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TAXONOMIC NOTES ON *CAREX* (CYPERACEAE) OF
AUSTRAL SOUTH AMERICA

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ABSTRACT

The name *Carex poeppigii* (sect. *Echinochlaenae*) is validated and a new combination in South American *Carex*, *C. vixdentata* (sect. *Spirostachyae*), is made here. Also, the taxonomic status of *C. aueri* is discussed, and this name is placed in the synonymy of *C. reichei* (sect. *Arenariae*).

Key words: *Carex*, Cyperaceae, South America, taxonomy.

INTRODUCTION

Carex L. (Cyperaceae) is well represented in the southern half of South America (i.e., Argentina, Chile, Paraguay, Uruguay, and southern Brazil), with about 95 species and some 30-40 infraspecific taxa. In this paper, I validate a name, make a new combination, and discuss the taxonomic status of *C. reichei* Kük. and *C. aueri* Kalela. I have also designated lectotypes for those names created by Georg Kükenthal, whose types were at Berlin (B) and are no longer extant.

TAXONOMY

Validation of the Name Carex poeppigii

***Carex poeppigii* C. B. Clarke ex Wheeler, nom. nov.**

≡ *Carex lamprocarpa* Philippi var. *rotundata* Kük., in Bot. Jahrb. Syst. 27:541. 1899 (basonym).—
TYPE: CHILE. [Prov. Bío Bío:] Antuco, s. d., *Poeppig 247* (LECTOTYPE [here designated]: BM!; isolec-
totype: P [n.v.]); non *Carex rotundata* Wahlenb.

According to Kükenthal (1909:693 and 702), *Poeppig 247* at B (destroyed), which was the specimen on which Kunth (1837:504) based his description of *Carex multispicata* Kunze ex Kunth [= *C. acutata* Boott var. *multispicata* (Kunze ex Kunth) Kük.], is different from *Poeppig 247* at BM and P. Charles B. Clarke noted on an annotation label (attached to *Poeppig 247* at the British Museum and dated 18 Jul. 1898) that the BM specimen "is altogether different" from Kunth's *C. multispicata*. He wrote "*Carex Poeppigii*, C. B. Clarke ms" on the specimen, which I have examined. It is abundantly clear that *Poeppig 247* at BM (and presumably at P) was erroneously distributed as *C. multispicata*. Indeed, *Poeppig 247* at BM belongs in sect. *Echinochlaenae*, whereas *C. multispicata* belongs in sect. *Pseudocypereae*. It is noteworthy that Kükenthal (1899:541) mentioned the name "*C. Poeppigii* C. B. Clarke" under *C. lamprocarpa* var. *rotundata*, but it was merely cited as a synonym and, therefore, was not validly published in accordance with Article 34 of the I.C.B.N. (Voss et al. 1983). The epithet *rotundata* is not available for use at species rank because of the earlier *Carex rotundata* Wahlenb. Thus, I have validated Clarke's name for the species in question by providing the needed Latin diagnosis and designation of type.

Carex poeppigii was treated by Kükenthal (1899:541, 1909:693) as *C. lamprocarpa* var. *rotundata*, but differences in morphology between the two taxa strongly suggest that they are distinct species. *Carex poeppigii* differs from *C. lamprocarpa* by the following characters: lateral spikes 4–5 mm wide, the upper ones subsessile or on very short peduncles; perigynia greenish brown, dull, reddish dots conspicuous proximally, veins prominent distally, but faint or obscure proximally; and pistillate scales (majority of them) about one-half the length of the perigynia, with the apex usually ciliolate. By contrast, in *C. lamprocarpa* the same features are: lateral spikes 5.5–6.5 mm wide, the upper ones on peduncles to 1 cm long; perigynia brown, shiny, reddish dots inconspicuous, 2 veins prominent and the rest weak, all extending the entire length of the perigynium; and pistillate scales (majority of them) two-thirds to three-fourths the length of the perigynia, with the apex entire.

