

Egbert H. WALKER\*: **Critical taxonomic changes concerning  
the plants of Okinawa and the Southern Ryukyu Islands**

エグバト H. 和嘉\*: 琉球植物に関する分類学的新知見

While preparing a Flora of Okinawa and the Southern Ryukyu Islands, extending from Iheya Isl. to Yonaguni Isl., some nomenclatural changes and new taxa have become necessary. These are published here preliminary to the publication of this Flora. As some of these names come from manuscripts contributed by others than the principal author of this paper for publication in connection with this Flora, they must be cited as "in Walker," according to Article 46, Recommendation 46D of the International Code of Botanical Nomenclature (1961).

GRAMINEAE by Tetsuo Koyama\*\*

**Bothriochloa spicigera** (Benth.) T. Koyama, comb. nov.

*Chrysopogon parviflorus* var. *spicigerus* Benth., Fl. Austr. 7: 538. 1878.—Australia.

*Bothriochloa spicigera* differs from *B. assimilis* (Steud.) Ohwi in its racemes having 4 to 8 joints in contrast with 1 to 3 (mostly 1 or 2) joints in the latter. This distinction is valid for all the specimens so far examined from the Ryukyus and Malaysia.

**Microstegium vimineum** (Trin.) A. Camus forma **polystachyum** (Fr. & Sav.) T. Koyama, stat. nov.

*Pollinia japonica* Miq. var. *polystachya* Fr. & Sav., Enum. Pl. Japon. 2: 190. 1879.—Japan.

**Setaria verticillata** forma **ambigua** (Guss.) Koyama, forma nov.

*Panicum verticillatum* var. *ambiguum* Guss., Pl. Sic. Prodr. 80. 1827.

*Setaria verticillata* var. *ambigua* (Guss.) Parl., Fl. Palerm. 1: 36. 1845.

**Zoysia matrella** var. **tenuifolia** (Willd.) Durand & Schinz ex T. Koyama, stat. nov.

\* Botanist Emeritus, Smithsonian Institution, Washington, D. C., U. S. A.

\*\* The New York Botanical Garden, New York City, N. Y.

*Z. tenuifolia* Willd. ex Trin., in Mém. Acad. Sci. St. Pétersb. VI. Sci. Nat. 2, (Bot.): 96. 1836.—Mascarene Islands.

The name *Z. matrella* var. *tenuifolia* (Willd.) Durand & Schinz appeared in Makino, Illustrated Flora of Nippon, ed. 1, 831. 1940, but without designation as a new combination or new status, nor with citation of the basionym. Hence, according to the Article 33 of the International Code of Botanical Nomenclature, Makino's publication is illegitimate.

#### CYPERACEAE by Tetsuo Koyama

***Eleocharis* × *subangulata*** T. Koyama, hybr. nov. (*E. congesta* forma *achaeta* T. Koyama × *E. tetraquetra* Nees).

“*E. liukiensis* Makino, in Bot. Mag. Tokyo 18: 11. 1904,” as misapplied in Masamune, Sci. Rep. Kanazawa Univ. 4: 265. 1956.

“*E. wichurai* var. *liukiensis* (Makino) Ohwi, in Mem. Coll. Sci. Kyoto Univ. B, 18: 39. 1944,” as misapplied in Hatusima & Amano, Fl. Okinawa [ed. 1], 131. 1958, and [ed. 2], 131. 1959.

“*E. wichurai* forma *teres* (Hara) Ohwi, op. cit. 38. 1944,” as misapplied by Hatusima & Amano, Fl. Okinawa [ed. 3], 143. 1967.

Planta caespitosa estolonifera. Culmi graciles rigiduli 12–20 cm alti 1.5–2 mm crassi obtuse angulati sordide virides. Spicae oblongae vel lineari-oblongae 0.7–1.2 cm longae, 2.5–3.5 mm crassae pallide virides vel fulvescentes plerumque proliferae. Glumae eae *E. tetraquetrae* Nees similes sed paulo minores. Flores plerumque steriles. Setae hypogynae 6 retrorsim spinulosae. Nux matura ignota.

