



# Carex species of Southland Vol3

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Made on the New Zealand Plant Conservation Network website: [www.nzpcn.org.nz](http://www.nzpcn.org.nz)

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## INTRODUCTION

This book was compiled from information stored on the website of the New Zealand Plant Conservation Network ([www.nzpcn.org.nz](http://www.nzpcn.org.nz)).

This website was established in 2003 as a repository for information about New Zealand's threatened vascular plants. Since then it has grown into a national database of information about all plants in the New Zealand botanic region including both native and naturalised vascular plants as well as non-vascular plants and fungi.

Funding to develop the website was provided by the New Zealand Government's Terrestrial and Freshwater Biodiversity Information System Programme (TFBIS). The website is run by a team of volunteers and is continually improving in both the richness of content and the range of functions it offers.

The species information used on the website has come from a variety of sources which are cited at the bottom of a species page.

Where no published treatment was available Peter used herbarium specimens and his own knowledge of the flora to prepare species pages. Various other contributors have provided text and additional information to many species pages including botanists such as John Barkla, Cathy Jones, Simon Walls, Nick Singers, Mike Thorsen and many others. The threatened fungi text was written by Eric Mackenzie and Peter Buchanan (Landcare Research) and aquatic plant information was supplied by Paul Champion from NIWA. Colin Ogle has contributed to the exotic species fact sheets.

More than 200 photographers have kindly provided images to illustrate the website and for use in this book especially John Smith-Dodsworth, Jeremy Rolfe, Peter de Lange, Wayne Bennett and Gillian Crowcroft, Mike Thorse, Colin Ogle and John Sawyer.

## THE NEW ZEALAND BOTANIC REGION

The information on the Network website, from which this book was compiled, is for species that are indigenous to or naturalised within the New Zealand Botanic Region as defined by Allan (1961). The New Zealand botanic region encompasses the Kermadec, Manawatawhi/Three Kings, North, South, Stewart Island/Rakiura, Chatham, Antipodes, Bounties, Snares, Auckland Campbell island/Motu Ihupuku and Macquarie.

## ABOUT THE NETWORK

The Network has more than 800 members worldwide and is New Zealand's largest non-governmental organisation solely devoted to the protection and restoration of New Zealand's indigenous plant life.

The vision of the New Zealand Plant Conservation Network is that *'no indigenous species of plant will become extinct nor be placed at risk of extinction as a result of human action or indifference, and that the rich, diverse and unique plant life of New Zealand will be recognised, cherished and restored'*.

Since it was founded in 2003 the Network has undertaken a range of conservation initiatives in order to achieve its vision.

That work has included:

- Training people in plant conservation
- Publishing plant books, reports and posters
- Raising money for the David Given Threatened Plant Research Trust to pay for plant conservation research scholarships
- Educating people about plant life through the Network website
- Connecting people through our website, the monthly newsletter, the Network conference and the annual general meeting

## WHAT IS A THREATENED PLANT?

The NZ Threatened Plant Committee was formed in 1991 and ever since then it has met at regular intervals to review the status of indigenous vascular plants. It is made up of a team of botanists that between them have an extensive knowledge of the native plants of New Zealand.

This committee applies a set of criteria to each native plant to determine its conservation status. The resulting list of species classified as threatened is published in the NZ Journal of Botany (see for example [de Lange et al. 2018](#)). The main threat categories used are: Extinct, Nationally Critical, Nationally Endangered and Nationally Vulnerable, Declining. Other categories used are: Recovering, Relict, Naturally Uncommon, Coloniser, Vagrant and Data Deficient. For vascular plants the threat status used in this book is taken from the ['Conservation status of New Zealand indigenous vascular plants, 2017'](#) by [de Lange et al. \(2018\)](#).

Recently other committees have been established to review the status of non-vascular plants and have produced assessments for New Zealand mosses ([Rolfe et al., 2016](#)) as well as horworts and liverworts ([de Lange et al., 2015](#)).

# Carex punicea

## COMMON NAME

Red Bastard Grass, Frost Flat Hook Grass

## SYNONYMS

*Uncinia rubra* Boott var. *fallax* Kük.; *Uncinia rubra* Boott

## FAMILY

Cyperaceae

## AUTHORITY

*Carex punicea* K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCRUB

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North, South and Stewart Islands. From about Mt Pirongia and Te Urewera National Park (though mainly found within the Central Volcanic Plateau) South. In the South Island present in Nelson thence east of the main divide.

## HABITAT

Montane to alpine (coastal in southern part of range). In frost-flats, short and tall tussock grassland, grey and subalpine scrub, bogs and mires. In the North Island it has been very rarely collected from cloud forest (Mt Pirongia).

## FEATURES

Dark red, wine-red or reddish green, weakly tufted or shortly rhizomatous plant. Culms 150-350 × < 1 mm, rigid, wiry, minutely scabrid on the angles under the inflorescences. Leaves 2-5 per culm, much < to slightly > culm, 0.7-2.5 mm wide, rigidly flexuose to rigid, margins slightly scabrid, tapering rather abruptly towards the tip. Spikes 25-70 × 3-5 mm, usually ebracteate, female flowers 8-11, often aborted, internodes to 10 mm long at base of spike, 3-6 mm long above. Glumes = or < utricles, persistent, obtuse or lowermost subacute, coriaceous, red with a pale margin. Utricles 5.0-6.5 mm long, plano-convex, concavo-convex or subtrigonous, fusiform, striated, yellowish green, later yellow-brown, narrowed above to a beak 1.0-1.5 mm long, and scarcely narrowed below to a paler stipe 1.0-1.5 mm long



Close-up of flowers. In cultivation ex Moawhango River. Nov 1975. Photographer: Colin Ogle

### SIMILAR TAXA

A very distinctive species, easily recognised by the normally dark red to wine-red, rigid, wiry, weakly tufted culms. The species appears to be uniform throughout the North Id (populations there have leaves ½ the length of the culms and 1.0-1.5 mm wide), while in the South Island the leaves and culms are often slightly wider, and plants may occasionally be reddish-green.

### FLOWERING

October - November

### FRUITING

November - June

### PROPAGATION TECHNIQUE

Easily grown from fresh seed and by division of established plants - though these may take a while to settle. Prefers moist soil in a semi-shaded site. However, once established will tolerate a wide range of conditions. A very attractive species well worth cultivating. A red form of *Carex uncinata* L.f. is often sold erroneously labelled as this species.

### ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

### ATTRIBUTION

Description adapted from Moore and Edgar (1970). Fact sheet prepared by Peter J. de Lange 17 August 2006.

### REFERENCES AND FURTHER READING

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

### CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex punicea* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-punicea/> (Date website was queried)

### MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-punicea/>

# Carex purpurata

## COMMON NAME

Purple Bastard Grass, Tussock Hook Grass

## SYNONYMS

Uncinia purpurata Petrie

## FAMILY

Cyperaceae

## AUTHORITY

Carex purpurata (Petrie) K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCPUR

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | At Risk – Naturally Uncommon | Qualifiers: Sp

## PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Naturally Uncommon

2004 | Sparse

## DISTRIBUTION

Endemic. South Island, Canterbury (Fox Hill), Otago (hills near Dunedin, Ben Lomond, Mt Bengier and other peaks and ranges of Central Otago) and Southland

## HABITAT

A species of damp, open ground under montane forest and subalpine scrub, in tall tussock grassland, in grey scrub and in or near cliff faces. It prefers damp sites in seepages, near small springs or under rock overhangs.

