

Newsletter

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Editor's Note

Issues of this newsletter are available on the World Wide Web (www.statlab.iastate.edu/soils/soildiv). Click on NCSS and then on the desired issue number of the NCSS Newsletter.

You are invited to submit stories for future issues of this newsletter to Stanley Anderson, National Soil Survey Center, Lincoln, Nebraska. Phone—402-437-5357; FAX—402-437-5336; email—sanderson@nssc.nrcs.usda.gov.



Names of Orders, Suborders, Great Groups, and Subgroups

By Stanley Anderson, editor, National Soil Survey Center, Lincoln, Nebraska.

This issue of the NCSS Newsletter consists of a table showing the orders, suborders, great groups, and subgroups that will be included in the new edition of *Soil Taxonomy*, which will be published this year. The number of subgroups may change between now and the publication date, because new subgroups are continually being recommended by soil scientists from around the world. The table is presented in this newsletter because of anticipated interest in its contents on the part of soil scientists in the National Cooperative Soil Survey. The newsletter is available on the World Wide Web, as is indicated in the “Editor’s Note” on this page. Thus, soil scientists have access to an electronic version of the table, which they may be able to print out on their own computer systems.

I hope that soil scientists in the National Cooperative Soil Survey will find this table newsworthy. I admit that the table is not exactly “chatty” news. The information in the table, however, is important to the likely readers of this newsletter. The names in the table apply to the soils throughout the world. I think of soil taxonomy as a vast intellectual structure, something like a huge mansion with 12 elaborate rooms (some more elaborate than others). Families are in these rooms, but their place in this imposing

structure is another matter and is the subject of another chapter in *Soil Taxonomy*.

I count 12 orders in the table, 64 suborders, 317 great groups, and 2,435 subgroups. I am sure about the number of orders and suborders, pretty sure about the number of great groups, and not so sure about the number of subgroups. I would not bet the mortgage that my count of the subgroups is accurate. Those who cannot resist the urge to count the subgroups should know that there are potentially 49 lines in each column of the table and should use the following key.

Key to Columns of Subgroups

A. Columns that show fewer than 49 subgroups because they meet *one or more* of the following:

1. Have a “continued” line at the beginning of a page; *or*
2. Have lengthy great group or subgroup names that make up two lines; *or*
3. Are only 48 lines long on page 26 because of the editor’s desire to lengthen the column on page 27 by two lines; *or*
4. Ran out of subgroups at the end of the table, before reaching line 49.

Less Numeric Cols

B. Other columns.

Typic Cols

Description of Typic Cols

Typic Cols are those columns that have *both*:

1. 49 lines; *and*
2. 49 subgroups.

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Names of Orders, Suborders, Great Groups, and Subgroups

Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
Alfisols	Aqualfs	Cryaqualfs	Typic.				Arenic,
		Plinthaqualfs	Typic.				Grossarenic,
		Duraqualfs	Typic.				Aeric Umbric,
		Natraqualfs	Vertic,				Udollic,
			Vermic,				Aeric,
			Albic Glossic,				Mollic,
			Albic,				Umbric,
			Glossic,				Typic.
			Mollic,			Endoaqualfs	Aquandic,
			Typic.				Chromic Vertic,
		Fragiaqualfs	Vermic,				Vertic,
			Aeric,				Aeric Fragic,
			Plinthic,				Fragic,
			Humic,				Arenic,
			Typic.				Grossarenic,
		Kandiaqualfs	Arenic,				Udollic,
			Grossarenic,				Aeric Umbric,
			Plinthic,				Aeric,
			Aeric Umbric,				Mollic,
			Aeric,				Umbric,
			Umbric,				Typic.
			Typic.			Cryalfs	Palecryalfs
		Vermaqualfs	Natric,				Andic,
			Typic.				Vitrandic,
		Albaqualfs	Arenic,				Aquic,
			Aeric Vertic,				Oxyaquic,
			Chromic Vertic,				Xeric,
			Vertic,				Ustic,
			Udollic,				Mollic,
			Aeric,				Umbric,
			Aquandic,				Typic.
			Mollic,			Glossocryalfs	Lithic,
			Umbric,				Vertic,
			Typic.				Andic,
			Typic.				Vitrandic,
		Glossaqualfs	Histic,				Aquic,
			Arenic,				Oxyaquic,
			Aeric Fragic,				Fragic,
			Fragic,				Xerollic,
			Aeric,				Umbric Xeric,
			Mollic,				Ustollic,
			Typic.				Xeric,
			Typic.				Ustic,
		Epiaqualfs	Aeric Chromic				Mollic,
			Vertic,				Umbric,
			Aeric Vertic,				Eutric,
			Chromic Vertic,				Typic.
			Vertic,				Typic.
			Aquandic,			Haplocryalfs	Lithic,
			Aeric Fragic,				Vertic,
			Fragic,				Andic,

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Names of Orders, Suborders, Great Groups, and Subgroups--Continued

Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Haplocryalfs (continued)	Vitrandid, Aquic, Oxyaquic, Lamellic, Psammentic, Inceptic, Xerollic, Umbric Xeric, Ustollic, Xeric, Ustic, Mollic, Umbric, Eutric, Typic.			Paleustalfs	Aquertic, Oxyaquic Vertic, Udertic, Vertic, Aquic Arenic, Aquic, Oxyaquic, Lamellic, Psammentic, Arenic Aridic, Grossarenic, Arenic, Plinthic, Petrocalcic, Calcidic, Aridic, Kandic, Rhodic, Ultic, Udic, Typic.
	Ustalfs	Durustalfs	Typic.			Rhodustalfs	Lithic, Kanhaplic, Udic, Typic.
		Plinthustalfs	Typic.			Haplustalfs	Lithic, Aquertic, Oxyaquic Vertic, Torrertic, Udertic, Vertic, Aquic Arenic, Aquultic, Aquic, Oxyaquic, Vitrandid, Lamellic, Psammentic, Arenic Aridic, Arenic, Calcidic, Aridic, Kanhaplic, Inceptic, Calcic Udic, Ultic, Calcic, Udic, Typic.
		Natrustalfs	Salidic, Leptic Torrertic, Torrertic, Aquertic, Aridic Leptic, Vertic, Aquic Arenic, Aquic, Arenic, Petrocalcic, Leptic, Haplargdic, Aridic, Mollic, Typic.				
		Kandiustalfs	Grossarenic, Aquic Arenic, Plinthic, Aquic, Arenic Aridic, Arenic, Aridic, Udic, Rhodic, Typic.				
		Kanhaplustalfs ...	Lithic, Aquic, Aridic, Udic, Rhodic, Typic.				

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
	Paleudalfs (continued)		Fragiaquic, Plinthaquic, Glossaquic, Albaquic, Aquic, Anthraquic, Oxyaquic, Fragic, Arenic Plinthic, Grossarenic Plinthic, Lamellic, Psammentic, Arenic, Grossarenic, Plinthic, Glossic, Rhodic, Mollic, Typic.				Glossaquic, Aquultic, Aquollic, Aquic, Anthraquic, Oxyaquic, Fragic, Lamellic, Psammentic, Arenic, Glossic, Inceptic, Ultic, Mollic, Typic.
	Rhodudalfs		Typic.	Andisols	Aquands	Cryaquands	Lithic, Histic, Thaptic, Typic.
	Glossudalfs		Aquertic, Oxyaquic Vertic, Vertic, Aquandic, Andic, Vitrandic, Fragiaquic, Aquic, Oxyaquic, Fragic, Arenic, Haplic, Typic.			Placaquands	Lithic, Duric Histic, Duric, Histic, Thaptic, Typic.
	Hapludalfs		Lithic, Aquertic Chromic, Aquertic, Oxyaquic Vertic, Chromic Vertic, Vertic, Andic, Vitrandic, Fragiaquic, Fragic Oxyaquic, Aquic Arenic, Albaquultic, Albaquic,			Duraquands	Histic, Acraquoxic, Thaptic, Typic.
						Vitraquands	Lithic, Duric, Histic, Thaptic, Typic.
						Melanaquands ..	Lithic, Acraquoxic, Hydric Pachic, Hydric, Pachic, Thaptic, Typic.
						Epiaquands	Duric, Histic, Alic, Hydric, Thaptic, Typic.
						Endoaquands	Lithic, Duric,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Endoaquands (continued)	Histic, Alic, Hydric, Thaptic, Typic.				Typic.
				Xerands	Vitrixerands		Lithic, Aquic, Thaptic, Alfic Humic, Ultic, Alfic, Humic, Typic.
	Cryands	Duricryands	Aquic, Typic.				
		Hydrocryands	Lithic, Placic, Aquic, Thaptic, Typic.			Melanoxerands ..	Pachic, Typic.
		Melanocryands ..	Lithic, Vitric, Typic.			Haploxerands	Lithic, Aquic, Thaptic, Calcic, Ultic, Alfic Humic, Alfic, Humic, Typic.
		Fulvicryands	Lithic, Pachic, Vitric, Typic.				
		Vitricryands	Lithic, Aquic, Oxyaquic, Thaptic, Humic Xeric, Xeric, Ultic, Alfic, Humic, Typic.			Vitrands	Ustivitrands
							Lithic, Aquic, Thaptic, Calcic, Humic, Typic.
							Udivitrands
							Lithic, Aquic, Thaptic, Ultic, Alfic, Humic, Typic.
		Haplocryands	Lithic, Alic, Aquic, Acrudoxic, Vitric, Thaptic, Xeric, Typic.			Ustands	Durustands
							Aquic, Thaptic, Humic, Typic.
							Haplustands
							Lithic, Aquic, Dystric Vitric, Vitric, Pachic, Thaptic, Calcic, Dystric, Oxic, Ultic, Alfic, Humic,
	Torrands	Duritorrands	Petrocalcic, Vitric, Typic.				
		Vititorrands	Lithic, Duric, Aquic, Calcic, Typic.				
		Haplotorrands	Lithic, Duric, Calcic,				

