Gayana Bot. 53(2): 317-328, 1996. ISSN 0016-5301

THE STATUS AND DISTRIBUTION OF *CAREX INCONSPICUA* (CYPERACEAE) IN SOUTH AMERICA AND THE REPORT OF A NEW NATURAL HYBRID

EL ESTADO TAXONOMICO Y DISTRIBUCION DE CAREX INCONSPICUA *(CYPERACEAE) EN SUDAMERICA Y UN NUEVO HIBRIDO NATURAL DE ESTA ESPECIE*

Gerald A. Wheeler* and Otto Zöllner**

ABSTRACT

Carex inconspicua (sect. *Spirostachyae*) occurs primarily in IX and X Regions of Chile and as a rarity in western Argentina. It is most abundant near the coast, where it grows in open sites at elevations from near sea level to about 250m. Morphological differences between *C. inconspicua* and *C. distenta* are discussed. The salient features of *C. inconspicua* are: staminate and pistillate scale apices more or less truncate, with the midrib exserted as a prolonged scabrous-ciliate awn; perigynia ovate, wide spreading at maturity, with the beaks often recurved; and anthers mostly 1.2-2 mm long. A lectotype is chosen for *C. inconspicua*. In addition, the new natural hybrid *C. barrosii* x. *C. inconspicua* is described from plants collected in Valdivia Province (X Región), Chile.

KEYWORDS: Argentina, *Carex distenta*, *C. fuscula* aggregate, *C. inconspicua*, Chile, Cyperaceae, lectotypification, new natural hybrid *C. barrosii* x *C. inconspicua*, sections *Ceratocystis* and *Spirostachyae*.

RESUMEN

Carex inconspicua (sección *Spirostachyae*) se encuentra principalmente en la IX y X Regiones de Chile y como rareza en el oeste de Argentina. Es más abundante cerca de la costa, donde crece en lugares abiertos desde cerca el nivel del mar hasta alrededor de 250 m. Se discuten las diferencias morfológicas entre *C. inconspicua* y *C. distenta*. Las características más notables de *C. inconspicua* son: ápices de las escamas estaminadas y pistiladas más o menos truncados, con el nervio medio excerto en forma de una arista prolongada escabroso-ciliada; periginios ovados, anchamente expandidos en la madurez, con los picos a menudo recurvados, y anteras frecuentemente de 1,2-2 mm de largo. Se elige un lectotipo de *C. inconspicua*. Además, de plantas colectadas en la provincia de Valdivia (X Región), Chile, se describe el nuevo híbrido natural *C. barrosii* x *C. inconspicua*.

PALABRAS CLAVES: Argentina, *Carex distenta*, complejo *C. fuscula*, *C. inconspicua*, Chile, Cyperaceae, lectotipificación, nuevo híbrido natural *C. barrosii* x *C. insconspicua*, secciones *Ceratocystis* y *Spirostachyae*.

INTRODUCTION

Examination of specimens of the *Carex fuscula* Urv. aggregate (sect. *Spirostachyae* (Drejer) L. Bailey) in South America reveals that *C. distenta* Kunze ex Kunth has had much too wide a South American range ascribed to it by past authors (as *C. fuscula* var. *distenta* (Kunze ex Kunth) Kük., e.g., by Kütenthal 1909; Osten 1931; Pedersen 1968; Barros 1947, 1969). For instance, certain plants from central Chile previously referred to *C. distenta* are best treated as a separate species. In this paper, we discuss the taxonomic status and distribution of *C. inconspicua* Steudel in South America and designate a lectotype. We also describe a new natural hybrid from Chile and suggest *C. barrosii* Nelmes (sect. *Ceratocystis* Dumort.) and *C. inconspicua* as the putative parents.

Steudel (1855, p.221) described *Carex inconspicua* from two collections made in Valdivia

*University of Minnesota Herbarium, Department of Plant Biology, St. Paul, Minnesota 55108-1095, U.S.A.
**Universidad Católica, Instituto de Biología, Casilla 4059, Valparaíso, Chile.

Province (X Región, Los Lagos), Chile, in 1850-51. Kükenthal (1899) subsequently recognized it as a good species, but later he placed the name under the synonymy of *C. fuscula* var. *distenta* (Kükenthal 1909). As intimated above, more recent Chilean workers (e.g., Léveillé 1915; Marticorena and Quezada 1985) have closely followed Kükenthal's (1909) nomenclature and interpretation of the *C. fuscula* aggregate. Parenthetically, the only South American member of section *Spirostachyae* not in the *C. fuscula* aggregate, a group here believed to be monophyletic, is *C. vixdentata* (Kükh.) G. Wheeler from eastern Argentina and southern Uruguay (Wheeler 1988a).

This study demonstrates that certain characters serve to differentiate *Carex inconspicua* from other members of the *C. fuscula* aggregate. Below we point out salient differences in morphology (Table 1) and ecology between *C. inconspicua* and *C. distenta*, species wich in the recent past have not been treated as distinct from one another. The distribution of *C. inconspicua* has also been mapped here (Figs. 4 and 5). Citations are given near the end of this report for specimens of *C. inconspicua* collected in Chile and Argentina.

MORPHOLOGY AND ECOLOGY

When one examines and compares syntypes of *Carex inconspicua* with type material of *C. distenta* (Poeppig 250 [BM!]), it is abundantly clear that several characters differ between these two species. For example, the staminate scale apices of *C. inconspicua* are truncate or emarginate, with the midrib exserted as a conspicuous scabrous-ciliate awn up to 2.3 mm long (Fig. 1b); in contrast, the apices of the staminate scales in *C. distenta* are obtuse to subacute, with the midrib little, if at all, exserted (Fig. 2b, c). Similarly, the pistillates scales of *C. inconspicua*, particularly those in the proximal half of the spike, have apices that are more or less truncate with prolonged scabrous-ciliate awns up to 3.8 mm long (Fig. 1c); in contrast, the pistillare scales of *C. distenta* have apices that are subacute to acuminate with slightly roughened awns 1 mm long or less (Fig. 2d). In Fig. 3, staminate scale awn lenght is plotted against pistillate scale awn lenght for the two species. In each case, the longest awn on the scales of the uppermost (staminate) andlowermost (pistillate) spikes of a fertile culm were measured. It should be noted, however, that the awn on the lowermost scale of each spike (staminate and pistillate) was not measured; hence, these awn lenghts are not included in the measurements given in Fig. 3 or in Table 1.

