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This is the first of three volumes planned. Each will contain, as its first part, those citations relevant to the tropics in general and without emphasis on any single continent or country. The second part will be geographically oriented to tropical parts of continents, to large island groups, and to countries or other geographic entities within these large regions. The second part of this first volume treats tropical Africa and islands, such as Madagascar, commonly identified with Africa. The second part of the second volume will deal with tropical Latin America; and the third, to tropical Asia and Oceana. Under geographic headings, the citations are grouped according to texts or maps if such groupings are practical. As many text references contain maps, especially page-size maps, and many map references contain some text materials, the separation is seldom clean-cut. Arrangement within groups is alphabetical by author.

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BIBLIOGRAPHY OF SOILS OF THE TROPICS
Vol. 1: Tropics in General and Tropical Africa

by

Arnold C. Orvedal

The Agronomy Department of Cornell University arranged for, and monitored, the preparation of this bibliography. In this capacity it represented the Consortium on Soils of the Tropics made up of the following: Cornell University, North Carolina State University, Prairie View A & M University (Texas), University of Hawaii and the University of Puerto Rico. The work was supported by U. S. Agency for International Development through the Institutional Grants Program.

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BIBLIOGRAPHY OF SOILS OF THE TROPICS
Vol. 1: Tropics in General and Tropical Africa

by

Arnold C. Orvedal*

INTRODUCTION

Items in this bibliography of soils of the Tropics were extracted from the collection of bibliographic cards on file at the Soil Geography Unit** of the Soil Conservation Service (SGU/SCS).

The purpose of this Bibliography is to make relevant contents of this file readily available to university researchers and others who may find the information useful.

The collection of citations by the Soil Geography Unit has been continuous since it was started in 1945. These citations are mainly about soils outside the United States and, collectively, they contribute to knowledge about the geography of soils. Not only citations to soil maps are included in the collection but also thousands of references, which even though without maps, contribute to an understanding of soils--their distribution, characteristics, classification, environment, and use. Because of the interest in soil environment and use, the collection includes some citations to references on geology, landforms, vegetation, climate, land use, etc. that contribute to the knowledge about the soils of an area and aid in the prediction of kinds of soils, or at least some of their characteristics, where soil maps based on field work are lacking.

Because of the unique interest of the Unit, the collection is short on references that do not contribute, either directly or by inference, to geographic information about soils. Hence, citations about fertilizer technology, soil chemistry, soil physics, soil microbiology, etc., generally are not included unless also they have some relevance to soil geography.

This bibliography, therefore, does not cover equally all aspects of soil science. Neither, as the following paragraph explains, is it necessarily exhaustive for soil geography of all areas. Users are invited to submit additions and corrections (See "tear-out" sheets).

The collection of citations has been secondary to the primary missions of the Soil Geography Unit. Attempts were made consistently to take full advantage of every opportunity to add citations to the bibliographic files, but due to the duress of time or other constraints, some have been missed. Many citations were recorded as they were found under "literature cited" for articles, in bibliographies, reviews, and other sources. Completeness and format of source citations varied, and some errors in dates or spelling may have been introduced inadvertently.

The citations have been put into a uniform format although a few are not complete. There is a degree of inconsistency in the handling of citations to non-English references. In some citations to such references, titles are translated; in others, not. Similarly,

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*Soil scientist. Recently retired from Soil Conservation Service.

** Formerly World Soil Geography Unit, and until 1952, in the then Division of Soil Survey, Bureau of Plant Industry, Soils and Agricultural Engineering, USDA.

but less commonly, in some citations the name of the journal or corporate author is translated and in others not. If the SGU/SCS file card indicated a non-English language for a reference with a title translated into English, this fact is indicated in the bibliography by an annotation. Such information is lacking on some SGU/SCS citations, although the reader usually can make a reasonably accurate guess about the language in which the reference is written.

Diacritical marks are omitted from titles in French and other non-English languages.

Organization of the Bibliography

This is the first of three volumes planned. Each will contain, as its first part, those citations relevant to the Tropics in general and without orientation to any single continent or country. The second part will be geographically oriented to tropical parts of continents, or to large island groups, and to countries or other geographic entities within these large regions.

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Current names are used to identify the countries, but names in the citations have not been changed. Thus, under Ghana there are included references in which the country is identified by its former name, Gold Coast.

