

NOTES ON THE NOMENCLATURE OF SOUTH AMERICAN SPECIES OF *SCIRPUS*

By ALAN A. BEETLE *

In general the names applied to *Scirpus* are now well understood and stable in the literature. The genus, however, because of the large number of species involved and their tendency to intercontinental distributions, requires more than a regional viewpoint for the satisfactory solution of some of its nomenclatorial problems.

SUBGENERA

Barros (1947, *Genera et Species Plantarum Argentinae* 4 (1): 1-530. illus.), who has labored long and successfully to bring about a clearer understanding of Argentine sedges, accepts *Isolepis* as a subgenus following Pax in "*Die Natürlichen Pflanzenfamilien*", basing the distinction on the presence or absence of perianth bristles. The artificiality of this division is at once recognized from the key of Barros, which separates into different subgenera the same species (cf. *S. californicus* var. *spoliatus*, placed in subgenus *Isolepis* and *S. californicus* in subgenus *Eu-Scirpus*).

The reason for acceptance of leafy species as primitive in the genus have been discussed (Beetle, 1946, *Amer. Journ. Bot.* 33:660-666.), and based on this premise the genus may be divided into two natural subgenera as follows:

Stems leafy; involucre bracts leaf-like.

Subgenus **Eu-Scirpus** Pax

Cauline leaves greatly reduced, involucre bracts not leaf-like, often only one and appearing to be an extension of the stem. Subgenus **Aphylloides** Beetle

CONSPECTUS OF THE SECTIONS

The sections to which the South American species belong may be found by consulting Beetle, A.A., 1949, *Annotated list of original descriptions in Scirpus. American Midland Naturalist* 41:453-493. The sections are here treated in the same order that they are keyed out in *North American Flora* 17: pt. 8, pgs. 481-504. 1947.

SUBGENUS EU-SCIRPUS

1. Section OXYCARYUM (Nees) Beetle

South American representatives: *S. cubensis* Poepp. & Kunth,

* Associate Professor, University of Wyoming Laramie, Wyoming.

S. cubensis var. *gracilis* (Boeck.) Beetle (*S. cubensis* var. *paraguayensis* Kük.).

2. Section BOLBOSCHOENUS (Asch.) Beetle

Under the name *S. maritimus* L. Barros treats three species which may be keyed as follows:

A. Achenes lenticular, style 2-fid, scales light brown a. *S. paludosus*
A'. Achenes compressed to sharply trigonous, style 3-fid, scales dark brown or reddish.

B. Scales reddish; leaves commonly 8-10 mm broad.

b. *S. robustus*

B'. Scales dark brown, leaves normally not over 6 mm broad. c. *S. maritimus*

a. *S. paludosus* Nels. Argentina: Buenos Aires Prov., Partido de Junin, E.C. Clos 4027; Prov. Rio Negro, Juan de Garay (FCS) E.C. Clos 3565; and many other inland localities.

b. *S. robustus* Pursh. Argentina: Buenos Aires Prov., Partido de General Lavalle; San Clemente del Tuyú, A. L. Cabrera 4963 and A. Burkart 15670; Rincon de Viedma, Ringuélet 349.

c. *S. maritimus* L. Argentina: Buenos Aires Prov., Juancho, A. L. Cabrera 2695. Chile: Valdivia, Philippi 1895.

It is the opinion of the author, on the basis of distribution, that *S. robustus* and *S. maritimus* are introduced in Argentina but that *S. paludosus* is a part of the native flora.

3. Section TAPHROGETON Reich.

Not represented in South America. The type species of the genus, European *S. sylvaticus* L., falls into this section.

4. Section ANDROCOMA (Nees) Benth. & Hook.

A photograph of a plant from the Atacama Desert of Chile labelled "Type of *S. asper*" which was distributed by the Field Museum misled the author into believing that the common plant of South America in the Section Androcoma was wrongly called *S. asper*. After further study it appears that the photograph so labelled is not of the type of *S. asper* Presl and that the name is now properly applied. This places *S. subasper* Beetle in the synonymy of *S. asper* and necessitates the following transfer:

S. ASPER Presl var. **DIFFUSUS** (Beetle) Beetle, comb. nov.

Based on *S. subasper* Beetle var. *diffusus* Beetle, Amer. Jour Bot. 33: 661. 1945.

The plant wrongly labelled "Type" as mentioned above is *S. trachycaulus* Phil., a good species from the Atacama Desert.

Scirpus giganteus Kunth belongs in this section.

5. Section TRICHOPHORUM (Pers.) Darl.

Not represented in South America.

Section MONOCEPHALES Beetle.

Scirpus repens caespitosus, rhizoma tenue; culmo brevissima, foliosa, bracteis foliosis capitulum aequantibus.

