

NOTES ON MALESIAN GRASSES IV
A SYNOPSIS OF CENTOTHECA AND REDUCTION OF RAMOSIA

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In 1916 Merrill described a new monotypic genus of *Gramineae*, *Ramosia*, from the Philippines, recording one species, *R. philippinensis*, based on one single collection by Ramos, BS 23607, from Lake Pulog, Sorsogon Prov., Luzon, 27-8-1915, where the plant grew along the border of the lake, either in wet swampy places or in shallow water. Except for the type no other specimens have ever been mentioned, nor encountered during this study.

Merrill could not place his new genus with certainty, comparing it with *Panicum nodosum* Kunth and *Glyceria*. In 1923 he placed it near *Festuca* and *Bromus*. The genus was not taken up by C. E. Hubbard (1934), while Pilger (1954) placed it provisionally in *Festuceae—Melicinae*. The late Dr. Jansen saw an isotype in Kew and noted in his MS 'giving the impression of a small *Centotheca*', postponing a decision.

The tender plant with its narrow leaves is quite different in habit from *Centotheca latifolia* (Osborn) Trin. The structure of the spikelet, however, is as Jansen already noted, not distinguishable from it; the lemmas have no bristles, but this is also encountered in *C. schlechteri* Jansen and *C. uniflora*. With these species and *C. longilamina* Ohwi it seemed to agree in the narrow leaves. The grain was described as black and terete-oblong, in the isotype I found it to be ovoid and not substantially different in shape from that in *Centotheca*, where black caryopses are encountered occasionally.

It is therefore obvious that *Ramosia* cannot be upheld as a separate genus and must be reduced to *Centotheca* Desv.

In order to decide the status of *R. philippinensis* in *Centotheca* it was necessary to compare it with the other species of this genus. It then soon became clear, that it was identical with *C. schlechteri* and the specimens attributed to *C. longilamina* from New Guinea. Jansen's name must thus become a synonym of the new combination *C. philippinensis* (Merr.) Monod de Froideville, based on *Ramosia philippinensis* Merr.

About the following synopsis of *Centotheca* a few things may be said.

The genus was created by Desvaux in 1810, who erroneously called it *Centosteca*, which has no apparent meaning. In 1813 he discussed the genus again, now calling it *Centotheca*, which means 'with armed spikelets', referring to the bristles on the lemma of the typespecies. This latter spelling has been used by all authors since and it is obvious that it should be retained, although, according to the Code of International Botanical Nomenclature, the original spelling should be used.

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Desvaux based his new genus on *Cenchrus lappaceus* Linné, not realizing that *Holcus latifolius* Osb. was an older name for the same species. Linné did not realize this, either. Apparently the first to do so was Trinius, who in 1820, in discussing the genus, mentioned as the single species 'latifolia (*Cenchrus lappaceus* Linné)'. Some have considered this as a superfluous name and have rejected Trinius' combination. But why this eminent agrostologist did this is made clear in 1831, when he gave both *Cenchrus lappaceus* and *Holcus latifolius* as synonyms under what he now called *Uniola lappacea*, there already being an older *U. latifolia* Michx., which shows he already applied the priority rule. I therefore agree with Merrill (1933) that the typespecies should be called *C. latifolia* (Osb.) Trin.

Many varieties and forms have been described for this species (see Andersson, 1865; Bentham, 1878; Warburg, 1890; O. Kuntze, 1891), none of which are upheld here, one grading into the other. It shows the variability of the species. Viviparous plants have been mentioned from Ceylon (Trimen, 1900), Indo-China (Camus, 1922), and Java (Koorders, 1911; Backer, 1928; Monod de Froideville, 1968).