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ANGOLA

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7. North-Eastern Northern Rhodesia: Vegetation and soils, scale 1:1,000,000.
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10. Utilization map: Usangu Plain, scale 1:500,000.
11. Provisional Vegetation and Soils Map: Upper Chambezi River area, Northern Rhodesia, scale 1:250,000.
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Contains chapters on climate, p. 12-23, by Jameson and McCallum; geology, p. 24-29, by Farbrother and Munro; soils, p. 43-71, by Harrop; soil fertility, p. 72-89, by Stephens; and vegetation, p. 90-97, by Langdale-Brown. Accompanied by the following maps:
Uganda: Soils, scale 1:1,500,000
Uganda: Vegetation, scale 1:1,500,000
Main Food Crops, 4 maps on 1 sheet, scale 1:3,000,000
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2. Uganda: Rainfall, scale 1:1,250,000
3. Eastern Province: Vegetation, scale 1:500,000
4. Eastern Province: Land Use, scale 1:1,000,000
5. Eastern Province: Natural Climax Types, scale 1:1,000,000
6. Eastern Province: Physiological Potential, scale 1:1,000,000

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2. Buganda: Rainfall, scale 1:1,000,000
3. Buganda: Vegetation, scale 1:500,000
4. Buganda: Land Use, scale 1:1,000,000
5. Buganda: Cultivation Density, scale 1:1,000,000
6. Buganda: Natural Climax Types, scale 1:1,000,000
7. Buganda: Physiological Potential, scale 1:1,000,000
8. Buganda: Volunteer Pastures, scale 1:1,000,000
9. Buganda: Physiognomy, scale 1:1,000,000

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Accompanied by the following maps:
1. Location and Elevation, scale 1:1,000,000
2. Rainfall, scale 1:1,000,000
3. West Nile, Acholi and Lango: Vegetation, scale 1:500,000
4. West Nile, Acholi and Lango: Land Use, scale 1:1,000,000
5. West Nile, Acholi and Lango: Cultivation Density, scale 1:1,000,000
6. West Nile, Acholi and Lango: Natural Climax Types, scale 1:1,000,000
7. West Nile, Acholi and Lango: Physiological Potential, scale 1:1,000,000
8. West Nile, Acholi and Lango: Volunteer Pastures, scale 1:1,000,000
9. West Nile, Acholi and Lango: Physiognomy, scale 1:1,000,000

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Accompanied by the following maps:
1. Location and Elevation, scale 1:2,000,000
2. Rainfall, scale 1:1,000,000
3. Vegetation, scale 1:500,000
4. Land Use, scale 1:1,000,000
5. Cultivation Density, scale 1:1,000,000
6. Natural Climax Types, scale 1:1,000,000
7. Physical Potential, scale 1:1,000,000
8. Volunteer Pasture, scale 1:1,000,000
9. Physiognomy, scale 1:1,000,000

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Uganda Protectorate, scale 1:1,000,000
Uganda: Mean Annual Rainfall, scale 1:1,250,000
Buganda: Map 3: Vegetation, scale 1:500,000
Western Province of Uganda: Map 3: Vegetation, scale 1:500,000
West Nile, Acholi and Lango: Map 3: Vegetation, scale 1:500,000
Eastern Province of Uganda: Map 3: Vegetation, scale 1:500,000
Uganda: Land Use, scale 1:1,000,000
Uganda: Cultivation Density, scale 1:1,000,000
Uganda: Natural Climax Types, scale 1:1,000,000
Uganda: Physiological Potential, scale 1:1,000,000
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1. Uganda Protectorate Location (Inset in top right corner of map 7)
2. Sampling Sites and Field Bases
3. Mean Annual Rainfall, scale 1:1,000,000
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5. Physiographic Divisions, scale 1:1,000,000
6. Soil Mapping Units, scale 1:1,000,000
7. Kingdom of Buganda Soils, scale 1:500,000
8. Farming Density, 1958, scale 1:1,000,000
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1. Vegetation of Southern Karamoja Distric, scale 1:250,000
2. Karamoja District: Crop Potential, scale 1:1,000,000
3. Karamoja District: Generalized Vegetation map (1960), scale 1:1,000,000
4. Karamoja District: Generalized Vegetation Map (1900), scale 1:1,000,000

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Maps

(Maps in addition to those indicated in annotations under text references.)