Three members of sect. *Echinochlaenae* (subg. *Carex*) occur in Chile (Fig. 1), two of which, *Carex poeppigii* (Fig. 2C) and *C. lamprocarpa* (Fig. 2B), grow on the mainland; the third species, *C. berteroniana* Steudel (Fig. 2A), is endemic to the Juan Fernández Islands. Like other members of sect. *Echinochlaenae*, the three Chilean species have gynaeandrous lateral spikes (i.e., many to numerous pistillate flowers above and a smaller number of staminate flowers below), a character very helpful in circumscribing this section. Both *C. lamprocarpa* and *C. poeppigii* have been collected in central Chile, but they are very poorly represented in herbaria; also, habitat data for both species are scarce. The only specimen of *C. poeppigii* that I have examined was collected near Antuco in Bío Bío Province (Fig. 1).

A New Combination in Temperate South America Carex

***Carex vixdentata* (Kük.) Wheeler, comb. nov.**

= *Carex extensa* Good. var. *vixdentata* Kük., apud Osten, Anales Mus. Hist. Nat. Montevideo (ser. II) 3:242. 1931 (basonym).—TYPE: URUGUAY. [Dpto.] Montevideo: Punta Brava, *Osten 5229* (LECTOTYPE [here designated]: MVM). [Because the syntypes at B are no longer extant, the lectotype was chosen from among existing syntypes in Herbarium Osten (MVM) that were definitely studied by Georg Kükenthal; see Osten 1931:242. I have examined material of *C. vixdentata* from Punta Brava, Uruguay (*Osten 5229b* [US]).]

Carex vixdentata is endemic to southeastern South America, occurring from southern Uruguay to Río Negro Province in Argentina (Fig. 1). It grows in both muddy and sandy sites along the Atlantic coast and also occurs locally inland, such as in the Meseta de Somuncurá (Río Negro Province) where it grows in moist, sandy soil. This species flowers in late September and October and fruits from November through January.

Carex vixdentata, which belongs in sect. *Spirostachyae* (Drejer) L. Bailey (subg. *Carex*), resembles the European *C. extensa* but differs by: perigynium beak with teeth poorly developed or essentially absent; spikes (3–)4–6, 7–35 mm long, 5.5–8 mm wide; culms 10–60 cm tall; bracts of middle spikes 7–20 cm long, 2–3.5 mm wide, prominently serrate (ca. 19–25 teeth per 5 mm); leaves 2–4 mm wide; and culms 1–2 mm thick, rigid. By contrast, in *C. extensa* these same features are: perigynium beak bidentulate, with teeth 0.1–0.3 mm long; spikes 3–4(5), 5–15 mm long, 4–6.5 mm wide; culms 5–42 cm tall; bracts of middle spikes 6–11

