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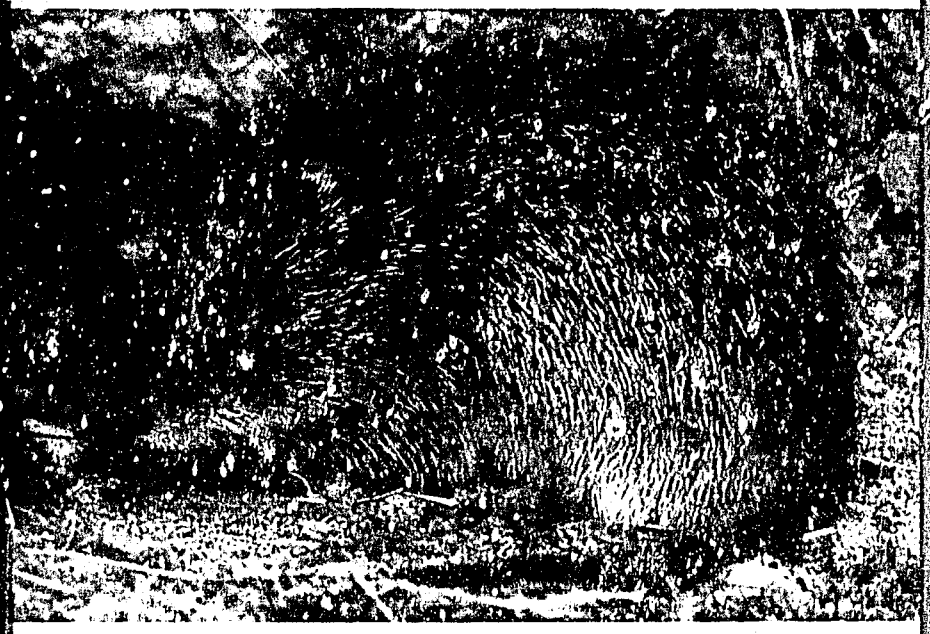
An annotated bibliography on rodent research in Latin America, 1960-1985



FAO PLANT PRODUCTION AND PROTECTION PAPER

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

An annotated bibliography on rodent research in Latin America, 1960-1985

FAO
PLANT
PRODUCTION
AND PROTECTION
PAPER

98

by
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INTRODUCTION

From 1950 through 1973, the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) published three bibliographies on rodent research. This present bibliography is to update the Latin American portion of these bibliographies from 1960 through 1985.

The term Latin America is often restricted to Spanish and Portuguese-speaking countries found south of the United States and in the Caribbean. In this publication we define Latin America to include Mexico, Central America, South America, the Caribbean Islands and the West Indies.

This bibliography covers publications on rodent taxonomy, distribution, biology, ecology, behavior, disease, damage, control and public health. References are not cited that deal with rodents as laboratory or test animals unless they fall under the aforementioned categories.

We tried to provide an abstract for most of the citations, but it was impossible to obtain reprints from some journals. Abstracts were not prepared for books, theses, dissertations, mammalian species or where the citation itself was an abstract.

You will note in the subject index there are several titles without citations (i.e., Bait Shyness, Hibernation, Peanuts). These titles were left in the index to show there are no citations for subjects one assumes would appear during the time period covered by the bibliography.

An attempt was made to include every publication on rodent research in Latin America from 1960 through 1985. Undoubtedly many citations have been missed. The authors apologize for citations that are not included in the bibliography.

This work was conducted with funds provided to the U.S. Department of Agriculture by the U.S. Agency for International Development under the Participating Agency Service Agreement--Vertebrate Pest Management Systems R&D (DAN-4173-X-AG-6001-00) and the Food and Agriculture Organization of the United Nations (PL 31/50 Rodents).

A los biólogos Latinoamericanos

AN ANNOTATED BIBLIOGRAPHY ON RODENT RESEARCH IN LATIN AMERICA, 1960 - 1985

1. Abarca, M. 1970. Modern methods of rodent control in the sugarcane plantations of Mexico. Bol. Azucar Mex. 242:41-42. (In Spanish)

2. Abarca, M. 1981. Rodent control in sugarcane fields (Mexico). Proc. Second Inter American Sugar Cane Seminar 2:189-200.

   After reviewing the importance of rodents, the author discusses their general classification, species, general characteristics, habitat, and damage. Simple methods of sampling are given and also preparation and distribution of baits. Also an evaluation of the benefits of control is presented.

3. Abbott, K. D. 1974. Ecotypic and racial variation in the water and energy metabolism of Peromyscus maniculatus from the western United States and Baja California, Mexico. Unpublished Ph.D. dissertation, Univ. Calif. (Irvine). 172 pp.

4. Abravaya, J. P. and J. O. Matson. 1975. Notes on a Brazilian mouse, Blarinomys breviceps (Winge). Contrib. Sci. Nat. Hist. Mus. Los Angeles 270:1-8.

   Non-geographic and possible geographic variation, natural history, and zoogeography of Blarinomys breviceps from two areas in Espirito Santo, Brazil, are discussed.

5. Adam, A. V. 1972. Summary of joint FAO/Industry Seminar on the safe, effective and efficient utilization of pesticides in agriculture and public health in Central America and the Caribbean. (TF:LAT/16) Turrialba, Costa Rica (April 20-28, 1972) Rome. FAO ACPP: Misc/6. 25 pp.

6. Agnes, P. and E. Laville. 1984. Discovery of a clavicle in a South American caviomorph rodent, Myoprocta acouchi E., supporting a peculiar muscular system. C. R. Acad. Sci. Ser. III Sci. Vie. 299(15):643-645. (In French)

   The discovery of a regressed clavicle allowed the development of a very peculiar muscular system, dissociating from other rodents and offering some convergence points with the muscular system of the smaller Artiodactyla. These peculiarities distinguish the Caviomorph rodents from the rest of the order.

7. Aguero, D. 1976. The acceptance of different baits formulated with rice and other seeds for controlling rats in cultivated crops. Boletin CIARCO 4:3-14. (In Spanish)

   Seven rodenticide baits were tested for acceptance by Holochilus brasiliensis under laboratory conditions in Venezuela. The baits

that were more acceptable were Totorin mixed with rice powder and Racumin mixed with rice powder. The rats consumed very little of the following baits: Racumin wax blocks, Cygon, Endrin, Vacor, and Raticat.

8. Aguero, D. 1978. A reproductive study of a population of Holochilus brasiliensis (Rodentia - Cricetidae) in rice paddies in the state of Portuguesa. Agron. Trop. 28(3):101-106. (In Spanish)

   A study was made on the reproduction of Holochilus brasiliensis which is considered the most important plague to maturing rice in the State of Portuguesa in Venezuela. The results indicated a correlation between weight and average number of embryos for females. There was no evidence of any specific reproductive period within the year. The male-female ratio was 1:1.

9. Aguero, D. and E. Miralles. 1977. The use of rodenticides in Venezuela. Pages 111-156 in E. Miralles, Ed. Seminar on the Use of Biochemicals in Venezuela, Guanare, Portuguesa, State. (In Spanish)

10. Aguilar, F. 1971. Chagas' disease in Guatemala. Rev. Col. Med. Guatem. 22(4):275-281. (In Spanish)

11. Aguilar, P. G., O. D. Beingolea, A. J. Brack, and I. Ceballos-Bendezu. 1977. Important vertebrates in Peruvian agriculture. Rev. Peru. Entomol. 20(1):25-32. (In Spanish)

    Behind the cosmopolitan Muridae, Cricetids are the wild rodents of highest economic importance, with the genera Oryzomys, Akodon, Phyllotis, Rhipidomys, Andinomys and Punomys being the major pests. Damages have been evaluated to be more than 50% in certain agricultural products.

12. Aguilera, M. 1981. An intrageneric analysis of the evolution of chromosomes in some groups of mammals. Pages 191-206 in O. A. Reig, Ed. Ecologia y Genetica de la Especiacion Animal. Caracus Edit. Equinoccio, Universidad Simon Bolivar. (In Spanish)

13. Aguilera, M. 1985. Growth and reproduction in Zygodontomys microtinus (Rodentia, Cricetidae) from Venezuela in a laboratory colony. Mammalia 49(1):75-83.

    The results obtained in this study on Z. microtinus indicate that the species shows early reproductive maturity, short gestation period, high mean litter size and rapid growth. These developmental and reproductive characteristics contribute to the species ability to proliferate in disturbed environments and to become a pest.

14. Aguilera, M. and M. A. Barros. 1979. Karyotype of a reference population of Holochilus venezuelae Allen 1904 (Rodentia: Cricetidae) from Calabozo (Guarico, Venezuela). Acta Cient. Venez. 30(1):95. (In Spanish)

15. Aguilera, M., O. A. Reig, M. A. Barros, and M. G. Basanez. 1978. The characterization of chromosomes and notes on the reproductive biology of Proechimys canicollis in Venezuela. Acta Cient. Venez. 29 (Supplement 1):113. Abstract only. (In Spanish)

16. Aguilera, M., O. A. Reig, M. A. Barros, and M. G. Basanez. 1979. Systematics, cytogenetics and reproductive data on a population of Proechimys canicollis in northeastern Venezuela. Acta Cient. Venez. 30:408-417. (In Spanish)

The presence of Proechimys canicollis is documented in Venezuela based on a sample from Rio Cachiri, Mara District, Zulia State. The species is distinguishable on morphological grounds from members of the P. guairae superspecies, as well as from P. guyannensis, P. urichi and P. trinitatis. It also differs from other species in the genus in skull and tooth characters and in external morphology. The somatic chromosome number is 2n = 24.

17. Aguilera, M., J. L. Silva, A. Ferrer, and O. A. Reig. 1984. The population ecology of Proechimys guairae guairae (Rodentia, Echimyidae) in a semideciduous forest where cattle graze. Acta Cient. Venez. 35 (Supplement 1):125. Abstract only. (In Spanish)

18. Aguilera, M., G. Garcia, P. Rangel, A. Perez, C. Alvarez, and O. Reig. 1978. Notes on the ecology and reproduction of a population of Zygodontomys microtinus (Rodentia: Cricetidae). Acta Cient. Venez. 30(1):50. Abstract only. (In Spanish)

Zygodontomys microtinus were caugnt in a rice field 35 km S. of Calabozo (Guarico), Venezuela. Also caught in the same field were Holochilus sp. and Sigmodon alstoni.

19. Aguirre L., G. and E. Fey A. 1981. Preliminary studies of the agouti (Agouti paca nelsoni Goldman) in the Lacondona plains, Chiapas. Pages 41-54 in Pedro Reyes-Castilla, Ed. Ecological studies of tropical Mexico. Inst. Ecologia Publ. No. 6, Mexico, D. F. 105 pp. (In Spanish)

Presents data obtained from studying agouti under natural conditions (burrows, ectoparasites) with agouti raised in captivity.

20. Aitken, T. H. G., C. B. Worth, A. H. Jonkers, E. S. Tikasingh, and W. G. Downs. 1968. Arbovirus studies in Bush Bush Forest, Trinidad, W. I., September 1959-December 1964. II. Field program and techniques. Am. J. Trop. Med. Hyg. 17:237-252.

The field program of the Trinidad Regional Virus Laboratory in Bush Bush Forest included studies in which arboviruses (their prevalence and epidemiology) were the chief interest and also studies on the biology of the arthropods and vertebrates possibly associated with arbovirus cycles. The techniques used included the exposure of sentinel animals: Oryzomys laticeps and Zygodontomys brevicauda.

21. Akiev, A. K. 1982. Epidemiology and incidence of plague in the world, 1958-79. Bull. W. H. O. 60(2):165-169.

In the Americas, during the period under consideration, 7,382 cases of human plague (15.7% of the world total) were reported from 7 countries. Human plague was constantly present in Bolivia, Brazil, Ecuador, Peru, and the United States of America, and occurred periodically in the form of sporadic cases in Colombia and Venezuela.

22. Albuquerque, R. D. R. and M. P. Barretto. 1968. Studies of wild reservoirs and vectors of Trypanosoma cruzi. XXVI. Natural infection of the water rat, Nectomys squamipes squamipes (Brants, 1827) with T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 10:229-237. (In Portuguese)

A strain of T. cruzi was isolated through xenodiagnosis from a water-rat, Nectomys squamipes squamipes (Brants, 1827) trapped at Cassia dos Coqueiros, State of Sao Paulo, Brazil.

23. Alho, C. J. R. 1978. The application of a method to compute home range of animal populations under natural circumstances. Rev. Bras. Biol. 38(3):689-692.

This paper proposes a method to compute home range sizes of animal populations, which are usually records taken by the ecologist of repeated captures by live-trapping. The program simplifies calculations determining the area by coordinates. It is written in PL/1 computer language.

24. Alho, C. J. R. 1979a. The application of a technique to survey small mammal populations under ecological circumstances. Rev. Bras. Biol. 39(3):597-600.

The survey of small mammal populations for ecological studies is often made by live trapping and the use of capture-mark-recapture technique in a standard grid. The present technique has been tested and its moving transects of traps within a large grid reduces biases present in previous techniques for studying populations and home ranges of small mammal populations.

25. Alho, C. J. R. 1979b. Relative exclusiveness of use of space as a measure of spatial distribution of mammal populations. Rev. Bras. Biol. 39(1):275-279.

Spatial relationships among animals and between them and the components of the habitat depend on each individual's movement patterns and the dispersion or overlap of different individual's ranges. The positions of the individuals in the environment in a given time is the result of a history of births, deaths, and movements. Relative exclusiveness of use of space is defined here as an individual's use of locations or quadrats in relation to other individual's use of them.

26. Alho, C. J. R. 1980. Homing ability in the wild rodent Proechimys roberti determined by radiotelemetry. Rev. Bras. Biol. 40:91-94.

Telemetry was used to determine the ability of Proechimys roberti to return to their home range once removed from it. Six males and two females were captured and released 200-500 m away from their home ranges in different kinds of habitat. Four males and one female successfully returned to their home range.

27. Alho, C. J. R. 1981. Small mammal populations of Brazilian cerrado: The dependence of abundance and diversity on habitat complexity. Rev. Bras. Biol. 41:223-230.

The factors influencing local distribution of nine species of wild rodents in four different natural habitats of hillside landscape in Brazil are studied. Species captured were Calomys callosus, C. expulsus, Oecomys simplex, Oryzomys eliurus, O. oniscus, O. subflavus, Proechimys roberti, Zygodontomys lasiurus, and Rhipidomys sp.

28. Alho, C. J. R. 1982. Brazilian rodents: Their habitats and habits. Pages 143-166 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

The Brazilian rodent fauna is one of the most diverse in the world with representatives of three suborders, but it is poorly known. A comprehensive taxonomic revision and reinterpretation of the evolution of the order, based on present knowledge of species distribution and composition and ecological requirements is urgently needed. Brazilian rodents deserve study not only because they are poorly known but also because they are involved in some of the major unsolved problems in the evolution of the order.

29. Alho, C. J. R. and L. A. Pereira. 1985. Population ecology of a cerrado rodent community in central Brazil. Rev. Bras. Biol. 45(4):597-607.

A capture-mark-release study of rodents was carried out from November 1980 to October 1981 in the hilly habitat of the National Park of Brasilia, Brazil. The ecosystem is marked by a periodicity of rainfall with well defined dry (May-October) and

rainy (November-April) seasons. The rodent community was composed of Zygodontomys lasiurus (= Bolomys lasiurus), Oryzomys subflavus, O. eliurus (= O. nigripes), Calomys callosus and Thalpomys lasiotis (= Akodon lasiotis). The density of rodents increased during the dry season. Home range sizes were similar for the different species and did not differ between seasons.

30. Alho, C. J. R. and M. J. Souza. 1982. Home range and use of space in Zygodontomys lasiurus (Cricetidae, Rodentia) in the cerrado of Central Brazil. Ann. Carnegie Mus. 51(7):127-132.

Space utilization and distribution of free ranging Zygodontomys lasiurus (= Bolomys lasiurus) were studied on a 1.3 hectare grid in a natural cerrado habitat in Brasilia, Brazil, using a live-trapping procedure.

31. Alho, C. J. R. and O. M. M. Villela. 1984. Scansorial ability in Oryzomys eliurus and O. subflavus (Rodentia: Cricetidae) from the cerrado. Rev. Bras. Biol. 44(4):403-408.

This paper compares the arboreal abilities of Oryzomys eliurus and O. subflavus under laboratory conditions. Three experimental tests were performed: inclination to climb; climbing vertically; and crossing gaps. O. eliurus exhibited better performance than O. subflavus but the differences were not statistically significant.

32. Alicata, J. E. and D. K. Amiel. 1967. Absence of Angiostrongylus cantonensis among rodents in parts of Central and South America. J. Parasitol. 53:1118.

Survey conducted in parts of Brazil, Costa Rica, Ecuador, and Guyana.

33. Almeida, C. R., A. R. Almeida, J. Baptiste Vieira, U. Guida, and T. Butler. 1981. Plague in Brazil during two years of bacteriological and serological surveillance. Bull. W. H. O. 59(4):591-597.

In northeastern Brazil, where plague infection is endemic, bacteriological and serological methods were employed during a 2-year period to determine accurately the occurrence of human infection and to define certain epidemiological features of both human and rodent infection. Rodent surveillance resulted in isolation of Yersinia pestis from 33 animals, most of them from the field rodent, Zygodontomys pixuna in the states of Pernambuco and Ceara.

34. Almeida, E. J. C. 1980. Cytogenetic variability of the genera Oryzomys and Thomasomys (Rodentia: Cricetidae). Unpublished Ph.D. dissertation, Univ. of Sao Paulo, Sao Paulo, Brazil. (In Portuguese)

35. Almeida, E. J. C. and Y. Yonenaga. 1974. A cytogenetic study of rodents of the genus Oryzomys. Cienc. Cult. 26:243. (In Portuguese)

36. Almeida, E. J. C. and Y. Yonenaga-Yassuda. 1985. Robertsonian fusion, pericentric inversion and sex chromosome heteromorphisms in Oryzomys subflavus (Cricetidae, Rodentia). Caryologia 38(2):129-137.

Seven different karyotypes were identified in a sample of 14 specimens of Oryzomys subflavus (2n = 56, 55 and 54: FN = 62 and 63). Homozygous and heterozygous individuals for a Robertsonian rearrangement of autosomes 5 and 6 were detected.

37. Altava, V. 1963. Prevention of leptospirosis in rice fields. System followed and results obtained after two years of deratization. Rev. Sanid. Hig. Publica 37(1/2):68-72. (In Spanish)

38. Altava, V. 1966. Epizooty and epidemiology of leptospirosis of murine origin in an agricultural environment. Prevention. Ann. Soc. Belg. Med. Trop. Parasitol. Mycol. 46(2):161-168.

39. Altava, V. and M. Barrera. 1961. Extermination of rats as a prophylactic measure against leptospirosis in rice fields. Rev. Sanid. Hig. Publica 35(10/11):647-655. (In Spanish)

As an alternative to vaccination, eradication efforts using a rice and coumarin bait were directed at R. norvegicus, R. rattus, and Apodemus sylvaticus, with great success.

40. Altava, V. and M. Barrera. 1962. Results of rat extermination in the prophylaxis of leptospirosis in the rice fields in 1961. Rev. Sanid. Hig. Publica 36(7/9):277-278. (In Spanish)

41. Altuna, C. A. 1983. Notes on the construction of burrows by Ctenomys pearsoni Lessa and Langguth, 1983 (Rodentia: Octodontidae). Res. Commun. J. Cienc. Nat. Montevideo 3:70-72. (In Spanish)

A series of burrows of Ctenomys pearsoni were excavated to compare differences in construction.

42. Altuna, C. A. 1985. The microclimate in burrows of Ctenomys pearsoni (Rodentia: Octodontidae) in Arroyo Carrasco (Montevideo). Actas J. Zool. Uruguay 5:59-60. (In Spanish)

Tucu-tucu, Ctenomys pearsoni, keep their burrows plugged for most of the day apparently to keep a uniform relative humidity. Relative humidity and temperature were recorded for 1 year (1983) in tucu-tucu burrows in Uruguay. Comparisons were made between the relative humidity and temperature within the burrow to the same outside the burrow.

43. Altuna, C. A. and E. P. Lessa. 1985. Penial morphology in Uruguayan species of Ctenomys (Rodentia: Octodontidae). J. Mammal. 66:483-488.

The glans penes of the three species of Ctenomys found in Uruguay were compared: C. rionegrensis, C. pearsoni, and C. torquatus.

44. Altuna, C. A., M. Ubilla, and E. P. Lessa. 1985. Observations of Ctenomys rionegrensis Langguth and Abella, 1970 (Rodentia: Octodontidae). Actas J. Zool. Uruguay 5:8-9. (In Spanish)

Reported are new information on the distribution, ecology and phenotypic variation for this little known species.

45. Alvarez, T. 1961a. Synopsis of the Mexican species of the genus Dipodomys. Rev. Soc. Mex. Hist. Nat. 21:391-424. (In Spanish)

A complete taxonomic review of the 13 species of Dipodomys found in Mexico.

46. Alvarez, T. 1961b. Taxonomic status of some mice of the Peromyscus boylei group in eastern Mexico, with description of a new subspecies. Univ. Kans. Mus. Nat. Hist. Publ. 14:111-120.

A taxonomic comparison of Peromyscus aztecus, P. boylii beatae, and P. b. levipes from eastern Mexico. Describes a new subspecies, Peromyscus boylii ambiguus. The type specimen, an adult male, was collected at Monterrey, Nuevo Leon, Mexico.

47. Alvarez, T. 1961c. A review of the arboreal squirrels of the genus Sciurus in Mexico (Mammalia: Sciuridae). An. Esc. Nac. Cienc. Biol. Mex. 10:123-148. (In Spanish)

This work consists of a key, a catalog, and distributions maps relating to the Mexican arboreal squirrels (Sciurus). The key is the first one in Spanish for Mexican Sciurus, and is based on 390 specimens deposited in the Museum of Natural History, University of Kansas. These specimens represent 15 of the 18 species reported from Mexico.

48. Alvarez, T. 1962a. A new subspecies of ground squirrel (Spermophilus spilosoma) from Tamaulipas, Mexico. Univ. Kans. Publ. Mus. Nat. Hist. 14:121-124.

A new subspecies, Spermophilus spilosoma oricolus, is described. The type specimen, an adult female, was collected 1 mile east of La Pesca, Tamaulipas, Mexico.

49. Alvarez, T. 1962b. A new subspecies of woodrat (Neotoma) from northeastern Mexico. Univ. Kans. Mus. Nat. Hist. Publ. 14:139-143.

A new subspecies of wood rat is described, Neotoma albigula subsolana. This wood rat ranges from Sierra Madre Oriental southeastern Coahuila to southwestern Tamaulipas.

50. Alvarez, T. 1963a. The recent mammals of Tamaulipas, Mexico. Univ. Kans. Mus. Nat. Hist. Publ. 14:363-473.

The mammals of Tamaulipas, Mexico, are described including 53 species and subspecies of rodents.

51. Alvarez, T. 1963b. The type locality for Nyctomys sumichrasti Saussure. J. Mammal. 44:582-583.

The type locality of Nyctomys sumichrasti is Uvero, 20 km northeast of Santiago Tuxtla, Veracruz.

52. Alvarez, T. 1968. Notes on a collection of mammals from the coastal region of the Balsas River between Michoacan and Guerrero. Rev. Soc. Mex. Hist. Nat. 29:21-35. (In Spanish)

In early 1967 mammals were collected in the region of Balsas River located between Michoacan and Guerrero, Mexico. This is the site of the construction of a dam to create Lake La Villita Rodents collected were Sciurus aureogaster, Liomys pictus, Oryzomys palustris, Oryzomys fulvescens, Peromyscus banderanus, Baiomys musculus, and Sigmodon hispidus.

53. Alvarez, T. and C. E. Avina. 1963. Notes on some species of Mexican squirrels of the genus Sciurus (Rodentia: Sciuridae). Rev. Soc. Mex. Hist. Nat. 24:33-39. (In Spanish)

Gives measurements and ecological observations on the following squirrels collected in Mexico: Sciurus apache, two males collected at Arroyo de Tapiecitas, Nuevo Casas Grandes, Chihuahua, S. aureogaster aureogaster from San Luis Potosi and Oaxaca, S. nelsoni nelsoni from the state of Mexico, S. poliopu effugius from Guerrero, S. p. senex from Guerrero and S. p. peregrinator from Moralos.

54. Alvarez, T. and O. J. Polaco. 1984. A study of mammals captured La Michilia, southeastern Durango, Mexico. An. Esc. Nac. Cienc Biol. Mex. 28:99-148. (In Spanish)

Gives taxonomy, habitat and food habits for 12 species of rodents.

55. Alvarez, T. and J. Ramirez-Pulido. 1968. A description of a new subspecies of Spermophilus adocetus (Rodentia: Sciuridae) from Michoacan, Mexico and a taxonomic study of S. a. arceliae (Vill R. 1942). Rev. Soc. Mex. Hist. Nat. 29:181-189. (In Spanish)

A new subspecies, Spermophilus adocetus infernatus, is described from an adult female collected 14 km north of El Infiernillo, Michoacan.

56. Alvarez, T., P. Dominguez, and J. Arroyo-Cabrales. 1984. Mammals of La Angostrua, the central region of Chiapas. Cuad. Trab. Dep. Prehistoria, Inst. Nac. Antropol. Hist. Mex. 24:1-89. (In Spanish)

Includes taxonomy and food habits for: Sciurus aureogaster, Liomys pictus, Oryzomys fulvescens, O. palustris, Reithrodontomys fulvescens, R. mexicanus, Peromyscus aztecus, P. boylii, P. mexicanus, Baiomys musculus and Sigmodon hispidus.

57. Alvarez del Toro, M. 1977. The mammals of Chiapas. Universidad Autonoma de Chiapas, Tuxtla Gutierrez, Chis. 147 pp. (In Spanish)

58. Alvarez, V. 1960. The presence of Linguatula serrata Froelich, 1789, in Dusicyon culpaeus and the pupa form in Octodon degus and Abrocoma bennetti. Bol. Chil. Parasitol. 51:22. (In Spanish)

59. Amrein, Y. U. 1967. Effects of environmental temperature on Trypanosoma cruzi infection in mice. J. Parasitol. 53:1160.

A comparison between the course of infection in mice kept at 10 C, without exception terminating fatally, in mice kept at ambient room temperature (26 C), evidencing a chronic infection, and in mice maintained at 35 C, which appeared to overcome the infection, seems clearly to show that a warmer environmental temperature allows mice to hold the infection in check or even totally to overcome it.

60. Anderson, S. 1962. Tree squirrels (Sciurus colliaei group) of western Mexico. Am. Mus. Novit. 2093:1-13.

Comparisons are made among Sciurus colliaei truei, S. c. sinaloensis, S. c. colliaei, and S. c. nuchalis.

61. Anderson, S. 1964. The systematic status of Perognathus artus and Perognathus goldmani (Rodentia). Am. Mus. Novit. 2184:1-27.

In 1900, W. H. Osgood described and named Perognathus artus and Perognathus goldmani as new species of pocket mice. Both species inhabit the coastal plains of western Mexico. In 1960 Hall and Ogilvie reported that they judged the two species to be conspecific. Study of recently collected material and restudy of older material have led the author to the conclusion that P. artus and P. goldmani are separate species.

62. Anderson, S. 1965. Conspecificity of Plagiodontia aedium and P. hylaeum (rodentia). Proc. Biol. Soc. Wash. 78:95-98.

Two specimens of Plagiodontia from southern Haiti were originally called P. hylaeum. It has now been determined one specimen is P. hylaeum and the other is P. aedium.

63. Anderson, S. 1966. Taxonomy of gophers, especially Thomomys in Chihuahua, Mexico. Syst. Zool. 15(3):189-198.

The division of pocket gophers (Geomyidae, Rodentia) into many subspecies has been criticized frequently in recent years. The history of the nomenclature and taxonomic practice in one complex of species of the genus Thomomys is analyzed and continuous progress is apparent. Studies of Thomomys in Chihuahua, Mexico, are summarized. Thomomys baileyi is synonymized with Thomomys bottae. T. bottae is not conspecific with T. umbrinus.

64. Anderson, S. 1969. Taxonomic status of the woodrat Neotoma albigula in southern Chihuahua, Mexico. Pages 35-50 in J. K. Jones, Ed. Contributions in Mammology. Univ. Kans. Mus. Nat. Hist. Misc. Publ. 51:1-428.

Taxonomic characters are given to distinguish Neotoma albigula from Neotoma micropus.

65. Anderson, S. 1972. Mammals of Chihuahua. Taxonomy and distribution. Bull. Am. Mus. Nat. Hist. 148:151-410.

Study of published records and about 6,500 specimens of native mammals of the state of Chihuahua, Mexico, revealed 122 species; at least 17 other species probably occur in the state. The number of species in any one area, however, is only about 35 to 55. Illustrated keys are based on external and cranial characters and also include 10 domestic and introduced species. The taxonomic status within Chihuahua of each species and subspecies is considered, including intrasubspecific variation when observed.

66. Anderson, S. 1985. A preliminary list of Bolivian mammals. Cuadernos Acad. Nac. Cienc. Bolivia, vol. 65, Cienc. Naturaleza, no. 6, Mus. Nac. Hist. Nat., Zoologica, no. 3:5-16. (In Spanish)

Gives the species and subspecies of mammals that occur in Bolivia or are thought to occur in Bolivia. Lists 47 genera and 123 species and subspecies of rodents known from Bolivia and 3 species that are thought to occur in Bolivia.

67. Anderson, S. and J. P. Hubbard. 1971. Notes on geographic variation of Microtus pennsylvanicus (Mammalia, Rodentia) in New Mexico and Chihuahua. Am. Mus. Novit. 2460:1-8.

Newly found material of a relict population once present in southwestern New Mexico was compared with other samples from Mexico, New Mexico, and Colorado. The relict population near Aragon, New Mexico, is interpreted as integrated between M. p. mondestus and M. p. chihuahuensis.

68. Anderson, S. and J. K. Jones, Jr. 1960. Records of harvest mice, Reithrodontomys, from Central America, with description of a new subspecies from Nicaragua. Univ. Kans. Mus. Nat. Hist. Publ. 9:521-529.

Collection data is given for the following harvest mice from Central America: Reithrodontomys sumichrasti australis, R. gracilis anthonyi, R. gracilis gracilis, R. gracilis harrisi, R. gracilis pacificus, R. microdon microdon, R. mexicanus howelli, R. mexicanus lucifrons, and R. brevirostris. A new subspecies R. fulvescens meridionalis is described from Nicaragua.

69. Anderson, S. and C. A. Long. 1961. Small mammals in pellets of barn owls from Minaca, Chihuahua (Mexico). Am. Mus. Novit. No. 2052. 3 pp.

Various rodent species, especially Peromyscus, were identified from the remains.

70. Anderson, S. and C. E. Nelson. 1960. Birds and mammals in barn owl pellets from near Laguna, Chihuahua, Mexico. Southwest. Nat. 5(2):99-101.

Nine species of rodents were identified from owl pellets, Tyto alba, collected on July 9, 1959, near Laguna de Bustillos, Chihuahua, Mexico.

71. Anderson, S., J. K. Doutt, and J. S. Findley. 1963. Collections of mammals in North America. J. Mammal. 44(4):471-500.

A list of museum and private collections of rodent skins and those of other animals in Canada, the U.S.A., Mexico, and Costa Rica.

72. Anderson, S. D. 1982a. Comparative population ecology of Peromyscus mexicanus in a Costa Rican wet forest. Unpublished Ph.D. dissertation, Univ. Southern Calif.

73. Anderson, S. D. 1982b. Life history and population dynamics of Peromyscus in a lower montane tropical wet forest. Bull. Ecol. Soc. Am. 63(2):67. Abstract only.

74. Anon. 1961. Methods for the extermination of gophers. Mexico Agricola 7(84):29-30. (In Spanish)

Describes damage to sugarcane in Mexico by pocket gophers (Geomys mexicana). Biology described. Control by poison baits and fumigation.

75. Anon. 1964a. Rat control in cocoa fields. Cacau Atual. (Brazil) 1(6):8-9. (Food and Agricultural Organization of the United Nations) Grain Stor. Newslett. 8(3):109, 1966.

Deals with damage to cocoa plantations by rats in Brazil and methods of control consisting of baiting with maize meal, rice [illegible] 2% groundnut oil, or fruits and warfarin. Matches stuck into bananas for 24 hours were also used.

76. Anon. 1964b. Rat control blocks. Farm. Jamaica 69:266.

Describes how to make a waterproof bait out of 11 lb corn meal, 2 lb granulated sugar, 1 lb commercial warfarin and 7 lb paraffin.

77. Anon. 1967. Provisional list of the fauna of Guyana. J. Guyana Mus. Zool. 42:58-60.

78. Anon. 1968. Summer project in St. Louis (U.S.A.) involves work, and warfarin. Pest Control 36(8):10-12, 14.

A description of Monsanto's demonstration projects in St. Louis and Brazil. St. Louis project involves 434 block area and provided jobs for 70 persons using Monsanto's new warfarin (with taste enhancer). Brazil project involves a 4-week course for local technicians taught by teams of rodent experts.

79. Anon. 1977. Fitofilo 74. Secretaria de Agricultura y Recursos Hidraulicos, Direccion General de Sanidad Vegetal, Mexico. (In Spanish)

Recommendations for monitoring rodent populations in cane fields. Two rows of 50 traps with 10 m between rows and 15 m between traps for four nights.

80. Anon. 1978. Damage caused by rodents to (cereal) production reaches 1% (Argentina). Rev. Bolsa de Cereales 105:4-7. (In Spanish)

In 1976/1977 (1 year) 1% of all grain produced in Argentina was consumed or contaminated by rats. This represents a loss of 288,190 tons.

81. Anon. 1984. Information bulletin on the control of urban zoonoses. Sao Paulo Hygiene and Health, Department of Zoonoses Control, Brazil, 9(7). 76 pp. Mimeo. (In Portuguese)

82. Antinori, A. A. 1980. A note on the distribution of Spermophilus variegatus in Sinaloa, Mexico. Tex. J. Sci. 32(3):281.

A range extension for the rock squirrel, Spermophilus variegatus, of 450 km south-southeast to Santa Lucia, Sinaloa, Mexico.

83. Antunes, C. M. F., et al. 1971. Contribution to the recognition of the role of the rat, Nectomys squamipes squamipes, in the epidemiology of Schistosoma mansoni infection. Rev. Bras. Malariol. Doencas Trop. 23:203-204. (In Portuguese)

Of 60 Nectomys trapped near Baldim, Minas Gerais, 32% eliminated ova of S. mansoni in the feces. It is concluded that this rodent plays a part as an animal reservoir for this infection.

84. Antunes, C. M. F., R. M. De Andrade, N. Katz, P. M. Z. Coelho, J. Pellegrino. 1973. Role of Nectomys squamipes squamipes in the epidemiology of Schistosoma mansoni infection. Ann. Trop. Med. Parasitol. 67(1):67-73.

Findings indicate the rodent may play a significant part in the epidemiology of schistosomiasis in Brazil.

85. Apt, W. and M. Diaz. 1965. Discovery of Trypanosoma cruzi in the chorionic vilii stroma of mice. Bol. Chile Parasitol. 20:52-53. (In Spanish)

Leishmanioid forms of T. cruzi were found in a single placenta of two different mice.

86. Apt, W., C. Naquira, A. Tejada, and L. Strozzi. 1968. Congenital transmission of Trypanosoma cruzi. 2. In rats with acute and chronic infections. Bol. Chile Parasitol. 23:9-15. (In Spanish)

Although T. cruzi infection of the mother rats was obtained, no congenital infection could be detected in the litters.

87. Arandas Rego, A. 1984. Pentastomids in wild rodents from Bahia, identification of Porocephalus larvae. Mem. Inst. Oswaldo Cruz Rio de J. 79(3):393-394. (In Portuguese)

This note corrects a misidentification of pentastomid nymphs identified as Armillifer moniliformis, found in a wild rodent, Zygodontomys pixuna from Bahia State. It is demonstrated that these nymphs belong to Porocephalus, probably P. crotali (Humboldt, 1808).

88. Araujo, P. 1967. Helminths of Rattus norvegicus in the city of Sao Paulo. Rev. Fac. Farm. Bioquim. Univ. Sao Paulo 5:141-159. (In Portuguese)

89. Arcay, L. 1981. New Coccidia from wild rodents in Venezuela: Eimeria guerlinqueti and Wenyonella maligna from Sciurus granatensis and Eimeria akodoni from Akodon urichi venezuelensis (Rodentia, Myomorpha Cricetidae, Cricetinae). Acta Biol. Venez. 11(2):125-148. (In Spanish)

Three new species of Coccidae are described. They were collected from Sciurus granatensis and Akodon urichi venezuelensis.

90. Arias, J. R. and R. D. Naiff. 1981. The principal reservoir host of cutaneous leishmaniasis in the urban areas of Manaus, Central Amazon of Brazil. Mem. Inst. Oswaldo Cruz Rio de J. 76:279-286.

91. Assis, M. F. L. 1980. Regional organization of nuclei in Akodon arviculoides and Akodon sp. (Rodentia: Cricetidae). Unpublished thesis, Univ. of Sao Paulo, Sao Paulo, Brazil. (In Portuguese)

92. Assis, M. F. L., S. Kasahara, and Y. Yonenaga-Yassuda. 1978. Ag-staining of nucleolus organizer regions of Akodon sp. (Cricetidae, Rodentia) with supernumerary chromosome. Mamm. Chrom. Newsl. 19:125-126.

A chromosomal polymorphism due to supernumeraries was found in Akodon sp. which presents diploid numbers 2n = 24, 2n = 25, and 2n = 24/25. The use of AgI staining method for chromosomes with silver nitrate solutions allowed the nucleolar organizer regions (NOR's) in Akodon sp. to be determined. The telomeres were stained in the long arm of the metacentric chromosomal pair 2, the short arm of the metacentric pairs 3 and 5 and in the acrocentric pair 10.

93. Aste-Salazar, H. and P. R. Morrison. 1962. Paper electrophoresis and alkali denaturation of hemoglobins from some Peruvian rodents. Comp. Biochem. Physiol. 6:257-267.

The electrophoretic mobility in filter paper at pH 8.6 was measured for hemoglobins from 76 Peruvian rodents representing 15 species or subspecies from the following genera: Phyllotis, Akodon, Chinchillula, Mus, Hesperomys, Oryzomys, Ctenomys and Cavia. These rodents showed a wide range of nemoglobin mobilities from 0.6 to 1.5 times that of man (Hb-A).

94. August, P. V. 1981. Population and community ecology of small mammals in northern Venezuela. Unpublished Ph.D. dissertation, Boston University. 218 pp.

95. August, P. V. 1983. The role of habitat complexity and heterogeneity in structuring tropical mammal communities. Ecology 64(6):1495-1507.

The relationship between mammal community structure and vertical variation in habitat physiognomy (complexity) and horizontal variation in habitat form (heterogeneity) was examined on five study areas in the llanos of Venezuela. Rodent species collected in the study areas were Sciurus granatensis, Heteromys anomalus, Rhipidomys sp., Oryzomys bicolor, Zygodontomys brevicauda, Sigmomys alstoni, Coendou prehensilis, Echimys semivillosus, Dasyprocta agouti, and Agouti paca.

96. August, P. V. 1984. Population ecology of small mammals in the Llanos of Venezuela. Texas Tech. Univ. Mus. Spec. Publ. 22:71.

The Venezuelan llanos supports a small mammal fauna of low diversity and density. The seasonality of rainfall in the llanos is extreme and plays a significant role in many aspects of small mammal life history, especially reproduction and habitat selection.

97. August, P. V. and T. H. Fleming. 1984. Competition in neotropical small mammals. Acta Zool. Fenn. 172:33-36.

Many theoretical ecologists contend that interspecific competitive interactions play a major role in structuring animal communities. Unfortunately, research by field ecologists has lagged behind the work of theoreticians; few studies have addressed this topic. This review gives four phases of research that need to be done to evaluate the role of competition in structuring neotropical small mammal communities and summarizes the data presently available in each of the four phases.

98. Avila-Pires, F. D. 1960a. A new genus of South American rodent. Bol. Mus. Nac. 220:1-6. (In Portuguese).

99. Avila-Pires, F. D. 1960b. Rodents collected in the region of Lagoa Santa, Minas Gerais, Brazil. Arq. Mus. Nac. 50:25-46. (In Portuguese)

The author describes rodents collected in 1954 by Moojen and Cory in the region of Lagoa Santa, Minas Gerais, Brazil.

100. Avila-Pires, F. D. 1964. Mammals collected from the region of Rio Negro (Amazonas, Brazil). Bol. Mus. Para. Emilio Goeldi 42:1-23. (In Portuguese)

101. Avila-Pires, F. D. 1967. The type-locality of Chaetomys subspinosus (Olfers, 1818) (Rodentia, Caviophorpha). Rev. Bras. Biol. 27:177.

The type specimen of Chaetomys subspinosus was collected by Francisco Agostinho Gomes in the state of Bahia, Brazil. This specimen is found in the mammal collection of the Royal Museum of Berlin, Germany.

102. Avila-Pires, F. D. 1968. Recent type specimens of mammals held in the National Museum, Rio de Janeiro. Arq. Mus. Nac. Rio De J. 53:161-192. (In Portuguese)

Lists 27 species and subspecies of rodents whose type specimen is in the National Museum, Rio de Janeiro, collection.

103. Avila-Pires, F. D. 1972. A new subspecies of Kunsia fronto (Winge 1880) from Brazil (Rodentia, Cricetidae). Rev. Bras. Biol. 32:419-422.

A new subspecies (Kunsia fronto planaltensis) is described. The type specimen was caught in the Federal District, Brasilia, Brazil.

104. Ayala, S. C., A. D'Alessandro, R. B. Mackenzie, and D. Angel. 1973. Hemoparasite infection in 830 wild animals from the eastern Llanos of Colombia. J. Parasitol. 59(1):52-59.

Seven percent of the rodents collected were infected.

105. Babero, B. and P. E. Cattan. 1975. The helminth fauna of Chile. III. Parasites of the degus rat, Octodon degus, Molina, 1782, with the descriptions of three new species. Bol. Chil. Parasitol. 30:68-76. (In Spanish)

Thirty nine Octodon degus were caught at Quebrada de la Plata, 30 km southeast of Santiago, Chile. Collected from these rodents were seven species of helminths and one arthropod: Cestada, Aprostatandrya octodonensis; Nematoda, Graphidioides taglei, Longistriata degusi, Physaloptera sp., Trichuris bradleyi, Octodonthoxys gigantea, and Heteroxynema chiliensis; Arthropoda, Linguatula serrata.

105. Babero, B. B. and P. E. Cattan. 1980. The helminth fauna of Chile: VIII. Graphidioides yanezi sp. n. A parasite of Spalacopus cyanus Molina. Bol. Mus. Nac. Hist. Nat. Chile 37:225-228. (In Spanish)

A new species of nematode, Graphidioides yanezi, is described. The nematode was collected from the intestine from Spalacopus cyanus captured on the Con-con coast of Chile.

107. Babero, B. B., C. Cabello, and J. E. Kinoed. 1979. Helminth fauna of Chile. V. Additional parasites records from the nutria, Myocastor coypus (Molina, 1782). Bol. Chil. Parasitol. 34(1&2):26-31. (In Spanish).

Five different species of worms were collected from 11 nutria in Chile.

108. Babero, B. B., P. E. Cattan, and C. Cabello. 1975. Trichuris bradleyi sp. n. a whipworm from Octodon degus in Chile. J. Parasitol. 61:1061-1063.

Eight of 27 specimens of Octodon degus collected 30 km southwest of Santiago, Chile, were infected with the whipworm Trichuris bradleyi sp. n..

109. Babero, B. B., P. E. Cattan, and C. Cabello. 1976. A new species of whipworm from the rodent Akodon longipilis in Chile. Trans. Am. Microsc. Soc. 95(2):232-235.

Three specimens of Akodon longipilis were collected at Codillera de Nahuelbuta, Malleco Province, 25-30 km west of Angol. One of the specimens was infested with whipworms. Described is a new species of whipworm, Trichuris chiliensis.

110. Baccus, J. T. 1978. Notes on the distribution of some mammals from Coahuila, Mexico. Southwest. Nat. 23:706-708.

Three species of rodents are either reported for the first time from Coahuila or are range extensions (Spermophilus mexicanus parvidens, Spermophilus spilosoma pallescens, and Perognathus hispidus hispidus).

111. Baker, R. H. 1960. Mammals of the Guadiana lava field, Durango, Mexico. Publ. Mus. Mich. State Univ. 1(9):303-328.

The lava flow has increased the available habitat for rock-dwelling rodents. Dark-colored rodents, notably Peromyscus pectoralis and Spermophilus variegatus seem to be highly successful in this limited environment. Habitat available for soil-dwelling rodents was reduced by the lava. Selection for various color patterns in different rodents is noted.

112. Baker, R. H. 1963. Geographical distribution of terrestrial mammals in Middle America. Am. Midl. Nat. 70:208-249.

Includes rodents of area of Mexico south through Panama.

113. Baker, R. H. 1966. Further notes on the mammals of Durango, Mexico. J. Mammal. 47:344-345.

The cliff chipmunk, Eutamias dorsalis dorsalis, and the hispid pocket mouse, Perognathus hispidus paradoxus, are reported for the first time from Durango, Mexico.

114. Baker, R. H. 1967. Distribution of recent mammals along the Pacific coastal lowlands of the Western Hemisphere. Syst. Zool. 16:28-37.

Coastal lowlands on the western side of the Americas are irregularly narrow and squeezed between the shoreline and adjacent montane country. There are 407 species of mammals belonging to 189 genera (marine and insular forms excluded) that live on this coastal strip. The author divides the coastal lowlands into 8 divisions from north to south.

115. Baker, R. H. 1968. Habitats and distribution. Pages 98-126 in J. A. King, Ed. Biology of Peromyscus (Rodentia). Spec. Publ. Am. Soc. Mammal. 2:1-593.

116. Baker, R. H. 1969. Cotton rats of the Sigmodon fulviventer group (Rodentia: Muridae). Pages 177-232 in J. K. Jones, Jr., Ed. Contributions in Mammalogy. Univ. Kans. Mus. Nat. Hist. Misc. Publ. 51:1-428.

A taxonomic review of Sigmodon fulviventer group in Mexico. S. leucotis, S. ochrognathus, S. alleni, and S. fulviventer.

117. Baker, R. H. 1974. Records of mammals from Ecuador. Publ. Mus. Mich. State Univ. (E. Lansing) Biol. Ser. 8(2):129-146.

Presemts species accounts and a gazetteer of collecting localities. Microsciurus, Sciurus, Oryzomys, Nectomys, Reithrodontomys, Akodon, Phyllotis, Echimys, Dactylomys, Dasyprocta, and Agouti are among the rodent genera represented.

118. Baker, R. H. 1983. Sigmodon hispidus (Rata Algodonera Hispida, Hispid Cotton Rat). Pages 490-492 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

119. Baker, R. H. and J. K. Greer. 1960. Notes on Oaxacan mammals. J. Mammal. 41(3):413-415.

Peromyscus novemcinctus mexicanus and Sigmodon hispidus saturatus were caught in live traps. A Mexican agouti (Dasyprocta mexicana) was seen running in the jungle.

120. Baker, R. H. and J. K. Greer. 1962. Mammals of the Mexican state of Durango. Publ. Mus. Mich. State Univ. 2(2):25-154.

Includes biogeographical considerations, characteristics of mammalian fauna, and a check list of the area including for rodents: Sciuridae, 9 spp.; Geomyidae, 10 spp.; Heteromyidae, 17 spp.; Cricetidae, 38 spp.; and Muridae, 2 spp.; namely Rattus rattus and Mus musculus.

121. Baker, R. H. and M. K. Petersen. 1965. Notes on a climbing rat, Tylomys, from Oaxaca, Mexico. J. Mammal. 46(4):694-695.

A male Tylomys nudicaudus microdon was caught on 6 August 1964, 4 miles S. of Valle Nacional, Oaxaca. Plate 1 in the article is a photograph of the live T. nudicaudus microdon. This is the first photograph of this difficult to capture rodent.

122. Baker, R. H. and C. J. Phillips. 1965a. Mammals from El Nevado de Colima, Mexico. J. Mammal. 46:691-693.

Rodents collected on El Nevado de Colima, Colima, Mexico, were Sciurus poliopus, Reithrodontomys chrysopsis, R. sumichrasti, Peromyscus boylii, P. hylocetes, P. melanotis and Microtus mexicanus.

123. Baker, R. H. and C. J. Phillips. 1965b. Peromyscus ochraventer in San Luis Potosi. J. Mammal. 46:337-338.

On 5 July 1963 19 Peromyscus ochraventer were caught in Sherman live-traps in a montane area 8 miles W of El Naranjo, San Luis Potosi, Mexico. This is the first record for this mouse in San Luis Potosi.

124. Baker, R. H. and K. A. Shump, Jr. 1978a. Sigmodon fulviventer. Mamm. Species 94:1-4.

125. Baker, R. H. and K. A. Shump, Jr. 1978b. Sigmodon ochrognathus Mamm. Species 97:1-2.

126. Baker, R. H. and R. G. Webb. 1966. Notes on the amphibians, reptiles and mammals of La Pesca, Tamaulipas. Rev. Soc. Mex. Hist. Nat. 17:179-190. (In Spanish)

A group from Michigan State University made two trips near La Pesca, Tamaulipas, Mexico, to collect vertebrates (August 11-14, 1961 and August 6-8, 1963). Rodents collected were Sciurus aureogaster aureogaster, Peromyscus merriami merriami, Liomys irroratus texensis, Peromyscus leucopus texanus, Neotoma micropus micropus, and Rattus rattus.

127. Baker, R. H. and D. Womochel. 1966. Mammals from southern Oaxaca. Southwest. Nat. 11:306.

Rodents collected 8 miles SSW Juchatengo, Oaxaca, Mexico, were: Liomys irroratus, Oryzomys alfaroi, Reithrodontomys sumichrasti, Peromyscus megalops, P. evides, Sigmodon planifrons, and Neotoma mexicana.

128. Baker, R. H., R. G. Webb, and P. L. Dalby. 1967. Notes on reptiles and mammals from southern Zacatecas. Am. Midl. Nat. 77:223-226.

Reptiles and mammals were collected 1.6 km N of Santa Rosa, Zacatecas, at 1100 m elevation in a deep canyon containing the Rio Juchipila. Rodents collected were Liomys irroratus, Peromyscus melanophrys, and P. pectoralis.

129. Baker, R. H., R. G. Webb, and E. Stern. 1971. Amphibians, reptiles and mammals from north-central Chiapas. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 42(1):77-85.

Rodents collected in Chiapas, Mexico were: Sciurus deppei deppei, Heteromys desmarestianus desmarestianus, Oryzomys alfaroi, O. palustris couesi, Ototylomys phyllotis connectens, Reithrodontomys sumichrasti dorsalis, Peromyscus mexicanus, P. oaxacensis, and P. zarhynchus.

130. Baker, R. H., M. W. Baker, J. D. Johnson, and R. G. Webb. 1981. New records of mammals and reptiles from northwestern Zacatecas, Mexico. Southwest. Nat. 25:568-569.

Rodents collected for the first time in Zacatecas were: Ammospermophilus interpres, Spermophilus mexicanus, Perognathus penicillatus eremicus and Thomomys umbrinus goldmani.

131. Baker, R. J. and J. T. Mascarello. 1969. Karotypic analyses of the genus Neotoma (Cricetidae, Rodentia). Cytogenetics 8:187-198.

Compares chromosomes among Neotoma floridana, N. micropus, N. albigula, N. lepida, N. stephensi, N. mexicana, N. fuscipes, N. cinerea, and N. phenax.

132. Baker, R. J. and S. L. Williams. 1974. Geomys tropicalis. Mamm. Species 35:1-4.

133. Baker, R. J., R. K. Barnett, and I. F. Greenbaum. 1979. Chromosomal evolution in grasshopper mice (Onychomys: Cricetidae). J. Mammal. 60(2):297-306.

Diploid number was consistent at 48 in all specimens of Onychomys studied, but the number of pairs of acrocentric elements varied from 0 in O. leucogaster to 6, 7, and 9 in O. torridus and to 10 in O. arenicola. All the specimens were collected in the USA, with the exception of some of the O. arenicola which were collected in Chihuahua, Mexico.

134. Baker, R. J., B. F. Koop, and M. W. Haiduk. 1983. Resolving systematic relationships with G-Bands: A study of five genera of South American cricetine rodents. Syst. Zool. 32(4):403-416.

G- and C-banded chromosomes of Holochilus brasiliensis, Nectomys squamipes, Neacomys guianae, Sigmodon hispidus, and 11 species of Oryzomys are compared.

135. Balter, M. 1964. General aspects of Chagas' disease. Rev. Med. Cordoba 52:289-300. (In Spanish)

The author reviews 116 human cases of Chagas' disease in Argentina.

136. Banks, R. C. 1962. A history of explorations for vertebrates on Cerralvo Island, Baja California. Proc. Calif. Acad. Sci., 4th ser. 30:117-125.

From 1895 through 1960, Cerralvo Island, Baja California, Mexico, was visited 13 times by investigators interested in the biology of the terrestrial vertebrates of the island. Three native mammals are known from the island, two of which, Peromyscus eremicus avius and Perognathus arenarius siccus, are endemic.

137. Banks, R. C. 1964a. The mammals of Cerralvo Island, Baja California. Trans. San Diego Soc. Nat. Hist. 13:399-404.

Only four native and two feral species of mammals occur on Cerralvo Island, the southernmost of the islands in the Gulf of California, Mexico. Measurements are given for the two mice that are considered to be endemic subspecies: Perognathus arenarius siccus and Peromyscus eremicus avius.

138. Banks, R. C. 1964b. Birds and mammals of the Voyage of the "Gringa." Trans. San Diego Soc. Nat. Hist. 13:177-184.

Between April 9, 1963, and May 15, 1963, a group of biologists from the San Diego Natural History Museum visited 16 Mexican islands on the Pacific coast of Baja California and in the southern part of the Gulf of California. Rodents collected (names of islands on whch they were collected are in parentheses) were: Perognathus baileyi (Monserrate); Perognathus spinatus (Danzante); Peromyscus pseudocrinitus (Coronado); Peromyscus eremicus (Santa Margarita and Carmen); Peromyscus maniculatus (San Martin and San Geronino); Neotoma lepida (Magdalena and Danzante); and Neotoma bryanti (Cedros).

139. Banks, R. C. 1967a. A new insular subspecies of spiny pocket mouse (Mammalia: Rodentia). Proc. Biol. Soc. Wash. 80:101-104.

A new subspecies, Perognathus spinatus lorenzi, is described. The holotype, an adult male, was collected on South San Lorenzo Island, Gulf of California, Baja California, Mexico.

140. Banks, R. C. 1967b. Birds and mammals of La Laguna, Baja California. Trans. San Diego Soc. Nat. Hist. 14:205-232.

An annotated list of 69 species of birds and 18 species of mammals known to occur at La Laguna, in the mountains of the Cape region of Baja, California, Mexico, presents information on their life histories, with special emphasis on breeding biology. Rodents collected were Thomomys bottae alticola, Perognathus spinatus peninsulae, Peromyscus truei lagunae and Neotoma lepida notia.

141. Banks, R. C. 1967c. The Peromyscus guardia-interparietalis complex. J. Mammal. 48:210-218.

Peromyscus interparietalis is considered to be specifically distinct from P. guardia, of which it was originally considered a subspecies. Each species includes three subspecifically distinct populations, each endemic to an island in the northern Gulf of California, Baja California, Mexico.

142. Barbosa, F. S. 1972. Natural infection with Schistosoma mansoni in small mammals trapped in the course of a schistosomiasis control project in Brazil. J. Parasitol. 58(2):405-407.

Infected rodents included Rattus rattus subspp., R. norvegicus, and Oryzomys nigripes. Holochilus brasiliensis showed the largest intensity of infestation (16%).

143. Barbosa, F. S., R. M. Pinto, and O. A. Souza. 1976. Control of Schistosomiasis mansoni in a small northeast Brazilian community Trans. R. Soc. Trop. Med. Hyg. 65(2):206-213.

Of small mammals captured within the area, data on 10 species of rodents are reported over a 7-year period and the change in infestation rate is given. Having over a 10% infestation rate with S. mansoni in various years were: Rattus rattus frugivorous, R. r. alexandrinus, R. r. rattus, R. norvegicus, Oryzomys nigripes, O. subflavus, Holochilus brasiliensis, and Zygodontomys lasiurus.

144. Barlow, J. C. 1969. Observations on the biology of rodents in Uruguay. R. Ont. Mus. Life Sci. Contrib. (Toronto) 75:1-59.

An expedition from the American Museum of Natural History visited the South American Republic of Uruguay between December 1962 and the end of May 1963, to collect mammals and their ectoparasites. More than 630 specimens comprising 16 species of rodents - Oryzomys delticola, O. flavescens, Thomasomys oenax, Akodon azarae, A. obscurus, Oxymycterus nasutus, Scapteromys tumidus, Calomys laucha, Reithrodon physodes, Holochilus brasiliensis, H. magnus, Mus musculus, Cavia pamparum, Hydrochoerus hydrochaeris, Myocastor coypus and Ctenomys torquatus - were collected in woodland, grassland and limnic habitats.

145. Barquez, R. M. 1983. The distribution of Nectomys ebriosus Thomas in Argentina and its presence in the Province of San Juan (Mammalia, Rodentia, Cricetidae. Hist. Nat. (Mendoza) 3(22):189-191. (In Spanish)

The occurrence of Nectomys ebriosus in Argentina is known from three localities in the provinces of Jujuy and Catamarca. A new record from San Juan suggests its range is larger than previously thought.

146. Barquez, R. M., D. F. Williams, M. A. Mares, and H. H. Genoways. 1980. Karyology and morphometrics of three species of Akodon (Mammalia: Muridae) from northwestern Argentina. Ann. Carnegie Mus. 49(22):379-403.

Chromosomal and morphometric studies were conducted on a sample from an assemblage of Akodon spp. occurring in various patterns of sympatry from the provinces of Catamarca, Jujuy, Salta, and Tucuman, Argentina.

147. Barrera, A. 1969. Notes on the behavior of Loberopsyllus traubi, a cucujuid beetle associated with the volcano mouse, Neotomodon alstoni in Mexico. Proc. Entomol. Soc. Wash. 71:481-486.

Observations and simple field experiments were conducted to elucidate the kind of biological associations among the cucujoid beetle, Loberopsyllus traubi and its host the volcano mouse, Neotomodon alstoni. The resulting observations corroborate the extreme adaptation to the host, a condition previously suspected because of the anophthalmia and apterism occurring in this genus of beetle.

148. Barrera, A. and C. Machado-Allison. 1960. A new ectoparasite of Microtus mexicanus mexicanus Saussure: Ctenophthalmus caballeroi sp. n. and a current key to (Insecta: Siphonoptera). Pages 549-553 in A tribute to Dr. Eduardo Cabellero y Caballero. Ed. Politecnica, Mexico. 594 pp. (In Spanish)

149. Barrera, A. and A. Martinez. 1970. A new Mexican cryptofagus, Cryptofagus bolivari sp. n. (Ins. Col.). An. Esc. Nac. Cienc. Biol. Mex. 17:151-156. (In Spanish)

Described is a new species of beetle Cryptophagus bolivari sp. nov. from Nevado de Colima and Mt. Popocatepetl, Mexico, collected at altitudes higher than 3,000 m on the fur of Peromyscus melanotis and Microtus mexicanus.

150. Barrera, A., C. Machado-Alison, and R. Muniz. 1960. A new parasitic coleoptera of rodents: Amblyoninus bolivari sp. n. (Col., Staph.). Cienc. Mex. 20:127-130. (In Spanish)

151. Barretto, M. P. 1964. Studies of wild reservoirs and vectors of Trypanosoma cruzi. IV. Natural infection of Triatoma infestans, found in wild forest ecotopes, caused by a trypanosome resembling T. cruzi. Rev. Inst. Med. Trop. (Sao Paulo) 6:219-224. (In Portuguese)

Precipitin tests were carried out of 17,615 triatomines, 4,517 captured in human dwellings and their annexes and 13,098 collected in natural biotopes. Discussed is how the disease is spread to domestic and wild animals.

152. Barretto, M. P. 1965. Trypanosomes similar to Trypanosoma cruzi in wild animals and their identification as the etiological agent of Chagas' disease. Rev. Inst. Med. Trop. (Sao Paulo) 7:305-315. (In Portuguese)

This paper deals with the problems of identifying mammalian trypanosomes.

153. Barretto, M. P. 1967. Studies on wild reservoirs and vectors of Trypanosoma cruzi: XXI. Observations on the ecology of Panstrongylus geniculatus. Rev. Bras. Biol. 27(4):337. (In Portuguese)

A natural focus of American trypanosomiasis is described in a small residual tropical forest located in a large cultivated area.

154. Barretto, M. P. 1968. Studies on wild reservoirs and vectors of Trypanosoma cruzi. XXXI. Observations on the association between reservoirs and vectors, with special reference to the northeast region of the state of Sao Paulo. Rev. Bras. Biol. 28:481-494. (in Portuguese)

Extensive investigations carried out in the hydrographic basins of Rio Grande River and Paranaiba River, in Brazil, showed the presence of P. geniculatus in various new localities. Most of the specimens were collected in armadillo burrows; smaller numbers were obtained from rock cavities inhabited by "pacas," rats and opossums.

155. Barretto, M. P. 1971. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. XLV: Preliminary survey on wild triatomines in the southern region of the state of Mato Grosso, Brazil (Hemiptera, Reduviidae). Rev. Bras. Biol. 31(2):225-233. (In Portuguese)

In southern Mato Grosso, Brazil, 1,716 specimens of triatomines belonging to 7 species were collected in various types of natural biotopes: tree holes, palm trees, plants, rock cavities and nests. The triatomines feed on birds, opossums, rats and bats.

156. Barretto, M. P. and R. D. Ribeiro. 1972. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. LIII: Natural infection of the rat, Wiedomys pyrrhorhinus (Wied. 1821) by T. cruzi. Rev. Bras. Biol. 32(4):595-600. (In Portuguese)

A strain of Trypanosoma cruzi was isolated from a Wiedomys pyrrhorhinus trapped at Pouso Alegre, MG, Brazil. All mice and rats inoculated with the trypanosome became infected.

157. Barretto, M. P. and R. D. Ribeiro. 1979. Wild reservoirs of Trypanosoma (Schizotrypanum) cruzi, Chagas 1909. Rev. Inst. Adolfo Lutz 39(1):25-36. (In Portuguese)

A list of wild animals found with natural infection of Trypanosoma cruzi in the different countries of the South American continent. The importance of the various groups of reservoirs in the epidemiology of American trypanosomiasis is discussed.

158. Barretto, M. P. and R. D. Ribeiro. 1981a. Studies on trypanosomes belonging to the subgenus Herpetosoma, Doflein 1901, in wild rodents, with the descriptions of three new species. Rev. Bras. Biol. 41(3):485-497. (In Portuguese)

In a study of rodents trapped in the states of Sao Paulo and Minas Gerais, Brazil, two species of trypanosomes were found and redescribed: T. coutinhoi from Agouti paca paca and T. forattinii from Oryzomys nigripes. In addition three new species are described: T. pattolli from Dasyprocta azarae azarae, T. siqueirai from Echimys nigrispinus and T. ferriolli from Oryzomys subflavus.

159. Barretto, M. P. and R. D. Ribeiro. 1981b. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. LXXVII: Observation on the ecology of Triatoma arthurneivai Lent and Martins, 1940. Rev. Bras. Biol. 41(2):317-320. (In Portuguese)

Triatoma arthurneivai were collected at several localities in the Alto Sao Francisco area, Minas Gerais, Brazil. The insects were found among loose stones and ruins of stone walls where they feed on rodents and lizards. Two specimens were found positive for Trypanosoma cruzi.

160. Barretto, M. P., R. D. Ribeiro, and F. M. B. Neto. 1978. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. LXVIII: The infection of mammals by oral route. Rev. Bras. Biol. 38(2):455-459. (In Portuguese)

Mice, rats, dogs, cats, guinea pigs and opossums were fed triatomines infected with Trypanosoma cruzi. Seventy-five percent of the opossums became infected and 100% of the other animals became positive. The results indicate that feeding on infected mammals by other animals is a route for the spread of T. cruzi.

161. Barretto, M. P., A. F. Siqueira, and J. L. Freitas. 1964. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. II: The occurrence of Panstrongylus megistus in outdoor ecotypes in the state of Sao Paulo, Brazil (Hemiptera, Reduviidae). Rev. Inst. Med. Trop. Sao Paulo 6(2):56-63. (In Portuguese)

Panstrongylus megistus were collected from 37 localities in the state of Sao Paulo, Brazil. They were found in opossum burrows, rodent burrows and bird nests. The infection rate by cruzi-like trypanosomes was 27.5%.

162. Barretto, M. P., A. F. Siqueira, F. Ferriolli, Jr., and J. D. R. Carvalheiro. 1966. Studies on the reservoirs and wild vectors of Trypanosoma cruzi in the municipality of Ribeirao Preto, Sao Paulo. XI: Observations on a natural focus of American trypanosomiasis. Rev. Inst. Med. Trop. Sao Paulo 8(3):102-112. (In Portuguese)

Among the mammals found positive for Trypanosoma cruzi were Akodon arviculoides cursor, Cavia aperea aperea and Rattus norvegicus.

163. Barretto, M. P., A. F. Siqueira, F. Ferriolli, Jr., and J. D. R. Carvalheiro. 1967. Studies on wild reservoirs and vectors of Trypanosoma cruzi. XX. Natural infection of commensal rats, captured in natural and artificial biotopes by cruzi-like trypanosomes. Rev. Bras. Biol. 27:145-156. (In Portuguese)

The epidemiological importance of commensal rats is due to the relatively high infestation indices and to their presence in artificial niches. Triatoma vectors are given.

164. Barros, M. A. and O. A. Reig. 1979. Double Robertson polymorphism in Microxus bogotensis (Rodentia: Cricetidae) from the alpine plains of Mucubaji (Merida, Venezuela). Acta Cient. Venez. 30:106. (In Spanish)

165. Barros, R. 1978. Chromosomal variability in Proechimys and Oryzomys (Rodentia) from the Amazon. Unpublished Ph.D. dissertation, Univ. of Sao Paulo, Sao Paulo, Brazil. (In Portuguese)

166. Barroso, C. M. L. and R. Barros. 1978. A cytogenetical study of Zygodontomys from the Amazon. Cienc. Cult. 30:514. (In Portuguese)

167. Basanez, M. G. and O. A. Reig. 1981. The contact zone hybridization among the chromosomal forms 2n = 46, 2n = 50 in the superspecies Proechimys guairae (Rodentia, Echimyidae). Acta Cient. Venez. 31 (Supplement I):65. Abstract only. (In Spanish)

168. Baskin, J. A. 1978. Bensonomys, Calomys, and the origin of the phyllotine group of neotropical cricetines (Rodentia: Cricetidae). J. Mammal. 59:125-135.

The Late Miocene to Pleistocene North American genus Bensonomys is recognized as a subgenus of the Pleistocene and Recent South

American genus Calomys. Characters of this material examined indicate that Calomys is derived from Copemys, the cricetine which is also ancestral to Peromyscus. The phyllotine group of South American cricetines initially evolved in North America and did not enter South America until the Panamanian land bridge was established.

169. Basso, B., A. Eraso, E. Moretti, I. Albesa, and F. O. Kravetz. 1977. Natural infection of Calomys musculinus (Rodentia: Cricetidae) with Trypanosoma cruzi. Rev. Asoc. Argent. Microbiol. 9:11-16. (In Spanish)

In the rural area of Las Higueras, Rio Cuarto, Cordoba, Argentina, a trypanosoma was isolated from a Calomys musculinus and classified as Trypanosoma cruzi.

170. Basso, B., E. Moretti, I. Albesa, A. Eraso, and F. O. Kravetz. 1982. Natural infection of Akodon dolores, Thomas, 1916 (Rodentia, Cricetidae) by Trypanosoma cruzi. Rev. Inst. Med. Trop. Sao Paulo 24:21-26. (In Portuguese)

A morphobiometric and biological study of three strains of trypanosomes isolated from a population of Akodon dolores in the semi-rural area of Las Higueras, Province of Cordoba, Argentina, proved that they were all T. cruzi.

171. Bassols, I. 1975. Mesostigmata ectoparasites of mammals in Mexico with special reference to the subfamily Laelapinae (Acari: Parasitiformes). Unpublished Ph.D. dissertation, Esc. Nac. Ciencias Biologicas, IPN, Mexico. (In Spanish)

172. Bassols, I. 1979. Mesostigmata ectoparasites on mammals in Mexico. Recent Adv. Acarol. II:478-480.

173. Bassols, I. 1981. A catalog of the Mesostigmata mites of mammals in Mexico. An. Esc. Nac. Cienc. Biol. Mex. 24:9-49. (In Spanish)

This paper presents the result of a survey on Mesostigmatic mites associated externally with mammals in Mexico. Data on genera and species found are presented in a systematic form and include 22 genera and 61 species. From these 8 genera, 2 subgenera and 36 species are found for the first time in Mexico.

174. Bates, J. F. 1960. Rodent control in sugarcane in British Guiana. Proc. Br. W. Indies Sug. Technol. pp. 61-67.

175. Bates, J. F. 1963. The cane field rat in British Guiana and its control. Proc. Int. Soc. Sugar Cane Technol. 11:695-704.

The cane-field rat Holochilus sciureus berbicensis is a major pest of sugarcane in British Guiana. Details are given of its life history, the damage it causes and the control measures used.

176. Bates, J. F. 1966. Developments in rodent control in Guyana. Proc. Br. W. Indies Sug. Technol. 1966:224-232.

177. Bates, J. F. 1969. Rodents in sugarcane. Pages 541-561 in J. R. Williams, J. R. Metcalfe, R. W. Mungomery and R. Mathes, Eds. Pests of Sugar Cane. Elsevier, Amsterdam.

Thirty-five or more species of rodents, most belonging to the Cricetidae and Muridae, the New and Old World rats, respectively, attack sugarcane. Indigenous species may be important, but the black and brown Murine rats have spread to most cane-growing regions and are major pests.

178. Baumgardner, G. D. and D. J. Schmidly. 1981. Systematics of the southern races of two species of kangaroo rats (Dipodomys compactus and D. ordii). Occas. Pap. Mus. Tex. Tech. Univ. No. 73. 27 pp.

Geographic distribution for Dipodomys ordii and D. compactus are given for south Texas and on the adjacent barrier islands of Texas and Tamaulipas, Mexico.

179. Beaucournu, J. C. and M. H. Gallardo. 1977. Some new fleas from Chile (Siphonaptera) that are parasites of Ctenomys (Rodentia, Octodontidae). Bull. Soc. Pathol. Exot. Ses. Fil. 70:438-450. (In Spanish)

180. Beaufort, F. de. 1963. The Cricetid rodents of the Galapagos Islands. The impact of the genus Nesoryzomys. Mammalia 27:338-340. (In French)

Compares morphological characters between Oryzomys bauri and Nesoryzomys narboroughi.

181. Bellocq, M. I. and F. O. Kravetz. 1983a. Specific identification and determination of rodent relative age and sex from bones from the Province of Buenos Aires, Argentina. Hist. Nat. (Mendoza) 3(10):101-112. (In Spanish)

A systematic key to identifying rodent species from Diego Gaynor (Province of Buenos Aires) was devised using molar series features.

182. Bellocq, M. I. and F. O. Kravetz. 1983b. Some predation traits of Athene cunicularia on rodents in the Argentine pampean agroecosystem. I Symp. Ornithol. Neotrop. (IX CLAZ Peru, Oct. 1983). pp. 55-60. (In Spanish)

In the Argentine pampean agroecosystems the burrowing owl, Athene cunicularia, is an opportunistic predator, which mostly consumes rodents from field borders in response to high prey densities. Rodents collected in the study were: Akodon azarae, Oligoryzomys flavescens, Calomys musculinus and C. laucha.

183. Benado, M., M. Aguilera, and O. A. Reig. 1978. Small genetic distance among distinctive chromosome forms of spiny rats (Proechimys), (Rodentia: Echimyidae) from Venezuela. Congr. Theriol. Int. 2:80. Abstract only.

184. Benado, M., M. Aguilera, O. A. Reig, and F. Ayala. 1979. Biochemical genetics of chromosome forms of Venezuelan spiny rats of the Proechimys guairae and Proechimys trinitatis superspecies. Genetica 50:89-97.

Spiny rats from Venezuela show an extensive karyotypic diversification (2n = 24 to 2n = 62) and little morphological differentiation. This study reports genetic distance, heterozygosity and polymorphism based upon 22 loci in semispecies and allospecies of the Proechimys grairae superspecies from N. Central Venezuela, as compared with Proechimys urichi, a member of the Proechimys trinitatis superspecies from eastern Venezuela.

185. Benshoof, L., T. L. Yates, and J. W. Fraehlich. 1984. Noteworthy records of mammals from Eastern Honduras. Southwest. Nat. 29:511-514.

A survey of the mammals of the Rio Platano Biosphere Reserve in the Department of Gracias a Dios was made from January to March, 1981. Four new species were found in Honduras: (Philander opossum, Ectophylla alba, Oryzomys bombycinus, and Tylomys nudicaudus.

186. Berlin, B. and J. L. Patton. 1979. A classification of the mammals from Aguaruna, Amazonas, Peru. Language Behavior Research Laboratory, Berkeley, California. (In Spanish)

187. Bernal Landin, J. A. 1981. Mapping present populations of beaver (Castor canadensis) in Nuevo Leon, Mexico. U.S. For. Serv. Gen. Tech. Rep. WO-28. pp. 309-314. (In Spanish)

188. Berry, D. L. and R. J. Baker. 1972. Chromosomes of pocket gophers of the genus Pappogeomys, subgenus Cratogeomys. J. Mammal. 53:303-309.

Pappogeomys fumosus, P. tylorhinus, P. zinseri and P. gymnurus have indistinguishable karyotypes consisting of a diploid number of 40 and a fundamental number of 76. Pappogeomys castanops has a northern chromosomal race with a diploid number of 46 and southern race with a diploid number of 42. Pappogeomys castanops were collected in the USA and Mexico. All other species were collected in Mexico.

189. Best, T. L. 1976. Morphologic variation in kangaroo rats (Genus, Dipodomys) of the Heermanni group in Baja California, Mexico. Unpublished Ph.D. dissertation, Univ. Okla. 101 pp.

190. Best, T. L. 1978. Variation in kangaroo rats (Genus, Dipodomys) of the Heermanni group in Baja California, Mexico. J. Mammal. 59(1):160-175.

Variation in skin and skeletal measurements of kangaroo rats (genus Dipodomys) was evaluated using 265 specimens from 11 localities in Baja California, Mexico. The data indicate that there are only two species of kangaroo rats (D. agilis and D. gravipes) of the heermanni group in Baja California.

191. Best, T. L. 1981a. Relationships between ecogeographic and morphologic variation of the agile kangaroo rat (Dipodomys agilis) in Baja California, Mexico. Bull. South. Calif. Acad. Sci. 80:60-69.

Interlocality variation in temperature and precipitation were analyzed for 11 localities in Baja California, Mexico, where kangaroo rats (Dipodomys agilis) were collected. Correlations between these data and kangaroo rat morphologic variation were determined. Principal component I (size) of the morphologic data was significantly correlated with latitude and longitude for both sexes.

192. Best, T. L. 1981b. Bacular variation in kangaroo rats (Genus Dipodomys) of the Heermanni group in Baja California, Mexico. Southwest. Nat. 25:529-534.

Variation in kangaroo rat (Dipodomys) bacula was evaluated using 124 specimens collected from 11 localities in Baja California, Mexico.

193. Best, T. L. 1982. Relationships of the burrows of Baja California kangaroo rats to ecogeographic and morphologic variation. J. Mammal. 63(3):532-536.

Burrow variations were studied at 10 localities in Baja California. The study was to determine if geographic variation in kangaroo rat burrows (Dipodomys agilis) exist and whether the variation was correlated with that observed for morphologic and ecogeographic variables.

194. Best, T. L. 1983a. Morphologic variation in the San Quintin kangaroo rat (Dipodomys gravipes Huey 1925). Am. Midl. Nat. 109(2):409-413.

Variation was evaluated in 110 specimens of Dipodomys gravipes from Baja California, Mexico. There was significant secondary sexual dimorphism in size for 7 of 19 characters (males were largest), and significant intersample heterogeneity for 14 of the 19 characters. Populations near El Rosario are larger than those in the northern part of the range, and are probably geographically isolated. There are habitat differences that could partially account for the observed variation.

195. Best, T. L. 1983b. Intraspecific variation in the agile kangaroo rat (Dipodomys agilis). J. Mammal. 64(3):426-436.

Intraspecific variation in external and cranial measurements of agile kangaroo rats (Dipodomys agilis) was evaluated using 3,078 adult specimens (1,694 males and 1,384 females). Males were larger than females for 17 of 19 characters examined, and significant geographic variation occurred in all characters for both sexes.

196. Bianchi, N. O. and J. R. Contreras. 1967a. The mechanism of sex determination in the field mouse Akodon azarae (Rodentia: Cricetidae). Rev. Argent. Endocrinol. Metab. 13:157-167. (In Spanish)

197. Bianchi, N. O. and J. R. Contreras. 1967b. The chromosomes of the field mouse Akodon azarae (Cricetidae: Rodentia) with special reference to sex chromosome anomalies. Cytogenetics 6:306-313.

The chromosomes of the field mouse Akodon azarae were investigated. In males the diploid chromosome n = 38 plus XY. Four types of chromosome constitutions were found in females: (a) 38 chromosomes with XX sex chromosomes; (b) 38 chromosomes with Xx; (c) 38/37 with Xx/XO; and (d) 37 chromosomes with an XO sex chromosome complement.

198. Bianchi, N. O. and J. R. Contreras. 1968. Sex chromosome polymorphism in two subspecies of Akodon. Proc. XII Int. Congr. Genet. 1:205.

199. Bianchi, N. O. and M. S. Merani. 1981. Chromosome I polymorphism and viability in Akodon (Rodentia, Cricetidae). Pages 211-233 in O. A. Reig, ed. Ecologia y Genetica de la Especiacion Animal. Caracas: Editorial Equinoccio, Univ. Simon Bolivar.

200. Bianchi, N. O. and M. S. Merani. 1984. Cytogenetics of South American Akodont rodents (Cricetidae). X. Karyological distances at generic and intergeneric levels. J. Mammal. 65(2):206-219.

G-banding was employed to analyze the extent of chromosomal homology in seven akodontine species related at generic and suprageneric levels (Akodon molinae, A. dolores, A. varius, A. azarae, A. mollis, A. urichi and Bolomys obscurus). A high rate of chromosomal divergence seems to indicate that akodont rodents underwent an active process of cladogensis, which was highly correlated with chromosomal rearrangements. A. mollis were collected in Ecuador, A. urichi in Venezuela and all other species were collected in Argentina.

201. Bianchi, N. O., J. R. Contreras, and F. N. Dulout. 1969. Intraspecies autosomal polymorphism and chromosome replication in Akodon molinae (Rodentia: Cricetidae). Can. J. Genet. Cytol. 11:233-242.

Eight Akodon molinae trapped in the area of Chasico Lake, Province of Buenos Aires, Argentina, were studied. In five animals (three males and two females) the diploid chromosome number was 42; the other three (one male and two females) had a modal number of 43. Studies of sex chromosomes replication showed that the Y chromosome was the last to start and to end DNA synthesis in male complements. In females, one X chromosome was the last to start replication. No sex chromatin could be detected in females.

202. Bianchi, N. O., F. N. Dulout, and J. R. Contreras. 1968. Sex chromosome replications and sex chromatin in Akodon azarae (Rodentia: Cricetidae). Theor. Appl. Genet. 38:343-347.

