authors non *H. japonicum* Thunb.)
Leptostigma setulosum
Lobelia anceps
Nertera depressa
N. dichondrifolia
N. villosa
Oxalis exilis
O. magellanica
O. rubens
Parietaria debilis
Peperomia urvilleana
Plectranthus parviflorus (unc)
Pratia angulata
P. angulata × *P. perpusilla* (unc)
Ranunculus amphitrichus
R. macropus (unc)
R. reflexus
R. amphitrichus x *R. macropus* (unc)
R. urvilleanus (unc)
Stellaria parviflora
Solanum americanum
Urtica incisa (unc)
Veronica plebeia (unc)
Wahlenbergia violacea

TOTAL: 416 taxa

Field trip: Mt Tamahunga, 17 February 2007

Maureen Young

At 439 m. a.s.l.. Tamahunga (also known as "the Dome") is the highest point in the Rodney Range, and its double peak is a well-known landmark. On the higher of the two peaks is a meteorological microwave station, and on the lower peak (436 m. a.s.l.), is a helipad used for servicing the station. Although there are some small outcrops of Ti Point basalts nearby, Tamahunga is composed of hard, indurated sandstone. A section of the Te Araroa Walkway, from Omaha Valley Road to Rodney Road, passes over the crest.

Bot Soc last visited Tamahunga (Omaha Ecological Area) on a wet day in June 1991. This trip was not written up, but an article by Young (1993) outlined some of the botanical history, a few of the plants, the poor state of the forest due to the heavy infestation of goats, and a species list. Lately a hunter has been employed in the forest, and to date he has removed 1000 goats and 36 pigs (Thelma Wilson, Department of Conservation, *pers. comm.*). Although the vegetation along the track showed much sign of browsing, there were also some seedlings getting a start, indicating that the pressure has been taken off to a certain degree.

The view from the Omaha Valley carpark shows that the forest has a mix of podocarp/broadleaf species, with very little kauri. Some fine heads of northern rata emerge above the general vegetation. Seen from close up the rata trees look to be in good health, an indication that the possums are being controlled. The track to the summit follows a south-facing ridge, and common species on the lower slopes are *Hoheria populnea, Clematis cunninghamii* and both *Libertia grandiflora* and *L. ixioides.* These latter two were in fruit, making them easy to differentiate. Moore (1967) noted a strange chromosome number from a single *L. grandiflora* sample taken from Tamahunga, and Dan Blanchon from Unitec School of Natural Sciences is looking into this (Dan Blanchon, *pers.comm.*). Some young trees of *Streblus* had the intermediate sized leaves that suggest the hybrid, *S. banksii* x *S. heterophyllus*.

In places the ground cover consisted largely of goat-induced swards of *Microlaena avenacea.* A band of taraire part way up the hill provided a happy hunting ground for those interested in relocating the insignificant little orchid, *Danhatchia australis,* which had been noted there in December 2001. Sharp eyes picked up two plants, at this late date looking less conspicuous than ever. The capsules had shed seeds and the stems were withered. On stopping at a rocky outcrop to look at the view over a gully, a population of *Melicope simplex* was noted. About this point tawa (*Beilschmiedia tawa*) began to make an appearance.

Where the steep slopes levelled out somewhat, large kanuka (*Kunzea* aff. *ericoides*) trees indicated that the forest had been burned here maybe 150 years ago. This correlated with the documented 1860s occupation of the peak by Maori who had escaped imprisonment on Kawau Island after the Waikato Land Wars. We postulated that this could have been the site of their camp. Thomas Kirk visited the prisoners in the company of a local resident, and he made Great Omaha the type locality for *Astelia trinervia.* To our party this now seems a strange decision, as there was very little of this species in the area. However, the few plants we saw were compared with *A. solandri, Collospermum hastatum,* and the *Collospermum microspermum* that had begun to make an appearance at the higher altitude. Also appearing at this point were *Blechnum procerum, Cyathea smithii* and *Raukaua edgerleyi*.

A visit to the microwave station resulted in Anne and Gorakh putting their detection skills to good use and relocating *Hymenophyllum lyallii* and *H. flexuosum.* Beyond the station were more plants of *Raukaua edgerleyi*, all epiphytic on tree ferns, and showing the range of leaf forms from the lobed trifoliate juveniles to the single adult leaves. It was surprising to see several good trees of pukatea (*Laurelia novae-zelandiae*) growing at this high point.

