

琉球大学学術リポジトリ

カヤツリグサ科の分類額研究 9

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TAXONOMIC STUDY OF CYPERACEAE 9*

Tetsuo KOYAMA**

§ 22. New or noteworthy species of the genus *Fimbristylis* from Micronesia.

(1) A plant of *Fimbristylis* collected in Palau Island, Hosokawa no. 6859, is considered to be a new species of *F. schoenoides* group. Dr. Hosokawa himself has determined this plant as *F. marianna* Gaudich. (= *F. tristachya* R. Br.), a widespread few-spiked species, in Trans. Nat. Hist. Soc. Formosa 25:261 (1935). At a glance this one resembles *F. tristachya* not a little especially in the colour and the texture of scales. However, as illustrated in Fig. 16, it can be clearly distinguishable therefrom in its much narrower scales with more conspicuous keel ending in a short upright mucro, and the brownish colour of achenes, besides its spikelets being narrower and longer than in *F. tristachya* R. Br. It is my pleasure to name this new sedge as *Fimbristylis Fosbergiana*, dedicating the epithet to Dr. F. Raymond Fosberg who studied the Micronesian Flora holding some new views as to the genus *Fimbristylis*.

Including this one, there are three species of *F. schoenoides* group very similar to each other, which are keyed below. *F. schoenoides* Vahl and *F. tristachya* R. Br. are very similar to one another, so that these two are sometimes regarded to fall under a same taxon, I, however, follow an opinion that these two are respectively an independent species from one another because the length of anthers are much different between the two.

- A. Umbel with usually 1 to 2 spikelets which are 3 to 4 mm across; scales less than 3 mm long; anthers 3/4 mm long; styles 1.5 mm long or shorter. *F. schoenoides* Vahl.
- AA. Umbel with 2 to 10 spikelets; scales more than 4 mm long; anthers about 2 mm long; styles 3 mm long or more.
 - B. Spikelets ovoid 5 to 6 mm across; scales very broadly oval of which keel not conspicuous; achenes white. *F. tristachya* R. Br.
 - BB. Spikelets oblong-cylindrical less than 2.5 mm across; scales elliptical with distinct keel; achenes brown when mature. *F. Fosbergiana*, n. sp.

Fimbristylis schoenoides (Retzius) Vahl, Enum. Pl. 2: 286 (1806); Ohwi in Mem. Coll. Sci. Kyoto Imper. Univ. Ser. B, 18: 76 (1944); T. Koyama in Contrib. Inst. Bot. Univ. Montreal No. 70, 44 (1957).

Distrib. India, Indo-China, throughout Malaysia, Formosa, Australia.

*) Part 8 was published in Acta Phytotax. et Geobot. 17 (4): 97-102. 1958.

In preparing this text, my heartfelt thanks are due to Miss Eiko Ôshiro, who has been always at hand with various aides and kindness.

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Fimbristylis tristachya R. Brown, Prodr. Fl. Nov. Holl. 226 (1810); Kern in Blumea 8 (1): 131 (1955).

F. marianna Gaudich. in Freyc., Voy. Bot. 413 (1826), excl. varr.; Merrill, Enum. Philip. Fl. Pl. 1: 124 (1923); Kuekenthal in Engler, Bot. Jahrb. 59 (1): 5 (1924); Kanehira in Journ. Dept. Agric. Kyushu Imp. Univ. 4 (6): 279 (1935), ex pte.; Ohwi in Journ. Jap. Bot. 18 (3): 133 (1942); S. T. Blake in Journ. Arn. Arb. 35 (2): 212 (1954) — *F. maxima* K. Schum. ex Schum. et Hollr., Fl. Kais. Wilh. Ld. 24 (1889); Volkens in Engler, Bot. Jahrb. 31: 458 (1902) — *F. marianna* Gaudich. var. *foenea* Kuekenthal in Fedde, Repert. 16: 432 (1920).

Caroline: Yap (C. Y. Wong 543!,* US), ibid. (G. Volkens 145!, US), ibid. (R. Kanehira 1148!, KYU) — Guam: Mt. Tenjo 900' (G. C. Moore 75!, US), ibid. (R. Rodin 535!, US). Distrib. Malaysia, Australia.

Fimbristylis Fosbergiana T. Koyama, spec. nova e grege *F. tristachyae* R. Br. a qua differt spiculis angustioribus longioribusque, squamis angustioribus, et nucis colore. (Fig. 16 & 17) — *F. marianna* (non Gaudich.): Hosokawa in Trans. Nat. Hist. Soc. Formosa 25: 261 (1935).