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Haplustands (continued)	Typic.				Anthraquic, Aquic Duric, Duric, Alic, Aquic, Acrudoxic Hydric, Acrudoxic Thaptic, Acrudoxic Ultic, Acrudoxic, Vitric, Hydric Thaptic, Hydric, Eutric Thaptic, Thaptic, Eutric, Oxic, Ultic, Alfic, Typic.
	Udands	Placudands	Lithic, Aquic, Acrudoxic, Hydric, Typic.				
		Durudands	Aquic, Acrudoxic, Hydric, Pachic, Typic.				
		Melanudands	Lithic, Anthraquic, Aquic, Acrudoxic Vitric, Acrudoxic Hydric, Acrudoxic, Pachic Vitric, Vitric, Hydric Pachic, Pachic, Hydric, Thaptic, Ultic, Eutric, Typic.	Aridisols	Cryids	Salicryids	Aquic, Typic. Petrocryids
		Hydrudands	Lithic, Aquic, Acrudoxic Thaptic, Acrudoxic, Thaptic, Eutric, Ultic, Typic.				Xereptic, Duric Xeric, Duric, Petrogypsic, Xeric, Ustic, Typic.
		Fulvudands	Eutric Lithic, Lithic, Aquic, Hydric, Acrudoxic, Ultic, Eutric Pachic, Eutric, Pachic, Thaptic, Typic.			Gypsicryids	Calcic, Vitrixerandic, Vitrandic, Typic.
		Hapludands	Lithic,			Argicryids	Lithic, Vertic, Natric, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.
						Calcicryids	Lithic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.
						Haplocryids	Lithic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup	
		Haplocryids (continued)	Vertic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.			Natrigypsids	Xeric, Ustic, Typic. Lithic, Vertic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.	
Salids	Aquisalids	Gypsic, Calcic, Typic.				Argigypsids	Lithic, Vertic, Calcic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.	
	Haplosalids	Duric, Petrogypsic, Gypsic, Calcic, Typic.				Calcigypsids	Lithic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.	
Durids	Natridurids	Vertic, Aquic Natrargidic, Aquic, Natraxeralfic, Natrargidic, Vitrixerandic, Vitrandic, Xeric, Typic.				Haplogypsids	Lithic, Leptic, Sodic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.	
	Argidurids	Vertic, Aquic, Abruptic Xeric, Abruptic, Haploxeralfic, Argidic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.				Argids	Petroargids	Petrogypsic Ustic, Petrogypsic, Duric Xeric, Duric, Natric, Xeric, Ustic, Typic.
	Haplodurids	Aquicambidic, Aquic, Xereptic, Cambidic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.				Natrargids	Lithic Xeric, Lithic Ustic, Lithic, Vertic, Aquic,	
Gypsids	Petrogypsids	Petrocalcic, Calcic, Vitrixerandic, Vitrandic,						

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
	Natrargids (continued)		Durinodic Xeric, Durinodic, Petronodic, Glossic Ustic, Haplic Ustic, Haploxeralfic, Haplic, Vitrixerandic, Vitrandic, Xeric, Ustic, Glossic, Typic.				Xeric, Ustic, Typic.
						Haplargids	Lithic Ruptic- Entic, Lithic Xeric, Lithic Ustic, Lithic, Xerertic, Ustertic, Vertic, Aquic, Arenic Ustic, Arenic, Durinodic Xeric, Durinodic, Petronodic Ustic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.
	Paleargids		Vertic, Aquic, Arenic Ustic, Arenic, Calcic, Durinodic Xeric, Durinodic, Petronodic Ustic, Petronodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.			Calcids	Petrocalcids Aquic, Natric, Xeralfic, Ustalfic, Argic, Calcic Lithic, Calcic, Xeric, Ustic, Typic.
	Gypsiargids		Aquic, Durinodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.				Haplocalcids Lithic Xeric, Lithic Ustic, Lithic, Vertic, Aquic Durinodic, Aquic, Duric Xeric, Duric, Durinodic Xeric, Durinodic, Petronodic Xeric, Petronodic Ustic, Petronodic, Sodic Xeric, Sodic Ustic, Sodic,
	Calciargids		Lithic, Xerertic, Ustertic, Vertic, Aquic, Arenic Ustic, Arenic, Durinodic Xeric, Durinodic, Petronodic Xeric, Petronodic Ustic, Petronodic, Vitrixerandic, Vitrandic,				

