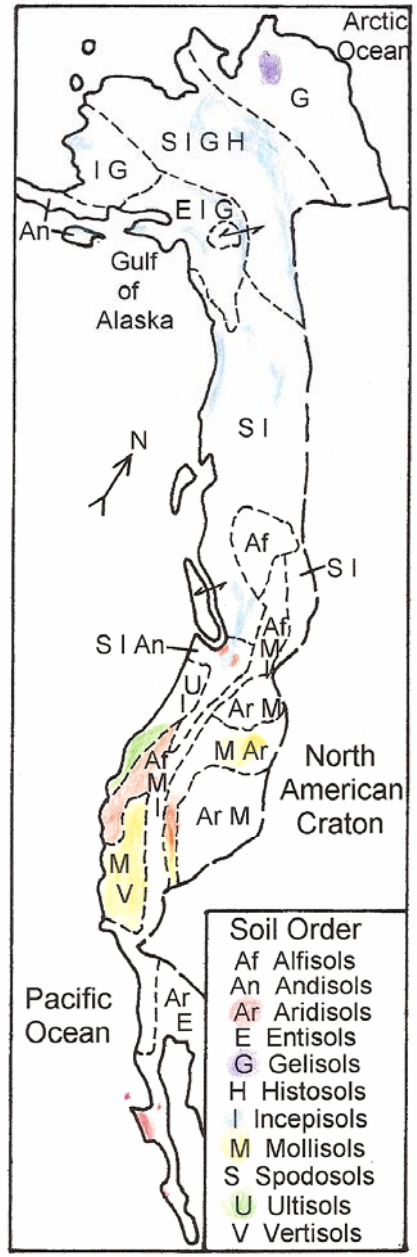
# Elusive Serpentine Ultisols

Earl B. Alexander
Soils & Geoecology

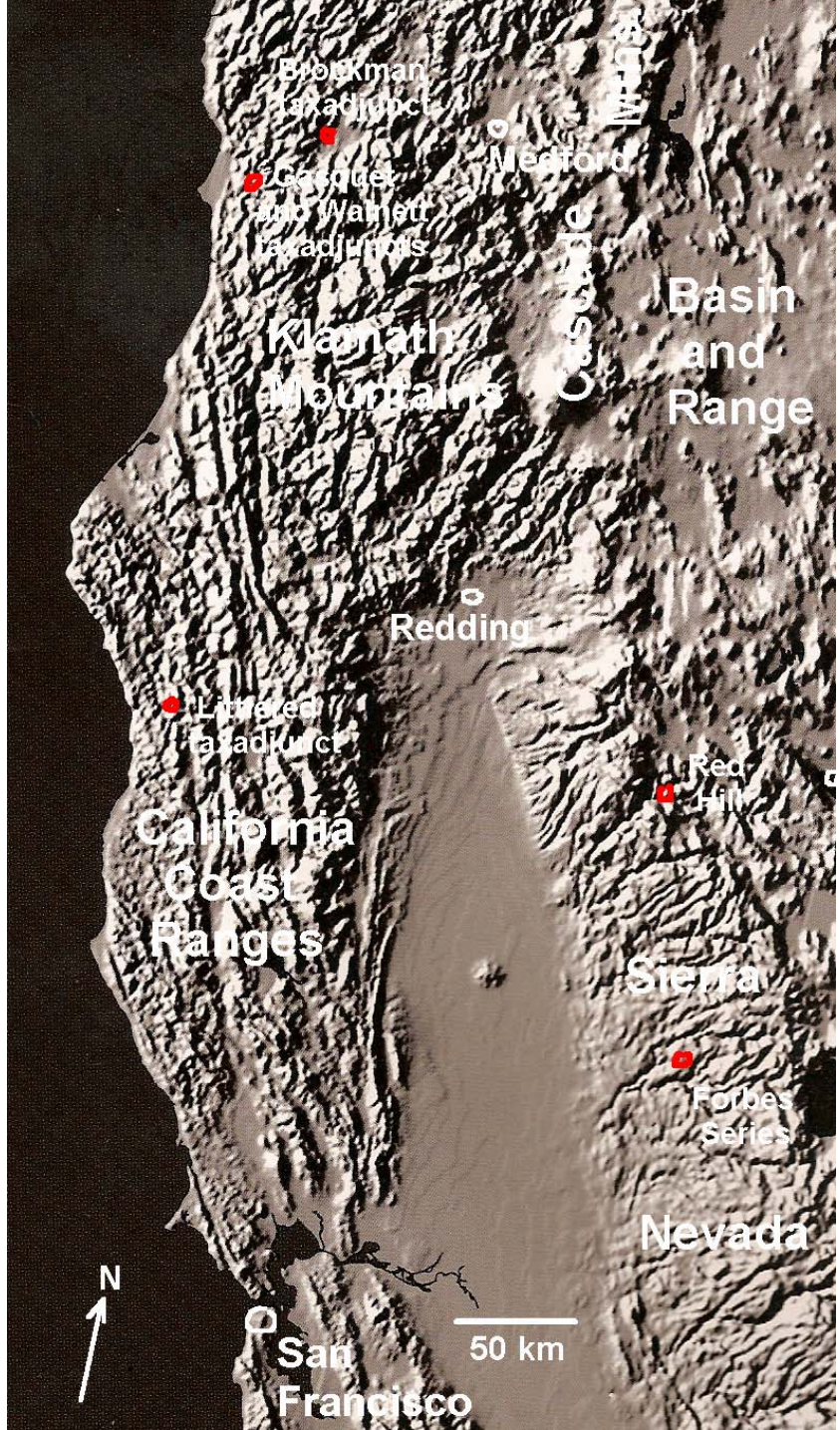
