

MISCELLANEOUS NOTES ON LORANTHACEAE 19—24

by

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19. On two Loranthaceae from the Solomon Islands.

Among the indeterminate *Loranthaceae* of the Kew Herbarium, I found two specimens, belonging to different species, both collected by the Reverend R. B. COMINS in San Cristoval Island. One of them appeared to represent a new species, the other to belong to a species formerly described by me, and to give a welcome completion to the knowledge of this species.

1. *Amylotheca salomonica* DANSER, in Bull. Jard. Bot. Buitenzorg, sér. 3, XVI, 1 (1936) 80.

To the description may be added: Adult flowers up to 55 mm long. Unripe fruits roundish-ellipsoid, broadly truncate, with slightly vaulted disc and very short style rest.

Solomon Islands, San Cristoval, X 1890, COMINS 160 (K), climber like 159, leaves opposite, flowers yellow, fruit; vern. name: *surumoru*.

2. *Sogerianthe trilobobractea* DANSER, n. sp. — Fig. 1, *a—c*.

Glabra, pedicellis bracteis calycibusque minute sed dense puberulis exceptis. Ramuli teretes, internodiis 5—7 cm longis, 1.2—2 mm diametro, nodis paulum incrassatis ad duplo dilatatis. Folia striete opposita; petiolus 7—9 mm longus, supra basin paulum incrassatam teres, 1.25—2 mm diametro, laminam versus dilatatus et facie superiore applanatus; lamina ovata vel rotundato-ovata, 5—8 cm longa, 3—5.5 cm lata, sub basi rotundata abrupte in petiolum contracta, apice obtusa vel rotundata, nervis lateralibus utrinque 2 vel 3 incurvatis subeurvinervis, costa nervisque crassioribus supra distinctis paulum prominentibus, venis indistinctis. Flores numerosi circum nodos singuli in scrobiculis inserti; pedicelli teretes, c. 2 mm longi, basi clavatum incrassata 0.75 mm, parte superiore 0.4—0.8 mm diametro, apice bractea subamplexicauli triloba, c. 1 mm

longa, lobo mediano c. 1 mm lato, lateralibus paulo brevioribus et minus latis. Calyx tubo subcylindraceo paulum infundibuliformi, c. 2.5 mm longo, basi 1.25 mm apice 1.5 mm lato, limbo infundibuliformi vel cupulato, 0.75—1 mm longo; corolla sympetala, statu alabastri adulti 15—17 mm longa, basi rotundata, in $\frac{3}{5}$ partibus inferioribus fusiformiter inflata ad 4 vel 5 mm lata, parte superiore subelavata obtusissima, postea usque ad maximam amplitudinem divisa in lacinas 5 parte inferiore anguste triangulares, medio angustatas c. 1 mm latas, parte apicali spathulatas 1.5 mm latas crassiusculas obtusiusculas; filamenta valde dorsiventraliter applanata c. 1.5 mm longa; antherae c. 3.5 mm longae 0.6 mm latae obtusissimae dithecae, loculis 4 non septatis; stylus corollae aequilongus vel paulo brevior, a basi ad apicem vix incrassatus, apicem versus tantum 4-angulus; stigma depresso globosum, c. 0.8 mm diametro.

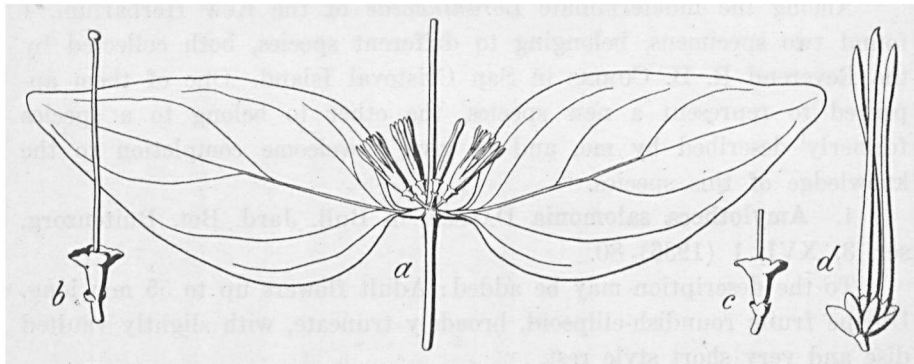


Fig. 1, a—c: *Sogerianthe trilobractea* DANSEY (from COMINS 159); a: fragment of a stem with leaves and flowers, $\frac{3}{5} \times$; b: pedicel with bract, calyx, ovary, and style, $\frac{3}{5} \times$; c: the same seen from the other side; — d: *Dicymanthes tetrapetala* DANSEY, inflorescence with one triad of flowers in bud present, the other 3 flowers taken away, $\frac{3}{5} \times$ (from MAYR 819).

Fructus ellipsoideus vel obovatus, ad 10 mm longus 6 mm diametro, calyce persistente coronatus.

Solomon Islands, San Cristoval, X 1890, COMINS 159 (K), climbing parasite on nut trees, which it helps to kill; leaves opposite, flowers red, fruit a yellow berry containing small seeds; vern. name: *surumoru*.

I have placed this species provisorily in *Sogerianthe*, though, in some respects, it differs from all species of this genus known hitherto. Like *Sogerianthe versicolor* DANSEY our new species has no scales in the corolla tube; the corolla is not 6-merous but 5-merous (I erroneously mentioned 5-merous flowers among the characters of *Sogerianthe* in the

original description in Verhand. Kon. Akad. Wetensch. Amsterdam, afd. Natuurk., sect. 2, XXIX, 6, p. 106); there is, moreover, no articulation in the pedicel, nor are there 3 or 2 separate bracts at the base of the flower, but a single trilobate one. The short 5-merous corolla and the peculiar trilobate bract distinguish our species from all other *Sogerianthae*.

20. A new *Amyema* from Soemba (Netherlands East Indies).

Amyema polytrias DANSER, n. sp. — Plate XV, left part.