## FEATURES

Tufted, caespitose, gracile sedge. Culms 40–400 x 0.5 mm, finely scabrid below inflorescence; basal bracts dull brown to yellow brown. Leaves 3–5 per culm, much < than mature culms in length, 1–2 mm wide, erect or slightly curved, faintly scabrid on the margins and undersides, especially towards the leaf apex. Spikes 25–40 x 3–4 mm, ebracteate, female flowers 10–20, close set, becoming rather lax at maturity with internodes up to 5 mm apart near base of spike, 1.5 mm above. Glumes mostly 1/2 to 3/4 glume length, persistent, broadly ovate, obtuse or lowermost subacute, coriaceous, bright chesnut-brown with a green or light brown midrib and broad, whitish to white-grey hyaline margins. Utricle 4.5–5.5 x 1–2 mm, plano-convex, oblong or obovate, dark brown with numerous faint veins, beak 1–1.5 mm long, stipe c. 1 mm long.

## SIMILAR TAXA

Perhaps closest to *Carex penalpina* K.A.Ford from which it differs by its much more gracile/slender habit, faintly scabrid leaves and especially by the bright chestnut-brown colour of the glumes. Unlike *Carex penalpina*, the glumes of *C. purpurata* are markedly shorter than the utricles. Despite the specific epithet, *C. purpurata* often has a washed out, whitish green colouration, only the occasional plant is wine-red or purple-tinged. In the field *C. purpurata* can be recognised by the dark spikes, narrowly hyaline glume margin and dark brown almost black immature utricles which fade to chestnut as the utricle matures and spreads. In some examples the glume may be dark chestnut. The Leaves of *C. purpurata* are usually much narrower than *C. penalpina* which has more obviously coriaceous and curved leaves that those of *C. purpurata* which are straight to curved and very pliant.

## FLOWERING

October - November

## FRUITING

October - April

## PROPAGATION TECHNIQUE

Probably easily grown in a suitably moist, peaty soil.

## THREATS

This species is never abundant at any particular location and is quite widespread, though rather localised, being a truly biologically sparse, naturally uncommon sedge. It does not appear to have suffered any decline, indeed as a result of field surveys over the last 20 years it is now known to be quite secure and widespread over much of its range.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**purpurata**: Purplish in colour

## WHERE TO BUY

Not commercially available

## ATTRIBUTION

Description adapted from Moore and Edgar (1970). Fact sheet prepared by Peter J. de Lange 17 August 2006.

## REFERENCES AND FURTHER READING

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

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex purpurata* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-purpurata/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-purpurata/>

# Carex raoulii

## COMMON NAME

Coastal forest sedge, Raoul's sedge

## SYNONYMS

*C. macmahoni* Petrie

## FAMILY

Cyperaceae

## AUTHORITY

*Carex raoulii* Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARRAO

## CHROMOSOME NUMBER

2n = 46

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Data Deficient

## DISTRIBUTION

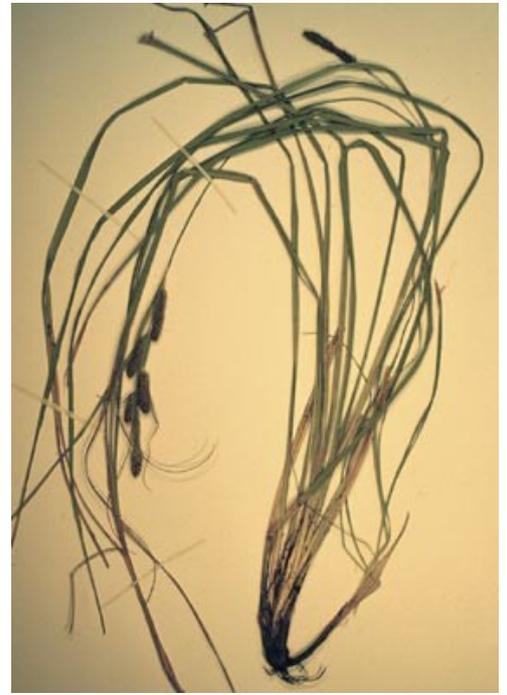
Endemic. North and South Islands. Exact distribution uncertain.

## HABITAT

Sedge of coastal and lowland shrublands.

## FEATURES

Densely tufted, tussock-forming, dark-yellow green/wine-red sedge. Culms 50-90cm × 0.5-1mm, 3-angled (trigonal), scabrid below inflorescence, greatly elongating at maturity, sometimes 3 m long. Basal sheaths dark grey-brown. Leaves < culms 2-4 mm wide, double-folded, soft, grassy, margins finely scabrid. Inflorescence of 5-7 unstalked, closely, clustered 1-4 cm × 4-7 mm spikes, arranged at top of culm, proximal portion of terminal spike female, basally male, remaining spikes all female. Glumes (excluding awn) = or < utricles, very broadly ovate, apex often cleft, membranous, colourless with few small red brown lines, pale cream midrib extending beyond to form finely scabrid awn. Utricles 2-3 × 1.5 mm, Plano-convex, elliptic-obovoid, light reddish brown, usually with distinct pale brown nerves, slightly winged, usually scabrid on margins, and on both surfaces of upper half. Beak 0.5-1 mm long, bifid, orifice finely scabrid. Stigmas 2. Nut c.1.5 mm, biconvex, obovoid, light to dark brown.



*Carex raoulii*. Photographer: Cathy Jones



*Carex raoulii* close up of spikelet.  
Photographer: Colin Ogle

## SIMILAR TAXA

Allied to a distinctive, apparently unnamed (C.C. Ogle pers. comm.) sedge which is common throughout the sand country and coastal cliffs and shrublands of the western North Island, as well as locally present elsewhere. That sedge (known by the tag name C. "raotest") differs from *C. raoulii* by the terminal spikelets all male. This is sometimes subtended by a reduced female spikelet.

## FLOWERING

No information available

## FRUITING

No information available

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown by division and from fresh seed.

## THREATS

Because of frequent confusion with the somewhat similar *Carex* 'raotest' the exact distribution and status of *Carex raoulii* is unclear. It is certainly less common than indicated by Flora 2, which included the very common *C. 'raotest'* within *C. raoulii*. Present indications are that *C. raoulii* might be rather uncommon.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**raoulii**: After Raoul

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex raoulii* Fact Sheet (content continuously updated).

New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-raoulii/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-raoulii/>

# Carex resectans

## COMMON NAME

Desert Sedge

## SYNONYMS

*Carex inversa* R.Br. var. *radiata* Cheeseman

## FAMILY

Cyperaceae

## AUTHORITY

*Carex resectans* Cheeseman

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARRES

## CHROMOSOME NUMBER

2n = 58-60

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North and South Islands. Mainly easterly and uncommon in the North Island where it found from about the Hawkes Bay south.

## HABITAT

Coastal to alpine. Usually on consolidated sand and alluvium in free draining usually very dry (though often seasonally flooded) habitats in short-tussock grassland, rough pasture, or in river beds or lake margins.



