



# Carex species of Southland Vol2

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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 filamentosa

## COMMON NAME

Stewart Island Sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

*Carex filamentosa* Petrie

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARFIL

## CURRENT CONSERVATION STATUS

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

## PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Naturally Uncommon

2004 | Range Restricted

## DISTRIBUTION

Endemic. South and Stewart Islands. In the South Island confined to Southland where scarce. Stewart Island locally common throughout.

## HABITAT

A species of damp sites in damp ground within montane to subalpine scrub, shrubland and open grassland.

## FEATURES

Rather densely tufted stoloniferous, pale green to reddish green sedge. Culms 30–120 x 0.5 mm, terete, faintly striated. Leaves up to twice the length of the culms, 0.5 – 1 mm wide, plano-convex, nerved on the under surface, smooth on the upper, rather finely scabrid toward the apex. Inflorescence of 2–4 spikes; these crowded toward the top of the culm, usually with at least some of the lowermost distant. Uppermost spike rather slender, male; remaining spikes mainly female, shortly pedunculate, rarely with some male flowers toward the top. Bracts subtending spikes, long, filiform and leaf-like. Glumes < or sometimes = to utricles, ovate, chartaceous to membranous, pale cream, brown- or red-flecked, midrib distinct extended as a smooth finely scabrid awn. Utricles 2.5–3 x 1.5 mm, plano-convex or subtrigonal, elliptic-lanceolate, light brown with reddish brown markings towards the beak, distinctly nerved; beak slightly narrowed, 0.5 mm long, margins smooth, crura finely bifid; stipe minute. Stigmas 3. Nut 1.5 mm long, red-brown, trigonal, obovoid



Table Hill, Tin Range, Rakiura, 500m elevation.  
Photographer: Rowan Hindmarsh-Walls



Table Hill, Tin Range, Rakiura, 500m elevation.  
Photographer: Rowan Hindmarsh-Walls

## SIMILAR TAXA

*Carex filamentosa* is closely allied to *C. edgarae* Hamlin, *C. libera* (Kük.) Hamlin and *C. uncifolia* Cheeseman, all are small, rhizomatous reddish green sedges with congested, approximate spikes. From these species *C. filamentosa* is most similar to *C. uncifolia* from which it differs by its distinctly wide spreading stoloniferous rather than shortly rhizomatous habit and by the shortly pedunculate rather than sessile female spikes. From the North West Nelson endemic *C. libera*, *C. filamentosa* is distinguished by its southern South Island and Stewart Island distribution, plano-convex leaves and distinctly beaked utricles. From *C. edgarae* of inland Otago, *C. filamentosa* is readily distinguished by its distinctly beaked utricles and much narrower leaves.

## FLOWERING

October - February

## 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 division of whole plants and fresh seed. Does well in a pot or in a damp sunny site. Tolerant of most garden soils and situations. Does not like drought or excessive humidity.

## THREATS

A naturally uncommon sedge which is by and large confined to Stewart Island. It may be threatened in some parts of its Southland coastal range.

## ETYMOLOGY

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

**filamentosa:** Thread-like

## 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-filamentosa/>

# Carex flagellifera

## COMMON NAME

Glen Murray tussock, Trip Me Up

## SYNONYMS

*Carex lucida* Boott

## FAMILY

Cyperaceae

## AUTHORITY

*Carex flagellifera* Colenso

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARFGL

## CHROMOSOME NUMBER

2n = c.58

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

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

## HABITAT

Coastal to montane. Usually in free draining soils under scrub or open forest. Rarely in wetlands or in permanently damp, shaded sites.



In cultivation. Dec 2007. Photographer: Jeremy Rolfe



In cultivation. Dec 2007. Photographer: Jeremy Rolfe



## FEATURES

Usually densely tufted, dark green, yellow-green to red-green plants. Culms 350-750(-900) × 0.5-1.0 mm, or slightly wider, close-packed, trigonous or subtrigonous, smooth or slightly scabrid for a short distance below inflorescence, usually elongating in fruit up to c. 2.8 m, initially erect, soon prostrate and long trailing; basal sheaths dark brown, occasionally tinged with red-purple, nerves ± distinct. Leaves numerous, usually > culms, 1.5-2.5(-4.0) mm. wide, bright shining green, yellow-green or reddish, spreading or drooping at the tips, channelled, margins sharply scabrid. Spikes 4-8; terminal 1-2(-3) spikes male, close together, slender; remaining spikes female, 15-30(-40) × 3-5 mm, usually distant, usually pedunculate but ± erect, often male at the base, rarely male at the top also. Glumes ± = utricles, broadly ovate, usually obtuse, often with fimbriate margins, occasionally almost emarginate, subcoriaceous, dark or light red-brown, occasionally distinctly nerved, midrib distinct and thickened, conspicuously light brown, almost cream, produced to a short, slightly scabrid awn. Utricles 2.0-2.5(-3.0) × c. 1.5 mm, unequally biconvex, almost plano-convex, elliptic-ovoid, light brown at base, usually dark brown towards the top, smooth and shining, or faintly nerved on the more convex face, margins glabrous, rarely very slightly scabrid below beak; beak c. 0.4 mm long, acutely bidentate, margins slightly scabrid; stipe c. 0.3 mm. long. Stigmas 2. Nut < 1.5 mm long, biconvex, ovoid-oblong, dark brown.

## SIMILAR TAXA

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

## FLOWERING

September - November

## FRUITING

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 the division of established plants. An attractive sedge whose usually long trailing fruiting culms look spectacular if plants are grown along the top of a wall. *Carex flagellifera* is a variable species and would repay some horticultural selection.

## ETYMOLOGY

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

**flagellifera**: From the Latin flagrum 'whip' and ferre 'to bear', meaning bearing a whip-like appendage

## 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 flagellifera* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-flagellifera/> (Date website was queried)

## MORE INFORMATION

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

# Carex flaviformis

## COMMON NAME

Yellow Sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex flaviformis Nelm

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARFLA

## CHROMOSOME NUMBER

2n = c.64

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand: North (Cape Palliser), South, Stewart and Chatham Islands. Also in Tasmania

## HABITAT

Coastal to alpine (up to 1400 m a.s.l.). In the northern part of its South Island range it is usually found well inland. However in the North and Chatham Islands, and in parts of its range on Stewart Island it is mostly found in permanently damp coastal and lowland turfs often bordering slowly flowing streams and wetlands.