Among still yet other differences between these two species, the wide-spreading perigynia of *Carex inconspicua* are ovate with the beaks often strongly recurved (Figs. 1d and 7), whereas those of *C. distenta* are more or less lanceolate wih the beaks straight or only recurved (Fig. 2e). Also *C. inconspicua* has elliptical to slightly obovate achenes (Fig. 1e) and the majority of its anthers are 1.2-2 mm long; in contrast, *C. distenta* has elliptical to oblong achenes (Fig. 2f) and anthers 1.8-3 mm long. A morphological comparison of nine characters of *C. inconspicua* and *C. distenta* is given in Table 1.

In addition to morphological differences, the two species discussed above differ in ecology. *Carex inconspicua* grows in dry or somewhat moist soils in open habitats, e.g., in prairies and grasslands, along the banks of rivers and streams, in meadows, along highway verges; it also grows in thickets but seldom occurs in heavily-shaded forest. In contrast, *C. distenta* grows in more hydric habitats, such as in wet, sandy soils bordering creeks and streams and in bottomlands near the mouths of rivers.

It is also worthy of note that all members of section *Spirostachyae* have reddish-brown crystalline inclusions in their cells (Crins and Ball 1988). Indeed, most parts of *C. inconspicua*, such as its perigynia and leaf sheaths, strongly display these inclusions. Although reddish-brown inclusions are also present in the cells of *C. distenta*, they are usually less intense. But, in general, inclusion intensity is a very unreliable taxonomic character for separating members of this section.

DISCUSSION

Although superficially resembling each other, it is abundantly clear from their respective morphologies and differing habitats that *Carex inconspicua* and *C. distenta* are distinct species. In Chile (Figs. 4 and 5), *C. inconspicua* occurs more or less continuously from Malleco Province (IX Región, Araucanía) south to Chiloé Province (X Región), where it grows in open sites at eleva-

tions from near sea level to about 250 m. The majority of specimens examined come from Valdivia Province (Fig. 6), particularly near Valdivia and Corral, though several specimens have also been seen from Cerro Ñielol, near Temuco, in central Cautín Province (IX Región). A few collections of this species have also been made north of Malleco Province, one near Concepción (VIII Región, Bío Bío), another in Ñuble Province (VIII Región) near Chillán, at around 1700 m, and still another in western Talca Province (VII Región, Maule), at about 2200 m. A collection from Sierra Famatina in La Rioja Province, Argentina (Fig. 9), made at 2700-2800 m, also appears to be this species, though the perigynia are slightly larger and all of the spikes are sessile.

Specimens of *Carex inconspicua* with ripe fruit have been collected from November throught February, throught by late March most plants have shed their perigynia. The epithet propably refers to the small pistillate scale body, wich is partially or concealed by the wide-spreading perigynia at maturity (Fig. 7). Based on this study, we here consider *C. inconspicua* to be closely related but taxonomically distinct from *C. distenta*. As such, *C. inconspicua* should hereafter be included in the floras of both Chile and Argentina, though apparently as a rarity in the latter.

Although *Carex distenta* is not discussed further here, it is noteworthy that the type collection was made at "Los Chorillos", near Concón, in Valparaíso Province (V Región, Valparaíso), Chile, wich is appreciably north of the range of *C. inconspicua*.

LECTOTYPIFICATION AND DESCRIPTION OF SPECIES

Steudel (1855, p. 221) based the name *Carex inconspicua* on two collections, "Lechler nr. 399 et 695" (Fig. 8), both made near Valdivia, Chile. After examining syntypes from the Muséum National d'Histoire Naturelle, Paris (P), France, where Steudel's types are currently preserved, Lechler 695 is chosen as lectotype because it best characterizes the species. Moreover, Lechler 695 is more widely distributed in major herbaria than Lechler 399. Because so litte information is available on the morphology of this species, a detailed description is here provided.

Carex inconspicua Steudel, Syn. Pl. Glum. 2: 221, 1855.

TYPE: Chile, [X Región, Los Lagos], Prov. Valdivia, "prope Arique", Dec-1851. Lechler 695. (LECTOTYPE [here designated]: P!; ISOLECTOTYPES: GH (partim)!, K-3 sheets!, MICH!, P-2 sheets!, S!, UPS!).