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup	
		Haplocalcids (continued)	Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.			Hydraquents	Sulfic, Sodic, Thaptic-Histic, Typic.	
	Cambids	Aquicambids	Sodic, Durinodic Xeric, Durinodic, Petronodic, Vitrixerandic, Vitrandic, Fluventic, Xeric, Ustic, Typic.			Cryaquents	Aquandic, Typic.	
		Petrocambids	Sodic, Vitrixerandic, Vitrandic, Xeric, Ustic, Typic.			Psammaquents ...	Lithic, Sodic, Spodic, Humaqueptic, Mollic, Typic.	
		Anthracambids ...	Typic.			Fluvaquents	Sulfic, Vertic, Thapto-Histic, Aquandic, Aeric, Humaqueptic, Mollic, Typic.	
		Haplocambids	Lithic Xeric, Lithic Ustic, Lithic, Xerertic, Ustertic, Vertic, Durinodic Xeric, Durinodic, Petronodic Xeric, Petronodic Ustic, Petronodic, Sodic Xeric, Sodic Ustic, Sodic, Vitrixerandic, Vitrandic, Xerifluventic, Ustifluventic, Fluventic, Xeric, Ustic, Typic.			Epiaquents	Aeric, Humaqueptic, Mollic, Typic.	
		Entisols	Aquents			Endoaquents	Sulfic, Lithic, Sodic, Aeric, Humaqueptic, Mollic, Typic.	
			Sulfaquents			Arents	Ustarents	Haplic.
			Haplic, Histic, Thapto-Histic, Typic.			Xerarents	Sodic, Duric, Alfic, Haplic.	
						Torriarents	Sodic, Duric, Haplic.	
						Udarents	Alfic, Ultic, Mollic, Haplic.	
						Psamments ..	Cryo- psamments	Lithic, Aquic, Oxyaquic, Vitrandic, Spodic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Cryopsamments (continued)	Lamellic, Typic.			Plaggeptic, Typic.	
		Torri- psamments	Lithic, Vitrandic, Haploduridic, Ustic, Xeric, Rhodic, Typic.			Fluents	Cryofluents
		Quartzi- psamments	Lithic, Aquodic, Aquic, Oxyaquic, Ustoxic, Udoxic, Plinthic, Lamellic Ustic, Lamellic, Ustic, Xeric, Spodic, Typic.			Xerofluents	Vertic, Aquandic, Andic, Vitrandic, Aquic, Oxyaquic, Durinodic, Mollic, Typic.
		Usti- psamments	Lithic, Aquic, Oxyaquic, Aridic, Lamellic, Rhodic, Typic.			Ustifluents	Aquertic, Torrertic, Vertic, Anthraquic, Aquic, Oxyaquic, Aridic, Udic, Mollic, Typic.
		Xero- psamments	Lithic, Aquic Durinodic, Aquic, Oxyaquic, Vitrandic, Durinodic, Lamellic, Dystric, Typic.			Torrifluents	Ustertic, Vertic, Vitrixerandic, Vitrandic, Aquic, Oxyaquic, Duric Xeric, Duric, Ustic, Xeric, Anthropic, Typic.
		Udi- psamments	Lithic, Aquic, Oxyaquic, Spodic, Lamellic,			Udifluents	Aquertic, Vertic, Andic, Vitrandic, Aquic, Oxyaquic, Mollic, Typic.
						Orthents	Cryorthents
							Lithic, Vitrandic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Cryorthents (continued)	Aquic, Oxyaquic, Lamellic, Typic.				Sapric, Typic.
		Torriorthents	Lithic Ustic, Lithic Xeric, Lithic, Xerertic, Ustertic, Vertic, Vitrandic, Aquic, Oxyaquic, Duric, Ustic, Xeric, Typic.			Fibristels	Lithic, Terric, Fluvaquentic, Sphagnic, Typic.
		Xerorthents	Lithic, Vitrandic, Aquic, Oxyaquic, Durinodic, Dystric, Typic.			Hemistels	Lithic, Terric, Fluvaquentic, Typic.
		Ustorthents	Aridic Lithic, Lithic, Torrertic, Vertic, Anthraquic, Aquic, Oxyaquic, Durinodic, Vitritorrandic, Vitrandic, Aridic, Udic, Vermic, Typic.			Sapristels	Lithic, Terric, Fluvaquentic, Typic.
		Udorthents	Lithic, Vitrandic, Aquic, Oxyaquic, Vermic, Typic.			Turbels	Histoturbels
		Gelisols	Histels				Lithic, Glacic, Ruptic, Typic.
			Folistels			Aquaturbels	Lithic, Glacic, Sulfuric, Ruptic-Histic, Psammentic, Typic.
			Glacistels			Anhyturbels	Lithic, Glacic, Petrogypsic, Gypsic, Nitric, Salic, Calcic, Typic.
						Molliturbels	Lithic, Glacic, Vertic, Andic, Vitrandic, Cumulic, Aquic, Typic.
						Umbristurbels	Lithic, Glacic, Vertic, Andic, Vitrandic, Cumulic, Aquic, Typic.