The second peak was then explored, with Brian adding two new ferns, *Lastreopsis glabella* and *Deparia*

petersenii, both growing under the enclosed helipad. Most of the party retraced their steps back to the carpark at this point, but a few carried on down the northern slopes to the end of the forest. Anne and Gorakh again proved their worth by spotting *Hypolepis lactea* (ranked Regionally "Sparse"; Stanley et al. 2005), and *Metrosideros carminea*. This latter plant consisted only of juvenile foliage that crept over an exposed boulder. Anne insisted that because the leaves were hairy they belonged to *M. carminea*. A very good comparison of the different species of *Metrosideros,* including the juvenile leaves, occurs in "Small-leaved Shrubs of New Zealand" by Hugh Wilson and Tim Galloway (Wilson & Galloway 1993). They also point out that the red margins on the young leaves, as well as hairiness, is a feature of *M. carminea*. Well spotted, Anne! A good botanical ending to the day was brought about by the verification of two bushes of *Coprosma rigida* (ranked "Regionally Endangered" by Stanley et al. 2005). All that remained now was to climb back to the summit and down the other side in the summer heat.

Footnote
On 14 May 2007, while carrying out weed and threatened plant surveillance for DoC, I followed up a report of king fern (*Marattia salicina*) on the north eastern boundary. In one gully, the streamside supported (at a rough count) c. 15 big plants and numerous very small ones. In the adjacent gully I saw two plants.

Field trip participants:
Ross Beever, Lisa Clapperton, Colleen Crampton, Brian Cumber, Frances Duff, Anne Grace, Leslie Haines, Fran Hintz, Richard Hursthouse, John Kendrick, John Millett, Helen Preston Jones, Vivienne Paterson, Juliet Richmond, Josh Salter, Gorakh Silvester, Alison Wesley, Mike Wilcox, Tony Williams, Maureen Young.

The checklist of indigenous vascular plants of Mt Tamahunga published in Young (1993), with additions and corrections (+)

Ferns & Fern Allies

+*Adiantum cunninghamii*
Adiantum fulvum
Adiantum viridescens
Anarthropteris lanceolata
Asplenium bulbiferum
Asplenium flaccidum
Asplenium lamprophyllum
Asplenium oblongifolium
Asplenium polyodon
Blechnum chambersii
Blechnum discolor
Blechnum filiforme
Blechnum fraseri
Blechnum membranaceum
Blechnum procerum
Blechnum novae-zelandiae
Cardiomanes reniforme
Ctenopteris heterophylla
Cyathea dealbata
Cyathea medullaris
Cyathea smithii
+*Deparia petersenii*
Dicksonia squarrosa
+*Diplazium australe*
Doodia australis
Histiopteris incisa
Huperzia varia
Hymenophyllum demissum
Hymenophyllum dilatatum
Hymenophyllum ferrugineum
Hymenophyllum flabellatum
Hymenophyllum flexuosum
Hymenophyllum lyallii
Hymenophyllum revolutum
Hymenophyllum sanguinolentum
Hymenophyllum scabrum
+*Hypolepis lactea*
+*Lastreopsis glabella*
Lastreopsis hispida
Leptopteris hymenophylloides
Lindsaea trichomanoides
Lycopodium volubile
Lygodium articulatum
+*Marattia salicina*
Microsorum pustulatum
Microsorum scandens
Paesia scaberula
Pneumatopteris pennigera
Polystichum neozelandicum
Pteridium esculentum
Pteris macilenta
Pteris tremula
Pyrrosia eleagnifolia
Rumohra adiantiformis
Tmesipteris elongata (incl. subsp. *robusta*)
Tmesipteris lanceolata
Tmesipteris sigmatifolia
Tmesipteris tannensis
Trichomanes elongatum
Trichomanes endlicherianum
Trichomanes venosum

Gymnosperms

Agathis australis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Libocedrus plumosa
Phyllocladus trichomanoides
Podocarpus hallii
Podocarpus totara
Prumnopitys ferruginea
Prumnopitys taxifolia