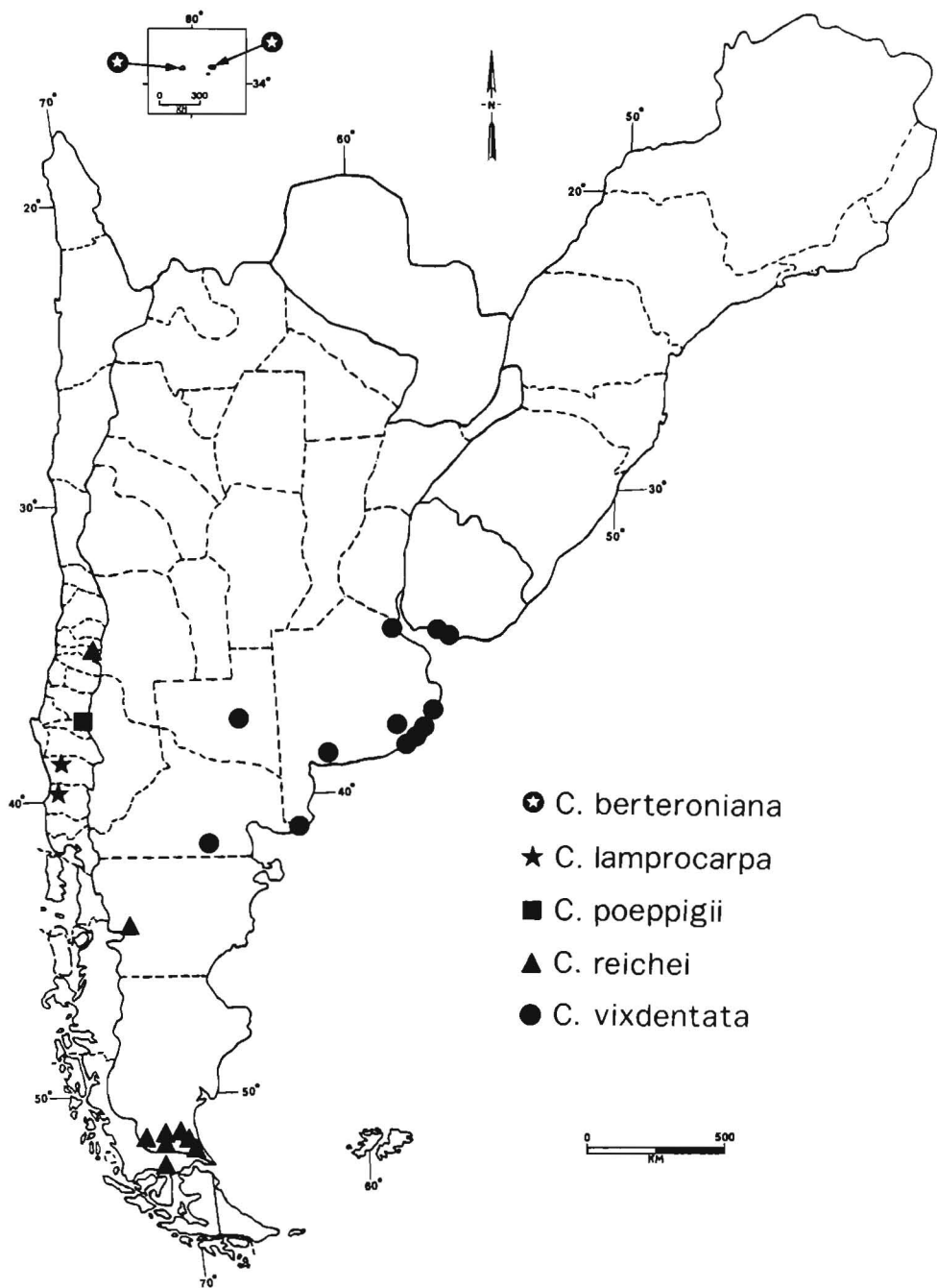


Fig. 1. Map of southern South America showing the distributions of *Carex berteroniana*, *C. lamprocarpa*, *C. poeppigii*, *C. reichei*, and *C. vixdentata*.

cm long, 1–2 mm wide, comparatively less serrate (ca. 5–11 teeth per 5 mm); leaves 1–3 mm wide; and culms comparatively narrower and somewhat less rigid.

Representative specimens.—ARGENTINA. Prov. Buenos Aires: *Barros* 1885 (F); *Boelcke* 14440 (MO); *Burkart* 19053 (GH); *Clos et al.* 300 (BAB); *Correa* 2319 (BAB); *Crovetto* 376 (BAB), 568 (BAB), and 1278 (BAB); *Krapovickas* 152 (LIL); *Nicora* 2812 (SI); *Parodi* 8167 (GH); *Sparre* 5502 (LIL).—Prov. La Pampa: *Cano* 3282 (BAB).—Prov. Río Negro: *Ruiz Leal* 26189 (BAB); *Wilkes Exp. s.n.*, Río Negro (GH).—URUGUAY. Dpto. Montevideo: *Herter* 131 (B, C, F, GH, LIL, MO, S, WIS); *Osten* 5229b (US) and 21831 (GH).

Status of Carex reichei and C. aueri in South America

CAREX REICHEI Kük., Bot. Jahrb. Syst. 27:504. 1899.—TYPE: CHILE, [Prov. Curicó:] Cordillera de Curicó, 2500 m, s.d., *Reiche* 514 (LECTOTYPE [here designated]: SGO-46124!). [An annotation label affixed to SGO-46124 was handwritten and signed by Georg Kükenthal (dated 25 Jan. 1899) and reads “*Carex Reichei* Kükenthal nov. spec.” Since the holotype probably was at B (destroyed), *Reiche* 514 at SGO is chosen lectotype.]

