

A review on *Polygala arillata* Buch.-Ham. ex D. Don and description of a new variety under it

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A review on *Polygala arillata* Buch.-Ham. ex D. Don and description of a new variety under it

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RÉSUMÉ

BANERJEE, R. N. & G. S. GIRI (1987). Révision de *Polygala arillata* Buch.-Ham. ex D. Don et description d'une variété nouvelle dans ce taxon. *Candollea* 42: 555-558. En anglais, résumés français et anglais.

Une étude critique des spécimens de Wallich de l'herbier de Genève (G), du British Museum (Natural History) (BM) et de l'herbier de Calcutta (CAL) a été faite. Une variété nouvelle *P. arillata* var. *laevicarpa* R. N. Banerjee & G. S. Giri, var. nov. est décrite du Népal central et du Sikkim himalayen.

ABSTRACT

BANERJEE, R. N. & G. S. GIRI (1987). A review on *Polygala arillata* Buch.-Ham. ex D. Don and description of a new variety under it. *Candollea* 42: 555-558. In English, French and English abstracts.

A critical study on the Wallichian specimens available in Geneva Herbarium (G), British Museum (Natural History) (BM) and Calcutta Herbarium (CAL) has been furnished. A new variety *P. arillata* var. *laevicarpa* R. N. Banerjee & G. S. Giri, var. nov. is described from Central Nepal and Sikkim Himalaya.

DON (1825) described *Polygala arillata* based on specimens collected by Hamilton, Wallich from Narainhetty of Nepal Himalaya (Wallich Num. List No. 4191a collected in 1821 CAL, G and K). Chodat in his monograph recognised a variety under *P. arillata* namely var. *angustifolia* collected from Sinchal, Darjeeling which differs from var. *arillata* by lanceolate or elliptic lanceolate leaves and more pubescent nature. MUKERJEE (1954), recognised six forms and two varieties including var. *angustifolia* Chodat in the *P. arillata* complex. BANERJEE & al. (1984), however, treated var. *angustifolia* Chodat as a distinct species *P. angustifolia* and transferred *P. arillata* forma *scandens* under it with a higher varietal status. Other forms namely *P. arillata* forma *revoluta*, *chartacea* and *purpurescens* were treated in higher varietal rank under *P. arillata*. The above mentioned study was based on the herbarium specimens deposited in the Central National Herbarium (CAL) and in other regional herbaria under Botanical Survey of India. For the revisionary study of the family, fortunately we have received some specimens from Geneva (G) and from British Museum, Natural History (BM). The critical study of these specimens and those deposited in CAL reveal that the type specimens of *P. arillata* (*Wallich 4191a*, 1821) shows a great range of variation specially the size and shape of leaves, the nature of pubescence as follows. *Wallich 4191a* (1821) deposited in CAL possesses the elliptic to elliptic lanceolate leaves which are glabrous or slightly pubescent, whereas *4191a* (1821) of Geneva (G) having more or less lanceolate or elliptic lanceolate leaves and the younger parts densely tomentose. It is also seen that *4191a*, comprising many specimens, were not collected in the same year, 1821. Materials deposited at Geneva show that the number *4191a* collected in 1826 and in 1829 are evidently not type specimens. The 1826 collection show the lanceolate or narrowly lanceolate leaves whereas the two specimens of 1829 show two kinds of variation:

