

CRITICAL NOTES ON NEW GUINEA PLANTS DESCRIBED BY A. GILLI

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SUMMARY

Two new genera and nineteen new species of Dicotyledons from Papua New Guinea collected and described by A. Gilli (1980) have been examined by specialists. These families are Begoniaceae, Cruciferae, Elaeocarpaceae, Euphorbiaceae, Hypericaceae, Leguminosae, Rosaceae, Rubiaceae, Saxifragaceae, and Sterculiaceae. Both new genera are reduced: *Melachone* to *Amaracarpus* (Rub.), *Disaster* to *Commersonia* (Sterc.). Supposed new generic records to Malesia proved erroneous: a new *Thelygonum* belongs to *Nertera* (Rub.), and a *Trochiscus* to *Nasturtium* (Cruc.); the *Viburnum* from Papua is a *Psychotria* (Rub.). All species are reduced to those already known. It is advocated as undesirable to describe novelties from odd tropical plant collections.

INTRODUCTION

In 1974 Dr. A. Gilli, Vienna, made a botanical tour in Papua New Guinea. He identified the material he collected there, to which was added a small collection made by the anthropologist H. C. Dosedla, in 1971, in Papua New Guinea.

In 1978 Gilli published the first part of his account, covering the Bryophyta, Pteridophyta, and Coniferae, in the *Annalen des Naturhistorischen Museums, Wien*, 81 (1978) 19–29, and recently the second part covering the Dicotyledons in the same journal, vol. 83 (1980) 417–474.

As the latter part contained quite a number of new species, and even some new genera, and also some astounding new records of families and genera hitherto unknown for the Malesian region, it seemed necessary to re-examine a selected number of these novelties or new records, some of which seemed out of the way in the Malesian flora.

This led to the participation of several specialists whose help is here appreciated, and whose conclusions are enumerated in compact form. We have restricted ourselves largely to the more obvious novelties concerning families or genera which were unknown from Malesia, or for which specialists are extant.

It appeared that Dr. Gilli had insufficient knowledge of the literature on the botany of Malesia. Obviously he did not realize that since Lauterbach's 'Beiträge zur Flora Papuasien' an enormous progress has been made on the collections and publications on the flora of New Guinea, in the frame-work of the Flora Malesiana project, and that for many families and genera there are specialists who should be entrusted with identifications in their specialities.

Examination of novelties by specialists in the families below has revealed that none of the genera and species proposed as new have stood the test. They are accordingly reduced. Several taxa were assigned to wrong families or genera.

I add, that working out odd local Malesian collections is at the present stage of knowledge impossible, or at least highly undesirable. This point of view is in effect true for almost any tropical region, especially when one stands in an isolated position as regards availability or knowledge of literature and a large reference herbarium. Such attempts simply create more work and solve nothing.

I will even go further and certify that in well-equipped centres trained taxonomists will generally refrain from naming new collections in unrevised families and genera.

We sincerely hope that Dr. Gilli will, for the forthcoming third instalment covering the Monocotyledons, consult specialists or at least use up-to-date literature.

BEGONIACEAE (M. J. S. Sands, Kew)

Begonia augustae Irmischer. — *B. dosedlae* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 421.

Papua New Guinea: Mt. Hagen, 1500 m, *Dosedla* 139 (type in W).

N o t e: *Begonia naumoniensis* Irmischer, with which Gilli compared his assumedly new species, is quite different in inflorescence and fruit characters, but *B. isoptera*, to which he also refers, while not occurring in Papua New Guinea, may well be closely allied to *B. augustae*.

CRUCIFERAE (J. F. Veldkamp)

Nasturtium peekelii O. E. Schulz. — *N. novoguineense* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 429.

Papua New Guinea: Wanapap, *Gilli* 428 (type in W).

N o t e: To this species belong also a specimen cited by Gilli (l.c. 430) and referred to *N. officinale* R. Br. (*Dosedla* 93).

Nasturtium schlechteri O. E. Schultz. — *Trochiscus macrocarpus* A. Gilli, l.c. 430.

Papua New Guinea: Laiagam, *Gilli* 481 (type in W).

N o t e: In a note (l.c. 431) Gilli mentioned the paucity of Cruciferae in New Guinea: 4 *Nasturtium* and 1 *Cardamine*, all endemic. This is a distinct underestimate. Besides the introduced cq. cultivated species of *Brassica*, *Raphanus*, and *Capsella*, there are at least 4 species of *Cardamine*, 5 of *Nasturtium*, at least 1 of *Rorippa*, and 2 of the endemic genus *Papuzilla*.