Sex chromosome length, sex chromatin area and the pattern of sex chromosome replication were determined in the field mouse, Akodon azarae.

203. Bianchi, N. O., M. S. Merani, and M. S. Lizarralde. 1979a. Cytogenetics of the South American akodont rodents (Cricetidae). V. Segregation of chromosome No. 1 polymorphism in Akodon molinae. Experientia 35:1438-1439.

204. Bianchi, N. O., M. S. Merani, and M. S. Lizarralde. 1979b. Cytogenetics of the South American akodont rodents (Cricetidae). VI. Polymorphism in Akodon dolores (Thomas). Genetica 50:99-104.

The cytogenetic analysis of 68 specimens of Akodon dolores collected in three different localities of the central region of Argentina showed the presence of chromosomal polymorphisms of the Robertsonian type in chromosomes 1, 3, 4, and 5. The variability of chromosomes 3, 4, and 5 was correlated with the geographical area of collection.

205. Bianchi, N. O., L. Vidal-Rioja, and M. S. A. Bianchi. 1973. Constitutive heterochromatin G-bands and Robertsonian rearrangements in the chromosomes of Akodon molinae (Rodentia: Cricetidae). Can. J. Genet. Cytol. 15:855-861.

The cytogenetic study of a population of A. molinae showed individuals with 2n = 42 chromosomes including a large metecentric pair (chromosome 1); individuals with 43 chromosomes having one chromosome 1 and two large subterminal elements (chromosomes 1a and 1b); and animals with 44 chromosomes having a pair of 1a and a pair of 1b chromosomes. The analysis of chromosome length combined with g- and c-bands indicate that there are only two probable mechanisms of chromosome rearrangement explaining the pair 1 polymorphism.

206. Bianchi, N. O., L. Vidal-Rioja, and M. S. A. Bianchi. 1976. Cytogenetics of the South American akodont rodents (Cricetidae). II. Interspecific homology of G-banding patterns. Cytologia 41:139-144.

The presence of shared chromosomes in Akodont rodents was analyzed by comparing the distribution of G-bands (such as produced by mild trypsin digestion of chromosomes) in the karyotypes from three species: Akodon molinae, Akodon azarae, and Akodon obscurus.

207. Bianchi, N. O., O. A. Reig, O. J. Molina, and F. N. Dulout. 1971. Cytogenetics of the South American akodont rodents (Cricetidae). I. A progress report of Argentinian and Venezuelan forms. Evolution 25:724-736.

The chromosome complement of bone marrow, spleen and testis was analyzed on 14 species and 6 subspecies of akodont rodents.

208. Bianchi, N. O., C. A. Redi, C. Garagna, E. Capanna, and M. G. Manfredi-Romanini. 1983. Evolution of the genome size in Akodon (Rodentia, Cricetidae). J. Mol. Evol. 19:362-370.

Nuclear DNA contents were estimated by microdensitometry in five species of Akodon rodents: Akodon molinae, A. dolores, A. mollis, A. azarae, Bolomys obscurus and in three chromosomal varieties of A. molinae (2n = 42, 2n = 43, 2n = 44). The data obtained showed that the species with the highest DNA content was B. obscurus, followed in order of decreasing genome size by A. molinae, A. mollis, A. dolores and A. azarae. In A. molinae the forms with 2n = 42 chromosomes had the lowest and the forms with 2n = 44 the highest amount of DNA, while the forms with 2n = 43 had intermediate DNA contents.

209. Birney, E. C. and H. H. Genoways. 1973. Chromosomes of Spermophilus adocetus (Mammalia: Sciuridae), with comments on the subgeneric affinities of the species. Experentia 29:228-229.

The karyotype for a male Spermophilus adocetus captured at Xalitla, Guerrero, Mexico, is described. It has a diploid number of 32 with 14 metacentric and 16 submetacentric autosomes.

210. Birney, E. C. and J. K. Jones, Jr. 1972. Woodrats (genus Neotoma) of Sinaloa, Mexico. Trans. Kans. Acad. Sci. 74:197-211.

Four species of rats of the genus Neotoma were collected in Sinaloa, N. albigula, N. mexicana, N. alleni, and N. phenax.

211. Birney, E. C., J. B. Bowles, R. M. Timm, and S. L. Williams. 1974. Mammalian distributional records in Yucatan and Quintana Roo, with comments on reproduction, structure and status of peninsular populations. Occas. Pap. Bell Mus. Nat. Hist. Univ. Minn. 13:1-25.

Specimens of 1 marsupial, 25 species of bats, 1 edentate, 12 species of rodents, and 5 carnivores are reported from localities

in Yucatan and Quintana Roo. Rodents poorly known from the peninsula and represented in this collection were Heteromys gaumeri and Coendou mexicanus.

212. Bishop, I. R. 1974. An annotated list of caviomorph rodents collected in northeastern Mato Grosso, Brazil. Mammalia 38(3):489-502.

Rodents collected on the Serra do Roncador, Mato Grosso, Brazil, were: Proechimys sp., Clyomys laticeps, Carterodon sulcidens, Cavia aperea, Galea sp., Dasyprocta azarae, Cuniculus paca, and Hydrochoerus hydrochaeris.

213. Bjornson, B. F., H. D. Pratt, and K. S. Littig. 1972. The control of rats and domestic mice - a guide, series for the control of rodents, AID, Mexico-Buenos Aires, pp. 1-41. (In Spanish)

214. Blanco, S., G. Ceballos, C. Galindo, M. Maass, A. Pescador, A. Suarez, and R. Patron. 1981. The ecology of Zoquiapan experimental station: A general description and the flora and fauna. Univ. Auton. Chapingo, Cuadernos Universitarios 2:1-142. (In Spanish)

This publication deals with the generalities of the Parque Nacional Zoquiapan, in the state of Mexico. It includes a description of the habitats and checklists of vertebrates and the flora. There is a brief section describing the natural history of the mammals, including the following rodent species: Microtus mexicanus, Neotomodon alstoni, Peromyscus maniculatus, Peromyscus melanotis, Neotoma mexicana, Reithrodontomys chrysopsis, Reithrodontomys sumichrasti, Pappogeomys merriami, Spermophilus mexicanus and Sciurus aureogaster.

215. Blender, D. C. 1971. Survey report and recommendations for rodent control program to alleviate leptospirosis disease problem in Barbados, West Indies. Rep. PAHO/WHO Re. BARB/0700/ZI-5189-71.

216. Blood, B. D., B. Szyfres, and V. Moya. 1963. Natural Leptospira pomona infection in the pampas cavy. Public Health Rep. 78(6):537-542.

Concludes the pampas cavy, Cavia pamparum, prevalent throughout the most important cattle-producing areas of Argentina and Uruguay, may play a role in the epizootiology of bovine leptospirosis, and of possible danger to the rural human population.

217. Bogan, M. A. and D. F. Williams. 1975. Neotoma micropus in Chihuahua. Southwest. Nat. 20:278-279.

First capture of a Neotoma micropus from central Chihuahua.

218. Boher, B. S. 1981. Biometrics and geographical distribution of the common squirrel Sciurus granatensis Humboldt (Rodentia: Sciuridae) in Venezuela. Special study. Escuela de Biologia, Universidad Central de Venezuela, Caracas. 177 pp. (In Spanish)

219. Bonaventura, S. M. and F. O. Kravetz. 1984. The relationship between rodents and vegetation: A preliminary study. Mus. Argent. Cienc. Nat. "Bernardino Rivadavia" 13(46):445-451. (In Spanish)

Indices of rodents were made in different vegetational habitats in Argentina. Rodents collected were Akodon azarae, Oligoryzomys flavescens and Calomys laucha.

220. Bond, S. I. 1969. Type specimens of mammals in the San Diego Natural History Museum. Trans. San Diego Soc. Nat Hist. 15:252-263.

The mammal collections of the San Diego Society of Natural History contains the holotypes of 55 subspecies of rodents from Mexico. Also found in the collections are the holotypes for three species from Mexico: Dipodomys parlius, Dipodomys gravipes, and Dipodomys antiquarius.

221. Bonoff, M. B. and D. H. Janzen. 1980. Small terrestrial rodents in eleven habitats in Santa Rosa National Park, Costa Rica. Brenesia (Costa Rica) 17:163-174.

Rodents were captured with live-traps from 11 different locations in the Santa Rosa National Park. Species collected were Liomys salvini, Sigmodon hispidus, and Oryzomys flavescens.

222. Borba, P. 1961. Chagas' disease. Rev. Clin. Esp. 80:297-302. (In Spanish)

223. Borchert, M. and R. L. Hansen. 1983. Effects of flooding and wildfire on valley side wet campo rodents in central Brazil (Brasilia National Park). Rev. Bras. Biol. 43:229-239. (In Portuguese)

The ecology of three species of rodents, Oxymycterus roberti, Zygodontomys lasiurus and Plectomys paludicola was studied for 11 months in a burned and unburned valley side wet campo near Brasilia, Brazil.

224. Borrero H., J. I. 1967. Neotropical Mammals. Universidade del Valle, Departmento de Biologia, Cali, Colombia. 110 pp. (In Spanish)

225. Botelho, J. R. and P. M. Linardi. 1980. Some ectoparasites of wild rodents of Caratinga County, Minas Gerais, Brazil. I. Flea-host relations. Rev. Bras. Entomol. 24:127-130. (In Portuguese)

Fleas were collected from wild rodents in Caratinga county, Minas Gerais, Brazil. Twelve species of rodents were captured.

226. Botelho, J. R. and P. Williams. 1980. Ectoparasites on wild rodents from the municipality of Caratinga, Minas Gerais, Brasil. II. Acarofauna. Mem. Inst. Oswaldo Cruz Rio De J. 75(3-4):47-51. (In Portuguese)

The authors captured mites from wild rodents in the county of Caratinga, State of Minas Gerais, Brazil, between April 1976 and March 1977. One hundred and sixty-nine wild rodents of 10 species were captured and 2,444 mites of 11 species were collected.

227. Boulenge, E. Le and E. R. Fuentes. 1978. Preliminary population dynamics of Octodon degus. Congr. Theriol. Int. 2:180. Abstract only.

228. Bowers, J. H. 1974. Genetic compatibility of Peromyscus maniculatus and Peromyscus melanotis, as indicated by breeding studies and morphometrics. J. Mammal. 55:720-737.

Reproductive compatibility, skull morphometrics, color of pelage, and size and structure of bacula and sperm were compared in nine populations of Peromyscus maniculatus and P. melanotis from the southwestern United States and Mexico.

229. Bowers, J. H., R. J. Baker, and M. H. Smith. 1973. Chromosomal, electrophoretic and breeding studies of selected populations of deer mice (Peromyscus maniculatus) and black-eared mice (P. melanotis). Evolution 27:378-386.

Chromosomal polymorphism and geographic variation in chromosomes and electrophoretic patterns are reported for Peromyscus maniculatus and P. melanotis from southwestern U.S. and Mexico.

230. Bradley, W. G. and E. L. Cockrum. 1968. A new subspecies of the meadow vole (Microtus pennsylvanicus) from northwestern Chihuahua, Mexico. Am. Mus. Novit. 2325:1-7.

Specimens of Microtus collected in the Mexican state of Chihuahua represent a highly localized relict population which belongs to the Microtus pennsylvanicus group and differ significantly from the nearest adjacent populations of this group. This relict population is recognized as a distinct subspecies: Microtus pennsylvanicus chihuahuensis. The holotype, an adult female, was collected 3 miles southeast of Galeana, Chihuahua.

231. Bradshaw, G. R. and B. J. Hayward. 1960. Mammal skulls recovered from owl pellets in Sonora, Mexico. J. Mammal. 41:282-283.

Barn owl pellets, Tyto alba, were collected from a cave 1 mile west of Mayterrena, Sonora, Mexico. Skeletal remains of rodents were identified as Mus musculus, Perognathus sp., P. flavus, P. baileyi, Sigmodon hispidus, Reithrodontomys sp., R. burti, Dipodomys merriami and Peromyscus eremicus. Mus musculus was the most abundant species.

232. Brand, L. R. and R. E. Ryckman. 1969. Biosystematics of Peromyscus eremicus, P. guardia and P. interparietalis. J. Mammal. 50:501-513.

The taxonomic relationship of Peromyscus eremicus, P. guardia, and P. interparietalis was investigated using hybridization, morphological characters, and blood serum protein electrophoresis.

233. Bredas, J. 1978. Chemical control of small rodents in young palm groves. Oleagineaux 23(1):15-17.

Gives two different formulas for making rodent baits.

234. Brennan, J. M. 1960. Eight new species of Pseudoschongastia from Mexico and Panama with a revised key to species (Acarina: Trombiculidae). Acarologia 2:480-492.

Eight new species of Pseudoschongastia are described from Mexico and Panama. Some of the species were collected from these rodents: (Mexico) Peromyscus mexicanus and Baiomys musculus; (Panama) Oryzomys talamancae, Sigmodon hispidus and Liomys adspersus.

235. Brennan, J. M. 1968. A collection of chiggers (Acarina: Trombiculidae) from rodents in southwestern Colombia. J. Parasitol. 54(4):679-685.

Eighteen species of chiggers (eight new) are recorded from southwestern Colombia, south of Cali and west of Popayan. Rodents involved were Oryzomys albigularis, Heteromys australis, Thomasomys fuscatus, Thomasomys cinereiventer, and Oryzomys caliginosus.

236. Brennan, J. M. 1970a. A small collection of chiggers from Surinam (Acarina: Trombiculidae). Bull. South. Calif. Acad. Sci. 69(1):32-37.

Nine species of chiggers, one of them new, are recorded for the first time from Surinam and Brazilian rodents, including Oryzomys macconnelli.

237. Brennan, J. M. 1970b. Chiggers from the Bolivian-Brazilian border (Acarina: Trombiculidae). J. Parasitol. 56(4):807-812.

Twenty species of chiggers were recorded and their hosts given. Four new species were found. A common host among rodents was Oryzomys capito.

238. Brennan, J. M. and E. K. Jones. 1961. Chiggers of Peru (Acarina: Trombiculidae). Acarologia 3:172-205.

Thirty-seven species of chiggers, including 17 new species and a new genus, Fereus, are described.

239. Brennan, J. M. and C. E. Yunker. 1966. The chiggers of Panama (Acarina: Trombiculidae). Pages 221-266 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago.

Keys to Panamanian genera and species and a host list are presented.

240. Brooks, J. E. 1980. Assignment report rodent control in the Bahamas 1-21 September 1980. WHO AMRO/BAH-0100. 20 pp.

241. Brosset, A. 1963. Mammals of the Galapagos Islands. Mammalia 27:323-338. (In French)

Reports on species of Oryzomys and other rodents.

242. Brosset, A. and F. de Beaufort. 1963. Distribution of the mammals of the Galapagos Islands. Mammalia 27:341. (In French)

Besides the Cricetinae, the distribution of Rattus and Mus is given.

243. Brower, L. P., B. E. Horner, M. A. Marty, C. M. Moffitt, and B. Villa-R. 1985. Mice (Peromyscus maniculatus, P. spicilegus, and Microtus mexicanus) as predators of overwintering monarch butterflies (Danaus plexippus) in Mexico. Biotropica 17(2):89-99.

The discovery of accumulations of monarch butterfly wings on the forest floor beneath a 2,125 ha aggregation of overwintering butterflies in the Sierra Chincua, Michoacan, Mexico, suggested that small mammals prey upon these butterflies. During two trapping sessions in 1979 and 1980, we captured 112 Peromyscus maniculatus labecula, three Peromyscus spicilegus, and one Microtus mexicanus salvus. Feeding experiments showed all three species ate monarch butterflies and Peromyscus maniculatus labecula killed and ate an average of 25 butterflies per night.

244. Browne, C. O. 1982. Rodent control in Barbados. Proc. Vertebr. Pest Conf. 10:109-115.

In 1978 the Ministry of Health created a Rodent Control Unit. The objectives were to make the public aware of the need for rodent control and to distribute anticoagulant baits. The anticoagulant was not identified.

245. Brum, N. 1962. Cytogenetical investigations of some cricetid species (Rodentia) in Uruguay. An. Congr. Lat. Am. Zool. 2:315-320. (In Spanish)

246. Brum, N., N. Lafuente, and P. Kiblisky. 1973. Cytogenetic studies in the cricetid rodent Scapteromys tumidus (Rodentia-Cricetidae). Experientia 28:1373.

Five male and two female Scapteromys tumidus collected from different localities in Uruguay were used in this cytogenetic study. All specimens were found to have identical chromosomal complements with a diploid number of 2n = 24.

247. Buchanan, O. M. and T. R. Howell. 1965. Observations on the natural history of the thick-spined rat, Hoplomys gymnurus. Ann. Mag. Nat. Hist. Ser. 13 8:549-559.

Samples of the little-known thick-spined rat were obtained in northeastern Nicaragua and observations on its natural history and behavior were recorded in the field. This rodent was found to inhabit burrows in the steep, sandy bank of a small creek.

248. Buchanan, O. M. and T. R. Howell. 1967. Zoogeography of Scotinomys in Middle America, with the description of a new subspecies from Nicaragua. J. Mammal. 48(3):414-419.

The distribution of the cricetid rodent genus Scotinomys is briefly reviewed, and its distribution as a Middle American endemic is shown to coincide with the distribution of cloud forest, or upper humid montane forest. A new subspecies S. teguina stenopygius is described from north-central Nicaragua.

249. Bucher, E. H. and C. J. Schofield. 1981. Economic assault on Chagas' disease. New Sci. 92(1277):321-324.

The parasites that cause the fatal Chagas' disease infect 10 million people in South America. Research concentrates on producing drugs, vaccines, and insecticides. This paper looks at land-management as a better alternative.

250. Bundy, D. A. P. and J. H. Steele. 1984. Parasitic zoonoses in the Caribbean Region - A review. Int. J. Zoonoses 11(1):1.

251. Burt, W. H. and R. A. Stirton. 1961. The mammals of El Salvador. Univ. Mich. Mus. Zool. (Ann Arbor) Misc. Publ. No. 111. 69 pp.

Includes an account of species in the order Rodentia.

252. Busch, M., F. O. Kravetz, R. E. Percich, and G. A. Zuleta. 1984. Recommendations for the ecological control of Argentinian Hemorrhagic Fever through management habitat. Medicina (Buenos Aires) 44:34-40. (In Spanish)

Rodent population densities were compared in different crops, especially soybeans and corn fields, in order to appraise the feasibility of an ecological control for Argentinian Hemorrhagic Fever (AHF). Results show that (1) soybean fields exhibited lower rodent densities, especially for Calomys spp., than corn or sunflower fields; (2) winter crops (wheat, oats, linseed) showed uniformly low densities; (3) grazing after harvest and before corn sowing depressed rodent densities during the following season. The incidence of AHF has decreased over the last decade with the increase in soybean production. Based upon these observations it is recommended to promote the sowing of soybeans instead of corn or sunflowers in high AHF incidence areas and encourage intensive grazing of stubble after harvest.

253. Caballero, J. 1970. A description of Brachylaemus (Brachylaemus) bravoae, sp. n. (Trematoda: Digenea) in rodents from the state of Jalisco, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 41:39-44. (In Spanish)

254. Cabrera, A. 1961. A catalog of South American mammals. II. (Sirenia, Perrissodactyla, Artiodactyla, Lagomorpha, Rodentia, Cetacea). Rev. Mus. Argent. Cienc. Nat. "Bernardino Rivadavia" Inst. Nac. Invest. Cienc. Nat. Zool. 4:309-732. (In Spanish)

255. Cabrera, A. and J. Yepes. 1960. Mammals of South America. 2nd Ed., C. C. Weidner Publ. 2 Vols., 350 pp. (In Spanish)

256. Cabrera, M. I. 1984. The feeding habits of Holochilus venezuelae (Allen, 1904) (Rodentia, Cricetidae), in rice paddies in the state of Portuguesa. Unpublished thesis, Univ. Central de Venezuela, Caracas. (In Spanish)

Holochilus venezuelae is a herbivore. Rice stems make up the major portion of its diet (61.53%). Also consumed are Echinochloa colonum (17.11%) and Leptochloa scabra (6.69%). Rice grains are not an important part of this rodent's diet.

257. Cacchione, R. A. et al. 1965. Leptospirosis in wild animals. Recent study on its isolation and classification from Argentinian sources. Rev. Invest. Agropecu. Ser. 4 Patol. Anim. 2(13):173-197. (In Spanish)

Six strains were isolated from Rattus norvegicus and two other strains from R. rattus.

258. Cacchione, R. A. et al. 1966. Leptospirosis in wild animals. The isolation of a strain of L. canicola from hair (Chaetophractus villosus). Rev. Invest. Agropecu. Ser. 4 Patol. Anim. 3(5):51-55. (In Spanish)

Two strains of leptospira were isolated from Akodon azarae and Calomys laucha at the same locality.

259. Callahan, J. R. 1975. Status of the peninsula chipmunk. J. Mammal. 56:266-269.

Presents evidence that the peninsula chipmunk of Baja California is a species which is distinct from Eutamias merriami.

260. Callahan, J. R. 1976. Systematics and biogeography of the Eutamias obscurus complex (Rodentia: Sciuridae). Unpublished Ph.D. dissertation, Univ. Ariz. 198 pp.

261. Callahan, J. R. 1977. Diagnosis of Eutamias obscurus (Rodentia: Sciuridae). J. Mammal. 58(2):188-201.

A comparison of subspecies of Eutamias obscurus from Mexico and the United States.

262. Callahan, J. R. 1980. Taxonomic status of Eutamias bulleri. Southwest. Nat. 25:1-8.

The taxon Eutamias bulleri is shown to consist of two parapatric species. The currently recognized subspecies E. b. bulleri is actually a monotypic species E. bulleri (Sensu stricto). Its geographic range is here extended by some 100 km and it is shown to occur on both sides of the Rio Mesquital, Durango, contrary to previous reports.

263. Callahan, J. R. and R. Davis. 1976. Desert chipmunks. Southwest. Nat. 21:127-130.

Describes the habitat, nests, food, and water sources of two species of desert-dwelling chipmunks (Eutamias merriami and E. dorsalis) occurring in Baja California and coastal Sonora.

264. Callahan, J. R. and R. Davis. 1977. A new subspecies of the cliff chipmunk from coastal Sonora, Mexico. Southwest. Nat. 22:67-75.

A new subspecies of Eutamias dorsalis is described. E. d. dorsalis is confined to coastal Sonora north of Guaymas.

265. Cameron, G. N. and S. R. Spencer. 1981. Sigmodon hispidus. Mamm. Species 158:1-9.

266. Campo-Aasen, I. 1977. Microfilariae in the upper and middle dermis of the skin of the capybara ("chiguire"). Acta Cient. Venez. 28:165-166.

267. Cant, J. G. H. 1977. A census of the Agouti, Dasyprocta punctata in seasonally dry forest at Tikal, Guatemala, with some comments on strip censusing. J. Mammal. 58(4):688-690.

All contacts with agoutis (Dasyprocta punctata) were recorded using a simple version of strip censusing. The crux of the procedure is that the observer records for every sighting the perpendicular distance from the animal to the census route at time of contact. These distances are then used to construct a profile of detectability by plotting frequency against distance. Agoutis were seen 23 times - 21 sightings were of lone animals, 2 of 2 animals. Perpendicular distances (in m) were as follows (number of sightings in parentheses): 1 to 3 (8); 4 to 6 (2); 7 to 9 (5); 10 to 12 (2); 13 to 15 (4); 16 to 18 (2).

268. Capri, J. J. and R. A. Mauri. 1971. Ectoparasites (Suctoria and Acarina) of the family Caviidae in Argentina. Rev. Soc. Entomol. Argent. 33(1-4):93-100. (In Spanish)

Lists ectoparasites (Suctoria and Acarina) of caviidae rodents that have been collected in Argentina.

269. Capurro, L., H. Castilla, J. Ipinza, and D. Torres. 1972. Notes on the rodent population of Hacienda Peralillo (Illapel, Province of Coquimbo) after a month of trapping. XV Reunion Anual Sociedad Biologia, Chile. Abstract only. (In Spanish)

270. Carleton, M. D. 1977. Interrelationships of populations of the Peromyscus boylii species group (Rodentia, Muridae) in western Mexico. Occas. Pap. Mus. Zool. Univ. Mich. No. 675. 47 pp.

This study presents additional distributional and morphological information on populations of Peromyscus boylii, particularly those known by the subspecific names simulus and spicilegus. Both of these sets of populations are confined to western Mexico: simulus in the coastal lowlands of Sinaloa and Nayarit and spicilegus in the Sierra Madre Occidental from southern Chihuahua and Sonora to Jalisco.

271. Carleton, M. D. 1979. Taxonomic status and relationships of Peromyscus boylii from El Salvador. J. Mammal. 60(2):280-296.

The status and affinities of Peromyscus boylii cordillerae and P. b. sacarensis, both described from El Salvador, are evaluated using principal components analysis.

272. Carleton, M. D. 1980. Phylogenetic relationships in neotomine-peromyscine rodents (Muroidea) and a reappraisal of the dichotomy within New World Cricetinae. Misc. Publ. Mus. Zool. Univ. Mich. 157:1-146.

This work evaluates the size and equivalence of the currently defined genera of neotomine-peromyscines; studies the cladistic relationships among neotomine-peromyscines; and assesses the relationships of neotomine-peromyscines to South American cricetines.

273. Carleton, M. D. and D. G. Huckaby. 1975. A new species of Peromyscus from Guatemala. J. Mammal. 56(2):444-451.

A new species, Peromyscus mayensis, is described from Guatemala. The new species is assigned to the subgenus Peromyscus. The species is about the size of P. mexicanus.

274. Carleton, M. D., E. T. Hooper, and J. H. Honacki. 1975. Karyotypes and accessory reproductive glands in the rodent genus Scotinomys. J. Mammal. 56:916-921.

Karyotypes and male accessory glands are compared for two species of Scotinomys with Baiomys musculus. S. teguina were collected in Costa Rica, Nicaragua and Panama, S. xerampelinus from Costa Rica and B. musculus from Mexico.

275. Carleton, M. D., D. E. Wilson, A. L. Gardner, and M. A. Bogan. 1982. Distribution and systematics of Peromyscus (Mammalia: Rodentia) of Nayarit, Mexico. Smithson. Contrib. Zool. No. 352. iii + 46 pp.

Peromyscus found in Nayarit are: P. maniculatus, P. boylii, P. simulus, P. madrensis, P. pectoralis, P. spicilegus, and P. melanophrys.

276. Carrasco C., J. 1963. The problem of rats in sugarcane plantations in Mexico. B. Azucarero Mex. 172:3-7. (In Spanish)

Problem rodent species in sugarcane fields are: Sigmodon hispidus, Peromyscus leucopus, P. boylii, P. latirrostris, Oryzomys couesi, Liomys irroratus and Reithrodontomys fulvescens. It is estimated rodent losses are 8.19% of total production in Mexico. Control chemicals recommended are: Talic sulfate, zinc phosphide and anticoagulants.

277. Carrasco C., J. and M. Abarca. 1962. The rat problem in the sugarcane plantations of Mexico. Proc. Int. Soc. Sugar Cane Technol. 11:699-711.

Rats are far from being under control in Mexico despite the considerable advances made in control measures during the last 10 years. Perhaps the main benefits gained during this period are the interest in rat control awakened among sugarcane growers and the training acquired by the technical personnel that are now facing the rat problem. Some of the major achievements are: The main problem species have been identified as Sigmodon hispidus,

Peromyscus leucopus texanus, and Peromyscus boylii levipes. The areas infested as well as the losses have been documented, and methods of control have been adapted to meet the economic and ecological conditions of the sugarcane areas of Mexico.

278. Cartaya, E. 1983. A study of a rodent community that are attacking rice fields (Oryza sativa L.) and their life cycle in Portuguesa state. Unpublished thesis. Univ. Simon Bolivar, Caracas. (In Spanish)

279. Cartaya, E. and M. Aguilera. 1984. The action area of Holochilus venezuelae Allen, 1904 (Rodentia: Cricetidae) in a rice field. Acta Cient. Venez. 35:162-163. (In Spanish)

The area of action is defined as the area where an animal lives (home range). Discussed are the movements of Holochilus venezuelae in a rice paddy.

280. Cartaya, E. and M. Aguilera. 1985. A study on a community of rodents that are attacking rice paddies. Acta Cient. Venez. 36:250-257. (In Spanish)

Of the four species present in the study area, Holochilus venezuelae was the most abundant (94.81% of the recaptures). Although H. venezuelae was the most important pest species, no correlation was found between the population size and the amount of crop damage.

281. Carter, C. H. and H. H. Genoways. 1978. Liomys salvini. Mamm. Species 84:1-5.

282. Carvalho, C. T. 1965. Bionics of small mammals in Boraceia. Rev. Biol. Trop. 13:239-257. (In Portuguese)

This paper is a summary of field observations on small mammals (Rodentia) studied in the Biological Station of Boraceia, Sao Paulo, Brazil. A description and analysis of the area, baits, trapping routine, mortality in the traps, and activity of the animals are given. Rodent species were Delomys dorsalis, Oryzomys subflavus, O. nigripes, Thaptomys nigrita, and Proechimys iheringi.

283. Carvalho, C. T. and R. A. Bueno. 1975. Damages caused by animals in forest plantations Mammalia Rodentia. Silvic. Sao Paulo 9:39-46. (In Portuguese)

Observations and details are given on the damage by common rodents (Clyomys, Agouti and Coendou) in stands of exotic species of trees introduced in the State of Sao Paulo, Brazil. General considerations about the problem in other countries and a brief report about the damages in stands of Pinus taeda and P. elliottii in Campos do Jordao, Sao Paulo, are included.

284. Carvalho, C. T. and A. J. Toccheton. 1969. Mammals from the northeastern part of Para, Brazil. Rev. Biol. Trop. 15:215-226. (In Portuguese)

Presented is a list of all the mammals found in the following museums: Goeldi Museum of Belen, the National Museum of Rio de Janeiro, and The Department of Zoology at Sao Paulo. These mammals were trapped in the state of Para. Rodents listed were Guerlinguetus gilvigularis, Oryzomys microtis, O. capito, O. macconnelli, Oecomys bicolor, O. concolor, Rhipidomys emiliae, Nectomys squamipes, Holochilus brasiliensis, Zygodontomys lasiurus and Rattus rattus.

285. Castillo G., H., D. Torres and M. Tamayo. 1978. Chilean rodents and their trophic relations. Mus. Nac. Hist. Nat. Not. Mens. (Santiago) 23(268):3-10. (In Spanish)

Discusses the food chain for rodents in Chile.

286. Catala, A., L. Vidal-Rioja, and N. O. Bianchi. 1981. Liver chromatin fractions in Mus and Akodon: The concept of constitutive heterochromatin. Mol. Cell. Biochem. 36:135-141.

The liver chromatin from Mus musculus and Akodon molinae was separated in eight fractions by differential centrifugation. Like fractions from both species showed approximately similar contents of DNA, equivalent ratios of histone to non-histone proteins, corresponding template activities and equal amounts of positive C-banded material. On the other hand, heavy chromatin fractions of Mus were highly enriched in satellite DNA whereas no satellite DNA was found in Akodon chromatin.

287. Cattan, P. E. and M. George-Nascimento. 1978. Some relationships between the rodent Octodon degus and their degree of infestation with intestinal parasites. Rev. Iber. Parasitol. 38(3-4):505-514. (In Spanish)

Octodon degus were studied in Chile to determine if there was a correlation between the species and various intestinal parasites. The parasites were Longistriata degusi, Trichuris bradleyi, Heteroxynema chiliensis and Octodonthoxys gigantea. There was a statistically significant correlation for all the worms except O. gigantea.

288. Cattan, P. E. and M. George-Nascimento. 1982. The status of parasites in wild Chilean mammals. Mus. Nac. Hist. Nat. Publ. Ocas. (Santiago) 38:117-127. (In Spanish)

This is a general review of the history of research on the parasites of wild mammals in Chile up to 1980. The major problem in this field is the lack of parasitologists working in Chile. Rodent species that have been examined for parasites are Octodon

degus, Phyllotis darwini, Myocastor coypus, Spalacopus cyanus, Ctenomys robustus and C. fulvus.

289. Cattan, P. E., M. George-Nascimento, and J. A. Rodriguez. 1976. First observations on the variations of parasitic helminth populations from the Chilean rodent Octodon degus. Bol. Chil. Parasitol. 31:16-20. (In Spanish)

Numbers and prevalence of helminth parasites from Octodon degus were regularly collected between April-December 1975 at Lo Curro, Santiago, Chile. Species examined were Trichuris bradleyi, Longistriata degusi, Octodonthoxys gigantea and Heteroxynema chiliensis.

290. Causey, C. E. 1963. The role of small mammals in maintenance of arboviruses in the Brazilian Amazon forests. An. Microbiol. 11(A):119-121.

In one year 534 rodents and marsupials were captured, of which 486 were marked, released and recaptured a total of 2,671 times in a study to evaluate their role in maintenance of arbovirus in the Amazon forest. Rodent genera were Proechimys, Oryzomys and Nectomys.

291. Ceballos, G. and C. Galindo. 1983. Glaucomys volans goldmani (Rodentia: Sciuridae) in central Mexico. Southwest. Nat. 28(3):375-376.

First record of a flying squirrel from the state of Hidalgo, Mexico.

292. Ceballos, G. and C. Galindo. 1984. The wild mammals of the valley of Mexico. Ed. Limusa, Mexico. 299 pp. (In Spanish)

293. Ceballos, G. and A. Miranda. 1985. Notes on the biology of Mexican flying squirrels (Glaucomys volans) (Rodentia: Sciuridae). Southwest. Nat. 30:449-450.

First record of flying squirrels from the state of Mexico. Reproductive biology is also discussed.

294. Ceballos, G. and D. E. Wilson. 1985. Cynomys mexicanus. Mamm. Species 248:1-3.

295. Ceballos-Bendezu, I. 1981. The mammals collected in Cuzco by Otto Garlepp. Rev. Cantua (Univ. Nac. Cuzco) 7 & 8, 1-16. (In Spanish)

The author lists 16 species of mammals which the German naturalist Otto Garlepp had collected between 1897-1899 near Cuzco, Peru. Rodents collected were Nectomys squamipes, Calomys lepidus, Sciurus ignitus, Oryzomys longicaudatus, Calomys

sorellus, Rhipidomys leucodactylus, Akodon urichi, Cavia tschudii and Dasyprocta variegata.

296. Cendrero, L. 1972. Zoology. The vertebrates of Hispanoamerica. Editorial Porrua, Mexico. 1160 pp. (In Spanish)

297. Cerpa, C. and J. L. Yanez. 1981. Seasonal variation in the diet of Tyto alba (Gray, 1829) in the mediterranean zone of central Chile. Bol. Mus. Nac. Hist. Nat. Chile 38:137-146. (In Spanish)

Akodon olivaceus, Oryzomys longicaudatus, Phyllotis sp. and Mus musculus are the rodent species most often eaten by this owl. These species prey size is the closest to the optimum size for consumption by Tyto alba.

298. Cerqueira, R. 1975. On the type locality of Holochilus brasiliensis vulpinus (Brants, 1827) (Rodentia, Cricetidae). Rev. Bras. Biol. 35:31-34. (In Portuguese)

Discussed are the possible localities where Friedrich Sellow collected the type specimens of Holochilus brasiliensis vulpinus, Kunsia tomentosus and Ctenomys torquatus.

299. Cerqueira, R. 1976. A study of Holochilus brasiliensis (Rodentia, Cricetidae). Unpublished Ph.D. dissertation, Universidade Federal do Rio de Janeiro. 98 pp. (In Portuguese)

300. Cestari, A. N. and J. Imada. 1968. The chromosomes of the rodent Akodon arviculoides cursor Winge, 1888 (Rodentia: Cricetidae). Cienc. Cult. 20:58-762. (In Portuguese)

The chromosomes of the rodent Akodon arviculoides cursor were studied by means of lung plasma-clot cultures and squashes of pieces of spleen and testicular tubules. The somatic and spermatogonial cells contained 2n = 24 (22+XY).

301. Charles-Dominique, P., M. Atramentowicz, M. Charles-Dominique, H. Gerard, A. Hladik, C. M. Hladik, and M. F. Prevost. 1981. The frugivorous, arboreal, nocturnal mammals in a Guayanese forest: interrelationship between plant and animal. Terre Vie 35(3):341-435. (In French)

The relationships between a community of nine nocturnal frugivorous mammal species and the plants on which they feed were studied during 14 consecutive months in a secondary forest near Cayenne, French Guiana. Two major trophic groups can be defined: The seed eaters open unripe fruits to eat their seeds. All are rodents: Coendou prehensilis, Echimys armatus and Oryzomys concolor. The pulp eaters specialize in ripe fruits. They eat the pulp and swallow most of the seeds which are disseminated with their feces. Five of them are marsupials and the sixth species is a carnivore.

302. Chieffi, P. P., R.M.D.S. Dias, A. C. S. Mangini, D. M. A. Grispino, and M. A. D. Pacheco. 1981. Capillaria hepatica (Bancroft, 1893) in rats trapped in the municipality of Sao Paulo, Sao Paulo State, Brazil. Rev. Inst. Med. Trop. Sao Paulo 23:143-146. (In Portuguese)

During the period from May 1977 to August 1979, 205 live rats (191 Rattus norvegicus and 14 R. rattus) trapped in the municipality of Sao Paulo were examined at necropsy; 120 of them were infected with Capillaria hepatica.

303. Choate, J. R. and J. K. Jones, Jr. 1970. Additional notes on reproduction in the Mexican vole, Microtus mexicanus. Southwest. Nat. 14:356-358.

Reproductive comparisons by month for the Mexican vole.

304. Christen, M. F. 1978. The nutritive evaluation of four monospecific diets of Myocaster coypus (Molina, 1782). Unpublished thesis, Univ. Austral Chile, Valdivia, Chile. (In Spanish)

305. Clark, D. A. 1981. Foraging patterns of black rats across a desert-montane forest gradient in the Galapagos Islands. Biotropica 13:182-194.

306. Clark, D. A. 1982. Foraging behavior of a vertebrate omnivore (Rattus rattus): Meal structure, sampling and diet breadth. Ecology 63(3):763-772.

Diet selection by the omnivorous black rat (Rattus rattus) was examined by detailed analysis of stomach contents of individuals from seven wild populations in the Galapagos Islands. High within-meal diversity of foods was found: nearly all stomachs contained at least four foods, and many contained eight or more.

307. Clark, D. B. 1978. Population biology of two rodents of the Galapagos Islands, Rattus rattus and Oryzomys bauri. Unpublished Ph.D. dissertation, Univ. of Wisconsin.

308. Clark, D. B. 1979a. Black rat (Rattus rattus) feeding ecology in the Galapagos Islands, Ecuador. Diss. Abstr. B Sci. Eng. 40(3):1042.

309. Clark, D. B. 1979b. A centipede preying on a nestling rice rat (Oryzomys bauri). J. Mammal. 60:654.

A centipede, Scolopendra galapagoensis, removed a young rice rat, Oryzomys bauri, from a nest on Santa Fe Island in the Galapagos Islands, Ecuador.

310. Clark, D. B. 1980a. The role of introduced black rats in Galapagos ecosystems. Not. Galapagos 31:14.

311. Clark, D. B. 1980b. Population ecology of an endemic neotropical island rodent: Oryzomys bauri of Santa Fe Island, Galapagos, Ecuador. J. Anim. Ecol. 49(1):185-198.

The rice rat Oryzomys bauri Allen is an endemic species restricted to the arid 2,400-ha island of Santa Fe in the Galapagos Islands. Populations of O. bauri in seven sites were studied over a 31-month period by mark-recapture methods. Population levels were relatively stable throughout the study.

312. Clark, D. B. 1980c. Population ecology of Rattus rattus across a desert-montane forest gradient in the Galapagos Islands. Ecology 61(6):1422-1433.

Populations of introduced black rats (Rattus rattus) were studied by removal trapping in five nonagricultural habitats in the Galapagos Islands: montane forest, montane scrub, tropical deciduous woodland, thorn scrub, and savannah.

313. Clark, L. G., V. M. Varela-Diaz, C. R. Sulzer, R. R. Marshak, and C. J. Hollister. 1966. Leptospirosis in Nicaragua: preliminary report on the first year of study. Am. J. Trop. Med. Hyg. 15:735-742.

Eleven species of rodents were examined for leptospirae in Nicaragua; only Oryzomys caliginosus was positive.

314. Clark, M. M. and 3. G. Galef, Jr. 1977. Patterns of agonistic interaction and space utilization by agoutis, Dasyprocta punctata. Behav. Biol. 20:135-140.

Observations of agouti behavior were carried out in the Allee Creek ravine immediately adjacent to the Smithsonian Institution field station on Barro Colorado Island from May to October 1974. In the months of food scarcity, normally solitary and minimally interactive agoutis aggregate at rich feeding sites and form dominance hierarchies.

315. Cleveland, A. G. 1972. Studies on morphology and biology of cotton rats (Sigmodon hispidus) from northern Mexico to southern Nebraska. Diss. Abstr. B Sci. Eng. 32(12):6837.

316. Clough, G. C. 1969. The Bahamian hutia: a rodent refound. Oryx 10:106-108.

In 1966, on a small rocky uninhabited island in the Bahamas, the author discovered an abundant population of the Bahamian hutia, a nocturnal rodent the size of a rabbit, which had been reported extinct. In three visits to the islands he has studied the

hutias, now strictly protected by the Bahamian government, and is also breeding them in captivity.

317. Clough, G. C. 1972a. Biology of the Bahamian hutia, Geocapromys ingrahami. J. Mammal. 53(4):807-823.

This primitive rodent is unique to the area. Its reproductive biology, food habits, behavior, and social interactions and other behavior are described. It is especially interesting in its intra-species amicability, supposedly resulting from the absence of predation.

318. Clough, G. C. 1972b. A most peaceful rodent. Nat. Hist. 82(6):66-74.

Concerns Geocapromys ingrahami on East Plana Cay in the Bahamas. This relict population is socially tolerant and does not exhibit high stress to crowding, possibly due to use of scent marking.

319. Clough, G. C. 1974. Additional notes on the biology of the Bahamian hutia. J. Mammal. 55:670-672.

The Bahamian hutia, Geocapromys ingrahami ingrahami, is confined to one small island, East Plana Cay, in the Bahamas. Eleven hutia were removed from East Plana Cay and placed on a small cay in the Exumas National Sea and Land Park. This was done at the request of the Bahamian Ministry of Agriculture and Fisheries to help ensure the survival of this rare species.

320. Clough, G. C. 1976. Current status of two endangered Caribbean rodents. Biol. Conserv. 10:43-47.

Living members of the rodent genus, Geocapromys, the hutias, have been found on only three islands in the Caribbean: Jamaica, Little Swan Island and East Plana Cay. It appears the Swan Island population has become extinct and the Jamaican population is much lower than previously reported.

321. Cockburn, T. A. 1961. Eradication of infectious diseases. Science (Wash. D.C.) 133(3458):1050-1058.

Considers eradication, in contrast with constant control, to be entirely practical within certain limits. Gives examples with diseases in Central and South America.

322. Cockrum, E. L. and G. R. Bradshaw. 1963. Notes on mammals from Sonora, Mexico. Am. Mus. Novit. No. 2138. 9 pp.

Rodents collected were Perognathus flavus, P. baileyi, P. penicillatus, P. goldmani, Dipodomys merriami, D. deserti, Peromyscus eremicus, Onychomys torridus, Sigmodon hispidus, and Neotoma albigula.

323. Collett, S. F. 1981a. Population characteristics of Agouti paca (Rodentia) in Colombia. Unpublished Ph.D. dissertation, Mich. State Univ. 165 pp.

324. Collett, S. F. 1981b. Population characteristics of Agouti paca (Rodentia) in Colombia. Publ. Mus. Mich. State Univ. Biol. Ser. 5(7):485-602.

Characteristics of reproduction and age structure were evaluated for a sample of 205 pacas collected from narrow gallery forests in the Llanos Orientales of Colombia.

325. Collett, S. F., C. Sanchez-Hernandez, K. A. Shump, Jr., W. R. Teska, and R. H. Baker. 1975. Demographic population characteristics of small mammals in two Mexican habitats. An. Inst. Biol. Univ. Nac. Auton. Mex. 46 Ser. Zool. 1:101-124. (In Spanish)

Populations of small mammals living on selected study plots were examined at Playa Azul on pine-oak mountain slope in west central Durango and at Estacion Chamela in arid tropical forest in coastal Jalisco. Specimens at each area were captured in live-trap stations arranged in grids, marked for identification, examined for age and reproductive characteristics, released where captured, and recaptured on two three-night intervals each midsummer (July-August) in 1972, 1973, 1974. Information on species diversity, density, mobility, age structure, reproductive activity, and longevity was obtained during these live-trapping periods plus a terminal removal-trapping procedure directly following the final live-trapping in 1974.

326. Collins, L. R. and J. F. Eisenberg. 1972. Notes on the behavior and breeding of pacaranas, Dinomys branickii, in captivity. Int. Zoo Yearb. 12:108-114.

Dinomys branickii will breed in captivity provided that the animals are housed in spacious enclosures. Even though individuals may show great tolerance for one another, separation of an adult male and female with subsequent simultaneous introduction at intervals of approximately 5 to 10 days helps to establish a compatible relationship and perhaps induces mating activity. The gestation period is between 223 and 283 days.

327. Combes, C. and P. Delattre. 1978. Research on the infestation of Rattus rattus and Rattus norvegicus with Schistosoma mansoni in one family in the Antilles. Proc. Int. Congr. Parasitol. (Warsaw, Sec. C) 4:99-100. (In French)

328. Combes, C. and P. Delattre. 1981. Characteristics of the infestation of the rats (Rattus rattus and Rattus norvegicus) in a Caribbean intestinal schistosomiasis. Acta Oecol. Oecol. Appl. 2:63-79. (In French)

A survey carried out on Guadeloupe found Rattus rattus and Rattus norvegicus are highly infected with Schistosoma mansoni.

329. Combes, C. and D. Imbert-Establet. 1980. Infectivity in rodents of Schistosoma mansoni cercariae of human and murine origin. J. Helminthol. 54:167-171.

Experimental infections of white laboratory mice and wild rats Rattus rattus with cercariae of Schistosoma mansoni of different descent, whether murine or human, demonstrate that there is no significant difference in the probability of maturation of these cercariae into adult schistosomes.

330. Combes, C., N. Leger, and Y. J. Golvan. 1975a. The dynamic role of rats in endemic schistosomiasis in Guadeloupe. Compte Rendus de la Acad. de Sci. (Paris) 281:1059-1061. (In French)

The role rats (Rattus rattus) and R. norvegicus) play in the transmission of schistosomiasis in Guadeloupe is discussed.

331. Combes, C., N. Leger, and Y. J. Golvan. 1975b. Rats and schistosomiasis in Guadeloupe. Acta Trop. 32:304-308. (In French)

Rats in Guadeloupe (Rattus rattus and R. norvegicus) play an important part in the spread of schistosomiasis.

332. Contreras, J. R. 1964. Data on intrapopulation variations of the morphology of molars in members of the genera Galea and Microcavia (Rodentia: Caviidae). Ameghiniana. Rev. Asoc. Paleonto. Arg. III 8:235-253. (In Spanish)

333. Contreras, J. R. 1965. Sympatry between two genera of rodents in the subfamily Caviinae. Neotropica 11(36):81-83. (In Spanish)

The author reports on the sympatric existence of two species of the subfamily Caviinae (Galea musteloides and Cavia aperea) in the Province of Buenos Aires, Argentina. The presence of Cavia aperea is a range extension for this species.

334. Contreras, J. R. 1966a. Sympatry among three genera of the subfamily Caviinae (Mammalia: Rodentia). Physis 26:111-112. (In Spanish)

Sympatry is recorded for three species of the subfamily Caviinae near Tostado, Department of 9 de Julio, Province of Santa Fe, Argentina. The species were Cavia aperea, Galea musteloides and Microcavia australis. This also represents a range extension for the three species.

335. Contreras, J. R. 1966b. The tuco-tuco in relation to range land management. Pages 469-482 in E. Rapaport, Ed. Progresos en Biologia del Suelo. UNESCO, Montevideo, Monografias 1. (In Spanish)

336. Contreras, J. R. 1972a. New data about the distribution of some rodents in the Provinces of Buenos Aires, La Pampa, Entre Rios, Santa Fe and Chaco. Neotropica 18(55):27-30. (In Spanish)

Documents new localites for Akodon azarae, Eligmodontia typus, Reithrodon physodes, Galea musteloides, Ctenomys talarum, C. australis, Myocastor coypus, Cavia aperea, Phyllotis griseoflavus, and Ctenomys azarae.

337. Contreras, J. R. 1972b. The home range of a population of Oryzomys longicaudatus philippi (Landbeck) (Rodentia: Cricetidae). Physis 31:353-361. (In Spanish)

The size and other characteristics of the home range in a population of Oryzomys longicaudatus philippi were studied in Puerto Piedras Blancas, Isla Victoria, Province of Neuquen, Argentina. Field determinations were made by using a regular grid pattern of traps spaced every 10 meters. Boundary strip exclusive method was used in the estimation of home-range size. Average home range for adult females was 680.8 m^2 and for adult males 1,007 m^2/

338. Contreras, J. R. 1973. Molting patterns in the longtailed rat Oryzomys longicaudatus philippi (Landbeck). Physis 32(84):191-197. (In Spanish)

During their lifetime Oryzomys longicaudatus philippi molt, at least, twice. The first molt is when the young obtains an adult pelage. The other is during the adult years. In young the pattern of molting is regular, simple and constant. In adults the pattern is more complex, slow and irregular.

339. Contreras, J. R. 1974. The ecology of the field mouse Akodon azarae in the semiarid zone of southeastern Bonarense, Laguna Chasico, Partido de Villarno. Deserta (Mendoza, Argentina) 4:15-24. (In Spanish)

340. Contreras, J. R. 1979. A preliminary list of the vertebrates from the Nacunan Ecological Park. IADIZA, Cuaderno Tecnico 1-79:39-47. (In Spanish)

341. Contreras, J. R. 1980. On the western limit of the geographic range of the great cavy, Cavia aperea pamparum in Argentina. Hist. Nat. (Mendoza) 1(11):73-74. (In Spanish)

The great cavy is distributed throughout most of the southern zone of the Province Cordoba and reaches as far as the locality of Pedernera in the Province of San Luis.

342. Contreras, J. R. 1981. The tunduque: a model of adaptation. Sen. Cient. No. 21. pp. 22-25. (In Spanish).

343. Contreras, J. R. 1982a. Notes on Bolomys temchuki (Massoia, 1982) from northeastern Argentina, with descriptions of two new subspecies (Rodentia, Cricetidae). Hist. Nat. (Mendoza) 2(20):174-176. (In Spanish)

Notes on Bolomys temchuki from northeastern Argentina, with descriptions of two new subspecies.

344. Contreras, J. R. 1982b. Graomys griseoflavus (Waterhouse, 1837) in the Province of Chaco, Argentina (Rodentia, Cricetidae). Hist. Nat. (Mendoza) 2(27):252. (In Spanish)

Three specimens of this species are in the mammal collection of CECOAL from the Province of Chaco.

345. Contreras, J. R. 1982c. Mammals from Corrientes. I. Preliminary notes on the distribution of some species. Hist. Nat. (Mendoza) 2(10):71-72. (In Spanish)

Gives collection data for Cabreramys temchuki, Oligoryzomys fornesi, O. eliurus, Holochilus chacarius chacarius, and Calomys callosus callosus from the Province of Corrientes, Argentina.

346. Contreras, J. R. 1984. Notes for a revision of the genus Ctenomys (Mammalia: Rodentia). III. Ctenomys boliviensis Waterhouse, 1848. Hist. Nat. (Mendoza) 4(11):110-112. (In Spanish)

Reviews specimens of C. boliviensis collected in northern Argentina.

347. Contreras, J. R. and L. M. Berry. 1982a. Ctenomys bonettoi a new species of tucu-tucu from the Chaco Province, Argentina (Rodentia: Octodontidae). Preliminary diagnosis. Hist. Nat. (Mendoza) 2(14):123-124. (In Spanish)

The type locality for a new species of tucu-tucu, Ctenomys bonettoi, is 7.5 km southeast of Capitan Solari, Department of Sargento Cabral, Province of Chaco.

348. Contreras, J. R. and L. M. Berry. 1982b. New Argentine records of Pseudoryzomys wavrini (Thomas, 1921) (Rodentia: Cricetidae: Phyllotiini). Hist. Nat. (Mendoza) 2(19):164. (In Spanish)

Pseudoryzomys wavrini are recorded for the first time from Colonia Tragadero, Department of San Fernando and in the mountains of Las Palmas, Department of Bermejo.

349. Contreras, J. R. and L. M. Berry. 1982c. Ctenomys argentinus, a new species of tucu-tucu from the Province of Chaco, Argentina (Rodentia: Octodontidae). Hist. Nat. (Mendoza) 2(20):165-173. (In Spanish)

A new species of tucu-tucu, Ctenomys argentinus, is described for the north-central Province of Chaco, Argentina.

350. Contreras, J. R. and L. M. Berry. 1983. Notes on rodents of the genus Oligoryzomys in the Province of Chaco, Argentina (Rodentia: Cricetidae). Hist. Nat. (Mendoza) 3(15):145-148. (In Spanish)

A large collection of Oligoryzomys was made in the Province of Chaco. Species caught were O. flavescens, O. nigripes, O. fornesi, and O. chacoensis. Only O. nigripes was previously reported from this Province. Some comments on distribution and taxonomy of these species are given.

351. Contreras, J. R. and A. N. Ch. de Contreras. 1984. Preliminary diagnosis of a new species of "Anguya-Tutu" from the Province of Corrientes, Argentina (Genus Ctenomys, Mammalia: Rodentia). Hist. Nat. (Mendoza) 4(13):131-132. (In Spanish)

Describes a new species, Ctenomys d'orbignyi, from Argentina. The type specimens were collected in the Department of Beron de Astrada in the Province of Corrientes.

352. Contreras, J. R. and E. R. Justo. 1974. A contribution to the Pampean mastozoology. I. New localities for the distribution of cricetid rodents (Mammalia: Rodentia). Neotropica 20(62):91-96. (In Spanish)

Collected in the Departments of Toay and Leventue, Province of La Pampa were: Akodon azarae, A. benefactus, Eligmodontia typus, Reithrodon physodes and Calomys musculinus.

353. Contreras, J. R. and O. A. Reig. 1964. Data on the distribution of the small cavy (Microcavia australis) in the Province of Buenos Aires. Neotropica 10:120-124. (In Spanish)

The small guinea pig, Microcavia australis, is found in the Province of Buenos Aires. It also occurs in Miramar, Partido de General Alvarado and is reported from several localities in Partido de Tres Arroyas. Microcavia and Cavia seem to display allopatric distribution in these areas.

354. Contreras, J. R. and O. A. Reig. 1965. Data on the distribution of the genus Ctenomys (Rodentia, Octodontidae) in the coastal zones of the Province of Buenos Aires between Necochea and Bahia Blanca. Physis 25(69):169-186. (In Spanish)

A survey is made of the distribution of the tuco-tuco (Ctenomys) in the southern coastal region of Buenos Aires Province from Necochea to Bahia Blanca. Two species occur between Necochea and Bahia Blanca, C. australis and C. talarum.

355. Contreras, J. R. and V. G. Roig. 1976. Presence of the small cricetid rodent, Calomys musculinus (Thomas) in the Province of Mendoza (Rodentia: Cricetidae). Neotropica 22(67):15-16. (In Spanish)

Three new collection sites are given for this small cricetid rodent in the arid slopes of the Preandean mountains in the Province of Mendoza, north of the Tunuyan River.

356. Contreras, J. R. and V. G. Roig. 1978. Observations on ecology and behavior of the small cavy Microcavia australis australis in Nacunan (Province of Mendoza, Argentina). Ecosur 5(10):191-199. (In Spanish)

Small cavy populations were studied in the arid region of western Argentina. Described is the social organization, which is the lax type, without well defined individual territories and without a rigid lineal system of hierarchy.

357. Contreras, J. R. and M. I. Rosi. 1980a. Territorial behavior and habitat fidelity in a population of rodents from the central area of the Province of Mendoza, Argentina. Ecologia (Argentina) 5:17-29. (In Spanish)

Spatial relationships are compared among the dominant species of small rodents in the area: Calomys musculinus cordovensis, Mus musculus and Akodon varius neocenus.

358. Contreras, J. R. and M. I. Rosi. 1980b. The field mouse Calomys musculinus cordovensis (Thomas) in the Province of Mendoza. I. Taxonomy. Hist. Nat. (Mendoza) 1(5):17-25. (In Spanish)

A series of 57 specimens of the field mouse, Calomys musculinus cordovensis from several localities of NE Mendoza, Argentina, was studied. Karyological and osteometrical data of C. m. cordovensis agree with the general pattern of C. musculinus, but external characters are more like C. laucha.

359. Contreras, J. R. and M. I. Rosi. 1980c. A new subspecies of Oligoryzomys flavescens from the Province of Mendoza (Mammalia: Rodentia: Cricetidae). Hist. Nat. (Mendoza) 1(22):157-160. (In Spanish)

Oligoryzomys flavescens occidentalis, a new subspecies of the long-tailed mouse from the arid flatlands of Eastern and Central Mendoza, Argentina, is described. This is a well-defined race, with long and thick hair and coarse fur, and with a general gray tone instead of the yellow-cinnamon of the nominal subspecies.

360. Contreras, J. R. and M. I. Rosi. 1980d. Notes on Akodon molinae Contrereas, 1968, in the Province of Mendoza, Argentina. Hist. Nat. (Mendoza) 1(26):181-184. (In Spanish)

Akodon molinae has been reported from several localities in the semiarid plateau of the Precordillera and in the flatlands of eastern and central Mendoza, Argentina. This is the first record for this species from western Argentina and is a range extension of more than 500 kilometers. A single specimen of A. molinae was collected in 1968 at the Ecological Reserve of Nacunan, Department of Santa Rosa, Province of Mendoza, Argentina.

361. Contreras, J. R. and M. I. Rosi. 1981a. Notes on the Argentine akodont rodents (Rodentia: Cricetidae). I. Abrothrix longipilis moerens Thomas, 1919, in the Nahue Huapi National Park. Hist. Nat. (Mendoza) 1(30):209-212. (In Spanish)

Measurements are given for three specimens of Akodon longipilis moerens collected in the southwestern part of the Province of Rio Negro, Argentina.

362. Contreras, J. R. and M. I. Rosi. 1981b. Notes on the akodont rodents of Argentina (Rodentia: Cricetidae). II. Akodon andinus andinus (Philippi, 1868) in the Province of Mendoza. Hist. Nat. (Mendoza) 1(32):233-236. (In Spanish)

Taxonomic, metric, ecological and distributional data are given for a series of Akodon andinus andinus collected in the Province of Mendoza, Argentina.

363. Contreras, L. and E. Bustos-Obregon. 1977. The annual reproductive cycle in the male Octodon degus (Molina). Medio Ambiente (Valdivia, Chile) 3(1):83-90. (In Spanish)

Octodon degus is a seasonal breeder, litters being born in September and December. Gestation takes 87 to 90 days. This work is a quantitative analysis of testis weight throughout the year in relationship to other histophysiological parameters of the male reproductive tract. These data are used to characterize the periods of sexual activity that the male degus exhibits in the wild.

364. Contreras, L. and M. Rosenmann. 1982. Thermoregulation in the testes of Octodon degus: A nonscrotal rodent. Physiol. Zool. 55:144-147.

In the rodent Octodon degus the testes are located inside the abdomen even during the breeding season, and their temperature is only 0.9 C lower than body temperature (36.8 C). The cauda epididymides are located in the cremasteric sacs, and their temperature is 4.8 C lower than body temperature even though

they are in a nonscrotal position. Compared to the testes, the cauda epididymides are insulated from body core and are more thermally conductive to the environment.

365. Cordero, R., G. A. and J. Ojasti. 1981. Comparison of capybara populations and forested habitats. J. Wildl. Manage. 45:267-271

This study was designed to compare the capybara populations (Hydrochoerus hydrochaeris) of savanna and forested habitats at the El Frio ranch in the Venezuelan Llanos, State of Apure, Venezuela. Based upon direct counts they were not able to detect a difference in population density between the two habitats.

366. Cordova, E. 1961. Investigations of Chagas' disease Peru. Epidemiological study in the Tembo Valley (Matalaque district, Department of Moquegua). I. Preliminary observations 1958-1959. Bol. Chil. Parasitol. 16:54-59. (In Spanish)

Preliminary surveys on the incidence of Chagas' disease in the Matalaque region, southern Peru, show that housing conditions favor the development of Triatoma infestans, the only vector found in this zone.

367. Cothram, E. G., E. G. Zimmerman, and C. F. Nadler. 1977. Genetic differentiation and evolution in the ground squirrel subgenus Ictidomys (genus Spermophilus). J. Mammal. 58:610-622.

The genetic structure of 34 natural populations of three species belonging to the ground squirrel subgenus Ictidomys (genus Spermophilus) was analyzed using starch-gel electrophoresis. Of the 28 loci examined, 14 were considered monomorphic, with the same allele fixed in all species. Species examined were S. tridecemlineatus and S. mexicanus which were collected in the U.S. and S. spilosoma collected in the U.S. and Chihuahua, Mexico.

368. Coulter, M., F. Cruz, and J. Beach. 1982. Experiments of the effectiveness of TALON controlling populations of black rats (Rattus rattus) in Galapagos Island, Ecuador. Annual Report, Darwin Research Station, Guayaquil. 9 pp. Mimeo.

369. Coutinho, J. de O. 1962. Contribution to the study of the epidemiology of Chagas' disease. Argent. Hig. 27:317-330. (In Portuguese)

370. Coutinho, J. de O. and D. G. B. Pattolli. 1964. Notes on the trypanasomes of rodents with descriptions of two new species. Pap. Avulsos 16:217-227. (In Portuguese)

The authors verified the existence of microfilariae, sporozoa and flagellates in animals captured in different regions of the

state of Sao Paulo. Studying the flagellates, they describe the trypanosomes of rodents: Trypanosoma agouchyi Brimont, 1909 of Dasyprocta azarae; Trypanosoma coutinhoi Deane, 1961 of Cuniculus paca; Trypanosoma forattini, n. sp. of Oryzomys eliurus, and Trypanosoma decnai, n. sp. of Oxymycterus quaestor.

371. Couve, E. M. 1975. The cytogenetics of Phyllotis (Auliscomys) boliviensis Waterhouse with special reference to the subgenus Auliscomys (Rodentia, Cricetidae). An. Mus. Hist. Nat. (Valparaiso). Vol. 8.

372. Coy Otero, A. and V. Barus. 1980. New definitive host for Pseudoheligmosomum howelli (Perez, 1934) (Nematoda: Heligmosomatidae) in Cuba. Misc. Zool. Inst. Zool. Acad. Cienc. Cuba 11:4. (In Spanish)

373. Crespo, J. A. 1962. The reddish long-nosed rat Oxymycterus rufus platensis. Neotropica 8(27):115-116. (In Spanish)

General comments on four specimens of Oxymycterus rufus platensis collected 25 km south of Azul, Buenos Aires Province, Argentina.

374. Crespo, J. A. 1964. Two new mammals from the Province of Cordova. Neotropica 10(32):62. (In Spanish)

Two new mammals are reported for the first time from the Province of Cordoba, Argentina. One was the rodent subspecies Oxymycterus rutilans platensis.

375. Crespo, J. A. 1966. The ecology of a rodent community in Partido de Rojas, Province of Buenos Aires. Rev. Mus. Argent. Cienc. Nat. Bernardino Rivadavia Ecologia 1(3):79-134. (In Spanish)

376. Crespo, J. A. 1982a. An introduction to the ecology of the mammals of the Palmar National Park, Entre Rios. An. Parques Nac. 15:1-33. (In Spanish)

377. Crespo, J. A. 1982b. The ecology of a mammal community in Iguazi National Park, Misiones. Rev. Mus. Argent. Cienc. Nat. Bernardino Rivadavia Ecologia 3(2):42-162. (In Spanish)

378. Crespo, J. A., M. S. Sabattini, M. J. Piantanida, and G. DeVillafane. 1970. Ecological studies on some wild rodents with observations on density, reproduction and social structure of a community of rodents from southern Cordoba. Secretaria de Estado de Salud Publica, Buenos Aires. 45 pp. (In Spanish)

379. Crossin, R. S., O. H. Soule, R. G. Webb, and R. H. Baker. 1973. Biotic relationships in the Canon del Rio Mezquital, Durango, Mexico. Southwest. Nat. 18:187-200.

Plants and vertebrates at seven localities were studied in the Durangan section of the Canon del Rio Mezquital.

380. Cruz, P. F. N. 1983. Occurrence and evaluation of damages caused by rodents, cacao pests in Bahia, Brazil. Rev. Theobroma. 13:59-61. (In Portuguese)

The most common rodents that attack cacao plantations in Bahia, Brazil, are Nectomys squamipes, Rattus rattus, Thomasomys sp., Akodon sp. and Rhipidomys sp.

381. Csuti, B. 1980. Type specimens of recent mammals in the Museum of Vertebrate Zoology, University of California, Berkeley. Univ. California Publ. Zool. 114:VII+1-75.

382. Daciuk, J. 1978. The status of some mammalian species introduced in the Aracauna Region (Argentina) and the degree of their use of some of the southern mountainous ecosystems. An. Parques Nac. 15:105-130. (In Spanish)

Discusses large mammals introduced in the Aracauna Region. Includes beavers (Castor canadensis) and muskrats (Ondatra zibethica) introduced from Canada.

383. Dalby, P. L. 1974. Ecology and population dynamics of Pampa rodents near Balcarce, Argentina. Unpublished Ph.D. dissertation, Mich. State Univ. 212 pp.

384. Dalby, P. L. 1975. Biology of Pampa rodents, Balcarce area, Argentina. Publ. Mus. Mich. State Univ. Biol. Ser. 5(3):149-271.

A 17-month field study of the comparative ecology and population dynamics of three grassland rodents was conducted in the vicinity of Balcarce, Province of Buenos Aires, Argentina. The three species studied were Akodon azarae, Oryzomys nigripes, and Oxymycterus rutilans.

385. Dalby, P. L. and A. G. Heath. 1976. Oxygen consumption and body temperature of the Argentine field mouse, Akodon azarae, in relation to ambient temperature. J. Thermal Biol. 1:177-179

Akodon azarae, a rodent of the pampas grasslands of South America, and similar to the northern hemisphere microtines in many aspects, exhibits a resting metabolic rate expected for an animal of its size. This is unlike the higher values generally found within the temperate adapted microtines. Behavioral selection of suitable microclimate may be a particularly important adaptation to cold in this species.

386. Dalby, P. L. and M. A. Mares. 1974. Notes on the distribution of the coney rat, Reithrodon auritus, in northwestern Argentina. Am. Midl. Nat. 92(1):205-206.

The coney rat, Reithrodon auritus, is recorded for the first time from the northwestern provinces of Tucuman and Jujuy, Argentina. This is a range extension of nearly 550 km north of previously published trapping localities.

387. Dalby, P. L. and H. Oziebge. 1978. Cuterebrid myiasis in the South American field mouse, Akodon azarae. Proc. Pa. Acad. Sci. 52(1):105. Abstract only.

The associated biology of the bot fly, Rogenhofera grandis, and South American field mouse, Akodon aza , was studied under field and laboratory conditions near t town of Balcarce, Buenos Aires Province, Argentina.

388. Daugherty, H. E. 1972. The impact of man on the zoogeography of El Salvador. Biol. Conserv. 4(4):273-278.

Our exploitation is noted; large predators are reduced in numbers, small mammals proliferated, and there are serious agricultural pests and disease reservoirs.

389. Davis, T. M. 1975. Effects of familiarity on agonistic encounter behavior in male degus (Octodon degus). Behav. Biol. 14:511-517.

Familiarity is a source of variability in the expression of agonistic behavior in the South American rodent Octodon degus. During initial encounters between unfamiliar male degus, one animal approaches and mounts his partner, while the other individual retreats and urinates. High frequencies of fighting are seen. Fighting is less frequent in subsequent pairings on the same day and body sniffing occurs more often.

390. Dawson, G. A. and J. W. Lang. 1973. The functional significance of nest building by a neotropical rodent (Sigmodon hispidus). Am. Midl. Nat. 89(2):503-509.

Surface nests were observed in a grassy area in Costa Rica. Average nest dimensions, interior temperatures, and orientation and shelter from precipitation were determined.

391. de Alencar, F. O. C. C. 1969. Notes on the sugarcane rat in the Cariri region of Ceara. Rev. Bras. Biol. 29(4):567-570. (In Portuguese)

This paper deals with the biology and control of the sugarcane rat, Holichilus sciureus Wagner, in the southern region of the State of Ceara, Brazil. The rats attack sugarcane, corn, rice, and cotton.

392. D'Alessandro, A., R. L. Rausch, G. A. Morales, S. Collet, and D. Angel. 1981. Echinococcus infections in Colombian animals. Am. J. Trop. Med. Hyg. 30(6):1263-1276.

The results of a survey involving more than 4,000 Colombian mammals, carried out to detect Echinococcus infections, are presented. Polycystic larvae were found in 96 of the 325 pacas and in 6 of 1,168 spiny rats, Proechimys spp. None of the 118 agouti showed hydatids.

393. de Almeida, A. M. Paiva, et al. 1984. Note on bubonic plague (Yersinia pestis) infection in Minas Gerais State, Brazil. Rev. Microbiol. 15(3):145.

394. de Amorim, J. P. 1962. Wild rodents as disseminators of Schistosoma mansoni. Rev. Inst. Med. Trop. Sao Paulo 4(6):397-402. (In Portuguese).

Holochilus sciureus and Nectomys squamipes acted as carriers of S. mansoni in Brazil, associated with human dwellings. Infectio was found in 11.61% of the rodents examined.

395. de la Cruz, J. 1981. Two new species of mites (Acarina, Dermanyssidae: Laelapinae and Macronyssinae) parasites of hutias (Rodentia: Capromyidae) of Cuba. Poeyana Inst. Zool. Acad. Cienc. Cuba No. 225. 14 pp. (In Spanish)

Describes two new species of mites, Androlaelaps capromydis and Ornithonyssus garridoi found on hutias in Cuba.

396. de la Cruz, J. 1983. A new species of Ornithonyssus (Acarina: Dermanyssidae, Macronyssinae) parasite of hutias (Rodentia: Capromyidae) in Cuba. Poeyana Inst. Zool. Acad. Cienc. Cuba No. 256. 10 pp. (In Spanish)

A new species (male and female) of the acarine genus Ornithonyssus (Dermanyssidae) is described as parasitic on hutias (Capromys sp.) from Baracoa, Guantanamo Province, Cuba.

397. de Leon, D. D. 1964. Helminth parasites of rats in San Juan, Puerto Rico. J. Parasitol. 50:478-479.

Helminth parasites are described from Rattus norvegicus and R. rattus trapped in San Juan, Puerto Rico.

398. de Lucena, D. T. and A. B. de Lima. 1960. Epidemiology of Chagas' disease in Alagoas. I. Preliminary entomologico-protozoological survey. Rev. Bras. Malariol. 12:81-86.

399. De Villafane, G. 1970. The ecology of wild rodents (Cricetidae) in the southern part of Cordoba Province with observations on reproduction and litter development. Unpublished Ph.D. dissertation, Univ. Nac. de Cordoba, Argentina. (In Spanish)

400. De Villafane, G. 1981a. Reproduction and growth of Calomys musculinus murillus (Thomas, 1916) (Rodentia: Cricetidae). Hist. Nat. (Mendoza) 1(33):237-256. (In Spanish)

Reproduction and growth parameters of Calomys musculinus murillus were studied for 4 years under laboratory conditions. Sexual maturity was reached by females 72.5 days after birth and 50% of the males were sexually mature 82 days after birth. Growth measurements are correlated with reproductive data in an attempt to determine age classes. All the animals used in the study were collected in the Province of Cordoba, Argentina.

401. De Villafane, G. 1981b. Reproduction and growth of Akodon azarae azarae (Fisher, 1829). Hist. Nat. (Mendoza) 1(28):193-204. (In Spanish)

Reproduction and growth parameters of Akodon azarae azarae were studied for 3 years under laboratory conditions. Females were sexually mature 75.3 days after birth and males 83.7. Average litter size was 3.5 young. External measurements are given from birth to 10 months.

402. De Villafane, G., F. O. Kravetz, M. J. Piantanida, and J. A. Crespo. 1973. Dominance, density and invasion in a rodent community at Pergamino (Province of Buenos Aires). Physis Secc. C. Cont. Org. Terr. 32(84):47-59. (In Spanish)

A capture system consisting of 320 snap traps arranged in four concentric circles was placed in a parcel of land, measuring 170 x 560 m. The distance between circles was 20 m. The traps were kept in place for 15 days after 2 days of prebaiting. The total number of animals captured was 832. Most prevalent rodent species to least prevalent species in the study area were: Akodon azarae, A. obscurus, Mus musculus, Calomys musculinus, and Oryzomys nigripes.

403. De Villafane, G., F. O. Kravetz, O. Donadio, R. E. Percich, L. Knecher, M. P. Torres, and N. Fernandez. 1977. Dynamics of some rodent communities in agroecosystems of the Pampa. Medicina (Bs. As.) 37:128-138. (In Spanish)

404. Deane, L. M. 1960. On a trypanosome of the cruzi-type discovered in a wild rat, in the state of Para. Rev. Bras. Malariol. 12:87-102. (In Portuguese)

405. Deane, L. M. 1961. Trypanosomes in mammals of the Amazon Region. I. Some hemoflagellates found in mammals from the state of Para. Rev. Inst. Med. Trop. Sao Paulo 3:15-28. (In Portuguese)

406. Deane, L. M. 1964a. Trypanosomidae in mammals of the Amazon region. III. Hematoscopy and xenodiagnosis of wild animals of the environs of Belem, Para. Rev. Inst. Med. Trop. Sao Paulo 6:225-232. (In Portuguese).

The examination of 222 mammals revealed trypanosomes of five types. Cruzi-like trypanosomes were detected in bats of the species Carollia perspicillata and Choeronycteris minor, marsupials Didelphis marsupials and Philander opossum, edentata Dasypus novemcinctus, and a wild rat, Nectomys squamipes.

407. Deane, L. M. 1964b. Animal reservoirs of Trypanosoma cruzi in Brazil. Rev. Bras. Malariol. Doencas Trop. 16:27-48.

408. Deane, L. M. 1967. Trypanosomas of mammals from the Amazon Region. IV. The hematoscope and xenodiagnosis of wild animals collected on the Belem-Brasilia highway. Rev. Inst. Med. Trop. Sao Paulo 9:143-148. (In Portuguese)

409. Deane, M. P., T. de Brito, and L. M. Deane. 1963. Pathogenicity to mice of some strains of Trypanosoma cruzi isolated from wild animals of Brazil. Rev. Inst. Med. Trop. (Sao Paulo) 5(5):225-235. (In Portuguese)

A comparison of the pathogenicity and histotropism of four strains of Trypanosoma cruzi from wild mammals of Brazil. The strains were isolated from a wild rat (Nectomys squamipes), a squirrel-monkey (Saimiri sciureus), an opossum (Didelphis marsupialis) and a bat (Eumops abrasus).

410. Dedet, J. P., P. Desjeux, P. Goyot, and M. Gosselin. 1984. Natural infection of Proechimys cuvieri Petter, 1978 (Rodent, Echimyid by Leishmania mexicana amazonensis Lainson and Shaw, 1972 (Kinetoplastid Trypanonsomatid) in French Guiana. Comptes rendus des seances de l'Academie des Sciences, Serie III, Sciences de la Vie 298:85-87. (In French)

Reports the first isolation of Leishmania mexicana amazonensis from the skin of Proechimys cuvieri, an echimyid rodent of French Guiana.

411. Delattre, P. and H. Le Louarn. 1980. Breeding cycle of the black rat (Rattus rattus) and of the brown rat (Rattus norvegicus) in different habitats of the Guadeloupe (French Antilles). Mammalia 44(2):233-243.

The reproduction and growth of the black rat Rattus rattus and of the brown rat Rattus norvegicus have been studied for 18 months in different habitats of Guadeloupe. In mangroves reproduction stops during the winter; in the other habitats there are fluctuations of the reproductive cycle in conjunction with the rains. This invalidates bibliographic data tending to show the influence of latitude on the breeding season.

412. Delattre, P. and H. Le Louarn. 1981. Population dynamics of the black rat Rattus rattus in Lacustrine Mangrove. Mammalia 45(3):275-288. (In French)

The reproductive cycle of the black rat was earlier the object of observations made on the volcanic mountains of the Antilles (Mammalia, 1980, No. 2). Some new data about this species have been collected in the typical habitat of the lacustrine mangrove. A trap line study preceded the demographic analysis. This allowed the definition of a schematic model of observed seasonal fluctuations and an estimation of several characteristic parameters of populations of black rats.

413. Demesa, J. E. 1975. The importance of kangaroo rats (Dipodomys spp.) at the Rancho Experimental "La Campana," Chihuahua, Chih. Mexico. Unpublished thesis, Univ. of Mexico. (In Spanish)

414. Denke, M. A. 1977. Four new nematodes heligmosomes, parasites of rodents in Mexico. Bull. Mus. Nat. Hist. Nat. Zool. 3(470):777-787. (In French)

Four new nematodes are described from Mexico. They were found in the following species of rodents: Oryzomys alfaroi, Peromyscus mexicanus and Heteromys lepturus.

415. Dewsbury, D. A. 1979. Copulatory behavior of four Mexican species of Peromyscus. J. Mammal. 60:844-846.

The copulatory behavior is described for four species of Peromyscus from Mexico: P. melanocarpus, P. mexicanus, P. melanophrys, and P. yucatanicus.

416. Dias de Avila Pires, F. 1968. Types of recent mammals in the National Museum, Rio de Janeiro. Arq. Mus. Nac. Rio De J. 53:161-191. (In Spanish)

417. Diaz de Pascual, A. 1978. Ecological studies of a population of Proechimys on the Venezuelan-Peruvian border. Unpublished thesis, Univ. de Los Andes. (In Spanish)

418. Diaz de Pascual, A. and J. Pefaur. 1982. The morphology of bacula of some Venezuelan cricetid rodents. Actas 8 Congreso Latinoamericano de Zoologia, Octubre 1980, Merida, Venezuela: 665-680. (In Spanish)

The bacula of 12 cricetid rodents from the Andes and lowlands of Venezuela are described. A key based on the baculum for each species is provided and every baculum is illustrated in four views.

419. Diaz de Pascual, A. and O. A. Reig. 1978. Notes on the reproductive biology of spiny rats (Proechimys sp.) with chromosomes 2n = 62 in an area of Barinitas. Acta Cient. Venez. 29 (Supplement 1):38. Abstract only. (In Spanish)

420. Diaz, V. A. 1960. Epidemiological considerations on Chagas' disease. Arch. Venez. Med. Trop. 3:187-201. (In Spanish)

421. Diaz, V. C. 1967. Parasitic nematodes of Venezuelan rodents. Bol. Soc. Venez. Cientif. Nat. 27:129-162. (In Spanish)

422. Diaz-Ungria, C. 1966. Transmission of Trypanosoma cruzi in mammals. Ann. Parasit. Hum. Comp. 41:549-571. (In French)

423. Didier, R. 1962. Notes on the os penes of some South American rodents. Mammalia 26(3):408-430. (In French)

Described are the morphology of the os penes for 21 species of South American rodents.

424. Diersing, V. E. 1976. An analysis of Peromyscus difficilis from the Mexican-United States boundary area. Proc. Biol. Soc. Wash. 89(39):451-466.

Peromyscus difficilis from the Franklin Mountains of Texas and New Mexico and from northern Coahuila, Mexico, are a distinct subspecies and are named Peromyscus difficilis penicillatus.

