

immediate vicinity one has to resort to hand pollination using the pollen from catkins of a male *Streblus smithii* applied to the female fruiting spike by dusting or by direct application with a small artist's paint brush.

Towards the end of last year (1996) the three trees at Point Chevalier all bore spikes (female) for the first time. They were hand pollinated using male catkins from the tree by the barrack wall in the grounds of Auckland University. Six months later the fruit developed and, being protected by bird-netting turned from green to brilliant red during June/July 1997. By mid-August the fruiting trusses (whole and intact each bearing (say) 50-100 drupes) commenced to fall to the ground, released naturally from a clean cone-like abscission point close to the trunk or branch.

There is nothing very remarkable about red fruit in winter, but nevertheless *S. smithii* retains its fascination - confined in the wild on a small remote group of ocean islands, and with the impact of its brilliant winter display of ripe drupes seen by very few people indeed, either in the wild or in cultivation.

*The generic name, from the Greek *streblos*, twisted, presumably alludes to the distorted branches of some of the twenty-two species, as mentioned under "*Streblus*" in the New York Botanical Garden Illustrated Encyclopedia of Horticulture, vol.10 STE-ZY 1982.

Mt Donald McLean to Whatipu field trip, and *Epilobium pedunculare*

E.K. Cameron

On 16 August 1997 28 Bot Soccers met at the Mt Donald McLean carpark. Several vehicles had already been parked at Whatipu where we would eventually emerge from the bush. Sandra Jones was supposed to be our leader but she had broken her ankle the previous weekend doing a reconnoitre of the track. She ended up being lifted out by helicopter at 11.00 pm but still produced a species list for us. I stood in as leader with the help of Jack Rattenbury who knew where the hard beech outlier was.

We departed from the carpark at 10.15 am and after 10 minutes along the Puriri Ridge Track we turned off to the west to 'bush bash' our way down to the beech trees. Jack Rattenbury, with help from his 'Retreads' tramping group, had marked a route during the week. This was just as well as the unofficial track was overgrown (Bot Soc previously visited this beech stand on 21 October 1989 - see Hatch 1990). At first we were on a flat ridge dominated by manuka 3-5 m tall with some taller kanuka, abundant *Gahnia xanthocarpa*, gorse (too bad for Jamie's bare feet), kiokio and *Schoenus tendo*. The wide ridge slowly narrowed and we eventually scrambled down a narrow spur to the Whatipu Stream. Mairehau, toatoa, akeake and *Corokia buddleioides* greeted us just before the beech. There were four healthy hard beech trees, up to 20 m tall, on a small spur jutting out into the stream. The picturesque stand in such a remote locality was admired by all.

Associated with the beech trees were tawa, kauri, Hall's totara, *Rhabdothamnus*, nikau, miro, *Dracophyllum latifolium*, mangeao, *Grammitis ciliata* and *Sticherus cunninghamii*. See Cameron (1997) for an article on hard beech distribution in the Waitakeres.

The stream adjacent to the beech was in a rocky gorge with moss and fern-covered banks. The native streamside daisy, *Anaphalis keriensis*, was present and sadly the ubiquitous exotic mist flower as well. Native herbs included *Nertera depressa* and several *Epilobium* species (*E. rotundifolium*, *E. nerteroides* and *E. pedunculare*). *Epilobium pedunculare* was included in Mead's (1969) Waitakere flora, but Gardner (1982) excluded it from his account because there were no Waitakere specimens in AK or AKU herbaria. This record (AK 233830) confirms its presence in the Ranges. The streamside *Epilobium* species along with other native herbs, ferns and bryophytes are threatened by the increase of weed species in northern New Zealand, especially mist flower.

After lunch on the ridge above the beech we retraced our steps back to the Puriri Ridge Track. This "short" sojourn had taken 3 hrs 15 mins! We were now only 10 minutes away from where we started, but everyone agreed to proceed onto Whatipu. The Puriri Ridge Track is well forested with some good views down the Whatipu Stream Valley from the ridge top. *Olearia albida*, wharangi, native passionfruit and a single taraire were all admired along the way. At 3.00 pm we reached the start of the Kura Track where I found a beautiful kauri snail (alive) on the side of the track. These carnivores have been introduced to the Waitakeres and this record shows they are spreading from the Mt Donald McLean area where they are well established.

The Kura Track is new and in places not well formed (easy to see how Sandra broke her ankle). The find of a pill millipede created some interest. When we reached the stream the track followed the flat floodplain. Mist flower densely lined the stream margins. We finally emerged to a boggy paddock at 5.00 pm - a 7 hour day with only a short lunch stop.