In cultivation ex Turakirae Head. Oct 2007.  
Photographer: Jeremy Rolfe



In cultivation ex Turakirae Head. Oct 2007.  
Photographer: Jeremy Rolfe

## FEATURES

Rhizomatous; yellow-green to dark green sedge, usually forming a dense sward, or small circular patches. Rhizome 1.0-1.5 mm diameter, woody, much-branched, long-creeping, with shoots spaced singly and evenly along it, c.1 mm diameter at base. Culms 5-40 mm tall, completely hidden by the leaf-sheaths; basal sheaths light grey-brown or chestnut. Leaves much > culms, 20-100 × c.0.5 mm, plano-convex towards the tip, involute towards the base, wiry, margins scabrid especially towards the long trigonous tip. Inflorescence a pale green, compact head, 4-8 mm long, orbicular-ovate, with 1-3 crowded spikes, subtended by 2-3 leaf-like bracts. Spikes androgynous, few-flowered, male flowers 1-3 at base of spike, occasionally 0, female flowers 3-8. Glumes < or rarely = utricles, ovate or ovate-lanceolate, acuminate, hyaline, keel stout, green, 1-3-nerved. Utricles 3-4 × 1.5-2.0 mm, plano-convex, prominently nerved, light brown; contracted above to a narrow green beak c.1.5 mm long, margins minutely toothed, orifice bifid; stipe not markedly contracted, c.0.1 mm long. Stigmas 2. Nut c.1.5 mm long, plano-convex, obovoid to almost orbicular, brown, shining, shortly stipitate

## SIMILAR TAXA

It is most similar to *C. colensoi* Boott and *C. inversa* R.Br. two other densely tufted, grass-like species from which it is easily distinguished by the long-creeping rhizome with the shoots spread evenly along it, culms sheathed by leaves for almost their entire length, few-flowered, minute inflorescences which are usually obscured within the surrounding foliage, and light brown nuts with a pale green, minutely toothed beak.

## FLOWERING

October - December

## FRUITING

November - April

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from the division of whole plants and from fresh seed. Best suited for a well drained, sunny site in dry climates. This species dislikes humidity and soon dies if kept to moist.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex resectans* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-resectans/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-resectans/>

# Carex rubicunda

## COMMON NAME

Sedge

## SYNONYMS

*Carex novae-zelandiae* Petrie; *Carex petriei* Cheeseman var. *rubicunda* (Petrie) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex rubicunda* Petrie

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARRUB

## CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, RR

## PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Vulnerable | Qualifiers: DP

2004 | Range Restricted

## DISTRIBUTION

Endemic. North and South Islands. In the North Island known from swamps in the southern Kaingaroa Plain, the Kaimanawa and Ruahine Mountains, and wetlands within Tongariro National Park. Its exact distribution in the South Island is still unclear. It has long been known from Lakes Te Anau and Manapouri, and has recently (2009-2010) been found at Lake Lyndon (Canterbury) and Lake Wanaka (Otago). It is likely to be found at other sites.

## HABITAT

A species of mainly montane to subalpine lake, tarn, and pond margins. Also found in other ephemeral wetlands, often in places seasonally flooded.



*Carex rubicunda* - Matea Road. Photographer: John Hobbs



*Carex rubicunda* - Matea Road. Photographer: John Hobbs

## FEATURES

Diminutive, shortly rhizomatous, stiffly erect, reddish brown tufted sedge with curled leaf apices frequenting lake, pond, and tarn margins, flushes, slow flowing stream and seepage in montane to subalpine conditions. Culms 10-150 x 0.5-1 mm, glabrous, terete, basal sheaths light brown to grey brown. Leaves much longer than culms, 30-300 x 0.5-1 mm, red to red-brown, rigid, plano-convex, occasionally with margins inrolled, striated on undersides, margins finely scabrid, leaf apex obtuse, twisted and curled when dry. Inflorescence 10-15 mm long, usually hidden within foliage towards base of plant. Spikes 3-4(-6), shortly pedunculate to almost sessile, pale yellow-brown, terminal spike wholly male, subterminal spike female or with some males near apex, remaining spikes female, 5-10 x 3 mm, clustered at the same level round base of male spike, all subtended by leaf-like bracts, these about same length as leaves. Glumes equal to or slightly shorter than utricles, ovate, membranous, nerved, pale pink, maturing brown, with green midribs, apices acute. Utricles 1.5-2 x 1 mm, plano-convex, obovoid, smooth or faintly nerved, gradually narrowed at either end, light brown below, trending to darker purple-brown toward the 0.3 mm long glabrous beak, apex hardly bifid, crura minutely scabrid; stipe 0.5 mm long. Stigmas 2. Nut about 1 mm long, obovoid to suborbicular, pale grey-brown.

## SIMILAR TAXA

In some respects *C. rubicunda* is perhaps closest to *C. petriei* Cheeseman from which it differs by its red, curly-tipped rather than twisted leaves, female flowers bearing 2 rather than 3 stigmas, and by the scarcely beaked rather than distinctly beaked, grey brown rather than dull brown, obovoid to suborbicular rather than oblong-obovoid, utricle. It could also be confused with *C. cirrhosa* Bergg., from which it differs by its (usually) smaller stature, and smooth or faintly nerved rather than distinctly nerved, utricle which tapers to a minute beak (0.3 mm long), rather than an abruptly narrowed utricle terminating in a > 0.5 mm long beak. The utricles of *C. rubicunda* are usually much < 2 mm long, whilst those of *C. cirrhosa* are typically > 2 mm long. The two species are occasionally found growing together.

## FLOWERING

October - January

## FRUITING

October - August

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from the division of whole plants and from fresh seed. A diminutive species best suited for cultivation in pots within an alpine house or in a rockery. It requires permanently moist soil to flourish and prefers full sun. It is intolerant of much competition and dislikes humidity

## THREATS

A locally common species of suitable habitats within the Central North Island. Some populations might be at risk from horse trampling, vehicle traffic and invasive wetland weeds. Status in the South Island needs clarification.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

## WHERE TO BUY

Not commercially available

## ATTRIBUTION

Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-rubicunda/>

# Carex secta

## COMMON NAME

Purei, Pukio, Niggerhead

## SYNONYMS

*Carex virgata* var. *secta* (Boott) Hook.f., *C. paniculata* var. *secta* (Boott) Cheeseman, *C. appressa* var. *secta* (Boott) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex secta* Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARSEC

## CHROMOSOME NUMBER

2n = c.70

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. Found throughout the North, South and Stewart Islands. Also on the main Chatham Island, though scarce.

## HABITAT

Widespread in suitable wetlands from coastal to montane wetlands.

## FEATURES

Tussock forming sedge up to 1.5 x 0.8 m, mature specimens with trunk-like bases comprised of matted rhizomes, roots and old culm-bases. Culms 0.25-1(-1.5) m, drooping, trigonous, scabrid, basal sheaths brown to light-brown. Leaves 1.5-7 mm wide, light green to yellow-green (rarely dark green - then in heavy shade), equal to or longer than culms, drooping, channelled, margins and keel scabrid. Inflorescence a loosely branched, somewhat slender, drooping panicle 0.45-1 m long. Spikes pale brown, mostly clustered towards the ends of the slender branchlets. Utricles chestnut brown to dark brown, margins weakly winged, scabrid, light brown to brown, apex with a minute to distinct beak.



Coromandel, January. Photographer: John Smith-Dodsworth



Feb 2008. Photographer: Jeremy Rolfe

## SIMILAR TAXA

*C. appressa*, *C. sectoides*, *C. tenuiculmis* and *C. virgata*. From *C. appressa* and *C. virgata*, it can be distinguished by its branched, drooping, paniculate inflorescence. From *C. sectoides*, by its smaller stature, and slender, longer, drooping inflorescence branchlets. *C. sectoides* is sympatric with *C. secta* at only one site on main Chatham Island. From *C. tenuiculmis*, it differs by its light green to yellow-green, rather than wine-red foliage, and larger panicles with more numerous branchlets.