ELAEOCARPACEAE (R. Weibel, Geneva)

Elaeocarpus altigenus Schlechter. — *E. elaeagnoides* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 432.

Papua New Guinea: Between Laiagam and Kandep, 3100 m, *Gilli* 432 (type in W).

N o t e: Unfortunately Dr. Gilli has omitted to consult Coode's revision of the Papuan species of *Elaeocarpus* (*Brunonia* 1, 1978, 131). I have examined the isotypes of *E. altigenus* (*Schlechter* 18793, in K, P).

Elaeocarpus fuscoides Knuth. — *E. mingendensis* A. Gilli, l.c. 432.

Papua New Guinea: Mingende, *Gilli 163* (type in W).

Note: I have examined an isotype of *E. fuscoides* Knuth (*Clemens 4681A*, in A).

EUPHORBIACEAE (H. K. Airy Shaw, Kew)

Macaranga pleioneura Airy Shaw. — *M. polyneura* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 428.

Papua New Guinea: Forest near Par, 2200 m, *Gilli 514* (type in W), *515* (W).

Macaranga pleioneura Airy Shaw var. **velutina** Whitmore. — *M. hageniana* A. Gilli, l.c. 437.

Papua New Guinea: Mt. Hagen, 1700 m, *Dosedla 27* (type in W).

HYPERICACEAE (N. K. B. Robson, London)

Hypericum papuanum Ridl. — *H. kunaianum* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 440.

Papua New Guinea: Kuna Saw Mill near Mt. Hagen, *Dosedla 76* (type in W).

Note: Gilli's lengthy discussion on the status of his new species he concluded by saying that it could possibly be a form (either a variety or a subspecies) of the variable *H. papuanum*. The differences Gilli mentioned are either based on a misunderstanding or represent a slight extension of variation range in an already variable species.

As to venation Gilli's plant has 4 (–5) pairs of nerves, as I depicted for *H. papuanum* (Fl. Males. I, 8, 1974, 23, fig. 18); there is no difference.

The smaller size of the petals (6–9 by 3–4 mm, as against my definition 9–15 by 4–5 mm) is in part due to the fact that in Gilli's specimen they are not sufficiently spread out to measure accurately; I am inclined to regard them as depauperate, small for the species but no more than that.

The seed length in *H. papuanum* is 0.7–0.8 mm, Gilli gives for his 0.5 mm, but I measure them as 0.6 mm, which almost eliminates the difference.

LEGUMINOSAE (R. M. Polhill, Kew)

Crotalaria goreensis Guill. & Perr. — *C. aidiostipulata* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 433.

Papua New Guinea: Wewak, *Gilli 568* (type in W).

Note: This species is introduced from Africa.

Crotalaria lanata Bedd. ex Polh. ined. - *C. lanata* Bedd., non Thunb. — *C. semperflorens* Vent.; A. Gilli, l.c. 444.

Papua New Guinea: *Dosedla 273*, *Gilli 101*, *380*.

Crotalaria micans Link. — *C. anagyroides* Kth. — *C. striata* (non DC.) A. Gilli, l.c. 444.

Papua New Guinea: *Dosedla 24c*, *Gilli 23*, *215*.

Crotalaria montana Roth. — *C. linifolia* auct. non L. f.: A. Gilli, l.c. 444.

Papua New Guinea: *Dosedla* 87, *Gilli* 68, 138, 623.

Crotalaria pallida Ait. — *C. striata* DC.; A. Gilli, l.c. 444

Papua New Guinea: *Dosedla* 198, *Gilli* 361.

ROSACEAE (C. Kalkman)

Prunus costata (Hemsl.) Kalkman. — *Pygeum hagenianum* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 455.

Papua New Guinea: Mt. Kuta near Mt. Hagen, *Dosedla* 129b (type in W), near Mt. Hagen, *Dosedla* 145 (W).

N o t e: Gilli mentioned the differences with *Pygeum retusum* and *Pygeum platyphyllum*, which is quite apt. *Pygeum retusum* is a synonym of *Prunus costata*, *Pygeum platyphyllum* is a synonym of *Prunus gazelle-peninsulae*. These two species are quite closely related. I reduce the new species to *Prunus costata*, although the leaves are a bit on the large side.

Rubus fraxinifolius Poir. — *R. fraxinifolius* subsp. *celebicus* Bl.; A. Gilli, l.c. 456

Papua New Guinea: near Kompian, *Gilli* 553 (W).

