

Empodisma robustum

COMMON NAMES

wire rush

BIOSTATUS

Native

CURRENT CONSERVATION STATUS

2023 | At Risk – Declining

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CATEGORY

Vascular

STRUCTURAL CLASS

Rushes & Allied Plants

FLOWER COLOURS

Yellow

DETAILED DESCRIPTION

Dioecious, perennial herb producing numerous, branched, flexuose culms collectively forming densely interwoven tangles. **Rhizome** rather robust for plant, erect, up to 12 mm diameter, covering with light brown, imbricating scale-like sheaths and very thick tufts of brown hairs; roots numerous, mostly horizontal-ascending rather than descending, 1.2–1.8 mm diameter, densely covered in pinkish-white root hairs. **Culms** 0.38–2.2 m, 0.9–2.2 mm diameter, much-branched, flexuose, terete or slightly flattened and grooved on one side, glabrous, dark green to dark brown, erect when short, otherwise more or less prostrate to ascending, widely spreading and lianoid. **Leaves** reduced to mucronate sheaths, 5.2–21.0 mm long, closely appressed to culm, spaced 20–70 mm apart, initially light green to light brown maturing dark brown, margin entire; cilia protruding through the mouth of the sheath as white tufts of woolly white hairs; hairs arising from the outer scale of the axillary bud enclosed within sheath; mucro persistent, 2.2–7.5 mm long, initially light green maturing dark brown, fine, sharp-pointed (accicular), strongly reflexed from leaf sheath. **Spikelets** brown, distant within uppermost sheaths. **Male spikelets** 1–2, 6.8–9.0 mm long, 1–6-flowered, 1 sessile and 1 stalked, each borne within a hard, mucronate sheath; tepals 6, narrow-linear, acute; stamens 3, filaments slender, > tepals, anthers 1.9–2.5 m, exerted beyond the floral bract. **Female spikelets** 5.8–8.9 mm, solitary within 1–3 uppermost, bearded, obtuse sheaths, 1-flowered, subtended by 2 imbricate, empty floral bracts; tepals 4–6, very small, hyaline; styles 3, free. **Fruit** a hard nut, 2.7 mm long, dark brown, ovoid, protruding over persistent tepals, sessile on a thick receptacle.

SIMILAR TAXA

Empodisma minus differs from *E. robustum* by its diminutive stature and slender growth habit; culms mostly < 1 mm in diameter, sheaths mostly < 7.5 mm long and spikelets generally < 6.0 mm long. Readily distinguished from the two other New Zealand tall restiad genera *Sporadanthus* and *Apodasmia* by the mostly widely spreading, decumbent, trailing to lianoid growth habit, and 1–6-flowered male and 1-flowered female spikelets.

DISTRIBUTION

Endemic. New Zealand: North Island (Te Aupouri Peninsula south to the lower Waikato).



Empodisma robustum. Photographer: Wayne Bennett, Licence: CC BY-NC.



Empodisma robustum. Photographer: Wayne Bennett, Licence: CC BY-NC.

HABITAT

Empodisma robustum is restricted to ombrotrophic raised peat bogs where it often coexists with *Sporadanthus ferrugineus*, fens and gumland heathland peats. It is often locally abundant.

GENUS

Empodisma

FAMILY

Restionaceae

AUTHORITY

Empodisma robustum Wagstaff et B.R. Clarkson

SYNONYMS

None first described in 2012.

TAXONOMIC NOTES

The description (as *Calorophus minor*) in Flora II (Moore & Edgar 1970) includes two elements which are now treated as two species *Empodisma minus* and *E. robustum*.

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

FLOWERING

August–October

FRUITING

November–March

PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. Despite its natural restriction to acidic wetlands, *Empodisma robustum* can be easily grown in a range of media though it does best in full sun in a permanently damp soil.

WETLAND PLANT INDICATOR STATUS RATING

OBL: Obligate Wetland

Almost always is a hydrophyte, rarely in uplands (non-wetlands).

ETYMOLOGY

empodisma: Tangle-foot

robustum: Sturdy

NVS CODE

EMPROB

CHROMOSOME NUMBER

2n = 24

PREVIOUS CONSERVATION STATUSES

2017 | At Risk – Declining

2012 | Not Threatened

2009 | Not Threatened

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REGIONAL CONSERVATION STATUSES

Auckland: 2025 | Regionally At Risk – Regionally Relict | Qualifiers: DPT, PF, RR Help

The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Auckland conservation status information is sourced from the “Conservation status of vascular plant species in Tāmaki Makaurau / Auckland” Simpkins E et al. (2025) report.

REFERENCES AND FURTHER READING

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

Wagstaff SJ, Clarkson BR. 2012. Systematics and ecology of the Australasian genus *Empodisma* (Restionaceae) and description of a new species from peatlands in northern New Zealand. *Phytokeys* 13: 39–79.

<https://doi.org/10.3897/phytokeys.13.3259>.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 26 June 2012. Description from Wagstaff & Clarkson (2012).

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/empodisma-robustum/>

PDF DATE

27 May 2026