

WAIKUMETE CEMETERY – Field Trip in October

Mike Wilcox and Leslie Haines

This is a brief sketch of the Botanical Society's excursion to the Waikumete Cemetery, Waitakere City, on 9 October 1999. The cemetery land covers 107 ha and has been in use as a burial ground since 1886. Its botanical attractions include numerous planted trees, both native and introduced, an abundance of spring wild flowers (particularly South African Iridaceae), grassy areas with mixed native and introduced herbs and monocots, and some sizeable areas of gumland scrub with naturalised trees, particularly *Pinus pinaster* and *Acacia mearnsii*.

South African Iridaceae

Waikumete Cemetery is probably the best site in New Zealand in which to see growing wild the numerous colourful species of introduced bulbous plants of the family Iridaceae of South African origin. These plants no doubt were first cultivated as ornamentals around graves and have since become firmly established. Many were in bloom at the time of our visit. We list them here as a guide for wildflower enthusiasts.

Aristea ecklonii Baker

South Africa. Common around Auckland on roadsides and in overgrown grassy places. Waikumete Cemetery, roadsides near Huapai, Shakespear's Regional Park. It is very abundant in Centennial Park, Campbells Bay, and at Waikumete Cemetery. Attractive bright blue flowers in late October- late November.

Babiana stricta (Sol.) Ker-Gawl.

Baboon flower. South Africa. Attractive bluish-purple or reddish-purple flowers. Leaves pubescent, plicate. Waikumete Cemetery. Flowering early October.

Crocsmia x crocosmiiflora (Nicholson) N.E. Brown
Montbretia. A common weed. Attractive reddish-orange flower. Abundant in disturbed forests around Auckland. Waikumete Cemetery. Fl. January.

Freesia refracta (Jacq.) Klatt

Common freesia. South Africa. Flowers cream, tinged with green and yellow.

Gladiolus undulatus L.

Wild gladiolus. South Africa. Greenish-cream flowers. Common roadside weed in Auckland and Northland. Abundant cormils at the base of the corm. Flowers in December. Waikumete Cemetery,

Ixia maculata L.

South Africa. Grass-like, tufted. Flowers large, 4-5 cm in diameter, with brownish or blackish circular blotch

at centre. Fl. September-October. Waikumete Cemetery.

Ixia polystachya L.

Variable ixia. South Africa. Common in Waikumete Cemetery, Auckland. Grass-like. Flowers pale violet-blue, white at centre with yellow patch. Fl. October-November.

Romulea rosea (L.) Ecklon

Onion grass. South Africa. Waikumete Cemetery. A diminutive, grass-like plant. Occurs in pasture and grassy waste land and lawns. Flowers lilac-pink, rosy-cerise or magenta, with yellow centre. Aerial stem absent.

Sparaxis bulbifera (L.) Ker-Gawl.

Harlequin flower. South Africa. Bulbils in leaf axils. Flowers creamy-yellow, occasionally purple or red.

Sparaxis tricolor (Schneev.) Ker-Gawl.

Tricolor harlequin flower. South Africa. Tufted, grass-like. Flowers deep orange-red to scarlet or purplish, internally all with a dark brown blotch above bright yellow tube.

Tritonia crocata (L.) Ker-Gawl.

South Africa. A wildflower in Waikumete Cemetery, Auckland. Flowers bright orange, pink, or reddish.

Tritonia lineata (Salisb.) Ker-Gawl.

Lined tritonia. South Africa. Waikumete Cemetery. Flowers yellow-cream, fine purple veins. Fl. early October.

Watsonia borbonica ssp. *ardernei* (Sander) Goldblatt

South Africa. A very tall, robust plant to 2 m tall. Flowers white, open structure. Waikumete Cemetery. Fl. early October.

Watsonia meriana (L.) Mill.

South Africa. Flowers rose-red or salmon pink. Waikumete Cemetery.

Watsonia meriana cv. *Bulbillifera* J.W.Mathews & L.Bolus

Wild watsonia, bugle lily. South Africa. Abundant weed in the Waitakeres, Auckland. Brick-red flowers in October. Produces clusters of cormils. A serious weed. Abundant weed in Waikumete Cemetery. Flowers orange-red, trumpet-shaped. Strenuous efforts have been made to curtail the spread of this plant in the cemetery.

Sparaxis bulbifera were the dominant flower at the time of the trip with *Babiana stricta*, *Ixia maculata*, *I. polystachya*, *Watsonia borbonica* and *Tritonia lineata* just beginning to flower. Small amounts of *Romulea roseum* were present, though later in November there are good displays of a larger and brighter *Romulea* sp. The ixias are usually in full bloom in November and the freesia had finished flowering.

