Exam III Wednesday in Class Office hours: today 12:30 – 1:30 tomorrow 10:00 – 12:00 5:00 – 5:30 E-mail to make other arrangements Soil Taxonomy and Taxonomic Names Soil Orders in Florida Entisola – Itilis development, usually A-C hotzons, ochric expedion incopiacida – A little development, usually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion incopiacida – A little more development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development, lasually A-C hotzons, ochric unbrid expedion in s. 30% incoming a little development in		
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Soil Orders

Weathering and development

slight Entisols

Histosols Inceptisols Andisols Gelisols

Aridisols Vertisols
Alfisols Mollisols
Ultisols Spodosols

Strong Oxisols

The Florida state soil is a spodosol: Myakka fine sand

Extent of Florida Soil Orders

Spodosols	8.4 million ac
Entisols	7.5
Ultisols	6.9
Alfisols	4.6
Histisols	4.0
Inceptisols	1.0
Mollisols	1.0



Myakka fine sand

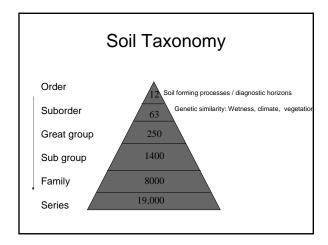
<u>Taxonomy</u>

The last syllable in the taxonomic name indicates the soil order

Apopka loamy, siliceous, hyperthermic grossarenic paleudult

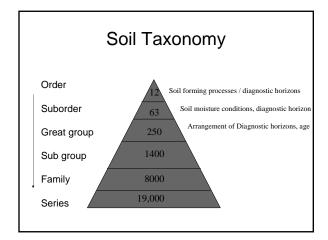
Ledwith fine, smectitic, hyperthermic mollic albaqualf

-ent -oll -od -ept



Moisture Conditions Wet Aquic - poor aeration, reduced iron Order Udic- dry < 90 total days Ustic - limited but is present Suborder Aridic- moist <90 total days Xeric - dry Dry Great group **Temperature Conditions** Sub group cold Family Cryic – icy cold Frigid – lower than 8°C Series Mesic – between 8 and 15°C Thermic – between 15 and 22°C Hyperthermic - > 22°C Hot

Suborders moisture, diagnostic horizons Suborder Examples Order Suborder very wet spodosol Aquod Udult wet ultisol Great group Udoll wet mollisol dry mollisol Xeroll Sub group Psamment sandy entisol Ochrept Family Umbrept Alboll Series



Great Groups

Based on diagnostic horizons and their arrangements or other features like age, color, texture

Arg - argillic horizon present

Pale - old

Kand - kandic horizon present Hapl - minimum horizonation

quartzi - quartz sand

Hum - humid

Order

Suborder

Great group

Sub group

Family

Series

<u>Suborder</u>	Great Group
Udult	paleudult
Aquoll	argiaquoll
Udalf	paleudalf
Udult	hapludult

Aquic – poor aeration, reduced iron Udic- dry < 90 total days

Ustic - limited but is present Aridic- moist <90 total days Xeric - dry

Order Suborder Great group Sub group Family Series

Sub group

Expresses the core concept of the great group

Moisture, sandiness, depth, color

Typic (typifies the great group) Arenic (sandy) Grossarenic (deep sandy) Aquic (aquic moisture) Rhodic (red color)

Typic hapludult Grossarenic quartzipsamment Order

Suborder

Great group

Sub group

Family

Series

<u>Families</u>

Properties important to growth of plant roots

 Particle size
 mineralogy
 temperature ∘ C

 Sandy
 Siliceous
 Frigid < 8</td>

 Loamy
 Kaolinitic
 Mesic 8-15

 Fine loamy
 Smectitic
 Thermic 15-22

 Clayey
 Oxidic
 Hyperthermic > 22

Series

Horizon number, order, thickness, texture, structure, Color, Organic matter, pH, accumulations

 Order
 Sub-order
 G. Group
 Sub-group
 Family
 Series

 Mollisol
 Aquoll
 Argiaqoll
 typic Argiaquoll
 typic argiaquoll loamy siliceous
 Brookston loamy siliceous
 Cordova Westland

Alachua County Apopka loamy, siliceous, hyperthermic grossarenic paleudult Ledwith fine, smectitic, hyperthermic mollic albaqualf Surrency loamy, siliceous, thermic, arenic paleaquult Pomona sandy, siliceous, hyperthermic, ultic, haplaquod paleudult order Suborder albaqualf great group sub-group paleaquult family haplaquod Alachua County Order paleudult Suborder Great group suborder order Great group Sub group albaqualf Family Great group suborder order Series Summary of Taxonomy Posted on Website