TYPES: *Hatusima 22885* (holotype) & *22869* (paratype) from Ishikawa, Nakagami, Okinawa, both in the herbarium of the National Arboretum, U.S. Department of Agriculture, Washington.

The identity of this plant as a hybrid rests on its characters, being intermediate between the presumed parents, in the high degree of sterility of the flowers, and in their strong proliferous nature.

***Fimbristylis cymosa*** R. Br. var. ***spathacea*** (Roth) T. Koyama, stat. nov.

*Fimbristylis spathacea* Roth, Nov. Sp. Pl. Ind. Or. 24. 1821.—India.

There have been many opinions concerning the taxonomy of the *F. cymosa* complex. Recently Kern in Reinwardtia 5: 39. 1961, relegated *F. spathacea* to the synonymy of *F. cymosa*. In my observation, however, the

glumes of *F. cymosa* from Australia are relatively loosely arranged on smaller ovoid-globose spikelets and are grayish with a sharp keel, whereas in *F. spathacea* of the Indian subcontinent and southeastern Asia, the glumes are tightly imbricate on more oblong spikelets, and are always rusty brown with a more obtuse keel. Achenes of *F. cymosa* are 3-angled, grayish and dull, but those of *F. spathacea* are lenticular, brown and slightly shiny when completely mature. These minor differences may not warrant a specific separation, but seem to be sufficient for varietal differentiation.

#### ERIOCAULACEAE by Tetsuo Koyama

**Eriocaulon miquelianum** Koern. var. **lutchuense** (Koidz.) T. Koyama, stat. nov.

*E. lutchuense* Koidz., in Bot. Mag. Tokyo 28: 171. 1914.—Okinawa: Kogatsi.

I regard *E. lutchuense* as a glabrous phase of the polymorphic *E. miquelianum*.

#### COMMELINACEAE

**Pollia japonica** Thunb. var. **minor** (Honda) Walker, comb. nov.

*Pollia minor* Honda, in Bot. Mag. Tokyo 45: 2. 1931.—Kyushu, Ryukyus, and Formosa.

Five specimens are cited with the original description, none designated as the type. Honda published the name as "*Pollia minor* (Hayata) Honda nom. nov." and cited as the basionym "*Pollia japonica* var. *minor* Hayata in Sched. Imp. Univ. Tokyo," followed by a Latin description. However, since Hayata's name was invalidly published, because it was in synonymy only, it could not be the basis for a new name. Hence Honda's publication must be considered as the first, as *P. minor* Honda. Thus the above transfer is necessary.

#### ILLICIACEAE

**Illicium anisatum** L. var. **tashiroi** (Maxim.) Walker, comb. nov.

*Illicium tashiroi* Maxim., in Bull. Acad. Sci. St. Pétersb. 32: 479. (Mél Biol. 12: 716). 1888.—"Archipelago Ya-yama inter Liukiu et Formosa . . . (A[ntei] Tashiro Flor., 1886)."

## EUPHORBIACEAE by Grady L. Webster\*\*\*\*

**Phyllanthus virgatus** G. Forst. var. **chinensis** (Muell.-Arg.) Webster, comb. nov.

*Phyllanthus simplex* Retz. var. *chinensis* Muell.-Arg., in *Linnaea* 32: 33. 1863.—“In China (Park. n. 57!), prope Hongkong (Hance n. 1223! in hb. Berol.).”

