

Aciphylla dieffenbachii

COMMON NAME

Dieffenbach's speargrass, soft speargrass, coxella

SYNONYMS

Gingidium dieffenbachii F.Muell., *Ligusticum dieffenbachii* Hook.f.,
Angelicia dieffenbachii Benth, et Hook.f., *Coxella dieffenbachii* (F.Muell.)
Cheeseman et Hemsl.

FAMILY

Apiaceae

AUTHORITY

Aciphylla dieffenbachii Kirk

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

ACIDIE

CHROMOSOME NUMBER

2n = 22

CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: CD, EF, IE, RR

PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Vulnerable | Qualifiers: CD, EF, IE, RR

2004 | Threatened – Nationally Vulnerable

DISTRIBUTION

Endemic to the Chatham Islands where it is known from Chatham, Pitt, Mangere, Little Mangere, South East (Rangatira) islands and some of the Murumuru stacks and islets. It has also been deliberately introduced to Native Island and Ernest Islands off Stewart Island.

HABITAT

Strictly coastal. Former habitat preferences unclear. Now only known from the Chatham (Rekohu) Island from steep, usually south facing, cliffs, rock scarps, ledges and colluvial slopes. It is usually found on basalt rather than schist rock substrates. On the outer islands, particularly those free of browsing animals it occupies similar habitats but can also be found in *Poa chathamica* Petrie swards, and amongst petrel burrowed ground.



Chatham Islands. Photographer: Peter de Lange



Aciphylla dieffenbachii group of adult females bearing fruiting inflorescences, Chatham (Rekohu) Island, Otauwae Point. Photographer: Peter de Lange

FEATURES

Tufted, dioecious, perennial with extremely stout, napiform taproot. All parts exuding white, sticky latex when damaged. Leaves glaucous, flaccid, up to 0.7m long. Petiole broadly sheathing near lamina junction, furnished on either side by blunt lobes. Leaf lamina 150–400 × 100–300 mm. Primary pinnae 4–7 pairs, segments up to 90 × 5 mm, linear, flaccid, apices bluntly mucronate. Inflorescence up to 1.0 × 0.6m diameter, rather stout, almost woody. Umbels numerous, subpaniculate. Peduncles rigid, stout, 50–150 mm long. Primary bracts pinnatisect with broad base. Male umbels with up to 15 rays, 10 mm long, slender; female umbels similar but with 3–6 rays. Involucral bracts linear-lanceolate, acuminate. Flowers golden-yellow. Male flowers with distinct triangular acute calyx-teeth; petals 2 mm long, oblong to ovate-oblong. Female calyx-teeth narrowly triangular, subacute; petals 1.5 mm long, obovate. Fruit 15 × 10 mm, golden yellow maturing light brown-grey, dorsally flattened, splitting at maturity into 2 more or less equal mericarps, these 2–3 winged, wings up to 3 mm wide.

SIMILAR TAXA

One of only two species of *Aciphylla* on the Chatham Islands. *A. dieffenbachii* is a strictly coastal species which differs from *A. traversii* (F.Muell.) Hook.f. by the flaccid, more heavily divided, glaucous, blunt-tipped leaves, shorter (up to 1 m), fewer though much stouter and denser inflorescences with golden yellow flowers, and much larger fruits. By comparison *A. traversii* is a species of peat bogs, lake margins and peaty ground in open forest clearings. It has much larger, less flaccid and less divided dark green, sharply-tipped leaves, more numerous, taller (up to 1.8 m) distinctly narrower, more open inflorescences with cream-coloured flowers, and smaller fruits.

FLOWERING

November - February

FLOWER COLOURS

Yellow

FRUITING

January - June

LIFE CYCLE

Winged schizocarps are dispersed primarily by wind (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easy from fresh seed. Seed has short-term viability so will not store well. An attractive species ideal for a coastal situation. In good conditions spontaneous seedlings are often seen, and on occasion it can become invasive. It does best in full sun, with a moderately fertile to fertile, free draining soil. Does well in damp sand, frequently manured with sea weed. Plants should never be allowed to dry out, and even when well established are inclined to sudden collapse. This species often dies after a heavy flowering. Like most Chatham Island endemic plants this species dislikes humidity.

THREATS

Domestic stock and feral mammals are the prime threats. Rodents probably eat seeds and seedlings; possums probably eat flowers and seedlings. The speargrass weevil (*Hadramphus spinipennis*) is dependent on the speargrass, but can be locally very damaging: adults eat stems, flowers and leaves; larvae eat roots as well. Thick exotic grass swards may inhibit seedling establishment.

ETYMOLOGY

aciphylla: From the Latin *acicula* 'needle' and the Greek *phyllum* 'leaf', meaning needle-leaf.

dieffenbachii: Named after Dr. Ernst Dieffenbach, 19th century German naturalist

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 1 August 2003. Description based on Allan (1961) supplemented with observations obtained from fresh plants and herbarium specimens - see also de Lange et al. (2010)

REFERENCES AND FURTHER READING

Allan, H.H. 1961. Flora of New Zealand. Vol. I. Government Printer, Wellington (as *Coxella dieffenbachii* Cheeseman & Hemsl.) de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Canterbury University Press, Christchurch. Dawson, J.W. 1969: New Zealand Umbelliferae. A Leaf Comparison of *Aciphylla* and *Anisotome*. *New Zealand Journal of Botany* 6: 450-458. Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Aciphylla dieffenbachii* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

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MORE INFORMATION

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