Modice robusta, omnis glabra. Stolones cylindranei, superficie inaequali, 4—5 mm diametro, passim haustoriis plantae nutrici affixa. Rami e stolonibus orientes, parce ramosi, 20—40 cm longi, teretes, prope basin 5—6 mm diametro, versus apices attenuati, internodiis inferioribus 10—15 cm longis, superioribus brevioribus, supremis saepe pauca em tantum longis, nodis abrupte incrassatis duplo vel sesquiplo crassioribus. Folia ad 3—6 verticillata, petiolis supra basin nonnihil incrassatam subcylindraneis, laminam versus supra applanatis, 7—15 mm longis, 1—1.5 mm diametro; laminae lanceolatae vel oblongo-lanceolatae, plerumque 6—10 cm longae, 1.5—3.5 cm latae, basi cuneatae, apicem acutiusculum versus acutae vel levissime acuminatae, (in herbario) crassae, durae, fragiles, nervatura pennata, costa facie inferiore valde prominente apicem versus tenuescente, facie superiore indistincta, nervis lateralibus crassioribus utrinque indistinctis vel invisibilibus. Inflorescentiae ex stolonibus et nodis inferioribus orientes, in scrobiculis corticis insertae, singulae vel ex axillis saepe ternae, umbellae multiradiatae triadum floribus omnibus pedicellatis; pedunculi graciles, e basi nonnihil incrassata cylindranei, plerumque 16—27 mm longi, 0.5—0.75 mm diametro, apice leviter capitati; radii umbellae circiter 8, divergentes, graciles, cylindranei vel nonnihil angulati, 1.5—6 mm longi, circiter 0.25 mm diametro, apice in discum conspicuum dilatati; pedicelli plerumque 2—3 mm longi, paulo graciliores quam radii, apice nonnihil in discum dilatati; bracteae omnes ex apice pedicelli distincte unilaterales, anguste ovatae, acutae, convexae, circiter 1 mm longae. Calycis tubus anguste infundibuliformis, 2.5—3 mm longus; limbus infundibuliformis, 0.5—0.75 cm longus, integerrimus; corolla adulta plerumque 25—28 mm longa, statu alabastris adulti gracile cylindranea, vix 1 mm lata, apice distincte in clavam anguste obovatam circiter 3 mm longam 1 mm crassam, nonnihil quadriangulam, obtusiusculam incrassata, postea divisa in petala 4 omnino separata vel saepe partibus mediis et inferioribus in vittam cohaerentia, 0.5—0.75 mm lata, parte superiore circiter 5 mm longa abrupte reflexa lingulata obtusa;

filamenti pars libera circiter 4 mm longa, plana, stricta; anthera oblonga, circiter 2 mm longa, obtusissima, 4-ocularis; stylus 2—3 mm longior quam corolla, a basi ad apicem fere aequicrassus, apice tantum nonnihil attenuatus; stigma vix incrassatum, obtusissimum. Fructus ignotus.

Amyema polytrias is so closely allied to *A. celebica*, *A. basilanensis*, and *A. anisomeres*, that one would be inclined to consider them as local forms of one polymorphous species. They all have the same mode of growth, the same arrangement and structure of the inflorescences and flowers, the same leaf-shape, and same texture of the lamina, and they are all entirely glabrous. *Amyema polytrias* shows the largest differences from the main species, *Amyema celebica*, by nearly 8-rayed umbels, whereas all other species above mentioned have 4-rayed umbels. To this may be added a number of minor differences: *A. celebica* has the leaves opposite or scattered, rarely verticillate, and as a consequence the nodes are less thickened; its inflorescences are somewhat smaller and less robust, its bracts are more obtuse, its corollas usually longer, 27—35 mm, and 5-merous, its stigma is more distinctly thickened. *Amyema basilanensis* shows nearly the same differences from *A. polytrias*, but has its leaves more often scattered, its inflorescences still smaller (peduncles 2—6 mm long), its corollas shorter (nearly 17 mm long), again 5-merous, the reflexed part of the petals only 3 mm, the filaments only 0.5 mm, the anthers 2.5 mm long. *Amyema anisomeres* differs from *A. polytrias* by its usually scattered, rarely opposite, leaves, its smaller inflorescences, the middle flowers of the triads sessile, the bracts more obtuse, the corollas 19—20 mm long, partly 4-merous, partly 5-merous, the filaments only 1.5 mm, the anthers only 1 mm long.

Type specimen of *A. polytrias*:

Island Soemba, Kanangar, 21 VII 1938, GREVENSTUK 212 (B), flower with red tube and green lobes.

21. A new *Notothixos* from Mergui (Lower Burma).

Notothixos merguiensis DANSER, n. sp. — Plate XIII, right part.

Modice gracilis pro genere, multoties pseudo-di-trichotoma. Indumentum in omnibus partibus iuvenilibus densum, nonnihil floccosum, ex aureo ochraceum, in foliorum facie superiore mox deciduum, in caulibus et foliorum facie inferiore diu persistens denique tenuescens, in inflorescentiis, floribus fructibusque semper floccosum. Internodia iuvenilia teretia striata, 0.75—1.5 mm diametro, apice circiter sesquiplo latoria, denique crassiora minusque dilatata, in parte plantae florente 1.5—2.5 cm longa,

in parte inferiore (quoad nota) ad 4.5 cm longa. Folia stricte opposita, petiolo 3—5 mm longo, supra basin tereti, laminam versus nonnihil dilatatus et distincte canaliculatus; lamina rotundato-ovata, plerumque suborbicularis apicem obtusum versus breve acuminata, 1.5—3.5 cm longa, 1—3 cm lata, basi rotundata, tenuiter coriacea, facie superiore costa, nervis lateralibus 2 maioribus, et venis reticulatis distinctis, leviter prominentibus, inter eas leviter bullata, facie superiore nervatura indumento fere invisibili. Inflorescentiae terminales in bifurcationibus caulium, spicae triadum decussatarum (sect. *Ixostachys*), ad 2.5 cm longae, paribus triadum ad 7, quarum inferiores remotae, superiores confertae; dispositio florum femineorum et masculorum indistincta, alabastri superiores globosi (probabiliter masculi), indumento incluso ad 1 mm diametro, feminei denique fructus ellipsoides proferentes perigonio 4-mero persistente, disco subplano, et stylo brevi cylindraceo coronatos, valde juveniles tantum notos.

Closely allied to all other species of the section *Ixostachys*, most closely to *Notothixos sulphureus*, but as much different from this as this from its allies, in its thinner, acuminate, distinctly veined leaves. Perhaps all species of the section are only local forms of one polymorphous species.

Type specimen:

Burma, South Tenasserim, Mergui District, Leikpok Chaung, 400 ft alt., 1925/26, Mr. BRAYBON's collector 201 (DD).