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Psammiturbels ..	Lithic, Glacic, Spodic, Typic.			Psammiorthels ..	Lithic, Glacic, Spodic, Typic.
		Haploturbels	Lithic, Glacic, Aquic, Typic.			Haplorthels	Lithic, Glacic, Aquic, Typic.
Orthels	Historthels	Lithic, Glacic, Ruptic, Typic.		Histosols	Folists	Cryofolists	Lithic, Typic.
		Aquorthels	Lithic, Glacic, Sulfuric, Ruptic-Histic, Andic, Vitrandic, Salic, Psammentic, Typic.			Torrifolists	Lithic, Typic.
		Anhyorthels	Lithic, Glacic, Petrogypsic, Gypsic, Nitric, Salic, Calcic, Typic.			Ustifolists	Lithic, Typic.
		Molliorthels	Lithic, Glacic, Vertic, Andic, Vitrandic, Cumulic, Aquic, Typic.			Udifolists	Lithic, Typic.
		Umbriorthels	Lithic, Glacic, Vertic, Andic, Vitrandic, Cumulic, Aquic, Typic.			Fibrists	Cryofibrists
		Argiorthels	Lithic, Glacic, Natric, Typic.				Hydric, Lithic, Terric, Fluvaquentic, Sphagnic, Typic.
						Sphagno- fibrists	Hydric, Lithic, Limnic, Terric, Fluvaquentic, Hemic, Typic.
						Haplofibrists	Hydric, Lithic, Limnic, Terric, Fluvaquentic, Hemic, Typic.
						Sapristis	Sulfosapristis
							Typic.
							Terric, Typic.
							Lithic, Terric, Fluvaquentic, Typic.
							Lithic, Limnic, Halic Terric, Halic, Terric,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Haplosaprists (continued)	Fluvaquentic, Hemic, Typic.			Humaquepts	Hydraquentic, Histic, Aquandic, Cumulic, Fluvaquentic, Aeric, Typic.
	Hemists	Sulfohemists	Typic.				
		Sulfihemists	Terric, Typic.				
		Luvihemists	Typic.			Epiaquepts	Vertic, Aquandic, Fluvaquentic, Fragic, Aeric, Humic, Mollic, Typic.
		Cryochemists	Hydric, Lithic, Terric, Fluvaquentic, Typic.				
		Haplohemists	Hydric, Lithic, Limnic, Terric, Fluvaquentic, Fibric, Sapric, Typic.			Endoquepts	Sulfic, Lithic, Vertic, Aquandic, Fluvaquentic, Fragic, Aeric, Humic, Mollic, Typic.
Inceptisols	Aquepts	Sulfaquepts	Salidic, Hydraquentic, Typic.				
		Petraquepts	Histic Placic, Placic, Plinthic, Typic.			Anthrepts	Plagg- anthrepts
		Halaquepts	Vertic, Aquandic, Duric, Aeric, Typic.				Typic.
		Fragiaquepts	Aeric, Humic, Typic.			Haplanthrepts ...	Typic.
		Cryaquepts	Sulfic, Histic Lithic, Lithic, Vertic, Histic, Aquandic, Fluvaquentic, Aeric Humic, Aeric, Humic, Typic.			Cryepts	Eutrocryepts
		Vermaquepts	Sodic, Typic.				Humic Lithic, Lithic, Andic, Vitrandic, Aquic, Oxyaquic, Lamellic, Xeric, Ustic, Humic, Typic.
							Dystrocryepts ...
							Humic Lithic, Lithic, Andic, Vitrandic, Aquic, Oxyaquic, Lamellic, Spodic, Xeric, Ustic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Dystrocryepts (continued)	Humic, Typic.				Entic, Typic.
	Ustepts	Durustepts	Typic.			Calcixerepts	Lithic, Vertic, Petrocalcic, Sodic, Vitrandic, Aquic, Typic.
		Calciustepts	Lithic Petrocalcic, Lithic, Torrertic, Vertic, Petrocalcic, Gypsic, Aquic, Aridic, Udic, Typic.			Fragixerepts	Andic, Vitrandic, Aquic, Humic, Typic.
		Dystrustepts	Lithic, Andic, Vitrandic, Aquic, Fluventic, Oxic, Humic, Typic.			Dystroxerepts ...	Humic Lithic, Lithic, Aquandic, Andic, Vitrandic, Fragiaquic, Fluvaquentic, Aquic, Oxyaquic, Fragic, Fluventic Humic, Fluventic, Humic, Typic.
		Haplustepts	Aridic Lithic, Lithic, Udertic, Torrertic, Vertic, Andic, Vitrandic, Anthraquic, Aquic, Oxyaquic, Oxic, Lamellic, Torrifluventic, Udifluventic, Fluventic, Gypsic, Haplocalcidic, Calcic Udic, Calcic, Aridic, Dystric, Udic, Typic.			Haploxerepts	Humic Lithic, Lithic, Vertic, Aquandic, Andic, Vitrandic, Gypsic, Aquic, Lamellic, Fragic, Fluventic, Calcic, Humic, Typic.
	Xerepts	Durixerepts	Aquandic, Andic, Vitrandic, Aquic,			Udepts	Sulfudepts
							Typic.
							Durudepts
