Native roses among the exotic thorns

William Reinders

Everybody loves to wander in an exciting native ecosystem. Unfortunately, in Christchurch and its near hinterland very few of those remain; and in most of them, dogs are forbidden. An excessively energetic dog, limited time, and a hatred of long-distance driving has forced me to combine the necessity of dog walking and the luxury of botanising into the unexpected pleasure of urban botany: and so, for the last few years the exiled hound and I have been exploring the less natural areas of the city and hunting the botanical treasures there. One might think the chances of being entertained in the industrial/commercial landscape to be rather low, but once one's expectations have been calibrated (i.e., learn to like weeds) it is a rare walk that doesn't turn up something of interest. More exciting than obscure weeds though are the rare native pearls that turn up in the exotic sea! I have been surprised by many native species found thriving in the city. This article will show three that were both unexpected and rare.

Figure 1. *Rytidosperma merum* at the A&P showgrounds. Photo: Reinders 2020

Rytidosperma merum At Risk – Declining (de Lange et al. 2018)

Rytidosperma merum is an endemic grass of dry, short tussock grasslands. NZPCN notes that it is "apparently very uncommon throughout its range". Habitat loss caused by the agricultural improvement of dry grassland is a particular threat. The foliage is nondescript, but the plant becomes much more conspicuous in flower, with greatly elongated culms (up to 1 m long) that arch over towards the ground, or trail along it (Figure 1).

I have found this species twice within Christchurch City. The first find was at the A&P showgrounds in Hillmorton. It was growing in a paddock grazed by sheep and used by the Halswell Pony Club for cross-country competitions. The paddock has been occasionally herbicided and resown in perennial ryegrass and white

clover; but the soil is dry and sandy, so the flora quickly reverts to a rough open-based pasture dominated by unproductive exotic grasses and annual herbs. The commonest grasses are the exotic *Rytidosperma racemosum*, *Agrostis capillaris*, and *Cynosurus cristatus*; and the commonest forbs the exotic *Erodium moschatum*, *Trifolium subterraneum*, *Plantago lanceolata*, and *Veronica arvensis*. There is also a substantial range of other exotic grasses and herbs. The only other native species is *R. clavatum*, which is present in several small groups. Of *R. merum* there is just a single group of several large plants, on top of a long, low dry rise. This gives the appearance of a remnant population.

I have since found *R. merum* in one other spot in the city: perhaps not coincidentally, the old A&P showgrounds next to Hagley Park. The population there is much larger (dozens of plants) growing in a remnant portion of the old stockyards. It is confined to a small (c. 10 m x 5 m) patch of hardfill composed of rounded river gravel and sand, but it is very dominant there, growing with occasional small tufts of cocksfoot, abundant small rosettes of *Plantago coronopus*, and mosses – mostly the dry-loving moss *Triquetrella papillata* (Figure 2).

Figure 2. left: *Rytidosperma merum* foliage, Photo Reinders 2020; right: *Rytidosperma merum* seed. The callus is elongated, and the lemma hairs are only present as lateral tufts. Photo: Reinders 2022

Mazus novaezeelandiae subsp. *impolitus* Nationally Endangered (de Lange et al. 2018)

Mazus novaezeelandiae subsp. *impolitus* is a creeping herb of wet soil. I first found it growing in several lawns in Hazeldean Business Park, just south of Hagley Park. The lawn

in which the biggest patch grows is sunken and receives rainwater from the surrounding concrete areas. As well as this, the lawns of the business park are irrigated in summer, which keeps the sunken lawn wet at all times. The main associated herbs are *Prunella vulgaris*, *Hydrocotyle heteromeria*, *Trifolium repens*, and *Bellis perennis*; but the *Mazus* is strongly dominant. *Mazus* is also present in lower abundance and vigour in two other drier lawns on site, notably in one of the iconic humped lawns off Lincoln Road. The business park was constructed in 2009, and none of the three lawns in which the plant grows is at the original ground level, so the population seems unlikely to be a remnant (Figures 3 & 4).

I found a second location this year next to a stream in Fendalton, also in a lawn - a private one. The lawn had been recently sprayed for weeds, and almost all the *Mazus* was moribund. A single small patch immediately next to the stream had been missed by the spray, but since its future on site seemed tenuous, I took it and transplanted it to a few hopeful looking sites in the Wigram retention basin. With any luck it will come back from seed in the sprayed lawn; but even if it doesn't, the abundance of similar streamside lawns in the area seems like a hopeful sign.

Figure 3. *Mazus novaezeelandiae* subsp. *impolitus*. Photo: Reinders 2021

Figure 4. The small white flowers are *Mazus.* Photo: Reinders

Epilobium hirtigerum At Risk – Recovering (de Lange et al. 2018)

Epilobium hirtigerum is one of the largest native willowherb species. It also grows in Australia, South America, and Indonesia. It had been naturally found throughout the country in open wet areas; but it is now found almost exclusively in cities, where it behaves as a weed, particularly in wasteland or hardscaped areas. Before its spread in the cities of the upper North Island it was considered to be critically endangered in New Zealand, but it

Figure 5. Summer habit of *Epilobium hirtigerum*. Photo: Reinders

is now recovering. There is only one herbarium record from the Christchurch area (six total in Canterbury).

I found it growing in Ferrymead in a gravel carpark in the industrial zone (Figure 5). It is abundant there, but the carpark is regularly herbicided, so the plants are stunted. It appears that *E. hirtigerum* is partially resistant to glyphosate, as are some of the other weedy species in the genus. Other than *E. hirtigerum*, the flora of the carpark is mostly composed of typical glyphosate-resistant exotic species of clovers, medicks, and exotic willowherbs.

Tom Ferguson and I explored around the other side of the estuary to see whether we could find it elsewhere, and he found it growing in the Tramway Historical Society depot in Ferrymead. I have since found it growing in other sites in Ferrymead, Woolston, and in more natural situations above Sumner and at Castle Hill (Figure 6, p.7).

Figure 6. Very hairy cauline leaves and pods of *E. hirtigerum*. Photo: Reinders

References

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