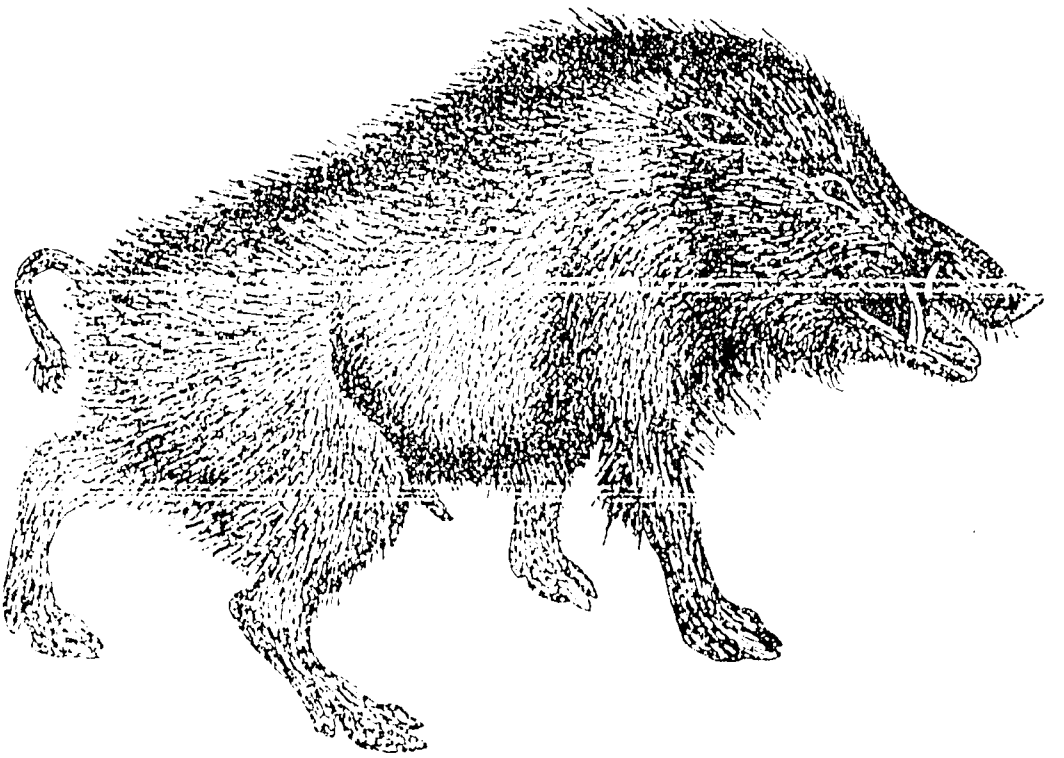
VERTEBRATE PEST CONTROL PROJECT

Food Security Management
Post-Harvest Management Component

A PARTIAL RESEARCH BIBLIOGRAPHY ON THE BIOLOGY AND CONTROL OF FERAL PIGS AND WILD BOAR

TECHNICAL REPORT NO. 6

AUGUST 1986



U.S. Agency for International Development
Denver Wildlife Research Center

Pakistan Ministry of Food and Agriculture
Pakistan Agricultural Research Council

National Agricultural Research Centre

Islamabad, Pakistan

PNABF-762

A PARTIAL RESEARCH BIBLIOGRAPHY ON THE BIOLOGY AND CONTROL OF FERAL PIGS AND WILD BOAR

By Joe E. Brooks[1], Ejaz Ahmad[2] and Iftikhar Hussain[2]

GOP/USAID Vertebrate Pest Control Project

Technical Report No. 6

August 1986

1 Team Leader, GOP/USAID Vertebrate Pest Control Project, NARC, Islamabad, Pakistan and Denver Wildlife Research Center, Denver, Colorado, USA

2 Research Scientists, GOP/USAID Vertebrate Pest Control Project, NARC, Islamabad, Pakistan

Cover Picture: Redrawn from a cover design by Diedre Huxley on Tisdell (1982)

A PARTIAL RESEARCH BIBLIOGRAPHY ON THE BIOLOGY AND CONTROL OF FERAL PIGS AND THE WILD BOAR

By Joe E. Brooks, Ejaz Ahmad and Iftikhar Hussain

I. Introduction

While many animals have suffered severe reduction in numbers or actual extinction due to mans' activities, this is not the case with the wild boar and feral pigs. Our domestic pigs and feral pigs (wild populations derived from domestic pigs that have returned to the wild, Bratton 1977) both can trace their ancestry back to the original Eurasian wild boar (*Sus scrofa* L.) stock that occurred historically ranging from the western coast of Europe to the islands of Japan and Indonesia. Feral pigs and wild boar have extended their range in the world as a result of mans' activities. They have successfully colonized new continents and islands to which they have been introduced recently by man, either intentionally or by accident.

Man regards the feral pigs and wild boars with mixed emotions: to the agriculturalist and farmer they are often a pest requiring management and control. They can be beneficial or detrimental to forestry. Hunters find feral pigs and wild boars challenging and wily sporting animals and the management of feral pig and wild boar populations as game animals is carried out in many European countries and in the U.S.A. Feral pigs can be used commercially for food and other products in countries where not prohibited on religious grounds. Conservationists consider feral pigs to be a threat to wildlife and flora in a number of environmental situations. Feral pigs prey upon, kill and eat other animals, ranging from birds, rodents and snakes to lambs and poultry. Feral pigs play a significant role in the spread of diseases and parasites infectious to livestock and man. Finally, feral pigs and wild boars are capable of, and do, cause severe injury and sometimes death to humans. For these diverse reasons, this preliminary bibliography on feral pigs and the Eurasian wild boar has been assembled so that information on their biology and control may more easily be accessed.

Studies of both feral pigs and wild boar have been made in many countries, prompted either by the pest status of the animal or because of its value as a game animal. The most important general ecological studies are those of Breidermann (1973), Bromlei (1964), Haber (1969), Ling (1955), Oloff (1951), and Sludskii (1956) in Europe and the U.S.S.R.; Diong (1975) in Malaysia; Hoogerwerf (1970) in Indonesia; and several in the U. S. A. (Barrett 1978; Bratton 1974, 1975; Henry 1966, 1968a, 1968b; Henry and Conley 1970, 1972; Kurz and Marchinton 1972; Matschke 1962, 1963, 1964, 1967; Matschke and Hardister 1966; Matschke and Henry 1969; Pine and Gerdes 1973; Wood and Brenneman 1977). Mauget et al. (1984) have produced an excellent up-to-date review of the current state of knowledge of wild boar biology. The classic work on feral pigs is considered to be Mohr

(1960). Several recent symposia have covered other aspects of the management of wild boar and feral pigs (Wood 1977, Spitz and Pepin 1984, and Tate 1984). The most recently convened symposium on feral pigs and wild boar was that held at the Fourth International Theriological Congress at Edmonton, Canada in 1985.

Nomenclature

The wild swine found throughout the world belong basically to two groups: (1) pigs descended from domestic stock that were released, abandoned, or escaped (feral pigs or hogs), and (2) wild boar descended from wild stock introduced for hunting purposes or those wild boar that occur naturally within their geographic range. Since domestic stock and wild stock freely interbreed to some extent, the nomenclature regarding this group has become somewhat confused. In this bibliography we will follow the vernacular names as suggested by Bratton (1977).

The term "feral pigs or feral hogs" is reserved for those animals that were introduced as domestic swine and then escaped or were released into the wild. The term "wild boar" is universally used in the English language and in European and Asian literature for either the introduced form of the original European stock or for wild swine occurring naturally within their original geographic range. The term "European wild boar" is a misnomer since this species occurs wild also in northern Africa and all across Asia into Indonesia and even southern Japan. It might be more appropriate to refer to it as the "Eurasian wild boar". However, in consistency with Bratton (1977), we will simply use the term "wild boar" to refer to both the introduced stock from Europe and to the wild species occurring naturally within its geographic range.

Geographic Range of Wild Boar

The original geographic range of *S. scrofa* is shown in Fig. 1 as derived from Heptner, Nasimovic and Bannikov (1966). The original range included all of central and southern Europe, including Great Britain and southern Scandanavia; north Africa and the Nile Valley, and a broad belt across Asia both north and south of the Himalayas and including parts of Japan, Taiwan and Indonesia. The species is now extinct in Great Britain, southern Scandanavia and the Nile Valley. In the north its distribution appeared to be limited by the depth of winter snows (a depth of 30 to 40 cm) and it was absent in the Gobi desert area because of the extreme aridity. In recent times, feral pigs or wild boars have been introduced into parts of North and South America, Australia, Tasmania, New Guinea and New Zealand. Heptner et al. (1966) point out that the original natural distribution of the wild boar in Southeast Asia is uncertain. It may have been present in the Philippines and it probably did not occur in the New Guinea area. Tisdell (1982) regards it as extremely doubtful that the wild boar originally occurred in New Guinea and the adjacent Melanesian Islands.

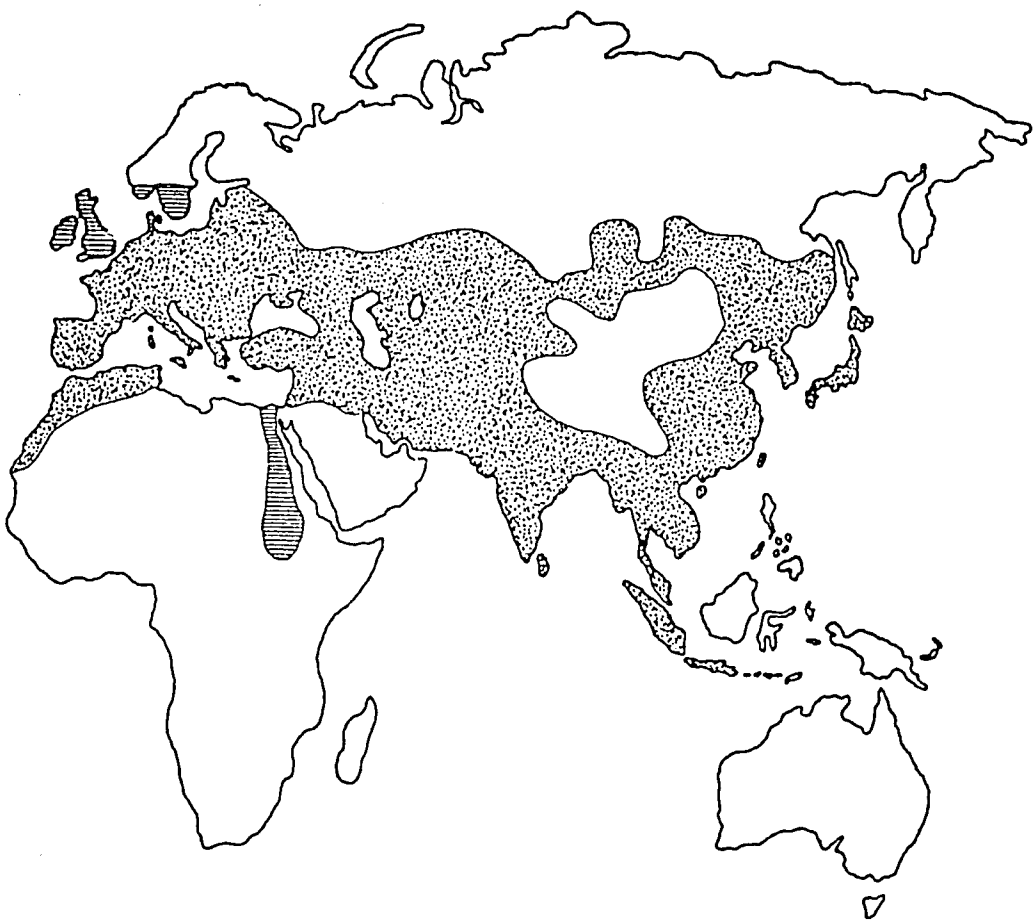


Fig. 1. Original geographic range of *S. Scrofa* (after Heptner et al. 1966). The lined areas are those parts of the range where the wild boar has become extinct.

Feral pigs and crosses between feral pigs and wild boars now occur in the U.S.A., mainly in the southeastern states and in California. Feral pigs have been spread into South America, New Guinea, the Melanesian Islands and Polynesia, Australia, Tasmania and New Zealand by mans' activities.

Biology

What wild boars lack in grace and beauty, they make up for in strength, adaptability and intelligence. They are admirably adapted to range in forests, thickets, woodlands and grasslands, which they roam in small bands of 6 to 30 animals. The wild boar is not the ponderous, clumsy animal that we know as the domestic pig, but instead posseses a narrow, well proportioned body which is built for running and fighting. The rather narrow body is carried on relatively thin legs. The sparsely-bristled body can penetrate thickets which no other animal of its size would attempt since it is protected by a very thick skin. The head is large proportionately and the animal posseses long, sharp tusks (canines) which are used in aggressive and defensive encounters (Fig. 2).

All studies in the literature report a strong similarity in the ecology of feral pigs and wild boar in their habitat selection, food habits, parasites, movements, behavior and, to a lesser extent, in their reproductive biology.

Feral pigs and wild boar throughout their worldwide range are omnivorous and opportunistic feeders. Vegetable matter usually accounts for the major part of their diet. However, insects, rodents, frogs, lizards, snakes, other small animals and carrion are eaten when available. Weak animals or the young of certain domestic animals (such as lambs) may be killed and eaten. Eggs and young birds of ground-nesting species are eaten when found. Because of their rooting habits, feral pigs find much of their food underground where the soil is moist or easily dug. Such things as earthworms, larvae of insects, roots and edible bulbs, grasses, fruits, nuts, herbs, and mushrooms are obtained by rooting. Where agricultural crops are available, feral pigs or boars are known to attack and consume wheat, oats, barley, rye, maize, potatoes, turnips, sunflower, soybeans, pasture crops, rice, sugarcane, tapioca, yams, sweet potatoes, coconuts, rubber trees, oil palms, bananas and pineapple (Tisdell 1982).