## AQUIFOLIACEAE by Shiu-ying Hu\*\*\*\*\*

**Ilex fosbergiana** S. Y. Hu, sp. nov.

Frutex humilis, ramosissimus, ramulis erectis, annotinis 3 mm diametro, longitudinaliter striato-sulcatis, brunneis, hornotinis, 1 mm crassis, quadrangulis, sulcatis, sub lente brevissime puberulis, postea glabrescentibus; foliis obovato-ellipticis vel ellipticis, 1.5–2 cm longis, 7–15 mm latis, basi acutis, apice obtusis, raro acutis, margine anguste recurvatis crenulatis, supra nitidis, subtus brunneopunctatis; nervis supra evidentibus, subtus obscuris; petiolis 3–5 mm longis, supra sulcatis, breviter puberulis; stipulis parvis deltoideis brunneis; floribus pistillatis solitariis, pedicellis 9–11 mm longis, prophyllis, 2, brunneis, minutis, infra medium insertis; fructibus subglobosis, immaturis 4 mm diametro.

Ishigaki Island: Occasional in dense dwarf bamboo brake on summit of Omoto-dake, F. R. Fosberg 37405, June 9, 1956—TYPE in Arnold Arboretum Herbarium, and a duplicate in U. S. National Herbarium.

This species is closely related to *Ilex maximowicziana* Loes. and *I. mutchagara* Makino. It is distinguished by its unusually small leaves.

## SYMPLOCACEAE

**Symplocos glauca** (Thunb.) Koidz. var. **tashiroyi** (Matsum.) Walker, comb. nov.

*S. tashiroyi* Matsum., in *Bot. Mag. Tokyo* 15: 72. 1901.—Okinawa: Y [asusada] Tashiro, s. n. TYPE.

This differs from *S. glauca* var. *glauca* only in its wider (up to 4.5 cm) and elliptic rather than oblong-lanceolate leaf-blades.

\*\*\* University of California at Davis, California.

\*\*\*\* Arnold Arboretum of Harvard University, Cambridge, Massachusetts.

## CONVOLVULACEAE

***Ipomoea congesta*** R. Br. forma ***albiflora*** (Stone) Walker & Tawada, comb. nov.

*Ipomoea indica* forma *albiflora* Stone, in *Micronesica* 2: 7. f. 1. 1966.

This widespread form was first given taxonomic recognition by Benjamin Stone in 1966. It was first brought to the attention of the senior author of this new name in the same year. The junior author published it in *Biol. Mag. Okinawa* 4(2): 39. December 1967 under the same name, *I. indica* forma *albiflora* Tawada, which however is superfluous because of Stone's publication in 1966. However, as the treatment of *Ipomoea* in the coming Flora of Okinawa is in accord with S. J. van Ooststrom's treatment in the *Flora Malesiana* I. 4: 458-488. 1953, which was prepared in collaboration with B. Stone, and recognizes *I. congesta* R. Br. with *I. indica* Merr. as an uncertain synonym, the above transfer is needed, if this trivial color variant is to have taxonomic recognition.

## GESNERIACEAE

***Rhynchocheum discolor*** (Maxim.) Burt var. ***incisum*** (Ohwi) Walker, comb. nov.

*Isanthera discolor* Maxim. var. *incisa* Ohwi, in *Act. Phytotax. Geobot.* 7: 29. 1938.—T. Kanashiro n. 9, TYPE, collected Aug. 8, 1937 on Nagodake, Kunigami, Okinawa; specimens in KYO and AH<sup>1)</sup>.

## RUBIACEAE

***Damnacanthus biflorus*** (Rehd.) Masam. var. ***lutchuensis*** (Koidz.) Walker, comb. nov.

*Tetraplasia lutchuensis* Koidz., in *Act. Phytotax. Geobot.* 3: 161. 1934.

*Damnacanthus lutchuensis* (Koidz.) Hatusima, in *Journ. Jap. Bot.* 14: 237. 1938.

