among the most popular. Cape honeysuckle (*Tecoma capensis*) is by far the commonest urban hedge species. A survey of 546 **streets** indicated that titoki (*Alectryon excelsus*), willow myrtle (*Agonis flexuosa*), Persian lilac (*Melia azedarach*), flowering cherries (*Prunus*), Australian kanooka (*Tristaniopsis laurina*), pohutukawa and silver birch were the most commonly used. A sample survey of tree cover over 22.5 ha in a mature suburb gave a combined street and garden density of 27.5 trees per hectare.

A survey of the tree composition in 660 **urban parks**, industrial estates, cemeteries, school grounds, campuses, and large historic gardens, covering 3000 ha, showed that the commonest big trees (15 m or more tall) in the city are pohutukawa, eucalypts, puriri, totara, pin oak (*Quercus palustris*), sweet gum, pedunculate oak, London plane (*Platanus* ×*acerifolia*), monkey apple, Monterey cypress (*Cupressus macrocarpa*), Norfolk Island pine (*Araucaria heterophylla*), Monterey pine, Canary Island date palm (*Phoenix canariensis*), brush box (*Lophostemon confertus*), river sheoak (*Casuarina cunninghamiana*), claret ash (*Fraxinus angustifolia* subsp. *oxycarpa* 'Raywood'), silky oak (*Grevillea robusta*) and poplars (*Populus yunnanensis*, *P. nigra* 'Italica', *P.* ×*canadensis*). These are the species that give the primary structure to Auckland's urban forest. The predominant eucalypts are *Eucalyptus botryoides*, *E. cinerea*, *E. nicholii* and *E. saligna*. The most abundant smaller trees (<10 m) are cabbage tree, karaka, lemonwood, titoki, evergreen magnolia (*Magnolia grandiflora*), karo, kohuhu and broadleaf (*Griselinia littoralis*).

Auckland's oldest parks dating back 150 years have an assemblage of trees from various parts of the world, with Norfolk Island pine, Queensland kauri (*Agathis robusta*), Moreton Bay fig (*Ficus macrophylla*), pohutukawa (*Metrosideros excelsa*), puriri, holm oak (*Quercus ilex*), camphor laurel (*Cinnamomum camphora*), oaks (*Quercus*) and elms (*Ulmus*) being particularly prominent.

The urban forest is ecologically, socially, commercially and politically complex. A mechanism such as an "Urban Forest Collective" is needed to record and share information about the city's urban trees and to promote research, effective management and future improvement of the urban forest for the benefit of all citizens.

The above summary is from Auckland Botanical Society Bulletin 29, *Auckland's remarkable urban forest*, Auckland Botanical Society, Auckland. 348p (2012).

Is that it? Auckland's Threatened and Uncommon Plants

Bec Stanley

Most of Auckland's threatened plants are not attractive to anyone but people like us. Imagine, for example, my disappointment as I led 20 people to see dactylanthus (*Dactylanthus taylorii*), surely one of the most fascinating plants in our flora, only to hear someone ask "Is that it?" I've often wondered if botanists need marketing degrees too. I admit that before I started working on these plants I may well have pulled them out of my own garden (not dactylanthus! But maybe *Senecio scaberulus*). Many of our threatened plants are annual or short-lived early successional plants finding homes in gaps, edges and after disturbances. Without the exotic herbs and grasses that now outnumber them, I bet many would still be common in urban Auckland. We might have found *Rorippa divaricata* near Takapuna beach where the gulls wait to steal your sandwich, or *Daucus glochidiatus* in a crack in the footpath on Karangahape Road. Indeed at the Auckland Botanic Gardens the *Picris burbidgeae* boldly self-seeds in front of every other plant's name tag but its own, indicating how freely it would have regenerated before exotics came on the scene.

The closest we get to seeing Auckland's pre-naturalised plants flora is from Cheeseman's and Kirk's specimens, lists and papers. But even Kirk noticed that the scoria cones of the isthmus were dominated by exotic plants in 1871. Alan Esler (in a series of papers on the naturalisation of plants in urban Auckland) used these old records to compare the changes in the flora as urbanisation and the impacts of exotic plants and animals increased (Esler 1988). Alan warned us to study kikuyu (*Cenchrus clandestinus*) and record the details of the vegetation in its path for the archives (Esler 2004), as he saw this loss from a hundred years back using these old lists. Bot Soc continues this tradition (I call it "time travel") because we understand the relevance of this data for future bot soccers who we hope won't be trying to nut out from our species lists where *Haloragis erecta* once grew.

So where can we see these threatened plants? Most people expect that threatened plants will be found in something like pristine nature. Some are, but many Auckland plants persist in what seems at

Fig. 1. *Ophioglossum petiolatum* habitat on Scenic Drive, Waitakere Ranges. Photo: Bec Stanley, 8 Apr 2008.