The following key may lead to an identification of *Centotheca* species:

1. Leaves with more or less contracted base, asymmetric, up to 6.9 times as long as broad, usually much less. Spikelets (1—)2—4-florous; lower lemma always without bristles, mucronate, the higher one always with bristles (appressed and inconspicuous when young!). Anthers 0.4—0.7 mm long 1. *C. latifolia*
1. Leaves gradually narrowed into base, \pm symmetric, at least 6.3 times as long as broad, usually much more. Spikelets 1—3-florous; bristles usually distributed otherwise or entirely absent.
 2. Leaves longer than 17 cm, broader than 13 mm. Lower lemma always with bristles, obtuse to emarginate, at most apiculate between the lobes. Anthers 0.5—1.25 mm long. . 2. *C. longilamina*
 2. Leaves shorter than 17½ cm and narrower than 17 mm. Lower lemma only very rarely with bristles and then only in a few spikelets per raceme.
 3. Inflorescence lax, but pedicels at most little longer than the spikelets and with distinct spicules, which are longer below the glumes, forming a corona. Anthers 0.5—0.75 mm long. 3. *C. philippinensis*
 3. Inflorescence very lax, pedicels much longer than spikelets (up to 7½ times), very minutely and inconspicuously spiculate, without a corona. Anthers 1.25—1.4 mm long . 4. *C. uniflora*

The following literature-references¹⁾ and synonymy can be given. For *C. latifolia* only the most important outside Malesia have been mentioned, within Malesia mere records have been omitted, except for the oldest for a certain region.

Centotheca Desv., Nouv. Bull. Sc. Soc., Philom. 2 (1810) 189 ('*Centosteca*'); J. Bot. Appl. Agric. 1 (1813) 70; Benth. & Hook. f., Gen. Pl. 3 (1883) 1190; Hack in E. & P., Nat. Pfl. Fam. 2, 2 (1887) 71; C. E. Hubb. in Hutch., Fam. Fl. Pl. 2 (1934) 206; Pilg., Bot. Jahrb. 76 (1954) 311; Jacq.-Félix, Gram. Afr. Trop. 1 (1962) 138. — Type species: *C. lappacea* (Linné) Desv. = *C. latifolia* (Os.) Trin.

Ramosia Merr., Philip. J. Sc., Bot. 11 (1916) 2; En. Philip. Fl. Pl. 1 (1923) 92; Pilg., Bot. Jahrb. 76 (1954) 308. — Type species: *R. philippinensis* Merr. = *C. philippinensis* (Merr.) Monod de Froideville.

Distribution: Four species in the tropics of the Old World, from Africa to Polynesia and Australia (N. Queensland); 3 species in Malesia.

Ecology: Swamps and open places in rain forests and thickets, sometimes spreading to and dominant along shaded roads, fields, and plantations.

¹⁾ by J. F. Veldkamp, Rijksherbarium, Leiden, Netherlands.

1. *Cenotheca latifolia* (Osb.) Trin., Fund. Agrost. (1820) 141; O. Ktze, Rev. Gen. Pl. 2 (1891) 765, incl. var. & forms; Merr., Fl. Manila (1912) 100; Philip. J. Sc., Bot. 11 (1917) 255; Sp. Blanc. (1918) 74; En. Born. Pl. (1921) 51; En. Philip. Fl. Pl. 1 (1923) 91; Bull. Torrey Bot. Club 60 (1933) 638; Back. in Heyne, Nutt. Pl. 1 (1922) 252; ed. 2 (1950) 277; Onkr. Suiker. (1928) 122, t. 117; Handb. Fl. Java 2 (1928) 244; Hitchc., J. Arn. Arb. 13 (1932) 117. — *Holcus latifolius* Osb., Dagb. Ostind. Resa (1757) 247; Linné, Syst. Nat., ed. 10 (1759) 1305; Sp. Pl., ed. 2 (1763) 1486. — *Poa latifolia* Forst. f., Prodr. (1768) 8. — *Torresia latifolia* Beauv. ex R. & S., Syst. Veg. 2 (1817) 515. — *Festuca blepharophora* R. & S., Syst. Veg. 2 (1817) 515. — *Festuca blepharophora* R. & S., l.c. 728. — *F. latifolia* Roth., Nov. Pl. Sp. (1821) 75, non DC. (1813). — *Hierochloa ? latifolia* Kunth, Rév. Gram. 1 (1829) 21. — Type: *Osbeck s.n.* (S?).

