

**FLORAE MALESIANAE PRECURSORES XIX**  
**NOTES ON MALAYSIAN AND SOME S.E ASIAN CYPERACEAE VI<sup>1)</sup>**

by

**J. H. KERN**

(Rijksherbarium, Leiden)

(Issued Oct. 2nd, 1958)

I. SCIRPUS ERECTUS POIR. AND *S. LATERIFLORUS* GMEL.

Although Clarke saw the type of *Scirpus erectus* Poir. in the Paris Herbarium he misapplied the name to a quite different species occurring in Madagascar, S. and E. Asia, and tropical Australia. Herein he was followed by Ridley, Merrill, Backer, and others. It has now generally been accepted that the correct name of this species is *Scirpus juncooides* Roxb. and that the name *Scirpus erectus* Poir. does not belong to its synonymy. After having examined the type of *S. erectus* I am convinced that the question was admirably cleared up by Chermezon (see Arch. Bot. 4, 1931, 26, and also in Humbert, Fl. Madag., fam. 29, 1937, 149). *Scirpus erectus* is much nearer to the European *S. supinus* L. than to *S. juncooides* Roxb. It differs from *S. supinus* by the larger spikelets, the larger, more distinctly mucronate glumes, the bristly appendage of the connective, the bifid style, and the larger, biconvex, only faintly wavy-ridged, elliptic or suborbicular nuts. It is an African species extending from the Mediterranean region through tropical Africa to Madagascar and Mauritius.

There can be no doubt that *Isolepis uninodis* Delile is conspecific with *Scirpus erectus* Poir. Delile's description is very accurate: "épis cylindriques, ovoïdes-lanceolés ... écailles ovales, aiguës ... deux stigmates ... graine lenticulaire, transversalement rugueux vers les bords." The differences with *Scirpus supinus* are clearly indicated: "ses graines [du *S. supinus*] sont ovoïdes-cunéiformes, trigones, ridées transversalement sur toute leur surface; ses styles sont trifides." Moreover, Delile's excellent figure leaves no doubt whatever on the identity of his species.

In Reinwardtia (vol. 4, 1956, 93) I pointed out that in my opinion S. T. Blake is wrong in citing *Scirpus erectus* Poir. and *Isolepis uninodis* Delile in the synonymy of *Scirpus lateriflorus* Gmel. (see Proc. R. Soc.

<sup>1)</sup> Part I in Reinwardtia 2, 1952, 97—130; II in Reinwardtia 3, 1954, 27—66; III in Blumea 8, 1955, 110—169; IV in Reinwardtia 4, 1956, 86—97; V in Blumea 9, 1958, 215—236.

Queensl. 62, 1952, 83—88). Like *Scirpus erectus*, *S. lateriflorus* is close to *S. supinus* L., from which it differs in having the stem one-noded above the base, (1—)2 involucreal bracts, one of the spikelets usually peduncled, nerveless sides of the glumes, a bristly appendage of the connective, and solitary flowers in the leaf-sheaths. In *Scirpus supinus* the stems are nodeless without basal flowers, the involucreal bract is always solitary, the inflorescence always capitate, the glumes are several-nerved, and the appendage of the connective is smooth. The differences for the discrimination between *Scirpus supinus* and *S. erectus* as indicated above, hold also good for *S. lateriflorus* and *S. erectus*. I did not find basal flowers in the specimens of *S. erectus* I examined.

I am returning to the subject as Raymond, in discussing some critical *Scirpus* species from Indo-China (in Nat. Canad. 84, 1957, 132), is of the opinion that there is absolutely no doubt that the names *Scirpus lateriflorus* Gmel., *Scirpus erectus* Poir., *Isolepis uninodis* Delile, and *Scirpus lateralis* Forsk. all refer to the same species, for which he accepts the name *Scirpus lateralis* Forsk. In my opinion the Indo-Chinese plant should be called *Scirpus lateriflorus* Gmel.; this species occurs in S. and E. Asia and Australia, but as far as is known it does not extend to Arabia, whence Forskål's *Scirpus lateralis* — a very doubtful species — was described.