Plants cespitose with short rhizomes. Fertile culms 7.5-63.5 cm tall, 0.7-1 mm thick, obscurely trigonous, smooth, with glabrous, reddish-brown-tinged basal sheaths. Leaves 5-11, mostly in the lower one-fourth of the culm; blades 3.5-21 cm long, 2-5.5(-6) mm wide, flat or plicate, glabrous, the margins smooth proximally and antrorsely scaberulent distally; leaf sheaths 3.5-42 mm long, more or less tightly enveloping culms, glabrous, greenish brown with reddish-brown streaks; inner band of sheaths glabrous, hyaline and strongly reddish-brown-streaked, the apex convex and prolonged; ligules 2-4 mm long, rounded to subacute, the free portion pale brown with reddish-brown streaks. Inflorescences 3.3-25.5 cm long, with the upper spikes overlapping and the lowest spike 4-16.5 cm distant (however, sometimes the remotes pike is lacking); upper spikes sessile or on antrorsely-scabrous peduncles up to 15 m long; lowermost spikes sessile or, more often, on antrorsely-scabrous peduncles up to 40 mm long; lowermost bracts with blades 5-25 cm long and 1.8-4 mm wide and sheaths 1.3-5.3 cm long; rachis antrorsely scabrous, spikes 4-6, the terminal staminate, the lateral pistillate. Terminal spikes 0.7-2.6 cm long, 2-3 mm wide, ca. (10-)20-100-flowered; peduncles antrorsely scabrous, 2-15(-34) mm long. Lateral spikes 0.8-3.2 cm long, 5-9 mm wide, cylindrical, ca. (15-)25-100-flowered; peduncles antrorsely scabrous, the exserted portion up to 20(-32) mm long. Pistillate scales glabrous, the bodies 1-2 mm long and 0.8-1.6 mm wide and partially or completely concealed by the wide-spreading perigyni, oval to ovate, stramineous or greenish center with broad, pale brown to brown margins, reddish-brown-streaked, 3-veined, the apices truncate or emarinate with a prolonged, greenish or stramineous scabrous-ciliate awn 1-3.8 mm long. Staminate scales glabrous, the bodies 2.5-3.8 mm long and 0.9-2.2 mm wide, oblong or slightly obovate, stramineous or greenish center with broad, hyaline or pale brown margins, reddish-brown-streaked, 1(-3)-veined, the apices truncate or emarginate with a prolonged, greenish or stra-

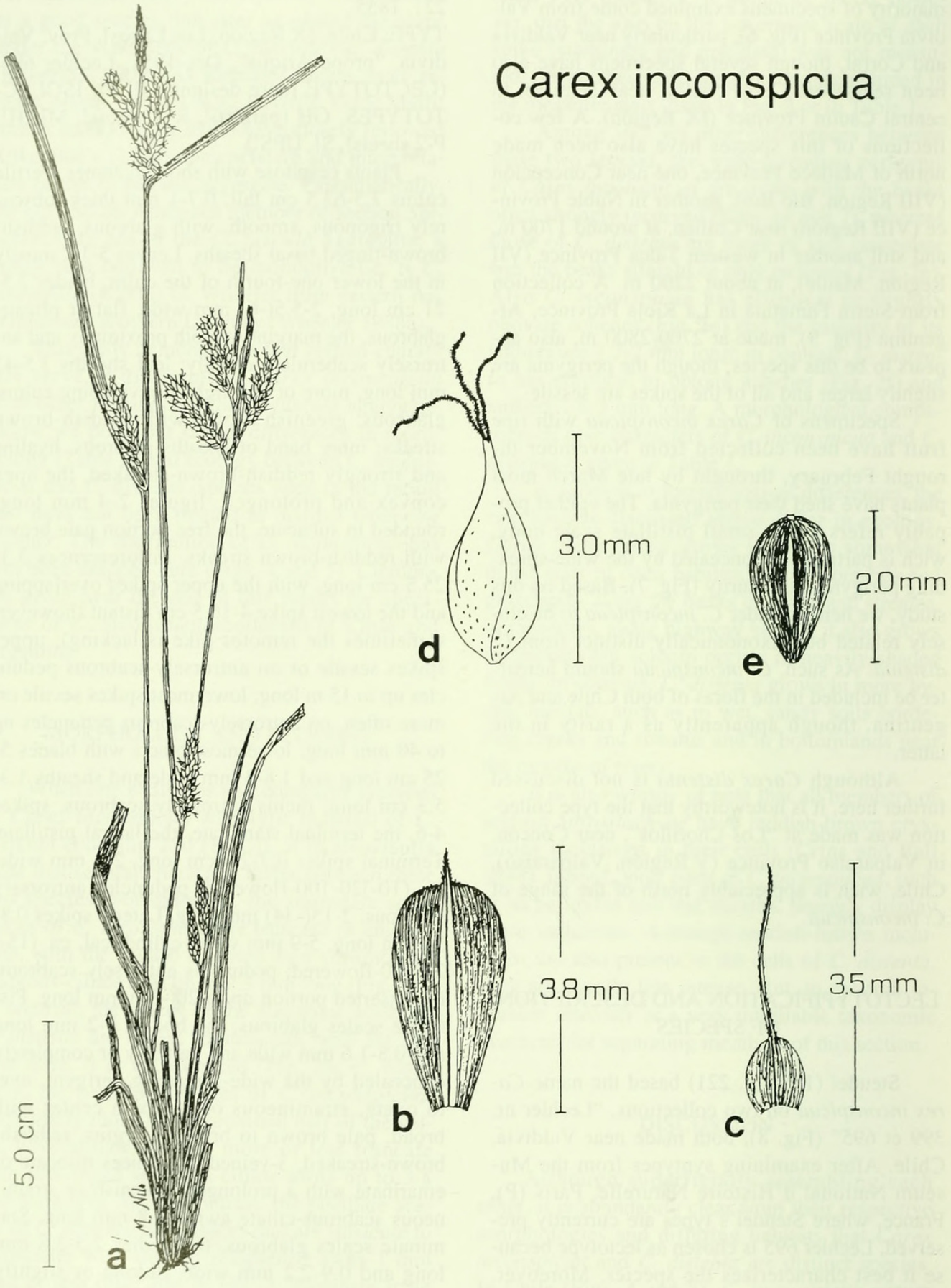

FIG. 1. *Carex inconspicua*. a.Habit. b.Staminate scale. c.Pistillate scale. d. Perigynium. e. Achene. Drawn by S.M. Nilo from Gunckel 2877(H). Collection from Valdivia Province, Chile.

mineous scabrous-ciliate awn 0.5-2.3 mm long. Perigynia 2.8-4.2 mm long, 1-1.4 mm wide, ascending to very wide spreading at maturity, trigonous with flat to convex, ovate sides, somewhat inflated, stramineous or greenish and reddis-brown-streaked, glabrous, sessile (or nearly so), 2 veins prominent and the rest obscure or sometimes with 7-11 faint veins (at least proximally), tapered into a beak; beaks 0.7-1.3 mm long, often recurved, stramineous or greenish and reddish-brown-straked, the margins smooth or scaberulent, the apex obscurely bidentulate with teeth up to 0.3 mm long. Achenes 1.7-2.2 mm long 0.8-1.2 mm wide, trigonous with convex, elliptical or slightly obovate sides, more or less loosely enveloped by the perigynium, yellowish brown when immature, brownish at maturity, apiculate, subsessile. Stigmas 3, 0.5-1.4 mm long. Anthers 3, 1.2-2(-2.4) mm long, including an apiculate tip 0.1-0.2 mm long.