							Aquandic, Andic, Vitrandic, Aquic, Typic.
							Fragiudepts
							Andic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Fragiudepts (continued)	Vitrantic, Aquic, Humic, Typic.				Ruptic-Ultic, Typic.
		Eutrudepts	Humic Lithic, Lithic, Aquertic, Vertic, Andic, Vitrantic, Anthraquic, Fragiaquic, Fluvaquentic, Aquic Dystric, Aquic, Oxyaquic, Fragic, Lamellic, Dystric Fluventic, Fluventic, Arenic, Dystric, Rendollic, Humic, Ruptic-Alfic, Typic.			Natralbolls	Leptic, Typic.
		Dystrudepts	Humic Lithic, Lithic, Vertic, Aquandic, Andic, Vitrantic, Fragiaquic, Fluvaquentic, Aquic Humic, Aquic, Oxyaquic, Fragic, Lamellic, Humic Psammentic, Fluventic Humic, Fluventic, Spodic, Oxic, Humic Pachic, Humic, Ruptic-Alfic,			Argialbolls	Xerertic, Vertic, Argiaquic Xeric, Argiaquic, Xeric, Aquandic, Typic.
						Aquolls	Cryaquolls
							Vertic, Histic, Thapto-Histic, Aquandic, Argic, Calcic, Cumulic, Typic.
						Duraquolls	Natric, Vertic, Argic, Typic.
						Natraquolls	Vertic, Typic.
						Calciaquolls	Petrocalcic, Aeric, Typic.
						Argiaquolls	Arenic, Grossarenic, Vertic, Abruptic, Typic.
						Epiaquolls	Cumulic Vertic, Fluvaquentic Vertic, Vertic, Histic, Thapto-Histic, Aquandic, Duric, Cumulic, Fluvaquentic, Typic.
						Endoaquolls	Lithic, Cumulic Vertic, Fluvaquentic Vertic, Vertic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup	
		Calcixerolls (continued)	Oxyaquic, Pachic, Vitrandic, Aridic, Vermic, Typic.				Torriorthentic, Aridic, Duric, Psammentic, Fluventic, Vermic, Calcic, Entic Ultic,	
		Argixerolls	Lithic Ultic, Lithic, Torrertic, Vertic, Andic, Vitrirrandic, Vitrandic, Aquultic, Aquic, Oxyaquic, Alfic, Calcic Pachic, Pachic Ultic, Pachic, Argiduridic, Duric, Calciargidic, Aridic, Calcic, Ultic, Typic.				Ultic, Entic, Typic.	
						Ustolls	Durustolls	Natric, Haploduridic, Argiduridic, Entic, Haplic, Typic.
						Natrustolls	Leptic Torrertic, Torrertic, Leptic Vertic, Glossic Vertic, Vertic, Aridic Leptic, Leptic, Aquic, Aridic, Duric, Glossic, Typic.	
		Haploxerolls	Lithic Ultic, Lithic, Torrertic, Vertic, Vitrirrandic, Vitrandic, Aquic Cumulic, Cumulic Ultic, Cumulic, Fluvaquentic, Aquic Duric, Aquultic, Aquic, Oxyaquic, Calcic Pachic, Pachic Ultic, Pachic, Torrifluventic, Duridic, Calcidic, Torripsammentic,				Calcicustolls	Salidic, Lithic Petrocalcic, Lithic, Torrertic, Udertic, Vertic, Petrocalcic, Gypsic, Pachic, Aquic, Oxyaquic, Aridic, Udic, Typic.
							Paleustolls	Torrertic, Udertic, Vertic, Pachic, Aquic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
	Paleustolls (continued)	Petrocalcic, Calcidic, Aridic, Udic, Calcic, Entic, Typic.					Oxyaquic, Torrifluentic, Torriorthentic, Aridic, Fluentic, Duric, Udorthentic, Udic, Entic, Typic.
	Argiustolls	Aridic Lithic, Alfic Lithic, Lithic, Torreptic, Udertic, Vertic, Andic, Vitritorrandic, Vitrandic, Pachic, Aquic, Oxyaquic, Alfic, Calcidic, Aridic, Udic, Duric, Typic.		Udolls	Natrudolls	Petrocalcic, Leptic Vertic, Glossic Vertic, Vertic, Leptic, Glossic, Calcic, Typic.	
	Vermustolls	Lithic, Aquic, Pachic, Entic, Typic.			Calciudolls	Lithic, Vertic, Aquic, Fluentic, Typic.	
	Haplustolls	Salidic, Ruptic-Lithic, Lithic, Torreptic, Pachic Udertic, Udertic, Vertic, Torroxic, Oxic, Andic, Vitritorrandic, Vitrandic, Aquic Cumulic, Cumulic, Anthraquic, Fluvaquentic, Pachic, Aquic,			Paleudolls	Vertic, Petrocalcic, Aquic, Pachic, Oxyaquic, Calcic, Typic.	
					Argiudolls	Lithic, Aquertic, Oxyaquic Vertic, Pachic Vertic, Alfic Vertic, Vertic, Andic, Vitrandic, Aquic, Pachic, Oxyaquic, Lamellic, Psammentic, Arenic, Abruptic, Alfic, Oxic, Calcic, Typic.	