## FLOWERING

(September-) October-November (-December)

## FRUITING

October - March

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. Although a wetland species *C. secta* will grow well in most soils and moisture regimes. Does best in full sun.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**secta**: Much divided (panicle)

## WHERE TO BUY

Commonly cultivated. Sold by most garden centres.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex secta* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-secta/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-secta/>

# Carex silvestris

## COMMON NAME

Forest Bastard Grass, Hook Sedge

## SYNONYMS

*Uncinia silvestris* Hamlin

## FAMILY

Cyperaceae

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCSIL

## CHROMOSOME NUMBER

$2n = 88$

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## BRIEF DESCRIPTION

*Carex silvestris* (Hamlin) K.A.Ford

## DISTRIBUTION

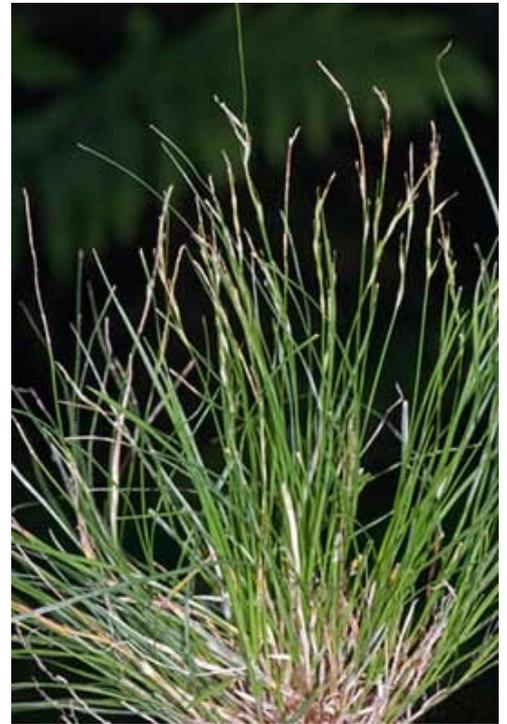
Endemic. New Zealand, North Island (Pureora and the Kaimai Range south), South and Stewart Islands

## HABITAT

Lowland to upper montane forest. Often rather local and probably warranting listing as Naturally Uncommon/Sparse.

## FEATURES

Bright green, densely caespitose plants. Culms 200.0-400.0 × c.0.5 mm, glabrous; basal bracts light cinnamon-brown or yellow-brown, not shining. Leaves 4-5 per culm, ± = or slightly > culms, 0.5-2.0 mm wide, bright green, tapering to a long filiform tip, scabrid on margins and on upper surface towards leaf-tip. Spikes 35-100 × 2-3 mm, often bracteate with the leaf-like bract much > spike, female flowers c.10-20, internodes 3-5 mm long towards base of spike, 1-2 mm long above. Glumes much < utricles, persistent, ovate, acute or subacute, membranous, very faintly nerved, midrib pale green. Utricles 3.5-5.0 mm long, slightly < 1 mm diameter, plano-convex, concavo-convex or subtrigonal, oblong or ovoid-lanceolate, light green, rarely greenish brown, membranous, few-nerved or smooth, stipe c.1 mm long, narrowed above to a distinct beak 1.0-1.5 mm long



Tararua Forest Park. Feb 2008. Photographer: Jeremy Rolfe



Tararua Forest Park. Leaf bases. Feb 2008. Photographer: Jeremy Rolfe

### **SIMILAR TAXA**

Distinguished from all other species with persistent glumes by the glabrous culms and glumes which are conspicuously shorter than the utricles( see also *Carex egmontiana* (Hamlin) K.A.Ford)

### **FLOWERING**

October - November

### **FRUITING**

November - February

### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed and by division of established plants. Prefers a permanently moist, peaty soil but will grow in most substrates. Best in semi-shade.

### **ETYMOLOGY**

**carex:** Latin name for a species of sedge, now applied to the whole group.

**silvestris:** Of forests

### **WHERE TO BUY**

Not Commercially Available

### **ATTRIBUTION**

Description adapted from Moore and Edgar (1970).

### **REFERENCES AND FURTHER READING**

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

### **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/carex-silvestris/>

# Carex sinclairii

## COMMON NAME

Sinclair's sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex sinclairii Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARSIN

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand. North and South Islands from the Waikato River delta and Hauraki Plains south.

## HABITAT

Coastal to alpine. In freshwater wetlands, under willow in gully systems, along river and stream banks, lake margins, and in damp seepages, pond and tarn margins and clearings within forest. Preferring fertile to mid-fertile wetlands.

## FEATURES

Rhizomatous; tufts ± distant, rather stiff, bright green to bright yellow-green (often with a slight glaucous sheen). Rhizome 2–4 mm diameter, occasionally long-creeping. Culms 40–500 × 0.5–1.5 mm, trigonous, margins faintly scabrid, especially towards inflorescence; basal sheaths grey-brown or reddish brown. Leaves numerous = or > culms, 2–4 mm wide, double-folded, ± erect, rather rigid, margins closely scabrid. Spikes 4–7, all, or at least the lowest, distinctly pedunculate; terminal 1(–2) spikes male, dark brown or occasionally very light brown, the rest female, 15–35 × 3–5 mm, usually dark brown, occasionally branched at base. Glumes ± = utricles, ovate-lanceolate, subacute, truncate, almost emarginate, coriaceous, dark red-brown, almost black, midrib narrow, light yellow-green, extending to the tip or produced beyond to a scarcely scabrid awn usually < 1 mm, but up to 2.5 mm long. Utricle 2.5–3.5 × c.1.5 mm, plano-convex, ovoid to ovoid-ellipsoid, rather compressed, light yellow-brown to dark brown, with usually 2–5 distinct nerves on each face, occasionally more in larger plants, margins glabrous; tapering gradually above to a beak slightly < 0.5 mm long, orifice entire or minutely bidentate; stipe < 0.5 mm long. Stigmas 2. Nut 1.5–2.0 mm. long, plano-convex, oblong, light brown



L. Tennyson, January. Photographer: John Smith-Dodsworth



Inflorescence, Whanganui. Photographer: Colin Ogle

## SIMILAR TAXA

*Carex sinclairii* can be confused with *C. subdola*. From that species it is best distinguished by the colour of the mature utricles; those of *C. subdola* are bright cinnamon-brown, and those of *C. sinclairii* are yellow-brown to dark brown. Smaller specimens of *C. sinclairii* have glumes without awns, or scarcely awned, and obovoid utricles with only 2–5 prominent nerves, but larger plants have longer awns in some of the glumes and the utricles are ovoid and tapering with nerves as is usual in *C. subdola*.

Can also be confused with *Carex gaudichaudiana* (with which it often co-occurs) when utricles are immature and green. *Carex gaudichaudiana* is perennial, smaller, and with finer leaves (

## FLOWERING

October - November

## FRUITING

November - May

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. Although a wetland species *C. sinclairii* will grow well in most soils and moisture regimes. Best in partial shade unless grown in permanently damp conditions.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**sinclairii**: After Sinclair (c. 1796–1861). Colonial Secretary and naturalist.

## WHERE TO BUY

Not commercially available.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (110 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex sinclairii* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-sinclairii/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-sinclairii/>

# Carex solandri

## COMMON NAME

Forest Sedge, Solander's Sedge

## SYNONYMS

*Carex dissita* Boott var. *solandri* (Boott) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex solandri* Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARSOL

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. North, South and Stewart Islands

## HABITAT

Coastal to montane. Usually in riparian forest where it may be the dominant sedge of alluvial terraces, and riversides but also colonising wet seepages and slip scars. Usually found in association with *C. dissita* Boott.



