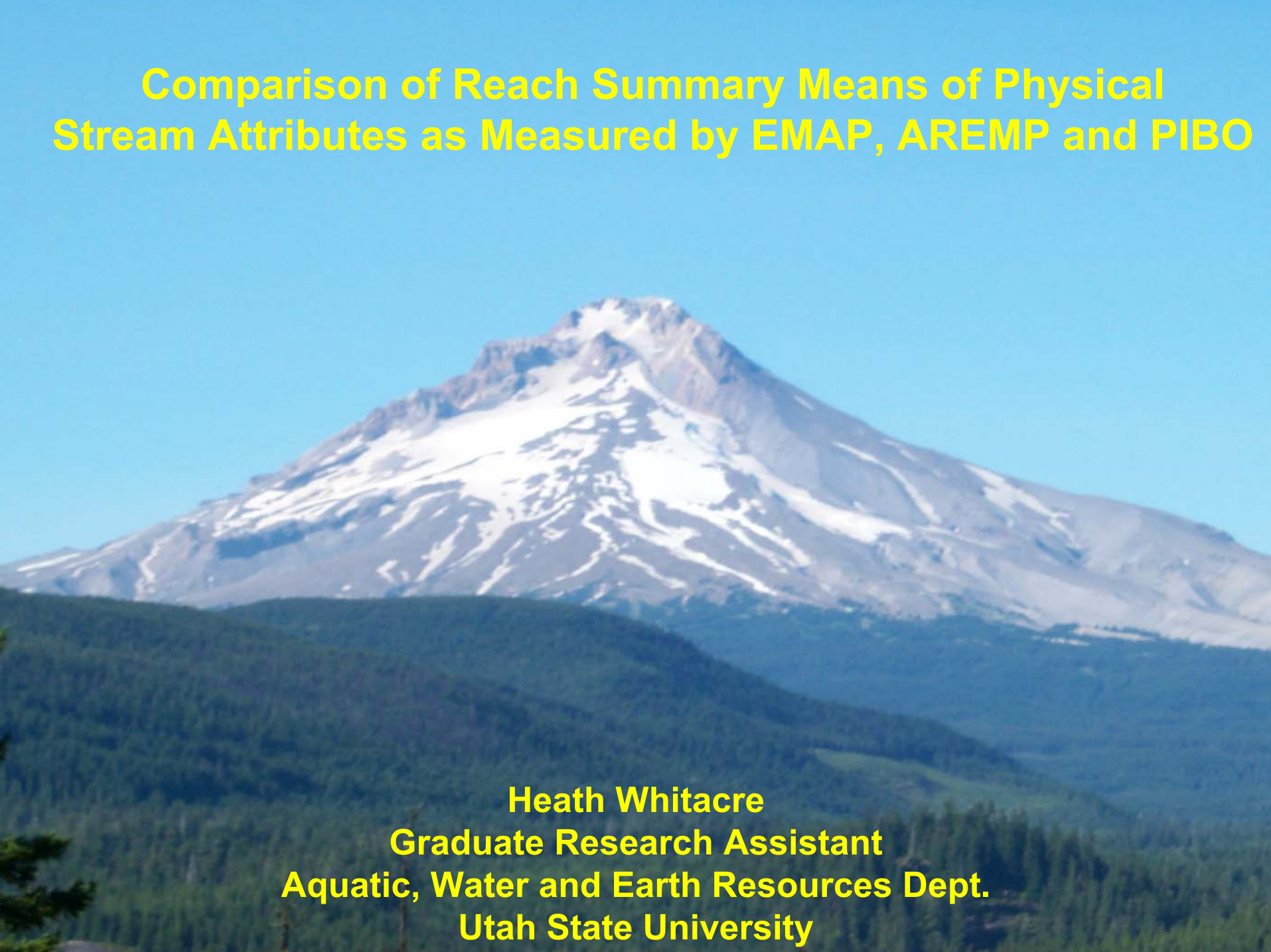
Comparison of Reach Summary Means of Physical Stream Attributes as Measured by EMAP, AREMP and PIBO