Perennis caespitans. Culmi graciles erecti 3 ad 6 dm alti medio circiter 1 mm crassi triquetri laeves basi *raginis* non vel brachyphyllis cincti. Folia linearia rigidula canaliculata 15–45 cm longa 1–1.2 mm lata plus minusve involuta saltem sursum margine minute scabra apice breviter acuta basi in *raginas* longiusculas basem culmi

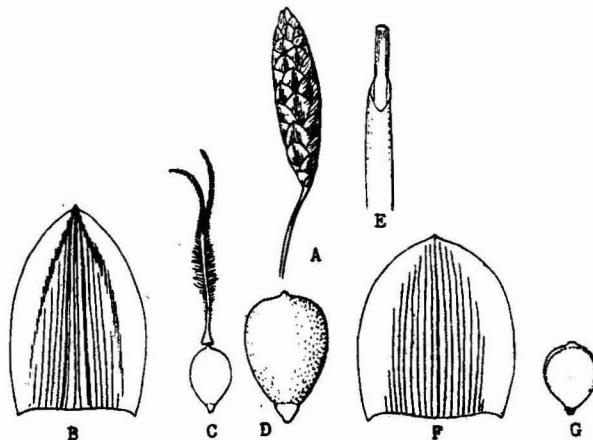


Fig. 16. A-E: *Fimbristylis Fosbergiana*, n. sp.

- A. Spikellet, $\times 7/2$. B. Scale, $\times 10$. C. Achene with style, $\times 10$.
 D. Achene, $\times 20$. E. Mouth of leaf sheath, \times ca 3.
 F, G: *Fimbristylis tristachya* R. Br. F. Scale, $\times 10$.
 G. Achene, $\times 10$.

*) I have been revising the known Micronesian Cyperaceae and the work is almost over. I am very grateful to Dr. Egbert H. Walker and Dr. Lyman B. Smith (United States National Herbarium), who were kind enough to have turned over me many Micronesian Cyperaceous specimens, which provided me with a greater part of the materials.

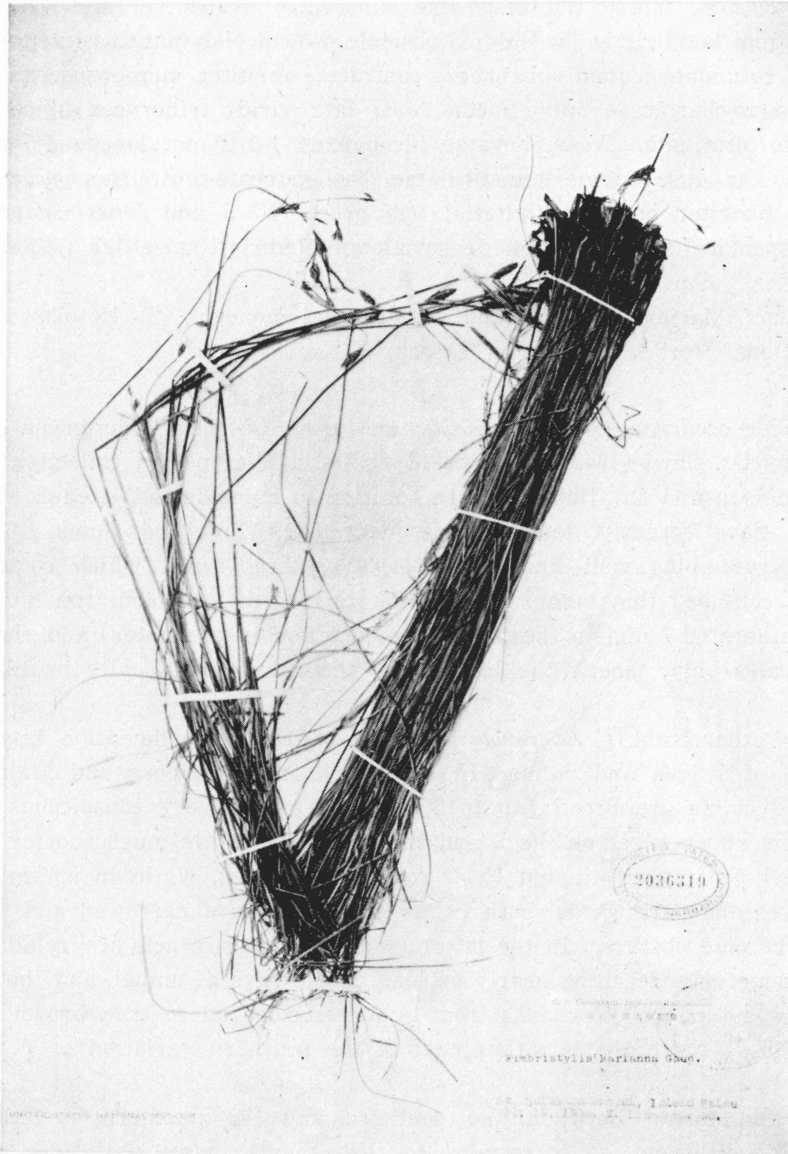


Fig. 17. Holotype of *Fimbristylis Fosbergiana*, n. sp.
kept in U. S. National Herbarium.

