

# Machaerina complanata

## SYNONYMS

*Cladium complanatum* Bergg., *Baumea complanata* (Bergg.) Blake

## FAMILY

Cyperaceae

## AUTHORITY

*Machaerina complanata* (Bergg.) Koyama

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

MACCOM

## CHROMOSOME NUMBER

$2n = c.50$

## CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Vulnerable | Qualifiers: RF

## PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Vulnerable | Qualifiers: RF

2009 | Threatened – Nationally Vulnerable | Qualifiers: RF

2004 | Range Restricted

## DISTRIBUTION

Endemic. Known only from the North Island, where it now occurs locally from Te Paki south to the Kaipara Harbour. It was also once present in the Waikato on the shores of Lake Waaihi, and there are recent subfossil deposits made by this species in peat bogs (now drained) at Papamoa and Te Puke (Bay of Plenty).

## HABITAT

Coastal to lowland (1–300 m a.s.l.). A species of open habitats which has been collected from estuaries (in salt marsh), consolidated dune swales (which are seasonally wet), freshwater lake and river margins, amongst gum land scrub, under regenerating kauri, from the margins of geothermally active springs and fumaroles, and from acidic peat bogs.

## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

Usually is a hydrophyte but occasionally found in uplands (non-wetlands).



*Machaerina complanata* wild plant, Ngawha Springs. Photographer: Lisa Forester, Licence: CC BY-SA.



Growth form of *Machaerina complanata*, in the wild at Ngawha Springs, Lake Waiparaheka, October 1990. Photographer: Gillian M.

## DETAILED DESCRIPTION

Dark green, tufted and leafy sedge. **Culms** 0.5–0.9–(1.3) m tall, c. 3 mm wide, smooth, ± compressed. **Leaves** ± = culms, 4–8 mm wide, flat, distichous, isobilateral equitant, striated, pale green, tip acute, margins glabrous. **Panicle** 0.15–0.50 m long, narrow, erect from a long sheath with short lamina; branchlets flexible, fascicled from upper sheaths. **Spikelets**, c. 5 mm long, light red-brown, 2–3-flowered, 1–2 flowers fertile. **Glumes** 5–6, ovate, acuminate or acute, chartaceous, striped with brown, scabrid on back towards tip, margins minutely ciliate. **Nut**, including beak, c. 4 × 2 mm, trigonous, red-brown, very shortly stipitate, narrowed above to a long, triquetrous, scabrid beak.

## SIMILAR TAXA

*Machaerina sinclairii* is similar but has much wider (10–30–(40) mm) light green (rather than dark green) leaves, some what fluffy brown more pendulous rather than erect to suberect, non-fluffy inflorescences, and the persistent style base of *M. sinclairii* is about the same length as the nut, and though rather narrow is quite conspicuous. In *Machaerina complanata* the style-base though persistent, is usually turgid, much shorter than the nut and usually inconspicuous.

## FLOWERING

September–November

## FRUITING

November–March (but fruits of varying ages may be found throughout the year)

## PROPAGATION TECHNIQUE

Difficult and should not be removed from the wild. Fresh seed germinates easily (usually within 1–3 months) but plants resent root disturbance and seedlings need to be handled with care as any root damage will kill them. Once seedlings establish it is easy to grow. Does well in wet or dry but prefers full sun. Experimentation with growing conditions at Oratia Native Plant Nurseries showed this species does best when planted in fresh, untreated pine saw dust. Seed set varies from year to year, and there is some indication that it has mast years. For example, 2005 was a particularly good seeding year, while the previous four years were not.

## THREATS

At all known sites seedlings are scarce (or absent altogether). Many populations are senescent or flower infrequently, and few are on protected land. Indications are that this is a light-demanding plant which in the wild is succumbing to natural succession. In heavy shade plants will not flower. In the past this species was regarded as highly threatened, and at that time the key threat had been habitat loss caused by wetland drainage. Discoveries since the 1990s indicate that this species is not necessarily confined to wetlands, and potentially can grow in any suitably open habitat.

## ETYMOLOGY

**complanata**: Levelled or flattened

## ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (8 September 2004). Description adapted from Moore & Edgar (1970).

## REFERENCES AND FURTHER READING

McCluggage AP. 2000. New location of *Baumea complanata* at Shenstone Te Pahi Northern New Zealand. *Auckland Botanical Society Journal* 55: 68–69.

Moore LB, Edgar E. 1970. Flora of New Zealand, Volume II. Indigenous Tracheophyta: Monocotyledones except Gramineae. Government Printer, Wellington, NZ. 354 p.

## NZPCN FACT SHEET CITATION

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

<https://www.nzpcn.org.nz/flora/species/machaerina-complanata/> (Date website was queried)

**MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/machaerina-complanata/>