

## *Pleuropetalum darwinii* (Amaranthaceae), a Galapagos Islands endemic cultivated in northern New Zealand

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In 2001 a piece of this plant was sent to the Auckland Museum herbarium (AK), from a Whangarei garden (see **Specimen** below). Despite having flowers, fruit and well-formed seeds, the identification was put aside "for later" — perhaps because it seemed to be a garden plant rather than a new weed. But at last I have been able to name it and learn a little of its history.

The specimen had alternate, entire-margined, eglandular leaves, no stipules, and an indument of short stubby hairs. Even these few vegetative features greatly shortened the list of families it might belong to, beginning promisingly (because of its relatively small size) with Amaranthaceae, though with Asteraceae looming alphabetically.

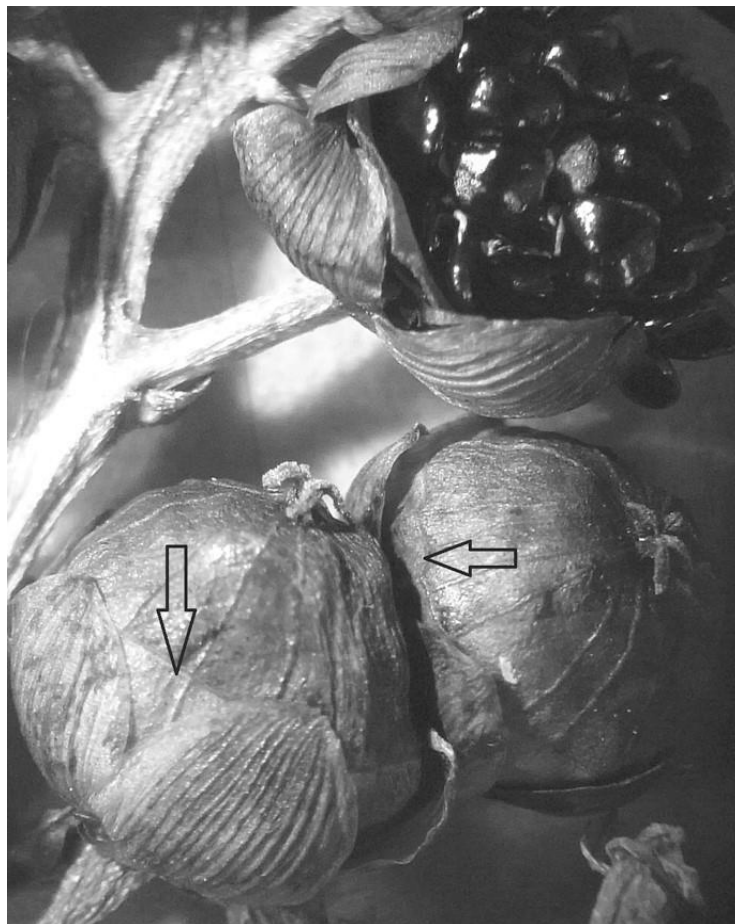
Fortunately, the capsular fruits and flattened, shiny black discoid seeds ruled out its being a daisy. And a closer look turned up something very desirable in identification work, that is, a rare character: the fruits were opening by an equatorial "circumcision" (Fig. 1). This is Amaranthaceae to a T.

Then, on looking through world-wide accounts of the family I was struck by one genus-name: *Pleuropetalum* (Gr. *pleuro-*ribbed), because the specimen was distinctive in this regard too (Fig. 1).

Various sources then brought the conclusion that our specimen most likely represented *P. darwinii* of the Galapagos Islands.

*Pleuropetalum*, named by the young J. D. Hooker (1846), is based on a single specimen of *P. darwinii* collected by Darwin on the 'Beagle' expedition. Hooker's illustration (Fig. 2) agrees well with the Whangarei specimen in overall appearance and floral detail, although no fruits are shown. It is said to be a shrub of up to 2 m tall. According to Eliasson (1971) the prominently nerved perianth-members (petals to some, tepals to others) are orange-coloured on their inner surface — presumably they are greenish outside.

The genus contains several species, the others being from Central and South America. It would not be surprising if *P. darwinii* is the most robust of these, since the development of woodiness in ancestrally herbaceous, island-dwelling taxa is a well-



**Fig. 1.** *Pleuropetalum darwinii* flowers and fruit, showing the leathery tepals (in life, orange-coloured inside) with fine, prominent, ascending nerves; capsules with circumcision line (arrowed), and shiny discoid seeds. Capsules are 5 mm diam. Photo: ROG.

known evolutionary feature. It is seen in other endemic shrubby amaranths of the Galapagos Islands: *Alternanthera*, *Froelichia* and *Phloxerus*. Elsewhere, there are woody amaranths in Hawaii (*Achyranthes*, *Charpentiera* and *Nototrichium*) and Norfolk Island (*Achyranthes arborescens*, the largest of them all, said to reach 9 m tall).

I also followed up the lead that the Whangarei garden plant had in some way come from "the botanic garden in Hamilton" (now Hamilton Gardens). Staff there told me that they had received seed of *P. darwinii* in 1985, from Jardins Botaniques du Grand Nancy et de l'Université de Lorraine in France. They were not able to tell me whether they might still have it growing, but again, it seems reasonable to suppose that it has not become a weed there.

Knowing what can happen when a gardener meets a new and attractive foreigner in a shrubbery far

from home I have to suppose that *P. darwinii* did not travel unaccompanied to Whangarei. As a purloined sprig, perhaps, or as seed 'accidentally' fallen into purse or trouser-cuff? The AK specimen-label does not tell us: a loss of useful biological information (and I would rather have liked to grow the plant myself).

### Acknowledgements

Thanks to Gus Flower and Chris Gill of Hamilton City Council for information about the plant in Hamilton Gardens.

### References

- Eliasson, U. 1971: *Amaranthaceae*, pp. 184–207. In: Wiggins, I.L. & Porter, D.M.P., *Flora of the Galapagos Islands*. Stanford University Press.
- Hooker, J.D. 1846: Description of *Pleuropetalum*, a new genus of Portulacaceae, from the Galapago Islands. *London Journal of Botany* 5: 108–9, t.2.

### Specimen

AK 367712, cult. 186 Marsden Point Road, Whangarei (Georgie Gardner garden)\*, "ex Hamilton Botanic Garden", 1.3 m tall, [flowers and ripe fruit]. Rec'd 25 May 2001.

**\* Note from the Editor:** Georgie Gardner was married to Phil Gardner "who had a passion for plants" and was a nurseryman for many years (Enid Asquith 2000: Remembering Phil Gardner 1928–2000. *Auckland Bot. Soc. Journal* 55: 97) – which may help explain the presence of this unusual plant in their garden.



Fig. 2. *Pleuropetalum darwinii* type specimen (Hooker 1846, t. 2)