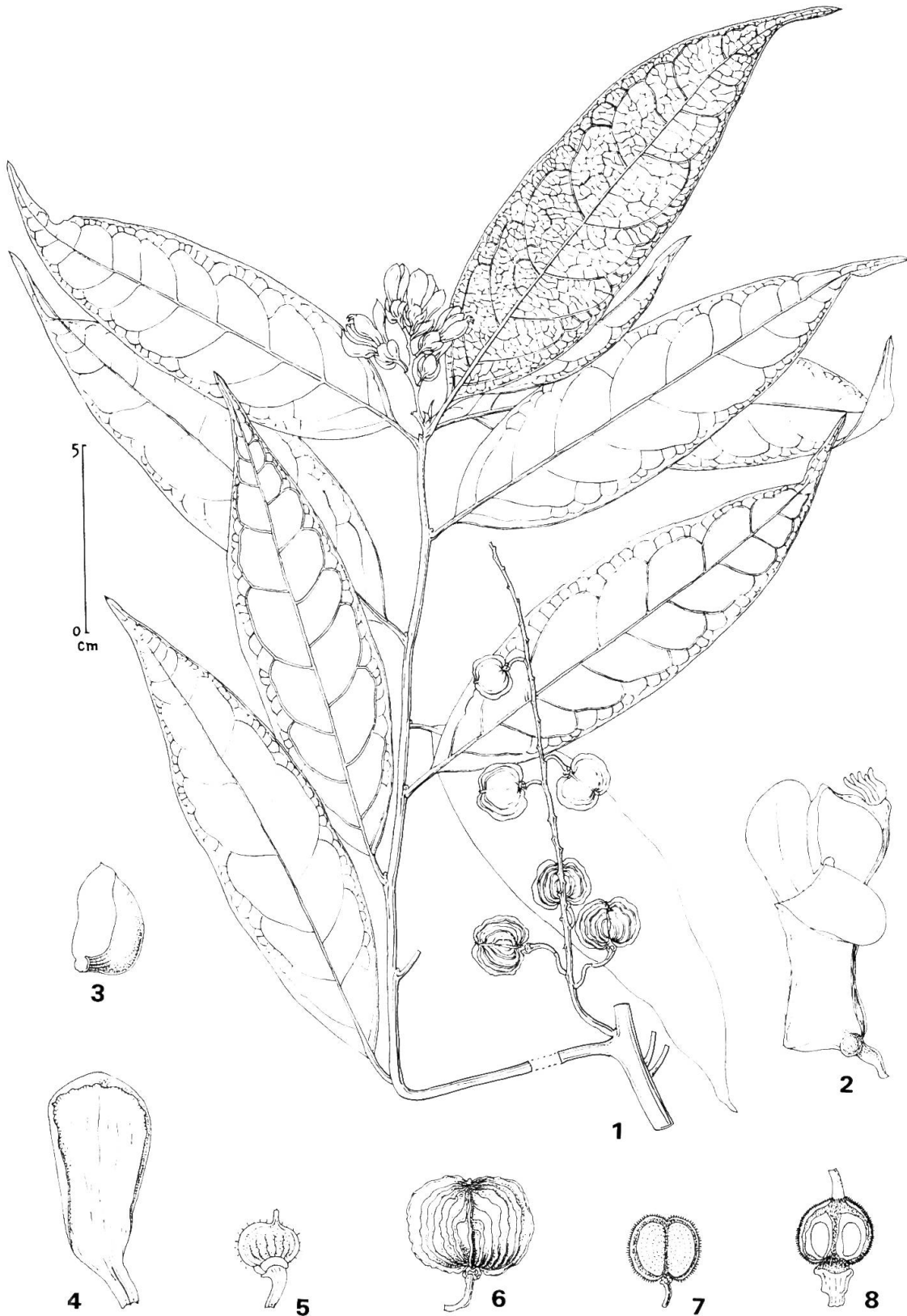


Fig. 1. — *Polygala arillata* var. *laeviscarpa* R. N. Banerjee & G. S. Giri
 1, plant; 2, flower $\times 2$; 3, outer sepal $\times 2$; 4, inner sepal (wing or ala) $\times 2$; 5, ovary $\times 2$ (with a portion of style); 6, fruit
 1:1; 7, fruit $\times 1:1$ (capsules: *P. angustifolia* var. *angustifolia* and var. *scandens*); 8, ovary with a portion of style $\times 2$ (capsules:
P. angustifolia var. *angustifolia* and var. *scandens*).

