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MISCELLANEOUS BOTANICAL NOTES XXV

C. G. G. J. VAN STEENIS

Rijksherbarium, Leiden

150. SAMBUCUS IN NEW GUINEA (CAPRIFOLIACEAE)

Though *Sambucus javanica* Reinw. *ex* Bl. ranges widely from Japan to China and through the SE. Asian countries to Malesia as far as the Philippines, Celebes, and Lombok, it was in 1951 not collected in the Malay Peninsula, the Moluccas, and New Guinea. Cf. Fl. Males. I, 4 (1951) 191.

This is rather surprising as there are in East Australia two perfectly distinct species, occurring in both Queensland and New South Wales. These two species represent in Schwerin's monograph (Mitt. Deutsch. Dendrol. Ges., 1909: 26) each a separate section because of the 3-merous and 4-merous flowers, respectively. I have studied material of both and have come to the conclusion that they must belong to one section. In the 3-merous *S. australasica* (Lindl.) Fritsch 4-merous flowers do occur frequently (Schwerin mentioned *'nur sehr vereinzelt'*) and in the 4-merous *S. gaudichaudiana* DC. 3-merous flowers occur commonly, though in minority. The number of flower parts varies also in other species, e.g. in *S. canadensis*, which is normally 5-merous but in which I found occasionally also 4-merous flowers.

Whether these two outlying species must belong to sect. *Sambucus* seems uncertain. I found that both Australian species have a stigma consisting of short separate stigmatic teeth, in contrast to species of sect. *Sambucus*, where the stigma is a fused roundish cap or knob. The decision whether this character is of sufficient value for sectional rank I leave to a future monographer.

In passing I mention that both Australian species are erroneously claimed to occur also in New Guinea (Schwerin, l.c., map V); obviously he took 'Neu-Holland' for New Guinea.

Recent collections have not filled the gaps in Malaya and the Moluccas, but show that *Sambucus* occurs in New Guinea, by *S. javanica*, indigenous, and by *S. canadensis*, cultivated and introduced.

Sambucus javanica Reinw. *ex* Bl.; cf. Fl. Males. I, 4 (1951) 191.

NEW GUINEA. W e s t. Arfak Mts., Mt. Lensemoi, near Minjambau, common shrub in secondary growth, 1850 m, *BW 12657 Versteegh*, vern. *prijoi*, in Hattam lang.; Wissel Lake region, between Ginamberai and Djembodini, *P. J. Eyma 4618*. — N o r t h - e a s t. Morobe Dist., Sattelberg, Timbe R. near Sambanga, forest edge, 1500 m, *Clemens 7793*.

Sambucus canadensis L.; cf. Fl. Males. I, 4 (1951) 192.

PAPUA NEW GUINEA. Zenag via Mumeng, cultivated in village, 1250 m, *H. S. McKee 1542*; Madang Dist., Finisterre Mts., Saidor Subdist., Naho-Rawa Div., pr. Budemu, planted near village huts, 1250 m, vern. *kakali*, *NGF 21338*; Morobe Dist., Snake River Valley, near Sinagei, on steep banks by roadside amongst shrubs, 1200 m, *NGBF 1027*, obviously run wild.

151. THE GENUS PERIOMPHALE IN NEW GUINEA (CAPRIFOLIACEAE)

Among recent accessions an unidentified sheet was characterized by scattered exstipular leaves (partly crowded in pseudo-verticils), a gamopetalous corolla, and an inferior ovary, reminding me of *Alseuosmia* A. Cunn. However, the single mature flower bud appeared to have a more or less narrow barrel-shaped tube and not a funnel-shaped corolla as in that genus. Furthermore, on dissection it appeared that the stamens are free and not inserted in the mouth of the tube, while the corolla lobes were at their tip inside characteristically caruncular, together closely enveloping the corrugate globular stigma. These characters clearly fitted the genus *Periomphale* Baill. (hitherto only known from New Caledonia) except for the solitary flowers, which are in *Periomphale sens. str.* fasciculate or subumbellate.

The number of flowers seems, however, not to be an important character in this group, as in the allied New Zealand genus *Alseuosmia* their number varies from 1—5 per inflorescence, and this variation may even be found within a species, e.g. *A. linariifolia* A. Cunn. and the closely allied *A. ligustrifolia* A. Cunn. Cf. Allan, Fl. New Zeal. 1 (1961) 557. Also in the monotypic New Caledonian genus *Pachydiscus*, which I reduce to *Periomphale* (see below), the number of flowers varies from 1—4.

These observations led me to examine two other monotypic New Caledonian genera assigned to the same tribe *Alseuosmieae*, viz. *Memecylanthus* Gilg & Schltr. and *Pachydiscus* Gilg & Schltr. Cf. Bot. Jahrb. 39 (1906) 269—270.