425. Diersing, V. E. 1980. Systematics of flying squirrels Glaucomys volans from Mexico, Guatemala and Honduras. Southwest. Nat. 25:157-172.

Systematics, distribution and habitat of G. volans in Mexico and Central America are assessed. G. volans occurs primarily in oak and pine-oak habitat. This habitat in Mexico, Guatemala and Honduras is usually available above 800 m, whereas comparable habitat in the USA is primarily below 800 m.

426. Dietz, J. M. 1983. Notes on the natural history of some small mammals in Central Brazil. J. Mammal. 64:521-523.

The objective of this study was to determine the relative seasonal abundance of small mammals in the three major habitats in the Serra da Canastra National Park, south-central Brazil, as part of a census of trophic resources available to maned wolves (Chrysocyon brachyurus). The most common rodents collected were Calomys laucha, Zygodontomys lasiurus, Oryzomys fornesi, and Akodon lasiotis.

427. Disney, R. H. L. 1964. Visceral involvement with dermal leishmaniasis in a wild-caught rodent. Trans. R. Soc. Trop. Med. Hyg. 58:581.

428. Disney, R. H. L. 1966. A trap for phlebotomine sandflies attracted to rats. Bull. Entomol. Res. 56:445-451.

In traps baited with rodents known to be reservoir-hosts of Leishmania, the species caught in greatest numbers in British Honduras was Ph. apicalis.

429. Disney, R. H. L. 1968. Observations on a zoonosis: leishmaniasis in British Honduras. J. Appl. Ecol. 5(1).1.

The rat Ototylomys phyllotis is the principal reservoir host and the fly Lutzomyia flaviscutellata is the principal vector of L. mexicana in British Honduras.

430. Disney, R. H. L. 1969. Notes on rodent warble-flies from British Hondurus including the description of a new species of Cuterebra Clark (Diptera, Cuterebridae). Entomol. Mon. Mag. 104:189-197.

Cuterebra flaviventris were isolated from Sigmodon hispidus trapped in the Cayo District. A new species Cuterebra chiquibulensis was collected from Ototylomys phyllotis caught in the same District.

431. Dolan, P. G. and D. C. Carter. 1977. Glaucomys volans. Mamm. Species 78:1-6.

432. Dorst, J. 1971. New research on the ecology of rodents of the high Peruvian plateaus. Mammalia 35(4):515-547. (In French)

The ecology of Calomys sorella, C. lepidus, Phyllotis pictus, P. osilae, Chinchillula sahamae, Akodon boliviensis, A. jelskii, and A. amoenus was studied. Circadian rhythms and habitat characteristics are discussed.

433. Dorst, J. 1972a. Stomach morphology and diet of some rodents from the high Andes of Peru. Mammalia 36(4):647-656. (In French)

The stomach of various cricetid rodents from the Peruvian highlands, belonging to the genera Phyllotis, Akodon, Calomys and Chinchillula, forms a single pouch and is one of the most primitive types known among Cricetidae. Phyllotis and Chinchillula are mainly vegetarian, whereas Akodon and Calomys prey on insects and larvae. The cecum is more developed in the vegetarians.

434. Dorst, J. 1972b. Some research on the density, biomass, and ecological specialization of some rodents in the high Andes of Peru. C. R. Seances Acad. Sci. Ser. D Sci. Nat. 274(6):940-942. (In French)

The high Andean plateau near Azangaro, Peru, is around 4,000 meters. Some rodent species have adapted to living under these conditions: Lagidium peruanum, Cavia tschudii, Calomys sorella, C. lepidus, Phyllotis pictus, P. osilae, Chinchillula sahamae, Akodon boliviensis, A. jelskii, and A. amoenus. The biomass for these rodents ranged from 350 to 1,000 g/ha.

435. Dowler, R. C. and H. H. Genoways. 1978. Liomys irroratus. Mamm. Species 82:1-6.

436. Downs, W. G. 1963. The presence of Trypanosoma cruzi in the Islanc of Trinidad, W.I. J. Parasitol. 49:50.

Trypanosoma cruzi is isolated for the first time from the island of Trinidad.

437. Downs, W. G., T. H. G. Aitken, C. B. Worth, L. Spence, and A. H. Jonkers. 1968. Arbovirus studies in Bush Bush Forest, Trinidad, W. I., September 1959-December 1964. I. Description of the study area. Am. J. Trop. Med. Hyg. 17:224-236.

From September 1959 through December 1964 the Trinidad Regional Virus Laboratory carried on an extensive field program in the Bush Bush Forest area on the Nariva Swamp in eastern Trinidad.

438. Dropelmann, I. 1969. Food habits of Myocastor coypus (Molina) in spring and summer. Unpublished thesis, Univ. Austral de Chile, Valdivia, Chile. (In Spanish)

439. Drummond, D. C. 1966. Rats resistant to warfarin. New Sci. 30(501):771-772.

Resistance to warfarin has appeared in Holochilus sciureus, a rodent pest of sugarcane in Guyana, in the house mouse (Mus musculus) and in Rattus norvegicus. The nature of rodent resistance is discussed.

440. Dubost, G. 1968a. Ecological nests of South American and African tropical forests, sources of remarkable similarities between rodents and Artiodactyla. Terre Vie 115:3-28. (In French)

The comparison deals with South American rodents of the genera Dasyprocta, Myoprocta, Cuniculus, and Hydrochoerus.

441. Dubost, G. 1968b. The preputial gland in the agouti, Dasyprocta agouti. Mammalia 32(2):218-221. (In French)

At the tip of the penis sheath, the agouti has two voluminous sebaceous glands which form an incomplete ring. From 6 to 10 small excretory canals open on the prepuce at the base of large hairs, in a posterior half circle.

442. Dubost, G. 1968c. Fossorial mammals. Rev. Ecol. Biol. Sol 1:99-133. (In French)

A complete review of morphological adaptations made to enable these animals to live underground. Covers worldwide fossorial mammals.

443. Dubost, G. 1968d. Fossorial mammals. Rev. Ecol. Biol. Sol 2:135-197. (In French)

A complete review of worldwide fossorial mammals and the effects they have on their surroundings. Effects of digging on soils and vegetation. Also covers fossorial mammals microhabitats.

444. Dubost, G. and H. Genest. 1974. Social behavior of a colony of maras (Dolichotis patagonum) in the Park of Branfere. Z. Tierpsychol. 35:225-302. (In French)

A population of Maras, Dolichotis patagonum, was followed throughout the course of a year in the park of Branfere (Brittany). In both their morphology and behavior patterns, Maras show numerous resemblances to ruminants and other large herbivores, as well as traits common to hystricomorph rodents and those unique to the species itself.

445. Dubost, G. and F. Petter. 1978. A new species of rat from French Guiana, Dactomys oyapocki (Rodentia: Cricetidae). Mammalia 42:435-439. (In French)

A new species of Dactomys is described from a single specimen collected at Trois Sauts, French Guiana. Dactomys oyapocki differs from members of the genus by having different molar configurations and the absence of the upper and lower M3.

446. Duchassin, M., et al. 1966. Infective index by L. icterohaemorrhagiae in rats in Cayenne: some epidemiologic aspects of leptospiroses in French Guiana. Bull. Soc. Pathol. Exot. 58(2):170. (In French)

Leptospira icterohaemorrhagiae was isolated from 34% of 151 wild rats (Rattus norvegicus) at Cayenne, French Guiana. One strain was highly virulent. Three human clinical cases were confirmed serologically as due to L. icterohaemorrhagiae.

447. Dunford, C. and R. Davis. 1975. Cliff chipmunk vocalizations and their relevance to the taxonomy of coastal Sonoran chipmunks. J. Mammal. 56:207-212.

Chipmunk calls were recorded and compared from cliff chipmunks, Eutamias dorsalis. The recordings were made in southern Arizona and Sonora, Mexico.

448. Dunnigan, P. B. 1967. Pocket gophers of the genus Thomomys of the Mexican state of Sinaloa. Radford Rev. 21:139-168.

Two species of pocket gophers of the genus Thomomys occur in the Mexican state of Sinaloa, Thomomys bottae, which inhabits sandy soils of the northern coastal plain and the foothills in the northeast, and Thomomys umbrinus, which is found in generally

more clayed soils in the mountains and foothills of eastern Sinaloa and on the southern part of the coastal plain.

449. Durant, P. 1978. Some aspects on the population dynamics of Peromyscus leucopus (Rodentia: Cricetidae) from two communities with different floral composition. Bol. Soc. Venez. Cienc. Nat. 33(135):199-216. (In Spanish)

450. Durant, P. and R. Perez. 1982. Reproduction and growth in two populations of cotton rats, Sigmodon hispidus (Rodentia: Cricetidae). Acta Cient. Venez. 38:249-254. (In Spanish)

This study reports some aspects of reproductive activity and growth for cotton rats of two different Venezuelan populations. The study areas were near Barinitas, state of Barinas and at Hacienda Boro-Santa Teresa, near El Tocuyo, State of Lara.

451. Durette-Desset, M-C., M. A. Denke, and R. Murua. 1976. A Chilean rodent as host of a nematode Inglamidinae (Sub. Fam. Nov.) belonging to the Amidostomatidae previously known exclusively from Australian mammals. Ann. Parasitol. Hum. Comp. 51(4):453-460. (In French)

Inglamidum akodon was isolated from a female Akodon olivaceus caught at San Martin, Valdivia Province, Chile.

452. Dusbabek, F. and V. Cerny. 1969. Ectoparasites of synanthropic rodents in Havana. Torreia Nueva Ser. 17:2-8. (In Spanish)

Ectoparasites were collected from Rattus rattus, R. norvegicus, and Mus musculus in Havana. Two species of lice and eight species of mites were found.

453. Eberhard, M. L., G. A. Morales, and T. C. Orihel. 1976. Cruorifilaria tuberocauda gen. sp. N. (Nematoda: Filarioidae) from the capybara (Hydrochoerus hydrochaeris) in Colombia. J. Parasitol. 62(4):604-607.

Cruorifilaria tuberocauda is described from blood vessels of the kidney, heart, and lungs of the capybara, Hydrochoerus hydrochaeris in Colombia, S. A.

454. Edgcomb, J. H. and C. M. Johnson. 1970. Natural infection of Rattus rattus by Trypanosoma cruzi in Panama. Am. J. Trop. Med. Hyg. 19(5):767-769.

T. cruzi was demonstrated in 57 of 100 wild roof rats trapped in communities of Panama Province, Republic of Panama, and thus appears to be an important natural reservoir in the area.

455. Edgcomb, J. H., D. H. Walker, and C. M. Johnson. 1973. Pathological features of Trypanosoma cruzi infections of Rattus rattus. Arch. Pathol. 96(1):36-38.

About half of 202 wild R. rattus from Panama were found to be naturally infected with T. cruzi, suggesting the importance of the species as a natural reservoir.

456. Eisenberg, J. F. 1974. The function and motivational basis of hystricomorph vocalizations. Symp. Zool. Soc. Lond. 34:211-244.

Studied were the vocalizations of 17 species of New World hystricomorphs from 7 families. Special attention was given to the vocal repertoires of: Octodon degus, Myoprocta pratti, Dinomys branickii, and Cavia porcellus. The maximum number of different sounds produced by a given species ranges from 11 to 14. The animals were studied in captivity.

457. Eisenberg, J. F. 1980. The density and biomass of tropical mammals. Pages 35-55 in M. Soule and B. Wilcox, Eds. Conservation Biology: An Evolutionary-ecological Perspective. Sunderland, Massachusetts, Sinauer Associates.

Deals with animal numbers expressed as biomass and the land area needed to sustain viable populations of species at different trophic levels. Mammal biomass described was from Panama and Venezuela.

458. Eisenberg, J. F. and M. A. O'Connell. 1976. The reproductive characteristics of some caviomorph rodents and their implications for management. In 11 Seminario sobre chiguires y babas. Consejo Nacional de Investigaciones Cientificas y Tecnologicas.

459. Eisenberg, J. F. and K. H. Redford. 1979. Biogeographic analysis of the mammalian fauna of Venezuela. Pages 31-36 in J. F. Eisenberg, Ed. Vertebrate ecology in the northern Neotropics. Smithson. Inst. Press, Washington, D.C. 271 pp.

460. Eisenberg, J. F. and K. H. Redford. 1982. Comparative niche structure and evolution of mammals of the Nearctic and southern South America. Pages 77-84 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

The southern portion of South America (that is, Uruguay, Argentina and Chile) is compared with an equivalent land area in North America that extends from southern British Columbia to the Isthmus of Tehuantepec. The relative size classes for mammalian genera and species were compared for the two regions. It is concluded that the frequency of size distributions are remarkably similar.

461. Eisenberg, J. F. and R. W. Thorington, Jr. 1973. A preliminary analysis of a neotropical mammal fauna. Biotropica 5(3):152-155, 156-159.

The abundance and biomass of species of nonvolant mammals on Barro Colorado Island, Panama, are estimated and compared with data from Surinam. The edentates, particulary the sloths, are shown to be dominant elements in neotropical forests. Rodents, ranked in order of abundance, on Barro Colorado Island were: Dasyprocta and Sciurus (diurnal), Proechimys and Agouti (nocturnal). In Surinam: Myoprocta and Dasyprocta (diurnal), Coendou, Agouti and Echimys (nocturnal).

462. Eisenberg, J. F., M. A. O'Connell and P. V. August. 1979. Density, productivity, and distribution of mammals in two Venezuelan habitats. Pages 187-207 in J. F. Eisenberg, Ed. Vertebrate Ecology in the Northern Neotropics. Smithsonian Institution Press, Washington. 271 pp.

The mammalian fauna for Guatopo National Park and Fundo Pecuario Masaguaral is compared and contrasted. The llanos habitat at Masaguaral exhibits a lower diversity of non-volant mammalian species. Density estimates for non-volant mammals were developed for the two habitats.

463. Elias, D. J. 1983. Vertebrate pests: their place in post-harvest losses. In Anais do 1 Seminaria Latino-Americana de Perdas Pos-Colheita de Graos, Vicosa, Brasil 143-180. (In Spanish)

A general review of rodents that cause postharvest damage in Latin America.

464. Elias, D. J. 1984. Rodents as pests for food products: Control and management. Serie: Tecnologia Postcosecha. Oficina Regional de la FAO para America Latina y El Caribe, Santiago, Chile. pp. 1-40. (In Spanish)

General review on postharvest losses to rodents and control.

465. Elias, D. J. and D. Valencia. 1973. The control of rodents in coconuts. ICA Informe No. 8, Bogota, Colombia. pp. 1-4. (In Spanish)

Describes how to "crown-bait" coconut trees to control rodents and reduce damage. Most damage to coconuts in Colombia is caused by Rattus rattus.

466. Elias, D. J. and D. Valencia. 1984. The agriculture of Latin America and the vertebrate pests. Interciencia 9(4):223. (In Spanish)

General review of vertebrate pests in Latin America.

467. Elias, D. J., D. Valencia, J. F. Londono, and P. P. Woronecki. 1971. The evaluation and control of rodents that damage coconuts in Colombia. Unpublished ICA report. 21 pp. (In Spanish)

468. Elias, D. J., D. Valencia, J. F. Londono, and P. P. Woronecki. 1973. The control of rodents in coconuts. ICA Informa. 4 pp. (In Spanish)

469. Ellis, L. S. and L. R. Maxson. 1980. Albumin evolution within new world squirrels (Sciuridae). Am. Midl. Nat. 104(1):57-62.

Immunological studies of the Sciuridae using quantitative microcomplement fixation indicate that the ground squirrel and chipmunk lineages diverged from tree squirrels during the early Oligocene.

470. Emmons, L. H. 1981. Morphological, ecological, and behavioral adaptations for arboreal browsing in Dactylomys dactylinus (Rodentia, Echimyidae). J. Mammal. 62(1):183-189.

The study was conducted in Ecuador and Peru. Described are a suite of morphological, ecological, and behavioral characteristics of Dactylomys dactylinus, which seems specifically adapted to its completely arboreal browsing habits.

471. Emmons, L. H. 1982. Ecology of Proechimys (Rodentia, Echimyidae) in southeastern Peru. Trop. Ecol. 23(2):280-290.

Aspects of the ecology of Proechimys brevicauda and P. hendeei in SE Peru were studied by trapping, radio-tracking, strip census, and analysis of fecal samples.

472. Enders, R. K. 1980. Observations on Syntheosciurus: Taxonomy and behavior. J. Mammal. 61(4):725-727.

Gives additional records on specimens of Syntheosciurus poasensis collected in Panama. Also some observations on this squirrel's behavior under natural conditions.

473. Engeman, R. M., J.-P. Samedy, M. S. Bornstein, and G. C. Mitchell. 1985. A comparison of bird damage among eleven varieties of corn in Haiti. J. Agric. Univ. Puerto Rico 69(3):291-295.

Besides identifying bird damage, a rodent control strategy in maturing corn is described.

474. Escobar, A. and E. Gonzalez Jimenez. 1974. Statistical variation and the relative frequency of vegetable species consumed by capybaras (Hydrochoerus hydrochaeris) in the flood plains. Acta Cient. Venez. 25(Supl. 1):15. (In Spanish)

475. Escobar, A. and E. Gonzalez Jimenez. 1976. A study on the competition for food of large herbivores in the flood plains with special reference to the capybara. Agron. Trop. 26:215-227. (In Spanish)

476. Espino, R., L. Cabrera, and R. I. Cornide. 1981. Finding of Leptospira pomona in Mus musculus Linnaeus from a rice production zone in the Province of Havana. Acad. Cienc. Cuba Inf. Cient.-Tec. No. 164. 11 pp. (In Spanish)

Considers Mus musculus to be the main reservoir for leptospirosis in Cuba.

477. Espinoza, H. R. and F. P. Rowe. 1979. Biology and control of the cotton rat, Sigmodon hispidus. PANS 25(3):251-256.

There was a severe outbreak of rodents in the San Bernardo Valley of southern Honduras in 1974-75. Extensive damage was inflicted to rice, maize, sugarcane, cotton, melons, grasses, alfalfa, vegetable and fruit crops. The rodent species concerned was the grey-bellied cotton rat, Sigmodon hispidus. The outbreak coincided with the flooding of peripheral lowlands.

478. Esquivel, M. P. 1981. A comparative study of the craneocervical musculature of Neotomodon alstoni alstoni (Davis, 1944) and Peromyscus boylii levipes (Osgood, 1909) (Rodentia: Cricetinae). An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 51:525-562. (In Spanish)

479. Esquivel, R. R., J. A. Zuniga, M. Alfaro, and E. Kotcher. 1967. Trypanosomes of Costa Rican feral mammals. J. Parasitol. 53:951-955.

A trypanosome morphologically similar to T. peromysci Watson and Hadwen, 1912 was found in Peromyscus nudipes, a white-footed mouse. A new species of trypanosome, Trypanosoma (Megatrypanum) zeledoni sp. n., is described from the spiny pocket mouse, Liomys salvini, collected in two different provinces of Costa Rica.

480. Esslinger, J. H. 1973. The genus Litomosoides Chandler, 1931 (Filarioidea: Onchocercidae) in Colombian bats and rats. J. Parasitol. 59(2):225-246.

Rodents hosts of filarial worms of this genus included Hoplomys gymnurus, Proechimys semispinosus and Oryzomys caliginosus.

481. Estep, D. Q., D. L. Lanier, and D. A. Dowsbury. 1977. Copulatory behavior of Tylomys and Ototylomys. Am. Midl. Nat. 98(1):223-227.

Patterns of copulation were observed in laboratory tests of Ototylomys phyllotis and Tylomys.

482. Everard, C. O. R. 1975. Endoparasites of some amphibia, reptiles, and small mammals from Trinidad. J. Trin. Field Nat. Club:72-79.

Endoparasites were isolated from the following rodents: Rattus norvegicus, R. rattus, Oryzomys capito, Akodon urichi, Zygodontomys brevicauda, Heteromys anomalus, Proechimys guyannensis and Echimys armatus.

483. Everard, C. O. R. and T. H. G. Aitken. 1972. Cuterebrid flies from small mammals in Trinidad. J. Parasitol. 58:189-190.

Bot flies were found parasitizing seven different species of rodents on the island of Trinidad.

484. Everard, C. O. R. and O. E. Sousa. 1972. Recovery of Trypanosoma forattinii Coutinho and Pattolli from a Trinidadian rodent. Rev. Saude Publica Sao Paulo 6:283-285.

Recovery of Trypanosoma forattinii from natural infected Oryzomys capito velutinus from Trinidad is reported.

485. Everard, C. O. R. and E. S. Tikasingh. 1970. The study of small mammal ecology in Turune Forest, Trinidad, with associated virological and parasitological problems. Part 1. Trapping techniques, population densities, home range, and longevity studies. West Indian Med. J. 19:126-127.

Animals were caught in live traps set along two parallel lines and also in two grids. The data collected for each animal included: sex, maturity, external measurements, weight, date and locality of capture. The two most common species were Oryzomys laticeps and Proechimys guyannensis.

486. Everard, C. O. R. and E. S. Tikasingh. 1973a. Ecology of the rodents Proechimys guayanensis trinatus and Oryzomys capito velutinus on Trinidad. J. Mammal. 54:875-886.

This study deals with ecology of two rodents, Proechimys guyannensis trinitatis and Oryzomys capito velutinus, representing nearly 70 percent of the mammals captured in Turure Forest, Trinidad. Maximum population densities of each species were 5.5 and 9.2 animals per acre, respectively; mean values computed for each home range were 0.425 and 1.012 acres, respectively.

487. Everard, C. O. R. and E. S. Tikasingh. 1973b. The abundance of small mammals in Turure Forest, Trinidad. J. Trin. Field. Nat. Club:85-90.

Mammals were trapped with Havahart live traps 2 to 4 nights per week for 3 years in the Turure Forest, Trinidad. Baits were coconuts, bananas and pawpaws. Oryzomys capito and Proechimys guyannensis were the most common rodents.

488. Everard, C. O. R., E. S. Tikasingh, and J. B. Davis. 1974. The biology of Dipetalonema proechimyis Esslinger, 1974 (Nematoda: Filarioidea) in Trinidad. J. Parasitol. 60:556-558.

Dipetalonema proechimyis was isolated from Proechimys guyannensis in Trinidad, W.I.

489. Everard, C. O. R., G. M. Fraser-Chanpong, L. J. Bhagwandin, M. W. Race, and A. C. James. 1983. Leptospires in wildlife from Trinidad and Grenada. J. Wildl. Dis. 19(3):192-199.

Serum samples were taken from 894 wild animals from Trinidad and Grenada. Rodents positive for Leptospira were: Rattus norvegicus, R. rattus, Mus musculus, Proechimys guyannensis, Nectomys squamipes, Heteromys anomalus, Oryzomys capito, Rhipidomys couesi, Zygodontomys brevicauda, and Akodon urichi.

490. Everard, C. O. R., C. R. Sulzer, L. J. Bhagwandin, G. M. Fraser-Chanpong, and A. C. James. 1980. Pathogenic leptospira isolates from the Caribbean Islands of Trinidad, Grenada, and St. Vincent. Int. J. Zoonoses 7:90-100.

All known isolates of Leptospira interrogans obtained in Trinidad, Grenada and St. Vincent up to the end of 1979 are listed. There were 80 from Trinidad, 20 from Grenada, and 2 from St. Vincent.

491. Fairchild, G. B., G. M. Kohls, and V. J. Tipton. 1966. The ticks of Panama (Acarina: Ixodoidea). Pages 167-219 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist., Chicago.

Includes information of distribution in relation to altitude and climate and notes on Haemophysalis leporispalustris, Rhipicephalus sanguineus, and Ixodes spp. among others. Includes key to species and a host list.

492. Feito, R. and M. H. Gallardo. 1982. Sperm morphology of the Chilean species of Ctenomys (Octodontidae). J. Mammal. 63(4):658-661.

Compares the sperm morphology for the following fossorial caviomorph rodents from Chile: Ctenomys opimus, C. fulvus, C. maulinus, and C. magellanicus.

493. Feito, R. J., L. A. Gonzalez, and R. Mondian. 1981. Determination of age and age classes of Akodon olivaceus in southern Chile. Stud. Neotrop. Fauna Environ. 16:201-207.

494. Fernandes, R. G. 1967. The "tuco-tuco" rodent pest. Rev. Fac. Agron. Vet. Univ. Fed. Rio Grande Sul (Brazil) 7(3-4):253-257.

Deals with animals called "tuco-tuco" (Ctenomys torquatus) from the sounds they make in their burrows. Their burrows can destroy pastures and can also cause dangerous falls to horses and their riders.

495. Fernandez, R. 1964. The karyotype of Octodon degus. A preliminary note presented at the VI Cong. Asociacion Latinoamericana de Ciencias Fisiologicas, Vina del Mar, Chile.

496. Fernandez, R. 1966. Identification and behavior of the sex bivalent in male Octodon degus. Biologica 38:30-37.

Meiosis and the behavior of the sex bivalent were studied in the Chilean rodent Octodon degus. A small pairing segment was found in the sex chromosomes.

497. Fernandez, R. 1968. The karyotype of Octodon degus (Rodentia-Octodontidae) (Molina 1782). Arch. Biol. Med. Exp. 5:33-37. (In Spanish).

The karyotype and the idiogram of Octodon degus was studied in 343 metaphase plates obtained from 10 males and 6 females 85 to 140 days old. The number 2N = 58 has been confirmed.

498. Fernandez, R. and A. E. Spotorno. 1968. Heteromorphism in chromosome pair No. 1 of Cavia porcellus L. Arch. Biol. Med. Exp. 5:81-85. (In Spanish)

499. Ferrer, F., J. Suniaga and J. Salazar. 1973. Notes on the control of rats in sugarcane. CIARCO 3:51-56. (In Spanish)

500. Ferriolli, F., Jr. and M. P. Barretto. 1965a. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. VI. The natural infection of Akodon arviculoides cursor (Winge, 1985) with a trypanosome similar to T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 7:72-81. (In Portuguese)

A cruzi-like trypanosome was isolated through xenodiagnosis from Akodon arviculoides cursor captured in Ribeirao Preto, State of Sao Paulo, Brazil. No trypanosomes or leishmaniae were found in blood or tissue, but baby mice inoculated intraperitonally became infected and showed a trypanosome morphology similar to T. cruzi.

501. Ferriolli, F., Jr. and M. P. Barretto. 1965b. Studies on forest reservoirs and vectors of Trypanosoma cruzi. IX. Natural infection of Rattus rattus (L.) with a trypanosoma resembling T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 7:164-179. (In Portuguese)

A trypanosome morphologically identical to T. cruzi was isolated through xenodiagnosis from a specimen of Rattus rattus captured in Ribeirao Preto, State of Sao Paulo, Brazil.

502. Ferriolli, F., Jr. and M. P. Barretto. 1966. Studies on wild reservoirs and vectors of Trypanosoma cruzi. XIV. Natural infection of a rodent, Cavia aperea aperea (Erxleben) by trypanosoma-like T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 8:267-276. (In Portuguese)

A cruzi-like trypanosome was observed through xenodiagnosis in 3 out of 38 rodents Cavia aperea aperea captured at Ribeirao Preto, State of Sao Paulo, Brazil.

503. Findley, J. S. 1967. A black population of the Goldman pocket mouse. Southwest. Nat. 12:191-192.

A black population of the rock inhabiting species Perognathus goldmani was found living in a lava field 2 miles S. of Moctezuma, Sonora. Eighteen P. goldmani were trapped and all but one were black, in marked contrast to normally colored specimens from other places in Sonora. One specimen was of approximately normal coloration.

504. Findley, J. S. and C. J. Jones, Jr. 1960. Geographic variation in the yellow-nosed cotton rat. J. Mammal. 41:462-469.

Geographic variation is compared for specimens of Sigmodon ochrognathus. Included in the study were specimens from Chihuahua and Coahuila, Mexico.

505. Fistein, B. and R. M. P. Sutton. 1963. Chagas' disease in the West Indies. Br. Med. J. L:330-331.

506. Fleming, T. H. 1969. Population ecology of three species of Neotropical rodents. Unpublished Ph.D. thesis, Univ. Michigan, Ann Arbor. 231 pp.

507. Fleming, T. H. 1970. Notes on the rodent faunas of two Panamanian forests. J. Mammal. 51(3):473-490. (WHO Information Circular VBC/VC/71.18, p. 77, no. 328)

Twenty-one species of rodents were trapped or observed in two forests in the Panama Canal Zone. Data on the ecology, molt, and food habits of seven species are presented. Among the terrestrial rats and mice, three species (Liomys adspersus, Oryzomys capito, and Proechimys semispinosus) were common in the Atlantic slope forest. Ecological segregation serves to minimize competition among the rodents in both forests.

508. Fleming, T. H. 1971. Population ecology of three species of neotropical rodents. Publ. Mus. Zool. Univ. Mich. 143:1-77.

Three species of rodents (Liomys adspersus, Oryzomys capito, and Proechimys semispinosus) were studied for 1 year in the Canal Zone in Panama. Temperate and tropical rodent populations are compared with respect to population densities, annual survivorship rates, and reproductive rates.

509. Fleming, T. H. 1973a. Numbers of mammal species in North and Central American forest communities. Ecology 54:555-563.

Latitudinal trends in the species diversity of North and Central American mammalian communities are documented by examining seven habitats ranging from the tundra of central Alaska to the moist tropical forest of central Panama. The communities are compared with respect to the numbers and kinds of species in each habitat and their size, spatial, and trophic relationships.

510. Fleming, T. H. 1973b. The number of rodent species in two Costa Rican forests. J. Mammal. 54(2):518-521.

Consists of two sciurus spp., two heteromyidae, nine cricetids, one Murid (Rattus rattus) and a number of endemic rodents such as the Coendou and the Agouti. Liomys salvini and Heteromys desmarestianus were especially common. Different habitat requirements are discussed for the various species.

511. Fleming, T. H. 1974a. The population ecology of two species of Costa Rican heteromyid rodents. Ecology 55:493-510.

This study compares the demographic characteristics of two tropical heteromyid rodents: Liomys salvini, which inhabits deciduous tropical forests, and Heteromys desmarestianus, which inhabits wet tropical forests.

512. Fleming, T. H. 1974b. Social organization in two species of Costa Rican heteromyid rodents. J. Mammal. 55(3):543-561.

The social organization of Liomys salvini and Heteromys desmarestianus was studied using lab and field techniques. Individuals of the former species seemed less tolerant of conspecifics than the latter. Intraspecific aggression, dominance, home range, and population regulations are discussed.

513. Fleming, T. H. 1975. The role of small mammals in tropical ecosystems. Pages 275, 278, 279 in F. Golley, K. Petrusewicz and L. Ryskoski, Eds. Small Mammals: Their Productivity and Population Dynamics. Cambridge University Press, London.

514. Fleming, T. H. 1977. Growth and development of two species of tropical heteromyid rodents. Am. Midl. Nat. 98(1):109-123.

This paper describes laboratory rates of growth and early development in two species of Costa Rican heteromyid rodents,

Heteromys desmarestianus and Liomys salvini; compares laboratory and field observation on maturation; and compares growth rates of Heteromys and Liomys with those of other heteromyid rodents in an attempt to identify different developmental strategies within this endemic New World family.

515. Fleming, T. H. 1983a. Heteromys desmarestianus (Raton Semiespinosa, Spiny Pocket Mouse). Pages 474-475 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

516. Fleming, T. H. 1983b. Liomys salvini (Raton Semiespinosa, Guardafiesta, Spiny Pocket Mouse). Pages 475-477 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

517. Fleming, T. H. and G. J. Brown. 1975. An experimental analysis of seed hoarding and burrowing behavior in two species of Costa Rican heteromyid rodents. J. Mammal. 56:301-315.

This study compares the seed hoarding and burrowing behavior of two Costa Rican heteromyid rodents, Liomys salvini, an inhabitant of dry tropical forests, and Heteromys desmarestianus, an inhabitant of wet tropical forests.

518. Fittkau, E. J. 1969. The fauna of South America. Pages 624-658 in E. J. Fittkau, et al., Eds. Biogeography and Ecology of South America.

519. Fogden, P., M. Fogden, and J. M. Pena Neira. 1978. Control, management and exploitation of the wild fauna of pasturelands (Wild animals and rodents as potential predators and/or grazing competitors of livestock, nature conservation, Mexico). Pastizales 9:2-16. (In Spanish)

Rodents identified as pest species were prairie dogs, Cynomys spp., pocket gophers, Thomomys spp., and kangaroo rats, Dipodomys spp. Recommends using phostoxin and strychnine for control.

520. Fonseca, F. da. 1960. Notes on acarology. 56. Parasitic acarine fauna of Bolivia. Mem. Inst. Butantan (Sao Paulo) 29:89-141. (In Spanish)

521. Forattini, O. I., E. Juarez, E. X. Rabello, D. G. B. Patoli, and R. R. Correa. 1969. House infestation by Triatoma infestans and some epidemiologic aspects of American trypanosomiasis in a certain area of the state of Sao Paulo, Brazil. Rev. Saude Publica 3(2):159-172. (In Spanish)

The rodents Akodon arviculoides and Oryzomys nigripes were found naturally infected with Chagas' disease.

522. Forattini, O. P., E. X. Rabello, M. L. S. Castanho, and D. G. B. Pattoli. 1970. Ecological aspects of American trypanosomiasis. I. Observations on Panstrongylus megistus and its relation to natural foci of the infection in the urban area of Sao Paulo, Brazil. Rev. Saude Publica 4(1):19-30. (WHO Information Circular VBC/VC/2.19, p. 40, no. 138) (Trop. Dis. Bull. 68(6):682-683). (In Spanish)

A description is given of the occurrence in a forested area within the city of Sao Paulo of a zoonotic cycle of Trypanosoma cruzi with the triatomid bug Panstrongylus megistus transmitting the infection to Didelphis marsupialis and Rattus norvegicus 1,000 meters from forest land.

523. Forattini, O. P., O. A. Ferreira, E. Da Rocha, E. O. Silva, E. X. Rabello, J. L. D. S. Ferreira. 1971. Ecological aspects of South American trypanosomiasis: II. Local distribution and dispersion of triatomids in natural and artificial ecotopes. Rev. Saude Publica 5(2):163-191. (In Spanish)

The persistence of T. cruzi in the area of Sao Paulo, Brazil, was detected both by triatomids naturally infected found in dwellings and by positive xenodiagnosis obtained in Rattus norvegicus captured there. The possibility of increase of local transmission rate is emphasized.

524. Forattini, O. P. et al. 1972. Natural infection of sylvatic mammals with cutaneous leishmaniasis in Sao Paulo State, Brazil. Rev. Saude Publica 6(3):255-261. (In Spanish)

An endemic area of cutaneous leishmaniasis in the State of Sao Paulo, Brazil, is described. From investigations on natural infections of local wild mammals by skin culture techniques three strains were isolated from Akodon arviculoides and Oryzomys nigripes.

525. Forattini, O. P. et al. 1973. Natural infection of Oryzomys capito laticeps in enzootic focus of cutaneous leishmaniasis in Sao Paulo State, Brazil. Rev. Saude Publica 7(2):181-184. (In Spanish)

The infection was due to L. braziliensis. This is the first time rodents have been found as natural reservoirs of the mucocutaneous form of leishmaniasis.

526. Fornes, A. and E. Massoia. 1965. Micromammals collected in the Buenos Aires region of Miramar. Physis 25(69):99-108. (In Spanish)

527. Fors, A. L. 1981. Certain philosophies related with the behavior and control of rodents (rats and gophers) in Mexico, Central America and the Caribbean. Proc. 2nd Inter-American Sugar Cane Sem. pp. 201-212.

Rodents affecting sugarcane in the Caribbean differ from those in Mexico and Central America in their species as well as behavior. This paper mainly deals with damage in Mexico and Central America, pointing out that certain conditions are necessary for the development of significant outbreaks.

528. Fredga, K. 1966. Chromosome studies in five species of South American rodents (Suborder Hystricomorpha). Mammalian Chromosome Newsletter 20:45-46.

529. Freitas, J. L. 1961. Epidemiology of Chagas' disease. Hospital (Rio De J.) 60:323-332. (In Portuguese)

530. Freitas, T. R. O. 1980. Cytogenetical studies in rodents from southern Brazil. Unpublished thesis, Univ. Fed. do Rio Grande do sul, Porto Alegre, Brazil. (In Portuguese)

531. Freitas, T. R. O. and V. H. Travi. 1982. A cytotaxonomical study and the geographical distribution of three species of Ctenomys from Rio Grande do Sul (Rodentia: Ctenomyidae). Cienc. Cult. 34:755. (In Portuguese)

532. Freitas, T. R. O., T. Lessa, and E. P. Lessa. 1984. Cytogenetics and morphology of Ctenomys torquatus (Rodentia: Octodontidae). J. Mammal. 65(4):637-642.

Two chromosomal forms of Ctenomys torquatus are found in southern Brazil: 2n = 44 and 2n = 46, both showing AN = 72. The patterns of the G and C bands and the nucleolar organizer regions are presented. The two chromosomal forms do not show important differences in their morphology.

533. Freitas, T. R. O., M. S. Mattevi, and L. F. B. Oliveira. 1983. G- and C-banded karyotype of Reithrodon auritus from Brazil. J. Mammal. 64(2):318-321.

Describes the chromosomes of Reithrodon auritus collected in Rio Grande do Sul, Brazil.

534. Freitas, T. R. O., M. S. Mattevi, and L. F. B. Oliveira. 1984. Unusual C-band patterns in three rearranged karyotypic forms of Scapteromys (Rodentia: Cricetidae) from Brazil. Cytogenet. Cell. Genet. 38:39-44.

Chromosome studies of 30 specimens of the rodent Scapteromys collected at nine localities in southern Brazil revealed the occurrence of three karyotypic taxa with 2n = 36 (one locality), 34 (two localities), and 24 (six localities), although all three had 40 autosomal arms. The C-bands occur on one autosomal pair and on the X and Y in the 2n = 36 and 34 forms and on the X and Y chromosomes only in the 2n = 24 taxon.

535. Freitas, T. R. O., M. S. Mattevi, L. F. B. Oliveira, M. J. Souza, Y. Yonenaga-Yassuda, and F. M. Salzano. 1983. Chromosome relationships in three representatives of the genus Holochilus (Rodentia, Cricetidae) from Brazil. Genetica (The Hague) 61(1):13-20.

G- and C-banded karyotypes are compared among Holochilus brasiliensis, H. b. vulpinus and H. magnus.

536. Freyre, A., C. Burgues, L. Seoane, I. Correa, W. R. Piquinela, R. Ayala, J. C. Ayala, and O. Montanez. 1979. Parasites found during autopsies of capybara (Hydrochoerus hydrochaeris) in Uruguay. An. Fac. Vet. 16(1):65-93. (In Spanish)

537. Frost, M. D. 1977. Wildlife management in Belize: Program status and problems. Wildl. Soc. Bull. 5(2):48-51.

Paper deals with Agouti and Dasyprocta.

538. Fuentes, E. R. and C. Campusano. 1985. Pest outbreaks and rainfall in the semi-arid region of Chile. J. Arid Environ. 8(1):67-72.

Data on pest outbreak complaints and high precipitation are statistically related in the semi-arid region of Chile. Inspection of the species that actually cause the problems shows that they are species not known to be restricted to the cultivated valleys, but rather wild or at least very unspecialized species that when rainfall and hence water and newly produced plant tissues are abundant on the interfluvial areas, reproduction of the so-called pest species would be more successful or mortality less than in normal years.

539. Fuentes, E. R. and F. M. Jaksic. 1979. Lizards and rodents: an explanation for their relative diversity in Chile. Arch. Biol. Med. Exp. 12(1):179-190.

The relative richness of lizard fauna in Chile might be related to ecological attributes of this group (marked altitudinal segregation, coarse-grained habitat selection, and low vagility associated with ectothermy), which would favor a rapid speciation pattern concomitantly with Quaternary Glaciations. As a contrast, also discussed is the situation of the relatively poor Chilean rodent fauna. It is shown that although rodents exhibit some altitudinal segregation they do not form more subspecies on mountaintops than on lowlands, which is possibly related to their fine-grained habitat selection and greater vagility associated with endothermy.

540. Fuentes, E. R., F. M. Jaksic, and J. A. Simonetti. 1983. European rabbits versus native rodents in Central Chile: effects on shrub seedlings Oryctolagus cuniculus). Oecologia 58:411-414.

The importance of the rabbit, Oryctolagus cuniculus, and the rodent, Octodon degus, as browsers of shrub seedlings in the central Chilean evergreen shrublands are assessed. Degus caused important seedling mortality only within a 5 m radius from their burrow. Rabbits cause heavier seedling mortality and have a greater impact than do degus.

541. Fuerbringer, J. 1974. The capybara: A practical manual for raising them in captivity in Colombia. Temas de Orient. Agropecuaria 99:5-59. (In Spanish)

542. Fulk, G. W. 1975. Population ecology of rodents in the semiarid shrublands of Chile. Occas. Pap. Mus. Tex. Tech Univ. No. 33. pp. 1-40.

Two rodent communities in north-central Chile (Fray Jorge and Rinconada) were live trapped over a 9-month period in 1971-72. The majority of the rodents captured at the two sites were Akodon olivaceus and Phyllotis darwini.

543. Fulk, G. W. 1976a. Notes of the activity, reproduction and social behavior of Octodon degus. J. Mammal. 57(3):495-505.

Data on activity and social behavior of the Chilean degu, Octodon degus, were gathered by direct observation of animals. Social organization is based on group territories, at least during the period after emergence of the young.

544. Fulk, G. W. 1976b. Owl predation and rodent mortality: a case study. Mammalia 40:423-427.

Three cases of apparent nonrandom sampling of rodent populations by owls, Asio flammeus and Tyto alba (over-representation of young and males of Akodon olivaceus in February and under-representation of Akodon longipilis in all months) corresponded to differences in mortality observed in the prey populations. This leads to the hypothesis that owl predation was an important factor affecting the survivorship of mice in this community.

545. Fulk, G. W. and M. L. Schamberger. 1972. Mammals of Fray Jorge National Park, Coquimbo Province, Chile. Am. Zool. 12(4):657.

Small mammals were sampled in four habitat types and the most abundant species in each were: (1) fog forest: Oryzomys longicaudatus and Ratius rattus; (2) shrublands: Akodon olivaceus and Phyllotis darwini; (3) shrub-forest ecotone: Oryzomys longicaudatus; (4) riparian: Akodon longipilis.

546. Funayama, G. K. and M. P. Barretto. 1969. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. XXXIV: Natural infection of the rat, Oryzomys capito laticeps (Lund, 1841) by T. cruzi. Rev. Bras. Biol. 29(2):163-173. (In Portuguese)

A strain of T. cruzi was isolated from a specimen of Oryzomys capito laciceps captured at Uberaba, Minas Gerais, Brazil. This strain is pathogenic for baby mice and especially for baby rats. One hundred percent of the rats inoculated with the strain became infected, but the infection in rats is mild.

547. Furtado, V. V. 1981. Chromosomal diversity in rodents from the families Cricetidae and Caviidae from Pernambuco, Brazil. Unpublishe Ph.D. dissertation, Univ. Fed. do Rio Grande do Sul, Porto Alegr , Brazil. (In Portuguese)

548. Gale, N. B. 1963. Leptospires isolated in the Panama Canal Zone. Am. J. Trop. Med. Hyg. 12(6):895.

Leptospira canicola was isolated from the cotton rat, Sigmodon hispidus.

549. Gale, N. B. et al. 1966. An outbreak of leptospirosis among U.S. Army troops in the Canal Zone. II. Isolation and characterizations of the isolates. Am. J. Trop. Med. Hyg. 15(1):64-70.

Leptospires were isolated from spiny rats, Proechimys semispinosus, and spiny pocket mice Liomys adspersus.

550. Galef, B. G., Jr. and M. M. Clark. 1976. Non-nurturent functions of mother-young interaction in the agouti (Dasyprocta punctata). Behav. Biol. 17(2):255-262.

Field observations of the interaction of the precocial young of the agouti with their dam suggests a number of adaptive functions of mother-young interactions.

551. Galindo, P. et al. 1966. An ecological survey for arboviruses in Almirante, Panama, 1959-1962. Am. J. Trop. Med. Hyg. 15(3):385-400.

Presents a list of arboviruses isolated and sources from which they were obtained including rodents.

552. Gallardo, M. H. 1979. The Chilean species of Ctenomys (Rodentia: Octodontidae). I. Establishing karyotypes. Arch. Biol. Med. Exper. 12:71-82.

553. Gallardo, M. H. 1982. Chromosomal homology in southern Akodon. Experientia 38:1485-1487.

Differential staining (G and C) of southern South American Akodon are presented. A. olivaceus, A. longipilis and A. sanborni all have the same karyotype (2n = 52, NF = 58). A virtually identical band sequence is observed. All the specimens used in the study were collected in Chile.

554. Gallinas, S. 1981. Investigation of the food habits for agouti (Agouti paca) in Lancaja-Chansayab, Chiapas. Pages 55-67 in P. Reyes-Castillo, Ed. Estudios Ecologicos en el Tropico Mexicano Inst. Ecol. Publ. No. 6, Mexico, D. F. 105 pp. (In Spanish)

Fruit in the diet of agouti (Agouti paca) is entirely based upon what fruit is available at a given time during the year.

555. Galton, M., K. Benirschke, and S. Ohno. 1966. Sex chromosomes of the chinchilla: Allocycle and duplication sequence in somatic cells and behaviour in meiosis. Chromosoma (Berl.) 16:668-680.

556. Galvao, A. B. et al. 1961. On the geographic distribution and natural infection by Rhodnius domesticus Neiva & Pinto, 1923 (Chagas' disease). Rev. Bras. Malariol. 13:57-60. (In Portuguese)

557. Galvao, V. A. 1976. A study of the incidence of Capillaria hepatica in rats in Salvador, Bahia and preliminary notes on immunopathology. Rev. Soc. Bras. Med. Trop. 10:333-338. (In Portuguese)

558. Gamboa, J. 1963. Survey of extra-domiciliary Rhodnius prolixus in Venezuela. (Preliminary report) Bol. Of. Sanit. Panam. 54:18-25. (In Spanish)

A year-long survey of the presence of Rhodnius prolixus was conducted in the State of Guarico, Venezuela.

559. Gamero Idiaquez, I. 1978. Mammals of the land. Vol. 1. Tegucigalpa, D. C., Honduras. 234 pp. (Marsupials through rodents) (In Spanish)

560. Garcia, E. 1970. Notes on the ecology and biology of the genus Zygodontomys in Venezuela (Rodentia, Cricetidae). Acta Cient. Venez. 21, suppl. 1:29. (In Spanish)

The ecology and biology of Zygodontomys were studied in the llanos of Guarico, Venezuela.

561. Garcia-Benado, G. and O. A. Reig. 1981. The contact zone among the karyotypes 2n = 50 and 2n = 62 for the superspecies Proechimys guairae (Rodentia, Echimyidae). Acta Cient. Venez. 31 (Supplement 1):65. Abstract only. (In Spanish)

562. Garcia Gomez, V. 1984. National rat and mouse control programme, Cuba 1981-1982. Pages 151-161 in A. C. Dubock, Ed. Proc. Conf. on: The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI-PPD England, ISBN 0-901747-02-5.

A massive national rodent control campaign was conducted in Cuba in 1981 and 1982. Prior to the campaign it was estimated 54.1% of the premises in urban areas were infested with rats. After the campaign only 13.5% of the premises were infested. The rodenticide was warfarin (0.03%).

563. Garcia-Mata, R. 1976. The zoological classification of chinchilla. Rev. Mus. Argent. Cienc. Nat. Bernardino Rivadavia Zool. 12:45-56. (In Spanish)

Gives the distinct species, varieties and races of chinchillas to use in the classification for commercial skins.

564. Gardenal, C. N., N. Triay de Jarez, M. Gutierrez, and M. S. Sabattini. 1977. Notes and observations on three species of the genus Calomys (Rodentia, Cricetidae). Physis 36:169-178. (In Spanish)

565. Gardner, A. L. 1971. Karyotypes of two rodents from Peru, with a description of the highest diploid number recorded for a mammal Experientia 27:1088-1089.

Karyotypes are given for Anotomys leander and Agouti taczanowskii. The animals were trapped on the eastern slope of the Cordillera Carpish, Carretera Central, Depto. Huanuco, Peru.

566. Gardner, A. L. 1976. The distributional status of some Peruvian mammals. Occas. Pap. Mus. Zool. Louisiana State Univ. 48:1-18.

Presented is information on 79 specimens of 23 species of mammals collected in Peru. Six of the species have not previously been reported from Peru. The specimens are housed in the mammal collections of the Louisiana State University Museum of Zoology and the National Museum of Natural History. Rodents in the collection were Thomasomys taczanowskii, collected at Yuraccyacu, Ayacucho, and Thomasomys notatus, collected on the Eastern slope of the Cordillera Carpish, Huanuco.

567. Gardner, A. L. 1983a. Oryzomys caliginosus (Raton Pardo, Raton Arrocero Pardo, Costa Rican Dusky Rice Rat). Pages 483-485 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

568. Gardner, A. L. 1983b. Proechimys semispinosus (Rodentia: Echimyidae): Distribution, type locality, and taxonomic history. Proc. Biol. Soc. Wash. 96(1):134-144.

The type locality of Proechimys semispinosus (Tomes) has been alleged to be Gualaquiza, in the lowland forests of southeastern Ecuador. A review of the travels of the collector Louis Fraser, and examination of the content of reports based on the mammals he collected, plus the comparison of the type specimen with samples

representing several species of Proechimys from Central and South America, indicate that the type did not come from Gualaquiza. The type locality of P. semispinosus is corrected to Esmeraldas, on the Pacific coast of Ecuador.

569. Gardner, A. L. and L. H. Emmons. 1984. Species groups in Proechimys (Rodentia, Echimyidae) as indicated by karyology and bullar morphology. J. Mammal. 65(L):10-25.

The genus Proechimys is divisible into four groups of species on the basis of bullar septal patterns. Each of the four groups can be further characterized by distinctive distributions and karyotypes. The subgenus Trinomys and the guairae species group each are comprised of phylogenetically closely related species. The semispinosus and brevicauda groups, although generally distinctive on the basis of bullar septa, are not phylogenetically equivalent to the first two groups.

570. Gardner, A. L. and J. L. Patton. 1976. Karyotypic variation in oryzomyine rodents (Cricetinae) with comments on chromosomal evolution in the Neotropical cricetine complex. Occas. Pap. Mus. Zool. Louisiana State Univ. 49:1-48.

A clarification of some of the species relationships within the oryzomyines in addition to summarizing their evolutionary trends as indicated by available karyotypic data. Emphasis was placed on clarifying the kinds and patterns of variation at this level and applying these interpretations to comparable data for the Sigmodontini as a unit.

571. Garnham, P. C. C. 1971. American leishmaniasis. Bull. W. H. O. 44:521-527.

A widespread leishmanial infection in wild rodents has been located in areas of Central and South America. Important reservoirs for some forms of the disease include: Ototylomys phyllotis, Nyctomys sumichrasti, Heteromys desmarestianus, Proechimys semispinosus, Hoplomys spp., Oryzomys concolor, and others.

572. Gavino de la Torre, G., A. Martinez-Guerrero, Z. Uribe-Pena and S. Santillan-Alarcon. 1981. Terrestrial vertebrates and dominant vegetation on the Isla de Ixtapa, Guerrero, Mexico. An. Inst. Biol. Univ. Nat. Auton. Mex. Ser. Zool. 50:701-719. (In Spanish)

573. Geest, J. C. and R. B. Loomis. 1968. Chiggers of the genus Pseudoschoengastia (Acarina: Trombiculidae) from Costa Rica. Contrib. Sci. Los Ang. Mus. 150:1-49.

574. Genest, H. and G. Dubost. 1974. Pair-living in the mara (Dolichotis patagonum Z.). Mammalia 38(2):155-162.

In the Mara sexual pairs are closely united. The male and female always stay close to each other, aided by visual and acoustic signals. The couple remains constant from one year to the next. Monogamy is strict, persisting even when polygamy is possible.

575. Gennaro, A. L. and T. J. Salb. 1969. The hispid pocket mouse in San Luis Potosi. Southwest Nat. 14:251.

First record of the hispid pocket mouse (Perognathus hispidus) from the state of San Luis Potosi, Mexico.

576. Genoways, H. H. 1971. A new species of spiny pocket mouse (Genus Liomys) from Jalisco, Mexico. Occas. Pap. Mus. Nat. Hist. Univ. Kans. 5:1-7.

Liomys spectabilis appears to be a member of the Liomys pictus group as defined by Goldman. L. spectabilis occupies a restricted distribution near the eastern limits of the geographic range of L. pictus in Jalisco.

577. Genoways, H. H. 1973. Systematics and evolutionary relationships of spiny pocket mice, genus Liomys. Spec. Publ. Mus. Tex. Tech Univ. 5:1-368.

The purpose of this study was to examine the taxonomic relationships of the species of the genus Liomys and, after forming a new systematic arrangement of the taxa, to examine the evolutionary relationship of the species within the genus and to evaluate their relationship to members of the genus Heteromys. Liomys species were L. irroratus, L. pictus, L. spectabilis, L. salvini and L. adspersus.

578. Genoways, H. H. and E. C. Birney. 1974. Neotoma alleni. Mamm. Species 41:1-4.

579. Genoways, H. H. and J. K. Jones, Jr. 1968. A new mouse of the genus Nelsonia from southern Jalisco, Mexico. Proc. Biol. Soc. Wash. 81:97-100.

A new subspecies of woodrat, Nelsonia neotomodon cliftoni, is described from an adult female collected 2.5 mi. ENE Jazmin, Jalisco.

580. Genoways, H. H. and J. K. Jones, Jr. 1969. Notes on pocket gophers from Jalisco, Mexico, with descriptions of two new subspecies. J. Mammal. 50(4):748-755.

Systematic, distributional, and ecological data are provided for seven taxa, two described as new, of three species of the pocket gopher genus Pappogeomys in the Mexican state of Jalisco. The first Jaliscan record of Orthogeomys grandis also is reported and several instances of sympatric occurrence of pocket gophers are documented.

581. Genoways, H. H. and J. K. Jones, Jr. 1971a. Systematics of southern banner-tailed kangaroo rats of the Dipodomys phillipsii group. J. Mammal. 52:265-287.

Both nongeographic and geographic variation was assessed in southern banner-tailed kangaroo rats of the nominal species Dipodomys phillipsii and D. ornatus. Univariate and multivariate analyses were employed in consideration of geographic variation. D. ornatus is arranged as a subspecies of D. phillipsii, in which four races (phillipsii, ornatus, perotensis, and oaxacae) are recognized. Some observations on natural history also are included.

582. Genoways, H. H. and J. K. Jones, Jr. 1971b. Second specimen of Oryzomys dimidiatus. J. Mammal. 52(4):833-834.

Only the second specimen of Oryzomys dimidiatus was collected at El Recreo, Zelaya, Nicaragua, approximately 15 kilometers to the west of the type locality.

583. Genoways, H. H. and J. K. Jones, Jr. 1972. Variation and ecology in a local population of the vesper mouse (Nyctomys sumichrasti) Occas. Pap. Mus. Tex. Tech. Univ. 3:1-22.

In the summer of 1964, a local population of Nyctomys sumichrasti florencei was discovered at San Antonio, Department of Chinandega, Nicaragua. This area was visited again in the summers of 1966 and 1967, and in the spring of 1968, and the present paper details variation in this population and records such ecological information as was obtained.

584. Genoways, H. H. and J. K. Jones, Jr. 1973. Notes on some mammals from Jalisco, Mexico. Occas. Pap. Mus. Tex. Tech. Univ. 9:1-22.

Rodents collected in Jalisco, Mexico, were Eutamias bulleri bulleri, Spermophilus adocetus adocetus, S. annulatus annulatus, S. mexicanus mexicanus, S. spilosoma spilosoma, Perognathus hispidus zacatecae, P. nelsoni nelsoni, Oryzomys fulvescens lenis, and Peromyscus perfulvus chrysopus.

585. Genoways, H. H., H. A. Reichart, and S. L. Williams. 1982. The Suriname small mammal survey: A case study of the cooperation between research and national conservation needs. Pages 491-504 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

A cooperative program between the Foundation for Nature Preservation in Suriname and the Carnegie Museum of Natural History to survey the small mammals of Suriname is reviewed. The program has proven to be mutually beneficial and it is presented as a model for development of similar programs in the future.

586. Genoways, H. H., S. L. Williams, and J. A. Groen. 1981. Results of the Alcoa Foundation-Suriname Expeditions. V. Noteworthy records of Surinamese mammals. Ann. Carnegie Mus. 50(11):319-332.

Included in a collection of mammals from Suriname were Neacomys guianae and Holochilus brasiliensis.

587. Gentile de Fronza, T. 1970a. The karyotype of Oxymycterus rutilans platensis (Rodentia, Cricetidae). Physis 30:343. (In Spanish)

Oxymycterus rutilans platensis karyotype is 2n = 54 and NF = 68. The karyotype consists of 20 pairs of acrocentrics, 1 pair of subtelocentric, 5 pairs of metacentrics and the sex chromosomes.

588. Gentile de Fronza, T. 1970b. The karyotype of Scapteromys tumidus aquaticus (Rodentia, Cricetidae). Physis 30:343. (In Spanish)

The karyotype of Scapteromys tumidus aquaticus is 2n = 32 and NF = 44. There are 10 pairs of telocentrics, 1 pair of submetacentric and 4 pairs of metacentrics plus the sex chromosomes.

589. George, W. 1980. A study in hystricomorph rodent relationships: The karyotypes of Thryonomys gregorianus, Pedetes capensis and Hystrix cristata. Zool. J. Linn. Soc. 68(4):361-372.

The chromosomes of three African hystricomorphs are described and compared to those of South America. The Thryonomys karyotype with a big N.O.R. on chromosome 1 resembles the karyotypes of South American hystricomorphs.

590. George, W. 1981. Blood vascular patterns in rodents: contributions to an analysis of rodent family relationships. Zool. J. Linn. Soc. 73:287-305.

The major blood vascular patterns of rodents are compared. The myomorphs form a cohesive group with outliers in the Geomyidae. The Sciuridae are an isolated family and do not seem to be closely related to Gliridae or Castoridae. African hystricomorph families have considerable likeness to those of South America.

591. George, W. and B. J. Weir. 1972a. The chromosomes of some octodontids with special reference to Octodontomys (Rodentia; Hystricomorpha). Chromosoma 37:53-62.

The chromosomes of three species (Octodontomys gliroides, Octodon degus and Ctenomys talarum) are compared.

592. George, W. and B. J. Weir. 1972b. Record chromosome number in a mammal. Nat. New Biol. 236:205-206.

The Jamaican hutia Geocapromys brownii has a diploid number of 88: a few large and mainly acrocentric, the rest small and mainly acrocentric.

593. George, W. and B. J. Weir. 1973. A note on the karyotype of Proechimys guairae (Rodentia: Hystricomorpha). Mammalia 37(2):330-332.

The karyotype of P. guairae from Venezuela is described. The diploid number of 2n = 46 is confirmed but a previous report of isomorphic sex chromosomes in this species is refuted. In all the karyotypes, the X-chromosome is medium-sized and subacrocentric and the Y-chromosome small and metacentric. One small metacentric pair of chromosomes consistently shows satellites.

594. Gill, A. E. 1981. Morphological features and reproduction of Perognathus and Peromyscus on northern islands in the Gulf of California. Am. Midl. Nat. 106(1):192-196.

Mice of the genus Perognathus trapped on three northern Gulf of California islands, and Peromyscus trapped on five islands were analyzed for morphological variation within and between species.

595. Gill, J. E. and R. Redfern. 1980. Laboratory trials of seven rodenticides (Warfarin, Coumatetralyl, Difenacoum, Brodifacoum, Bromadiolone, Calciferol, Zinc Phosphide) for use against cotton rats Sigmodon hispidus. J. Hyg. 85(3):443-450.

The efficacy of seven rodenticides for use against Sigmodon hispidus was investigated in the laboratory. The poisons (warfarin, coumatetralyl, difenacoum, brodifacoum, bromadiolone, calciferol and zinc phosphide) were all toxic at the concentrations normally used against Rattus rattus and R. norvegicus and all were palatable. Trials are now needed to confirm the efficacy of these poisons in the field, but it seems likely that, if used in suitable bait formulations, they would all be useful for the practical control of S. hispidus.

596. Glanz, W. E. 1977a. Small mammals in southern California and central Chile. Pages 232-237 in N. Thrower and D. Bradbury, Eds. Chile-California Mediterranean Scrub Atlas: A Comparative Analysis. Dowden, Hutchinson and Ross, Inc., Stroudsburg, Pennsylvania.

A comparison of 9 rodent species in Chile with 16 species from California.

597. Glanz, W. E. 1977b. Comparative ecology of small mammal communities in California and Chile. Unpublished Ph.D. dissertation, Univ. of California, Berkeley.

598. Glanz, W. E. 1978. Population ecology of the neotropical red-tailed squirrel, Sciurus granatensis, relation to food availability. Abstract 184 in Abstracts of Technical Papers 58th Annual Meeting of the American Society of Mammalogists, Athens, Georgia.

599. Glanz, W. E. 1982a. Adaptive zones of neotropical mammals: A comparison of some temperate and tropical patterns. Pages 95-110 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

If adaptive zones are defined in terms of ecological resources utilized, then Neotropical mammals generally appear to occupy a range of adaptive zones similar to that of mammals of other continents with comparable climates. Recent studies, however, suggest some interesting or unexpected patterns in the distribution of phyletic groups and of habitat and trophic adaptations.

600. Glanz, W. E. 1982b. The terrestrial mammal fauna of Barro Colorado Island: Censuses and long-term changes. Pages 455-468 in E. G. Leigh, Jr., A. S. Rand and D. M. Windsor, Eds. The Ecology of a Tropical Forest. Smithsonian Institution Press, Washington, D.C.

This paper presents estimates of the numbers of most of the nonvolant species of mammals on Barro Colorado Island. These results were compared with estimates from previous censuses, to learn how much these populations have fluctuated. Since 1930, several species of mammals have gone extinct on Barro Colorado, including pumas and white-lipped peccaries, which could not survive on so small an island after hunting pressure built up on the adjacent mainland, and pygmy squirrels, pygmy rice rats, and perhaps other rodents, which died out as areas of grassland and young second-growth grew into more mature forest. Rodents in this census were Sciurus granatensis, Oryzomys spp., Diplomys labilis, Proechimys semispinosus, Coendou rothschildi, Dasyprocta punctata, Agouti paca, and Hydrochaeris hydrochaeris.

601. Glanz, W. E. 1984a. Food and habitat use by two sympatric Sciurus species in central Panama. J. Mammal. 65(2):342-347.

Sciurus granatensis and S. variegatoides were studied at a locality in central Panama. The author: (1) characterized the types of food and habitat resources utilized by these species; (2) compared the dietary specialization of S. granatensis at this site with patterns found in a more intensive study of this species elsewhere in Panama; (3) determined if these species show consistent ecological separation in their use of either foods or habitats; and (4) compared these patterns of resource use with those in other communities of tropical squirrels.

602. Glanz, W. E. 1984b. Ecological relationships of two species of Akodon in central Chile. J. Mammal. 65(3):433-441.

Analyses of habitat selection and diet showed significant ecological separation between Akodon longipilis and A. olivaceus in Mediterranean-climate areas of Chile.

603. Glanz, W. E. 1985a. Influences of food availability, predators, and climate on population trends of Sciurus granatensis in Panama. Abstract 234 in W. A. Fuller, M. T. Nietfeld and M. A. Harris, Eds. Abstracts of Papers and Posters, Fourth International Theriological Congress, 22-25 August 1985, Edmonton, Canada.

604. Glanz, W. E. 1985b. The structure of neotropical mammal communities: Temporal changes among mammals in central Panama. Abstract 233 in W. A. Fuller, M. T. Nietfeld and M. A. Harris, Eds. Abstracts of Papers and Posters, Fourth International Theriological Congress, 22-25 August 1985, Edmonton, Canada.

605. Glanz, W. E. and P. L. Meserve. 1982. An ecological comparison of small mammal communities in California and Chile. Pages 220-226 in Proc. Symposium on Dynamics and Management of Mediterranean-type Ecosystems, June 22-26, 1981, San Diego, California.

Studies in similar scrub habitats in California and Chile reveal some interesting differences between these two regions in the structure of their small mammal communities. The Chilean fauna is less diverse, with fewer species per site, and possibly more extreme density fluctuations. Rodent species from Chile were Abrocoma bennetti, Octodon degus, O. lunatus, Spalacopus cyanus, Akodon longipilis, A. olivaceus, Oryzomys longicaudatus, Phyllotis darwini, and Rattus rattus.

606. Glanz, W. E., R. W. Thorington, Jr., J. Giacalone-Madden, and L. R. Heaney. 1982. Seasonal food use and demographic trends in Sciurus granatensis. Pages 239-252 in E. G. Leigh, Jr., A. S. Rand, and D. M. Windsor, Eds. The Ecology of a Tropical Forest: Seasonal Rhythms and Long-term Changes.

Although red-tailed squirrels on Barro Colorado Island have been observed to eat from 58 species of plants, they feed primarily on the heavily armored nutlike fruits of the palms Scheelea zonensis and Astrocaryum standleyanum, and the legume Dipteryx panamensis, and pulp from the large fruits of Gustavia superba.

607. Gliwicz, J. 1972. Population dynamics and productivity of a tropical forest rodent Proechimys semispinosus (Tomes, 1860). Unpublished Ph.D. dissertation, Univ. of Warsaw. pp. 45. (In Polish)

608. Gliwicz, J. 1973. A short characteristics of a population of Proechimys semispinosus (Tomes, 1860), a rodent species of the tropical rain forest. Bull. Acad. Pol. Sci. Ser. Sci. Biol. 21(6):413-418.

Dynamics of numbers, biomass and age structure of a Proechimys semispinosus population in Panama were studied for a year. Mortality and natality of the population were calculated and appeared to be low. The efficiency of production of the population is very high. The population seems to comply with the requirements of the exceptionally rich and highly mature climax ecosystem of the tropical rain forest, the basic role of which is efficient and economic energy management.

609. Gliwicz, J. 1983. Age indicators in the spiny rat Proechimys semispinosus. Trop. Ecol. 24(2):299-304.

Growth of wild Proechimys semispinosus was followed from birth for 2 years. Curves illustrating: (1) the age-specific increase in weight of eye lens, and (2) age-specific increase in body weight of males and females were constructed. Weight of lens was treated as the most reliable indicator of an absolute age, and was used for timing other age-related processes.

610. Gliwicz, J. 1984. Population dynamics of the spiny rat Proechimys semispinosus on Orchid Island (Panama). Biotropica 16(1):73-78.

Seasonal variation in population density, reproduction, and mortality was observed in an island population of the tropical forest rodent Proechimys semispinosus. Average density was 8.5 individuals per hectare, with the maximum in August being 1.3 times higher than the minimum in April. Reproduction continued year round, although breeding was most intensive in the dry season.

611. Goff, M. L. 1981. A new species of Polylopadium (Acari: Trombiculidae) from Colombia, with a key to the species in the genus. J. Med. Entomol. 18(3):228-231.

Polylopadium antioquiai is described as new from specimens collected in Colombia from Tomes Spiny Rat, Proechimys semispinosus. A key to the 11 species in the genus is given.

612. Goff, M. L. 1982. A new species of Pseudoschoengastia (Acari: Trombiculidae) from a forest spiny pocket mouse (Rodentia: Heteromyidae) taken in Panama. J. Med. Entomol. 19(1):12-14.

A new chigger is collected from a spiny pocket mouse, Heteromys desmarestianus in Panama.

613. Goff, M. L. and J. O. Whitaker, Jr. 1984a. A new genus and two new species of schoengastiine chiggers (Acari: Trombiculidae) from a cane mouse in Brazil. Int. J. Entomol. 26(1-2):162-166.

A new genus of chigger, Serratacarus, containing two new species S. dietzi and S. lasiurus is proposed. Both new species were recovered from a cane mouse, Zygodontomys lasiurus lasiurus, collected at Faz das Pedras, Serra da Canastra National Park, 25 km W. of Sao Roque de Minas, Brazil.

614. Goff, M. L. and J. O. Whitaker, Jr. 1984b. A new genus of Leeuwenhoekiinae (Acari: Trombiculidae) from cricetid rodents in Paraguay. J. Med. Entomol. 21(1):31-33.

Paraguacarus callosus, n. gen and n. sp., is described from specimens collected from a vesper mouse, Calomys callosus, taken in Paraguay.

615. Goff, M. L., J. O. Whitaker, Jr., and J. M. Dietz. 1983. Three new species of chiggers (Acari: Trombiculidae) from Brazil. J. Med. Entomol. 20(2):183-188.

Microtrombicula rhipidomysi from Rhipidomys mastacalis, Colicus brasiliensis from Oryzomys fornesi and O. subflavus, and Kymocta lutui from Zygodontomys lasiurus are described as new from specimens collected in Brazil.

616. Golvan, Y. J., R. Houin, C. Combes, M. Denian, and F. Lancastre. 1977. Natural transmission of schistosomiasis by Schistosoma mansoni in Guadeloupe (French Antilles). Ann. Parasitol. 52:259-275. (In French)

617. Gomes, D. C. and J. J. Vicente. 1984. Helminth parasites of Nectomys squamipes (Brants) of the Sumidouro Municipality of Rio de Janeiro State. Mem. Inst. Oswaldo Cruz Rio de J. 79(1):67-73. (In Portuguese)

618. Gomez, J. C. 1960. Correlation of a population of roof rats in Venezuela with seasonal changes in habitat. Am. Midl. Nat. 63:177-193.

The purpose of this study is to obtain a better understanding of the forces acting on the rodent population in Venezuela. The site of the study is Zorro Island in Lake Valencia (Tacarigua). This locality was chosen because it is inhabited by a colony of Rattus rattus rattus, the size is adequate, there is little possibility of migrations, and meteorological data are readily available.

619. Gomez, L. L. F. 1968. The problem of Chagas' disease in Guayaquil. Rev. Ecuat. Hig. Med. 25:3-10.

620. Gomez, P. V. 1968. Agricultural production losses caused by rodents in the Department of Loreto. Tercer Boletin Extra. IMTA. Univ. Nac. Mayor de San Marcos, Lima. (In Spanish)

621. Gomez, V. G. 1984. National rat and mouse control programme, Cuba 1981-1982. Page 151 in A. C. Dubock, Ed. Proc. Conf. on: The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI-PPD England, ISBN 0-901747-02-5.

During 1981-1982 a national rodent control program was conducted in Cuba. Methods followed included cleaning up urban areas and a massive baiting program with warfarin.

622. Gonzales, N. R., J. W. Torrealba, G. A. Gomach, and O. Alfaro. 1976. Rattus rattus, a natural carrier of Schistosoma mansoni in Venezuela. Bol. Direc. Malariol. Saneamiento Ambiental 16:126-128. (In Spanish)

623. Gonzalez, L. A., R. Murua, and R. Feito. 1980. Population density and spatial activity patterns of Akodon olivaceus (Rodentia: Cricetidae) in different habitats. Actas 8º Congreso Latinoamericano de Zoologia, Merida, Venezuela 8:935-947.

Seasonal fluctuations of density and spatial activity patterns for Akodon olivaceus were studied. Two contrasting habitats were selected at the San Martin Experimental Forest near Valdivia, Chile: A temperate rain forest and a shrubland-grasslands. The maximum population density in the shrubland-grasslands was in July (37.7 individuals/ha). In the rain forest the peak population was in April (37.9 individuals). Males increased their home range during the breeding season, while the females home range remained constant throughout the year.

624. Gonzalez, L. A., R. Murua, and C. Jofre. 1978. The habitat of three species of cricetid rodents inhabiting the Valdiviana rain forest. Res. Commun. Arch. Biol. Med. Exp. (Santiago, Chile) 2(4):185. (In Spanish)

625. Gonzalez, Y. and A. Willinski. 1979. Reproduction biology of Sigmodon hispidus, a pest species in pineapples in the State of Lara. XXIX Conv. Nac. ASOVAC, Barquisimeto, Venezuela. Resume. (In Spanish)

626. Gonzalez-Espinosa, M. 1984. Comparative ecology of three rodent species in a semiarid habitat in central Mexico. Bull. Ecol. Soc. Am. 65(2):96. Abstract only.

627. Gonzalez Jimenez, E. 1977. The capybara - an indigenous source of meat in tropical America. Food Sci. 1977:24-30.

628. Gonzalez-Romero, A. 1981. Pest rodents in agriculture in the Federal District. Publ. No. 7 Inst. Ecol., Mexico. 83 pp. (In Spanish)

629. Gonzalez-Romero, A., P. Galina-Tessaro, and S. Alvarez-Cardenas. 1983. Comparative studies of the rodent community in an agricultural zone in the southern part of the valley of Mexico. Pages 136-154 in D. J Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983. (In Spanish)

Rodents were studied in five different habitats. Five species were found in the study areas: Peromyscus hylocetes, P. maniculatus, Microtus mexicanus, Liomys irroratus and Reithrodontomys megalotis. All species were found in cultivated fields and four species were caught in forests.

630. Gonzalez-Romero, A., T. Sandoval, S. Secundino, and A. Ramirez. 1978. Damages caused by cotton rat, Sigmodon hispidus zanjonensis, on sugarcane in San Pedro Sula, Honduras. Proc. Vertebr. Pest Conf. 8:231-236.

Zinc phosphide was evaluated in an area where the rodent density (Sigmodon hispidus) was 39 rats per hectare. After application the population was reduced 53.85%.

631. Goodwin, G. G. 1961. Mammals from the state of Oaxaca, Mexico, in the American Museum of Natural History. Bull. Am. Mus. Nat. Hist. 141:3-269.

632. Goodwin, G. G. 1962. Descriptions of two new rodents from Tobago, the West Indies, and of Zygodontomys brevicauda tobagi Thomas. Am. Mus. Novit. 2096:1-9.

Two new subspecies of rodents are described from mammals that were collected in Tobago in 1960: Echimys armatus handleyi and Akodon urichi tobagoensis. Additional observations are made for Zygodontomys brevicauda tobagi.

633. Goodwin, G. G. 1964. A new species and a new subspecies of Peromyscus from Oaxaca, Mexico. Am. Mus. Novit. 2183:1-8.

A new species, Peromyscus ixtlani, is described from a male specimen collected at Cerro Machin, 5 km NE of Macuiltianguis, District of Ixtlan, Oaxaca, Mexico. A new subspecies, Peromyscus mexicanus putlaensis, is described from a male collected at San Vicente, District of Putla, Oaxaca, Mexico.

634. Goodwin, G. G. 1965. A new subspecies of Zygodontomys brevicauda from Soldado Rock, Trinidad, the West Indies (Rodentia: Cricetidae). Am. Mus. Novit. 2238:1-10.

A new subspecies, Zygodontomys brevicauda soldadoensis, is described from an adult male collected on Soldado Rock, an island 6 miles west of the southwestern tip of Trinidad, the West Indies, and 7 miles from the nearest point of the Venezuelan coast.

635. Goodwin, G. G. 1966a. A new species of vole (genus Microtus) from Oaxaca, Mexico. Am. Mus. Novit. 2243:1-4.

A new species of vole, Microtus oaxacensis, is described from an adult male collected from an evergreen rain forest at Tarahundi, a ranch near the village of Vista Hermosa, about halfway between Comaltepec and Valle Nacional, 135 km north of Oaxaca City.

636. Goodwin, G. G. 1966b. Flying squirrels (Glaucomys volans) of Middle America. Am. Mus. Novit. No. 2059. 22 pp.

Subspecific variations are given for the six subspecies of Glaucomys volans.

637. Goodwin, R. 1967. The mammals of Jamaica. Caribbean Biological Centre Newsletter 2:17-21.

638. Granados, H. 1973. Preliminary observations concerning the pigment of incisors of Cuban hutias, genus Capromys. Ser. Poeyana Inst. Zool. Acad. Cienc. Cuba 123:1-26. (In Spanish)

A study of the incisor pigment in the seven species of Cuban hutias (genus Capromys): (a) C. nanus (dwarf hutia), (b) C. pilorides (conga hutia), (c) C. prehensilis (carabali hutia), (d) C. melanurus (andaraz hutia), (e) C. auritus (rat hutia), (f) C. garridoi (hutia from Cayo Maja) and (g) C. sanfelipensis (ground's little hutia). Fossils and living specimens were compared.

639. Grand, T. I. and J. F. Eisenberg. 1982. On the affinities of the dinomyidae. Saeugetierkd. Mitt. 30(2):151-157.

The view that the Dinomyidae and Erethizontidae are closely related is supported by several independent lines of evidence: vocalizations, reproductive physiology, a common nematode parasite, and the anatomy of the auditory region. Anatomical similarities in Dinomys, Coendou, and Erethizon are pointed out in the palms and soles, the proportion and distribution of groups of muscles, and the muscularity of the tails.

640. Green, A. E., C. R. Sulzer, C. O. R. Everard, and W. L. Jones. 1978. Four new leptospira serotypes from Trinidad. W. I. Med. J. 27:117-126.

Four new Leptospira serotypes from the West Indian island of Trinidad are described. L. caribe was isolated from Rattus norvegicus.

641. Greenbaum, I. F., R. J. Baker, and J. H. Bowers. 1978. Chromosomal homology and divergence between sibling species of deer mice: Peromyscus maniculatus and P. melanotis (Rodentia, Cricetidae). Evolution 32(2):334-341.

Chromosomal homology and amount and location of heterochromatin, as revealed by G-banding and C-banding analyses, were examined for Peromyscus maniculatus bairdii and P. melanotis. These procedures enabled determination of interspecific homology of all euchromatic autosomal segments. The P. melanotis were collected in Mexico.

642. Greer, J. K. 1960. Mammals of northeastern Durango, Mexico. Unpublished Ph.D. dissertation, Michigan State Univ., East Lansing. 47 pp., 6 plates.

643. Greer, J. K. 1965. Mammals of Malleco Province, Chile. Publ. Mus. Mich. State Univ. (E. Lansing) 3(2):49-152.

Includes biogeographical considerations, characteristics of the mammalian fauna, and an account of each species present. A check-list for the area includes Rattus norvegicus, R. rattus, and Mus musculus.

644. Greer, J. K. 1968. Mammals of the province of Malleco. Published by the Museum "Dillman S. Bullock." El Vergel. 114 pp. Angol, Chile. (In Spanish)

645. Greer, J. K. and D. S. Bullock. 1966. Notes on stomach contents and weights of some Chilean birds of prey. Auk 83:308-309.

Stomach contents were examined from 30 sparrow hawks (Falco sparverius and 3 crested caracaras (Polyborus plancus) collected at Callipulli, Malleco Province, Chile. Remains of one rodent, Akodon olivaceus, were found in the stomach of one sparrow hawk.

646. Grenot, C. and V. Serrano. 1980a. Organization of a small mammal community in the Bolson of Mapimi (Chihuahua Desert, Mexico). C. R. Hebd. Seances Acad. Sci. Ser. D Sci. Nat. 290(4):359-362. (In French)

In the well diversified Biosphere Reserve of Mapimi, the rich rodent fauna is composed of 11 species, of which granivorous Heteromyids form the most abundant group (70% of the density population). The spatial distribution of the rodent fauna in smaller communities is dependent upon habitat and trophic diversities. The role played by trophic competition is discussed.

647. Grenot, C. and V. Serrano. 1980b. The density and structure of a rodent community in the Bolson de Mapimi (Chihuahuan Desert, Mexico). Resumes of the Latin American Zoological Congress, Merida, Venezuela 8:106-107. (In Spanish)

648. Grenot, C. and V. Serrano. 1981. Ecological organization of small mammal communities at the Bolson de Mapimi (Mexico). In R. Barbault and G. Halffter, Eds. Ecology of the Chihuahuan Desert: Organization of Some Vertebrate Communities. Publ. Inst. Ecol. Mex. 8:89-100.