This is the only Section of *Scirpus* which is endemic to South America and consists of four species, *S. deserticola* Phil (*S. semi-subterraneus* Boeck.); *S. acaulis* Phil. (*S. chubutensis* Clarke), *S. macrolepis* Phil., and the little known *S. thermalis* Spruce from Ecuador. Notice the similarity of the illustrations of *S. acaulis* and *S. chubutensis* as presented by Barros.

SUBGENUS APHYLLOIDES

6. Section BAEOTHRYON (A. Dietr.) Reichenb.

Scirpus atacamensis (Phil.) Boeck. (1870) and *S. hieronymi* Boeck. are (notice the illustrations of Barros) identical species. The types of both names represent the larger-scaled form illustrated by Barros under *S. hieronymi* Boeck.

Only other South American representative is *S. rigidus* (Steud.) Boeck.

7. Section ELEOGITON (Link.) Reichenb.

Only South American representative is *S. amazonicus* Beetle from Brazil.

8. Section ISOLEPIS (R. Br.) Griseb.

The three South American species in this section are *S. cernuus* Vahl, *S. inundatus* (R. Br.) Poir., and *S. ranco* (Steud.) Beetle, Amer. Midl. Nat. 41 (2): 484. 1949, based on *Cyperus ranco* Steud. Syn. Pl. Glum. Pars. II. Cyperaceae 315. 1855, a name which replaces *S. perpusillus* Boeck.

9. Section ACTAEOGETON Reichenb.

Not represented in South America.

10. Section SCHOENOPLECTUS Reichenb.

Scirpus chilensis Meyen, Reise Erd. 1:380. 1834, nomen; et Nees & Meyen, Linnaea 9: 293. 1834, nomen; Nees in Meyen, Act. Acad. Cur. 19:93. Suppl. 1843. is an earlier name for *S. olneyi* Gray, Bost. Jour. Nat. Hist. 5:238. 1845.

The South American material of *S. nevadensis* Wats. may be called *S. nevadensis* Wats. var. *remireoides* (Griseb.) Beetle, Amer. Jour. Bot. 33:663. 1946.

In the herbarium of the Instituto de Botanica Darwinion are two North American collections of *S. americanus* Pers. annotated by Barros as var. *longibracteatus* Osten & Barros, the one from Ohio (E. Wilkinson in 1905), the other from Georgia (Biltmore Herb. 3316d). Both of these fall within the range of typical *S. americanus* Pers. and

are characterized (as is the type) by reddish scales, 2-fid style, few culm leaves as contrasted with much of the South American material (which is also annotated as var. *longebracteatus*) which has chocolate-colored scales, 3-fid style, and several culm leaves and which may be called var. *polyphyllus* (Boeck.) Beetle. This varietal name dates from 1870, being based on *S. pungens* var. *polyphyllus* Boeck. *Linnaea* 36:709.

11. Section PTEROLEPIS (Schrad.) Endl.

Although both Barros and Beetle have agreed on the validity of *S. californicus* (Mey.) Steud. var. *tereticulmis* (Steud.) there remains to be resolved the delicate question of to whom the combination should be credited, i.e. (Steud.) Beetle, *Madroño* 6:48. 1941 or (Steud.) Barros, *Lilloa* 1:69. 1937. Barros, himself, accepted the first of these two combinations, i.e. (Steud.) Beetle (cf. *Darwiniana* 6:126. 1942) although the reference is to a later paper than the one listed above. In changing his mind in the *Gen. & Sp. Pl. Arg.* (1947) Barros refers to the following statement made in the original description of *Scirpus californicus* var. *spoliatus*: "Su semejanza con la var. *tereticulmis* es tal que sólo la falta de escamas hipóginas lo distingue de ella." That Barros would not usually consider this sufficient reference to make a valid combination is shown by his acceptance of *Bulbostylis consanguinea* (Kunth) Clarke (rejecting (Kunth) Nees in Mart. *Fl. Bras.* ii. I. 84, in obs. 1842) as well as his acceptance of *Bulbostylis hirtella* (Schrad.) Urban, again rejecting (Schrad.) Nees, op. cit.

Section HOLOSCHOENUS K. Koch.

Scirpus ellychniarius (sic!) Molina, G. I. *Saggio sulla storia Naturale del Chili* 1:153, 349. 1782 (the only species of the genus that he described) was characterized as "*Scirpus culmo tereti nudo, spicis globosis quaternis*" and was used as wicks for candles because they gave off no smoke (a use overlooked in Beetle, 1950. *The Bulrushes and their multiple uses. Economic Botany* 4:132-138.). It was at first this author's opinion that this name belonged to the South American plant which has been passing under the name of the Australian *S. nodosus* R. Br.

Philippi, R. A. (1863. *Anal. Univ. Chile* 22:69-741, cf. pgs. 720-721) refers to *Scirpus ellychniarius* as a species of *Cyperus*, an unlikely disposition since few, if any, of the regional species of *Cyperus* are "nudo" whereas many are in *Scirpus*. Hauman, L. (1923. "*Notes sur le Saule sud-Américain et sur la valeur des espèces botaniques de Molina*", *Physis* 7:72.) adds another spelling to an already confused name as follows: "*Scirpus ellycherianus* (p. 53): Clarke, *Cyp. Chile* p. 2 dit: décrit de telle sorte que personne n'a

été capable de découvrir ce que c'était." It seems best to let the name rest as a nomen dubium.