arcte circumdantes vix attenuantia, *ore* vaginae latiuscule auriculato fusco-membranaceo. *Anthela* simplex mediocris vel interdum partim composita per laxam 3-9-spiculigeram circiter 4cm longa ac lata; *bracteae* inferiores 1-2 (-3) setaceae usque breviter subfoliaceae quam radius suus subtriplo breviores suberectae; *radia* 3-4 oblique patentes compressae trigoni laeves usque ad 3.5 cm longi plerumque spicula unica terminati; *antherulae* 2-3-stachyae subbracteatae radiolis 1.5 cm longis. *Spiculae*

cylindrico-oblongae 8–15 mm longae 2–2.3 mm in diametro spisse pluriflorae fulvae nitentes. *Squamae* imbricatim dispositae suberectae ovaes vel late ovatae 4 mm longae 2.5 mm latae naviculares dorso obsolete 6–8-nerviae margine integrae sursum ad apicem rotundato-acutam subabrupte contractae tenuiter membranaceae lateribus utrinque sicco-chartaceae fulvo-tinctae, *costa* late viridi trinervosa apice mucrone breve recto terminata. *Nuces* obovatae biconvexae 1–1.2 mm longae 4/5 mm latae facie convexae fusco-fulvae punctulatae basi cuneato-contractae, *gynophoris* fere conspicuis breviter obconico-stipitatis; *styli* erecti 4.5–5 mm longi compressi basi subconico-spongiosi supra medium dense lateque fimbriati apice 1/3 (*stigmata*) bifidi fusco-papulosi. *Stamina* 2.

Holotype: Marian: Palau Island, Mt. Luisualumonogui. T. Hosokawa no. 6589! (U. S. National Herb.). Isotype in Taipeh.

(2) The occurrence of *Eimbristylis tainanensis* Ohwi in Micronesia has once reported by Dr. Ohwi (1942), when he identified a Micronesian collection made by Prof. Kanehira and Dr. Hatusima. In addition to Palau Island cited by Dr. Ohwi therein, I have recently detected this plant from Yap and Guam. The plant strikingly resembles well known *F. complanata* Link, with which some authors concerned confused this taxon. Indeed the former differs from the latter in the shorter anthers (0.7 mm in the former and 1.5 mm in the latter) and the slightly smaller scales only, though the leaves and the culms are usually broader in the former.

On the other hand, *F. complanata* Link has a very wide deviation especially in the width of leaves and culms. In specimens from Formosa and Malaysia, the compressed culms are broad (up to 5 mm wide) with very conspicuous wings at least on the upper edges on them, and the broad bracts are much shorter than the rays of umbel being terminated by a round short apex, while in specimens from the Ryukyus and northwards, both culms and leaves are narrower and the wings on culms become obscure. In the latter plants, however, bracts are relatively well elongate sometimes reaching nearly as long as the rays of umbel, and the colour of scales show a tendency to change from light rust-coloured to true brown deep. *F. tainanensis* Ohwi, therefore, is rather near to the southern variation of *F. complanata* Link.

The relationship between the southern and the northern variation of *F. complanata* Link seems to correspond to that among many variations under *F. dichotoma* Vahl one of the most widespead species. The characters tend to vary geographically to some extent, but the characteristic discontinuity is not conspicuous. The distinction between the southern and the northern variations of *F. complanata* Link has already been made by several authors concerned, but because the name *F. Kraussiana* Hochst ex Krauss which has been accommodated to the northern variation including Japanese plants, does not maintain *F. complanata* Link at all but is nothing else than *F. consanguinea* Kunth (cfr. Kern in Blumea 8: 111. 1955), a new name should be given to the Japanese plants when this is distinguished taxonomically from the typical species.

Fimbristylis complanata (Retzius) Link, Hort. Berol. Descrip. **1**: 292 (1827);
Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **18**: 63 (1944).

Scirpus complanatus Retzius --- *F. autumnalis* Roemer et Schultes var. *complanata*
(Retzius) Kuekenenthal.

var. **complanata**.

forma **complanata**.

Distrib. From India through Indo-China to Formosa and Malaysia.