649. Grenot, C. and V. Serrano. 1982. Spacial and structural distribution of small vertebrate communities in the Chihuahua desert. C. R. Seances Soc. Biogeogr. (Paris) 58(4):159-191. (In French)

The species diversity and equitability, especially of small mammal populations are related to habitat heterogeneity, structural complexity of the plant community, rainfall and primary productivity. There are 27 species of rodents in the Chihuahua desert.

650. Guagliumi, P. 1961. Rats that attack sugarcane in Venezuela. Minist. Agric. y. Cria. Cent. Invest. Agric. Circ. No. 2, Maracay, pp. 1-32. (In Spanish)

651. Gubernick, D. J. 1981. Parent and infant attachment in mammals. Page 263 in D. J. Gubernick and P. H. Klopfer, Eds. Parental Care in Mammals. New York.

652. Guillotin, M. 1982a. The place of Proechimys cuvieri (Rodentia, Echimyidae) within the terrestrial micromammalian populations of the forests of Guiana. Mammalia 46(3):299-318. (In French)

The study of rodents in two regions of French Guiana and in two kinds of forests permitted quantification of some important differences in the faunistic composition between a recently deforested zone and the neighboring primary forest. Rodents, which represent 84.3% of the micromammals in the primary forest, form only 48.3% of the community in the deforested area.

653. Guillotin, M. 1982b. Circadian rhythm and food preferences of Proechimys cuvieri and Oryzomys capito velutinus (Rodentia) in a Guianese forest. Rev. Ecol. (Terre Vie) 36:337-371. (In French).

Proechimys cuvieri and Oryzomys capito velutinus were studied in two forests of French Guiana, on the Arataye River and at Saint-Elie. The daily movements of the animals were followed by radiotracking and the use of a fluorescent powder sprayed on a number of individual rodents and whose traces on the ground and/or vegetation were detected with a UV lamp. Proechimys and Oryzomys are mostly frugivorous, the diet varying with the sex of the animal, the season and the forest type.

654. Guillotin, M. and J. F. Ponge. 1984. Identification of two rodent species from French Guiana, Proechimys cuvieri and Proechimys guyannensis (Echimyidae) by analysis of correspondence. Mammalia 48(2):287-291. (In French)

Two species of rodents of French Guiana, Proechimys cuvieri and Proechimys guyannensis, are difficult to differentiate certainly with classical methods. Here is tested an analysis of correspondences which allowed to distinguish the two species with cranial measurements, molars length and occipital hole breadth.

655. Hafner, D. J. and T. L. Yates. 1983. Systematic status of the Mojave ground squirrel, Spermophilus mohavensis (Subgenus Xerospermophilus). J. Mammal. 64(3):397-404.

The systematic status of the sibling species Spermophilus mohavensis and S. tereticaudus (subgenus Xerospermophilus) is investigated throughout their range, based on allozymic and chromosomal data. The species have different diploid numbers (2N = 36 in S. tereticaudus, 2N = 38 in S. mohavensis) and exhibit a moderate level of genic similarity (S = 0.78). Hybridization of the species was detected only at a single site, whereas allelic introgression appears to be confined to an estimated 60 km reach of the Mojave River wash. Pending more detailed analysis of this single site, we recommend that the two taxa retain their current status as full biological species.

656. Hafner, M. S. and L. J. Barkley. 1984. Genetics and natural history of a relictual pocket gopher, Zygogeomys (Rodentia: Geomyidae). J. Mammal. 65(3):474-479.

Protein chemistry and karyotypes showed no variations among three populations of Zygogeomys trichopus in Michoacan, Mexico. This monotypic genus is presently restricted to high elevations (above 2,200 m), whereas Pappogeomys, a larger pocket gopher, is common at lower elevations. Where deforestation has occurred at higher elevations, the range of Pappogeomys has expanded upward and that of Zygogeomys has contracted. With increasing deforestation in Michoacan, Z. trichopus may be in danger of extinction.

657. Hafner, M. S. and J. C. Hafner. 1982. Structure of surface mounds of Zygogeomys (Rodentia: Geomyidae). J. Mammal. 63(3):536-538.

Populations of Zygogeomys trichopus were studied on Volcan Tancitaro, Michoacan in 1977, 1978, and 1981. Several features of its life history, including the structure of surface mounds, appear to be unique to this genus of pocket gopher and collectively suggest habits very different from those of other geomyids.

658. Haiduk, M. W., J. W. Bickham, and D. J. Schmidly. 1979. Karyotypes of six species of Oryzomys from Mexico and Central America. J. Mammal. 60(3):610-615.

Karyotypes are compared for Oryzomys alfaroi, Oryzomys melanotis, O. couesi, O. fulvescens, O. palustris, and O. caudatus. Specimens were collected in Texas, Mexico, and Nicaragua.

659. Hall, E. R. 1968. Variation in the blackish deer mouse Peromyscus furvus. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 39(1):149-154.

Six kinds of variation - seasonal, individual, secondary sexual, age, microgeographic, and geographic - are reported on for the blackish deer mouse of eastern Mexico.

660. Hall, E. R. 1981. The mammals of North America. John Wiley and Sons Vol. 1:XV+600+90, Vol. 2:VI+601+90.

661. Hall, E. R. and T. Alvarez. 1961a. A new subspecies of pocket gopher (Heterogeomys) from northern Veracruz. An. Esc. Nac. Cienc. Biol. Mex. 10:121-122.

A new subspecies, Heterogeomys hispidus latirostris, is described. The type, an adult female, was collected at Hacienda Tamiahua, Cabo Rojo, Veracruz, on April 2, 1960. The range is the type locality on Cabo Rojo and the "mainland" at Hacienda "El Caracol."

662. Hall, E. R. and T. Alvarez. 1961b. A new species of mouse Peromyscus) from northwestern Veracruz, Mexico. Proc. Biol. Soc. Wash. 74:203-205.

A new species, Peromyscus angustirostris, is described. The type specimen, an adult male, was collected 3 km west of Zacualpan, Veracruz, on 12 April 1960.

663. Hall, E. R. and W. W. Dalquest. 1963. The mammals of Veracruz (Mexico). Publ. Univ. Kansas Mus. Nat. Hist. 14(14):165-362.

Includes squirrels, gophers, rats, and mice from the area.

664. Hall, E. R. and H. H. Genoways. 1970. Taxonomy of the Neotoma albigula-group of woodrats in central Mexico. J. Mammal. 51(3):504-516.

Study of specimens collected from critical localities since 1944 reveals that: Neotoma montezumae and N. leucodon zacatecae are indistinguishable from earlier named taxa; N. latifrons is a subspecies of an earlier named taxon; N. palatina is a distinct spp.

665. Hall, E. R. and C. A. Long. 1960. A new subspecies of pocket gopher (Thomomys umbrinus) from Sinaloa, Mexico, with comments on T. u. sinaloae and T. u. evexus. Proc. Biol. Soc. Wash. 73:35-38.

A new subspecies of pocket gopher, Thomomys umbrinus varus, is described. It is only known from the type locality which is 1 mile S. El Dorado, Sinaloa, Mexico.

666. Hall, E. R. and M. B. Ogilvie. 1960. Conspecificity of two pocket mice, Perognathus goldmani and P. artus. Univ. Kans. Publ. Mus. Nat. Hist. 9:513-518.

Perognathus goldmani and Perognathus artus occur in Sonora, Sinaloa, Chihuahua and Durango, Mexico. After taxonomic comparisons it is recommended that artus be considered a subspecies of goldmani: P. g. goldmani and P. g. artus.

667. Hamilton, M. J. and G. A. Heidt. 1984. Microgeographic variation in the Mexican vole, Microtus mexicanus. Arkansas Acad. Sci. Proc. 38:45-48.

Altitudinal variation was assessed in 115 Mexican voles (Microtus mexicanus) from six localities in Jalisco, Mexico. Univariate and multivariate statistical techniques were employed in the data analyses. A total of 49 skeletal measurements were investigated, and of these, 17 showed significant interlocality variation.

668. Hampson, S. J. 1984. A review of rodent damage to sugarcane with criteria for the use of rodenticides. Pages 227-251 in A. C. Dubock, Ed. Proc. Conf. on: The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI PPD England, ISBN 0-901747-02-5.

Rodent damage can affect both harvested weight and sugar content of cane. Losses of 10-30% of the potential yield are common. Brodifacoum is recommended as a rodenticide to use in cane. Theoretical calculations suggest that a yield increase of less than 0.5% can justify rodent control.

669. Handley, C. O. 1966. Checklist of the mammals of Panama. Pages 753-795 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist., Chicago.

Gives the 42 species of rodents found in Panama.

670. Handley, C. O. 1972. Mammalogy in Panama. Bull. Biol. Soc. Wash. 2:217-227.

A history on mammal surveys conducted in Panama.

671. Handley, C. O. 1976. Mammals of the Smithsonian Venezuelan project. Brigham Young Univ. Sci. Bull. Biol. Series 11:5. Jun. ISSN-0068 1024.

Rodent genera from Venezuela listed are: Sciurus, Heteromys, Oryzomys, Neacomys, Nectomys, Rhipidomys, Thomasomys, Chilomys, Akodon, Microxus, Zygodontomys, Calomys, Holochilus, Sigmodon, Sigmomys, Anotomys, Daptomys, Rattus, and Mus.

672. Handley, C. O. and E. Mondolfi. 1963. A new species of fish-eating rat, Ichthyomys, from Venezuela (Rodentia, Cricetidae). Acta Biol. Venez. 3:417-419.

673. Hanif, M. and N. O. Poonai. 1968. Wildlife and conservation in Guyana. Field Res. Proj. Man Nat. Ser. 8:26, 42. Coconut Grove, Florida.

674. Harris, C. E. and M. K. Petersen. 1979a. Comparative swimming performances in selected cricetid and heteromyid rodents. Occas. Pap. Zool. Michael K. Petersen 3:1-16.

A test of comparative swimming performances in selected cricetid and heteromyid rodents failed to reflect taxonomic patterns, but did show some relationship to ecological situations. Compared were 13 taxa of rodents which were captured at Atotonilco de Campa, Durango, Mexico, and 5 taxa trapped in Iowa.

675. Harris, C. E. and M. K. Petersen. 1979b. Olfactory discrimination in Sigmodon and its possible relevance to habitat segregation. Occas. Pap. Zool. Michael K. Petersen 2:1-16.

Cotton rats, Sigmodon fulviventer and S. hispidus, were tested for inter- and intraspecific olfactory discrimination in a Y-maze. The data are suggestive of nonavoidance behavior at the intraspecific level and of avoidance behavior at the interspecific level. Olfactory communication may play an important role in habitat segregation for these two sympatric species collected in Durango, Mexico.

676. Heaney, L. R. 1983. Sciurus granatensis (Ardilla Roja, Ardilla Chisa, Red-tailed Squirrel). Pages 489-490 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

677. Heaney, L. R. and E. C. Birney. 1977. Distribution and natural history notes on some mammals from Puebla, Mexico. Southwest. Nat. 21:543-545.

Rodents included in a collection of mammals from Puebla, Mexico, were: Oryzomys alfaroi, Peromyscus furvus, P. thomasi, Reithrodontomys sumichrasti and Microtus quasiater.

678. Heaney, L. R. and R. S. Hoffmann. 1978. A second specimen of the neotropical montane squirrel, Syntheosciurus poasensis. J. Mammal. 59(4):854-855.

The holotype of the Neotropical montane squirrel, Syntheosciurus poasensis is from Volcan Poas, Alajuela Province, Costa Rica. A second specimen of the species was shot at Cerro Pando, Bocas del Toro Province, Panama.

679. Heaney, L. R. and R. W. Thorington, Jr. 1978. Ecology of neotropical red-tailed squirrels, Sciurus granatensis, in the Panama Canal Zone. J. Mammal. 59(4):846-851.

Foraging and food use, population dynamics and reproduction, and social interaction are described from observations of 11 marked neotropical red-tailed squirrels in Panama.

680. Hellenthal, R. A. and R. D. Price. 1976. Louse-host associations of Geomydoecus (Mallophaga: Trichodectidae) with the yellow-faced pocket gopher, Pappogeomys castanops (Rodentia: Geomyidae). J. Med. Entomol. 13(3):331-336.

The distribution of six taxa of lice of the genus Geomydoecus on Pappogeomys castanops appears to divide the hosts into northern and southern subspecies-groups. The gophers were collected in the U.S.A. and Mexico.

681. Hellenthal, R. A. and R. D. Price. 1980. A review of the Geomydoecus subcalifornicus complex (Mallophaga: Trichodectidae) from Thomomys pocket gophers (Rodentia: Geomyidae), with a discussion of quantitative techniques and automated taxonomic procedures. Ann. Entomol. Soc. Am. 73:495-503.

Geomydoecus subcalifornicus is redescribed and illustrated; its known host range is 44 subspecies of Thomomys bottae and 3 of T. umbrinus from U.S.A. (Arizona, California, Nevada, Utah) and Mexico (Baja California, Sonora).

682. Hellenthal, R. A. and R. D. Price. 1984. Distributional associations among Geomydoecus and Thomomydoecus lice (Mallophaga: Richodectidae) and pocket gophers hosts of the Thomomys bottae group (Rodentia: Geomyidae). J. Med. Entomol. 21(4):432-446.

A computerized taxonomic and geographic storage, retrieval, analysis, and distribution mapping system was used to evaluate 51,670 specimens of Geomydoecus and Thomomydoecus chewing lice collected from 226 species and subspecies of the pocket gophers Thomomys bottae, T. umbrinus, T. townsendii, and T. bulbivorus. The gophers were trapped in the U.S.A. and Mexico.

683. Helm, J. D., III. 1975. Reproductive biology of Ototylomys (Cricetidae). J. Mammal. 56:575-590.

The reproductive biology of the Neotropical climbing rat, Ototylomys, is described based on the examination of 86 offspring of animals live-trapped from Campeche, Mexico.

684. Helm, J. D., III, and J. R. Bowers. 1973. Spermatozoa of Tylomys and Ototylomys. J. Mammal. 54:769-772.

Spermatozoa are described from related neotropical rodents of the genera, Tylomys and Ototylomys. T. gymnurus were collected 8 km E Rio Grande, Oaxaca, Mexico, T. panamensis from Achiate, El Aquacate, and Santa Rita de Cherrera, Panama. O. phyllotis were collected 12 km W Escarcega, Campeche, Mexico.

685. Helm, J. D., III, C. Sanchez-Hernandez, and R. H. Baker. 1976. Observations on the rat, Peromyscus perfulvus Osgood (Rodentia: Cricetidae). An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 45:141-146. (In Spanish)

686. Hendrichs, H. 1978. Tests of mammals in a paleotropical and neotropical montane rain forest. Saugetierk. Milleil., BLV Verlagsgesselschaft mbh Munchen 40 25(3):214-225. (In German)

687. Hernandez, N. A. and D. C. Drummond. 1984. A study of rodent damage to food in some Cuban warehouses and the cost of preventing it. J. Stored Prod. Res. 20(2):83-86.

Approximately 1% of all food stored in Cuban warehouses is consumed by rats and mice. Baiting with warfarin eliminated these losses.

688. Hernandez-Orozco, J. V. 1963. The rat and sugarcane. B. Azucarero Mex. 168:25. (In Spanish)

Sugarcane losses to rodents were documented in the early 1950's in the State of Veracruz. In San Cristobal, Veracruz, 11% of production was consumed by rats. This represented a loss of $415,000. The principal pest species was Sigmodon hispidus.

689. Herrer, A. 1960a. Geographical distribution of Chagas' disease and of its vectors in Peru. Bol. Of. Sanit. Panam. 49:572-581. (In Spanish)

Chagas' disease is endemic in two regions of Peru. One region is in the southern part of the western slope of the Andes and the other is an area situated between the Maranon and Huallage Rivers of the Amazon Basin.

690. Herrer, A. 1960b. Leptospirosis in Peru. IV. Serological observations on the Pucala farm (Department of Lambayeque). Rev. Med. Exp. 13(1/2):113-118. (In Spanish)

A serological test in Rattus norvegicus and other animals.

691. Herrer, A. 1964. Chagas' disease in Peru. I. The epidemiological importance of the guinea pig. Trop. Geogr. Med. 16:146-157.

692. Herrer, A. 1971. Leishmania hertigi sp. n., from the tropical porcupine, Coendou rothschildi Thomas. J. Parasitol. 57(3):626-629.

A skin-inhabiting species of Leishmania found in the tropical porcupine, Coendou rothschildi, is considered new and described as Leishmania hertigi.

693. Herrer, A. and J. L. de Hidalgo. 1960a. Leptospirosis in Peru. II. Incidence of infection in the rat (Rattus norvegicus) in the town of Lima and identification of the origin of infection. Rev. Med. Exp. 13(1/2):84-107. (In Spanish)

Positive diagnosis by several techniques was obtained in 62.4% of 591 rat specimens.

694. Herrer, A. and J. L. de Hidalgo. 1960b. Leptospirosis in Peru. III. Serological investigation in the Mercado Central of Lima. Rev. Med. Exp. 13(1/2):108-112. (In Spanish)

A serological investigation of persons working in area of heavy rat infestation with leptospirosis had surprisingly low incidence of infection.

695. Herrer, A., H. A. Christensen, and R. J. Beumer. 1973. Detection of leishmanial activity in nature by means of sentinel animals. Trans. R. Soc. Trop. Med. Hyg. 67(6):870-879.

Describes the use of various sentinel animals in Panama, including Mesocricetus auratus and Sigmodon hispidus; the latter being especially readily infected with L. braziliensis.

696. Herrer, A., S. R. Telford, and H. A. Christensen. 1971. Enzootic cutaneous leishmaniasis in eastern Panama. I. Investigation of the infection among forest mammals. Ann. Trop. Med. Parasitol. 65(3):349-358.

Of 386 animals, 25 were infected, including 14 rice rats (Oryzomys spp.), Proechimys spp., a murine opossum, a paca, and one arboreal spiny rat. The potential role as reservoir hosts of the different mammals found naturally infected in Sasardi is discussed and a comparison is made of cutaneous leishmaniasis among forest mammals in Sasardi and that which occurs in animals in central Panama.

697. Herrer, A., V. E. Thatcher, and C. M. Johnson. 1966. Natural infections of Leishmania and trypanosomes demonstrated by skin culture. J. Parasitol. 52(5):954-957.

In the search for potential reservoirs of leishmaniasis, cultures were made from the skin of 61 wild-caught animals which showed no lesions or other external signs of infection. Leptomonad flagellates were obtained in culture from the skin of six porcupines, Coendou rothschildi, from Panama.

698. Herrera, C. M. and F. M. Jaksic. 1980. Feeding ecology of the barn owl in Central Chile and southern Spain: a comparative study. Auk 97(4):760-767.

The food habits of barn owls (Tyto alba) were compared in the mediterranean-climate areas of Central Chile and southern Spain. In both areas most prey were small mammals (95% and 87% in Chile and Spain, respectively).

699. Hershkovitz, P. 1960. Mammals of Northern Colombia. Preliminary Report No. 8: arboreal rice rats; a systematic revision of the subgenus Oecomys, Genus Oryzomys. Proc. U.S. Nat. Mus. 110:513-568.

A complete review of the taxonomy of Oecomys for its entire distribution in South America.

700. Hershkovitz, P. 1962. Evolution of Neotropical cricetine rodents (Muridae) with special reference to the phyllotine group. Fieldiana Zool. Chicago Nat. Hist. Mus. 46. 524 pp.

A complete taxonomic revision with distribution of Calomys, Eligmodontia, Pseudoryzomys, Phyllotis, Galenomys, Chinchillula, and Euneomys.

701. Hershkovitz, P. 1963. The recent mammals of South America. Proc. Int. Congr. Zool. Wash., D.C. 16:

702. Hershkovitz, P. 1966a. South America swamp and fossorial rats of the Scapteromyine group (Cricetanae, Muridae) with comments on the glans penis in murid taxonomy. Z. Saeugetierk. 31(2):81-149.

Complete taxonomy and distribution of Scapteromys and Kunsia.

703. Hershkovitz, P. 1966b. Mice, land bridges and Latin American faunal interchange. Pages 725-751 in R. I. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago.

Histories and distribution of most New World cricetine rodents.

704. Hershkovitz, P. 1969. The evolution of mammals on southern continents. VI. The recent mammals of the Neotropical Region A zoogeographic and ecological review. Q. Rev. Biol. 44:1-70.

705. Hershkovitz, P. 1970. Supplementary notes on neotropical Oryzomys dimidiatus and Oryzomys hammondi (Cricetinae). J. Mammal. 51(4):789-794.

These rodents were collected in Nicaragua and Ecuador. The article is supplemental to the author's 1944 taxonomic review of the Cricetine water rats.

706. Hershkovitz, P. 1971. A new rice rat of the Oryzomys palustris group (Cricetinae, Muridae) from northwestern Colombia, with remarks on distribution. J. Mammal. 52(4):700-709.

Oryzomys gorgasi is described, and is the first member of the Oryzomys group discovered in South America. It is compared with other members of the group and its distribution and zoogeography is discussed.

707. Hershkovitz, P. 1972. VII. The recent mammals of the Neotropical Region: a zoogeographic and ecological review. Pages 311-431 in A. Keast, F. C. Erk and B. Glass, Eds. Evolution, Mammals and Southern Continents. State Univ. New York Press, Albany.

708. Hickman, G. C. 1985. Surface-mound formation by the Tuco-Tuco, Ctenomys fulvus (Rodentia: Ctenomyidae), with comments on earth-pushing in other fossorial mammals. J. Zool. Ser. A (Lond.) 205(3):385-390.

Surface-mound formation by Ctenomys fulvus differs from most other fossorial mammals in that soil is transported to the surface by kicking with the hind feet (a habit shared with most Bathyergidae, the African mole-rats). The greatly enlarged hind feet of Ctenomys are the largest for any terrestrial fossorial group.

709. Hoare, C. A. 1965. Natural focality of protozoonoses. Pages 463-467 in B. Rosicky and K. Heyberger, Eds. Theoretical Questions of Natural Foci of Diseases. Symp. Proc., Publ. House Czech. Acad. Sci., Prague.

Gives examples of cutaneous leishmaniasis, maintained in natural foci by the gerbil Rhombomys opimus and sandflies living in their burrows, and Espundia, a disease in South America with reservoirs in the agouti Dasyprocta agouti and the paca Cuniculus paca. Other protozoonoses mentioned with rodent involvement include trypanosomiasis (Neotoma spp.) and balantidosis (rats).

710. Hoffmann, A. 1962. Monograph on the Ixodoidea of Mexico I. Rev. Soc. Mex. Hist. Nat. 23:191-307. (In Spanish)

711. Hoffmeister, D. F. 1977. Noteworthy range extensions of mammals in northern Mexico and Arizona. Southwest Nat. 22:150-151.

Range extensions for the least shrew (Cryptotis parva berlandieri) in Nuevo Leon, Harris' antelope squirrel (Ammospermophilus harrisii harrisii) in Sonora, hispid pocket mouse (Perognathus hispidus zacatecae) in Durango.

712. Hoffmeister, D. F. 1981. Peromyscus truei. Mamm. Species 16:1-5.

713. Hoffmeister, D. F. and V. E. Diersing. 1973. The taxonomic status of Peromyscus merriami goldmani, Osgood, 1904. Southwest Nat. 18:354-357.

Comparisons are made for two subspecies of Peromyscus merriami from Sonora, Mexico: P. m. goldmani and P. m. merriami.

714. Hoffmeister, D. F. and V. E. Diersing. 1978. Review of the tassel-eared squirrels of the subgenus Otosciurus. J. Mammal. 59:402-413.

Geographic variation was studied throughout the range of Sciurus aberti. Sixteen external and cranial measurements were used in the analyses of 244 adults.

715. Hoffmeister, D. F. and L. de la Torre. 1961. Geographic variation in the mouse Peromyscus difficilis. J. Mammal. 42:1-13.

Peromyscus difficilis and P. nasutus are classified as separate species. Based upon morphological features it is concluded that there is one species, Peromyscus difficilis and that Peromyscus nasutus is a synonym.

716. Homan, J. A. and H. H. Genoways. 1978. An analysis of hair structure and its phylogenetic implications among heteromyid rodents. J. Mammal. 59(4):740-760.

Hair morphology of 36 species of the family Heteromyidae including the genera Dipodomys, Perognathus, Microdipodops, Liomys and Heteromys was studied using both light and scanning electron microscopy.

717. Honacki, J. H., K. E. Kinman, and J. W. Koepp1. 1982. Mammal species of the world. Lawrence: Allen Press, Inc. and The Association of Systematics Collections. i-ix + 1-694.

718. Honeycutt, R. L. and S. L. Williams. 1982. Genic differentiation in pocket gophers of the genus Pappogeomys, with comments on intergeneric relationships in the subfamily Geomyinae. J. Mammal. 63:208-217.

Patterns of genetic differentiation revealed by starch-gel electrophoresis of proteins are compared. The genic data suggest: 1. the tribes (Thomomyini and Geomyini) are distinct, monophyletic assemblages; 2. Orthogeomys and Zygogeomys form a distinct clade; and 3. the Pappogeomys-Cratogeomys and Orthogeomys-Zygogeomys lineages may be more closely related to each other than either is to Geomys. Specimens compared were collected in the U.S.A. and Mexico.

719. Hood, G. A. 1971. Survey report and recommendations for rodent control program to alleviate leptospirosis disease problem in Barbados, West Indies. (Unpublished trip report, Nov. 28 - Dec. 19, 1971, DWRC files)

A 10-year national rodent control program was recommended to reduce the spread of leptospirosis and other rodent-borne diseases.

720. Hooper, E. T. 1961a. Notes on mammals from western and southern Mexico. J. Mammal. 42:120-122.

Rodents caught in western and southern Mexico were (state is in parenthesis): Sciurus poliopus (Michoacan), Reithrodontomys sumichrasti (Michoacan), Peromyscus boylii (Michoacan), Peromyscus lepturus (Oaxaca), and Sigmodon melanotis (Michoacan).

721. Hooper, E. T. 1961b. The glans penis in Proechimys and other caviomorph rodents. Occas. Pap. Mus. Zool. Univ. Michigan 623:1-18.

Glans penes are described for the following species. The Latin American country of origin is in parenthesis: Cavia tschudii (Peru); Dasyprocta agouti (Colombia); Dasyprocta mexicana (Mexico); Agouti paca (Colombia); Geocapromys ingrahami (Bahamas); and Proechimys sp. (Colombia).

722. Hooper, E. T. 1962. The glans penis in Sigmodon, Sigmomys, and Reithrodon (Rodentia: Cricetinae). Occas. Pap. Mus. Zool. Univ. Mich. 625:1-11.

Glans penes are described for the following species. The Latin American country of origin is in parenthesis: Reithrodon cuniculoides (Argentina); Sigmodon alleni (Mexico); and Sigmomys alstoni (Venezuela).

723. Hooper, E. T. 1968. Habitats and food of amphibious mice of the genus Rheomys. J. Mammal. 49(3):550-553.

Five new localities are reported for Rheomys, four in Costa Rica and one in Guatemala. Rheomys feed almost exclusively on aquatic larvae of insects.

724. Hooper, E. T. 1972. A synopsis of the rodent genus Scotinomys. Occas. Pap. Mus. Zool. Univ. Mich. (Ann Arbor) 665:1-32.

Presents available information on this group of small rodents inhabiting the mountains of Central America.

725. Hooper, E. T. 1977. Type specimens of recent mammals in the Museum of Zoology, the University of Michigan. Occas. Pap. Mus. Zool. Univ. Michigan 680:1-22.

Holotype rodent specimens from Latin America in the Museum of Zoology at the University of Michigan are 22 from Mexico, 1 from Guatemala, 2 from Belize, 8 from Costa Rica, 4 from Panama, 11 from Ecuador, and 1 from Cuba.

726. Hooper, E. T. and M. D. Carleton. 1976. Reproduction, growth and development in two contiguously allopatric rodent species, genus Scotinomys. Misc. Publ. Mus. Zool. Univ. Mich. 151:1-52.

This study is concerned principally with four aspects of the biology of Scotinomys: reproduction, postnatal growth and development, behavior and food habits, and distribution and habitats. It also discusses factors and selection pressures which possibly were involved in the evolution of different reproductive regimes, behaviors, and ecologies of the species. Species studied were Scotinomys teguina and S. xerampelinus collected in Costa Rica, Nicaragua and Panama.

727. Hooper, E. T. and G. G. Musser. 1964. The glans penis in neotropical Cricetines (family Muridae) with comments on classification of Muroid rodents. Misc. Publ. Mus. Zool. Univ. Mich. (Ann Arbor) 123:1-57.

Describes the glans penes for the following genera of circetine rodents: Oryzomys, Neacomys, Nectomys, Rhipidomys, Thomasomys, Akodon, Notiomys, Oxymycterus, Scapteromys, Calomys, Eligmodontia, Phyllotis, Zygodontomys, Holochilus, and Rheomys.

728. Hopf, H. S., G. E. Morley, and J. R. Humphries, editors. 1976. Rodent damage to growing crops and to farm village storage in tropical and subtropical regions. Cent. Overseas Pest Res. Lond. 115 pp.

Rattus rattus and R. norvegicus are the important pest species in the Caribbean while "New World rats" (Cricetidae) are the major pest species in Latin America (the region in continental America south of the United States).

729. Howard, W. E. 1983. Ecological aspects in the control of vertebrate pests. Pages 11-24 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983.

A general review of worldwide vertebrate pest problems. Actual species are not identified.

730. Howe, R. J. 1974. Marking behavior of the Bahamian hutia (Geocapromys ingrahami). Anim. Behav. 22:645-649.

The marking behavior of the Bahamian hutia (Geocapromys ingrahami) was studied in captivity. Hutias were more likely to mark urine-scented sticks than to mark unscented controls. The odor of conspecific urine readily induced marking and the sight and/or odor of an animal marking often immediately led to marking by other animals. Marking was exhibited by both males and females regardless of whether females were in estrus.

731. Howells, R. E., L. F. Schnur, and A. Cadena. 1978. Hydatid cysts in spiny rats in Amazonas, Colombia. Ann. Trop. Med. Parasitol. 72(4):395-396.

Two of 49 specimens of the spiny rat, Proechimys guyannensis, captured during August and September 1977 in forest areas surrounding Araracuara, on the river Caqueta, Amazonas, Colombia, were infected with hydatid cysts.

732. Huckaby, D. G. 1973. Biosystematics of the Peromyscus mexicanus group. Unpublished Ph.D. dissertation, Univ. Mich.

733. Huckaby, D. G. 1980. Species limits in the Peromyscus mexicanus group (Mammalia: Rodentia: Muroidea). Contrib. Sci. Nat. Hist. Mus. (Los Ang.) 326:1-24.

To estimate species limits within the Peromyscus mexicanus group over 4,000 specimens were compared by conventional and multivariate techniques. Comparisons were made on a suite of characters chosen from the skull, male reproductive system, and external morphology of preserved specimens.

734. Huckinghaus, F. 1961. Subspecific variation in Cavinae, Murray 1886. Sonderd. aus Z. Wiss. Zool. Bd. 166. Heft 1/2. (In German)

735. Huey, L. M. 1960a. A new race of pocket gopher (Thomomys) from San Fernando Mission, Baja California, Mexico. Trans. San Diego Soc. Nat. Hist. 12:407-408.

The study of a small series of pocket gophers from San Fernando Mission, Baja, California, Mexico, revealed the presence of a new race, Thomomys umbrinus brazierhowelli.

736. Huey, L. M. 1960b. Comments of the pocket mouse Perognatus fallax, with descriptions of two new races from Baja California, Mexico. Trans. San Diego Soc. Nat. Hist. 12:413-420.

Specimens of Perognathus fallax from a number of localities ranging from southern California to central Baja California, Mexico, were examined. Two new subspecies from Baja are described: P. f. majusculus and P. f. xerotrophicus.

737. Huey, L. M. 1960c. Two new races of Perognathus spinatus from Baja California, Mexico. Trans. San Diego Soc. Nat. Hist. 12:409-412.

The study of a series of Perognathus spinatus from the rocky region about the old Mission of San Fernando, together with specimens collected years ago from localities on the western slope of the Sierra San Pedro Martin and the southern parts of the peninsula, reveals the presence of two undescribed races: P. s. oribates and P. s. broccus.

738. Huey, L. M. 1962. Two new species of broad-faced, five-toed kangaroo rats (genus Dipodomys). Trans. San Diego Soc. Nat. Hist. 12:477-480.

Two new species of broad-faced five-toed kangaroo rats are described. Dipodomys antiquarius from Baja California, Mexico, and D. cascus from California.

739. Huey, L. M. 1964. The mammals of Baja California, Mexico. Trans. San Diego Soc. Nat. Hist. 13(7):85-168.

740. Humbert, R. P. 1983. Control of rodents - new rodenticide gives excellent results in sugarcane fields. Agricultura de las Americas, Dec., pp. 6-7, 26-27. (In Spanish)

Brodifacoum sugarcane trials in Mexico reduced rodents such that none could be trapped posttreatment.

741. Husson, A. M. 1960. A new species of the rodent Baiomys from Aruba and Curacao. Stud. Fauna Curacao 10:33-40.

742. Husson, A. M. 1973. Preliminary list of the mammals of Surinam. Zool. Bijdr. 14:1-15. (In Dutch)

Published at the request of the Foundation for Nature Preservation in Surinam (STINASU) the present list is intended as a first orientation about the mammalian fauna. The scientific name is followed by the vernacular names in the Surinam language (Sranantongo), in Dutch and in English, as far as these are known. Domesticated mammals are omitted from the list, as are the doubtful species and those incorrectly reported from Surinam. Introduced species are added within square brackets.

743. Husson, A. M. 1978. The mammals of Suriname. Zoologishe monographieen van het Rijksmuseum van Naturlijke Historie No 2. 719 pp. (In Dutch)

744. Ibanez, C. 1980. Activity patterns for some rodents in the plains of Apure (Venezuela). Acta Vertebr. Donana 7:117-120. (In Spanish)

745. Imbert-Establet, D. 1982a. An experimental approach for the role of Rattus rattus and Rattus norvegicus as vectors for Schistosoma mansoni in Guadeloupe. Ann. Parasitol. (Paris) 57(3):271-284. (In French)

Studied the development of Schistosoma mansoni in two natural hosts, Rattus rattus and Rattus norvegicus, and in two laboratory hosts, the white mouse and the white rat.

746. Imbert-Establet, D. 1982b. Wild rodents naturally infected by Schistosoma mansoni in Guadeloupe: quantitative data about development and fertility of the parasite. Ann. Parasitol. (Paris) 57(6):573-585. (In French)

A study of S. mansoni schistosomiasis in Rattus rattus and R. norvegicus naturally infected in the Guadeloupean focus confirms the results previously obtained with experimental infections in the rodents.

747. Inchaurraga, L. 1973. Preventing rodents from damaging rice fields with the use of corrugated roofing. Bol. CIARCO 3:166-169. (In Spanish)

Describes how corrugated zinc coated roofing is placed in the ground around rice fields to reduce losses to rats in Portuguesa State, Venezuela.

748. Ipinza, J. 1969. A list of the native and introduced rodents in Chile. Mus. Nac. Hist. Nat. Not. Mens. (Santiago) 14(159):6-11. (In Spanish)

A checklist for native and introduced rodents in Chile.

749. Ipinza, J., M. Tamayo, and J. Rottmann. 1973. Octodontidae in Chile. Mus. Nac. Hist. Nat. Not. Mens. (Santiago) 16(183):3-10. (In Spanish)

A key for the Octodontidae in Chile: Octodontomys gliroides, Octodon degus, and Octodon bridgesi.

750. Izor, R. J. and T. J. McCarthy. 1984. Heteromys gaumeri (Rodentia: Heteromyidae) in the northern plain of Belize. Mammalia 48(3):465-467.

Two subadult specimens of H. gaumeri were obtained in riparian, deciduous seasonal forest along the west side of Honey Camp Lagoon, Orange Walk District.

751. Jackson, W. B. 1977. Evaluation of rodent depredations to crops and stored products. EPPO Bull. 7:439-458.

Discusses worldwide pre- and post-harvest losses to rats, but reports in most cases estimates are not statistically defensible.

752. Jaksic, F. M. and C. D. Marti. 1984. Comparative food-habits of Bubo owls in Mediterranean-type ecosystems. Condor 86:288-296.

Tested was whether food habits of Bubo owls were more similar among mediterranean-type ecosystems (shrublands in Chile, Spain, and California) as compared to those in a different ecosystem (a grassland in Colorado). The owls in all four areas did not differ markedly in their diet composition; they all preyed heavily on rabbits, little on mammals weighing less than 20 g and somewhat on other vertebrates as well as large invertebrates.

753. Jaksic, F. M. and J. L. Yanez. 1977. Biometric relations in estimating the age of Octodon degus. Medio Ambiente 3(1):74-77. (In Spanish)

Corporal biometric analysis (head and body length) shows non-significant correlations among different morphological characters in Octodon degus; however, the craniometric dimensions (basilar length, zygomatic arch width, cheek teeth row) are all linearily associated among them and with head and body length.

754. Jaksic, F. M. and J. L. Yanez. 1978. Annual variation in the community composition of micromammals in Los Dominicos, Santiago. Not. Mens. Mus. Hist. Nat. (Santiago) 23(267):10-11. (In Spanish)

Gives the seasonal fluctuations for five species of rodents at Dominicos, 20 km east of Santiago: Octodon degus, Abrocoma bennetti, Akodon olivaceus, Phyllotis darwini, and Oryzomys longicaudatus.

755. Jaksic, F. M. and J. L. Yanez. 1979a. The diet of the barn owl Tyto alba in central Chile and its relation to the availability of prey. Auk 96:619-621.

Remains of the following species were found in Tyto alba pellets: Abrocoma bennetti, Akodon longipilis, Akodon olivaceus, Mus musculus, Octodon degus, Oryzomys longicaudatus, Phyllotis darwini, Rattus rattus, and Spalacopus cyanus.

756. Jaksic, F. M. and J. L. Yanez. 1979b. Head and body lengths for rodents in the mammal collection at the National Museum of Natural History, Santiago, Chile. Not. Mens. Mus. Hist. Nat. (Santiago) 23(271):3-4. (In Spanish)

Total length measurements are given for 13 native species of rodents and 3 introduced species.

757. Jaksic, F. M. and J. L. Yanez. 1980. Differential utilization of prey resources by great horned owls and barn owls in central Chile. Auk 97(4):895-896.

Great Horned Owls (Bubo virginianus magellanicus) and Barn Owls (Tyto alba pratincola) are sympatric in central Chile, but their interactions in terms of prey taken have not been analyzed. Owl pellets for both species were collected at La Dehesa, 20 km east of Santiago, Chile. Remains from eight species of rodents were found in the pellets. All species of rodents were found in pellets for both owls, except Octodon degus and Spalacopus cyanus were not found in Great Horned Owl pellets and Rattus rattus was not found in Barn Owl pellets.

758. Jaksic, F. M., H. W. Greene, and J. L. Yanez. 1981. The guild structure of a community of predatory vertebrates in central Chile. Oecologia (Berl.) 49:21-28.

The trophic ecology of 11 predator species of vertebrates in central Chile is analyzed. The study areas exhibit the typical climate (hot-dry summers, cold-rainy winters), and vegetation (chaparral), of mediterranean ecosystems. Densities of the staple prey (small mammals) were estimated by seasonal trapping during 2 years in both open and dense patches of chaparral.

759. Jaksic, F. M., J. R. Rau, and J. L. Yanez. 1978. The relation between prey supply and predation by Bubo virginianus (Strigidae) in the "Torres del Paine" National Park. An. Inst. Patagonia, Punta Arenas (Chile) 9:199-202. (In Spanish)

The relation between prey supply in the field and prey composition in the diet of Bubo virginianus is studied in "Torres del Paine" National Park. It is shown that there is no correlation between both variables, and hence it is concluded that B. virginianus does not consume its prey in the same proportion they are available in the field. Two alternative hypotheses are advanced to account for this phenomenon.

760. Jaksic, F. M., R. P. Schlatter, and J. L. Yanez. 1980. Feeding ecology of central Chilean foxes, Dusicyon culpaeus and Dusicyon griseus. J. Mammal. 61(2):254-260.

Rodents were the basic prey for both species of foxes. Frequency of occurrence of rodent prey items in the droppings tended to

match their relative abundance in the field. Rodent species were Abrocoma bennetti, Akodon olivaceus, Octodon degus, Phyllotis darwini and Spalacopus cyanus.

761. Jaksic, F. M., J. L. Yanez, and E. R. Fuentes. 1981. Assessing a small mammal community in central Chile. J. Mammal. 62(2):391-396.

The effect of three factors that intuitively seem to be important in the determination of the number, taxonomic composition, and abundance of small mammal species in a given place were studied: (1) the time of the year the trapping is conducted (temporal factor); (2) the degree of openness of habitat patches (habitat-openness factor) and (3) the sampling technique (sampling factor). The study site was Fundo San Carlos de Apoquindo, in Los Dominicos, 20 km east of Santiago, Chile. Species captured were Abrocoma bennetti, Akodon olivaceus, Octodon degus, Oryzomys longicaudatus, and Phyllotis darwini.

762. Jaksic, F. M., J. L. Yanez, and J. R. Rau. 1983. Trophic relations of the southernmost populations of Dusicyon in Chile. J. Mammal. 64(4):693-697.

The diets of two southern species of foxes (Dusicyon griseus and D. culpaeus) were analyzed from populations on Tierra del Fuego Island and the mainland (Magallanes) Chile. Stomach contents contained the following rodents Akodon, Ctenomys, Ondatra, Oryzomys, and Reithrodon.

763. Jaksic, F. M., J. L. Yanez, and R. P. Schlatter. 1980. Prey of the Harris' hawk in central Chile. Auk 97(1):196-198.

Pellets found under Harris' Hawks (Parabuteo unicinctus) nests were collected at two locations in central Chile. Rodent bones were identified as Abrocoma bennetti, Akodon longipilis, A. olivaceus, Octodon degus, and Phyllotis darwini.

764. Janzen, D. H. 1982a. Attraction of Liomys mice to horse dung and the extinction of this response. Anim. Behav. 30(2):483-489.

When horse dung containing the large seeds of Enterolobium cyclocarpum (the guanacaste tree) was experimentally placed in a tropical deciduous forest in Costa Rica (Santa Rosa National Park), Liomys salvini (Heteromyidae) spiny pocket mice went to it and dug out the seeds.

765. Janzen, D. H. 1982b. Seed removal from fallen guanacaste fruits (Enterolobium cyclocarpum) by spiny pocket mice (Liomys salvini). Brenesia 19/20:425-429.

This study was to determine what percentage of the seeds from fallen guanacaste fruits (Enterolobium cyclocarpum) are removed

by the spiny pocket mouse (Liomys salvini). 93.4% of the seeds are removed by L. salvini.

766. Janzen, D. H. 1982c. Fruit traits and seed consumption by rodents of Crescentia alata (Bignoniaceae) in Santa Rosa National Park, Costa Rica. Am. J. Bot. 69:1258-1268.

Horses eat the large hard fruits of Crescentia alata (jicaro) and the seeds pass through the horse to germinate in the dung. Liomys salvini avidly harvest the seeds from the horse dung but cannot open the hard fruits by itself. The interaction between horses, jicaro fruits, and Liomys mice is probably representative of that which used to occur between Pleistocene megafauna and a number of contemporary Central American trees.

767. Janzen, D. H. 1982d. Removal of seeds from horse dung by tropical rodents: influence of habitat and amount of dung. Ecology 63(3):1887-1900.

Horses are major contemporary dispersers of guanacaste tree seeds (Enterolobium cyclocarpum) in Costa Rica. By placing piles of fresh horse dung in grassland and adjacent deciduous forest I determined that the seeds have a much greater chance of being harvested by seed predator rodents (Liomys salvini) from the dung in forest than that in adjacent grasslands.

768. Jervis, O. 1967. Plague in Ecuador from 1908 to 1965. Bol. Of. Sanit. Panam. 62(5):418.

Describes the spread of the disease and the problems of DDT resistance in control efforts. Replacement of DDT spraying with ronnel and BHC, and the use of rodenticides such as 1080 and cyanogas is recommended.

769. Johnson, K. M., S. B. Halstead, and S. N. Cohen. 1967. Haemorrhagic fevers of Southeast Asia and South America: a comparative study. Prog. Med. Virol. 9:105-158, 165 refs.

Studies in Bolivia showed that land where cases of AHF were encountered teems with wild rodents. Junin virus was recovered from Mus, Calomys and Akodon leading to the conclusion that rodents were important reservoirs of infection.

770. Johnson, K. M., R. B. Mackenzie, P. A. Webb, and M. L. Kuns. 1965. Chronic infection of rodents by Machupo virus. Science (Wash. D.C.) 150(3703):1618-1619.

Chronic infection in wild rodents may be an important mechanism in the natural history of Machupo virus infections, such as in Calomys callosus.

771. Johnson, P. T. 1972a. On the rodent-infesting Anoplura of Panama. Great Basin Nat. 32(3):121-136.

The species of Anoplura found on indigenous Panamanian rodents belong to the genera Hoplopleura, Fahrenholzia, Neohaematopinus and Polyplax.

772. Johnson, P. T. 1972b. Sucking lice of Venezuelan rodents, with remarks on related species (Anoplura). Brigham Young Univ. Sci. Bull. Biol. Ser. 17:62.

The paper includes discussions and descriptions of species of Anoplura known to occur on Venezuelan rodents, and of certain other taxa related to Venezuelan forms. Five genera are represented.

773. Jones, C. J., K. D. Taylor, D. M. Myers, L. H. Turner, and C. O. R. Everard. 1982. Pathogenic Leptospira isolates from the Caribbean Island of Barbados. Int. J. Zoonoses 9:138-146.

The 78 known pathogenic Leptospira isolates made on Barbados up to Dec. 31, 1981, are listed. Only 17 were previously reported. The 78 isolates were obtained from humans, dogs, rats, mongooses, and a mouse. Rodents involved were Rattus norvegicus, R. rattus, and Mus musculus.

774. Jones, G. S. and W. D. Webster. 1976. Notes on distribution, habitat and abundance of some mammals of Zacatecas, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. 47(1):75-84.

Natural history and distributional notes on 40 species of mammals collected between 1950 and 1964 are presented. The natural history notes include observations on reproduction, predation, abundance, habitat, nests, and behavior.

775. Jones, J. K., Jr. 1964a. Additional records of mammals from Durango, Mexico. Trans. Kans. Acad. Sci. 66:750-753.

Mammals were collected along the Elota River at Santa Ana, Durango. Rodents collected and not previously reported from Durango, Mexico, were Sciurus colliaei sinaloensis and Peromyscus eremicus anthonyi.

776. Jones, J. K., Jr. 1964b. A new subspecies of harvest mouse, Reithrodontomys gracilis, from Isla Del Carmen, Campeche. Proc. Biol. Soc. Wash. 77:123-124.

A new subspecies, Reithrodontomys gracilis insularis, is described from an adult male collect 8 miles ENE Ciudad del Carmen, Isla del Carmen, Campeche, Mexico.

777. Jones, J. K., Jr. 1982. Reithrodontomys spectabilis. Mamm. Species 193:1.

778. Jones, J. K., Jr. and Y. A. Baldassarre. 1982. Reithrodontomys brevirostris and Reithrodontomys paradoxus. Mamm. Species 192:1-3.

779. Jones, J. K., Jr. and H. H. Genoways. 1967. Notes on the Oaxacan vole Microtus oaxacensis Goodwin 1966. J. Mammal. 48:320-321.

The second and third known specimens of this species are reported, both from Oaxaca, Mexico.

780. Jones, J. K., Jr. and H. H. Genoways. 1968. Distribution of the porcupine, Erethizon dorsatum, in Mexico. Mammalia 32:709-711.

Only three specimens of Erethizon dorsatum have been reported from Mexico. This paper gives 4 additional specimens for this species: 1 from Sonora; 2 from Chihuahua; and 1 from Sinaloa.

781. Jones, J. K., Jr. and H. H. Genoways. 1970. Harvest mice (genus Reithrodontomys) of Nicaragua. West. Found. Vertebr. Zool. Occas. Pap. 2. 16 pp.

Six species are treated, including R. paradoxus described as new, R. brevirostris a subspecies described as new, and other species from Nicaragua.

782. Jones, J. K., Jr. and H. H. Genoways. 1971. Notes on the biology of the Central American squirrel, Sciurus richmondi. Am. Midl. Nat. 86(1):242-246.

Gives information on this little known squirrel from the rain forests of Nicaragua as regards variation, distribution, reproduction, and molting cycle.

783. Jones, J. K., Jr. and H. H. Genoways. 1975a. Dipodomys phillipsii. Mamm. Species 51:1-3.

784. Jones, J. K., Jr. and H. H. Genoways. 1975b. Sciurus richmondi. Mamm. Species 53:1-2.

785. Jones, J. K., Jr. and H. H. Genoways. 1978. Neotoma phenax. Mamm. Species 108:1-3.

786. Jones, J. K., Jr. and T. E. Lawlor. 1965. Mammals from Isla Cozumel, Mexico, with description of a new species of harvest mouse. Univ. Kans. Publ. Mus. Nat. Hist. 16:409-419.

Mammals were collected on the island of Cozumel, Mexico, in August 1962. Rodents captured were Oryzomys palustris cozumelae, Peromyscus leucopus cozumelae, Dasyprocta punctata yucatanica,

Agouti paca, and a new species of harvest mouse, Reithrodontomys spectabilis.

787. Jones, J. K., Jr. and T. L. Yates. 1983. Review of the white-footed mice, Genus Peromyscus, of Nicaragua. Occas. Pap. Mus. Tex. Tech Univ. 82:15.

Morphological comparisons of three species of Peromyscus collected in Nicaragua: P. stirtoni, P. gymnotis, and P. mexicanus.

788. Jones, J. K., Jr., T. Alvarez, and M. R. Lee. 1962. Noteworthy mammals from Sinaloa, Mexico. Univ. Kans. Publ. Mus. Nat. Hist. 14:145-159.

Range extensions are reported for the following rodents collected in Sinaloa: Sciurus truei; Thomomys umbrinus atrovarius; Peromyscus merriami goldmani; and Onychomys torridus yakiensis.

789. Jones, J. K., Jr., D. C. Carter, and W. D. Webster. 1983. Records of mammals from Hidalgo, Mexico. Southwest. Nat. 28:378-380.

Rodents reported were Sciurus deppei negligens, Oryzomys couesi peragras, and Oryzomys melanotis rostratus.

790. Jones, J. K., Jr., H. H. Genoways, and T. E. Lawlor. 1974. Annotated checklist of mammals of the Yucatan Peninsula, Mexico. II. Rodentia. Occas. Pap. Mus. Tex. Tech Univ. 22:1-24.

Rodents collected in Yucatan, Mexico, were Sciurus yucatanensis, S. deppei, Orthogeomys hispidus, Heteromys desmarestianus, H. gaumeri, Oryzomys fulvescens, O. melanotis, O. palustris, Tylomys nudicaudus, Ototylomys phyllotis, Otonyctomys hatti, Reithrodontomys gracilis, R. spectabilis, Peromyscus leucopus, P. yucatanicus, Sigmodon hispidus, Mus musculus, Rattus rattus, Dasyprocta punctata, Agouti paca, and Coendou mexicanus.

791. Jonkers, A. H., L. Spence, W. G. Downs, T. H. G. Aitken, and E. S. Tikasingh. 1968. Arbovirus studies in Bush Bush Forest, Trinidad, W.I., September 1959-December 1964. V. Virus isolations. Am. J. Trop. Med. Hyg. 17:276-284.

This paper describes the virological techniques used and the results obtained in the Bush Bush forest studies in Trinidad. Rodent species examined were: Oryzomys laticeps, O. concolor, Zygodontomys brevicauda, Heteromys anomalus, Nectomys squamipes, Proechimys guyannensis, and Rattus rattus.

792. Jonkers, A. H., L. Spence, W. G. Downs, T. H. G. Aitken, and C. B. Worth. 1968. Arbovirus studies in Bush Bush Forest, Trinidad, W.I., September 1959-December 1964. VI. Rodent-associated viruses (VEE and agents of Group C and Guama): Isolations and further studies. Am. J. Trop. Med. Hyg. 17:285-298.

Rodents identified as positive for arboviruses were: Oryzomys laticeps, Zygodontomys brevicauda, Heteromys anomalus, Nectomys squamipes, Proechimys guyannensis, and Rattus rattus.

793. Jourdane, J. 1978. Permissivity of the rat, Rattus rattus, of Guadeloupe with regard to Schistosoma mansoni and demonstration of a migration of adult schistosomes to the lungs. C. R. Hebd. Seances Acad. Sci. Ser. D Sci. Nat. 286(12):1001-1004. (In French)

In contrast to the laboratory rat, the rat (Rattus rattus) of Guadeloupe is a favorable host for the life cycle of S. mansoni.

794. Justo, E. R. and L. de Santis. 1977. Akodon serrensis serrensis in Argentina (Rodentia, Cricetidae). Neotropica 23(69):47-48. (In Spanish)

Found in the mammal collection of the Instituto Argentine de Investigaciones de las Zonas Aridas de Mendoza (IADIZA) was a specimen of Akodon serrensis serrensis which is the first record of this species in Argentina and a range extension of 600 km. The rodent was captured near the San Antonio River, 32 km north of Bernardo de Irigoyen, province of Misiones.

795. Kajon, A., O. A. Scaglia, C. Morgan, C. A. Velazquez, M. S. Merani, and O. A. Reig. 1982. Three new karyotypes for the tribe Akodontini (Rodentia, Cricetidae). Resumenes III Reunion Iberoamericana de Conservacion and Zoologia de Vertebrados. Buenos Aires 15-19 Noviembre 1982:94. Abstract only. (In Spanish)

796. Kajon, A., O. A. Scaglia, C. Morgan, C. A. Velazquez, M. S. Merani, and O. A. Reig. 1984. Three new karyotypes for the tribe Akodontini (Rodentia, Cricetidae). Rev. Mus. Argent. Cienc. Nat. Bernardino Rivadavia 13(8):461-469. (In Spanish)

Karyotypes are described for Akodon puer, A. budini and Oxymycterus rufus captured in Argentina.

797. Kannard, C. P. 1965. Pests and diseases of rice in British Guiana and their control. FAO Plant Prot. Bull. 13(4):73-78.

A note on damage by the rat Holochilus sciureus berbicensis to sugarcane and rice. Control consists of manual destruction of rats and their nests, and by baiting with 2% endrin.

798. Karimi, Y., C. R. de Almeida, A. M. Paiva de Almeida, A. Keyvanfar, and M. Bourdin. 1974. Characteristics of strains of Yersinia pestis isolated in the northeast of Brazil. Ann. Microbiol. (Paris) 125A(2):243-246. (In French)

Four hundred and seven strains of Y. pestis were isolated from: Zygodontomys, Rattus, man, fleas of Zygodontomys (Polygenis), rat fleas (Polygenis and Xenopsylla cheopis), and house fleas (Polygenis irritans, X. cheopis). The strains of Y. pestis studied had the classical morphology of gram-negative coccobacilli and of bipolar coloration.

799. Karimi, Y., C. R. de Almeida, and R. Petter. 1976. Notes on some rodents from northeastern Brazil. Mammalia 40(2):257-266. (In French)

Biological studies of rodents in relation to plague were conducted in northeastern Brazil. Rodents collected were Calomys callosus, Zygodontomys lasiurus, Oryzomys eliurus, O. subflavus, Wiedomys pyrrhorhinus, Galea spixii, Kerodon rupestris, Dasyprocta agouti, and Thrichomys apereoides.

800. Kasahara, S. 1978. Chromosomal variability in four species of rodents from the families Cricetidae and Muridae. Unpublished Ph.D. dissertation, Univ. of Sao Paulo, Sao Paulo, Brazil. (In Portuguese).

801. Kasahara, S. 1981. Cytogenetic studies of Cavia aperea (Family Caviidae). Cienc. Cult. 33:657. (In Portuguese)

802. Kasahara, S. and Y. Yonenaga-Yassuda. 1981. Chromosome variability in Brazilian specimens of Rattus rattus (2 n = 38). Experientia 37:31-32.

In eight specimens of Rattus rattus collected in the state of Sao Paulo, Brazil, a diploid number of 2n = 38 was found. Contrary to the supposed lack of karyotypic variability in South American populations, five specimens were found to be heterozygotes for a pericentric inversion in the autosome no. 8.

803. Kasahara, S. and Y. Yonenaga-Yassuda. 1982. Chromosomal variability in Akodon sp. (Rodentia: Cricetidae). Cytologia 47:317-324.

This paper presents additional data on the chromosomal variability in Akodon sp. as found in specimens collected from several regions in the state of Sao Paulo, Brazil.

804. Kasahara, S. and Y. Yonenaga-Yassuda. 1983. Sex chromosome variability in Zygodontomys lasiurus (Rodentia: Cricetidae). Cytologia 48:569-576.

This paper presents further data on the sex chromosomes in Zygodontomys lasiurus from the state of Sao Paulo, Brazil. The G- and C-banding patterns were studied and the silver stained necleolus organizer regions (NORs) were detected in the karyotype.

805. Kasahara, S. and Y. Yonenaga-Yassuda. 1984. A progress report of cytogenetic data on Brazilian rodents. Rev. Bras. Genet. 7(3):509.

Cytogenetic research on Brazilian rodents started in 1968. Up to now, nearly 60 species belonging to the Families Cricetidae, Echimyidae, Caviidae, Hydrochocridae, Dasyproctidae, Ctenomyidae and Muridae have been analyzed and the findings have shown great chromosomal variability within the Order Rodentia. A summary report of the main cytogenetic data on Brazilian rodents is presented in this paper.

806. Keirans, J. E. and E. K. Jones. 1972. Descriptions of the immature stages of Ixodes (I.) sinaloa Kohls and Clifford (Acarina: Ixodidae), from rodents in Mexico and Nicaragua. Acarologia 13:471-475.

Ixodes sinaloa had previously been described from Sinaloa and Nayarit, Mexico. Recently it has been taken on rodents in Jalisco, Mexico, and Nicaragua. Host species were: Liomys pictus (Jalisco) and Liomys salvini, Oryzomys alfaroi, Peromyscus mexicanus and Reithrodontomys sumichrasti (all Nicaragua).

807. Keirans, J. E., C. M. Clifford, and D. Corwin. 1976. Ixodes sigelos, n. sp. (Acarina; Ixodidae), a parasite of rodents in Chile, with a method for preparing ticks for examination by scanning electron microscopy. Acarologia 18:217-225.

The female, nymph and larva of Ixodes sigelos are described. They were collected from Santiago, Maule and Malleco Provinces, Chile, on chinchilla rats (Abrocoma bennetti), degus (Octodon degus), leaf-nosed mice (Phyllotis sp.) and rock rats (Aconaemys fuscus).

808. Kennedy, M. L. and G. D. Schnell. 1978. Geographic variation and sexual dimorphism in Ord's kangaroo rat, Dipodomys ordii. J. Mammal. 59(1):45-59.

Geographic variation was assessed in 4,335 male and 3,518 female specimens of Ord's kangaroo rat (Dipodomys ordii) from throughout the range of the species. A total of 16 skull measurements was analyzed and, of these, 11 showed significant sexual dimorphism.

809. Kiblisky, P. 1969. The chromosomes of two species of the genus Oryzomys (Rodentia: Cricetidae). Experientia 25:1338-1339.

Compared are the karyotypes of Oryzomys albigularis and Oryzomys delicatus from Venezuela. O. albigularis had a diploid count of 2n = 66 and O. delicatus 2n = 60.

810. Kiblisky, P. 1971. The chromosomes of the Cricetidae rodent Phyllotis caprinus (Pearson). Mammal. Chrom. Newsl. 8:281-282.

811. Kiblinsky, P. and O. A. Reig. 1965. The karyotype of Ctenomys magellanicus (Rodentia: Octodontidae) and data on the somatic number in the distinct species of the genus Ctenomys. Presented at the III Cong. Latinoamericano de Zoologia, Santiago, Chile. (In Spanish)

812. Kiblisky, P. and O. A. Reig. 1966. Variation in chromosome number within the genus Ctenomys and description of the male karyotype of Ctenomys talarum talarum Thomas. Nature 212:436-438.

The number of chromosomes in the genus Ctenomys range from 2n = 26 for C. opimus luteolus to 2n = 68 for Ctenomys torquatus. The male karyotype of Ctenomys talarum talarum is 23 pairs of autosomes, plus X and Y.

813. Kiblisky, P., I. S. Lobig, and O. A. Reig. 1970. Chromosomal studies in diverse populations of the llanos rat Zygodontomys microtinus Thomas (Rodentia, Cricetidae). Acta Cient. Venez. 21 (Supplement 1):35. Abstract only. (In Spanish)

814. Kiblisky, P., N. Brum-Zorilla, G. Perez, and F. A. Saez. 1977. Chromosomal variability in diverse Uruguayan populations of rodents of the genus Ctenomys (Rodentia: Octodontidae). Mendeliana 2:85-93. (In Spanish)

815. Kiblisky, P., M. S. Merani, O. J. Molina, and N. O. Bianchi. 1976. The cytogenetics of South American akodon rodents (Cricetidae). III. Intraspecific chromosomal polymorphism in Akodon dolores (Thomas). Mendeliana 1:97-103. (In Spanish)

816. Kilpatrick, C. W. and E. G. Zimmerman. 1976. Biochemical variation and systematics of Peromyscus pectoralis. J. Mammal. 57(3):506-522.

The genetic structure of 21 populations of Peromyscus pectoralis was analyzed through electrophoretically demonstrable variation in proteins. The populations studied were from southwestern United States and northern Mexico.

817. Kirkpatrick, R. and A. Cartwright. 1975. List of mammals known to occur in Belize. Biotropica 7:136-140.

A list of mammals known to occur in Belize was compiled by a search of the literature, by consulting persons who are working in Belize, and by collecting during the summers of 1972 and 1973. A total of 89 species is reported for this country, including representatives of 11 orders and 28 families.

818. Kirkpatrick, R., A. Cartwright, J. C. Blier, and E. J. Spicka. 1975. Additional mammal records for Belize. Mammalia 39(2):330-331.

Paper is on Oryzomys fulvescens, O. palustris, and Sigmodon hispidus from Belize.

819. Kleiman, D. G. 1970. Reproduction in the female green acouchi, Myoprocta pratti Pocock. J. Reprod. Fertil. 23:63.

The green acouchi, Myoprocta pratti Pocock, in common with many other South American hystricomorph rodents (= Caviomorpha), possesses a vaginal closure membrane which becomes fully perforated only at estrus and parturition. Partial perforation occurs at other times but does not prevent its use to define cyclical activity. The estrous cycle, about 40 days, and gestation length, about 99 days, are long, relative to the size of the animal, but are within the range of those of related species. One or two offspring are born at any time of the year although a slight birth peak is seen during the summer months.

820. Kleiman, D. G. 1971a. The courtship and copulatory behavior of the green acouchi, Myoprocta pratti. Z. Tierpsychol. 29(3):259-278.

Some aspects of the social organization and behavior of the captive green acouchi are described. Male courtship displays include trembling of the body, stepping movements of the forefeet, urination or urine-spraying, racing, and squealing. The frequency of male courting varies with the female's reproductive cycle.

821. Kleiman, D. G. 1971b. The caviomorphs. Unusual South American rodents. Spots Stripes 8(4):13-17.

822. Kleiman, D. G. 1972. Maternal behavior of the green acouchi (Myoprocta pratti Pocock), a South American caviomorph rodent. Behaviour 43(1-4):48-84.

The acouchi is a diurnal, surface-dwelling caviomorph rodent, inhabiting the tropical forests of South America, and having a reproductive cycle characterized by a 40-day estrous cycle, a 3-1/2 month gestation and small litters with precocial young. An analysis of the acouchi female's behavior during late pregnancy, parturition, maternal and nest building behavior is described.

823. Kleiman, D. G. 1974. Patterns of behavior in hystricomorph rodents. Pages 171-209 in I. W. Rowlands and B. J. Weir, Eds. Biology of Hystricomorph Rodents. Symp. Zool. Soc. Lond. 34:1-482.

The basic behavior of the sub-order is very uniform considering the great differences that exist in the size and life style of its members. Several behavioral characteristics which are atypical of rodents have evolved, particularly in relation to the mode of their reproduction and as anti-predator devices.

824. Kleiman, D. G. 1977. Monogamy in mammals. Q. Rev. Biol. 52:45.

This review considers the behavioral, ecological, and reproductive characteristics of mammals exhibiting monogamy, i.e., mating exclusivity. Two forms of monogamy occur, Type 1, facultative, and Type 2, obligate. Within both types of monogamy, the following traits are typically seen: (1) adults show little sexual dimorphism either physically or behaviorally (2) the adult male and female exhibit infrequent socio-sexual interactions except during the early stages of pair bond formation.

825. Kleiman, D. G., J. F. Eisenberg, and E. Maliniak. 1980. Reproductive parameters of and productivity - caviomorph rodents. Pages 173-183 in J. F. Eisenberg, Ed. Vertebrate Ecology in the Northern Neotropics. Smithsonian Press.

Data on estrous cycle length, seasonality of reproduction, gestation, litter size, and growth rates are presented for species of caviomorph rodents studied in the field and the laboratory.

826. Koford, C. B. 1968. Peruvian desert mice: Water independence, competition, and breeding cycle near the equator. Science (Wash. D.C.) 160(3827):552-553.

The native mouse (Phyllotis gerbillus) of the Peruvian coastal desert can survive on dry seed without drinking water, and it burrows in sand. House mice (which abound in other adjoining deserts) also tolerate dehydration, and in some areas may displace the native mice.

827. Koop, B. F., R. J. Baker, and H. H. Genoways. 1983. Numerous chromosomal polymorphisms in a natural population of rice rats (Oryzomys, Cricetidae). Cytogenet. Cell. Genet. 35:131-135.

Based on G- and C-banded karyotypes of 10 specimens of rice rats, genus Oryzomys, from a single isolated population, were found at least nine different centric fusion/fission polymorphisms.

828. Koop, B. F., R. J. Baker, M. W. Haiduk, and M. D. Engstrom. 1984. Cladistical analysis of primitive G-band sequences for the karyotype of the ancestor of the Cricetidae complex of rodents. Genetica 64:199-208.

Homologous segments identified by G-banding sequences of chromosomes of Peromyscus boylii, Neotoma micropus, Oryzomys capito, Melomys burtoni, and Apodemus sylvaticus were used to hypothesize a chromosomal condition for the cricetid ancestor. Specimens of O. capito were collected in Surinam.

829. Kramer, P. 1973. Wildlife conservation in the Galapagos Islands (Ecuador). Natur. Res. 9(4):3-10.

Extinction of five endemic cricetids was correlated with the introduced Rattus rattus. Two Oryzomys species are extant but threatened. Rats may also destroy eggs and hatchlings of the petrel and tortoises. Anticoagulant resistance is suspected.

830. Kratochvil, J., V. Barus, and L. Rodriguez. 1978. A revision of the taxonomy of capromyidae from Cuba. Congr. Theriol. Int. 2:188. Abstract only.

831. Kratochvil, J., L. Rodriguez, and V. Barus. 1978. Capromyinae (Rodentia) of Cuba. I. Acta Sci. Nat. Acad. Sci. Bohemoslov. Brno 12:1-160.

832. Kraus, C., M. Gihr, and G. Pilleri. 1970. The behavior of Cuniculus paca (Rodentia: Dasyproctidae) in captivity. Rev. Suisse Zool. 77(2). Number 26:353-388. (In German)

833. Kravetz, F. O. 1972. A study of food habits, activity periods and other ecological traits of a rat population (Oxymycterus rufus platensis Thomas) in Punta Lara. Acta Zool. Lilloana 29:201-212. (In Spanish)

The population density of Oxymchterus rufus in Punta Lara, Argentina, is highest in the winter (July) and lowest during the summer (February). Few O. rufus survive for more than 1 year. Breeding can occur anytime between September and May.

834. Kravetz, F. O. 1977. Ecology and the control of reservoirs. Cienc. e Invest. 33:235-242. (In Spanish)

835. Kravetz, F. O. 1978. The biology and control of a population of wild rodents that are a reservoir for Argentinian hemorrhagic fever in the Department of Rio Cuarto. Unpublished Ph.D. dissertation Univ. Buenos Aires. 193 pp. (In Spanish)

836. Kravetz, F. O. and G. De Villafane. 1981. Rodent populations in a corn field during the stages of maturity and harvest. Hist. Nat. (Mendoza) 1(31):213-232. (In Spanish)

Rodent populations of two corn fields before and immediately after harvest were studied. In each field long-term captures were conducted, with traps set forming four concentric squares with 20 meters between parallel sides. Calomys laucha and C. musculinus were the dominant species in both fields.

837. Kravetz, F. O. and J. J. Polop. 1983. Agroecosystem rodent communities in Rio Cuarto, Cordoba, Argentina. Ecosur Argentina 10(19/20):1-18. (In Spanish)

Rodent sampling was carried out in fields of Rio Cuarto, Cordoba Province, Argentina. A comparison was made for rodent species in cultivated fields as opposed to natural habitat. Calomys spp. predominated in cultivated fields, whereas Akodon dolores and Oligoryzomys flavescens were more common in natural habitat.

838. Kravetz, F. O., G. De Villafane, and M. P. Torres. 1976. The rodent population in a corn field during different stages of growth and after harvest. Ecologia 3:155. Abstract only. (In Spanish)

839. Kravetz, F. O., G. De Villafane, M. P. Torres, and M. J. Piantanida. 1975. A rodent population in a wheat field. Physis (C) 34(89):187-197. (In Spanish)

840. Kravetz, F. O., M. Busch, R. E. Percich, M. C. Manjon, and P. N. Marconi. 1981. The population dynamics of Calomys laucha in the Department of Rio Cuarto. II. Criteria used for determining age, morphometric characters and seasonal variation. Ecologia 6:35-44. (In Spanish)

Lens weight was used to estimate the ages of Calomys laucha. Molar wear was only considered as an alternative method due to its variability.

841. Kravetz, F. O., A. Eraso, E. Moretti, I. Albesa, and B. Basso. 1978. Variations and prevalence of similar trypanosomes to Trypanosoma cruzi in wild rodents. Ecologia 3:81-87. (In Spanish)

Specimens of Calomys musculinus, C. laucha and Akodon molinae were live-trapped in the rural area of Loa Higueras, Department of Rio Cuarto, Cordoba, Argentina. The prevalence of trypanosome infection was 15.1% for C. musculinus, 14.9% for A. molinae, and 7.8% for C. laucha.

842. Kravetz, F. O., R. E. Percich, G. A. Zuleta, M. A. Callelo, and M. C. Weissenbacher. 1986. Distribution of Junin virus and its reservoirs. A tool for Argentinian hemorrhagic fever risk evaluation in nonendemic areas. Interciencia 11(4):185-188.

Junin virus was isolated from a rodent, Akodon azarae, in the nonendemic locality of Pila, Buenos Aires Province, a Pampean plains. No virus was found in Chaco plains localities. It was concluded that the risk of an outbreak is higher in the Pampean localities, especially if corn production is increased.

843. Kravetz, F. O., M. C. Manjon, M. Busch, R. E. Percich, P. N. Marconi, and M. P. Torres. 1981. The ecology of Calomys laucha (Rodentia: Cricetidae) in the Department of Rio Cuarto

(Cordoba). I. Population dynamics. Ecologia 6:15-22. (In Spanish)

Compares population density, structure and reproductive activity.

844. Kuns, M. L. 1965. Epidemiology of Machupo virus infection - II. Ecological and control studies of haemorrhagic fever. Am. J. Trop. Med. Hyg. 14(5):813-816.

The rodent Calomys callosus is an important reservoir host of the Machupo virus (haemorrhagic fever) in Bolivia. After rodent control measures were applied there were no new cases of Machupo fever in humans.

845. Kuyp, E. van der. 1979. Schistosomiasis mansoni in Surinam. I. General remarks. Surinaams Medisch Bull. 3:8-13.

846. Kverno, N. B., D. J. Elias, E. Vogel, and R. Bojorge. 1971. Exploratory studies to reduce cotton rat damage to rice in Nicaragua. Vertebrate Damage Control Research, U.S. Dep. Inter., U.S. Agency for International Development. pp. 1-22.

One of the common baits used for controlling the hispid cotton rat, Sigmodon hispidus, in rice fields in Nicaragua is Racumin bait. The bait is mixed at the rate of 1 part Racumin concentrate (0.6%), 1 part sugar, and 19 parts carrier (broken rice). It is then sealed in plastic bags and the bags are dipped into molasses which is thought to be a rodent attractant. After comparing several bait combinations it was found that hulled rice treated with vegetable oil was accepted significantly higher than all other treatments. Loose rice was greater accepted than when the rice was placed in plastic bags. Molasses had no value as an attractant.

847. La Bastilla, A. 1973a. Mammals. Wildlife of study area. An ecological survey of the proposed Volcano Baru National Park, Republic of Panama. IUCN (Int. Union Conserv. Nat. Nat. Resour.) Occas. Pap. 6:48-51.

Rodents collected in the proposed national park were Peromyscus nudipes, Oryzomys alfaroi and Agouti paca.

848. La Bastille, A. 1973b. External measurements of rodents captured on Volcano Baru, Chiriqui, Panama. Appendix C. An ecological survey of the proposed Volcano Baru National Park, Republic of Panama. IUCN (Int. Union Conserv. Nat. Nat. Resour.) Occas. Pap. 6:77.

Measurements are given for one Peromyscus nudipes and two Oryzomys alfaroi caught on Volcano Baru, Chiriqui, Panama.

849. Lacey, L. A. and T. K. George. 1981. Myiasis in an Amazonian porcupine. Entomol. News 92(2):79-80.

An adult female porcupine (Coendou prehensilis prehensilis) caught near Urua, Para, Brazil, was infected with screwworms.

850. Lacher, T. E., Jr. 1979. Rates of growth in Kerodon rupestris and an assessment of its potential as a domesticated food source. Pap. Avulsos Dep. Zool. (Sao Paulo) 33:67-76.

851. Lacher, T. E., Jr. 1980. The comparative social behavior of Kerodon rupestris and Galea spixii in the Xeric Caatinga of northeastern Brazil. Unpublished Ph.D. dissertation, Univ. of Pittsburgh. 289 pp.

852. Lacher, T. E., Jr. 1981. The comparative social behavior of Kerodon rupestris and Galea spixii and the evolution of behavior in the Caviidae. Bull. Carnegie Mus. Nat. Hist. No. 17. 71 pp.

853. Lacher, T. E., Jr. 1982. Behavioral research in South America. Pages 209-230 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Pub. Ser. 6. 539 pp.

The mammalian fauna of South America is poorly known in all respects. Our knowledge of the behavior of Neotropical mammals is especially poor. The wide diversity of habitat types present in South America presents an excellent backdrop for research concerned with the theoretical and empirical interactions between social organization and the environment, an area of intense interest in contemporary behavior.

854. Lackey, J. A. 1976. Reproduction, growth, and development in the Yucatan deer mouse, Peromyscus yucatanicus. J. Mammal. 57:638-655.

The reproductive pattern of Peromyscus yucatanicus differs from that of species of Peromyscus with a generally northern distribution in length of breeding season, which is thought to be year-round in yucatanicus, and in the gestation period of non-lactating females, longest yet reported for a species of Peromyscus. All other aspects of reproduction studied were similar to those of various northern species.

855. Lackey, J. A. 1978. Geographic variation in habitat use by the white-footed mouse, Peromyscus leucopus. Am. Midl. Nat. 100(1):171-178.

Geographic variation in habitat use by the white-footed mouse (Peromyscus leucopus) was explored in populations in Michigan and in the Yucatan Peninsula, Mexico. In northern populations, the white-footed mouse is most abundant in forests and brushy

fields; in Mexico it occupies a habitat (grainfields) that is spatially confined and which undergoes drastic changes on an annual basis when vegetation remaining after harvest is burned.

856. Lainson, R. 1968. Parasitological studies in British Honduras. III. Some coccidial parasites of mammals. Ann. Trop. Med. Parasitol. 62:252-259.

Deals with coccidial parasites of Orthogeomys and Sciurus yucatanicus.

857. Lainson, R. 1982. Leishmanial parasites of mammals in relation to human disease. Symp. Zool. Soc. Lond. 50:137-179.

858. Lainson, R. and J. J. Shaw. 1968a. Leishmaniasis in Brazil. I. Observations on enzootic rodent leishmaniasis-incrimination of Lutzomyia flaviscutellata (Mangabeira) as the vector in the lower Amazonian basin. Trans. R. Soc. Trop. Med. Hyg. 62(3):385.

The authors conclude that L. flaviscutellata is the major vector of the Leishmania species among Oryzomys and Proechimys in this forest area.

859. Lainson, R. and J. J. Shaw. 1968b. Leishmaniasis in Brazil. II. Observations on enzootic rodent leishmaniasis in the lower Amazon region - the feeding habits of the vector, Lutzomyia flaviscutellata in reference to man, rodents and other animals. Trans. R. Soc. Trop. Med. Hyg. 62(3):396.

At Utinga, no sandfly species has been found to feed indiscriminately on man and rodents, and no recent records of human infection have been found. In nearby Paragominas in the same State, Para, and also in parts of Amapa State, human leishmaniasis is common and may be transmitted by a sandfly which bites rodents and man.

860. Lainson, R. and J. J. Shaw. 1970. Leishmaniasis in Brazil: V. Studies on the epidemiology of cutaneous leishmaniasis in Mato Grosso State, and observations on two distinct strains of Leishmania isolated from man and forest animals. Trans. R. Soc. Trop. Med. Hyg. 64(5):654-667.

Over 43% of animals collected showed signs of the disease, including 54% of Oryzomys capito, 25% of O. concolor, 100% of other Oryzomys spp., 17% of Neacomys spinosus, 14% of Nectomys squamipes.

861. Lainson, R. and J. J. Shaw. 1972. Leishmaniasis of the new world: taxonomic problems. Br. Med. Bull. 28:44-48.

Includes discussion of rodent leishmaniasis in Brazil. Hosts are poorly known but individual isolations have been reported

for Oryzomys conedor, Cuniculus paca, Dasyprocta azarae and Kannabateomys amblyonyx, among others.

862. Lainson, R. and J. J. Shaw. 1979. The role of animals in the epidemiology of South American leishmaniasis. Pages 1-116 in W. H. R. Lumsden and D. A. Evans, Eds. Biology of the Kinetoplastida. Vol. 2. London, New York and San Francisco, Academic Press.

863. Lainson, R. and J. Strangways-Dixon. 1963. Leishmania mexicana: the epidemiology of dermal leishmaniasis in British Honduras. I. The human disease. Trans. R. Soc. Trop. Med. Hyg. 57(4):242-265.

A description of the zoonosis, including consideration of the sandfly vectors and reservoirs in the wild rodents such as Ototylomys, Nyctomys and Heteromys spp.

864. Lainson, R. and J. Strangways-Dixon. 1964. The epidemiology of dermal leishmaniasis in British Honduras: II. Reservoir-hosts of Leishmania mexicana among the forest rodents. Trans. R. Soc. Trop. Med. Hyg. 58(2):136-153.

Of several rodents studied, only the cotton rat, Sigmodon hispidus, was readily infected.

865. Lainson, R., J. J. Shaw, R. D. Ward, and H. Fraiha. 1973. Leishmaniasis in Brazil. IX. Considerations on the Leishmania braziliensis complex: - Importance of sandflies of the genus Psychodopygus (Mangabeira) in the transmission of L. braziliensis braziliensis in north Brazil. Trans. R. Soc. Trop. Med. Hyg. 67(2):184-196.

Various species of Leishmania may produce cutaneous leishmaniasis in man in Brazil. Hosts of some forms are Proechimys, Hoplomys, Kannabateomys, Dasyprocta, Cuniculus, Rattus rattus and several other species.

866. Lainson, R., J. J. Shaw, P. D. Ready, M. A. Miles, and M. Povoa. 1981. Leishmaniasis in Brazil. XVI. Isolation and identification of Leishmania species from sandflies, wild mammals and man in north Para State with particular reference to Leishmania braziliensis guyanensis, causative agent of "pian bois." Trans. R. Soc. Trop. Med. Hyg. 75:530-536.