Shrub, dichotomously branching. Branchlets subterete, glabrous, smooth, the nodes often alternately bearing pairs of normal and reduced leaves or no leaves but only stipules, these sometimes subtending the inflorescences. Leaves with small stipules, these crustose, broadly ovate, scarcely lobed or

1) Private herbarium of Tetsuo Amano in Naha, Okinawa.

toothed, light tan colored; petiole 2-5 mm long, glabrous; blade coriaceous, elliptic- or rarely oblong-lanceolate, 4-7.5 cm long, 9-18 (-25) mm wide, acute or long-acute at both ends, entire and slightly revolute on margin, glabrous, shiny, somewhat yellowish green, paler beneath, the primary lateral veins 5 or 6 pairs diverging at a wide angle or nearly perpendicular to the midrib. Inflorescences axillary, 2- (3-) flowered fascicles, the base or peduncle 1-2 mm long or less, densely covered with crustose bracts like the stipules. Flowers white (?) turning black, on pedicels 2 mm long; calyx campanulate, 2-5 mm long, glabrous, the 4 lobes broadly ovate, obtuse, 0.5 mm long; corolla 0.8-1 cm long, funnel-form, glabrous except pilose in throat, the lobes about 2.5 mm long with slender incurved tips; stamens 3 mm long, inserted near base of tube but the filaments connate with the tube except the upper 1.5 mm, the anthers oblong, 1.5 mm long, attached at base; style nearly as long as the stamens, 4-lobed at apex. Fruit unknown.—Habitat unknown, probably in forests.

Known only from the two type specimens from Kunigami-gun in Okinawa, Z. Tashiro, s. n., collected January 25, 1924 at Kunchan, and Sonohara, s. n., undated, both in the herbarium of the University of Kyoto.

The original description was very short and only localities were cited, no specimens. The description of the internodes as very short is insignificant. The few other characters given there coincide with those on the specimens here cited. Almost the only differences between this variety and *D. biflorus* (Rehd.) Masam. (known only from northern Okinawa and Iriomote) are in the narrow elliptic-lanceolate rather than ovate leaf-blades and in the slightly smaller flowers. It seems also very closely related to *D. angustifolius* Hayata, Journ. Coll. Sci. Univ. Tokyo 25(19): 113. pl. 15. 1908, known only in Taiwan, the type of which has not been seen. Only the specimen collected by Sonohara has flowers. Further collections may show intermediate characters, indicating that *D. biflorus* (Rehd.) Masam. is merely a variable species, as is *D. indicus* Gaertn. f., common in this area.

***Ophiorrhiza kuroiwai* Makino var. *yaeyamensis* (Ohwi) Walker, comb. nov.**

*O. liukiensis* Hayata var. *yaeyamensis* Ohwi, in Act. Phytotax. Geobot. 7: 196. 1938.—“Yaeyama-gunto.” “Foliis subtus praesertim in nervis pilis longiusculis patentibus pilosis.”

Since *O. liukiensis* Hayata (1912) is now a synonym of *O. kuroiwai* Makino, this transfer is necessary. The variety differs strikingly in the hairs on the midrib and lateral veins being longer, up to 0.5 mm, and mostly straight, rather than very short and distinctly curved, as in var. *kuroiwai*.

