

# Cenchrus caliculatus

## COMMON NAME

large burr grass, devil grass, owee grass

## SYNONYMS

*Cenchrus caliculatus* Cav. is an orthographic variant

## FAMILY

Poaceae

## AUTHORITY

*Cenchrus caliculatus* Cav.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Grasses

## NVS CODE

CENCAL

## CHROMOSOME NUMBER

2n = 102

## CURRENT CONSERVATION STATUS

2017 | At Risk – Naturally Uncommon | Qualifiers: RR, TO

## PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: RR, TO

2009 | At Risk – Naturally Uncommon | Qualifiers: TO, OL

2004 | Range Restricted

## DISTRIBUTION

Indigenous. In New Zealand known from Raoul Island (Kermadec Islands group) only. Formerly widespread across the Pacific, now very rare or extinct throughout most of its former range.

## HABITAT

Strictly coastal. In New Zealand known only from rocky bluffs, associated talus and from beach sands in one small part of Raoul Island. Elsewhere in the Pacific it has been recorded growing on basalt rock exposures both inland and on the coast, on calcarenite, uplifted coral and coral sand.



Inflorescence at female stage of flowering, Raoul Island, 2004. Photographer: Bec Stanley, Licence: CC BY-SA.



Habit, Raoul Island, 2004. Photographer: Bec Stanley, Licence: CC BY-SA.

## DETAILED DESCRIPTION

Robust, through somewhat lax, spreading, clump-forming grass arising from a stout, woody rhizome; culms trailing and rooting freely from lower nodes. **Branching** initially extravaginal becoming intravaginal. **Leaf-sheath** longer than internodes, firm papery, keeled, smooth, minutely scabrid on narrow membranous margin and on ribs below collar. **Ligule** 1.0–1.5 mm, truncate with a densely ciliate rim. **Leaf-bade** 70–200 × 4–9 mm, linear-lanceolate, rounded-truncate at base, flat, firm, undersides smooth, upper surface minutely scabrid on ribs; margins somewhat thickened, minutely scabrid, tapering to a long acuminate apex. **Culm** 700 × 2–2.5 mm diameter, terete, more or less angled, internodes minutely pubescent-scabrid on ridges below panicle. **Panicle** 100–250 × 15 mm, spicate; rachis triangular, slightly winged, densely minutely pubescent-scabrid, bearing ovoid clusters of 1–3 spikelets, hidden amongst bristles and densely, spirally arranged along rachis; clusters 7–10 × 4–7 mm, including involucre of stiff bristles, at first appressed, finally borne at right angles to rachis; bristles retrorsely barbed, very variable in length, 0.5–11.0 mm, outermost smaller, terete, inner more planoconvex with margins densely softly long-ciliate, one bristle in each cluster usually exceeding the others. **Spikelets** 5–6 mm, 2-flowered, < inner bristles, sessile, glabrous, light green to almost colourless. **Glumes** hyaline; lower 2–4.5 mm, 1-nerved, upper 4–5 mm, 5-nerved. **Lower floret** with lemma 4.8–6.0 mm, 5-nerved, scabrid; palea keels ciliate, interkeel minutely hairy, margins scabrid; anthers 1.5–2.0 mm, brown with thick orange-yellow filaments. **Upper floret** with lemma 5.0–5.5 mm, 5-nerved, finely scabrid-papillose; palea finely scabrid-papillose; anthers as in lower floret. **Seed** 2.2–2.7 mm, more or less ellipsoid.

## MANAAKI WHENUA ONLINE INTERACTIVE KEY

Key to the grasses of New Zealand

## SIMILAR TAXA

In New Zealand none. *Cenchrus caliculatus* is a very robust species within the genus. In the Pacific it appears to have declined in favour of the widespread, weed *C. echinatus* L. That species is very much smaller, and has dark maroon-red to purple inflorescences. It is not closely related to *C. caliculatus*, and has yet to be found in New Zealand.

## FLOWERING

November–May

## FRUITING

December–September

## LIFE CYCLE

Spiny florets are spread by attachment and possibly wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easy from fresh seed, rooted pieces and node cuttings. very cold sensitive.

## THREATS

Unclear. This very large grass has declined markedly over the last 40 years, and is now extinct or scarce over large parts of former range. No one is exactly sure why (W. R. Sykes pers. comm.).

## ETYMOLOGY

**cenchrus**: From the Greek cenchros which means millet

**caliculatus**: From the Greek kalux (in Latin calyx) 'case of a bud' or 'husk', meaning to have a calyculus or epicalyx (whorls or bracts below the calyx)

## ATTRIBUTION

Description modified from Edgar and Connor (2000)

## REFERENCES AND FURTHER READING

Edgar E, Connor HE. 2000. Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 p.  
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.

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/cenchrus-caliculatus/>