22. The synonymy of the Philippine *Lepidellae*.

In the Philippine Journal of Science, 58, I mentioned, as indigenous to the Philippines, two species of the genus *Lepidaria*, viz., *Lepidaria Williamsii* (MERRILL) DANSER (p. 57), and *Lepidaria tetrantha* (MERRILL) DANSER (p. 58). On p. 60—61, I moreover mentioned *Lepidaria quadriflora* VAN TIEGHEM, based on CUMING's no. 1171, and *Lepidaria biflora* VAN TIEGHEM, based on CUMING's no. 1174, both from the Philippines and both inadequately known, remarking that the numbers, given by VAN TIEGHEM, probably were incorrect, and had to be CUMING 1971 and 1974, a supposition that later proved to be correct. Of these numbers I had, at that time, only seen the latter, but *Lepidaria biflora*, probably based on this, being a nomen nudum, it had no influence upon the nomenclature of the two species mentioned.

In April 1938, however, I had the opportunity of studying, in the Kew Herbarium, both the numbers 1971 and 1974 of CUMING, and from

this it appeared, that both were specimens of *Lepidaria Williamsii*. Now VAN TIEGHEM's name *Lepidaria quadriflora* cannot be considered as a *nomen nudum*, and this causes the necessity of a nomenclatorial change.

In *Blumea*, II, p. 37, I transferred the species in question to VAN TIEGHEM's genus *Lepidella*, and now I wish to maintain this standpoint. The synonymy of the Philippine *Lepidellae* consequently must be as follows.

1. *Lepidella quadriflora* (VAN TIEGHEM) DANSER — *Lepidaria quadriflora* & *Lepidaria biflora* (*nomen*) VAN TIEGHEM, in Bull. Soc. Bot. Fr., 42 (1895) 441; *Loranthus Williamsii* MERRILL, in Phil. Journ. Sc., 4, bot. (1909) 148; *Chorilepis quadriflora* & *Chorilepis biflora* VAN TIEGHEM, in Compt. rend. Ac. Sc., Paris, 153 (1911) 1196, 1198; *Lepeostegeres Williamsii* MERRILL, Enum. Phil. Fl. Pl., 2 (1923) 102; *Lepidaria Williamsii* DANSER, in Bull. Jard. Bot. Buitenzorg, sér. 3, X, 3 (1929) 322; *Lepidella biflora*, *Lepidella quadriflora*, *Lepidella Williamsii* DANSER, in *Blumea*, II, 2 (1936) 37.

2. *Lepidella tetrantha* (MERRILL) DANSER — *Loranthus tetranthus* MERRILL, in Phil. Journ. Sc., bot., 7 (1912) 79; *Lepeostegeres tetranthus* MERRILL, Enum. Phil. Fl. Pl., 2 (1923) 101; *Lepidaria tetrantha* DANSER, in Bull. Jard. Bot. Buitenzorg, sér. 3, X, 3 (1929) 322; *Lepidella tetrantha* DANSER, in *Blumea*, II, 2 (1936) 37.

23. Additions to the Loranthaceae of New Guinea.

I, 1. *Amylotheca dictyophleba* (F. v. MUELLER) VAN TIEGHEM — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 242.

Papua, Middle Fly River, Lake Daviumbu, VIII 1936, BRASS 7587 (L, double from AA), occasional on lake-shore trees, upper part of perianth-tube yellow, other parts red, covered with glaucous bloom.

Second record for New Guinea.

I, 2. *Amylotheca triflora* (SPANOGHE) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 250; *Blumea*, III, 38.

Waigeo, Samlam, 300 m alt., 31 V 1931, G. STEIN 178 (BD); Sattelberg bis Junzaing, 800—1500 m alt., I 1929, E. MAYR 741 (BD).

I, 3. *Amylotheca Versteegii* (LAUTERBACH) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 251; *Blumea*, III, 39.

Papua, Western Division, Daru Island, 2 IV 1936, BRASS 6429 (L, double from AA), uncommon parasitic shrub on rain-forest trees, base of perianth-tube red, upper part and lobes green; Middle Fly River, Lake Daviumbu, VIII 1936, BRASS 7597 (L, double from AA),

common on lake-shore trees, perianth red and green; Lower Fly River, east bank opposite Sturt Island, rain forest, X 1936, BRASS 8199 (L, double from AA), common on low trees along river, lower perianth tube red, upper green, lobes greenish white; Morobe, Sattelberg, Sambanga, 5—6,000 ft el., forest mountain on big cordate leaf tree, 13 XI 1937, CLEMENS 7586 (BD).

II, 1. *Amyema barbellata* (BLAKELY) DANSER — Cfr. *Blumea*, III, 42.

N.E. New Guinea, Morobe, Yunzaing, 4500 ft alt., 25 VI 1937, CLEMENS 6447 (BD), on *Melia*, flowers light yellow apex, base salmon pink red; *ibidem*, 18 VI 1937, CLEMENS 6447a (BD), flowers yellow, base red; Sattelberg, Sambanga, 5—6,000 ft alt., 3 XII 1937, CLEMENS 7835 (BD), flower buds pale, faint brown tinge, like fruit; Boana, mountain bush on *Albizzia*, near mission, 3300 ft alt., 9 VI 1938, CLEMENS 8241 (BD), flower yellow-orange; Abe, Sarawaket, mountain bush, 4—6,000 ft alt. (prob.), 15—18 VI 1938, CLEMENS 8312 (BD), flower base red, to yellow; mts. above Boana, 4—5,000 ft alt., 26 VII 1938, CLEMENS 8536 (BD), flower base salmon red, apex yellow.

In the above mentioned specimens, the style length varies from 28 to 36 mm.

II, 2. *Amyema clavipes* DANSER — Cfr. *Brittonia*, II, 132, t. I, d; *Blumea*, III, 43.

New Guinea, Morobe, Mt. Sarawaket, Bog Meadow Camp, but up to forest limits, 4 & 17 III 1937, CLEMENS 5607 (BD), bright red.

This specimen is somewhat more robust than the type, the leaf-bearing twigs are up to 5 mm in diam., the internodes to 7 cm long, the leaves more oblong or narrow-oblong, the laminae to 7 cm long by 2.5 cm broad, the inflorescences in the axils of the older leaves 2 or 3 together, the flowers somewhat coarser, the styles 25—26 mm long.

II, 3. *Amyema corniculata* DANSER — Cfr. *Brittonia*, II, 133, t. I, e—g; *Blumea*, III, 44.

N.E. New Guinea, Morobe District, Mt. Sarawaket, 11,000 ft (?) alt., on little tree near rock wall, 6 X 1937, CLEMENS 7403 (BD), flower bright purple red; *ibidem*, X 1937, CLEMENS s.n. (BD), without original label, perhaps belonging to the former collection.

The specimens above mentioned certainly represent the same species and probably belong to *A. corniculata*. As, however, they are somewhat different from the type specimens, I give the following description based on them.