CAREX AUERI Kalela, Ann. Acad. Sci. Fenn., Ser. A, 54(5):60. 1940.—TYPE: CHILE, [Prov.] Magallanes: Feuchte Niederung auf *Festuca gracillima*-Steppe zwischen Carpa Manzana und Seno Skyring [9 Feb. 1938, *Kalela* 2221] (holotype: H-1066609!; isotype: S!).

Kükenthal (1899) described *Carex reichei* from plants collected in central Chile (Curicó Province), but, unfortunately, his description was based on immature material (i.e., perigynia not fully mature and achenes barely developed). Subsequent workers (Kükenthal 1909; Léveillé 1915) recognized *C. reichei* as a good species, citing the holotype collection. Kükenthal (1909:141), in his worldwide monograph of *Carex*, treated *C. reichei* as a “Species incertae sedis” and placed it near members of sect. *Arenariae* subsect. *Austerales* Kük. (subg. *Vignea*).

In 1940 Kalela described *Carex aueri* from plants collected in southern Chile (Magallanes Province). He placed it in sect. *Arenariae* subsect. *Austerales* and noted its similarities to species growing in Australia and New Zealand; interestingly, Kalela made no reference to *C. reichei*. Barros (1949) subsequently reported *C. aueri* from Argentina (Santa Cruz Province) and also later included it in his treatment of the Patagonian Cyperaceae (Barros 1969:77). It is noteworthy that Marticorena and Quezada (1985) have recently reported both *C. aueri* and *C. reichei* as occurring in Chile.

Examination of numerous specimens (cited below) labeled *Carex aueri*, including the type collection, reveals that they are conspecific with *C. reichei*. This conclusion is based on the following evidence: (1) the lectotype of *C. reichei* and young plants of *C. aueri* from southern Patagonia are very similar in habit (compare Fig. 3 and 4); (2) the vegetative features of the lectotype of *C. reichei* are essentially identical to those of the type collection of *C. aueri*; and (3) the flowers and immature fruits of the lectotype of *C. reichei* are very similar to those in young plants of *C. aueri* from southern Patagonia. These aforementioned features are: fertile culms less than 7 cm tall, these arising single or, less commonly, very few together from horizontally creeping rhizomes; basal sheaths brown, usually fibrillose; leaves 2–7(–10) cm long, 2–4 mm wide, keeled proximally and often curved (at least the lower ones), the margins serrulate; inflorescences less than 2.5 cm long, little elevated above the leaves; pistillate scales 3–4 mm long, oblong-elliptical, cuspidate, yellowish-brown with a 3-veined, pale green center; perigynia 3–4 mm long, pale brown, margins scaberulent above the middle; and anthers

