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## Floristic Studies in some species of *Scirpus* Linn. (Cyperaceae)

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### Abstract:

Present study is on our own critical observations on fresh plant material collected from the different parts. The observations are also based on herbarium specimens. Relevant data from literature have been referred for comparative study and conclusion including recent nomenclature. The study of *Scirpus* Linn provides a detailed taxonomic description, illustration and relevant information for its easy identification in the field. The genus *Scirpus* L. in broad sense appears to be a heterogeneous assemblage of ill-defined species. It includes all the scirpoid species left out from inclusion in other genera (Clarke, 1893).

Three species are collected and are described. The present report is hoped to provide basic material for further research in Cyperaceae.

**Key Words:** *Scirpus*, Cyperaceae, Floristic.

### Introduction:

As a part of floristic studies in Cyperaceae, species of *Scirpus* has been collected. On critical examination and perusal of literature, they were identified as *Scirpus articulatus* L., *Scirpus littoralis* Schrad., and *Scirpus praelongatus* Poir.

The characteristic features of the genus are spirally arranged glumes and style which is continuous with the ovary. These features, however, are not diagnostic or exclusive of the genus but are shared by other genera as well. Spirally arranged glumes for instans are characteristic for genera such as *Bulbostylis*, *Fimbristylis*, *Eleocharis*, *Fuirena*, *Eriophorum* and *Lipocarpha*. It is therefore necessary to employ other features such as involucre bracts, position and nature of inflorescence on the culms, presence and absence of hypogynous structures, habit etc. in the circumscription of different species. Thus it can be said that there is no satisfactory set of characters that can be employed for characterization of any one species. It is an overall assessment of certain prominent features and field experience that help to distinguish different species of the genus. (W. Khan, 2000)

The genus is comparatively large, comprising more than 200 species distributed throughout the world and represented by over 25 species in India (Clarke, 1893). In present paper, three species are collected and described.

### Taxonomic Treatment:

***Scirpus articulatus*** L. Sp. Pl. 47. 1753; Clarke in Hook. f. Fl. Brit. India 6: 656. 1893 partly, et in Ill. Cypr. t. 49. f. 1-2 (Partly) 1902; Cooke Fl. Pres. Bomabay 2: 891. 1908(excl. descr.); Fischer in Gamble Fl. Pres. Madras (1931) 3:1666 (repr. ed.)1994. partly. Kern in Steenis Fl. Malesiana 1.7(3):513.1974; W. Khan in Naik Fl. Marathwada 2:966.1998. (excl. descr.) et in J. Rheede 10 (1): 25. 2000. *Schoenoplectus articulatus* (L.) Palla. Bot. Jahrb. Syst.

10:229.1888. Karthik. et al Fl. Indic. En. Monocotos:68.1989. Hopper in Sald. and Nicol. Fl. Hassan Dt. 697. 1976; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:222.1985; L'narsimhn in Sharma et al Fl. Maharashtra :357.1996; Brahman & Saxena Fl. Orissa : 4.2203.1996. Pullaiah & Hanumanth.Cypr. in Fl. Andhra Pradesh 3:1107.1997. Cook CDK Aq. & Welt. Pl. India:175.1996. Hayasaka E. in J. Japan. Bot. 78(2):69.2003. W. Khan in Bioinfolet J. 5 (3): 294 - 305. 2008.

var. **articulatus**

Densely tufted perennial, 10-40 cm tall; rhizome very short or obscure; stems many, terete 6-8 mm wide spongy, fistular, hardly compressed, septate, when dry. Leaves: sheaths subdistichous, membranous, striate; mouth oblique with obtuse limb; blades ultimately reduced to sheaths. Inflorescence: simple, pseudolateral sessile, capitate heads, usually below the middle or just above the mouth of sheaths, with often 10-20 spikelets; involucre bracts solitary, stem-like, much longer than and as though continuation of the stems, often erect. Spikelets ellipsoid, 5-10 x 3.5-5 mm, sessile, greenish or tinged with brown, obtuse; rhachilla wingless. Glumes broadly ovate, 3.5-4 x 3-3.5 mm, deeply boat shaped; keel with a strong mid-nerve; sides with distinct many nerves, often brown linate, broadly hyaline on margins, subacute; stamens 3; anthers elliptic oblong, ca 1 mm long, mucous; bristles or scales absent. Style 3-fid. Nuts triquetrous, broadly-obovoid, 1.6-2 mm, smooth, thick angled, yellowish to brown apiculate. Common in marshes and small water bodies

Flowers and Fruits: November to March.