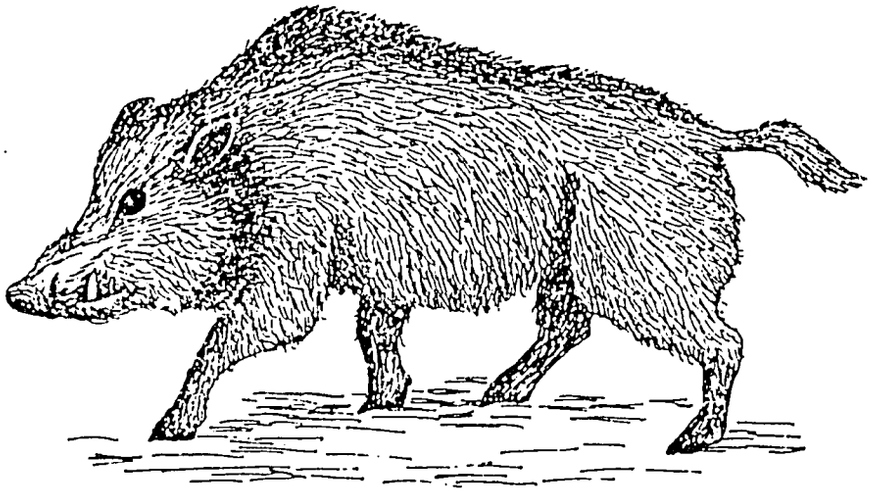


Fig. 2. Wild boar.

Pigs must have access to water and shade, especially in hot weather. Pigs must have a source of water for drinking and, because they have no sweat glands, and therefore have difficulty in regulating their body temperature, they need moist or wet places in which to wallow during hot weather. Shade from dense vegetation helps them to keep cool on hot days.

Feral pigs and wild boar do, however, survive in a wide range of climatic conditions and occur from lowland areas to high elevations. They can withstand snow if it is not to deep (30 to 40 cm) for them to walk in and they can survive at temperatures below freezing. At the same time they thrive in the tropics. They are able to live in areas of low rainfall and high temperatures, such as inland areas in Australia and Pakistan, provided that surface water and shade are available.

Feral pigs and wild boar have poor vision but possess keen senses of hearing and smell. Their sense of smell helps them detect foods, such as carrion, over long distances. The sense of

smell also aids them in locating and rooting up foods from underground. They are mainly active at night in their feeding, moving out from cover about dusk and returning just before dawn. They are not strict to this routine, however, and may be seen foraging during the day in areas where they are not distrubed.

In reproductive biology there are some differences between feral pigs and wild boar. Free-living wild boar of European origin usually produce only one litter per year, with littering occurring in spring and summer (Oloff 1951, Sludskii 1956, Gundlach 1968, Mauget 1972, Pine and Gerdes 1973, Wood and Brenneman 1977, Springer 1977), whereas Asian forms usually produce two litters (Hoogerwerf 1970), as do feral pigs (Pullar 1950, Nichols 1962, Barrett 1978) and domestic pigs (Day 1962). Wild boar in Europe will produce two litters per year if food availabliity in autumn is particularly good (Oloff 1951, Lebedeva 1956, Jezierski 1977).

There is little information on population dynamics or adult mortality rates, except for data given by Lebedeva (1956), Jezierski (1977) and Barrett (1978). Most studies have indicated that mortality in the first year of life is high, with estimates ranging from 10-15% if food and weather are particularly favorable (Lebedeva 1956, Jezierski 1977) to 90% if conditions are less favorable (Lebedeva 1956, Barrett 1978). Barrett (1978) reported that mortality of feral piglets in California were from 70 to 90%, and that most deaths occurred in the first month after birth.

Feral pigs and wild boar are irregularly sedentary, with home ranges of 5-50 km 2 (Lewis 1966, Pine and Gerdes 1973, Kurz and Marchinton 1972, Martin 1975, Wood 1977, Brisbin et al. 1977, Barrett 1978). Most studies have indicated that pigs will remain in an area with suitable cover as long as there is sufficient food and water, and may shift their home range as a response to drought, flooding and severe disturbance (Wodzicki 1950, Oloff 1951, Sludskii 1956).

Other differences noted between wild boar and domestic and feral pigs are in their chromosome numbers and their morphometrics. McFee et al. (1966) reported that in the U. S. A. wild boar of European origin had either 36 chromosomes (73%) or 37 chromosomes (27%), while domestic pigs had 38, and hybrids of domestic pigs and wild boar had 37 and were fertile. Stegemen (1938) and Barrett (1978) compared morphometrics of pigs in the U. S. A. with those of European wild boar. Morphometrics of wild boar in the U. S. S. R. were given by Sludskii (1956) and in Poland by Cabon (1958). Briefly, wild boar tend to be larger than comparable feral pigs with a longer snout, smaller ears, a deeper, more compressed body, higher shoulders and a straighter tail. Kruska (1970, 1972) reports that European wild boar have a brain of 34% greater total volume than that of domestic pigs.

In both wild boar and feral pigs, males tend to be larger than females, although this is more marked in the wild boar than in feral pigs as described by Stegeman (1938), Barrett (1978), and Pine andf Gerdes (1973).

Control Methods

When the wild boar or feral pig are regarded as pests, for instance in agriculture, then a variety of methods of control have been tried. These fall into four main categories: physical, chemical, environmental and biological.

1. Physical Methods

Hunting: The most common physical method is hunting; that is direct removal of the animals from the area by killing. Hunting may be carried out with the help of dogs, especially during daytime hunts. Quite often wild boars are hunted at night, either on foot or more frequently from vehicles with the use of bright searchlights. Since wild boars are usually nocturnal, nighttime hunting offers a better chance for a kill.

Hunting may be casual, the occasional killing of a wild boar by a farmer or it may involve systematic drives in which the intent is to kill as many animals as possible in a short period of time within a given area. Hunting has been used in conjunction with fencing to eliminate feral pigs from National Parks in the Hawaiian Islands, with fair success. The costs, however, per animal removed are quite high.

Night-guarding of fields with lights or lanterns, dogs and clubs, spears and guns, is quite often practiced by farmers in Asian countries to protect their fields from wild boar damage.

Trapping: Several designs of traps for wild boars and feral pigs have been described (Matschke 1962, Williamson and Felton 1971, Fraser 1975, Birmingham 1983). Trapping as a removal technique has been of only limited success and the economics are questionable. Snares have proven to be of little use, as the animals apparently can easily throw them. We have seen only one reference to the use of steel-jaw traps as a means of capture (Birmingham 1983).

Exclusion by fencing: Fencing has been used to exclude feral pigs in agricultural situations, with a fair degree of success. Electric fences are being increasingly used in Australia to exclude feral pigs from lambing paddocks and from crops (Plant 1980). The use of electric fences to protect field crops has also been reported from France (Vassant and Boisaubert 1984). Electric fencing is costly, however, and has limitations, i. e., it may be torn down and broken, grass and undergrowth must be kept away from the fence to prevent shorting out and care must be taken not to fence wild pigs or boars inside (Tisdell 1982).

Micellaneous Methods: Acoustic devices have been used in France in attempts to prevent wild boar damage to field crops, but with little success (Vassant and Boisaubert 1984).

M-44: The use of the M-44, a carnivore-control device used in the United States, was not mentioned in the literature.

2. Chemical Methods

Poison Baits: Poison baits have been used in Australia (1080) and Pakistan (various pesticides) to kill wild pigs or wild boar, with mixed results. Sodium fluoroacetate (1080) can perform spectacularly when used properly but only should be handled by specialists in its use. The use of 1080 could be a threat to wildlife, domestic animals and man and should be used with extreme caution. Other poisons, such as rodenticidal materials (zinc phosphide, strychnine, arsenic, or anticoagulants) were rarely mentioned in the literature.

Chemical Repellents: Repellents have been tried to protect field crops in France, but were not effective (Vassant and Boisaubert 1984).

3. Environmntal Methods

Denial of Shade: The survival of wild boar or feral pigs in many hot areas depends upon access to shade, provided by shrubs, trees and dense growths of grasses, tules and even field crops. The clearing of brush, shrub and dense grass cover reduces the chances for survival by wild pigs - they have difficulty escaping the heat and become easy targets for hunters (Tisdell 1982).

Denial of Water: Denial of access to water is another method of environmental control practiced in Australia (Hone and O'Grady 1980). As Tisdell (1982) points out, however, the fencing off of waterholes can have an undesirable impact upon wildlife.

4. Biological Methods

Natural Predators: Natural predators, such as wolves and tigers, are mainly gone or greatly reduced within the original range of the wild boar. Some minor predation by jackals and wild dogs may occur on piglets, however. But this is not enough to exert any significant predation pressure on wild boar populations. The only large predator that has any impact upon wild boars and feral pigs is man himself.

Diseases and Parasites: Studies of wild boars and feral pigs generally show that they are parasitized by a variety of helminths, cestodes and nematodes but despite these parasite loads, their general health is not seriously affected.

The introduction of the African swine fever virus for wild boar control has been considered in some areas but because it

could have a devastating impact upon domestic swine production, has not seriously been attempted as a control method. While Tisdell (1982) says that swine fever has been used in Pakistan, this is extremely unlikely since its effects could easily be carried into neighboring wild boar populations in Indian Punjab, and from them, into domestic pig populations, with possible political ramifications.

Consider the wild boar's vital statistics:

Height: 30 to 102 cm at the shoulder.
Weight: 50 to 200 kg.
Habitat: forests, grasslands, meadows, swamps and agricultural areas
Food: small animals and all kinds of plants, carrion.
Reproduction: 2 to 12 young after a pregnancy of 3 1/2 to 4 months. Sexual maturity at 10 to 19 months.
Life Span: 15 to 20 years.
Home Range: 10 to 20 sq. km.

These are indeed formidable animals. Despite the best efforts of man to hunt them, they persist and even today are spreading their range. They can be hunted to extinction, but usually only in tightly fenced enclosures and usually only at great expense per animal, as in the National Parks in Hawaii. In Pakistan, they occur throughout the irrigated agricultural areas and even into the rain-fed growing areas (Roberts, 1977), where in both types of agriculture they are serious pests for small-holding farmers to contend with. Damage by this species to a variety of agricultural crops, including sugarcane, maize, watermelon, potato, sweet potato, peas, chillies, wheat, rice, clover, and groundnut has been noted (Beg and Khan 1982, Mirza 1978). Recent damage assessments of losses in sugarcane due to wild boars indicate it is a significant agricultural and economic pest (Brooks et al., 1986; Shafi and Khokkar, in press). In Pakistan, there are very few control measures available for farmers to use and what few are practiced are relatively inefficient. For these reasons, it was thought desirable to put together the worldwide literature on the biology and control of wild boars. The references have been gathered from several sources: The Denver Wildlife Research Center provided computer searches of the databases of BIOSIS (1977 to 1985), AGRIS (1974 to 1985), the Zoological Record database (1978 to 1982), and the Commonwealth Agricultural Bureaux Abstracts (CAB); many references were picked up from *Wildlife Review* and *Wildlife Abstracts* and others were taken from numerous papers, symposia and books published on the wild *S. scrofa*. The bibliography contains references to wild or feral pigs as well as a few on domestic pigs where the information is pertinent to the situation. The references compiled so far represent a preliminary bibliography. As other references on wild boar are received they will be searched for additional literature citations. A revised research bibliography will be issued, if necessary, sometime in the near future.

II. WILD BOAR REFERENCES

Acharjyo, L.N. and S. Mohapatra. 1980.
Litter size of some captive wild mammals. J. Bombay Nat. Hist. Soc., 77(2):321-325.

Ackerman, B.B., M.E. Harmon and F.J. Singer. 1978.
Seasonal food habits of the European wild hog. Part II. Studies of the European wild boar in Great Smoky Mountains National Park, A Report for the Superintendent, Gatlinburg, Tenn.

Adachi, T., K. Kubo, and M. Yamashita. 1982.
[Damage of crop plants by wild boar, *Sus scrofa leucomystax* (Temmick et Schlegel) and its protection in Hyogo Prefecture, Japan]. Proc. Kansai Plant Prot. Soc., 1982, (No. 24). pp. 5-10. (In Japanese).

Ahmad, E., M.H. Khan and J.E. Brooks. 1986.
Wild boar and rodent damage to wheat in Faisalabad District, Pakistan. Food Security Management, Vertebrate Pest Control Project, NARC, Islamabad. Tech. Report No. 3, 6 pp.

Alexiou, P.N. 1983.
Effect of feral pigs (*Sus scrofa*) on subalpine vegetation at Smokers Gap, ACT. Proc. Ecol. Soc. Aust., 12:135-142.

Amon, R. 1938.
Abstammung, Arten und Ressen der Wild Schweine Eurasiens. Zeit. fur Zuechtune, ser. B., 40(1):49-88.

Andrzejewski, R. 1970.
Wedroski dzikow. Lowiec Pol., 9(1932):7. (In Polish).

Andrzejewski, R. and W. Jezierski. 1969a.
[Principles of counteracting the damage caused by wild boars]. Lowiec Pol., 1(1340):4-6. (In Polish with Eng. Summ.).

Andrzejewski, R. and W. Jezierski. 1969b.
[Principles of counteracting the damage caused by wild boars]. Lowiec Pol., 2(1341):2-3. (In Polish with Eng. Summ.).

Andrzejewski, R. and W. Jezierski. 1978.
Management of a wild boar population and its effects on commercial land. Acta Theriol., 23(19):309-340.

Anonymous. 1949.
The wild boar (*Sus scrofa*). J. Bombay Nat. Hist. Soc., 24(1):21-29.

Appleton, P.L. and J.H. Norton. 1976.
Sparganosis...a parasitic problem in feral pigs. Queensland Agric. J., 102(6):339-343.

Asahi, M., M. Mori and T. Shidei. 1975.
[Harvest of wild boar and deer, with reference to vegetation from the census in Kyoto Prefecture]. Biol. Sci., 27(3):159-169. (In Japanese).

Aumaitre, A., C. Morvan, J.P. Quere, J. Peiniau and G. Vallet. 1982.
[Potential litter size and winter breeding in free living wild sows (*Sus scrofa scrofa*)]. Journel Rech. Porcine en France, 14:109-124. (In French).

