



Science to Management Forum: Overcoming Obstacles to Variable Retention in Forest Management

September 25-27, 2007

Prince George, BC

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This event was made possible with the support and collaboration of



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**SUSTAINABLE FOREST
MANAGEMENT NETWORK**
RÉSEAU DE GESTION
DURABLE DES FORÊTS

FOREST BIRDS AND RETENTION LEVELS

A SYNTHESIS OF STUDIES

David Huggard

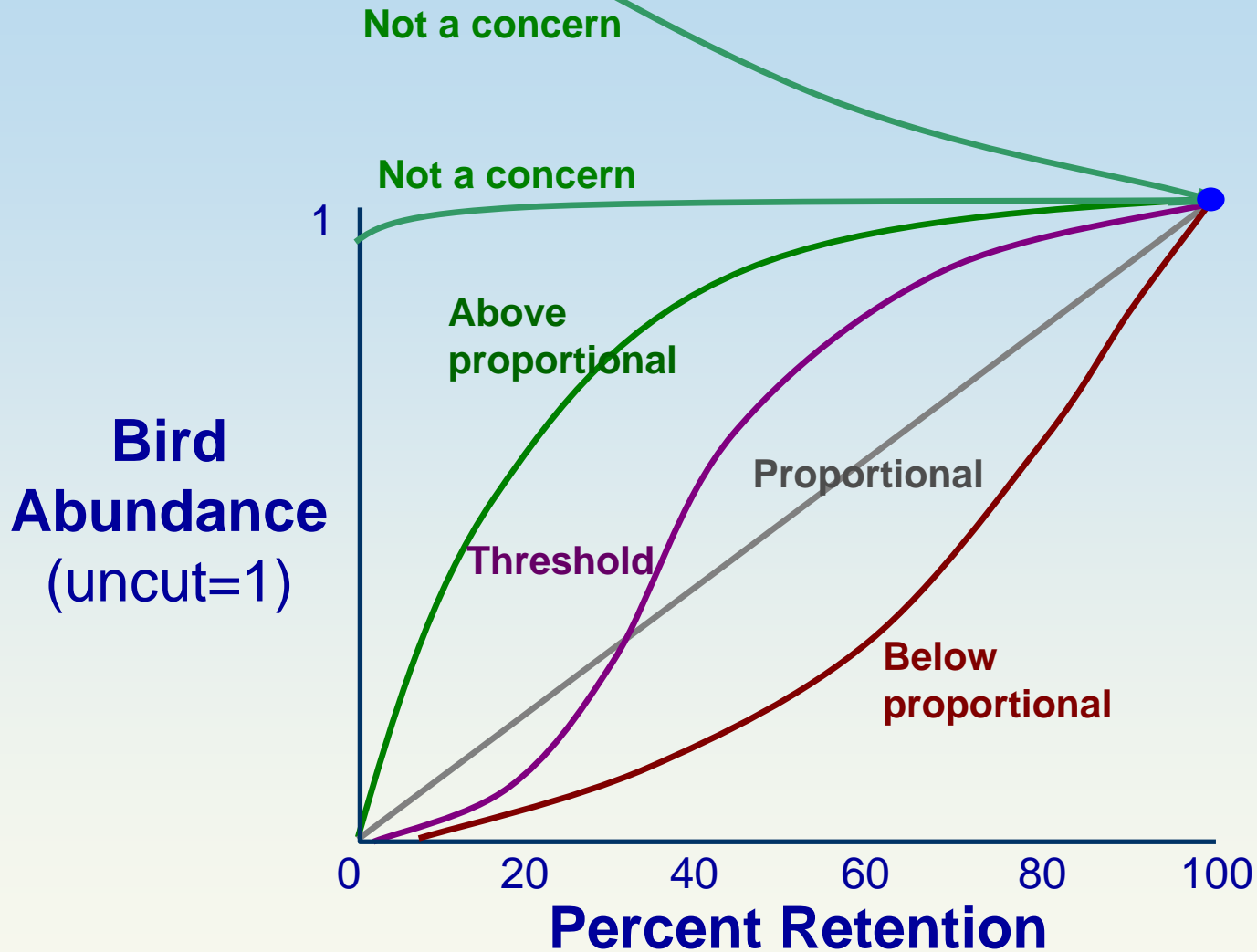
Consultant and CACR, UBC

Forest Birds and Retention Levels



Pix: Bill Beese, MB/Weyerhaeuser/etc.

