

**Plant of the month: *Pneumatopteris pennigera*
(G. Forst.) Holttum.**

By John Steel

Order: Filicales (Ferns)

Family: Thelypteridaceae.

Common names: feather fern, gully fern, paakauroharoha.

The name, *Pneumatopteris*, is derived from Greek with *pneuma*- meaning wind or breath which refers to the aerophores (localised outgrowths) especially on the croziers, associated with ventilation, and *-pteris* meaning wing. The species epithet, *pennigera*, is also Greek with *penna*- meaning feather, and the ending *-ger* meaning bearing.

From a distance, this fern, being yellow-green in colour and having round apices to the pinnules, could be mistaken for the more common *Dryopteris filix-mas*, which has a green rachis and a much less symmetrical growth habit. Though not represented in the herbarium (OTA) from Dunedin, it would appear to have been quite common here in the past. Martin (1924) describes it “as growing only in stream beds in the bush - e.g., on Mount Charles - is now becoming comparatively rare”. Allen (1994) finds it “was once common near streams emerging from the forest but in many former localities may have disappeared. It was recorded from Mount Charles on Otago Peninsula and at Whare Flat; more recent records are from Evansdale Glen, Leith Valley and Otago Peninsula forest remnants”. Brownsey and Smith-Dodsworth (1989) describe it as common throughout the Three Kings, North and South Islands in damp lowland to montane forest though confined to coastal regions in the southern South Island. Its recent sighting in Leith Valley is typical of its recorded habitat.

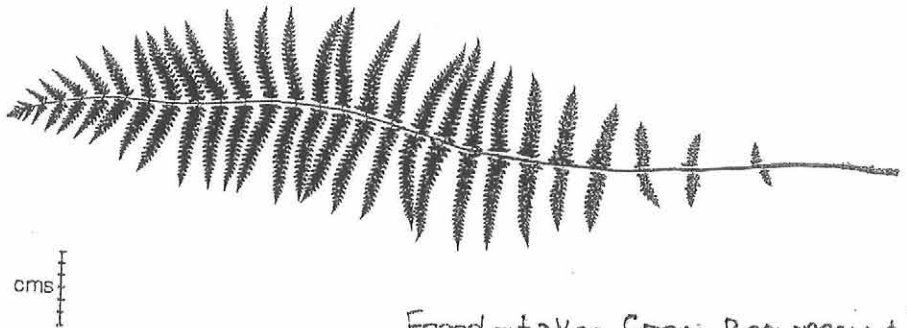
Pneumatopteris is a genus of about 80 species of mainly tropical ferns from Africa through Malesia to Australia (3 spp.) and New Zealand (1 sp.) but absent from the Americas

There are about seven plants at the site in Leith Valley with short, erect rhizomes up to 60 cm tall [60-120 cm]: stipe and rachis golden-brown [pale-brown]; stipe 5-25 cm long, scaly at base glabrous beyond, rachis glabrous. Laminae narrowly elliptic, once-pinnate, 30-150 x 10-40 cm, light-green [dark-green], soft. Pinnae in 15-30 pairs, the longest 6-20 x 1.5-3 cm, the lowest 1-6 cm long, tapering to apices, sessile, divided about halfway to midrib, sparsely hairy and scaly, midribs dark-brown below; pinnules rounded with obvious veins, the lowest veins of adjacent pinnules anastomosing at the sinus (*i.e.* join together where the pinnules meet); sori on veins, away from the pinnule margin in two rows either side of the midrib, round and without indusia.