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Prepared for (Great Britain) Colonial Office. Vol. 2 contains sections on soils for northeastern Northern Rhodesia, p. 7-36, and Tanganyika, p. 69-109. (Dr. R. T. Odell, Univ. Ill., worked on this survey and probably is principal author of sections on soils.) Vol. 1 contains the following maps in pocket:
1. Africa, scale 1:15,000,000 (Orientation map).
2. Communications, scale 1:10,000,000.
3. Political, scale 1:3,000,000.
4. Physical, scale 1:3,000,000.
5. Rainfall, scale 1:3,000,000.
6. Geological, scale 1:3,000,000.
7. North-Eastern Northern Rhodesia: Vegetation and soils, scale 1:1,000,000.
8. Tanganyika-Southern province: Vegetation and soils, scale 1:1,000,000.
9. Utilization map: Kilombero Valley, scale 1:500,000.
10. Utilization map: Usangu Plain, scale 1:500,000.
11. Provisional vegetation and soils map: Upper Chambezi River area, Northern Rhodesia, scale 1:250,000.

12. Provisional vegetation and soils map: Southern Tanganyika, scale 1:500,000.
13. Provisional vegetation and soils map: The Usango plain, Tanganyika, scale 1:125,000.

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Strong, C. S. 1961. A geography of the Rhodesias and Nyasaland. 122 p. Longmans, Cape Town.

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Contains a page-size map, scale 1:4,000,000, of "Native Tribes and Agricultural Systems". 1st edition printed in 1943. For use with "Vegetation-Soil Map of Northern Rhodesia", scale 1:2,000,000 issued in 1947 and re-issued in 1950.

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Article does not contain this map.

Trapnell, C. G., and J. N. Clothier. 1956. The soils, vegetation and agricultural systems of north western Rhodesia: Report of the ecological survey. (Northern Rhodesia) Gov. Print., Lusaka. 81 p.
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Contains maps, scale 1:50,000, "Matabele Plain", 2 sheets; and, scale 1:1,000,000, "Barotseland: Major Land Forms, Soil Inspection Sites and Traverses", 1 sheet; and "Barotseland: Land Capability", 1 sheet.

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Yager, T. U., H. F. Gelens, G. W. W. Elberson, and F. C. de Greitas. 1965. Kafue basin, Zambia: Multi-purpose survey draft report: Vol. 2, Technical annex: Soil survey and classification. (Zambia) Dep. Agric., Mount Makulu Res. Stn., and F. A. O. 253 p.
(Draft copy on file in Soil Geography Unit, Soil Conservation Service, Room 233-A, F. C. B. 1, Hyattsville, Maryland 20782.) Contains the following maps:

Soils of Zambia: Kafue Flood Plains and Adjacent areas, scale 1:1,100,000.
Kafue Basin Survey: Reconnaissance Soil Survey of Chibila, scale 1:100,000.
Kafue Basin Survey: Irrigability-Soil Map, Chibila, scale 1:100,000.
Kafue Basin Survey: Reconnaissance Soil Survey, Mwembeshi-Kembe, scale 1:100,000.
Kafue Basin Survey: Irrigability-Soil Map, Mwembeshi-Kembe, scale 1:100,000.
Kafue Basin Survey: Reconnaissance Soil Survey, Meshi Teshi-Namwala, scale 1:100,000.
Kafue Basin Survey: Irrigability-Soil Map, Meshi Teshi-Namwala, scale 1:100,000.
Kafue Basin Survey: Reconnaissance Soil Survey, Nangoma Area, scale 1:100,000.
Kafue Basin Survey: Irrigability-Soil Map, Nangoma Area, scale 1:100,000.
Kafue Basin Survey: Reconnaissance Soil Survey, Macha Area, scale 1:50,000.
Kafue Basin Survey: Irrigability-Soil Map, Macha Area, scale 1:50,000.
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Ominde, S. H. (ed). 1971. Studies in east African geography and development. 273 p. Univ. Calif. Press, Berkeley.

Schlippe, Pierre de. 1956. Shifting cultivation in Africa: The zande system of agriculture. 304 p. Routledge and Kegan Paul, London.