The synonymy of *Scirpus erectus* Poir., as given by Chermeson, needs some minor corrections; also that of *Scirpus lateriflorus* Gmel., as far as known to me, is given below.

***Scirpus erectus* Poir.** in Lamk, Encycl. Méth. 6, 1804, 761; Chermeson, Arch. Bot. 4, 1931, 26; in Humb., Fl. Madag., fam. 29, 1937, 149; non Clarke, Fl. Br. Ind. 6, 1893, 656, nec auct. asiat. plur. — *Isolepis uninodis* Delile, Deser. Egypt. 2, 1812, 152, t. 6, f. 1; Flore d'Égypte, Expl. des Planches (1813) 8, t. 6, f. 1; Schult. in R. & S., Mant. 2, 1824, 62; Kunth, En. 2, 1837, 198. — *Scirpus uninodis* (Delile) Coss. & Dur., Fl. d'Algérie II, Phanér. (1867 vel initio 1868) 310; Trab. in Batt. & Trab., Fl. d'Alger, Monoc., 1884, 128; Fl. de l'Algérie, Monoc., 1895, 100; Beetle, Amer. J. Bot. 29, 1942, 656. — *Scirpus supinus* L. var. *digynus* Boiss., Fl. Or. 5, 1884, 380; non Boeck., Linnaea 36, 1870, 700. — *Scirpus supinus* L. var. *uninodis* (Delile) Aschers. & Schweinf., Ill. Fl. d'Égypte, 1887, 157 (n.v.); Clarke, Fl. Br. Ind. 6, 1893, 656, quoad basion., haud quoad specim. cit.; Fl. Trop. Afr. 8, 1902, 453.

***Scirpus lateriflorus* Gmel.**, Syst. Veg. 1, 1791, 127; S. T. Blake, Proc. R. Soc. Queensl. 62, 1952, 87. — *Scirpus lateralis* Retz., Obs. 4, 1786, 12; 5, 1789, 16; Raymond, Nat. Canad. 84, 1957, 132; non Forsk., Fl. Aeg. Arab., 1775, 15. — *Eleocharis tristachyos* Mor., Syst. Verz., 1846, 97; non *Scirpus tristachyos* Rottb. — *Isolepis ambigua* Steud. in Zoll., Syst. Verz. 1, 1854, 62, nom. nud.; non Steud., Syn. 2, 1855, 91. — *Isolepis oryzetorum* (err. typ. 'oryectorum') Steud., Syn. 2, 1855, 96. — *Isolepis uninodis* (non Delile) Miq., Fl. Ind. Bat. 3, 1856, 308. — *Isolepis* ? *juncoides* Miq., Fl. Ind. Bat. 3, 1856, 312. — *Scirpus supinus* (non L.) F.-Vill., Nov. App., 1882, 308; Clarke, Philip. J. Sc. 2, 1907, Bot. 99; Ridl., Mat. Fl. Mal. Pen. (Monoc.) 3, 1907, 79; Camus, Fl. Gén. I.-C. 7, 1912, 135 (etiam f. 17, 6?); Merr., En. Philip. 1, 1923, 118; Ridl., Fl. Mal. Pen. 5, 1925,

161; Back., Onkr. Suiker., 1928, 148, t. 148; Bekn. Fl. Java (em. ed.) 10, 1949, fam. 246, 12. — *Scirpus supinus* var. *uninodis* Clarke, Fl. Br. Ind. 6, 1893, 656; Philip. J. Sc. 2, 1907, Bot. 99, quoad specim. cit., non *Isolepis uninodis* Delile. — *Scirpus erecto-gracilis* Hayata, Ic. Pl. Form. 6, 1916, 114. — *Scirpus oryzetorum* (Steud.) Ohwi, Mem. Coll. Sc. Kyoto Imp. Un. B 18, 1944, 112.

