

Pertusaria sorodes # (M.Ford 1188, AK)
Pertusaria thiospoda # (M.Ford 1189, AK)
Phaeophyscia hispidula # (M.Ford 1132, AK)
Phlyctis sordida # (M.Ford 1136, AK).
Phyllopsora sp.
Physcia jackii
Physcia poncinsii
Physma chilense # AK384409
Peltigera dolichorhiza #
Placopsis sp. #
Pseudocyphellaria bartlettii # AK384419
Pseudocyphellaria carpoloma
Pseudocyphellaria chloroleuca
Pseudocyphellaria coriacea
Pseudocyphellaria crocata agg. # (M.Ford 984, Unitec).
Pseudocyphellaria dissimilis
Pseudocyphellaria episticta
Pseudocyphellaria haywardiorum #
Pseudocyphellaria intricata
Pseudocyphellaria neglecta # AK384417

Podostictina pickeringii
Porina exocha #
Punctelia borrieri
Punctelia subrudecta # (M.Ford 1148, AK; M.Ford 1149, AK)
Pyrenula nitidula # (M.Ford 889, Unitec).
Pyxine subcinerea
Ramalina celastri
Scytinium kauaiense
Stereocaulon ramulosum
Sticta babingtonii # AK384387
Sticta fuliginosa #
Sticta latifrons
Sticta limbata # AK384412
Sticta martinii
Strigula novae-zelandiae
Strigula prasina
Usnea angulata
Usnea dasaea # AK384416
Usnea rubicunda

Veronica cymbalaria, a new record for New Zealand

Frances Duff



Fig. 1. *Veronica cymbalaria* plants among grasses and agapanthus, Tamaki Drive, Auckland. Scalebar = 5 cm. All photos taken on 21 Aug 2021 by the author.

Reduced during Covid lockdown last year to daily walks around the city, I came across an interesting weed. On 21 August 2021 what had begun as a windy, damp and dreary walk along Tamaki Drive, Auckland's waterfront, turned into an exciting one - if you get excited by finding new naturalised plants. There, beside the path above the railway line, I spotted the pretty white flowers and hairy rounded capsules of what I took to be *Veronica cymbalaria* (cymbalaria-leaved speedwell) (Fig. 1). I felt familiar with this species from trips I'd made in Europe. Many of the plants were small (<10 cm tall) and unbranched but already flowering and fruiting, and they occurred only in a few patches that were not dominated by agapanthus (*Agapanthus praecox*).

I collected some plants (Fig. 2), took photos of what seemed to be key characters (Figs. 3–6), and lodged a specimen at Auckland Museum herbarium (AK 383373).

But confidence in my attribution waned, as the taxon was not in the NZ Flora Vol. 4 (Webb et al. 1988), or the recent adventive additions to the Floras of New Zealand (Ogle 2021); nor could I



Figs. 2 & 3: **2.** *Veronica cymbalaria* plants with flowers and fruits. The single-stemmed mature plants were predominant, but the branched plants were more reminiscent of ones seen by the author in Europe. Note that the pedicels on developing plants were erect, while at maturity they were patent. Scalebar = 5 cm. **3.** *Veronica cymbalaria*: Capsule covered with wispy hairs that are longer than the hairs on the rest of the plant. Scalebar = 1 cm.

find it on the websites of Landcare Research (<https://nzflora.landcareresearch.co.nz/>), NZPCN (<https://www.nzpcn.org.nz/flora/>) or iNaturalistNZ (<https://inaturalist.nz/observations> for New Zealand locations). I have found no record of this species in any Australasian herbarium. Nor did AVH (<https://avh.ala.org.au/search>) or GBIF (<https://www.gbif.org/species>) show any southern hemisphere occurrences.

It didn't help that, in Europe, I have always seen what I had assumed to be *Veronica cymbalaria* growing not on the ground but cascading down stone walls, rather like the ivy-leaved toadflax (*Cymbalaria muralis*) from which its specific name derives.

The slightly elongated subglobose capsules of my plants (Figs. 3, 4) differed from the laterally compressed capsules that characterise most of the exotic northern hemisphere veronicas (speedwells) that we see in New Zealand. Moreover, the capsules of my plants mostly contained four relatively large rounded seeds compared with the more numerous smaller and flatter seeds of other familiar speedwells.