Aumaitre, A., J.P. Quere and J. Peiniau. 1984.
[Effect of environment on winter breeding and prolificacy of the wild sow]. Symp. Intl. sur le sanglier, Toulouse (France). pp. 69-78. (In French with Eng. Summ.).

Austin, D.H. and J.H. Peoples. 1968.
Capturing hogs with Alpha-Chloralose. Proc. Annu. Conf. S.E. Assoc. Game Fish Comm., 21:201-205.

Baber, D.W. 1978.
Social organization and behavior in the feral hog, *Sus scrofa* L. Unpubl. M.S. Thesis, Fla. Inst. of Tech., 66 pp.

Baber, D.W. and B.E. Coblentz. 1982.
Immobilization of feral pigs with a combination of ketamine and xylazine. J. Wildl. Manage., 46(2):557-559.

Baettig, M. 1980.
Contribution a la biologie et ecologie du sanglier (*Sus scrofa*) dans le canton de Vaud. Diplome en Zoologie, Universite de Bale, 1976, 196 pp.

Baker, J.K. 1979.
The feral pig in Hawaii Volcances National Park. Proc. First Conf. Sci. Res. Natl. Parks, Ser. No. 5, Vol. 1. pp. 365-367.

Baron, Jill. 1980.
Vegetation impact by feral hogs: Gulf Islands National Seashore, Mississippi. Proc. Second Conf. Sci. Res. Natl. Parks, 8:309-318.

Baron, Jill. 1982.
Effects of feral hogs (*Sus scrofa*) on the vegetation of Horn Island, Mississippi. Am. Midl. Nat., 107(1):202-205.

Barrett, R.H. 1970.
Management of wild hogs on private lands. Trans. Calif. Nev. Sec. Wildl. Soc., 17:71-78.

Barrett, R.H. 1971.
Ecology of the feral hog in Tehama County, California. Unpubl. Ph.D. Thesis, Univ. of Calif., Berkeley. 368 pp.

Barrett, R.H. 1977.
Wild pigs in California. In "Research and management of wild hog populations", G.W. Wood, (ed.), Belle W. Baruch Forest Sci. Inst., Clemson Univ., Georgetown, S. Car., pp.111-113.

Barrett, R.H. 1978.
The feral hog on the Dye Creek Ranch, California. Hilgardia, 46(9):283-355.

Barrett, R.H. 1982a.
Habitat preferences of feral hogs, deer, and cattle on a Sierra Foothill Range. J. Range Manage., 35(3):342-346.

Barrett, R.H. 1982b.
Wild pigs. In "CRC Handbook of Census Methods for Terrestrial Vertebrates". D.E. Davis, (ed.), pp. 243-244.

Barrett, R.H. and D.S. Pine. 1981.
History and status of wild pigs, *Sus scrofa*, in San Benito County, California. California Fish Game, 67(2):105-117.

Barrette, C. 1986.
Fighting behavior of wild *Sus scrofa*. J. Mammal., 67(1):177-179.

Becker, H.N., R.C. Belden, T. Breault, M.J. Burridge, W.B. Frankenberger and P. Nicoletti. 1978.
Brucellosis in feral swine in Florida. J. Amer. Vet. Med. Assoc., 173:1181-1182.

Beg, M.A. and A.A. Khan. 1982.
The wild boar in Pakistan. 1. Distribution, habitat and movement patterns. J. Anim. Sci., Pakistan, 4(1-2):46-51.

Belden, R.C. 1972.
Rooting and wallowing activities of the European wild hog (*Sus scrofa*) in the mountains of East Tennessee. M.S. Thesis, Univ. Tenn., 68 p.

Belden, R.C. and M.R. Pelton. 1975.
European wild hog rooting in the mountains of East Tennessee. Proc. Annu. Conf. S.E. Assoc. Game Fish Comm., 29:665-671.

Belden, R.C. and M.R. Pelton. 1976.
Wallows of the European wild hog in the mountains of East Tennessee. J. Tenn. Acad. Sci., 51(3):91-93.

Belden, R.C. and W.B. Frankenberger. 1977.
A portable root-door hog trap. Proc. Ann. Conf. S.E. Assoc. Fish Wildl. Agencies, 31:123-125.

Benson, R. 1980.
Evaluating feral pig damage and costs of control in Western New South Wales, Research Workpaper No. 120, Div. of Marketing and Economics, N.S.W. Dept. of Agric., Sydney.

Beuerle, W. 1978.
[Field observations on the aggressive and sexual behaviour of the European wild hog]. Tierpsychol., 39:211-258. (In German with Eng. Summ.).

Birmingham, G.H. 1983.
Feral hogs. In "Prevention and control of wildlife damage", R.M. Timm (ed.), Great Plains Agric. Council and Nebraska Cooperative Extension Service, Linclon, Nebraska.

Bisset, I. and D. Kennedy. 1977.
1080 or not 1080? - An exercise in formulating policy control of rabbits, wild pigs, dingoes and feral dogs, New South Wales. Agric. Gazette N.S.W., 88(1):12-15.

Boback, A.W. 1957.
Das Schwarzwild. J. Neumann Verlag, Leipzig., 141 pp.

Boisaubert, B., J.L. Bouldoire and J. Vassant. 1983.
Bilan de cinq annees d'experimentation de protection des cultures par clotures electriques dans le department de la Haute-Marne. Bull. Mensuel de l'Office Natl. de la Chasse. No. 68, pp.15-26.

Boisaubert, B. and C. Charnot. 1981.
La situation du sanglier dans l'Est de la France. Chasseurs de l'Est. No. 4:6-9.

Boisaubert, B. and F. Klein. 1984.
[Contribution to the study of the spatial habits of the wild boar (*Sus scrofa*) by capture-recapture]. Symp. Intl. sur le sanglier, Toulouse (France), pp. 135-150. (In French with Eng. Summ.).

Bogatskii, K.B.A. 1981.
[Control of swine fever among wild boars]. Allevatore, 37(33): p.4. (In Italian).

Bootes, B.W. 1976.
Feral pigs. Agric. Gazette N.S.W., 87(June):51.

Borczynski, M. 1973.
[The effect of rooting by wild boars on the species composition and number proportions in the herb layer under the conditions of three types of environment]. Pr. Kom. Nauk Roln. Lesn., 36:3-18. (In Polish with Eng. Summ.).

Borowski, St. and L. Milkowksi. 1977.
[Observations on the bark-stripping game in the Bialowieza Primeval Forest during the year 1969 to 1973]. Z. Jagdwiss., 23(4):169-187. (In German with French and Eng. Summ.).

Boschi, I. 1984.
[Improvement of wild boar population in the Maremme National Park. First Results]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 169-171. (In French with Eng. summ.).

Bosma, A.A. 1976.
Chromosomal polymorphism and G-banding patterns in the wild boar (*Sus scrofa* L.) from the Netherlands. Genetica, 46:391-399.

Bosma, A.A., N.A. DeHaan and A.A. Macdonald. 1984.
Karyotype variability in the wild boar (*Sus scrofa*). Symp. Intl. sur le sanglier, Toulouse, (France), pp. 53-56.

Bouldoire, J.L. 1984.
[Status of the wild boar in France. Evolution during the 1975-1982 period]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 173-186. (In French with Eng. Summ.).

Boye, E. 1956.
Vergleichende untersuchungen uber die arterielle gefassversorgung des uterus von wild- und hausschweinen. Z. Tierzucht. Zuchtbiol.,67:259-296.

Bratton, Susan P. 1974.
The effect of the European wild boar (*Sus scrofa*) on the high-elevation vernal flora in Great Smoky Mountains National Park. Bull. Torrey Bot. Club, 101(4):198-206.

Bratton, Susan P. 1975.
The effect of the European wild boar (*Sus scrofa*) on gray beech forest in the Great Smoky Mountains. Ecology, 56(6):1356-1366.

Bratton, Susan P. 1977.
Wild hogs in the United States: Origin and nomenclature, Symp. Proc: "Research and management of wild hog populations", G.W. Wood, (ed.), Belle W. Baruch Forest Science Inst., Clemson Univ., Georgetown, S. Car., pp. 1-4.

Bratton, Susan P., M.E. Harmon and P.S. White. 1982.
Patterns of European wild boar rooting in the Western Great Smoky Mountains. Castanea, 47(3):230-242.

Bratton, Susan P., F.J. Singer, M.E. Harmon and P.S. White. 1980.
Rooting impacts of the European boar on the vegetation of Great Smoky Mountains National Park during a year of mast failure. Proc. Second Conf. Sci. Res. Natl. Parks, 8:276-293.

Briedermann, L. 1967.
[The food components of wild boar (*Sus scrofa*) in the Central European Civilized Territory]. VII Intl. Congr. Union Game Biol., pp. 207-213. (In German with Eng. Summ.).

Briedermann, L. 1968.
[Influence of boars on biological and silvicultural conditions in managed forests]. Arch. Forstwes., 17(9):943-967. (In German).

Briedermann, L. 1970a.
Zum Korper und Organwachstum des Wildschweines in der Deutschen Demokratischen Republik. Arch. Forstwes., 19:401-420.

Briedermann, L. 1970b.
[The role of the wild boar (*Sus scrofa* L.) in the increase of the wildlife production]. Intl. Congr. Union Game Biol., 9:807-810. (In German with Russian Summ.).

Briedermann, L. 1971a.
Zur reproduktion des Schwarzwildes in der Deutschen Demokratischen Republik. Tag.-Ber. dt. Akad. Landwirtsch.-Wiss. Berlin., 113:169-186.

Briedermann, L. 1971b.
Ermittlungen zur Aktivitatsperiodik des Mitteleuropaischen wildschweines (*Sus scrofa*). Zool. Garten., 40(6):302-327.

Briederman, L. 1973.
Das Schwarzwild (*Sus scrofa* L.). In "Buch der Hege", Band I: Harrwild (H. Stubbs, ed.), Vel Deutscher Landwirbschaftsverlag, Berlin, pp. 123-154.

Briedermann, L. 1976.
[Results of an analysis of the contents of 665 wild boar stomachs]. Zool. Garten., 46(3):157-185. (In German with Eng. Summ.).

Brisbin, I.L. Jr., R.A. Geiger, H.B. Graves, J.E. Pinder III; J.M. Sweeney and J.R. Sweeney. 1977.
Morphological characterizations of two populations of feral swine. Acta Theriol., 22(4):75-85. (In Eng. with Polish Summ.).

Brisbin, I.L. Jr., M.W. Smith and M.H. Smith. 1977.
Feral swine studies at the Savannah River Ecology Laboratory: an overview of program goals and design. In "Research and Management of Wild Hog Populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Inst. Clemson Univ., Georgetown, S. Car., pp. 71-90.

Britov, V.A. 1983.
[*Trichinella nelsoni* (Trichocephalidae, Trichinellidae) from the Lithuanian wild boar]. Parazitologiya (Leningr.), 17(6):487-489. (In Russian with English summ.).

Bromlei, G.F. 1964.
Ussuruskii Kaban. Izdatel'stuo "Nauka", Moscow, 107 pp.

Brooks, J.E., M.H. Khan, E. Ahmad and Z. Hussain. 1986.
The agricultural importance of wild pigs to sugarcane production in Faisalabad District, Pakistan. Food Security Management, Vertebrate Pest Control Project, NARC, Islamabad. Tech. Report No.1, 18 pp.

Brown, L.N. 1985.
Elimination of a small feral swine population in an urbanizing section of Central Florida, USA. Fla. Sci., 48(2):120-123.

Bruce, J. 1941.
Mostly about the habits of the wild boar. Calif. Conserv., 6(5):14-21.

Bulackov, V.L. 1975.
Vlijanie rojuscej dejatelnosti kabana na fiziko-chimiceskie i biogeocenoticeskie svojstva pocu lesnych biogeocenozov. Sb."Kopytnye fauny SSSR", Moskva. pp. 159-160. (In Russian).

Cabon, K. 1958.
Das Mascensterben von Wildschweinen im Naturstaaspark von Bialowieza im Winter 1955-56. Acta Theriol., 2:71-82.

Carnelutti, B. and Th. Sardin. 1985.
[Study of tree rubbing pattern of *Sus scrofa* in an area of France]. Trans. Congr. Intl. Union Game Biol., 17:949-951. (In French).

Casanova, P. 1982.
[Some comments on the wild boar (*Sus scrofa* L.) as utilizer of marginal areas of the Apennines]. Atalia Forest. Montana, 37(4):203-207. (In Italian with Eng.and French Summ.).

Challies, C.N. 1975.
Feral pigs (*Sus scrofa*) on Auckland Island: Status, and effects on vegetation and nesting sea birds. N.Z.J. Zool., 2(4):479-490.

Challies, C.N. 1976.
Feral pigs in New Zealand. In "The value of Feral Farm Mammals in New Zealand", A.H. Whitaker and M.R. Rudge (eds.). N.Z. Dept. of Lands and Survey, Wellington, p. 23 -.

Chmarzynski, W. 1983.
[Trichinosis in wild hogs in Poland]. Medycyna Weterynaryja, 39(7):428-431. (In Polish with Russian and Eng. Summ.).

Clark, R.K., D.A. Jessup, D.W. Hird, R. Ruppanner and M.E. Meyer. 1983.
Serologic survey of California wild hogs for antibodies against selected zoonotic disease agents. J. Am. Vet. Med. Assoc., 183(11):1248-1251.

Conley, R.H. 1977.
Management and research of the European wild hog in Tennessee. In "Research and Management of Wild Hog Populations", G.W. Wood (ed), Belle W. Baruch Forest Sci. Inst., Clemson Univ., Georgetown, S. Car., pp. 67-70.

Corner, L.A., R.H. Barrett, A.W.D. Lepper, V. Lewis and C.W. Pearson. 1981.
A survey of mycolacteriosis of feral pigs in the Northern Territory. Aust. Vet. J., 57(129):537-542.

Cornide, Rosa I. 1984.
[Leptospiral antibodies in *Sus scrofa*]. Misc. Zool. Inst. Zool.. Acad. Cienc. Cuba, 18:2. (In Spanish).

Covacevich, J. 1976.
A nest constructed by wild pigs. Victorian Nat., 93(1):25-27.

Crouch, L.C. and R.J. Sweeney. 1981.
Habitat utilization by feral hogs at Savannah River Plant, South Carolina. Bull. S.C. Acad. Sci., 43:77. (Abstract only).