The first has already been reduced by others to *Periomphale*, e.g. by Hutchinson (Gen. Pl. 2, 1967: 85); its description was obviously made in ignorance to refer it to *Periomphale* because the latter was at that time assigned to the family *Gesneriaceae* under which family it still figured in Guillaumin's Flore de la Nouvelle Calédonie (1948: 318).

Pachydiscus was distinguished from *Memecylanthus* (= *Periomphale*) in having a solitary ovule in each cell and a disk. In fact the number of ovules in *Periomphale* is 4—6 per cell; however, in the allied genus *Alseuosmia* it ranges from 2—5. A further reduction to one ovule per cell seems therefore not unreasonable and at least not of sufficient importance for generic distinction. Shaw (Willis Dict., 1973: 46) reduced it to *Periomphale*.

The matter of the occurrence of a disk is not clear, as Schlechter himself described it as *'quasi ovarium simulans'*. As far as I could observe, I take it as a slightly protruding ovary beyond the calyx and again assume that this can not be advanced as of generic distinction.

My conclusion is, therefore, that both generic names should be reduced to *Periomphale*, which would then have four species in New Caledonia and one new species in New Guinea; the latter is quite distinct by the very small, oblong-lanceolate, mostly dentate leaves.

The tribe *Alseuosmieae* was mostly assigned to *Caprifoliaceae*. According to a few notes on *Periomphale* by Radlkofer (Schlechter, l.c.), its anatomy would not be inconsistent with this disposition. Erdtman (Pollen Morphology & Plant Tax-

onomy, 1952: 98) found *Alseuosmia* as to its pollen 'isolated' in the family. Shaw (Kew Bull. 18, 1965: 249; Willis Dict., 1973: 46) raised the tribe to family rank, suggesting that it is in some respects intermediate between *Escalloniaceae* and *Loganiaceae*. To me it was striking that the sweet scent of *Alseuosmia macrophylla* is exactly that of *Lonicera*. It may be an ancient Laurasian element in the flora of Australasia.

Periomphale papuana Steen., *sp. nov.*

Differt a speciebus ceteris foliis parvis oblongo-lanceolatis 2—3-nerviis generaliter parum dentatis 12—25 mm longis, 6—8 mm latis floribusque solitariis.

Typus: *LAE 67068 A. Vinas & J. Wiakabu* (holotype in L), Papua New Guinea, West Sepik Dist., Telefomin Subdist.

Branched, very thin and slender, completely glabrous, epiphytic shrublet, *c.* 75 cm long. *Twigs* angular. *Leaves* scattered and in pseudo-verticils; petiole 3—4 mm, much widened at base; blade lanceolate-oblong, cuneate at base, acute at apex; margin entire or mostly with 1—2 short gland-tipped teeth; nerves 2—3 pairs, very erect; venation impressed above, indistinct beneath. *Flowers* actinomorphic, solitary, axillary; pedicel emerging between a few minute bracts, 1—2 mm. *Calyx* lobes 5, thickish, blunt deltoid, $1\,^1/_4$ by $^1/_2$ mm. *Corolla* (in mature bud) narrowly barrel-shaped, 6 mm long; lobes carunculate inside apex, 1 mm. *Stamens* 5, free, alternipetalous, filaments 4 mm, anthers roundish, cordate, $^3/_4$ mm. *Ovary c.* 3 mm, 2-celled, inferior, with flat top; ovules flattened, attached to the septum, 4(—?5) in each cell; style columnar, as long as the corolla, the globular rugose stigma closely enveloped by the corolla lobes.

PAPUA NEW GUINEA. West Sepik Dist., Telefomin Subdist., on ridge leading from Tamanagabib up to surroundings of Mt. Capella ridge, 5° S, 141° E, 3000 m, in *Podocarpus-Phyllocladus* woodland with Gahnia tussocks dominating undergrowth, *LAE 67068* ((A, BRI, CANB, K, L).

Field notes: Pedicels pink, gynoecium creamy white, petals pinkish light green, stamens creamy white.

Periomphale gaultherioides (Gilg & Schltr) Steen., *comb. nov.*

Pachydiscus gaultherioides Gilg & Schltr, Bot. Jahrb. 39 (1906) 270. — Type: *Schlechter 15426* (iso in L), New Caledonia.

Periomphale neo-caledonica (Gilg & Schltr) Steen., *comb. nov.*

Memecylanthus neo-caledonicus Gilg & Schltr, Bot. Jahrb. 39 (1906) 269. — Type: *Schlechter 15677* (holo in B†?), New Caledonia.

152. PITTOSPORUM PUMILUM SCHODDE; EMENDED DESCRIPTION (PITTOSPORACEAE)

One of the new Papuan *Pittosporum* species, collected and described after the revision of the genus appeared in Fl. Males. I, 5 (1957), was recorded from one collection in fruit.