Dicotyledons

Acaena novae-zelandiae
Alectryon excelsus
Alseuosmia macrophylla

Beilschmiedia tarairi
Beilschmiedia tawa
Brachyglottis kirkii
Brachyglottis repanda
Callitriche muelleri
Carmichaelia australis
Carpodetus serratus
Centella uniflora
Clematis cunninghamii
Clematis paniculata
Coprosma arborea
Coprosma grandifolia
Coprosma lucida
Coprosma rhamnoides
+*Coprosma rigida*
Coprosma robusta
Corynocarpus laevigatus
Dracophyllum latifolium
Dysoxylum spectabile
Elaeocarpus dentatus
Elatostema rugosum
Epilobium sp.
+*Euchiton collinus*
+*Fuchsia excorticata*
+*Galium propinquum*
Geniostoma ligustrifolium
Griselinia lucida
Hebe stricta
Hedycarya arborea
Hoheria populnea
Hydrocotyle moschata
Knightia excelsa
Kunzea aff. *ericoides*
Laurelia novae-zelandiae
Leptospermum scoparium
Leucopogon fasciculatus
Litsea calicaris
Lobelia anceps
Lophomyrtus bullata
Macropiper excelsa
Melicope simplex
Melicytus macrophyllus
Melicytus micranthus
Melicytus ramiflorus
+*Metrosideros carminea*
Metrosideros diffusa
Metrosideros fulgens
Metrosideros perforata
Metrosideros robusta
+*Muehlenbeckia australis*
Myrsine australis
Myrsine salicina
Nertera depressa
Nertera dichondrifolia
Nestegis lanceolata
Olearia furfuracea
Olearia rani
Parsonsia heterophylla
Passiflora tetrandra
Peperomia urvilleana
Pittosporum cornifolium
Pittosporum eugenioides
Pittosporum tenuifolium
Pseudopanax arboreus
Pseudopanax crassifolius
Ranunculus reflexus
Raukaua edgerleyi
Rhabdothamnus solandri
Rubus australis
Rubus cissoides
Schefflera digitata
Senecio minimus
+*Sophora chathamica*
+*Streblus banksii* x *S. heterophyllus*
Streblus heterophyllus
+*Veronica plebeia*
Vitex lucens
Wahlenbergia violacea

Monocotyledons

Acianthus sinclairii
Astelia solandri
Astelia trinervia
Carex dissita
+*Carex flagellifera*
+*Carex geminata*
+*Carex lambertiana*
+*Carex solandri*
+*Carex virgata*
Collospermum hastatum
Collospermum microspermum
Cordyline australis
Cordyline banksii
+*Danhatchia australis*
Dianella nigra
Diplodium alobulum
Earina autumnalis
Earina mucronata
+*Echinopogon ovatus*
Freycinetia banksii
Gahnia lacera
Gahnia pauciflora
Gahnia setifolia
Gahnia xanthocarpa
Isolepis reticularis
+*Juncus pallidus*
+*Juncus planifolius*
+*Libertia* aff. *grandiflora*
Libertia ixioides
Microlaena avenacea
+*Microlaena stipoides*
Microtis unifolia
Oplismenus hirtellus subsp. *imbecillis*
+*Poa anceps*
Pterostylis agathicola
Pterostylis banksii
Rhopalostylis sapida
Ripogonum scandens
+*Rytidosperma unarede*
Schoenus maschalinus
+*Singularybas oblongus*
+*Thelymitra* sp.
Uncinia uncinata
Winika cunninghamii

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Easter Camp: Karikari Peninsula and environs. 6-9 April 2007

Maureen Young

Camp participants:
Enid Asquith, Paul Asquith, Robinn Asquith, Jan Butcher, Helen Cogle, Brian Cumber, Bev Davidson, Geoff Davidson, Gael Donaghy, Leslie Haines, Graeme Jane, Harry Livesey, Elaine Marshall, Kevin Matthews (local expert), Barbara Parris (leader), Helen Preston Jones, Alison Wesley, Sophie Williams, Maureen Young (camp mother).