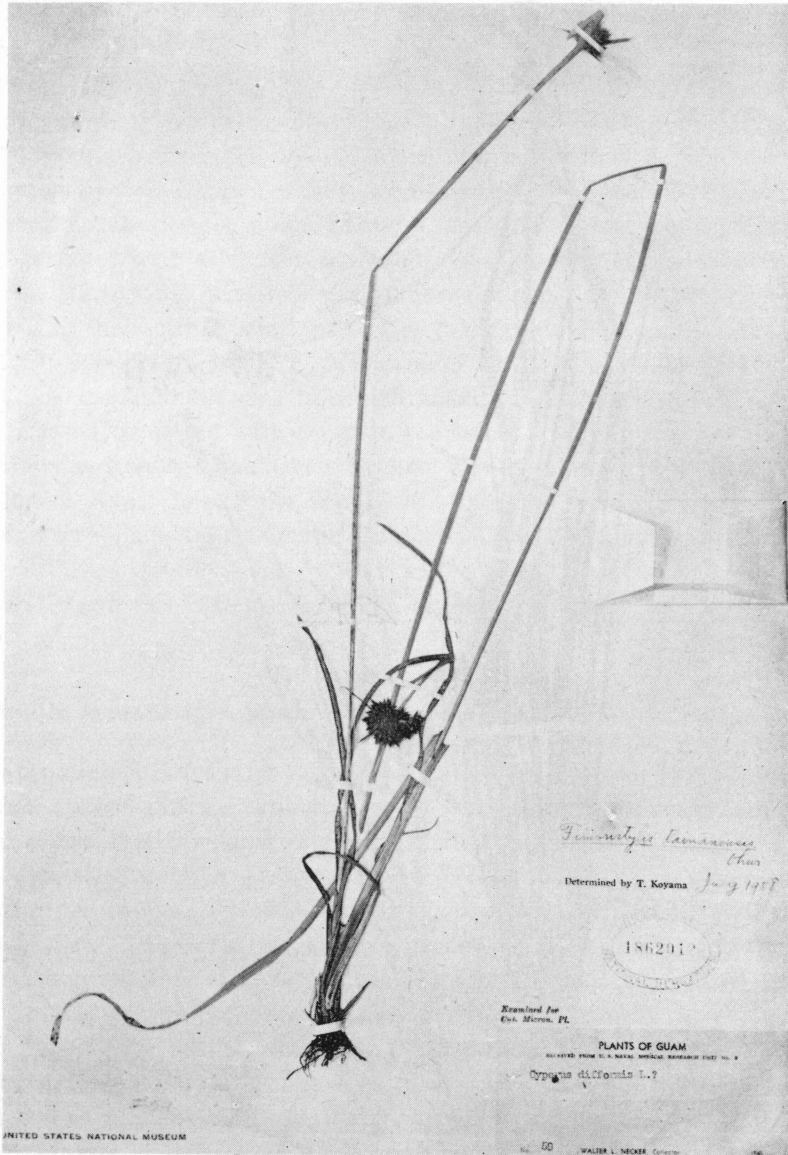


Fig. 18. *Fimbristylis complanata* Link var. *tainanensis*
Ohwi & T. Koyama from Guam.

forma **exalata** T. Koyama, forma nova differt a typo omnibus partibus minoribus tenuioribusque, culmis fere exalatis, squamis brunneo-vel rufo-fuscis.—*F. complanata* (vix Link): C. B. Clarke et auct. plur.—*F. complanata* Link var. *Kraussiana* (non C. B. Clarke, 1893): C. B. Clarke (1903) saltem pro pte. et auct. plur.

Holotype; Japan: Honshu. Morigami in Prov. Shinano. J. Ohwi no. 7557! (KYO).
Distrib. China, Ryukyus, Mainland of Japan.