## II. CYPERUS DIGITATUS VAR. KHASIANUS

*Cyperus digitatus* Roxb. var. *khasianus* (Clarke) Kern, comb. nov. — *Cyperus hookeri* Boeck., Linnaea 36, 1870, 308. — *Cyperus auricomus* Sieb. var. *khasianus* Clarke, J. Linn. Soc., Bot. 21, 1884, 189. — *Cyperus digitatus* Roxb. var. *hookeri* (Boeck.) Clarke, Fl. Br. Ind. 6, 1893, 618; J. Linn. Soc., Bot. 34, 1898, 40; Kük., Pflanzenr., Heft 101, 1935, 56; Kern, Reinw. 2, 1952, 99.

In Reinwardtia, l. c., I wrongly used the name *Cyperus digitatus* var. *hookeri* for this variety. As the earliest varietal epithet is *khasianus*, the correct name under *Cyperus digitatus* is *C. digitatus* Roxb. var. *khasianus* (Clarke) Kern.

## III. FIMBRISTYLIS HOOKERIANA

*Fimbristylis hookeriana* Boeck. was based on "*Fimbristylis* no 22, Mont. Khasia, leg. Hooker & Thomson." The Indian specimens of this species I have seen are very uniform and match the type collection in detail. They justify Boeckeler's remark "species insignis habitu peculiari". The leaves are about as long as the stems and 2—2½ mm wide, the relatively large inflorescence is compound or subdecompound with conspicuous rays, the involueral bracts are similar to the leaves and as long as or longer than the inflorescence, the glumes distinctly mucronate and 3½—4 mm long, the number of stamens is usually 2, the style (without stigmas) about 3½ mm long and ciliate nearly its whole length, the nut 1—1.25 mm long and 0.7—0.8 mm wide.

Recently I received a specimen of *Fimbristylis* collected in Cambodia by M. Schmid, which showed differences with typical *F. hookeriana* to such a degree that at first I supposed it might represent a separate species (see fig. 1). Its leaves are much shorter than the stems and only 1 mm wide, the inflorescence is capitate, consisting of 3—6 digitately arranged spikelets, the involueral bracts are very short, the glumes apiculate just below the apex and only 2½—3 mm long, there are 3 stamens, the style is only 2 mm long and quite glabrous. The somewhat smaller nuts (0.8—0.9 × 0.6 mm) agree with those of typical *F. hookeriana* in being minutely trabeculate by the transversely oblong, slightly impressed epidermal cells, and densely covered with pluricellular whitish papillae.

However, at about the same time I could study the cyperaceous collections in the Herbarium of the Royal Forest Department, Bangkok, among which I found some specimens intermediate between the Cambodia plant and typical *F. hookeriana*. For this reason I confine myself to calling attention to the variability of this interesting species.