S. Arm, Manapouri, February. Photographer: John Smith-Dodsworth



In cultivation ex Cobb Valley. Oct 2007. Photographer: Jeremy Rolfe



## FEATURES

Yellow-green to yellow, rather stiffly tufted sedge. Culms 50–300 x 1.0–1.5 mm, smooth, trigonous, lower half usually ensheathed by leaves; basal bracts cream to dark grey, rarely reddish. Leaves much > culms, 2–3 mm. wide, initially double-folded but maturing almost flat, margins and keel scabrid towards the tip with small, close-set teeth. Inflorescence of 3–8 yellow-green, sessile, densely crowded spikes forming a head up to 30 mm long and up to 25 mm diameter, occasionally all spikes androgynous, or terminal spike male, 10–20 mm x 1.5–2.0 mm, lateral spikes female or androgynous, upper more often androgynous, lower more often female, 6–15 x 6–8 mm.; bracts subtending inflorescence leaf-like, often overtopping the foliage leaves. Glumes much < utricles, oblong-ovate, obtuse, membranous, white, sometimes tinged with brown, the centre green, with white midrib not usually excurrent. Utricles 3.5–4.5 x c. 1.5 mm., inflated or subtrigonous, ovoid, rather bright yellow-green, spreading when mature, nerves well-marked; beak 1.0–1.5 mm long, very narrow, green, papillose, shortly bifid with scabrid orifice or almost entire; stipe minute or absent. Stigmas 3. Nut c.1.5 mm long, trigonous with thickened angles, especially near centre of nut, obovoid, light yellow-brown.

## SIMILAR TAXA

The yellow-green to yellow leaves and yellow-green utricles immediately distinguish *Carex flaviformis* from all but the naturalised *C. demissa* Hornem. *Carex demissa* differs from *C. flaviformis* by the male spike which is shortly pedunculate rather than sessile; and by the female spikes which are not very closely clustered (rather than closely clustered) at the base of the male spike, typically with lowest rather distant.

## FLOWERING

October - January

## FRUITING

December - 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 division of established plants. Tolerant of a wide range of conditions but prefers full sun and permanently damp substrate. The yellowish foliage is rather attractive.

## ETYMOLOGY

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

**flaviformis:** Like a European yellow sedge

## 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 flaviformis* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-flaviformis/> (Date website was queried)

## MORE INFORMATION

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

# Carex fretalis

## COMMON NAME

Curly Sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex fretalis Hamlin

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARFRE

## CHROMOSOME NUMBER

2n = c.60-64

## CURRENT CONSERVATION STATUS

2018 | At Risk – Declining

## PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: Sp

2009 | At Risk – Naturally Uncommon | Qualifiers: DP

2004 | Range Restricted

## DISTRIBUTION

Endemic. South Island, Southland (Foveaux Strait area, Bluff Hill, Centre Island) and Stewart Island. Naturalised in Tasmania (where it is erroneously known as *C. comans* Bergg.)

## HABITAT

A coastal species of relatively, exposed, open, damp, peaty ground, often overlying beach gravels. At Bluff Hill it has invaded surrounding pasture and is locally common along the track sides leading to the summit. On Stewart Island it often grows along tracks sides within the coastal portions of their routes, and is said to spread aggressively following fires or in heavily grazed areas.

## FEATURES

Stiffly erect, tufted light yellow-green sedge with distinctly much curled and twisted leaf apices. Culms 100-150 x 0.5 mm, terete, glabrous, often elongating at maturity and becoming somewhat pendant toward the apex; basal sheaths light brown. Leaves more or less equal, or somewhat > culms, 1 mm wide, plano-convex, margins scabrid towards the very strongly cirrhose apex. Spikes 4-7; single terminal male spike rather slender; remaining spikes female, 10-25 x 4-5 mm, more or less oblong, more or less distant, erect, the uppermost sessile or shortly pedunculate, the lowest on a slender, pendant peduncle up to 10 mm long. Glumes (excluding awn) usually slightly < or equal to utricles, ovate-acuminate, hyaline though closely dotted with red brown striae, the cream midrib thickened and prolonged to an awn as long as glume or longer. Utricles 3.5 x 1 mm, plano-convex, ovoid, turgid, buff brown to tawny-yellow or tan, usually with distinctly paler nerves; scarcely narrowed to a glabrous beak, crura conspicuous, sometimes scabrid on margins; stipe relatively thick, 0.5 mm long, pale brown. Stigmas 3. Nut 1.5 mm, dark grey, trigonous, oblong-obovoid.

## SIMILAR TAXA

Very closely related to *Carex comans* Bergg., from which it differs by the usually pale yellow-green leaves with strongly curled (cirrhose) apices, a light brown, never purple-brown basal sheaths. The inflorescence tends to be shorter and more stiffly erect and the spikes fewer, broader and with larger, usually glabrous utricles which have a scarcely narrowed, usually glabrous beak rather than the distinct, and very scabrid beak seen in *C. comans*.

## FLOWERING

October - December

## 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 fresh seed and by the division of established plants. It is this species which is the original *Carex comans* cv. Frosted Curly popular in cultivation, which was first discovered by Terry Hatch of Joy Plants, Pukekohe on Bluff Hill and mistakenly assigned to *C. comans* Bergg. However, over the last decade much of what is sold as cv. Frosted Curly is now, ironically, the green form of *C. comans* s.s. *Carex fretalis* does well in cultivation in a moist, free draining sun situation or in semi-shade. It is naturalised in Tasmania.

## THREATS

Not Threatened. *Carex fretalis* is perhaps least common in the Southland part of its range but it is abundant over large parts of Stewart Island. There is no documented evidence of decline, and the species is listed only because of its naturally restricted area of occupancy.

## ETYMOLOGY

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

**fretalis:** Belonging to a strait

## 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-fretalis/>

# Carex gaudichaudiana

## COMMON NAME

Gaudichaud's sedge

## SYNONYMS

*Carex vulgaris* var. *gaudichaudiana* (Kunth) Boott

## FAMILY

Cyperaceae

## AUTHORITY

*Carex gaudichaudiana* Kunth

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARGAU

## CHROMOSOME NUMBER

2n = 72

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand: North and South Islands from about the northern Waikato south. Also in Australia and New Guinea.

## HABITAT

Lowland to alpine in wetlands, bogs and mires, along river flats, in seepages, around the margins of lakes, ponds and tarns.

## FEATURES

Rhizome ascending; tufts flaccid. Rhizomes 1.5-2.0 mm diameter, often long-creeping. Culms variable in size, 20-320 × 0.3-1.0 mm, trigonous, almost glabrous, but often slightly scabrid just below the inflorescence; basal sheaths light brown or grey-brown. Leaves numerous, < or us. > culms, 0.5-2.5 mm wide, double-folded, grass-like, keel, margins and nerves on adaxial surface slightly scabrid towards tip. Inflorescence of 3-5 spikes, ± approximate, usually sessile; uppermost spike male, occasionally compound with a smaller male spike near its base; lower spikes female, often male at the top, 5-20 × 2-5 mm, usually < male spikes. Glumes < utricles, ovate, subacute, dark brown to almost black, coriaceous, midrib narrow to broad, green, scarcely reaching tip of glume. Utricles 2.5-4.0 × 1.5-2.0 mm, narrow-ovoid to orbicular-ovoid, gradually tapering above, much compressed, green with minute red-brown spots when mature, conspicuously nerved, margins smooth; beak almost wanting, orifice entire or minutely bidentate; stipe < 0.5 mm. long. Stigmas 2. Nut 1.5-2 mm. long, biconvex, orbicular-ovoid, dull grey



Mavora lakes, November. Photographer: John Smith-Dodsworth



Lake Wanaka. Photographer: John Barkla

### SIMILAR TAXA

*Carex gaudichaudiana* is most similar to *C. sinclairii* Boott and *C. subdola* Boott from which it is easily distinguished by its overall smaller size, narrower leaves and sessile spikes.