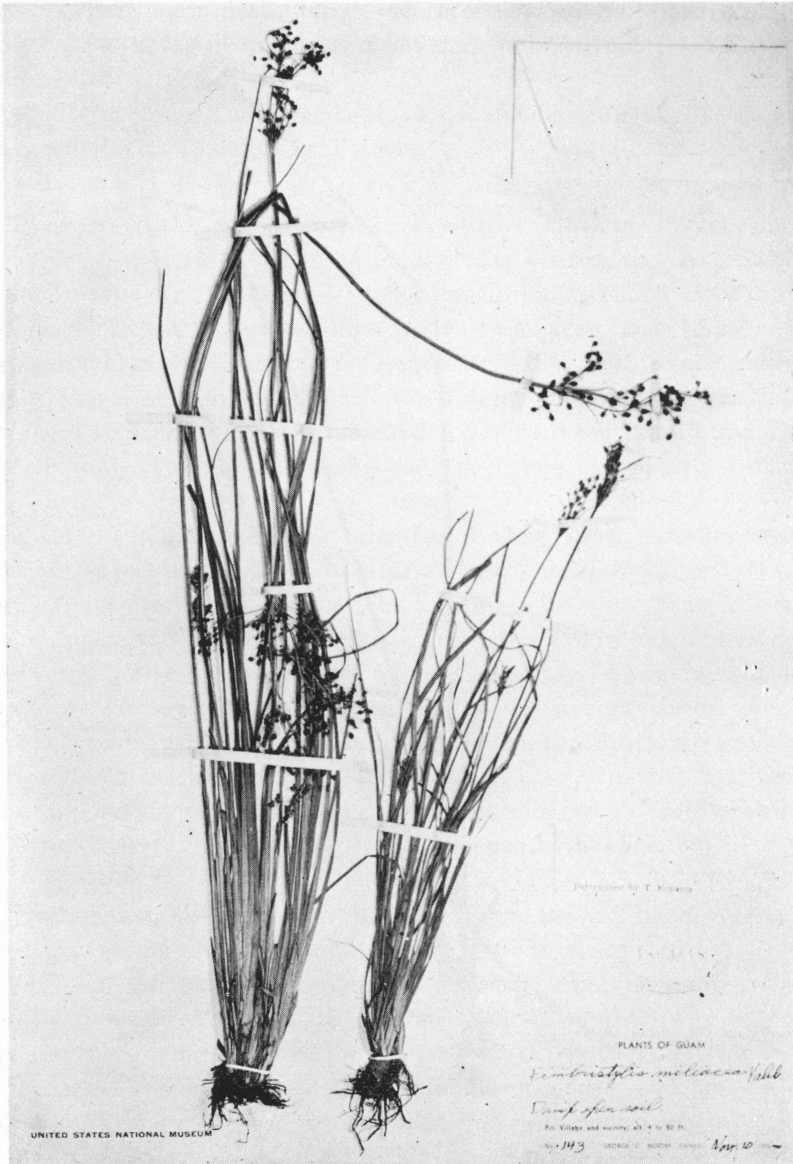


Fig. 19. *Fimbristylis Koidzumiana* Ohwi from
Guam Is. Micronesia.

var. **tainanensis** (Ohwi) Ohwi et T. Koyama, stat. novus. (Fig. 18)

F. tainanensis Ohwi in Journ. Jap. Bot. **14**: 574 (1938), ditto **18**: 133 (1942), et in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **18**: 63 (1944) — *F. complanata* (non Link): Volkens in Englers Bot. Jahrb. **31**: 458 (1902); Merrill in Philip. Journ. Sci. C, 9: 61 (1914) — *F. autumnalis* Roemer et Schultes var. *complanata* Kueckenthal in Englers Bot. Jahrb. **59**: 6 (1925), excl. basionym.

Palau: Aimiriik (Kanehira & Hatusima 4497!, KYU); Yap: (C. Y. Wong 3221, US); Guam: 2 km north of Agat (Walter L. Necker 59!, US), Mt. Lamlam 1000' (G. C. Moore 233!, US).

. Distrib. Southern Formosa (!.)

(3) *Fimbristylis Koidzumiana* Ohwi (Fig. 19) has been newly found in Guam Island. The data have been accepted by me examining specimens kept in U. S. National Herbarium cited below, where they were named *F. miliacea* Vahl. *F. Koidzumiana* Ohwi, hitherto known only from Formosa and Indo-China, belongs to the series Miliaceae together with other seven southern Asiatic species. All these are, in my opinion, specifically distinct from each other, but the classification is much complicated owing to their strong similarity (cfr. T. Koyama in Contrib. Inst. Bot. Univ. Montreal No. 70, 46-47. 1956). *F. Koidzumiana* Ohwi is separable from its nearest species, *F. miliacea* Vahl by dark brownish colour of spikelets which are relatively densely disposed compared with those in the latter.

Fimbristylis Koidzumiana Ohwi in Acta Phytotax. et Geobot. **1**: 78 (1932) et in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **18**: 70 (1944).

Guam: Piti village 4-50' (George C. Moore 143!, US), mouth of Ylig river (R. Rodin 765!, US).

Distrib. Formosa (Takao!), Ryukyus, mainland of Japan.

§ 23. On some sedges of *Carex sachalinensis* group.

Carex sachalinensis F. Schmidt sensu lato belongs to the most polymorphous species of Japanese Carices, its variations hitherto known being as many as 17. Among these plants, the specific status is often granted for the 7 plants, viz. *C. tenuinervis* Ohwi, *C. sikokiana* Franch. & Savat., *C. alterniflora* Franchet, *C. sachalinensis* F. Schmidt sensu stricto, *C. conicoides* Honda, *C. Fernaldiana* Lévl. & Van't., and *C. Duraliana* Franch. & Savat. The perigynia almost common in all members and the vegetative distinguishing characters such as the length of bracts, colour of basal leaf sheaths, nature of stolons etc. not tending to vary geographically make it very difficult to classify this common sedge. Recently, Dr. Ohwi in his elaborate work, Flora of Japan, has united almost all variant into one species of which the correct name is *C. sachalinensis* F. Schmidt. The variations still left in specific status therein by him are 4, *C. tenuinervis*, *C. sachalinensis*, *C. Fernaldiana*, and *C. Duraliana*. I also agree with Dr. Ohwi in this larger concept of species, however, in my opinion, when such variants as *C. alterniflora* and *C. sikokiana* are regarded to be conspecific with *C.*

sachalinensis s. str., the 3 including *C. tenuinervis*, *C. Fernaldiana*, and *C. Duvaliana* should also be attributed to *C. sachalinensis* itself.