This means that the plant which has been passing as *S. nodosus* R. Br. in Chile is undescribed. This plant has brown, plano-convex achenes which are readily distinguishable from the black trigonous ones of *S. nodosus*. True *S. nodosus* R. Br. is beautifully illustrated in Rich. Voy. Astral. Bot. 2:104. 1832, cf. plate 18.

SCIRPUS MOLINIANUS sp. nov.

Perennis; culmi leves, tereti, nudi; basi vaginatis, vaginis rubidis; spiculis glomeratis; involucri bracteis 1-2 cm longis; squamis usque ad 2,25 mm longis; stylo trifido; achenio 1 mm longo, brunneo.

Perennial from short rootstocks, culms smooth, terete, naked, the bladeless sheaths reddish, especially above; spikelets many, congested; subtending bract short (1-2 cm long); scales 2.25 mm long, strongly keeled, dark reddish, especially above; achenes 1 mm long, brown, plano-convex (obtusely trigonous); style 3-fid.

Type: Chile: 2 km n. of Valparaíso, Feb. 16, 1939, A. A. Beetle 26104 (in Rocky Mountain Herbarium, U. of Wyoming, Laramie, Wyoming) type number also in the Darwinion. Paratype: Chile: Viña del Mar, Feb. 20, 1939, A. Burkart 9382 (Darwinion).

NAMES IN ISOLEPIS

Philippi was the only South American to accept *Isolepis* R. Br. as a valid genus in the Cyperaceae. He clung to the belief in its validity even after Boeckeler (1869-70 in his "*Die Cyperaceen des Königlichen Herbariums zu Berlin*") has satisfactorily proven its artificiality.

The genus was based as follows: "*Habitus Scirpi, a quo differt defectu setarum hypogynarum*". There follows a summary of South American names in *Isolepis* that are closely related to *Scirpus* and which continue to be troublesome in the literature:

Isolepis acaulis Phil. ex Boeck. in Linnaea 36: 440. 1870. — *Scirpus acaulis* Phil. *

I. albescens Dextr. in C. Gay, Hist. físic. y polít. Chile 6: 188. t. 70. fig. 2. 1853. — *Scirpus inundatus* (R. Br.) Poir. (Barros!).

I. andina Phil. Anal. Mus. Nac. Chile 79. 1891. — *Eleocharis pauciflora* (Lightf.) Link.

I. angachillensis Steud. in Boeck. Flora 42: 448. 1839. — *Scirpus inundatus* (R. Br.) Poir.

I. atacamensis Phil. Fl. Atacamensis 53. 1860. — *Scirpus atacamensis* (Phil.) Boeck.

(¡Barros!) means in agreement with Barros.

* means a change of opinion (based on examination of type material) over published disposition of the name by Beetle, A.A. 1945, Amer. Midl. Nat. 34: 723-734. wick see for a complete listing of the names in *Isolepis*.

I. brevis Brongn. in Duperrey, Voy. 180. 1829. — *Scirpus cernuus* Vahl (Barros!).

I. chlorotica Phil. ms. acc. to Clarke, Cyp. Chile; Bot. Jahrb. von Engl. 30: 27. 1901. — *Scirpus cernuus* Vahl.

I. deserticola Phil. Fl. Atacamensis 53. 1860. — *Scirpus deserticola* Phil.

I. gaudichaudiana Kunth, Enum. Pl. 2: 201. 1837. — *Scirpus inundatus* (R. Br.) Poir. (Barros!).

I. modesta Phil. Linnaea 29: 79. 1857-58. *Scirpus cernuus* Vahl.

I. nana Phil. Linnaea 29: 79. 1857-58. — *Scirpus cernuus* Vahl. (A sohr form — the type collection at Santiago, Chile, is mixed with a species of *Eleocharis*)*.

I. nigricans HBK. Nov. Gen. & Sp. 1:220. 1815. — *Scirpus inundatus* (R. Br.) Poir. (Barros!).

I. oreophila Phil. Anal. Mus. Nac. Chile 79. 1891. — *Scirpus nevadensis* Wats. var. *remireoides* (Griseb.) Beetle.

I. perpusilla Phil. Anal. Univ. Chile 555. 1873. — *Scirpus cernuus* Vahl.*.

I. trichocaulus Phil. Anal. Univ. Chile 93: 475. 1896. — *Scirpus inundatus* (R. Br.) Poir. (Barros!).

I. urvillei Steud. Syn. Pl. Glum. Pars. II. Cyp. 94. 1855. — *Scirpus inundatus* (R. Br.) Poir. (Barros!).