To my knowledge the only speedwell with a subglobose capsule that has been recorded in New Zealand is *Veronica hederifolia*. It has not been much collected, and there are no records as far north as Auckland (<https://avh.ala.org.au/search>). While it resembles *Veronica cymbalaria* in this feature, its capsule is glabrous, not hairy, and its calyx has lobes with cordate bases and acute apices

(Webb et al. 1988). The calyx lobes of my plants are ovate with obtuse apices, spreading beneath the mature capsule (Figs. 4, 5).

The New Zealand Flora online (http://www.nzflora.info/factsheet/Weed/Veronica_hederifolia.html) reproduces the description for *Veronica hederifolia* from Vol. 4 (Webb et al. 1988) but notes that there are a "number of subspecific taxa in New Zealand within *V. hederifolia*". The suggestion of potential subspecies of *Veronica hederifolia* in New Zealand, along with the apparent absence of *V. cymbalaria*, set me on a search for a flora that gave fuller descriptions of each of the two species, and of any of their close relatives.

My European field guide keys generally narrowed down to just two *Veronica* species with subglobose capsules: *Veronica cymbalaria* and *V. hederifolia*, the final difference between them being in the shape of the calyx and the hairiness or otherwise of the capsules. These two species are both widespread and are therefore most likely to be encountered in the field. But I was aware of the existence of other related species, often with more limited distributions. The status of some of these has fluctuated over the years from species to subspecies and back again, so perhaps the field guides were taking a conservative approach. The fact that some of these other related species also have hairs on their capsules (<http://www.floraiberica.org>) meant that I needed to dig deeper.

Taxonomists have long recognised the close affinity of the small number of speedwells with



Figs. 4 & 5: 4. *Veronica cymbalaria*: Two detached corollas and a mature capsule covered in wispy hairs, and containing four large seeds. Note the dehiscence line on the long axis. Scalebar = 1 cm. 5. *Veronica cymbalaria*: Two detached corollas and a ripe capsule inverted to show underside of calyx. Note marginal hairs on calyx lobes. Scalebar = 1 cm.

distinctly inflated, globose or broadly elliptic capsules and the corresponding reduced number of large cymbiform seeds (usually four per capsule), and have grouped them together under various sections and subsections within *Veronica* (summarized in Albach et al. 2004). Initially *Veronica cymbalaria* and *V. hederifolia* were included within one group but further investigation pointed to the need to separate the two. At least as early as 1973, Fischer (1973) had recognised that the two species (and their close relatives) constituted two distinct groups which he called *Veronica cymbalaria* agg. and *V. hederifolia* agg., and he pursued this with morphological and cytological studies which cemented the segregation of the two groups (Fischer 1975, in Albach 2007). His findings have been extensively followed up in more recent analyses (Albach 2007).

Within *Veronica cymbalaria* agg. Fischer and Greuter (1976) identified five species. The group comprises *Veronica cymbalaria* s.str., *V. panormitana*, *V. trichadena*, *V. lycica* and *V. stamatiadae* (the latter newly described in their 1976 paper), a group whose natural distribution is in Europe, the Mediterranean and western Asia.

All five species are annuals. While *Veronica panormitana*, *V. trichadena*, *V. lycica* and *V. stamatiadae* are all diploid, *V. cymbalaria* s.str. is polyploid. The morphological and cytological variability of *Veronica cymbalaria* and the fact that it exhibits characters that appear to be intermediate between those of *V. panormitana* and *V. trichadena* (see Fig. 7) led to the hypothesis that *V. cymbalaria* has originated as a natural hybrid between these two species (Fischer 1975, in Albach 2007). This was perhaps enabled when hitherto separated species came into contact following the glacial retreat at the end of the last ice age (Albach 2007). The occurrence of both hexaploid and tetraploid forms of

Veronica cymbalaria points to multiple origins of the species, subsequently affirmed by detailed DNA analysis of all five species within this group (Albach 2007). Aside from chromosomal differences, there are apparently no discernable morphological differences between the tetraploid and hexaploid forms, although the taxon in general is quite variable.

Recent phylogenetic researches including DNA and chromosome analysis have resulted in the proposed broadening of the concept of *Veronica* to encompass a large number of taxa, including the New Zealand genus *Hebe* (Albach et al. 2004; Albach et al. 2008). A new hierarchy of subgenera, sections and subsections has been erected to accommodate some of the natural groupings within the new broad concept of *Veronica*. The segregation of the same five species as in Fischer and Greuter's group is retained by Albach et al. (2008) (although it should be noted that this is still a fluid group, both evolutionarily and taxonomically, and new species or subspecies may be identified, or existing ones sunk within existing circumscriptions).