Forest Birds and Retention Levels



Forest Birds and Retention Levels

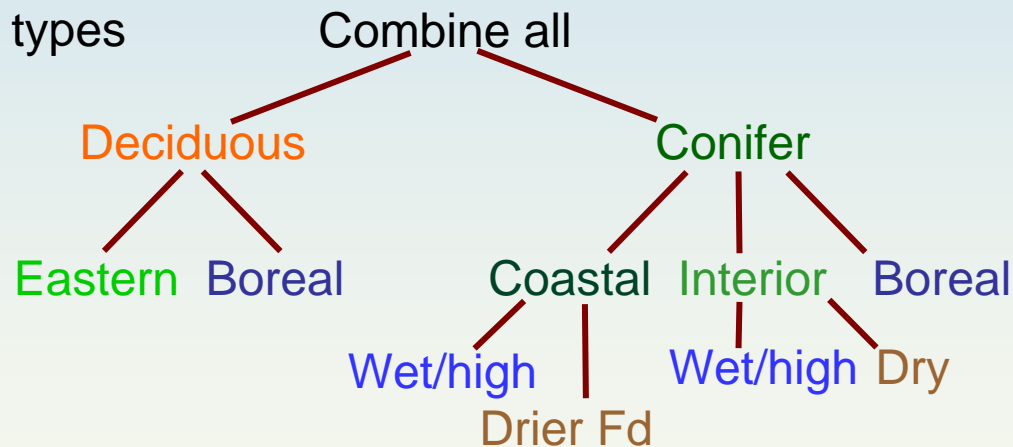
Methods

- 100's of studies → 51 studies with species abundances in partial retention and uncut
- 176 treatment means (0-88% ret'n + uncut)
- 69 forest-dwelling species in >4 retention levels

Comparisons

→ Dispersed vs group retention

→ Ecosystem types



→ Summer vs winter

...lots of stats...