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Vermudolls	Lithic, Haplic, Typic.				Aquic Lithic, Lithic, Anionic Aquic,
		Hapludolls	Lithic, Aquertic, Vertic, Andic, Vitrandic, Aquic Cumulic, Cumulic, Fluvaquentic, Aquic, Pachic, Oxyaquic, Fluventic, Vermic, Calcic, Entic, Typic.				Anionic, Plinthic, Aquic, Eutric, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.
						Eustrustox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Kandiustalfic, Humic Inceptic, Inceptic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.
Oxisols	Aquox	Acraquox	Plinthic, Aeric, Typic.				
		Plinthaquox	Aeric, Typic.				
		Eutraquox	Histic, Plinthic, Aeric, Humic, Typic.				
		Haplaquox	Histic, Plinthic, Aeric, Humic, Typic.			Kandiustox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.
		Torrox	Acrotorrox				
			Petroferric, Lithic, Typic.				
		Eutrotorrox	Petroferric, Lithic, Typic.				
		Haplotorrox	Petroferric, Lithic, Typic.				
		Ustox	Sombriustox				
			Petroferric, Lithic, Humic, Typic.			Haplustox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aqueptic,
		Acrustox	Aquic Petroferric, Petroferric,				

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup	
		Haplustox (continued)	Aquic, Oxyaquic, Inceptic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.				Aquic, Andic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.	
	Perox	Sombriperox	Petroferric, Lithic, Humic, Typic.			Haploperox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Andic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.	
		Acroperox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Anionic, Plinthic, Aquic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.			Udox	Sombriudox	Petroferric, Lithic, Humic, Typic.
		Eutroperox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Kandiudalfic, Humic Inceptic, Inceptic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.			Acrudox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Anionic Aquic, Anionic, Plinthic, Aquic, Eutric, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.	
		Kandiperox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic,			Eutradox	Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Kandiudalfic,	

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
	Eutrudox (continued)		Humic Inceptic, Inceptic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.				Arenic Umbric, Arenic, Grossarenic, Alfic, Ultic, Aeric, Typic.
	Kandiudox		Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Andic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.			Fragiaquods	Histic, Plaggeptic, Argic, Typic.
	Hapludox		Aquic Petroferric, Petroferric, Aquic Lithic, Lithic, Plinthaquic, Plinthic, Aquic, Inceptic, Andic, Humic Rhodic, Humic Xanthic, Humic, Rhodic, Xanthic, Typic.			Placaquods	Andic, Typic.
	Spodosols	Aquods	Cryaquods			Duraquods	Histic, Andic, Typic.
			Lithic, Placic, Duric, Andic, Entic, Typic.			Epiaquods	Lithic, Histic, Andic, Alfic, Ultic, Umbric, Typic.
			Alaquods			Endoaquods	Lithic, Histic, Andic, Argic, Umbric, Typic.
			Lithic, Duric, Histic, Alfic Arenic, Arenic Ultic,			Cryods	Placocryods
							Andic, Humic, Typic.
						Duricryods	Aquandic, Andic, Aquic, Oxyaquic, Humic, Typic.
						Humicryods	Lithic, Aquandic, Andic, Aquic, Oxyaquic, Typic.
						Haplocryods	Lithic, Aquandic, Andic, Aquic, Oxyaquic,

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Haplocryods (continued)	Entic, Typic.	Ultisols	Aquults	Plinthaquults	Typic. Kandic, Typic.
	Humods	Placohumods	Andic, Typic.			Fragiaquults	Aeric, Plinthic, Umbric, Typic.
		Duriumods	Andic, Typic.			Albaquults	Vertic, Kandic, Aeric, Typic.
		Fragiumods	Typic.			Kandiaquults	Acraquoxic, Arenic Plinthic, Arenic Umbric, Arenic, Grossarenic, Plinthic, Aeric, Umbric, Typic.
		Haplohumods ...	Lithic, Andic, Plaggeptic, Typic.			Kanhapl- aquults	Aquandic, Plinthic, Aeric Umbric, Aeric, Umbric, Typic.
	Orthods	Placorthods	Typic.			Paleaquults	Vertic, Arenic Plinthic, Arenic Umbric, Arenic, Grossarenic, Plinthic, Aeric, Umbric, Typic.
		Durorthods	Andic, Typic.			Umbraquults	Plinthic, Typic.
		Fragiorthods	Aquic, Alfic Oxyaquic, Oxyaquic, Plaggeptic, Alfic, Ultic, Entic, Typic.			Epiaquults	Vertic, Aeric Fragic, Arenic, Grossarenic, Fragic, Aeric, Typic.
		Alorthods	Oxyaquic, Arenic Ultic, Arenic, Entic Grossarenic, Entic, Grossarenic, Plaggeptic, Alfic, Ultic, Typic.			Endoaquults	Arenic, Grossarenic, Aeric, Typic.
		Haplorthods	Entic Lithic, Lithic, Fragiaquic, Aqualfic, Aquentic, Aquic, Alfic Oxyaquic, Oxyaquic Ultic, Fragic, Lamellic, Oxyaquic, Andic, Alfic, Ultic, Entic,				