C. Duvaliana differs from *C. alterniflora* only in the hairy vegetative parts. *C. Fernaldiana* is also distinguishable from *C. alterniflora* only in its very narrow vegetative parts; last year the author has collected many intermediate plants showing various degrees of deviation between typical *C. Fernaldiana* and *C. alterniflora* at one locality, but it is safe that we do not treat this taxon as an ecological form of *C. alterniflora*. *C. tenuinervis* described from Kyushu lacks stolon at all, however, this is connected to *C. alterniflora* with densely tufted individuals of *C. alterniflora* often found in central Kyushu. The nomenclature of these three plants are given below:

Carex (*Praecoces*) **sachalinensis** F. Schmidt, Reisen Amurl. u. Ins. Sachal. 194. t. 6, ff. 14-17 (1868).

var. **tenuinervis** (Ohwi) T. Koyama, comb. nova

C. tenuinervis Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, **5**: 266 (1930)——

C. alterniflora Franchet var. *tenuinervis* (Ohwi) Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, **6**: 259 (1931).

var. **Fernaldiana** (Levl. & Van't.) T. Koyama, stat. novus

C. Fernaldiana Léveillé & Vaniot in Bull. Acad. Intern. Geogr. Bot. **10**: 276 (1901)

——*C. Mariesii* & *ischme* C. B. Clarke in Kew Bull. Add. Ser. **8**: 80 (1908)——*C. tenuissima* (non Boott): Franch. & Savat. et auct. plur.

var. **Duvaliana** (Franch. & Savat.) T. Koyama, comb. nova

C. Duvaliana Franchet & Savatier, Enum. Pl. Japon. **2**: 568 (1879)——*C. Hilgendorffiana* Boeckeler in Englers Bot. Jahrb. **5**: 518 (1884)——*C. hololasius* Lévl. & Van't. in Bull. Acad. Intern. Geogr. Bot. **10**: 280 (1901)——*C. tenuissima* Boott var. *Duvaliana* (Franch. et Savat.) Kuekenenthal, Cyper. Caric. 476 (1909).

§ 24. Relationship between *Carex dolichostachya* and *Carex multifolia*.

Carex multifolia Ohwi is a common sedge in the montane region of Japan, and has a very close taxonomical affinity with *Carex dolichostachya* Hayata, the area of which lies in the Ryukyu islands and Formosa covering relatively high mountains. The distinction between the two is made by the colour of the basal leaf sheaths, long stolon occasionally produced in *C. multifolia*, and staminate scales of *C. dolichostachya* sometimes cup-like with their margins connate. As to the colour of leaf sheaths, however, a considerable variability is seen in *C. multifolia*. The basal leaf sheaths of *C. dolichostachya* are generally blackish or purplish brown deep at least along their parallel nerves, while in *C. multifolia* the colour of sheaths is commonly reddish ferruginous and sometimes pale brown, brown deep or purple brown on the nerves. The plants of *C. multifolia* from the northern part of Japan mostly have reddish ferruginous or dark brown sheaths and relatively denseflowered spikelets on thickish culms. The lighter coloured sheaths with purple brown nerves are more frequent in plants from the Kinki District and westwards. In such

individuals, culms become slenderer with looser-flowered lateral spikelets. This character seems to be a transitional state between Japanese *C. multifolia* and Formosan *C. dolichostachya*, which area marks its northernmost limit in Is. Okierabu, the Ryukyus. The area of *C. dolichostachya* may be thought to be the foot stretched out southwards from that of Japanese *C. multifolia*. *Carex filipes* Franch. & Savat. subsp. *arisanensis* T. Koyama occupying the same distributional area with *C. dolichostachya* can also be interpreted as the southern population originated from Japanese *Carex filipes* group. (For the similarity between *C. filipes* ssp. *arisanensis* and *C. filipes* v. *tremula* cfr. T. Koyama in Journ. Jap. Bot. 29: 41-44. 1954).

Carex (*Præcoeces*) **dolichostachya** Hayata, Icon. Pl. Formos. 10: 61, f. 38 (1921); Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 18: 375 (1936).

forma *connatisquama* T. Koyama, forma nova squamis masculis marginibus connatis poculiformis a typo differt. Holotype: Ryukyus, Is. Okinawa, Mt. Nagodake. Coll. S. Nakamine, 988! (Hb. Univ. Ryukyus).

var. **glaberrima** (Ohwi) T. Koyama, comb. nava et sensu emend.

C. multifolia Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 5: 264 (1930), & Do. 18: 373 (1936) — *C. multifolia* Ohwi var. *glaberrima* Ohwi in Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 5: 265 (1930) — *C. multifolia* Ohwi varr. *globosa*, *stolonifera*, *pallidisquama*, & *imbecillis* Ohwi loc. cit. 6: 258 (1931) — *C. foliosissima* (non F. Schmidt): Franchet & auct. plur.

Varietas valde variabilis. Formae sequentes plus minus insignes sunt.

1) forma **glaberrima**, utriculis glaberrimis.