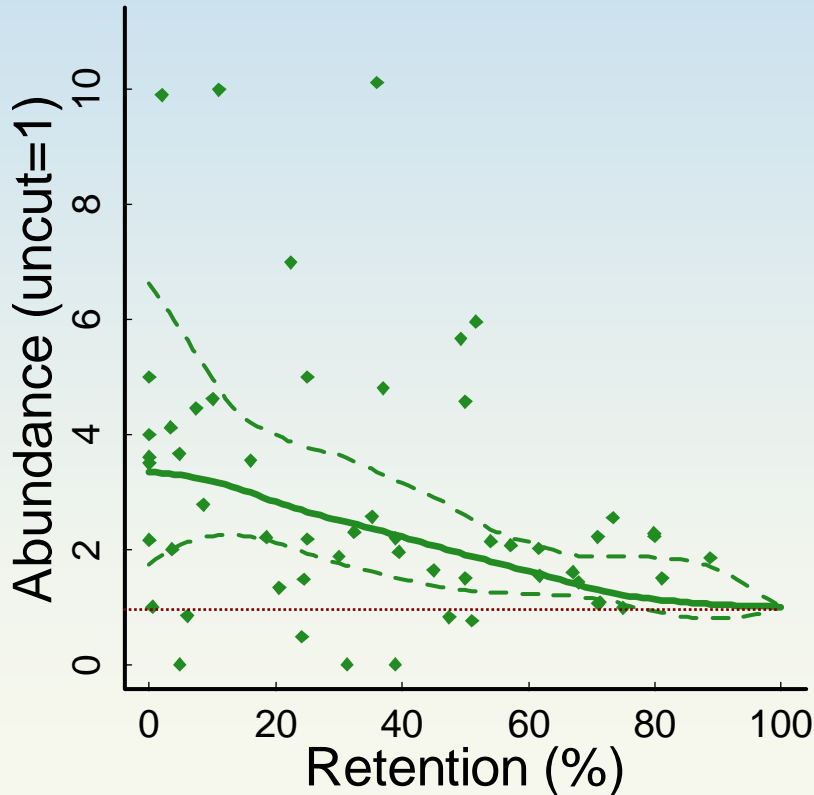
Forest Birds and Retention Levels

Examples of species' response curves

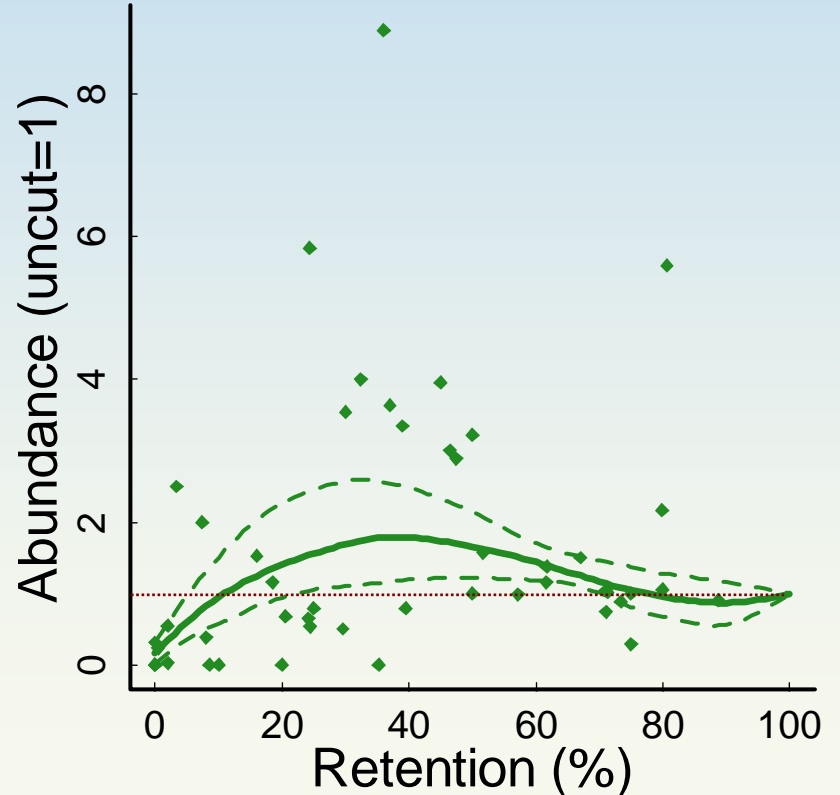
Increasing

Positive, except at low retention

American Robin