Entirely glabrous. Twigs terete, internodes usually 1—3 cm long,

the leaf-bearing ones terete and 1—1.5 mm in diam. at the base, dilated to 2 mm towards the apex, the older ones terete, finally with tuberculate-thickened leaf-insertions and axils, their surface rough by wrinkles, crevices and lenticels. Leaves opposite; petioles hardly thickened at the base, terete, but flattened above or even slightly canaliculate towards the lamina, 3—6 mm long, nearly 1 mm broad; laminae elliptic to oblong or obovate to obovate-oblong, usually 2—4 cm long, 8—20 mm broad, rounded to obtuse at the apex, cuneate or somewhat rounded at the base and rather abruptly contracted into the petiole, thickish, dull on both sides, nearly nerveless, only the midrib visible above and in the basal part below. Inflorescences in the axils of the older leaves and on the leafless nodes, single, 4-rayed umbels of triads of which the middle flowers sessile, the lateral ones pedicelled; peduncles of the inflorescences in bud 1—2 cm long, nearly 1 mm thick, slightly clavate at the base, slightly capitate at the apex, those of the fruit-bearing ones as long and somewhat thicker; all ramifications divaricate; rays to 6 mm long in the inflorescences in bud, up to 9 mm long in the fruit-bearing ones, nearly 0.6 mm in diam. at the base; pedicels of the lateral flowers nearly 5 mm long when fruit-bearing; bracts triangular-ovate, nearly 0.5 mm long, somewhat convex, always with a tubercle on their back that often is half as long as the bract, usually smaller, here and there moreover with indistinct smaller tubercles and sometimes with a single small tooth at the margin. Fruits roundish-ellipsoid, to 4 by 3 mm, crowned by the nearly flat disc nearly 1 mm in diameter and surrounded by the very short calyx limb.

The differences from the type that are of some importance are the thicker inflorescences, the much longer rays and pedicels, and the less developed tubercles on the bracts.

II, 4. *Amyema finisterrae* (WARBURG) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 332; Blumea, III, 44.

N.E. New Guinea, Morobe Distr., Sattelberg, Sambanga, 5—6,000 ft alt., mossy forest near rivulet, 20 VIII 1937, CLEMENS 6760 (BD), red lorant, on big *Turpinia*; *ibidem*, on great *Podocarpus*, 1 X 1937, CLEMENS 7240 (BD), flower red; *ibidem*, on big Euph. tree, 13 XI 1937, CLEMENS s. n. (BD); "supplement", probably to the preceding, with which it is nearly identical, numbered 7573a in Berlin; moreover a specimen without label, XII 1937, numbered 7754a in Berlin.

The first mentioned specimens are different from all former ones by narrower leaves and longer flowers. The corollas in bud are up to 38 mm long, two styles are 40 and 41 mm long. The bracts are distinctly

cupulate-amplexicaulous, and opposite the bract the margin often bears 2 short, acute teeth, as if two bracteoles were connate with the bract. One flower bears two opposite bracts, and between these we find, on each side, two such teeth somewhat connate (as in interpetiolarly stipules); such teeth we also find in the other specimens mentioned above, and the "supplement" again bears 2 bracts to one of the flowers.

II, 5. *Amyema friesiana* (K. SCHUMANN) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 332; Blumea, III, 46.

N.E. New Guinea, Morobe District, Mt. Sarawaket, forest limits, 12,500 ft (?), 7 IV 1937, CLEMENS 5776 (BD); Yunzaing, 4500 ft alt., 18 VI 1937, CLEMENS 6499 (BD), on *Calophyllum*, fruit brown; Sattelberg, Sambanga, high forest, mountain above "village" on big *Rutacea*, 5—6,000 ft alt., 27 XI 1937, CLEMENS 7754 (BD), flower red, yellow apex; Saruwaged Gebirge, Ogramnang, 1800 m alt., III 1929, E. MAYR 829 (BD).

II, 6. *Amyema pentactis* DANSER, n. sp. — Plate XIII, left part.

Robusta, omnis glabra. Internodia iuniora teretia, ad 5 cm longa, plerumque breviora, 2—4 mm diametro, apicem versus ad sesquiplo dilatata, levia, cinerea vel subfusca, vetustiora crassiora, cinerea, nodis incrassata, superficie minus levia. Folia opposita vel subopposita vel passim sparsa; petioli 2—15 mm longi, basi vix incrassati, teretes, laminam versus supra applanati; laminae ellipticae vel oblongae vel magis obovatae, ad 9 cm longae, 5 cm latae, sub basi cuneata in petiolum contractae, apice obtusae vel rotundatae, crassiusculae, fragiles, utrinque leves sed minime lucentes, e fusco rufidulae, facie superiore nervis vix visibilibus, inferiore costa et nervis maioribus latis et planis distinctis. Inflorescentiae gregatim in nodis defoliatis, umbellae pedunculatae triadum floribus omnibus sessilibus; pedunculi plerumque 15—25 mm longi, basi clavati, ceterum teretes, 0.6—0.8 mm diametro, apice in receptaculum subglobosum circiter 1.5 mm crassum incrassati; radii plerumque 5, teretes, 4—5 mm longi, circiter 0.5 mm diametro, basi nonnihil clavati; bracteae triadum aequales, basi nonnihil connatae, ovato-triangulares, primum calycibus appressae, denique patentes. Calyces obovati, circiter 2.5 mm longi, 1.5—2 mm diametro, iam in alabastris aucti, cinerei vel albidii, minime lucentes, limbo brevissimo inflexo. Corollae in alabastris adultis basi leviter dilatatae, dimidia parte inferiore teretes, 0.3—0.4 mm latae, dimidia parte superiore gradatim nonnihil dilatatae, deinde abrupte in clavam obovatam erictae 1.5 mm longam vix 1 mm latam incrassatae, postea divisae in petala 6 basi nonnihil dilatata ad 0.25 mm lata, deinde gradatim ad dimidiam latitudinem angustata, denique in partem apicea-

lem anguste spathuliformem incrassatam acutam dilatata, circiter 6 mm sub apice recurvata. Filamenta filiformia; antherae oblongae vel obovato-oblongae, circ. 1.25 mm longae, distincte 4-loculares. Stylus corollae aequilongus vel paulo longior, 14—18 mm longus, subfiliformis, angulatus, parte apicali tereti excepto; stigma stylo paulo tantum longior, rotundatum vel subtruncatum. Fructus ignotus.