**Specimen examined:** T.N. Viluppuram Dist. on the way of Chennai to Pondicherry, *Shaikh R. I.* 746.

**Notes:** To be distinguished from its allies by the smooth nuts. However, the description provided by Cooke (l.c.) is probably preferable to *S. praelongatus* Poir. due to undulated nuts. Clarke (l.c.) description is partly referable to this species, as he takes *S. articulatus* in broad sense. The same is followed by Fischer (l.c.).

**Scirpus littoralis** Schrad. Fl. Germ. 1:42: t. 5. f. 7.1806; Clarke in Hook. f. Fl. Brit. India 6:659.1893; Cooke in Fl. Pres. Bombay 2:894.1908; W. Khan Fl. Marathwada 2:969.1998. *Schoenoplectus littoralis* (Schrad.) Palla, Sitzber. Zool. Bot. Ges. Wien 38: 49.1888; Brahman & Saxena Fl. Orissa: 4.2207.1996. Pullaiah & Hanumanth.Cypr. in Fl. Andhra Pradesh 3:1109.1997. subsp. **subulatus** (Vahl) W. Khan in J. Rheede 10 (1):28. 2000. *Scirpus subulatus* Vahl En. Pl. 2:268.1806. *S. littoralis* Schr. var. *subulatus* (Vahl) Chiovenda Istit. Bot. Catania 1:15.1928. *Schoenoplectus littoralis* (Schr.) Palla subsp. *subulatus* (Vahl) Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:157.1985; L'narsimhn in Sharma et al Fl. Maharashtra 2:363.1996.

Robust perennials, 40-120 cm tall. Stems terete, 3-7 mm wide, angular, glabrous. Leaves sheaths glabrous, basal, blade short, 15 cm long, 5-7 mm wide. Umbels simple or subcompound, solitary, involucre bracts, stem-like 5-10 cm long, continuation of a stems, primary 2-4 with few to many spikelets, the longest rays 3-4 cm long. Spikelets ovoid, oblong, 10 x 3-4 cm, solitary, brownish in the upper half, acute, rhachilla wingless. Glumes elliptic - oblong 3.5-4 x 1.6-2 mm spirally arranged, white hyaline, mid nerve very strong and prominent. Stamens 3, anther linear, 2 mm long, hypogynous scales 3-5, bright - red, longer than the nuts. Styles 2 fid, longer than the nuts. Nuts biconvex, obovate, suborbicular, 1.8-2 x 1.5 mm, pale - yellow to brownish, smooth, apiculate.

Common, along banks of rivers, margins of tank, and lake.

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Flowers and Fruits: December to March.

**Specimens examined:** A.P. Krishna Dist. Lonkavenidhibba, C. R. Mangesh, W. Anisdasan & P. Venu, 053(D.C.). Lankaveni dhibba, C. R. Magesh, W. Anisdason & P. Venu, 56 (D.C.); Nellore Dist. Akkarapaka, Shaikh R. I. 881.

**Notes:** To be distinguished from the typical var. *littoralis* by the terete stems as against trigonous in the latter.