References

- Cameron, E.K. 1997: Distribution of beech in the Waitakere Ranges. *Auckland Botanical Society Journal* 52(2): 68-72.
 Gardner, R.O. 1982: Native vascular flora of the Waitakere Range, Auckland. *Auckland Botanical Society Bulletin* 13. 15pp.
 Hatch, E.D. 1990: *Pterostylis cardiostigma* D. Cooper - a new record for the Waitakeres. *Auckland Botanical Society Journal* 45(1): 17-18.
 Mead, A.D. 1969: Native flora of the Waitakere Ranges.

From Mt Donald McLean to Whatipu via Puriri Ridge and Kura Tracks

Initial list compiled by Sandra Jones, with additions recorded on the Bot Soc field trip on
 16 August 1997 and marked [ABS]

indicates additional species recorded on the unmarked track from Puriri Ridge Track
 down to the *Nothofagus truncata* on the Whatipu Stream

FERNS & FERN ALLIES

<i>Adiantum cunninghamii</i>	<i>Hymenophyllum dilatatum</i>
<i>Adiantum fulvum</i>	<i>Hymenophyllum flabellatum</i>
<i>Anarthropteris lanceolata</i>	<i>Hymenophyllum lyallii</i>
<i>Asplenium bulbiferum</i>	<i>Hymenophyllum multifidum</i>
<i>Asplenium flaccidum</i>	<i>Hymenophyllum revolutum</i>
<i>Asplenium lamprophyllum</i>	<i>Hymenophyllum sanguinolentum</i>
<i>Asplenium oblongifolium</i> (<i>A. lucidum</i>)	<i>Lastreopsis glabella</i>
<i>Asplenium polyodon</i> (<i>A. falcatum</i>)	<i>Lastreopsis hispida</i>
<i>Blechnum</i> "black spot" (was incl. in <i>B. capense</i>)	<i>Lastreopsis microsora</i> [ABS]
<i>Blechnum chambersii</i> (<i>B. lanceolatum</i>)	<i>Lindsaea linearis</i>
<i>Blechnum discolor</i>	<i>Lindsaea trichomanoides</i>
<i>Blechnum filiforme</i>	<i>Lycopodium deuterodensum</i>
<i>Blechnum fraseri</i>	<i>Lycopodium varium</i> (incl. <i>L. billardierei</i>)
<i>Blechnum membranaceum</i>	# <i>Lycopodium volubile</i> [ABS]
<i>Blechnum procerum</i>	<i>Lygodium articulatum</i>
<i>Cyathea dealbata</i>	<i>Paesia scaberula</i>
<i>Cyathea medullaris</i>	<i>Phymatosorus pustulatus</i>
<i>Cyathea smithii</i> [ABS]	(<i>Phymatodes diversifolius</i>)
<i>Dicksonia squarrosa</i>	<i>Phymatosorus scandens</i>
<i>Doodia media</i>	(<i>Phymatodes scandens</i>)
<i>Hymenophyllum demissum</i>	<i>Pneumatopteris pennigera</i>
	<i>Polystichum richardii</i>

Pteridium esculentum
Pteris macilenta
Pteris saxatilis
Pteris tremula
Pyrosia eleagnifolia
 (previously known as *P. serpens*)
Rumohra adiantiformis [ABS]
Tmesipteris elongata ssp. *elongata*
Tmesipteris lanceolata
Tmesipteris ?sigmatifolia
Tmesipteris tannensis
Trichomanes reniforme

GYMNOSPERMS

Agathis australis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Libocedrus plumosa
 #*Phyllocladus toatoa* (*P. glaucus*) [ABS]
Phyllocladus trichomanoides
Podocarpus hallii
Prumnopitys ferruginea
 (*Podocarpus ferrugineus*)
Prumnopitys taxifolia (*Podocarpus spicatus*)

DICOTYLEDONS

Alectryon excelsus
Alseuosmia macrophylla
Beilschmiedia tarairi [ABS]
Beilschmiedia tawa
Brachyglottis kirkii var. *angustior*
 (*Senecio*) [ABS]
Brachyglottis repanda
Callitriche muelleri [ABS]
Carmichaelia australis
 (incl. *C. aligera*, *C. cunninghamii*)
Centella uniflora
Clematis paniculata
Coprosma arborea
Coprosma grandifolia (*C. australis*)
Coprosma lucida
Coprosma macrocarpa
Coprosma propinqua x *C. macrocarpa*
Coprosma rhamnoides
Coprosma robusta
Coprosma spathulata
Corokia buddleioides var. *buddleioides*
Corynocarpus laevigatus
Cyathodes juniperina
Dodonaea viscosa [ABS]
Dracophyllum latifolium
Dracophyllum sinclairii
 #*Drosera auriculata*
 (*D. peltata* subsp. *auriculata*) [ABS]
Dysoxylum spectabile
Elaeocarpus dentatus