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2. Geology of Sierra Leone (after Anderson), scale 1:3,000,000
3. Physiography of Sierra Leone, scale 1:3,000,000
4. Vegetation of Sierra Leone (after Clarke) scale 1:2,750,000
5. Soil Province Map of Sierra Leone, scale 1:2,100,000
6. Soil Association Map of the Torma Bum Area, Sierra Leone, scale 1:125,000
7. Soil Map of the Njala Area, 3 sheets, scale 1:25,000
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Contains page-size map, "Land Apportionment and Climatic Regions".

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1. Location map of the Sudan showing the project area, scale 1:20,000,000
2. Map showing isohyets of mean annual rainfall, scale 1:1,000,000
3. Index map, aerial photography, scale 1:500,000
4. Geological map, scale 1:500,000
5. Reconnaissance soil map, scale 1:250,000
6. Reconnaissance vegetation map, scale 1:250,000
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Nyrop, Richard F., et al. 1969. Area handbook for Rwanda. U. S. Dep. Army Pam. 550-84. 212 p.
Prepared by Foreign Areas Studies, American University. For sale by Gov. Print. Off. Contains maps.

ABBREVIATIONS

Abbreviations, except those few followed by an asterisk (*), are in accordance with the WORD-ABBREVIATION LIST, 1971 edition, and supplements, of the National Clearinghouse for Periodical Title Word Abbreviations. This Clearinghouse was established in 1966 by Standards Committee Z39 of the American National Standards Institute. The word-abbreviation list also conforms to the UNISIST/ICUS-AB International List and hence accomodates many non-English as well as English words.

Many word roots end with a hyphen (-), which means that the root stands for various words with different endings but having the same root. For example, the word-root, "Academi-" (for which the abbreviation is "Acad.") may stand for academie, academiae, academic, academician, academico, academiei, academies, or even additional words that have the root "academi-".

An asterisk (*) after an abbreviation, for example "CCTA*", means that the abbreviation has been inserted for use in this bibliography and was not extracted from the Word-Abbreviation List of the National Clearinghouse.

ABBREVIATION	WORD ROOT
Abstr.	Abstract-
Abt.	Abteilung
Acad.	Academi- Academy
Accad.	Accadem-
Addit.	Additamentum Addition- Additivi-
Adm.	Administr-
Adv.	Advanc-
Advis.	Adviser- Adviseur- Advisor-
Afd.	Afdeeling Afdeling
Aff.	Affair-
Afr.	Africa- Afrika- Afrique
Agrar.	Agrari-
Agric.	Agricol- Agricult-
Agrobiol.	Agrobiolog-
Agrobot.	Agrobotan-
Agrochem.	Agrochemi-
Agrochim.	Agrochimi-
Agrogeol.	Agrogeolog-
Agrol.	Agrolog-
Agron.	Agronom-
Agropecu.	Agropecuari-
Agrotec.	Agrotecni-
Agrotech.	Agrotechni-
Agroteh.	Agrotehni-
Akad.	Akadeem- Akadem-
Allg.	Allgemein-
Am.	America-
An.	Anais Anale Analele Anales Anani Anals
Anal.	Analis- Analit- Analiz- Analys- Analyt- Analyz-
Anim.	Animal Animat- Animaux-
Ann.	Annaes Annal-
Annot.	Annotat-
Annu.	Annu-
Anot.	Anotaciones Anotationes
Anthropol.	Anthropolog-
Antiq.	Antique- Antiquit-

ABBREVIATIONS--Continued

ABBREVIAT	WORD/ROOT
Anu.	Anual- Anuar-
Apl.	Aplica- Aplika-
Append.	Appendices Appendi- Appendix
Appl.	Applica- Applied Applique-
Aprovision.	Aprovisionamient-
Arb.	Arbied- Arbiet
Arch.	Archiv-
Artic.	Article
Asiat.	Asiati-
Asist.	Asistenc-
Asoc.	Asocia-
Asses.	Assessment
Assist.	Assistance Assistant
Assoc.	Associ-
Atl.	Atlantic-
Atmos.	Atmosfaer- Atmosfar- Atmosfer- Atmosphaer- Atmospher-
Aufn.	Aufnahme-
Ausl.	Auslaendisch- Ausland
Aust.	Australi-
Aver.	Average
Beob.	Beobach-
Ber.	Bericht
Biannu.	Biannual
Bibliogr.	Bibliograph- Bibliograf-
Bibl.	Bibliotec- Bibliotek- Bibliothec- Bibliothek- Biblioteque-
Bienn.	Biennial

