Bolboschoenus fluviatilis

COMMON NAMES
marsh clubrush, kukuraho, purua grass

BIOSTATUS
Native

CURRENT CONSERVATION STATUS
2023 | Not Threatened | Qualifiers: SO
Jump to previous conservation statuses

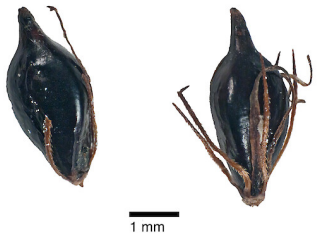
CATEGORY
Vascular

STRUCTURAL CLASS
Sedges

DETAILED DESCRIPTION
Summer-green, bulbous perennial forming mostly densely clumped patches. **Rhizome** 7–9 mm diameter, woody, long-creeping, very dark brown, apices terminated by globose, ligneous tubers. **Culms** 1.5–2.5 m tall, 6–15 mm diameter, triquetrous, striated, smooth except just below inflorescence where scabrid on angles; basal sheaths loose, membranous, septate, brown to fawn, up to 150 mm long. **Leaves** numerous, ≤ or > culms, 500 × 7–11 mm, double-folded but flattened, grass-like, tapering, coriaceous, margins and midrib scabrid towards apices; sheaths long, closed, coriaceous. **Inflorescence** a terminal, compound, irregular umbel; rays 6–9, unequal, 20–100 mm long, bearing clusters of 1–6 spikelets, a sessile glomerule of spikelets at the base of the rays; involucral subtending bracts similar to leaves, > inflorescence, unequal, 150–250 × 3–6 mm, as many as, or 1–2 fewer than rays. **Spikelets** 10–25 mm long, ovoid, or cylindric, dull red-brown. **Glumes** membranous, pubescent, apices cleft or lacerate, with a scabrid, recurved awn. **Hypogynous bristles** 6, more or less equal to nut in length, persistent, red-brown, retrorsely scabrid. **Stamens** 3. **Style-branches** 3. **Nut** 3.0–4.0 × 1.5–2.0 mm, equilaterally 3-angled with acute dorsal angle, obovate, apiculate, pale cream, occasionally black and glossy.



Bolboschoenus fluviatilis. Photographer: Wayne Bennett, Licence: CC BY-NC.



Ventral (left) and dorsal (right) view of nuts with retrorsely scabrid bristles.. Photographer: Jeremy R. Rolfe, Date taken: 29/05/2010, Licence: CC BY.

SIMILAR TAXA
Bolboschoenus fluviatilis is the tallest of the three New Zealand species, and the one most likely to be found in freshwater systems. It differs from *B. caldwellii* (Cook.) Soják and *B. medianus* (Cook) Soják by the taller stature, conspicuously umbellate inflorescence with long, through irregular, rays, and distinctly trigonous nuts. *B. fluviatilis* has 3 rather than the 2 or 2–3 style branches typical of the other two species.

DISTRIBUTION
Indigenous.

HABITAT
Coastal to lowland in saltmarshes and other poorly drained saline areas, also found along some freshwater rivers and lakes. Sometimes invades pasture abutting tidal streams and estuaries.

GENUS
Bolboschoenus

FAMILY
Cyperaceae

AUTHORITY
Bolboschoenus fluviatilis (Torr.) Soják

SYNONYMS
Scirpus fluviatilis (Torr.) Gray; Scirpus maritimus var. fluviatilis Torr.; Scirpus perviridis Cook

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
October–January

FRUITING
December–May

LIFE CYCLE AND DISPERSAL
Bristly nuts are dispersed by water and possibly wind (Thorsen et al., 2009).

PROPAGATION TECHNIQUE
Easily grown from fresh seed and rooted pieces. Will grow in almost any soil but prefers a sunny, damp soil. Ideal as a pond plant or for planting along tidal streams.

WETLAND PLANT INDICATOR STATUS RATING
OBL: Obligate Wetland
Almost always is a hydrophyte, rarely in uplands (non-wetlands).

CULTURAL USE/IMPORTANCE
Some inland occurrences in the Hamilton Basin (Waikato) peat lakes suggest that the species was planted deliberately for food by Māori.

ETYMOLOGY
bolboschoenus: From Greek: bolbos (swelling or bulb) and schoinos (rush, reed), from the supposed difference from the genus Schoenus in having bulbous tubers
fluviatilis: From the Latin fluvius 'river', meaning growing near rivers

NVS CODE
BOLFLU

CHROMOSOME NUMBER
2n = c.110

PREVIOUS CONSERVATION STATUSES
2017 | Not Threatened | Qualifiers: SO
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened
Jump to current conservation status

REGIONAL CONSERVATION STATUSES
Auckland: 2025 | Regionally Not Threatened | Qualifiers: DPS, DPT 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

Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics 11*: 285–309.

ATTRIBUTION

Description adapted from: Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington. 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.

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/bolboschoenus-fluviatilis/

PDF DATE

08 June 2026