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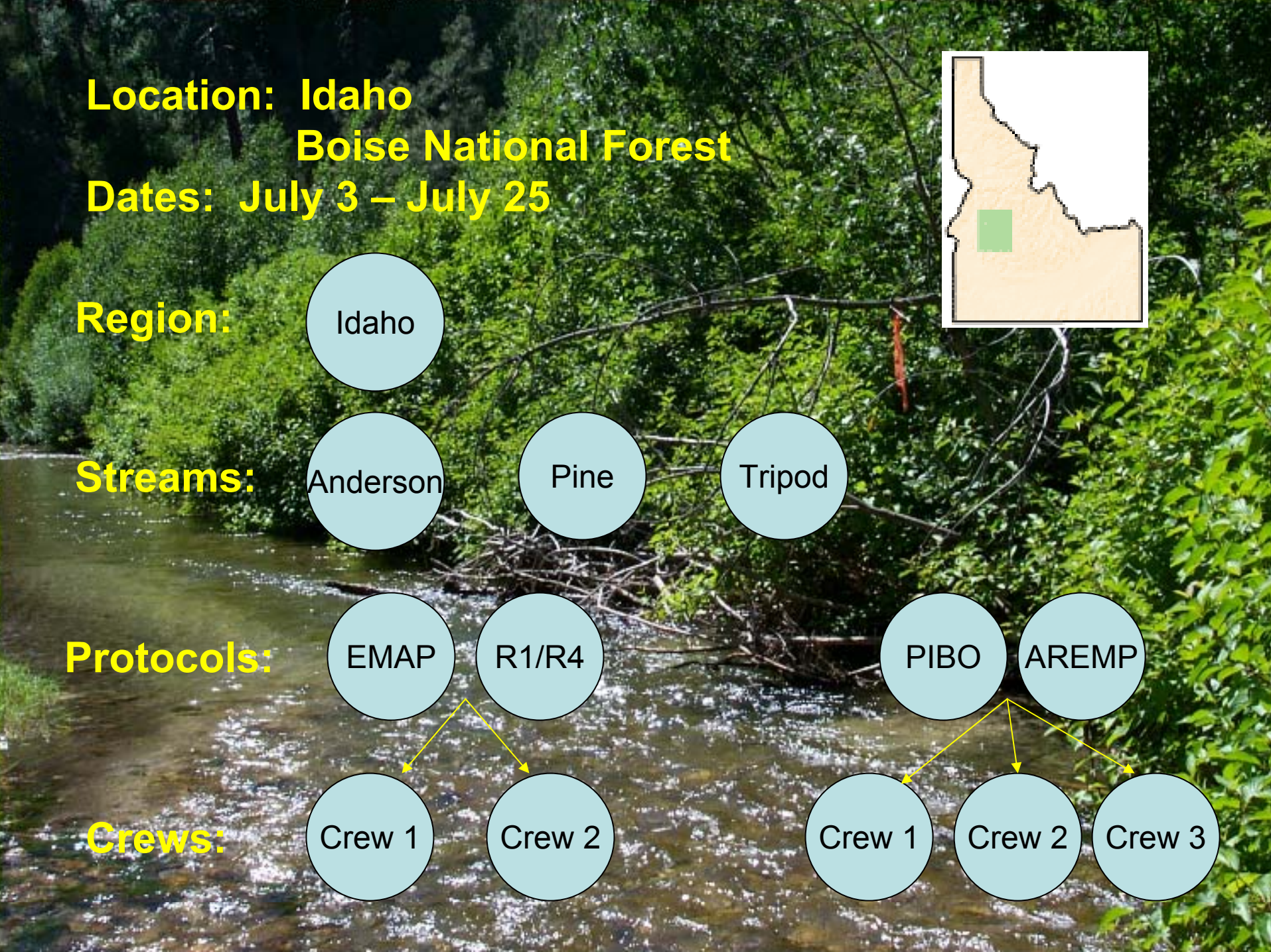
Background

What is the purpose and how does this study fit in?

Objectives

1. Provide context for discussion of repeatability among crews.
2. Present reach summary means from this summer's field effort in Idaho and Oregon.
3. Identify potential factors contributing to variable results in reach summary means.