ABBREVIATIONS	WORD/ROOT
Bild.	Bildung
Bimon.	Bimonthly
Biochem.	Biochem-
Bioclimatol.	Bioclimatolog-
Biodyn.	Biodynamic
Bioeng.	Bioengineer-
Biogeogr.	Biogeograph-
Biogr.	Biograf- Biograph-
Biol.	Biolog- Bioloj- Bioloog- Biolosk-
Biosci.	Bioscience
Biotech.	Biotechni-
Biotechnol.	Biotechnolog-
Bodenkd.	Bodenkund-
Bol.	Boletim- Boletin-
Bot.	Botan-
Br.	Britain Britanni- British
Build.	Builder Building
Bul.	Buleten- Buletin Bulten
Bull.	Bulletin- Bulletino
Bur.	Bureau-
Bus.	Business
Cah.	Cahier-
Can.	Canada Canadi-
Cap.	Capital
Cartogr.	Cartograf- Cartograph-
Cat.	Catalog-

ABBREVIATIONS--Continued

ABBREVIATIONS	WORD/ROOT
C.C. T. A. or CCTA*	Commission de Cooperation Technique en Afrique au sud du Sahara (Commission for Technical Cooperation in Africa South of the Sahara)
Cent.	
Centrafr.	
Centroam.	
CEPAL*	Comision Economica para America Latina de las Nacionnes Unidas (United Nations Economic Commission for Latin America)
Charact.	Characteristic Characteriz-
Chem.	Chemia- Chemic- Chemie Chemii Chemij Chemik- Chemine- Chemisch- Chemist Chemiz- Chemj-
C. I. A. F.'	Centro Interamericana de Fotointerpretacion
CIDA*	Inter-American Committee for Agricultural Development (Comite Interamericano de Desarrollo Agricola)
Cienc.	Ciencia-
Cient.	Cientific-
Circ.	Circolar- Circolazione Circolo Circulaire Circular- Circulat- Circulo
Clasif.	Clasific-
Classif.	Classifi- Classification
Clim.	Climate Climati-

ABBREVIATIONS	
Climatol	Climatolog-
Co.	Companies Company
Colab.	Colaboracion-
Colecc.	Coleccion-
Col.	Colegio
Collab.	Collaborat- Collaborazione
Collect.	Collect-
Coll.	College- Collegi-
Colloq.	Colloque- Colloguia Colloguio Colloqium
Colon.	Coloni-
Coloq.	Coloquio-
Com.	Comisi- Comissao Comit-
Coment.	Comentario
Comer.	Comerci-
Comment.	Commentair- Commentar-
Comm.	Commissie Commission- Committee
Commonw.	Commonwealth
Commun.	Communica-
Compend.	Compendium
Compil.	Compilation
Compr.	Comprensive
C. R.	Compte Rendu Comptes Rendus
Comun.	Comunica-
Conf.	Conferenc- Conferent- Conferenz- Conferinta
Congr.	Congres-
Connais.	Connaissance

ABBREVIATIONS--Continued

ABBREVIATION	WORD/ROOT
Cons.	Conseil Consejo Conselho Consiglio Consili-
Conserv.	Conservation- Conservacion
Consult.	Consult Consult- Consultat- Consulting
Cont.	Continent-
Contrib.	Contribuc- Contribuic- Contribut-
Conv.	Convegno Convenc- Convenio Convention Convenzione
Coop.	Coopera-
Corp.	Corporat-
Counc.	Council-
Couns.	Counsel-
C. S. I. R. O. or CSIRO	Commonwealth Scientific and Industrial Organization
Cult.	Cultur- Cultuur-
Def.	Defence Defensa Defense
Democr.	Democracy Democrati-
Dep.	Departament- Departemen- Departement- Department-
Descr.	Descripti- Descritti-
Dtsch.	Deutsch Deutsche-
Dev.	Development- Developpement-
Diffus.	Diffusion-
Dir.	Direcc- Direci- Directeur- Directi- Director- Direktion Direktor- Direkts- Diretor- Direttor- Direzion-
Dis.	Disease-
Diss.	Disserta-
Discuss.	Discussies Discussion-
Dist.	District Distrito
Div.	Divis-
Doc.	Document Documenta Documentac- Documental- Documentar- Documentatio- Documento- Documents
Dokl.	Doklad-
D. O. S. or DOS*	(Great Britain) Directorate of Overseas Surveys
Drain.	Drainage
Dyn.	Dynamic- Dynamik Dynanisch- Dynamisk-
East.	Eastern
Ec.	Ecole
ECLA*	United Nations Economic Commission for Latin America
Ecol.	Ecolog-
Econ.	Econom- Economi- Economy
Edafol.	Edafolog-
Ed.	Edic- Edit- Ediz-
Educ.	Educac- Educat- Educaz-