A NEW NATURAL HYBRID

Although very little is known about the hybridization of *Carex* in South America, one uf us (GAW) has seen some plants from southern South America that suggest hybrid status. Here we describe a new natural hybrid from Valdivia Province (Chile), with suggested putative parents *C. barrosii* and *C. inconspicua*. As might be expected of a hybrid between parents from two different sections of the genus, the putative *C. barrosi* x *C. inconspicua* was totally sterile. It is worthy of note, however, that natural hybrids between members of these two sections have been reported from elsewhere (e.g., Jermy *et al.* 1982). According to Crins and Ball (1988), sect. *Ceratocystis* and sect. *Spirostachyae* are "two distinct but closely related sections". Notably, all members of section *Ceratocystis* lack the reddish-brown crystalline inclusions that are diagnostic of section *Spirostachyae* (Crins and Ball 1988). Moreover, most sections of *Carex*, including section *Spirostachyae*, have glycoflavones in their foliage, whereas plants in section *Ceratocystis* contain flavonols, a class of flavonoids otherwise rare in the genus (Manhart 1990).

Examination of Kunkel 311 (CONC), wich has four plants mounted on the herbarium sheet (Fig. 10), revealed a mixed collection. Although the specimen was originally labelled "*Carex fusculа*", one of the plants was identified by the senior author as *C. inconspicua* (Fig. 10a) and a second as *C. barrosii* (Fig. 10b); the other two (Fig. 10c,d) appeared to possess some features intermediate between the other two plants on the sheet. In regard to *C. barrosii*, it is noteworthy that this species reaches the northwestern most limit of its range in Valdivia Province (Wheeler 1988b, p.130, map in Fig. 2).

Several characteristics of the two plants in question (Fig. 10c,d) strongly suggest hybrid status. For example, all of the perigynia examined have small, malformed achenes, the latter being invariably empty, i.e., they are never filled with endoperm. Also, the pollen is malformed and collapse. Hybrid status is also suggested by its rarity, with only two plants thus far seen from South America.

As intimared above, some features of the suspected hybrid strongly *Carex barrosii* as one of the putative parents. For example, the perigynia are prominently 11-14- veined, the pistillate scales are ovate and 3-veined, and the spikes are either sessile or on short, smooth peduncles. On the other hand, the staminate and pistillate scales of the putative hybrid possess scabrous-ciliate awns, a diagnostic feature of *C. inconspicua* but lacking in *C. barrosii*. The presence of a single terminal staminate spike and four lateral pistillate spikes is similar to the inflorescences possessed by both putative parents. It should be noted, however, that the putative hybrid seems to lack reddish-brown crystalline inclusions in its cells.

The only known plants of the putative hybrid *C. barrosii* x *C. inconspicua* comprise, in part, the following specimen: Chile, [X Región, Los Lagos], Prov. Valdivia, Riñihue, 39° 50' S. lat., 72° 25' W. long., alt. 115 m, 6 Dec. 1958, Kunkel 311 (CONC, partim). See Figs. 5, 10, and 11. A description based on the two known plants of this new natural hybrid is given below.

Carex barrosii Nelmes x ***C. inconspicua*** Steudel.

Plants with elongate rhizomes. Fertile culm 7-8.5 cm tall, smooth, with glabrous, pale brown basal sheaths. Leaves ca. 5, mostly basal; blades 1.8-12 cm long, 3-3.5 mm wide, keeled, glabrous, the margins antrorsely scaberulent (at leas distally); leaf sheaths less than 10 mm long, glabrous; inner band of sheath hyaline or pale brown, glabrous, brownish at the concave mouth;

