1987

A New Species of *Carex* (Cyperaceae) from Western South America and a New Combination in the Genus

Gerald A. Wheeler

The University of Minnesota, Twin Cities

Follow this and additional works at: <https://scholarship.claremont.edu/aliso>

Part of the [Botany Commons](#)

Recommended Citation

Wheeler, Gerald A. (1987) "A New Species of *Carex* (Cyperaceae) from Western South America and a New Combination in the Genus," *Aliso: A Journal of Systematic and Floristic Botany*: Vol. 11: Iss. 4, Article 9. Available at: <https://scholarship.claremont.edu/aliso/vol11/iss4/9>

A NEW SPECIES OF *CAREX* (CYPERACEAE) FROM WESTERN
SOUTH AMERICA AND A NEW COMBINATION IN
THE GENUS

GERALD A. WHEELER

*Department of Botany, University of Minnesota
St. Paul, Minnesota 55108*

ABSTRACT

A new species of *Carex* (Cyperaceae) is described from western South America. *Carex pleioneura* (sect. *Foetidae*) occurs in central Chile and west-central Argentina, where it grows on rocky slopes, among rocks bordering streams, and in mountain meadows (vegas). A new combination in South American *Carex*, *C. longii* var. *meridionalis* (sect. *Ovales*), is also made here.

Key words: *Carex pleioneura*, new species, *C. longii* var. *meridionalis*, new combination, South America.

INTRODUCTION

Slightly over 90 species and some 30–40 infraspecific taxa of *Carex* L. (Cyperaceae) are known from the southern half of South America (Wheeler, in press). In this paper, I describe a new species of *Carex* from central Chile and west-central Argentina and make a new combination.

DESCRIPTIONS AND COMMENTS

***Carex pleioneura* Wheeler, sp. nov.**

Fig. 2, 3

Type.—CHILE. Prov. Coquimbo: Dpto. Illapel, Hacienda Cuncumén, cajón de los Pelambres, 3000 m, suelo pantanoso, 9–13 Jan. 1932, *Looser 2141* (holotype: GH!).

Paratypes.—ARGENTINA. Prov. San Juan: Dpto. Calingasta, Pachón, valle río Pachón, 3300 m, en vega, Feb. 1982, *Herb. Cat. Geobotan. 10085* (SI!).—CHILE. Prov. Coquimbo: Dpto. Illapel, 10 km E of Matancilla and 15 km NE of Sánchez Mine, cerro Curamáhuida, 2800 m, steep dry slopes, 23 Nov. 1938, *Worth & Morrison 16681* (DS!, MO!, NA!, UC! [2 sheets]).—Prov. Aconcagua: Dpto. Petorca, ca. 18 km E of La Laguna and SE of Patagua Mine, cerro Chache, 1900 m, rocky areas along stream, 30 Dec. 1938, *Morrison 17038* (DS!, MO!, NA!, SI!, UC! [2 sheets]).

Rhizoma repens elongatum; culmi 1.8–6.8 dm alti, teretes, sursum subscabri; vaginae basales glabrae, brunneae. Folia 3–5; laminae 6–39 cm longae, 2.5–5 mm latae, supra planae; vaginae glabrae, antice hyalinae; ligulae 2–4 mm longae, latiores quam longiores. Inflorescentiae 9.5–16 mm longae, 9–12 mm latae, in capitulum ovatum, oblongo-ovatum vel subglobosum dense congestae; spicae plures androgynae. Perigynia 2.8–3.6 mm longa, 0.8–1.3 mm lata, glabra, venis 12–24 prominētibus percursis; rostra 0.8–1.3 mm longa, marginibus laevia vel sparsissime scabrella, apice bidentata, dentibus debilibus 0.1–0.3 mm longis. Achenia 1.5–1.7 mm longa, 0.8–1.1 mm lata. Stigmata 2. Antherae 3, 1.9–2.5 mm longae.

Rhizomes long-creeping, stout (about 4 mm thick), dark brown; roots pale brown, filiform; fertile culms 1.8–6.8 dm tall, arising singly or in small clumps at intervals, generally exceeding the leaves, obscurely trigonous or more often terete proximally but triangular distally, smooth except usually roughened beneath the inflorescence, 1.5–3 mm thick, stiff, with glabrous, brown basal sheaths. Leaves