# Western North America

Accreted terranes



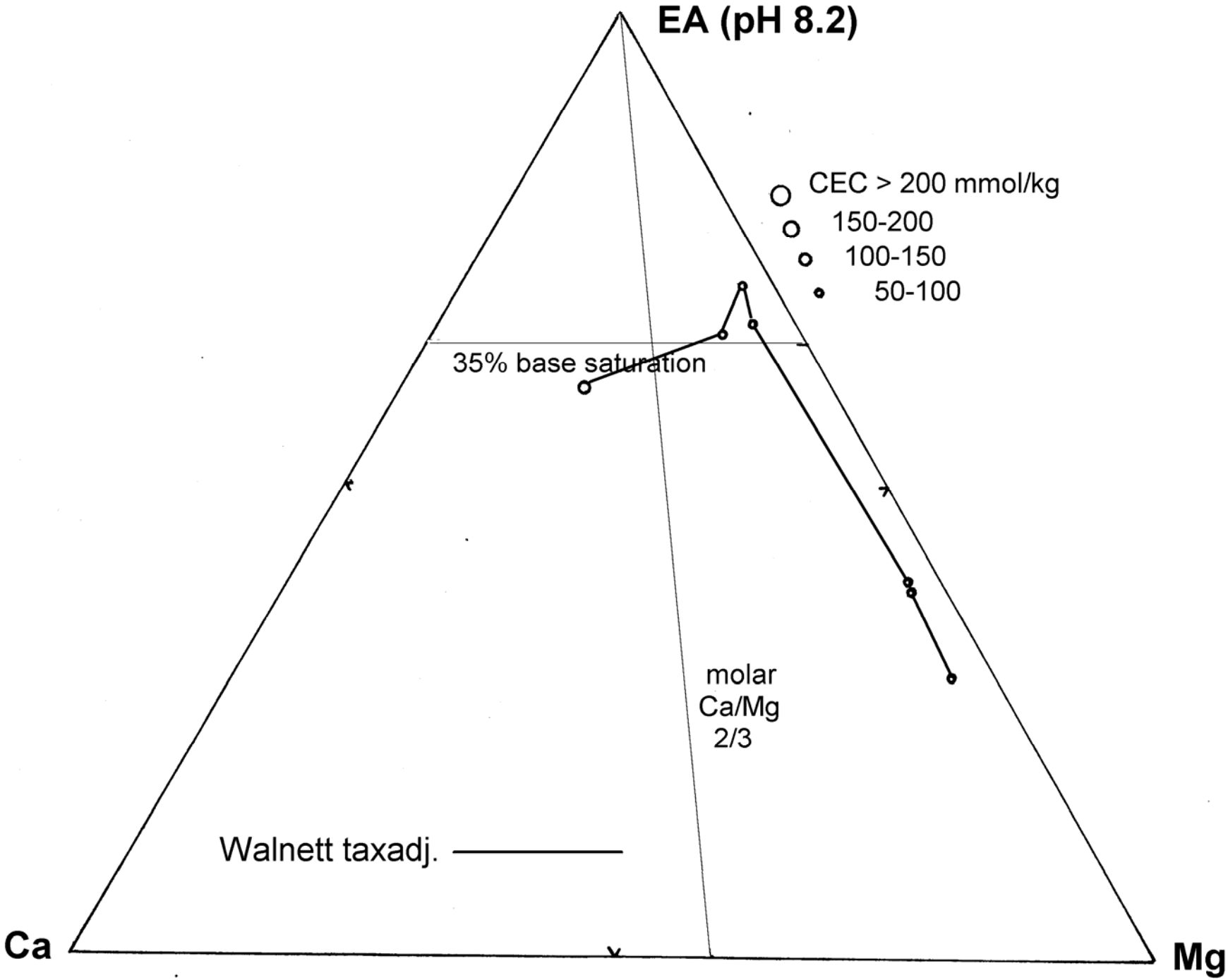

Soils of Accreted Terranes in Western North America

# Soil Pedon Sites



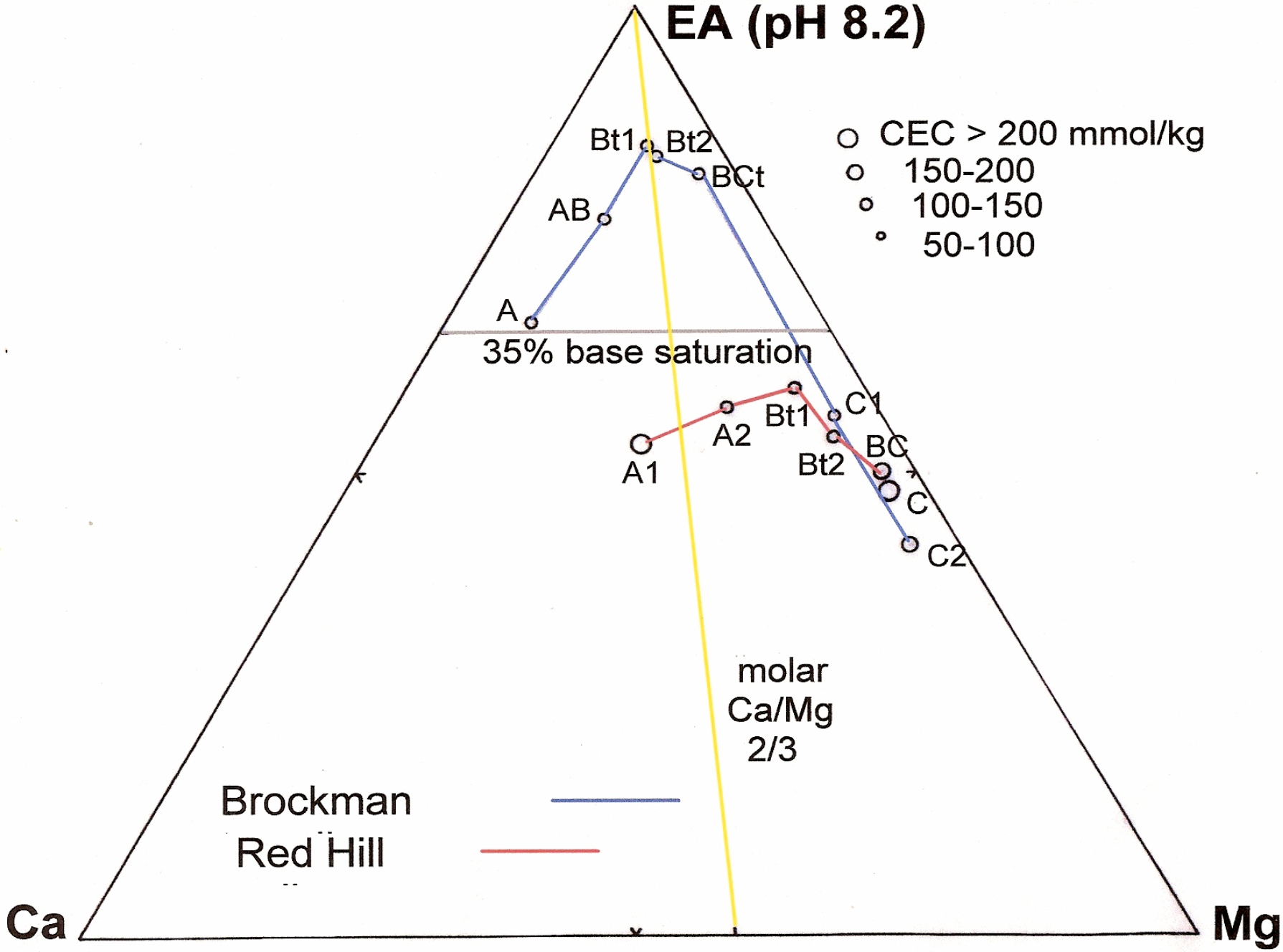
# Walnett taxadjunct

**Gasqurt Mountain**


EA (pH 8.2)
CEC > 200 mmol/kg
150-200
100-150
50-100
35% base saturation
molar
Ca/Mg
2/3
Walnett taxadj.
Ca
Mg