ABBREVIATIONS--Continued

	WORD/ROOT
Ekol.	Ekolog-
Ekon.	Ekonom-
Elev.	Elevage
Emp.	Empire
Encycl.	Encyclop-
Eng.	Engenharia Engenheiro Engineer-
Ens.	Ensaio
Enseign.	Enseignment-
Environ.	Environment-
Entwickl.	Entwicklung
Erdkd.	Erdkunde
Erfahr.	Erfahrung-
Erforsch.	Erforschung-
Ergaenz.	Erganzung
Ernaehr.	Ernaehrung
Esc.	Escola- Escuela-
Espec.	Especial-
Establ.	Establ-
Estac.	Estac-
Estud.	Estud-
Ethnol.	Ethnolog-
Etud.	Etudes Etudiant-
Eval.	Evaluacion- Evaluation
Exp.	Experiment-
Exped.	Expedic- Expedition-
Explor.	Explora- Explorer
Ext.	Extension
Fac.	Facolt- Faculd- Facult-
Facil.	Facilit-
Fed.	Federa- Federe

ABBREVIATIONS	WORD/ROOT
Fert.	Fertilis- Fertiliz-
Fertil.	Fertilit-
Fisiol.	Fisiolog-
Fisiogr.	Fisiograf-
Foldt.	Foldtan-
Fom.	Fomento
Fondam.	Fondamenta-
Fond.	Fondation- Fondazione
F. A. O. or FAO	Food and Agriculture Organization of the United Nations
For.	Forest Forestal- Forester- Forestier- Forestry
Forsch.	Forschung-
Forstztg.	Forstzeitung
Fotogr.	Fotograf.
Found.	Foundation-
Fr.	Francais- France Franco French
Fund.	Fundacao Fundacion
Ganad.	Ganader-
Gard.	Garden-
Gaz.	Gazeta Gazette Gazettes
G.B.	Great Britain
Gen.	Genel- General- Generaux
Geod.	Geodaes- Geodaet- Geodas- Geodat- Geodes- Geodet- Geodez-
Geogr.	Geograf- Geograph-

ABBREVIATION	WORD/ROOT
Geol.	Geolog- Geologa- Geologe- Geologi- Geologo Geologos Geologov Geologue- Geology Geoloshk- Geolosk- Geolozh
Geomorfol.	Geomorfolog-
Geomorphol.	Geomorpholog-
Geophys.	Geophys-
Ger.	German
Ges.	Gesellschaft
Gesch.	Geschichte
Gouv.	Gouvernment-
Gov.	Government-
Grad.	Graduate
Grow.	Grower- Growing
Handb.	Handboek Handbook Handbuch
Heb.	Hebrew
Hebd.	Hebdomadaire-
Herb.	Herbage Herberi-
Hidraul.	Hidraul-
Hidrogeol.	Hidrogeolog-
Hidrogr.	Hidrograf-
Hidrol.	Hidrolog-
Highw.	Highway-
Hisp.	Hispalis Hispan-
Hist.	Histoir- Histor-
Hochsch.	Hochschule
Hum.	Humain- Human
Hydrol.	Hydrolog-
IAIAS*	Inter-American Institute of Agricultural Sciences
IICA*	Instituto Interamericao de Ciencias Agricolas (Inter-American Institute of Agricultural Sciences)
Imp.	Imperatorsk- Imperia-
Improv.	Improvement- Improving
Inaug.	Inaugural
Ind.	Industria- Industrie- Industrii Industriia Industriiu Industrij- Industrin- Industriya Industriyu Industry
Inf.	Informac- Informare Informatik- Information Informational Informatique- Informativ- Informator- Informats- Informaz- Informe-
Ing.	Ingegner- Ingenier- Ingenieur Ingenioer Ingenior Ingener-
I. N. Q. U. A. or INQUA*	International Association for Quaternary Research
Inst.	Institout- Instituc- Institus- Institut Instituta- Institute- Institution Instituto- Institutu- Instituut-
Interafr.	Interafrica-
Interam.	Interamerican-
Int.	Internaci- Internationaal International Internationaux Internazional-
Invest.	Investiga-

