

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

- Entisols – little development, usually A-C horizons, ochric epipedon
- Inceptisols – A little more development, Bw horizons, ochric, umbric epipedon
- Alfisols – Argillic/Kandic horizon (Bt) less than 2 m, base saturation is > 35%
- Ultisols – Argillic/Kandic horizon (Bt) less than 2 m, base saturation is < 35%
- Mollisols – Mollic epipedon, dark, high organic matter
- Spodosols – Spodic horizon (Bh), illuvial O.M., ochric, umbric epipedon
- Histosols – Organic soil, histic epipedon

Soil Orders

Weathering and development

slight



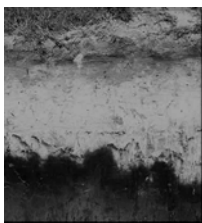
Strong

Entisols
 Histosols Inceptisols Andisols Gelisols
 Aridisols Vertisols
 Alfisols Mollisols
 Ultisols Spodosols
 Oxisols

The Florida state soil is a spodosol: Myakka fine sand

Extent of Florida Soil Orders

Spodosols	8.4 million acres
Entisols	7.5
Ultisols	6.9
Alfisols	4.6
Histosols	4.0
Inceptisols	1.0
Mollisols	1.0



Myakka fine sand

The Florida state soil is a spodosol: Myakka fine sand

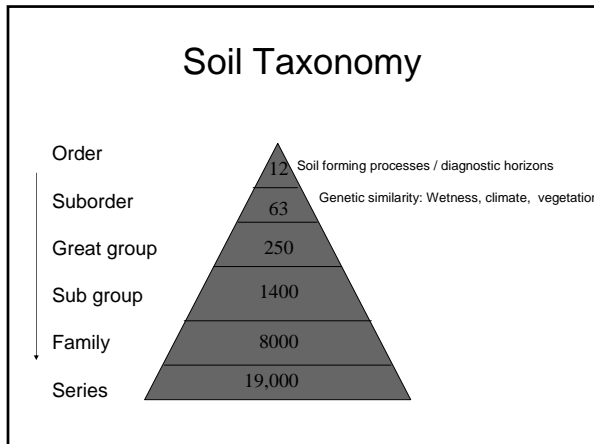
Taxonomy

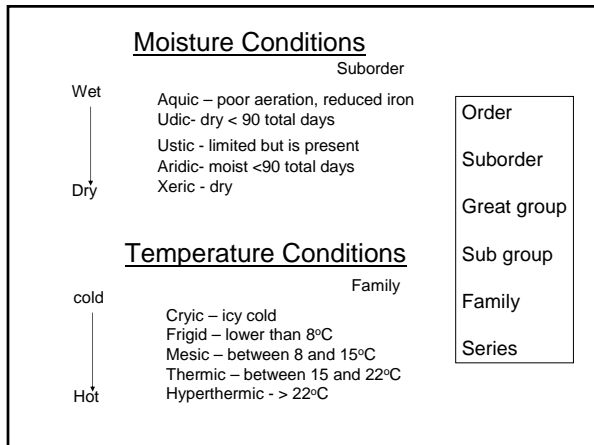
The last syllable in the taxonomic name indicates the soil order

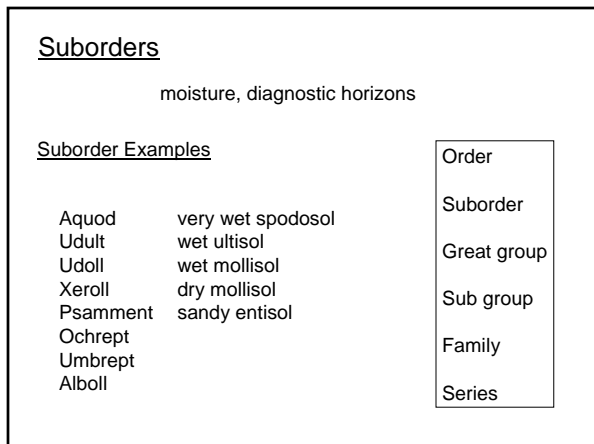
Apopka loamy, siliceous, hyperthermic grossarenic paleudult

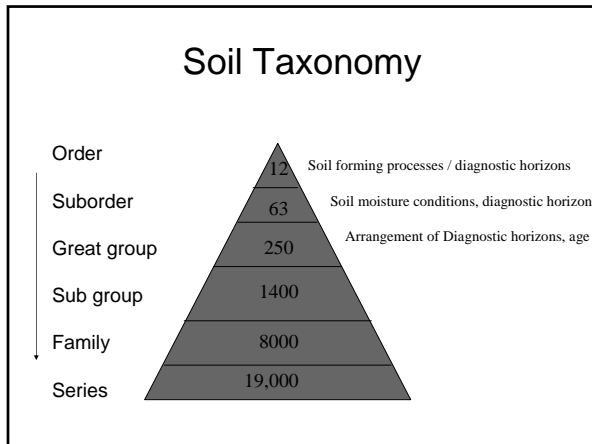
Ledwith fine, smectitic, hyperthermic mollic albaqualf

-ent -oll -od -ept









Great Groups

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

Order
Suborder
Great group
Sub group
Family
Series

Arg - argillic horizon present
 Pale - old
 Kand - kandic horizon present
 Hapl - minimum horizonation
 quartzzi – quartz sand
 Hum - humid

<u>Suborder</u>	<u>Great Group</u>	
Udult	paleudult	Order
Aquoll	argiaquoll	Suborder
Udalf	paleudalf	Great group
Udult	hapludult	Sub group
		Family
		Series

Aquic – poor aeration, reduced iron
 Udic- dry < 90 total days
 Ustic - limited but is present
 Aridic- moist <90 total days
 Xeric - dry

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

Families

Properties important to growth of plant roots

Particle size

mineralogy

temperature °C

Sandy

Loamy

Fine loamy

Clayey

Siliceous

Kaolinitic

Smectitic

Oxidic

Frigid < 8

Mesic 8-15

Thermic 15-22

Hyperthermic > 22

Series

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

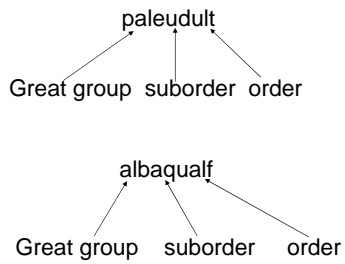
Order	Sub-order	G. Group	Sub-group	Family	Series
Mollisol	Aquoll	Argiaquoll	typic Argiaquoll	typic argiaquoll loamy siliceous	Brookston Cordova Westland

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

order	paleudult
Suborder	albaqualf
great group	
sub-group	paleaquult
family	
	haplaquod

Alachua County



- Order
- Suborder
- Great group
- Sub group
- Family
- Series

Summary of Taxonomy Posted on Website