Western Tanager



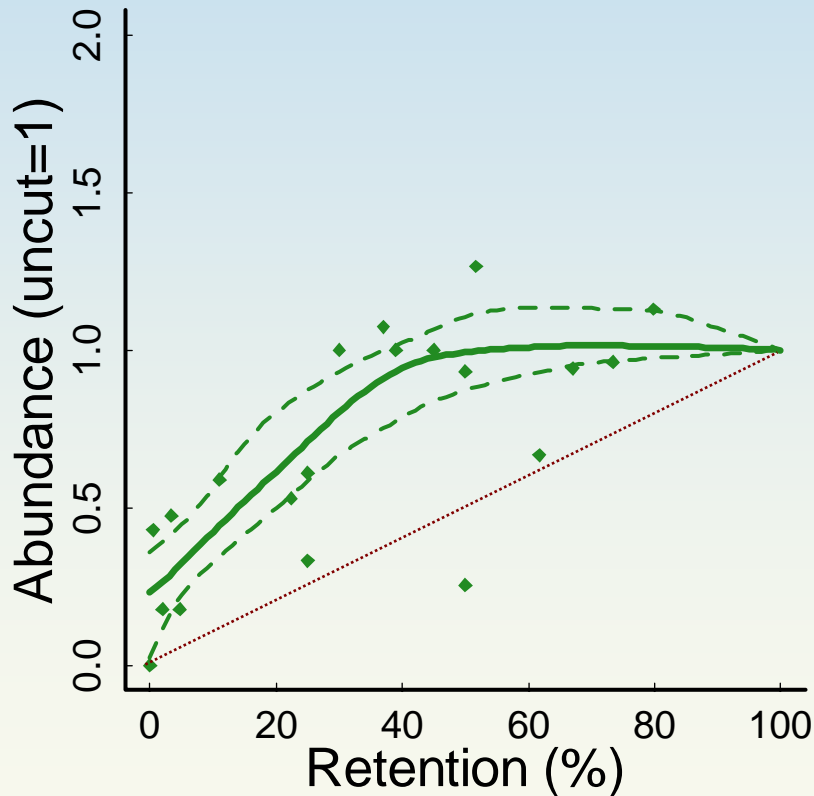


Forest Birds and Retention Levels

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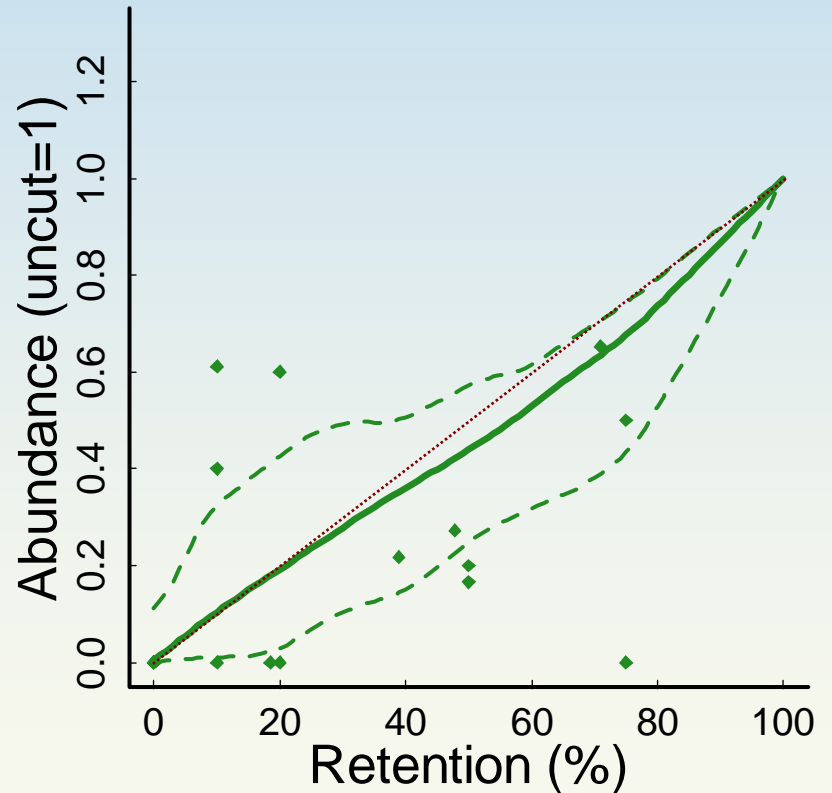
Above proportional