Cuthbertson, K. 1974.
Pighunting in New Zealand. A.H. and A.W. Reed, Wellington.

Danilov, P. I. 1979.
Novosely karel'skih lesov. Petrozavodsk. 88 pp.

Dardaillon, M. 1984a.
[Social organization and reproduction in Camarque wild boar]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 159-165. (In French with Eng. Summ.).

Dardaillon, M. 1984b.
Le sanglier et le milieu camargais: dynamique co-adaptative. These Doct. 3'eme cycle, Univ. Paul Sabatier, Toulouse.

Dardaillon, M. 1984c.
[Use of trophic resources by the wild boar *Sus scrofa* in Camargue France]. In ["Processes of Early Acquisition", Communications, Intl. Colloquium on Ethology, French Soc. for the Study of Animal Behavior]. Universitat Autonoma de Barcelona, Spain, pp.419-426. (In French).

Dardillon, M. 1985.
[Seasonal habitat selection by wild boars (*Sus scrofa*) in the Camargue, Southern France, as rated by signs distributions analysis]. Trans. Congr. Intl. Union Game Biol., 17:245-253. (In French with Eng. Summ.).

Davletova, L.V. (ed.). 1985.
[Morphology and genetics of wild boar]. Izdatel'stvo "Nauka", Moscow. 279 pp. (In Russian).

Day, B.N. 1962.
The reproduction of swine. In "Reproduction in Farm Animals", E.S.E. Hafez (ed.), Lea and Febiger, Phila.

Degner, R.L., L.W. Rodan, W.K. Mathis and E.F.J. Gibbs. 1982.
The recreational and commercial importance of feral swine in Florida. Industry Rept. 82-1, Florida Agric. Market Research Center, Univ. of Fla., Gainesville, Fla.

Degner, R.L., L.W. Rodan, W.K. Mathis and E.P.J. Gibbs. 1983.
The recreational and commercial importance of feral swine in Florida: Relevance to the possible introduction of African swine fever into the U.S.A. Prev. Vet. Med., 1:371-381.

de Vos, A. and A. Sassani. 1977.
[A wild boar (*Sus scrofa*) population study in Mohammad Reza Shah National Park]. Z. Jagdwiss., 23(3):113-126. (In German with French and Eng. Summ.).

Dietrich, U. 1984.
[Results and tendencies of wild boar *Sus scrofa* research from 1975 to 1983]. Saeugetierk. Mitt., 31(2-3):223-237. (In German with Eng. Summ.).

Dinerstein, E. 1980.
An ecological survey of the Royal Karnali-Bardia wildlife reserve Nepal 3. Ungulate populations. Biol. Conserv., 18(1):5-38.

Diong, C.H. 1973.
Studies of the Malayan wild pig in Perak and Johore. Malay. Nat. J., 26:120-151.

Diong, C.H. 1980.
Responses of feral pigs to trap types and food baits. Proc. Conf. Nat. Sci. Hawaii Volcanoes Natl. Park, 3:91-100.

Dittus, T. 1983.
[Investigations on wild boar. Clinical and parasitological studies; sedation and narcosis; anatomical, pathological and histological examinations]. Inaugural Dissertation, Ludwig-Maximilians Universitat, Munich. 99 pp. (In German with Eng. Summ.).

Dombrowski, R. 1896.
Die wildschaden. Voight Verlag: 1-87. Weimar.

Donaurov, S.S. and V.P. Teplov. 1938.
Kaban kavkazskom zapovednike. Trudy Kabazskogo Gosudarstvennogo Zapovednika., 1:191-226.

Dormidontov, P. 1967.
Kaban v podmoskove. Ohotn i ohotu hozjastwo, 5:11-13.

Douaud, J.F. 1983.
Utilisation de l'espace et du temps et ses facteurs de modulation chez le sanglier (*Sus scrofa* L.) en milieu forestier onvert (Massif des Dhiuts, Haute-Marne). These de 3'eme cycle, Universite de Strasbourg.

Duncan, R.W. 1974.
Reproductive biology of the European wild hog (*Sus scrofa*) in the Great Smoky Mountains National Park. M.S. Thesis, Univ. Tenn., 95 pp.

Dutt, R.H., E.C. Simpson, J.C. Christian and C.E. Barnhart. 1959.
Identification of preutial glands as the site of production of sexual odor in the boar. J. Anim. Sci., 18:1157. (Abstract only).

Dzieciolowski, R. 1976.
Estimating ungulate numbers in a forest by track counts. Acta Theriol., 21(12-23):217-222.

Dzieciolowski, R. 1981.
[Situation in the management and harvesting of big game in Europe: Moose; red-deer; roe-deer; wild boar]. Sylwan, 125(3):17-26. (In Polish with Eng. and Russian Summ.).

Eck, J. 1929.
Wald and wildhege. Meyer Verlag, Munchen. 242 pp.

Eisenberg, J.F. and M. Lockhart. 1972.
An ecological reconnaissance of Willpattu National Park, Ceylon. Smithsonian Inst. Press, Wash., D.C., 118 pp.

El Mastari, A. 1982.
[Contribution to the study of biology and mode of living of wild boar (*Sus scrofa barbarus*)]. Memoire de 3'eme cycle agronomie, Rabat (Morocco), 66 pp. (In French with Arabic, Eng. and French Summ.).

Erkinaro, E., K. Heikura, E. Lindgren, E. Pulliainen and S. Sulkava. 1982.
Occurrence and spread of the wild boar (*Sus scrofa*) in Eastern Fennoscandia. Mem. Soc. Fauna Flora Fenn., 58(2):39-47. (In Eng. with Finnish Summ.).

Everitt, J.H. and M.A. Alaniz. 1980.
Fall and winter diets of feral pigs in South Texas. J. Range Manage., 33(2):126-129.

Fadeev, E.V. 1973.
[Population dynamics of *Sus scrofa* in the European part of the Russian SSR]. Zool. Zh. 52(8):1214-1219. (In Russian with Eng. Summ.).

Fadeev, E.V. 1975.
[The ecology of the wild boar in the Central Russian SSR]. Vestn. Mosk. Univ. Ser. 6 Biol. Pochvoved., 28(5):20-28. (In Russian with Eng. Summ.).

Fadeev, E.V. 1981.
[On the dynamics of the Northern limits of the area of distribution of the wild boar in Eastern Europe]. Biol. Nauki (Mosc.), 1981(9):56-64. (In Russian).

Fadeev, E. V. 1982.
[Distribution and number of wild boar in the Eastern European edge of its territory]. Biol. Nauki (Mosc.), 1982(3):53-57. (In Russian).

Fedosenko, A.K. and V.A. Zhiryakov. 1984.
[Wild boar ecology and behaviour in mountains of the Southern and South-Eastern parts of Kazakhstan]. Biul. Moscow Obshch. Ispyt. Prirod., Biol., 89(4):36-45. (In Russian with Eng. Summ.).

Fichant, R. 1978.
[The wild boar]. Chasse et Nature, 69(3):108-112. (In French).

Firinii, A., P. Cossu, C. Scarano and L. Marceddu. 1983.
[African swine fever in Sardinia. II. Serological survey of wild boar]. Atti. del. Soc. Ital. del. Sci. Vet., 37:725-727. (In Italian with Eng. Summ.).

Foreyt, W.J., A.C. Todd and K. Foreyt. 1975.
Fascioloides magma (Bassi, 1875) in feral swine from Southern Texas. J. Wildl. Dis., 11(4):554-559.

Forrester, D.J., J.H. Porter, R.C. Belden and W.B.Frankenberger. 1982.
Lungworms of feral swine in Florida. J. Am. Vet. Med. Assoc., 181(11):1278-1280.

Forsberg, S. 1979.
The wild boar has returned. Fauna Flora (Stockh.), 74(1):43-45.

Fox, J.R. 1972.
An evaluation of control techniques for the European wild hog (*Sus scrofa*) in the Great Smoky Mountains National Park. M.S. Thesis, Univ. Tenn., 76 pp.

Fox, J.R. and M.R. Pelton. 1977.
An evaluation of control techniques for the European wild hog in the Great Smoky Mountains National Park. In "Research and Management of Wild Hog Populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Inst., Clemson Univ., Georgetown, S. Car., pp. 53-63.

Fraczbak, K. 1974.
An attempt at determining the role of parasites as a factor controlling the number of wild boar (*Sus scrofa*) population. Wiad. Parazyt, 20:747-749.

France, N.W. 1969.
A record wild boar of 1905 vintage. N.Z. Wild Life, 25:28-30.

Frankenberger, W.B. and R.C. Belden. 1978.
Distribution, relative abundance and management needs of feral hogs in Florida. Proc. Ann. Conf. S.E. Assoc. Fish Wildl. Agencies, 30:641-644.

Fraser, T.K. 1975.
A cheap effective portable pig trap for the control of wild pigs. Queensland Agric. J., 101(3):366-369.

Furubayashi, K., T. Iwano and N. Maruyama. 1979.
[Geographical distribution of Japanese serow, Sika deer, Japanese black bear, Ezo brown bear, Japanese monkey, and Japanese wild boar, and distribution of their damage to agriculture and forestry in Japan]. Biological Science, 31(2):96-112. (In Japanese).

Gallego, J., J.M. Rocamora and S. Mas-Coma. 1977.
[New data on *Capillaria garfiai* (Nematoda: Trichuridae) parasite of the wild boar of the Iberian Peninsula]. Rev. Iber. Parasitol., 37(3-4):243-250. (In Spanish with Eng. Summ.).

Genard, M. and F. Lescourrett. 1985.
[Predation and dispersion of seeds by the wild boar, *Sus scrofa scrofa*, in France]. Terre Vie, 40(3):343-353. (In French with Eng. Summ.).

Genov, P. 1981a.
Significance of natural biocenoses and agrocenoses as the source of food for wild boar (*Sus scrofa* L.). Ekol. Pol., 29(1):117-136.

Genov, P. 1981b.
Food composition of wild boar in North-Eastern and Western Poland. Acta Theriol., 26(10):185-205. (In English with Polish Summ.).

Genov, P. 1981c.
[The distribution of wild boar (*Sus scrofa* L.) in Eurasia and its adaptation to the feeding conditions]. Z. Jagdwiss., 27(4):221-231. (In German with French and Eng. Summ.).

Genov, P. 1984.
[Food preferences of wild boar with regard to various potato cultivars]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 201-204. (In French with Eng. Summ).

Giffin, J. 1977.
Ecology of the feral pig on Hawaii Island. Elepaio, 37(12):140-142.

Giles, J. 1973.
Controlling feral pigs. Agric. Gaz. N.S.W., 84(3):130-132.

Giles, J.R. 1977.
Control of feral pigs. Wool Technol. Sheep Breeding, June/July:29-31.

Giles, J.R., J. Hone et al. 1977.
The biology and control of feral pigs. Aust. Meat Comm. Final Report, June 1977, N.S.W. Dept. Agric., Glenfield.

Gorynska, W. 1981.
Method of determining relations between the extent of damage in farm crops big game numbers and environmental conditions. Acta Theriol., 26(29-35):469-482.

Gottschlich, H.J. 1975.
Beitrag zur vermehrung und entwicklung lines schwarzwild-bestandes. Beitr. Z. Wildforsch., 9:204-207.

Graves, H.B. 1984.
Behavior and ecology of wild and feral swine (*Sus scrofa*). J. Animal Sci., 58(2):482-492.

Graves, H.B. and K.L. Graves. 1977.
Some observations on biobehavioral adaptations of swine. In "Research and Management of wild hog populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Inst., Clemson Univ., Georgetown, S. Car., pp. 103-110.

Greiner, E.C., P.H. Pamela; C.B. Robert; B.F. William; H.A. David and P.J. Gibbs E. 1981.
Ixodid ticks on feral swine in Florida. J. Wildl. Dis., 20(29):114-119.

Greiner, E.C., C. Taylor III, W.B. Frankenberger and O.C. Belden.1982.
Coccidia of feral swine from Florida. J. Am. Vet. Med. Assoc., 181(11):1275-1277.

Gordon, H. McL., B.A. Forsyth and M. Robinson. 1954.
Sparganosis in feral pigs in New South Wales. Aust. Vetern. J., May:135-138.

Groot Bruinderink, G. 1977.
[Study of the stomach content of the wild boar *Sus scrofa* in the Veluwe Area in the Province of Gelderland, Netherlands]. Lutra, 19(3):76-85. (In Dutch).

Gropp, A., D. Giers and U. Tettenborn. 1969.
Das chromocomenkomplement des wildschweins (*Sus scrofa*). Experientia, 25:778.

Groves, C. 1981.
Ancestors for the pigs: Taxonomy and phylogeny of the genus *Sus*. Tech. Bull. 3, Aust. Natl. University.

Guidot, G. 1975.
[Wild boars of tropical Africa]. These, Doctorat Veterinaire, Paris Univ., 76 pp. (In French).

Gunchak, N.S. 1978.
[Morphometric characteristics of *Sus scrofa* in Ukrainian Carpathian Mountains USSR]. Zool. Zh., 57(12):1870-1877. (In Russian with Eng. Summ.).

Gunchak, N.S. 1980.
[Nutrition of the wild boar *Sus scrofa* in the Carpathian Mountains of the Ukrainian-SSR]. Vestn. Zool., 1980(5):73-78. (In Russian).

Gundlach, H. 1968.
[Care and rearing of young, behavioural ontogeny and daily life cycle in the European wild boar (*Sus scrofa* L.)]. Ziet. Tierpsychol., 25:955-995. (In German with Eng. Summ.).

Haber, A. 1950.
[Defending the wild boars]. Lowiec Pol., 6(979):4-8. (In Polish with Eng. Summ.).

Haber, A. 1961.
[The wild boar in Poland]. Terre Vie, 108(1):74-76. (In French with Eng. Summ.).

Haber, A. 1966.
[The food of wild boar]. Lowiec Pol., 14(1281):2-3. (In Polish with Eng. Summ.).

Haber, A. 1967.
Znaczenie dzika w biologicznej ochronie lasu. Zesz. Nauk Szk. Glown. Gosp. Wiejs. Ser. Lesnictwo, No. 9.