The *Veronica cymbalaria* group according to Albach et al. (2008) is now nested within Tribe Veroniceae, Genus *Veronica*, Subgenus *Cochlidiosperma*, Section *Cochlidiosperma*, Subsection *Cymbalariae*, while Subsection *Cochlidiosperma* encompasses the *V. hederifolia* group. Surprisingly (to me) something as variable as flower colour is still one of the few morphological characters mentioned as a useful separator of Subsection *Cymbalariae* (white flowered) from Subsection *Cochlidiosperma* (blue flowered) (Albach et al. 2008).

A paucity of information on other morphological characters has impeded my quest. *Flora Iberica* (<http://www.floraiberica.org>) gives detailed

descriptions and illustrations of the three species (*Veronica cymbalaria*, *V. panormitana* and *V. trichadena*) that occur in their region (illustrations reproduced in Fig. 7). While these drawings illustrate well some key differences between the species, such as hairiness and leaf shape, the capsule shapes are not so convincing, either in relation to my plants or to images that can be seen in books and online (<https://www.gbif.org/species>). The descriptions of the other two species (*Veronica lycica* and *V. stamatiadae*) are less comprehensive (e.g. no information on the capsules) but there are some other key features described by Fischer and Greuter (1976) for these.

Table 1 lists selected characters of the five species in Subsection *Cymbalariae* (sensu Albach 2008) combining information from *Flora Iberica* (Martinez Ortega et al. 2009), Fischer and Greuter (1976) and D. C. Albach (Albach pers. comm., Sep 2022).

Veronica cymbalaria s.str. is by far the most widespread species of the group, and is recorded beyond its original range as far as North America and Japan (<https://www.gbif.org/species>). It appears to be synanthropic (i.e. associated with humans, either benefitting from modified human habitats or being spread by humans) (Fischer & Greuter 1976). It seems that none of the other species has yet spread beyond the landmasses surrounding the Mediterranean and western Asia.

Veronica lycica and *V. stamatiadae* have extremely limited distributions in SW Anatolia, the latter known



Fig. 6. *Veronica cymbalaria*. The pedicels and calyces of two mature capsules. Note the scattered hairs on all surfaces, including on the undersides of the leaves. Scalebar = 1 cm.

only from a few localities, and are thus perhaps less likely to have found their way to New Zealand.

More significantly, my plants are unlikely to be either of these two SW Anatolian species because both of them have floral bracts that are different from the true leaves (Table 1; Fischer & Greuter 1976). The bracts of the other three species resemble their leaves, a feature shared by my plants. Within each of these three species the number and nature of the lobes on the bracts is variable. However, *Veronica trichadena* has bracts that have poorly defined shallow lobes or are crenelate whereas my plants have bracts that are distinctly lobed (mostly seven lobed), thus tending to rule out *V. trichadena* (Figs. 2, 6, 7; Table 1).