In general appearance this species reminds one of *A. ovariosa*, but differs from this as well as from the closely allied *A. scandens*, by non-verticillate leaves and shorter flowers. By its opposite leaves it resembles *A. friesiana*, *A. cercidioides*, *A. triantha*, and *A. obovata*, but differs from all these by different leaf-shape, from most of them by shorter flowers. The strongest resemblance is with *A. triantha*, from Borneo, which likewise has short flowers, but it differs from this by glabrous inflorescences, narrower leaves, more triangular-ovate bracts, and calyces not constricted below the limb.

N.E. New Guinea, Morobe District, Mt. Sarawaket, Abc, open bush, 5—6,000 ft alt. (probably), 15—18 VI 1938, CLEMENS 8307a (BD), flower purplish red. *Type* of the species.

II, 7. *Amyema scandens* (VAN TIEGHEM) DANSER = *Amyema verticillifolia* (K. KRAUSE) DANSER; cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 354; XVI, 92; Blumea, III, 48.

New Guinea, Papua, Western Division, Penzara, between Morehead and Wassi Kussa Rivers, savannah forests, XII 1936, BRASS 8435 (L, double from AA), scandent, flowers pink; N.E. New Guinea, Morobe District, Sambanga, on mountain forest tree, 5—6,000 ft alt., 25 VIII 1937, CLEMENS 6836 (BD), shrub, buds all pink.

I see no differences between these specimens and *Amyema scandens* from New Caledonia and Lifu. Though Mrs. CLEMENS's specimen is described as a shrub, and not as scandent, the materials available consist of three fragments of a runner bearing inflorescences. The corollas of this specimen are not yet open, and are already 36 mm long; such long corollas were hitherto unknown in the New Guinea *Amyema verticillifolia*, but are common in the New Caledonian *Amyema scandens*. Because of the swollen calyces this specimen ought to be included into *A. ovariosa* DANSER, but I think it will be impossible to maintain this species.

II, 8. *Amyema seemeniana* (K. SCHUMANN) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 345; Blumea, III, 47.

New Guinea, Papua, Lower Fly River, east bank opposite Sturt Island, X 1936, BRASS 7990 (L, double from AA), common, parasitic on high trees in rain forest, perianth yellow-green, anthers red.

Differs from the type of *A. seemeniana* by all parts being glabrous and by the very short calyx limbs; by the former character it comes nearer to *A. articulata*; moreover the leaves are usually oblong. The flowers are distinctly 5-merous.

III, 1. *Dicymanthes tetrapetala* DANSER, n. sp. — Fig. 1, d (p. 390).

Ramuli teretes, 3.5—6 mm diametro, nodis nonnihil incrassatis, internodiis ad 13 cm longis, fere levibus. Folia opposita, subsessilia, lamina ovata, ad 14 cm longa, 7 cm lata, apicem obtusiusculum versus acuta, sub basi rotundata subito contracta, crassiuscula, fragili, utrinque opaca, faciebus distincte diversis, superiore cano-viridi, inferiore magis rufa, penninervi, costa nervisque lateralibus utrinque distinctis sed subtus magis prominentibus quam supra, venis omnino invisibilibus vel supra indistinctis. Inflorescentiae circum nodos foliiferos, capitula breve pedunculata floribus 6 in triadibus 2 dispositis, involuero e bracteis 2 florum mediorum bracteolisque 4 florum lateralium composito; pedunculus involucrumque tenuiter ferrugineo tomentosi; pedunculus 2 mm longus, 1—2 mm latus, apice latior quam basi; bractee adscendentes, conduplicato-suborbiculares, obtusae, dorso rotundato, concavae, 3.5—4 mm longae; bracteolae oblongae, planae, bracteis aequilongae, fere 2 mm latae, obtusae. Calyx parce ferrugineo tomentosus, anguste campanulatus, nonnihil infundibuliformis, tubo circiter 2.5 mm longo, supra 1 mm lato, limbo 0.5—0.75 cm longo, paulum infundibuliformis, margine irregulariter dentato, pilis ferrugineis breve fimbriato. Corolla statu alabastri tantum nota, ad 30 mm longa, parce ferrugineo tomentosa, a basi ad apicem fere aequilata, basi circiter 1 mm lata, 4-angula, ad $\frac{2}{3}$ longitudinis magis teres et nonnihil angustata, deinde iterum incrassata in clavam angustam circiter 5 mm longam 1—1.25 mm crassam, acutiusculam, postea probabiliter divisa in petala 4 (in alabastris passim basi separata). Corolla aperta et fructus ignoti.

In general appearance different from all other *Dicymanthes* species known hitherto, especially by the longer and more cupuliformous involueres and the 4-merous flowers. The genus is new to New Guinea.

New Guinea, Saruwaged Mountains, Ogeramngang, 1800 m alt., 22 III 1929, E. MAYR 819 (BD). *Type* of the species.

IV, 1. *Distrianthes molliflora* (K. KRAUSE) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 366.

N.E. New Guinea, Morobe, Kalanza, grass land, bush margin, 1500 ft alt., 2 I 1938, CLEMENS 7932 (BD), shrub, big plant, flower red.

Like the specimen mentioned by me in *Blumea*, III, 48, as *Distrianthes Lamii*, the above mentioned specimen is an intermediate between

Distrianthes Lamii and *molliflora*, but comes nearer to *D. molliflora*, because of its flowers, that are entirely densely long-hairy; the involucre, however, is nearly glabrous, only here and there with remnants of stellate hairs. The petioles are short and thick, 5—6 mm long, 5 mm in diameter, the laminae are 18—22 cm long, 9—11 cm broad, rounded at the base, very obtuse at the apex, not acuminate, rather thick-coriaceous; also in these respects our specimen unites *D. molliflora* with *D. Lamii*. The involucral bracts are 40—45 mm long, connate in the basal 5 mm; such long involucres were, hitherto, unknown in *Distrianthes*. Rather than base a new species on the above specimen, I should prefer to unite *D. molliflora* and *D. Lamii*. In that case the epithet "*molliflora*" would have one year's priority over "*Lamii*".

V, 1. **Dendrophthoë falcata** (LINN. FIL.) ETTINGSHAUSEN — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 403; Blumea, III, 52.

Papua, Western Division, Daru Island, parasitic on *Rhizophora mucronata*, 29 II 1936, BRASS 6234 (L, double from AA), small shrub, corolla tube yellow; *ibidem*, parasitic in mangrove forests, 11 III 1936, BRASS 6330 (L, double from AA), common, corolla lobes red, tube yellow; Middle Fly River, Lake Daviumbu, on dry *Banksia-Grevillea* savannahs, VIII 1936, BRASS 7447 (L, double from AA) plentiful, flowers orange-yellow with reflexed red lobes; *ibidem*, on low *Banksias* of savannahs, IX 1936, BRASS 7930 (L, double from AA), plentiful, conspicuous when displaying young red leaves, flowers orange-red.