Haber, A. 1968.
[Biotopes of the wild boar, *Sus scrofa* L., in Poland and its food and plant origin]. Zesz. Nauk., Szk. Glown. Gosp. Wiejs. Ser. Lesnictwo, No. 10, Warsaw. (In Polish with Eng. Summ.).

Haber, A. 1969.
[Wild boar]. Panstwowe Wydawnictwo Rolnicze i Lesne, Warszawa. 216 pp.

Hagen, D.R. and K.B. Kephart. 1980.
Reproduction in domestic and feral swine. I. Comparison of ovulatory rate and litter size. Biol. Reprod., 22:550-552.

Hamilton, W.D., J. Wright and R. Kirby. 1976.
Feral pig control trials on "Wynella", Dirrabandi. Queensland Agric. J., 102:419-421.

Hansen, W.J., C.W. Foley, R.W. Seerley and S.E. Curtis. 1972.
Pelage traits in neonatal wild, domestic and "crossbred" piglets. J. Anim. Sci., 34:100-102.

Hanson, R.P. and L. Karstad. 1959.
Feral swine in the Southeastern United States. J. Wildl. Manage., 23(1):64-74.

Harrison, J.L. 1959.
What do wild pigs eat? Malay. Nat. J., 14:223-224.

Hart, K. 1979.
Feral pig problems on the South Coast. Agric. Gazette N.S.W., 90(6):1-3.

Haupt, W. and I. Stubbe. 1975.
Endoparasito logishe undersuchungen an der schwarz wilden population (*Sus scrofa* L.) des wildforschungsgebietes Habel. Beit. Jagdrll: Wildforschung., 9:195-203. (In German).

Hayashi, Y., T. Nishida, K. Mochizuki and S. Seta. 1977.
Sex and age determination of the Japanese wild boar *Sus scrofa leucomystax* by the lower teeth. Jap. J. Vet. Sci., 39(2):165-174.

Hayashi, Y., T. Nishada, T. Hashiguichi and K. Mochizuki. 1984.
Morphological studies of the mandible of the Indonesian native pigs and seven types of Asian wild boar. Jap. J. Vet. Sci., 46(1):99-104.

Heck, L. and Raschke, G. 1980.
Die wildsauen. Paul Parey, Hamburg.

Heinemann, E. 1983.
[Immobilization by drugs of feral bovidae and suiformes]. Inaugural Dissertation, Fachbereich Veterinarmedizin Der Freien Universitat Berlin. 389 pp. (In German, English summ.).

Hell, P. and L. Paule. 1983.
[Systematic position of wild hogs, *Sus scrofa*, in the West Carpathians]. Prirodoved. Pr. Ustavu Cesk. Akad. Ved. Brne, 17(3):1-54. (In German with Eng. and Russian Summ.).

Hell, P., M. Simiak and M. Henciar. 1984.
[Territorial distribution of wild boar (*Sus scrofa*) in Slovakia]. Folia Venatoria, 1984 (No. 14):71-88. (In Czech., German, Eng. and Russian Summ.).

Hemsworth, P.H. 1978.
The social environment and sexual behaviour of the domestic boar. Aust. Soc. for Reprod. Biol., Tenth Ann. Conf., Sydney. Aug. 1978.

Hennig, R. 1963.
Schwarzwildhege, schwarzwildjagd. Handbuch-Verlag GMBH, Hannover. 116 pp.

Hennig, R. 1972.
Das Schwarzwild. Handbuch-Verlag GMBH, Hannover. 68 pp.

Hennig, R. 1981.
[The wild boar, biology, behaviour, conservation, gamekeeping and hunting]. BLV Verlagsgesellschaft (Munich) German Federal Republic. 221 pp. (In German with Eng. Summ.).

Henriksen, S.A., and B. Clausen. 1977.
Trichinella spiralis in wild boars (*Sus scrofa*). Nordisk Veterin., 29(12):543-545. (In English with Danish Summ.).

Henry, V.G. 1966.
The European wild hog hunting season recommendations based on reproductive data. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 20:139-145.

Henry, V.G. 1968a.
Length of estrous cycle and gestation in European wild hogs. J. Wildl. Manage., 32(2):406-408.

Henry, V.G. 1968b.
Fetal development in European wild hogs. J. Wildl. Manage., 32(4):966-970.

Henry, V.G. 1969a.
Predation on dummy nests of ground-nesting birds in the Southern Appalachians. J. Wildl. Manage., 33(1):169-172.

Henry, V.G. 1969b.
Detecting the presence of European wild hogs in wild swine populations. J. Tenn. Acad. Sci., 44(4):103-104.

Henry, V.G. 1970.
Weights and body measurements of European wild hogs in Tennessee. J. Tenn. Acad. Sci., 45(1):20-23.

Henry, V.G. and R.H. Conley. 1970.
Some parasites of European wild hogs in the Southern Appalachians. J. Wildl. Manage., 34:913-917.

Henry, V.G. and R.H. Conley. 1972.
Fall foods of European wild hogs in the Southern Appalachians. J. Wildl. Manage., 36(3):854-860.

Henry, V.G. and R.H. Conley. 1978.
Survival and mortality in European wild hogs. Proc. Ann. Conf. S.E. Assoc. Fish Wildl. Agencies, 32:93-99.

Henry, V.G. and G.H. Matschke. 1968.
Immobilizing trapped European wild hogs with Cap-Chur-Barb. J. Wildl. Manage., 32(4):970-972.

Henry, V.G. and G.H. Matschke. 1972.
Immobilizing European wild hogs with sernylan. J. Tenn. Acad. Sci., 47:81-84.

Henson, T.M. 1975.
Age determination and age structure of the European wild hogs (*Sus scrofa*). M.S. Thesis, Univ. of Tenn., Knoxville, 58 pp.

Heptner, V.G., A.A. Nasimovic and A.G. Bannikov. 1966.
Die saugetiere der sowjetunion. Band I: Paarhufer und unpaarhufer. VEB Gustav Fischer Verlag, Jena, DPR. 939 pp.

Higashino, P.K. and C.P. Stone. 1982.
The fern jungle exclosure in Hawaii Volcanoes National Park: 13 years without feral pigs in a rain forest. Proc. Conf. Nat. Sci. Hawaii Volcanoes Natl. Park, 4:86 (Abstract only)

Hone, J. 1980.
Effect of feral pig rooting on introduced and native pasture in Northeastern New South Wales. J. Aust. Instit. Agric. Sci., 46(2):130-132.

Hone, J. 1983.
A short-term evaluation of feral pig eradication at Willandra in Western New South Wales. Aust. Wildl. Res., 10(2):269-275.

Hone, J. and P. Atkinson. 1981.
Evaluation of fencing to control feral pig movement. Aust. Wildl. Res., 10(3):499-505.

Hone, J. and H. Bryant. 1984.
An examination of feral pig eradication in a hypothetical outbreak of foot and mouth disease at Newcastle, New South Wales. Proc. Int. Conf. Wildl. Dis. Assoc., 4:79-85.

Hone, J., H. Bryant, P. Nicholls, W. Atkinson and R. Kleba. 1985.
The acceptance of dyed grain by feral pigs and birds. III. Comparison of intakes of dyed and undyed grain by feral pigs and birds in pig-proof paddocks. Aust. Wildl. Res., 12(3):447-454.

Hone, J. and R. Kleba. 1984.
The toxicity and acceptability of warfarin and 1080 poison to penned feral pigs. Aust. Wildl. Res., 11(1):103-111.

Hone, J. and J.O'Grady. 1980.
Feral pigs and their control. Div. Animal Product. Bull. A 4.1.1., N.S.W. Dept. Agric., pp. 1-19.

Hone, J. and H. Pederson. 1980.
Changes in a feral pig population after poisoning. Proc. Vert. Pest Conf., 9:176-182.

Hone, J., H. Pedersen and J. O'Grady. 1980.
Decisions in the control of feral pig damage. N.S.W. Dept. Agric., Agric. Bull., No. 5.

Hone, J. and J. Waithan. 1979.
Feral pigs are spreading. Agric. Gazette of N.S.W., April:12-13.

Hoogerwerf, A. 1970.
Udjung kulon, the land of the last Javan rhinocerous with local and general data on the most important faunal species and their preservation in Indonesia. E.J. Brill. Leiden: 512 pp. Part III. Wild boar. pp. 330-349.

Hoogestein, R. 1980.
[The baquiros; wild pigs of tropical America]. Natura, 1980 (No. 68), pp. 4-9. (In Spanish).

Howe, T.D. and S.P. Bratton. 1976.
Winter rooting activity of the European wild boar in the Great Smoky Mountains National Park. Castanea, 41(3):256-264.

Howe, T.D., F.J. Singer and B.B. Ackerman. 1981.
Forage relationships of European wild boar invading northern hardwood forest. J. Wildl. Manage., 45(3):748-754.

Huff, M.H. 1980.
Effect of the European wild boar on the woody vegetation on gray beech forest in the Great Smoky Mountains. Proc. Second Conf. Sci. Res. Natl. Parks, 8:263-275.

Iff, U. 1983.
[Age determination and assessment in wild boar]. Wild und Hund. 86(11):26-30. (In German).

Igo, W.K., T.J. Allen and E.D. Michael. 1980.
Observations on European wild boars released in Southern West Virginia. Proc. Ann. Conf. S.E. Assoc. Fish. Wildl. Agencies, 33:313-317.

Inayatullah, C. 1973.
Wild boar in West Pakistan. Wildl. Manage. Branch Bull. No. 1, Pakistan Forest Inst., Peshawar, 17 pp.

Ito, T. and J. Sato. 1980.
[Distribution of 5 species of medium and large mammals in the Tohoku District Northeast Japan]. Bull. Yamagata Univ. (Nat. Sci), 10(1):61-80. (In Japanese).

Jacobi, J.D. 1980.
Changes in a native grassland in Haleakala National Park following disturbance by feral pigs. Proc. Second Conf. Sci. Res. Natl. Parks, 9:294-308.

Janda, M. 1958.
Die nahrung des schwartzwilds (*Sus scrofa*) im mittelgebirgsgebiet von stiavnica. Saeugetierk, Mitt., 6(2):67-74. (In German).

Janeau, G. and F. Spitz. 1984a.
[Space and time budget of the wild boar (*Sus scrofa* L.) in Gresigne Forest]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 123-134. (In French with Eng. Summ.).

Janeau, G. and F. Spitz. 1984b.
[The use of space by wild boar (*Sus scrofa scrofa* L): Distribution and patterns of use]. Gibier Faune Sauvage, No. 1 pp. 73-89. (In French with German and Eng. Summ.).

Jeffrey, S. 1974.
Antelopes, duikers and hogs of the dry high forest of Ghana. Nigerian Field, 39(1):27-33.

Jenny, J. 1978.
[Regulating populations of wild boars]. Bull. de l'Office Natl. de la Chasse, 1978, (No. 10):5-7. (In French).

Jezierski, W. 1972.
Gospodarcze znaczenie szkod lowieczne. Panstw. Wyd. Nauk., Warszawa, 119 pp.

Jezierski, W. 1977.
Longevity and mortality rate in a population of wild boar. Acta Theriol., 22(24):337-348.

Jezierski, W. and J.W. Dubas. 1984.
Wild boar food selection in relation to agricultural plants: phenology and species variation. Symp. Intl. sur le sanglier, Toulouse, (France), p. 213.

Johnsingh, A.J.T. 1978.
A wildboar (*Sus scrofa*) sharing wilddogs' (*Cuon alpinus*) kill. J. Bombay Nat. Hist. Soc., 75(1):211-212.

Johnson, K.G., R.W. Duncan and M.R. Pelton. 1982.
Reproductive biology of European wild hogs in the Great Smoky Mountains National Park. Proc. Ann. Conf. S.E. Assoc. Fish Wildl. Agencies, 36:552-564.

Jones, P. 1957.
The European wild boar in North Carolina. Game Div., N. Car. Wildl. Res. Comm., Raleigh, N.C. 29 pp.

Jotterand-Bellomo, M. and M. Baettig. 1981.
Etude cytogenetique de deux sangliers (*Sus scrofa* L.) de Couleur claire,, captures' aux environs de Geneve (Suisse). Revue Suisse Zool., 88:787-795.

Juhel, L. 1981.
[Wild boar breeding and management; breeds, feeding, diseases, parasites]. Elevage. Edition Porcin, 1981 (No. 107), pp. 47-52. (In French).

Jung, D. 1981.
Essais d'effarouchment acoustique du sanglier (*Sus scrofa* L.). Memoire de fin d'etude ENITA de Dijon., 82 pp.

Karanth, K.U. 1982.
Factors governing the distribution of wild mammals in Karnataka, India. J. Bombay Nat. Hist. Soc., 79(2):409-411.

Katahira, L. 1980.
The effects of feral pigs on a montane rain forest in Hawaii Volcanoes National Park. Proc. Conf. Nat. Sci. Hawaii Volcanoes Natl. Park., 3:173-178.

Keast, J.C., I.R. Littlejohns, L.C. Romain and J.S. Wannan. 1963.
The role of the feral pig as a disease reservoir. Aust. Vet. J., 39:99.

Khan, M.H., R.A. Khan and M.A. Qayyom. 1980.
Chemical control of wild boars. Pakistan Ent., 2(1-2):45-50.

Klauber, A. and K. Onderscheka. 1982.
Problems and experience in immobilization of free ranging roe deer (*Capreolus capreolus*) and wild boar (*Sus scrofa*). Wiener Tierarztliche Monatsschrift, 69(4):118-122.

Kleba, R., J. Hone and G. Robards. 1985.
The acceptance of dyed grain by feral pigs and birds. II. Penned feral pigs. Aust. Wildl. Res., 12(1):51-55.

Klein, F. 1984.
[Contribution to the study of growth rate in wild boar (*Sus scrofa*) by capture-recapture]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 57-67. (In French with Eng. Summ.).

Klingholz, F., S. Constantin and M. Heinz. 1979.
[Accustical communication of the European wild boar (*Sus scrofa*). Zool. Gart., 49(4/5)277-303. (In German with Eng. Summ.).