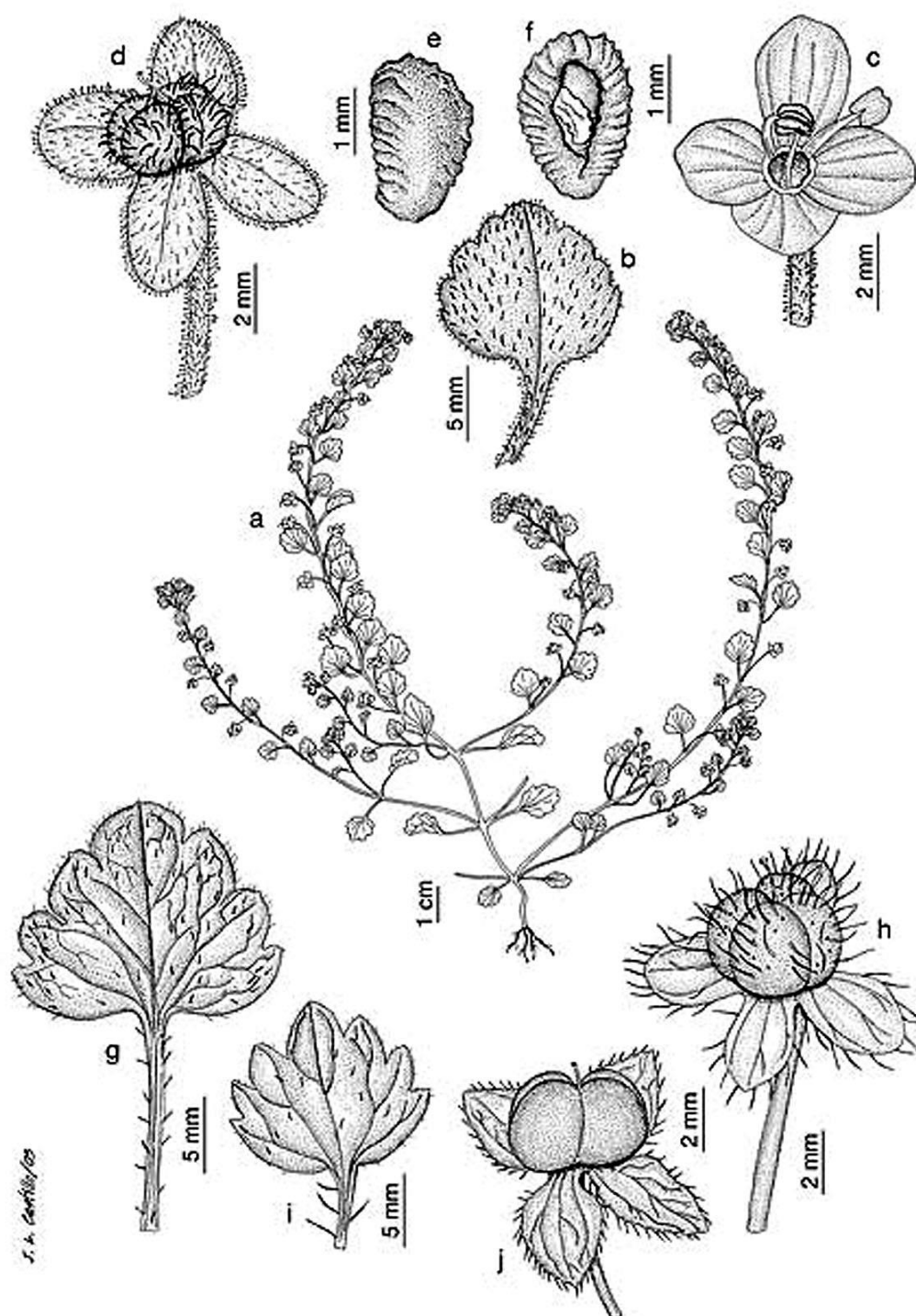
The flowers of *Veronica lycica* and *V. stamatiadae* are considerably larger than those of the other three species (12–16 mm diameter) (Fischer & Greuter 1976). By contrast the flowers of *V. panormitana* are less than 5 mm in diameter. The flowers of my plants are c.5–6 mm which tends to eliminate these three species (Figs. 4, 5; Table 1).

The capsule is glabrous in *Veronica panormitana* while in my plants it is hairy; some capsules have scattered long hairs and others have an abundance of long wispy hairs, but it is hard to determine whether the long hairs are glandular (Figs. 3, 4, 7). The undersides of the leaves of *Veronica panormitana* are also glabrous whereas there are scattered hairs on the leaf undersides of my plants (Fig. 6). This further rules out *Veronica panormitana*.

The whole surface of the calyx and the pedicel of *Veronica trichadena* is densely covered in glandular hairs (Fig. 7), whereas the calyces on my plants have long wispy hairs mostly confined to the margins, and the pedicels have rather scattered fine hairs (Figs. 3–6). So my plants are unlikely to be *Veronica trichadena*.

Still a little tentative, I felt the need to seek the advice of an expert: I emailed D. C. Albach at Oldenburg University, Germany, with images of my plants. He replied that they are likely to be *Veronica cymbalaria* (D.C. Albach pers. comm., Sep 2022) and confirmed some key points that helped exclude the other species, and I have included them in Table 1.

On several counts my plants do seem to exhibit intermediate features between *Veronica panormitana* and *V. trichadena*, with some characters resembling one species and some resembling the other, something that might be expected in *Veronica cymbalaria*, given its purported origins. And they do



Lám. 100.—*Veronica trichadena*, Pont d'Inca, Mallorca (MA 344973): a) hábito; b) hoja, por el haz; c) flor; d) cáliz y cápsula; e) semilla, cara dorsal; f) semilla, cara ventral. *V. cymbalaria*, g) sierra de Lijar, Cádiz (MA 428818); h) Lekeitio, Vizcaya (MA 563734): g) hoja, por el haz; h) cáliz y cápsula. *V. panormitana* subsp. *panormitana*, Albranca Vell, Ferreries, Menorca (SALA 105882): i) hoja, por el haz; j) cáliz y cápsula.

