# Tetragonia tetragonioides

**Tetragonia tetragonioides** (previously T. expansa) is a leafy groundcover also known as **Botany Bay spinach**, **Cook's cabbage**,  $k\bar{o}kihi$  (in Māori), **New Zealand spinach**, [1] **sea spinach**, and **tetragon**. Its Australian names of **warrigal greens** and **warrigal cabbage** [2] come from the local use of warrigal to describe plants that are wild (not farmed originally). [3] It is native to Argentina, Australia, Chile, Japan, and New Zealand.

The species, rarely used by indigenous people as a leaf vegetable, was first mentioned by Captain Cook. It was immediately picked, cooked, and pickled to help fight scurvy, and taken with the crew of the *Endeavour*.<sup>[2]</sup> It spread when the explorer and botanist Joseph Banks took seeds back to Kew Gardens during the latter half of the 18th century.<sup>[4]</sup> For two centuries, *T. tetragonioides* was the only cultivated vegetable to have originated from Australia and New Zealand.

There are some indications that Māori did eat  $k\bar{o}kihi$  perhaps more regularly. "To counteract the bitterness of the older leaves of this herb, the Māori boiled it with the roots of the convolvulus  $(p\bar{o}hue)$ ".<sup>[5][6]</sup>

The species prefers a moist environment for growth. The plant has a trailing habit, and will form a thick carpet on the ground or climb though other vegetation and hang downwards. The leaves of the plant are 3–15 cm long, triangular in shape, and bright green. The leaves are thick, and covered with tiny papillae that look like waterdrops on the top and bottom of the leaves. The flowers of the plant are yellow,<sup>[2]</sup> and the fruit is a small, hard pod covered with small horns. The plant is a halophyte and grows well in saline ground.

### 1 Cultivation

It is grown for the edible leaves, and can be used as food or an ornamental plant for ground cover. As some of its names signify, it has similar flavour and texture properties to spinach, and is cooked like spinach. Like spinach, it contains oxalates; its medium to low levels of oxalates need to be removed by blanching the leaves in hot water<sup>[7]</sup> for one minute, then rinsing in cold water before cooking. It can be found as an invasive plant in North and South America, and has been cultivated along the East Asian rim. It thrives in hot weather, and is considered an heirloom vegetable. Few insects will bother it, and even slugs and snails do not seem to bother it.

The thick, irregularly-shaped seeds should be planted just

after the last spring frost. Before planting, the seeds should be soaked for 12 hours in cold water, or 3 hours in warm water. Seeds should be planted 5–10 mm (0.2–0.4 in) deep, and spaced 15–30 cm (5.9–11.8 in) apart. The seedlings will emerge in 10–20 days, and it will continue to produce greens through the summer.

### 2 References

- "BSBI List 2007". Botanical Society of Britain and Ireland. Archived from the original (XLS) on 2015-02-25. Retrieved 2014-10-17.
- [2] "Tetragonia tetragonioides". The Royal Botanic Gardens and Domain Trust. Retrieved 10 February 2014.
- [3] The New Oxford American Dictionary (3rd ed.). 2010, 2012. adjective (of a plant) not cultivated: warrigal melons. Check date values in: |date= (help)
- [4] Low, T., Wild Food Plants of Australia, Angus & Robertson, 1991, ISBN 0-207-16930-6
- [5] Riley, Murdoch (1994). "Maori Healing and Herbal". Paraparaumu, New Zealand: Viking Sevenseas N.Z. Ltd. pp. 7–10. ISBN 0854670955.
- [6] "Māori Healing and Herbal New Zealand Ethnobotanical Sourcebook". Viking Sevenseas NZ Ltd. 1994. p. 221.
- [7] "Hungry? Try some bush tucker" (movie). The Sydney Morning Herald. 2011-06-28. Retrieved 2011-06-28.

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## **3.1** Text

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