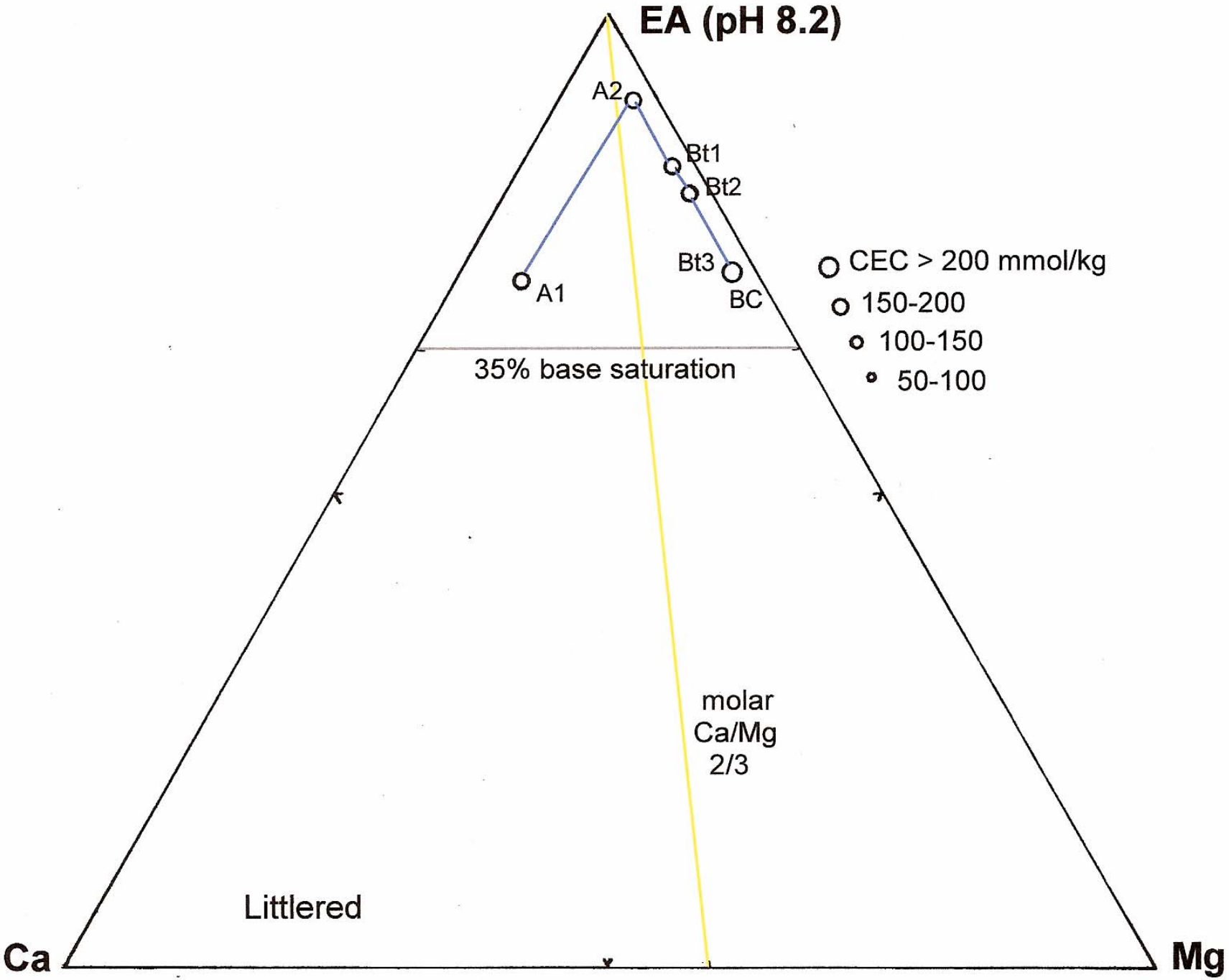
# Red Hill

Plumas National Forest

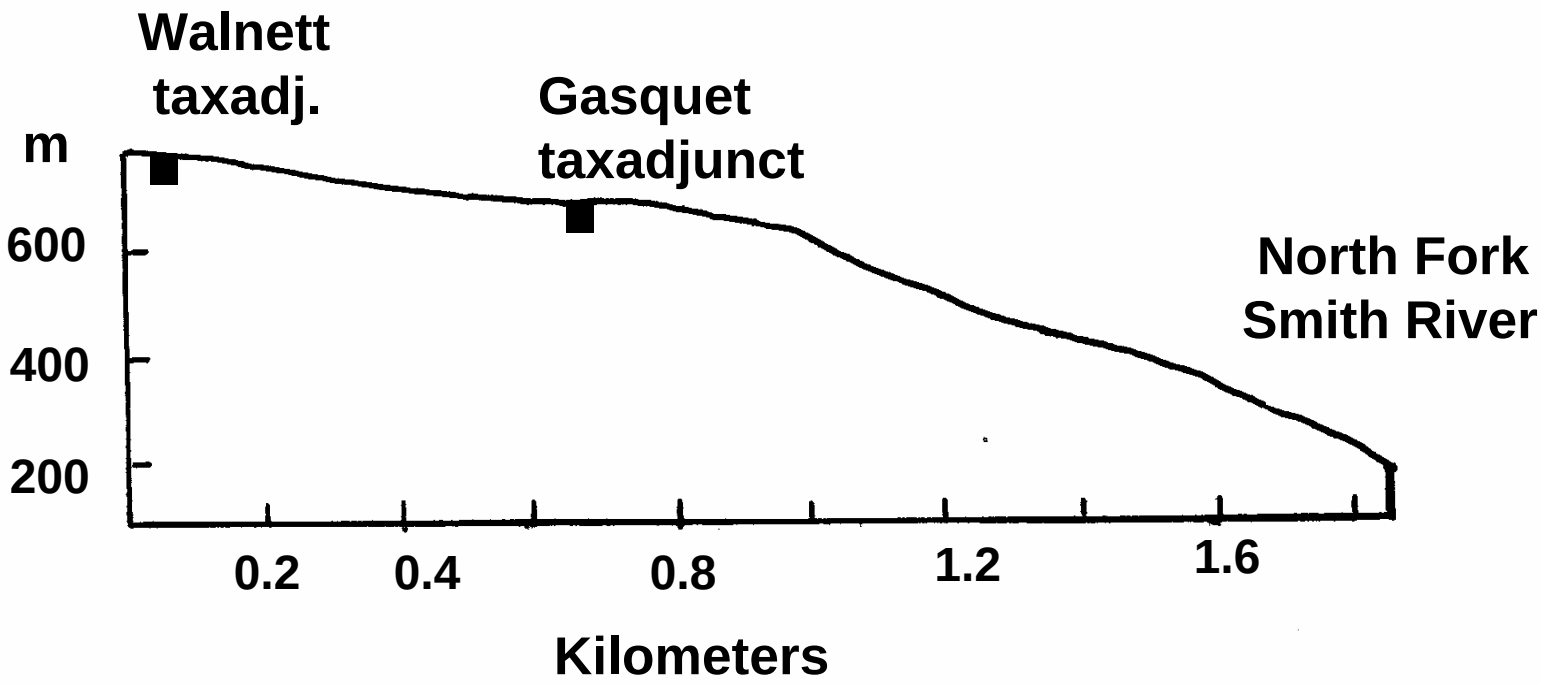

EA (pH 8.2)
CEC > 200 mmol/kg
150-200
100-150
50-100
Bt1
Bt2
BCt
AB
A
35% base saturation
A1
A2
Bt1
C1
Bt2
BC
C
C2
molar
Ca/Mg
2/3
Brockman
Red Hill
Ca
Mg