Fig. 7. Three *Veronica* species: *V. trichadena* (a–f), *V. cymbalaria* (g, h), and *V. panormitana* subsp. *panormitana* (i, j). Page (Plate 100) downloaded from *Flora Iberica* <http://www.floraiberica.org>.

Table 1. Morphological features and chromosome numbers separating *Veronica* species in the Subgenus *Cochlidiosperma*, Section *Cochlidiosperma*, Subsection *Cymbalariae*.
Based on: *Flora Iberica* (Martinez Ortega et al. 2009) with additional information from Fischer & Greuter (1976)* and Albach (pers. comm., 2022)**

	<i>V. cymbalaria</i>	<i>V. panormitana</i>	<i>V. trichadena</i>	<i>V. lycica</i>	<i>V. stamatiadae</i>
leaf incl. leafy bracts	leaves & bracts alike, broadly ovate to suborbicular, 3–9(11) lobed, pubescent on both sides	leaves & bracts alike, broadly ovate to deltoid, (6)7–8(9) lobed, lobes acuminate, **glabrous undersides	leaves & bracts alike, broadly ovate to almost orbicular, cuneate at base, margins subentire to crenate with 5–9(11) ill-defined lobes ** (only in upper half)	*leaves & bracts distinct: *bracts smaller	*leaves & bracts distinct: leaves $\pm$ wedge-shaped 4–8 $\times$ 4–8 mm, 5–7 lobed or crenate; *bracts smaller, 3 lobed
flower & pedicel	5–12 mm white fls overtop calyx pedicels $\geq$ bracts, patent or sometimes curved, from glabrous to hairy	**<5 mm white fls scarcely overtop calyx pedicels $\geq$ bracts, patent and incurved at the end, glabrous	5–9 mm white fls overtop calyx pedicels $\geq$ bracts, suberect and recurved at the end, covered in glandular hairs	*12–16 mm *white, conspicuously greenish yellow centre *fls 3–4 times as long as the calyx *fruiting pedicels at least twice as long as subtending bract, **and usually erect	*12–16 mm *white, conspicuously greenish yellow centre *fls 3–4 times as long as the calyx *fruiting pedicels at least twice as long as subtending bract, **and usually erect
calyx	2.5–6.0 mm sepals ovate, apex obtuse, patent in fruit hairs on whole surface or only on margin	1–3 mm sepals oval to ovate, apex $\pm$ acute, scattered hairs on margin	2.5–4.0 mm sepals oval to obovate, apex rounded, glandular hairs over whole surface	no information	no information
capsule	3–7 $\times$ 2–5 mm variably ciliate, with fine glandular hairs, at least some >1 mm, and fine non-glandular hairs >0.3 mm, sometimes both	2.0–3.5 $\times$ 3–4 mm glabrous	2.0–4.5 $\times$ 2.0–3.5 mm with abundant glandular hairs ≤ 1 mm, and occasionally non-glandular hairs <0.3 mm	no information	no information
ploidy	2n = 36, 54	2n = 18	2n = 18, 36	2n = 18	2n = 18

seem unlikely to be *Veronica lycica* or *V. stamatiadae*, for reasons given above, except for one feature (Fischer & Greuter 1976; Albach pers. comm., Sep 2022): that the pedicels of *Veronica lycica* and *V. stamatiadae* are at least twice as long as the subtending bracts, whereas in the other three species they are no more than twice the length (Fischer & Greuter 1976). This made me take a second look at the pedicels of my plants, some of which look

suspiciously long (Figs. 2, 6; Table 1). However the pedicels of my mature plants are patent, not erect.

Whatever their exact identity I feel my plants belong firmly within Subsection *Cymbalariae*, and that they are a new casual record for New Zealand. So how long have they been here? Have they been here but overlooked? And how did they get here?

I can't resist repeating some original descriptions by Bodard, the author of *Veronica cymbalaria* (Bodard 1810: p. 425) that remain succinct and resonant, and still seem appropriate for my plants, even though none of the other four close relatives had been identified back then:

Of the calyx:

"Les quatre folioles du calice horizontalement étendues en croix au-dessous du pericarpe ...constamment obtuses".

