Spreading sneezeweed *Centipeda minima* var. *minima* in Auckland

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One of Auckland's rarest plants is the tiny annual herb *Centipeda minima* var. *minima* or spreading sneezeweed. It is a prostrate bright lettuce green herb with kite shaped leaves. *Centipeda minima* var. *minima* was once widespread throughout the country, but as there are not many recent collections, it is now listed as "Acutely threatened Nationally Critical" which is as highly threatened as a species can be before it goes extinct (de Lange *et al.* 2004).

Centipeda is a genus of five species with a distribution centred on Australia, South America, and New Zealand. The centre of diversity in the genus is Australia (Walsh 2001). *Centipeda* literally mean "a hundred feet" because of its creeping stems (Taylor 2002). *Centipeda minima* var. *minima* is also native to Australia, India, Thailand, Russia, China, Taiwan, Japan, Singapore, Indonesia, Philippines, Papua New Guinea, New Caledonia, Fiji and Samoa (Walsh 2001).

The genus has many known medicinal uses and *Centipeda minima* var. *minima* contains at least 3 antibacterial compounds all of which had activity against the common bacteria *Bacillus subtilis* and *Staphylococcus aureus* (Taylor & Towers 1998). It also has been found to have anti-allergy compounds (Wu *et al*. 1991). Indeed its common name "sneezeweed" (also often used for other species in the daisy or Asteraceae family) is because its seeds are used as sneeze inducers to treat sinus infections (Taylor & Towers 1998). *Centipeda minima* var. *minima* seems to have a multitude of other uses summarised by Walsh (2001) including use as an anti-inflammatory.

There are two other similar native *Centipeda* species in the Auckland Region which *Centipeda minima* var. *minima* can be confused with. The endemic *Centipeda aotearoana* is a larger mat forming species with much longer, narrower, lanceolate, grey-green coarsely toothed leaves and hemispherical flower heads and *C. cunninghamii* which is a taller (up to 20cm) shrubby herb with dark green to grey green coarsely serrated leaves and globular flower heads.

Centipeda minima var. *minima* grows in the open on mud, clay and sand surrounding lakes, ponds or other watercourses (e.g. drains and track puddles). The seed germinates in the drying mud following the gradual recession of water as summer approaches and water evaporates. It does not grow on steep sided lakes (presumably the water would then rise and fall too suddenly). It is intolerant of shade growing only in open, or very lightly shaded, ground. It flowers and seeds prolifically until the water levels rise again and submerge it. I have seen it still growing partially submerged on Little Barrier but I expect it dies when fully inundated. A seed bank must form in the silt under water ready to be exposed when water level recede again in summer.

Fig 1. *Centipeda minima* var. *minima.*

Centipeda minima var. *minima* grows at several sites which at first seem surprising e.g. a regularly cleared drain, a mown track, a grazed paddock (by cattle) grazed shrubland (by wallabies) and a rubbish dump. These sites have processes which are mimicking the natural disturbance regime of this plant. Its strategy of germinating on fresh open ground now puts it in competition with numerous exotic herbs and grasses. Thus any disturbance regime whether natural or human/exotic animal induced which keeps the ground and canopy open will allow the plants natural cycle to occur annually. The best time to find *Centipeda minima* var. *minima* is between December to April (most herbarium specimens have been collected between January and April).

In Auckland we know of current sites on Great Barrier in a drain alongside the airstrip which is regularity cleared, and beside farm ponds; on Kawau Island at an old dump site, the oxidation ponds, and on patches of private land on the island; on Little Barrier in a mown track which passes through a natural depression which seasonally fills with water; and on the shores of a lake (and in puddles on very wet clay tracks), on private land near Te Arai Point. The largest populations in the Auckland region are at Kawau Island. *Centipeda minima* var. *minima* has gone from two locations in the region. It was collected by Harry Carse at New Lynn in 1923 (CHR 290003) and observed by Thomas Kirk at St Johns Lake in Remuera (Kirk 1873).

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Pie melon (*Curcubita ficifolia*) at Onehunga

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Cucurbita ficifolia Bouché (Cucurbitaceae) is variously known as pie melon (in New Zealand), fig-leaf gourd, black-seeded squash, Malabar gourd, chila (Portugal), zambo (Ecuador), and chilicayote (Mexico). It is an ancient cultigen originating in central Mexico but of wide occurrence at higher elevations in Central and South America (National Research Council 1980; Siemonsma & Piluek 1994). It is a rampant, scrambling short-lived perennial tendril vine, and grown as a vegetable crop, most commonly in the Ecuador and Colombia, but also in the Philippines.

According to Esler (1988), it first became naturalised (escaping from cultivation) in Auckland in 1981, but it was reportedly grown in New Zealand as a vegetable during the late 1800's (Webb *et al*. 1988). Ewen Cameron (*pers. comm.*) was familiar with it wild in the early 1960s at the bottom of Orakei Road by Tonks Street in Remuera.

The small, immature fruits can be eaten like courgettes or zucchini, and the young leaves and tips can be used as a green vegetable. The mature fruits are large and something like a watermelon in appearance, and are renowned for their good keeping qualities. The flesh is white and the seeds black (unusual in squashes). The usual way for the mature fruits to be used is as jam.

There is a very extensive colony of pie melon at Onehunga, growing on slopes below industrial land on the seaward side of Neilson Street, and extending through to the Onehunga Walkway. It scrambles over banks and climbs into trees such as brush wattle (*Paraserianthes lophantha*). In April 2005 when I examined this population, there were good numbers of very young fruit, middle-sized maturing fruit, and also full-sized mature fruit. Most flowers at this time were male, with bumble bees busy working the pollen. Several maturing fruit had been hollowed out, probably by rats.

With help of the Internet I have found various recipes for making sweet puddings and jams from this cucurbit. Here is a recipe for a jam which can be made with its thread like flesh. This jam is very popular in Portugal where chila is grown throughout the country and forms the basis for many traditional sweet meats.

Fig. 1. Colony of pie melon (Curcurbita) at Onehunga.

Fig. 2. Male flower of pie melon, Onehunga.

The older the chila the better it will be. They can keep for several years and when the green colours start fading then they are ready for the pot. Start by cracking the chila - if in doubt throw it on the floor and it will split nicely. You must remove all the spine-like dark bits in the centre by hand in order to avoid breaking the threads. Just boil the chunks after peeling and deseeding it. After it has been boiled remove any seeds that were left over then keep the flesh in plenty of cold water with lemon peel for two or three days. Change the water several times a day to remove the