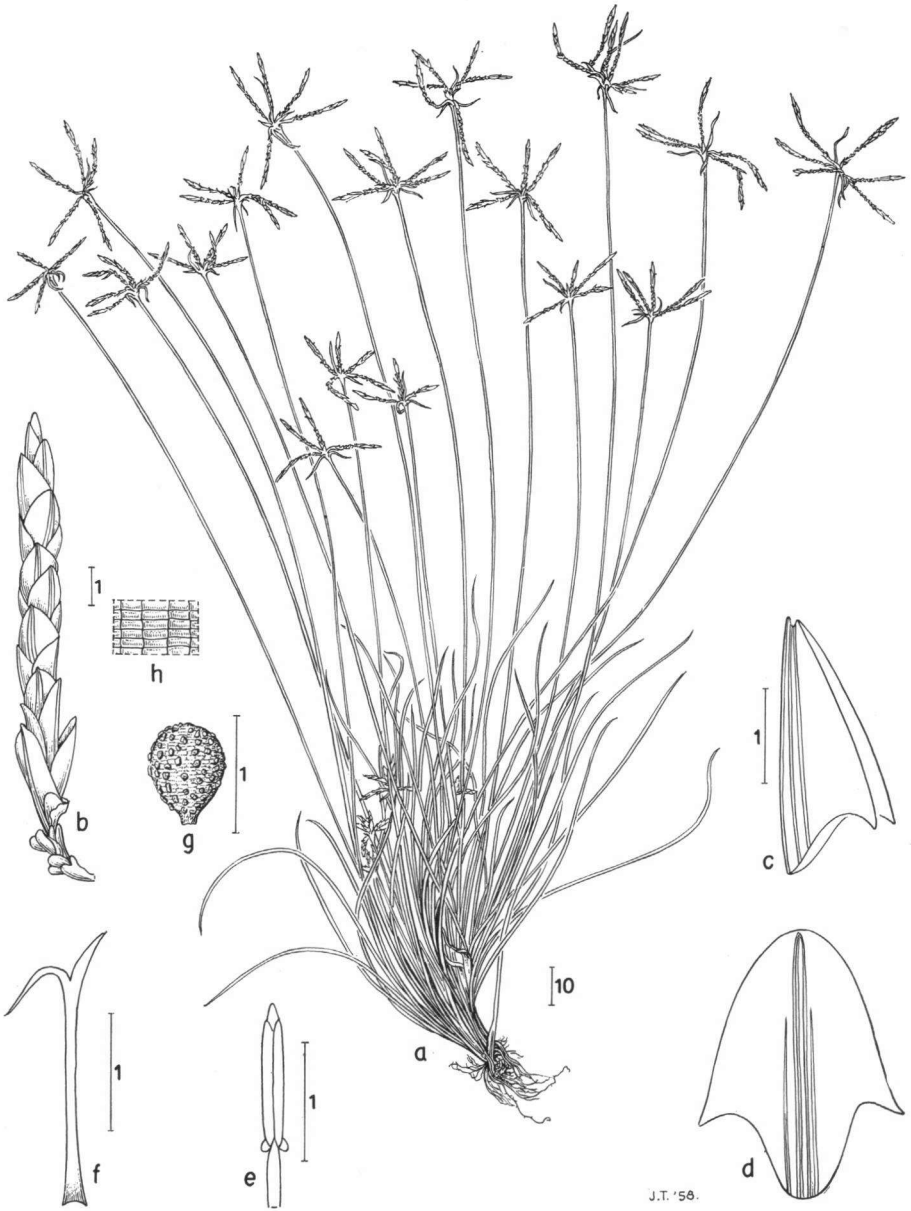


Fig. 1. *Fimbristylis hookeri* Boeck., var. — a. habit, b. spikelet, c, d. glumes, e. stamen, f. style, g. nut, h. epidermal cells of nut. (From Schmid 2472).

N.E. THAILAND. Loei, Phu Krading, 1300 m, common in open pine forest: *Dee 148* (= *RFD 4904*) (BKF, L); *Din 10* (= *RFD 3582*) (BKF, L); some locality and altitude, common in savannah on rock: *Smitinand 1949* (BKF, L).

CAMBODIA. Chaîne de l'Eléphant, Bokor, au voisinage de Kampot, 1000 m, rocailles dans le lit d'un ruisseau: *Schmid 2472* (L, P).