[The four leaflets of the calyx [sepals] horizontally extended in a cross under the pericarp...[the sepals are] consistently obtuse].

Of the capsule:

"Le péricarpe est exactement scrotiforme et hérissé de poils blancs, droits et plus longs que dans le reste de la plante".

[The pericarp is exactly scrotiform and bristling with white hairs, straight and longer than in the rest of the plant].

After I'd catalogued my specimen at AK (I did call it *Veronica cymbalaria*) I returned to the AVH and GBIF websites to check that I hadn't missed any southern hemisphere occurrences. To my astonishment there on GBIF was a *Veronica cymbalaria* collected in Auckland. Closer inspection revealed that it was MY specimen – which goes to show how (alarming) quickly information is disseminated these days.

Acknowledgements

Thankyou to D.C. Albach for kindly responding to my query; and to Joshua Salter for captions and the scalebars on the images.

References

- Albach, D.C. 2007: Amplified fragment length polymorphisms and sequence data in the phylogenetic analysis of polyploids: multiple origins of *Veronica cymbalaria* (Plantaginaceae). *New Phytologist* 176: 481–498.
- Albach, D.C., Martínez-Ortega, M.M., Delgado L., Weiss-Schneeweiss, H., Özgökce, F., Fischer, M.A. 2008: Chromosome numbers in Veroniceae (Plantaginaceae): Review and several new counts. *Annals of the Missouri Botanical Garden* 95(4): 543–566.
- Albach, D.C., Martínez-Ortega, M.M., Fischer, M.A., Chase, M.W. 2004: A new classification of the Tribe Veroniceae: Problems and a possible solution. *Taxon* 53(2): 429–452.
- Australian Virtual Herbarium (AVH) <https://avh.ala.org.au/search> accessed Aug 2021 and Sep 2022.
- Bodard, M. 1810: *Cours de Botanique Médicale Comparée* Vol. 1: 422–426.
- Breitwieser I., Brownsey P.J., Nelson W.A., Smitsen R., Wilton A.D. eds. (2010–2022) *Flora of New Zealand Online – Weed Profile – Veronica hederifolia* (based on Webb *et al.* (1988) *Flora of New Zealand* Volume 4). http://www.nzflora.info/factsheet/Weed/Veronica_hederifolia.html accessed Sep 2022
- Fischer, M.A. 1973: Observations sur quatre espèces de Veronica dans la flore majorquaine. *Bolletí de la Societat d'Història Natural de les Balears* 18: 5–20.
- Fischer, M.A., Greuter W. 1976: On two diploid species of the *Veronica cymbalaria* group (*Scrophulariaceae*), endemics of South West Anatolia. *Plant Systematics and Evolution* 125: 245–252.
- Global Biodiversity Information Facility (GBIF) <https://www.gbif.org/species> accessed Aug 2021 and Sep 2022.
- iNaturalistNZ <https://inaturalist.nz/observations> accessed Aug 2021.
- Landcare <https://nzflora.landcareresearch.co.nz> accessed Aug 2021.
- Martínez Ortega, M.M.; Sánchez Agudo, J.A.; Rico, E. 2009: *Veronica* L. In: González, C.B., Heras, J.G., Nieto, A.H. & Hernández E.R. (eds.). *Iberian Flora* 13: 360–424. Royal Botanical Garden, CSIC, Madrid.
- =Flora Iberica: Vascular plants of the Iberian Peninsula and Balearic Islands <http://www.floraiberica.org> accessed Aug 2021.
- New Zealand Plant Conservation Network (NZPCN) <https://www.nzpcn.org.nz/flora> accessed Aug 2021.
- Ogle, C.C. 2021: Adventive monocotyledons, dicotyledons, conifers, ferns and fern allies in New Zealand, additional to those in Flora of New Zealand Vol. 4 (Webb *et al.* 1988). *New Zealand Botanical Society Newsletter* 145: 9–33.
- Webb, C.J.; Sykes, W. R.; Garnock-Jones, P.J. 1988: *Flora of New Zealand Volume 4. Naturalised pteridophytes, gymnosperms, dicotyledons*. Botany Division, D.S.I.R., Christchurch, New Zealand.