### FLOWERING

October - December

### FRUITING

December - April

### 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. gaudichaudiana* 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.

**gaudichaudiana**: After Gaudichaud-Baupre

### 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-gaudichaudiana/>



# Carex geminata

## COMMON NAME

Cutty grass, Rautahi

## SYNONYMS

*Carex ternaria* var. *gracilis* Cheeseman, *C. confusa* Hamlin.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex geminata* Schkuhr

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARGEM

## 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.

## HABITAT

Coastal to lower montane in freshwater wetlands, along river and stream banks, lake margins, and in damp seepages, pond margins and clearings within forest. Preferring fertile to mid-fertile wetlands.

## FEATURES

Rhizomatous, robust bright-green to yellow-green sedge, 0.5-1.2 m tall. Culms 1-5-3.5(-5) mm diam., triangular in cross-section, very sharply scabrid. Basal sheaths dull grey-brown or purple-brown. Leaves numerous, > culms (2-)5-9(-11), wide, double-folded, margins very scabrid. Spikes (10-)15-24, yellow-green, grass-green, or dark-green mottled red or purple, all pedunculate, pendulous, rather narrow, often twisted and "worm-like". Glumes dark red-purple, (excluding awns) more less same length as utricles, narrow-oblong, truncate or emarginate with a hispid awn of variable length. Utricles (2-)2.3-2.9(-3.5) x 1.2-1.7(-2) mm, biconvex, compressed at base, tapering evenly above, green-, red- or yellow-brown, 3-5-nerved, margins glabrous, beak minute or 0.2 mm long.

## SIMILAR TAXA

*C. geminata* has frequently been confused with *C. lessoniana* Steud. This species often grows in similar habitats, but can be distinguished by the compact inflorescences, with wider, though smaller, usually erect spikelets, and by distinctly beaked utricles. A similar species *C. ternaria* Boott is occasionally cultivated on the New Zealand mainland, this species is very much larger (up to 3 m tall), dark green sedge with much larger spikes and glumes which are conspicuously awned.



Coromandel, March - an unnamed carex allied to *C. geminata* s.s. Photographer: John Smith-Dodsworth



Seeds of *Carex geminata*. Photographer: Wayne Bennett

## 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. geminata* 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.

**geminata**: Twinned

## WHERE TO BUY

Not commonly cultivated, and plants offered by this name by many nurseries are usually other quite unrelated species, including the Northern Hemisphere *C. pendula* and the New Zealand subantarctic endemic *C. ternaria*.

## NOTES ON TAXONOMY

This taxon includes two entities, one probably better regarded as an allied but distinct, possibly unnamed species which differs from true *C. geminata* by its much broader, often yellow-green leaves, longer narrower spikelets, preference for open sunny sites within coastal and lowland wetlands, and also by distinct differences within the nrDNA ITS sequence region.

## 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 geminata* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-geminata/> (Date website was queried)

## MORE INFORMATION

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

# Carex horizontalis

## COMMON NAME

Bastard Grass, Hook Sedge

## SYNONYMS

*Uncinia caespitosa* var. *minor* Kük.; *Uncinia horizontalis* Col.; *Uncinia rupestris* Raoul

## FAMILY

Cyperaceae

## AUTHORITY

*Carex horizontalis* (Colenso) K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCRUP

## 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 Chatham Islands.

## HABITAT

A mainly forest dwelling species. Mostly montane in the North Island (300-1000 m a.s.l.) but becoming more common in lowland areas in the southern South Island. Irrespective of altitude common throughout forested areas on the Chatham Islands.

## FEATURES

Plants loosely tufted or forming a dense turf. Culms 100.0–400.0 x c.0.5 mm, drooping or nodding, glabrous, usually slightly scabrid just below inflorescence; basal bracts light brown, not shining. Leaves widely spreading, 4–7 per culm, < mature culms, c.1.5–2.0 mm wide, bright green, soft, channelled, scabrid on margins and upper surface towards apex. Spikes 30–60 x 3–5 mm., occasionally bracteate, female flowers 5–33, lax towards base of spike with internodes to 6 mm long, more crowded above with internodes 0.5–1.0 mm long. Glumes ± = or us. < utricles, deciduous, ovate, acute or acuminate, hyaline with green midrib or very pale brown. Utricles 4.5–6.0 x 1.0–1.5 mm, ovate-lanceolate, trigonous, green to greenish brown, usually smooth except for a prominent lateral nerve but occasionally with a few less distinct nerves, somewhat spreading when ripe, slightly contracted below to a stipe c.1.0–1.5 mm long, tapering above to a beak of 1–2 mm long.

### **SIMILAR TAXA**

*Carex horizontalis* is closely allied to *Carex minor* (Kük.) K.A.Ford (a species many regard as part of *C. horizontalis*). In the field *C. horizontalis* can be distinguished from *Carex minor* by its densely leafy, tufted, rather than loosely tufted growth habit, leaves which are 1.5-2.0 mm rather than < 1 mm wide, and utricles which are 1.0-1.5 mm rather than c.1 mm diameter. *Carex minor* tends to flower earlier (September – October) than *C. horizontalis* (October – November).

### **FLOWERING**

October - December

### **FRUITING**

December - April (-July)

### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed and by division of established plants - though these may take a while to settle. Prefers a permanently damp, shaded site in a deep rich soil.

