

ART. XL.—Additional Notes on the Genus *Carex*.

By T. F. CHEESEMAN, F.L.S., F.Z.S.

[Read before the Auckland Institute, 2nd November, 1891.]

***Carex resectans*, n. sp.***C. inversa*, Br., var. *radicata*, Cheeseman, Trans. N.Z. Inst, xvi., 425.

Forming broad grassy patches often many feet in diameter. Rootstock creeping, stoloniferous. Culms short or almost wanting, rarely more than 2in. high. Leaves numerous, wiry, involute, filiform, 1in.—5in. long, overtopping the culms. Spikelets usually three, but often reduced to a single one, crowded together, pale-green. Bracts long, leafy, sheaths deeply grooved. Glumes ovate or ovate-lanceolate, margins thin, keel stout, 3-nerved. Male flowers at the base of the spikelet, few in number and sometimes altogether absent. Perigynia ovate below, narrowed into a long tapering serrate beak, very prominently nerved. Stigmas, 2.

*Hab.* Lakes Tekapo and Pukaki, Canterbury, alt. 2,500ft., T. F. C. Interior of Otago, D. Petrie!

I originally placed this curious little plant as a variety of *C. inversa*, but further study has convinced me of its distinctness. Its chief characters lie in its peculiar habit, wiry filiform leaves, short culms, and in the long-beaked perigynia, which are very sharply toothed above. It forms a short compact turf, and may easily be taken for some creeping rooted grass.

***Carex leporina*, L.**

To the localities mentioned in my previous paper (Trans. N.Z. Inst., vol. xvi.) should be added the Mount Arthur plateau, Nelson, where it is not uncommon from 3,000ft. to 4,500ft. elevation. Specimens from thence are shorter and stouter and have much browner spikelets than those collected in the lowland districts of Nelson, but I can see no other difference.

***Carex trachycarpa*, n. sp.***C. muricata*, Cheeseman, Trans. N.Z. Inst., xvi., 411; non Linn.

Stems tufted, 6in.—18in. high, rather slender, grassy, smooth or slightly scabrid. Leaves longer or shorter than the culms, nearly smooth, flat, grassy, striate,  $\frac{1}{2}$ in.— $\frac{3}{4}$ in. broad. Spikelets 4–10, androgynous, pale chestnut-brown, compacted into a spike-like head  $\frac{1}{2}$ in.—1 $\frac{1}{2}$ in. long. Bracts ovate and membranous at the base, produced into setaceous points usually longer

than the spikelets. Male flowers at the top of the spikelets, usually few in number. Glumes ovate, acuminate or awned, pale-chestnut or pale-brown, with pale-green midribs and hyaline margins. Perigynia smaller than the glumes, not spreading when ripe, plano-convex, ovate in outline, somewhat acute at the base, gradually narrowed into a short bidentate beak, rough with minute projections on both surfaces, strongly ribbed, especially on the convex side. Stigmas 2.

*Hab.* Nelson Province: Mount Owen, alt. 4,000ft.; Mount Arthur and Mount Peel, alt. 3,500ft. to 4,500ft.

In an immature condition this so closely resembles some states of the northern *C. muricata* that I referred my first specimens to that species. During a recent visit to the Mount Arthur plateau, however, I obtained mature fruiting specimens which prove beyond doubt that it is a distinct species, utterly unlike *C. muricata* in the much smaller differently-shaped perigynia, which do not spread when ripe, and are rough all over with minute projections. This last character is a very peculiar one, and I do not know any species with androgynous spikelets which has the perigynia roughened in a similar manner, except a plant which I have also collected on the Mount Arthur plateau, and which exhibits it in a smaller degree. I refrain from describing this because there is a possibility that it may be a large form of *C. kirkii*, Petrie (Trans. N.Z. Inst., xvii., 297). Mr. Petrie does not, however, describe the perigynia as being rough, and the few specimens which I possess are too immature to settle the question.

In addition to the above peculiarities, the perigynia of *C. trachycarpa* can be readily distinguished from those of *C. muricata* by being shorter, broader, and flatter, with a much shorter beak, and by the strongly-marked ribs.

#### **Carex wakatipu, Petrie.**

This is not uncommon on the slopes of Mount Arthur and Mount Peel, ascending to over 5,000ft. I have also a specimen collected by Mr. Tryon on Mount Burnett, near Collingwood. This locality is the most northern yet recorded for the species.

#### **Carex decurtata.**

*C. cryptocarpa*, Cheeseman, Trans. N.Z. Inst., xvi., 412 (1883). Non *C. cryptocarpa*, E. Meyer (1831).