A collection in flower, be it functionally female, invites to emend the description of this interesting species, which is allied to *P. berberidoides* Burk.

Pittosporum pumilum Schodde, Blumea 15 (1967) 406, fig. 1; Fl. Males. I, 6 (1972) 962.

Slender shrub, 1 m, to small tree, 5 m, d.b.h. 7 cm. *Leaves* dull dark green above, light green below, in sicco coriaceous, spathulate to obovate, $1^1/_2$—$6^1/_2$ by $^1/_2$—4 cm, nerves 4—8 pairs, apex rounded to blunt. *Inflorescences* axillary, with stalks and calyx densely brown-tomentose as are the innovations; peduncle $^1/_2$ cm, carrying 4 flowers in a pseudo-umbel. Pedicels *c. 6 mm. Flowers* functionally ♀, with deep-purple corolla. *Sepals* 5, free, ovate-oblong, blunt, long-hairy, 5 by $2^1/_2$—$2^3/_4$ mm. *Petals* 5(—6), free though cohering towards the base, apices bent outwards, ligulate, glabrous, rounded at the apex, *c.* 12 by $2^1/_2$ mm. *Stamens c.* 3 mm, with flattened filaments and reduced, barren, sagittate, small anthers. *Ovary* densely brown-hairy, ellipsoid, 4 by 2 mm; style glabrous, *c.* 1 mm; stigma capitate. *Fruit* red to deep-brown, the structure exactly as in the type.

PAPUA NEW GUINEA. Slopes of Mt. Kenive (Nisbet), 9°10′ S, 147°45′ E, in montane rain-forest, 2500 m, *LAE 65011 J. R. Croft et al.*, 24-7-74.

153. A SPINY DESMODIUM FROM THE LESSER SUNDA ISLANDS (LEGUMINOSAE)

Desmodium horridum Steen., *sp. nov.*

D. acanthoclado F.v.M. similis, sed apicibus ramulorum saepe spinis efoliatis pseudoramosis differt; *ramuli* apice teretes, vix costulati; *stipulae* nervis 10—15 longitudinaliter inter sese parallelis densis praeditae, triangulares, (sub)acutae, pubescentes; *folia* unifoliolata, coriacea, oblanceolata, apice rotundata, margine incrassata, supra glabra, subtus sparsissime appresse puberula, stipellis 2 subulatis planis obsita, 18—32 mm longa, 5—8 mm lata; *legumen* longe stipitatum, inter articula 1 vel 2 (vel 3?) angustiora, articulis ultimis 5—6 mm longis et 3 mm latis, statu immaturo planis, sparsissime puberulis retiveniis.

Typus: *De Voogd 2130* (holo in L, iso in A, BO, BRI, K, NSW).

Firm, rather densely branched, strongly thorny, dense shrub. *Twig* ends terete, short-hairy, not seldom leafless and ending in 5—6 seemingly branched thorns. *Thorns* (short-shoots with leaf insertion vestiges) 7—25 mm long, straight, firm. *Stipules* densely parallel 10—15-nerved, triangular, with wide insertion, short hairy, acute or slightly acuminate, 2—3 mm long, $1^1/_4$—$1^1/_2$ mm wide at base. *Leaves* 1-foliolate; petiole thick, $1^1/_2$ mm long; petiolule $^1/_2$ mm; *stipelles* flattish filiform, $^1/_2$ mm; blade firmly coriaceous, elliptic (25 by 13 mm) to oblanceolate, slightly cordate at base, rounded at apex, 18—32 by 5—8 mm, above glabrous, underneath laxly appressed-puberulous, 7—8-nerved, the nerves and veins densely elevated-reticulate, margin thickened. *Flowers* purple, in dense, bracteate, uncinate-puberulous, terminal, *c.* 10-flowered racemes $1^1/_2$—3 cm long; pedicels in part geminate, 4—5 mm long, nodding at apex. *Bract* veined, ovate-oblong, acute, *c.* 2 by $^3/_4$ mm. *Bracteoles* at base of pedicel very narrow, acute, $1^1/_2$ mm. *Calyx* appressedly long-hairy, *c.* 2 mm high, incised halfway, one lobe larger, acute triangular, three others triangular, smaller, acuminate by a long hairy mucro. *Vexillum* obtriangular, cuneate at the base, widely rounded at the apex, *c.* 8 by 6 mm; *carina c.* 5 mm long, strongly hooded; *alae* oblanceolate, 5 mm; *staminal tube c.* 6 mm long, all stamens equal, the

vexillar one attached at the lower third. *Ovary* puberulous on a hairy stipe, with 1—2(—?) ovules; style hairy at base, *c.* 3 mm long. *Pod* (not fully mature) long-stipitate, deeply gradually narrowed between the joints; joints obliquely oblong-elliptic, laxly puberulous, prominently reticulate-veined, 5—6 by 3 mm, constrictions only $^1/_2$—$^3/_4$ mm wide.