### **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.

### **MORE INFORMATION**

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

# Carex imbecilla

## COMMON NAME

Feeble Bastard Grass, Hook Sedge

## SYNONYMS

*Uncinia gracilentata* Hamlin

## FAMILY

Cyperaceae

## AUTHORITY

*Carex imbecilla* K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCGRA

## CHROMOSOME NUMBER

2n = 88

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

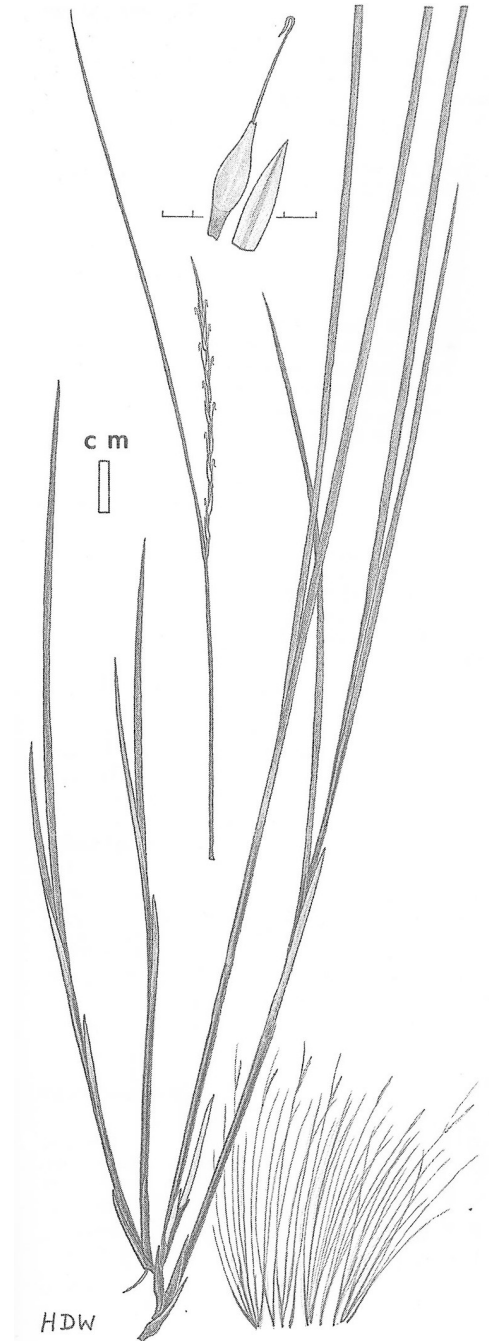
Endemic. New Zealand: North (from about Whangarei south) South (Marlborough Sounds, northern Marlborough, Nelson, Otago, South Canterbury, Westland, Fiordland) and Stewart Islands

## HABITAT

Mostly montane forest, cloud forest or in subalpine scrub, often on or near rotting logs. Descending to coastal areas in the southern part of its range.

## FEATURES

Loosely tufted, dark green or reddish-green plants. Culms 100.0-420.0 × c.0.5 mm, glabrous or rarely scabrid below inflorescence; basal sheaths dark brown, shining. Leaves 4-6 per culm, usually > culm, 1.0-2.0 mm, wide, dark green or reddish green, margins moderately scabrid. Spikes 50-70 × c.2 mm, usually bracteate, the bract leaf-like and far overtopping spike, or setose and shorter than spike, female flowers c.15-20, ± equidistant in lower part of spike with internodes to 6 mm long, c.2 mm apart above. Glumes < utricles, deciduous, acuminate, hyaline with green midrib. Utricles 4-5 × c.1mm, trigonous, elliptic-lanceolate or oblong, green, faintly nerved with the lateral nerves more prominent, scarcely spreading when ripe, stipe 1.0-1.5 mm long, beak c.1mm long.



Reproduced with permission from Stewart Island plants (1982). Photographer: Hugh D. Wilson



### SIMILAR TAXA

Distinguished from other species by the glossy (shining), dark brown, basal bracts and the short, (usually hidden amongst the leaves), lax-flowered spikes with  $\pm$  equidistant utricles. *Carex imbecilla* shares with *C. erebus* K.A.Ford and *C. aucklandica* (Hamlin) K.A.Ford dark brown basal bracts, from both these species it is distinguished by the spikes which are greater than 50 mm long. *Uncinia hookeri* is confined to the Subantarctic islands, and *C. aucklandica* the southern South Island, Stewart Island and Auckland and Campbell Islands. *Carex imbecilla* is potentially sympatric with only *C. aucklandica*, and only then in the very southern part of its range.

### FLOWERING

October - December

### FRUITING

November - April

### 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.

### ETYMOLOGY

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

**imbecilla:** Weak

### 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 imbecilla* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-imbecilla/> (Date website was queried)

### MORE INFORMATION

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

# Carex inopinata

## COMMON NAME

Grassy mat sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex inopinata Cook

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARINO

## CHROMOSOME NUMBER

2n = c.60

## CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: Sp

## PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Endangered | Qualifiers: DP, CD, Sp

2004 | Threatened – Nationally Endangered

## DISTRIBUTION

Endemic. Eastern South Island from the upper Awatere River to Deep Creek and Tapanui, Southland.

## HABITAT

Carex inopinata has been found in several different habitats, unified by their high fertility. These include riparian alluvial terraces under rohutu (*Lophomyrtus obcordata* (Raoul) Burret) forest, limestone and schist overhangs, and at a forest margin on a rubbly slope under shrubland. Occasional plants have been found at the base of limestone and schist rocks.

## FEATURES

Rhizomatous, widely creeping sedge forming diffuse mats. Rhizomes 0.5-0.8 mm diameter, bearing widely spaced, tufted, leafy culms up to 10 mm long; basal culm sheaths dull brown. Leaves grass-like, > culms up to 100 x 1 mm, dark green, channelled, margins distinctly scabrid toward apex. Inflorescence of 2-3 pedunculate spikes; terminal spike male, slender; 1-2 lower spikes female, 5-7-flowered; bracts subtending inflorescence, numerous, leaf-like. Glumes more or less equal to or just < utricles, ovate-lanceolate, papery membranous, often streaked with red, midrib extending into ascabrid awn. utricle 6-7 mm, biconvex, ovate-lanceolate, basally light brown, grading to dark red-brown towards apex, nerves distinct, these light brown; beak very narrow, 3 mm long, deeply bifid, crura spreading, margins and orifice scabrid. Stigmas 3. Nut 2 mm, trigonous with distinctive rounded angles, oblong, grey-brown to brown.



Photographer: Cathy Jones



Photographer: Shannel Courtney

## SIMILAR TAXA

Carex breviculmis and some species of hook sedge (Uncinia spp.) are similar. From these Carex inopinata can be recognised by the presence of fine teeth on the upper leaf margins only near the tip and by the few large, non-hook bearing, red-brown utricles. C. breviculmis leaves are also wider and finely toothed for their entire length, and its spikelets are evenly spaced up the stem, while the utricles smaller. Sterile specimens of hook sedge can be distinguished from C. inopinata by their leaves which are finely toothed for their entire length.

## FLOWERING

October to January

## FRUITING

November to February

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easy from rooted pieces and fresh seed. An unusual plant that makes an attractive ground cover for a semi-shaded site. This species does best in a well drained, moderately fertile soil. Although it rarely flowers and fruits, some clones in cultivation do so frequently. Carex inopinata is very drought tolerant.

## THREATS

The diminutive stature and open, diffuse mat-forming habit increase this species vulnerability to introduced weeds. This species is intolerant of much competition from other taller or faster growing plants which is possibly why it favours semi-shaded situations. Some populations are threatened through recreational activities such as rock climbing.

## ETYMOLOGY

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

## ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (31 August 2006): Description adapted from Moore and Edgar (1970) - see also de Lange et al. (2010).

