

Thelypteris confluens - an addition to the Waitakeres

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In February 1998 one of us (RMB) discovered a single clump of swamp fern (*Thelypteris confluens*) in the Waitakere (Te Henga) Wetland (herbarium voucher: AK 235196). It was growing amongst 80 cm tall swamp millet (*Isachne globosa*) and sparse raupo (*Typha orientalis*).

Swamp fern is widely distributed in the Old World tropics and subtropics (Brownsey & Smith-Dobson 1989) and in New Zealand it is found in swamps from Northland to the Bay of Plenty. It is listed by Cameron et al. (1995) as a nationally threatened species at the rank of "Rare". Previously from the Auckland region there appears to have been only a single collection: from northern Woodhill, collected by Bruce Burns in 1983 (AKU 15136) (see Cameron & Bellingham 1986). It has not been seen there since but it is likely to still be present.

The Waitakere Wetland is one of the largest (80 ha) and most important of the Auckland wetlands. The dense vegetation we see there today is the result of intensive milling of the catchment (1925-26) followed by massive siltation (Cameron et al. 1997: 154). Therefore, with the changing swamp vegetation, swamp fern may be a relatively recent arrival and is possibly limited to this single site. On the other hand this extensive wetland has not often been searched by botanists and other populations of this fern are likely to be present.

Suitable habitat appears to cover some 40 hectares. The closest known population of swamp fern to the Waitakere Wetland is at northern Woodhill, some 50 km away. Slightly further to the north (67 km), on the Pouto Peninsula are several populations of swamp fern by the north Kaipara dune lakes. At one of these sites it was recorded as abundant in 1991 (herbarium voucher: *Wright 11610*, AK).

With the freshwater dune lakes now a permanent feature at Whatipu (southern Waitakeres), these extensive wetlands maybe the next Auckland locality for swamp fern to establish in? Good hunting.

References

- Brownsey, P.J. & Smith-Dobson, J.C. 1989: New Zealand ferns and allied plants. David Bateman, Auckland. 168pp.
Cameron, E.K. & Bellingham, P.J. 1986: Woodhill State Forest - notes on several natural areas. *Auckland Botanical Society Newsletter* 41 (2): 46-52.
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Cameron, E., Hayward, B. & Murdoch, G. 1997: A field guide to Auckland, exploring the region's natural and historic heritage. Godwit, Auckland. 280pp.

Schoenus carsei and *Tetraria capillaris*

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The former of these tussocky long-culmed swamp sedges is generally regarded as an uncommon plant in New Zealand (it also occurs in Australia). Originally described by Cheeseman from specimens found at Whangarei, Papatoetoe, between the Manakau Harbour and the Waikato River, and Taranaki, it appears to be most frequent in the Waikato restiad and sedge wetlands, but even here it is only locally abundant, e.g., AK collections by Peter de Lange from the Reao of the Whangamarino Swamp say "rather uncommon" and "prolific along wet seepages within *Baumea huttonii*", while another from the Opuatia wetland says "locally common here, but appears to be a very uncommon species in the [Waikato basin]". The only other recent AK collections come from the Hinehopu Swamp at the east end of Lake Rotoiti, where Ewen Cameron found it to be "locally common ... associated with *Schoenus brevifolius* and *Tetraria capillaris*", and from Ruawai, where Lisa Forester found it in the kahikatea forest.

See Fig. 1, opposite