These spring flowering plants are maintained by clearing the spent growth by mowing between December and March when there are no flowers or vegetative growth.

Other small plants of the graveyards and lawns

Native plants of particular note were the sundew (*Drosera peltata* ssp. *auriculata*), the small turfy sedge, *Schoenus apogon*, with black spikelets, the fern *Lindsaea linearis* (better known from scrubland or scrub margins), *Leucopogon fraseri* in flower, growing in low loose patches, *Psilotum nudum* growing in fractured concrete of some of the older graves, *Centella uniflora* with bronze-coloured leaves growing abundantly in the lawns, the common grass *Microlaena stipoides*, and the orchids *Microtis parviflora* and *Microtis uniflora*. An interesting find, and evidently a new record for Waikumete, was a clump of *Lycopodium varium* (now *Huperzia varia*) growing on *Phoenix canariensis*. A colony was seen of the rather uncommon grass, *Paspalum orbiculare*.

Ewen took us across a grassy gumland hill which is so poorly drained and infertile that gumland species (manuka, *Lindsaea linearis*, both *Pomaderris kumeraho* and *Pomaderris phyllicifolia* var. *ericifolia*, and *Drosera*) are competing well, despite being kept prostrate by frequent high lawn mowing.

However, introduced plants tend to form most of the vegetation around the graves and on the lawns. The dominant turf grass is narrow-leaved carpet grass (*Axonopus affinis*). The commonest grass in flower at this time of the year was sweet vernal (*Anthoxanthum odoratum*). Two species of wood rush (*Luzula campestris* and *Luzula multiflora*) were prominently flowering. The small sedge *Cyperus tenellus* was abundant in the damper grass sites, and track rush (*Juncus tenuis*) was common – on tracks.

Wildflowers (or weeds !) included *Allium triquetum*, *A. roseum*, *Hypoxis capensis*, *Oxalis purpurea*, spur valerian (*Centranthus ruber*), commonly in crevices of old graves, yarrow (*Achillea millefolium*), cape weed (*Arctotheca calendula*), oxeye daisy (*Leucanthemum vulgare*), centaury (*Centaureum erythraea*), small-flowered buttercup (*Ranunculus parviflorus*), sheep's sorrel (*Rumex acetosella*), and field madder (*Sherardia arvensis*).

Conifers

Waikumete has an extensive and varied collection of introduced conifers, grown as formal specimens around the graves, as roadside avenues, or as small woodlots. Some of the species we particularly noted were Arizona cypress (*Cupressus arizonica* including var. *glabra* with smooth bark), Mediterranean cypress (*Cupressus sempervirens*, both var. *horizontalis* and var. *pyramidalis*), Australian cypress pine (*Callitris rhomboidea*), Norfolk pine (*Araucaria excelsa*), Japanese cedar (*Cryptomeria japonica*), Chinese arbor-vitae (*Thuja orientalis*), Western red cedar (*Thuja plicata*), swamp cypress (*Taxodium distichum*), lawsoniana (*Chamaecyparis lawsoniana*), African podocarp (*Afrocarpus falcata*), Australia brown pine (*Podocarpus elatus*), and four species of pine – *Pinus radiata*, *Pinus pinea*, *Pinus canariensis*, and *Pinus pinaster*. All four of these pines have grown well at Waikumete, with *P. pinaster* abundantly naturalised in the scrublands and obviously very well adapted to the impoverished phosphate-deficient clay soils, and periodic fires. Canary Island pine (*P. canariensis*) is represented by several handsome specimens of narrow conical form and thick bark, including a commemorative tree near the crematorium said to have descended from Gallipoli, Turkey (this is most unlikely, as the commonest pine there is *Pinus brutia*).

Native trees were planted in gullies around 1930, and developed into quite natural-looking bush. Species noted were kauri (*Agathis australis*), rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), tanekaha (*Phyllocladus trichomanoides*), kawaka (*Libocedrus plumosa*), and monoao (*Halocarpus kirkii*), this latter pointed out by Colin Bradshaw.

Broadleaved trees and shrubs

Australian trees are richly represented at Waikumete. There are at least 30 species of eucalypt alone, many (including the commonest ones such as *Eucalyptus saligna*, *E. botryoides* and *E. robusta*) unfortunately now in a sorry condition as a result of defoliation by introduced insect pests such as *Ophelimus* sp. "b" (a eulophid wasp), brown lace lerp (*Cadiaspina fiscella*), and leaf-mining sawfly (*Phylacteophaga froggatti*). Four species which seemed to have remained healthy, and have grown well are yellow stringybark (*Eucalyptus muelleriana*), blackbutt (*E. pilularis*),

tallowwood (*E. microcorys*), and white peppermint (*E. pulchella*). The stringy barked eucalypt growing in pure stands towards the water tank is *E. obliqua*. We noted naturalised regeneration of *E. robusta*, *E. muelleriana*, and *E. saligna*.