## REFERENCES AND FURTHER READING

de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Canterbury University Press, Christchurch.  
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* 11: 285-309

## CITATION

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

## MORE INFORMATION

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

# Carex inversa

## COMMON NAME

Creeping lawn sedge

## SYNONYMS

*Carex smaragdina* Col.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex inversa* R.Br.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARINV

## CHROMOSOME NUMBER

2n = c.40-44

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

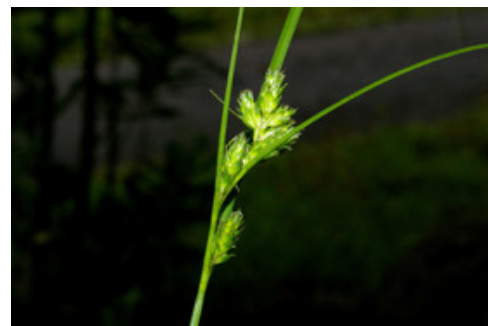
2004 | Not Threatened

## DISTRIBUTION

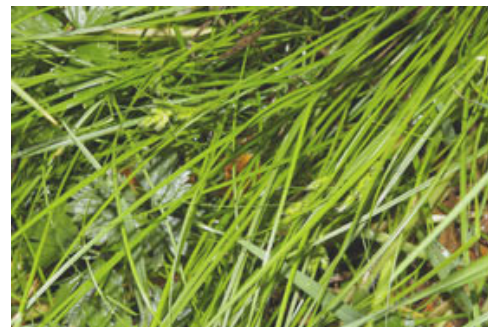
Indigenous. New Zealand: North and South Islands

## HABITAT

Coastal to montane - but mostly coastal to lowland. In scrub, open forest, and grassland. A common urban weed of lawns in northern New Zealand. This species has probably become more common as a result of human colonisation of the country.



*Carex inversa*. Photographer: John Smith-Dodsworth



*Carex inversa*. Photographer: John Smith-Dodsworth

## FEATURES

Rhizomatous, extensively creeping yellow-green to green sedge. Plants variable in size, usually flaccid, forming a matted sward. Rhizome long-creeping, to 2 mm diameter, covered by closely appressed brown scales or their fibrous remains; shoots ± distant, singly from the rhizome, c. 1 mm diameter at base including basal sheaths. Culms 20-450 × c. 0.5-1.0 mm, weak, smooth, green to yellow-green, obtusely trigonous; basal sheaths pale brown almost cream. Leaves < mature culms, 0.5-1.5 mm wide, channelled to flat, soft, grass-like, margins usually smooth or very minutely scabrid towards tip. Inflorescence a pale green or bright green ovate head, c.10 mm long, of 2-5 closely packed ± sessile spikes, or occasionally 1-2 spikes distant from the rest; bracts subtending inflorescence and lower spikes green and leafy, much longer than inflorescence. Spikes androgynous, 4-8 mm long, male flowers 1-3 at base of spikes, occasionally 0. Glumes < utricles, ovate, acuminate, white or pale brown, with a green, faintly scabrid keel. Utricles 3.0-3.5 × c.1.5 mm, plano-convex, ovoid, elliptical, distinctly nerved on convex face, light greenish brown; narrowed to a scabrid beak c.1 mm long; stipe slightly > 0.5 mm long, pale cream. Stigmas 2. Nut c.1.5 mm. long, plano-convex, broadly oblong, shortly stipitate, light to dark brown.

## SIMILAR TAXA

Perhaps most similar to *Carex colensoi* Boott, from which it is distinguished by the shortly creeping, usually flaccid, trailing habit, and yellow-green to green rather than long trailing, light-green (almost glaucous) culms topped by 2-5 (rarely 1-2) pale green to light yellow-brown spikes rather than relatively large inflorescences composed of 1-4 clustered brown spikes. The utricles of *C. inversa* are prominently beaked and nerved; those of *C. colensoi* are scarcely beaked utricles and with indistinct nerves

## FLOWERING

Throughout the year

## FRUITING

Throughout the year

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easily (too easily) grown from fresh seed and rooted pieces. An aggressive plant in most situations which readily spreads from seed and by detachment of the rhizome. This species is unlikely to be deliberately cultivated though it can be a useful ground cover in dry, open situations. *Carex inversa* is often spread by lawn mowers, and once established can prove difficult to control.

## ETYMOLOGY

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

## 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 inversa* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-inversa/> (Date website was queried)

## MORE INFORMATION

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



# Carex iynx

## COMMON NAME

Australian sedge

## FAMILY

Cyperaceae

## FLORA CATEGORY

Vascular – Exotic

## STRUCTURAL CLASS

Sedges

## CONSERVATION STATUS

Not assessed

## YEAR NATURALISED

1961

## ORIGIN

Australia; Tasmania, Victoria

## ETYMOLOGY

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

## MORE INFORMATION

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



Whitireia Park, Titahi Bay. Dec 2010.  
Photographer: Jeremy Rolfe



Specimen from Whitireia Park, Titahi Bay. Dec 2010. Photographer: Jeremy Rolfe

# Carex leporina

## COMMON NAME

Oval sedge

## SYNONYMS

*Carex ovalis* Gooden.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex leporina* L.

## FLORA CATEGORY

Vascular – Exotic

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARLEP

## CONSERVATION STATUS

Not assessed

## BRIEF DESCRIPTION

Dense pale green grass-like tufts or mat-like swards up to 1 m tall, with slightly taller flower stem bearing brown oval heads near the tip.

## DISTRIBUTION

Locally common throughout New Zealand.

## HABITAT

Wide variety of wet habitats from lowland to subalpine, especially disturbed habitats, but also a problem weed in short turf wetland where it can completely displace indigenous vegetation.

## FEATURES

Dense tufts; rhizome short. Stems 20-60-(120) cm high, 3-angled, scabrid just below inflorescence. Leaves 1.5-3.5 mm wide, usually < stems, ± flat, ± soft, bright green, sheaths light brown. Inflorescence a compact ovoid head 2.5-4- (6) cm long, of 3-5- (11) approximate, sessile, light green to light brown spikes; bracts glume-like and inconspicuous or > inflorescence and ± setaceous. Spikes androgynous, male flowers at base. Glumes = or slightly < utricles, light brown with paler green to brown midrib, acute. Utricles 4-4.5 × ± 2 mm, ovoid, plano-convex, distinctly nerved, with winged margins almost covered by glumes, scabrid towards the tapered beak of ± 1 mm long. Stigmas 2. Nut plano-convex, ± oblong.

## SIMILAR TAXA

Two other *Carex* spp. have oval spikes (*C. scoparia* and *C. longii*). Both these species have glumes shorter than the utricle, so *C. leporina* spikes appear less compact (see comparison with *C. scoparia* in photo).