When describing my *C. cryptocarpa* I accidentally overlooked the fact that the name had been previously applied to a species common in northern Europe and in some parts of North America. As a new name is therefore required I propose that of *C. decurtata*. It has been recently collected by Mr. Petrie in several localities in the interior of Otago, and is

probably not at all rare in the middle and southern portions of the South Island. Some of Mr. Petrie's specimens differ from mine in having reddish or reddish-brown culms and leaves; but this feature is common in many of our species, and is so variable and inconstant that it cannot be used even as a varietal distinction.

***Carex uncifolia*, Cheeseman.**

Add to the localities Mount Pisa, Otago, from whence I have specimens collected by Mr. Petrie. I have also gathered it on Mount Peel, in the Nelson Provincial District. Attains a somewhat larger size than that given in my description.

***Carex petriei*, Cheeseman.**

This species also extends northwards into the Nelson Provincial District, and is of comparatively common occurrence on the Mount Arthur plateau. I find that the glumes are not always so pale in colour as I supposed, and in exposed localities are quite a full chestnut.

***Carex comans*, Berggren.**

*C. cheesemanii*, Petrie, Trans. N.Z. Inst., xv., 358.

In my "Revision" I hinted that Mr. Petrie's *C. cheesemanii* would probably prove to be a variety of *C. comans*, and further investigation has fully convinced me that that is the case. What I take to be the true plant of Dr. Berggren occurs in several localities near New Plymouth, and only differs from Mr. Petrie's specimens in the pale-green colour, shorter culms, shorter stalks to the spikelets, and rather narrower perigynia; and I have many specimens from Nelson and Canterbury quite intermediate in character. The plant from Lake Tekapo, mentioned in my "Revision," is much stouter, with shorter culms and strict erect leaves, and has much broader perigynia. It has a very distinct appearance, and may be entitled to specific rank, but for the present I prefer to place it under *C. comans* as var. *stricta*. I have a form of *C. testacea* which approaches it in habit, but the shape of the perigynia and number of styles at once separate the two plants.

***Carex litorosa*, Bailey, "Memoirs of the Torrey Botanical Club," vol. i., p. 72.**

*C. littoralis*, Petrie, Trans. N.Z. Inst., xv., 358 (1882).  
Non *C. littoralis*, Schweinitz (1825).

Several years ago Mr. Arthur Bennett, a well-known student of the genus *Carex*, pointed out to me that Mr. Petrie's name of *C. littoralis* had been preoccupied as far back as 1825 for a North American species published by Schweinitz. I retained the name in my "Revision" because

it seemed to be doubtful whether Schweinitz's species was a good one. Since then Mr. L. J. Bailey, who is engaged in a critical examination of the North American *Carices*, has satisfied himself that *C. littoralis*, Schweinitz, is the oldest name for the plant known of late years as *C. barrattii*, and must stand. He therefore suggests the name of *C. litorosa* for the New Zealand species.

In my previous paper I neglected to mention that it occurs in immense profusion in the large brackish-water marshes fringing Kaipara Harbour.

**Carex flava, L.**

Add to the localities the Mount Arthur plateau, Nelson, where it is not uncommon, and which is the most northern locality yet recorded in New Zealand.

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ART. XLI.—*Note on the Cleistogamic Flowers of Melicope simplex.*

By GEO. M. THOMSON, F.L.S.

[Read before the Otago Institute, 10th November, 1891.]

*Melicope simplex* is a common shrub in Otago, and in the east coast districts produces its small greenish-white flowers in October and November, but in the interior a month or so later. These average about  $\frac{3}{8}$  in. in diameter, and are fragrant. I have not, however, detected any nectar in them, nor do I know how they are fertilised. In a paper on "Fertilisation of Flowering-plants" (Trans. N.Z. Inst., vol. xiii., p. 257) I suggested that these flowers were probably fertilised by "the numerous small Diptera which so commonly frequent the edge of the bush," but I have never been able to verify this surmise. Though sometimes quite hermaphrodite, it is frequently the case that they are so in structure only, being unisexual in function; while others again are strictly dicecious, the male form having no pistil, and the female flowers having stamens with more or less imperfect anthers, and little or no pollen. This feature is remarkably common among New Zealand flowering-plants, and in several species it is possible to find transition stages between perfectly-hermaphrodite and perfectly-dicecious plants. But truly cleistogamic flowers, self-fertilised and remaining quite closed until the fruit is considerably developed, have hitherto been recorded from very few species.