Location: Idaho
Boise National Forest
Dates: July 3 – July 25
Region:
Idaho
Streams:
Anderson
Pine
Tripod
Protocols:
EMAP
R1/R4
PIBO
AREMP
Crews:
Crew 1
Crew 2
Crew 1
Crew 2
Crew 3

Location: Oregon
Mt. Hood National Forest
Dates: July 28 – August 20

Region: Oregon

Streams: Linney, Oak Grove, Still

Protocols: EMAP, PIBO, AREMP, R6, R10

Crews: Crew 1, Crew 2, Crew 3

Date: August 5

Types of Physical Stream Attributes

- Slope
- Sinuosity
- Bankfull Width
- Width-to-Depth Ratio
- Bank Angle
- Percent Undercut Banks
- Undercut Depth
- Percent Pools
- Pool Tail Fines
- Residual Pool Depth
- D50
- Percent Fines
- Large Woody Debris

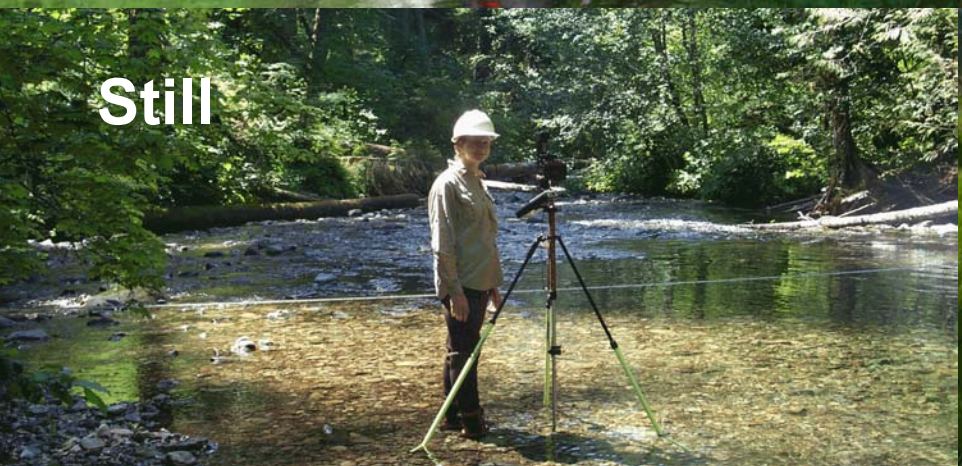
The Short List
•Slope
•Mean Bankfull Width
•Percent Pools
•D50