## FLOWERING

Late spring to early summer

## FLOWER COLOURS

Brown, Green

## FRUITING

Summer to autumn

## LIFE CYCLE

Seed dispersed by contaminated machinery or waterfowl.



Tararua Forest Park. Photographer: Jeremy Rolfe



Tararua Forest Park. Photographer: Jeremy Rolfe

## YEAR NATURALISED

1879

## ORIGIN

Europe, Asia, North Africa

## REASON FOR INTRODUCTION

Unknown, seed or soil contaminant.

## CONTROL TECHNIQUES

Can be controlled manually, mechanically or herbicidally depending on situation.

## ETYMOLOGY

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

## ATTRIBUTION

Prepared by Paul Champion and Deborah Hofstra (NIWA). Features description from Healy and Edgar (1980).

## REFERENCES AND FURTHER READING

Healy, A.J.; Edgar, E. (1980). Flora of New Zealand, Volume III. Adventive Cyperaceous, Petalous and Spathaceous Monocotyledons. Government Printer, Wellington. 220pp.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

Champion et al (2012). Freshwater Pests of New Zealand. NIWA publication.

<http://www.niwa.co.nz/freshwater-and-estuaries/management-tools/identification-guides-and-fact-sheets/freshwater-pest-species>

## MORE INFORMATION

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

# Carex lessoniana

## COMMON NAME

Rautahi, Cutty Grass

## SYNONYMS

*Carex polystachya* A.Rich.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex lessoniana* Steud.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARLES

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North and South Islands. Widespread in the North Island. In the South Island more common in the northern half, sporadic further south.

## HABITAT

Coastal to lowland (rarely montane). Usually on the margins of peat swamps, or in very wet alluvial forest.

## FEATURES

Rhizomatous; robust, 0.5-1.5 m tall, bright green to dark green. Culms 1.5-5.0 mm diameter, triquetrous, scabrid on the edges; basal sheaths dull brown or red-brown, margins shredding into fibres wrapped round the culm. Leaves numerous usually much > culms, 3.5-8.0 mm wide, double-folded, margins scabrid. Spikes 6-20, pendulous on filiform peduncles, or upper spikes erect, sessile; upper 3-6 spikes male, sometimes mixed with female flowers, solitary or the lower geminate, 2-4 mm diameter, glumes hardly awned; remaining spikes female, usually with male flowers at the top, geminate, ternate or occasionally quinate, lowermost spikes 20-90 × 4-7 mm, upper spikes progressively smaller. Glumes (excluding awn) < utricles, narrow-ovate, obtuse, truncate or emarginate with a hispid awn of variable length, red-brown with a light brown, 3-nerved midrib, margins narrow, hyaline. Utricles 2.6-3.8 × 1.3-2.3 mm, ovoid to oblong, saccate, inflated or unequally compressed, 6-10-nerved on each face, olive green, becoming greenish brown or red-brown, soft, margins glabrous; beak very narrow, c.0.2 mm long, orifice entire, rarely slightly bidentate. Stigmas 2. Nut c.1.5 mm long, in lower half of utricles, biconvex, orbicular-ovoid or obovoid, brown



*Carex lessoniana*, Howarth wetland, Te Aroha.  
Photographer: John Smith-Dodsworth



*Carex lessoniana*, Howarth wetland, Te Aroha.  
Photographer: John Smith-Dodsworth

## SIMILAR TAXA

*Carex lessoniana* is allied to *C. coriacea* Hamlin, *C. ternaria* Boott, and *C. germinata* Schkuhr. From all these species it can be distinguished by the compact inflorescences, with wider, though smaller, initially erect spikelets (the basal few are always pendulous), and by distinctly beaked utricles. However, in some specimens the beak can be minute. *Carex ternaria* is unlikely to be confused because it is confined to the Chatham and Subantarctic islands outside the range of *C. lessoniana*, while ecologically *C. lessoniana* and *C. geminata* often overlap, *C. lessoniana* is more common in wetter and/or more acidic habitats – such as peat bogs. Only rarely do the ranges of *C. lessoniana* and *C. coriacea* overlap, and then only in the south-eastern limits of its range.

## FLOWERING

October - December

## FRUITING

December - April

## 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. lessoniana* will grow well in most soils and moisture regimes. Does best in partial shade.

## ETYMOLOGY

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

**lessoniana:** Named after René Primevère Lesson who was a 19th century French botanist and surgeon

## 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 lessoniana* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-lessoniana/> (Date website was queried)

## MORE INFORMATION

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



# Carex litorosa

## COMMON NAME

Sea Sedge

## SYNONYMS

*Carex littoralis* Petrie, *Carex australis* Kirk

## FAMILY

Cyperaceae

## AUTHORITY

*Carex litorosa* L.H.Bailey

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARLIT

## CHROMOSOME NUMBER

2n = 48

## CURRENT CONSERVATION STATUS

2012 | At Risk – Declining | Qualifiers: RR

## PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Declining

2004 | Serious Decline

## DISTRIBUTION

Endemic to North, South and Stewart Islands.

## HABITAT

Coastal in salty, brackish marshes and on sandy, tidal river banks.

## FEATURES

An upright sedge to 800 mm tall (but usually smaller), that forms pale green or reddish, dense tussocks with curly tops. Leaves are flat on one side, curved on the other and slightly serrated along the edge, 1.5 mm wide and about the same length as the flower stem. Flower stems are cylindrical and upright, with light brown spikes.

## SIMILAR TAXA

*Carex divisa*, which also grows in saltmarshes but has blue-grey leaves, and smaller, compact black spikes borne on long stems near the apex of the leaves of each tussock.

## FLOWERING

October to December

## FRUITING

December to April (but seedheads long persistent)



Awarua Bay, Southland. Photographer: Jesse Bythell



Carex litorosa. Photographer: Cathy Jones



## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easy from fresh seed and by the division of whole plants. Very easy to grow in a range of substrates.

## THREATS

Habitat loss through coastal development. Encroachment by weeds is a serious problem in the North Island, especially from species such as spartina, tall fescue and Carex divisa.