**Scirpus praelongatus** Poir. Ency. Meth. Bot. 6:764.1804; Kern in Steenis Fl. Malesiana 1.7(3):514.1974 (under notes). W. Khan in J. Eco. Tax. Bot. 27 (suppl.) 1222. 2003. *Isolepis praelongatus* (Poir.) Nees in Wt. Contr. Bot. Ind. 108.1834. *Scirpus articulatus* auct. non L. Clarke in Hook. f. Fl. Brit. India 6:656.1893; Kern l. c. 513. *Scirpus articulatus* Roxb. Fl. Ind. 1:215.1820. *S. incurvatus* Roxb. l.c. 217. *Eleocharis incurvatus* (Roxb.) Schult. Mant.2:92.1824. *Holoschoenus incurvatus* (Roxb.) Dietr. Sp. Pl. 2:165.1833. *Holoschoenus subarticulatus* (Roxb.) Dietr. l.c.166. *Schoenoplectus praelongatus* (Poir.) J.Raynal Adansonia 2(16);148.1976. K. L.Wilson, Telopea 2:161.1981 S. K.Uniyal et al Cypr. Uttar Pradesh 62.1997. E. Hayasaka J. Jap. Bot. 78(2):67.69.2003.

Tufted annual, rhizome inconspicuous very short; stems 20-50 cm tall, smooth, striate, pale green to stramineous when dried 1.3-2 mm wide, nodeless or often 1-noded 0.5-3 cm above the base. Leaves: sheaths short, closed or scale like, thin-membranous, stramineous to pale brown, finely veined, apex subacute or obtuse, tubular, 4-6 cm long, blades absent. Inflorescence : pseudolateral, capitate with 4-25 spikelets, 0.7-1.5 cm across; involucre bracts solitary; stem-like, smooth, finely striate shorter towards apex, apex obtuse; spikelets, sessile, broadly ovoid or oblong-ovoid, subterete, 4-7 mm long 3-4 mm wide, stramineous, apex subacute or often obtuse, many flowered. Glumes ovate to broadly ovate, boat shaped 2.5-3.5 mm long, 1.5-2.5 mm wide, obtuse, lateral veins inconspicuous, midrib, thin. Stamens 3, style 3-fid, very slender. Nut obovate to broadly obovate, sharply trigonous, 1.2-1.6 mm long, sides concave dark brown at maturity. Common in marshes and old water bodies.

Flowers and Fruits: November to December.

**Specimens Examined:** T. N. Viluppuram Dist. Chennai to Pondicherry (on the way), Shaikh R. I. 739.

**Notes:** To be spelled as *praelongatus* (Hayasaka 2003). Kern (l.c.) provides description of this taxon under the name of *S. articulatus*. Highly variable habitually and in other vegetative features as well. Very smaller forms with slender 1.5-2.5 (3) mm broad stems and fewer smaller spikelets are not rare. These often confuse apparently with *S. jacobii* (as seen in few herbaria), but differs as shown in key. The septations of involucre bracts, not rarely exhibited by such variants are unlike those of the latter. Very robust specimens with up to 10 mm wide stems, up to 20 cm long sheaths sometimes approach superficially to var. *major* of *S. articulatus* but nut is undulated in *S. praelongatus*.

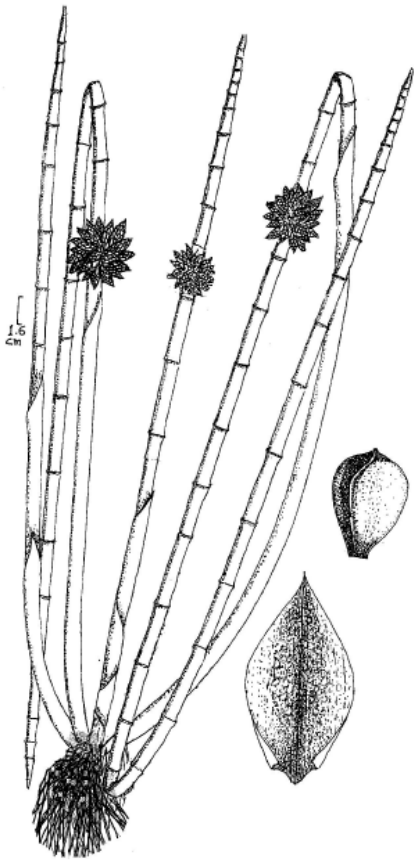


Fig. *Scirpus articulatus* (L.) var. *major* Boeck.  
A - habit, B - glume, C - nut