Other Australian trees and shrubs at Waikumete are she-oak (*Casuarina cunninghamiana*), brush box (*Lophostemon confertus*), kanooka (*Tristaniopsis laurina*), black wattle (*Acacia mearnsii*), Sydney golden wattle (*Acacia longifolia*), Gosford wattle (*A. prominens*), Queensland silver wattle (*A. podalyriifolia*), *Hakea salicifolia*, *H. sericea*, lilly pilly (*Acmena smithii*), brush cherry (*Syzygium australe*), brush wattle (*Paraserianthes lophantha*), tea tree (*Leptospermum polygalifolium*), *Ficus rubiginosa*, and *Westringia fruticosa*. Black wattle is thoroughly naturalised in scrubby areas, and was conspicuous because of its flowering, and heavy attacks by the gall-forming rust, *Uromycladium notabile*. An Australian tea tree *Leptospermum polygalifolium* has become naturalised in a damp gully. It differs from the native manuka (*Leptospermum scoparium*) by its larger flowers and by the abundant large, smooth capsules.

Yunnan poplar (*Populus yunnanensis*) has grown to a large size at Waikumete. There are also examples of lombardy poplar (*Populus nigra* cv. *Italica*), and white poplar (*Populus alba*) - the latter spreading by suckers.

Other exotic trees or shrubs are *Escallonia bifida*, *Erica lusitanica*, *Fraxinus ornus*, *Ligustrum lucidum*, *Psoralea pinnata*, *Prunus serrulata*, *Pryacantha angustifolia*, *Raphiolepis umbellata*, and *Ulex europaeus*. The most prominent planted native trees are pohutukawa and puriri.

Gumland scrub

The western part of Waikumete Cemetery has an appreciable area of gumland vegetation. This has

been periodically burnt, resulting in a mosaic of vegetation from mature scrubland with emergent maritime pine and black wattle through to recently burned sites undergoing the first stages of regeneration.

The dominant scrub species is manuka (*Leptospermum scoparium*). Other shrub species commonly associated with it are kumarahou (*Pomaderris kumeraho*), *Pomaderris phyllicifolia* var. *ericifolia*, *Dracophyllum sinclairii*, *Hakea sericea*, *Hakea salicifolia*, *Acacia mearnsii*, *A. longifolia*, *Pinus pinaster*, hangehange (*Geniostoma rupestre* var. *ligustrifolium*) and *Olearia furfuracea*. The ground vegetation comprises dense tangles of umbrella fern (*Gleichenia dicarpa*, *G. microphylla*), various tussocky or rush-like sedges, especially *Gahnia setifolia*, *Lepidosperma laterale*, *Baumea teretifolia*, *Schoenus brevifolius*, and *Schoenus tendo*. Orchids (e.g. *Pterostylis agathicola*), small herbs (e.g. *Nertera dichondrifolia*, *Lobelia anceps*, *Gonocarpus incanus*) and *Lindsaea linearis* can be found nestled in the shade, in mature scrub.

Following fires, which can destroy the main canopy trees (manuka, black wattle, maritime pine), very dense regeneration has occurred from the considerable seed bank stored in the leaf litter or in thick woody fruits. A recent fire has resulted in very dense seedling growth of manuka, kumarahou and black wattle in particular.

Alan Esler took a core to sample the age of the trees in the adjacent stand which had not been burnt in the most recent fires and found them to be about 35-40 years old. There was no sign of forest species regenerating beneath with the exception of hangehange (*Geniostoma rupestre* var. *ligustrifolium*).

Thanks to Alan Esler and Ewen Cameron whose vast experience of Waikumete was shared on the trip.

References

- Cameron, E., Hayward, B., Murdoch, G. 1997: *A Field Guide to Auckland*. No. 67. Waikumete Cemetery. p 183. Godwit Press, Auckland.
Gilligan, M. 1997: *Waikumete Cemetery*. Brief History. Friends of Waikumete Inc.
Ritchie, J. (ed.) 1999: *Waikumete Cemetery. Conservation and open space management plan*. Waitakere City Council. 99 p.
Wilcox, M. D. 1998: Eucalypts at Waikumete Cemetery. *Auckland Botanical Society Journal* 53(1): 36-37.

Acknowledgement: Ewen Cameron helped in the proof-reading of this ABS Journal.