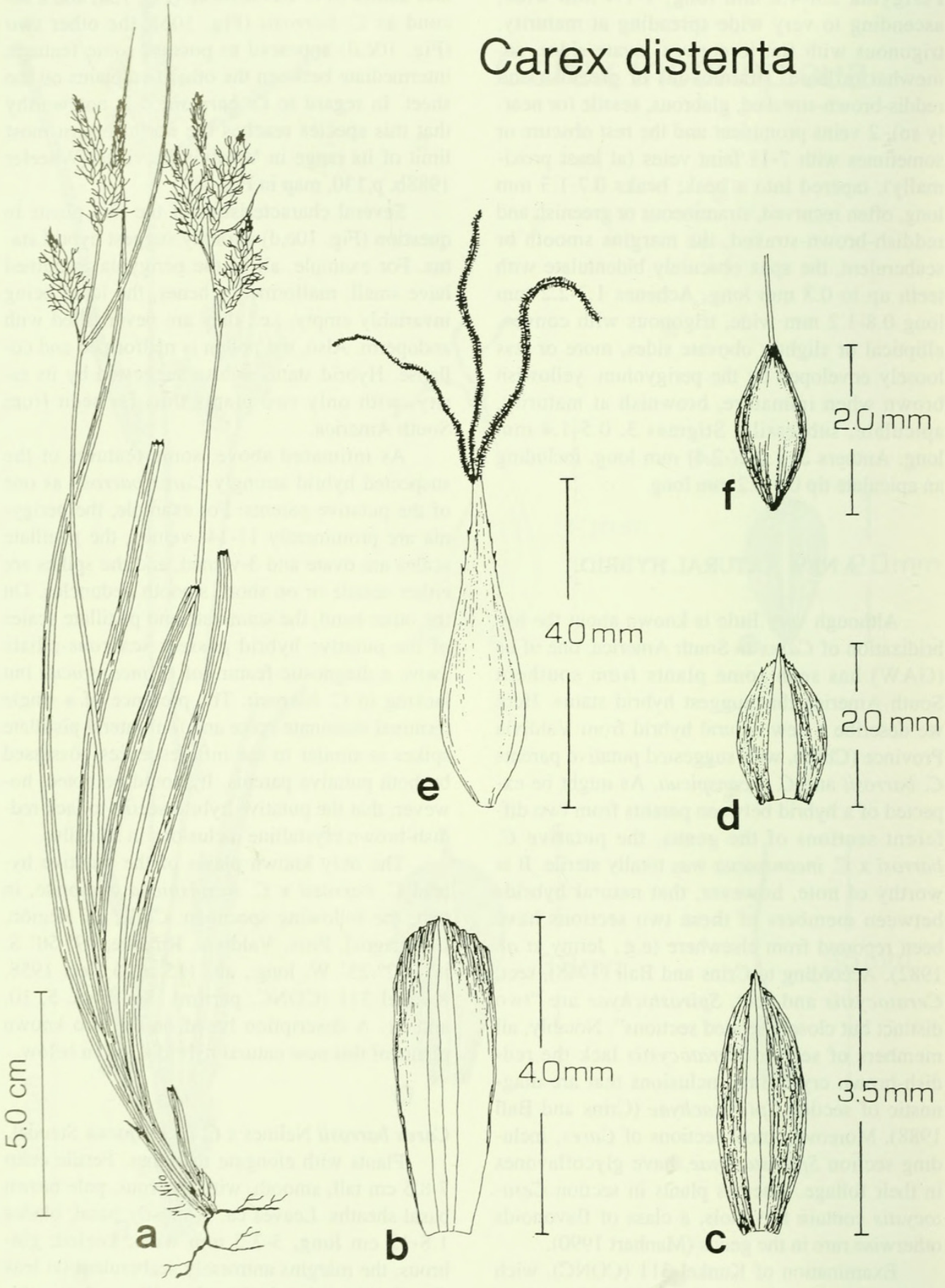

FIG. 2. *Carex distenta*. a.Habit. b,c.Staminate scale. d.Pistillate scale. e.Perigynium. f.Achene. Drawn by S.M. Nilo from Zöllner 16884(MIN). Collection from Valparaíso Province, Chile.

ligules 0.4-0.6 mm long, rounded to nearly straight across. Vegetative culm unknown. Inflorescences 4.1-4.4 cm long, the upper lateral spikes strongly overlapping and the lowermost spike 5-15 mm distant; upper spikes sessile or nearly so; lowermost spike on smooth peduncles 3-7 mm long; lowermost bracts with blades 7-12 cm long and 2.23-3 mm wide and sheathless (or nearly so). Spikes 5, the terminal staminate, the lateral pistillate. Terminal spikes 1.8-2.1 cm long, 2-2.5 mm wide, ca. 35-50-flowered. Lateral spikes 13-20 mm long, 4.5-6 mm wide, ca. 40-70-flowered; peduncles up to 7 mm long. Pistillate scales 2.6-4 mm long, 0.8-1.4 mm wide, ovate to lanceolate, glabrous, pale green center with broad, hyaline or pale greenish margins, 3-veined, the apices subacute to acuminate, with a pale greenish scabrous-ciliate awn up to 1.5 mm long. Staminate scales 3-4.4 mm long, 1-1.6 mm wide, ovate, glabrous, pale green center with broad, pale yellowish brown margins, the apices subacute to acute with a very short awn. Perigynia 3-4 mm long, 1.2-1.7 mm wide, ascending, compressed trigonous with ovate sides, glabrous, stramineous or pale brow, prominently 11-14-veined, sessile, more or less abruptly contracted into a distinct beak; beaks 0.6-1 mm long, stramineous, the margins smooth, bidentate with the teeth stiff and 0.1-0.3 mm long. Achenes incompletely developed, brownish, elliptical and ca. 1.2 mm long and 0.4 mm wide. Stigmas 3. Anthers 3, 1.6-1.8 mm long; pollen malformed.