Chestnut-backed Chickadee



Proportional

Boreal Chickadee

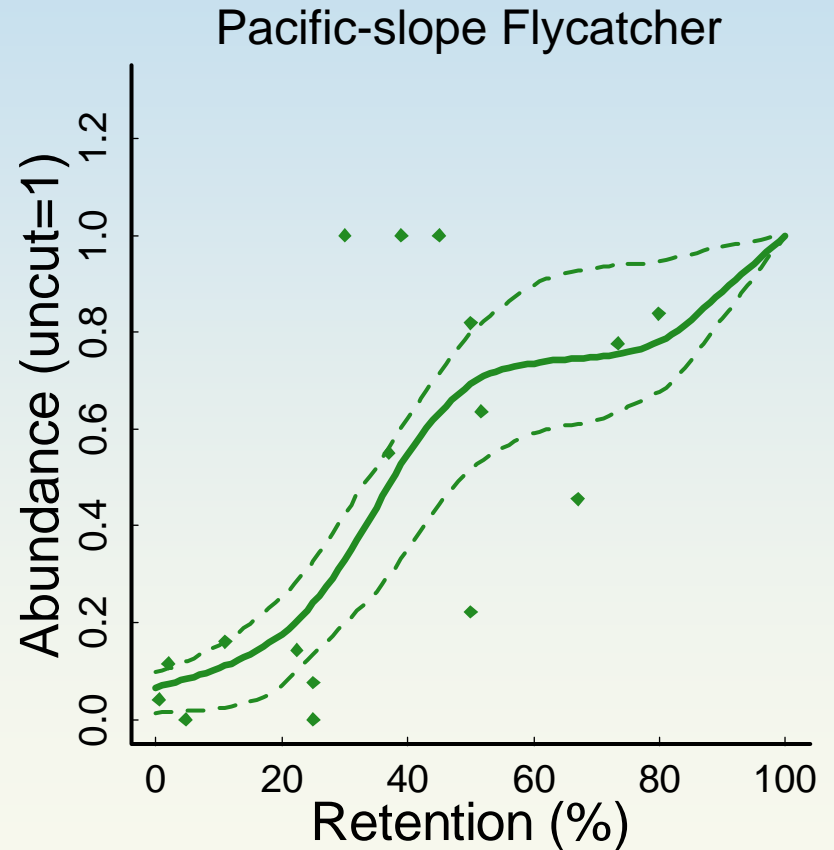
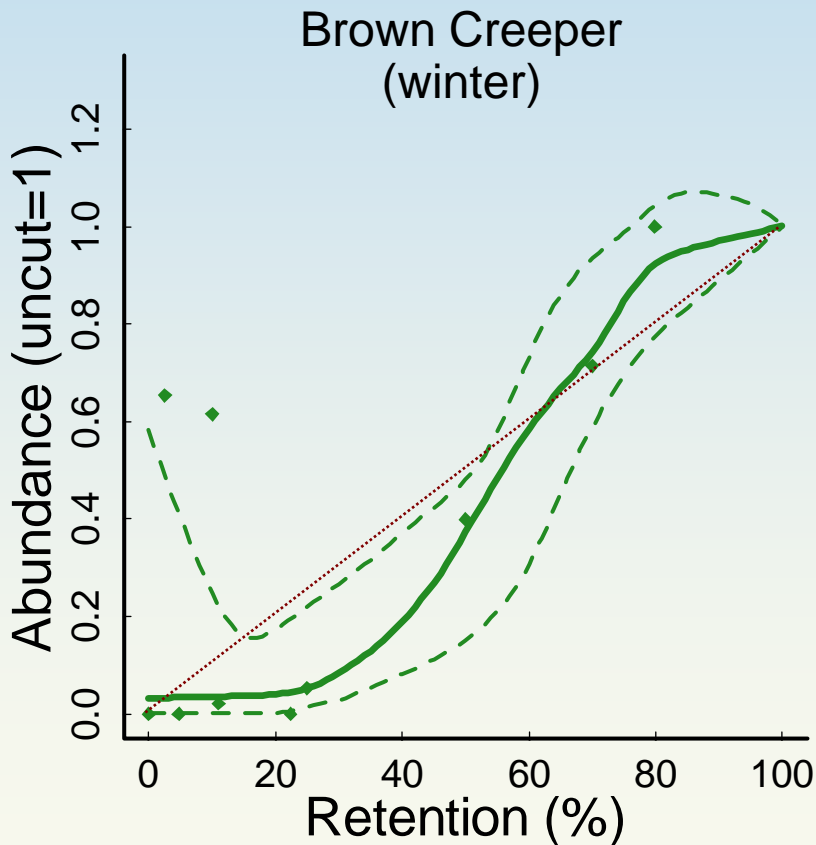