V, 2. **Dendrophthoë Gjellerupii** (LAUTERBACH) DANSER — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 409; Blumea, III, 52.

New Guinea, Papua, Western District, Wassi-Kussa River, Tumbuke, on low trees in *Agonis* and *Melaleuca* savannah forests, XII 1936, BRASS 8476 (L, double from AA), plant rusty-brown, flowers reddish-brown, inner surface of perianth-lobes pink; *ibidem*, Tarara, in savannah forests, I 1937, BRASS 8667 (L, double from AA), inner surface of perianth lobes pink; Morobe, Boana, below mission, 3000 ft alt., 6 VI 1938, CLEMENS 8235 (BD).

VI, 1. **Notothixos leiophyllus** K. SCHUMANN — Cfr. Bull. Jard. Bot. Buitenzorg, sér. 3, XI, 456; Blumea, III, 55.

New Guinea, Papua, Fly River, 528 mile camp, V 1936, BRASS 6818 (L, double from AIA), parasitic on branches of tall canopy tree, young leaves and inflorescence golden yellow; Morobe, Sattelberg, 3000 ft alt., on *Pygeum*, forest hill below mission, 24 III 1938, CLEMENS 8067 (BD), flowers vivid yellow, fruit gray-greenish.

VII, 1. *Viscum ovalifolium* A. P. DE CANDOLLE — Cfr. *Blumea*, III, 58.

New Guinea, Papua, Palmer River, 2 mi. below junction Black River, 100 m alt., VII 1936, BRASS 7211 (I, double from AA) parasitic on forest canopy liana, much branched weak shrub, flowers green, minute, fruit orange-brown, warty, ± 6 mm diam.

Index to collectors' numbers mentioned in this note.

BRASS 6234, 6330 = V, 1; 6429 = I, 3; 6818 = VI, 1; 7211 = VII, 1; 7447 = V, 1; 7587 = I, 1; 7597 = I, 3; 7930 = V, I; 7990 = II, 8; 8199 = I, 3; 8435 = II, 7; 8476, 8667 = V, 2.

CLEMENS s.n. = II, 3 & II, 4; 5607 = II, 2; 5776 = II, 5; 6447, 6447a = II, 1; 6499 = II, 5; 6760 = II, 4; 6836 = II, 7; 7240 = II, 4; 7403 = II, 3; 7573a = II, 4; 7586 = I, 3; 7754 = II, 5; 7754a = II, 4; 7835 = II, 1; 7932 = IV, 1; 8067 = VI, 1; 8235 = V, 2; 8241 = II, 1; 8307a = II, 6; 8312, 8536 = II, 1.

MAYR 741 = I, 2; 819 = III, 1; 829 = II, 5.

STEIN 178 = I, 2.

24. Two new species of *Taxillus*.

Taxillus assamicus DANSER, n. sp. — Plate XIV.

Partes novissimae tomento tenui ferrugineo, in organis vegetativis mox deciduo, in inflorescentiis floribusque partim persistente, in corolla et fructu tenuescente denique nullo. Ramuli graciliores, teretes, internodiis ad 3 cm longis plerumque multo brevioribus, iam inter folia adulta cortice cinereo lenticellis numerosis, 1—3 mm diametro, nodis sesquiplo vel duplo latioribus. Folia opposita vel subopposita; petiolus difficile a lamina distinguendus, 2—6 mm longus, e basi subtereti laminam versus supra applanatus; lamina ovato-oblonga vel ovato-lanceolata, 4—12 cm longa, 1—5 cm lata, basi in petiolum attenuata, apicem obtusum versus acuta vel nonnihil acuminata, tenuiter coriacea, faciebus paulum tantum diversis, haud lucidis, coloribus plerumque pallidioribus, facie superiore nervatura omni usque ad venas visibili sed paulum prominente, facie inferiore costa valde, nervis crassioribus paulum prominentibus, venis plerumque invisibilibus. Inflorescentiae singulae in axillis foliorum et paucae in nodis defoliatis, umbellae sessiles vel subsessiles floribus 4 vel paucioribus; pedunculus 0—0.5 mm longus; pedicelli teretes, plerumque 2—5 mm longi, apice nonnihil capitati; bractae suborbiculares, obtusissimae, convexae, semiamplexicaules, 0.5—1 mm longae. Calyx campanulato-obovatus, 1.25—1.5 mm longus, 1 mm latus, limbo brevissimo

erecto vel inflexo; corolla statu alabastri adulti stylo acquilonga, e parte basali cylindrica medio inflata, plerumque ad 2 mm lata, deinde in colum 1 mm latum attenuata, denique in clavam angustam, circiter 1.5 mm crassam, obtusam incrassata, postea decurvata et divisa in lacinias 4 more *Scurrularum*; stylus 20—30 mm longus, filiformis, stigmatibus multo crassiore, globoso, 0.3—0.4 mm diametro. Fructus obovatus, ad 6 mm longus, 4 mm diametro, apice subtruncatus, limbo nullo, disco convexo, superficie granulata vel verruculosa. (Description mainly from DEKA s.n., in flower, and DEKA 16588, in fruit, in the Shillong Herbarium.)

Loranthus umbellifer, in HOOKER's Flora of British India, V, p. 211, appears to be a mixture of different species, among which the one here described as new. His var. *clavigera* appears to be a well-distinct species, which I call *Scurrula Corynitis* (SPRENGEL) G. DON. The main form of the species is, according to its name, SCHULTES's *Loranthus umbellifer*, a plant with the flowers in peduncled, 3—4-flowered umbels, and which I call *Taxillus umbellifer* (SCHULTES) DANSER. The only number, however, which HOOKER cites, as "Loranth. 72, Herb. Ind. Or. H. f. & T.", is the species here described as new. It appears to be common in Assam, and is easily distinguished by its sessile umbels. Moreover HOOKER labelled specimens as *Loranthus umbellatus* WALL. or *umbellifer* SCHULT., which have flowers in prolongate racemes, and which I prefer to include in *Scurrula elata* (EDGEWORTH) DANSER.