Linney

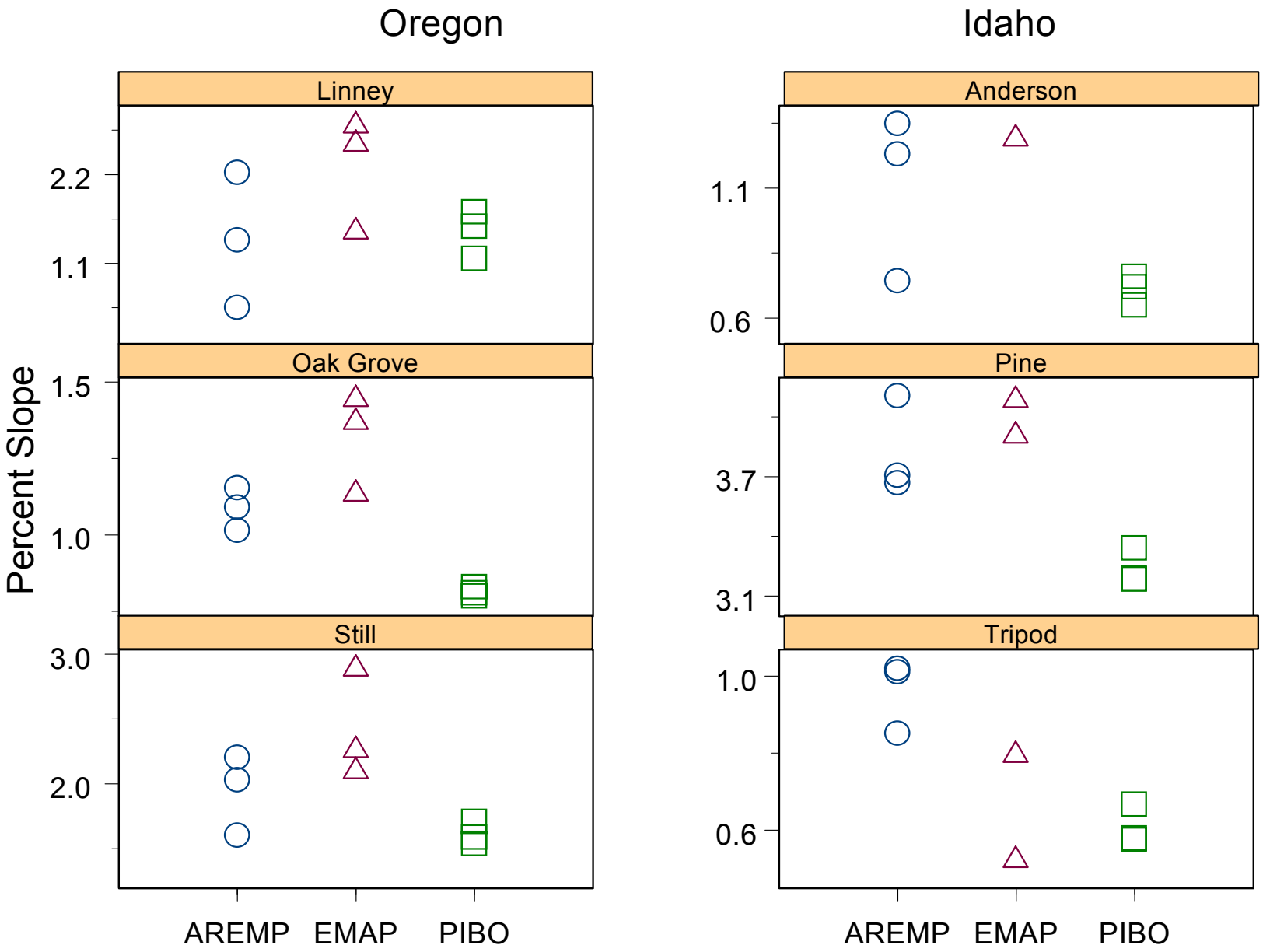
Anderson

Oak Grove

Pine

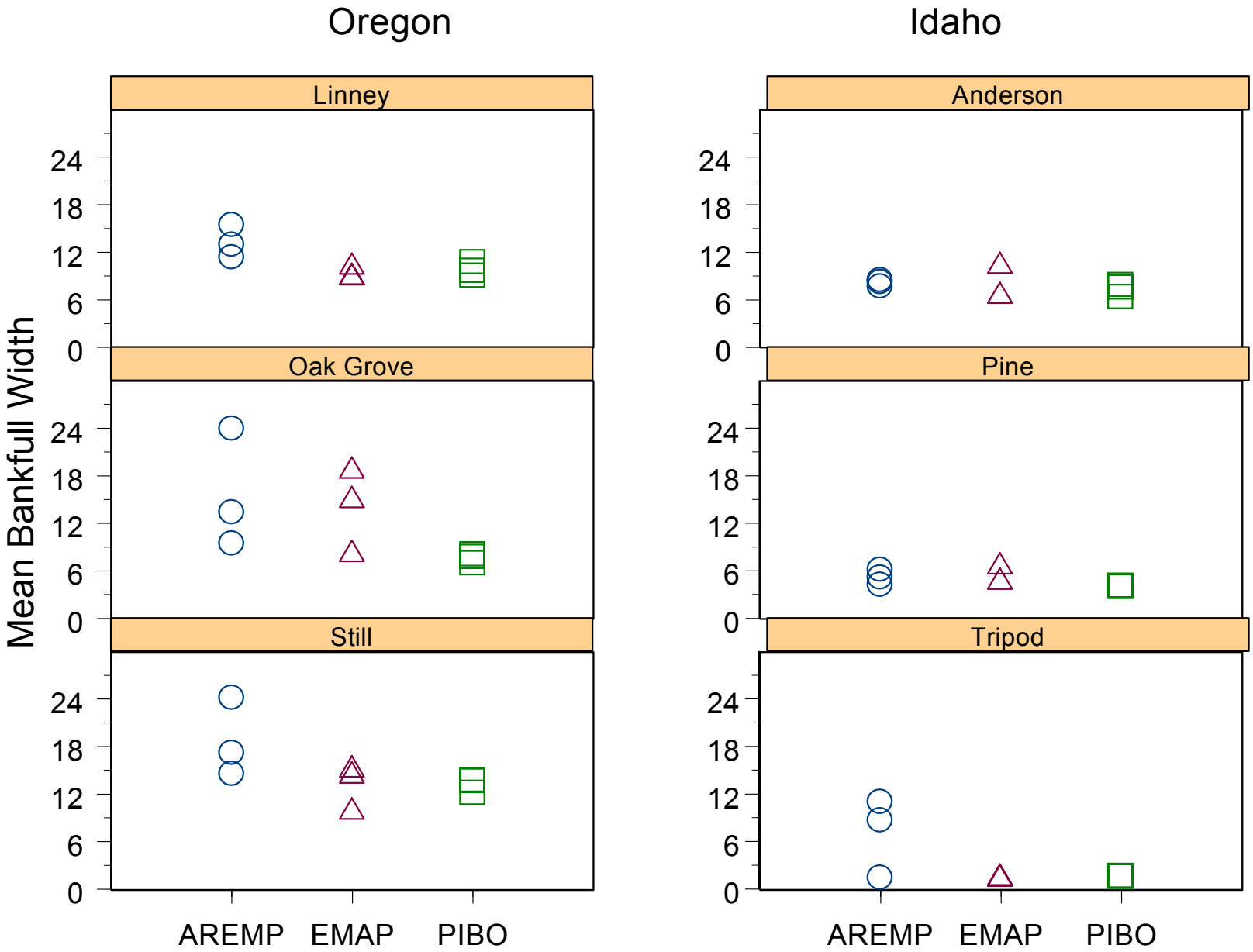

Still

Tripod


Oregon
Idaho
Linney
Oak Grove
Still
Anderson
Pine
Tripod
Percent Slope
2.2
1.1
1.5
1.0
3.0
2.0
1.1
0.6
3.7
3.1
1.0
0.6
AREMP
EMAP
PIBO
AREMP
EMAP
PIBO