Kneitz, G. and J. Jaedicke. 1977.
[Wild boar harvest and distribution in lower Franconia]. Waldhygiene, 12(4)119-112. (In German with Eng. Summ.).

Koehler, W. 1954.
[Possibilities of using the wild boar within the biological method]. Roczn. Nauk Lesn., 4(111):125-140.

Kormilitsyn, A.A. and I. Dulitaskii A. 1972.
[Reacclimatization of *Sus scrofa* L. in the Crimea]. Vestn. Zool., 6(1):38-44. (In Russian with Eng. Summ.).

Korneyev, A.P. 1970.
[Fluctuation of the wild boar's numbers in the Ukraine and an optimal density of its population in game areas]. Trans. Intl. Congr. Union Game Biol., 9:812-814. (In Russian with Eng. Summ.).

Kozlo, P.G. 1965.
Materialy da charcavannja dzika belavezkoj pusci. Vesci Akad. Nauk BSSR, Ser. Biol., 2:90-94.

Kozlo, P.G. 1968.
[Ecological and morphological characteristics of *Sus scrofa* from the Belovezhskaya preschcha]. Vestnik Zool., 6:53-58. (In Russian with Eng. Summ.).

Kozlo, P.G. 1969.
Pitanie kabana i sezonnaja smena ego korma belovezskaja pusca, Issledovanija, 3:132-144. (In Russian)

Kozlo, P.G. 1970.
[Factors determining the population density of wild boar in the Belovezhskaya Preschchal. Zool. Zh., 49(3):422-430. (In Russian with Eng. Summ.).

Kozlo, P.G. 1972.
O sostave osenne-zimnih kormov dikogo kabana (*Sus scrofa* L.) Berezinski Zap., 2:133-140. (In Russian).

Kozlo, P.G. 1975.
Dikii Kaban. Urozaj, Minsk., 223 pp.

Kozlo, P. G. and L. R. Yemyal'yanava. 1980.
[Role of the boar, *Sus scrofa*, in biogeocenotic changes in the Belorussian-SSR]. Vestsi Akad. Navuk BSSR (Ser. Biyal), 1980(2):104-107. (In Russian).

Kristiansson, H. 1985.
Crop damage by wild boars in Central Sweden. Trans. Congr. Intl. Union Game Biol., 17:605-609.

Kruska, D. 1970.
Vorbichend cytoarchitektonische unter-suchungen an Gehirnen von wild-und Hausschweinen. Z. Anat. Entwickl. Gesch., 136:291-324.

Kruska, D. 1972.
Volumenvergleick opstischer Hirnzentren bei wild-und Hausschweinen. Z. Anat. Entwickl. Gesch., 138:265-282.

Kruska, D. and H. Stephen, 1973.
Volumenvergleich allokortikaler Hirnzentren bei wild-und Hausschweinen. Acta Anat., 84:387-415.

Kurnosov, K.M. and B.I. Petrishchev. 1977.
[Embryogenesis of the wild boar, *Sus scrofa*. The state of external morphological characteristics in wild boar embryos in different stages of development]. Zool. Zh. 56(3):412-419. (In Russian with Eng. Summ.).

Kurz, J.C. 1971.
A study of feral hog movements and ecology on the Savannah River Plant, South Carolina. Unpublished Masters' Thesis, Univ. of Georgia, Athens.

Kurz, J.C. and R.L. Marchinton. 1972.
Radiotelemetry studies of feral hogs in South Carolina. J. Wildl. Manage., 36(4):1240-1248.

Kutzner, E. and H.K. Hinaidy. 1971.
[Parasites of wild boars (*Sus scrofa* L.) in Austria]. Z. Parasitenkd., 35(3):205-217. (In German with Eng. Summ.).

Lacki, M.J. 1984.
The effects of rooting by wild boar on tree growth and nutrient cycling in Great Smoky Mountains National Park. Ph.D. Dissertation, N.C. State University, 80 pp.

Lacki, M.J. and R.A. Lancia. 1982.
Effect of wild boar on tree growth: An alternative hypothesis. U.S. National Park Ser. Ann. Sci. Res. Meeting, 8:19. (Abstract only).

Lacki, M.J. and R.A. Lancia. 1983.
Changes in soil properties of forests rooted by wild boar. Proc. Ann. Conf. S.E. Assoc. Fish. Wildl. Agencies, 37:228-236.

Lebedeva, L.S. 1956.
Ekologiceskie osobennosti kabana v belovezkog pusci. Ucebn. Zapis. Mosk. Gorod. Pedagog. Inst., 61:105-271.

Lescourret, F. and M. Gerard. 1985.
[Search for feeding signs and study of summer habitat use by the European wild boar (*Sus scrofa scrofa* L.) in the Herault Department (France)]. Gibier Faune Sauvage, 1985(1):63-73. (In French with Eng. Summ.).

Lewis, J.C. 1966.
Observations of pen-reared European hogs released for stocking. J. Wildl. Manage., 30(4):832-835.

Lincke, M. 1938.
Der wildschaden im wald und feld und die mittel zu seiner verminderung. J. Neumann Verlag, Neudamm and Berlin, 370 pp.

Lindner, A. 1979.
[3 decades of wild boar management in the animal preserve Furstliches-Forstant-Thiergarten West Germany]. Waldhygiene, 13(2-3):69-78. (In German).

Ling, H. 1955.
Metssea (*Sus scrofa*) areaalipuri muutused noukogude Baltimaadel Vumastel sajanditel (Eastonian). Loodus. Selts. Aast., 48:176-200.

Ling, H. 1980.
[The wild boar]. Easti Loodus, 23(11):729-735.

Litvinov, V.P. 1981.
[The wolf (*Canis lupus*) and wild boar (*Sus scrofa*) in the Kyzyl-Agach State Reservation]. Zool. Zh., 60(10):1588-1591. (In Russian with Eng. Summ.).

Loginov, V.V. 1936.
Novye dannye k poznaniyu biologu Kaukazskogo Kaban (*Sus scrofa attila* Thomas). Bull. Soc. Nat. Moscow, Sect. Biol., 45:10-21. (In Russian).

Lozan, A. M. 1980.
[Orientation of wild boar to positive stimuli at average and long distances]. Vestn. Zool., 1980(3):56-60. (In Russian).

Lozan, M.N., A.M. Lozan and O.J. Panicerska. 1978.
Ekologo-etologiceskie aspekty pitania kabana (*Sus scrofa* L.) Moldavii, Sb. "Fauna, ekologia i fizyologija zivotnyh", pp. 38-46.

Lozan, M.N. and A.M. Lozan. 1981.
[Populational structure as one of the bases for the rational utilization of wild boar]. Vestn. Zool., 1981(4):51-56. (In Russian).

Lucas, E.G. 1977.
Feral hogs - problems and control on national forest lands. In "Research and Management of Wild Hog Populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Inst., Clemson Univ., Georgetown, S. Car., pp. 17-21.

Lyubchenko, O.V. 1974.
[Wild boar in the Voronezh Reserve]. Byull. Mosk. Oba. Ispyt. Prir. Otd. Biol., 78(3):17-29. 1973. (In Russian with Eng. Summ.).

Macdonald, A.A., A.F.L.M. Kneepkens and A.A. Bosma. 1984.
Anatomical studies on the female and male reproductive tracts of wild pigs. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 93-104. (In English with French Summ.).

Mackin, Regina. 1970.
Dynamics of damage caused by wild boar to different agricultural crops. Acta Theriol., 15(27):447-458. (In English with Polish Summ.).

Mackintosh, G.R. 1950.
Destruction of wild pigs by poisoned baits. N.Z.J. Agric., 80(3):259-261.

Mann, D. 1981.
Hog wild over wild hogs. Fla. Sportsman, 12:28-34.

Mansfield, T.M. 1978.
Wild pig management on a California public hunting area. Cal-Neva Wildl., 1978:187-201.

Marchinton, R. L., R. B. Aiken and V.G. Henry. 1974.
Split guard hairs in both domestic and European wild swine. J. Wildl. Manage. 38(2):361-362.

Mare, C.J. 1976.
The role of wild pigs in the epidemiology of African swine fever, In "Wildlife Diseases", L.A. Page (ed.), Plenum Press, N.Y., pp. 227-234.

Marin, J.Y. 1981.
[Wild boars in Haute-Marne France: Cynegetics, rearing, damage]. These, Docteur Veterin., Ecole nationale Veterinaire de Lyon, 77 pp. (In French).

Martin, J.T. 1975.
Movement of feral pigs in North Canterbury, New Zealand. J. Mammal., 56(4):914-915.

Martinez Rica J,P, 1976.
[Notes on wild boar (*Sus scrofa*) behaviour]. Miscelanea Zoologica, 3(5):243-250. (In Spanish).

Martinez Rica, J.P., D. Sanuy and J. Cervantes. 1976.
Notes on the behavior of wild boar. Inst. Munic Cienc Nat. Misc. Zool. 3(5):243-250.

Martys, M. 1982.
[Observations on parturition and reproductive biology in captive European wild boars (*Sus scrofa*)]. Z. Saeugetierkd, 47(2):100-113. (In German with Eng. Summ.).

Mason, J.M. 1893.
Food of the wild boar. J. Bombay Nat. Hist. Soc., 8:

Matschke, G.H. 1962.
Trapping and handling European wild hogs. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 16:21-24.

Matschke, G.H. 1963.
An eye-lens nutrition study of penned European wild hogs. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 17:20-27.

Matschke, G.H. 1964.
The influence of oak mast on European wild hog reproduction. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 18:35-39.

Matschke, G.H. 1965.
Predation by European wild hogs on dummy nests of ground-dwelling birds. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 19:154-156.

Matschke, G.H. 1967.
Aging European wild hogs by dentition. J. Wildl. Manage., 31(1):109-113.

Matschke, G.H. and J.P. Hardister. 1966.
Movements of transplanted European wild boar in North Carolina and Tennessee. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 20:74-84.

Matschke, G.H. and V.G. Henry. 1969.
Immobilizing European wild hogs with Cap-Chur-Gem. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 23:185-188.

Mauget, R. 1972.
Observations sur la reproduction du sanglier (*Sus scrofa* L.) a l'etat sauvage. Ann. Biol. Anim. Bioch. Biophys., 12:195-202.

Mauget, R. 1974.
[Observations on wild pig (*Sus scrofa* L.) reproduction]. Ann. Biol. Anim. Biochem. Biophys., 12(2):195-202. (In French with Eng. Summ.).

Mauget, R. 1978.
[Some problems of biology and ecoethology in wild boar]. Bull. de e'Office Natl. de la Chasse, 1978 (No. 12):14-23. (In French).

Mauget, R. 1979.
[European wild boar's home range as determined by capture-recapture and radiotracking in the Chize Forest]. Biol. Behav., 4(1):25-41. (In French with Eng. Summ.).

Mauget, R. 1980a.
Home range concept and activity patterns of the European wild boar (*Sus scrofa* L.) as determined by radio-tracking. In "A Handbook on Medical Biotelemetry and Radio Tracking", C.J. Amlaner, Jr. and D.W. MacDonald (eds.), Pergamon Press, Oxford. pp. 725-728.

Mauget, R. 1980b.
Regulations ecologiques, comportementales et physiologiques (fonction de reproduction), de l'adaptation du sanglier (*Sus scrofa* L.) au milieu. These de Doctorat d'Etat. Unversite de Tours. 1980.

Mauget, R. 1982.
Seasonality of reproduction in the wild boar. In "Control of Pig Reproduction", D.J.A. Cole and G.R. Foxcroft (eds.), Butterworth: London, pp. 509-526.

Mauget, R. 1984.
[Activity rhythm and time-budget of the wild boar (*Sus scrofa* L.)]. Symp. Intl. sur le sanglier, Toulouse (France) pp. 79-92. (In French with Eng. Summ.).

Mauget, R., R. Campan, F. Spitz, M. Dardaillon, G. Janeau and D. Pepin. 1984.
[Current state of the knowledge of wild boar biology, research outlooks]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 15-50.(In French with Eng. Summ.)

Mauget, R. and J. Boissin. 1984.
[Seasonal variations in growth, food consumption and thyroid activity in the wild boar, *Sus scrofa*]. J. Physiol., (Paris), 79(5):81A. (In French, abstract only).

Mauget, R., M.C. Castet, R. Maraud and R. Canivene. 1977.
Etude dynamique et caryotypique d'une population de sangliers a robe chaire. C.R. Sciences Soc. Biol., 171:592-596.

Mayer, J.J. II. 1983.
The history, comparative morphology, and current status of wild pigs in the United States. Ph.D. Dissertation, Univ. of Conn. 388 pp.

McFee, A.F. and M.W. Banner. 1969.
Inheritance of chromosome number in pigs. J. Reprod. Fert., 18:9-14.

McFee, A.F., M.W. Banner and J.M. Rary. 1966.
Variation in chromosome number among European wild pigs. Cytogenetics, 5:75-81.

McIlroy, J.C. 1983.
The sensitivity of Australian animals to 1080 poision. V. The sensitivity of feral pigs, *Sus scrofa*, to 1080 and its implications for poisoning campaigns. Aust. Wildl. Res., 10(1):139-148.

McVicar, J.W., C.A. Mebus, H.N. Becker, R.C. Belden and E.P.J. Gibbs. 1981.
Induced African swine fever in feral pigs. J. Amer. Vet. Med. Assoc., 17:441-446.

Medway, L. 1963.
Pigs nests. Malay. Nat. J., 17(1):41-45.

Meynhardt, H. 1979.
[Prevention of damages to crops by wild boars by diversionary feeding in the forest]. Allgemeine Forstzeit., 34(17/18):469-470. (In German).

Milkowski, L. and J.M. Wojcik. 1984.
Structure of wild boar harvest in the Bialowieza Primeval Forest. Acta Theriol., 29(28):337-348.

Miller, J.A. 1955.
Poisoning wild pigs with arsenic trioxide. N. Z. J. Agric., 90(5):551.

Mirza, Z.B. 1978.
Observations on the habitat and habits of wild boar, and estimates of its population and damage to agriculture in Faisalabad District. 9 pp. (Unpublished Report).