LESSER SUNDA ISLANDS. Lombok. Praja, at 300 m alt. on a dry stony gully edge in grassland ('oro'), *De Voogd 2130*, fl. fr. 6 April 1935, flowers purple (as heather). — Flores. P. Rintjak, off Flores, 5 m alt, *E. Schmutz 1614* (L), thorny bush, sterile, 10 July 1967.

Notes. This most peculiar species reminded me of the only armed species known to me, *Desmodium acanthocladum* F.v.M., which is obviously a rare plant confined to a small area in the extreme northeast corner of New South Wales. Mrs. Joy Thompson at Sydney was so kind to compare it (in 1969) with the Australian species but concluded it was different and Mr. K. Mair sent me a fragment of this. Mr. Selwyn Everist was so kind to compare it with the single sheet at Brisbane of the Australian species and the late Dr. Stan Blake came (in 1969) to the same conclusion; he wrote that F. M. Bailey had included this species in the Queensland Flora but that it had never been actually found in the State.

In *D. acanthocladum* the spines are always solitary, the stipules are *c.* 5-nerved and end rather suddenly from a broad base in a long acicular point. From each stipule 2 ridges run down on the sharply triangular twig end. The leaves are predominantly 3-foliolate, with acicular stipelles. The calyx is short-hairy in the upper part with some long appressed hairs towards the base. The larger calyx lobe is broadly ovate, broadly rounded or (more often) shortly 2-lobed with rounded lobes, while the other lobes are ovate-triangular, acute. The leaflets are narrow, *c.* 10—24 by 2—$3^1/_2$ mm, rather thin, densely appressed hairy beneath and with a short mucro at the tip. Pod joints measure 10—12 by 4 mm and are densely short-pubescent.

Unfortunately the material came on loan from Bogor too late to be included in the revision of the Malesian species by Mrs. M. S. Knaap-van Meeuwen (Reinwardtia 6, 1962: 239—276).

With Ohashi's revision one arrives at *Desmodium* near sect. *Monarthrocarpus*, but it does not seem closely allied to any other species. The floral characters may need emendation with future material, as the flowers present were few and far gone.

154. BOHOLIA MERR. IN THE LESSER SUNDA ISLANDS (RUBIACEAE)

Gradually it appears that there are plants which show a curious north—south range in Central Malesia, that is, Philippines, Celebes, Lesser Sunda Islands. Examples include *Biophytum microphyllum* Veldk., Oxal. (see Fl. Males. I, 7, 1971, fig. 5). Sometimes they occur then also in eastern Java.

The first which came to my notice was the endemic grass genus *Asthenochloa*, but later similar ranges were found in *Arundinella humilior* (Hack.) Jans., Gram., *Isachne beneckei* Hack., Gram., *Lycianthes banahaensis* (Elm.) Bitt., Solan., *Passiflora moluccana* Bl. var. *teysmanniana* (Miq.) De Wilde, Passifl., *Rhododendron zollingeri* J.J.S., Eric., *Sophora longipes* Merr., Legum., *Xylosma luzoniense* (Pr.) Clos, Flac., etc.

They are definitely not bound to a single or specialized habitat.

To these is here added the monotypic genus *Boholia* Merr. of the *Rubiaceae*, hitherto assumed to be endemic in the Philippines.

Boholia nematostylis Merr., Philip. J. Sc. 29 (1926) 492.

PHILIPPINES. B o h o l. Bilar and Kalingohan, *Ramos 43107* (isotype in K), *Ramos BS 43318*. — M i n d o r o. Prov. Oriental, E. slope Mt. Yagaw, pr. Mansalay, virgin forest, 500 m, *Sulit & Concklin PNH 16910*, fruit light blue to violet, 13–12–52.

LESSER SUNDA ISLANDS. F l o r e s. SE. part, M'bengan, 600 m, *Kostermans 22135*, flowers white, 11–5–65; W. part, Sesok, 800 m, *E. Schmutz 1653*, fruit blue, consistency as that of *Symphoricarpus*. — S u m b a. *Iboet 417, 494*, distributed as *Pavetta sp.*

N o t e s. The identity of this caracteristic plant, which has no close ally in Malesia, was checked with the isotype thanks to a generous loan from Kew.

Merrill's assumption that the fruit is 'apparently and septicidally lengthwise dehiscent' cannot be agreed with. With a knife the cocci can rather easily be separated in dried fruits, but really the fruit is of a thin-fleshy drupaceous structure as in so many of the *Coffeoideae* and not dehiscent. The nigrescence and lush terminal panicle are characteristic.