867. Lambrecht, F. L. 1965. Biological variations in trypanosomes and their relation to the epidemiology of Chagas' disease. Rev. Inst. Med. Trop. (Sao Paulo) 7(6):346-352. (In Portuguese)

The concept of strain mixtures and variations is suggested to explain certain aspects of Chagas' disease in the Americas. Strain mixtures and therefore the etiology of Trypanosoma cruzi

infections seem to vary with their environment and their maintaining hosts and vectors. The relatively avirulent character of T. cruzi in the U.S. is probably due to weeding out of the more virulent strains by their passage through rodents, their maintaining hosts in most parts of the country.

868. Lander, A. 1974. Preliminary observations on Agouti paca (Linn. 1766) (Rodentia: Agoutidae) in Venezuela. Unpublished thesis Univ. Central de Venezuela, Maracay. 104 pp. (In Spanish)

869. Langguth, A. 1963. Uruguayan species of the genus Oryzomys (Rodentia: Cricetidae). Commun. Zool. Mus. Hist. Nat. Montev. 7(99):1-19. (In Spanish)

An indepth taxonomic review for the species of Oryzomys found in Uruguay: O. flavescens and O. delticola.

870. Langguth, A. 1965. Contribution and knowledge of the Cricetinae in Uruguay. An. Congr. Lat.-Am. Zool. 2:327-335. (In Spanish)

Rodent remains were collected from owl pellets, Tyto alba, from two localities in Uruguay. The rodents were identified as Reithrodon physodes, Holochilus brasiliensis, Thomasomys oenax, Akodon azarae, Scapteromys tomentosus, Oryzomys flavescens and O. delticola

871. Langguth, A. 1966. Application to place on the appropriate official list the names given by G. Fischer 1814 to the cricetid rodents described by Felix de Azara in the French translation of "Essais sur l'histoire naturelle des quadrupedes du Paraguay" 1801. Z. N. (S) 1774. Bull. Zool. Nomencl. 23(6):285-288.

872. Langguth, A. 1975. The identification of Mus lasiotis Lund and the status of the genus Thalpomys Thomas. Pap. Avulsos Zool. (Sao Paulo) 29(8):45-54. (In Spanish)

The holotype of Mus lasiotis Lund, 1838 belongs to the same species as the holotype of Mus lasiurus Lund, 1838 (= Akodon lasiurus. Akodon lasiurus is the name to be used for this species. Mus dubius J. B. Fischer, 1829, is not a Thalpomys but a member of Calomys, probably a synonym of C. laucha. Since no name is available for the mice currently referred to as "Thalpomys lasiotis," a name is proposed and the species described. O. Thomas misidentified the type-species of his genus Thalpomys. A new type-species is to be designated.

873. Langguth, A. 1976. Mammals. Pages 1-6 in Dept. Zoologia-vertebrados, Mus. Nac. Hist. Nat. Montev. List of vertebrate species found in Uruguay. Publ. extra no. 13. 53 pp. (In Spanish)

874. Langguth, A. and A. Abella. 1970. The Uruguyan species of the genus Ctenomys (Rodentia-Octodontidae). Comun. Zool. Mus. Hist. Nat. Montev. 10(129):1-20. (In Spanish)

875. Langguth, A. and S. Anderson. 1980. A manual for identifying the mammals of Uruguay. Universidad de la Republica, Montevideo. 65 pp. (In Spanish)

876. Langguth, A. and M. P. Silva. 1983. Karyotype for Wiedomys pyrrhorhinus Wied. Cienc. Cult. 35:706. (In Portuguese)

877. Larson, E. A. 1964. The peninsula chipmunk in Baja California. J. Mammal. 45:634.

The peninsula chipmunk, Eutamias merriami meridionalis, was observed from two areas of Baja California, Mexico. At Rancho Las Calabasas in the Sierra de San Francisco, and 8 miles southwest at Rancho Sausalito. At both Ranchos the chipmunks were found living near free water.

878. Lausi, L. 1964. The Argentina panorama of Chagas' disease. Rev. Assoc. Med. Argent. 78:448-452. (In Spanish)

879. LaVal, R. K. 1976. Voice and habitat of Dactylomys dactylinus (Rodentia: Echimyidae) in Ecuador. J. Mammal. 57(2):402-404.

Calls of the spiny rat or coro-coro (Dactylomys dactylinus) are described from Santa Cecilia, Napo, Ecuador. On some nights no coro-coros were heard, but between 1800 and 0100 it was frequently possible to hear at least one coro-coro calling at any given time, and as many as three sometimes called simultaneously.

880. Lawlor, T. E. 1965. The Yucatan deer mouse, Peromyscus yucatanicus. Univ. Kans. Publ. Mus. Nat. Hist. 16(4):421-438.

The objectives of this study were to: (1) ascertain the characteristics of Peromyscus yucatanicus as compared with closely related species; (2) analyze geographic variation within the species and assess its taxonomic significance; (3) summarize available information concerning natural history; and (4) provide evidence relating to origin and evolution of the species.

881. Lawlor, T. E. 1969. A systematic study of the rodent genus Ototylomys. J. Mammal. 50:29-42.

The genus Ototylomys is revised taxonomically. One species and three subspecies are recognized. Size and color of venter seem related to altitude or differential gene flow between populations. Ecologic and zoogeographic factors influencing distribution of Ototylomys are discussed.

882. Lawlor, T. E. 1971a. Evolution of Peromyscus on northern islands in the Gulf of California, Mexico. Trans. San Diego Soc. Nat. Hist. 16(5):91-124.

Mice of the genus Peromyscus on northern islands of the Gulf of California and adjacent mainland areas were examined to trace the divergence of populations there. A total of 27 qualitative characters of the osteology, pelage, phallic morphology, soft anatomy, serology, and karyology was examined in detail. Morphometric characters and dental patterns also were studied, and matings of pertinent forms were attempted with limited success.

883. Lawlor, T. E. 1971b. Distribution and relationships of six species of Peromyscus in Baja California and Sonora, Mexico. Univ. Mich. Mus. Zool. Occas. Pap. 661. 22 pp.

Concerns Peromyscus merriami, P. permbertoni, P. eva, P. eremicus, P. crinitus, and P. maniculatus.

884. Lawlor, T. E. 1982a. Ototylomys phyllotis. Mamm. Species 181:1-3.

885. Lawlor, T. E. 1982b. The evolution of body size in mammals: Evidence from insular populations in Mexico. Am. Nat. 119:54-72.

Body-size trends were examined for populations of mammals occurring on islands bordering Baja California, Mexico. Most rodent species (Peromyscus, Neotoma) display gigantism on the islands, a pattern consistent with observations reported elsewhere. However, species of Perognathus are characteristically dwarfed. It is suggested that metabolic conservatism, expressed through reductions in body size, should be favored in insular rodents (Perognathus) which specialize on particulate resources because their food supply is distributed in a heterogeneous fashion.

886. Lawrence, B. 1964. Evolution of neotropical cricetine rodents (Muridae) with special reference to the phyllotine group. Review of Philip Hershkovitz. Fieldiana Zool. 46, Chicago Natural History Museum, Chicago. Q. Rev. Biol. 39(4):409-411.

887. Le Boulenge, E. and E. R. Fuentes. 1978. Some observations on the population dynamics of Octodon degus (Rodentia: Hystricomorpha) in central Chile. Terre Vie 32(3):325-341. (In French)

Field studies were carried out at two sites at Los Dominicos, 20 km east of Santiago, Chile, using capture-recapture methods. On site A, Octodon degus densities varied from 49 individuals/ha in February to 39 individuals/ha at the end of March and 73 individuals/ha in October-November. At site B densities ranged from 259 individuals/ha in February to 192 individuals/ha in April.

888. Le Boulenge, E. R. and P. L. Meserve. 1983. Population dynamics, habitat utilization, and resource partitioning in a north Chilean small mammal community. Ann. R. Belgium Soc. Zool. 114:109. Abstract only.

889. Lee, M. R. and F. F. B. Elder. 1977. Karyotypes of eight species of Mexican rodents (Muridae). J. Mammal. 58(4):479-487.

Karyotypes of six species of murid rodents from Mexico are reported for the first time, including: Nyctomys sumichrasti, Peromyscus hylocetes, P. perfulvus, P. banderanus, Baiomys musculus, and Neotoma goldmani. Also karyotypes are compared with those of Neotoma alleni and Microtus mexicanus. The chromosomes of some species clearly suggest affinities within the appropriate taxa.

890. Lee, M. R. and D. F. Hoffmeister. 1963. Status of certain fox squirrels in Mexico and Arizona. Proc. Biol. Soc. Wash. 76:181-190.

The Sciurus nayaritensis group of fox squirrels previously was composed of three species: Sciurus chiricahuae, S. apache, S. nayaritensis. These squirrels inhabit the mixed pine-oak forests of the Chiricahua Mountains in Arizona and the Sierra Madre Occidental of Mexico. All three species are phylogenetically closely allied. In view of the great similarity in cranial features between nayaritensis and apache we suggest that the two be regarded as conspecific. The new classifications are: Sciurus nayaritensis nayaritensis, S. n. apache and S. n. chiricahuae.

891. Lee, M. R. and D. J. Schmidly. 1977. A new species of Peromyscus (Rodentia: Muridae) from Coahuila, Mexico. J. Mammal. 58(3):263-268.

A new species, Peromyscus hooperi, occurring in central Coahuila, Mexico, is named and described. Characters of the skull, skin, phallus, and karyotype are discordant regarding its relationship within the genus. Grayish coloration, long tail, large auditory bullae, and small phallus are distinctive.

892. Lee, M. R., D. J. Schmidly, and C. C. Huheey. 1972. Chromosomal variation in certain populations of Peromyscus boylii and its systematic implications. J. Mammal. 53:697-707.

Evidence now available is compelling for regarding Peromyscus attwateri as a species of Peromyscus distinct from the boylii-rowleyi-utahensis complex of boylii. Other evidence also hints that certain currently recognized subspecies of boylii occurring in Mexico are not the same as the assemblage comprised of boylii-rowleyi-utahensis. Subspecies from Mexico are P. b. levipes, P. b. spicilegus, and P. b. subsp. (?).

893. Lehmann, V. E. von and H. E. Schaefer. 1979. Cytogenetic and taxonomic studies of a small mammal collection from Honduras (Sperm morphology and comparative cytochemistry). Z. f. Zool. Syst. Evolutionsforsch. 17(3):226-236. (In German)

894. Lemmon, F. R. and B. J. Weir. 1968. A method for handling agoutis and acouchis. J. Inst. Anim. Tech. (Lond.) 19(2):49-51.

895. Leon, G. A. et al. 1960. Chagas' disease in Honduras. Rev. Med. Hondur. 28:78-83. (In Spanish)

896. Leon, L. A. 1962. Chagas' disease. 3. Aspects of the problem in the Republic of Ecuador. Medicina 42:404-411. (In Spanish)

897. Leon, M. H. 1985. Rodent pest species in rice and sugarcane crops in Venezuela, and applicable control methods. Unpublished thesis, Colorado State University, Fort Collins, Colorado. 49 pp.

898. Lewis, W. H. P. 1972. Genetically determined polymorphism of two peptidases in the tuco-tuco (Ctenomys talarum talarum). J. Zool. (Lond.) 166:357-362.

Six distinct peptidases have been found to occur in the erythrocytes of the Tuco-tuco. The substrate specificities suggest that these enzymes are homologous with the peptidases previously described in man and the mouse. Common polymorphisms of two of this group of enzymes are described.

899. Lichtenberger, E. 1967. Observations on Chagas' disease in Colombia. Verh. Dstch. Ges. Pathol. 57:424-429. (In German)

Among 6,265 autopsies done in the pathological department of the San Juan de Dios Hospital in Bogota, Colombia, 49 cases of chronic Chagas disease were found.

900. Lidicker, W. Z., Jr. 1960a. The baculum of Dipodomys ornatus and its implication for superspecific groupings of kangaroo rats. J. Mammal. 41(4):495-499.

Compares the bacula of the 11 species of Dipodomys.

901. Lidicker, W. Z., Jr. 1960b. A new subspecies of the cliff chipmunk from central Chihuahua. Proc. Biol. Soc. Wash. 73:267-274.

A new subspecies of cliff chipmunk (Eutamias dorsalis nidoensis) is described from the Sierra del Nido Mountains in Chihuahua, Mexico.

902. Lidicker, W. Z., Jr. 1961. Two southern range extensions in Chihuahua. J. Mammal. 42:281.

A young adult, female Perognathus intermedius intermedius was collected 14 miles SW Cuidad Camargo, Chihuahua, Mexico. This extends the known range over 90 miles to the south-southeast of Chihuahua City, the previous southernmost locality.

903. Linardi, P. M. 1977. The rodent-flea relationship observed in the municipalities of Salesopolis and Itapetininga, Sao Paulo. Bol. Mus. Hist. Nat. UFMG (Zool.) 23:1-25. (In Portuguese)

904. Linardi, P. M. 1979. Some species of Rhopalopsyllidae (Siphonaptera), South American members of the "Pradoi complex" (Taxonomy, pest of rodents). Rev. Bras. Entomol. 23:99-106. (In Portuguese)

A population of Polygenis frustratus Johnson, 1957, was captured from wild rodents in the county of Salesopolis, State of Sao Paulo, Brazil.

905. Linardi, P. M., J. R. Botelho, H. C. Cunha, and N. de Souza Moreira. 1984. Ectoparasites of rodents in the Belo Horizonte, MG urban area. I. Interaction between ectoparasites and host. Mem. Inst. Oswaldo Cruz Rio de J. 79(2):239-247. (In Portuguese)

A rodent ectoparasite survey was made in the city of Belo Horizonte, Minas Gerais, Brazil, from June 1980 to September 1982. The species of ectoparasites captured from 950 Rattus norvegicus norvegicus were: Xenopsylla cheopis, Ctenocephalides felis felis, Polyplax spinulosa, Laelaps nuttalli, Echinolaelaps echidninus and Atricholaelaps glasgowi.

906. Linares, O. J. 1969. Notes regarding the capture of Nectomys squamipes in Cueva del Agua (AN-1), Anzoategui, Venezuela. Bol. Soc. Venez. Espeleol. 2(1):31-34. (In Spanish)

907. Lindsay, S. L. 1981. Taxonomic and biogeographic relationships of Baja California chickarees (Tamiasciurus). J. Mammal. 62(4):673-682.

Results of four statistical analyses consistently separated samples of Tamiasciurus from Baja California from samples of T. douglasii and T. hudsonicus. Univariate statistics indicated that 12 of 17 cranial characters were individually sufficient to distinguish one group from another.

908. Lins, Z. C. 1970. Studies on enteric bacterias in the lower Amazon region: 1. Serotypes of Salmonella isolated from wild forest animals in Para State, Brazil. Trans. R. Soc. Trop. Med. Hyg. 64(3):439-443.

Various serotypes were isolated from several mammals, including the rodents Oryzomys capito, Proechimys guyannensis and Dasyprocta agouti.

909. Lizarralde, M. S., N. O. Bianchi, and M. S. Merani. 1982. Cytogenetics of South American Akodont rodents (Cricetidae). VII. Origin of sex chromosome polymorphism in Akodon azarae. Cytologia 47:183-193.

A. azarae has a sex chromosome polymorphism which gives rise to XX females and females with a partial or total deletion of one X chromosome. Two hypotheses have been proposed to explain this phenomenon: it is assumed that XX,Xx and XO females are fertile and able to produce X,x and O ova to give XX,Xx and XO females after fertilization by a X-bearing sperm. The second hypothesis proposed an extreme mechanism of sex dosage compensation ranging from X-chromosome inactivation, to partial or total X chromosome elimination. These hypotheses were tested by analyzing the chromosome complement in the offspring derived from mating pairs of A. azarae of known chromosome constitution. The results obtained do not fit the predictions of the fertilization or the sex dosage compensation hypothesis.

910. Llanos, A. C. 1964. A field study to determine the rodent population in the provinces of Salta and Jujuy. Reuta. Argent. Zoogeogr. 4:51-57. (In Spanish)

911. Lobato, L., G. Cantos, B. Araujo, N. O. Bianchi, and M. S. Merani. 1982. Cytogenetics of the South American akodont rodents (Cricetidae). VIII. Akodon mollis: a species with XY females and B-chromosomes. Genetica 57:199-205.

The morphology, G- and C-banding pattern of the Akodon mollis chromosome complement is analyzed. Of the total of 14 males and 10 females studied, 8 males and 7 females had a modal chromosome number of 22, while 6 males and 3 females showed a modal number of 23 chromosomes. In the animals with 23 chromosomes the odd element was considered a B chromosome. All the specimens were collected in the National Park of Cotopaxi, Ecuador.

912. Lock, M. 1981. A new species of Oecomys from Brasilia, D. F. Brasil (Cricetidae, Rodentia). Bol. Mus. Nac. 300:1-5. (In Portuguese)

913. Londono, J. F. 1977. Vertebrates and their control in rice. Arroz 26(285):4-7. (In Spanish)

The author has observed rat damage in maturing rice near San Alberto, Cesar, Colombia, greater than 50%. The main genera were Holochilus, Orzomys, Sigmodon, Zygodontomys and Sigmomys.

914. Loomis, R. B. 1969. Chiggers (Acarina, Trombiculidae) from vertebrates of the Yucatan Peninsula, Mexico. Univ. Kans. Publ. Mus. Nat. Hist. 50:1-22.

Twenty-six species of chiggers, belonging to 15 genera are reported from the Yucatan Peninsula. Thirteen species of chiggers were found on 11 species of rodents.

915. Loomis, R. B. and R. C. Stephens. 1965. Cliff chipmunks from the vicinity of Guaymas, Sonora. J. Mammal. 46:501.

A male cliff chipmunk, Eutamias dorsalis dorsalis, was collected 10 miles NNW of Guaymas, Sonora, Mexico. This represents the second record from Sonora and extends the range approximately 225 miles southwestward from the previous record.

916. Loomis, R. B. and R. C. Stephens. 1962. Neotoma phenax in Sinaloa, Mexico. J. Mammal. 43:112.

Three Sonoran wood rats, Neotoma phenax, were collected 14 miles west of Guamuchil, Sinaloa, Mexico. This is a range extension of 110 miles SSE of the pevious record.

917. Lopetegui, O. 1980. Observations on the annual activity of Myocastor coypus (Molina) in Malleco Lagoon. Medic Ambiente 4(2):29-34. (In Spanish)

A population of nutria was studied for 1 year at the National Park of Tolhuaca in the Andes in the province of Malleco, Chile. Animals were marked with white reflective paint and with liquid nitrogen. Males and females were marked differently. Diurnal activities were recorded for the marked animals.

918. Lopetegui, O. 1980. The population dynamics and habitat utilization of Akodon olivaceus brachiotis, Oryzomys longicaudatus philippi and Akodon longipilis apta in the Valdiviana rain forest. Unpublished thesis, Univ. Austral de Chile, Valdivia, Chile. (In Spanish)

919. Lopez, J. 1968. Control of rats in rice fields. Arroz 17(182):16-17. (In Spanish)

About 80% of the rice fields especially of small holders are damaged by rats in Colombia. The life cycle of rats is outlined. Methods of control are described including trapping, predators, poisoning, etc.

920. Lopez-Forment, W. 1968. Biological aspects of the gopher Cratogeomys tylorhinus tylorhinus (Rodentia: Geomyidae) in the valley of Mexico. Unpublished thesis Univ. Nac. Auton. Mex. 56 pp. (In Spanish)

921. Lopez-Forment, W. and G. Urbano-V. 1977. The remains of small mammals recovered from owl pellets of Tyto alba in Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 48:231-242. (In Spanish)

The different mammals and other vertebrates found in owl pellets of Tyto alba from the Peninsula of Baja California, the East and West Coast and the Central Highlands of Mexico were studied. Rodents comprised 88.28% of the diet. Rodent remains (in order of more common occurrence) were: Liomys sp., Sigmodon sp., Baiomys sp., Oryzomys sp., Peromyscus sp., Reithrodontomys sp., Neotoma sp., Microtus sp., Perognathus sp., and Dipodomys sp.

922. Lopez-Forment, W., C. Sanchez-Hernandez, and B. Villa-R. 1971. Some mammals from the region of Chamela, Jalisco, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. 2, Ser. Zool. 1:99-106. (In Spanish)

Of the 31 taxons collected prior to May 1970 at the Station for Research, Experimentation and Extension located in the vicinity of Chamela Bay, Jalisco, Mexico, the following species are recorded for the first time from this locality: Nyctomys sumichrasti colimensis, Spilogale pygmaea pygmaea, and Felix yagouaroundi tolteca. They also reported collecting Xenomys nelsoni during daylight hours.

923. Lord, R. D., A. M. Vilches, J. I. Maiztegui, E. C. Hall, and C. A. Soldini. 1971. Frequency of rodents in habitats near Pergamino, Argentina, as related to Junin virus. Am. J. Trop. Med. Hyg. 20(2):338-342.

Rodent density is greatest along railroad rights-of-way, roadsides, and fence rows. Cornfields and pastures are not as important to annual production of rodents as the above areas, but weedy cornfields do help preserve the lives of young rodents as they disperse from the favored linear habitats, and thus probably serve as important links in the infection of man with Junin virus, the cause of Argentinian hemorrhagic fever. Future control measures should be aimed at curtailing rodent reproduction along the linear habitats to prevent their spread into the cornfields.

924. Lord, V. R. and R. Fores C. 1983. Brucella spp. from the capybara (Hydrochaeris hydrochaeris) in Venezuela: Serologic studies and metabolic characterization of isolates. J. Wildl. Dis. 19(4):308-314.

A bacteriological and serological study of 201 wild capybara from the llanos, State of Apure, Venezuela, was made to isolate Brucella from spleen and lymph node tissues and determine the role of this rodent as a reservoir of this bacteria. Twenty-three isolations were made.

925. Lukoschus, F. S. and A. W. A. M. de Cock. 1983. Parasitic mites of Surinam. XXXVIII. Radfordia (Radfordia) holochilus spec. nov. (Acarina: Prostigmata: Myobiidae) from Holochilus brasiliensis (Rodentia: Cricetidae). Zool. Meded. (Leiden) 56(24):309-319.

926. Lukoschus, F. S., F. Dusbabek, and E. M. Jameson. 1973. Parasitic mites of Surinam. VI. Proradfordia guyannensis gen. nov. spec. nov. (Myobiidae: Trombidiformes) ex Proechimys guyannensis (Echimyidae: rodentia). Acarologia 15:310-322.

A new species of mite, Proradfordia guyannensis, was collected from a Proechimys guyannensis in Surinam.

927. Lumer, C. 1980. Rodent pollination of Blakea (Melastomataceae) in a Costa Rican cloud forest. Brittonia 32(4):512-517.

Two species of rodents, Oryzomys devius and Peromyscus mexicanus were observed drinking the nectar from the flowers of Blakea in a Costa Rican cloud forest. This first report of pollination by non-flying mammals in the neotropics suggests that this type of pollination may be important where there is little competition with bats.

928. Lusty, J. A. and B. Seaton. 1978. Estrus and ovulation in the casiragua, Proechimys guariae (Rodentia, Hystricomorpha). J. Zool. (Lond.) 184:255-265.

The casiragua, Proechimys guairae, has a long gestation period (62 days) relative to its size. The reproductive physiology of this species was studied in order to determine the optimum conditions for breeding experimental colonies. It was learned that the casiragua is an induced ovulator (and not strictly a spontaneous ovulator) and shows no regular estrous cycle when not pregnant.

929. Luther, E. 1974. Faunal material. Pages 62-80 in D. M. Pendergast, Ed. Excavations at Actun Polbilche, Belize. Archaeol. Monogr. Royal Ontario Museum 1:1-103.

Paper deals with Ototylomys, Sigmodon, Oryzomys, and Agouti.

930. Lyall-Watson, M. 1964. The ethology of food hoarding in mammals with special reference to the green acouchi, Myoprocta pratti. Unpublished Ph.D. dissertation, Univ. of London.

931. MacDonald, D. W. 1981. Dwindling resources and the social behavior of capybaras, Hydrochoerus hydrochaeris) (Mammalia). J. Zool. (Lond.) 194(3):371-391.

Hydrochoerus hydrochaeris were studied in the Venezuelan llanos during the peak of a dry season. As surface water and associated resources dwindled the rodents' group sizes, activity pattern and social behavior were studied.

932. MacDonald, D. W., K. Krantz, and R. T. Aplin. 1984. Behavioral anatomical and chemical aspects of scent marking amongst capybaras (Hydrochoerus hydrochaeris) (Rodentia: Capiomorpha). J. Zool. (Lond.) 202(3):341-360.

Behaviorally and anatomically the capybara is sexually dimorphic with respect to both the morrillo and the anal pockets, as it is chemically at least for the anal pocket secretions.

933. Mackenzie, R. B. 1972. Public health importance of rodents in South America. Bull. W. H. O. 27:161-169.

Rodent involvement in various disease is discussed, including: plague, sylvatic Venezuelan encephalitis, S. American hemorrhagic fevers, murine typhus, and cutaneous leishmaniasis. Suggested involvement in other disease, such as leptospirosis, American trypanosomiasis, S. American hyatid disease, and vesicular stomatitis is discussed. In certain other infections such as bartonellosis and the South American spotted fevers, a wild rodent reservoir is inferred but not yet identified.

934. Mackenzie, R. B., H. K. Beye, L. Valverde, and H. Garron. 1964. Epidemic hemorrhagic fever in Bolivia. I. A preliminary report of the epidemiologic and clinical findings in a new epidemic area in South America. Am. J. Trop. Med. Hyg. 13(4):620-625.

Since 1959, the tropical prairies of eastern Bolivia have been the site of an epidemic fever. Thirty percent of 470 registered human cases during 4 years have been fatal.

935. Mackenzie, R. B. et al. 1966. An outbreak of leptospirosis among US Army troops in the Canal Zone. 1. Clinical and epidemiological observations. Am. J. Trop. Med. Hyg. 15(1):57-63.

Leptospires were isolated from spiny rats, Proechimys semispinosus, and spiny pocket mice, Liomys adspersus, trapped along the banks of a river.

936. MacNamara, M. C. 1981. Kind of a cottontail but no kind of rabbit. Anim. Kingdom 84(3):22-25.

A popular article on cavy (Dolichotis patagonum) in Argentina.

937. Maia, V. 1984. Karyotypes of three species of caviinae (Rodentia: Caviidae). Experientia 40(6):564.

Chromosomes of Cavia aperea aperea, Galea spixii, and Kerodon rupestris are described with data on banding patterns. Comparisons with karyotypes of other species of Caviinae are taken into consideration.

938. Maia, V. and A. Hulak. 1978a. A chromosomal study of two species of the family Caviidae (Rodentia). Rev. Nordest. Biol. 1:119-124. (In Portuguese)

939. Maia, V. and A. Hulak. 1978b. Robertsonian polymorphism in chromosomes of Oryzomys subflavus (Rodentia: Cricetidae). Cytogenet. Cell Genet. 31:33-39.

Eighty-four specimens of Oryzomys subflavus, collected in the State of Pernambuco, Brazil, were studied. A Robertsonian chromosome polymorphism, characterized by a varying diploid number of 50, 49, 48, and 46, was found.

940. Maia, V. and A. Langguth. 1981. New karyotypes of Brazilian Akodont rodents with notes on taxonomy. Z. Saugetierk. 46:241-249.

941. Maia, V., J. M. Lafayette, and M. W. Pinto. 1983. Chromosomal data (G-bands, C-bands, NOR's) for Oryzomys eliurus (Rodentia: Cricetidae) from Pernambuco. Cienc. Cult. 35:713. (In Portuguese).

942. Maia, V., Y. Yonenaga-Yassuda, T. R. O. Freitas, S. Kasahara, M. Sune-Mattevi, L. F. B. Oliveira, M. A. Galindo, and I. J. Sbalqueiro. 1984. Supernumerary chromosomes, Robertsonian rearrangement and variability of the sex chromosomes in Nectomys squamipes (Cricetidae, Rodentia). Genetica 63:121-128.

Chromosomes were analyzed in 91 specimens of Nectomys squamipes collected in three distinct geographic regions of Brazil. Chromosomal polymorphism due to supernumerary chromosomes, Robertsonian rearrangement and variation of sex chromosomes is reported. The Brazilian populations of N. squamipes are composed of at least two basic entities, one with 2n = 52 and its increasing series up to 2n = 55, the other with 2n = 56, increasing to 2n = 59.

943. Mailloux, M. and B. Kolochine-Erber. 1961. Leptospirosis in the ancient territories of the French Union. Z. Tropenmed. Parasitol. 12(3):307-325. (In French)

A survey of human and animal Leptospira infections with special reference to the epidemiology is given comprising the overseas territories formerly belonging to the French Union: Morocco, Tunisia, French West Africa, French Central Africa, Madagascar, Indochine, French Guiana, etc.

944. Maliniak, E. and J. F. Eisenberg. 1971. Breeding spiny rats, Proechimys semispinosus, in captivity. Int. Zoo Yearb. 11:93-98.

945. Manjon, M. C., L. Camarasa, M. P. Torres, J. J. Polop, and F. O. Kravetz. 1983. Rodent densities and movements in a sunflower field. Pages 156-172 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983. (In Spanish)

The study was conducted in 8 ha of sunflowers near Cordoba, Argentina. Rodents captured were Calomys musculinus, C. laucha, C. venustus, Akodon dolores, and Oxymycterus sp. Movement within the study area is correlated with the time of preparing the soil for planting and plant development.

946. Mann Fischer, G. 1978. The small mammals of Chile (marsupials, bats, edentada, and rodents). Gayana Zool. 40:1-342. (In Spanish)

947. Mares, M. A. 1973a. Climates, mammalian communities and desert rodent adaptation: An investigation into evolutionary convergence. Unpublished Ph.D. dissertation, University of Texas, Austin. 345 pp.

948. Mares, M. A. 1973b. Desert rodent ecology: Review for origin and structure of ecosystems convergent evolution research program. Acta Zool. Lilloana 30:207-225.

Cricetine history in the North and South American continents is reviewed. The species in these two regions are only distantly related. The ecology of rodents inhabiting Argentinian deserts (S. America) Phyllotis darwini, P. griseoflavus, Calomys callosus, Eligmodontia typus, Oryzomys longicaudatus, Akodon varius, Microcavia australis and Ctenomys sp., and that of rodents inhabiting the Sonoran desert (N. America) Dipodomys, Perognathus, Thomomys, Peromyscus, Reithrodontomys, Onychomys, Baiomys, Neotoma and Sigmodon, are discussed. A model illustrating the interrelationships of factors molding small mammal niches in desert regions is included.

949. Mares, M. A. 1975a. Observations of Argentine desert rodent ecology, with emphasis on water relations of Eligmodontia typus. Pages 155-175 in I. Prakash and P. K. Ghosh, Eds. Rodents in Desert Environments. Junk B. V., The Hague, The Netherlands.

Three species of rodents were studied: Akodon varius, Calomys laucha and Eligmodontia typus. The rodents were from the Argentine Monte Desert. Water dependency studies were conducted in the laboratory with E. typus. This species is able to survive for almost 2 months on a dry laboratory diet without access to free water. Such tolerance to dessication almost surely is important in allowing this species to inhabit some of the more arid parts of the Monte.

950. Mares, M. A. 1975b. South American mammal zoogeography: Evidence from convergent evolution in desert rodents. Proc. Nat. Acad. Sci. U.S.A. 72:1702-1706.

Evidence suggests that Monte caviomorphs have been associated with the desert for a longer period than cricetines, and that the latter represent a fairly recent invasion of the Monte Desert.

951. Mares, M. A. 1976. Convergent evolution of desert rodents: Multivariate analysis and zoogeographic implications. Paleobiology 2:39-64.

An ecological comparison of rodent faunas in the Sonoran Desert of southwestern United States and the Monte Desert of northwestern Argentina.

952. Mares, M. A. 1977a. Water economy and salt balance in a South American desert rodent, Eligmodontia typus. Comp. Biochem. Physiol. A. Comp. Physiol. 56(3):325-332.

Water balance and utilization of sodium chloride solutions were examined for Eligmodontia typus of the Monte Desert of northwestern Argentina.

953. Mares, M. A. 1977b. Aspects of the water balance of Oryzomys longicaudatus from northwest Argentina. Comp. Biochem. Physiol. A. Comp. Physiol. 57(2):237-238.

Oryzomys longicaudatus which occurs in the lowland Monte Desert of northwestern Argentina does not possess any abilities to exist without free water while on a seed diet in the laboratory.

954. Mares, M. A. 1977c. Water balance and other ecological observations on three species of Phyllotis in northwestern Argentina. J. Mammal. 58(4):514-520.

Water balance was examined in three species of leaf-eared mice (Phyllotis griseoflavus, P. darwini, and P. osilae) from northwestern Argentina. The degree of specialization for aridity in each species conforms with its general habitat requirements.

955. Mares, M. A. 1977d. Water independence in a South American nondesert rodent. J. Mammal. 58(4):653-656.

Calomys musculinus (a small 16 gram, nocturnal cricetine) was tested for water independence. The animals were collected from the Monte Desert in Argentina. C. musculinus can tolerate long periods with no free water, but unlike heteromyids it does not gain weight under such a regimen.

956. Mares, M. A. 1982. The scope of South American mammalian biology: Perspectives on a decade of research. Pages 1-26 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Pub. Ser. 6. 539 pp.

The history of mammalogical investigations in North and South America is quite distinct. Early systematic and survey research initiated by C. Hart Merriam and his associates formed the

foundation for all later mammal research in North America. South America has never had the benefit of a comprehensive mammal survey. There are few workers studying the mammal fauna of the continent and even fewer resident researchers. It is suggested that only through active cooperation between South American institutions and universities in North America and Europe can a sufficient number of scientists be trained within the short time period that is necessitated by the threat to the habitats and fauna of the continent.

957. Mares, M. A. and A. C. Hulse. 1977. Patterns of some vertebrate communities in creosote brush deserts. Pages 209-226 in T. Mabry, J. Hunziker, and D. R. DiFeo, Eds. Creostoe Bush: Biology and Chemistry of Larrea in New World Deserts. Dowden, Hutchinson and Ross, East Stroudsburg, Pennsylvania.

958. Mares, M. A. and R. A. Ojeda. 1982. Patterns of diversity and adaptations in South American hystricognath rodents. Pages 393-432 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Pub. Ser. 6. 539 pp.

The distributional patterns of the hystricognath rodents of South America are analyzed in detail. Distributional maps are presented for all species and families of hystricognaths. The general adaptations of each group are described and compared to potentially equivalent species from other regions of the world.

959. Mares, M. A. and M. L. Rosenzweig. 1978. Patterns of granivory in North and South American deserts: rodents, birds and ants. Ecology 59:235-241.

Experiments which measure seed removal rates of ants, birds, and mammals were conducted in the Sonoran Desert of North America and the Monte Desert of South America. Rodents were the primary consumers in North America, but ants also took large amounts of seeds there. Ants were the major granivores in the Monte, where mammal seed consumption was insignificant.

960. Mares, M. A., R. A. Ojeda, and M. P. Kosco. 1981. Observations on the distribution and ecology of the mammals of Salta Province, Argentina. Ann. Carnegie Mus. 50:151-206.

Distributional and ecological observations of mammals of Salta Province, Argentina, are summarized in this report. Data are presented which pertain to macro- and microhabitat preferences, molting, reproduction, and natural history. Fifty-eight species belonging to 19 families and 7 orders are considered in this paper.

961. Mares, M. A., K. E. Streilein, and M. P. de la Rosa. 1982. Nonsynchronous molting in three genera of tropical rodents from the Brazilian Caatinga (Thrichomys, Galea, and Kerodon). J. Mammal. 63(3):484-488.

Molting patterns were compared in three common rodents, Kerodon rupestris, Galea spixii and Thrichomys apereoides from the Caatinga region of northeastern Brazil.

962. Mares, M. A., M. R. Willig, K. E. Streilein, and T. E. Lacher, Jr. 1981. The mammals of northeastern Brazil: a preliminary assessment. Ann. Carnegie Mus. 50(4):81-137.

Mammals were collected in northeastern Brazil between 1975 and 1978. Research was concentrated in the State of Pernambuco in the environs of the Municipality of Exu and in the State of Ceara, in the Municipality of Crato. Additionally, a representative sample of mammals collected throughout the Caatingas and housed in the National Museum in Rio de Janeiro and the Museum of Zoology of the University of Sao Paulo was examined.

963. Mares, M. A., W. F. Blair, F. A. Enders, D. Greegor, A. C. Hulse, D. H. Hunt, D. Otto, R. D. Sage, and C. S. Tomoff. 1977. The strategies and community patterns of desert animals. Pages 107-163 in G. H. Orians and O. T. Solbrig, Eds. Convergent Evolution in Warm Deserts. Dowden, Hutchinson and Ross, East Stroudsburg, Pennsylvania. 333 pp.

964. Mariano, J. S. 1983. An analyses of the karyotypes of two genera Hydrochaerus and Cavia (Mammalia: Rodentia). Unpublished thesis, Univ. of Sao Paulo, Ribeirao Preto, Brazil. (In Portuguese).

965. Mariano, J. S., I. Ferrari, and S. A. Santos. 1983. Cytogenetic studies obtained from a culture of lymphocytes from the genera Hydrochaerus and Cavia (Mammalia: Rodentia). Cienc. Cult. 35:656. (In Portuguese)

966. Markham, B. J. 1971. Catalogue for the amphibians, reptiles, birds, and mammals in the Province of Magallanes (Chile). Inst. Patagonia Punta Arenas 1-64. (In Spanish)

967. Martin F., E. and T. Alvarez. 1982. Growth and development of Neotomodon alstoni (Rodentia: Cricetidae) in the laboratory. An. Esc. Nac. Cienc. Biol. Mex. 26:55-84. (In Spanish)

968. Martin, R. E. 1970. Cranial and bacular variation in populations of spiny rats of the Genus Proechimys (Rodentia: Echimyidae) from South America. Smithson. Contrib. Zool. 35:1-18.

Cranial and bacular variation in Proechimys are compared. Species examined were P. guyannensis, P. canicollis, P. quadruplicatus, and P. steerei.

969. Martin, R. E. and J. A. Rodriguez. 1976. Populations of two Caviomorphs, Abrocoma bennetti and Octodon degus in Chile. Proc. 56th Ann. Meeting, Am. Soc. Mammal., Lubbock, Texas.

970. Martinez, E. 1966. Leptospirosis in wild animals of Argentina: serologic study. Gac. Vet. (B. Aires) 28(191):275. (Abstract) (In Spanish)

971. Martinez-Palacios, C., C. B. Chavez-Sanchez, R. Iturate-Soto, and M. A. Marquez. 1978. Warfarin baits bagging to control the population of cotton rats in field crops in Sinaloa, Mexico. Proc. Vertebr. Pest Conf. 8:226-230.

Warfarin baits (0.05%) in paper bags with corn oil as an attractant were placed in 4,000 ha of mixed crops. After baiting the number of rodents on the treated plots was reduced between 63% to 93%. Also discussed are comparative costs between using warfarin and zinc phospide.

972. Martorell, L. F. 1966. Field practices used to control sugarcane pests in Puerto Rico. Sugar (N.Y.) 61(4):28-31.

The total loss in sugarcane to rodents for the 1961 crop in Puerto Rico was 19,285 tons, valued at $2,427,210. Rodents causing the damage are Rattus rattus, R. norvegicus and Mus musculus. Most damage occurs in areas where the rainfall is more than 50 inches a year.

973. Martorell, L. F. 1967. A preliminary report on rat damage in Puerto Rico cane fields. Proc. Int. Soc. Sugar Cane Technol. 12:1435-1443.

974. Martorell, L. F. and S. M. Gaud. 1974. Orchid pests in Puerto Rico. J. Agric. Univ. P. R. 58:105-124.

Thirty-eight species of insects, mites, snails, slugs, and mice are reported as attacking wild and cultivated orchids in Puerto Rico.

975. Martorell, L. F., S. Medina-Gaud, and A. Cruz-Miret. 1965. A preliminary report on rat damage in Puerto Rican canefields. (Paper presented at the 12th Cong. Int. Soc. Sugar Cane Tech., Sec. Ent., San Juan, P.R., April 1965).

976. Mascarello, J. T., J. W. Warner, and R. J. Baker. 1974. A chromosome banding analysis of the mechanisms involved in the karylogical divergence of Neotoma phenax (Merriam) and Neotoma micropus Baird. J. Mammal. 55:831-834.

Chromosome bandings were analyzed from woodrats (Neotoma phenax) collected in southern Texas and Sinaloa, Mexico.

977. Mass, J., R. Patron, A. Suarez, S. Blanco, G. Ceballos, C. Galindo, and A. Pescador. 1981. The ecology of the Zoquiapan Experimental Station (General Description, Vegetation and Fauna). Univ. Aut. Chapingo, Dir. Dif. Cultural, Depto. Bosques, Mexico. Col. Cuadernos Univ. 2:1-114. (In Spanish)

978. Massoia, E. 1961. Notes on some cricetids from the plains bordering Punta Lara (Mammalia, Rodentia). Publ. Mus. Mun. Trad. Mar del Plata 1(4):115-134. (In Spanish)

979. Massoia, E. 1962. Two new species of cricetids for Argentina. Physis 23:27-34. (In Spanish)

980. Massoia, E. 1963. The systematic status and geographic distribution of Akodon nigrita (Rodentia: Cricetidae). Physis, Secc. C 24:73-80. (In Spanish)

A series of 15 specimens of Akodon nigrita from three Argentine localities and three Brazilian localities are compared. Their systematic relationships with other Akodontine Cricetids are commented on.

981. Massoia, E. 1969. A key for the rodents of the Parana Delta (Mammalia). INTA IDIA 253:11-18. (In Spanish)

982. Massoia, E. 1970a. Contributions and knowledge on the mammals of Formosa with notes on those that inhabit the Vinaleras Zone. INTA, IDIA 276:55-63. (In Spanish)

983. Massoia, E. 1970b. Rodent damage to popular trees in Argentina. Com. Nac. Alamo, Acta Reunion XXXI, Bs. As. (In Spanish)

984. Massoia, E. 1971a. Akodon varius toba Thomas in the Argentine Republic (Mammalia: Rodentia: Cricetidae). Rev. Invest. Agropecu. Ser. 4 Patol. Anim. 8(5):123-129. (In Spanish)

Morphological and chromatical characters of Akodon varius toba, a new rodent for Argentina, are described. The specimens were collected in the District of Pilcomayo, Formosa Province. Systematic comparisons with other species and subspecies within the genus were made.

985. Massoia, E. 1971b. Description and biological data of a new subspecies of cricetid: Akodon azarae bibianae (Mammalia: Rodentia). Rev. Invest. Agropecu. Ser. 4 Patol. Anim. 8(5):131-140. (In Spanish)

A new subspecies, Akodon azarae bibianae, is described, based upon 13 specimens collected in Formosa Province, Argentina. This subspecies is compared with other subspecies of A. azarae.

986. Massoia, E. 1971c. The "marsh rats" genus Holochilus described as Mus braziliensis by Waterhouse (Mammalis: Rodentia: Cricetidae). Rev. Invest. Agropecu. Ser. 4 Patol. Anim. 8(5):141-148. (In Spanish)

Skins and ecological characters of 15 specimens of the genus Holochilus obtained from five districts are described. The comparison of their external and ecological characters with the homological characters of 37 specimens of the genus, obtained in the Delta of Buenos Aires, and in localities of the Uruguay Oriental Republic, show constant and very small differences. Consequently the name darwini used by Thomas (1897 and 1910) in the combination Holochilus darwini and by Cabrera (1957-61) as Holochilus brasiliensis darwini is valid as a name of subspecies and it is different from H. b. vulpinus.

987. Massoia, E. 1971d. Bioecological characteristics of Holochilus brasiliensis chacarius (Thomas) in the province of Formosa compared with Holochilus brasiliensis vulpinus (Brants) (Mammalia-Rodentia-Cricetidae). Rev. Invest. Agropecu. INTA 8(1):13-39. (In Spanish)

Specimens of the genus Holochilus marsh rats, captured in Formosa Province, Argentina, were compared with specimens captured in Buenos Aires Province. Morphological and ecological comparisons show the two to be different subspecies.

988. Massoia, E. 1973a. The description of Oryzomys fornesi, a new species and new data on other Argentine species and subspecies of the genus Oryzomys (Oligoryzomys). Rev. Invest. Agropecu. INTA, Ser. 1 Biol. Prod. Anim. 10:21-37. (In Spanish)

989. Massoia, E. 1973b. Zoogeography of the genus Cavia in Argentina with bioecological and systematic comments (Mammalia: Rodentia: Caviidae). Rev. Invest. Agropecu. INTA Ser. 1 Biol. Prod. Anim. 10:1-11. (In Spanish)

Includes a distribution map for the genus Cavia in Argentina. Only two subspecies are recognized in Argentina: C. aperea pamparum and C. tschudii sodalis.

990. Massoia, E. 1974. Holochilus and other rodents attacking sugarcane fields. INTA IDIA 321/24:1-12. (In Spanish)

In many special publications of INTA, Holochilus is identified as a major pest species in sugarcane and other crops. This paper reviews damage to sugarcane in northern Argentina.

991. Massoia, E. 1975. Data on a new cricetid from Argentina: Oryzomys (Oryzomys) capito intermedius and the differences with Oryzomys (Oryzomys) legatus (Mammalia-Rodentia). Rev. Invest. Agropecu. INTA Ser. 5 Patol. Veg. 11:1-7. (In Spanish)

Oryzomys capito intermedius was collected for the first time in Argentina. One female was collected on the National Route No. 14, Dos de Mayo, Cainguas Department, Misiones Province in July 1973. Another female was collected on March 20, 1974, at Arroyo Juan Pedro, San Vicente, Guarani Province, Misiones Province.

992. Massoia, E. 1976. Fresh water fauna in the Republic of Argentina. Mammalia 46:1-128. (In Spanish)

993. Massoia, E. 1976/77. The identity of the holotype of Graomys hypogaeus Cabrera, 1934 (Mammalia, Rodentia, Cricetidae). RIA, INTA, Pat. Veg. ser. 5 13(1):15-20.

The holotype specimen of Graomys hypogaeus was compared with two specimens collected in the Province of Catamarca. Based on these comparisons G. hypogaeus is considered synonymous with Eligmodontia typus marica.

994. Massoia, E. 1977. Mammals of Argentina. II. The mammals of the Province of Formosa. Resumes of the 7th Latin American Zoological Congress, Tucuman. p. 107. (In Spanish)

995. Massoia, E. 1978. Description of a new genus and species: Bibimys torresi (Mammalia: Rodentia: Cricetidae: Sigmodontinae: Scapteromyini). Physis 38:1-7. (In Spanish)

A new genus and species, Bibimys torresi, are described. The description is based on the morphological characters of four adult specimens captured in Canal 6(3), and in Las Piedras Creek (1), an insular zone on the Parana River Delta, Campana, Buenos Aires Province, Argentina.

996. Massoia, E. 1978/79. Melanism in three mammals of the Parana Delta. RIA, INTA, Biol. Prod. Animal, ser. 1 14(1):1-6. (In Spanish)

Melanism was not observed in specimens of Oryzomys flavescens and Scapteromys tumidus collected on the islands in the Parana Delta.

997. Massoia, E. 1980a. The systematic status of four species of South American cricetids with comments on other congeneric species (Mammalia: Rodentia). Ameghiniana 17:280-287. (In Spanish)

The rodents Scapteromys labiousus and Akodon chacoensis are placed in the genus Bibimys as Bibimys torresi and Bibimys chacoensis. Hesperomys simplex is included in the genus Pseudoryzomys as Pseudoryzomys simplex. Hesperomys molitor is placed in the genus Holochilus as Holochilus molitor.

998. Massoia, E. 1980b. New data on Akodon, Deltamys and Cabreramys with a description of a new species and subspecies (Mammalia: Rodentia: Cricetidae). Preliminary note. Hist. Nat. (Mendoza) 1(25):179. (In Spanish)

The author reconfirms there are two subspecies of Akodon azarae: A. a. azarae and A. a. hunteri. He describes a new subspecies Deltamys kempi langguthi from specimens collected in Uruguay. He describes a new species Cabreramys temchucki, the type locality being Arroyo Zaiman, in the Capital Department, Misiones Province, Argentina.

999. Massoia, E. 1980c. Mammals of Argentina. I. The wild mammals of Misiones Province. Iguazu 1(1):15-43. (In Spanish)

1000. Massoia, E. 1981a. Notes on the cricetid rodents of Mendoza, Argentina (Mammalia: Rodentia). Hist. Nat. (Mendoza) 1(29):205-208. (In Spanish)

The family Cricetidae is represented in the Province of Mendoza, by four of the seven tribes known for the Argentine Republic: Phyllotini, Akodontini, Sigmodontini, and Oryzomyini. Thirteen species are listed and some new geographical data are given for five of them. Some taxonomic and nomenclatorial problems are briefly discussed.

1001. Massoia, E. 1981b. Morphological variability in the molars of Scapteromys of the Delta del Parana (Mammalia: Rodentia: Cricetidae: Sigmodontinae). Hist. Nat. (Mendoza) 2(9):57-63. (In Spanish)

Morphological variabilities are compared to determine if they can be used as taxonomic tools.

1002. Massoia, E. 1981c. The systematics and zoogeography of Mus brasiliensis Desmarest and Holochilus sciureus Wagner (Mammalia: Rodentia: Cricetidae). Physis 39(97):31-34. (In Spanish)

Holochilus sciureus is a small rodent with short feet and molars without mesoloph. Mus brasiliensis is a large cricetid rodent with longer feet and molars with well developed mesoloph. Both nutrias are widely distributed in Brazil, but are not sympatric.

1003. Massoia, E. 1982a. A preliminary diagnosis of Cabreramys temchuki n. sp. (Rodentia: Cricetidae). Hist. Nat. (Mendoza) 2(11):91-92. (In Spanish)

A new species of cricetid rodent, Cabreramys temchuki, is described. The type locality was Costa del Arroyo Saiman, Villa Miguel Lanus, the Capital Department, Province of Misiones, Argentina.

1004. Massoia, E. 1982b. Mammal remains collected in Paraje Paso de los Molles, Pilcaniyeu, Rio Negro. RIA, INTA 57(1):39-53. (In Spanish)

The bones of 110 mammals were collected in two caves at Paraje Paso de los Molles, Pilcaniyeu, Rio Negro. Included were Ctenomys, Microcavia, Reithrodon, and Galea.

1005. Massoia, E. and A. Fornes. 1961. A new cricetid for Argentina: Akodon arviculoides montensis Thomas (Rodentia). Physis 23(65):185-194. (In Spanish)

1006. Massoia, E. and A. Fornes. 1964. Notes on the genus Scapteromys (Rodentia: Cricetidae). I. Systematics, geographical distribution and ethoecological characteristics of Scapteromys tumidus (Waterhouse). Physis Secc. C 24:279-297. (In Spanish)

This review of Scapteromys tumidus is the first paper written on the species since 1932.

1007. Massoia, E. and A. Fornes. 1965a. Oryzomys (Oecomys) Thomas, 1906, a new subgenus of Cricetid from the Republic of Argentina (Rodentia). Physis 25(70):319-324. (In Spanish)

1008. Massoia, E. and A. Fornes. 1965b. New data on the morphology, geographic distribution and ethoecology of Calomys callosus callosus (Rengger) (Rodentia-Cricetidae). Physis 25(70):325-331. (In Spanish)

New specimens of Calomys callosus callosus are studied. The subspecies is recorded for the first time in some Argentine and Bolivian localities.

1009. Massoia, E. and A. Fornes. 1965c. Notes on the myomorphic Argentine rodents that carry hemorrhagic fever. Minist. de Asistencia Soc. y Salud. Pub. 1-20. (In Spanish)

1010. Massoia, E. and A. Fornes. 1967a. Rodents collected in the Capital (Buenos Aires). IDIA 240:47-53. (In Spanish)

1011. Massoia, E. and A. Fornes. 1967b. A systematic study, geographic distribution, and ecological data for some neotropical mammals (Marsupialia and Rodentia) with the description of a new genus Cabreramys (Cricetidae). Acta Zool. Lilloana 23:407-430. (In Spanish)

1012. Massoia, E. and A. Fornes. 1967c. Notes on the genus Scapteromys (Rodentia: Cricetidae). V. Curious dental anomalies in Scapteromys tumidus aquaticus Thomas. Neotropica 12(39):91-94. (In Spanish)

Unusual teeth growth is reported for six specimens of Scapteromys tumidus aquaticus collected from several localities in Argentina.

1013. Massoia, E. and A. Fornes. 1969a. A key for the identification of the rodents of Delta del Parana. IDIA, INTA (Buenos Aires) 253:11-18. (In Spanish)

1014. Massoia, E. and A. Fornes. 1969b. Common and distinctive characteristics of Oxymycterus nasutus (Waterhouse) and O. iheringi, Thomas (Rodentia: Cricetidae). Physis 28:315-321. (In Spanish)

The authors reviewed the systematic status of Oxymycterus nasutus and Oxymycterus iheringi. After comparing morphological characters it was concluded the two should remain as separate species.

1015. Massoia, E., A. Fornes, R. L. Wainberg, and T. Gentile de Fronza. 1968. New contribution to the knowledge of Buenos Aires species of the genus Calomys (Rodentia-Cricetidae). Rev. Invest. Agropecu. INTA Ser. 1 Biol. Prod. Anim. 5:63-92. (In Spanish)

Reconfirmed that Calomys laucha laucha and C. musculinus murillus are different subspecies.

1016. Mathieu-B, X., J. C. Duran-R and M. Rivas-R. 1982. Studies of normal bacterial flora of wild Chinchilla lanigera. Rev. Latinoam. Microbiol. 24:77-82.

Fifty-three Chinchilla lanigera were collected at Auco, Illapel, Chile. The bacterial flora of wild chinchillas did not differ significantly from that in other mammals. Listeria grayi was frequently isolated, mainly in the digestive tract, a normal habitat for the microorganism.

1017. Matson, J. O. 1980. The status of banner-tailed kangaroo rats, genus Dipodomys, from central Mexico. J. Mammal. 61(3):563-566.

Two species of banner-tailed kangaroo rats occur in central Mexico. Dipodomys nelsoni is a small species which occurs mostly in Chihuahuan Desert habitats. Dipodomys spectabilis is larger and occurs in grassland and desert-grassland ecotonal habitats.

1018. Matson, J. O. 1982. Numerical analysis of rodent distributional patterns in Zacatecas, Mexico. J. Mammal. 63(1):73-84.

Rodent distributional patterns in the state of Zacatecas, Mexico, were analyzed by cluster and factor techniques. Forty-six species and five environmental variables were recorded from 57 quadrats within the state. Three separate indices of association between quadrats produced four major clusters in common to each that represented major ecogeographic units in the state: Desert, Grassland, Montane, and Tropical.

1019. Matson, J. O. and K. A. Shump, Jr. 1980. Intrapopulation variation in cranial morphology in the agouti, Dasyprocta punctata (Dasyproctidae). Mammalia 44(4):559-570.

Extent and nature of variation of 13 cranial measurements in a single population of Dasyprocta punctata from northwestern Ecuador were assessed using univariate and multivariate techniques.

1020. Matson, J. O., R. H. Baker, and J. K. Greer. 1978. New records of mammals in the state of Zacatecas, Mexico. Southwest. Nat. 23:154-156.

Three new rodents (Liomys pictus hispidus, Sigmodon arizonae, Neotoma palatina) are reported from Zacatecas, Mexico.

1021. Mattevi, M. S., I. J. Sbalqueiro, T. R. O. Freitas, and L. F. B. Oliveira. 1981. Cytotaxonomic studies of rodents from the extreme southern part of Brazil. V Congreso Latino Americano de Genetica, Chile. p. 67. (In Portuguese)

1022. Mauri, R. A. and J. J. Capri. 1970. Ectoparasites of rodents of the genus Akodon in Argentina. Rev. Soc. Entomol. Argent. 32:133-141.

Rodents of the genus Akodon, particularly A. azarae and A. obscurus, occur widely in Argentina. In the province of Buenos Aires, it was found that about 85% of these rodents were parasitized by mites. Junin virus, the causal agent of Argentinian hemorrhagic fever, has been isolated from the rodents and their mites. A list of mites and fleas recovered is included.

1023. May, L. A. 1976. Vertebrate fauna of the Sonoran Desert, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 47(2):143-182. (In Spanish)

Forty-three mammalian species inhabit the Sonoran Desert including the endemic Neotoma albigula sheldoni and Peromyscus crinitus delgadilli.

1024. McCarty, R. 1975. Onychomys torridus. Mamm. Species 59:1-5.

1025. McCarty, R. 1978. Onychomys leucogaster. Mamm. Species 87:1-6.

1026. McEvoy, J. S. 1982. Comparative myology of the pectoral and pelvic appendages of the North American porcupine (Erethizon dorsatum) and the prehensile porcupine (Coendou prehensilis). Bull. Am. Mus. Nat. Hist. 173(4):337-421.

The myology of the pectoral and pelvic appendages of Erethizon dorsatum and Coendou prehensilis were compared by dissection.

The data were used to hypothesize on the evolutionary relationship of these two species, and the arboreal adaptations within their musculature were identified.

1027. McGhee, M. E. and H. H. Genoways. 1978. Liomys pictus. Mamm. Species 83:1-5.

1028. McNab, B. K. 1982. The physiological ecology of South American mammals. Pages 187-208 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Pub. Ser. 6. 539 pp.

Little is known of the physiological ecology of South American mammals. Most studies have examined temperature regulation and energetics, but even here some orders and many families remain unstudied. Even less is known of the water and salt balance of South American mammals or of their reaction to low oxygen pressures in the environment.

1029. McPherson, A. B. 1971. An analysis of factors influencing the distribution of Costa Rican rodents. Unpublished Ph.D. dissertation, Southern Illinois Univ. 292 pp.

1030. Medina, J. G. 1976. The ecology and control of prairie dogs (Cynomys mexicanus) in northern Mexico. Monografia tecnico-cientifica UAAAN 2:365-412. (In Spanish)

1031. Meehan, T. E., P. W. Rundel, R. Ambrose, G. Baker, and A. Rappaport. 1977. The influence of intense selective browsing by pocket mice Perognathus on the spatial distribution of Polygala deserticum in Baja California. Am. Midl. Nat. 97(2):489-495.

Observations in several areas of Baja California Norte, Mexico, indicated a distinct pattern of browsing on Polygala deserticum by rodents. Four species of rodents were captured in the study areas: Perognathus eremicus, P. baileyi, P. fallax, and Dipodomys agilis. Although four species were captured, the Perognathus species appear to be significant grazers. The unusually high nitrogen content of P. deserticum suggest that the availability of nitrogen is an important cause of this intensive herbivory in these generally granivorous rodents.

1032. Mello, D. A. 1968. Susceptibility of Rattus norvegicus and Rattus rattus frugivurus of the city of Recife to Pasteurella pestis. Rev. Soc. Bras. Med. Trop. 2(3):127. (In Portuguese)

Commensal rodents from Brazil showed resistance to strains of P. pestis isolated from wild rodents in Exu, State of Pernambuco, and Venezuela.

1033. Mello, D. A. 1969. Wild rodents from some municipalities in the state of Pernambuco and from natural habitat. Rev. Bras. Pesqui. Med. Biol. 2:360-362. (In Portuguese)

1034. Mello, D. A. 1970a. Pests in the municipalities of Teresopolis and Nova Friburgo, Rio de Janeiro State, Brasil. Rev. Soc. Bras. Med. Trop. 4:97-104. (In Portuguese)

1035. Mello, D. A. 1970b. Studies on the susceptibility of rodents from Teresopolia-Nova Friburgo plague foci, Rio de Janeiro State, Brazil. Rev. Soc. Bras. Med. Trop. 4(3):167-171.

1036. Mello, D. A. 1977. Preliminary observations on the ecology of some species of mountain rodents, Municipal of Formas, Goias, Brazil. Rev. Bras. Pesqui. Med. Biol. 10:39-44. (In Portuguese)

Rodents collected in the northern part of Goias were: Calomys expulsus, Oryzomys eliurus, Zygodontomys lasiurus, Oryzomys subflavus, Nectomys squamipes, Cercomys cunnicularius, and Holochilus brasiliensis.

1037. Mello, D. A. 1978. Biology of Calomys callosus (Rengger, 1830) under laboratory conditions (Rodentia, Cricetidae). Rev. Bras. Biol. 38:807-811.

Some aspects of the life cycle of Calomys callosus were studied under laboratory conditions. The average litter size was 4.5. The average estrus cycle duration was 6.6 days. Puberty was 40.1 days in females and 19.6 days in males. It is believed that C. callosus might become an excellent laboratory animal because they adapt to laboratory conditions, have a high reproductive potential and are easy to handle. The specimens used in this study were collected in Formosa, Goias State, Brazil.

1038. Mello, D. A. 1980. Population studies of some species of rodents (north of Formosa, Goias). Rev. Bras. Biol. 40:843-860. (In Portuguese)

During the period January 1975 to May 1977, 963 rodents belonging to 13 species were captured north of Formosa, Goias, Brazil. Population dynamic studies were made with three species: Calomys callosus, Oryzomys eliurus, and Zygodontomys lasiurus. Results of these studies show regular high and low population peaks for both sexes of C. callosus and O. eliurus. The reproductive period for both species always coincided with the end of the rainy season. Z. lasiurus had a different population pattern with no well defined high or low peaks.

1039. Mello, D. A. 1982. Wild rodents, marsupials and Triatominae captured in the municipality of Mambai-Goias. Natural infection by Trypanosoma cruzi. Rev. Publica, Fac. Saude Publica, Univ. Sao Paulo 16:282-291. (In Portuguese)

One hundred and fifty-one rodents (11 species) and 73 Didelphis albiventris were trapped and checked for T. cruzi.

1040. Mello, D. A. and A. G. M. Coelho. 1968. Trypanosomes found in wild rodents from the Araripe region of Pernambuco. Rev. Soc. Bras. Med. Trop. 2:67-70. (In Portuguese)

1041. Mello, D. A. and L. E. Moojen. 1979. Notes on a collection of rodents and marsupials from some mountainous regions of central Brazil. Rev. Bras. Pesqui. Med. Biol. 12:287-291. (In Portuguese)

1042. Mello, D. A. and M. Teixeira. 1977. Notes on a naturally infected case of Calomys expulsus Lund 1841 (Rodentia: Cricetidae) with Trypanosoma cruzi. Rev. Saude Publica 11:561-564. (In Portuguese)

1043. Mendez, B. 1976. The topography of the visual projection in the neocortex of Octodon degus. Unpublished thesis, University of Chile. 60 pp.

1044. Merani, M. S., E. Capanna, and N. O. Bianchi. 1980. Cytogenetics of South American Akodon rodents. VI - Segregation of the polymorphic chromosomes 1 in the testicular meiosis of Akodon molinae. The Nucleus 23(3):226-233.

The Cricetidae Akodon molinae has a polymorphism of chromosome 1 which gives rise to three karyotypes, 42-, 43-, and 44-chromosomes. M-II cells derived from each of the three varieties of Akodon molinae were analyzed to determine the pattern of segregation of the polymorphic chromosome.

1045. Merani, M. S., M. S. Lizarralde, D. Oliveira, and N. O. Bianchi. 1978. Cytogenetics of the South American Akodont rodents (Cricetidae). IV. Interspecific crosses between Akodon dolores x Akodon molinae. J. Exp. Zool. 206(3):343-346.

Interspecific hybridization of Akodon molinae x Akodon dolores were made under laboratory conditions. The presence of natural hybrids has not been detected; therefore, the appearance of A. molinae x A. dolores hybrids is up to this moment a laboratory phenomenon.

1046. Meritt, D. A., Jr. 1978. The natural history and captive management of the Central American agouti, Dasyprocta punctata Gray, and agouti Dasyprocta agouti Linne. Proc. Am. Assoc. Zool. Parks Aquariums. pp. 177-190.

Discusses the reproduction and rearing of young Dasyprocta punctata and Dasyprocta agouti under laboratory and natural conditions. Also covers how to care for agoutis in captivity including recommendations for diet.

1047. Meritt, D. A., Jr. 1982. A bibliography of the agouti or guatusa Dasyprocta spp. (Rodentia: Dasyproctidae). Brenesia 19/20:595-612.

The first bibliography on the genus Dasyprocta with 300 citations.

1048. Merrit, J. F. 1978. Peromyscus californicus. Mamm. Species 85:1-6.

1049. Meserve, P. L. 1977. Food habits of a White Tailed Kite populatio in Central Chile. Condor 79:263-265.

White-tailed Kite (Elanus leucurus) pellets were collected for 14 months to determine dietary preferences for this bird. The study was conducted at Polpaico, Santiago Province, Chile, between April 1973 and May 1974. The primary prey was Akodon olivaceus and the secondary prey Mus musculus.

1050. Meserve, P. L. 1978. Water dependence in some Chilean arid zone rodents. J. Mammal. 59(1):217-219.

Examined was the possibility of water independence in two Chilean arid zone rodents, Phyllotis darwini, the leaf-eared mouse, and Akodon olivaceus, the field mouse, which is endemic to Chile. The species studied were captured at Parque Nacional Fray Jorge on the southern fringe of the Atacama Desert. Although neither species is independent of free water at Fray Jorge, the results suggest animals caught during the dry summer and autumn months are better able to resist desiccation than those caught in the spring.

1051. Meserve, P. L. 1981a. Trophic relationships among small mammals in a Chilean semiarid thorn scrub community. J. Mammal. 62(2):304-314.

The food habits of seven species of small mammals were analyzed for a 15-month period during a live-trapping and snap-trapping study in a semiarid thorn scrub community in north-central Chile. The species included four cricetids (Akodon olivaceus, A. longipilis, Phyllotis darwini, and Oryzomys longicaudatus), two caviomorphs (Octodon degus and Abrocoma bennetti), and a didelphid (Marmosa elegans).

1052. Meserve, P. L. 1981b. Resource partitioning in a Chilean semi-arid small mammal community. J. Anim. Ecol. 50:745-757.

Patterns of habitat and food utilization among small mammals were studied for 17 months in a Chilean semi-arid thorn scrub community. The major species in the study were Akodon olivaceus, A. longipilis, Phyllotis darwini, and Octodon degus.

1053. Meserve, P. L. and W. E. Glanz. 1978. Geographical ecology of small mammals in the northern Chilean arid zone. J. Biogeogr. 5(2):135-148.

Nine small mammal communities were studied during 1973-74 along a 1,000 km latitudinal transect in northern Chile. Rodents in the study areas were: Akodon olivaceus, A. longipilis, Phyllotis darwini, Oryzomys longicaudatus, Octodon degus, O. lunatus and Abrocoma bennetti.

1054. Meserve, P. L., R. E. Martin, and J. A. Rodriguez. 1983. Feeding ecology of two Chilean caviomorphs in a central Mediterranean savanna. J. Mammal. 64(2):322-325.

Between April 1975 and July 1976, the diets and feeding activities of the Chilean degu, Octodon degus, and the chinchilla-rat, Abrocoma bennetti, were documented in a moderately grazed savanna in La Desha (El Monasterio), Chile.

1055. Meserve, P. L., R. E. Martin, and J. A. Rodriguez. 1984. Comparative ecology of the caviomorph rodent Octodon degus in two Chilean Mediterranean-type communities. Rev. Chil. Hist. Nat. 57(1):79-89.

The degu (Octodon degus) is the most common caviomorph rodent found in Chilean mediterranean-type communities. Between 1973 and 1976, two studies of the degu were conducted, one in a semiarid scrub community in northern Chile (Fray Jorge), and the other in a mediterranean savanna in central Chile (La Dehesa). Although nonconcurrent, the studies used similar methodologies and analyses, thus allowing comparison of results on population trends, reproduction, dietary habits, and habitat association.

1056. Meserve, P. L., R. Murua, O. Lopetegui, and J. R. Rau. 1982. Observations on the small mammal fauna of a primary temperate rain forest in southern Chile. J. Mammal. 63(2):315-317.

A census of small mammals was conducted at La Picada Forest Preserve, 84 km E. Osorno, Osorno Province, Chile, in December 1980 (summer) and May 1981 (winter). Species caught in December were Akodon sanborni, A. longipilis, A. olivaceus, Oryzomys longicaudatus, Notiomys valdivianus, and Rhyncholestes raphanurus. The same species were captured in May with the exception of N. valdivianus.

1057. Metcalfe, J. R. and G. Thomas. 1966. Preliminary experiments in Jamaica with a method for determining loss of sugar resulting from rat damage to sugarcane. Proc. Br. W. Indies Sug. Technol. pp. 276-278.

1058. Milan, M. 1977. Nutritional habits of the capybara. Unpublished thesis, Univ. Nac. de Colombia, Bogota. 76 pp. (In Spanish)

1059. Miles, M. A. 1976. A simple method of tracking mammals and locating triatomine vectors of Trypanosoma cruzi in Amazonian forest. Am. J. Trop. Med. Hyg. 25:671-674.

A simple method of tracking mammals from capture points to their refuges was developed to study T. cruzi reservoir-vector associations in Belem forest. A device containing a spool of fine line was carried by released mammals so that the line unwound under minimum tension as the animal proceeded and could be followed the day after release.

1060. Miller, L. M. and S. Anderson. 1977. Bodily proportions of Uruguayan myomorph rodents. Am. Mus. Novit. 2615:1-10.

Sixteen external and skeletal measurements in 10 species of cricetine rodents from Uruguay were compared.

1061. Miller, S. D. 1980. Human influences on the distribution and abundance of wild Chilean mammals; prehistoric-present. Unpublished Ph.D. dissertation, Univ. of Washington, Seattle. 433 pp.

1062. Miller, S. D. and J. Rottmann. 1976. A guide to the mammals of Chile. Editora Nacional Gabriela Mistral, Santiago. 200 pp. (In Spanish)

1063. Miner, J. N. 1984. Is the Baja California rock squirrel (Spermophilus atricapillus) a good species? Retort (Idaho Acad. Sci.) 22(1):7. Abstract only.

1064. Minoprio, J. L. 1966. Chagas' disease. South American trypanosomiasis. Prensa Med. Argent. 53:1972-1976. (In Spanish)

Comments are made on new criteria for judging heart disease caused by T. cruzi using modern concepts developed at the Ribeirao Preto School (Brazil) in Chagas' disease.

1065. Miralles, E. 1981. Control of rats. Min. Agric. Cria, Caracas. 10 pp. Mimeo.

1066. Mittermeler, R. A. 1972. Jamaica's endangered species. Oryx 11:258-262.

This paper describes the present status of the hutia in Jamaica and all the reptiles currently recognized as endangered, and suggest a few more be added to the endangered list.

1067. Modi, W. S. 1978. Morphological discrimination, habitat preferences, and size relationships of Peromyscus pectoralis and Peromyscus boylii from areas of sympatry in northern Mexico and western Texas. Unpublished thesis, Texas A&M Univ. 44 pp.

1068. Mohlias, C. 1983. Preliminary information on the conservation and management of Chinchilla lanigera in Chile. Bol. Tec. Corp. Nac. For. Chile No. 3. iii + 41 pp. (In Spanish)

1069. Mondolfi, E. and B. S. Boher. 1984. A new subspecies of squirrel of the group Sciurus granatensis (Mammalia, Rodentia) in Venezuela. Acta Cient. Venez. 35:312-314. (In Spanish)

A new subspecies of squirrel Sciurus granatensis llanensis is described. Distribution is in the state of Barinas, Venezuela, north to Apure, Portuguesa, and south to Cojedes.

1070. Mones, A. 1968. Mammalian bones collected from owl pellets from the state of Oaxaca, Mexico. An. Inst. Biol. Univ. Nat. Auton. Mex. 39 Ser. Zool. 1:169-172. (In Spanish)

Owl pellets, Tyto alba, collected at Convento Cave, 6 km NE Tequisistlan, Oaxaca, Mexico, were examined. Rodent remains were found for Liomys pictus, Oryzomys palustris, Peromyscus melanophrys, Sigmodon hispidus, and Neotoma mexicana. Remains of Sigmodon hispidus were the most commonly found for all species (marsupials, bats and rodents) at 58.62% with Liomys pictus second 21.67%.

1071. Mones, A. 1973. A study of the family Hydrochoeridae (Rodentia). I. Introduction and taxonomic history. Rev. Bras. Biol. 33:277-283. (In Spanish)

General information and a distribution map of the living and extinct species of the family Hydrochoeridae are given. This is followed with a taxonomic history of the family and a discussion of the genus Hydrochoerus.

1072. Mones, A. 1974. A study of the family Hydrochoeridae (Rodentia). III. The comparative osteology of the auditory region of Hydrochoerus Brisson with analogous shapes. Ameghiniana 11(1):39-57. (In Spanish)

1073. Mones, A. 1975a. A study of the family Hydrochoeridae (Rodentia). V. A reevaluation of the morphological dental characteristics with some observations on the phylogeny of the group. Actas I Congr. Argent. Paleontol. y Bioestrat. 2:463-473. (In Spanish)

1074. Mones, A. 1975b. The capybara. Bol. Mus. Nac. Hist. Nat. Montev. 10:1-4. (In Spanish)

A popular article on Hydrochoerus hydrochaeris.

1075. Mones, A. 1975c. Studies of the family Hydrochoeridae (Rodentia). VI. Annotated catalogue of the type-specimens. Comun. Paleontol. Mus. Hist. Nat. Montev. 1(5):99-133. (In Spanish)

This paper gives all available information about the 60 known species or subspecies belonging to the family Hydrochoeridae. The validity of some of them is questioned. The species Xenocardia diversidens is transferred to the family Caviidae, subfamily Cardiomyinae.

1076. Mones, A. 1980a. A study of the family Hydrochoeridae (Rodentia), VIII. Syposium on the population situation of the capybara, Hydrochoerus hydrochaeris (L.) in Uruguay. Rev. Fac. Humanid. Cienc. Biol. 1(9):101-104. (In Spanish)

1077. Mones, A. 1980b. Biogeographic and systematic notes on the Dinomyidae (Rodentia). Resumenes I Jorn. Cienc. Nat. :13-14. Abstract only. (In Spanish)

1078. Mones, A. 1981a. A study of the family hydrochoeridae (Rodentia). XI. Pathogens and parasites of Hydrochoerus Brisson, 1762. Preliminary list. Res. Com. Jorn. Cienc. Nat. 2:16. (In Spanish)

Lists 81 parasites isolated from Hydrochoerus hydrochaeris and H. isthmius.

1079. Mones, A. 1981b. A preliminary systematic arrangement of the family Dinomyidae (Mammalia: Rodentia, Caviomorpha). An. 2º Congr. Latinoamer. Paleontol. 2:605-619.

A new systematic arrangement of the Dinomyidae is given, recognizing four subfamilies: Potamarchinae, Gyriabrinae, Phoberomyinae, and Dinomyinae, the latter composed by two tribes: Dinomyini nov. and Eumegamyini nov.

1080. Mones, A. 1984. A study of the family Hydrochoeridae. XIV. A revision of the systematics (Mammalia: Rodentia). Senckenb. Biol. 65(1-2):1-17. (In Spanish)

1081. Mones, A. and S. Martinez. 1982. A study of the family Hydrochoeridae (Rodentia), XIII. Pathogens and parasites of Hydrochoerus Brisson, 1762. Rev. Fac. Human. Cienc. Biol. 1(20):297-329. (In Spanish)

1082. Mones, A. and U. Kuhl de Mones. 1980. Studies on the family Hydrochoeridae (Rodentia). X. Vernacular names of the genus Hydrochoerus Brisson, 1762. Rev. Fac. Hum. y Cienc. (Cienc. Biol.) 1(15):225-257. (In Spanish)

This paper gives the vernacular names for the two species of Hydrochoerus: H. hydrochaeris and H. isthuius. More than 190 names have been found in the literature for these species and the authors tried to classify them according to linguistic and geographic locations.

1083. Mones, A., A. Ximenez, and J. Cuello. 1973. The contents of owl pellets of Tyto alba tuidara (J. E. Gray) with the discovery of a new mammal for Uruguay. Trab. V Congr. Latinoam. Zool. 1:166-167. (In Spanish)

Owl pellets were collected at Bopicue, Department of Rio Negro, Uruguay. Rodent remains identified in the pellets were Cavia pamparum, Akodon sp., Holochilus sp., Oryzomys sp., Reithrodon typicus and Scapteromys tumidus.

1084. Montenegro, A. 1962. How to prevent rodent damage in a coconut plantation. Coffee and Cacao M. pp. 5, 9, 192-197.

1085. Montgomery, G. G. and Y. D. Lubin. 1978. Movements of Coendou prehensilis in the Venezuelan Llanos. J. Mammal. 59(4):887-888.

Reports data on movements and home range spaces of three radio-marked adult Coendou prehensilis in the Llanos of Central Venezuela. The animals were studied at Hato Masaguaral, a privately owned cattle ranch near Corozo Pando, Guarico State.

1086. Montoya, R. and W. Venegas. 1977. Chromosome banding: Bands G., in Akodon longipilis hirtus Thomas (Rodentia, Cricetidae). Bol. Soc. Biol. Concepcion 51 (Fasciculo 1):159-165. (In Spanish)

Chromosomic banding of Akodon longipilis hirtus captured at Chillan (Cordillera de Chillan), Chile, is presented. The diploid number found was 2n = 52.

1087. Moojen de Oliveira, J. 1965. A new genus of Cricetidae from central Brazil. Rev. Bras. Biol. 25:282-286. (In Portuguese)

A new genus of rodent is described from Brazil (Juscelinomys candango). All specimens examined were collected at the Zoobotanical Foundation of Brazil in the Federal District.

1088. Moojen de Oliveira, J. 1966. Ecological notes on the Brazilian rodents involved in rural plague. W. H. O. Vector Biol. Contrib. WHO/VC 66.217:51.

1089. Moore, J. C. 1961. The spread of existing diurnal squirrels across the Bering and Panamanian land bridges. Am. Mus. Novit. 2044:1-26.

Central America, or parts of it, as an island or archipelago must have served as a staging area for the adaptation of squirrel species of Nearctic origin to tropical conditions over perhaps a substantial portion of the Pliocene before the emergence of a Panamanian land bridge gave them access to South America at the end of the Pliocene.

1090. Morales, B. and V. Leyton. 1977. The pre- and postnatal development of the testes in Octodon degus (Molina). Medio Ambiente (Valdivia, Chile) 3(1):91-99. (In Spanish)

Octodon degus are described as having three compartments in the testis: tubular, peritubular, and interstitial. This paper deals with the pre- and post-natal development of these compartments. In the tubular compartment formation of spermatocytes begins 18 days after birth. Spermiogenesis starts at 40 to 55 days and is completed by day 65. The peritubular compartment shows differentiation of the myoid cells in the prepuberal stage (11 days after birth). The interstitial compartment in the adult testis exhibits a pattern of organization similar to that described for the guinea pig and the chinchilla.

1091. Morales, G. A., V. H. Guzman, and D. Angel. 1978. Vascular damage caused by Cruorifilaria tuberocauda in the capybara Hydrochoerus hydrochaeris. J. Wildl. Dis. 14(1):15-21.

Infection with Cruorifilaria tuberocauda caused vascular damage in the kidneys, lungs and heart of the capybara (Hydrochoerus hydrochaeris).

1092. Morales, G. A., E. A. Wells, and D. Angel. 1976. The capybara Hydrochoerus hydrochaeris as a reservoir host for Trypanosoma evansi. J. Wildl. Dis. 12(4):572-574.

Discovery of two ill horses and three dogs naturally infected with Trypanosoma evansi near an experimental station in the Eastern Plains of Colombia led to a search for reservoir hosts of the parasite. Infection was detected in 8/33 healthy capybaras (Hydrochoerus hydrochaeris).

