Bryophyte ecology, diversity and biogeography

Comparing two Tasmanian rainforest regions

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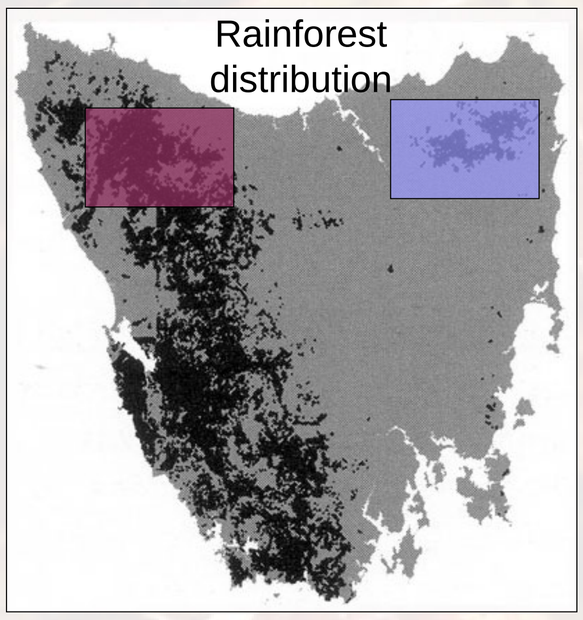
Introduction

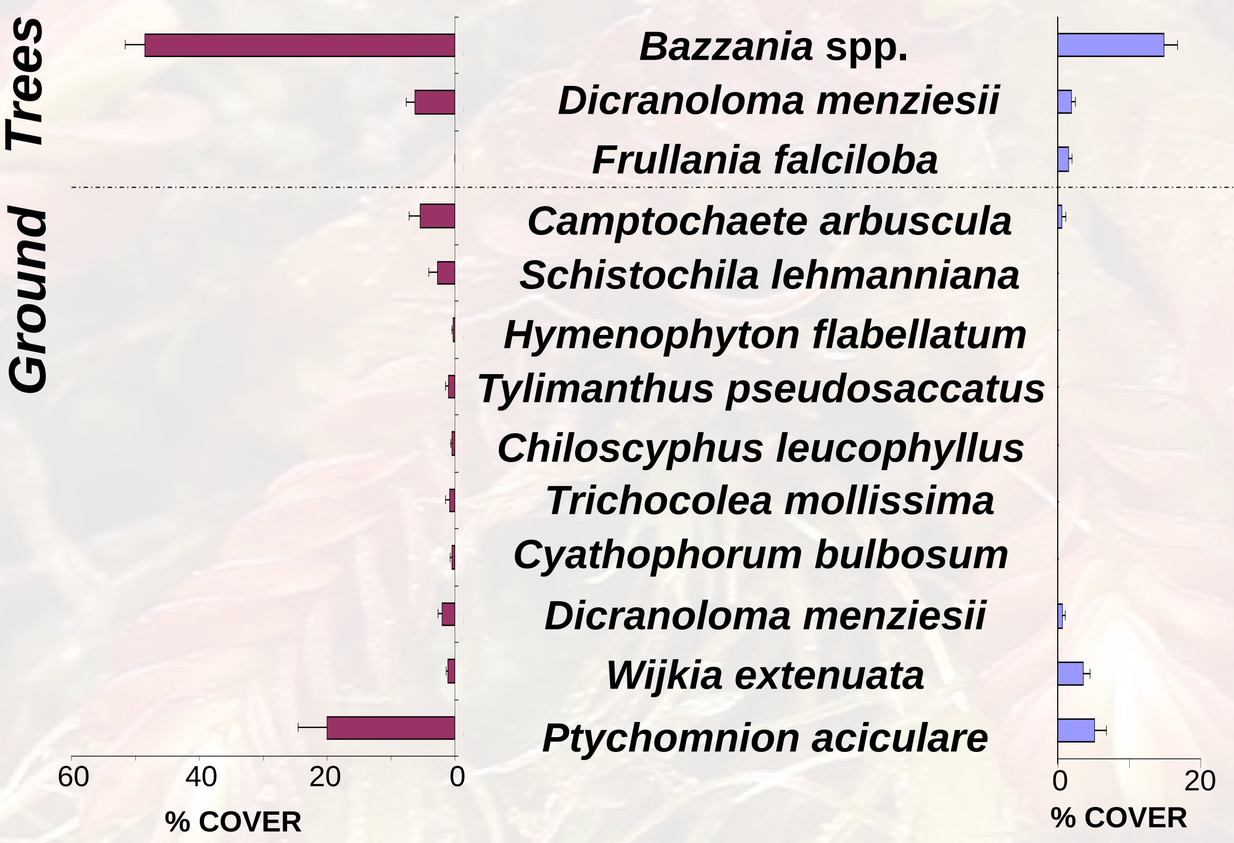
We compare the **Ecology**; **Diversity & Biogeography** of structurally comparable rainforest sites in **Northwest (NW)** and **Northeast (NE)** Tasmania.