#### IV. LIPOCARPHA CHINENSIS

*Lipocarpa chinensis* (Osb.) Kern, comb. nov. — *Scirpus chinensis* Osb., *Dagb. Ostind. Resa*, 1757, 220. — *Scirpus senegalensis* Lamk, *Tabl. Encycl. Méth., Bot.* 1, 1791, 140. — *Hypolytrum senegalense* (Lamk) L. C. Rich. in *Pers., Syn.* 1, 1805, 70, non Clarke (1902). — *Hypaelyptum argenteum* Vahl, *En.* 2, 1806, 283. — *Hypolytrum argenteum* (Vahl) Kunth in H. B. K., *Nova Gen. et Sp. Pl.* 1, 1816, 218, quoad syn. — *Tunga laevigata* Roxb., *Fl. Ind.* 1, 1820, 188. — *Hypolytrum laevigatum* (Roxb.) Spreng., *Syst. Veg.*, ed. 16, 1825, 233. — *Lipocarpa laevigata* (Roxb.) Nees in Wight, *Contr. Bot. Ind.*, 1834, 92. — *Schoenus laevigatus* Roxb. ex Nees in Wight, l. c., in syn. — *Lipocarpa argentea* (Vahl) [Steud., *Nomencl.*, ed. 1, 1821, 485, in syn.] R. Br. ex Nees, *Linnaea* 9, 1835, 287. — *Hypaelyptum albidum* Willd. ex Kunth, *En.* 2, 1837, 266, in syn. — *Kyl-linga albescens* Steud., *Syn.* 2, 1855, 68. — *Hypaelyptum senegalense* (Lamk) K. Schum. in Engl., *Pflanzenw. Ost-Afr. C.*, 1895, 127. — *Lipocarpa senegalensis* (Lamk) Th. & Hél. Durand, *Syll. Fl. Congol.*, 1909, 619. — *Lipocarpa triceps* (non Nees) Camus in Lecomte, *Fl. Gén. I.-C.* 7, 1912, 144. — *Lipocarpa debilis* Ridl., *Trans. Linn. Soc.*, Bot. 9<sup>1</sup>, 1916, 243.

*Scirpus chinensis* Osb. was described as follows: "Scirpus (chinensis) culmo triquetro, subnudo, spicis ternis, sessilibus, terminalibus, involucreo diphylo, reflexo — et gräs med smala långa blad; det ena af dem som sitter wid axet är mycket långre än det andra. Figuren ses under namn af Motta pullu i Rhed. Hort. Malab. Tom. 12. p. 71. t. 38."

Vahl (*En.* 2, 1806, 259) cited this name in the synonymy of *Scirpus squarrosus* L. (1771), although it antedates Linnaeus's name. Raymond (*Nat. Canad.* 84, 1957, 123) therefore accepted *Scirpus chinensis* Osb. as the earliest name for *Scirpus squarrosus* L. The correctness of this procedure seemed doubtful to me, as one of the most striking characters to distinguish *Scirpus squarrosus* from similar small Cyperaceae is furnished by the stiffly erect (never reflexed) lowest involucreal bract.

A specimen undoubtedly representing part of Osbeck's collection of *Scirpus chinensis* is preserved in the Lund Herbarium. As appears from the annotations on the sheet it came into the hands of Dr Andreas Dahl. No other specimens being known, it has to be accepted as the lectotype of *Scirpus chinensis* Osb. Although it is rather poor there can be no doubt about its being conspecific with *Lipocarpa argentea* (Vahl) R. Br. ex Nees and *L. senegalensis* (Lamk.) Th. & Hél. Durand. The correct name of this species in *Lipocarpa* appears to be *Lipocarpa chinensis* (Osb.) Kern.

#### V. SCHOENUS DELICATULUS

*Schoenus delicatulus* (Fern.) Kern, comb. nov. — *Cladium filiforme* Merr., *Philip. J. Sc.* 5, 1910, 172; Kük. in Fedde, *Rep.* 51, 1942, 192, in

syn.; non *Schoenus filiformis* Lamk (1791), Thunb. (1794), R. & S. (1824). — *Mariscus delicatulus* Fern., Rhodora 25, 1923, 53. — *Schoenus falcatus* R. Br. var. *borneensis* Kük. in Fedde, Rep. 44, 1938, 25; Bull. Jard. Bot. Btzig III, 16, 1940, 304.

Kükenthal (1942, l. c.) pointed to the fact that *Cladium filiforme* Merr. belongs in *Schoenus* and is synonymous with *Schoenus falcatus* R. Br. var. *borneensis* Kük. Although it is certainly closely allied to *Schoenus falcatus*, I think it should be separated specifically from this on account of the striking differences especially in the nut.

In *Schoenus falcatus* the basal sheaths are dark purplish to black, the leaves up to 7 mm wide at the base, the spikelets 7—12 by about 2½ mm, always maturing several nuts, the perianth is represented by (1—)3 bristles about as long as the nut, the style is much longer than the stigmas, 3½—4 mm long, the anthers are about 3 mm long, the rufous nut is densely setulose at the top and distinctly scrobiculate by the wide, deeply pitted external cells.