Assam. Khasia, 4—6000 ft alt., J. D. HOOKER "Loranthus 72" (BD, L); Khasi Hills, Bendon Falls, 4500 ft alt., U. KANJILAL 2415 (Sh); Khasi Hills, Rangumtia, 5500 ft alt., U. KANJILAL 2642 (Sh); Khasi & Jyntea Hills, Mairang, 5500 ft alt., H. KANJILAL 5864 (DD); K. & J. Hills, Peak Forest, S. R. SHARMA 9749 (Sh); *ibidem*, G. K. DEKA 16588 (Sh); Lawlyngdoh, G. K. DEKA s.n. (Sh), type of the species.

Taxillus rutilus DANSER, n. sp. — Plate XV, right part.

Indumentum foliorum et ramulorum iuvenilium densum, flavido-fuscum, in foliorum facie superiore mox deciduum, in ramulis tenuescens sed tamdiu persistens quam folia, in foliorum facie inferiore paululum tenuescens et obscurescens, sed semper densum, in inflorescentiis et calyceibus semper densum, magis rutilum quam in partibus vegetativis, in corollis etiam fere rubrum et magis floccosum quam in calyceibus, tempore florendi tamen tenuescens. Ramuli teretes, internodiis iuvenilibus ad nodos applanatis et dilatatis, vetustioribus magis teretibus, folia adulta ferentibus ad 5 cm longis, 2—3 mm diametro, post lapsum indumenti cinereis, mox lenticellis numerosis. Folia opposita vel subopposita; petiolus plerumque 6—10 mm longus, teres, laminam versus supra appla-

natus; lamina oblonga, rarius elliptica, plerumque 4—7 cm longa, 1.5—2.5 cm lata, apice basique acuta vel obtusiuscula, chartacea, facie superiore flavo-fusca, semi-lucida, nervatura omni usque ad venas visibili sed in distincta, facie inferiore indumento vestita sed costa valde prominente. Inflorescentiae paucae in axillis foliorum vetustiorum et numerosae in nodis defoliatis, umbellae pedunculatae floribus plerumque 2 vel 1, raro 3; pedunculus 3—5 mm, plerumque 4 mm longus, teres, apice basique vix incrassatus, minus quam 0.5 mm (plerumque 0.3—0.4 mm) crassus, inter flores 2 in apiculum parvum obtusum prolongatus; pedicelli tenuiores, 1—1.5 mm longi, teretes; bractea ovata obtusa parva convexa, circiter 0.5 mm longa. Calyx obovatus, 1.5—2 mm longus, limbo indistincto, brevi et inflexo; corolla statu alabastri adulti circiter 22 mm longa, in partibus $\frac{3}{4}$ inferioribus ad 4 mm diametro inflata, deinde in collum breve 1.5 mm latum attenuata, denique in clavam breve obovatam 3 mm longam 2.5 mm latam inflata, postea usque ad partem angustissimam divisa in lacinias 4, fissura singula profundiore, parte reflexa spathulata, ut corollae tubus crassiuscula, circiter 5 mm longa 1 mm lata, uncinata, acutiuscula, facie interiore cava viridi; filamenta atra, c. 3 mm longa; antherae c. 1 mm longae obtusae, loculis 4 haud transverse septatis; stylus plerumque c. 22 mm longus, a basi ad apicem gradatim attenuatus, maxima parte acute quadriangulus, parte superiore 3 mm longa teres, stigmatibus styli basi subaequicrasso, styli apice circiter sesquialtero crassiore, obtuso. Fructus semi-evoluti obovati, maturi ignoti. (Description from the type S_{IN} 3905.)

This species is closely allied to the western *T. vestitus*, the northern *T. sutchuenensis* and *T. tibethensis*, the eastern *T. yadoriki*, and the southern *T. kwantungensis*. The greatest resemblance is with *T. vestitus*, especially in the shape and indument of the twigs and leaves, and the usually 2-flowered umbels, but it differs from this species and approaches the other species by longer flowers, pedicels and peduncles. The reddish colour of the inflorescences and flowers, especially of the corollas, is remarkable, and causes a resemblance to *T. yadoriki*, but in this species not only the flowers and inflorescences, but also the indument of the twigs and the leaves is dark reddish-brown, and the leaves are more roundish and of a darker colour. It is not at all impossible that all the species mentioned are geographical variations of one polymorphous species, but their distribution is inadequately known up till now.

China, Kwangsi Prov., Yao Shan, alt. 800 m, S. S. S_{IN} 3905 (Hb. Sun Yatsen Univ., doubles in BD and L), **type**; *ibidem*, alt. 600 m, S. S. S_{IN} 3990 (Hb. Sun Yatsen Univ., BD), entirely identical with the former; probably also: China, South Hunan, S. S. S_{IN} 672 (BD),

and Hunan Prov., Chao Shan, Siangtau, alt. 300 ft, S. S. SIN S.H. 216 (BD).

SIN 672 has not yet adult flower buds, SIN S.H. 216 has only very young flower buds, and both are, therefore, not quite certain.