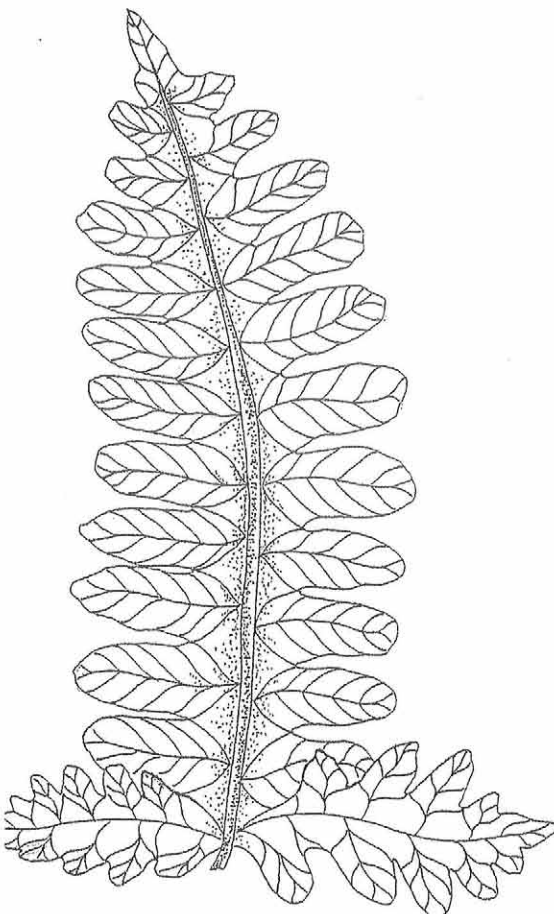
This describes the Leith Valley plants. The description of Brownsey and Smith-Dodsworth (1989) is given in square brackets where it differs from the condition of the Leith Valley plants.

References:

- Allen, R. 1994: *Native plants of Dunedin and its environs*. Otago Heritage Books, Dunedin.
Brownsey, P.J.; Smith-Dodsworth, J.C. 1989: *New Zealand ferns and allied plants*. David Bateman, Auckland.
Martin, W. 1924: *Native plants of Dunedin and surrounding districts*. Otago Daily Times and Witness, Dunedin.



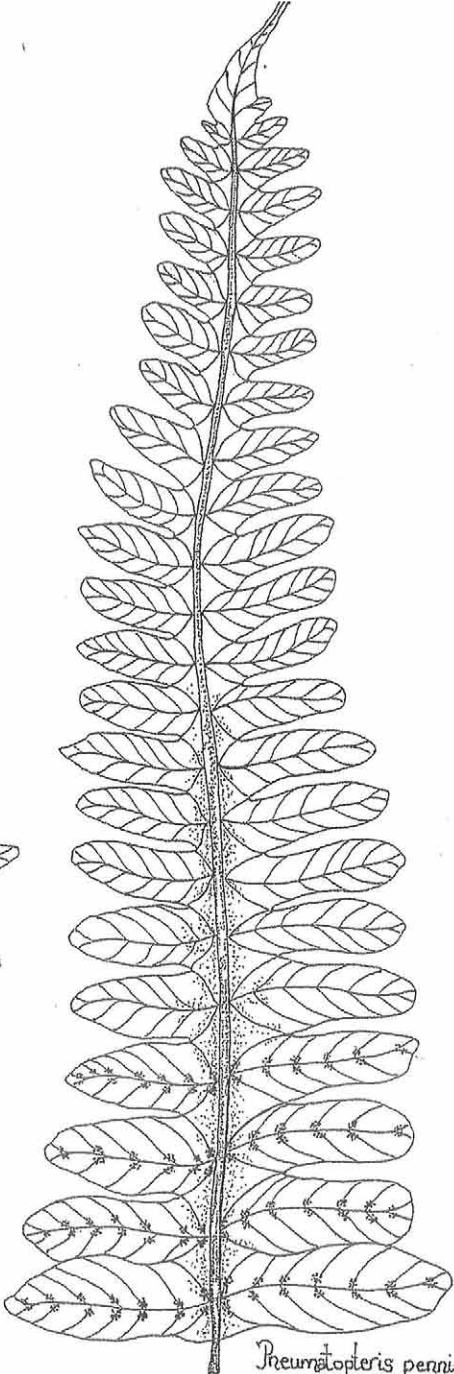
Frond - taken from Brownsey & Smith-Dodsworth (1989).



5mm

Pneumatopteris pennigera
1st basal pinna

14 mm



Pneumatopteris pennigera
Upper pinna