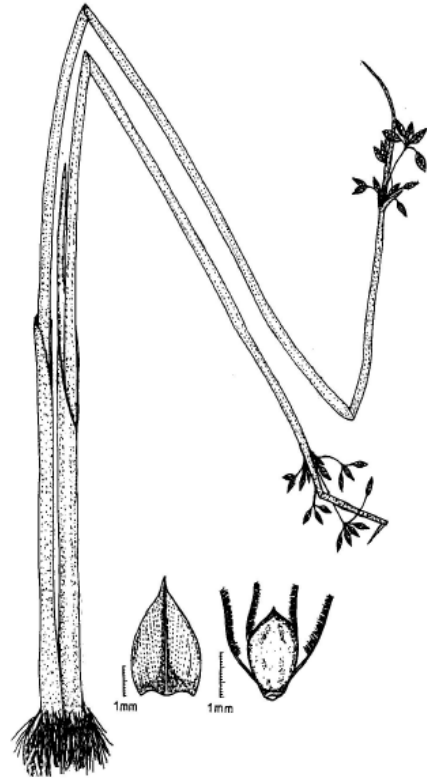


Fig. *Scirpus littoralis* Schrad.  
A - habit, B - glume, C - nut.

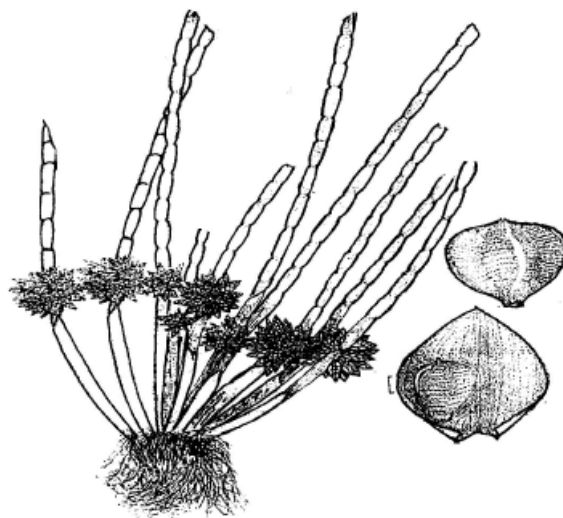


Fig. *Scirpus praelongatus* Poir A - habit, B - glume, C - nut.

### **Acknowledgements:**

The author is thankful to Dr. M. A. Wadoodkhan ex Reder and Head, Dept. of Botany, Herbarium of Cyperaceae, Majalgaon College Majalgaon (HCMCM) for the confirmation of identity of taxa and going through the manuscript. The Principal, Majalgaon College Majalgaon for laboratory and library facilities.

### **REFERENCES:**

1. Malhotra, C. L. 1985. A Note on *Scirpus cernus* Vahl in J. Econ. Tax. Bot. Vol. 7. No.2 471.
2. Fischer, C.E.C. 1928. Cyperaceae in Gamble, *Flora of Presidency of Madras*, Vol. 3. Adlard & Sons Ltd. London.
3. Koyama, T. 1958. Taxonomic Studies of the genus *Scirpus* L. J. Fac. Sci. Univ. Tokyo Sect. III 7:271-366.
4. Wadoodkhan, M. A. 1998. A New species of *Scirpus* from Deccan Plateau India. *Rheedea* 8 (1):71.
5. Prasad, V. P. and Singh, N. P. 2002. *Sedges of Karnataka (India) (Family Cyperaceae)*. Scientific publishers, Jodhpur.
6. Koyama, T. 1985. Cyperaceae In: Dassanayake and Fosberg (ed.) *Revised Handbook to the Flora of Ceylon* vol 5. Oxford and IBH, New Delhi.