1093. Morales, G. A., V. H. Guzman, E. A. Wells, and D. Angel. 1979. Polycystic echinococcosis in Colombia: the larval cestodes in infected rodents. J. Wildl. Dis. 15(3):421-428.

Described are the characteristics of the polycystic larval cestodes found in an endemic area of echinococcosis in the Eastern Plains of Colombia and the tissue reaction evoked in infected rodents. Of 848 free-ranging animals examined, polycystic hydatids were found in 44/93 Cuniculus paca and 1/369 Proechimys sp.

1094. Moretti, E., B. Basso, I. Albesa, A. Eraso, and F. O. Kravetz. 1980. A natural infection of Calomys laucha with Trypanosoma cruzi. Medicina Bs. As. 40 (Supl. 1):181-186. (In Spanish)

Trypanosoma cruzi was isolated from a specimen of Calomys laucha trapped at Alejandro, Cordoba, Argentina.

1095. Morris, D. 1962. The behavior of the green acouchi (Myoprocta pratti) with special reference to scatter hoarding. Proc. Zool. Soc. Lond. 139(4):701-732.

Five acouchi were studied in the laboratory for 1 year and preliminary ethograms were compiled. Food with an outer covering of peel is skinned elaborately by acouchis before eating and certain food objects are buried. Food burying comprises a fixed sequence of five distinct motor-patterns and some of these occur as vacuum activities if the animals have no suitable substratum. It was found that acouchis tend to bury objects where they have not buried previously. The result is "scatter-hoarding" as distinct from the more familiar "larder-hoarding."

1096. Morrison, P. R. 1964. Wild animals at high altitudes. Symp. Zool. Soc. Lond. 13:49-57.

Many of the differences observed in resident wild mice at high altitude are contrary to the changes produced by experimental or short-term hypoxia. This may be accounted for in terms of two distinct processes, acclimatization and adaptation. South American species used in the study were Octodon degus, Phyllotis darwini, Akodon sp., and Oryzomys longicaudatus.

1097. Morrison, P. R. and R. Elsner. 1962. Influence of altitude on heart and breathing rates in some Peruvian rodents. J. Appl. Physiol. 17:467-470.

Heart and breathing rates were measured at 0.1 and 4.5 km before, during and after Nembutal anesthesia in Phyllotis darwini chilensis, P. d. rupestris, P. osilae, P. pictus, Akodon amoenus, A. berlepschii, A. jelskii, and A. boliviensis. None of the high-altitude mice and only the native Phyllotis of the low-altitude mice showed a circulatory response to altitude. All the low-altitude mice, but only Akodon of the high-altitude mice showed a respiratory response to altitude.

1098. Morrison, P. R., K. Kerst, and M. Rosenmann. 1963. Hematocrit and hemoglobin levels in some Chilean rodents from high and low altitude. Int. J. Biometeorol. 7:45-50.

Hematocrit levels were measured on five species of rodents from high altitude and eight species from near sea level. Translocation of three highland species (Phyllotis darwini, Akodon andinus, and Lagidium viscacia) to sea level for 2 months did not reduce their hematocrits. The offspring of two highland species (Phyllotis darwini and Akodon andinus) showed no reduction in hematocrit after birth and rearing in the laboratory at sea level.

1099. Mougeot, G., Y. J. Golvan, and P. Delattre. 1978. The detection of a rat schistosome with microblood sampling and immunofluorescence. C. R. Acad. Sci. Ser. D 286:141-143. (In French)

A technique of microblood sampling followed by an immunofluorescence test was used to study rat parasitism with Schistosoma mansoni in Guadeloupe. This method makes it possible to take the blood sample and then release the rat.

1100. Mueller, P. and I. Vermanis. 1971. A new subspecies of Sciurus ingrami (Rodentia: Sciuridae) from the island of Sao Sebastiao (Sao Paulo, Brazil). Senckenb. Biol. 52(6):377-380. (In German)

A new subspecies Sciurus ingrami sebastiani is described from the island of Sao Sebastiao, Brazil.

1101. Muller, J. A. and J. H. P. Macedo. 1980. Preliminary notes on damage caused by wild animals to pine trees. Rev. Floresta 11:35-41. (In Portuguese)

This article measures damage caused by wild animals to seeds of Araucaria angustifolia (Bert) O. Ktze. Genera of rodents causing damage are Agouti, Sciurus, Cyanocorax and Rattus.

1102. Munoz, L. A. 1962. Notes on the damage caused by rodents in the pasture lands of Chihuahua. Unpublished thesis, Univ. of Chihuahua. (In Spanish)

1103. Murie, J. O. 1977. Cues used for cache-finding by agoutis, Dasyprocta punctata. J. Mammal. 58(1):95-96.

The study was conducted at the Smithsonian Tropical Research Institute field station on Barro Colorado Island in the Panama Canal Zone. Described is how agoutis use visual and olfactory cues in finding experimental caches of food in their natural habitat.

1104. Murphey, R. J., J. S. Mariano, and F. A. Moura Duarte. 1985. Behavioral observations in a capybara colony (Hydrochoerus hydrochaeris). Appl. Anim. Behav. Sci. 14(1):89-98.

An unmanaged capybara colony was studied in a setting adjacent to agricultural activities in Brazil. Preliminary notes were made on alarm responses to intruders, various aspects of flight behavior, and investigatory activity.

1105. Murua, R. 1981. The demographic changes in a springtime decline in a population of Akodon olivaceus brachiotis. Arch. Biol. Med. Exp. 14:281. (In Spanish)

1106. Murua, R. 1982. Characteristics of the tracks of cricetid rodents from the Valdiviano Forest. Bol. Soc. Biol. Concepcion Chile 53:78-86. (In Spanish)

Tracks and trails were studied for five species of rodents: Akodon longipilis, A. sanborni, A. olivaceus, Phyllotis micropus and Oryzomys longicaudatus.

1107. Murua, R. 1983. Population dynamics for Akodon olivaceus brachiotis (Rodentia: Cricetidae). Medio Ambiente 6(2):12-18. (In Spanish.

Populations of Akodon olivaceus brachiotis were studied at the San Martin Experimental Forest near Valdivia, Chile, from 1979-1983. Each year the population would peak in late fall or early winter (April-June).

1108. Murua, R. and M. F. Christen. 1980. Determination of the energy requirements of Myocaster coypus (Molina, 1782) based on four monospecific diets. Medio Ambiente 4(2):23-28. (In Spanish)

Energy utilization by nutria are compared with four different diets. Plants used in the tests were: Taraxacum officinale, Hypochoeris radicata, Scirpus californicus and Limnobium stoloniferum.

1109. Murua, R. and L. A. Gonzalez. 1979. The distribution of wild rodents in relation to habitat. An. Mus. Hist. Nat. Valparaiso 12:69-75. (In Spanish)

Several vegetational parameters are analyzed in order to determine their influences on wild rodent distribution (Akodon olivaceus, Akodon longipilis, and Oryzomys longicaudatus) in Chile. There is a close relationship between rodent distribution and the shrub configuration in forests and open fields.

1110. Murua, R. and L. A. Gonzalez. 1981. A study of the dietary preferences of two species of cricetid rodents. Medio Ambiente 5:115-124. (In Spanish)

A study was conducted to determine food preference and food habits for two rodent species Akodon olivaceus and Oryzomys longicaudatus in Chile. The food preference test was conducted under laboratory conditions and both species had similar preferences. Food habits were determined by looking at stomach contents of wild animals. Oryzomys longicaudatus had a much larger grain content in their diet.

1111. Murua, R. and L. A. Gonzalez. 1982. Microhabitat selection in two Chilean cricetid rodents. Oecologia (Berl.) 52(1):12-15.

A discriminant analysis on vegetational variables was performed in order to determine differences in habitat utilization by two sympatric Chilean rodents: Akodon olivaceus brachiotis and Oryzomys longicaudatus philippii.

1112. Murua, R. and L. A. Gonzalez. 1985. A cycling population of Akodon olivaceus (Cricetidae) in a temperate rain forest in Chile. Acta Zool. Fenn. 173:77-79.

A long-term study was carried out in order to establish cycling in Akodon olivaceus brachiotis, a cricetid species of southern Chile. The species showed a multiyear cycle according to spring population densities and changes in individual body weight.

1113. Murua, R. and J. A. Rodriguez. 1985. Characteristics of rodent damage in pine plantations (Pinus radiata D. Don). In the Congress on Pinus radiata investigations in Chile. U. Austral de Chile. Vol. I. 339 pp. (In Spanish)

1114. Murua, R., L. A. Gonzalez, and C. Jofre. 1977. Food preference of Oryzomys longicaudatus philippi (Landbeck). XX Reun. Anual Soc. Biol. Chile. Resume. (In Spanish)

1115. Murua, R., L. A. Gonzalez, and C. Jofre. 1978. Determining the activity patterns of five species of wild rodents in the laboratory. Arch. Biol. Med. Exp. 11:199. (In Spanish)

1116. Murua, R., L. A. Gonzalez, and C. Jofre. 1980a. Experimental food preferences of two southern Chilean rodents. J. Mammal. 61(1):138-140.

Compares food preferences for Oryzomys longicaudatus and Akodon olivaceus. Twenty-four different types of seeds were used in the tests.

1117. Murua, R., L. A. Gonzalez, and C. Jofre. 1980b. Microhabitat selection for two sympatric rodents in forests. Arch. Biol. Med. Exp. 13:91. (In Spanish)

1118. Murua, R., L. A. Gonzalez, and C. Jofre. 1982. Ecological studies of wild rodents of the temperate rain forests of Chile. Publ. Ocas. Mus. Nac. Hist. Nat. Santiago 38:105-116. (In Spanish)

1119. Murua, R., O. Neumann, and I. Dropelmann. 1981. Food habits of Myocastor coypus in Chile. Pages 544-558 in The Worldwide Furbearer Conference, August 3-11, 1980, Frostburg, Maryland.

Food habits of nutria, Myocastor coypus, were determined by studying scats from two contrasting habitats near Valdivia, Chile. It was shown nutria eat what is available and abundant in their habitat following the plant's life cycle. However, there is a strong preference to eat roots and rhizomes in winter.

1120. Musser, G. G. 1966. Notes on geographical distribution, habitat, and taxonomy of some Mexican mammals. Occas. Pap. Mus. Zool. Univ. Mich. 636:1-22.

Twelve species of rodents were included in a group of mammals collected in eight southern Mexican states. A new subspecies, Peromyscus thomasi cryophilus, is described from an adult male collected at Sierra de Juarez, Ixtlan District, Oaxaca.

1121. Musser, G. G. 1968. A systematic study of the Mexican and Guatemalan grey squirrel, Sciurus aureogaster F. Cuvier (Rodentia: Sciuridae). Mus. Zool. Univ. Mich. (Ann Arbor) Misc. Publ. 137:1-112.

By studying the ecologic and geographic distribution of size, color, and pattern of pelage, it has been possible to define morphological limits of Sciurus aureogaster. Those limits embrace two major segments within the species, the Aureogaster Group of eastern Mexico and the Socialis Group of western Mexico and Guatemala.

1122. Musser, G. G. 1969. Notes on Peromyscus (Muridae) of Mexico and Central America. Am. Mus. Novit. 2357:1-23.

Based on data from skins, skulls, and genitalia, samples of Peromyscus from southern Oaxaca regarded as a subspecies of P. banderanus, are placed in P. mexicanus rather than in banderanus. Series of Peromyscus from Guatemala and Honduras originally recorded in the literature as P. mexicanus saxatilis, P. guatemalensis tropicalis, and P. hondurensis are reallocated either to P. m. saxatilis or to P. oaxacensis. Peromyscus hondurensis is a synonym of oaxacensis.

1123. Musser, G. G. 1970. Identity of the type-specimens of Sciurus aureogaster F. Cuvier and Sciurus nigrescens Bennett (Mammalia, Sciuridae). Am. Mus. Novit. 2438:1-19.

The author describes the holotype for Sciurus nigrescens and the lectotype and paralectotype of Sciurus aureogaster. The S. nigrescens specimen is in the mammal collection at the British Museum of Natural History in London. The S. aureogaster are in the collection at the National Museum of Natural History in Paris. All three specimens were collected in Mexico.

1124. Musser, G. G. 1971. Peromyscus allophylus Osgood: a synonym of Peromyscus gymnotis Thomas (Rodentia: Muridae) Am. Mus. Novit. 2453:1-10.

The author believes that until the mexicanus group is taxonomically revised, Peromyscus gymnotis should be considered a species rather than a subspecies of P. mexicanus, a taxonomic arrangement that presently best reflects known facts. Peromyscus allophylus is considered to be synonymous with P. gymnotis.

1125. Musser, G. G. and A. L. Gardner. 1974. A new species of the ichthyomyine Daptomys from Peru. Am. Mus. Novit. 2537:1-23.

A new species Daptomys peruviensis is described. The type locality is Balta where the streams Inuya and Xumuya enter the Curanja River, Department of Uczyali, Peru.

1126. Musser, G. G. and V. H. Shoemaker. 1965. Oxygen consumption and body temperature in relation to ambient temperature in Mexican deer mice, Peromyscus thomasi and P. megalops. Occas. Pap. Mus. Zool. Univ. Michigan 643:1-16.

Measurements of oxygen consumption were made of two species of deer mice, Peromyscus thomasi and P. megalops, at various ambient temperatures. Both P. thomasi and P. megalops maintained core body temperatures at about 38° C at the lowest temperatures investigated. Metabolic responses to low ambient temperatures indicate that insulation continues to increase with decreasing temperature below the lower critical temperature. The rodents were trapped in June 1964, near Puerto Chico in the mountains west of Chilpancingo, Guerrero, Mexico.

1127. Musser, G. G. and M. M. Williams. 1985. Systematic studies of oryzomyine rodents (Muridae): definitions of Oryzomys villosus and Oryzomys talamancae. Am. Mus. Novit. 2810:1-22.

The holotype of the Colombian Oryzomys villosus is shown to be a composite: the skull is an example of Oryzomys albigularis, the skin from an Oryzomys talamancae. The latter, usually included within the species definition of O. capito, appears to be a distinct biological species.

1128. Myers, P. 1977. A new phyllotine rodent (Genus Graomys) from Paraguay. Occas. Pap. Mus. Zool. Univ. Mich. 676:1-7.

A new species Graomys pearsoni is described. The type specimen was collected 410 km NW Villa Hayes by road, Department of Boqueron, Paraguay.

1129. Myers, P. 1982. Origins and affinities of the mammal fauna of Paraguay. Pages 85-94 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

An unusually sharp zoogeographic boundary coincides with the Rio Paraguay as it traverses Paraguay. Geologic factors appear to be primarily responsible for the distinctiveness of the regions. The pattern appears to better fit a dispersal, rather than vicariance model of zoogeographic origin.

1130. Myers, P. and M. D. Carleton. 1981. The species of Oryzomys (Oligoryzomys) in Paraguay and the identity of Azara's "Rat sixieme ou Rat a Tarse Noir." Misc. Publ. Mus. Zool. Univ. Mich. 161:1-41.

A detailed review of Oryzomys nigripes, O. chacoenis, and O. fornesi in Paraguay.

1131. Myers, P. and R. M. Wetzel. 1979. New records of mammals from Paraguay. J. Mammal. 60(3):638-641.

New records of rodents from Paraguay: Oryzomys (Oecomys) concolor roberti, Scapteromys tumidus and Akodon azarae bibianae Also captured were several Akodon nigrita.

1132. Nadler, C. F. and R. S. Hoffman. 1970. Chromosomes of some Asia and South American squirrels (Rodentia: Sciuridae). Experientia (Basel) 26(12):1383-1386.

Chromosomes are described for Sciurus granatensis from Venezuela

1133. Nash, D. J. and R. N. Seaman. 1977. Sciurus aberti. Mamm. Species 80:1-5.

1134. Nassi, H., F. Lancastre, and J. Poirot. 1975. Rats and schistosomiasis in Guadeloupe. Nourvelles donnees. Ann. Parasitol. 50:731-733. (In French)

Examination of rats (Rattus norvegicus) in Guadeloupe (French West Indies) shows that their infection by Schistosoma mansoni is not restricted to any particular habitat.

1135. Nelson, G. S. 1968. The transmission of Trichinella spiralis from wild animals to man and domestic animals. Page 77 in O. Graham-Jones, Ed. Some Diseases of Animals Communicable to Man in Britain. Proc. Symp. Br. Vet. Assoc. Br. Small Anim. Vet. Assoc. (London, 1966). Pergamon Press, London.

Rats appear to participate in the disease epidemiology only in certain areas, as in central and southern America. Notes that rodent involvement is not well understood and should be investigated.

1136. Nelson, T. W. and K. A. Shump, Jr. 1978. Cranial variation and size allometry in Agouti paca from Ecuador. J. Mammal. 59(2):387-394.

Nineteen measurements were taken on a series of 212 unknown-age skulls of Agouti paca from Pacific coastal Ecuador. Sex, age, individual variations and size allometry of skull structures were analyzed. Eruption and wear patterns of the upper molars were used to establish age classes. Seventeen measurements were

found to vary significantly with age, while none varied significantly with sex.

1137. Nery-Guimaraes, F., M. Azevedo, and R. Damasceno. 1966. Cutaneous leishmaniasis - zoonosis of wild rodents (Oryzomys goeldii) in the Amazon. Hospital (Rio de J.) 70(2):155-163. (In Spanish)

Relates the decline in infection rate 1964-1966 to changes in rodent populations.

1138. Neumann, O. 1978. Food habits of Myocastor coypus (Molina) in fall and winter in the Province of Valdivia. Unpublished thesis, Univ. Austral de Chile, Valdivia, Chile. (In Spanish)

1139. Newson, R. M. 1966. Reproduction in the feral coypu (Myocastor coypus). Symp. Zool. Soc. Lond. 15:323-334.

1140. Niethammer, J. 1964. Contribution to the knowledge of terrestrial mammals of Santa Cruz (Isle Indefatigable) of the Galapagos Islands. Results of the 1962/1963 German expedition. Mammalia 28:593-606. (In French)

Among rodents collected were Rattus rattus and Mus musculus, along with others not common in this region.

1141. Nogueira Neto, P. 1973. A key to the indigenous vertebrates (fishes, amphibians, reptiles, birds, mammals). Tecmapis, Sao Paulo. 327 pp. (In Portuguese)

1142. Nunez, H. and J. L. Yanez. 1981. The diet of Milvago chimango chimango (Vieillot) (Aves: Falconiformes). Not. Mens. Mus. Nac. Hist. Nat. (Santiago) 25(295):5-9. (In Spanish)

Stomach contents were examined from 36 samples of Milvago chimango chimango collected at Pudahuel, 15 km west of Santiago, Chile. Skeletal remains of Oryzomys longicaudatus were found in one stomach.

1143. Nunez, A. G., C. B. Chavez-Sanchez, and C. Sanchez-H. 1981. Wild mammals from the region of Tuito, Jalisco, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 51:647-668. (In Spanish)

This paper is based on the analyses of 332 mammalian specimens collected at El Tuito, Jalisco, Mexico. The group includes 1 marsupial, 24 bats, 1 edentate, 1 lagomorph, 13 rodents, 7 carnivores, and 1 artiodactyl. The area collected and the reproductive conditions are given for each species.

1144. O'Connell, M. A. 1982a. Population ecology of small mammals from northern Venezuela. Diss. Abstr. Int. B Sci. Eng. 42(10):3980.

1145. O'Connell, M. A. 1982b. Population biology of North and South American grassland rodents: A comparative review. Pages 167-186 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

Grasslands have a broad distribution in North and South America. Factors that determine the distribution of these grasslands are characterized by fluctuations between environmental extremes - rainfall versus drought, burnt versus unburnt, flooded versus dry. Rodents, which are an important component of these grasslands, are therefore subject to a fluctuating environment. This paper examines the question of whether the selective pressures imposed by grassland environments result in demographic patterns that are shared by rodents of different taxa inhabiting grasslands of these two continents.

1146. O'Connor, B. M., F. S. Lukoschus, and K. T. M. Giesen. 1982. Two new species of Marmosopus (Acari: Astigmata) from rodents of the genus Scotinomys (Cricetidae) in Central America. Occas. Pap. Mus. Zool. Univ. Chicago. 22 pp.

Two new species of mites were found on specimens of Scotinomys teguina from Costa Rica and S. xerampelinus from Panama.

1147. Ojasti, J. 1968. Notes on the mating behavior of the capybara. J. Mammal. 49:534-535.

In the course of field studies concerning the ecology of Hydrochoerus hydrochaeris in the state of Apure, Venezuela, matings of wild capybaras in unfenced areas were frequently observed. Although they seemed to breed throughout the year, mating tends to be most intense at the onset of the rainy season, in April and May.

1148. Ojasti, J. 1970. Notes on reproduction of the capybara (Hydrochoerus hydrochaeris). Acta Cient. Venez. 21 (Supl. 1):27. Abstract only. (In Spanish)

1149. Ojasti, J. 1971. The capybara. Defensa Natur. Venez. 1(3):4-14. (In Spanish)

1150. Ojasti, J. 1972. A preliminary review of Venezuelan agoutis (Rodentia, Dasyproctidae). Mem. Soc. Cienc. Nat. La Salle 32(93):159-204. (In Spanish)

The color pattern and size relationships of 117 specimens of Dasyprocta deposited in Venezuelan collections were examined. Four species were found to exist in the country, D. agouti is represented by D. a. cayana and D. a. flavescens. A new species, D. guamara is proposed. D. fuliginosa is represented by D. f. fuliginosa and probably could be separated as a distinct

subspecies, D. f. nigricans, when better series are available. D. f. apurensis shares the same chromatic pattern but is much smaller. D. punctata includes a new subspecies, D. p. zuliae, which differs from D. p. colombiana in its smaller size. The agoutis breed apparently all year round according to information obtained from 12 pregnant females.

1151. Ojasti, J. 1973. A biological study of the capybara. Fondo Nacional de Investigaciones Agropecuarias, Caracas. 275 pp. (In Spanish)

1152. Ojasti, J. 1978. The relation between populations and productions of the capybara (Hydrochoerus hydrochaeris). Unpublished Ph.D. dissertation, Univ. of Georgia. 204 pp.

1153. Ojasti, J. 1981. Ecological notes on the mammals of inundated plains. Bol. Soc. Venez. Cienc. Nat. 35:59-66. (In Spanish)

1154. Ojasti, J. 1983. Ungulates and large rodents of South America. Ecosyst. World 13:427-439.

Reviews the ecology of the native grazing mammals in South American savannas and discusses their role within the ecosystem.

1155. Ojasti, J. and G. M. Padilla. 1972. The management of capybara in Venezuela. Trans. N. Am. Wildl. Nat. Resour. Conf. 37:268-277.

Only 9% of the states of Apure and Barinas have controlled market hunting. Much more area should be put under management.

1156. Ojasti, J. and L. M. Sosa Burgos. 1985. Density regulation in populations of capybara. Acta Zool. Fenn. 173:81-83.

The meat-producing capybara (Hydrochoerus hydrochaeris) has been the subject of much recent research in South America. As a grazer of social and sedentary habits, it attains population levels up to two animals per ha in grassland habitats, provided by pasture, permanent water holes and dry ground to rest. Enclosure experiments in native habitat showed density dependent effects in weight gains, natality, survival of newborn and mortality of adults in the rainy season but the dry season mortality was density independent.

1157. Ojeda, R. A. 1979. Ecological aspects of a cricetid community in a subtropical transition forest. Neotropica 25:28-35. (In Spanish)

A rodent community of a transitional subtropical forest, located 25 km north of San Miguel de Tucuman, Argentina, was studied during winter (April to June) 1976. The rodent members of the community were: Akodon varius, A. boliviensis, Calomys callosus, Oryzomys longicaudatus, Graomys sp., and Galea musteloides. Time

of activity, preference for vegetation cover, soil cover and other comments related with density, reproductive conditions and general habits of the species are given.

1158. Ojeda, R. A. 1980. Preliminary observations on the winter moult of Oryzomys longicaudatus longicaudatus (Bennett). Physis 96:9-13. (In Spanish)

This report deals with the moulting changes in the rice rat Oryzomys longicaudatus longicaudatus during the dry season in the humid subtropical forest of Argentina. Results do not support the contention that humidity acts as a triggering mechanism in moulting in subtropical forests. In fact, the highest percentage of moulting occurred during the driest month of the year.

1159. Ojeda, R. A. and M. A. Mares. 1982. Conservation of South American mammals. Pages 505-522 in M. Mares and H. Genoways, eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

Argentina supports a varied array of habitats and a great diversity of mammal species. The country has long been subjected to uncontrolled use of its floral and faunal resources. This great deleterious pressure upon the biota has resulted in a marked decrease in the geographic ranges of many species and in a pronounced alteration of the natural habitats. Within the last several decades, laws have been enacted to protect the country's fauna, but these laws have been uniformly ineffective due to a lack of enforcement.

1160. Ojeda, R. A. and M. A. Mares. 1984. The degradation of natural resources and wild animals in Argentina. Interciencia 9(1):21. (In Spanish)

Gives reasons for the reduction of wild animals in Argentina. These include habitat destruction, overhunting, pollution and exportation of skins. Chinchilla brevicaudata was one of the species mentioned.

1161. Olavarria, J., R. Mendez, and H. Maturana. 1976. Visual cortex and its retinotropic organization in Octodon degus. XIX Reunion Annual Soc. Biol. de Chile. Resume only.

1162. Olazarri, J., A. Mones, A. Ximenez, and M. E. Philippi. 1970. A list of type specimens deposited in the Museo Nacional de Historia Natural de Montevideo, Uruguay. I. Chordeta. Mammalia, pp. 10-12. Comun. Zool. Mus. Nac. Hist. Montevideo 10:1-12. (In Spanish)

Includes the type specimen for Ctenomys minutus rionegrensis.

1163. Oliveira, D., M. C. Semino, A. J. Solari, and N. O. Bianchi. 1979. Synaptonemal complex in the XY Pair of Akodon azarae. Cytologia 44:353-357.

Three-dimensional reconstructions of the XY chromosomal pair in spermatocytes of Akodon azarae show that the ultrastructural axes of the X and Y chromosomes pair partially to form a long synaptonemal complex.

1164. Oliveira, L. F. B., I. J. Sbalqueiro, T. R. O. Freitas, and M. S. Mattevi. 1982. Additional notes on the rodent fauna of Brazil and some commentaries on zoogeography. Abstract only. IX Cong. Bras. de Zoologia, Porto Alegre: 34. (In Portugese).

1165. Oliveira, Z. 1967. Criterion for the use of pesticides (Rodenticides). Rev. Bras. Malariol. 18:361-370. (In Portuguese)

Describes important rodenticides and their uses and gives status of rat resistance to anticoagulants as observed in the UK and Denmark.

1166. Oliver, W. L. R. 1975. The Jamaican hutia (Geocapromys brownii brownii). 1975 Annual Report from the Headquarters of the Jersey Wildlife Preservation Trust, at the Zoological Park, Les Augres Manor, Trinity, Jersey, Channel Islands. pp. 10-17.

Hutias or coneys are Caribbean rodents comprising the small family Capromyidae. They were once plentiful and widely distributed throughout the Greater Antilles but of the six recognized genera only three genera are now extant and all but one of the surviving species are considered rare and endangered.

1167. Oliver, W. L. R. 1976. The Jamaican hutia, Geocapromys brownii. Rep. Jersey Wildl. Preserv. Trust No. 12.

There were 13 Jamaican hutia births this year and we recorded the first reported instance of 2 females breeding in the same group.

1168. Oliver, W. L. R. 1977. The hutias capromyidae of the West Indies. 1977 Int. Zoo Yearb. 17:P14-20. From: Proceedings of the Second World Conference on Breeding Endangered Species in Captivity.

Considered as a group, the capromyid rodents present us with a classic example of the catastrophic effect of man on a peculiar and unique insular fauna. The remnants of a once rich and diverse family are now dangerously threatened in a restricted and damaged environment; of the approximately 20 described forms, well over half are now extinct, and the rest are scarce or endangered.

1169. Oliver, W. L. R. 1982. The coney and the yellow snake: The distribution and status of the Jamaican hutia Geocapromys brownii and the Jamaican boa Epicrates subflavus. Dodo, J. Jersey Wildl. Preserv. Trust 19:6-33.

The report presents a summarized account of the findings of a field survey in Jamaica, which was conducted during the period mid-January to mid-April 1982. The survey investigated the distribution and status of the endemic hutia and boa. The possibility of reintroducing captive-bred stocks was also addressed but considered inappropriate, as it became clear that both species remain far more widely distributed than most previous reports have suggested.

1170. Olrog, C. C. 1980. The mammals of the humid plains, Cerro Calilegua, Jujuy (Argentina). Acta Zool. Lilloana 33(2):9-14. (In Spanish)

1171. Olrog, C. C. and M. M. Lucero. 1981. A guide to the mammals of Argentina. Ministro de Cultura y Educacion, Fundacion Miguel Lillo, Tucuman, Argentina. 151 pp. (In Spanish)

1172. Olsen, O. W. 1976a. Monoecocestus torresi n. sp. (Cestoda: Cyclophyllidae: Anoplocephalidae) from Tuco-Tuco, Ctenomys maulinus brunneus Osgood, 1943 (Hystrichomorpha: Rodentia). Rev. Iber. Parasitol. 36(3-4):209-217.

Monoecocestus torresi is described and illustrated from a female tuco-tuco collected near Lonquimay, Chile.

1173. Olsen, O. W. 1976b. Diplophallus taglei n. sp. (Cestoda: Anoploce phalidae) from Lagidium peruanum. Proc. Helminthol. Soc. Wash. 33:49-53.

A new species of parasitic worm, Diplophallus taglei n. sp., is described. It was isolated from the small intestine of a Lagidium peruanum collected near the Choapo River, Coquimbo Province, Chile.

1174. Ondrias, J. C. 1960. Variation of the zygomatic breadth in Peromyscus mexicanus and Peromyscus boylii from El Salvador. Mammalia 24:218-221.

Four subspecies of Peromyscus mexicanus and three subspecies of Peromyscus boylii were compared to see if there were subspecific differences of the zygomatic breadth. No statistical differences were found.

1175. Orr, T. R. 1966. Evolutionary aspects of the mammalian fauna of the Galapagos. Pages 276-281 in R. I. Bowman, Ed. The Galapagos. Univ. of Calif. Press, Berkeley and Los Angeles, Calif.

1176. Ortega, I. and R. Feito. 1979. Photoperiodism and activity of Akodon olivaceus (Rodentia: Cricetidae). Res. Commun. Arch. Biol. Med. Exp. 12(4):534. (In Spanish)

1177. Ortells, M., A. Vitullo, M. S. Merani, and O. A. Reig. 1982. The same chromosomes are found in two geographic races of the tuco-tuco (Ctenomys talarum). Resumenes III Reunion Iberoamericana de Conservacion y Zoologia de Vertebrados, Buenos Aires, 1[illegible] 9 Noviembre, 1982:94. Abstract only. (In Spanish)

1178. Ortells, M., A. Vitullo, M. S. Merani, and O. A. Reig. 1984. Chromosomes identified for two geographic races of tuco-tuco (Ctenomys talarum). Rev. Mus. Argent. Cienc. Nat. Gernardion Rivadavia 13(50):479-484. (In Spanish).

Chromosomes are described for Ctenomys talarum recessus and C. t. talarum from Argentina.

1179. Otero, A. C. and V. Barus. 1980. New definitive host for Pseudoheligmosomum howelli (Perez, 1934) (Nematoda: Heligmosomatidae) in Cuba. Acad. Cienc. Cuba Misc. Zool. 11:4. (In Spanish)

Samples from the following species of hutia were examined for the nematode Pseudoheligmosomum howelli: Capromys pilorides, C. prehensilis, C. melanurus, C. auritus, and C. sanfelipensis. Only C. sanfelipensis was found positive.

1180. Packard, R. L. 1960. Speciation and evolution of the pygmy mice, genus Baiomys. Univ. Kans. Publ. Mus. Nat. Hist. 9:579-670.

A detailed comparison of two recent species (Baiomys musculus and Baiomys taylori), each polytypic with eight subspecies, and five fossil species.

1181. Packard, R. L. and J. B. Montgomery, Jr. 1978. Baiomys musculus. Mamm. Species 102:1-3.

1182. Paiva de Almeida, A. M., N. T. da Cunha e Silva, and C. R. de Almeida. 1984. Notes on bubonic plague (Yersinia pestis) infection in Minas Gerais State, Brazil. Rev. Microbiol. 15(3):145-146. (In Portuguese)

Yersinia pestis was isolated from rodents and plague antibodies were found in human and rodent sera from Minas Gerais State, Brazil, where plague activity had not been recorded for about 10 years. The rodents were: Nectomys squamipes olivaceus, Zygodontomys lasiurus pixuna and Akodon arviculoides arviculoides.

1183. Palacios, O. V. 1982. Morphometrics and systematics of Oryzomys longicaudatus (Rodentia: Cricetidae). Unpublished thesis, Univ. of Chile, Santiago, Chile. 99 pp. (In Spanish)

1184. Parodi, A. S., H. R. Rugiero, D. J. Greenway, N. Mettler, and M. Boxaca. 1961. Isolation of the Junin virus from rodents of nonepidemic areas. Prensa Med. Argent. 48:2321-2322. (In Spanish)

Junin virus was isolated from Mus musculus, Akodon sp. and Hesperomys sp. The rodents were caught at two cattle ranches near Azul, Argentina.

1185. Pathak, S., T. C. Hsu, and L. Shirley. 1973. Chromosome homology in the climbing rats, genus Tylomys (Rodentia: Cricetidae). Chromosoma 42:215-228.

Gives karyotypes for Tylomys panamensis, T. nudicaudus, T. n. gymnurus, and T. n. villai.

1186. Patterson, B. D., M. H. Gallardo, and K. E. Freas. 1984. Systematics of mice of the subgenus Akodon (Rodentia: Cricetidae) in southern South America, with the description of a new species. Fieldiana Zool. 23:1-16.

Two species of yellow-nosed mice (genus Akodon) occur in the forests and steppes of southern South America, but only one of these is currently named. Akodon xanthorhinus applies to the smaller, shorter-tailed species found over much of southern Chile and Argentina. A larger, longer-tailed form inhabits islands to the south, and this form is here described as new. The new form is considered a distinct species, Akodon hershkovitzi.

1187. Patton, J. C., R. J. Baker, and J. C. Avise. 1981. Phenetic and cladistic analyses of biochemical evolution in Peromyscine rodents. Pages 288-312 in M. Smith and J. Joule, Eds. Mammalian Population Genetics. The Univ. of Georgia Press, Athens, Georgia.

An approach to applying principles of Hennigian cladistics to qualitative, uncoded electrophoretic data is suggested. This approach is contrasted with more conventional phenetic analyses, using a data base of newly collected biochemical information on 9 genera and 14 species of New World rodents. Neotomodon alstoni used in the study were collected in Mexico.

1188. Patton, J. L. 1969. Chromosome evolution in the pocket mouse, Perognathus goldmani Osgood. Evolution 23(4):645-662.

This study documents the phylogenetic characters of the chromosomal races of Perognathus goldmani and interprets their historical relationships to each other and to P. artus in Sonora, Chihuahua and Sinaloa, Mexico.

1189. Patton, J. L. 1984. Systematic status of the large squirrels (Subgenus Urosciurus) of the western Amazon Basin. Stud. Neotrop. Fauna Environ. 19(2):53-72.

Patterns of geographic variation within and between regional samples of the large rufous western Amazon squirrels (Sciurus) are described based on univariate and multivariate analyses. Two species are clearly recognizable: Sciurus spadiceus and S. igniventris. The two are sympatric over all of eastern Ecuador and most of Peru; only spadiceus is known from Bolivia.

1190. Patton, J. L. and L. H. Emmons. 1985. A review of the genus Isothrix (Rodentia, Echimyidae). Am. Mus. Nov. 2817:1-14.

Two species of the echimyid rodent genus Isothrix are recognized within the Amazon and upper Orinoco basins of South America based on color and color pattern, bacular morphology, cranial morphometrics and karyotype: I. bistriata and I. villosa. Ninety-six specimens of Isothrix from eastern Peru, eastern Bolivia, southern Venezuela and central Brazil were examined in this study.

1191. Patton, J. L. and A. L. Gardner. 1972. Notes on the systematics of Proechimys (Rodentia, Echimyidae), with emphasis on Peruvian forms. Occas. Pap. Mus. Zool. La. State Univ. 44:1-30.

There is much confusion surrounding the systematics of Neotropical spiny rats of this genus. Included are chromosomal data gathered in the four Peruvian localities represented by the material. Descriptions are given for P. brevicauda, P. longicaudatus, P. semispinosus, P. hendeei, and P. guyannensis.

1192. Patton, J. L. and M. S. Hafner. 1983. Biosystematics of the native rodents of the Galapagos Archipelago, Ecuador. Pages 539-568 in R. I. Bowman, M. Berson and A. E. Letiton, Ed. Patterns of Evolution in Galapagoes Organisms. Pacific Division, AAAS.

The native rodent fauna of the Galapagos Archipelago consists of seven species of the family Cricetidae. These species comprise three rather distinct assemblages, each of which is varyingly accorded generic or subgeneric rank: (1) Oryzomys (sensu stricto), including O. galapagoensis and O. bauri; (2) Nesoryzomys, including N. narboroughi, N. swarthi, N. darwini and N. indefessus; and (3) Megalomys curioi. The time and pattern of radiation, and the phylogenetic relationships of Oryzomys and Nesoryzomys are assessed by karyological, biochemical, and anatomical investigations of the two extant species and by multivariate morphometric analyses of existing museum specimens of all taxa.

1193. Patton, J. L. and J. K. Jones, Jr. 1972. First records of Perognathus baileyi from Sinaloa, Mexico. J. Mammal. 53(2):371-372.

The range for Perognathus baileyi was extended south of Sonora Mexico, with specimens being taken near El Carrizo, Sinaloa, Mexico, and near Los Mochis, Sinaloa, Mexico.

1194. Patton, J. L. and P. Myers. 1974. Chromosomal identity of black rats (Rattus rattus) from the Galapagos Islands, Ecuador. Experientia 30(10):1140-1142.

Karyotypes were compared for Rattus rattus collected from seven islands of the Galapagos Archipelago. All specimens had the same karyotypes (2n = 38).

1195. Patton, J. L. and M. A. Rogers. 1983. Systematic implications of non-geographic variation in the spiny rat genus Proechimys (Echimyidae). Saugetierk. 48(6):363-370.

Intrapopulation variation due to sex and age components is examined for 23 morphometric variables of the skin and skull for the spiny rat, Proechimys brevicauda Gunther.

1196. Patton, J. L., B. Berlin, and E. A. Berlin. 1982. Aborginal perspectives of a mammal community in Amazonian Peru: knowledge and utilization patterns among the Aguaruna Jivaro. Pages 111-128 in M. A. Mares and H. H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

The genera of rodents found in the Aguaruna-Huambisa regions of Peru and Ecuador are: Sciurus, Microsciurus, Isothrix, Oryzomys, Neacomys, Nectomys, Proechimys, Makalata, Mesomys, Agouti, Dasyprocta, Dinomys, Hydrochaeris, and Myoprocta.

1197. Patton, J. L., S. Y. Yang, and P. Myers. 1975. Genetic and morphologic divergence among introduced rat populations (Rattus rattus) of the Galapagos Archipelago, Ecuador. Syst. Zool. 24(3):296-310.

Morphological variations of the Galapago Islands Rattus rattus populations was first noted by Heller in 1904, consisting of overall size and shape as well as pelage color differences. Analyses involving allozyme frequencies at 37 genetic loci, epigenetic cranial characters and multivariate treatments of mensural characters confirm and extend these observations.

1198. Paulete-Vanzell, J. 1970. Reduction of chromosome number in Brazilian Rattus rattus rattus, Mammal. Chromosomes Newsl. 11(3):99-101.

1199. Paulete-Vanrell, J., S. S. de Paulete-Vanrell, A. Laguarda-Figueras, and J. Romero-Jarero. 1971. Cytogenetic analysis of Neotoma mexicana torquata. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Biol. Exp. 42:55-60.

1200. Paulete-Vanrell, J., S. S. de Paulete-Vanrell, A. Laguarda-Figueras, and J. Romero-Jarero. 1971. The karyotype of Neotoma mexicana torquata. Mammal. Chromosomes Newsletter 12:121-122.

1201. Peacock, M. G., R. A. Ormsbee, and K. M. Johnson. 1971. Rickettsioses of Central America. Am. J. Trop. Med. Hyg. 20(6):941-949.

Q fever was found to be endemic in Central America, murine typhus in Guatemala, spotted fever in areas of Costa Rica, Honduras, and Panama. All of these diseases may involve rodents in the disease epidemiology.

1202. Pearson, A. K. and O. P. Pearson. 1979. Granular pneumocytes and altitude: A stereological evaluation. Cell Tissue Res. 201:137-144.

Stereological analysis demonstrates that the granular pneumocytes of mice native to high altitude (4660 m) are significantly larger than those of the same species (Phyllotis darwini) living at sea level.

1203. Pearson, O. P. 1960. Biology of the subterranean rodents, Ctenomys. Peru Mem. Mus. Hist. Nat. "Javier Prado" 9:1-56.

The wide-ranging genus Ctenomys is represented in Peru at the northern limit of its range by three species, all of them restricted to elevations above 12,500 feet. The three species are C. opimus, C. peruanus and C. leucodon. All three species live in close association with a species of guinea pig (Galea musteloides). With Ctenomys peruanus it was shown that guinea pigs move into the burrows promptly when the tuco-tucos are removed.

1204. Pearson, O. P. 1967. The population structure and reproductive dynamics of a population of field mice, Akodon azarae. Physis 27:53-58. (In Spanish)

Specimens of the field mouse, Akodon azarae, were collected throughout 1 year in grasslands near the city of Buenos Aires. Birth occurs from October to April. Molar wear proved to be a reliable method for determining the age of individuals. The rate of mortality is so rapid that very few animals survive 1 year.

1205. Pearson, O. P. 1972. New information on ranges and relationships within the rodent genus Phyllotis in Peru and Ecuador. J. Mammal. 53(4):677-686.

The karyotypes of P. amicus, P. darwini, P. gerbillus, P. haggardi, P. magister, P. definitus, and P. andium and P. osilae are studied and considerable chromosomal variation noted. Range extensions for some species are reported.

1206. Pearson, O. P. 1974. Ecology and behavior - Chairman's introduction. Symp. Zool. Soc. Lond. 34:109-111.

Pearson was chairman of a session on hystricomorphs. He talks about Charles Darwin's theories on the lowly tuco-tuco (Ctenomys).

1207. Pearson, O. P. 1975. An outbreak of mice in the coastal desert of Peru. Mammalia 39(3):375-386.

An outbreak of mice (Phyllotis darwini) occurred in the coastal desert of southern Peru. They compared the reproductive and age structure of the mouse population during the outbreak with the reproductive and age of the same population near the beginning of its buildup.

1208. Pearson, O. P. 1982. The distribution of small mammals in the altiplano and deserts of Peru. Pages 263-284 in P. Salinas, Ed. Zoologia Neotropical. Actas del VIII Congreso Latinoamericano de Zoologia, Merida, Venezuela. (In Spanish)

The coastal deserts of Peru have 10 species of small mammals, 5 of the 10 are in the genus Phyllotis. Twenty-four species of rodents are found in the highlands of Peru above 3,700 meters.

1209. Pearson, O. P. 1983. Characteristics of a mammalian fauna from forests in Patagonia, southern Argentina. J. Mammal. 64:476-492.

Diet, reproduction, age structure, body size, sex ratio and home range are described for nine species (eight genera) of small mammals living in Patagonian forests.

1210. Pearson, O. P. 1984. Taxonomy and natural history of some fossorial rodents of Patagonia, southern Argentina. J. Zool. (Lond.) 202(2):225-237.

Habits and taxonomy of species of the following genera are discussed: Aconaemys, Ctenomys, Chelemys, Geoxus and Notiomys. In degree of adaptation to a burrowing mode of life, these five Patagonian genera fall between Thomomys bottae and Microtus californicus.

1211. Pearson, O. P. and J. L. Patton. 1976. Relationships among South American phyllotine rodents based on chromosome analysis. J. Mammal. 57(2):339-350.

Study of karyotypes of almost all species of Phyllotis (sensu stricto) and of related genera indicates that Chinchillula, Andinomys, Neotomys, Eligmodontia, and Reithrodon are monotypic genera related to Phyllotis. Graomys (griseoflavus and domorum) and Auliscomys (pictus, sublimis, and boliviensis) are given generic rank.

1212. Pearson, O. P. and A. K. Pearson. 1976. A stereological analyses of the ultrastructure of the lungs of wild mice living at low and high altitude. J. Morphol. 150(2):359-368.

Stereological analysis of the ultrastructural composition of the pulmonary alveolo-capillary region of mice living at sea level compared with that of the same species (Phyllotis darwini) genetically adapted to life at 4,660 m reveals a trend at high altitude towards a greater volume percentage of tissue components. The mice were captured near Mollendo, Department of Arequipa, Peru. The high altitude population lived 215 km to the east at 8 km north of Lago Loriscoto, 4,660 m elevation.

1213. Pearson, O. P. and A. K. Pearson. 1982. Ecology and biogeography of the southern rainforests of Argentina. Pages 129-142 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

Small mammals were censused in three kinds of cool, moist forests dominated by southern beech trees and bamboo. Number of species, number of individuals, density and biomass per hectare equalled or surpassed those of most other kinds of forest, including tropical forests.

1214. Pearson, O. P. and C. P. Ralph. 1978. The diversity and abundance of vertebrates along an altitudinal gradient in Peru. Mem. Mus. Hist. Nat. "Javier Prado" 18:1-97 (Univ. Nac. Mayor de San Marcos).

The numbers of plant species, plant density, percent ground cover and numbers of small mammals were measured in eight arid or semi-arid plant communities in Peru on a transect from the coast to 4,500 m elevation in the Andes. Small mammals were censused by mark-and-recapture methods. Species captured were Phyllotis darwini, P. magister, P. osilae, Akodon berlepschii, A. andinus and A. amoenus.

1215. Pearson, O. P., N. Binsztein, L. Boiry, C. Busch, M. DiPace, G. Gallopin, P. Penchaszadeh, and M. J. Piantanida. 1967. Social structure, spacial distribution and age composition for a population of tuco-tuco (Ctenomys talarum). Invest. Zool. Chil. 13:47-80. (In Spanish)

A population of tuco-tucos on a 40 x 80 m area in the center of a grazed pasture was trapped intensively in March, April, and May 1965. An almost complete removal of the animals in March revealed a density of 207 tuco-tucos per hectare. In March more than half of the individuals were less than 7 months old and it is unlikely that many animals live through more than two reproductive seasons.

1216. Pefaur, J. 1969a. A list of wild mammals found in Chile. Bol. Univ. Chile 97-98:62-63. (In Spanish)

Lists all the wild mammals found in Chile including 48 species of rodents.

1217. Pefaur, J. 1969b. Comments on the problems of the conservation of wild Chilean mammals. Bol. Univ. de Chile 93-94:4-10. (In Spanish)

General comments on the ways and modes the mammals of Chile should be protected are presented.

1218. Pefaur, J. and B. Cacares-Pefaur. 1976. A bibliography of terrestrial Chilean mammals. Bol. Soc. Biol. Concepcion 50:157-172. (In Spanish)

Bibliographical references on terrestrial Chilean mammals published between 1942 and 1972 are presented. The 277 references are grouped in a systematic fashion according to the native mammalian orders found in Chile. An index grouping the references into topics is also provided.

1219. Pefaur, J. and A. Diaz de Pascual. 1985. Small mammal species diversity in the Venezuelan Andes. Acta Zool. Fenn. 173:57-59.

The non-volant small mammal community of the forested mountains of the Venezuelan Andes includes 7 species of marsupials and 16 species of rodents.

1220. Pefaur, J. and J. L. Yanez. 1980. The descriptive ecology of the Mocha Island (Chile) in relation to the vertebrate population. Bol. Mus. Nac. Hist. Nat. Chile 37:103-112. (In Spanish)

The analysis of different kinds of data lead the authors to suggest that the biotic development of both La Mocha Island and the correspondent continental biome has been parallel, beginning at the Miocene. On the island there are only 11 genera of tetrapods compared to 31 found on the continent. It is suggested that colonization occurred by drift.

1221. Pefaur, J., F. M. Jaksic, and J. L. Yanez. 1977. The diet of Speotyto cunicularia (Aves: Strigiphormes) in the Province of Coquimbo. An. Mus. Hist. Nat. 10:179-183. (In Spanish)

The prey composition in the pellets of Speotyto cunicularia in Coquimbo Province, Chile, is compared with the potential supply of its preferred preys (exclusively the rodents Phyllotis darwini and Akodon olivaceus), near the collection site. S. cunicularia feeds preferentially on the medium-sized P. darwini, in spite of the higher abundance of the smaller A. olivaceus.

1222. Pefaur, J., F. M. Jaksic, and J. L. Yanez. 1978. A population study of wild Mus musculus in Santiago, Chile. Publ. Ocas. Mus. Nac. Hist. Nat. 26:1-12. (In Spanish)

A feral population of Mus musculus was studied in an enclosed urban area in Santiago, Chile. Trapping periods were in August and December 1973. Mice were captured in August but none in December. An estimation of the population in August made with the Zippin Regression method gave a figure of 41 individuals per hectare.

1223. Pefaur, J., J. L. Yanez, and F. M. Jaksic. 1979. Biological and environmental aspects of a mouse outbreak in the semi-arid region of Chile. Mammalia 43(3):313-322.

For climatological reasons there was a surplus production of annual herbs and grasses in Coquimbo Province, Chile, during 1972 and 1973. This availability of food caused a rodent (including Phyllotis darwini, Akodon olivaceus, Octodon degus, Mus musculus and Rattus rattus) outbreak, of which Oryzomys longicaudatus was the main component. These biological factors are responses to the oceanic-meteorological phenomenon, El Nino.

1224. Pefaur, J., W. Hermosilla, and F. D. Castri, R. Gonzalez, and F. Salinas. 1968. A preliminary study of wild Chilean mammals: their distribution, economic value and zoological importance. Rev. Soc. Med. Vet. (Chile) 18(1,2,3,4):3-15. (In Spanish)

The distribution of 33 species of wild mammals is analyzed in Chile. There is a clear decrease in the areas of dispersal for native species, but an increase in the geographical distribution of species introduced by man including Rattus rattus, R. norvegicus, and Mus musculus.

1225. Pence, D. B. and H. H. Genoways. 1974. Neolabidophrus yucatanensis gen. et. sp. n. and a new record for Dermacarus ornatus Fain, 1967 (Acarina: Glycyphagidae) from Heteromys gaumeri Allen and Chapman, 1897. Gaumer's spiny pocket mouse (Rodentia: Heteromyidae). J. Parasitol. 60:712-715.

Two species of hypopial nymphs of mites of the family Glycyphagidae were recovered from Heteromys gaumeri from Yucatan, Mexico.

1226. Pendergast, D. M. 1979. Excavations at Altunita, Belize, 1964-1970. Vol. 1. Royal Ontario Museum, Toronto. 226 pp.

Mammal checklist: Sciurus yucatanensis, S. deppei, Heteromys gaumeri, Oryzomys couesi, Ototylomys, Otonyctomys, Reithrodontomys, Sigmodon, Rattus, Dasyprocta, and Agouti.

1227. Perea Garcia, J. T. and S. Ruiz Perez. 1977. The social organization and territorial habits of the capybara. Unpublished thesis. Univ. Nac. de Colombia, Bogota. 206 pp. (In Spanish)

1228. Pereira, B. M. 1963. Reservoirs and vectors of Trypanosoma cruzi in Brazil. Argent. Hig. 28:43-66. (In Portuguese)

1229. Pereira, L. A. 1982. The ecological use of space by Zygodontomys lasiurus (Rodentia: Cricetinae) in the natural habitat of the central Brazilian hills. Unpublished thesis, Univ. of Brasilia, Brazil. (In Portuguese)

1230. Perez-Beato, O., N. A. Hernandez, R. Carnero, and A. I. Frias. 1982. Coat color variation in Capromys pilorides (Rodentia: Caviomorpha) on the northern coast of Matanzas Province, Cuba. Poeyana Inst. Zool. Acad. Cienc. Cuba No. 247. 6 pp. (In Spanish)

Fourteen specimens of Capromys pilorides from four islands in the northern coast of Matanzas Province, Cuba, were studied to compare the color variations.

1231. Perez-Nieto, G. 1981. Pests of sugarcane. Pages 107-127 in El cultivo de la cana de azucar, CIARCO, Yaritagua, Estado Lara. 210 pp. (In Spanish)

1232. Perez-Zapata, A., M. Benado, and O. A. Reig. 1984. Genetical and chromosomal variability in populations of the superspecies Proechimys guairae and Proechimys trinitatis (Rodentia, Echimyidae) from western Venezuela. Acta Cient. Venez. 34 (Supplement 1):226. Abstract only. (In Spanish)

1233. Perez-Zapata, A., A. Ferrer, and O. A. Reig. 1984. Chromosomal polymorphism in a population of Nectomys squamipes Brandt (Rodentia, Cricetidae) in western Venezuela. Acta Cient. Venez. 34 (Supplement 1):227. Abstract only. (In Spanish)

1234. Perez-Zapata, A., M. Aguilera, A. Ferrer, and O. A. Reig. 1984a. The karyotype of a Venezuelan population of Oryzomys capito (Rodentia, Cricetidae). Acta Cient. Venez. 35 (Supplement 1):226. Abstract only. (In Spanish)

1235. Perez-Zapata, A., M. Aguilera, A. Ferrer, and O. A. Reig. 1984b. The karyotype of a population of Zygodontomys sp. (Rodentia, Cricetidae) from the Orinoco Delta. Acta Cient. Venez. 35 (Supplement 1):227. Abstract only. (In Spanish)

1236. Perruolo, G. and O. Morales. 1982. An ecological study of a population of Holochilus brasiliensis in rice fields of western Venezuela. Divulga 18:7-11. (In Spanish)

Holochilus brasiliensis is the major pest species in rice fields in Venezuela. H. brasiliensis were caught with snap traps at Canton, state of Barinas, Venezuela. The average weight for females was 149.6 grams. The average number of embryos per pregnant female was 3.3.

1237. Perry, A. E. and T. H. Fleming. 1980. Ant and rodent predation on small, animal-dispersed seeds in a dry tropical forest. Brenesia (Costa Rica) 17:11-22.

Seeds from three species of trees (Cecropia peltata, Chlorophora tinctoria, and Piper amalago) were placed in petri dishes to study the removal of seeds by ants and rodents. One-half of the petri dishes were screened to prevent rodent predation. The study was done at the Santa Rosa National Park, Costa Rica. Comparison of the removal rates of seeds in open and screened dishes indicate that ants had twice the impact on these seeds as rodents.

1238. Pessoa, S. B. 1962. Habitats of Triatominae and epidemiology of Chagas' disease. Argent. Hig. 27:161-171. (In Portuguese)

1239. Pessoa, S. B. 1974. Notes on some parasites of wild rats in the state of Sao Paulo. Rev. Inst. Adolfo Lutz 34:82-93. (In Portuguese)

1240. Pestana de Castro, A. F., C. A. Santa Rosa and C. Troise. 1961a. Cavia aperae azarae Lich. - Rodentia: Cavidae - as reservoir of Leptospira in Sao Paulo. Isolation of Leptospira icterohaemorrhagiae. Arq. Inst. Biol. Sao Paulo 28:219-223. (In Spanish)

Eight strains were isolated for the first time in Brazil.

1241. Pestana de Castro, A. F., C. A. Santa Rosa, and C. Troise. 1961b. Cavies as reservoirs of Leptospira in Sao-Paulo. Isolation of Leptospira icterohaemorrhagiae. Biologica 27(9):207-209. (In Spanish)

The first isolation of the agent in Brazil from Cavia aperae azarae.

1242. Petana, W. B. 1969a. American trypanosomiasis in British Honduras. V. Development of Trypanosoma (Schizotrypanum) cruzi in animals infected with strains isolated in the El Cayo District and the occurrence of crithida forms in the tissues. Ann. Trop. Med. Parasitol. 63:39-45.

Paper deals with Tylomys nudicaudus infected with Trypanosoma cruzi.

1243. Petana, W. B. 1969b. American trypanosomiasis in British Honduras: VI. A natural infection with Trypanosoma (Schizotrypanum) cruzi in the opossum Didelphis marsupialis (Marsupialia Didelphidae) and experimental investigations of different wild animal species as possible reservoirs for the parasite. Ann. Trop. Med. Parasitol. 63:47-56.

Rodents examined for Trypanosoma cruzi were: Heteromys, Oryzomys, Ototylomys, Tylomys, and Nyctomys.

1244. Petana, W. B. 1969c. American trypanosomiasis in British Honduras. VII. A natural infection in a wild cotton rat, Sigmodon hispidus (Rodentia, Cricetidae) with a trypanosome morphologically resembling Trypanosoma sigmodon Calbertson, 1941. Ann. Trop. Med. Parasitol. 63:57-61.

1245. Petersen, M. K. 1968. Electrophoretic blood-serum patterns in selected species of Peromyscus. Am. Midl. Nat. 79(1):130-148.

Blood serum proteins of 18 species in 5 subgenera of Peromyscus were separated by disc electrophoresis in an attempt to classify these animals by differences in these proteins. The findings are compared with present taxonomic arrangements of the various species of Peromyscus based on other characteristics. The results indicate that species can be placed in related groups based on their characteristic densitometric curves.

1246. Petersen, M. K. 1972. Female Peromyscus pectoralis fosters litter of Reithrodontomys megalotis. Southwest. Nat. 17(3):301-302.

A litter of five Reithrodontomys megalotis was placed with a female Peromyscus pectoralis for the purpose of observing intergeneric fostering of young rodents. The female Peromyscus was captured 5 km E. Atotonilco, Durango, Mexico, along with a litter of three. The Peromyscus raised the litter of Reithrodontomys.

1247. Petersen, M. K. 1973. Interactions between the cotton rats, Sigmodon fulviventer and S. hispidus. Am. Midl. Nat. 90(2):319-333.

Both species had similar ecological requirements and occurred in bunch grass on the central plateau in Durango, Mexico. Removal trapping indicated that normally the species interact in a passive (avoidance) manner which may help to regulate population and range. S. fulviventer appears to be the dominant species.

1248. Petersen, M. K. 1975. An analysis of multiple captures in several rodents from Durango, Mexico. J. Mammal. 56(3):703-705.

The study describes several aspects of multiple captures in rodents captured during a year-long (in 1967 and 1968) ecological study in mixed desert-shrub and mesquite-grassland in east-central Durango, Mexico. Rodents involved in multiple captures included Baiomys taylori, Reithrodontomys megalotis, R. fulvescens, Peromyscus maniculatus, and Sigmodon fulviventer.

1249. Petersen, M. K. 1976a. Food consumed by rodents caught at a cattle ranch in Durango, Mexico: Some implications in relation to grazing land. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 47(1):51-58. (In Spanish)

A rodent food consumption study in relation to livestock grazing was conducted at Atotonilco de Campa (a large cattle ranch) in Durango, Mexico. The rodents were found to have the potential to consume an equivalent amount of food capable of supporting over 6,000 cattle per day. There was probably little competition for food between these two types of herbivores because of differences in diets and/or grazing localities.

1250. Petersen, M. K. 1976b. Noteworthy range extensions of some mammals in Durango, Mexico. Southwest. Nat. 21(1):123-139.

The following rodents were captured at Hacienda de Atotonilco which is 1 km S. of Yerbanis, Durango: Perognathus hispidus, a range extension of 315 km SE for this species, Dipodomys nelsoni, a range extension of 50 km S., Sigmodon hispidus berlandieri, S. fulviventer fulviventer, S. ochrognathus and Neotoma goldmani, a range extension of 126 km S.

1251. Petersen, M. K. 1976c. The Rio Nazas as a factor in mammalian distribution in Durango, Mexico. Southwest Nat. 20:495-502.

The River Rio Nazas acts as a filter barrier and as a pathway for dispersal for some mammals. Its greatest influence is at the species level, particularly in rodents, where several species are separated into different subspecies on each side of the river.

1252. Peterson, M. K. 1978. Rodent ecology and natural history observations on the mammals of Atotonilco de Campa, Durango, Mexico. Carter Press Inc. and Iowa State University Copy Center, Ames, Iowa. 129 pp.

1253. Petersen, M. K. 1979. A laboratory test of species exclusion in Sigmodon fulviventer and S. hispidus. Iowa-State J. Res. 54(4):301-304.

A laboratory study of species exclusion was conducted on cotton rats, Sigmodon fulviventer and S. hispidus, that were collected in Durango, Mexico. Exclusion occurred significantly more often interspecifically than at the intraspecific level. Food and

water did not seem to influence species exclusion under these experimental conditions.

1254. Petersen, M. K. 1980a. A comparison of small mammal populations sampled by pit-fall and live traps in Durango, Mexico. Southwest. Nat. 25(1):122-124.

A comparison of small mammals collected over a 9-month period in pit-fall traps and Sherman live-traps. Live-trapping results showed several small mammals were able to avoid the pit-fall traps.

1255. Petersen, M. K. 1980b. The taxonomic status of a dusky-colored population of Peromyscus at Atotonilco, Durango, Mexico. Occas. Pap. Zool. Michael K. Petersen 5:1-19.

The taxonomic status of a dusky-colored population of Peromyscus at Atotonilco, Durango, Mexico, is evaluated. Originally, it was thought that: (1) this population might have represented a range extension of P. hooperi; (2) that it may have been a previously undescribed species of Peromyscus; or (3) it was a dusky color phase of P. pectoralis. An evaluation of subsequently collected specimens demonstrates it is a dusky color phase of P. pectoralis.

1256. Petersen, M. K. 1985. Food habits and dietary overlap in two sympatric species of Sigmodon from Durango, Mexico. Occas. Pap. Zool. Michael K. Petersen 6:1-23.

Food habits and dietary overlap of sympatric populations of cotton rats, Sigmodon fulviventer and S. hispidus in the mesquite-grasslands of eastern Durango, Mexico, were evaluated by fecal pellet analysis. Three species of grasses (Sporobolus wrightii, Hilaria mutica, and Muhlenbergia sp.) comprised over 88 percent of both cotton rats' diets. Food items were not necessarily selected on the basis of plant abundance. An index of food niche overlap suggests almost complete dietary overlap between these two ecologically equivalent species.

1257. Petersen, M. K. and M. J. Helland. 1978. Behavioral interactions in Sigmodon fulviventer and S. hispidus. J. Mammal. 59(1):118-124.

A laboratory study of intra- and interspecific behavioral interactions between the cotton rats, Sigmodon fulviventer and S. hispidus from Durango, Mexico, suggested that S. fulviventer is behaviorally dominant over S. hispidus.

1258. Petersen, M. K. and M. K. Petersen. 1979. A temporal comparison of owl pellet contents with small mammal population levels in Durango, Mexico. Occas. Pap. Zool. Michael K. Petersen 4:1-27.

The majority of rodent remains found in owl pellets were Perognathus flavus, Baiomys taylori and Sigmodon fulviventer. The study was conducted at Atotonilco de Campa in eastern Durango, Mexico.

1259. Peterson, R. L. 1966a. Recent mammal records from the Galapagos Islands. Mammalia 30:441-445.

A skull fragment of Nesoryzomys swarthi collected on James Island (= Santiago), seems to be the first specimen of this species found since 1906. The condition of this skull fosters the belief that this species is not completely extinct.

1260. Peterson, R. L. 1966b. Notes on the Yucatan vesper rat, Otonyctomys hatti with a new record, the first from British Honduras. Can J. Zool. 44:281-284.

The first specimen of Otonyctomys hatti from British Honduras is documented and illustrated. The existing records of occurrences of this genus are reviewed and mapped. A tabular summary of measurements is provided for six specimens, the only ones known to exist.

1261. Petter, F. 1973. The names of the genera Cercomys, Nelomys, Thrichomys and Proechimys (Rodentia: Echimyidae). Mammalia 37(3):422-426. (In French)

Examined were the skin of the type specimen of Cercomys Cuvier, 1829, being referred to as a cricetid, the skull of a Proechimys Allen, 1899, and the mandible of a Echimys Cuvier, 1809. It is declared that Cercomys cunicularius is invalid and should be replaced as Thrichomys apereoides.

1262. Petter, F. 1978. The epidemiology of leishmania in French Guiana in relation to the discovery of a new species of Echymidae rodent Proechimys cuvieri. C. R. Acad. Sci. Ser. D:261-264. (In French)

A new species of spiny rat, Proechimys cuvieri, was identified from French Guiana.

1263. Petter, F. 1979. A new species of rat from French Guiana, Nectomys parvipes (Rodentia: Cricetidae). Mammalia 43:507-510. (In French)

A new species of rodent, Nectomys parvipes is described from French Guiana. The species is comparable to N. squamipes melanius but characterized by smaller dimensions, reduction of M3, pattern of fronto-pariental suture and zygomatic plate.

1264. Petter, F. and H. C. Aguirre. 1982. A new Isothrix from Bolivia (Rodentia: Echimyidae). The dentition of Isothrix. Mammalia 46(2):191-203. (In French)

A new subspecies is described, Isothrix bistriata boliviensis.

1265. Petter, F. and F. J. Baud. 1981. Calomys laucha in Colombia (Rodentia: Cricetidae). Mammalia 45(4):513-514. (In French)

In 1962 a Calomys laucha captured in Venezuela was considered an accidental introduction. We report here a C. laucha was collected on the La Guajira Peninsula of Colombia.

1266. Pifano, F. R. 1969. Some aspects on the ecology and epidemiology of endemic diseases naturally occurring in tropical areas, especially Venezuela. Minist. Sanid. Asist. Soc., Caracas. 297 pp. (In Spanish)

1267. Pifano, F. R. et al. 1961. Present status of Chagas' disease in Venezuela. I. Epidemiological aspects. Rev. Venez. Sanid. Asist. Soc. 26:7-43. (In Spanish)

1268. Pilleri, G. and O. Pilleri. 1984. Craniometric considerations on the capybara (Hydrochoerus hydrochaeris) from the llano of Apure, Venezuela. Mammalia 48(1):81-84.

The skull proportions of adult Venezuelan (llano) capybaras do not differ from those of adult Hydrochoerus from Beni (Bolivia) or Uruguay. Skull differences are in the three populations irrelevant, so that microevolutive separation on this base seems equally unlikely.

1269. Pine, R. H. 1969. Three rodents new to the fauna of Honduras. J. Mammal. 50(3):643.

Describes Oryzomys caliginosus, Nectomys alfari and Proechimys semispinosus collected in Honduras.

1270. Pine, R. H. 1971. A review of the long-whiskered rice rat, Oryzomys bombycinus Goldman. J. Mammal. 52(2):590-595.

The taxonomy and natural history of the species is reviewed. The natural habitat is in a few localities in Costa Rica, Panama, and Colombia, Nicaragua and Ecuador. Ecological information is given.

1271. Pine, R. H. 1973. Mammals (exclusive of bats) of Belem, Para, Brazil. Acta Amazonica 3:47-49.

A complete list of the non-volant wild mammals believed to be now living in Belem, Para, Brazil and vicinity or which may have lived there within historic times is presented. The list

includes 72 species: 9 opossums, 6 primates, 10 edentates, 1 rabbit, 3 introduced commensal rodents, 18 native rodents, 2 cetaceans, 17 carnivores, 1 manatee, 1 tapir, and 4 artiodactyls.

1272. Pine, R. H. 1974. A new species of Akodon (Mammalia: Rodentia: Muridae) ón Wellington Island, Magallanes, Chile. An. Inst. Patagonia, Punta Arenas (Chile) (for 1973) 4(1-3):423-426. (In Spanish)

A new species, Akodon markhami, is described from a young male collected near Puerto Eden, Wellington Island, Magallanes, Chile.

1273. Pine, R. H. 1976. A new species of Akodon (Mammalia: Rodentia: Cricetinae) from Isla de los Estados, Argentina. Mammalia 40:63-68.

The mouse Akodon (Akodon) llanoi, n. sp., is described from Isla de los Estados, Argentina. The new species is most closely related to A. xanthorhinus but is convergent toward A. lanosus. A. llanoi is probably the only species of Akodon on Isla de los Estados.

1274. Pine, R. H. 1980. Notes on rodents of the genera Wiedomys and Thomasomys (including Wilfredomys). Mammalia 44(2):195-202.

New records, morphological data and limited ecological information are presented for the little-known rodents Wiedomys pyrrhorhinos, Thomasomys oenax, T. pyrrhonotus, and T. pictipes.

1275. Pine, R. H. 1982. Current status of South American mammalogy. Pages 27-38 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

This paper deals with the current state of knowledge (mostly faunal and taxonomic) of recent non-marine South American mammals. The mammals of the South American continent are probably the most poorly known in the world. A number of families and genera have not been revised for scores of years.

1276. Pine, R. H. and D. C. Carter. 1970. Distributional notes on the thick-spined rat (Hoplomys gymnurus) with first records from Honduras. J. Mammal. 51(4):804.

This terrestrial rodent is apparently limited to forest or forest edge in northwestern South America and Central America. Various collections in Nicaragua are noted, and a specimen taken in a rain forest in Honduras 50-60 km from the Nicaraguan border constitutes the northernmost-known boundary of the species distribution.

1277. Pine, R. H. and G. L. Ranek. 1969. Pseudoryzomys wavrini in Bolivia. J. Mammal. 50(3):618.

The fourth and fifth specimens of this species were trapped in San Joachin, Mamore, Beni, Bolivia and Santa Ana, Velasco, Santa Cruz, Bolivia.

1278. Pine, R. H. and R. M. Wetzel. 1975. A new subspecies of Pseudoryzomys wavrini (Mammalia: Rodentia: Muridae: Cricetinae) from Bolivia. Mammalia 39(4):649-655.

A new subspecies Pseudoryzomys wavrini reigi from Pampa de Meio, Rio Itenez, Depto. Beni, Bolivia, is described.

1279. Pine, R. H., J. P. Amgle, and D. Bridge. 1978. Mammals from the sea, mainland and islands at the southern tip of South America. Mammalia 42(1):105-114.

Noteworthy records of mammals from the southern tip of South America and vicinity are presented. Eight native terrestrial mammals, one native otter, six introduced mammals (including two feral bovids), three cetaceans and two pinnipeds are included. Most localities involved are on Isla Grande de Tierra del Fuego or Isla de los Estados.

1280. Pine, R. H., I. R. Bishop, and R. L. Jackson. 1970. Preliminary list of mammals of the Xavatina/Cachimbo expedition (central Brazil). Trans. R. Soc. Trop. Med. Hyg. 64(5):668-670.

Rodents collected included Sciurus aestuans, Oryzomys bicolor, O. capito, O. concolor, O. macconnelli, O. subflavus, Neacomys spinosus, Nectomys squamipes, Rhipidomys mastacalis, Akodon spp., Zygodontomys lasiurus, Oxymycterus spp. and Proechimys guyannensis.

1281. Pine, R. H., S. D. Miller, and M. L. Schamberger. 1979. Contributions to the mammalogy of Chile. Mammalia 43(3):339-376.

Life history data, new distributional records and taxonomic notes are presented for 92 forms of mammals found in Chile. This includes introduced Castor, 36 cricetines, introduced Ondatra, three introduced Old World murids, two caviids, three chinchillids, two myocastorids, six octodontids, three ctenomyids and two Abrocoma.

1282. Pinkham, C. F. A. 1973. The evolutionary signficance of locomotor patterns in the Mexican spiny mouse, Liomys irroratus. J. Mammal. 54:742-746.

Liomys irroratus were captured near Ciudad Victoria, Tamaulipas, Mexico. Locomotor movements were filmed with a Hycam camera at speeds ranging from 200 to 300 frames per second. It appears the

locomotor patterns for this species have changed little or not at all since the origin of the heteromyids during the Oligocene.

1283. Pinto, R. M., A. Kohn, B. M. M. Fernandes, and D. A. Mello. 1982. Nematodes of rodents in Brazil, with description of Aspidodera vicentei n. sp. Syst. Parasitol. 4:263-267.

Nine species of rodents collected in the states of Goias and Bahia, Brazil, were infested with 12 different species of nematodes. A new species of nematode, Aspidodera vicentei, is described. The holotype was found in the small intestine of a Nectomys squamipes collected at Formosa, Goias State, Brazil.

1284. Pires, F. D. de Avila. 1960a. Rodents collected in the region of Lagoa Santa, Minas Gerais, Brasil. Arq. Mus. Nac. 50:25-46. (In Portuguese)

1285. Pires, F. D. de Avila. 1960b. A new genus of rodent from South America. Bol. Mus. Nac. Nova Ser. Zool. 220:1-6. (In Portuguese)

1286. Pizzimenti, J. J. 1978. A test of the niche-variation in some Peruvian rodent communities. Congr. Theriol. Int. 2:252. Abstract only.

1287. Pizzimenti, J. J. 1979. The relative effectiveness of three types of traps for small mammals in some Peruvian rodent communities. Acta Theriol. 24(25):351-361.

Comparisons were made among species and size classes caught by three commonly used, small-mammal traps. Results suggest that trap design can bias estimates of size variation and species diversity. McGill rat traps are more effective for trapping larger species. Sherman live-traps are more effective for trapping the smaller phenotypes and species. Museum Special snap traps were the most effective in that they caught a broad size spectrum of individuals and species.

1288. Pizzimenti, J. J. and R. De Salle. 1980. Dietary and morphometric variation in some Peruvian rodent communities: The effect of feeding strategy on evolution. Biol. J. Linn. Soc. 13(4):263-285.

This study examines the relationship between feeding strategy and the evolutionary radiation of three genera of broadly sympatric cricetid rodents (Phyllotis, Akodon, Calomys) found in the Andes of southern Peru.

1289. Pizzimenti, J. J. and R. De Salle. 1981. Factors influencing the distributional abundance of two trophic guilds of Peruvian cricetid rodents. Biol. J. Linn. Soc. 15(4):389-394.

The distributional abundance of 13 species of southern Peruvian rodents is significantly correlated with altitude and patterns of vegetation but vegetation is a better predictor than altitude. Coincidental reversals in the altitudinal trends of both vegetation and rodents demonstrate that rodents are responding to vegetation patterns.

1290. Pizzimenti, J. J. and L. R. McClenaghan, Jr. 1974. Reproduction, growth and development, and behavior in the Mexican prairie dog, Cynomys mexicanus (Merriam). Am. Midl. Nat. 92:130-145.

1291. Pohl, M. 1977. Hunting in the Maya village of San Antonio Rio Hondo, Orange Walk District, Belize. Pages 52-63 in J. Belisle, S. Musa, A. Shoman, Eds. The Rio Hondo Project, an Investigation of the Maya of Northern Belize. J. Belizean Affairs 5:1-98.

Includes data on Agouti and Dasyprocta.

1292. Polop, J. J., N. C. Gardenal, and M. S. Sabattini. 1982. Rodent communities in sorghum fields in the Province of Cordoba and their possible relationship with Argentinian hemorragic fever. Ecosur 9:107-116. (In Spanish)

1293. Porter, S. L. 1979. Microsporum gypseum infection in three Mexican prairie dogs. Vet. Med. Small Anim. Clin. 74(1):71-73.

Microsporum gypseum, a geophilic dermatophyte fungus that affects dogs, cats, horses, man and wild rodents was isolated from three Mexican prairie dogs.

1294. Powell, M. A. and S. Sikes. 1970. Chromosome numbers of some Chihuahuan desert compositae. Southwest. Nat. 15:175-186.

Chromosome numbers are recorded for 72 species of compositae which occur within or near the Chihuahuan Desert region of Arizona and Mexico.

1295. Price, R. D. 1972. Host records for Geomydoecus (Mallophaga: Trichodectidae) from the Thomomys bottae-umbrinus complex (Rodentia: Geomyidae). J. Med. Entomol. 9(6):537-544.

Based on the identification of more than 2,300 adult lice from over 225 individual pocket gophers, distributions are given for the 10 currently recognized species of Geomydoecus found among 96 subspecies of Thomomys bottae and T. umbrinus in western United States and Mexico.

1296. Price, R. D. 1974. Two new species of Geomydoecus from Costa Rican pocket gophers (Mallophaga: Trichodectidae). Proc. Entomol. Soc. Wash. 76(1):41-44.

Two new species of Geomydoecus Ewing are described and illustrated from material from Macrogeomys taken in Costa Rica: G. setzeri from M. underwoodi and G. cherrieí from M. cherrieri.

1297. Price, R. D. and K. C. Emerson. 1971. A revision of the genus Geomydoecus (Mallophaga: Trichodectidae) of the New World pocket gophers (Rodentia: Geomyidae). J. Med. Entomol. 6:228-257.

A study of over 3,800 adult specimens of Geomydoecus, representing material from over 3/4 of the recognized species of pocket gophers, has resulted in the redescription of the 11 previously described Geomydoecus species as well as the description of 31 new species and 3 new subspecies. The pocket gophers were collected in Mexico and the United States.

1298. Price, R. D. and K. C. Emerson. 1972. A new subgenus and three new species of Geomydoecus (Mallophaga: Trichodectidae) from Thomomys (Rodentia: Geomyidae). J. Med. Entomol. 9:463-467.

Three new species of lice are described. The new species and their type-hosts are Geomydoecus jamesbeeri from Thomomys umbrinus supernus collected at Santa Rosa, Guanajuato, Mexico; G. genowaysi from T. u. madrensis collected in Chihuahua; and G. dickermani from T. u. tolucae collected at Nevada de Toluca, Mexico.

1299. Price, R. D. and R. A. Hellenthal. 1975a. A reconsideration of Geomydoecus expansus (Duges) (Mallophaga: Trichodectidae) from the yellow-faced pocket gopher (Rodentia: Geomyidae). J. Kans. Entomol. Soc. 48:33-42.

Geomydoecus expansus is redescribed, with its occurrence recorded from 22 subspecies of Pappogeomys castanops; a neotype designation establishes P. c. excelsus as the type-host. A closely related new species, G. martini taken from seven subspecies of P. castonops, is described; the type-host is P. c. subnubilus. The P. c. subnubilus were collected in northern Mexico.

1300. Price, R. D. and R. A. Hellenthal. 1975b. A review of the Geomydoecus texanus complex (Mallophaga: Trichodectidae) from Geomys and Pappogeomys (Rodentia: Geomyidae). J. Med. Entomol. 12(4):401-408.

Geomydoecus texanus is redescribed and illustrated, with the nominate subspecies restricted to material from Geomys personatus. Five new species and subspecies of Geomydoecus are described from five subspecies of Pappogeomys castanops. The pocket gophers were collected in the USA and Mexico.

1301. Price, R. D. and R. A. Hellenthal. 1976. The Geomydoecus (Mallophaga: Trichodectidae) from the hispid pocket gopher (Rodentia: Geomyidae). J. Med. Entomol. 12(6):695-700.

Four species of Geomydoecus are recognized from the hispid pocket gopher, Orthogeomys hispidus. They are G. copei, G. yucatanensis, G. chapini, and G. hoffmanni.

1302. Price, R. D. and R. A. Hellenthal. 1979. A review of the Geomydoecus tolucae complex (Mallophaga: Trichodectidae) from Thomomys (Rodentia: Geomyidae), based on qualitative and quantitative characters (Geomydoecus fulvi, Geomydoecus chihuahuae, Geomydoecus chihuahuae emersoni, Geomydoecus pattoni, new taxa, Mexico, Arizona). J. Med. Entomol. 16:265-274.

Geomydoecus tolucae is redescribed and illustrated: its known host range is five subspecies of Thomomys umbrinus from the Mexican states of Puebla, Veracruz, and Mexico. Four new species and subspecies of Geomydoecus are described.

1303. Price, R. D. and R. A. Hellenthal. 1980. The Geomydoecus neocopei complex (Mallophaga: Trichodectidae) of the Thomomys umbrinus pocket gophers (Rodentia: Geomyidae) of Mexico. (New taxa). J. Kans. Entomol. Soc. 53:567-580.