3–5; blades 6–39 cm long, 2.5–4.5(–5) mm wide, flat (at least distally), glabrous, the margins smooth proximally and more or less scaberulent distally; leaf sheaths glabrous, pale brown; inner band of sheaths glabrous, hyaline, the apex rounded and prolonged; ligules 2–4 mm long, rounded, wider than long, the free portion pale brown. Vegetative shoots 29–47 cm tall; leaves 5–11, similar to those of fertile culms; pseudoculms 6.5–12 cm tall. Inflorescences 9.5–16 mm long, 9–12 mm wide, the many to numerous spikes densely aggregated into an oblong-ovoid or ovoid or subglobose head; spikes androgynous, mostly undistinguishable, the apical staminate flowers very inconspicuous (except the anthers), perigynia several per spike; bracts absent or the lowest up to 25 mm long; pistillate scales shorter than to slightly longer than the perigynia (when mature), 2.5–4 mm long, 0.8–1.2 mm wide, ovate to lanceolate, acute to cuspidate, glabrous, light brown, with hyaline margins and stramineous center, 1-veined. Perigynia 2.8–3.6 mm long, 0.8–1.3 mm wide, ovate to lanceolate, glabrous, membranaceous, stramineous or light brown, prominently 7–14-veined dorsally and 4–10-veined ventrally, plano-convex to nearly biconvex in cross section, the margins smooth, tapered at base into a conspicuous stipe 0.1–0.4 mm long, tapered distally into a distinct beak; beaks 0.8–1.3 mm long, margins smooth or sparingly scaberulent, the apex obliquely cleft dorsally, bidentulate, the teeth weak, scarious, 0.1–0.3 mm long. Achenes 1.5–1.7 mm long, 0.8–1.2 mm wide, lenticular, with oblong-elliptical to obovate sides, subsessile, apiculate, pale brown. Stigmas 2. Anthers 3, 1.9–2.5 mm long, including an apiculate tip 0.1–0.2 mm long.

Carex pleioneura is known from Aconcagua and Coquimbo provinces in Chile and from San Juan Province in Argentina (Fig. 1). It flowers in October and early November and fruits from late November through February. This species, which is strongly rhizomatous, occurs at elevations from about 1900 to 3300 m and grows on rocky slopes, among rocks bordering streams, and in mountain meadows (vegas). The epithet *pleioneura*, “many-nerved,” refers to the prominent veins (11 to 24 total) traversing both faces of the perigynium (Fig. 3). *Carex pleioneura*, with its long-creeping rhizomes, androgynous spikes densely aggregated into an ovoid to subglobose head (Fig. 2), and membranaceous perigynia that are stipitate, clearly belongs in *Carex* sect. *Foetidae* (L. Bailey) Kük. This species most closely resembles *C. nebulare* Philippi (Fig. 4), which also occurs in western South America (Kükenthal 1909; Barros 1947; Marticorena and Quezada 1985), but differs from it by having smaller perigynia that are strongly veined on both faces (compare Fig. 3 and 4), a smooth beak (or nearly so), and terete culms (at least proximally). It differs from *C. kurtziana* Kük. [= *C. nebulare* var. *kurtziana* (Kük.) Kük.] (Fig. 5), which grows in west-central Argentina and Patagonia (Kükenthal 1909; Barros 1947; Marticorena and Quezada 1985), by having smaller achenes, terete culms, and smaller perigynia that are ovate to lanceolate and strongly veined on both faces (compare Fig. 3 and 5). *Carex pleioneura* also resembles *C. ecuadorica* Kük., which occurs in Ecuador and Peru (Kükenthal 1909; Macbride 1936), but differs from it by having perigynia strongly veined ventrally as well as dorsally, light brown pistillate scales without a green keel, and terete culms reaching 68 cm in height. In general, *C. pleioneura* occurs farther north on the South American continent than *C. nebulare* and *C. kurtziana* and farther south than *C. ecuadorica*.

Fig. 1. Map of southern South America showing the distributions of *Carex pleioneura* and *C. longii* var. *meridionalis*.

Fig. 2-5.—2-3. *Carex pleioneura*, from Looser 2141 (GH), holotype.—2. Inflorescence.—3. Perigynium: dorsal view (sinistral); ventral view (dextral).—4. *Carex nebularum*, from R. Philippi s.n., Jan. 1877 (SGO-46093), syntype. Perigynium: dorsal view (sinistral); ventral view (dextral).—5. *Carex kurtziana*, from Boelcke 12675 (BAA). Perigynium: dorsal view (sinistral); ventral view (dextral). (Fig. 2, bar = 1 cm; Fig. 3-5, bars = 1 mm.)

CAREX LONGII Mackenzie var. *meridionalis* (Kük.) Wheeler, comb. nov.

≡ *Carex albolutescens* Schwein. var. *meridionalis* Kük., Verh. bot. Ver. Brandenburg 47:208. 1905 (basionym).—TYPE: BRAZIL. Rio Grande do Sul, Quinta near Rio Grande, 5 Nov. 1901, leg. Malme, *Regnell II.205* (LECTOTYPE [here designated]: S!). [Because the syntypes deposited at B are no longer extant, the lectotype was chosen from among existing syntypes examined and annotated by Georg Kükenthal.]

≡ *Carex meridionalis* (Kük.) Herter, Revista Sudamer. Bot. 9:162. 1953.

Most authors (e.g., Kükenthal 1909; Osten 1931; Barros 1947, 1960; Pedersen 1968) treat the only member of *Carex* sect. *Ovales* occurring in east-central South America as *Carex albolutescens* var. *meridionalis*. However, the species that this

variety is actually referable to is *C. longii* (Mackenzie 1931). As indicated above, when treated at specific rank the name of this plant becomes *C. meridionalis*.