## ETYMOLOGY

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

**litorosa**: From the Latin littus 'shore', meaning shore-loving or growing on the shore

## ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 2 September 2003.

## REFERENCES AND FURTHER READING

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 litorosa Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-litorosa/> (Date website was queried)

## MORE INFORMATION

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

# Carex maorica

## COMMON NAME

Maori Sedge

## SYNONYMS

*Carex fascicularis* Boott var. *minor* Boott; *Carex forsteri* Wahl. var. *minor* (Boott) Hook.f.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex maorica* Hamlin

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARMAO

## CHROMOSOME NUMBER

$2n = c.72-76$

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North and South Islands. In the North Island uncommon in the east from East Cape to the Wairarapa otherwise widespread. In the South Island apparently absent from Southland and Fiordland

## HABITAT

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



Taken in Coromandel, January. Photographer: John Smith-Dodsworth



Atiwhakatu Valley, Wairarapa. Feb 2008. Photographer: Jeremy Rolfe

## FEATURES

Light green to yellow-green tufted sedge. Culms 150.0-700.0 × 1.0-2.5 mm., trigonous, smooth or faintly scabrid below inflorescence; basal sheaths light to dark grey, often red-tinged. Leaves > culms, to 1 m long, 2-7 mm wide, double-folded, cross-veinlets ± prominent, keel and margins minutely scabrid. Inflorescence of 2-5 close-set, sessile, usually erect, occasionally spreading spikes, or the lowest 1-2 rather distant and shortly pedunculate; terminal spike male; remaining spikes female, usually > and overtopping male spike, 20-60 × 7-12 mm, crowded at same level round base of male spike. Glumes usually much < utricles, 1-2 mm long, narrowly ovate-lanceolate, margin of upper part fimbriate or lacerate, hyaline with a green midrib produced to a scabrid awn 1-3 mm long, up to 6 mm long in lowermost glumes. Utricles 4.0-5.5(-6.0) × 1.0-1.5 mm., plano-convex or biconvex, turgid, ovate or lanceolate, spreading when ripe, shining light green to light brown with numerous distinct white nerves, very slightly tapered above to a beak 1.5-2.0 mm long, with bifid, glabrous orifice, crura c. 1/3 length of entire beak; stipe narrow, c.0.5 mm long. Stigmas 3. Nut c. 1.5 mm. long, triquetrous, ellipsoid, cream or light brown

## SIMILAR TAXA

*Carex maorica* is easily recognised by its slender culms; pale green to yellow green wide leaves; prominent cross-veinlets on sheaths and leaves; and mostly clustered spikelets, and short glumes with lacerate or fimbriate margins; and by the submembranous, strongly nerved, glabrous, spreading utricles. There are only two other carices in New Zealand with cross-veinlets, the indigenous *C. fascicularis* Boott and naturalised *C. lurida* Wahlenberg. *Carex fascicularis* differs from *C. maorica* by the female spikes mostly distant to ± approximate (but then never clustered at one level round base of male spike). *Carex lurida* is a much larger sedge than either species (up to 2.5 m tall) and has utricles 6-9 × 2-4 rather than 4.0-6.0 × 1.0-1.5 mm

## FLOWERING

October - December

## 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. maorica* 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.

## ATTRIBUTION

Fact sheet prepared by P.J. de Lange (12 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 maorica* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-maorica/> (Date website was queried)

## MORE INFORMATION

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

# Carex megalepis

## COMMON NAME

Bastard grass, Cavers beard

## SYNONYMS

*Uncinia ferruginea* Boott; *Uncinia nigra* Col.; *Uncinia variegata* Col.;  
*Uncinia australis* Pers. var. *ferruginea* (Boott) C.B.Clarke; *Uncinia uncinata*  
(Linn.f.) Kük. var. *ferruginea* (Boott) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex megalepis* K.A.Ford

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCFER

## 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 northern Waikato south.

## HABITAT

Coastal to montane forest, especially in the west. Often abundant in forest overlying calcareous rocks.

## FEATURES

Robust, yellow-green to dark green caespitose plants. Culms 100–600 × c.1 mm, glabrous; basal bracts dull brown to reddish brown. Leaves 4–8 per culm, = or > culms, 3–5 mm wide, scabrid on the margins. Spikes 70–160 × 6–10 mm, usually bracteate, female flowers c.60–100, very closely crowded throughout the whole spike, internodes 0.5–4.0 mm long. Glumes twice as long as utricles, deciduous, linear-subulate, acute or obtuse, coriaceous, dark golden yellow or rust-coloured. Utricles 4.0–5.0 × c.1.5 mm., plano-convex or rarely subtrigonal, dark brown, shining, nerved towards the base with a more strongly marked lateral nerve, sharply contracted below to a stipe 1 mm long and above to a stout beak 1.5–2.0 mm long.



Tararua Forest Park. Feb 2008. Photographer: Jeremy Rolfe



Mangatainoka River, Tararua Range. Jan 2008. Photographer: Jeremy Rolfe

### **SIMILAR TAXA**

Most similar to *Carex corynoidea* and *C. uncinata*, species with which it sometimes grows. Of both species it is most closely allied to *C. corynoidea* from which it differs by the conspicuous dark golden yellow or rust-coloured rather than yellowish to dark brown glumes which are twice as long as the utricles (rather than equal or slightly greater in length), and by the scarcely spreading rather than widely spreading utricles. *Carex uncinata* differs by the usually narrower spikes, early deciduous rather than long-persistent deciduous glumes, which are usually much shorter than the utricles, and mostly < 1.0 mm diameter (cf. 1.5 mm or greater)

### **FLOWERING**

October - December

### **FRUITING**

November - May

### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed and by the division of established plants (though these may then take a while to settle). Does best in a permanently damp, semi-shaded site. Benefits from regular applications of lime. Should be planted where the seed heads are well out of the way of human and animal traffic!

### **ETYMOLOGY**

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

### **WHERE TO BUY**

Not Commercially Available.

### **CULTURAL USE/IMPORTANCE**

This species is known as Cavers Beard in the western Waikato because of its tendency to grow around cave entrances. In these sites the hooked utricles frequently become ensnared in cavers entering or exiting caves eliciting much comment from the ensnared caver.

### **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 megalepis* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-megalepis/> (Date website was queried)

### **MORE INFORMATION**

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



# Carex petriei

## COMMON NAME

Petrie's Sedge

## SYNONYMS

None

## FAMILY

Cyperaceae

## AUTHORITY

Carex petriei Cheeseman

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARPTR

## CHROMOSOME NUMBER

2n = 60-62

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## BRIEF DESCRIPTION

Densely tufted, erect to loosely spreading small red to dark wine-red tussocks; leaves cirrhose at tips. Spikes 3-6, very dark red-brown; styles 3; utricles very dark red to almost black though paler towards the apex and base.

## DISTRIBUTION

Endemic. North, South and Stewart Islands. In the North Island scarce, known only from the Moawhango area (where it may now be extinct). In the South Island throughout except – apparently – Westland. Scarce on Stewart Island.

## HABITAT

A species of montane to subalpine river flats, stream sides, and lake, pond and tarn margins. It may also be found in seepages within tussock grassland.