Seven species of pocket gopher lice Geomydoecus (Thomomydoecus) neocopei complex are described and illustrated.

1304. Price, R. D. and R. A. Hellenthal. 1981. Taxonomy of the Geomydoecus umbrini complex (Mallophaga: Trichodectidae) from Thomomys umbrinus (Rodentia: Geomyidae) in Mexico. Ann. Entomol. Soc. Am. 74:37-47.

Eight specific and subspecific taxa of the Geomydoecus umbrini complex were collected from Thomomys umbrinus trapped in Mexico.

1305. Quentin, J.-C., B. B. Babero, and P. E. Cattan. 1979. The helminth fauna of Chile: V. Syphacia (Syphacia) phyllotios n. sp., a new oxyurid parasite from a cricetid rodent in Chile. Bull. Mus. Nat. Hist. Nat. Paris Ser. 1(2):323-327. (In French)

A new Oxyurid Syphacia (Syphacia) phyllotios parasite of a cricetid rodent Phyllotis darwini in Chile is described.

1306. Quintanilla, R. H., H. F. Rizzo, and C. P. Fraga. 1973. Rodents that damage agriculture in the Republic of Argentina. EUDEBA/LECTORES, Bs. As. (In Spanish)

1307. Radden, R. D. 1968. The Dominican Republic hutia, Plagiodontia aedium hylaeum in captivity. Unpublished thesis, Univ. of Puget Sound, Tacoma, Washington.

1308. Ramirez, A. I. 1982. General characteristics of a wild population of Sigmodon spp. Bol. Inf. Dir. Malar. San. Amb. 12(6):325-332. (In Spanish)

1309. Ramirez, S., I. Bassols, and S. Santillan-Alarcon. 1980. Hirstionyssus (Acarina, Mesostignata) of Iztaccihuatl, Mexico, with description of a new species (Hirstionyssus martinezi) rodent ectoparasites. Folia Entomol. Mex. Sept. 1980 (44):157-167. (In Spanish)

Five species of mites of the genus Hirstionyssus were collected from rodents at the Iztaccihuatl Volcano, Pueblo, Mexico. The rodents were Pappogeomys merriami, Sciurus aureogaster, Thomomys umbrinus, Liomys irroratus, Reithrodontomys chrysopsis, Peromyscus maniculatus, P. melanotis and Microtus mexicanus.

1310. Ramirez-Pulido, J. 1969. Contributions from a study of the mammals of the National Park "Lagunas de Zempoala," Morelos, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 40:253-290. (In Spanish)

Two hundred and eighty museum specimens were studied that were collected at the Lagunas de Zempoala National Park, which is located at the borders of the states of Mexico, Morelos and the Federal District. It is 65 km south of Mexico City, in the southernmost part of the Transvolcanic Belt. The fauna is predominantly Nearctic, since 85.3% of the species studied have affinities with this region and only 14.7% are of Neotropical affinities.

1311. Ramirez-Pulido, J. and M. C. Britton. 1981. An historical synthesis of Mexican mammalian taxonomy. Proc. Biol. Soc. Wash. 94:1-17.

The known terrestrial mammalian fauna of Mexico is composed of 10 orders, 32 families, 142 genera, and 436 species. In all, 73.4% of the mammalian fauna native to Mexico was described by 18 authors, and 101 other authors named the remainder.

1312. Ramirez-Pulido, J. and W. Lopez-Forment. 1976. Damage caused by arboreal squirrels (Sciurus aureogaster) to coconut trees in the Costa Grande of Guerrero, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 47(1):67-74. (In Spanish)

Observations of the damage done by the red bellied squirrel (Sciurus aureogaster) in six different coconut plantations on the coastal plains (Costa Grande) of Guerrero, Mexico, were made during 1972 and 1973. The evaluation of the damage gave an average of 4.6 (2.9-7.8) percent of lost coconuts per crop and per hectare per year.

1313. Ramirez-Pulido, J. and C. Sanchez-Hernandez. 1971. Tylomys nudicaudus from the Mexican states of Puebla and Guerrero. J. Mammal. 52(2):481.

Climbing rats are recorded for the first time from Puebla and Guerrero, Mexico.

1314. Ramirez-Pulido, J. and C. Sanchez-Hernandez. 1972. Owl pellets from the Canon cave in Zopilote, Guerrero, Mexico. Rev. Soc. Mex. Hist. Nat. 33:107-112. (In Spanish)

Owl pellets, Tyto alba, were collected from the Canon cave in Canon del Zopilote, 13 km south of Mezcala, Guerrero. Species of rodent remains found in the pellets were Liomys irroratus, L. pictus, Heteromys sp., Tylomys nudicaudus villai, Ototylomys phyllotis, Reithrodontomys fulvescens, Peromyscus banderanus, P. boylii, Baiomys musculus, Sigmodon hispidus, Neotoma alleni, Rattus rattus, and Mus musculus.

1315. Ramirez-Pulido, J., A. Martinez, and G. Urbano-V. 197[illegible]. Mammals from the Costa Grande region of Guerrero, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 48(1):243-292. (In Spanish)

Rodents collected from the Costa Grande region of Guerrero were Sciurus aureogaster, Orthogeomys grandis, Liomys pictus, Reithrodontomys fulvescens, Peromyscus banderanus, P. evides, P. mexicanus, Baiomys musculus, Sigmodon [illegible]otensis, and S. alleni

1316. Ramirez-Pulido, J., R. Lopez Wilchis, C. Mudespacher, and I. E. Lira. 1982. A catalog of the native terrestrial mammals in Mexico. Edit. Trillas, Mexico. 126 pp. (In Spanish)

1317. Ramirez-Pulido, J., R. Lopez-Wilchis, C. M. Ziehl, and I. E. Lira. 1983. A bibliography and listing of the recent mammals of Mexico. Universidad Autonoma Metropolitana Unidad Iztapalapa, Mexico. 336 pp. (In Spanish)

1318. Rau, J. R. 1980. Bioenergetics and dietary selection in two sympatric species Akodon olivaceus brachiotis and A. longipilis apta (Rodentia: Cricetidae). Unpublished thesis, Univ. Austral de Chile. 38 pp. (In Spanish)

1319. Rau, J. R. 1982. Dietary selection for consumption and hoarding of seeds by Akodon olivaceus brachiotis Waterhouse (Rodentia, Cricetidae) (Rodent as tree seed pest, Chile). Medio Ambiente 6:19-22.

Tree seed selection by Akodon olivaceus brachiotis was experimentally studied. It is shown that among the seeds of Gevuina avellana, Aextoxicon punctatum, Eucryphia cordifolia, Podocarpus salignus, and Persea lingue, only the G. avellana seeds were selected by A. olivaceus brachiotis.

1320. Rau, J. R. and M. E. Kennedy. 1981. An addendum to the Chilean mammal bibliography prepared by Pefaur and Caceres, 1976. Bol. Soc. Biol. Concepcion 52:135-143. (In Spanish)

This publication presents references not cited in the 1976 bibliography prepared by Pefaur and Caceres and includes works not yet published (i.e., in print, theses, and reports).

1321. Rau, J. R. and R. Murua. 1980. Energy balance and diet selection in sympatric rodents Akodon olivaceus and A. longipilis (Cricetidae). Arch. Biol. Med. Exp. 13(1):101. Abstract only. (In Spanish)

1322. Rau, J. R. and J. L. Yanez. 1981. New data on the diet of Bubo virginianus Vieillot, 1817 at Magallanes. Not. Mens. Mus. Hist. Nat. (Santiago) 25(295):9-10. (In Spanish)

Cricetid rodents represent 99.2% of the diet of Bubo virginianus at Magallanes, Chile, in the spring. Reported here are dietary analyses of pellets collected in the winter months at Magallanes. Cricetids are only 48.8% of the total diet.

1323. Rau, J. R., R. Murua, and M. Rodermann. 1981. Bioenergetics and food preferences in sympatric southern Chilean rodents. Oecologia (Berl.) 50(2):205-209.

Ecological divergences in two congeneric sympatric woodland rodents, Akodon olivaceus brachiotis and Akodon longipilis apta were demonstrated from determination of energetic budgets and food preferences.

1324. Rau, J. R., J. L. Yanez, and F. M. Jaksic. 1978. Confirmation of Notiomys macronyx alleni O. and Eligmodontia typus typus C. and the first record for Akodon (Abrothrix) lanosus T. (Rodentia: Cricedae) from the Ultima Esperanza Zone (Region XII, Magallanes). An. Inst. Patagonia 9:203-204. (In Spanish)

Owl pellets of Bubo virginianus were collected in the National Park "Torres del Paine." Rodent remains were identified as Notiomys macronyx alleni and Eligmodontia typus typus. This is the first record of the presence of both species in Magallanes. We also identified remains of Akodon (Abrothrix) lanosus, which expands its previously known distribution within Magallanes.

1325. Rausch, R. L., A. D'Alessandro, and M. Ohbayashi. 1984. The taxonomic status of Echinococcus cruzi Brumpt and Joyeux, 1924 (Cestoda: Taeniidae) from an agouti (Rodentia: Dasyproctidae) in Brazil. J. Parasitol. 70(2):295-302.

Paratype material of Echinococcus cruzi described from an agouti in Brazil is compared with Echinococcus oligarthrus of which the larval stage occurs also in agoutis and other rodents in South and Central America.

1326. Ready, P. D., R. Lainson, and J. J. Shaw. 1983. Leishmaniasis in Brazil: XX. Prevalence of "enzootic rodent leishmaniasis" (Leishmania mexicana amazonensis) and apparent absence of "pian bois" (Le. braziliensis guyanensis), in plantations of introduced tree species and in other non-climax forests in eastern Amazonia. Trans. R. Soc. Trop. Med. Hyg. 77:775-785.

The main rodent reservoir for Leishmania mexicana amazonensis is Proechimys guyannensis in the Amazon basin of Brazil.

1327. Reddell, J. R. 1971. A preliminary bibliography of Mexican Cave biology with a checklist of published records. Assoc. Mex. Cave Stud. Bull. 3:1-184.

1328. Reddell, J. R. 1981. A review of the cavernicole fauna of Mexico, Guatemala and Belize. Texas Mem. Mus., Univ. Texas Bull. 27:1-327.

1329. Reddell, J. R. and W. R. Elliot. 1973. A checklist of the cave fauna of Mexico. V. Additional records from the Sierra de Guatemala, Tamaulipas. Assoc. Mex. Cave Stud. 5:181-190.

1330. Reddell, J. R. and R. W. Mitchell. 1971. A checklist of the cave fauna of Mexico. I. Sierra de El Abra, Tamaulipas and San Luis Potosi. Assoc. Mex. Cave Stud. 4:137-180.

1331. Redi, C. A., S. Garagna, M. S. Merani, E. Capanna, N. O. Bianchi, and M. G. Manfredi-Romanini. 1982. Microdensitometric evaluation of the DNA content, as ploidy parameter, of spermatozoa in the polymorphic chromosomal system of Akodon molinae Cabrera (Rodentia, Cricetidae). Gamete Res. 5:345-354.

The influence of chromosome variability on the production of euploid spermatozoa was investigated in the Akodon molinae. This consists of individuals whose chromosome constitution is 2n = 42, 2n = 43, or 2n = 44. It is suggested that a selection mechanism is operative against aneuploid spermatozoa in the epididymis.

1332. Rego, A. A. 1970. Occurrence of Strongyloides venezuelensis in Rattus norvegicus in Rio de Janeiro. Atas Soc. Biol. Rio de J. 13(1-2):19-20. (In Portuguese)

1333. Reig, O. A. 1965a. Data on a community of small mammals from the coastal region of the District of General Pueyrredon and the surrounding districts (Buenos Aires Province, Argentina). Physis 25:205-211. (In Spanish)

The paper is a preliminary progress report of the study of the small mammals (cricetids, caviomorphs and didelphids) inhabiting the coastal belt of the southeastern corner of Buenos Aires Province.

1334. Reig, O. A. 1965b. Rodents and marsupials in the District of General Pueyrredon and adjacent regions (Province of Buenos Aires). Publ. Mus. Municipal Cienc. Nat. Mar del Plata 1(6):203-224. (In Spanish)

1335. Reig, O. A. 1970. Ecological notes on the fossorial octodont rodent Spalacopus cyanus (Molina). J. Mammal. 51(3):592-601.

In the coastal region of central Chile the coruro, Spalacopus cyanus, lives in large populations consisting of many small, nomadic colonies. One colony contained 15 members belonging to no less than three generations. A colony of coruros occupies a common burrow system and apparently wanders continuously in search of food. Coruros feed primarily, if not exclusively, on the tubers and underground stems of the lily, Leucoryne ixiodes.

1336. Reig, O. A. 1972. The evolutionary history of the South American cricetid rodents. Unpublished Ph.D. dissertation, Univ. College, London.

1337. Reig, O. A. 1975a. Considerations on the systematical, ecological and genetical aspects in the study of a population of rodents linked with Argentinian Hemorrhagic Fever. III Jornadas Argentinas de Microbiologia, San Miguel de Tucuman, 16-21 de Septeimbre, 1973. Mesas Redondas:363-377. (In Spanish)

1338. Reig, O. A. 1975b. The diversity, history, evolution and dispersion of South American cricetid rodents. Acta Cient. Venez. 25 (Supplement 1). Abstract only. (In Spanish)

1339. Reig, O. A. 1977. The rate of chromosomal change and the rate of morphological differentiation in South American rodents and marsupials. Acta Cient. Venez. 28 (Supplement 1):96. Abstract only. (In Spanish)

1340. Reig, O. A. 1978. Chromosomal speciation in South American tropical rodents. Abstracts Papers XVI International Congress of Genetics, Moscow 21-30 August 1978. Abstract only.

1341. Reig, O. A. 1981a. A theory on the origin and evolution of South American mammals. Monogr. Nat. (Mus. Municipal Cienc. Nat. Mar de Plata) 1:1-162. (In Spanish)

1342. Reig, O. A. 1981b. Models of the chromosomal speciation in Proechimys of Venezuela. Pages 149-190 in O. A. Reig, Ed. Ecology and Genetics of Animal Speciation. Equinoccio, Edit. Univ. Caracas, Simon Bolivar. (In Spanish)

1343. Rieg, O. A. 1984. Geographic distribution and evolutionary history of South American muroids, Cricetidae: Sigmodontinae. Rev. Brasil. Genet. 7(2):333-365. (In Portuguese)

About 22% of the living species of South American mammals belong to the subfamily Sigmodontinae of cricetid muroid rodents. Fifty-one genera and approximately 249 species are now recognized in the South American sigmodontine fauna. The different hypotheses on the origin and time of arrival to South America of these rodents are discussed.

1344. Reig, O. A. 1985a. Distribution patterns and evolutionary history of high Andean rodents. In M. Monasterio and F. Vuilleumier, Eds. High Altitude Tropical Biogeography. Oxford University Press Inc., New York. 65 pp.

1345. Reig, O. A. 1985b. The significance of cytogenetical methods for the separation and interpretation of species, with special reference to mammals. Trab. III Reun. Iberoamericana de Conservacion y Ecologia de Vertebrados, Buenos Aires 13(3):20-44. (In Spanish).

1346. Reig, O. A. and M. Aguilera. 1978. The present condition in the species problem and speciation in rodents. Acta Cient. Venez. 29 (Supplement 1):114. Abstract only. (In Spanish)

1347. Reig, O. A. and P. Kiblisky. 1968a. Chromosomes in four species of rodent of the genus Ctenomys (Rodentia: Octodontidae) from Argentina. Experientia 24:274-276.

Chromosomes are compared for Ctenomys tucumanus, C. latro, C. occultus and C. tuconax.

1348. Reig, O. A. and P. Kiblisky. 1968b. The somatic chromosomes of Akodon urichi (Rodentia: Cricetidae). Acta Cient. Venez. 19:76. (In Spanish)

Both sexes of Akodon urichi have a diploid number of 2n = 18. The specimens were collected at Rancho Grande, Aragua State, Venezuela.

1349. Reig, O. A. and P. Kiblisky. 1969. Chromosome multiformity in the genus Ctenomys (Rodentia, Octodontidae). Chromosoma (Berlin) 28:211-244.

Karotypes of 11 species of the South American burrowing rodents, genus Ctenomys, are described.

1350. Reig, O. A. and M. Useche. 1975. Multiform chromosomes in the spiny rat, genus Proechimys, in Venezuela (Rodentia, Echimyidae). Acta Cient. Venez. 25 (Supplement 1). Abstract only. (In Spanish)

1351. Reig, O. A. and M. Useche. 1976. Karyotypic diversity and systematics in Venezuelan Proechimys (Rodentia: Echimyidae) with additional notes on populations in Peru and Colombia. Acta Cient. Venezol. 27:132-140. (In Spanish)

1352. Reig, O. A., J. R. Contreras, and M. J. Piantanida. 1965a. A statistical and morphological study of populations of the genus Ctenomys in the province of Entre Rios and the Buenos Aires coastal zone on the la Plata River (Rodentia). Physis 25:161-163. Abstract only. (In Spanish)

Three species of Ctenomys (C. talarum, C. torquatus and C. minutus) were collected in four localities of the Province of Entre Rios (Argentina) and in the locality of Magdalena (Buenos Aires).

1353. Reig, O. A., J. R. Contreras, and M. J. Piantanida. 1965b. Contributions on the systematics of members of the genus Ctenomys (Rodentia: Octodontidae). Contrib. Cient. Fac. Cienc. Exactas Nat. Univ. B. Aires Ser. Zool. 2:301-351. (In Spanish)

1354. Reig, O. A., P. Kiblisky, and O. J. Linares. 1971. Notes on Akodon urichi venezuelensis (Rodentia: Cricetidae), an interesting mouse for cytogenetic research. Acta Biol. Venez. 7(2):157-189. (In Spanish)

The discovery of a low chromosome complement in Akodon urichi (2n = 18) makes this mouse a potentially important tool for cytogenetic and evolutionary studies. In this paper, the authors discuss the taxonomic situation of the various forms of the "urichi group" of Akodon subspecies. Four subspecies are tentatively recognized for Venezuela, Trinidad and Tobago.

1355. Reig, O. A., P. Kiblisky, and I. S. Lobig. 1970. Isomorphic sex chromosomes in two Venezuelan populations of the spiny rat, genus Proechimys (Rodentia: Cricetidae). Experientia 26:201-202.

A male and female Proechimys collected near La Esmeralda, Amazonas Territory, Venezuela, showed exactly the same karyotypes of 26 chromosomes without morphologically distinguishable X and Y chromosomes in the male. These karyotypes were compared with Proechimys guyannensis guairae which has a diploid number of 2n = 46 and the male also does not have distinguishable X and Y chromosomes. Based upon this cytogenetic evidence we suggest the La Esmeralda population be considered a distinct species and propose the name Proechimys cherriei.

1356. Reig, O. A., N. Olivo, and P. Kiblisky. 1971. The idiogram of the Venezuelan vole mouse, Akodon urichi venezuelensis Allen (Rodentia: Cricetidae). Cytogenetics 10:99-114.

The Venezuelan vole mouse, Akodon urichi venezuelensis, is a small South American cricetid. Their somatic chromosomes have been morphologically and statistically investigated. The chromosome number is 2n = 18. The eight pairs of autosomes are metacentric; four pairs are similar in size and arm ratio, but the others are easy to identify. The animals used in the study

were collected at the Rancho Grande Field Station, Aragua State Venezuela, on several occasions from March 1968 to May 1969.

1357. Reig, O. A., A. Perez-Zapata, and P. Soriano. 1982. The discovery of Oryzomys (Melanomys) caliginosus in western Venezuela. Acta Cient. Venez. 33 (Supplement 1):41I. Abstract only. (In Spanish)

1358. Reig, O. A., P. Soriano, and J. Ojasti. 1970. Variability of the last superior molar in a population of capybara (Hydrochoerus hydrochoeris) in the llanos of Apure. Acta Cient. Venez. 21 (Supplement 1):33. Abstract only. (In Spanish)

1359. Reig, O. A., J. Sportorno, and R. Fernandez. 1972. A preliminary survey of chromosomes in populations of the Chilean burrowing octodont rodent Spalacopus cyanus Molina (Cavimorpha; Octodontidae). Biol. J. Linn. Soc. 4(1):29-38.

Five populations in central Chile were sampled. Karyotype varied by habitat; some individuals were similar to Octodon degus, and others to species of Ctenomys. The evolutionary and systematic significance of these results is discussed.

1360. Reig, O. A., M. M. Tranier, and M. A. Barros. 1979. The identification of the chromosomes of Proechimys guyannensis (E. Geoffroy, 1803) and Proechimys cuvieri (Petter, 1978) (Rodentia: Echimyidae). Mammalia 43(4):501-505. (In French)

Karyotypic studies of Proechimys guyannensis (2n = 40) based on topotypical specimens which agree with the type, allowed to assess the limits of this species and to confirm that P. cherriei must be considered as its junior synonym. P. cuvieri (2n = 28) is clearly distinctive from P. guyannensis, but its status as a different species is in need of further study.

1361. Reig, O. A., M. Aguilera, M. A. Barros, and M. Useche. 1978a. The chromosomal evolution of a Rassenkreis in the superspecies Proechimys guairae (Rodentia, Echimyidae). Acta Cient. Venez. 29 (Supplement 1):113. Abstract only. (In Spanish)

1362. Reig, O. A., M. Aguilera, M. A. Barros, and M. Useche. 1978b. A Rassenkreis of chromosome forms in Venezuelan spiny rats of the Proechimys guairae superspecies. Abstracts Papers II Int. Theriological Cong., 20-27 June 1978, Brno, Czechoslovakia 74. Abstract only.

1363. Reig, O. A., M. Aguilera, M. A. Barros, and M. Useche. 1980. Chromosomal speciation in a rassenkreis of Venezuelan spiny rats (Genus Proechimys, Rodentia, Echimyidae). Genetica 52-53:291-312.

A series of populations of spiny rats (Proechimys) of NW and N Central Venezuela were found to belong to a circle of species and subspecies which surrounds the Andes of Merida-Cordillera de la Costa mountain axis.

1364. Reig, O. A., M. A. Barros, M. Useche, and M. Aguilera. 1978. Extreme karyotypes in populations of Nectomys squamipes in Venezuela and Trinidad. Acta Cient. Venez. 29 (Supplement 1):113. Abstract only. (In Spanish)

1365. Reig, O. A., J. V. Pincheira, A. O. Spotorno, and P. Waller. 1972. New evidence of a 38 chromosome karyotype in South American populations of the roof rat Rattus rattus L. (Rodentia: Muridae). Experientia 28:225-227.

Rattus rattus is highly variable when comparing chromosome numbers and structures. Compared in this paper are populations of Rattus rattus from Caripe, Monagas State, Venezuela, and Mehuin, Valdivia Province, Chile. Both populations had a karyotype of 2n = 38.

1366. Reig, O. A., M. A. Barros, M. Useche, M. Aguilera, and O. J. Linares. 1979. The chromosomes of spiny rats Proechimys trinitatis from Trinidad and eastern Venezuela (Rodentia: Echimyidae). Genetica 51(2):153-158.

A detailed description of the karyotype of Proechimys trinitatis based on specimens from Trinidad is given. It differs from the karyotype of Proechimys guyannensis which is interpreted as an indication of the need of giving full species status to P. trinitatis.

1367. Reise, D. 1973. A key for identifying the skulls of Chilean marsupials and rodents. Gayana (Concepcion, Chile) 27:1-20. (In Spanish)

1368. Reise, D. and W. Venegas. 1974. Behavioral studies of the small mammals in the region of Puerto Ibanez (Lago General Carrera), Aisen, Chile. Bol. Soc. Biol. Concepcion 47:71-85. (In Spanish)

Small mammals were studied in the region north of "Lago General Carrera." Information is presented on sexual activity, age structure, stomach contents and species composition. Oryzomys longicaudatus philippi, Phyllotis darwini xanthopygus and Akodon xanthorhinus canescens showed abnormally high population densities. This probably was a result of the large amounts of food available in the study area.

1369. Reyes, H., E. Inzunza, and G. Doren. 1972. Frequency of human infection by Hymenolepis diminuta in Santiago, Chile, 1957-1971. Chil. Parasitol. 27:29-33. (In Spanish)

Human infection with the rat tapeworm is seldom observed in Chile. Between 1957-1971, only 11 cases were found. Yet the authors conclude that H. diminuta infection seems to be more frequently observed on a worldwide scale than was previously assumed.

1370. Reynolds, T. J. and J. W. Wright. 1979. Early postnatal physical and behavioral development of degus (Octodon degus). Laboratory Animals 13:93-100.

Six litters of Octodon degus were studied from birth to 10 days of age. Newly born degus had open eyes, upper and lower pigment, fur, and teeth. Within 3-4 hours of birth they were able to walk. Solid food was ingested from day 6.

1371. Rhoades, R. E. 1977. Vertebrate pests in Central America and the Caribbean: An anthropological investigation. Katuaob 10:58-71.

1372. Rhoades, R. E. 1983. The other side of the coin: animals as pests. Proc. Third Annual Farming Systems Research Symposium, Kansas State University, Manhattan, Kansas. 19 pp.

This paper presents preliminary contributions to the social science of animal pests, emphasizing vertebrates in farming systems. Exploratory research was carried out in the Guatemalan highlands, The Dominican Republic, Peru, and Sri Lanka.

1373. Rhoades, R. E. and P. Bidegaray. 1983. Socio-economic aspects of vertebrate pests: tradition and change. Pages 49-64 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983. (In Spanish)

This is the first attempt to understand the sociocultural role rodents play in rural agriculture. Questions addressed are: (1) how do farmers perceive their vertebrate pest problems; (2) what traditional control strategies are used; and (3) what social criterions are used in implementing control programs.

1374. Ribeiro, R. D. 1971. A study of naturally infected Brazilian rodents with Trypanosoma cruzi. Unpublished thesis, Farm. Odont. Ribeirao Preto, USP, Ribeirao Preto, Brazil. (In Portuguese)

1375. Ribeiro, R. D. 1973. New reservoirs of Trypanosoma cruzi. Rev. Bras. Biol. 33(3):429-437. (In Portuguese)

Strains of T. cruzi were isolated from five species of rodents collected in northeastern Sao Paulo State, Brazil: Oryzomys subflavus, Calomys tener, Zygodontomys lasiurus lasiurus, Thomasomys dorsalis collinus, and Cercomys cunicularius cunicularius.

1376. Ribeiro, R. D. and M. P. Barretto. 1968. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. XXVI. The natural infection of the water rat Nectomys squamipes squamipes (Brants 1827) with T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 10:229-237. (In Portuguese)

1377. Ribeiro, R. D. and M. P. Barretto. 1972a. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. XLIX: Synonymy of Trypanosoma akodoni Carini and Maciel, 1915 and T. cruzi Chagas, 1909. Rev. Inst. Med. Trop. Sao Paulo 14(3):162-170. (In Portuguese)

A strain of T. cruzi was isolated from an Akodon nigritus nigritus trapped at Ipanema, SP, Brazil. The validity of Trypanosoma akodoni described from the same host, Akodon nigritus nigritus, is discussed and rejected, T. akodoni is considered synonymous of T. cruzi.

1378. Ribeiro, R. D. and M. P. Barretto. 1972b. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. L: Synonymy of Trypanosoma deanei Coutinho and Pattolli, 1964 in T. cruzi Chagas, 1909. Rev. Bras. Biol. 32(1):105-111. (In Portuguese)

A strain of Trypanosoma cruzi was isolated from an Oxymycterus hispidus quaestor trapped at Penapolis, Sao Paulo, Brazil.

1379. Ribeiro, R. D. and M. P. Barretto. 1972c. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. LII. Natural infections of Sciurus aestuans ingrami Thomas, 1901, by T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 14:352-359. (In Portuguese)

A strain of T. cruzi was isolated from a specimen of Sciurus aestuans ingrami trapped at Franca, State of Sao Paulo, Brazil. When injected into baby mice the infection was severe with a short prepatent period, high parasitemia and a mortality rate of 56.7%.

1380. Ribeiro, R. D. and M. P. Barretto. 1975. Studies on the reservoirs and wild vectors of Trypanosoma cruzi. LVIII. The natural infection of Akodon lasiotis (Lund 1841) with T. cruzi. Rev. Inst. Med. Trop. Sao Paulo 17:247-252. (In Portuguese)

A strain of T. cruzi was isolated from an Akodon lasiotis trapped at Ribeirao Preto, SP, Brazil. One hundred percent of the baby white mice inoculated with blood trypanosomes from this wild rat became infected.

1381. Ribeiro, R. D. and E. Juarez. 1972. The natural infection of the rat, Oryzomys nigripes (Desmarest, 1819) with T. cruzi. Rev. Soc. Bras. Med. Trop. 6(1):12-18. (In Portuguese)

A strain of Trypanosoma cruzi was isolated from an Oryzomys nigripes collected at Salto de Pirapora, SP, Brazil.

1388. Robbins, L. W. and R. J. Baker. 1981. An assessment of the nature of chromosomal rearrangements in 18 species of Peromyscus (Rodentia: Cricetidae). Cytogenet. Cell Genet. 31:194-202.

G- and C-banded karyotypes from nine previously unstudied species of Peromyscus are described and compared to the nine species described in the literature. P. difficilis and P. ochraventer used in the study were collected in Mexico.

1389. Robertson, P. B. 1975. Reproduction and community structure of rodents over a transect in southern Mexico. Unpublished Ph.D. dissertation, Univ. Kans. 124 pp.

1390. Robertson, P. B. and G. G. Musser. 1976. A new species of Peromyscus (Rodentia: Cricetidae), and a new specimen of P. simulatus from southern Mexico, with comments on their ecology. Occas. Pap. Mus. Nat. Hist. Univ. Kansas 47:1-8.

Five specimens of a Peromyscus differing in size and coloration from species known to occur in the region of the Sierra de Juarez, Oaxaca, Mexico, were collected. They represent a new species Peromyscus chinanteco. Also reported here was only the third known specimen for P. simulatus collected 3 km W Zacualapan, Veracruz.

1391. Rodriguez, J. A. 1985. Rodent pests, a potential danger for the tamarugo (Prosopis tamarugo). In "Estado actual del conocimineto sobre Prosopis tamarugo." Ed. M. Habitat, FAO. 483 pp. (In Spanish)

1392. Rodriguez, J. A. and L. A. Herrera. 1983. The impact of native rodents in plantations of Monterey pine (Pinus radiata D. Don). Resumenes "Primer encuentro cientifico sobre el Medio ambiente." La Serena. Vol. 1. TER 124:5. (In Spanish)

1393. Rodriguez, J. A. and L. A. Herrera. 1984. The evaluation of damage caused by Octodon bridgesi in plantations of Pinus radiata. Unpublished manuscript, Facultad de Ciencias Agrarias, Veterinarias y Forestales, Universidad de Chile, Casilla 9206, Santiago. 61 pp.

Damage was measured as losses of form and height. Mortality due to rodent damage in the stand was 12.5%. The most effective control methods appear to be elimination of undergrowth, pruning the trees to 2.2 m above the ground, and the application of motor oil to the trunk of the tree up to 1.2 m from the base to serve as a repellent.

1394. Rodriguez, J. A. and L. A. Herrera. 1985. Damage caused by rodents in plantations of Monterey pines (Pinus radiata D. Don). In Actas XI Jornadas Forestales, Conception, Chile. 214 pp. (In Spanish)

1382. Rickart, E. A. 1977. Reproduction, growth and development in two species of cloud forest Peromyscus from southern Mexico. Occas. Pap. Mus. Nat. Hist. Univ. Kansas 67:1-22.

Reproduction and ontogeny in Peromyscus melanocarpus and P. mexicanus totontepecus were examined in the laboratory. Both species occur in the humid cloud forest on the Gulf slope of the Sierra de Juarez in northeastern Oaxaca, Mexico. Both species are relatively conservative with regard to reproductive rates. Litter sizes and weights are low and it is thought that the stability and predictability of the cloud forest environment allows for breeding longevity.

1383. Riedemann, S. and J. Zamora. 1982. Leptospirosis in small rodents in rural areas of Valdivia. Zentralbl. Veterinaermed. Reihe B 29(10):764-768. (In Spanish)

1384. Rincones, C. 1980. Observations on the damage produced by rats in new varieties of sugarcane in Piritu, Portuguesa state. Bol. CIARCO 10:1-4. (In Spanish)

Venezuelan rats are a major pest in new varieties of sugarcane which contain less fiber and a high sucrose content.

1385. Riva, R., O. R. Vidal, and N. I. Baro. 1977. Chromosomes of the genus Holochilus. II. Karyotype for H. brasiliensis vulpinus. Physis 36:215-218. (In Spanish)

The somatic chromosomes of three male and three female Holochilus brasiliensis vulpinus were investigated. All, except one male, had a diploid number of 36, and a fundamental number of 58. The sixth animal had a diploid number of 2n = 37 and an FN = 59. All six specimens were collected at Canal 6 on the Parana River Delta, Campana, Buenos Aires Province, Argentina.

1386. Rizzo, C. E. G. 1970. Contributions to the study of the rodents (Muridae) of the province of Guayas, Ecuador. Rev. Ecuat. Hig. Med. Trop. 27(2):137-160. (In Spanish)

Describes Rattus norvegicus, R. rattus rattus, R. r. alexandrinus, R. r. frugivorus, and Mus musculus brevirosiris. The Norway rat is most prevalent. Seasonal abundance of the various species is given.

1387. Robbins, L. W. and R. J. Baker. 1980. G- and C-band studies on the privitive karyotype for Reithrodontomys. J. Mammal. 61(4):708-714.

G- and C-bands are compared for Reithrodontomys fulvescens, R. humulis and R. megalotis. Two specimens of R. fulvescens were collected in Durango, Mexico.

1395. Rodriguez, J. A. and R. Murua. 1985. The evaluation and control alternatives for damage caused by rodents in plantations of Monterey pine (Pinus radiata D. Don) in the 7th and 8th Regions. U. Austral de Chile. 91 pp. (In Spanish)

1396. Rodriguez, J. A. and J. Trevizan. 1983. A preliminary evaluation of damage caused by rodents in plantations of Monterey pine. Escuela de Cs. Forestales. U. Austral de Chile. 19 pp. (In Spanish)

1397. Rodriguez, M., R. Montoya, and W. Venegas. 1983. Cytogenetic analysis of some Chilean species of the genus Akodon Meyen (Rodentia, Cricetidae). Caryologia 36:129-138.

1398. Rodriguez-Romero, F., M. Uribe-Alcocer, and A. Laguarda-Figueras. 1975. Chromosome analysis of Neotomodon alstoni perotensis. Mamm. Chrom. Newsl. 16:117-119.

1399. Rodriques, A. de S. and A. A. da Costa. 1973. Rodent control in Santos, Brazil. Publ. Prodisan. Santos. 80 pp. (In Spanish)

Presents a comprehensive account of a program in the Municipality of Santos, Sao Paulo, Brazil, to control rats over a 1-year period. Eradication through establishment of perimeter baiting was not possible because of lack of access into certain areas but the operation was termed a great success with nearly 100,000 dead rats counted by the baiting crews.

1400. Rogers, D. S. and D. J. Schmidly. 1981. Geographic variation in the white-throated woodrat (Neotoma albigula) from New Mexico, Texas, and northern Mexico. Southwest. Nat. 26(2):167-181.

Nongeographic and geographic variation in the white-throated woodrat from New Mexico, Texas and northern Mexico were assessed. A total of 648 adult woodrats representing 323 individual localities was grouped into 53 samples.

1401. Rogers, D. S. and D. J. Schmidly. 1982. Systematics of spiny pocket mice (Genus Heteromys) of the Desmarestianus species group from Mexico and northern Central America. J. Mammal. 63(3):375-386.

Nongeographic and geographic variation is assessed in the desmarestianus species group of the genus Heteromys (exclusive of H. gaumeri). Concordant results of cranial, external, and bacular variation reveal that the desmarestianus-group is represented in northern Middle America by two species, H. desmarestianus and H. goldmani. H. longicaudatus and H. lepturus are indistinguishable from H. desmarestianus. H. temporalis is arranged as a subspecies of H. desmarestianus.

1402. Rogers, D. S., E. J. Heske, and D. A. Good. 1983. Karyotypes and a range extension of Reithrodontomys (Cricetidae: Subgenus Aporodon) from Mexico. Southwest. Nat. 28(3):372-374.

Reithrodontomys were collected in the state of Chiapas, Mexico. They documented a range extension for Reithrodontomys tenuirostris, describe its karyotype, and report a new karyotype for R. mexicanus.

1403. Rogovin, K. A., A. V. Surov, and V. Serrano. 1985. Niche convergence in the desert rodents of two geographically isolated communities. Acta Zool. Mex. 10:1-36.

Compares rodent populations in deserts of Mongolia and Mexico.

1404. Roig, V. G. 1962. Biological aspects and ecological place of the mammalian fauna in the arid and semiarid zones of Mendoz. Rev. Fac. Cienc. Agrar. 9(1):59-86. (In Spanish)

A review is made of publications on the mammals of the arid zones throughout the world. Few studies have been made for the arid neotropical fauna and most of its ecological problems are still to be solved. A description is made of the geographical distribution of each of the endemic mammals of Mendoza.

1405. Roig, V. G. and O. A. Reig. 1969. Preciptin test relationship among Argentinian species of the genus Ctenomys (Rodentia: Octodontidae). Comp. Biochem. Physiol. 30:665-672.

Serological relationships among eight species of the burrowing octodont rodent Ctenomys investigated using the precipitin test proved to be consistent with distribution and chromosome data. Species used in the study were: C. australis, C. azarae, C. latro, C. mendocinus, C. porteousi, C. talarum, C. tuconax, and C. tucumanus. All were collected in Argentina.

1406. Rojas, A., F. Villarroel, F. Diaz, P. Rubio, and H. Schenone. 1971. An investigation of trichinosis and Capillariasis hepatica in Rattus norvegicus from the Santiago Municipal Slaughterhouse. Bol. Chil. Parasitol. 26(1&2):65-66.

During 1970, 100 Rattus norvegicus were captured in the slaughterhouse in Santiago, Chile. Trichinella spiralis infection was found in 47% of the sample.

1407. Rojas, M., O. Rivera, G. Montenegro, and C. Barros. 1977. Observations on the reproduction of wild female Octodon degus, Molina, and a possible relationship with the type of vegetation. Medio Ambiente 3(1):78-82. (In Spanish)

The objective of this research was to study the reproductive activity of wild female Octodon degus. The animals were collected from June 1975 to January 1977 at the Fundo San Carlos de Apoquindo, southeast of Santiago, Chile. Groups of females were killed upon arrival to the laboratory to study ovulation and/or implantation. Observations showed that the female is fertile from the middle of June to mid-July and gives birth from the middle of September to mid-October.

1408. Romney, D. H. 1980. Economic performance of "Malayan Dwarf" coconut in Jamaica. Oleagineux 35:551-554.

Farm surveys of Malayan Dwarf coconuts showed that 78% of plants issued under a replanting scheme reached bearing age. Lethal Yellowing Disease killed only 0.2%. Mean annual yields for trees aged 7 years or more were 65 nuts/tree. Yields were significantly reduced by heavy weed competition, banana competition or heavy clay soil; 22% of the fields had rat damage and 15% had nuts scarred by Aceric mites.

1409. Rood, J. P. 1963. Observations of the behavior of the spiny rat Heteromys melanaleucus in Venezuela. Mammalia 27:186-192.

The behavior of 13 captive spiny rats, Heteromys melanoleucus, was studied at Rancho Grande National Park, Aragua, Venezuela, in 1960. The rats adjusted well to captivity. They made globular nests of dead leaves and used their cheek pouches to carry food and nesting material. Males attacked females unless they were in estrus. Two litters of young were reared in captivity and their development studied.

1410. Rood, J. P. 1967. Observations on the ecology and behavior of the caviinae of Argentina (Mammalia, Rodentia). Zool. Platense 1(1):1-6. (In Spanish)

1411. Rood, J. P. 1969. Observations on the ecology and behavior of Microcavia, Galea and Cavia. Acta Zool. Lilloana 24:111-114.

1412. Rood, J. P. 1970. Ecology and social behavior of the desert cavy (Microcavia australis). Am. Midl. Nat. 83:415-454.

The behavior and ecology of a population of individualy marked Microcavia australis was studied in a xerophytic thornbush habitat in Buenos Aires Province, Argentina, from April 1966 to October 1967. Another cavy, Galea musteloides, occurred in smaller numbers on the study area. Interactions between the two genera were amicable. Microcavia births occurred from August to April with most litters born in the September-December period.

1413. Rood, J. P. 1972. Ecological and behavioral comparisons of three genera of Argentine cavies. Anim. Behav. Monogr. 5:1-83.

1414. Rood, J. P. and F. H. Test. 1968. Ecology of the spiny rat, Heteromys anomalus, at Rancho Grande, Venezuela. Am. Midl. Nat. 79:89-102.

Live-trapping of Heteromys anomalus melanoleucus in a mosaic environment in the mountains of northern Venezuela in April-May 1960, indicated a preference for primary forest and Heliconia thickets. This species was largely segregated from six other species of small terrestrial mammals captured in the same grid of traps. The number of independent young trapped increased greatly in early May, suggesting a surge of mating in the nonrainy season of early March.

1415. Rosenbaun, M. B. and J. A. Cerisola. 1961. Epidemiology of Chagas' disease in the Argentine Republic. Hospital (Rio de J.) 60:55-100. (In Spanish)

1416. Rosenmann, M. 1961. Ondatra zibethica in Chile. Invest. Zool. Chil. 7:159-160. (In Spanish)

1417. Rosenmann, M. 1977. Thermal regulation in Octodon degus. Medio Ambiente (Valdivia, Chile) 3(1):127-131. (In Spanish)

The diurnal habits of Octodon degus and the arid to semi-arid habitat of the species presents adaptative problems on temperature regulation aggravated by the water scarcity in its natural environment. Like other desert rodents, O. degus expends a minimal amount of water evaporation (1 mg/g h)between 0° C and 30° C. Nevertheless, this adaptative austerity becomes dangerous when the ambient temperature climbs above 32° C. In this condition the heat loss by evaporation does not allow elimination of more than 1/4 of its heat produced and leads to hyperthermia and death.

1418. Rosenmann, M., V. Ruiz, and A. Cerda. 1981. Relations of spontaneous activity in Octodon degus and Abrocoma bennetti in central Chile. Medio Ambiente 5(1-2):125-129. (In Spanish)

Complementary anatomical, physiological and behavioral features in Octodon degus (degu) and Abrocoma bennetti (chinchilla rat) favor the coexistence of both species in a common habitat. For example, fossorial characteristics are quite evident in the degu but not in the chinchilla rat, which seems to depend on the former species for the construction of the tunnels shared by both species.

1419. Rosenmann, M., J. Dedes, P. Garrao, B. Rodriguez, and V. Ruiz. 1976. Thermal balance and evaporation in Octodon degus. XIX Reunion Annual Soc. Biol. de Chile. Resume only.

1420. Rosenzweig, M. L. and P. W. Sterner. 1970. Population ecology of desert rodent communities: body size and seed-husking as bases for heteromyid coexistence. Ecology 51:217-224.

Seven species of heteromyid rodents varying in size from 8 to 114 g were studied in the laboratory. Starved rodents husked four kinds of large seeds (spinach, sunflower, squash and pumpkin) and were timed at the task.

1421. Rosero Posso, E. 1975. Weight, tail length, perineum and the life history of the endemic rat on Santa Fe Island, Galapagos, Ecuador, Oryzomys bauri (Cricetidae). Rev. Univ. Catolica Numero Monografico 3(8):185-217. (In Spanish)

1422. Rosi, M. I. 1983. Notes on the ecology, distribution and systematics of Graomys griseoflavus griseoflavus (Waterhousi, 1837) (Rodentia: Cricetidae) in the Province of Mendoza, Argentina. Hist. Nat. (Mendoza) 3(17):161-167. (In Spanish)

Describes the morphometric, distribution and life history of Graomys griseoflavus griseoflavus from central and eastern Mendoza Province.

1423. Roth, E. L. 1976a. A new species of pocket mouse, Perognathus: Heteromyidae, from the Cape Region of Baja California Sur, Mexico. J. Mammal. 57(3):562-566.

A new species, Perognathus dalquesti, is described from Baja California Sur, Mexico. The new species is a member of the subgenus Chaetodipus resembling Perognathus arenarius but larger sized.

1424. Roth, E. L. 1976b. Evolutionary significance of adaptations in heteromyid rodents in Baja California, Mexico. Unpublished Ph.D. dissertation, Univ. of Arizona. 91 pp.

1425. Roth, E. L. 1984. Evolutionary significance of adaptations in heteromyid rodents in Baja California. Pages 119-138 in N. V. Horner, Ed. Festschrift for Walter W. Dalquest in Honor of His Sixty-sixth Birthday. Dept. Biology, Midwestern State Univ. xx+163.

Rodents of the family Heteromyidae primarily inhabit the semi-arid regions in the southwestern U.S. and northwestern Mexico. In the past, concepts of evolutionary relationships within this family have been based on specialization of the auditory and locomotor systems. Examinations of those features of the auditory and locomotor systems thought to be adaptive in nature and thus to have evolutionary implications are presented for five species of Perognathus and two species of Dipodomys occurring in Baja California, Mexico. Species examined were Perognathus baileyi, P. spinatus, P. formosus, P. fallax, P. arenarius, Dipodomys merriami, and D. agilis.

1426. Rowlands, I. W. 1974. Mountain viscacha. Symp. Zool. Soc. Lond. 34:131-141.

1427. Rowlands, I. W. and B. J. Weir. 1974. The biology of hystricomorph rodents. In Symp. Zool. Soc. (Lond.) 34. Academic Press, New York.

1428. Ruhm, W. 1966. Rat damage in Pinus radiata stands in Chile. Anz. Schaedlingskd. 39(5):69-71. (In German)

Discusses damage by Rattus rattus.

1429. Ruiz, I. 1980. An ecological study of a population of Sigmodon hispidus (Rodentia: Cricetidae) that is causing damage to pineapples. Res. VII Congr. Lat. Am. Zool. pp. 204-205. (In Spanish)

1430. Russell, R. J. 1968. Revision of the pocket gophers of the genus Pappogeomys. Univ. Kans. Publ. Mus. Nat. Hist. 16:581-776.

1431. Russell, R. J. 1969. Intraspecific population structure of the species Pappogeomys castonops. Pages 337-371 in Contributions in Mammalogy (J. K. Jones, Jr. ed.). Misc. Publ. Mus. Nat. Hist. Univ. Kansas 51:1-428.

1432. Ryan, R. M. 1960. Mammals collected in Guatemala in 1954. Acta Zool. Mex. 4:1-19. (In Spanish)

1433. Ryan, R. M. 1963. The biotic provinces of Central America as indicated by mammalian distribution. Acta Zool. Mex. 6:1-55.

1434. Saenz Vera, C. 1967. Rat-flea index in plague eradication campaigns (Ecuador). Bol. Of. Sanit. Panam. 62(6):518-521. (In Spanish)

A rat-flea index below 1% is regarded as safe and relatively easy to maintain with combined rodent-ectoparasite control in urban areas. Index determination in rural and sylvatic areas is difficult because other rodents besides commensal rodents and their ectoparasites have to be considered.

1435. Samedy, J.-P. 1983. Vertebrate pest problems in Haiti and control methods to reduce crop losses. Pages 65-73 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983.

Rodent pests in Haiti are Rattus rattus and R. norvegicus. Losses up to 15% are common in the major rice producing areas. Sustained baiting with anticoagulants in rice paddies has reduced losses to 1%.

1436. Sanborn, C. 1960. Small rodents from Peru and Bolivia. Publ. Mus. Hist. Nat. Javier Prado Ser. A Zool. 5:1-16.

A revision of the small rodents of Peru and Bolivia including the genera: Oryzomys, Neacomys, Hesperomys, Phyllotis (Auliscomys), Punomys, Andinomys, Chinchillula, Akodon, Oxymycterus and Lenoxus.

1437. Sanchez, F. F. 1975. Rodents affecting food supplies in developing countries: Problems and needs. FAO Plant Protection Bull. 23(3/4):96-102.

Major rodent pest species in Latin America are: Rattus rattus, R. norvegicus, Sigmodon hispidus, Holochilus scuireus, Myocaster coypus, Rhipidomys couesi, and Peromyscus spp. Crops damaged are rice, coconuts, cocoa and sugarcane.

1438. Sanchez-Hernandez, C., C. B. Chavez-Sanchez, and V. Sanchez-C. 1981. Diurnal activity patterns for Microtus mexicanus mexicanus, Saussure 1961 (Rodentia: Microtinae) in urban conditions in the Valley of Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 51:605-614. (In Spanish)

This study was conducted in the suburbs of Mexico City. Data were collected for 2 years. Activity patterns were similar throughout the year. Variation in activity patterns were related to vegetation, cloud cover and precipitation.

1439. Sanchez Leon, V. M. 1969. The natural resources of Mexico IV. A study of the cytogenetics of wild animals. Ediciones Inst. Mex. Recur. Nat. Renov. (IMRNR). A. C. Mexico. 353 pp. (In Spanish)

1440. Sanchez-Navarrete, F. 1978. Rodents and agricultural pests in Mexico--National rodent compaign. Proc. Vertebr. Pest Conf. 8:118-119.

Major pest genera are Sigmodon, Oryzomys, Peromyscus, Rattus, Mus, and Microtus. Most commonly used rodenticides are ZnP and warfarin.

1441. Sanchez-Navarrete, F. 1981. Rabbits and rodents. Colegio de Ingenieros Agronomos de Mexico. A. C. Sindicalismo No. 92, Mexico, D.F. 247 pp. (In Spanish)

1442. Sandmarin, C. and S. C. Ayala. 1972. Toxoplasma in animals submitted for rabies diagnosis in Cali, Colombia. Trans. R. Soc. Trop. Med. Hyg. 66(5):799.

A note on results of tests conducted from 1967-1972. Three of 93 rats were positive for toxoplasma and one rat was positive for rabies. Species of rodents tested were not identified.

1443. Santos, M. 1964. The occurrence of plague in north-eastern Brazil and the neighboring zones. General considerations: bacteriologic demonstration. Folha Med. 48(4):167-174. (In Spanish)

The two subspecies of rats playing a role in the transmission of plague to man in Brazil are Rattus rattus alexandrinus and R. r. fugivorus. Fleas Xenopsylla cheopis and X. brasiliensis are vectors. Gives further considerations on plague epidemiology and rodent involvement.

1444. Saunders, R. C. 1975. Venezuelan Macronyssidae (Acarina: Mesostigmata) (Ectoparasites of rodents, marsupials, bats, and birds). Brigham Young Univ. Sci. Bull. Biol. Ser. 20:75-90.

Mites of the family Macronyssidae from Venezuela are identified. Mites were collected from 23 species of rodents.

1445. Saunders, R. C. and C. E. Yunker. 1975. Venezuelan Macronyssidae. IV. A new genus and species of rodent-parasitizing Ornithonyssinae (Lepidodorsum tiptoni) (Acarina, Macronyssidae). J. Med. Entomol. 11:756-759.

Lepidodorsum tiptoni, a new species, is described from Oryzomys albigularis in Merida, Venezuela. Additional specimens were taken from the same host in Trujillo and Tachira and from Zygogontomys brevicauda in Miranda.

1446. Savage, H. G. 1971. Faunal material. Pages 78-111 in D. M. Pendergast, Ed. Excavations at Eduardo Quiroz Cave, British Honduras. Art and Archaeol., Occas. Pap. R. Ont. Mus. 21:1-123.

Includes data on Agouti.

1447. Sbalqueiro, I. J., M. S. Mattevi, L. F. B. Oliveira, and T. R. O. Freitas. 1982. Karyotypic analyses of two species of the genera Oryzomys (Rodentia) collected in the extreme southern part of Brazil. Cienc. Cult. 34:749-750. (In Portuguese)

1448. Scaglia, O. A., C. A. Velazquez, and M. A. Cauhepe. 1982. Plant composition of Coney rat's (Reithrodon auritus) diet. Acta Theriol. 27(24):350-353.

Study of the seasonal variation in the stomach contents of coney rats, Reithrodon auritus (Fischer, 1914), collected in a native grassland of the southeast of Buenos Aires Province, shows that diet of this small rodent is exclusively constituted of plant materials, mostly grasses.

1449. Schaldach, W. J., Jr. 1960. A brief report on the habits of Xenomys nelsoni Merriam. Rev. Soc. Mex. Hist. Nat. 21:425-434. (In Spanish)

A brief outline of the taxonomic history of the genus Xenomys is given. The systematic status of the genus is briefly discussed. Evidence is presented to support the view that Hodomys should be retained on the generic level. Fossil evidence and present distribution seem to indicate that Xenomys and Hodomys are closely related and may represent a distinct, earlier cricentine line of descent. Life history data are presented for the first time for Xenomys.

1450. Schaller, G. B. 1983. Mammals and their biomass on a Brazilian ranch. Arq. Zool. S. Paulo 31:1-36.

1451. Schaller, G. B. and P. G. Crawshaw, Jr. 1981. Social organization in a capybara population. Saeugetierkd. Mitt. 29(1):3-16.

Research was conducted on the Jofre ranch which lies in the Pantanal, a swampy region in the Mato Grosso state of southwestern Brazil. Capybara were studied along 13 km of road that bisects the ranch. The capybara population was organized into stable groups with compositions that varied from nuclear family to harem to mixed groups containing two or more adults of each sex.

1452. Schamberger, M. L. and G. W. Fulk. 1974. Mammals from the Fray Jorge National Park. Idesia 3:341-370. (In Spanish)

Mammals were identified in the Fray Jorge National Park which is located 50 km south of La Serena, in the province of Coquimbo, Brazil. Rodent species collected were Rattus sp., Akodon longipilis, A. olivaceus, Oryzomys longicaudatus and Phyllotis darwini.

1453. Schenone, H., C. Jacob, A. Rojas, and F. Villarroel. 1967. Trichinella spiralis infection in Rattus norvegicus captured in the Municipal of Matadero of Santiago, Chile. Bol. Chil. Parasitol. 22:176. (In Spanish)

1454. Schenone, H., J. Carrasco, F. Villarroel, R. Chinchon, and J. Urriola. 1967. Epizootic of trichinosis in swine and its relationship with the use of warfarin rodenticide. Bol. Chil. Parasitol. 22(4):138-143. (In Spanish)

Following a rodent control program at pig farms an outbreak of trichinosis occurred. Sixty people were infected.

1455. Scherer, W. F. et al. 1972. Observations of equines, humans and domestic and wild vertebrates during the 1969 equine epizootic and epidemic of Venezuelan encephalitis in Guatemala. Am. J. Epidemiol. 95:255-266.

None of the Rattus rattus tested had antibodies to the disease although they may have been "silent amplifiers" of the disease.

1456. Schlatter, R. P., J. L. Yanez, and F. M. Jaksic. 1980. Food-niche relationships between Chilean eagles and red-backed buzzards in central Chile. Auk 97(4):897-898.

Pellets from the Chilean eagle (Geranoaetus melanoleucus) (120) and the red-backed buzzard (Buteo polyosoma) (299) were collected at La Dehesa, 20 km east of Santiago, Chile. A comparison was made of the diets for the two species. Rodents, Abrocoma bennetti, Akodon olivaceus, Octodon degus, Oryzomys longicaudatus, and Phyllotis darwini were 75.9% of the total diet of the eagles. The same species, except A. olivaceus, were 89.3% of the total diet of the buzzards.

1457. Schlatter, R. P., J. L. Yanez, H. Nunez, and F. M. Jaksic. 1980. The diet of the burrowing owl in central Chile and its relation to prey size. Auk 97(3):616-619.

Burrowing owl, Athene cunicularia, pellets were collected between August 1973 and April 1974 at La Dehesa, 20 km east of Santiago, Chile. Rodents were the main mammalian prey (73.5% of the total items). Species were Abrocoma bennetti, Akodon longipilis, A. olivaceus, Octodon degus, Oryzomys longicaudatus, Phyllotis darwini, and Rattus rattus.

1458. Schlatter, R. P., J. L. Yanez, H. Nunez, and F. M. Jaksic. 1982. A statistical analysis of the diet of burrowing owls, Athene cunicularia (Molina) (Aves: Strigidae) in the foothills of Santiago. Medio Ambiente 6(1):9-18. (In Spanish)

Seasonal variation of the diet of Athene cunicularia plus morphometry, gravimetry and items of pellets regurgitated by these raptors were analyzed throughout 1 year in La Dehesa, near Santiago, Chile. Winter castings are longer, wider and heavier than ones collected in other seasons. Identified in the pellets were mostly arthropods with vertebrates (mainly rodents) accounting for no more than 30% of the total.

1459. Schmidly, D. J. 1971. Systematics and ecology of mice of the Peromyscus boylii species group from northern Mexico and parts of the southern United States. Unpublished Ph.D. dissertation, Univ. of Illinois. 252 pp.

1460. Schmidly, D. J. 1972. Geographic variation in the white-ankled mouse, Peromyscus pectoralis. Southwest. Nat. 17:113-138.

Geographic, individual and secondary sexual variations are analyzed in the white-ankled mouse, Peromyscus pectoralis. Ways of distinguishing this species from P. boylii are described. The most extreme intraspecific differentiation in the species occurs across a steep ecological gradient in Tamaulipas, Mexico.

1461. Schmidly, D. J. 1973. Geographic variation and taxonomy of Peromyscus boylii from Mexico and the southern United States. J. Mammal. 54(1):111-130.

Both nongeographic and geographic variation was assessed among populations of Peromyscus boylii from northern Mexico and the southern United States. Analysis of morphological features of the skin, skull, and molars reveals that Peromyscus attwateri is a separate species from the other taxa of the boylii complex.

1462. Schmidly, D. J. 1974. Peromyscus pectoralis. Mamm. Species 49:1-3.

1463. Schmidly, D. J. and F. S. Hendricks. 1976. Systematics of the southern races of Ord's kangaroo rat, Dipodomys ordii. Bull. South. Calif. Acad. Sci. 75:225-237.

Nongeographic and geographic variation were assessed of Ord's kangaroo rat (Dipodomys ordii) from southern Texas and northern Mexico. Dipodomys compactus is arranged as a separate species from D. ordii and four races of D. compactus (compactus, sennetti, largus, and parvabullatus) are recognized.

1464. Schmidly, D. J. and F. S. Hendricks. 1984. Mammals of the San Carlos mountains of Tamaulipas, Mexico. Spec. Publ. Mus. Tex. Tech Univ. 22:15-69.

Gives the mammalian fauna of the San Carlos Mountains of Tamaulipas, Mexico, their geographic and ecologic ranges, and their systematic status. In addition, certain life history observations were recorded.

1465. Schmidly, D. J. and G. L. Schroeter. 1974. Karyotypic variation in Peromyscus boylii (Rodentia: Cricetidae) from Mexico and corresponding taxonomic implications. Syst. Zool. 23:333-342.

Nine different karyotypes are evident among samples of six subspecies of Peromyscus boylii. All specimens have a diploid number of 48; the principal differences are in the numbers of large and medium-sized biarmed autosomes which range from 2-10.

1466. Schmidly, D. J., M. R. Lee, W. S. Modi, and E. G. Zimmerman. 1985. Systematics and notes on the biology of Peromyscus hooperi. Occas. Pap. Mus. Tex. Tech Univ. 97:1-40.

Peromyscus hooperi is a relict, monotypic species without close living relatives. The slight, but discordant geographic variation in morphology, pelage coloration, and allozymes does not warrant formal taxonomic subdivisions within the species.

1467. Schonewald, C. M. 1978. Temporal patterns of courtship in a caviomorph rodent, the green acouchi, Myoprocta pratti pocock. Unpublished Ph.D. dissertation, Univ. of Maryland. 225 pp.

1468. Schulz, T. A., F. J. Radovsky, and P. D. Budwiser. 1970. First insular record of Notiosorex crawfordi, with notes on other mammals of San Martin Island, Baja California, Mexico. J. Mammal. 51(1):148-150.

In addition to a first record of the gray shrew, several Peromyscus maniculatus exiguus were trapped. The white-footed mouse, P. m. exiguus, and the wood rat, Neotoma martinensis, are the only two land mammals previously recorded as endemic to the island. In this study, no Neotoma were trapped, possibly due to the earlier introduction of cats.

1469. Schuyler, H. R. 1983. The backbone of postharvest losses. Pages 1-10 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983.

A general review of crops that are attacked by vertebrate pests in storage situations. Species are not identified.

1470. Seib, R. L. 1980. Baja California: a peninsula for rodents but not for reptiles. Am. Nat. 115(4):613-620.

It has been suggested that several vertebrate groups in Baja California display a peninsular distribution pattern or the number of species decrease with distance from the base of the peninsula. Such a peninsular effect is demonstrated from heteromyid rodents, which decline from 12 to 2 species from north to south. This paper gives the distribution of reptiles on the peninsula.

1471. Selander, R. K., R. F. Johnston, B. J. Wilks, and G. G. Raun. 1962. Vertebrates from the barrier islands of Tamaulipas Mexico. Univ. Kans. Publ. Mus. Nat. Hist. 12:309-345.

Five species of rodents are found on the barrier islands of Tamaulipas, Mexico: Spermophilus spilosoma, Geomys personatus, Perognathus merriami, Dipodomys ordii, and Neotoma micropus.

1472. Semino, M. C., D. Oliveira, and N. O. Bianchi. 1977. Studies on the cycle of the seminiferous epithelium in rodents of the genus Akodon. Physics 37(93):333-340. (In Spanish)

The seminiferous epithelium of male rodents of the genus Akodon (A. azarae, A. dolores, and A. molinae) was studied and compared with similar data from mice. All the individuals studied had the same spermatogenesis stages described for mice. No new cellular associations were found.

1473. Semino, M. C., D. Oliveira, N. O. Bianchi, and L. Lobato. 1982. Cytogenetics of the South American akodont rodents (Cricetidae). IX. Chiasmatic sex bivalent in male meiosis of Akodon mollis. J. Hered. 73:149-150.

A. mollis has a large subterminal Y chromosome measuring 5.24% of the haploid set. The long arm of the Y has a pattern of homology with the short arm of the X, as indicated by the similar distribution of G bands and by the formation of a chiasma in diakinesis and metaphase 1 of teste cells.

1474. Severinghaus, W. D. and D. F. Hoffmeister. 1978. Qualitative cranial characters distinguishing Sigmodon hispidus and Sigmodon arizonae and the distribution of these two species in northern Mexico. J. Mammal. 59(4):868-870.

Cranial characteristics are used to define distribution for these two species in 11 northern Mexican states.

1475. Shaw, J. J. and R. Lainson. 1968. Leishmaniasis in Brazil. II. Observations on enzootic rodent leishmaniasis in the lower Amazon region - the feeding habits of the vector, Lutzomyia flaviscutella in reference to man, to rodents and other animals. Trans. R. Soc. Trop. Med. Hyg. 62(3):396-405.

1476. Shaw, J. J. and R. Lainson. 1972. Leishmaniasis in Brazil. VI. Observations on the seasonal variations of Lutzomyia flaviscutellata in different types of forest and its relationship to enzootic rodent leishmaniasis (Leishmania mexicana amazonensis). Trans. R. Soc. Trop. Med. Hyg. 66(5):709-717.

Several species of sandflies and one species of rodent, Oryzomys capito, were studied in relation to leishmaniasis in Brazil. It was found that proportionally more flies are evidently required than in British Honduras to bring about similar transmission rates.

1477. Shope, R. E. and J. P. Woodall. 1973. Ecological interaction of wildlife, man, and a virus of the Venezuelan equine encephalomyelitis complex in a tropical forest. J. Wildl. Dis. 9(3):198-203.

Venezuelan equine encephalomyelitis (VEE) virus was isolated 18 times from blood of Oryzomys in tropical forests near Belem, Brazil.

1478. Shump, K. A., Jr. 1975. Temperatures of spiny pocket mice (Liomys pictus). Trans. Kans. Acad. Sci. 78(3&4):171-172.

Rectal temperatures were taken of spiny pocket mice, Liomys pictus (Thomas), which were being live-caught for demographic studies at the Estacion de Experimentacion, Investigacion y Difusion Biologia de Chamela, a research facility of the Universidad Nacional de Mexico. This station is approximately 6 kilometers east of the coastal village of Chamela, Jalisco.

1479. Shump, K. A., Jr. and R. H. Baker. 1978a. Sigmodon alleni. Mamm. Species 95:1-2.

1480. Shump, K. A., Jr. and R. H. Baker. 1978b. Sigmodon leucotis. Mamm. Species 96:1-2.

1481. Sierra de Soriano, B. 1960a. The habitat of Myocastor coypus bonaeriensis Geoffroy, "Nutria." Actas I Congr. Sud. Zool. 1:145-152. (In Spanish)

1482. Sierra de Soriano, B. 1960b. The temperature in the subterranean habitat of Myocastor coypus bonaeriensis Geoffroy, "Nutria" in relation to the ambient temperature. Actas I Congr. Sud. Zool. 1:153-158. (In Spanish)

1483. Sierra de Soriano, B. 1969. Some external characters of cricetids and their bearing on the degree of adaptation to an aquatic life (Rodentia). Physis 27:471-486. (In Spanish)

External morphological characters are compared for three genera of cricetids that cohabit in Uruguay: Akodon azarae, Holochilus magnus and Scapteromys tumidus.

1484. Simonetti, J. A. 1979. Adaptive divergence in leaf-eared mice (Rodentia: Cricetidae). Unpublished thesis, Univ. of Chile, Valparaiso, Chile. 69 pp. (In Spanish)

1485. Simonetti, J. A. 1982. A new record for Auliscomys micropus from central Chile (Rodentia: Cricetidae). Not. Mens. Mus. Nac. Hist. Nat. (Santiago) 26(308-309):3. (In Spanish)

Found the remains of Auliscomys micropus in owl pellets collected at Farellones, near Santiago.

1486. Simonetti, J. A. 1983. Occurrence of the black rat (Rattus rattus) in central Chile. Mammalia 47(1):131-132.

The black rat is usually considered to be a human commensal, but two trapping reports them not living in close association with man.

1487. Simonetti, J. A. and G. Montenegro. 1981. Food preferences by Octodon degus (Rodentia: Caviomorpha): Their role in the Chilean matorral composition. Oecologia (Berl.) 51(2):189-190.

1488. Simonetti, J. A. and A. O. Spotorno. 1980. The taxanomic status of Phyllotis micropus (Rodentia: Cricetidae). An. Mus. Hist. Nat. Valparaiso (Chile) 13:285-297. (In Spanish)

1489. Simonetti, J. A., E. R. Fuentes, and R. D. Otaiza. 1985. Habitat use by two rodent species in the high Andes of central Chile. Mammalia 49(1):19-25.

The pattern of habitat use by two cricetid rodent species, Akodon andinus and Phyllotis santhopygus, in the high Andes of central Chile is described.

1490. Simonetti, J. A., J. Sportorno, and A. O. Sportorno. 1981. Adaptive divergence in leaf-eared mice. Medio Ambiente 5(1-2):88-95.

Compares molar development for 11 species of Phyllotis, 4 species of Auliscomys and the only species of Andinomys.

1491. Simonetti, J. A., H. Nunez, and J. L. Yanez. 1982. Falco sparverius: A common raptor in central Chile (Aves: Falconidae). Bol. Mus. Nac. Hist. Nat. Chile 39:119-124. (In Spanish).

The tropic diversity of Falco sparverius is compared between two Chilean populations and with other avian predatory species. Results suggest that F. sparverius consumes its prey in about their abundance in the field. This behavior seemingly results in the high trophic diversity of F. sparverius in comparison to the other predators considered.

1492. Simonetti, J. A., J. L. Yanez, and E. R. Fuentes. 1984. Efficiency of rodent scavengers in central Chile. Mammalia 48(4):608-609.

Scavengers of rodent carcasses (Octodon degus and Abrocoma bennetti) are ants (Camponotus spp.), beetles (Trox bullatus), Alopex lagopus, Vulpes fulva and Circus approximans.

1493. Simpson, D. I. H. 1978. Viral haemorrhagic fever of man. Bull. World Health Org. 56(6):819-832.

Rodents are the natural hosts and reservoirs for Junin and Machupo viruses in Latin America. Junin is transmitted by Calomys laucha and C. musculinus, although other rodent species may be involved. The rodent reservoir of Machupo virus is Calomys callosus.

1494. Simpson, G. G. 1969. South American mammals. Pages 879-909 in E. J. Fittkau, J. Illes, H. Klinge, G. H. Schwabe, and H. Sioli, eds. Biogeography and Ecology in South America. W. Junk, The Hague, Vol. 2.

1495. Siqueira, A. F., F. Ferriolli, Jr., and M. P. Sarretto. 1967. Studies on reservoirs and wild vectors of Trypanosomiasis cruzi. XVI. Natural infection of a porcupine, Coendou insidiosus insidiosus (Kuhl, 1820) by a cruzi-like trypanosoma. Rev. Inst. Med. Trop. (Sao Paulo) 9(3):155-162. (In Portuguese).

A cruzi-like trypanosome was isolated through xenodiagnosis from a porcupine captured at Descalvado, State of Sao Paulo, Brazil.

1496. Sisk, T. 1982. A report on Central American pocket gopher, Orthogeomys sp., biology and control in Costa Rica. ACM Field Biology Program, San Jose, Costa Rica. 27 pp.

Effects of Orthogeomys sp. as an agricultural pest were studied through interviews in four agricultural zones. Fifty-one percent of those interviewed reported substantial losses to the animal. Control methods studied involved the poisons Lannate and Methyl Bromide and two types of traps.

1497. Sisk, T. and C. Vaughan. 1984. Notes on some aspects of the natural history of the giant pocket gopher (Orthogeomys) Merriam in Costa Rica. Brenesia 22:233-247.

The objectives of this study were to quantify the agricultural impact of the genus Orthogeomys and to investigate some aspects of the natural history of a species, Orthogeomys heterodus.

1498. Smith, J. D. and J. K. Jones, Jr. 1967. Additional records of the Guatemalan vole, Microtus guatemalensis Merriam. Southwest. Nat. 12:189-205.

C. H. Merriam described the Guatemalan vole, Microtus guatemalensis, from specimens collected in the mountains at Totos Santos, Huehuetenango, Guatemala. Until now, this unique microtine has been known only from the type locality. On July 9 and 10, 1965, three specimens of this vole were trapped on Tzontehuitz Mountain, 7 miles north of San Cristobal de las Casas, Chiapas, Mexico, and approximately 115 miles northwest of the type locality.

1499. Smith, M. F. 1979. Geographic variation in genic and morphological characters in Peromyscus californicus. J. Mammal. 60(4):705-722.

Allelic variation was examined at 31 structural gene loci in 13 populations of Peromyscus californicus from California and Baja California del Norte, Mexico.

1500. Smith, N. J. 1974. Agouti and babassu. Oryx 12(5):581-582.

Both agoutis (Dasyprocta agouti) and the babassu palm (Orbygnia speciosa) thrive in secondary growth where primary rain forest has been removed, as is happening widely in South America, notably in Brazil. The agouti is also a prolific and easily farmed animal that provides good meat. The author suggests that farming of this native mammal would be much more likely than beef to succeed among the settlers coming in along Brazil's newly bulldozed roads.

1501. Smith, R. W. 1967a. The control of rats in coconuts using rat blocks. Oleagineaux 22:159-160.

In Jamaica rat damage to coconuts varies between 5% and 36%, and occasionally reaches 72%. The damage is mainly caused by Rattus rattus. A formula is given on how to prepare wax bait blocks using warfarin.

1502. Smith, R. W. 1967b. A new method of rat control in coconuts. Trop. Agric. Trinidad 44:315-324.

A survey of rat damage in coconuts and the control methods used is followed by a report of experimental work carried out in Jamaica leading to the conclusions that rat control using poison-baited rat blocks is an economic and practical operation even on small fields. Details of the manufacture and method of using rat blocks are given.

1503. Smith, R. W. 1969. Recent information on control of rats damaging coconuts. W. H. O. Inf. Circ. Vect. Contr. VBC/VC/69 8:30.

1504. Smythe, N. D. E. 1970a. Relationships between fruiting seasons and seed dispersal methods in a neotropical forest. Am. Nat. 104:25-35.

The weight of fruits and seeds that fell into 75 polyethylene sheets was measured over a period of 17 months in the humid forest of Barro Colorado Island, Panama. A total of 72 species of fruits and seeds fell into the traps. Small fruits, the seeds of which pass unharmed through the guts of animals, tend to be nonseasonal and thus avoid competition for dispersal. Fruits with large seeds that are destroyed by the animals eating them fruit synchronously. The agouti (Dasyprocta punctata), being unable to devour the entire synchronous crop, scatterhoards much of it and, since it fails to find many of the buried seeds, aids in the dispersal of its food species.

1505. Smythe, N. D. E. 1970b. Ecology and behavior of the agouti (Dasyprocta punctata) and related species of Barro Colorado Island, Panama. Unpublished Ph.D. dissertation, Univ. of Maryland. 217 pp.

1506. Smythe, N. D. E. 1970c. The adaptive value of the social organization of the coati (Nasua marica). J. Mammal. 51(4):818-820.

When fruit is abundant, adult male coatis often feed near agoutis (Dasyprocta punctata) without apparently disturbing them. As fruit becomes scarce, the solitary male coatis on Barro Colorado Island, Panama, devote much of their time to hunting for juvenile agoutis and make serious attempts to catch adult agoutis, especially those that are physically disabled. Although coatis normally are mostly diurnal, males extend their hunting activity periods well into the hours of darkness.

1507. Smythe, N. D. E. 1978. The natural history of the Central American agouti (Dasyprocta punctata). Smithson. Contrib. Zool. 257:1-52.

In this report the behavioral ecology of the Central American agouti (Dasyprocta punctata), a large caviomorph rodent, living on Barro Colorado Island, Panama, is described. This two-phase study includes social structure, activity patterns, maturation, courting, agonistic and comfort behavior, and acoustic, vocal, visual, and olfactory communication systems.

1508. Smythe, N. D. E. 1983. Dasyprocta punctata and Agouti paca (Guatusa, Gherenga, Agouti, Tepezcuintle, Paca). Pages 463-465 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

1509. Smythe, N. D. E. 1984. The park that protects the Panama Canal. Oryx 18(1):42-46.

A history of the development of the Parque Nacional Soberania that was created in 1980 in Panama. This preserve is 22,000 hectares of Neotropical forest and is essential for protecting water supplies both for people and the Panama Canal. The paca, Cuniculus paca, is one species hunted in the park even though hunting is officially banned.

1510. Smythe, N. D. E., W. E. Glanz, and E. G. Leigh, Jr. 1982. Population regulation in some terrestrial frugivores. Pages 227-238 in E. G. Leigh, Jr., A. S. Rand and D. M. Windsor, Eds. The Ecology of a Tropical Forest: Seasonal Rhythms and Long-term Changes.

Two large, territorial caviomorph rodents, the diurnal agouti, with adults averaging 3 kg in weight, and the nocturnal paca, with adults averaging 9 kg live on the forest floor of Barro Colorado Island. Both live primarily on fallen fruit, although pacas also browse leaves.

1511. Solis, M. and J.-P. Samedy. 1980. Pest and pesticide management in the Caribbean. In Proc. Consortium for International Crop Protection CICP/USAID.

1512. Solis, V., A. Laguarda-Figueras, J. Romero-Jarero, and J. Paulete-Vanrell. 1971. Chromosome analysis and meiotic behavior of Peromyscus truei gratus. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Biol. Exp. 42:49-53.

1513. Solis, V., A. Laguarda-Figueras, J. Romero-Jarero, and J. Paulete-Vanrell. 1973. Cytogenetic analysis of Peromyscus truei gratus. Mammal Chromosomes Newsletter 14:13.

Ten Peromyscus truei gratus were trapped at the Botanical Garden of the Universidad Nacional Autonoma de Mexico in Mexico City.

The chromosome number of this subspecies is 2n = 48. Peromyscus truei gratus has a very similar karyotype with Peromyscus truei collected in New Mexico.

1514. Soriano, B. S. 1960. Materials used to construct tunnels by Myocastor coypus bonariensis (Geoffroy) ("nutria"). Rev. Fac. Hum. Cienc. Univ. Repub. Urug. 18:257-276. (In Spanish)

1515. Soriano, B. S. 1965. Some external structures and their relationship to the aquatic life for two species of the genus Holochilus Brandt 1835 (Muridae: Cricetinae). Rev. Fac. Hum. Cienc. 22:209-220. (In Spanish)

1516. Soriano, B. S. 1969. Some external characteristics of cricetids and their relationship in adapting to living in water (Rodentia). Physis 27:471-486. (In Spanish)

Some external structures are compared in three species of cricetids that cohabit in Uruguay: Akodon azarae, Scapteromys tumidus, and Holochilus magnus. Starting with Akodon, a typical terrestrial form, a comparison is attempted to determine the adaptations needed to live in the semiaquatic niches occupied by Scapteromys and Holochilus.

1517. Soriano, P. 1977. Characterization and seasonal variations in communities of small mammals in the western Llanos of Venezuela. Special study for the degree Universidad del Zulia. 113 pp. (In Spanish)

1518. Sosa, F. V. 1981. Notes on the natural history of the gopher Pappogeomys tylorhinus tylorhinus (Rodentia: Geomyidae) in a semiarid zone. Unpublished thesis. Univ. Nac. Auton. Mex. 136 pp. (In Spanish)

1519. Sostaric, R. B., P. Adame de Paasch, and L. H. Paasch. 1982. Parasites identified in rats trapped in the slaughterhouse of Ferreria in Mexico City. Veterinaria (Mex. City) 13:189-197. (In Spanish)

Forty-two of 50 rats (Rattus norvegicus) were positive for parasites.

1520. Soto-Urribarri, R., S. T. De Soto, and M. P. Barretto. 1966. Studies on wild reservoirs and vectors of Trypanosoma cruzi. XV. Natural infection of an agouti, Dasyprocta azarae azarae licht., 1823 by a T. cruzi-like trypanosome. Rev. Bras. Biol. 26:133-144. (In Portuguese).

A cruzi-like trypanosome was isolated through xenodiagnosis from a rodent, D. azarae azarae Licht., 1823, collected at Morro Agudo, State of Sao Paulo, Brazil.

1521. Soukop, J. 1960-1961. A catalog of Peruvian mammals. Biota 3(26):240-276; 3(27):277-324; 3(28):325-331. (In Spanish)

1522. Sousa, O. E. 1970. Development of adult Echinococcus oligarthrus from hydatids of naturally infected agoutis. J. Parasitol. 56:197-198.

An adult female agouti (Dasyprocta punctata) caught in the Achiote area (Colon Province, Republic of Panama) harbored two hydatid cysts in the right scapular muscles and in the left flank. A house cat was fed a cyst and 121 days after exposure over 1,000 adult worms were recovered from the cat's small intestine. This is the first record of the development of adult E. oligarthrus from hydatids in wild agoutis.

1523. Sousa, O. E. 1972. Notations on Chagas' disease in Panama: Frequency and distribution of Trypanosoma cruzi and Trypanosoma rangeli. Rev. Biol. Trop. 20(2):167-179.

T. rangeli is 6-10 times more frequent than T. cruzi. Rattus rattus and Proechimys semispinosus are important reservoir hosts of T. cruzi. Seven species of triatomines are known as natural T. cruzi vectors.

1524. Sousa, O. E. and C. M. Johnson. 1973. Prevalence of Trypanosoma cruzi and Trypanosoma rangeli in Triatomines (Hemiptera: Reduviidae) collected in the Republic of Panama. Am. J. Trop. Med. Hyg. 22(1):18-23.

Rodents are a primary host.

1525. Sousa, O. E. and V. E. Thatcher. 1969. Observations on the life-cycle of Echinococcus oligarthrus (Diesing. 1863) in the Republic of Panama. An. Trop. Med. Parasitol. 63(2):165-175.