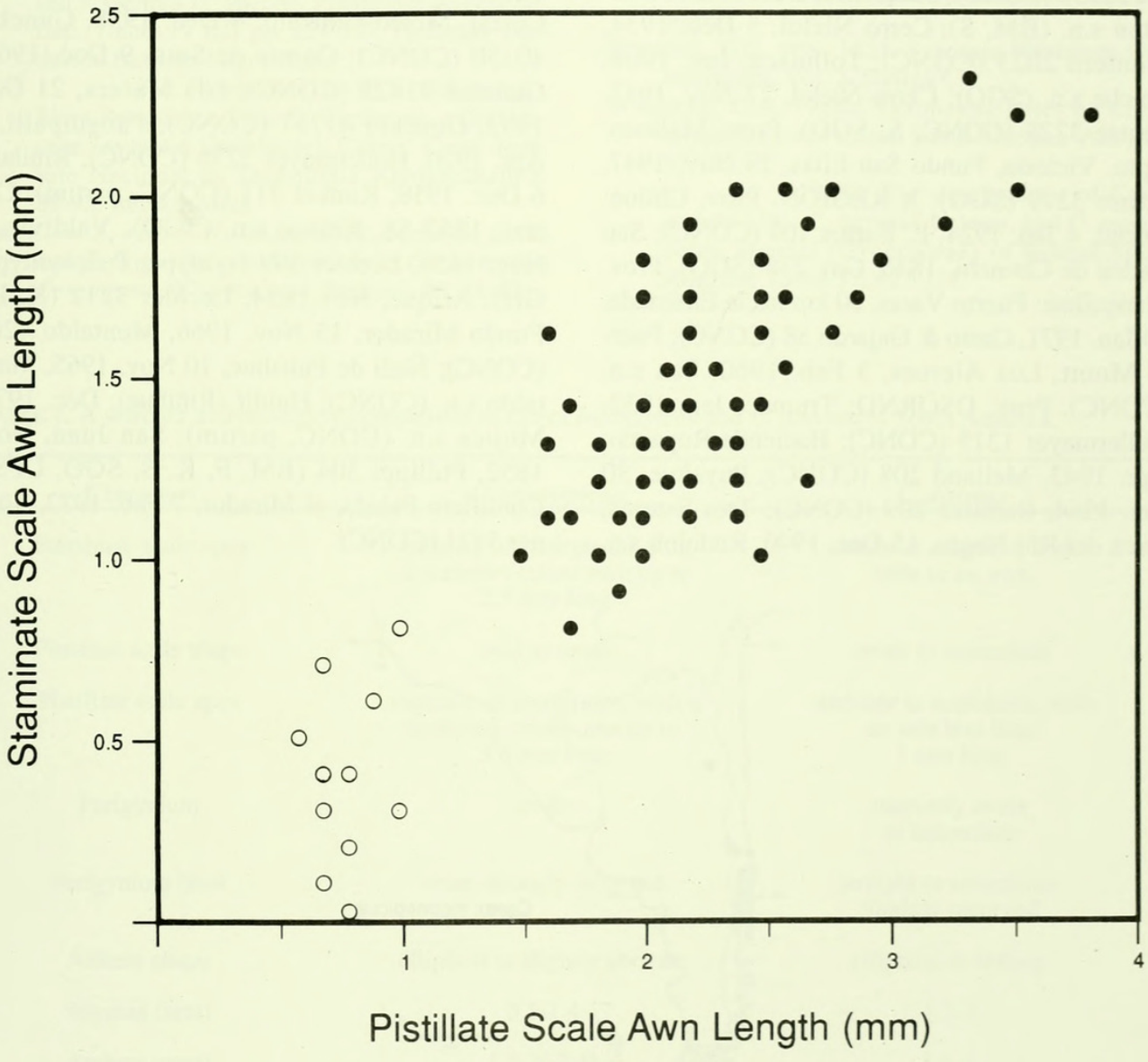

FIG. 3. Staminate scale awn lenght (millimeters) plotted against pistillate scale awn length (millimeters) for *Carex distenta* (open circles) and *C. inconspicua* (closed circles). See text for explanation of wich awns were measured.

REPRESENTATIVE SPECIMENS (*Carex inconspicua* Steudel)

ARGENTINA. Prov. La Rioja: Dpto. Famatina, Vega de la Hoyada, 20 Jan. 1908, Jiménez s.n. (CORD. MIN, MO).

CHILE, VII REGION. Prov. Talca: Laguna del Maule, 3 Jan. 1972, Zöllner 5959 (CONC). VIII REGION Prov. Concepción: Cerro Caracol, 3 Jan. 1941, Gunckel 13673 (CONC). Prov. Ñuble: entre Chillán et Termas de Chillán, 28 Dec. 1993, Charpin *et al.* 23896 (G, MIN). IX REGION. Prov. Cautin: Maquehue, 26-29 Dec. 1903, Elliott 212 (BM); Temuco, 3 Dec. 1942, Gunckel 13902 (CONC); Cerro Ñielol, 10 Nov. 1949, Gunckel 24906 (CONC); Truf-Truf, 20 Dec. 1947, Gunckel 26597 (CONC); Maquehue, Dec. 1905, Middleton s.n. (BM, S); Cerro Ñielol, 5 Dec. 1934, Montero 2023 (CONC); Tolhuaca, Jan. 1908, Reiche s.n. (SGO); Cerro Ñielol, 27 Nov. 1947, Sparre 3228 (CONC, S, SGO). Prov. Malleco: Dpto. Victoria, Fundo San Elías, 29 Nov. 1947, Sparre 3279 (SGO). X REGION. Prov. Chiloé: Ancud, 4 Jan. 1924, E. Barros 104 (CONC); San Carlos de Chonchi, 1836, Gay 238 (SGO). Prov. Llanquihue: Puerto Varas, 20 km hacia Ensenada, 20 Jan. 1971, Gasto & Gajardo 38 (CONC); Puerto Montt, Los Alerces, 3 Feb. 1960, Saa s.n. (CONC). Prov. OSORNO: Trumao, Jan, 1932, Hollermayer 1315 (CONC); Hacienda Rupanco, Apr. 1943, Melland 208 (CONC); Puyehue, 30 Oct. 1964, Ramírez 209 (CONC); Tres Esteros, cerca del Río Negro, 15 Dec. 1940, Rudolph s.n. (CONC). Prov. PALENA: San Ignacio de Huinay, s.d., Zöllner 10790 (CONC). Prov. Valdivia. Estancilla, 23 Nov. 1937, Andreas s.n. (CONC); Valdivia, 7 Nov. 1899, Buchtien 2695 (BM,S, SI, UPS); Valdivia, s.d., Gillies 834 (K); Corral, Amargos, 10 Dec. 1929, Gunckel 1188 (CONC); Corral, Cerro de la Virgen, 28 Oct. 1934, Gunckel 2574 (CONC); Corral, Quebrada del Bolsón, 2 Nov. 1931, Gunckel 2595 (CONC); Corral, Quebrada La Aguada, 15 Dec. 1931, Gunckel 2877 (CONC, H); Los Guindos, 28 Jan. 1941, Gunckel 11542 (CONC); Corral, Chaihuin, 3 June 1935, Gunckel 15620 (CONC); Guallihuapi, 23 Dec. 1947, Gunckel 16997 (CONC); Llancacura, 21 Dec. 1947, Gunckel 17036 (CONC); Corral, Mal Paso, 6 Nov. 1930, Gunckel 17821 (CONC); Valdivia, Dec. 1961, Gunckel 37568 (CONC); Corral, Niebla, Sep. 1928, Gunckel 39582 (CONC); Corral, Morro Gonzalo, 4 Dec. 1938, Gunckel 40350 (CONC); Cuesta de Sota, 9 Dec. 1963, Gunckel 41425 (CONC); Isla Macera, 21 Oct. 1933, Gunckel 41757 (CONC); Panguipulli, 7 Apr. 1920, Hollermayer 373b (CONC); Riñihue, 6 Dec. 1958, Kunkel 311 (CONC, partim); Corral, 1857-58, Krause s.n. (SGO); Valdivia, 1 Nov. 1850, Lechler 399 (syntype: P; iosyntype: GH); Arique, Nov.1854, Lechler 3212 (K, P); Fundo Mirador, 15 Nov. 1966, Montaldo 4269 (CONC); Ñadi de Punahue, 10 Nov. 1965, Montaldo s.n. (CONC); Huidif (Riñihue), Dec. 1970, Mujica s.n. (CONC, partim); San Juan, Nov. 1852, Philippi 304 (BM, F, K, S, SGO, UPS); Cordillero Pelada, el Mirador, 7 Feb. 1972, Zöllner 5471 (CONC).

