In search of *Myosotis petiolata* var. *pansa* 3 February 1998

Steve Benham, Bec Stanley and Brent Torrens

One of several reasons to undertake a field trip to Auckland's wild and rugged west coast was to find, record and photograph one of the region's locally rare herbs, namely *Myosotis petiolata* var. *pansa* for the Auckland Conservancy Department of Conservation (DoC) Regionally Threatened Plant database. *Myosotis petiolata* var. *pansa* was once regarded as endemic to the Waitakere Ranges, but we now know it extends from Te Henga to North Taranaki (Cameron et al. 1995a).

Normally one really doesn't need to have a purpose to visit Whatipu, one of Auckland's remotest points north of the Manukau, but being strictly on business there were a number of other good reasons for our visit.The day provided the ideal opportunity for staff from two major conservation agencies in Auckland, viz. Auckland Regional Council (ARC) and DoC to meet each other and share ideas and views and build a working relationship for the good of environmental conservation. The aim was also to create an awareness amongst ARC Park Ranger staff into the plight of this endemic *Myosotis*.

The other mission was to determine the extent of the populations from Pararaha Point southwards and possibly collect seed for the ARC Botanic Gardens (ARBG) ex situ Regionally Threatened Plant Collection. This Collection acts as an insurance against their possible loss in the wild, and also serves in an advocacy role and has the possibility of providing material for future research. Seeing and studying a particular plant and its ecological associations in the wild allows ARBG horticulturists to obtain a clear understanding of the plant's requirements. This knowledge is vital if one is considering bringing the plant into cultivation.

Greg Wittmer and Maurice Puckett were our two indispensable ARC Park Rangers for the day. Maurice steered and navigated the Arga, an amphibious craft, northwards along the high water mark until we reached the Pararaha Stream outlet (from where we walked southwards for the rest of the day). It was one of those perfect early morning summer days with azure-blue skies, the promise of high temperatures, gentle surf, isolation albeit a few fishermen were beach-casting, and good company.

Alongside the stream, as it flowed out across the sand flats, we found at first glance what we believed to be the endangered *Eleocharis neozelandica*, but with a closer examination of the culm we found the infrutescence was lateral and not terminal - thus indicative of *Isolepis cernua*. Earlier reports going back to the 1970's cited *E. neozelandica* as growing in this area; although Cameron (1989) did not add any new locations large mats of it were found by the Pararaha Stream later in 1989 (AK 203308). These mats have since declined due to the stream changing direction (E.K. Cameron pers. comm.). Alan Esler in 1974 located both *I. cernua* and *E. neozelandica*.

Between the dunes and the volcanic conglomerate cliffs vast wetlands have developed in the last 60-80 years as a result of huge volumes of sand being deposited along this stretch of coast and hence blocking off the escape of streams and natural seepages to the Tasman Sea. The experience of walking (and also sinking up to one's thighs!) on great rafts of oioi *Leptocarpus similis* was a truly amazing experience. It is interesting to read an account from less than ten years ago (Cameron 1989) in which this area was described as "submerged during winter floods" - we found it to be most certainly summer flooded! A diagram from the 1970's (Esler 1974) the area we walked was once "old sand vegetation", containing plants characteristic of dry dunes; also mentioned were areas of spinifex, lupin and marram, whereas we encountered raupo, oioi, *Eleaocharis acuta*, and *Baumea articulata* communities.

Eventually the group reached the cliffs where we found the semi-prostrate *Hebe obtusata* with the occasional lavender-coloured inflorescence; the Waitakere Ranges endemic *Hebe bishopiana* was seen as a single specimen with the typical violet/crimson pigmentation in the foliage (this taxon is classified as Vulnerable by Cameron et al. 1995b); as well we saw *Arthropodium cirratum*, *Lobelia anceps*, and *Astelia banksii* heavy in fruit. Surviving in the dry sandy pockets of soil where precious little else could survive were plants of *Lachnagrostis billardierei* a member of Poaceae.