ABBREVIATIONS--Continued

ABBREVIATION	WORD/ROOT
I. R. A. T. or IRAT*	L'Institut de Recherches Agronomiques et de Cultures Vivrieres
Irrig.	Irrigac- Irrigati- Irrigats- Irrigaz- Irrigate-
Isl.	Island Islend- Islenzk-
Ist.	Istitut- Istituzione
J.	Joernaal- Jornal- Journal
Jahr.	Jahrbuck Jahrbuecher
Jard.	Jardim- Jardin-
Kartogr.	Kartograf-
Klassif.	Klassifik-
Klim.	Klimat Klimati-
Klimatol.	Klimatolog-
Lab.	Laboratoir- Laborator-
Latinoam.	Latioamerican-
Lott.	Letter-
Libr.	Librair- Librar-
Lit.	Literar- Literatur Literature Literatury Literatuur
Litt.	Littarae Litterar- Litteratur Litterature
La.	Louisiana
Mag.	Magasin Magzijn Magazin-
Mapp.	Mapping
Marit.	Maritime-
Mech.	Mechani-
Meded.	Mededeeling- Mededeling-
Mediterr.	Mediterrane-
Meet.	Meeting-
Mem.	Memento- Memoir- Memori-
Memo.	Memorand-
Meteorol.	Meteorolog.
Mich.	Michigan
Mijnbouwkd.	Mijnbouwkund-
Mil.	Militaer- Militaerisch- Militair- Militar-
Mimeogr.	Mimeograph-
Min.	Mineraria Mineria Minero Mining
Miner.	Mineraal- Mineral- Minerale- Minerali- Mineraln- Mineral'n- Minerals Mineraux
Minist.	Minister- Ministr-
Misc.	Miscelan- Miscellan-
Mitt.	Mitteilung
Mod.	Modern-
Monogr.	Monograf- Monograph-
Mt.	Mount Mountain Mountainous Mountains
Mus.	Musea Musee Musei Museo Museu Museum
Muz.	Muzei Muzeia Muzej- Muzeu Muzeum Muzeya

ABBREVIATIONS--Continued

ABBREVIATION	WORD/ROOT
Nac.	Nacion-
N. A. S. - N. R. C. or NAS-NRC	National Academy of Sciences-National Research Council
Nat.	Natuerlich- Natur Natura Naturae Naturais Natural- Nature Naturel- Naturen Naturii Natuur Natuurlijk- Natyor
Naturwiss.	Naturwissenschaft-
Nauk.	Naukov- Naukow-
No.*	Number
Not.	Notationes Notica- Notice- Notici- Notise- Notizi- Notulae Notulen
Nouv.	Nouveau- Nouvell-
O. A. F. or OAF*	Occidentale Afrique Francaise
O. A. S. or OAS*	Organization of American States (Organizacion de los Estados Americanos)
O. A. U. or OAU*	Organization of African Unity (Organisation de l'Unite Africaine)
O-Vo.	Obshchestvo-
Ocas.	Ocasion-
Occas.	Occasion-
Occident.	Occidental-
OEA*	Organizacion de Estados Americanos (Organization of American States)
Off.	Offic- Offiz-
Of.	Ofici-
Oper	Operac- Operat- Operazione

ABBREVIATION	WORD/ROOT
Organ.	Organiza- Organize- Organizing Organizz-
OAS or O. A. S.	Organization of American States
Orient.	Oriental-
Pac.	Pacific Pacifique
Palaeobot.	Palaeobotan-
Palaeontol.	Palaeontolog-
Palaontol.	Palaontolog-
Pam.	Pamflet Pamphlet
Pap.	Papeis Papel Paper- Papier Papieru Papir Papiru
Pesq.	Pesquer-
Pesqui.	Pesquisa
Pflanzenernaehr.	Pflanzenernaehrung-
Philos.	Philosoph-
Photogr.	Photograaf- Photograf- Photograph-
Photogramm.	Photogrammetr-
Phys.	Physica- Physicist Physico Physics Physicu- Physik Physikal- Physique- Physisch-
Plann.	Planner Planning
Pochv.	Pochven-
Pochvoved.	Pochvoveden-
Pol.	Polish
Port.	Portug-
Prat.	Pratique Pratica
Prelim	Prelimin-