The life-cycle of Echinococcus oligarthrus is demonstrated experimentally, with several rodent species used as possible intermediate hosts. Although spiny rats (Proechimys semispinosus), climbing rats (Tylomys panamensis), cotton rats (Sigmodon hispidus) and agoutis (Dasyprocta punctata) are shown to be susceptible to infection with the larval stage, only the agouti was found naturally infected in Panama.

1526. Souza, M. J. 1981. The characteristics of chromosomes from eight species of Brazilian rodents from the families Cricetidae and Echimyidae. Unpublished Ph.D. dissertation, Univ. de Sao Paulo, Sao Paulo, Brazil. (In Portuguese)

1527. Souza, M. J. and C. J. R. Alho. 1980. Spacial distribution of the wild rodent Zygodontomys lasiurus in its natural hilly habitat. Brasil Florestal 44:31-74. (In Portuguese)

A study of the spatial distribution of Zygodontomys lasiurus emphasizing the ecological aspects of the use of space in the animal's natural hilly habitat and the social structure of its populations with reference to the home range of each individual in the population and its exclusive use.

1528. Souza, M. J. and Y. Yonenaga-Yassuda. 1982. Chromosomal variability of sex chromosomes and NOR's in Thrichomys apereoides (Rodentia: Echimyidae). Cytogenet. Cell Genet. 33:197-203.

G-banding, C-banding, and silver staining techniques were used to analyze the chromosomes of Thrichomys apereoides. The diploid number was 2n = 30. One male had a heteromorphic pair 1, with only one NOR-bearing homolog.

1529. Souza, M. J. and Y. Yonenaga-Yassuda. 1984. G- and C-band patterns and nucleolus organizer (NOR's) in somatic chromosomes of Clyomys laticeps laticeps (Rodentia: Echimyidae). Experientia 40:96-97.

Specimens of Clyomys laticeps laticeps collected in Itapetininga, State of Sao Paulo, Brazil, were analyzed and a diploid number of 2n = 34 was confirmed. G- and C-banding patterns and silver staining data are presented.

1530. Spencer, H. J. 1968. Rat extermination. FAO Tech. Asst. Rep. No. 2492 (to the Government of Panama). 11 pp. (In Spanish)

Describes the pest species of rats found in Panama (Sigmodon hispidus, Zygodontomys microtinus and Rattus rattus) and present methods of control including preparation of baits.

1531. Spencer, S. R. and G. N. Cameron. 1982. Reithrodontomys fulvescens. Mamm. Species 174:1-7.

1532. Spotorno, A. E. 1976. The taxonomic analyses of three highland species of the genus Phyllotis (Rodentia: Cricetidae). An. Mus. Hist. Nat. Valparaiso 9:141-161. (In Spanish)

1533. Spotorno, A. E. 1979. The contrast of caviomorph rodents macrosystematics by a comparative analysis of male reproductive morphology. Arch. Biol. Med. Exp. 12:97-106. (In Spanish)

The penal morphology of caviomorph rodents collected in Chile is compared. Species examined were Octodon degus, Aconaemys fuscus, Spalacopus cyanus, Abrocoma bennetti, Ctenomys robustus, C. fulvus, C. maulinus, C. magellanicus, and Chinchilla lanigera.

1534. Spotorno, A. E. and L. I. Walker. 1979. Analyses of chromosomal similarity according to G-band patterns in four Chilean species of Phyllotis (Rodentia, Cricetidae). Arch. Biol. Med. Exp. 12:83-90. (In Spanish)

An analyses of chromosomal sequences of G-bands of Phyllotis species based on phenograms shows great similarity in P. darwini, P. magister, and P. osgoodi. P. micropus was least similar but had 8 or 9 chromosomes that were similar to the other species. Our results agree with the current taxonomic divisions and present geographic distribution.

1535. Spotorno, A. E. and L. I. Walker. 1983. Electrophoresis and biometric analyses of two Phyllotis species from central Chile and their experimental hybrids. Rev. Chil. Hist. Nat. 56(1):51-59. (In Spanish)

1536. Spotorno, A. O. and R. Fernandez. 1976. Chromosome stability in southern Akodon (Rodentia: Cricetidae). Mamm. Chrom. Newsl. 17(4):13.

The South American rodent Akodon is a polytypic genus with diploid numbers ranging from 14 to 52 chromosomes. In this study the karyotypes were compared for 49 Akodon olivaceous from 4 populations from central Chile (La Serena, Pichidangui, Cachagua and Algarrobo) and 5 Akodon xanthorhinus from Tierra del Fuego, Chile. All individuals in both species have a diploid number of 52 chromosomes with a similar morphology.

1537. Srihongse, S. et al. 1966. Isolation of group C arboviruses in Panama including two members, Patois and Zegla. Am. J. Trop. Med. Hyg. 15(3):379-384.

Discusses five distinct antigenic types isolated from rodents in Panama.

1538. Stamp, N. E. and R. D. Ohmart. 1978. Resource utilization by desert rodents in the lower Sonoran desert. Ecology 59(4):700-707.

Four species of heteromyid rodents were studied in five communities in the Lower Sonoran Desert to examine differences in resource utilization by heteromyids.

1539. Stangl, F. B., Jr. and R. J. Baker. 1983. Evolutionary relationships in Peromyscus: Congruence in chromosomal, genic, and classical data sets. J. Mammal. 64(4):643-654.

G- and C-banded karyotypes are presented for Peromyscus pirrensis, P. perfulvus, and P. nudipes. The P. pirrensis and P. nudipes were collected in Panama and P. perfulvus from Mexico.

1540. Starrett, A. and G. F. Fisler. 1970. Aquatic adaptations of the water mouse, Rheomys underwoodi. Los Ang. Cty. Mus. Contrib. Sci. 182:1-14.

An adult male Rheomys underwoodi caught alive along the Rio Poasito, at 2000 m on Volcan Poas, Alajuela Province, Costa Rica, in April 1966, was maintained in captivity for a short time. Limited observations on maintenance behavior and locomotion of this animal are presented. In addition, morphological features (body form, tail shape and foot structure) related to the high degree of specialization for aquatic locomotion shown by this rodent are described.

1541. Stock, A. D. 1974. Chromosome evolution in the genus Dipodomys and its taxonomic and phylogenetic implications. J. Mammal. 55:505-526.

The mitotic chromosomes of 18 species of kangaroo rats, Dipodomys, were evaluated as indicators of relationships between species and species-groups. Included in the study were D. gravipes, D. agilis simulans, D. agilis plectilis, D. peninsularis pedionomus, D. merriami quintinensis, and D. merriani semipallidus from Baja California, Mexico, and D. nelsoni, D. ornatus, and D. merriami atronasus from San Luis Potosi, Mexico.

1542. Stout, C. A. and D. W. Duszyski. 1983. Coccidia from kangaroo rats (Dipodomys spp.) in the western United States, Baja California, and northern Mexico with descriptions of Eimeria merriami sp. n. Isospora sp. J. Parasitol. 69(1):209-214.

Feces of kangaroo rats were examined for the presence of coccidia. Positive from Mexico were Dipodomys agilis from Baja California Norte (29 of 63), one of one D. gravipes from Baja Norte, D. merriami from Baja Norte (12 of 23), Baja Sur (6 of 20), and Sonora, Mexico (8 of 28).

1543. Streilein, K. E. 1980. The small mammal fauna of the semiarid Brazilian caatinga: adaptation to a fluctuating environment. Unpublished Ph.D. dissertation, University of Pittsburgh, Pennsylvania.

1544. Streilen, K. E. 1982a. The ecology of small mammals in the semiarid Brazilian Caatinga. I. Climate and faunal composition. Ann. Carnegie Mus. 51:79-107.

Environmental unpredictability has been the predominant characteristic of the Caatinga region of northeastern Brazil in both evolutionary and ecological time. The geographic center of the Caatinga harbors a relatively depauperate small mammal fauna, including nine species of rodents in four families and three species of marsupials in a single family. Basic ecological and behavioral information are presented for each species of this little-known fauna.

1545. Streilein, K. E. 1982b. The ecology of small mammals in the semiarid Brazilian Caatinga. II. Water relations. Ann. Carnegie Mus. 51:109-126.

Small mammal species from the semiarid Caatinga of Brazil do not possess pronounced physiological capabilities for water conservation. The granitic outcroppings distributed throughout this xeric region serve as "microrefugia." Thus most of the caviomorph rodent and marsupial species are able to compensate for a low degree of physiological capabilities by preferentially utilizing the relatively mesic, rocky habitats; none of the murid rodents exhibit this behavior.

1546. Streilein, K. E. 1982c. The ecology of small mammals in the semiarid Brazilian Caatinga. III. Reproductive biology and population ecology. Ann. Carnegie Mus. 51:251-269.

The timing of reproduction is critical in an environmentally unpredictable area such as the Caatinga region of Brazil. Most of the small mammal species in the Caatinga reproduce year round but with varying degrees of success. The caviomorph rodents and marsupials are able to maintain higher population levels than the murid rodents, with a generally lower gross output of young.

1547. Streilein, K. E. 1982d. The ecology of small mammals in the semiarid Brazilian Caatinga. IV. Habitat selection. Ann. Carnegie Mus. 51:331-343.

Distributional patterns in the small mammal fauna of the Caatinga were examined. Most of the caviomorph rodent and marsupial species preferentially utilize granitic outcroppings. Pronounced affinity for the stable, mesic granitic habitats evolved as an avoidance response to the unpredictable occurrence of extreme climatic conditions characteristic of the Caatinga. None of the murids exhibited this behavior.

1548. Streilein, K. E. 1982e. The ecology of small mammals in the semiarid Brazilian Caatinga. V. Agonistic behavior and overview. Ann. Carnegie Mus. 51:345-369.

Basic agonistic behavior repertoires are described for Caatinga species. The results of interspecific encounters suggest that behavioral interactions contribute to the maintenance of observed distributional patterns; Galea spixii is actively excluded from granitic habitats by Kerodon rupestris.

1549. Streubel, D. P. and J. P. Fitzgerald. 1978. Spermophilus spilosoma. Mamm. Species 101:1-4.

1550. Sudia, W. D., R. D. Lord, V. F. Newhouse, D. L. Miller, and R. E. Kissling. 1971. Vector-host studies during an epizootic of Venezuelan equine encephalomyelitis in Guatemala, 1969. Am. J. Epidemiol. 93(2):137-143.

Rodent involvement in the disease is possible although no antibodies were found.

1551. Sutton, C. A. 1983. Notes on the parasite fauna of Argentina. XL. Diagnoses of Buenos Aires rodents. Neotropica 29(81):19-26. (In Spanish)

Two new trematodes are described, Isthmiophora scapteromae found in Scapteromys tumidus acuaticus and Zonorchis oxymycterae from Oxymcterus rufus platensis.

1552. Taber, A. B. and D. W. MacDonald. 1984. Scent dispensing papillae and associated behavior of the mara, Dolichotis patagonum (Rodentia: Caviomorpha). J. Zool. (Lond.) 203(2):298-301.

Describes the anal glands of one male and two female Maras killed by ranch hands at Peninsula Valdez, Chubut Province, Argentina, and summarizes observations of scent-marking by wild Maras observed during 320 hours between July and November 1981.

1553. Taibel, A. M. 1977. Mammals of Guatemala, with particular regard to the Peten region, collected from May to September 1932. Atti Soc. Ital. Sci. Nat. Mus. Civ. Stor. Nat. Milano 118(3-4):379-401. (In Italian)

Mammal species mostly caught in the Peten region of Guatemala are listed. All the specimens are at the Zoological Museum of the Bologna University. Rodents listed are Sciurus deppei, Heterogeomys hispidus, Dasyprocta punctata and Cuniculus paca.

1554. Tamsitt, J. R. and D. Valdivieso. 1962. Estral cycle of the rat Sigmodon bogotensis of Colombia. Mammalia 26:161-166. (In French)

The estrus cycle of Sigmodon bogotensis was studied. The average length of the cycle is 6.2 $\pm$ 0.45 days with a variation range from 4 to 8 days.

1555. Taylor, K. D. 1965. Rat damage to sugarcane in Barbados. Proc. Congr. Prot. Cultures Trop. Chambre de Commerce Marseille. pp. 647-652.

1556. Taylor, K. D. 1972. Rodent problems in tropical agriculture. PANS 18:81-87.

Major crops attacked by rats in the tropics are rice, coconuts, cacao and sugarcane. Some control methods are described.

1557. Taylor, R. H. 1970. Reproduction, development and behavior of the Cuban hutia conga, Capromys pilorides pilorides. Unpublished thesis, Univ. of Puget Sound, Tacoma, Washington.

1558. Taylor, R. L. and M. H. Shacklette. 1962. Naturally acquired histoplasmosis in the mammals of the Panama Canal Zone. Am. J. Trop. Med. Hyg. 11(6):796-799.

The agent was isolated from 12 spiny rats (Proechimys semispinosus) and from other animals.

1559. Telford, S. R., A. Herrer, and H. A. Christensen. 1972. Enzootic cutaneous leishmaniasis in eastern Panama. III. Ecological factors relating to the mammalian hosts. Ann. Trop. Med. Parasitol. 66(2):173-179.

About 90% of the trapping was conducted in secondary forest and abandoned agricultural fields. A large coconut plantation and primary forest accounted for the remaining 10% of the trapping. A total of 481 mammals belonging to 16 genera and 19 species was collected. Animals trapped were Proechimys semispinosus, Oryzomys capito, Marmosa robinsoni, Metachiru nudicaudatus and Saguinus geoffroyi.

1560. Tesh, R. B. 1970a. Observations on the natural history of Diplomys darlingi. J. Mammal. 51(1):197-199.

A total of 74 D. darlingi, the Neotropical arboreal rat, was captured in El Aguacate in central Panama. All were obtained from holes in trees near streams. The species is nocturnal, and was hostile and difficult to keep in captivity, where it ate bananas, apple, mango, sunflower seeds, almonds, and coconut. Notes on sex ratio and reproductive status of the captured animals are given.

1561. Tesh, R. B. 1970b. Notes on the reproduction, growth and development of Echimyid rodents in Panama. J. Mammal. 51(1):199-202.

Studies were made of Proechimys semispinosus and Hoplomys gymnurus from El Aguacate in central Panama.

1562. Tesh, R. B., P. H. Peralta, and K. M. Johnson. 1970. Ecologic studies of vesicular stomatitis virus. II. Results of experimental infection in Panamanian wild animals. Am. J. Epidemiol. 91:216-224.

Among those animals tested for experimental infection were: Oryzomys, Zygodontomys, Sigmodon, Tylomys, Peromyscus, Calomys, Rattus rattus, R. norvegicus, etc. The virus was found to have a wide potential host range. All species tested produced antibodies indicating that mammals are highly susceptible to VSV infection and many are naturally infected. The data and epidemiologic observations of vesicular stomatitis epizootics imply that the natural source of VSV may also be nonvertebrate, possibly a plant.

1563. Tesh, R. B., L. J. Ackerman, W. H. Dietz, and J. A. Williams. 1973. Angiostrongylus costaricensis in Panama, prevalence and pathologic findings in wild rodents infected with the parasite. Am. J. Trop. Med. Hyg. 22(3):348-356.

Five species of Panamanian wild rodents (Sigmodon hispidus, Rattus rattus, Liomys adspersus, Oryzomys fulvescens, and Zygodontomys microtinus) were found naturally infected with Angiostrongylus costaricensis, extending the known distribution and host range of the parasite.

1564. Tesh, R. B., B. N. Chaniotis, M. D. Aronson, and K. M. Johnson. 1971. Natural host preferences of Panamanian Phlebotomine sandflies as determined by precipitin test. Am. J. Trop. Med. Hyg. 20(1):150-156.

Of four sandfly species considered, Lutzomyia shannoni showed a preference for rodents, principally Sciurus granatensis, Coendou rothschildi, Tylomys nudicaudus, Proechimys semispinosus, Dasyprocta punctata and Rattus norvegicus.

1565. Tesh, R. B., B. N. Chaniotis, B. R. Carrera, and K. M. Johnson. 1972. Further studies on the natural host preferences of Panamanian phlebotomine sandflies. Am. J. Epidemiol. 95:88-93.

Rodents were important hosts for several species at certain times of the year.

1566. Thatcher, V. E. 1968. Studies of phlebotomine sandflies using castor oil traps baited with Panamanian animals. J. Med. Entomol. 5(3):293-297.

A new type of phlebotomine sandfly is trapped in two moats filled with castor oil around a bait animal.

1567. Thatcher, V. E. 1972. Neotropical echinococcosis in Colombia. Ann. Trop. Med. Parasitol. 66(1):99-105.

The 11 reported human cases of echinococcosis in Colombia are discussed. Natural infections with multilocular hydatids are reported from Proechimys guyannensis and Agouti paca. It is concluded that the multilocular cysts found in both man and animals in several tropical American countries probably all represent Echinococcus oligarthrus.

1568. Thatcher, V. E. 1973. Neotropical echinococcosis in Colombia and neighboring countries. Acta Med. Valle 4:17-27. (In Spanish)

Rodents found naturally infected with Echinococcus oligarthrus in northern Latin America were Dasyprocta agouti, D. punctata, Agouti paca, Echimys cayennensis, Proechimys semispinosus and P. guyannensis.

1569. Thatcher, V. E. 1982. Five new neotropical species of Lecithodendriidae (Trematoda: Digenea) including three new genera, all from Panamanian and Colombian mammals (Rats, raccoons, bats, opossums). Proc. Helminthol. Soc. Wash. 49:45-55.

Three new neotropical genera and species of Lecithodendriidae (Trematoda: Digenea) are described from Panamanian and Colombian mammals. Proechimytrema phanerotermina gen. et sp. n. from the spiny rat, Proechimys sp. and Oryzomytrema tristoma gen. et sp. n. from the rice rat, Oryzomys sp.

1570. Thatcher, V. E. and B. B. Nickol. 1972. Some Acanthocephalans from Panama and Colombia. Proc. Helminth. Soc. Wash. 39(2):245-248.

Eighteen species of Acanthocephala are listed from neotropical Panama and Colombia. The only rodent infected was Rattus rattus with Moniliformis moniliformis from Panama.

1571. Thatcher, V. E., C. Eisenmenn, and M. Hertig. 1965. Experimental inoculation of Panamanian mammals with Leishmania braziliensis. J. Parasitol. 51(5):842-844.

Infections produced in the spiny rat (Proechimys semispinosus) and the white-tailed tree rat (Tylomys panamensis).

1572. Thompson, K. V. and J. A. Cranford. 1984. Parental behavior of the South American punare (Thrichomys apereoides). Va. J. Sci. 35(2):90. Abstract only.

1573. Tikasingh, E. S. 1969. Leishmaniasis in Trinidad. A preliminary report. Trans. R. Soc. Trop. Med. Hyg. 63:411.

Three mammals were found positive for Leishmania in Trinidad including Oryzomys laticeps.

1574. Tikasingh, E. S. 1975. Leishmaniasis enzootic in the rodents of Trinidad, W.I. Bol. Of. Sanit. Panam. 79:312-324. (In French)

A total of 693 small mammals were trapped at six localities on the Island of Trinidad and were examined for enzootic cutaneous leishmaniasis. Of 16 species examined, 6 were found to be naturally infected with amastigotes; the highest incidence of infection (29.3 percent) was found in the rice rat Oryzomys capito.

1575. Tikasingh, E. S., L. Spence, A. H. Jonkers, and C. O. R. Everard. 1970. The study of small mammal ecology in Turure Forest, Trinidad, with associated virological and parasitological problems. Part 2. Arbovirus and parasitology studies. West Indian Med. J. 19:127-128.

From a total of 590 sera or organs processed from 15 species, 9 strains of viruses were isolated from Oryzomys laticeps and Proechimys guyannensis. In the parasitological studies 179 animals were processed yielding possibly three species of trypanosomes and two species of filariae.

1576. Tipton, V. J. and E. Mendez. 1966. The fleas (Siphonaptera) of Panama. Pages 289-386 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago.

Presents a key to Panamanian genera and species of fleas and includes a host list.

1577. Tipton, V. J. and E. Mendez. 1968. New species of fleas (Siphonaptera) from Cerro Potosi, Mexico, with notes on ecology and host parasite relationships. Pac. Insects 10(1):177-214.

Presents evidence indicating flea distribution was more dependent on elevation and season than sex of the host (small rodents).

1578. Tipton, V. J., R. M. Altman, and C. M. Keenan. 1966. Mites of the subfamily Laelaptinae in Panama (Acarina: Laelaptidae). Pages 23-83 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago.

Most rodent mites studied belonged to eight families: Laelaps, Gigantolaelaps, Eubrachylaelaps, Echinolaelaps, Mysolaelaps, Tur, Steptolaelaps, and Haemolaelaps.

1579. Tonn, R. J., G. M. Kohls, and K. Arnold. 1963. Ectoparasites of birds and mammals of Costa Rica. 2. Ticks. Rev. Biol. Trop. 11(2):217-220.

Nymphs of Amblyomma ovale were collected from Tomes spiny rat, Proechimys semispinosus (Tomes).

1580. Torres, P., O. Lopetegui, and M. H. Gallardo. 1976. Investigation of some new parasitic nematodes found in Rattus norvegicus and Ctenomys maulinus in Chile. Bol. Chil. Parasitol. 31:39-42. (In Spanish)

1581. Tovar, A. 1971. Catalogue of Peruvian mammals. An. Cient. (La Molina) 9(1-2):18-37. (In Spanish)

Both scientific and vernacular names are given for 11 orders with a total of 44 families including 378 species and subspecies for Peru.

1582. Tranier, M. M. 1976. New data on parallel evolution of karyotypes of Phyllotine rodents (Rodentia: Cricetidae). C. R. Acad. Sci. Ser. D:1201-1203. (In French)

1583. Travi, V. H. 1981a. First note on a new species of the genus Ctenomys Blainville, 1826 (Rodentia: Ctenomyidae). Iheringia Ser. Zool. 60:123-124. (In Portuguese)

A new species is described, Ctenomys flamarioni. Type locality is Fazenda Cacapava, Estacao Ecologica do Taim, Rio Grande, Rio Grande do Sul, Brasil.

1584. Travi, V. H. 1981b. Studies with a population of Ctenomys sp. (Rodentia, Ctenomyidae) using the capture-recapture method. Resume from the Comunicacoes Cientificas do VIII Congresso Brasileiro de Zoologia Universidade de Brasilai, D. F. Brazil. pp. 200-201. (In Portuguese)

1585. Trebbau, P. 1980. Some observation on the capybara (Hydrochoerus hydrochaeris). Zool. Gart. 50(1):40-44.

Discusses the distribution, growth and natural enemies of capybara in Venezuela. Describes how to use capybara in zoos.

1586. Twigg, G. I. 1962a. Rodent damage to sugarcane in British Guiana. World Crops 14:150-154.

Sugarcane is seriously damaged in British Guiana by Holochilus sciureus berbicensis, a rat-like Cricetine rodent. The objective of this article is to review the damage and attempts to achieve control in canefields.

1587. Twigg, G. I. 1962b. Notes on Holochilus sciureus in British Guiana. J. Mammal. 43:369-374.

Holochilus sciureus is found primarily in the Amazon drainage but the race berbicensis is found in the savannahs of British Guiana. Its natural food is the stalks and seeds of savannah grasses but where sugarcane is grown it feeds extensively on it. The nests are normally found 4 to 5 feet off the ground in the sugarcane fields. Nests are also built on the ground and in trash heaps.

1588. Twigg, G. I. 1965. Studies on Holochilus sciureus berbicensis, a cricetine rodent from the coastal region of British Guiana. Proc. Zool. Soc. Lond. 145:263-283.

These rodents live in the grassy savannahs where population density in circumscribed areas is often high and they easily colonize cultivated areas where their normal reproductive pattern, assisted by migration in wet weather, results in their periodically attaining plague proportions. The rodent continues to breed throughout its lifetime and produces young at all times of the year. The study describes fully the ecology of this harmful rodent.

1589. Undiano, C. 1964. Microtomus lunifer Berg as host, maintainer and accidental vector of T. cruzi among the wild animals of the north of the Province of Cordoba. Rev. Med. Cordoba 51:188-196. (In Spanish)

1590. Uribe-Pena, Z., G. Gavino de la Torre, and C. Sanchez-Hernandez. 1981. Vertebrates on the ranch "El Reparito" Municipio de Arteaga, Michoacan, Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 51:615-646. (In Spanish)

This paper contains data about the microhabitat and reproduction of 377 samples of vertebrates. The specimens were collected at the "Reparito" Ranch located on the Balsas-Tepalcatepec River Basin in the Municipality of Arteaga, Michoacan, Mexico. The only rodents included in the study were Spermophilus adocetus infernatus, Peromyscus banderanus banderanus and Neotoma alleni elattura.

1591. Uribe-Alcocer, M., F. Rodriguez-Romero, and A. Laguarda-Figueras. 1979. A new case of chromosomal intraspecific polymorphism in Reithrodontomys megalotis. Mammal Chromosomes Newsletter 20:135-139.

The chromosomes of 11 specimens, 8 females and 3 males, of Reithrodontomys megalotis were analyzed. The specimens were collected in the Federal District and Veracruz, Mexico. The diploid number found in all individuals was 40, all chromosomes being biarmed. No microchromosomes were found in any of the specimens examined.

1592. Uribe-Alcocer, M., A. Ahumada-Medina, A. Laguarda-Figueras, and F. Rodriguez-Romero. 1979. The karyotype of Spermophilus perotensis. Mammal Chromosomes Newsletter 20:139-141.

Karyotypes were determined for specimens of Spermophilus perotensis collected near Perote, and Tolotitlan, Veracruz, Mexico. The karyotype is 2n = 14 plus XX and XY.

1593. Uribe-Alcocer, M., F. Rodriguez-Romero, R. Ruiz-Carus, and A. Laguarda-Figueras. 1978. The chromosomes of Spermophilus spilosoma cabrerai. Mammal Chromosomes Newsletter 16:116-117.

1594. Uribe-Alcocer, M., A. Laguarda-Figueras, J. Romero-Jarero, J. Paulete-Vanrell, and S. S. de Paulete-Vanrell. 1973. Chromosome analysis and meiotic behavior of Neotomodon alstoni alstoni. Mammal Chromosomes Newsletter 14:12-13.

Thirteen Neotomodon alstoni alstoni (9 females and 4 males) were collected at La Cima, Tlalpan, Mexico, at km 43 on the Mexico-Cuernavaca highway. All specimens of N. a. alstoni studied had a diploid number of 2n = 48. From a cytogenetic point of view N. a. alstoni is very similar to Peromyscus which have the same

number of chromosomes and both have eight paris of biarmed autosomes.

1595. Uribe-Alcocer, M., A. Laguarda-Figueras, J. Romero-Jarero, J. Paulete-Vanrell, and S. S. de Paulete-Vanrell. 1974. Cytogenetic analysis of Neotomodon alstoni alstoni. Cytologia 39:437-442.

The authors report the cytogenetic analysis of Neotomodon alstoni alstoni, an endemic species restricted to the transversal volcanic system of Mexico. The chromosome number of this species is 2n = 48 and the fundamental number NF = 66. From a cytogenetic point of view, Neotomodon alstoni alstoni shows close relationships with the genus Peromyscus.

1596. Uribe-Alcocer, M., A. Laguarda-Figueras, J. Romero-Jarero, J. Paulete-Vanrell, and S. S. de Paulete-Vanrell. 1982. The chromosomes of a population of Microtus mexicanus (Muridae; Rodentia) of central Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Biol. Exp. 48:57-63.

1597. Valadez, G. 1969. The control of kangaroo rats (Dipodomys spp.) in the pasture lands of Chihuahua. Unpublished thesis, Univ. of Chihuahua. (In Spanish)

1598. Valadez, G. 1970. The control of rodents in pasture lands. Mexico Ganadero No. 147:23-25. (In Spanish)

1599. Valdes de la Osa, A. and O. H. Garrido. 1978. Presence of Rattus (Rodentia: Muridae) on Cuban reefs. Misc. Zool. Inst. Zool. Acad. Cienc. Cuba 7:2-3. (In Spanish)

1600. Valencia, D. 1980. Rat control in coconut palms in Colombia. Proc. Vertebr. Pest Conf. 9:110-113.

The black rat (Rattus rattus) causes severe damage to the coconut crop in Colombia. Damage results from the rats gnawing the shells of the coconuts until they penetrate to the endosperm; the perforated nuts will fall within a period of 15 days and are unsuitable for harvest. Since 1972, the Colombian Agricultural Research Institute through its vertebrate control program, has been conducting a series of investigations to obtain information about the characteristics of this damage and the best means of reducing it. The lack of water (i.e., rainfall) during the dry season seems to be associated with increased damage.

1601. Valencia, D. 1983. Rodents as agricultural pests in Colombia. Pages 123-131 in D. J. Elias, Compiler. Symposium: Zoologia economica y vertebrados como plagas de la agricultura. IX Congreso Latinoamericano de Zoologia, Arequipa, Peru, 9-15 Oct. 1983. (In Spanish)

Rodents from the families Muridae, Cricetidae, and Echimyidae damage cultivated crops in Colombia. The most common rodent attacking coconuts and oil palms is Rattus rattus. A mixture most accepted by rodents is 90% rice flour, 5% vegetable oil, 5% sugar plus an anticoagulant rodenticide.

1602. Valencia, D. 1985. Vertebrate pests in Colombian agriculture. Unpublished thesis, Colorado State Univ.

The major vertebrate pests in Colombia are eared doves, Zenaida auriculata, black rats, Rattus rattus and vampire bats Desmodus rotundus.

1603. Valencia, D. and D. J. Elias. 1975. The control of rats and domestic mice. ICA Informe No. 1, Bogota, Colombia, pp. 1-4. (In Spanish)

Gives methods for controlling rodents in houses and how to store food to reduce the availability for rodents.

1604. Valencia, D. and E. Ortiz. 1981. A guide for the control of rats and mice. Bol. didactico 10, Instituto Agropecuario Colombiano. 30 pp., mimeo. (In Spanish)

1605. Vance, T. L. and D. W. Duszynski. 1985. Coccidian parasites (Apicomplexa: Eimeriidae) of Microtus spp. (Rodentia: Arvicolidae) from the United States, Mexico, and Japan, with descriptions of five new species. J. Parasitol. 71(3):302-311.

Microtus examined for coccidia and the state of their origin in Mexico were M. mexicanus fulviventer (Oaxaca), M. mexicanus fundatus (Michoacan), M. mexicanus mexicanus (Mexico, Oaxaca, Veracruz), M. mexicanus subsimus (Coahuila) and M quasiater (Veracruz).

1606. Varela, G. and R. Velasco. 1965. New aspects on typhus epidemiology: the serologic research on domestic animals. Rev. Inst. Salubr. Enferm. Trop. (Mex.) 25(2):171-175. (In Spanish)

Rickettsia mooseri and R. prowaseki were isolated from Rattus rattus from northern Mexico.

1607. Varma, M. C. R. 1973. Ticks (Ixodidae) of British Honduras. Trans. R. Soc. Trop. Med. Hyg. 67(1):92-102.

Description of the territory, ticks recovered, hosts and contact potential for man is discussed. Rodent hosts included Sciurus yucatanensis.

1608. Varona, L. S. 1970a. Description of a new species of Capromys from southern Cuba (Rodentia: Caviomorpha). Poeyana Inst. Zool. Acad. Cienc. Cuba Ser. A 74:1-16. (In Spanish)

A new species of hutia, Capromys garridoi, is described from Cayo Maja, in Jardines and Jardinillos Bank, south of Cuba.

1609. Varona, L. S. 1970b. A new species and new subgenus of Capromys (Rodentia: Caviomorpha) from Cuba. Poeyana Inst. Zool. Acad. Cienc. Cuba Ser. A. 73:1-18. (In Spanish)

A new species of hutia, Capromys auritus, is described from Fragoso Key, in the north of Las Villas Province, Cuba.

1610. Varona, L. S. 1974a. A catalog of the living and extinct mammals of the Antilles. Acad. Cienc. Cuba. 139 pp. (In Spanish)

1611. Varona, L. S. 1974b. Capromys nanus, the smallest hutia of Cuba (Rodentia: Capromyidae). Torreia Nueva Ser. 34:3-11. (In Spanish)

Two specimens of Capromys nanus were found in a private collection that was donated to the Cuban Academy of Sciences.

1612. Varona, L. S. 1979. New subgenus and species of Capromys (Rodentia: Caviomorpha) for Cuba. Poeyana Inst. Zool. Acad. Cienc. Cuba 194:1-33. (In Spanish)

A new species of hutia (Capromys angelcabrerai) is described. In size the new species is similar to Capromys nanus, the dwarf hutia. A new subgenus is also described to accommodate both species, whereby C. nanus is removed from the subgenus Mysateles

1613. Varona, L. S. 1983. A new subspecies of the Conga hutia, Capromys pilorides (Rodentia: Capromyidae). Caribb. J. Sci. 19(3-4):77-79. (In Spanish)

A new subspecies of the "hutia conga," Capromys pilorides (Say) is described from the Archipielago de Sabana, to the north of Maranzas and Villa Clara provinces, Cuba.

1614. Varona, L. S. and O. H. Garrido. 1970. Vertebrates from the San Felipe Keys, including a new species of hutia. Poeyana Inst. Zool. Acad. Cienc. Cuba Ser. A 75:1-26. (In Spanish)

Observations are made on vertebrates found on the Cayos de San Felipe, south of La Coloma, Pinar del Rio, Cuba. A new species of hutia, Capromys sanfelipensis, is described.

1615. Vaz-Ferreira, R. 1960. A note on Cricetinae from Uruguay. Arch. Soc. Biol. Montev. 24:66-75. (In Spanish)

1616. Veal, R. and W. Caire. 1979. Peromyscus eremicus. Mamm. Species 118:1-6.

1617. Vega, R. 1982. Agonistic behavior in male Akodon olivaceus. Arch. Biol. Med. Exp. 15(2):160. (In Spanish)

1618. Veiga-Borgeaud, T. 1981. Epidemiology of the plague in northeast Brazil: Phytogeographical and climatic factors responsible for the population dynamics of rodents. Mammalia 45(3):289-298. (In French)

Zygodontomys lasiurus pixuna has been considered the sole factor responsible for plague epizootiology in northeastern Brazil. Rain and vegetation periodicity were shown to have the same influence on Rattus rattus and Zygodontomys populations. Plague and other diseases that Zygodontomys may transmit were discussed.

1619. Veiga-Bougeaud, T. 1982. Ecological data on Oryzomys nigripes (Desmarest, 1819) (Rodents: Cricetidae) in the natural focus of plague of Barrocao Dos Mendes (State of Rio de Janeiro, Brazil). Mammalia 46(3):335-359. (In French)

Capture-recapture studies of marked individuals in a population of Oryzomys nigripes carried out 7 days of each month throughout 1 year showed the principal characteristics of the population dynamics. Reproduction was highest from Sept.-Nov. and from Feb.-April. The population was highest in April-May and lowest in February.

1620. Venegas, W. 1973. The karyotype of Ctenomys maulinus maulinus Philippi (Rodentia, Ctenomydae). Bol. Soc. Biol. Concepcion 46:145-154. (In Spanish)

1621. Venegas, W. 1974a. A cytogenetic study of Aconaemys fuscus fuscus Waterhouse (Rodentia: Octodontidae). Bol. Soc. Biol. Concepcion 47:207-214.

Aconaemys fuscus fuscus Waterhouse captured in Chile. The chromosome number was 2n = 56, NF (number of chromosome arms) = 112. The karyotype is described. Aconaemys shows a chromosomal similarity with representatives of other genera of the Octodontidae family so far studied.

1622. Venegas, W. 1974b. Karytypic variation in Phyllotis micropus micropus Waterhouse (Rodentia: Cricetidae). Bol. Soc. Biol. Concepcion 48:69-76. (In Spanish)

The karyological results obtained from the study of five populations of Phyllotis micropus micropus are presented. The specimens were captured with Sherman traps in the provinces of Nuble, Malleco and Aysen, Chile. A diploid number of 2n = 32 was found in the specimens of two populations from the province of Nuble, while a diploid number of 2n = 34 was found in specimens of one population from the province of Malleco and two populations from the province of Aysen. The intrasubspecific karyotypic variability found may indicate a speciation process.

1623. Venegas, W. 1975. The somatic chromosomes of Octodon bridgesi Waterhouse (Rodentia, Octodontidae). Bol. Soc. Biol. Concepcion 49:7-15. (In Spanish)

The karyotype of Octodon bridgesi, an endemic rodent of Chile, is given. The chromosome number was 2n = 58 and the chromosomes were classified according to size and morphology. Octodon bridgesi presents a surprising chromosomic similarity to the Octodontidae family.

1624. Venegas, W. and C. Smith. 1974. The chromosomes of Ctenomys maulinus bruneus Osgood (Rodentia, Ctenomydae). Bol. Soc. Biol. Concepcion 48:281-287. (In Spanish)

The karyotype of the subterranean rodent Ctenomys maulinus bruneus Osgood, commonly known as "tuco-tuco" is described. The animals were captured on Cordillera of Lonquimay, Province of Malleco, Chile. The somatic number of chromosomes found was 2n = 26. The chromosomes were classified according to size and morphology. A great karyotypic diversity seems to be the most important cytogenetic characteristic of the genus.

1625. Vidal, R. O., R. Riva, and N. I. Baro. 1976. Chromosomes of the genus Holochilus. I. Polymorphism in H. chacarius Thomas (1906). Physis 35(C):75-85. (In Spanish)

The chromosomes of Holochilus chacarius chacarius and H. c. balnearum were compared. The diploid number ranged from 2n = 50 to 2n = 56. All the specimens were collected in Argentina.

1626. Vidal, R. O., R. Riva, and S. Spirito. 1973. The chromosomes of Chinchilla brevicaudata. Contributions to the systematics of the genus Chinchilla (Rodentia: Chinchillidae). Physis 32(84):141-150. (In Spanish)

The chromosomes of Chinchilla brevicaudata were studied. The diploid number was 64 (62 A/XX - XY). The chromosomes are metacentric or submetacentric. A pair of autosomes shows large satellites on the short arm.

1627. Vidal-Rioja, L. 1985. Chromosome polymorphisms in Ctenomys talarum (Rodentia, Octodontidae). Caryologia 38(2):169-178.

Chromosome polymorphisms involving shortening or total absence of short arms in several chromosome pairs were found to occur in different populations of the burrowing rodent Ctenomys talarum. All the populations compared came from the coastal regions of Buenos Aires Province, Argentina.

1628. Vidal-Rioja, L., L. Semorile, and N. O. Bianchi. 1979. DNA of Akodon (Rodentia, Cricetidae). I. Biophysical characterization. Biochem. Genet. 17(3/4):297-303.

Buoyant density in CsCl, melting temperature, and G + C base content of the DNA from four species of Akodon were determined. There was good agreement in DNA base composition of the four species, although values were slightly higher in A. obscurus, suggesting a certain degree of interspecies variability.

1629. Vidal-Rioja, L., N. O. Bianchi, A. Catala, and L. Semorile. 1982. DNA of Akodon (Rodentia, Cricetidae). II. Molecular hybridization of repetitive DNA sequences. Can. J. Genet. Cytol. 24:601-609.

Interspecies repetitive DNA homology was studied in akodont rodents related at generic and suprageneric levels. The homology was determined by taking the species Akodon molinae as the reference species. The 3H-DNA/DNA hybridization on filters showed a closer relationship between A. molinae and A. azarae, A. dolores, and A. mollis than between A. molinae and Bolomys obscurus.

1630. Vidales, G. U. and O. Sanchez-Herrera. 1983. Type specimens of mammals in the collection of the Institute of Biology, National University of Mexico. Occas. Pap. Mus. Tex. Tech Univ. 87:1-7.

The following type specimens are in the collection at the National University of Mexico: Citellus adocetus arceliae, Orthogeomys grandis alvarezi, O. grandis huixtlae, Tylomys gymnurus, and T. nudicaudus villai.

1631. Viegas-Pequignot, E., S. Kasahara, Y. Yonenaga-Yassuda, and B. Dutrillaux. 1985. Major chromosome homeologies between Muridae and Cricetidae. Cytogenet. Cell Genet. 39:258-261.

The presumed ancestral karyotype of Muridae, previously reconstructed, is compared with that of a selected Cricetidae species, Akodon arviculoides. Most of the chromosomes of the presumed ancestral chromosomes of Muridae are homeologous to chromosome arms or segments in the Akodon karyotype. This result strengthens the validity of the reconstruction of the ancestral karyotype for both Muridae and Cricetidae.

1632. Villa-C., B. 1983. The negative impact on agriculture by a burrowing rodent (Mammalia: Geomyidae), but a positive effect on drainage. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. (1):237-242. (In Spanish)

Pappogeomys merriami merriami is a serious problem in alfalfa fields in the valley of Mexico. Losses were estimated to be 8 tons/hectare at a value of $1,100 to $1,200 per ton. Control should be based on the density of the gophers.

1633. Villa-C., B. and V. S. Fernandez. 1983. Some aspects on reproduction of the plains pocket gopher Pappogeomys tylorhinus tylorhinus (Rodentia: Geomyidae) in an area north of Mexico City. An. Inst. Biol. Univ. Nac. Auton. Mex. 54 Ser. Zool. 1:199-209. (In Spanish)

The reproductive patterns for Pappogeomys tylorhinus tylorhinus were studied for a period of 26 months.

1634. Villa-R., B. 1960. The Socorro Island. Terrestrial vertebrates. Monogr. Inst. Geofisica 2:203-216. (In Spanish)

1635. Villa-R., B. 1979. Birds and Norway rats, Rattus norvegicus, versus the insular bat Pizonyx vivesi on the islands of the Sea of Cortez, Mexico. Biol. Univ. Nac. Mex. 50(1):729-736. (In Spanish)

Rattus norvegicus prey upon Pizonyx. This rat was introduced to the islands by man and is a threat to this species of bat.

1636. Vivas, A. M. 1985. Population biology of rodents in the Venezuelan llanos. IV International Theriological Congress, Edmonton, Canada, 22-25 August. Abstract No. 0634. Abstract only.

1637. Vivas, A. M. and A. C. Calero. 1985. Some aspects of the population ecology for small mammals from the Biological Station in the Llanos. Bol. Soc. Venez. Cien. Nat. 143:79-99. (In Spanish)

The study area was the Venezuelan Society of Natural Sciences Biological Station located SSE of Calabozo, Guaric, Venezuela. A population of Sigmodon hispidus was monitored for a year using mark-recapture techniques. Density was higher during the rainy season and lower during the dry season. Reproduction occurred throughout the year, but was highest during the rainy season. Habitats seem to be marginal probably due to the fact that Calabozo might be in the southern limit of distribution of the species.

1638. Vivas, A. M. and R. Roca. 1983. Use of space by Zygodontomys microtinus (Rodentia: Cricetidae) in Guarico state. Acta Cient. Venez. 34(1):146. Abstract only. (In Spanish)

1639. Voss, R. S. and Linzey, A. V. 1981. Comparative gross morphology of male accessory glands among neotropical muridae (Mammalia: Rodentia) with comments on systematic implications. Misc. Publ. Mus. Zool. Univ. Michigan 159:1-41.

The male accessory gland complements of 54 species in 35 genera and subgenera of South American cricetines are described. Despite their craniodental and external morphological diversity,

South American cricetines are remarkably uniform in male reproductive anatomy.

1640. Voss, R. S., J. L. Silva, and J. A. Valdes L. 1982. Feeding behavior and diets of Neotropical water rats, genus Ichthyomys Thomas, 1893. Z. Saugetierk. 47:364-369.

1641. Wainberg, R. L. and T. Gentile de Fronza. 1974. Autosomic polymorphism in Phyllotis griseoflavus griseoflavus Waterhouse, 1837 (Rodentia-Cricetidae). Boll. Zool. 41:19-24.

1642. Walker, L. I., A. E. Spotorno, and J. Arrau. 1984. Cytogenetic and reproductive studies of two nominal subspecies of Phyllotis darwini and their experimental hybrids. J. Mammal. 65(2):220-230.

Phyllotis darwini vaccarum and Phyllotis darwini darwini live contiguously in central Chile, the former in the high Andes and the latter in the Central Valley and on the coast. All individuals examined of both kinds had 38 chromosomes of similar shape, but P. d. vaccarum always showed large paracentromeric C-bands on all chromosomes, whereas P. d. darwini showed none or only small ones.

1643. Walker, L. I., A. E. Spotorno, and R. Fernandez. 1979. Conservation of whole arms during chromosomal divergence of phyllotine rodents. Cytogenet. Cell Genet. 24:209-216.

The assumption of simple fusion in a group showing a constant number of chromosome arms was tested by comparison of G-band patterns of chromosomes of three Phyllotis species. The karyotypes, each of which has 40 chromosome arms, have a 2n of 38, 38 and 40 and are made up of mostly metacentric chromosomes. Seven chromosomes and 21 arms out of the total were identical in the 3 species, denoting a conservation of whole-arm band sequences in this group. The three species compared were Phyllotis darwini, P. magister, and P. osgoodi. All were collected in Chile.

1644. Walker, L. I., S. Berrios, J. V. Pincheira, A. E. Spotorno, and R. Fernandez. 1979. Chromosomal analyses and hybrid molecular experiments with Phyllotis darwini darwini and Phyllotis darwini vaccarum. IV Congreso Latinoamericano de Genetica, Argentina. I:25. Abstract only. (In Spanish)

1645. Ward, R. D., J. J. Shaw, R. Lainson, and H. Fraiha. 1973. Leishmaniasis in Brazil: VIII. Observations on the Phlebotomine fauna of an area highly endemic for cutaneous leishmaniasis, in the Serra dos Carajas, Para State. Trans. R. Soc. Trop. Med. Hyg. 67(2):174-183.

Twenty-three species were caught and over 24% were found to feed on the rodents Cavia spp. or Proechimys guyannensis.

1646. Webb, R. G. and R. H. Baker. 1962. Terrestrial vertebrates of the Pueblo Nuevo area of southwestern Durango, Mexico. Am. Midl. Nat. 68:325-333.

This report emphasizes the change in kinds of vertebrates with decreasing altitude in the barranca, and the increasing resemblances of the vertebrates to those of the arid tropical lowlands of the Pacific Coast.

1647. Webb, R. G. and R. H. Baker. 1969. Terrestrial vertebrates from southeastern Oaxaca. An. Inst. Biol. Univ. Nac. Auton. Mex. Ser. Zool. 40:139-151. (In Spanish)

This study of the terrestrial vertebrates of southwestern Oaxaca emphasizes the diversity of the animal and plant life produced by the very rugged topography and the consequent dramatic changes of climate and altitude. In this region the tropical, temperate, and boreal biotas meet, 84 species of land vertebrates were obtained, representing the amphibians, reptiles, and small mammals, including 39 kinds of bats.

1648. Webb, R. G. and R. H. Baker. 1984. Terrestrial vertebrates of the Cerro Mohinora Region, Chihuahua, Mexico. Southwest Nat. 29:243-246.

Seven species of rodents were collected in this mountain range.

1649. Webb, R. G., R. H. Baker, and P. L. Dalby. 1967. Vertebrates on Toro Island, Veracruz. An. Inst. Biol., Univ. Nac. Auton. Mex. Ser. Zool. 38:1-8. (In Spanish)

The study of the present day vertebrates of Isla del Toro, in the middle of Laguna de Tamiahua in the State of Veracruz, Mexico, shows faunistic resemblance with those of the mainland at the same latitude. The present terrestrial and fresh-water vertebrate fauna of this island could represent survivors of ancient, ice-age colonization. The only rodents found on the island are Oryzomys palustris peragrus and Sigmodon hispidus toltecus.

1650. Webb, R. G., A. Martinez, and R. H. Baker. 1981. Some amphibians, reptiles and mammals from Mineral del Tigre, Nayarit. An. Inst. Biol., Univ. Nac. Auton. Mex. Ser. Zool. 51:699-702. (In Spanish)

Mineral del Tigre is the name of a mine located on the northern coast of Nayarit, Mexico, approximately 10 km east of Huajicori. The area is a deciduous tropical forest. In 1971, amphibians, reptiles and mammals were collected in this region. Sherman

live traps (100) set in the area four consecutive nights yielded only three species of rodents: Liomys pictus, Peromyscus spicilegus, and Sigmodon alleni. The most common species was L. pictus. Sciurus aureogaster was also seen in the area.

1651. Weber, C. and L. de Roguin. 1983. Unpublished data by Henri de Saussure on the type specimens of two rodents from Mexico: Microtus m. mexicanus (Saussure) and Reithrodontomys s. sumichrasti (Saussure). Rev. Suisse Zool. 90(3):747-750.

An unpublished part of Saussure's work on Mexican mammals reveals new morphological data about the types of Microtus m. mexicanus (Saussure) and Reithrodontomys s. sumichrasti (Saussure). Remarks are made on their type-localities.

1652. Webster, W. D. and J. K. Jones, Jr. 1982. Reithrodontomys megalotis. Mamm. Species 167:1-5.

1653. Weir, B. J. 1967. Aspects of reproduction in some hystricomorph rodents. Unpublished Ph.D. dissertation, Univ. of Cambridge.

1654. Weir, B. J. 1970. The management and breeding of some more hystricomorph rodents. Lab. Anim. 4:83-97.

The caging, feeding, and handling in our laboratory of four unusual hystricomorph rodents are described. These animals are: the wild guinea pigs, or cuis (Cavia aperea and Galea musteloides), the degu (Octodon degus), and the plains viscacha (Lagostomus maximus). The species were obtained for investigation of their reproduction and some details of this are given.

1655. Weir, B. J. 1971. Some observations on reproduction in the female agouti (Dasyprocta agouti). J. Reprod. Fertil. 24:203-211.

Agoutis (Dasyprocta agouti) were investigated in the laboratory for comparison of their reproductive characteristics with those of other hystricomorphs. A vaginal closure membrane was present and the length of the estrous cycle averaged 34.2 + 2.1 days. The ovaries and reproductive tracts of these animals, together with specimens obtained post mortem, were studied and some correlations with physiological condition attempted.

1656. Weir, B. J. 1974a. Reproductive characteristics of hystricomorph rodents. Symp. Zool. Soc. Lond. 34:265-301.

Members of the suborder Hystricomorpha share a number of characteristics of their reproductive physiology. The most outstanding features are: (a) a long gestation period; (b) a long estrous cycle; (c) a vaginal closure membrane; (d) lateral position of the nipples; (e) nonscrotal testes; (f) a sacculus urethralis; and (g) penile styles and/or spicules on the glans.

1657. Weir, B. J. 1974b. The tuco-tuco and plains viscacha. Symp. Zool. Soc. Lond. 34:113-130.

The tuco-tuco (Ctenomys talarum) and the viscacha (Lagostomus maximus) are among the typical mammals of the pampas in Argentina. This paper describes the distribution, burrow systems, vocalization, senses, and feeding behavior for these two species in Argentina.

1658. Weissenbacher, M. C., M. A. Calello, G. Carballal, N. Planes, Maria T. de La Vega, and F. O. Kravetz. 1985. Junin virus activity in nonendemic areas: Its isolation from wild rodents and detection of antibodies in humans. Medicina (Buenos Aires) 45:263-268.

Rodents were examined for Argentinian Hemorrhagic Fever (AHF) in Pila, Argentina, a nonendemic area for the disease. AHF, or junin fever, was isolated from a specimen of Akodon azarae.

1659. Wells, E. A., A. D'Alessandro, G. A. Morales, and D. Angel. 1981. Mammalian wildlife diseases as hazards to man and livestock in an area of the Llanos Orientales of Colombia. J. Wildl. Dis. 17(1):153-162.

A total of 59 mammalian species collected in the Llanos Orientales of Colombia was examined for parasites. Rodents found positive were: Cuniculus paca, Proechimys sp., Coendou sp. and Nectomys squamipes.

1660. Wenzel, R. L. and V. J. Tipton (Ed.). 1966. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago. 861 pp.

1661. Wetzel, R. M. and J. W. Lovett. 1974. A collection of mammals from the Chaco of Paraguay. Occas. Pap. Biol. Sci. Ser. Univ. Conn. 2(13):203-216.

As the few lists of mammals of Paraguay are inadequate for the western two-thirds of that nation, specimens collected in 1972 are reported. Collecting was during late winter and early spring, principally in the middle (Juan de Zalazar) and western (Teniente Ochoa) Chaco Boreal. Annotations include remarks on habitats, localities, new records, additional specimens of rare species, and changes in taxonomy since Cabrera's Catalogo de los Mamiferos de America del Sur of 1958 and 1961.

1662. Williams, D. F. and M. A. Mares. 1978. A new genus and species of phyllotine rodent (Muridae) from northwestern Argentina. Ann. Carnegie Mus. 47:192-221.

Andalgalomys, a new (Recent) genus of phyllotine rodents is described. Included species are A. olrogi, a new species from the Larrea desert of the Bolson de Pipanaeo, Catamarca Province, Argentina, and A. pearsoni (Myers), which is reassigned from the genus Graomys.

1663. Williams, J. O. 1984. Rodents and their problems in South America and the Caribbean. Page 53 in A. C. Dubock, Ed. Proc. Conf. The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI-PPD England, ISBN 0-901747-02-5.

Major rodent pests for South America and the Caribbean are identified.

1664. Williams, J. O. and E. Migalles Pereira. 1984. Brodifacoum as a rodenticide to control rodent damage in rice fields in Venezuela: II - Calabozo, State of Guarico. Pages 347-351 in A. C. Dubock, Ed. Proc. Conf. The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI-PPD England, ISBN 0-901747-02-5.

Brodifacoum (0.005%) mixed with cracked maize and sorghum was applied in a study area of 30 ha of maturing rice. The rodenticide was placed in 900 bait stations placed along the dikes and adjacent field margins at 10-m intervals. Two types of bait stations were used: one was a commercially produced cardboard box, and the other was a 1-liter oil can with half of both ends removed. Rodents trapped in the study area were: Sigmodon hispidus, S. alstoni, and Holochilus brasiliensis. Baiting was for 8 days. The commercially produced cardboard bait stations proved unsatisfactory. Many were eaten and all were destroyed during the rain. No problems were observed with the metal cans.

1665. Williams, J. O. and C. Vega. 1984. Brodifacoum as a rodenticide to control rodent damage in rice fields in Venezuela: I - State of Portuguesa. Pages 341-345 in A. C. Dubock, Ed. Proc. Conf. The Organisation and Practice of Vertebrate Pest Control, 30 August - 3 September 1982, ICI-PPD England, ISBN 0-901747-02-5.

Brodifacoum (0.005%) mixed with cracked maize and sorghum was applied in a study area of 24 ha of maturing rice. Rodent populations in the study area were reduced by 88.75% after 8 days of baiting.

Williams, P. 1965. Observations on the phlebotomine sandflies of British Honduras. Ann. Trop. Med. Parasitol. 59:393-404.

Rodents examined for sandflies were: Heteromys desmar, Nyctomys, Sigmodon, Tylomys, and Sciurus deppei.

1667. Williams, P. 1970. Phlebotomine sandflies and leishmaniasis in British Honduras (Belize). Trans. R. Soc. Trop. Med. Hyg. 64(2):317-364.

Infected rats included: Heteromys desmarestianus, Ototylomys phyllotis, Sigmodon hispidus, Nyctomys sumichrasti, Oryzomys couesi, O. melantotis, and O. alfaroi.

1668. Williams, S. L. 1982. Geomys personatus. Mamm. Species 170:1-5.

1669. Williams, S. L. 1982. Phalli of recent genera and species of the family Geomyidae (Mammalia: Rodentia). Bull. Carnegie Mus. Nat. Hist. 20:1-62.

A study of the external morphology of the phalli and bacula of the family Geomyidae was conducted. All 6 genera and 24 species (including the 9 species of Thomomys, the single species of Zygogeomys, 1 of 11 species of Orthogeomys, the 6 species of Geomys, 1 of 2 species of Pappogeomys, and 6 of 7 species of Cratogeomys) were examined. Results of the study were compared to systematic relationships proposed by previous investigators.

1670. Williams, S. L. and R. J. Baker. Geomys arenarius. Mamm. Species 36:1-3.

1671. Williams, S. L. and H. H. Genoways. 1977. Morphometric variation in the tropical pocket gopher (Geomys tropicalis). Ann. Carnegie Mus. 46:245-264.

The tropical pocket gopher (Geomys tropicalis), which exhibits no chromosomal or genic variation, was examined for variability at the morphometrical level. From these comparisons, G. tropicalis is considered to be a monotypic Mexican species.

1672. Williams, S. L. and H. H. Genoways. 1978. Review of the desert pocket gopher Geomys arenarius (Mammalia: Rodentia). Ann. Carnegie Mus. 42:541-570.

The desert pocket gopher (Geomys arenarius), which occupies a restricted geographic range in Texas, New Mexico, and Chihuahua, was examined for morphological variation. Two subspecies, G. a. arenarius and G. a. brevirostris were recognized after analyses of geographic variation.

1673. Williams, S. L. and H. H. Genoways. 1981. Systematic review of the Texas pocket gopher, Geomys personatus (Mammalia: Rodentia). Ann. Carnegie Mus. 50(19):435-473.

The Texas pocket gopher (Geomys personatus), which occupies a range in southern Texas and extreme northeastern Tamaulipas, was examined for morphological variation.

1674. Williams, S. L. and J. Ramirez-Pulido. 1984. Morphometric variation in the volcano mouse, Peromyscus (Neotomodon) alstoni (Mammalia: Cricetidae). Ann. Carnegie Mus. 53(6):163-183.

The volcano mouse, Peromyscus (Neotomodon) alstoni, occurs at high elevations in the transvolcanic belt of Mexico. Recently we collected a large number of P. alstoni from a population located between the recognized range of the two subspecies.

1675. Williams, S. L., H. H. Genoways, and J. A. Groen. 1983. Results of the Alcoa foundation Suriname expeditions. VII. Records of mammals from central and southern Suriname. Ann. Carnegie Mus. 52(14):329-336.

Rodents collected from central and southern Suriname were Sigmomys alstoni savannarum, Zygodontomys brevicauda microtinus, and Cavia aperea guianae.

1676. Williams, S. L., J. Ramirez-Pulido, and R. J. Baker. 1985. Peromyscus alstoni. Mamm. Species 242:1-4.

1677. Willinski, A., I. Arriaga, and J. Alvarez. 1979. An ecological study on the rodents (Rodentia: Cricetidae) that are pests in rice fields in Calabozo (Guarico). Acta Cient. Venez. 30(1):94. (In Spanish)

Three species of rodents were captured in rice paddies: Holochilus sp., Zygodontomys microtinus and Sigmomys alstoni. Holochilus sp. are the major pests in rice cultures and the other two species are potential problems.

1678. Wilson, E. E. 1983. Checklist of mammals. Pages 443-447 in D. H. Janzen, Ed. Costa Rican Natural History. The University of Chicago Press, Chicago and London. 816 pp.

A checklist of all the terrestrial mammal species known for Costa Rica.

1679. Wilson, D. E. 1985. New mammal records from Sinaloa: Nyctinomops aurispinosa and Onychomys torridus. Southwest. Nat. 30:323-342.

A capture of a southern grasshopper mouse (Onychomys torridus) extended the range for this species by 100 km.

1680. Winkelmann, J. R. 1962. Mammal records from Guerrero and Michoacan, Mexico. J. Mammal. 43:108-109.

Rodents collected in Canon de Zopilote, 14.5 miles N. of Zumpango, Guerrero, were Peromyscus banderanus and P. melanophrys. Collected near Aguililla, Michoacan, were Peromyscus boylii evides, Liomys pictus, Peromyscus banderanus, and Neotoma alleni.

1681. Wit T., P. M. de. 1960. The Wageningen rice project in Surinam. Eng. ed. "s-Gravenhage, Mouton. 293 pp.

1682. Woloszyn, D. and B. W. Woloszyn. 1982. Mammals from the Sierra de la Laguna, Baja California Sur. Consejo Nacional de Ciencia y Tecnologia, Mexico. 168 pp.

1683. Woods, C. A. 1973. Erethizon dorsatum. Mamm. Species 29:1-6.

1684. Woods, C. A. 1979. Adaptive radiation of Hispaniolan rodents. Am. Zool. 19(3):1011. Abstract only.

1685. Woods, C. A. 1982. The history and classification of South American hystricognath rodents: Reflections on the far away and long ago. Pages 377-392 in M. Mares and H. Genoways, Eds. Mammalian Biology in South America. The Pymatuning Symposia in Ecology, University of Pittsburg, Spec. Publ. Ser. 6. 539 pp.

Fossil and recent hystricognathous rodents from South America share a remarkable assemblage of common characters, and should be classified together with the North American porcupine and the Old World families Hystricidae, Petromuridae, Thyonomyidae, and Bathyergidae in the suborder Hystricognathi. The history of this diverse group of rodents in South America goes back to at least the early Oligocene where seven families of Hystricognaths can be identified in the Deseadan deposits of Argentina and Bolivia.

1686. Woods, C. A. 1985. Evolution and systematics of endemic Antillean rodents. Acta Zool. Fenn. 170:199-200.

The endemic hystricognathous rodents of the Greater Antilles have traditionally been classified into three separate families (Capromyidae, Echimyidae, and Heptaxodontidae). An analysis of the relationship of the morphological characters of primitive taxa with more derived forms indicates that all forms may be descended from a single invasion into the region that may have occurred as early as the Eocene to mid-Oligocene. The systematics of the endemic rodents of Puerto Rico and Jamaica support this conclusion.

1687. Woods, C. A. and D. K. Boraker. 1975. Octodon degus. Mamm. Species 67:1-5.

1688. Woods, C. A. and E. B. Howland. 1979. Adaptive radiation of capromyid rodents: anatomy of the masticatory apparatus. J. Mammal. 60:95-116.

The anatomy of jaw, hyoid, and pharyngeal regions of Capromys pilorides, Geocapromys ingrahami, Plagiodontia aedium, and Myocastor coypus are described. Four possible evolutionary sequences are presented to explain the history of these endemic rodents in the Caribbean.

1689. Wooten, M. C., R. D. Dew, and M. L. Kennedy. 1978. Activity patterns of the painted pocket mouse, Liomys pictus. J. Tenn. Acad. Sci. 53(2):72. Abstract only.

1690. Woronecki, P. P. 1973. Rodent problems in the Darien of Colombia. Biol. Conserv. 5(3):227.

Reports a rodent outbreak near Unguia, Darien, Colombia. The rodent was Zygodontomys brevicauda and crops affected were maize, rice and yuca.

1691. Worth, C. B. 1963. Small mammals in relation to arthropod-borne virus cycles in Trinidad, West Indies. An. Microbiol. 11:111-114.

Specimens of three common species of rodents from the Bush Bush Forest were studied in relation to arthropod-borne viruses: Heteromys anomalus, Oryzomys laticeps and Zygodontomys brevicauda.

1692. Worth, C. B. 1967. Reproduction, development and behavior of captive Oryzomys laticeps and Zygodontomys brevicauda in Trinidad. Lab. Anim. Care 17:355-361.

Oryzomys laticeps and Zygodontomys brevicauda originating from Bush Bush Forest, Nariva Swamp, in eastern Trinidad have been colonized at the Trinidad Regional Virus Laboratory for 4 years. In both species sexual maturity in both sexes was achieved at a minimum age of about 50 days; minimum gestation periods were 25 days; and estrus recurred every 5 or 6 days. Breeding was continuous throughout the year.

1693. Worth, C. B., W. G. Downs, T. H. G. Aitken, and E. S. Tikasingh. 1968. Arbovirus studies in Bush Bush Forest, Trinidad, W.I. September 1959-December 1964. IV. Vertebrate Populations. Am. J. Trop. Med. Hyg. 17:269-275.

Principal vertebrates of Bush Bush Forest are 59 species of mammal, 171 species of bird, 27 species of reptile, 7 species of amphibian, and an undetermined number of fish.

1694. Ximenez, A. 1965. Wiedomys pyrrhorhinos (Rodentia: Cricetidae) a new mammal from Uruguay. Physis 25(70):135-136. (In Spanish)

Two specimens in the National Museum of Natural History in Montevideo, Uruguay, were identified as Wiedomys pyrrhorhinus. They were collected at Arroyo Tres Cruces, Department of Tacuarembo, Uruguay.

1695. Ximenez, A. 1967. Notes on a new mammal for Uruguay: Cavia aperea rosida Thomas 1917 (Mammalia: Caviidae). Comun. Zool. Mus. Hist. Nat. Montev. 9:1-4. (In Spanish)

A new subspecies of Cavia is described from Uruguay.

1696. Ximenez, A. 1980. Notes on the genus Cavia Pallas with the description of Cavia magna sp. n. (Mammalia: Caviidae). Rev. Nordestina Biol. 3(especial):145-179. (In Spanish)

Given are morphological comparisons after studying 219 specimens of Cavia from Argentina, Brazil and Uruguay. New information is given for interspecific and intraspecific variations. Three species are recognized: C. aperea, C. fulgida, and C. magna. C. magna is a new species described in this paper. The type locality was in the Municipal of Tramandai, Rio Grande del Sur, Brazil.

1697. Ximenez, A. and A. Langguth. 1970. Akodon cursor montensis from Uruguay (Mammalia: Cricetinae). Comun. Zool. Mus. Hist. Nat. Montev. 10:1-7. (In Spanish)

Two specimens of Akodon cursor montensis were captured in the Department of Durazno. This was a range extension of 500 km southeast of the previous collecting site.

1698. Ximenez, A., A. Langguth, and R. Praderi. 1972. Systematic list of the mammals of Uruguay. An. Mus. Hist. Nat. Montev. 7(5):1-49. (In Spanish)

At the present time, 82 species of mammals are known from Uruguay which belong to 62 genera. A map shows 68 different collecting sites.

1699. Yanez, J. L. and F. M. Jaksic. 1977a. Age variations in some morphological characteristics of three populations of Akodon olivaceus. Bol. Mus. Nac. Hist. Nat. Chile 35:113-120.

By using morphological variations one can separate juvenile from adult Akodon olivaceus.

1700. Yanez, J. L. and F. M. Jaksic. 1977b. Geographic variation in the dental morphology of subspecies of the genus Akodon. Bol. Mus. Nac. Hist. Nat. Chile 35:105-112. (In Spanish)

A correlation is shown for molar wear and temperature. In colder climates where the vegetation is smaller and more woody molar wear is greater.

1701. Yanez, J. L. and F. M. Jaksic. 1978a. The natural history of Octodon degus. Occas. Pap. Mus. Nac. Hist. Nat. 27:3-11. (In Spanish)

A natural history study of Octodon degus in Chile that presents new ecological and systematic information.

1702. Yanez, J. L. and F. M. Jaksic. 1978b. The ecological role of foxes (Dusicyon) in central Chile. An. Mus. Hist. Nat. (Valparaiso) 11:105-112. (In Spanish)

The seasonal changes in diet composition of central Chilean foxes (Dusicyon griseus) and D. culpaeus) are studied by means of examining scats. It was found that foxes prey mainly upon diurnal and crepuscular rodents, and not upon nocturnal ones. Both species fed on Octodon degus, Abrocoma bennetti, Spalacopus cyanus, Akodon olivaceus and Phyllotis darwini. Based on these results and other published information, the ecological role of foxes in central Chile is inferred. The authors suggest that foxes could be very important in determining spatial utilization of habitats by small herbivores, thus indirectly affecting the distribution and sprouting success of central Chilean vegetation.

1703. Yanez, J. L. and F. M. Jaksic. 1978c. Prey of Parabuteo unicintus near Santiago. Not. Mens. Mus. Hist. Nat. (Santiago) 23(264):8-9. (In Spanish)

Pellets were collected at two localities near Santiago, Chile: Los Dominicos and La Dehesa. Rodents were identified as Octodon degus and Abrocoma bennetti from La Dehesa. The same two species plus Phyllotis darwini were found at Los Dominicos.

1704. Yanez, J. L. and F. M. Jaksic. 1979. Opportunistic predation by Speotyto cunicularia in northern Chile. Not. Mens. Mus. Nac. Hist. Nat. (Santiago) 23(272):12. (In Spanish)

Sixty-nine pellets were collected 15 km south of La Serena, Morrillos, Chile. Rodent remains identified were: Mus musculus (3) and Rattus sp. (1).

1705. Yanez, J. L. and H. Nunez. 1982. The diet of Athene cunicularia (Molina, 1782) in Region V. Not. Mens. Mus. Hist. Nat. (Santiago) 27(305):6-7. (In Spanish)

Pellets of burrowing owls were collected 30 km north of Valparaiso, Chile, Region V. Rodents were 11.1% of the total diet in the winter sample (1979): Akodon olivaceus, Phyllotis darwini, Oryzomys longicaudatus, Mus musculus and Rattus sp. In the spring sample (1979-80) rodents were 9.9% of the total diet with the same species minus P. darwini and Rattus sp.

1706. Yanez, J. L. and J. R. Rau. 1980. A statistical analysis of the diet of Dusicyon culpaeus (Canidae) in Magallanes. An. Mus. Hist. Nat. (Valparaiso) 13:189-191. (In Spanish)

Scats of Dusicyon culpaeus were collected in August (70) and November (35) at the "Torres del Paine" National Park, Magallanes, Chile. In the winter collection (August 2-3, 1978) rodents, Akodon lanosus, A. longipilis, A. olivaceus, Oryzomys longicaudatus, and Reithrodon physodes, were 50% of the total diet. In the spring collection (November 21-30, 1978) no rodent remains were found in any of the scats.

1707. Yanez, J. L. and J. A. Simonetti. 1979. The distribution of Auliscomys micropus in Chile (Waterhouse 1877) (Rodentia: Cricetidae). Not. Men. Mus. Nac. Hist. Nat. (Santiago) 24(276):6-7. (In Spanish)

A distribution map for Auliscomys micropus in Chile.

1708. Yanez, J. L., H. Nunez, and F. M. Jaksic. 1982. Food habits and weight of Chimango Caracaras in central Chile. Auk 99(1):170-171.

Stomach contents (52) and pellets (87) of the Chimango Caracaras, Milvago chimango, collected at Pudahuel, 15 km west of Santiago, Chile, were examined. The remains of one rodent, Oryzomys longicaudatus, were found in one stomach.

1709. Yanez, J. L., J. R. Rau, and F. M. Jaksic. 1978. A comparison of diets of Bubo virginianus (Strigidae) from two regions of Chile. An. Mus. Hist. Nat. Valparaiso 11:97-104. (In Spanish)

A comparative study of the morphology and contents of pellets of Bubo virginianus in two regions of Chile is made. The owl's pellets from Magallanes are wider but not longer than those from San Fernando. In early spring (September) the pellets mostly contained rodents. In summer (March) pellets mostly contained arthropods.

1710. Yanez, J. L., J. Valencia, and F. M. Jaksic. 1979. Systematics and morphometrics of the subgenus Akodon (Rodentia) in Chile. Arch. Biol. Med. Exp. 12:197-202. (In Spanish)

The morphometric analysis of 10 corporal, cranial, and dental characters is carried out for 3 Chilean species of the subgenus Akodon: A. olivaceus, A. xanthorhinus, and A. andinus. There is a marked latitudinal cline for all characters when comparing A. olivaceus and A. xanthorhinus. Based on karyotypic and morphometric evidence it is proposed that A. xanthorhinus is a subspecies of A. olivaceus.

1711. Yanez, J. L., H. Nunez, R. P. Schlatter, and F. M. Jaksic. 1980. Diet and weight of American kestrels in central Chile. Auk 97(3):629-631.

This is the first reporting of diet and weight of American kestrels (Falco sparverius) from central Chile. They collected 202 pellets at La Dehesa, 20 km east of Santiago, Chile, between November 1973 and February 1974. Rodents, Akodon olivaceus, Octodon degus, Oryzomys longicaudatus, were 33.3% of the total diet.

1712. Yanez, J. L., W. Sielfeld, J. Valencia, and F. M. Jaksic. 1978. The relationship between the systematics and morphometrics of the subgenus Abrothrix (Rodentia: Cricetidae) in Chile. An. Inst. Patagonia (Punta Arenas, Chile) 9:185-197. (In Spanish)

A statistical-morphometrical analysis of six subspecies of Akodon (Abrothrix) longipilis and two species Akodon sanborni and Akodon lanosus is made. On the basis of the morphometrical study it is inferred that specific and subspecific status of Chilean Abrothrix are rightly assigned.

1713. Yates, J. A. 1981. Filariae of the capybara, Hydrochoerus hydrochaeris from Colombia, South America. Unpublished Ph.D. dissertation, Tulane Univ. 91 pp.

1714. Yates, J. A. and J. P. Jorgenson. 1983. Dipetalonema (Alafilaria) hydrochoerus subgen. et sp. n. (Nematoda: Filarioidea) from Colombian capybaras. J. Parasitol. 69(3):606-609.

Dipetalonema hydrochoerus is described from specimens recovered from skeletal muscle fascia of the capybara, Hydrochoerus hydrochaeris, from several localities in Colombia.

1715. Yates, J. A. and R. C. Lowrie, Jr. 1984. Development of Yatesia hydrochoerus (Nematoda: Filarioidea) to the infective stage in Ixodid ticks. Proc. Helminthol. Soc. Wash. 51(2):187-190.

The arthropod host requirements and course of larval development for Yatesia hydrochoerus, a common filaria of Colombian capybaras, are described for the first time.

1716. Yates, T. L., R. J. Baker, and R. K. Batnett. 1979. Phylogenetic analysis of karyological variation in three genera of Peromyscine rodents. Syst. Zool. 28:40-48.

Chromosomal homologies between Neotomodon alstoni, Baiomys taylori and species of Peromyscus are compared. The N. alstoni and B. taylori were collected in Mexico.

1717. Yoneda, M. 1984. Species composition and reproductive cycle of rodents in the northern Andes of Bolivia. Ecol. Bolivia (Rev. Inst. Ecol.) 5:53-62. (In Spanish)

1718. Yonenaga, Y. 1972a. Chromosome polymorphism in the rodent Akodon arviculoides ssp. (2n = 14) resulting from two pericentric inversions. Cytogenetics 11:488-499.

Eight specimens of Akodon arviculoides collected in the state of Sao Paulo, Brazil, were studied. All seven pairs of chromosomes were identifiable. Two specimens had an heteromorphic pair of autosomes apparently resulting from a pericentric inversion (pair 3). Two other specimens possessed in addition to this

same inversion, another inversion in pair 2. The four remaining specimens had no heteromorphic pairs of chromosomes.

1719. Yonenaga, Y. 1972b. Chromosomal polymorphism in Brazilian rodents. Unpublished Ph.D. dissertation, Univ. de Sao Paulo, Sao Paulo, Brazil. (In Portuguese)

1720. Yonenaga, Y. 1975. Karyotypes and chromosome polymorphism in Brazilian rodents. Caryologia 28:269-286.

Karyotypes of nine species of Brazilian rodents collected in the state of Sao Paulo are compared. The species were: Akodon nigrita, Zygodontomys lasiurus, Thomasomys dorsalis, Oxymycterus sp., Calomys sp., Clyomys laticeps, Euryzygomatomys guiara, Proechimys iheringi, and Echimys sp.

1721. Yonenaga, Y. and F. Ricci. 1969. Chromosome studies of some rodent species. Cienc. Cult. 21:249. (In Portuguese)

1722. Yonenaga, Y., S. Kasahara, and E. J. C. Almeida. 1977. Karyotypes of nine species of Brazilian rodents. Atlas of Mammalian Chromosomes, Vol. 10. Eds. K. Benirsche and T. C. Hsu. (In Portuguese)

1723. Yonenaga, Y., O. Frota-Pessoa, S. Kasahara, and E. J. Cardoso. 1976. Cytogenetic studies on Brazilian rodents. Cienc. Cult. 28(2):202-211.

A review of our work on the cytogenetics of Brazilian rodents is presented and compared to the data in the literature. Karyotype evolution is interpreted on the basis of findings such as pericentric inversions, centric fusion, supernumerary chromosomes, autosomal heteromorphism, elimination of the Y chromosome and interspecific hybridization.

1724. Yonenaga, Y., S. Kasahara, E. J. C. Almeida, and A. L. Peracchi. 1975. Chromosomal banding patterns in Akodon arviculoides (2n = 14), Akodon sp. (2n = 24 and 25) and two male hybrids with 19 chromosomes. Cytogenet. Cell Genet. 15:388-399.

Chromosomal polymorphism resulting from two pericentric inversions in Akodon arviculoides has been described. In this paper the banding patterns are presented and identification of the inverted segments of the autosomal pairs 2 and 3 is made.

1725. Yonenaga-Yassuda, Y. 1979. New karyotypes and somatic and germ-cell banding in Akodon arviculoides (Rodentia, Cricetidae). Cytogenet. Cell Genet. 23:241-249.

Chromosomal polymorphism resulting from three autosomal pericentric inversions and a complex rearrangement involving the largest chromosome of the complement (pair 1) in Akodon arviculoides (2n = 14,15) is reported.

1726. Yonenaga-Yassuda, Y. 1985. Variability of the nucleolus organizer regions in rodents. Cienc. Cult. 37(3):453-456.

The study of NOR's in many species of the family Cricetidae showed that a great number of chromosomes are nucleolar organizers. In Akodon arviculoides (2n = 14 and 15), NOR's were located at the teomere on the chromosomes 3, 4, 5, and an interstitial region of the 1. In Akodon sp. (2n = 24) NOR's were located at 10 chromosomes.

1727. Yonenaga-Yassuda, Y., O. Frota-Pessoa, S. Kasahara, and E. J. C. Almeida. 1976. Cytogenetics studies on Brazilian rodents. Cienc. Cult. 28:202-211.

A review of their work on the cytogenetics of Brazilian rodents is presented and compared to the data in the literature. Karyotype evolution is interpreted on the basis of findings such as pericentric inversions, centric fusion, supernumerary chromosomes, autosomal heteromorphism, elimination of the Y chromosome and interspecific hybridization. The evolutionary significance of supernumerary chromosomes and pericentric inversions is discussed.

1728. Yonenaga-Yassuda, Y., M. F. L. Assis, S. Kasahara, M. L'Abbate, and M. J. Souza. 1983. Nucleolar organizer regions in Akodon arviculoides (Cricetidae, Rodentia): evidence for the activity of rDNA genes in both X chromosomes of females. Cytogenet. Cell Genet. 35:143-147.

Silver-stained cells from specimens of Akodon arviculoides (2n = 14 and 15) were analyzed for the location and frequency of Ag-NOR's. They were located terminally on four pairs of chromosomes, 3q, 4q, 5p and Xp.

1729. Yonenaga-Yassuda, Y., M. J. Souza, S. Kasahara, M. L'Abbate, and H. T. Chu. 1985. Supernumerary system in Proechimys iheringi iheringi (Rodentia, Echimyidae) from the state of Sao Paulo, Brazil. Caryologia 38(2):179-194.

In a sample of 13 animals of the spiny rat Proechimys iheringi iheringi from three localities in the State of Sao Paulo (Casa Grande, Ubatuba and Iguape) the diploid numbers were 2n = 61, 62, 63, 64 and 65 chromosomes due to the presence of 1, 2, 3, 4 and 5 minute supernumerary chromosomes, respectively.

1730. Young, C. J. and J. K. Jones, Jr. 1982. Spermophilus mexicanus. Mamm. Species 164:1-4.

1731. Young, C. J. and J. K. Jones, Jr. 1983. Peromyscus yucatanicus. Mamm. Species 196:1-3.

1732. Young, N. A. et al. 1969. Viruses of the Venezuelan equine encephalomyelitis complex. Am. J. Trop. Med. Hyg. 18(2):290-296.

Spiny rats, Proechimys semispinosus, and cotton rats, Sigmodon hispidus, were experimentally infected with VEE virus. Both are species that have been implicated as reservoirs of the virus in Panama.

1733. Yunker, C. E. and F. J. Radovsky. 1966. The Dermanyssid mites of Panama (Acarina: Dermanyssidae). Pages 83-103 in R. L. Wenzel and V. J. Tipton, Eds. Ectoparasites of Panama. Field Mus. Nat. Hist. Chicago.

Keys to the species from Panama and a host list are provided. Ornithonyssus bacoti was recovered from members of several rodent families.

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