Bryophyte ecology, diversity and biogeography

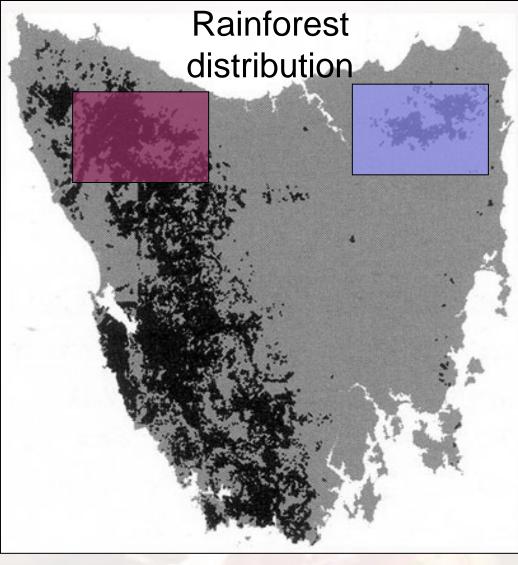
Comparing two Tasmanian rainforest regions

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Introduction

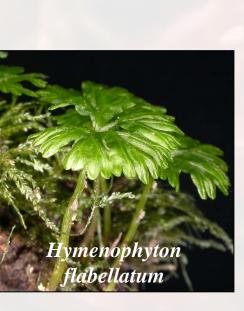
We compare the **Ecology**; Diversity & Biogeography of structurally comparable rainforest sites in Northwest (NW) and Northeast (NE) Tasmania.

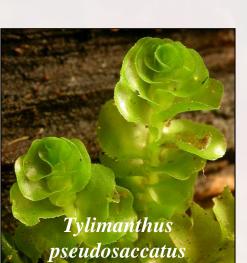


Ecology of key taxa

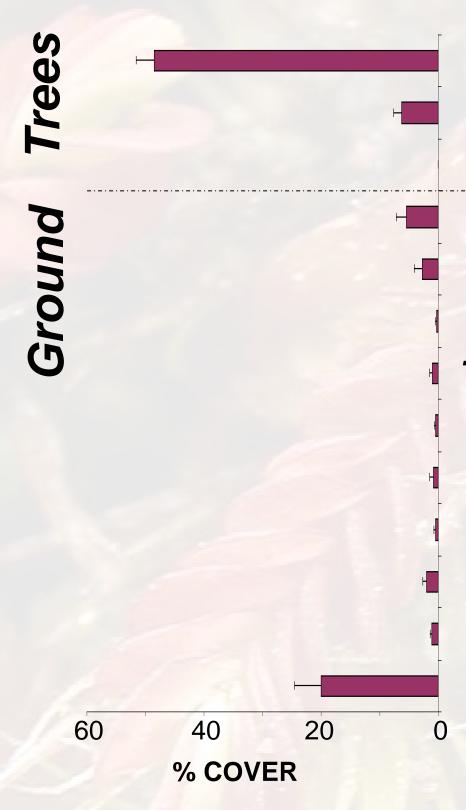
In quadrat studies:

- 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

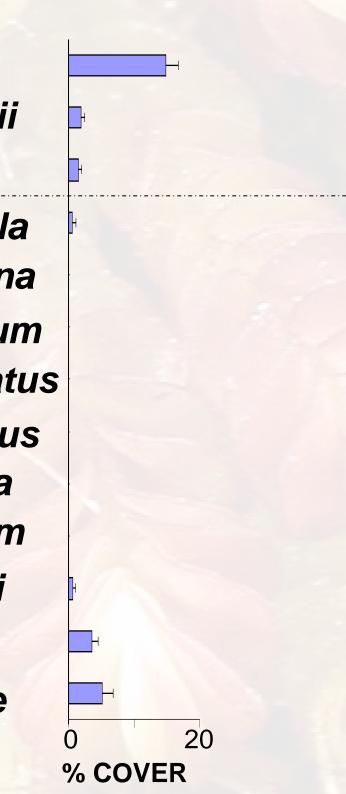








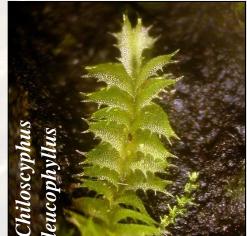
Bazzania spp. Dicranoloma menziesii Frullania falciloba Camptochaete arbuscula Schistochila lehmanniana Hymenophyton flabellatum Tylimanthus pseudosaccatus Chiloscyphus leucophyllus Trichocolea mollissima Cyathophorum bulbosum Dicranoloma menziesii Wijkia extenuata Ptychomnion aciculare







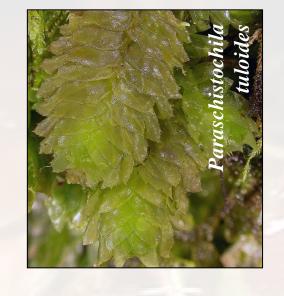




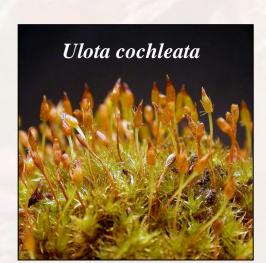
Diversity & Biogeography

From whole site samples:

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

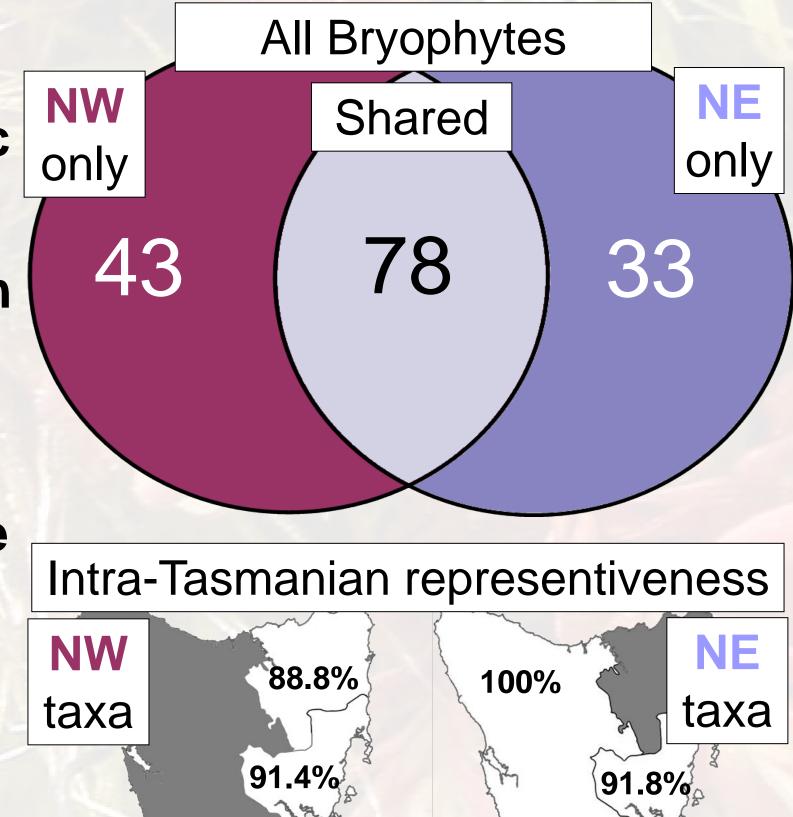






• ~ 2:1 hepatic to moss ratio Seven taxa in the NW are not known from the NE region but are disjunct in **New Zealand** or Victoria

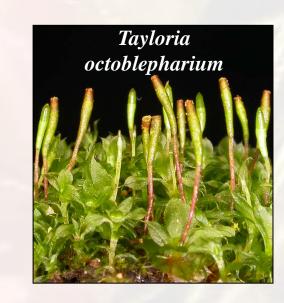
NW:



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.