First, a word about our local expert. Kevin Matthews farms on land between Awanui and Kaitaia, and is descended from the illustrious Matthews family, members of which have resided in Kaitaia since 1833. His great-great-grandfather was Rev. Joseph Matthews, missionary with the CMS. Joseph's brother Richard was the trainee missionary who travelled on the Beagle with Darwin. Joseph's eldest son, Richard Henry Matthews (Kevin's great-great-uncle), was well known as an amateur botanist who collected, mainly orchids, for Cheeseman. RHM passed this interest on to his eldest son, Henry Blencowe Matthews, who collected nearly 3000 specimens which are in the Auckland Museum Herbarium. Plants named in honour of these two men were *Corysanthes matthewsii, Thelymitra matthewsii, Myosotis matthewsii, Pterostylis matthewsii, Dracophyllum latifolium* var. *matthewsii* (later *D. matthewsii*), and *Pittosporum matthewsii. Thelymitra matthewsii* and *Myosotis matthewsii* are the only two of these names that are accepted. Kevin went out of his way to make our weekend a botanical success, even to the point of drying off his cows to one milking per day, so he would not have to rush off early in the afternoons. He hunted out special plants to show us, and gained permission for us to visit privately owned land. It's very pleasing that Kevin is now a member of ABS.

The camp was based at the Whatuwhiwhi Top 10 Holiday Park, with Barbara travelling up each day from Kerikeri. The weather was next to perfect, with just some rain on the last afternoon to dampen the stragglers who didn't have to rush back to work.

Friday 6 April
The first stop for the day was at Rangiputa, on the western-most point of the peninsula. Here we walked around the rocks to view the *Hebe diosmifolia* (Fig. 1.) that grows on the bank just a couple of metres above the splash-line. Studies have shown that there are two chromosome races present within this species, and populations from Te Paki, Rarawa and Karikari Peninsula contain tetraploid plants, the others being diploid, but no division can be made on morphological grounds (Murray *et al*. 1989). On the way we saw a small patch of *Tetragonia tetragonioides*, one frond of *Asplenium obtusatum* subsp. *northlandicum*, and a curious form of *Coprosma lucida* bearing thick leaves with inrolled margins.

South of the little village we walked a short distance down the coast, admiring the prostrate sand plants, *Coprosma acerosa* and *Pimelea arenaria.* Kevin guided us into a swamp to where the two swamp ferns, *Thelypteris confluens* and *Cyclosorus interruptus*, grow (Fig. 2.). These were much photographed. An interesting exotic growing near the edge of the swamp was pokeweed, *Phytolacca americana*, a more upright, robust and colourful plant than the common inkweed.

There are two small lakes with the name Rotokawau. We stopped at the smaller of the two, as it is accessible from the road. This lakeside has gone down in the annals of ABS history as being the site where the photo was taken that adorns the famous ABS T-shirt. In that photo members were in the usual undignified position, with glass to eye, tickling the irritable stigmas of *Glossostigma elatinoides.* Unfortunately, after the recent Northland floods, the *Glossostigma* plants were all underwater on this occasion. Also here were *Dracophyllum sinclairii, Schoenus brevifolius* and *Empodisma minus.* No sign was seen of the plants of *Cannabis sativa* that were present on the previous ABS visit.

Lunch was eaten in the hot sunshine at Puheke Beach, with one or two people enjoying a swim. The little volcanic hump at Puheke is a botanical disaster, being covered completely with gorse, pampas, and with tobacco weed in the gullies. One can only imagine it with the probable natural cover of pohutukawa forest. The plant that attracted us to this spot was a clump of *Asplenium obtusatum* subsp. *northlandicum*, snuggling in a crevice in a rock and showing well the fleshy, blunt-ended pinnae of this subspecies (Fig. 3.). Some were interested in a very robust plant of *Cyperus ustulatus* and wondered if perhaps it was the newly named *C. insularis* described from this locality.

Matai Bay (sometimes known as Maitai Bay) was the last stop for the day. Jolliffe Point, with an intriguing *Hebe* and also *Melicytus novae-zelandiae,* had to be ignored by most of the party, as we were led to Takini Point at the eastern end of the bay. By turning a botanical blind eye to the infestations of weeds – Cape honey flower, kikuyu, pampas and tobacco weed – we could enjoy the remaining natural vegetation. A grove of tawapou (*Pouteria costata*) excited more than the usual interest following the recent talk by Sandra Anderson on "Birds as pollinators & seed dispersers of the native flora". Although the trees were laden with