FIG. 4. Map of southern South America showing the generalized distribution of *Carex inconspicua*. A. detailed map of the stippled area is given in Fig. 5.

ACKNOWLEDGEMENTS

This study is based on specimens from BM, CONC, CORD, F, G, GH, H, K, MICH, MIN, MO, P, S, SGO, SI, and UPS; to the directors and curators of those herbaria we are very grateful for the loan of specimens. The personal herbarium of Otto Zöllner was also used extensively during this study. Finally, we wish to thank S.M. Nilo for the drawings of *C. distenta* and *C. inconspicua*.

LITERATURE CITED

BARROS, M. 1947. Cyperaceae: Scirpoideae, Rhynchosporoideae, Caricoideae. *In*: H.R. Descole (ed.). Genera et Species Plantarum Argentinarum. Tomus IV (II). pp. 259-539. Tucumán: Fundación Instituto Miguel Lillo.

_. 1969. Cyperaceae. *In*: M.N. Correa (ed.). Flora Patagónica, Parte II, Typhaceae a Orchidaceae (exceptio Gramineae). Colect. Cient. Instituto Nacional de Tecnología Agropecuaria 8: 38-92. Buenos Aires.

CRINS, W.J., AND P.W. BALL. 1988. Sectional limits and phylogenetic considerations in *Carex* section *Ceratocystis* (Cyperaceae). Brittonia 40: 38-47.

JERMY, A.C., A. O. CHATER, AND R.W. DAVID. 1982. Sedges of the British Isles. BSBI Handbook N° 1 Botanical Society of the British Isles, London.

KÜKENTHAL, G. 1899. Die *Carex*-Vegetation des aufsertropischen Südamerika (ausgenommen Paraguay und Südbrasilien). Bot. Jahrb. Syst. 27: 485-563.

_. 1909. Cyperaceae: Caricoideae. *In*: A. Engler (ed.). Das Pflanzenreich, IV. 20. Heft 38. pp. 1-824. Leipzig: Wilhelm Engelmann.

LÉVEILLÉ, H. 1915. Les *Carex* du Chili. Revista Chilena Hist. Nat. 19: 93-117.

MANHART, J.R. 1990. Chemotaxomy in the genus *Carex*. Canad. J. Bot. 68: 1457-1472.

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*. *In*: A. Cabrera (ed.). Flora de la provincia de Buenos Aires. pp. 318-338. Buenos Aires: Colec. Cient. Inst. Nac. Tec. Agrop.

STEUDEL, E.G. VON. 1855. Synopsis Plantarum Glumacearum. Vol. 2. Stuttgart.

WHEELER, G.A. 1988a. Taxonomic notes on *Carex* (Cyperaceae) of austral South America. Aliso 12: 97-102.

_. 1988b. The distributions of *Carex acaulis* Urv., *C. barrosii* Nelmes, and *C. macrosolen* Steudel (Cyperaceae) in austral South America. Taxon 37: 127-131.

TABLE 1. A selected morphological comparison of *Carex inconspicua* and *C. distenta* in South America.

Characters	*C. inconspicua*	*C. distenta*
Staminate scale apex	truncate or emarginate, with a scabrous-ciliate awn up to 2.3 mm long	obtuse or subacute, with little or no awn
Pistillate scale shape	oval to ovate	ovate to lanceolate
Pistillate scale apex	truncate or emarginate, with a scabrous-ciliate awn up to 3.8 mm long	subacute to acuminate, with an awn less than 1 mm long
Perigynium	ovate	narrowly ovate to lanceolate
Perigynium beak	often strongly recurved	straight or sometimes Slightly recurved
Achene shape	elliptical to slightly obovate	elliptical to oblong
Stigmas (mm)	0.5-1.4	1.2-2
Anthers (mm)	1.2-2(-2.4)	1.8-3
Anther color	brownish	reddish brown