Rubus papuanus Schlechter ex Diels. — *R. ferdinandi* Focke; A. Gilli, l.c. 456 ('*Fernandii*').

Papua New Guinea: Mt. Wilhelm, *Gilli* 345 (W).

Rubus rosifolius J. Sm. — *R. mingendensis* A. Gilli, l.c. 457.

Papua New Guinea: Mingende, *Gilli* 111 (type in W); Tomba between Mt. Hagen and Wabag, *Gilli* 408 (W).

N o t e: *Rubus rosifolius* is a rather variable species known from a large area. The specimens mentioned clearly belong to it. According to Gilli *R. mingendensis* would differ from *R. rosifolius* amongst others by having smaller leaves. This is true for *Gilli* 408 which has very small leaflets. Since it has been collected at 2950 m altitude, c. 500 m above the upper limit of the species in New Guinea thusfar known (the highest record even I have seen over its area) this does not surprise me very much.

Rubus rosifolius J. Sm. — *R. mingendensis* var. *trichocarpa* A. Gilli, l.c. 457.

Papua New Guinea: Yomba, *Gilli* 201 (type in W).

N o t e: The var. *trichocarpa* 'differs' in having hairy ovaries. Since the ovaries of *R. rosifolius* normally possess some hairs, the variety cannot be accepted. Its 'description' is dubiously validly published to my mind.

Rubus rosifolius J. Sm. — *R. dosedlae* A. Gilli, l.c. 456, *pro hybr.* *R. rosifolius* × *R. hasskarlii*.

Papua New Guinea: Mt. Hagen, College area, *Dosedla* 45a (type in W).

N o t e: This is a slightly deviating specimen of the common *R. rosifolius*. Some of the

leaves are unifoliolate, most are trifoliolate, whereas *rosifolius* normally has pinnate leaves with at least 2 pairs of lateral leaflets. Hybridization of *R. rosifolius* (subg. *Idaeobatus*) with *R. hasskarlii* (subg. *Malachobatus*) is highly improbable.

According to the label the fruits are blackish blue. This must be an error: all *Idaeobatus* in Malesia have red or reddish fruits.

Rubus tsiri v. Royen. — *R. novoguineensis* Merr. & Perry; A. Gilli, l.c. 458.

Papua New Guinea: South slope of Mt. Wilhelm, *Gilli* 355 (W).

RUBIACEAE (C. E. Ridsdale & C. G. G. J. van Steenis)

Amaracarpus subalpinus v. Royen, ined. — *Melachone microphylla* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 460.

Papua New Guinea: South slope of Mt. Wilhelm, *Gilli* 338 (type in W).

Note: The epithet *microphyllus* is already occupied in *Amaracarpus*.

Nertera granadensis (Mutis ex L. f.) Druce. — *Thelygonum gracile* A. Gilli, l.c. 469.

Papua New Guinea: Laiagam, *Gilli* 486 (type in W), 439 (W).

Psychotria sp. — *Viburnum albopedunculatum* A. Gilli, l.c. 423.

Papua New Guinea: Laiagam-Kandep, *Gilli* 434 (type in W); Kassap, *Gilli* 493 (W).

Note: The specimens belong to the unrevised *Psychotria sarmentosa* group. As far as known *Viburnum* does not occur in New Guinea.

Psychotria sp. — *Caelospermum chonanthum* A. Gilli, l.c. 458.

Papua New Guinea: South slope of Mt. Wilhelm, *Gilli* 336 (type in W).

Uncaria sterrophylla Merr. & Perry. — *U. dosedlae* A. Gilli, l.c. 462.

Papua New Guinea: Koropugl near Mt. Hagen, *Dosedla* 249 (type in W).

SAXIFRAGACEAE (J. F. Veldkamp)

Astilbe philippinensis Henry. — *A. longepilosa* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 466.

Papua New Guinea: Denglagu, *Gilli* 332 (type in W).

STERCULIACEAE (C. G. G. J. van Steenis)

Commersonia bartramia (L.) Merr. — *Disaster novoguineensis* A. Gilli, Ann. Naturh. Mus. Wien 83 (1980) 454, fig. 3.

Papua New Guinea: Kompian, *Gilli* 557 (type in W).

Note: The flower structure of *Disaster* was erroneously interpreted, the stellate disk described and figured being really 5 staminodes. The genus was accommodated by Gilli in Rhamnaceae.