Divergent causes of leaf and wood trait variation

Leaf Economics Spectrum [1]
Production vs. persistence
Trade-off between fast acquisition and conservation of resources

Wood Economics Spectrum [2]
Efficiency vs. safety
Trade-off between mechanical support and hydraulic safety

Plant Economics Spectrum [3]

Is there an integrated axis of nutrient concentrations across the whole plant?

1 STUDY AREA

Studied areas

2 SAMPLING
Measurements of equivalent traits in leaf and branch

LMA, C, Ca, K, Mg, N, Na, P, WD,

3 ANALYSIS
Multilevel models for variance partitioning

Species effect (SE)
Environment effect (EE)

4 VARIANCE PARTITIONING
Leaf traits are mainly driven by variation among species

Most wood traits are mediated by local environmental properties (e.g. soil cation status)

5 TRAIT COORDINATION
Partial coordination across organs depends on site environmental conditions

Inter-organ trade-offs seem to operate independently across species

References

4. Patiño, S. et al. Biogeosciences 6, 545-5681 (20)

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