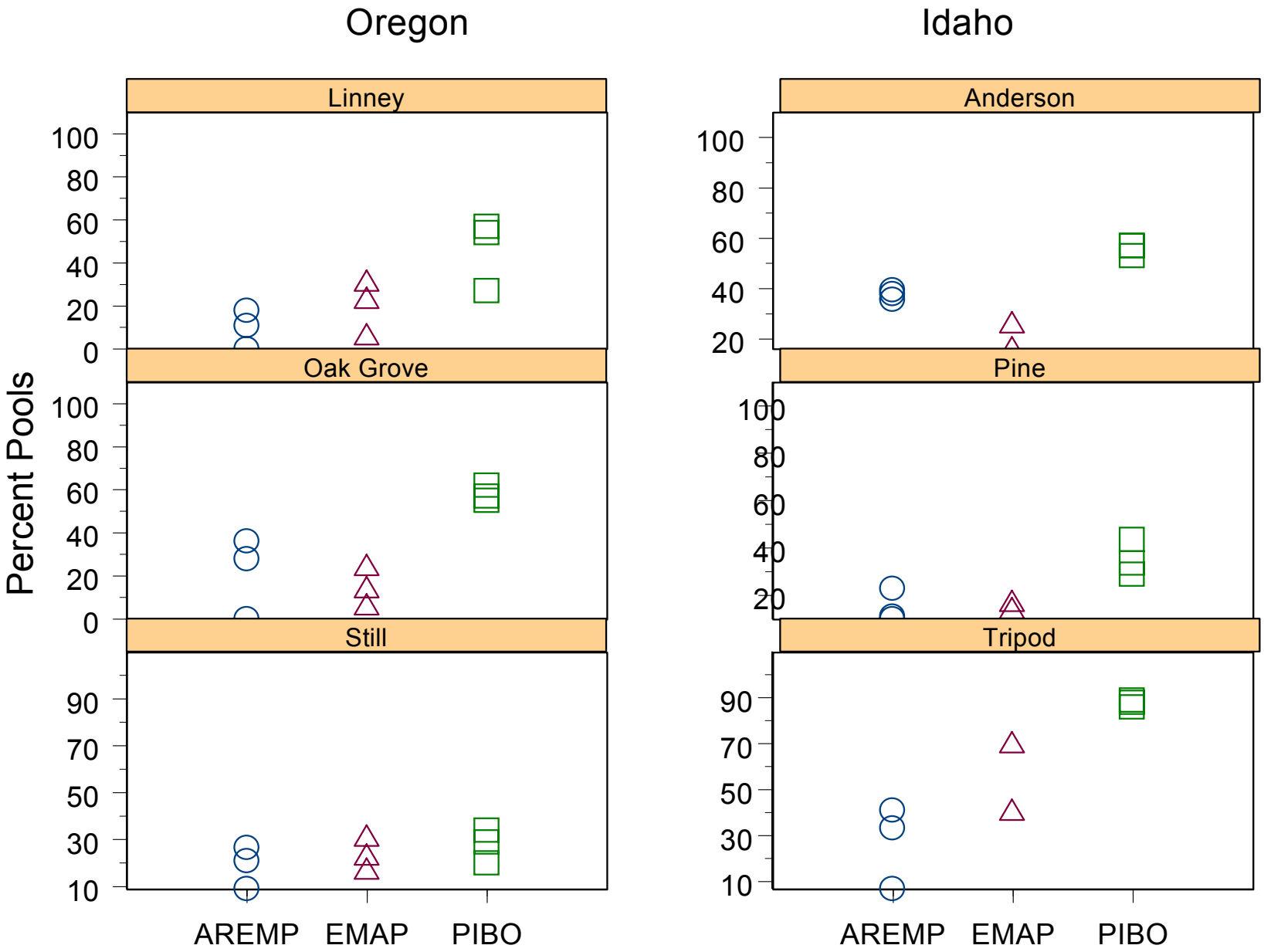
Percent Slope

Protocol	Region	Average Crew Mean	Average StdDev	Average CV
AREMP	Oregon	1.48	0.33	0.22
PIBO	Oregon	1.30	0.11	0.07
EMAP	Oregon	2.06	0.27	0.16


Oregon
Idaho
Linney
Oak Grove
Still
Anderson
Pine
Tripod
Mean Bankfull Width
0
6
12
18
24
AREMP
EMAP
PIBO