Cenchrus lappaceus Linné, Sp. Pl., ed. 2 (1763) 1488. — *Cenotheca lappacea* Desv., Nouv. Bull. Sc. Soc., Philom. 2 (1810) 189; J. Bot. Appl. Agric. 1 (1813) 70; Presl, Rel. Haenk. 1 (1830) 258; Brongn. in Duperrey, Voy. Coquille, Bot. (1831) 44; Buse in Miq., Pl. Jungh. (1854) 349; Miq., Fl. Ind. Bat. 3 (1857) 398; Anderss. in Peters, Reise Mossamb., Bot. 2 (1864) 560, incl. forms; Benth., Fl. Austr. 7 (1878) 640, incl. var. (*totius* ?); Warb., Bot. Jahrb. 13 (1890) 263, incl. forms; Ridl., J. Str. Br. Roy. As. Soc. 23 (1891) 31; *ibid.* 46 (1906) 221; Fl. Mal. Pen. 5 (1925) 253; Hook f., Fl. Br. Ind. 7 (1896) 332; Trimen, Handb. Fl. Ceylon 5 (1900) 304; Schum. & Laut., Fl. deutsche Schutzgeb. Südsee 1 (1901) 184; Rendle in Forbes & Hemsley, J. Linn. Soc., Bot. 36 (1904) 419; E. G. & A. Camus, Fl. Gén. I.-C. 7 (1922) 577; Burkill, Dict. (1935) 508; C. E. Hubb., Fl. W. Trop. Afr. 2 (1936) 505, f. 352; app. (1937) 522; M. Schmid, l'Agron. Trop. 13 (1958) 507, f. 103-1; Bor, Grasses (1960) 457, *pro var. lappacea*; Jacq.-Félix, Gram. Afr. Trop. 1 (1962) 138, f. 60B, e/j, 63; Monod de Froideville in Back. & Bakh. f., Fl. Java 3 (1968) 519; Henty, Bot. Bull. Lae 1 (1969) 47. — *Melica lappacea* Rasp., Ann. Sc. Nat., Sér. 1, 5 (1825) 443. — *Uniola lappacea* Trin., Mém. Ac. Sc. St Pétersb., Sér. 6, Sect. Nat. 1 (1831) 358; Sp. Gram. Ic. 3 (1836) t. 298. — Type: *Hb. Linné 1212-15* (LINN!).

Poa malabarica auct. non Linné: Burm. f., Fl. Ind. (1768) 27, t. 11, f. 2, excl. *synon.*; Merr., Bull. Torrey Bot. Club 60 (1933) 633. — *Cenotheca malabarica* Merr., Philip. J. Sc. 1 (1906) Suppl. 385; Koord., Exk. Fl. Java 1 (1911) 159.

Panicum magellanicum Lamk, Encycl. Meth. Bot. 4 (1789) 742. — *Oplismenus ? magellanicum* R. & S., Syst. Veg. 2 (1817) 485. — Type: *Commerson s.n. in Hb Juss. 2287* (P, *holo*); see also Hauman & Parodi, Physis 9 (1929) 339 + fig.

Anthoxanthum pulcherrimum Lour., Fl. Coch. (1790) 29; ed. 2 (1793) 36; Moore, J. Bot. 63 (1925) 246; Merr., Transact. Am. Philos. Soc. 24 (1935) 80. — Type: *Loureiro s.n.* (BM!).

Melica refracta & *M. diandra* Roxb., Fl. Ind. 1 (1820) 329; ed. 2 (Carey) 1 (1830) 327. — Types: *Roxburgh s.n.* (BM!).

Melica philippinensis Llanos, Fragm. Pl. Filip. (1851) 44; in Blanco, Fl. Filip., ed. 3, 4 (1880) 32. — Type: Llanos' description.