Elatostema rugosum
Geniostoma rupestre var. *ligustrifolium*
Gonocarpus incanus (*Haloragis incana*)
Griselinia lucida
Haloragis erecta
Hebe macrocarpa var. *macrocarpa*
Hedycarya arborea
Helichrysum lanceolatum
 (incl. *H. glomeratum/aggregatum*)
Hoheria populnea
Hydrocotyle dissecta
Hydrocotyle elongata
Knightia excelsa
Kunzea ericoides (*Leptospermum ericoides*)
Leptospermum scoparium
Leucopogon fasciculatus
 (*Cyathodes fasciculata*)
Litsea calicaris
Lophomyrtus bullata
Macropiper excelsum
Melicope ternata
Meliccytus macrophyllus
Meliccytus micranthus
Meliccytus ramiflorus
 #*Metrosideros diffusa* [ABS]
Metrosideros fulgens
Metrosideros perforata
Myrsine australis
Myrsine salicina
Nertera dichondrifolia
Nestegis lanceolata
Olearia albida var. *albida*
Olearia furfuracea
Olearia rani
Parsonsia sp.
Passiflora tetrandra
 (*Tetrapathaea tetrandra*) [ABS]
Peperomia urvilleana
Phebalium nudum
Pittosporum ellipticum
Pittosporum tenuifolium
 #*Pomaderris phyllicifolia* var. *ericifolia* [ABS]
Pseudopanax arboreus
Pseudopanax crassifolius
Pseudopanax lessonii
Pseudopanax crassifolius hybrids
Rhabdothamnus solandri
Rubus australis
Rubus cissoides
Schefflera digitata
Sophora microphylla
Vitex lucens

MONOCOTS excl. grasses & orchids

Astelia banksii
Astelia solandri

Astelia trinervia
Carex dissita
Collopermum hastatum
Cordyline australis
Cordyline banksii
Dianella nigra
Freycinetia banksii
Gahnia lacera
Gahnia pauciflora
Gahnia xanthocarpa
Lepidosperma laterale
Libertia grandiflora
Morelotia affinis
Phormium cookianum
Phormium tenax
Rhopalostylis sapida
Ripogonum scandens
Schoenus maschalinus [ABS]
Schoenus tendo

Uncinia banksii
Uncinia uncinata

GRASSES

Microlaena avenacea
Oplismenus imbecillis

ORCHIDS

Acianthus sinclairii
(A. fornicatus var. *sinclairii)*
Bulbophyllum pygmaeum
Corybas macranthus
Dendrobium cunninghamii
Earina autumnalis
Earina mucronata
Pterostylis alobula
Pterostylis cardiostigma
Pterostylis graminea
Pterostylis trullifolia

Distribution of beech in the Waitakere Ranges

E.K. Cameron

Hard beech (*Nothofagus truncata*) is locally common in the Auckland Region, e.g. Little Barrier Island; Kawau, Ponui and Waiheke Islands; North Shore, Paremoremo, Albany - Warkworth, Mangawhai; and east and southern Hunua Ranges and Mount William. In the Waitakere Ranges, "a small stand of *Nothofagus truncata* at Titirangi" (Mead 1969:2) is what most people are aware of. This refers to the trees below Konini Road (Site 2) (Mead 1959). More recently a remote small stand of hard beech on the margin of the upper Whatipu Stream has become better known (Site 1) (Wood 1976). When compiling this article I have become aware of another site west of the Konini Road trees (Site 4). This is possibly (depending on how many remain) the most extensive stand of hard beech remaining in the Ranges. See map (Fig. 1) for the site locations.

* Site 1: Upper Whatipu Stream margin, 4 healthy trees, Auckland Centennial Memorial Park. Map reference 260 Q11 457639 150 m asl. See Table 1 for the size and growth rates of these trees. I.T. Pickens (pers. comm.) collected material from this stand in the mid 1950's for his botany herbarium project at Auckland University. In 1976, Bill Beveridge took Katie Wood and others to visit these trees after he came across them in 1974 (Wood 1976). Brenda May vouchered the first herbarium specimens in August 1976 (AK 216565 ex Herbarium A E Esler) and Katie Wood collected more in October 1976 (AK 140567, 216564). Bot Soc visited this stand on 21 October 1989 and 16 August 1997 (Cameron 1997).

* Site 2: Gully between upper Konini and Tawini Roads. A.D. Mead (1959) recorded small groups of hard beech between these two roads of 6-20 trees each in secondary bush. Two of the groups were part of a subdivision reserve (now Centennial Memorial Park land) and the others were on private land. Seedlings were very rare. McDonald (1984) recorded 10 trees (including two dead) in the upper part of the valley (450 m down Konini Road from the Scenic Drive, map R11 565730 120-140 m asl) and 20 trees (including 4 dead) in the lower part (towards Konini School, map R11 564733 100 m asl) in June 1983. He recorded the diameter, health and tagged the individual trees.