one having elliptic lanceolate, glabrate leaves whereas the other with narrowly lanceolate pubescent leaves. The study of Microfiche No. 529/C-10 of the type specimens deposited at the New York Botanical Garden Herbarium (NY) reveals that the specimen *Wallich 4191* comprised two species. The left hand side *4191b* (in part) being *P. paniculata* Hassk. (= *P. tricholopha* Chodat) and the right hand side material *4191a* belongs to *P. arillata* collected from Nepal in 1821. The specimen *4191* (afterwards written "C") at Herb. Hookerianum 1867 (K) also bears two species namely (1) *Polygala arillata* Buch Ham. ex D. Don and (2) ?*P. paniculata* Hassk. (written later on). Likewise the type, a lot of other specimens show the same variation of character which leads to the decision that var. *angustifolia* Chodat (1893) raised to specific status *P. angustifolia* (1984) cannot be distinguished from *P. arillata* with the shape of leaves and nature of pubescence, and as such the present authors propose to merge *P. angustifolia* (Chodat) R. N. Banerjee syn. nov. and its var. *scandens* (Mukerjee) Giri & R. N. Banerjee with *P. arillata* Buch.-Ham. ex D. Don. The other varieties remain as such (1984). However, this critical study reveals that a number of materials from Nepal and Sikkim Himalayas, deposited at G and BM possess distinguishing taxonomic characters which are referred to as a new variety under *P. arillata* Buch.-Ham. ex D. Don.

Polygala arillata Buch.-Ham. ex D. Don var. ***laevicarpa*** R. N. Banerjee & G. S. Giri, var. nov.

A varietate *arillatae* differt foliis obscure viridibus in sicco, inflorescentiis glabris in fructu, floribus glabris, fructibus glabris.

Differentiated from var. *arillata* in having leaves dull green on drying, inflorescence glabrous in fruiting, flowers glabrous, fruits glabrous.

Rambling shrubs, stems terete, dull straw coloured, lamina oblong-lanceolate, lanceolate or elliptic-lanceolate, dull green on drying, 12-14.5 × 3-4.2 cm, apex acuminate, slightly curved, thin chartaceous, veins 5-7, arcuate. Petiole 7-9 mm long; inflorescence terminal or lateral 4-15 cm long. Flowers 15-18 mm long, yellow, pedicels 3 mm long, glabrous. Outer paired sepals 4 mm long, 3 mm wide, ovate rounded, outer solitary sepals 6 mm long, boat shaped, acute at apex, wing sepals 13 mm long, 5 mm wide, rounded at apex, concave, attenuate at base; petals 3-lobed, 1.5-2.0 cm long; stamens shorter than the petals, filaments 10, anthers oblong; ovary sparsely ciliated at margin or not, rotund 2 × 2 mm, rachis glabrous in fruiting. Capsules rounded, flat, pink, up to 1.1 cm long, 1.5 cm wide, thinly margined, glabrous. Seeds black, 5 × 4 mm, sparsely ciliated, glabrous, aril brownish, membranous.

Holotype: Central Nepal: Dhunche, 5000 ft. (1520 m), lat. 28°8'N, long. 85°20'E, Trisuli valley, amongst shrubs 4 ft., JDA. *Stainton 5185* (BM).

Specimens examined

Sikkim Himalaya: Rungbee, 5000 ft. (1520 m), flowering and young fruiting 9.8.1984, *Collectors natifs*, Herb. G, (eight specimens). **Nepal:** Ankhukhola, 8000 ft. (2432 m), lat. 28°12'N, long. 85°5'E, flowering and young fruiting, 23.6.1962, amongst dense shrubs, rambling, flowers pale orange, *Stainton 3880* (BM); Sikkim, 4-8000 ped. (1261-2432 m), Regio. temp., Coll. *H. D. H.* (Herb. Ind. Or. Hook. f. & Thomson), Herb. Candolle in G (three specimens); **Eastern Himalaya:** Sureil, 5000 ft. (1520 m), young flowering, 1.9.1919, *Cave s.n.*, Ex Herb. Hort. Bot. Reg. Edin. in G.

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