Dome Walkway. Jul 2006. Photographer: Jeremy Rolfe



Dome Walkway. Jul 2006. Photographer: Jeremy Rolfe

## FEATURES

Dense yellow-green tufts, upper part of leaves and culms drooping. Culms 0.10–1.00 m long, c.1 mm diameter, trigonous, smooth; basal sheaths red-brown, red-purple to black. Leaves < or = culms, 1.5–6.5 mm wide, linear, double-folded, cartilaginous. Inflorescence of 5–10 distant spikes 10–50 mm long, nodding on long filiform peduncles; terminal 1–4 spikes male, slender, usually approximate; remaining spikes female with a few male flowers above or below, 3–4 mm diameter, usually almost black, lowermost spikes often compound; subtending bracts leafy, > inflorescence. Glumes (excluding awn) ± = or < utricles, ovate, lanceolate, entire or rarely emarginate, light or dark brown, membranous, midrib produced to a scabrid awn of varying length. Utricles 2–3 mm long, slightly > 1 mm. diameter, plano-convex, unequally biconvex or subtrigonus, fusiform or ovoid, turgid, dark red-brown to almost black, occasionally light brown, pale yellow towards the base, surface smooth, occasionally faintly nerved at the base, shining; scarcely narrowed above to a bidentate beak < 0.5 mm. long, margins smooth or occasionally scabrid, orifice us. scabrid; rarely contracted to a stipe c.0.2 mm. long. Stigmas 3. Nut c.1 mm. long, trigonous, obovoid, cream, surface minutely but deeply pitted giving angles of nut a serrate appearance.

## SIMILAR TAXA

*Carex solandri* is most often confused with *C. dissita* Boott, especially as both species often grow together. *Carex dissita* differs from *C. solandri* by the distant, dark brown, rather short and stout, usually shortly pedunculate female spikes. Further, the utricles are also distinctly bicoloured basally cream to yellow brown and red-purple to black above. *C. solandri* has long filiform peduncles and uniformly dark coloured utricles (rarely light brown and pale yellow near the base).

## FLOWERING

August - December

## FRUITING

October - May

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by division of established plants. A popular species in cultivation, and often sold incorrectly as *C. dissita*. Prefers a permanently damp, semi-shaded site but once established can tolerate full sun and dry spells.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

**solandri:** Named after Daniel Carlsson Solander (19 February 1733 - 13 May 1782) who was a Swedish naturalist and an apostle of Carl Linnaeus.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex solandri* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-solandri/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-solandri/>

# Carex strictissima

## COMMON NAME

Bastard grass, hook sedge

## SYNONYMS

*Uncinia strictissima* Petrie; *Uncinia rigida* Petrie non Boeck., *U. rubra* var. *rigida* (Petrie) Cheeseman, *U. rubra* var. *strictissima* Kuk

## FAMILY

Cyperaceae

## AUTHORITY

*Carex strictissima* (Kük.) K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCSTR

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Endangered | Qualifiers: DP

## PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Endangered | Qualifiers: DP

2004 | Threatened – Nationally Endangered

## DISTRIBUTION

Endemic. In the North Island known only from the Central Volcanic Plateau. In the South Island it apparently has an easterly distribution, being recorded from the Nelson lakes, Canterbury, Otago and Southland.

## HABITAT

Lowland scrub, swamps, lake margins and in damp clears within lowland forest.

## FEATURES

Dark olive-green to red-green rush-like sedge, forming dense tufts. Culms 300-550(-700) mm x 1 mm, initially trigonous and scabrid but maturing as terete and smooth (except for just under the inflorescence). Basal bracts dull dark brown. Leaves much reduced, inrolled or flat, 1-2 mm wide, rigid, strongly nerved, scabrid on margins, midrib bright red. Spikes 30-100 mm long, subtended by a reddish filiform bract > spike. Female flowers 10-15, distant in longer spikes, internodes up to 14 mm long at base but decreasing to 3 mm toward apex. Glumes < or = utricles, persistent, obtuse or subacute, green to light brown, tinged pink. Utricles 6-7.5 x 2 mm, plano-convex, nerved, light brown, often pink near apex, stipe and beak up to 15 mm long.



*Carex strictissima*. Photographer: John Barkla



In cult. Feb 2009. Photographer: Jeremy Rolfe

## SIMILAR TAXA

A distinctive species perhaps most closely allied to *Carex erythrovaginata* K.A.Ford from which it differs by the unusual, erect rush-like growth form and by the usually inrolled, (1)-2-3, 1 mm wide leaves.

## FLOWERING

October to December

## FRUITING

November to May - but as the inflorescence is long persistent, fruits may be present all year round.

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and the division of whole plants. Prefers cool, damp ground but once established will tolerate drought. Excellent in semi-shade.

## THREATS

Herbarium specimens indicate that this was never a common species. However, it is clear that it has declined over large parts of its range, and it is now very close to extinction in the North Island. The species seems to be threatened by habitat loss as a result of weed invasion and by animal browse.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

**strictissima:** Very straight and narrow

## ATTRIBUTION

Description adapted from Moore and Edgar (1970). Fact sheet prepared by Peter J. de Lange 17 August 2006.

## REFERENCES AND FURTHER READING

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

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex strictissima* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-strictissima/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-strictissima/>

# Carex tenuiculmis

## COMMON NAME

Slender wine sedge

## SYNONYMS

*Carex secta* var. *tenuiculmis* Petrie

## FAMILY

Cyperaceae

## AUTHORITY

*Carex tenuiculmis* (Petrie) Heenan et de Lange

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARTEC

## CHROMOSOME NUMBER

2n = c.66

## CURRENT CONSERVATION STATUS

2012 | At Risk – Declining | Qualifiers: DP, Sp

## PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Declining | Qualifiers: DP

2004 | Sparse

## DISTRIBUTION

Endemic. South, Stewart and Chatham Islands (both Chatham (Rekohu) and Pitt Islands)

## HABITAT

A sedge of lowland to montane slow flowing stream sides, lake margins, tarns, ponds and associated wetland vegetation. This species usually grows in association with other carices including *Carex coriacea* Hamlin, *C. diandra* Schrank, *C. gaudichaudiana* Kunth, *C. secta* Boott and *C. virgata* Sol. ex Boott. It does not like tall vegetation.



Upper Taieri wetlands, Central Otago.  
Photographer: John Barkla



Mangape Creek, Chatham (Rekohu) Island.  
Photographer: Amanda Baird

## FEATURES

Tussock forming sedge of wetland margins. Rhizomes short and spreading, not forming a trunk. Leaves 250-800 x 2.4-3.2 mm, ascending and spreading, channelled, soft, red, wine-red, or red-green, keel and margins scabrid. Culms 200-500 x 1.8-2.1 mm, glabrous to near triquetrous in lower part, scabrid and trigonous in upper part; similar in length to, or shorter than, the leaves; basal sheath up to 90 mm long, red or red-green, becoming straw-coloured when dry. Inflorescence 80-140 mm long, usually with a single proximal branch, without subtending bract; spikes 1.5-15 mm long; upper spikes crowded and more or less sessile. male florets distal. Glumes 2.1-3 x 1.9-2.2 mm, shorter than utricles, ovate, membranous, persistent, acuminate, light-brown, with a straw-coloured midrib, margins hyaline. utricles 2.3-3.5 x 1.6-2.3 mm, broad or narrow, plano-convex, ovoid, turgid, light brown to brown, smooth, shining, nerves distinct at base; beak 0.5-0.8 mm long, entire or with minute crura; stipe 0.2-0.4 mm long, beak and upper part of utricle winged, with scabrid margins, cream to light brown. Stigmas 2. Nut 1.7-2 mm long, biconvex, ovoid to obovoid, light-brown.