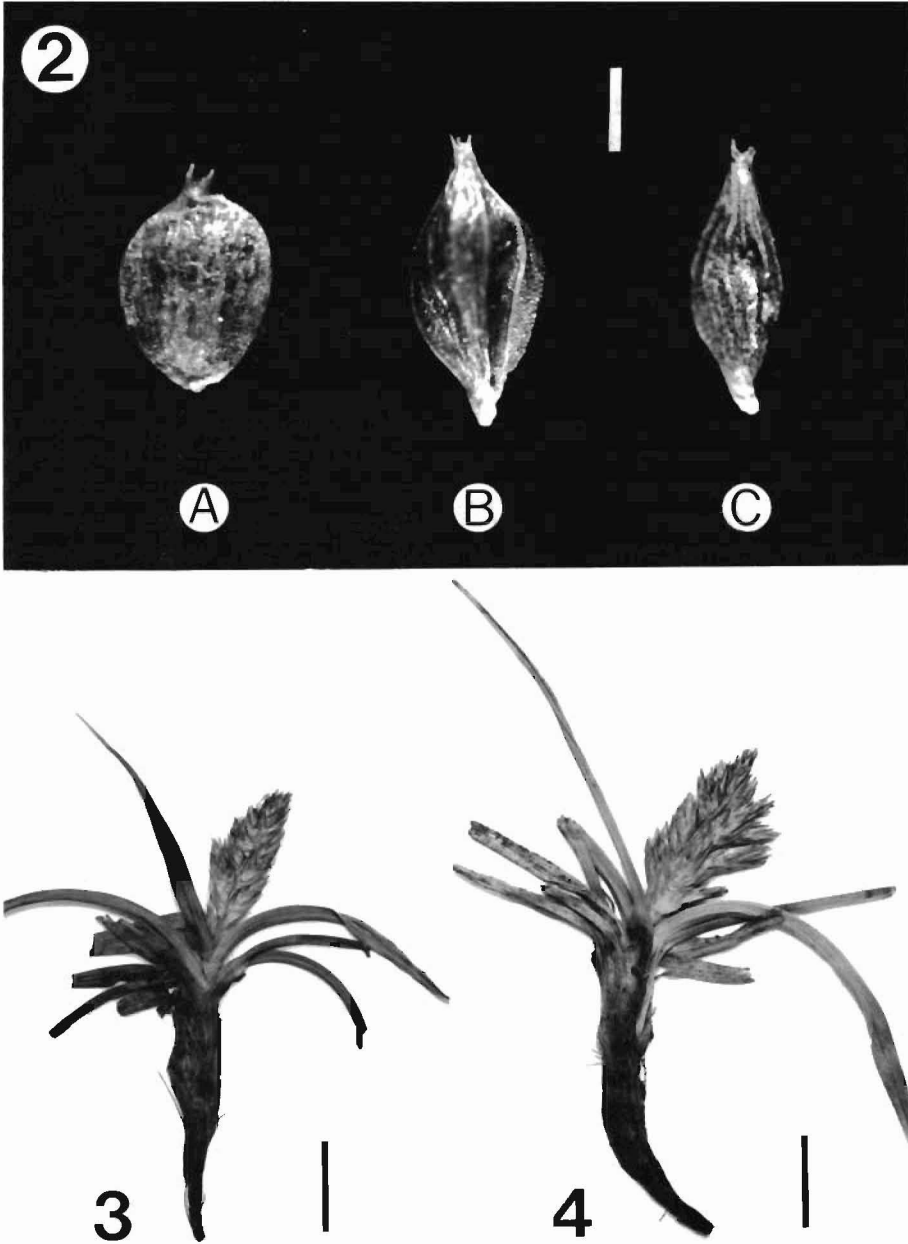


Fig. 2-4.—2. Perigynia: dorsal view.—A. *Carex berteroniana*, from Solbrig et al. 3864 (GH).—B. *Carex lamprocarpa*, from Hb. Middleton s.n., Dec. 1905 (BM).—C. *Carex poeppigii*, from Poeppig 247 (BM), lectotype.—3-4. *Carex reichei*—3. Habit (plant from Curicó Province, central Chile), from Reiche 514 (SGO), lectotype.—4. Habit (plant from Santa Cruz Province, southern Argentina), from T.B.P.A-FIT. 2389 (BAB). (Fig. 2, bar = 1 mm; Fig. 3-4, bars = 1 cm.)

2.6–3.2 mm long. Indeed, young plants of *C. aueri* fit Kükenthal's (1899) description of *C. reichei* in all respects. Thus, I treat *C. aueri* as a synonym of *C. reichei*.

Carex reichei is well distributed in southern Argentina, particularly along the shores of Río Gallegos, and it also occurs in Chubut Province in Argentina and in Magallanes and Curicó provinces in Chile (Fig. 1). It is a rhizomatous species that grows in moist to wet places and often in areas dominated by *Festuca gracillima* Hooker f. The plants are low growing and thus easily overlooked, especially when fruits are not present. In southern Patagonia, the species flowers in November and December and fruits in January and February.

Representative specimens.—ARGENTINA. Prov. Chubut, dpto. Río Senguerr: *Boelcke* 12991 (BAA).—Prov. Santa Cruz, dpto. Güer Aike: *Boelcke* 12343 (BAB, MIN, SI); *Grondona* 2234 (BAB); *Moore* 1307 (UPS); *Sleumer* 928 (LIL); *Soriano* 3350 (BAB); *T.B.P.A.* 317 (BAB), 3040 (HIP), and 3344 (HIP); *T.B.P.A.-FIT.* 2389 (BAB), 2716 (BAB), and 447½ (BAB). [T.B.P.A. is an acronym for Transecta Botánica de Patagonia Austral; T.B.P.A.-FIT. is an acronym for Transecta Botánica de Patagonia Austral Fitosociológica.]

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