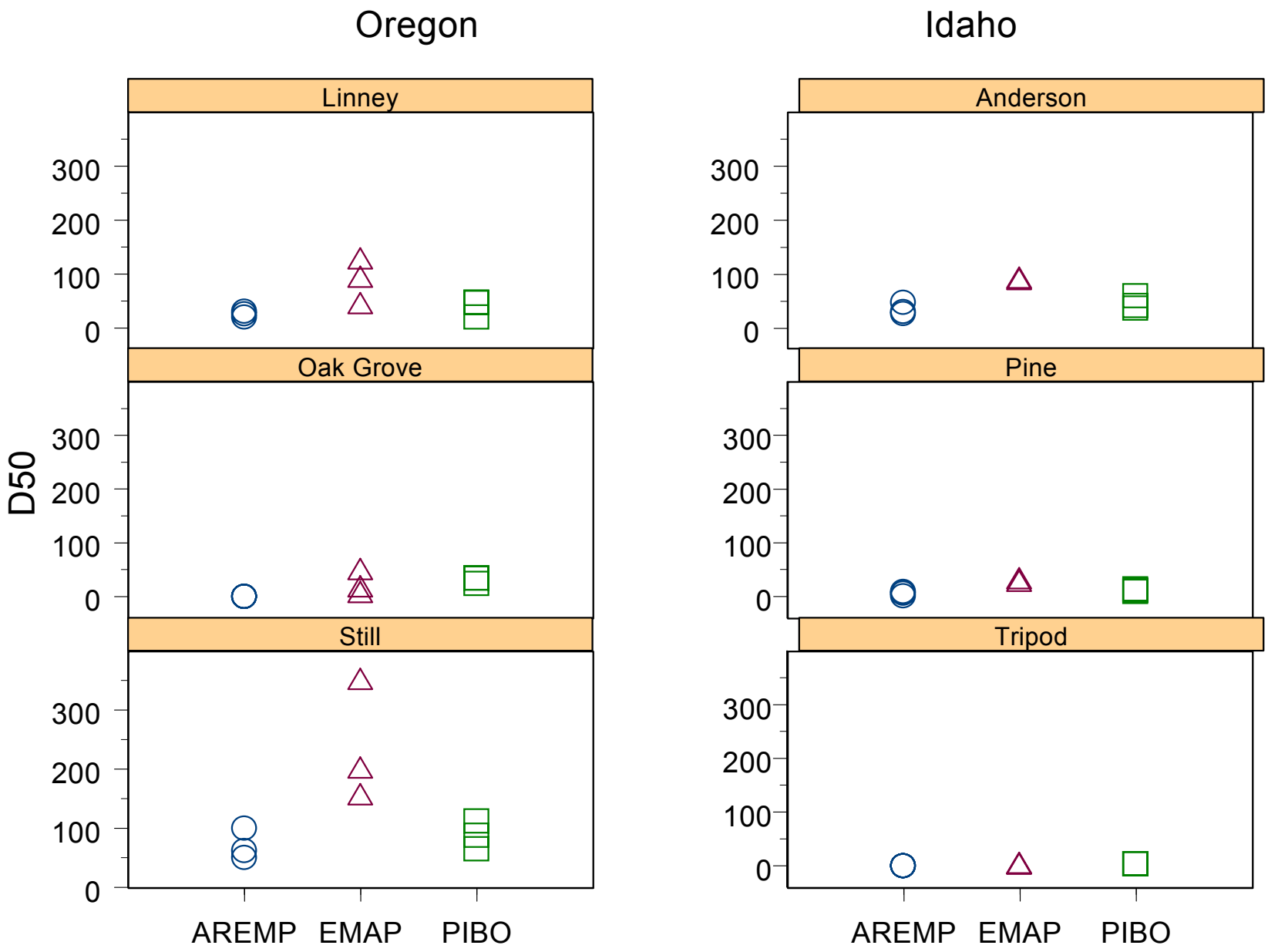
Mean Bankfull Width

Protocol	Region	Average Crew Mean	Average StdDev	Average CV
AREMP	Oregon	15.88	3.95	0.24
PIBO	Oregon	10.24	0.63	0.06
EMAP	Oregon	12.28	2.43	0.18


Oregon
Idaho
Linney
Oak Grove
Still
Anderson
Pine
Tripod
Percent Pools
AREMP
EMAP
PIBO

Percent Pools

Protocol	Region	Average Crew Mean	Average StdDev	Average CV
AREMP	Oregon	16.63	10.06	0.63
PIBO	Oregon	43.89	7.41	0.18
EMAP	Oregon	19.47	7.88	0.42


Oregon
Idaho
Linney
Oak Grove
Still
Anderson
Pine
Tripod
D50
300
200
100
0
AREMP
EMAP
PIBO

D50

Protocol	Region	Average Crew Mean	Average StdDev	Average CV
AREMP	Oregon	32.19	8.55	0.16
PIBO	Oregon	52.44	12.29	0.24
EMAP	Oregon	115.00	45.22	0.51

Conclusions

1. Data suggest Regional and “Protocol” trends.

2. Patterns of repeatability (CV’s) indicate a need to more closely integrate assessment methods between protocols.

Questions…..