Mohr, E. 1960.
Wilde schweine. Neue.-Brehm-Bucherie, Vol. 247. Wittenberg-Lutherstadt:Ziemsen.

Montovani, A. 1981.
[Swine fever; Beware of the wild boar]. Informatore Zootecnico, 28(3):35. (In Italian).

Morriss, J. and D. Poffenberger. 1980.
Movements, home range determination and habitat utilization of feral swine in a subtropical environment. Fla. Sci., 43(Suppl. 1):28. (Abstract only).

Mrozowski, J. 1966.
[The role of wild boars in limiting the development of pine beauty in the forest inspectorate Gohbek in 1961/1962]. Sylwan, 110:63-70. (In Polish with Eng. Summ.).

Muramoto, J., S. Makino, T. Ishikawa and H. Kanagawa. 1965.
On the chromosomes of the wild boar and the boar-pig hybrids. Proc. Japan Acad., 41:236-239.

Myrchan, A. and W. Jezierski. 1972.
Metabolic rate during the postnatal development of wild boars. Acta Theriol., 17(33):433-452.

Nichols, L. 1962.
Ecology of the wild pig. Hawaii Div. Fish & Game, P-R Project W-5-R-13.

Nishimura, S. 1982.
[Study on the age estimation of the Ryukyu wild boar (*Sus scrofa riukiuanus*) from incremental layers in tooth cementum of the first lower Molar 1/N]. Jour. Anthrop. Soc. Nippon, 90(3):143-152. (In Japanese).

Norton, J. H. and A D. Thomas. 1976.
Brucella suis in feral pigs. Aust. Vet. J., 52:293-294.

Oberle, M. 1979.
Essais d'effarouchment acoustique du sanglier (*Sus scrofa* L.). Memoire de fin d'etude ENITA de Dijon. 76 pp.

Oberle, M. 1980.
Essais d'effarouchment acoustique du sanglier (*Sus scrofa* L.). Bull. Mensuel Office Natl. de la Chasse. No. 39, pp.8-11.

Okamoto, A., H. Shiobara, T. Tomita and H. Ohmi. 1980.
Chromosome studies of the wild boar and Ohmini pigs. Bull. Coll. Agric. Utsonomiya University, 11.1-8.

Oloff, H.B. 1951.
Zur biologie und okolrgie des wildschweines. Beitrage zur Tierkunde und Tierzucht. Band 2:1-95.

Otto, D.K. and A.R. Tipton. 1978.
An evaluation of a questionnaire-survey technique on the European wild boar population in Great Smoky Mountains National Park. Va. J. Sci., 29(2):67. (Abstract only).

Ozieciolowski, R. 1976.
Estimating ungulate numbers in a forest by track counts. Acta Theriol., 21(12-23):217-222.

Pannwitz, S. 1984.
[General serological testing of wild boars for brucellosis]. Monatsh. Veterin., 39(18):627-628. (In German).

Pascovschi, S. 1982.
[Dispersal of wild boars in the European part of the USSR]. Vinatorul. Pesc. Sportliv., 34(11):15-16. (In Russian).

Paslawski, T. 1972.
[Spring-summer additional feeding of wild boars in the forest]. Lowiec Pol., 8:5. (In Polish with Eng. Summ.).

Patten, D.C. 1974.
Feral pigs, boom to burden. Proc. Vert. Pest Conf., 6:210-216.

Pavlov, P.M. 1980.
Assignment Report: Control methods suitable for the Asiatic wild boar (*Sus scrofa cristatus*) in Pakistan. FAO, Rome, 12 pp. + 3 appendices.

Pavlov, P.M. 1981.
Feral pigs - ungulate predators. N.Z.J. Ecol., 4:132-133.

Pavlov, P.M. and J. Hone. 1982.
The behaviour of feral pigs, *Sus scrofa*, in flocks of lambing ewes. Aust. Wildl. Res., 9(1):101-109.

Pedersen, F.S. 1976.
[The number of wild boars is now increasing in the forests of Sjaelland]. Dansk Jagt., 93(12):8-9. (In Danish).

Petrishchev, B.I. 1980.
[Linear weight growth of wild pig *Sus scrofa* embryos]. Vestn. Zool., 1980(6):63-63. (In Russian).

Pine, D.S. and G.S. Gerdes. 1973.
Wild pigs in Monterey County, California. Calif. Fish and Game, 59:126-127.

Plant, J.W. 1980.
Electric fences give pigs a shock. Agric. Gazette N.S. Wales Dept. Agric., 91(2):38-40.

Plant, J.W., D. Rees, R.S. Marchant and T.O. Mitchell. 1977.
Feral pigs predators of lambs. Agric. Gazette N.S. Wales Dept. Agric., 8:11-13.

Plant, J.W., R. Marchant, T.D. Mitchell and J.R. Giles. 1978.
Neonatal lamb losses due to feral pig predation. Aust. Vet. J., 54(9):426-429.

Popescu, C.P., J.P. Quere and P. Franceschi. 1980.
Observations chromosomiques chez le sanglier francais (*Sus scrofa scrofa*). Ann. Genet. Sel. Anim., 12:395-400.

Puidgefabregas, J. 1981.
[Notes on the rooting of wild boar in forest environment]. Publ. Cent. Pirenaico Biol. Exp. No. 12, pp. 7-17. (In Spanish with Eng. Summ.).

Pullar, E.M. 1950.
The wild (feral) pigs of Australia and their role in the spread of infectious diseases. Aust. Vet. J., 26:99-110.

Pullar, E.M. 1953.
The wild (feral) pigs of Australia: Their origin, distribution and economic importance. Mem. Natl. Mus. Victoria, 18:7-23.

Pulliainen, E. 1982.
[Wild boar -- A new game animal in Finland?]. Suomen Riista, 29:76-79. (In Finnish with Eng. Summ.).

Quere, J.P. and M. Pascal. 1984.
[Preliminary data about the use of teeth microstructures for age determination in wild boar (*Sus scrofa scrofa*)]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 105-111. (In French with Eng. Summ.).

Rakov, N.V. 1971.
[Causes of mortality of the wild boar and its interrelation with predators in the Amur Territory]. Zool. Zh., 49(8):1220-1228. (In Russian with Eng. Summ.).

Rary, J.M., V.G. Henry, G.H. Matschke and R.L. Murphee. 1968.
The cytogenetics of swine in the Tellico Wildlife Management Area, Tennessee. J. Heredity, 59:201-204.

Raschke, G. 1970.
Gedanken zur schwarzwildhege. Wild und Hund, 73:125 bis 130.

Rathmore, A.K. 1985.
Use of metoclopramide to prevent 1080 - induced emensis in wilu pigs. J. Wildl. Manage., 49(1):55-56.

Rittmannsperger, Ch. 1971.
Chromosomenuntersuchungen bei wild-und Haus-schweinen. Ann. Genet. Sel. Anim., 3:105.

Roberts, T.J. 1977.
The mammals of Pakistan. Ernest Benn, London.

Rodriguez Berrocal J., M.Zamora Logano and M.Medina Blanco. 1982.
[Feeding habits of wild boar: Application to a rational cinegetic practice]. Arch. Zootecnia, 31(120):149-154. (In Spanish; Abstract in Eng.)

Romic, S. 1975.
Body dimensions of wild boar. Conspectus Agriculturae Scientificus, 34:13-24.

Rudge, M.R. 1976.
A note on the food of feral pigs (*Sus scrofa*) of Auckland Island. Proc. N.Z. Ecol. Soc., 23:83-84.

Sablina, T.B. 1955.
Kopytnye belovezhskoi pushchi. Tr. Inst. Morfol. Zhivotn. Akad. Nauk. SSSR., 15:1-191.

Santiapillai, C. and M.R. Chambers. 1980.
Aspects of the population dynamics of the wild pig (*Sus scrofa* Linnaeus, 1758) in the Ruhuna National Park, Sri Lanka (Mammalia, Suidae). Spixiana, 3(3):239-250.

Schnebel, E.M. and J.G. Griswold. 1983.
Agonistic interactions during competition for different resources in captive European wild pigs (*Sus scrofa*). Appl. Anim. Ethol., 10(4):291-300.

Schneider, E. 1975.
[Mice in the stomach of a wild boar (*Sus scrofa* L.)]. Z. Jagdwiss., 21(3):190-192. (In German with French and Eng. Summ.).

Schneider, E. 1980.
[Marking and appropriation of food, imitation and learning in the European wild boar (*Sus scrofa* L.)]. Z. Jagdwiss., 26(3):126-132. (In German with French and Eng. Summ.).

Schwers, A., J. Barrat, J. Blancou, M. Maenhoudt and P.O. Pastoret. 1983.
Susceptibility of European wild mammals to rotavirus infection. Ann. Med. Vet., 127(8):651-654.

Scott, C.D. 1973.
Seasonal food habits of European wild hogs (*Sus scrofa*) in the Great Smoky Mountains National Park. M.S. Thesis, Univ. Tenn., 54pp.

Scott, C.D. and M.R. Pelton. 1975a.
Seasonal food habits of the European wild hog in the Great Smoky Mountains National Park. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 29:585-593.

Severtsov, S.A. and T.B. Sablina. 1953.
Olen kosulya i kaban v zapovdhike belovezhskaya pushcha. Akad Nauk, SSSR, Inst. Morfologii Zohiootnykh, 9:140-230. (In Russian).

Shaffer, M.L. 1979.
Behaviour of the European wild boar in the Great Smoky Mountains National Parks. Proc. First Conf. Sci. Res. Natl. Parks, U.S. Natl. Park Serv. Trans. Proc. Ser. No. 5 Vol. 1, pp. 357-364.

Shafi, M.M. and A.R. Khokhar. 1986.
Some observations of control of wild boar in Punjab. J. Bombay Nat. Hist. Soc., (In press).

Shaw, A.C. 1940.
The European wild hog in America. Trans. N. Amer. Wildl. Conf., 5:436-441.

Shoho, C. and M. Machida. 1979.
Nematode parasites of wild boar (*Sus riukiuanus*) from Iriomote Island, Japan. Bull. Natl. Sci. Mus., Ser. A. (Zool.), 5(4):235-248.

Signoret, J.P. 1972.
Contribution a l'etude des mecanismes ethologiques et endocriniens du comportement sexuel dela truie (*Sus scrofa* L.) These Doctorat de'Etat, Universite, Paris.

Singer, F.J. 1981.
Wild pig populations in the national parks. Environmental Manage., 5(3):263-270.

Singer, F.J. and B.B. Ackerman. 1981.
Food availability, reproduction and condition of European wild boar in Great Smoky Mountains National Park. Natl. Park Serv. Research/Resources Manage. Rept. No.43, Gatlinburg, Tenn., 59 pp.

Singer, F. and S. Coloman. 1980.
Ecology and management of European wild boar in Great Smoky Mountains National Park. Proc. Second Conf. Sci. Res. Natl. Parks, 8:253-262.

Singer, F.J., D.K. Otto, A.R. Tipton and C.P. Hable. 1981.
Home ranges, movements and habitat use of European wild boar in Tennessee. J. Wildl. Manage., 45(2):343-353.

Singer, F.J., W.T. Swank and E.E.C. Clebsch. 1981.
Some ecosystem responses to wild boar rooting in a deciduous forest. U.S. Natl. Park Serv. Ann. Sci. Res. Meeting, 7:24 (Abstract only).

Singer, F.J., W.T. Swank and E.E.C. Clebsch. 1984.
Effects of wild pig rooting in a deciduous forest. J. Wildl. Manage., 48(2):464-473.

Sinha, C.C.S. 1982.
The quantity and quality of wild food plants and the depredation of wild pigs in the Philippines. Dissertation Abstr. Int. (B), 42(9):3513.

Skrzypek, W. and W. Chmarzynski. 1983.
[Incidence of trichinellosis among wild boars]. Wi domosci Parazytol., 29(4-6):531-536. (In Polish with Eng. Summ.)

Sliwa, E. 1956.
[The role of wild boar in the control of insect pests of the forest]. Lowiec Pol., 6:11. (In Polish).

Sludskii, A.A. 1956.
[The wild boar: its ecology and economic importance]. Izadatel 'svo Akademii Nauk Kazakhaskoi, SSR, Alma-Ata. 219 pp. (In Russian).

Smiet, A.C., G.W. Fulk and S.B. Lathiya. 1979.
Wild boar ecology in Thatta District: A preliminary study. Pakistan J. Zool., 11(2):295-302.

Smith, H.M. Jr, W.R. Davidson, V.F. Nettles and R.R. Gerrish. 1982.
Parasitisms among wild swine in Southeastern United States. J. Am. Vet. Med. Assoc., 181(11):1281-1284.

Snethlage, K. 1967.
Das Schwarzwild. Verlag Paul Parey, Hamburg, 215 pp.

Sody, H.J.V. 1941.
Tweide bijdrage over de voort-planting-stijden der Indische zoogdieren. Ned-Indisch Jager., 11:198-201, 256-265.

Spatz, G. and D. Mueller-Dombois. 1975.
Succession patterns after pig digging in grassland communities on Mauna Loa, Hawaii. Phytocoenologia, 3:346-373.

Spitz, F. 1984.
[Demography of the wild boar in Gresigne forest (South-West France)]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 151-157. (In French with Eng. Summ.).

Spitz, F., G. Janeau and G. Valet. 1984.
Elements de demographie du sanglier (*Sus scrofa*) dans la region de gresigne. Acta Oecol., Oecol. Applic., 5:43-59.

Spitz, F. and D. Pepin (ed.). 1984.
International wild boar symposium, Toulouse (France), 226 pp.

Spitz, F. and D. Pepin. 1985a.
[Habitat use of *Sus scrofa* in a large forested area]. Trans. Congr. Intl. Union Game Biol., 17:953-959. (In French with Eng. Summ.)

Spitz, F. and D. Pepin. 1985b.
[Habitat use by *Sus scrofa* in an area of intense agriculture]. Trans. Congr. Intl. Union Game Biol., 17:241 (Abstract only). (In French with Eng. Summ.).

Springer, M.D. 1975.
Food habits of wild hogs on the Texas Gulf Coast. M.Sc. Thesis, Texas A&M University.