## SIMILAR TAXA

Closest to *C. secta* from which it differs by its non-trunked rather than trunked tussock forming habit, wine-red to red-green rather than green leaves which are 2.4-3.2 mm rather than 1.5-7 mm wide. In *C. tenuiculmis* the culms are 200-500 mm long, and in *C. secta* 0.25-1 m long. The inflorescence of *C. tenuiculmis* is spiciform, usually unbranched or with 1-2 short branches near the base, and 80-140 mm long, while that of *C. secta* is paniculiform with numerous long branches 200-600 mm long. The utricles of *C. tenuiculmis* are light brown to brown, with the margins strongly winged, scabrid and cream-coloured, and the apex either entire or with a minute crura. In *C. secta* the utricles are chestnut brown to dark brown with the margins weakly winged, scabrid and light brown to brown, and the apex with distinct or minute crura. *Carex tenuiculmis* has  $2n = c. 66$  chromosomes and *C. secta*  $2n = c. 70$ .

## FLOWERING

November - December

## FRUITING

January - May

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. A very attractive species now commonly seen in cultivation, though it is often sold incorrectly by commercial garden centres as *Carex ternaria* Boott which it doesn't even remotely resemble! The medium-sized tussock forming habit, dark wine-red foliage and narrowly pendent spike-like inflorescences are particularly attractive. Though it does best in a sunny, permanently damp situation it can tolerate extremely dry conditions, although, ultimately in these locations it will not flourish.

## THREATS

Once regarded to be seriously threatened, critical survey throughout its range has located many more populations, the majority of which occur in secure habitats and locations. The biological pattern of distribution now suggests that this species is normally uncommon, and while it can at times be locally common, it is more usually a minor (sparse) component of wetland systems. That said, it is evident that some populations, especially those in northern Canterbury are more at risk from development than others.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

## ATTRIBUTION

Fact sheet by P.J. de Lange (30 August 2005). Description based on Heenan & de Lange (1997).

## REFERENCES AND FURTHER READING

Heenan, P.B.; de Lange, P. J.; Murray, B. G. 1997: *Carex tenuiculmis* comb. et stat. nov. (Cyperaceae), a threatened red-leaved sedge from New Zealand. *New Zealand Journal of Botany* 35: 159-165.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

**CITATION**

Please cite as: de Lange, P.J. (Year at time of access): *Carex tenuiculmis* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-tenuiculmis/> (Date website was queried)

**MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/carex-tenuiculmis/>

# Carex testacea

## COMMON NAME

Speckled Sedge, Trip Me Up

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

*Carex testacea* Sol. ex Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARTES

## CHROMOSOME NUMBER

$2n = c.52$

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North and South Islands. Uncommon in the South Island.

## HABITAT

Coastal to montane. In sand dunes, coastal forest and scrub, dense forest or short tussock (*Festuca novae-zelandiae* (Hack.) Cockayne) grassland.



Otama Beach, February. Photographer: John Smith-Dodsworth



At Otama Beach, February. Photographer: John Smith-Dodsworth

## FEATURES

Densely tufted, 0.3-0.6(-0.8) m high, usually dark red to orange-red sedge. Culms < or > leaves, often exceedingly elongated at maturity, up to 2 m long, trailing, prostrate, < 1 mm diameter, often almost filiform, trigonous or subtrigonous, glabrous or slightly scabrid below the inflorescence; basal sheaths dark brown or red-brown, nerves distinct. Leaves 1.0-2.5(-3.0) mm wide, channelled, usually reddish or orange-green, sometime slight green, harshly scabrid. Spikes 3-5, ± approximate; terminal spike male, c. 1 mm diameter, ± = female spikes in length, on a filiform peduncle; remaining spikes female, 5-25(-30) × c. 5 mm, often with a few male flowers at the base, sessile, or the lowest more distant and shortly pedunculate. Glumes (excluding awn) ± = utricles, broadly ovate, thin and membranous, often deeply emarginate, occasionally entire, very light brown with darker flecks, midrib usually brown-spotted, produced to a scabrid awn of variable length. Utricles c. 2.5 × 1.5 mm, ± plano-convex, broadly ovoid, pale yellow-brown below, purple-brown above, nerved, more strongly so on the more convex face, shining, narrowed abruptly to the deeply bifid beak c. 0.5 mm long, margins and orifice usually finely scabrid, occasionally ± contracted below to a stipe c. 0.5 mm long. Stigmas 2. Nut c. 1.5 mm long, biconvex, dark brown, almost black.

## SIMILAR TAXA

*Carex testacea* belongs to a complex of allied species which include the South Island, ultramafic endemic *C. devia* Cheesemanii, *C. raoulii* Boott, and *C. flagellifera* Colenso. From *C. devia* and *C. raoulii* it is best distinguished by its usually long trailing fruiting culms, narrow, mostly orange-red, or reddish-green, channelled leaves, and usually distant, pendent female spikes. It is morphologically closest to *C. flagellifera* (itself a species complex). From that species, at least in its typical form it differs by the usually orange-red to red-green, rather than yellow-green to dark green culms, and membranous, mostly light brown glumes bearing numerous fine, red-brown striae, rather than uniformly red brown to dark red-brown, subcoriaceous glumes.

## FLOWERING

September - December

## FRUITING

November - May (but may be present throughout the year)

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by division of established plants. Can be grown in full sun and deep shade but prefers a free draining soil. Forms with dark orange-red leaves and culms are very popular in cultivation.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

**testacea:** From the Latin 'testa' tile, referring to either the hard quality of something or its yellow-brown colour like that of terracotta.

## NOTES ON TAXONOMY

*Carex testacea* is extremely variable and is probably better regarded as a species complex. Plants of inland forests are usually much stouter, and have longer, darker brown spikes than those collected from coastal areas. Forms from upland short-tussock grassland typically have wider leaves, and shorter culms, and in some sites are difficult to distinguish from *C. wakatipu* Petrie.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex testacea* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-testacea/> (Date website was queried)

**MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/carex-testacea/>

# Carex trifida

## COMMON NAME

Mutton-bird Sedge, Tataki

## SYNONYMS

*Carex rekohu* Petrie

## FAMILY

Cyperaceae

## AUTHORITY

*Carex trifida* Cav.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARTRI

## CHROMOSOME NUMBER

2n = 60

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand, southern South Island, Stephens, Stewart, Chatham, Snares, Antipodes, Auckland, Campbell Islands. Also present on Macquarie Island, in southern South America and the Falkland Islands.

## HABITAT

Strictly coastal where it often associated with seal haul outs and sea bird nesting grounds, especially - as the common name suggests - muttonbirds (*Puffinus* spp.). Usually in open sites, very rarely found in canopy gaps within coastal forest.