Forest Birds and Retention Levels

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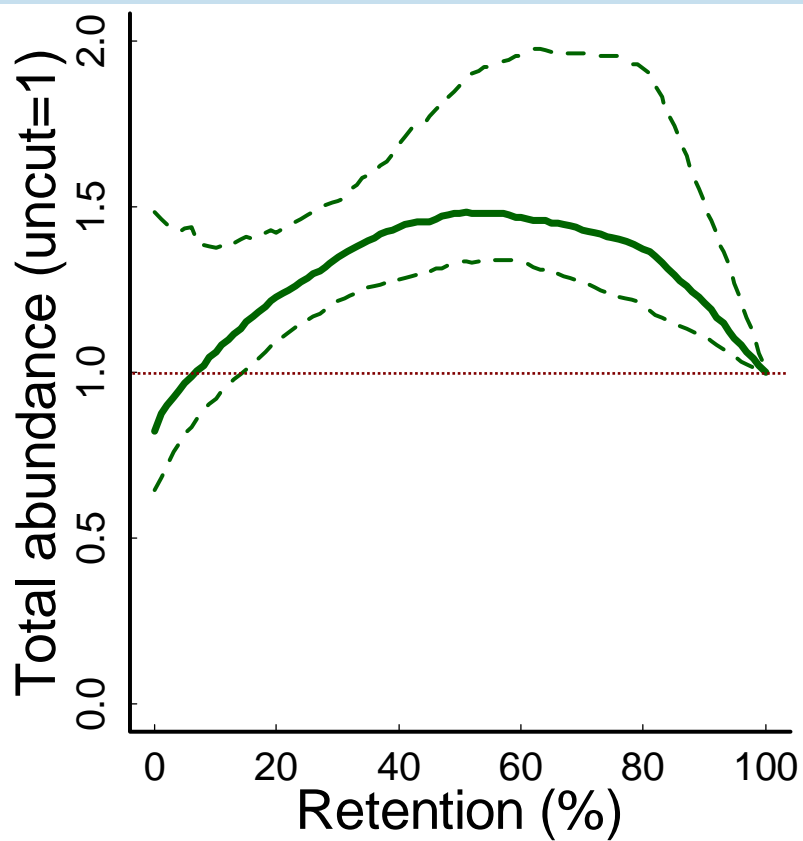
Below proportional

Soft 'threshold'

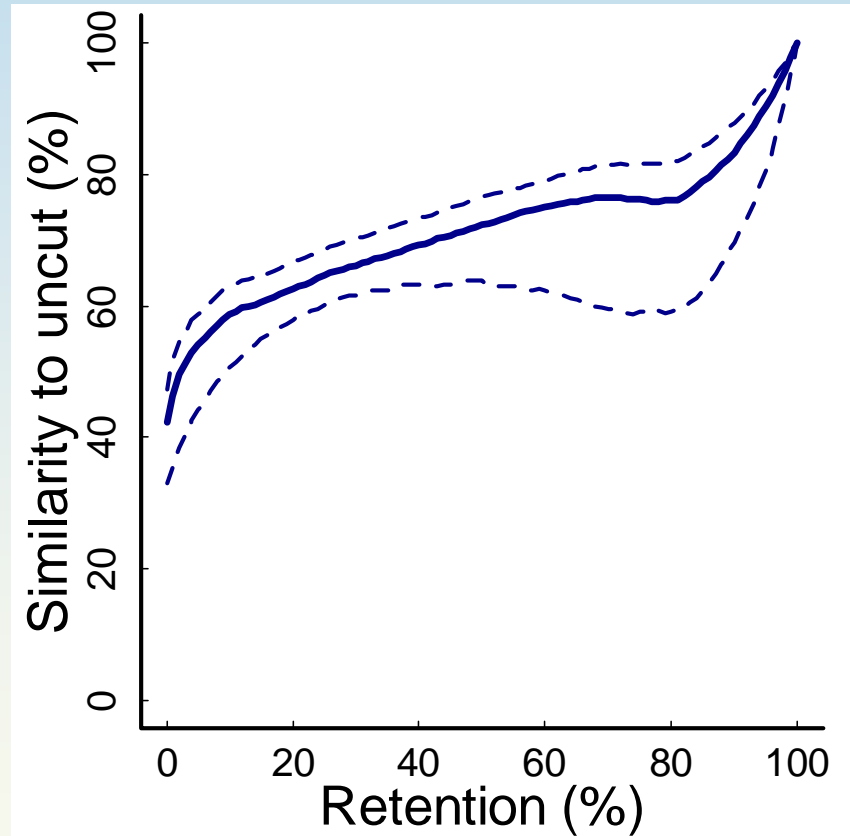


Forest Birds and Retention Levels

Total Bird Abundance



Community Similarity with Uncut



Forest Birds and Retention Levels

Conclusions

- For most species → stand-level retention “buys” more birds
But for a few very sensitive species → larger landscape reserves
- No obvious “thresholds”
But 2 retention levels stand out:
 - <15-20% Many less-sensitive species drop off
 - <35-40% Some more-sensitive species decline
- No strong difference between dispersed and aggregated retention
But available data not conclusive...
...and birds fly
- Quantitative synthesis
A lot of work, but cheaper than even 1 study
→ Broad patterns for policy decisions
→ Background for local monitoring