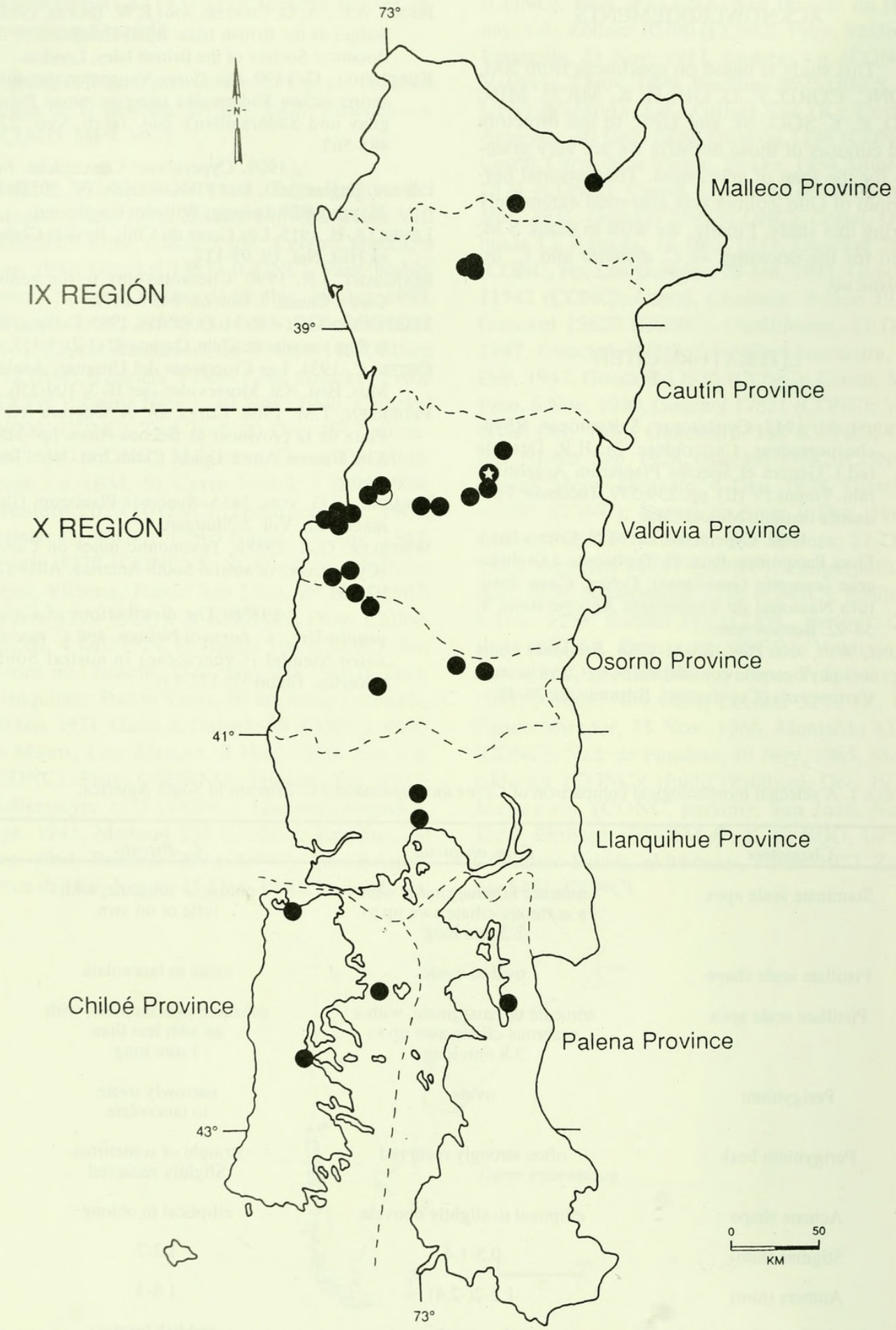

FIG. 5. Map of the distribution of *Carex inconspicua* in IX and X Regions of Chile: open circle indicates lectotype locality; starred circle indicates the only known locality for the natural hybrid *C. barrosii* x *C. inconspicua*.

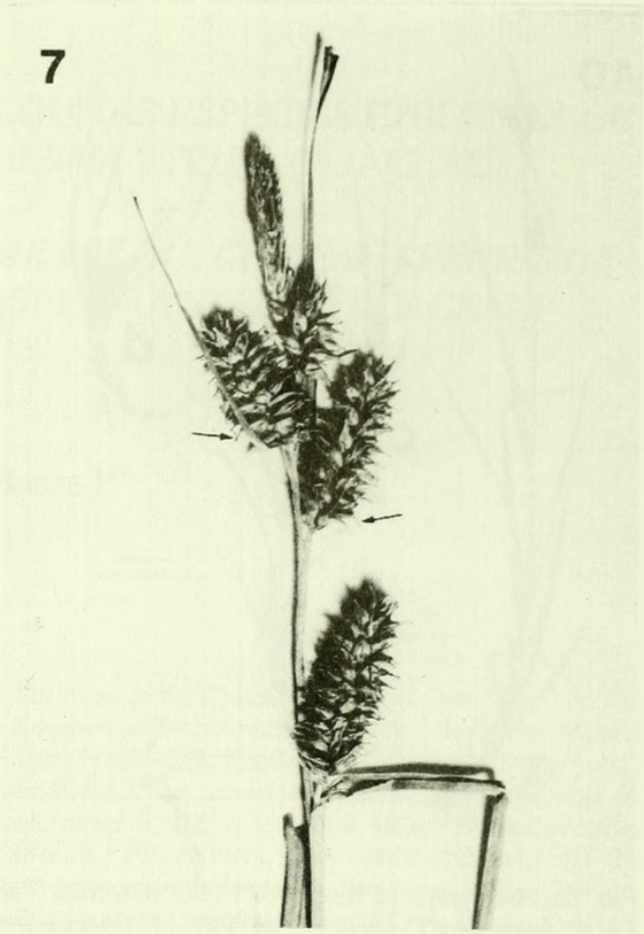

FIG. 6. *Carex inconspicua*. Photograph of Gunckel 41425 (CONC), from Valdivia Province, Chile. FIG. 7. *Carex inconspicua*. Inflorescence (plant from Cautín Province, Chile), from Middleton s.n. (S). Arrows point to recurved beaks. FIG. 8. *Carex inconspicua*. Photograph of Lechler 695 (GH, sinistral), isolectotype; and Lechler 399 (GH, dextral), isosyntype. Both collections from Valdivia Province, Chile. FIG. 9. *Carex inconspicua*. Photograph of Jiménez s.n. (MO), from La Rioja Province, Argentina.

FIG. 10. Photograph of Kunkel 311 (CONC), from Valdivia Province, Chile: a. *Carex inconspicua*; b. *C. barrosii*; c,d. *C. barrosii* x *C. inconspicua*. FIG. 11. *Carex barrosii* x. *C. inconspicua*. Inflorescence of plant "d" shown in Fig. 10.