Springer, M.D. 1977.
Ecologic and economic aspects of wild hogs in Texas. In "Research and Management of Wild Hog Populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Instit., Clemson Univ. Georgetown, S. Car., pp. 37-52.

Stegeman, L.C. 1938.
The European wild boar in the Cherokee National Forest, Tennessee. J. Mammal., 19(3):279-290.

Steinbacker, G. 1954.
Zur biologie des Europaeischen wildschweines (*Sus scrofa* Linne 1758). Saeugtierk. Mitt., 2:126.

Stone, C.P. and D.D. Taylor. 1984.
Status of feral pig management and research in Hawaii Volcanoes National Park. Proc. Conf. Nat. Sci. Hawaii Volcanoes Natl. Park, 5:106-117.

Stone, C.P. and J.O. Keith. 1985.
Control of feral ungulates and small mammals in Hawaii's National Parks: Research and management strategies. Proc. Fourth Theriological Congress, Ednonton. Canada.

Strand, Deborah K. and J. D. Morris. 1980.
Reproductive ecology and behaviour of the Florida feral hog, *Sus scrofa*. Fla. Sci., 43(Suppl. 1):28. (Abstract only.)

Stribling,H.L, I.L.Brisbin. Jr., J.R.Sweeney and L.A.Stribling. 1984.
Body fat reserves and their prediction in two populations of feral swine. J. Wildl. Manage., 48(2):635-639.

Stubbe, W. and M. Stubbe. 1977.
Vergleickende beitrage zur reproduktions und geburtsbiologie von wild und hausschewein *Sus scrofa* L., 1758. Judg. und Wildforschung, 10:153-179.

Suchoroslov, M.S. 1972.
Oroli dozdevych cervej v pitani kabana (*Sus scrofa* L.) v period vesennego polovedja. Teriologija, 1, Novosibirsk, 516 pp. (In Russian).

Suminski, P. 1963.
Dzik. Szkic monograficizny. Lowiec Pol., 1(1196):3-6, 2(1197):34, 3(1198):4-6. (In Polish).

Svarc, J. and J. Hromas. 1979.
[Basic life requirements and management regionalization of wild boars in Bohemia, Czechoslovakia]. Lesnictvi - UVTIZ, 25(5):451-460. (In Czech; German, Eng. and Russian Summ.)

Sweeney, J.M. 1970.
Preliminary investigations of a feral hog (*Sus scrofa*) population on the Sovannah River Plant, South Carolina. M.S. Thesis, Univ. of Georgia. 58 pp.

Sweeney, J.M., E.E. Provost and R.J. Sweeney. 1970.
A comparison of eye lens weight and tooth irruption pattern in age determination of feral hogs (*Sus scrofa*). Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 24:285-291.

Sweeney, J.M. and J.R. Sweeney. 1982.
Feral hog: *Sus scrofa*. In "Wild mammals of North America: Biology, management and economics". J.A. Chapman and G.A. Feldhamer (eds.), pp. 1099-1130.

Sweeney, J.M., J.R. Sweeney and E.E. Provost. 1979.
Reproductive biology of a feral hog population. J. Wildl. Manage., 43(2):555-559.

Taber, R.D. 1965.
The emergent boars. Pac. Discovery, 18(1):10.

Taiti, M. 1980.
[Wild boar for marginal lands, Italy]. Incontri, 12(17):3. (In Italian).

Tate, Jane. 1984.
Techniques for controlling wild hogs in Great Smoky Mountains National Park: Proc. of a Workshop. Natl. Park Serv. Research/Resources Manage. Rept. SER-72. 87 pp.

Telleria, J.L. and C. Saez-Royuela. 1984.
The large mammals of Central Spain: An introductory view. Mammal Rev., 14(2):51-56.

Telleria, J.L. and C. Saez-Royuela. 1984.
[Demographic evolution of the wild boar (*Sus scrofa*) in Spain]. Mammalia, 49(2):195-202. (In French with Eng. Summ.).

Thompson, R.L. 1977.
Feral hogs in national wildlife refuges. In "Research and Management of Wild Hog Population", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Instit. Clemson Univ., Georgetown, S. Car., PP. 11-15.

Thurmon, J.C., D.R. Nelson and G.J. Christie. 1972.
Ketamine anesthesia in swine. J. Amer. Vet. Med. Assoc., 160:1325-1330.

Tikhonov, V.N. 1979.
[Differentiation of populations of *Sus scrofa* from different regions of the USSR by blood group antigens]. Zool. Zh., 57(7):1074-1082. (In Russian with English Summ.).

Tikhonov, V.N. and A.I. Troshina. 1975.
Chromosome translocations in the karyotypes of wild boars *Sus scrofa* L. of the European and the Asian areas of USSR. Theoret. Appl. Genetics, 45:304-308.

Tilley, L.G.W. 1973.
Pig fencing in Mossman. Cane Growers Quart. Bull., 38(4):132-133.

Timofeeva, E.K. 1975.
Ekologija kabana v severozapade Europejskoi casti SSSR. Sb. "Kopytnye fauny SSSR", Moskva, pp.134-135.

Timofeeva, E.K. 1976.
Stacial'noe respredelenie i pitanie kabana na severnom predele ego rozprostranenija. Tr. Petergof. Biol. Inst., 24:107-121. (In Russian)

Timofeeva, E.K. 1978a.
The behaviour of the wild boar at the Northern Borderline of its range. Biul. Mosk. Obshch. Ispyt. Prirod., Biol., 83(5):26-33.

Timofeeva, E.K. 1978b.
[Effect of wild ungulates on vegetation of the Forest Steppe Oak Woods]. Vestnik Leningr. Gos. Univ. (Biol)., 1978(4):37-37. (In Russian).

Tipton, A.R. 1977a.
Determining optimum control strategies for the European wild boar *Sus scrofa* in the Great Smoky Mountains Park using computer simulations. Va. J. Sci., 28(2):68. (Abstract only).

Tipton, A.R. 1977b.
The use of population models in research and management of wild hogs. In "Research and Management of Wild Hog Population", Wood, G.W. (ed.), Belle W. Baruch For. Sci. Inst., Clemson Univ., Georgetown, S. Car., pp. 91-101.

Tisdell, C. A. 1978. Observations on the wild pig problem in N.S.W. - A survey and interpretation of economic aspects based on reports from Pastures Protection Boards. Research Rept. No. 41, Univ. of Newcastle.

Tisdell, C.A. 1982.
Wild pigs: Environmental pest or economic resource. Pergamon Press Ltd. Oxford, UK, 456 pp.

Tisdell, C. 1984.
Feral pigs threaten native wildlife in Australia. Tigerpaper, 11(3):13-18.

Tomek, A. and Kubacki. 1981.
Wybiorczose pokarmowa dzikow w odniesieniu do odmian ziemniakow, ZNAR. Lesnictwo, 13:151-161.

Towne, C.W. and E.N. Wentworth. 1950.
Pigs from cave to cornbelt. Univ. Oklahoma Press, Norman, Okla, 305 pp.

Trnkova, Jana. 1984.
Contribution to the knowledge of growth of the wild boar, *Sus scrofa* L., 1758. Vertebr. Zpravy, 1984:102-106. (In Czech with Eng. Summ.).

Troshina, A.I. and V.N. Tikhonov. 1980.
Cytogenetics of five generations of hybrids between wild and domestic pigs differing in karyotype morphology. Genetica, 52/53:317-326.

Tsarev, S.A. 1979.
[Seasonal variability of wild-boar's rest places]. Vestnik Leningr. Gos. Univ. (Biol.), 1979(3):22-28. (In Russian).

Tsarev, S.A. 1980.
[The behaviour of wild boar on the north of the area of its distribution]. Vestnik Leningr. Gos. Univ. (Biol.), 1980(2):15-21. (In Russian).

Tuff, M.H. 1977.
The effect of the European wild boar (*Sus scrofa*) on the woody vegetation of gray beech forest in the Great Smoky Mountains. Manage. Rept. No. 18, Natl. Park Serv., Gatlinburg, Tenn.

Turvey, R. J. 1978.
Approaches to the selection of optimal cantrol strategies for feral pigs: Cost-effectiveness analysis of present control measures. Dissertation, Faculty of Economics, University of New England.

Ueckermann, E. 1972.
Zur jagdlichen nutzungsfahigkeit von rot-, dam - und schwarz wildbestanden in einem Jagdatter. Z. Jagdwiss., 18:24-31.

Ueckermann, E. 1977.
Der schwarzwildabschuss. Paul Parey, Hamburg.

van der Werff, H. 1982.
Effects of feral pigs and donkeys on the distribution of selected food plants. Not. Galapagos No. 36, pp. 17-18.

Van Vuren, D. 1984.
Diurnal activity and habitat use by feral pigs on Santa Cruz Island, California. Calif. Fish Game., 70(3):140-144.

Van Wijngaarden-Bakker, L.H. and C.H. Maliepaard. 1982.
[Age determination of the wild boar, *Sus scrofa* Linnaeus 1758, based on the skeleton]. Lutra, 25(1):30-37. (In Dutch with Eng. summ.).

Vassant, J. and D. Breton. 1984.
[Electric fence: An efficient means of protecting cultivated crops against wild boar]. Symp. Intl. sur le sanglier, Toulouse (France), p. 217. (In French).

Vassant, J. and B. Boisaubert. 1984.
[Evaluation of experiments made in Haute-Marne to reduce wild boar damages]. Symp. Intl. sur le sanglier, Toulouse, (France), pp. 187-199. (In French with Eng. Summ.).

Varicad, J.R. and T. Abaigar. 1984.
[Data on the wild boar (*Sus scrofa* L.) in South-East Spain]. Symp. Intl. sur le sanglier, Toulouse (France), p. 219. (In French, Eng. summ.).

Vernakov, A.R. and T.S. Moseva. 1975.
Rol' kabana v selskom hozjaistve moskooskog oblasti. Sb. "Kopytnye fauny SSSR", Moskva. pp. 161-162.

Wacker, F. and K.J. Fichtner. 1978.
[Determination of age of wild boars]. Pirsch, der Deutsche Jaeger, 30(3):138-142. (In German).

Wallach, J.D. and W.J. Beever. 1983.
Wild swine and peccaries. In "Diseases of exotic animals", W.B. Saunders, Phila., pp. 631-651.

Warshauer, F.R. 1980.
An overview of the feral pig problem in Hawaii Volcanoes National Park. Proc. Second Conf. Sci. Res. natl. Parks, 2:476-480.

Wennrich, G. 1976.
[Cannibalism in the wild boar, *Sus scrofa*]. Deutsche Tieraerz. Wochenschr., 83(2):68. (In German).

Williamson, M.S. and M.R. Pelton. 1971.
New design for a large portable mammal traps. Proc. Ann. Conf. S.E. Assoc. Fish Game Comm., 25:315-322.

Williamson, M.J. and M.R. Pelton. 1976a.
Some biochemical parameters of serum of European wild hogs. Proc. Ann. Conf. S.E. Assoc. Game Fish Comm., 29:672-679.

Williamson, M.J. and M.R. Pelton. 1976b.
Some hematological parameters of European wild hogs (*Sus scrofa*). J. Tenn. Acad. Sci., 51(1):25-28.

Wodzicki, K.A. 1950.
Introduced mammals in New Zealand, an ecological and economic survey. N.Z. Dept. Sci. Indust. Research, Wellington, Bull., 98. 255 pp.

Wolf, R. 1978.
[Development of wild boar population in Czechoslovakia]. Sb. Ved. Lesnickeho Ustavu Vapoke Skoly Zemedelske v Praze, 1978 (No. 21):179-193. (In Czech; German, Eng. and Russian Summ.)

Wolf, R. 1984.
[Territorial distribution of wild boar (*Sus scrofa*) in Bohemia]. Folia Venatoria, 1984 (No. 14):57-70. (In Czech; German, Eng. and Russian Summ.)

Wood, G.W. (ed.). 1977.
Research and management of wild hog populations. Proc. Symp., Belle W. Baruch Forest Science Institute, Clemson Univ., Georgetown, S. Car., 113 pp.

Wood, G.W. and R.H. Barrett. 1979.
Status of wild pigs in the United States. Wildl. Soc. Bull., 7(4):237-246.

Wood, G.W. and R.E. Brenneman. 1977.
Research and management of feral hogs on Hobcaw Barony. In "Research and Management of Wild Hog Populations", G.W. Wood (ed.), Belle W. Baruch Forest Sci. Inst., Clemson, Univ., Georgetown, S.Car., pp. 23-35.

Wood, G.W. and R.E. Brenneman. 1980.
Feral hog movements and habitat use in Coastal South Carolina. J. Wildl. Manage., 44(2):420-427.

Wood, G.W., J.E. Hendricks and D.E. Goodman. 1976.
Brucellosis in feral swine. J. Wildl. Dis., 12(5):579-582.

Wood, G.W., E.E. Johnson, Jr. and R.E. Brenneman. 1977.
Observations on the use of succinylcholine chloride to immobilize feral hogs. J. Wildl. Manage., 41(4):798-800.

Wood, G.W. and T.E. Lynn, Jr. 1977.
Wild hogs in Southern forests. Southern J. Appl. Forestry, 1:12-17.

Wood, G.W. and D.N. Roark. 1980.
Food habits of feral hogs in coastal South Carolina. J. Wildl. Manage., 44(82):506-511.

Woodall, P.F. 1983.
Distribution and population dynamics of dingoes (*Canis familiaris*) and feral pigs (*Sus scrofa*) in Queensland. 1945-1976. J. Appl. Ecol., 20(1):85-95.

Wright, J.W. 1972.
Electric fence to keep out wild pigs. Queensland Agric. J., 98(7):371-372.

Zajicek, D. and J. Pav. 1972.
Coccidiosis of the wild boar (*Sus scrofa* L.) in Czechoslovakia. Folia parasitol. (Prague), 19(4):369-373. (In Eng. with Russian Summ.).

Zivkovic, S., V. Jovanovic, I. Isakovic and M. Milosevic. 1971. Chromosome complement of the European wild pig (*Sus scrofa* L.). Experientia, 27:224-226.

Zurowski, W. and M. Sakowicz. 1965. Effects of succinylcholine chloride on wild boars. J. Wildl. Manage., 29(3):626-629.