Clarence River valley below Lake Tennyson.  
Photographer: Pat Enright



Clarence River valley below Lake Tennyson.  
Photographer: Pat Enright



## FEATURES

Densely tufted, erect to loosely spreading small red to dark wine-red tussocks. Culms 60-350 x 0.5-1 mm, glabrous, terete or flattened; basal sheaths light brown, occasionally red to reddish brown. Leaves usually slightly > culms, 0.5-2 mm wide, pink or greenish red, lamina narrow-linear, concavo-convex, grooved on the back, showing 2 conspicuous nerves on the upper surface, margins scabrid, apex acute, curled and twisted when dry; sheaths very wide, about 3 times width of lamina. Spikes 3-6, very dark red-brown, more or less approximate, though usually with the lowest more distant on stiff, erect peduncles; terminal spike male; remaining spikes female, usually with a few male flowers above, 1-30 x 3-6 mm. Glumes < or sometimes > utricles, rather pale brown, chartaceous-membranous becoming chaffy, margins lacerate, apex acute or with the midrib prolonged into a long scabrid awn. Utricles 2.5 x 1.5 mm, plano-convex, turgid, very dark red to almost black though paler towards the apex and base, sometimes light brown throughout, smooth or faintly nerved; beak slightly > 0.5 mm long, usually cream. Stigmas 3. Nut 1.5 mm long, dull brown, trigonous, oblong-obovoid.

## SIMILAR TAXA

A distinctive species well marked by the leaves broad sheathing base and their fine, curled and twisted apices, pale coloured glumes, and dark purplish-brown to almost black, narrow-ovoid or elliptic turgid utricles. In specimens with dark coloured utricles the bright red lateral nerves are particularly distinct. *Carex petriei* is not obviously closely allied to any of the other New Zealand species but is perhaps most similar to *C. traversii* Kirk and *C. druceana* Hamlin, species from which it is easily distinguished by the very broad bases of the leaf sheaths, and by the lowest most female spikes borne on stiffly erect peduncles.

## FLOWERING

October - January

## FLOWER COLOURS

Green

## FRUITING

October - May

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easily grown by division of whole plants and from fresh seed. A very attractive dark red sedge ideal for a sunny damp situation in most soil types. Has proved remarkably adaptable and drought tolerant though it dislikes excessive humidity.

## ETYMOLOGY

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

**petriei:** Named after Donald Petrei (1846 -1925), Otago botanist

## 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-petriei/>

# Carex potens

## COMMON NAME

Bastard grass, hook sedge

## SYNONYMS

*Uncinia affinis* (C.B.Clarke) Hamlin; *Uncinia riparia* R.Br. var. *affinis* Col. ex C.B.Clarke; *Uncinia purpurata* Petrie var. *subcaespitosa* Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex potens* K.A.Ford,

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

UNCAFF

## 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 (Mt Egmont, Central Volcanic Plateau, Ruahine and Tararua Ranges), South Island.

## HABITAT

Mostly montane to alpine, rarely coastal in southern part of its range. In forests, subalpine scrub and frost flats

## FEATURES

Stoutly erect, densely caespitose, yellow-green to dark green plants. Culms 100.0-800.0 × 0.5-1.0 mm diameter, sharply trigonous, scabrid below inflorescence, often drooping; basal sheaths dull dark brown. Leaves 3-4 per culm, = or slightly < culms, 1.5-2.0 mm wide, yellow-green to dark green, margins harshly scabrid, slightly involute when dry. Spikes 50-140 mm long, female flowers c.15-20, lax, internodes 11 mm long at base of spike, 3-6 mm long above. Glumes ± = or rarely much < utricles, persistent, obtuse or lowermost subacute, coriaceous, pale brown. Utricles 6-7 × c.1 mm., plano-convex, lanceolate or oblong-lanceolate, grey-brown, nerved, slightly contracted or cuneate at the base forming a stipe 1.5-2.0 mm long, beak 2 mm long

### **SIMILAR TAXA**

Distinguished from the other New Zealand species by the lax inflorescences, and utricles which are c.1 mm diameter. It is most likely to be confused with *Carex erythrovaginata* K.A.Ford from which it differs by the leaf-sheaths, leaves and glumes which lack red colouration. *Carex potens* is very closely allied to the Australian *Carex umbricola* K.L.Wilson.

### **FLOWERING**

October - November

### **FRUITING**

November - January

### **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.

### **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-potens/>

# Carex pumila

## COMMON NAME

Sand sedge

## SYNONYMS

*Carex littorea* Labill.; *Carex pumila* Thunb. subsp. *littorea* (Labill.) Kük.

## FAMILY

Cyperaceae

## AUTHORITY

*Carex pumila* Thunb.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Sedges

## NVS CODE

CARPUM

## CHROMOSOME NUMBER

2n = 82

## CURRENT CONSERVATION STATUS

2012 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand: North, South and Chatham Islands. Uncommon in parts of the South Island. Also recorded from Australia, Lord Howe Island, Chile, China, Japan and Korea.

## HABITAT

Mostly coastal, rarely extending inland. A species of mobile sand dunes, sand flats and dune slacks (swales). Sometimes found fringing the sandy margins of coastal rivers and lagoons. Occasionally found as an urban lawn weed, especially in coastal settlements.



Waikawau bay, November. Photographer: John Smith-Dodsworth



At Wainuiomata River mouth. Dec 2006. Photographer: Jeremy Rolfe

## FEATURES

Deep blue-green to glaucous, tufted sedge; tufts coarse, arising from a long, wiry creeping rhizome of c.2 mm diameter Culms mostly buried in sand, 50–300 mm long, terete, smooth, cream or light green, almost entirely enclosed by light brown or cream, occasionally red-brown leaf-sheaths. Leaves > culms, up to 400 mm long, 1.5–0 mm. wide, channelled, rigid, glaucous, curved and tapering to a fine point, margins mostly smooth. Spikes 3–8, ± approximate; terminal spike male, often long-pedunculate, very slender, often with 1–3 very small, occasionally partly female, spikes at the base; remaining spikes female, often male at the top, 10–35 x c.10 mm. Glumes c.½ length of utricles, rarely only slightly < utricles, ovate, acute, red-brown, with broad colourless hyaline margins, midrib very pale brown, thickened, usually produced to a short awn. Utricles 6.0–7.5 x 2.0–3.5 mm, biconvex to subtrigonus, ovoid, light brown, thick, corky, turgid, smooth or faintly nerved, narrowed to a bifid beak, 1.5–2.0 mm long, orifice membranous, crura faintly scabrid at tip. Stigmas 3. Nut 2.5–4.0 x 1.5–2.5 mm., trigonus, obovoid, light brown, shortly mucronate.

## SIMILAR TAXA

None. The long, creeping, wiry rhizome, channeled, smooth-edged glaucous leaves and distinctly corky utricles are especially diagnostic.

## FLOWERING

October - December

## FRUITING

December - June

## LIFE CYCLE

Spongy utricles dispersed by water and wind (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

Easily grown from fresh seed and by division of established plants. Will grow in most soils and conditions but does best in a freely draining medium in full sun. Some wild populations rarely set seed, and some selection of wild forms is merited. An excellent and highly under-rated sand binder.

## ETYMOLOGY

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

**pumila**: Small

## 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 pumila* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carex-pumila/> (Date website was queried)

## MORE INFORMATION

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

# 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/>