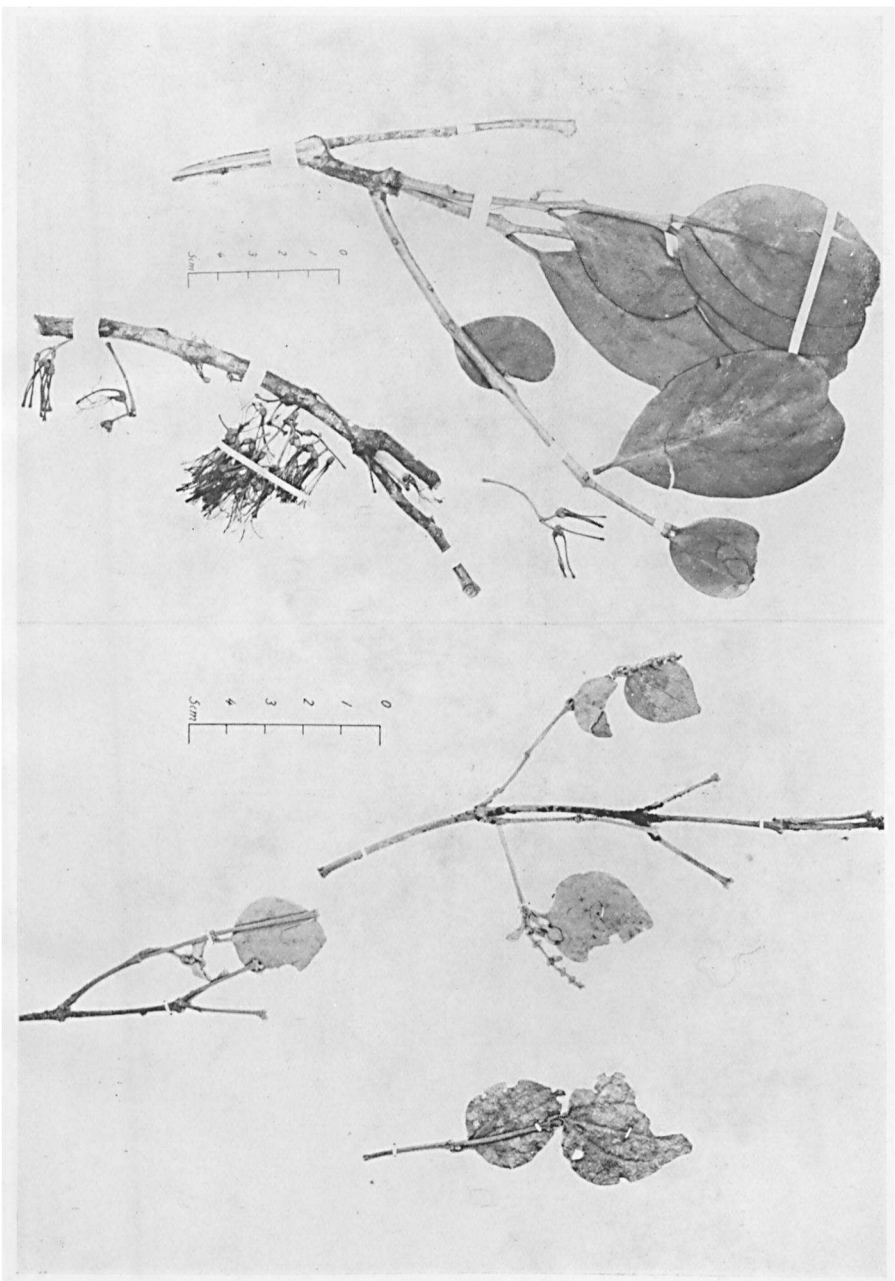


Plate XIII. To the left: *Amyema pentactis* DANSEN, part of the type (GEMENS 8307a); to the right: *Notolixos merguensis* DANSEN, part of the type (BRAYBON'S COLLECTOR 201). — PHOTO L. ALKENA.

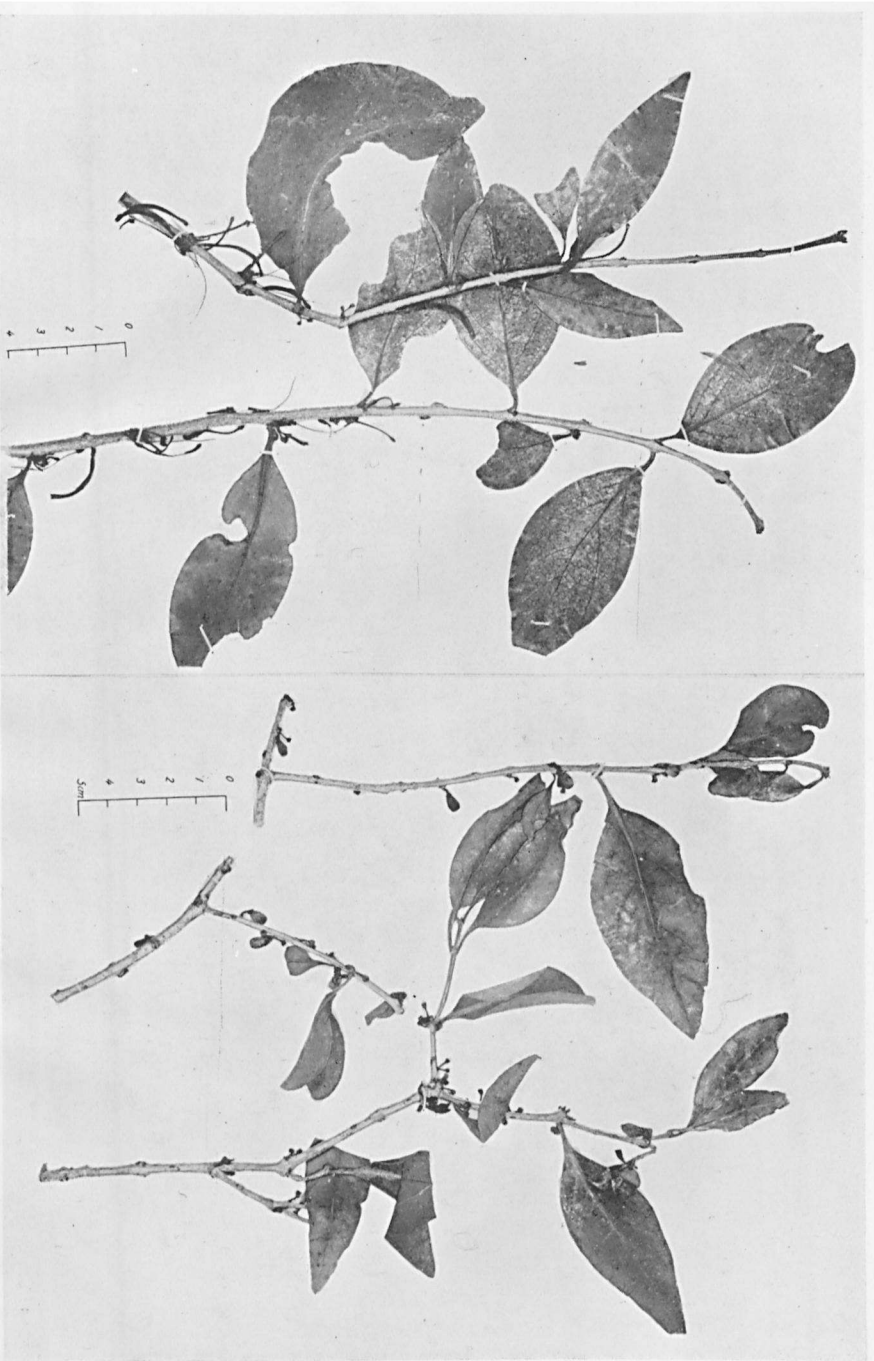


Plate XIV. *Taxillus assenicus* DANSEK; to the left: first type, in flower (DEKA s.n.), to the right: second type, in fruit (DEKA 16588). — Photo L. AIKENA.



Plate XV. To the left: *Amyema polytrichas* DANSER, type specimen (GREVENSTUK 212); to the right: *Tarilus rufus* DANSER, type (SIN 3905). — Photo L. ALKENA.