2) forma **multifolia** (Ohwi) T. Koyama, stat. novus — *C. multifolia* Ohwi l. c. (1930) — *C. multifolia* Ohwi varr. *globosa* & *stolonifera* Ohwi l. c. (1931) — vaginis foliorum basilarem et squamae foemineae rubentiferrugineis, habitu robustiore, rhizomate saepe repente interdum stolones longos agente.

3) forma **pallidisquama** (Ohwi) T. Koyama, stat. novus — *C. multifolia* Ohwi var. *pallidissima* Ohwi l. c. (1931). — squamis foemineis semper et eis masculis interdum pallidis, vaginis basilaribus non rubentibus.

4) forma **imbecillis** (Ohwi) T. Koyama, stat. novus — *C. multifolia* Ohwi var. *imbecillis* Ohwi l. c. (1931) — foliis flaccidis, squamis vaginisque plerumque pallidioribus, interdum stolones epigaeos agente; cum *C. dolichostachya* plus minus affinis videtur.

§ 25. **Mapania and Thoracostachyum are congeneric.**

As I mentioned in a previous paper (Contrib. Inst. Bot. Univ. Montréal No. 70: 64. 1957), the genus *Thoracostachyum* is separable from the genus *Mapania* in the corymbose inflorescence only. The following names can be adopted for the species of *Thoracostachyum* which I have ever referred to.

1) **Mapania Balansae** (E. G. Camus) T. Koyama, comb. nova

Thoracostachyum Balansae E. G. Camus in Lecomte, Notul. System. 1: 252, f. 14 (1910).

- 2) **Mapania bancana** (Kurz) T. Koyama, comb. nova
Thoracostachyum bancanum Kurz in Tijdsch. Nat. Verrn. Nedr. Ind. **27**: 224 (1864) et in Bot. Zeitung **23**: 204 (1865).
- 3) **Mapania lucbanensis** Elmer, Leafl. Philip. Bot. **2**: 573 (1909).
Thoracostachyum lucbanense (Elmer) Kuekenenthal in Englers Bot. Jahrb. **59**: 9 (1925).
- 4) **Mapania macilenta** (Ohwi) T. Koyama, comb. nova
Thoracostachyum macilentum Ohwi in Bot. Mag. Tokyo **56**: 210 (1942).
- 5) **Mapania monantha** K. Schum. et Lauterb., Fl. Deutsch. Schutzg. Sueds. 189 (1901).
Thoracostachyum monanthum (K. Schum. et Lauterb.) Suringar in Lorentz, New Guinea **8**: 710 (1912).
- 6) **Mapania pacifica** (Hosokawa) T. Koyama, comb. nova
Thoracostachyum pacificum Hosokawa in Trans. Nat. Hist. Soc. Formosa **32**: 6 (1942).
- 7) **Mapania pandanophylla** (K. Domin) T. Koyama, comb. nova
Thoracostachyum pandanophyllum K. Domin in Bibliothec. Bot. **85**: 484 (1915).
- 8) **Mapania tonkinensis** (E. G. Camus) T. Koyama, comb. nova
Diplasia tonkinensis E. G. Camus in Lecomte, Notul. System. **1**: 250, f. 15 (1910) —
Thoracostachyum tonkinense (E. G. Camus) Uittien in Rec. Trav. Bot. Neerl. **33**: 140, f. 2e (1936);
T. Koyama in Contrib. Inst. Bot. Univ. Montréal No. 70. 63 (1957).

A unit of the floral part of *Mapania* which we usually call a spikelet, consists of about 7 scales as a rule (Fig. 20). Of these scales, the outermost broad abaxial one is undoubtedly a bractlet. The lowest sidal 2 scales are always different in shape from the others in having a distinct keel very often scabrous with spinules at least above the middle. These I consider to be a pair of prophyllum at the axile of

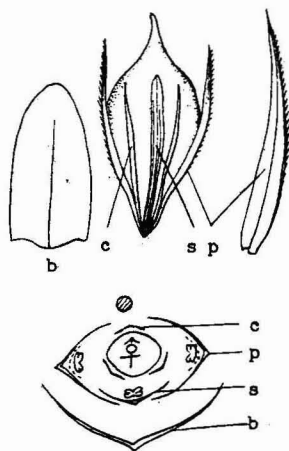


Fig. 20. A spikelet of *Mapania*. (from T. Koyama 1957). b: Bractlet; s: Staminate floral scale; p: Prophyllum; c: Rudimentary perianth of terminal flower.