*Carex trifida* plant, ex. cult. Photographer: Jeremy Rolfe



Chatham Islands, Te Whakaru. Photographer: Peter de Lange

## FEATURES

Extremely robust, compact, light green to glaucous sedge, producing tussocks up to 1 m diameter. Culms 0.15–1.00 m tall, 2–4 mm diameter, trigonous with angles rounded, glabrous; basal sheaths cream, grey, or yellow-brown. Leaves often overtopping the inflorescence, 6–15 mm wide, light green to dark glaucous green, double-folded, with keel not very much thickened, rather soft and spreading, margins slightly scabrid with rather distant teeth; sheath only slightly broader than lamina, paler green. Spikes 6–15, brown, very sturdy, 35–11 x 5–15 mm; upper 2–4 spikes male, occasionally with a few female flowers intermingled, ± approximate, ± sessile; lower spikes female, the lowest often compound, on stout erect peduncles; bracts leaf-like, > inflorescence. Glumes > utricles, linear-oblong, or lanceolate, noticeably emarginate, membranous, chestnut-brown, the pale greenish brown midrib produced to a very long hispid awn. Utricles 4.5–6.0 x c.2.0 mm., subtrigonous, oblong-obovoid, turgid, distinctly nerved, straw-coloured to light brown tinged; abruptly narrowed to a rather shallowly bifid beak c.1 mm long, margins and orifice occasionally slightly scabrid; much contracted to a very pale brown stipe c.1 mm long. Stigmas 3. Nut c. 2 mm. long, trigonous, oblong-obovoid, dark brown.

## SIMILAR TAXA

*Carex trifida* has no obvious close relatives in New Zealand, and of the few it frequently associates with, none, except the Chatham Island endemic *C. ventosa* Petrie, have any gross morphological similarity. From *C. ventosa*, *C. trifida* differs by its distinctly emarginate rather than acute or truncate, chestnut brown rather than mostly colourless, with red-brown striae glumes. Although *C. ventosa* is often weakly glaucous it rarely is the dark blue-green colour usually seen in *C. trifida*. *Carex ventosa* is normally a forest plant and *C. trifida* prefers open coastal sites, rarely however, do their distributions overlap, and there is some evidence they form hybrids.

## FLOWERING

August - December

## FRUITING

November - June

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. Often naturalises in gardens. Prefers full sun and a damp, well manured, slightly acidic soil but will grow in almost any conditions except deep shade. A beautiful and popular sedge, widely grown in New Zealand.

## THREATS

Not Threatened - but very uncommon in the northern part of its range

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**trifida**: Divided into three

## TAXONOMIC NOTES

Based on nrDNA ITS sequences New Zealand plants are sister to the Chatham Island endemics *C. ventosa* Petrie and *C. chathamica* Petrie. No sequences of *C. trifida* seem to be available from its type locality, the Falkland Islands.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex trifida* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-trifida/> (Date website was queried)

**MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/carex-trifida/>

# Carex uncinata

## COMMON NAME

Bastard grass, hook sedge, kamu, matau-a-maui

## SYNONYMS

*Uncinia uncinata* (L.f.) Kük.; *Uncinia australis* Pers.; *Uncinia alopecuroides* Colenso; *Uncinia bractata* Colenso; *Uncinia pedicellata* Kük.; *Uncinia uncinata* var. *pedicellata* (Kük.) Petrie; *Uncinia australis* var. *pedicellata* (Kük.) Petrie; *Uncinia uncinata* var. *laxior* Carse;

## FAMILY

Cyperaceae

## AUTHORITY

*Carex uncinata* L.f.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCUNC

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous: New Zealand. North, South, Stewart, Chatham and Auckland Islands. Also in the Hawaiian Islands.

## HABITAT

Coastal to montane (up to 1000 m a.s.l.). Widespread and common in most indigenous habitats from dense forest to open shrubland. Rarely colonising the margins of wetlands. Sometimes found as an urban weed in hedgerows, along river banks or in parks.



Coromandel, February. Photographer: John Smith-Dodsworth



Coromandel, February. Photographer: John Smith-Dodsworth

## FEATURES

Caespitose, yellow-green to dark green sedge. Culms 100–900 x 1.0–1.5 mm, glabrous, or occasionally scabrid just below inflorescence; basal sheaths dull brown. Leaves 5–10 per culm, ± = culms, or > flowering culms, 2–5 mm wide, dark green or occasionally reddish green, strongly scabrid on the margins and on the adaxial surface towards the tip. Spikes 55–200 x 2.0–3.5 mm, usually bracteate, female flowers numerous, usually c.60–120, very closely crowded throughout almost the whole spike, internodes 0.5–1.5 mm long. Glumes usually < but occasionally slightly > utricles, deciduous, ovate, obtuse or subacute, coriaceous, yellowish with a green midrib or often entirely dark brown, occasionally greenish pink. Utricles 4–5 mm long, slightly > 1 mm. diameter, plano-convex or concavo-convex, lustrous, with usually one prominent lateral nerve on the abaxial face and 3–4 faint nerves on the adaxial face, yellowish to dull brown, stipe 1.0–1.5 mm. long, beak slightly > 1 mm. long; scarcely spreading when ripe.

## SIMILAR TAXA

*Carex uncinata* is the most variable of the New Zealand species. It is chiefly distinguished by the number of female flowers which range from 35–180, and by the length of spikes (55–200 mm long). The glumes of this species are also characteristically deciduous. However, some forms are known where the glumes are persistent. The leaves of *C. uncinata* are usually dark green to yellow-green but in the southern part of its range dark red colour forms are known.

## FLOWERING

August - December

## FRUITING

Throughout the year

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants (though these may then take a while to settle). In the southern part of its range *C. uncinata* plants are often dark wine-red, it is this form which is erroneously sold as *Uncinia rubra* in the horticultural trade.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

**uncinata:** Hooked

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (18 August 2006). Description adapted from Moore and Edgar (1970) - see also de Lange et al. (2013).

## REFERENCES AND FURTHER READING

de Lange, P.J.; Heenan, P.B.; Rolfe, J.R. 2013: *Uncinia auceps* (Cyperaceae): a new endemic hooked sedge for the Chatham Islands. *Phytotaxa* 104 (1): 12–20. doi: 10.11646/phytotaxa.104.12

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

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex uncinata* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-uncinata/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-uncinata/>

# Carex virgata

## COMMON NAME

Swamp sedge, pukio, toitoi, toetoe

## SYNONYMS

*Carex paniculata* var. *virgata* (Boott) Cheeseman; *Carex appressa* var. *virgata* (Boott) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex virgata* Sol. ex Boott

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARVIR

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

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

## HABITAT

Widespread from sea level to about 1000 m a.s.l. in open, swampy conditions and also in damp sites within lowland forest. In parts of the country this sedge is often the dominant carice of lowland alluvial forest.

## FEATURES

Rhizomatous, densely clumped to tussock-forming sedge. Rhizome 5 mm. diameter. Culms 150–900 mm. x c.1.5 mm, trigonous, grooved, harshly scabrid; basal sheaths shining, grey-brown to dark brown, sometimes black. Lvs much > culms, 0.5–1.2 m tall, 1.5–4.5 mm wide, channelled, light green, harsh and rigid, keel and margins strongly scabrid. Inflorescence a narrow 100–260 mm long panicle with stiff erect branchlets, the lower-most quite distant. Spikes, androgynous, 4–6 mm. long, sessile, grey- or yellow-brown, male flowers terminal, lower spikes on each branchlet subtended by a pale membranous bract with a long scabrid awn often > spike. Glume ± = or slightly < utricles, membranous, ovate, acute, dull brown, with a prominent pale midrib, this often scabrid in lowermost glumes. Utricles 2.0–2.5 x c.1.0 mm, plano-convex, ovoid, light grey with distinct brown nerves; tapering to a brown beak c.0.5 mm long with a bifid orifice and conspicuously denticulate margins; abruptly contracted to a narrow stipe c.0.2 mm. long. Stigmas 2. Nut slightly > 1 mm. long, biconvex, ovoid, dark brown.