ABBREVIATIONS--Continued

ABBREVIATIONS	
Prod.	Produc- Produit- Produkt Produktion Produktiv- Produzion-
Prof.	Profesion Profession Professional
Program.	Programac-
Proj.	Project- Projekt
Prot.	Protecao Proteccion Protecti- Protectorate Protettivo Protettorato Protezoine
Prov.	Provinc- Provints- Provinz
Publ.	Publicac- Publicat-
Q.	Quarterly
Quim.	Quimic-
Racion.	Racional-
Rap.	Raporlari Raport-
Rapp.	Rapport-
R.	Real (Royal) Reale Royal
Reclam.	Reclamation
Recomm.	Recommend-
Rec.	Record-
Recur.	Recurso-
Reg.	Region-
Relaz.	Relazion-
Repubb.	Repubblica
Repub.	Republica- Republiek Republik- Republique
Res.	Research-
Resour.	Resource-
Ressour.	Ressource-

ABBREVIATIONS	WORD/ROOT
Rev.	Review- Revija Revised Revisio Revista Reviste Revistele Revue- Revuo
Riv.	Rivist-
Schr.	Schrift
Sci.	Scienc- Scient- Scienz-
Secc.	Seccao Seccion-
Secr.	Secretar-
Sel.	Selacao- Seleccion- Select- Selek- Selezione
Sem.	Semaine Semana-
Sep.	Separate Separation- Separatsi
Ser.	Seria- Serie- Seriia Serija Seriya Seryia Seryya
Serv.	Servic- Serving Serviz-
Ses.	Sesion- Sesiun- Sesji Sessi-
Sist.	Sistem-
Soc.	Social Sociale- Socialist- Socialn- Sociedad- Societ- Socijalist-
S. Afr.	South Africa
South.	Southern
Southwest.	Southwestern
Sov.	Soviet

ABBREVIATIONS--Continued

ABBREVIATION	WORD/ROOT
Soz.	Sozial Soziale Soziali- Sozietaet
Spec.	Special- Speciaux
Stn.	Station
S. T. R. C. or STRC*	Scientific, Technical and Research Commission (Commission Scientifique et de la Recherche)
Stud.	Studenchisk- Student- Studia Studie Studien Studies Studii Studiia Studij Studio Studium Studiya
Subtrop.	Subtrop-
Sudam-	Sudamerica-
Suec.	Suecan- Suecic-
Super.	Superieur- Superior-
Supl.	Suplement- Supliment-
Suppl.	Supplement- Supplementa- Supplemento Supplements
Supt.	Superintend-
Surv.	Survey-
Taxon.	Taxonom-
Tech.	Techni-
Tec.	Tecni-
Tecnol.	Tecnolog-
Teil	Teilung
Territ.	Territor-
Tidschr.	Tidschrift-
Tijdschr.	Tijdschrift-
Topogr.	Topograf- Topograph-
Trab.	Trabajo- Trabalho-
Transp.	Transport-
Trav.	Travail- Travaux
U. K.	United Kingdom
UN OR U. N.	United Nations
U. N. D. P. or UNDP*	United Nations Development Programme
U. N. E. S. C. O or UNESCO	United Nations Educational, Scientific and Cultural Organization
U. S. or US	United States
U. S. A. or USA	United States of America
U. S. S. R. or USSR	Union of Soviet Socialist Republics
Univ.	Universidad- Universit- Universytet- Univerzitet-
Util.	Utili-
Veg.	Vegeta- Vegetab- Vegetal- Vegetaux
Vol.	Volum-
Vses.	Veseoyuzn-
Wirtsh.	Wirtschaft-
Wiss.	Wissenchaft-
W. M. O. or WMO*	World Meteorological Organization of the United Nations
Work.	Worker- Working
Z.	Zeitung
Zool.	Zoolog-

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