On the south side of Pararaha Point under a cliff overhang where little or no direct sunlight penetrates plants of *Myosotis petiolata* var. *pansa* were found to be growing, and the occasional cyme supported a late flower. The main population, covering an area 90 cm x 78 cm grew in dry black windblown sand directly under a cliff overhang, along with *Tetragonia trigyna* and *Peperomia urvilleana*. These plants exhibited the typical long and robust decumbent vegetative laterals, which are a characteristic morphological feature of all coastal *Myosotis*. The lamina measured 4 cm in width x 3.5 cm in length with 5 cm long petioles. The individual flowers were 1 cm in diameter.

Plants growing on the outside of this group and exposed to more light were competing with the rank and adventive grasses. The second group under an adjoining overhang was surrounded with seedling propagules. Above the cliff overhang kawakawa *Macropiper excelsum* was dominant.

On returning to just north of our first sighting, a small area of *Myosotis petiolata* var. *pansa* was found to be competing with the invasive adventive *Lotus suaveolens*. It was recommended that ARC Ranger staff could monitor these vulnerable populations and annually carry out a form of "habitat gardening."

As we worked our way southwards, we found the wetland was infested with alligator weed *Alternanthera philoxeroides,* belonging to Amaranthaceae. This aquatic herb was noticeable not only for its abundance but for the mass of small cymose white inflorescences covered in bristly bracts. Alligator weed has also proved to be a noxious invader in North America where it was introduced as crayfish fodder.

The wetlands also became more distant from the cliffs now clothed predominantly in pohutukawa *Metrosideros excelsa*, thus indicating an improbable site for this species of *Myosotis*. A venerable ngaio *Myoporum laetum* measured 132 cm in circumference at the point of branching.

Further south still, the area between the cliff and wetland appears to be evolving into a forest community with manuka *Leptospermum scoparium*, nikau *Rhopalostylis sapida*, ti kouka *Cordyline australis*, West Coast kowhai *Sophora microphylla* var. *fulvida*, and harakeke *Phormium tenax.* The handsome giant umbrella sedge *Cyperus ustulatus* and *Baumea articulata,* with the characteristic and visible septa (partitions) in the culms, were scattered throughout. The cliff vegetation became more open with whau *Entelea arborescens* and the occasional sizeable and fruiting tawapou *Pouteria costata*. According to Lucy Cranwell in her publication Botany of Auckland tawapou grows in small groves and was on the decline in the early 1980s.

The heat of the afternoon and hour indicated that it was time to pack in what had been a very successful trip. The return journey almost became eventful as the Arga began to take in water; however Maurice navigated us safely back to base and Greg transported us to Arataki.

References

Cameron, E.K. 1989. Vegetation of Whatipu Sands, North Manukau Heads. *Auckland Botanical Society Journal 44(1)*: 3-10.

Cameron, E.K, de Lange, P.J., Given, D.R., Johnson, P.J., Ogle, C.C. 1995b. *New Zealand Botanical Society Threatened and Local Plants List (1995 revision). New Zealand Botanical Society Newsletter 39*: 15-28.

Cameron E.K., Taylor G.A. & Beever J.E. 1995a: Flora and vegetation of Taitommo Island and Nun Rock, South Piha, west Auckland. *Auckland Bot. Soc. Journal 50(1):* 14-21.

Esler, A.E. 1974. Vegetation of the Sand Country Bordering the Waitakere Range, Auckland: the Southern Beaches, *Proceedings of the NZ EcologicalSociety, 21*: 72-77.

Tawharanui Regional Park
ABS Field Trip - 15 November 97

Colleen Foster

Several Bot Soc'ers had gone north to study plants, so only a small group of eleven were treated to the delights of Auckland's northern-most regional park - at the end of Tawharanui Peninsula, east of Warkworth. The area has been occupied for centuries by Maori and European settlers, who have left their marks on the landscape.