Coromandel, January. Photographer: John Smith-Dodsworth



Coromandel, January. Photographer: John Smith-Dodsworth

## SIMILAR TAXA

*Carex virgata* most closely resembles *C. appressa* R.Br., especially as the inflorescence of both species is a stiff contracted panicle, further, both species have similar distinctly nerved utricles. However, *C. virgata* has more slender culms, narrower leaves and paler brown, less dense-flowered panicles. Plants of *C. virgata* could also be confused with *C. secta* Boott as they can occasionally become elevated on trunks formed by matted rhizomes and semi-decayed culms. However, in such rare examples of *C. virgata*, plants never attain the height reached by *C. secta*. Further, the inflorescences of *C. virgata* are never drooping, and obviously branched, with the basal branchlets often distant.

## FLOWERING

October - December

## FRUITING

December - May

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by the division of established plants. A fast growing sedge often popular in wetland restoration and riparian plantings.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

**virgata:** Twiggy

## NOTES ON TAXONOMY

On the Chatham Islands *C. virgata* either hybridises with or appears to intergrade with *C. appressa*.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex virgata* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-virgata/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-virgata/>

# Carex wakatipu

## COMMON NAME

Sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex wakatipu Petrie

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARWAK

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: South Island except apparently Fiordland. Scarce in Westland.

## HABITAT

Mostly upper montane to alpine (450-1800 m a.s.l.). The most commonly encountered, large carex sedge found in snow-tussock (*Chionochloa*) grassland, though it can at times be abundant in short-tussock grassland. It has occasionally been collected from quite low altitudes (< 450 m a.s.l.) on lake margins.

## FEATURES

Shortly rhizomatous; very variable in size, tufts dark green, reddish green or yellow-green. Culms 40-500 × c.1 mm, subtrigonus, glabrous or occasionally faintly scabrid below inflorescence, sunk among the leaves or sometimes elongating far beyond the leaves and drooping; basal sheaths dark brown or red-purple, nerves ± distinct. Leaves 2-4 mm. wide, ± erect or spreading, channelled, margins scarcely scabrid at base with well-spaced teeth towards tip. Spikes 4(-6), closely packed, at about the same level on the culm; terminal spike male, much more slender than and usually > female spikes; female spikes male at the base and occasionally at the top, 10-20 × c.5 mm, shortly pedunculate. Glumes slightly < utricles, broadly ovate, usually emarginate, sometimes almost entire, occasionally red-brown, usually very light brown flecked with darker brown striae, membranous, midrib very broad, very pale brown, produced to a short scabrid awn. Utricles 2.5-3/0 × c.2.0 mm, plano-convex or unequally biconvex, broadly elliptic-ovoid, pale brown flecked with red-brown striae below, or darker brown throughout, occasionally almost black, turgid, nerved, margins usually glabrous; beak c.0.3 mm long with a broad, ciliate, shortly bifid orifice; stipe c.0.2 mm long. Stigmas 2. Nut slightly > 1.5 mm long, biconvex, almost orbicular



Mt Cardrona, January. Photographer: John Smith-Dodsworth



Old Man Range. Photographer: John Barkla

## SIMILAR TAXA

Vegetatively *Carex wakatipu* is extremely variable. It is chiefly recognised by a combination of having dark green, yellow-green or reddish green channelled leaves which are distinctly keeled on the lower surface; a closely packed (congested) inflorescence with female spikes 10-20 × c.5 mm; and very broad glumes and utricles. The utricles are distinctly turgid. Nevertheless these characters encompass a wide range of variation with respect to growth habit, and whether or not the culms elongate at maturity or remain hidden within the leaves. Much of this variation appears genetic, and distinct races (some of which are sympatric) exist which could be segregated from this species.

## FLOWERING

October - December

## FRUITING

November - April

## LIFE CYCLE

Nuts surrounded by inflated utricles are dispersed by granivory and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from the division of whole plants and from fresh seed. Best suited for a well drained, sunny site but permanently damp situation. This species dislikes humidity.

## ETYMOLOGY

**carex:** Latin name for a species of sedge, now applied to the whole group.

## WHERE TO BUY

Not commercially available.

## NOTES ON TAXONOMY

*Carex wakatipu* as currently circumscribed is extremely variable and it is likely that further entities may be segregated from it in the near future.

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex wakatipu* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-wakatipu/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-wakatipu/>

# Carex zotovii

## COMMON NAME

Zotovs Bastard Grass, Zotovs Hook Sedge

## SYNONYMS

*Uncinia zotovii* Hamlin

## FAMILY

Cyperaceae

## AUTHORITY

*Carex zotovii* (Hamlin) K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCZOT

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North Island, South Island (mainly Nelson, Otago and Southland), Stewart and Chatham Islands.

## HABITAT

Coastal to montane (up to 1000 m a.s.l.) usually on ridge lines in tall forest, favouring well drained but moist soils. Rarely in tall scrub.

*Carex astricta* K.A.Ford

## FEATURES

Plants rather open, widely spreading, pale yellow-green tufts; tufts often with only 2–3 distant culms per plant. Culms drooping or nodding, 300–600 mm long, < 1 mm diameter, trigonous, glabrous, often scabrid just below inflorescence, basal bracts light brown. Leaves 4–6 per culm, < mature culms, 2–5 mm wide, soft, scabrid on margins and on adaxial surface towards apex. Spikes 40–80 x 3–6 mm, often bracteate, clavate, male part of spike us. c.1 mm. diameter and 1/5 to 1/4 length of whole spike, female flowers 12–32, lax towards base of spike with internodes 4–8 mm long, more crowded above with internodes 0.5–1.0 mm long. Glumes ± = utricles, deciduous, ovate, acute or acuminate, hyaline with green midrib or brownish. Utricles 5.0–6.0 x c.1.5 mm, trigonous or triquetrous, ovoid, usually smooth except for a prominent lateral nerve, but occasionally with a few less distinct nerves, green to grey-brown, stipe 1.0–1.5 mm long, beak 1–2 mm long.



Waitakere. Oct 2007. Photographer: Jeremy Rolfe



Waitakere. Oct 2007. Photographer: Jeremy Rolfe

## SIMILAR TAXA

*Carex zotovii* is most similar to *Carex horizontalis* (Colenso) K.A.Ford and *Carex minor* (Kük.) K.A.Ford. From *Carex horizontalis* it can be distinguished by its wider (2.5-5.0 cf. 1.5-2.0 mm), pale green to yellow-green, rather than dark green leaves, loosely tufted, spreading and more open growth habit, with fewer culms rather than the erect, many-culmed, densely tufted growth habit typical of *Carex horizontalis*. *Carex minor* is superficially similar but the glumes in the lower part of the spike are > utricles. In *C. zotovii* the glumes are equal to or < utricles in the lower part of the spike, and in mature spikes the utricles spread out at 90° from the rachis, while those of *C. minor* stay contracted.

## FLOWERING

October - December

## FRUITING

November - May

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by division of established plants - though these may take a while to settle. Prefers moist soil in a semi-shaded site. However, once established will tolerate a wide range of conditions except waterlogging.

## ETYMOLOGY

**carex**: Latin name for a species of sedge, now applied to the whole group.

**zotovii**: After Victor Dmitrievich Zotov (1908 - 1977), one of New Zealand's most eminent botanists who studied the vegetation of NZ high country and the classification of NZ grasses. He also completed a detailed study of the vegetation of the Tararua Range.

## WHERE TO BUY

Not commercially available

## ATTRIBUTION

Description adapted from Moore and Edgar (1970). Fact sheet prepared by Peter J. de Lange 17 August 2006.

## REFERENCES AND FURTHER READING

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

## CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carex zotovii* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-zotovii/> (Date website was queried)

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carex-zotovii/>