Mendocino County

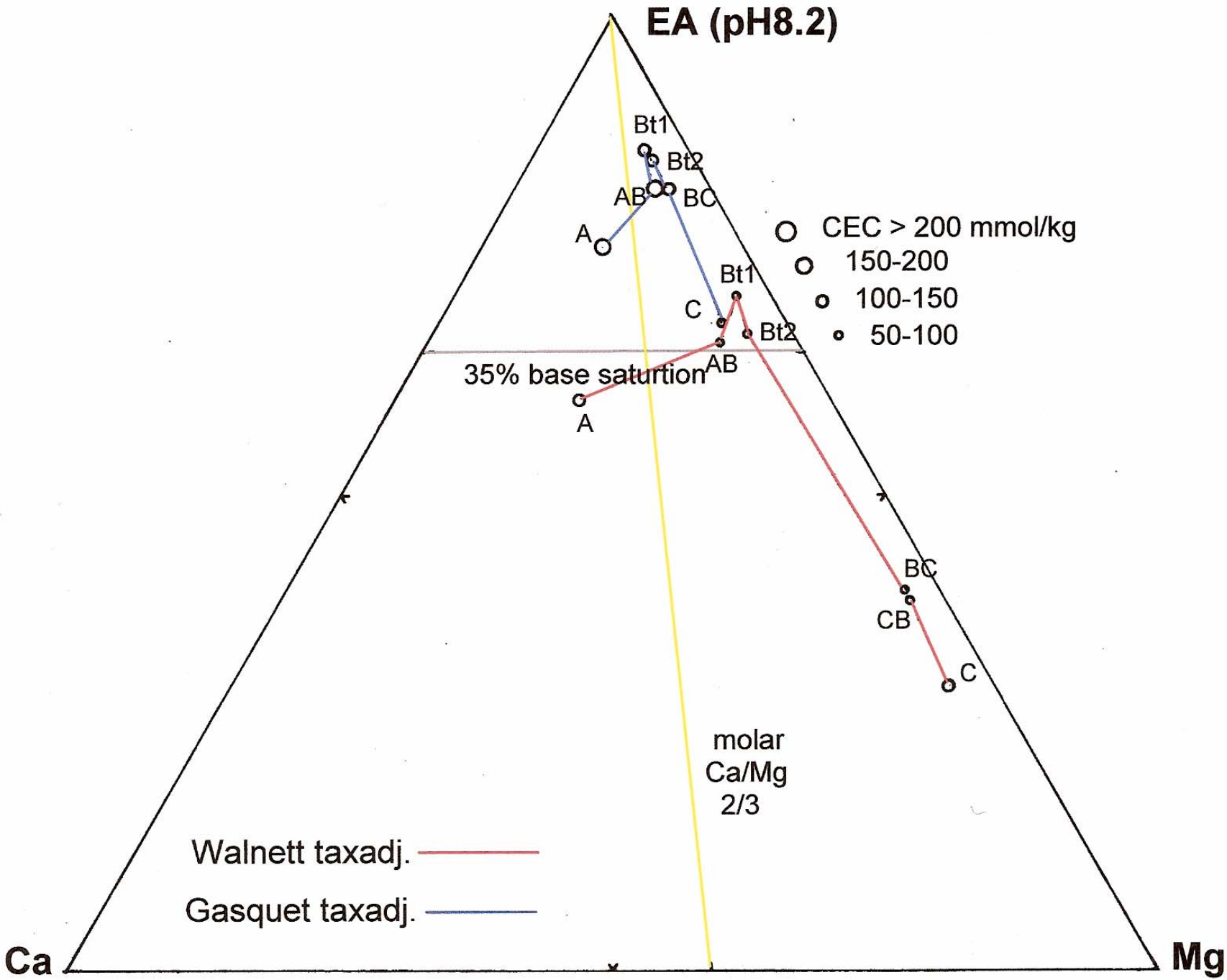
Mendocino County


EA (pH 8.2)
A2
Bt1
Bt2
Bt3
BC
A1
CEC > 200 mmol/kg
150-200
100-150
50-100
35% base saturation
molar
Ca/Mg
2/3
Littlered
Ca
Mg