*Schoenus delicatulus* can be distinguished by the brownish basal sheaths, the narrower leaves 2—4 mm wide at the base, the smaller spikelets (4—6 by about 1½ mm) with only a single fertile flower, the less numerous shorter glumes, the absence of hypogynous bristles, the shorter style (1½—2 mm, about as long as the stigmas), the shorter anthers (about 2 mm), and especially by the very different nut, which is quite smooth, shining milky white, slightly setulose at the top, with the epidermal cells minute and indistinct.

These differences are certainly much more conspicuous than those between *Schoenus falcatus* R. Br. and *S. punctatus* R. Br., which are generally accepted as specifically distinct.

I have seen the following collections of *Schoenus delicatulus*:

BORNEO. B. r. N. B. o. r. n. e. o, Mt Kinabalu, Marai Parai, 1500 m: Clemens 32382 (L; syntype coll. of *S. falcatus* var. *borneensis* Kük.); same locality and altitude: Holttum s.n. (SING).

PHILIPPINES. Palawan, Mt Victoria, 600 m, on rocks at base of a waterfall: Foxworthy BS 717 (P; type coll. of *Cladium filiforme* Merr.).

### Index to collector's numbers

The numbers between brackets refer to the paragraphs.

Clemens 32382 (V) — Dee 148 (III) — Din 10 (III) — Foxworthy BS 717 (V) — Holttum s.n. (V) — RFD Thailand 3582 (III); 4904 (III) — Schmid 2472 (III) — Smitinand 1949 (III).

### Index

The numbers refer to the paragraphs. New names are printed in bold type, synonyms in *italics*. Figures are indicated by an asterisk (\*).

*Cladium filiforme* Merr. V

*Cyperus auricomus* Sieb. var. *hasianus*

Clarke II

*digitatus* Roxb.

var. *hookeri* (Boeck.) Clarke II

var. *hasianus* (Clarke) Kern II

*hookeri* Boeck. II

*Eleocharis tristachyos* Mor. I

*Fimbristylis hookeriana* Boeck. III\*

*Hypaeliptum albidum* Willd. ex Kunth

IV

*argenteum* Vahl IV

*senegalense* (Lamk) K. Schum. IV  
*Hypolytrum argenteum* (Vahl) Kunth  
 IV  
*laevigatum* (Roxb.) Spreng. IV  
*senegalense* (Lamk) L. C. Rich. IV  
*Isolepis ambigua* Steud. I  
 ? *juncoides* Miq. I  
*oryztorum* Steud. I  
*uninodis* Delile I  
*uninodis* (non Delile) Miq. I  
*Kyllinga albescens* Steud. IV  
*Lipocarpa argentea* (Vahl) R. Br. ex  
 Nees IV  
*chinensis* (Osb.) Kern IV  
*debilis* Ridl. IV  
*laevigata* (Roxb.) Nees IV  
*senegalensis* (Lamk) Th. & H el.  
 Durand IV  
*triceps* (non Nees) Camus IV  
*Mariscus delicatulus* Fern. V  
*Schoenus delicatulus* (Fern.) Kern V  
*falcatus* R. Br. var. *borneensis*  
 K uk. V

*filiformis* Lamk V  
*laevigatus* Roxb. ex Nees IV  
*punctatus* R. Br. V  
*Scirpus chinensis* Osb. IV  
*erecto-gracilis* Hayata I  
*erectus* Poir. I  
*juncoides* Roxb. I  
*lateralis* Forsk. I  
*lateralis* Retz. I  
*lateriflorus* Gmel. I  
*oryztorum* (Steud.) Ohwi I  
*senegalensis* Lamk IV  
*squarrosus* L. IV  
*supinus* L. I  
 var. *digynus* Boiss. I  
 var. *uninodis* (Delile) Aschers. &  
 Schweinf. I  
*supinus* (non L.) F.-Vill. I  
*tristachyos* Rottb. I  
*uninodis* (Delile) Coss. & Dur. I  
*Tunga laevigata* Roxb. IV