Distribution: As the genus (Australia?).

Ecology: As the genus; up to 1500 m altitude.

Vernaculars: Malaya: *kadaga pul.* Tamil, *rumpul buloh-buloh*, Sembilan; Sumatra: *appai*, Mentawai, *balihin asu*, Simalur, *duhut solohat*, *d. basan*, Batak, *embah buluh*, Bencoolen, *kekèlot*, Bangka, *miang-miang*, Lingga, *rumpul tembagan*, Medan, *tjemetih*, Djambi, *ubu buluh*, Bencoolen; Java: *djukut hédjo erron*, *dj. kidang*, *dj. tjankorè*, *dj. tjitjikuran*, Sund., *suket lorodan*, Jav.; Borneo: *bubungkawon*, Dusan kinabatangan, *rumpul sundal*, Kedayan, *sulong*, Sampit; Philippines: *sikián*, Ig., *bariri-idu*, Mang., *balik-bátang*, Sub., *baili-patung*, *lansalansa*, *mariga*, Sul., *kauakauaydnan*, Tag.; Moluccas: *djéla-djéla*, Morotai; New Guinea:

dshidschili, Tami Isl., *wolonumgoto*, Miwaute, Wapi, *nepi-nitu*, Marok, Wapi, *tagèmba*, Mumuni, Orokaiwa, *midaio*, Kiwa, *kuang*, Papua, *augugan*, Naukwate, Onjob, *sikatakata*, Kububu, Minufia.

Note: Commerson's record for Patagonia, the only one for America, is highly improbable for a species of tropical rain forests. This collector is known for his mislabelled specimens.

2. *Centotheca longilamina* Ohwi, Bull. Tokyo Sc. Mus. 18 (1947) 10; Jansen, Reinwardtia 2 (1953) 253; Monod de Froideville in Back. & Bakh. f., Fl. Java 3 (1968) 520. — *C. lappacea* (Linné) Desv. var. *longilamina* Bor, Grasses (1960) 459. — Type: *Bakhuizen v. d. Brink f. 3312* (BO, holo; L!).

Distribution: India, Ceylon to N. Vietnam, S. to Malesia: Sumatra (Simalur & Mentawai Isl.), Malay Peninsula (incl. Langkawi Isl.), W. Java.

Ecology: In thickets, up to 600 m altitude.

3. *Centotheca philippinensis* (Merr.) Monod de Froideville, *comb. nov.* — *Ramosia philippinensis* Merr., Philip. J. Sc., Bot. 11 (1916) 2; Enum. Philip. Fl. Pl. 1 (1923) 92. — Type: *Ramos BS 23607* (PNH holo †, K!, L!).

Centotheca schlechteri Pilg. ex. Jansen, Reinwardtia 2 (1953) 252; Henty, Bot. Bull. Lae 1 (1969) 47. — Type: *Schlechter 19396* (B. holo †?, K!, P!, L!).

Centotheca lappacea auct. non Desv.: Benth., Fl. Austr. 7 (1878) 640, p.p.?

Centotheca longilamina auct. non Ohwi: Henty, Bot. Bull. Lae 1 (1969) 47.

Distribution: Apparently vicarious with the preceding species. So far the only species seen from Australia (N. Queensland). Malesia: Philippines (Luzon: Lake Pulog), New Guinea (Merauke; Papua: W. Dist.; TNG.: Morobe Dist.).

Ecology: Gregarious along paths and other open places in rain forests, swampy places, along lakes. Up to 250 m altitude.

4. *Centotheca uniflora* Swallen, J. Wash. Ac. Sc. 26 (1936) 535, f. 1; M. Schmid, l'Agron. Trop. 13 (1958) 507, f. 103-2b, c. — Type: *Petelot 5635* (US, holo!, P!, L!).

Distribution: Indo-China.

Ecology: Unknown.

Note: Only known from the type and *Gaudichaud 88* (L!), Tourane, Jan. 1837.