While *Carex longii* var. *meridionalis* occurs in southern Brazil, Uruguay, and northeastern Argentina (Fig. 1), var. *longii* is reported from southeastern North America and Bermuda (Mackenzie 1931; Fernald 1950), Mexico and Central America (Hermann 1974), and from Colombia in northern South America (Pinto-Escobar and Mora-Osejo 1966). The southern variety flowers in October and November and fruits from December through June. It differs from var. *longii* by having perigynia that reach 5.3 mm long (averaging 4.9 mm) and 3.2 mm wide (averaging 2.5 mm) and achenes that reach 1.8 mm long and 1 mm wide; by contrast, in var. *longii* the perigynia seldom reach 4.6 mm long and 2.6 mm wide and the achenes are mostly less than 1.6 mm long and 0.8 mm wide. Besides being slightly larger, the perigynia of var. *meridionalis* have winged margins that are comparatively more jagged or coarsely toothed than those of var. *longii* (especially above the middle).

Representative specimens.—ARGENTINA. Prov. Entre Ríos: *Burkart* 30737 (US); *Crovetto* 5099 (BAB); *Parodi* 9528 (SI).—BRAZIL. Paraná: *Dusén* 8926 (S), 9422 (GH, MO), 13372 (S, US), and 15759 (GH, MO, S); *Reitz & Klein* 17771 (UC, US); *Hatschbach* 14950 (L) and 33462 (C).—Rio Grande do Sul: *Jürgens s.n.*, s.d., Rio Pardo (B); *Rambo* 34815 (S), 45013 (B), 51567 (S), 54686 (B), 56316 (B), 57319 (B), 61516 (S), and 62730 (B); *Regnell II*. 376 (syntype: S) and 621 (syntype: S); *Sacco* 431 (F, UC) and 1383 (F); *Smith & Reitz* 5906 (US).—Santa Catarina: *Reitz* 2891 (S, US) and 3411 (LIL, S); *Reitz & Klein* 14008 (US); *Smith et al.* 7642 (L), *Smith & Reitz* 8686 (US), *Smith & Klein* 13004 (MO, S, WIS), 13574 (GH, UC), and 13688 (US).—URUGUAY. Dpto. Lavalleya: *Pedersen* 3591 (C).—Dpto. Rivera: *Herter* 1667 (F, GH, MO, S, US).—Dpto. Soriano: *Hb. Arechavaleta s.n.*, 1899 (S).

ACKNOWLEDGMENTS

I thank the curators and directors of the following herbaria for the loan of specimens: B, BAA, BAB, C, DS, F, GH, L, LIL, MO, NA, S, SGO, SI, UC, US, and WIS.

LITERATURE CITED

- Barros, M. 1947. Cyperaceae: Scirpoideae, Rhynchosporoideae, Caricoideae, p. 259–539. In H. R. Descole [ed.], *Genera et species plantarum Argentinae*. Tomus IV (II), Fundación e Instituto Miguel Lillo, Tucumán.
- . 1960. Las Ciperáceas del estado de Santa Catalina. *Sellowia* 12:181–450.
- Fernald, M. L. 1950. *Gray's manual of botany*. 8th ed. American Book Co., New York.
- Hermann, F. J. 1974. Manual of the genus *Carex* in Mexico and Central America. *Agr. Handbook* 467, Forest Service, USDA. Washington, D.C.
- Kükenthal, G. 1909. Cyperaceae: Caricoideae, pp. 1–824. In A. Engler [ed.], *Das pflanzenreich*, IV. 20, Heft 38. Leipzig: Wilhelm Engelmann.
- Macbride, J. F. 1936. *Carex* in flora of Peru. *Fieldiana: Botany* 13:314–320.
- Mackenzie, K. K. 1931. Cyperaceae, tribe I, Cariceae. *N. Amer. Flora* 18:1–168.
- Marticorena, C., and M. Quezada. 1985. Catálogo de la flora vascular de Chile. *Gayana* 42(1–2):1–157.
- Osten, C. 1931. Las ciperáceas del Uruguay. *Anales Mus. Hist. Nat. Montevideo* (ser. II) 3:109–256.
- Pedersen, T. M. 1968. *Carex*, pp. 318–338. In A. Cabrera [ed.], *Flora de la provincia de Buenos Aires*. Colec. Cient. Instituto Nacional de Tecnología Agropecuaria, Buenos Aires.
- Pinto-Escobar, P., and L. E. Mora-Osejo. 1966. Catálogo ilustrado de las plantas de Cundinamarca. Vol. 1. Inst. Cien. Nat., Universidad Nacional. Bogotá.
- Wheeler, G. A. In press. The taxonomy of *Carex* sect. *Abditispicae* sect. nov. (Cyperaceae) from austral South America. *Syst. Bot.*