the bractlet. The dorsal small scale (Fig. 20's) usually described as 'squamella dorsalis' is rather variable in the number, sometimes quite missing, sometimes more than 2 to a unit. This scale embraces a stamen inside. The rest or the 3 scales subtensing an achene (usually called 'squamellae nucis' (Fig. 20 c) resemble staminate scale, but usually narrower and acuter. Since the lowest pairs of sidal scales are interpreted as a pair of prophyllum, a dorsal scale embracing a stamen must be a scale of a staminate flower, and the other 3 under an achene seem to be homologous with the perianth segments. Thus the unit of floral parts in *Mapania* (= spikelet) is thought to be composed of one terminal pistillate flower with 3 stamens and 3 vestigial perianth segments, and staminate flowers

more than one. In the spikelets of *Hypolytrum*, however, a pair of prophyllum is only to be seen besides a pistil with 2 stamens. This is explicable as an ultimate state of *Mapania*-type floral unit with perfectly reduced staminate flowers. It

is interesting that in a few species of *Hypolytrum*, the pair of prophyllum is united into one scale just like a spathe-like prophyllum of *Cobresia* (cfr. *Hypolytrum Ohwianum* T. Koyama). This evidence perhaps suggests a phylogenetical link between the ancient plants of Caricoideae and Mapanioideae, the former of which may be originating from the latter. The writer is intending to discuss the phylogenetic relationship between Caricoideae and Mapanioideae in another article depending on the anatomical bases. The group of *Mapania* including *Hypolytrum*, *Mapaniopsis*, etc. have been included in the subfamily Scirpoideae, however, it is rather near to the subfamily Caricoideae and so far as the floral structures there is a sufficient reason to regard an independent subfamily, Mapanioideae, for this group. But, the genera *Paramapania*, *Mapaniopsis*, and *Diplasia* being thought to be congeneric with *Mapania* s. lat., this subfamily will be grouped into two genera, *Mapania* and *Hypolytrum*.

§ 26. A new species of *Carex* section *Graciles* from Is. Okinawa.

A sedge found at the Yona Experiment Forest of the University of the Ryukyus has been recognized to be new. Outwardly resembling *Carex brunnea* Thunb., this one is quite distinct therefrom by the longer beak of perigynia less hairy on the both sides, looser spikelets, and dark green leaves from somewhat repent rhizome. The locality of this species is restricted to the mossy rock in a narrow torrent sheltered by the evergreen forest, in such condition *Carex brunnea* does not grow. It is noteworthy that this entity has already been collected by Mr. Shoei Tamaki at the same place, however, his collection being rather poor, I could only determine it as *Carex sacrosancta* Honda *affinis*. Thus this new sedge is named in honour of Mr. Tamaki as follows.

Carex (*Graciles*) **Tamakii** T. Koyama, spec. nova ex affinitate *Caricis brunneae* Thunb. differt ab ea utriculis latere utrinque praeter ad nervos non hispidulis et longius rostratis, spiculis multo laxioribus, et haec etiam distincta abs *Carice sacrosancta* Honda dimensionibus utriculorum multo minoribus. *Carex autumnalis* Ohwi prope quidem accedit tamen remota videtur ab hac culmis laevibus, utriculis latoribus, spicula terminale semper mere mascula etc.

Laxiuscule caespitans, *rhizomate* breviusculo repente. *Folia* linearia culmo breviora rigidula sordide viridia 35–50 cm longa medio circiter 2 mm lata apice longe acuminata basi in *vaginas* usque ad 3 cm longas fusco-brunneas antice membranaceas in fibras fuscas faciliter solutas vix attenuantia. *Vaginae basilares* breviter laminatae faciliter fibroso-solutae persistentes. *Culmi* 1 ad pauci ex unico fasciculo orti pergraciles apice nutantes 40–60 cm alti basi foliati sursum distincte scabri apice 10–20 cm perremote paucispiculigeri. *Bractae* inferiores 1–2 anguste foliaceae ima cum dimidio inflorescentiae aequilonga longiuscule (ad 2 cm) vaginata, ceterae spathaceae brevilaminatae. *Spiculae* simplices oblongocylindricae laxiuscule pluriflorae 10–20 cm longae circiter 2 mm crassae cum *pedunculo* capillari exserto nutantes.

Squamae foemineae elliptico-ovatae 2-2.2 mm longae circiter 0.9 mm latae leviter naviculares tenuiter membranaceae apice acutae, latere fuscescenti-lineolatomaculatae, *costa* nervo 1 apice squamae acuminem brevem formante. *Utriculi* erecti elliptico-lanceolati biconvexi 2.8-3.2 mm longi 1-1.2 mm lati sursum in *rostro* erecto 1 mm longo gradatim attenuantes deorsum in *stipitem* cuneatum attenuati texture tenuimembranacei praeter nervos 5-8 sparsim hispidulos laeves, *ore* rostri oblique fisso hyalino. *Nuces* arcte inclusae ovatae biconvexae 1.5 mm longae maturitae brunnescentes; *styli* graciles recti, *stigmatibus* 2 utriculum subaequilongis plus minus persistentibus.

Holotype: Is. Okinawa; Kunigami, Experiment Forest of the University of the Ryukyus, alt. ca 150 m. Coll. T. Koyama, 7347 (TNS). Paratype: Ibidem. Coll. Sh. Tamaki. (Hb. Univ. Ryukyu.)