# Gasquet Mountain

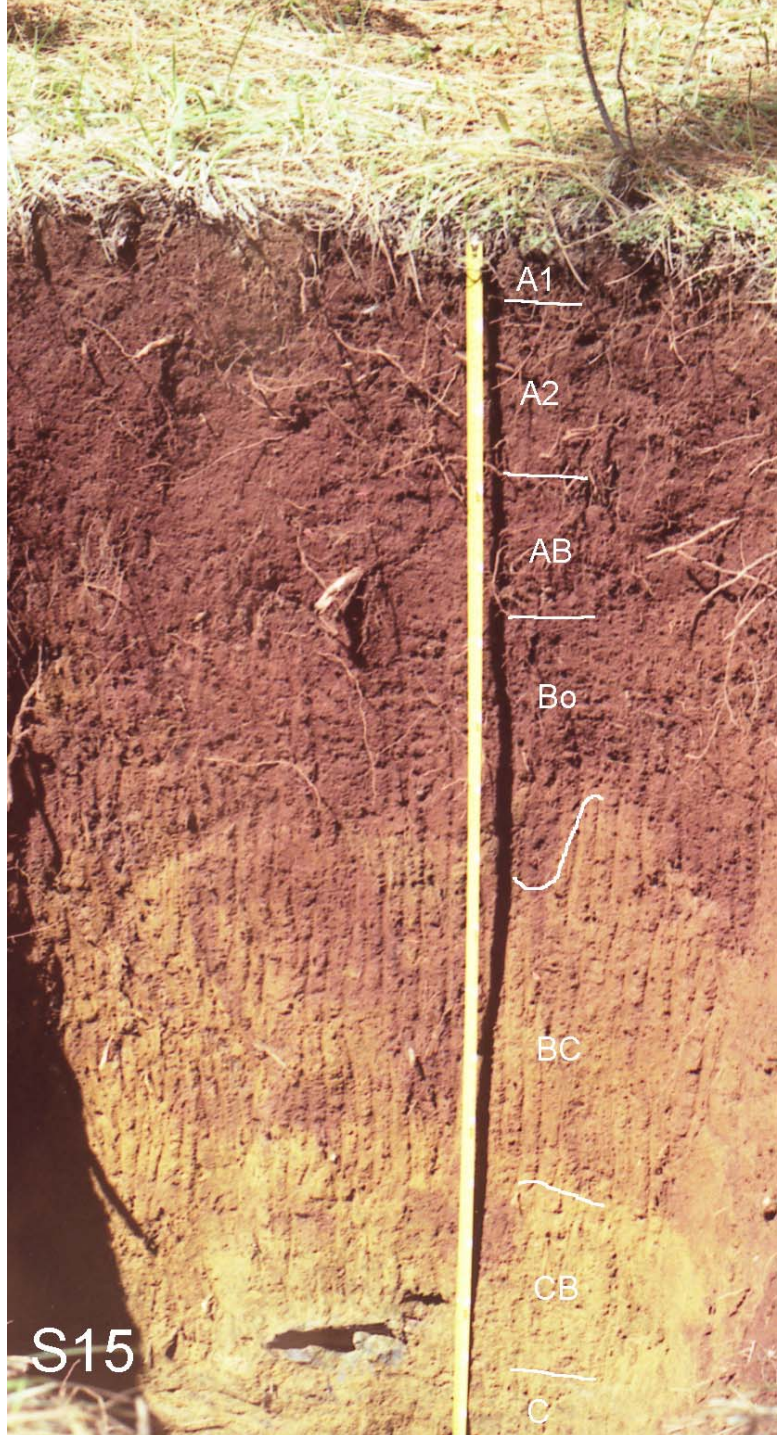


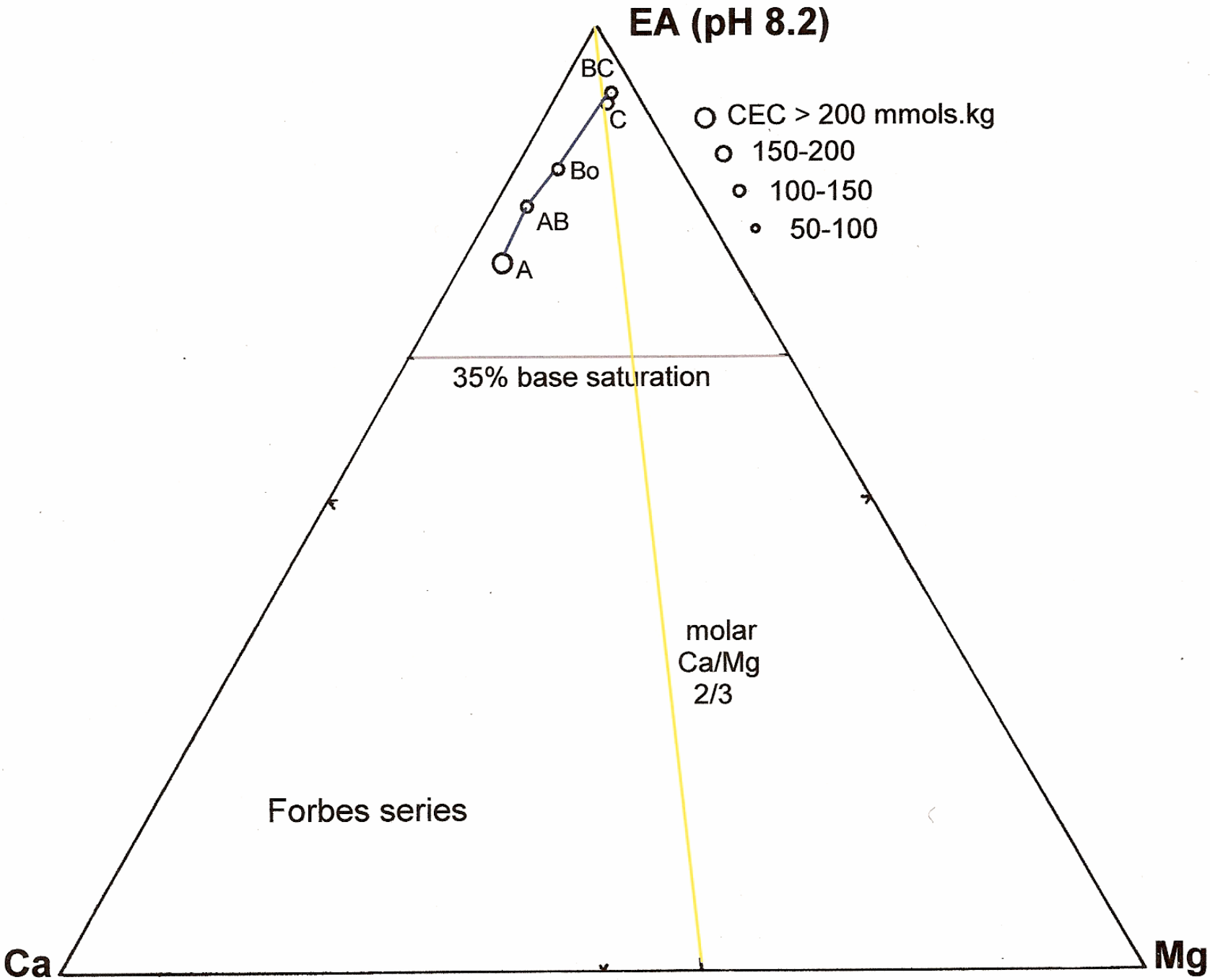
# Gasquet taxadjunct

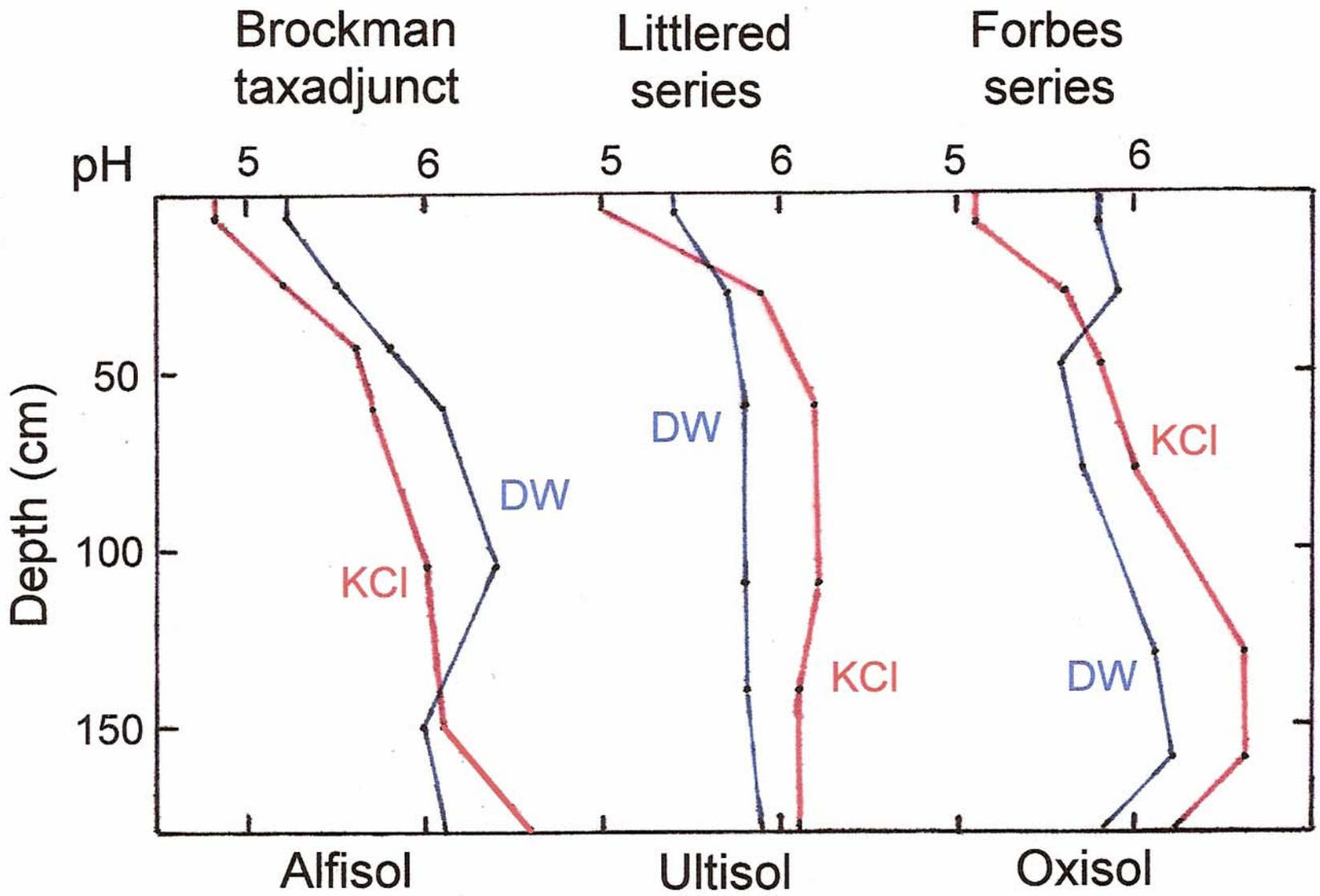

EA (pH8.2)
Bt1
Bt2
AB
BC
A
CEC > 200 mmol/kg
150-200
100-150
50-100
Bt1
C
Bt2
AB
35% base saturtion
A
BC
CB
C
molar
Ca/Mg
2/3
Walnett taxadj.
Gasquet taxadj.
Ca
Mg