Postscript

I revisited Tamaki Drive on 15 Sep 2022 and found that my small population had reappeared. The plants were looking rather depauperate, particularly those near the edge of the path that appears to have been sprayed with herbicide. The plants partially shaded by agapanthus were a little more robust, but very few were branched, the flowers and capsules forming on short single-stemmed plants. But along Tamaki Drive c.75 m distant from the original population, I discovered one plant that had not been evident last year, much larger and much darker green than those in the main population, and branched. This occasioned another herbarium

specimen (AK 385225). Though superficially rather different, it has white flowers c.6 mm in diameter and capsules and calyx that resemble those of my population - although the capsules are tinier and the calyx lobes larger.

Post-postscript

Finally, becoming apprised of the multiple origin theory Joshua Salter picked up the ball and ran with it. She had read in Albach (2007) that the stomatal size (length) on leaves can be used to distinguish between diploids, tetraploids and hexaploids within the *Veronica cymbalaria* group. She examined two leaves, one from my original population and one

from the newly discovered plant. She found that the average stomatal lengths were 36.1 μm for the former and 33.4 μm for the latter. These sizes were within the size range for the tetraploid *Veronica cymbalaria* as determined by Albach (2007: p.491; 32.8–38.2 μm).

Addendum – Joshua Salter

When Frances showed me the *Veronica cymbalaria* population at Tamaki Drive, I collected a few plants for closer scrutiny (I had by then read Albach (2007) and wondered if stomatal measurements might at least establish whether these plants were diploid or polyploid). An interesting feature that caught my attention was that, on the plants growing at Tamaki Drive, although the flowers faced upwards on more or less 'erect' pedicels, the pedicels of the mature capsules were elongated and turned downward, so that the capsules were held beneath the typically somewhat horizontal stems. Indeed the capsules were not generally visible until the plants were pulled out from the surrounding roadside weeds. On the growing tips of the plants where the main stems were more upright the downward pointing capsules had curved pedicels,

but where the main stem grew horizontally the downturned pedicels were 'patent' or even perpendicular to the stem. Thus in Fig. 6 (included to show the distribution of hairs on the undersides of the leafy bracts as well as on other structures) the plant was photographed upside down, with the capsules pointing uncharacteristically upwards on perpendicular pedicels.

I wondered if perhaps *Veronica cymbalaria* resembled *Cymbalaria muralis* (Plantaginaceae) in more than its leaf shape – was this habit of thrusting the capsules down towards the substrate a particular attribute of this *Veronica*? Negative phototropism of the capsules is a feature for which *C. muralis* is well-known (see for instance the UK website <https://cabinetofcuriosities-greenfingers.blogspot.com/>). However, negatively phototropic capsules are not confined to *V. cymbalaria* – from images I found online it seems that the other 'large-seed' *Veronica* species (in subgenus *Cochlidiosperma*) share this feature. Perhaps what they all have in common is a fondness for rock walls, and the need to ensure that their relatively large rounded seeds roll into the cracks.

Boston ivy (*Parthenocissus tricuspidata*) – reacting to climate change in New Zealand?

Ewen K. Cameron and Shelley Heiss-Dunlop

Introduction

Boston ivy (*Parthenocissus tricuspidata*) is a long-lived, deciduous, perennial woody vine that can fasten on to walls and buildings by the adhesive disc-like tips of the branched tendrils. As with many



Fig. 1. Boston ivy fully in leaf with fresh, apple-green leaves in spring, covering the Northern Club building, 19 Princes St, central Auckland. Photo: EKC, 16 Nov 2021.

common plant names, "Boston ivy" is misleading – it is neither from Boston, nor an ivy. It is actually native to eastern Asia (Korea, Japan, northern and eastern China) and is in the grape family, Vitaceae. It is so commonly cultivated in the USA, especially on their university buildings, that it is the "ivy" of their Ivy League. Around Auckland it is commonly cultivated in the older suburbs, usually covering walls or fences, sometimes covering buildings (Fig. 1), and occasionally climbing trees (Fig. 2). Boston ivy's leaves are usually 3-pointed or trifoliate, which separates it from its two relatives which are also in New Zealand: Virginia creeper (*P. quinquefolia*) and false Virginia creeper (*P. inserta*, syn. *P. vitacea*) that both have 5-leaflets.

Wild seedling records of Boston ivy in New Zealand (in chronological order)

In April 2019 a mystery seedling with trifoliate leaves was observed in a pot plant under an outside tree at EKC's residence in Mt Eden, Auckland. In autumn the leaves turned red and dropped off. Fortunately, it