#### CUCURBITACEAE

##### ***Trichosanthes ishigakiensis* Walker, sp. nov.**

Planta perennis scandens, caule primario lignoso, caulibus secundariis annuis herbaceis his et inflorescentiis fasciculatis lateralibus in basibus incrassatis. Caulis primarius ramosus, 0.5-1 cm crassus (vel novellus crassior?) rugosus pluri-costatus albidus, lenticellis numerosis atrofusciis, caule secundarii numerosi atrofusci, graciles, 1-2 mm diametro, 15-30 cm longi (vel longiores?), paucicostati, glabri, cirrhibus 2- vel 3-ramosis et foliis alternatis. Folia forsan immatura, petiolis 0.5-1 cm longis saepe tortis tenuiter pilosiusculis, laminis membranaceis late ovatis, 2.5-4.5 cm longis, 2-4 cm latis, apice acutis vel acuminatis, basi cordatis sinu aliquantum lato, margine leviter sinuatis apicibus venularum leviter protrudentibus, supra viridibus, subtus multo pallidioribus, utrinque tenuiter pubescentibus praecipue ad venas subtus, vel subglabris sed magis pubescentibus basim versus, nervis basalibus 5, lateralibus utraque supra basim 3. Plantae dioicae sed plantae pistillatae ignotae. Inflorescentiae staminatae racemosae 10-25 cm longae ex caulibus lignosis vel ut videtur ex caulibus herbaceis, pedunculis 2-3 cm longis, floribus in fasciculis 2-4 distantibus, bracteis foliiformibus subsessilibus rhomboideis 5-8 mm longis et fere pariter latis, late obtusis vel subtruncatis, apice grosse pauce dentatis, basi cuneatis integris. Flores albi circa 3 cm longi, 2.5 cm lati, pedicellis 6-10 mm longis, calyce tenuiter piloso vel glabro, tubo cylindrico-infundibuliforme 1-1.5 cm longo, apice 6 mm lato, lobis 5 anguste lanceolatis vel linearibus circa 7 mm longis, apice subcaudatis, integris, corolla super calyce conspicue atrovenosa externe paulo dense papillosa, tubo 4 mm longo, lobis 4-5 mm longis, apice viridibus reflexis apiculo 1 mm longo, marginibus copiose implicato-fimbriatis, staminibus 4, filamentis circa 1.5 mm longis, antheris sigmoideis cohaerentibus, 3.5 mm longis, 2.5 mm crassis, pistillis ignotis. Fructus ignotus.

TYPE in the United States National Herbarium no. 2554921 and 2554922 collected by F. R. Fosberg no. 38081 on Sarahama-yama, a broad wooded

ridge of the main divide of Ishigaki Island, 1-1.5 km west of Hora-dake, July 23, 1956. Duplicates will be deposited in the Kew Herbarium, England and in the University of Tokyo, Japan.

This species is distinguished by its woody stem densely covered with prominent lenticels, all other species known having only herbaceous stems. The genus is in need of careful revision.

**Zehneria liukiensis** (Nakai) Jeffrey,\*\*\*\*\* comb. nov.

*Melothria liukiensis* Nakai, in Journ. Jap. Bot. 14: 129. 1938.—Okinawa: Yasusada Tashiro, 1887—TYPE of staminate flowers; Shôzô Yazima—TYPE of fruit.

Studies by C. Jeffrey reveal that *Melothria* L., as properly defined, is confined to the New World. (See Kew Bull. 15(3): 342-344. 1962.) The most important of the realignments required in Tribe Melothrieae Endl. is the reestablishment of *Zehneria* Endl. Hence, this transfer of T. Nakai's species is needed.

#### COMPOSITAE

**Conyza sumatrensis** (Retz.) Walker comb. nov.

*Erigeron sumatrensis* Retz., Obs. Bot. 5: 28. 1789.—Sumatra.

This transfer is made to conform with Arthur Cronquist's redefinitions of *Conyza* and *Erigeron* in the Bull. Torrey Bot. Club 70: 631. 1943.

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「琉球植物誌」を編集中に、学名の変更や新植物に対する学名が必要になってきた。この植物誌に先立って予報的にこれを発表しておく。これらの学名の一部は主な著者である小生以外の寄稿者の原稿に由来するものであるから、国際植物命名規約第 46 条、勧告 46D によって “in Walker” として引用さるべきである。

□ **Modern methods in plant taxonomy** B5 版, 312 ページ。ロンドンの Academic Press 刊。1968。英国植物学会とロンドンのリンネ協会主催の「植物分類学の近代的方法についての会議」が 1968 年 9 月リバプール大学で開かれ、世界中 16 カ国から 200 名以上の学者が集まった。その時の論文 17 を収めたもので、読みごたえがある。内容の見出しを拾うと：ハーバリウムの役割、実験データの役割（核型、雑種形成、表現型など）、生化学、数値分類学、地理学、生態学など。（伊藤 洋）

\*\*\*\*\* C. Jeffrey, Kew Herbarium, England.