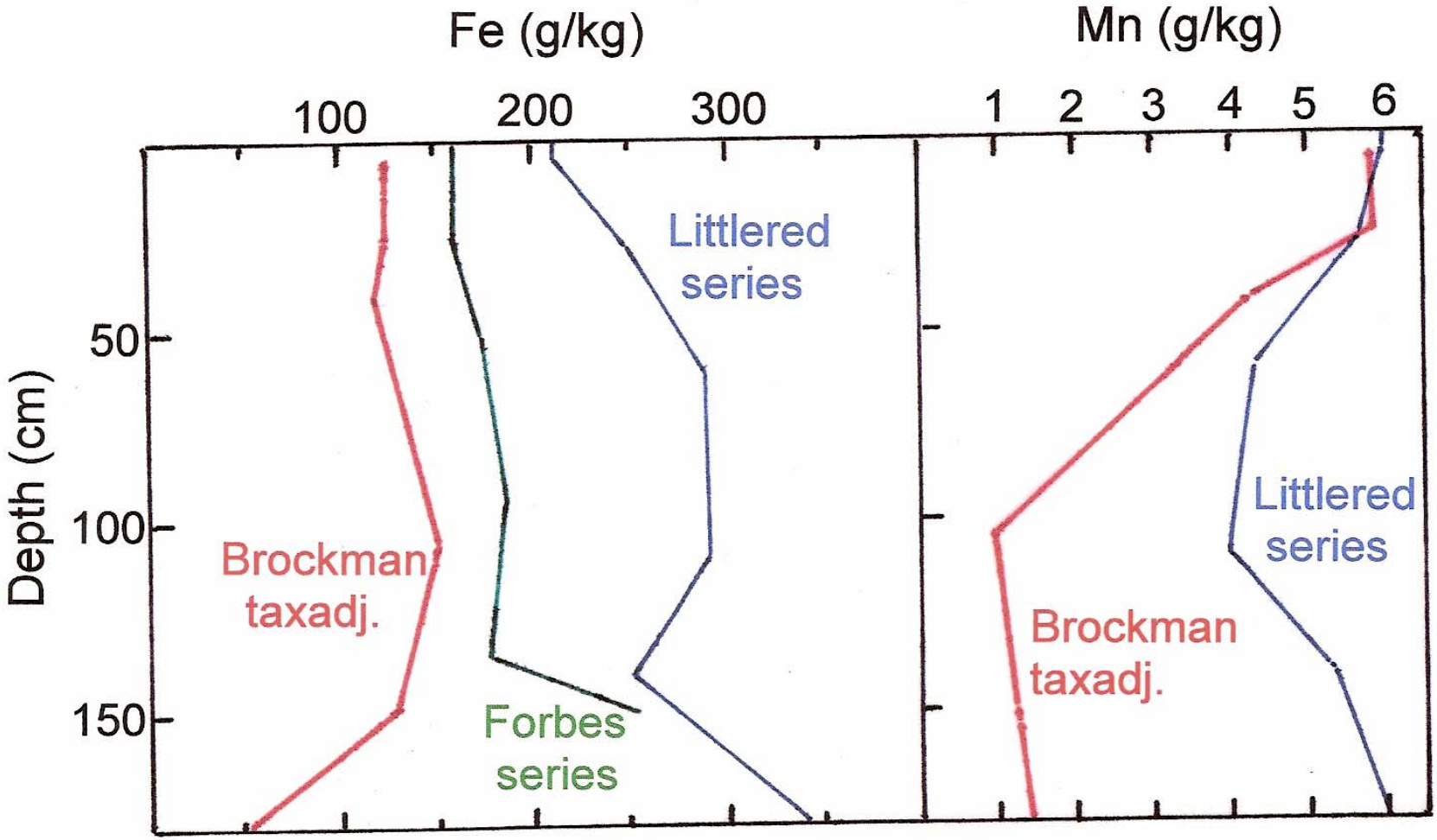
# Forbes

**Nevada County**




EA (pH 8.2)
BC
C
Bo
AB
A
CEC > 200 mmols.kg
150-200
100-150
50-100
35% base saturation
molar
Ca/Mg
2/3
Forbes series
Ca
Mg


Brockman taxadjunct
Littlered series
Forbes series
pH
5
6
5
6
5
6
Depth (cm)
50
100
150
DW
KCl
DW
KCl
KCl
DW
Alfisol
Ultisol
Oxisol


Fe (g/kg)
100
200
300
Mn (g/kg)
1
2
3
4
5
6
Depth (cm)
50
100
150
Littlered series
Brockman taxadj.
Forbes series
Littlered series
Brockman taxadj.

# Soil Classification

| Soil | Diagnostic Horizon | WRB Group | US Soil Taxonomy |
|---|---|---|---|
| Brockman taxadunct | kandic | Acrisol | Ultic Haploxeralf |
| Red Hill soil | argillic | Luvisol | Ultic Haploxeralf |
| Walnett taxadjunct | kandic | Lixisol | Ultic Haploxeralf |
| Gasquet taxadjunct | kandic | Lixisol | Xeric Kanhaplohumult |
| Littlered series | kandic | Lixisol | Xeric Kanhaplohumult |
| Forbes series | oxic | Ferralisol | Anionic Acrustox |

**Families: fine, ferruginous, mesic**