Fig. 2. *Daucus glochidiatus* on the roadside on Rangitoto I. Photo: Bec Stanley, 10 Dec 2007.

first glance to be more unusual places such as roadsides (*Ophioglossum petiolatum* (Fig. 1), *Pomaderris hamiltonii*, *Hebe bishopiana*, *Daucus glochidiatus* (Fig. 2), *Ileostylus micranthus*) and tracksides (*Myosotis petiolata* var. *pansa* (Fig. 3), *Centipeda minima* var. *minima*). It's not that unusual when you consider process. They live here because roadside mowing and trackside scrub-cutting for example can keep the plant in the open, arresting succession and maintaining its habitat. Jamie Kirkpatrick (2007) labelled this "unconscious conservation" as, in doing something for other reasons, we promote a threatened plant's habitat; for example, maintaining a safe roadside which doesn't obscure driver's vision creates open conditions for a roadside plant. It means you have to be doubly sure you'll recognise this when a road is widened, or indeed rerouted – leaving the old road to overgrow and become less suitable for the threatened plant.

Managing these threatened plants is challenging. Most aren't pretty (exceptions such as kakabeak and *Hebe speciosa*, two of our most attractive species, are also perilously threatened), and the habitats can be unpleasant (I did get a tetanus shot after my first trip to Bycroft Springs, just in case). This makes advocating their plight to developers, politicians and environment court judges very difficult. The prevailing view is that no-one would miss these plants, and further that the plants we should try to save are those which live in pristine nature such as reserves, not private land, not disturbed places and not areas used for industry or economic development. I don't think we can conserve our threatened plants only in reserves.

Considering plants as needing habitats too (rather than just merely providing habitats for animals) would also improve the chances of threatened plant recovery. It is not as easy as putting plants in the ground. Restoration projects are almost without exception intent on creating forest (for birds?) rather than understanding habitats of plants. For a threatened plants surveyor, the tall forest is the boring bit you have to get through to get to the gaps and edges. We need to think more about the characteristics of a site. What you'd plant on a paddock near the Huia is unsuitable for a gulf island for example. What you'd plant beside a stream is unsuitable for a ridge. Furthermore, some projects try to accelerate succession as fast as possible by thinning, and planting canopy dominants. It's the process of succession, the slowly changing conditions suited in turn to different plant communities that should be the goal. Much of our biodiversity, not just plants, lives in early successional habitats like wetlands, scrub, lava pavements, and on the edges and gaps of any place. The 'rush' to restore forest is not helpful for much of our uncommon and

threatened flora. Where will *Kunzea ericoides* var. *linearis* or *Pomaderris hamiltonii* live if we rush to restore everything to tall forest?

Importantly, restoration projects need to address threats to plants as well as animals. A pest for plants is not always clear-cut. Sometimes you think something's a pest and it might not be. For example, if wallabies were a pest for *Centipeda minima* var. *minima*, why is Kawau Island its national stronghold? Sometimes pest control for birds decimates plants. Sand tussock (*Poa billardierei*) on Whangapoua Beach (Great Barrier) was browsed to the ground because cat control to protect brown teal allowed rabbit numbers to sky-rocket. Can you have a pest-free island if Diamond-back moths (a predator of *Lepidium oleraceum*) can get there? Garden snails are not regarded as a conservation pest yet (*oh no, now she's gone too far!*) though they can destroy *Euphorbia glauca* populations (pers. obs).

I also think we need to consider slightly more creative solutions to threatened plant recovery. I think there's a place for our more unusual plants in some new habitats people are creating – green walls and roofs for example. Can we put a coastal turf on a roof? I don't think that would be an eco-sourcing crime, if plants were native to Auckland. It would be unlikely to be mistaken for a wild site. But it might just let us see some of these things back in the city. I think it's worth a shot.

Fig. 3. *Myosotis petiolata* var. *pansa* on Mercer Bay trackside, Waitakere Ranges. Photo: Bec Stanley, 13 Dec 2010.

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75th Jubilee Dinner, 27 October 2012

Mike Wilcox

Following the Symposium we adjourned to the Long Black Café, Unitec, for the Jubilee dinner (Fig. 1). Proceedings got underway with a toast to Bot Soc, proposed by *Paul Asquith*, who recounted many good memories of Bot Soc activities, especially the summer camps. *Geoff Davidson* rounded off the evening in similar fashion, highlighting the 'away' trips around New Zealand and beyond.

The election of *Cathy Jones* as a Life Member was warmly received, with fine speeches from *Maureen Young* and *Anthony Wright* emphasising Cathy's many contributions to New Zealand botany, and her heroic deeds in leading our numerous alpine trips in the South Island (see next article).

Dinner was a delicious and varied buffet prepared and served by Mandie Taylor and her team at Long Black Café.

Cutting of the Jubilee cake took place before desert was served (Figs. 2 & 3).