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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
	Humults	Sombri-					Humic,
		humults	Typic.				Typic.
		Plintho-			Kandiudults	Arenic	
		humults	Typic.				Plinthaquic,
		Kandihumults ...	Andic				Aquic Arenic,
			Ombroaquic,				Arenic Plinthic,
			Ustandic,				Arenic Rhodic,
			Andic,				Arenic,
			Aquic,				Grossarenic
			Ombroaquic,				Plinthic,
			Plinthic,				Grossarenic,
			Ustic,				Acrudoxic
			Xeric,				Plinthic,
			Anthropic,				Acrudoxic,
			Typic.				Plinthaquic,
		Kanhaplo-					Aquandic,
		humults	Lithic,				Andic,
			Ustandic,				Aquic,
			Andic,				Plinthic,
			Aquic,				Ombroaquic,
			Ombroaquic,				Oxyaquic,
			Ustic,				Sombric,
			Xeric,				Rhodic,
			Anthropic,				Typic.
			Typic.		Kanhapludults ...	Lithic,	
		Palehumults	Aquandic,				Fragiaquic,
			Andic,				Arenic Plinthic,
			Aquic,				Arenic,
			Plinthic,				Acrudoxic,
			Oxyaquic,				Plinthaquic,
			Ustic,				Andic,
			Xeric,				Aquic,
			Typic.				Ombroaquic,
			Typic.				Oxyaquic,
		Haplohumults ...	Lithic,				Fragic,
			Aquandic,				Plinthic,
			Aquic,				Rhodic,
			Andic,				Typic.
			Plinthic,				
			Oxyaquic,				Paleudults
			Ustic,				Vertic,
			Xeric,				Spodic,
			Typic.				Arenic
			Typic.				Plinthaquic,
		Udults	Plinthudults				Aquic Arenic,
			Typic.				Plinthaquic,
			Fragiudults				Fragiaquic,
			Arenic,				Aquic,
			Plinthaquic,				Anthraquic,
			Glossaquic,				Oxyaquic,
			Aquic,				Lamellic,
			Plinthic,				
			Glossic,				

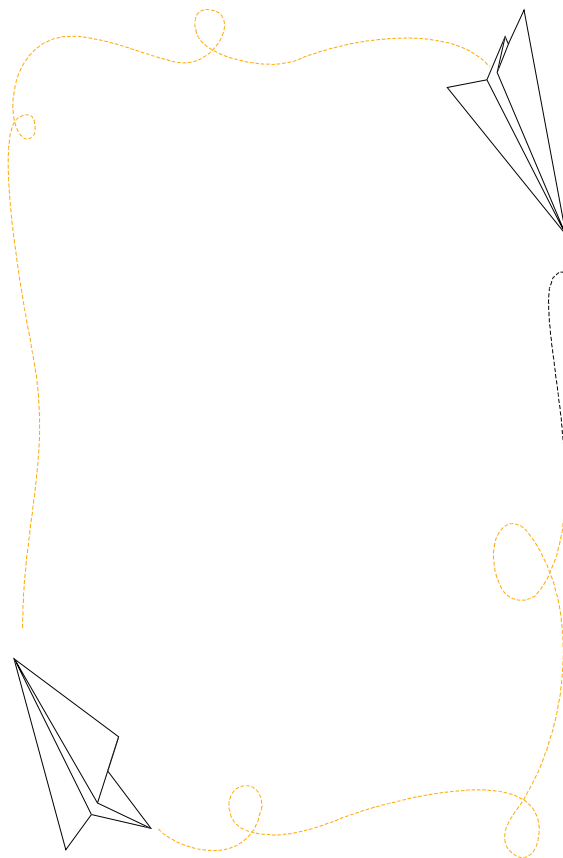
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Order	Suborder	Great Group	Subgroup	Order	Suborder	Great Group	Subgroup
		Dystraquerts	Sulfaqueptic, Aridic, Ustic, Aeric, Leptic, Entic, Chromic, Typic.			Haploxererts	Lithic, Halic, Sodic, Aridic, Aquic, Udic, Leptic, Entic, Chromic, Typic.
		Epiaquerts	Halic, Sodic, Aridic, Xeric, Ustic, Aeric, Leptic, Entic, Chromic, Typic.			Torrerts	Salitorrerts
		Endoaquerts	Halic, Sodic, Aridic, Xeric, Ustic, Aeric, Leptic, Entic, Chromic, Typic.			Gypsitorrerts	Chromic, Typic.
		Cryerts	Humicryerts			Calcitorrerts	Petrocalcic, Leptic, Entic, Chromic, Typic.
		Haplocryerts	Sodic, Chromic, Typic.			Haplotorrerts	Halic, Sodic, Leptic, Entic, Chromic, Typic.
		Xererts	Durixererts			Usterts	Dystrusterts
		Calcixererts	Lithic, Aridic, Petrocalcic, Leptic, Entic, Chromic, Typic.			Salusterts	Lithic, Sodic, Aquic, Aridic, Leptic, Entic, Chromic, Typic.
						Gypsiusterts	Lithic, Halic, Sodic, Aridic,

*Names of Orders, Suborders, Great Groups,
and Subgroups--Continued*

Order	Suborder	Great Group	Subgroup
		Gypsiusterts (continued)	Udic Leptic, Entic, Chromic, Typic.
		Calciusterts	Lithic, Halic, Sodic, Petrocalcic, Aridic, Udic, Leptic, Entic, Chromic, Typic.
		Haplusterts	Lithic, Halic, Sodic, Petrocalcic, Gpysic, Calcic, Aridic Leptic, Aridic, Leptic Udic, Entic Udic, Chromic Udic, Udic, Leptic, Entic, Chromic, Typic.
	Uderts	Dystruderts	Aquic, Oxyaquic, Leptic, Entic, Chromic, Typic.
		Hapluderts	Lithic, Aquic, Oxyaquic, Leptic, Entic, Chromic, Typic.



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