

Note from Branch Office

You will have noticed this is a big issue due to the *Ferns of Dunedin* key. Adapted from Patrick Brownsey and Smith-Dodsworth's *New Zealand Ferns and Fern Allies* by John Steel and Bastow Wilson. I'm sure this will prove very useful in the field, as it did at the fern workshop (June) and at the Peggys Hill trip (July). John is keen to keep improving it so any additions to the species found around Dunedin or modifications to the couplets are always welcome.

Thanks to all those who have been supporting our activities – it's always nice to see new faces at the field trips and talks.

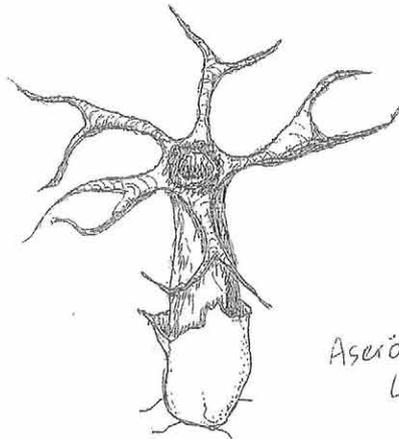
Barbara and Bastow

**Comments on: “*Reconstructing eastern Otago's natural forest communities*” by Ralf Ohlemüller and Bastow Wilson (Newsletter No 20).
By Geoff Baylis & Alan Mark, Professori Emeriti.**

We wish to challenge the claim that “The top of Maungatua ... climatically perfectly suitable for silver beech ...” There are several lines of evidence, not all transparently clear in the literature, that justify our view. One of us (GTSB) described serious winter injury to the uppermost stand of silver beech on the Range, at c. 750 m, back in 1957 (Proc. N. Z. Ecol. Soc. 6: 21- 2; 1958), which suggested that this stand was probably close to the species' upper limit here. In addition, AFM's paper of 1956 with Peter Wardle (Trans. Roy. Soc. N. Z. 84: 33- 44) mapped the subfossil wood remains and "forest dimples" on the range which showed that the pre-human cover on the crest had been a low woodland of mixed bog pine and pink pine, with mixed silver beech and Hall's totara forest below. The map also showed a few

remaining stands of silver beech on the drier north-west slope of the Range (contrary to the authors' claim for its current restriction to the moister south-east slope. The seedling silver beech of local stock, which AFM planted on the summit during his MSc project in 1954 (mentioned in the GTSB article and in another by AFM in a 1955 article: (N. Z. J. Sci. Tech. A37:350) soon succumbed to frost damage (though not in time to be reported in either of these articles).

The prevailing summer temperatures on Maungatua summit are too low for silver beech, or any other indigenous forest, to survive, with a mean midsummer air temperature of *c.*8.8 deg. C. (see N. Z. J. Bot. 3: 80; 1965). This value suggests, with conventional lapse rates, an equivalent value at the species' current upper limit, close to the generally accepted mean summer isotherm for treelines of 10 deg. C. AFM presented evidence in his 1955 paper that the natural (i.e. climax) plant cover on the Range crest is *Dracophyllum longifolium* - dominated shrubland with minor narrow-leaved snow tussock, and localised areas of cushion bog in permanently wet depressions. Such shrubland is currently re-establishing here in reserved areas under conservation management.



Aseröe rubra
La Bill. ex Fr.