

Ficinia spiralis

COMMON NAMES

pīngao, golden sand sedge, pikao

BIOSTATUS

Native – Endemic taxon

CATEGORY

Vascular

STRUCTURAL CLASS

Sedges

FLOWER COLOURS

White, Yellow

DETAILED DESCRIPTION

Stout, yellow-green when fresh, golden when dry, shortly creeping plants with stiff culms and very harsh leaves. **Rhizome** lignaceous, 10–15 mm diameter, shortly creeping, covered by red-brown to brown, fibrous strands left from decaying leaf-sheaths. **Culms** numerous, 0.3–1.2 m tall, 2–4 mm diameter, erect, obtusely trigonous, very leafy at the base. **Leaves** numerous, \pm = culms, 2–5 mm. wide, stiffly erect or weakly curved, coriaceous, linear, concavo-convex or \pm channelled, margins and keel sharply denticulate, narrowed to a long, trigonous tip; sheaths submembranous, much broader than leaves, with numerous, red-brown veins. **Inflorescence**, paniculate 70–300 mm long, each panicle composed of c. 12 confluent clusters of sessile spikelets, each cluster subtended by a rigid leaf-like bract adnate to the axis and broadening at base to an open sheath, lower bracts much exceeding inflorescence. **Spikelets** 4–5 mm. long, dark red-brown. **Glumes** coriaceous, rigid, broadly ovate, obtuse, distinctly nerved, finely mucronulate, the lower ones \pm keeled. **Nut** 2.5–4.0 × 2.0–2.5 mm, broadly obovoid, concavo-convex, compressed, obtuse, dark brown, smooth and shining.

SIMILAR TAXA

None. Easily recognised by the widely spreading rhizomatous growth habit, distinctive overall orange colouring of the plant, paniculate spiral seed heads, and by the possession of a gynophore (see taxonomic notes).

DISTRIBUTION

Endemic. New Zealand: North, South, Stewart and Chatham Islands.

HABITAT

Coastal sand dune systems. It favours sloping and more or less unstable surfaces, growing mostly on the front face of active dunes but also on the rear face and rear dunes, provided that there is wind-blown sand. It can also grow on the top of sand hills. It is effective at trapping sand.

CURRENT CONSERVATION STATUS

2023 | At Risk – Declining | Qualifiers: CI, PD, RR

THREATS

Competition from marram grass (*Ammophila arenaria*), dune stabilisation and compaction, harvesting, trampling, vehicle traffic and browsing animals. Because this species is wind-pollinated, individuals of small, isolated populations may not receive pollen during flowering, and therefore there will be no seed production. Browsing and trampling by sheep and horses; browsing of seedlings by possums; seed destruction by rodents; fire and insensitive harvesting.



Parengarenga Harbour, East Beach.
Photographer: John Sawyer, Licence: CC BY-NC.



Mangawhai Wildlife Reserve, north of Auckland.
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DETAILED TAXONOMY

FAMILY

Cyperaceae

AUTHORITY

Ficinia spiralis (A.Rich.) Muasya et de Lange

SYNONYMS

Isolepis spiralis A.Rich., *Desmoschoenus spiralis* (A.Rich.) Hook.f., *Anthophyllum urvillei* Steudel, *Scirpus frondosus* Boeck, *Scirpus spiralis* (A.Rich.) Druce

TAXONOMIC NOTES

Desmoschoenus has been submerged into the mainly South African genus *Ficinia* (Muasya & de Lange 2010) based on an analysis of molecular and morphological characters. Multiple DNA markers showed that *Desmoschoenus* was firmly embedded within *Ficinia*, and that, along with its possession of a gynophore (a small cup like structure found at the base of ovary/nut otherwise known only from *Ficinia*) were considered firm reasons for its merger.

Furthermore *Desmoschoenus* closely resembles those *Ficinia* which the molecular study placed it with. Read more about this research: [A new name and genus for pingao](#)

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

ECOLOGY

FLOWERING

Spring and early summer

FRUITING

Late summer

PROPAGATION TECHNIQUE

Can be grown from fresh seed and cuttings. Fresh seed germinates easily but plants resent root disturbance, and they should be grown in root trainers. Although it will tolerate most soils and moisture regimes, it obviously does best in coastal situations within active sand dunes.

OTHER INFORMATION

CULTIVATION

Sold by a number of specialist native plant nurseries, such as [Coastlands Nursery](#). Popular plant for dune restoration.

PLANT OF THE MONTH

This plant has been featured as a Plant of the Month – see [Trilepidea: NZPCN newsletter for September 2003](#) for the full story.

ETYMOLOGY

ficinia: Named after Heinrich David Auguste Ficinus, 19th century German botanist

spiralis: From the Latin spira 'coil' or 'twist' and -alis 'resembling', resembling a twist or corkscrew, spiral-shaped

NVS CODE

FICSPI

CHROMOSOME NUMBER

2n = 30

PREVIOUS CONSERVATION STATUSES

2017 | At Risk – Declining | Qualifiers: PD, RR

2012 | At Risk – Declining | Qualifiers: PD, RR

2009 | At Risk – Relict | Qualifiers: CD, Inc, Sp

2004 | Gradual Decline

REFERENCING AND CITATIONS

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.

Muasya AM, de Lange PJ. 2010. *Ficinia spiralis* (Cyperaceae) a new genus and combination for *Desmoschoenus spiralis*. *New Zealand Journal of Botany* 48: 31–39. <https://doi.org/10.1080/00288251003660703>.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (6 August 2006). Description adapted from Moore & Edgar (1970). Some of this factsheet information is derived from [Flora of New Zealand Online](#) and is used under a [Creative Commons Attribution 3.0 New Zealand](#) licence.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/ficinia-spiralis/>

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