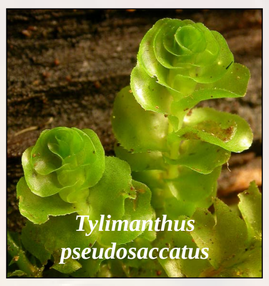


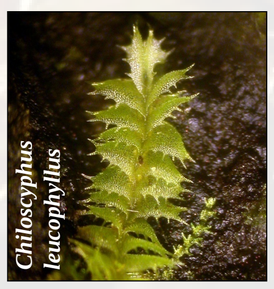
Ecology of key taxa

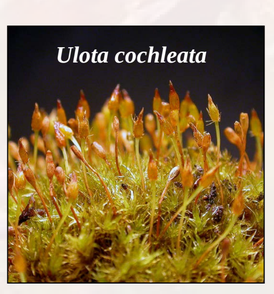
In quadrat studies:

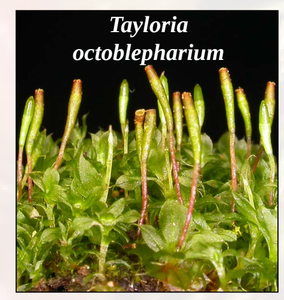
- Many key taxa have a much higher percent cover in the **NW**
- Some key **NW** taxa missing or present at very low incidence in the **NE**

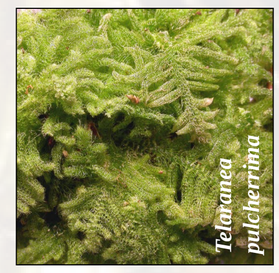












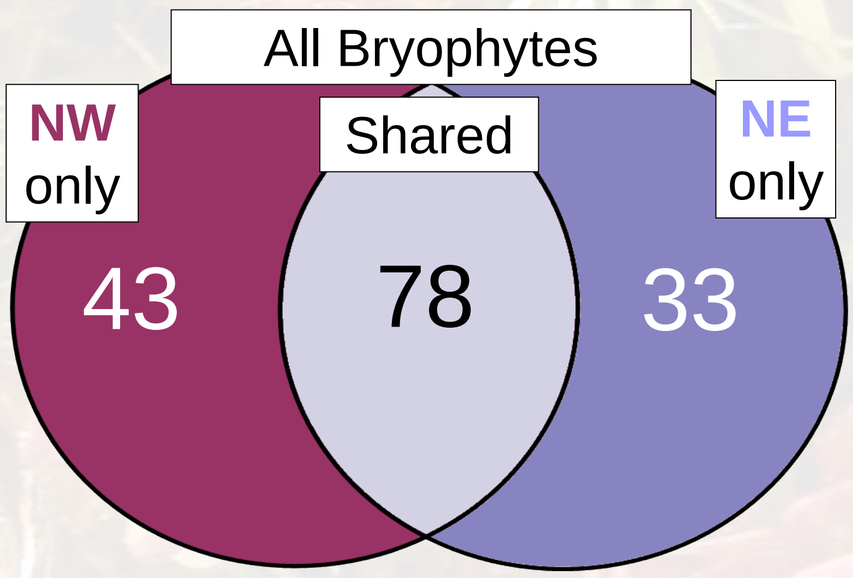
Diversity & Biogeography

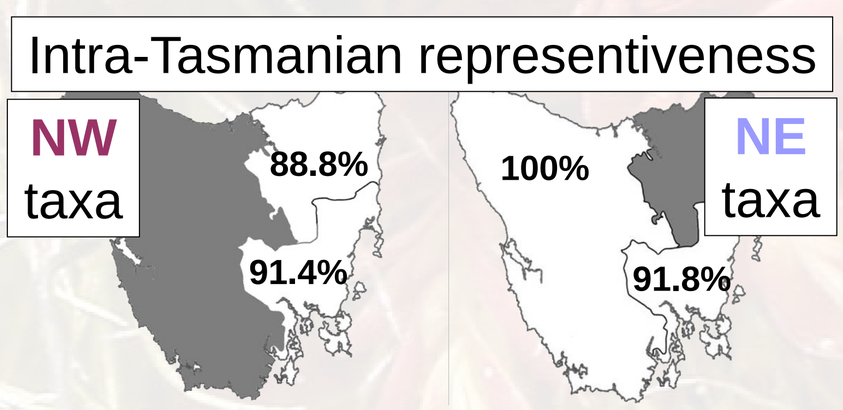
From whole site samples:

- **NW** has a higher overall and average site diversity
- **NE** has a higher beta-diversity (species turnover)

NW:

- **~ 2:1 hepatic to moss ratio**
- **Seven taxa in the NW are not known from the NE region but are disjunct in New Zealand or Victoria**





NE:

- **~ 1:1 hepatic to moss ratio**
- **All NE taxa also occur in West or Southeast Tasmania**

Discussion & Conclusions

- The two rainforest regions differ in the ecology of key taxa, diversity, and floristics.
- Wetter climates in the **NE** only partly account for these differences.
- Historical effects (eg glacial extinctions, refugial survival) may play a role in shaping the bryophyte flora of the **NE**.