ON THE TAXONOMIC STATUS OF CERTAIN SPECIES OF PAVETTA (RUBIACEAE) FROM THE INDIAN SUBCONTINENT

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The genus Pavetta L. (Rubiaceae) is represented by about 400 species in the Old World. It was intensively studied by Breinekamp (1934, 1939 a,b). He described 42 species and nine varieties from the Indian subcontinent, including 29 species and eight varieties as new. He, however, distinguished species sometimes on the basis of one or two quantitative characters. Very often a slight difference in length of the calyx teeth or hairiness of the leaf or corolla tube were sufficient for him to distinguish species. He also did not hesitate to postulate species on the basis of very incomplete or insufficient material bearing no flower or fruit. Due to unsatisfactory delimitation of taxa, Bridson (1978) and Kok and Grobbelaar (1984) synonimised a number of species.

We have been working on the taxonomy of the genus Pavetta in the Indian subcontinent, and are convinced that some taxa do not deserve the status given. These are presented below with their synonymy.

(1) Pavetta gleniei Hook. f. (1880: 152-153) was postulated on the basis of Thwaites, C.P. 2815 and Walker 14 from Sri Lanka. Breinekamp (1934) segregated Walker 14 and a part of Thwaites, C.P. 2815 to describe P. malacophylla Bremek., distinguishing it from the former species by the shorter calyx lobes, leaves beneath tomentose and midrib not prominent beneath. Due to unsatisfactory delimitation of taxa, Bridson (1978) and Kok and Grobbelaar (1984) synonimised a number of species.


Pavetta gleniei Hook. f. var. glabrescens Bremek. (=var. gleniei) l.c. 81. (Type: Thwaites C.P. 2815a, holo. K!, photo CAL!), nom surperfl.

P. gleniei Hook. f. var. pubescens Bremek. l.c. 81 (Type: Thwaites, C.P. 2815 b, holo. K!, photo CAL!) syn. nov.

P. malacophylla Bremek. l.c. 81 (Type: Thwaites, C.P. 2815 c, holo. K!, photo CAL!) syn. nov.

P. tomentosa Thw. Enum. PI. Zeyl. 156. 1859, non Roxb. ex Smith, 1819.


(2) In the subgen. 2 Eupavetta (=Pavetta) sect. Pavettaster, ser. 2 Angustistipulae, Breinekamp (1934: 81-82) described three species: Pavetta travancorica, P. concanica and P. laeta on the basis of two gatherings each. These species were distinguished by the shape and venation of leaves and the length of corolla tube: leaves being lanceolate in P. travancorica, elliptic in P. concanica and P. laeta; lateral ner-
ves 10-12 pairs in *P. travancorica* and *P. concanica*, 6-9 pairs in *P. laeta* and corolla tube 6.5-8 mm in *P. travancorica* and *P. laeta*, 12-14 mm in *P. concanica*. A study of protologues and type specimens and other collections (not examined by Bremekamp) reveals that the leaves are variable from elliptic to elliptic-lanceolate or lanceolate with 8-12 pairs of lateral nerves; corolla tube is 6.5-12 mm long, depending partly on the varying stages of development. The form of stipules and their apices vary even on the same specimen. These variations evidently indicate that they are not taxonomically distinct, even as varieties. Accordingly the three species are reduced to one as follows.

**Pavetta travancorica** Bremek. in Fedde Repert. 37: 81. 1934 (Type: Travancore, June 1835, R. Wight s.n. (K! dist. No. 1485, holotype K!, photo CAL!).

**P. concanica** Bremek. l.c. 81 (type: Concan, Law s.n., holotype K!, photo CAL!) syn. nov.

**P. laeta** Bremek. l.c. 82 (type: Tamil Nadu, Pulney Hills, 1914, R.A. Sauliere 673, holotype K!, photo CAL!) syn. nov.

(3) **Pavetta stocksii** Bremek. (1934: 113) was described on the basis of three gatherings: Cooke s.n., Tilak 88 and Stocks s.n., all extant at K. On describing this species the author stated “it is not impossible that this species and the last one (P. crassicaulis) are merely varieties of the same”. A study of the protologues, the types as well as a paratype (Tilak 88 E!) shows that the hairiness on the underside of the leaf is variable, being softly to densely pubescent. Hence *P. stocksii* is reduced to a synonym as follows.

**Pavetta crassicaulis** Bremek. in Fedde Repert. 37: 91. 1934 & 47: 25. 1939 (type: Concan, Stocks s.n., holotype K!, photo CAL!). *P. stocksii* Bremek. l.c. 113 (Type: loci, Stocks s.n. holotype K!, photo CAL!) syn. nov.

(4) **Pavetta birmahica** Bremek. (1934: 115) from Burma was distinguished into the varieties, namely var. *glabrescens* “folia supra glabrescentia” and var. *tomentosa* “folia utrimque tomentosa”, the former being the typical variety. According to the International Code of Botanical Nomenclature, the typical variety does not require a different varietal name. It is var. *birmahica*, where leaves are sparsely to densely pubescent on the upper surface, thereby it comes closer to var. *tomentosa*. Examination of types and other specimens shows that hairiness is variable to such an extent that the varieties do not stand and deserve to be merged. *P. gamblei* Bremek. (l.c. 114) was based on a single specimen Gamble 115. It agrees with *P. birmahica* in all respects except the length of the corolla tube (8 mm), which in *P. birmahica* is up to 6 mm long. It is likely to be at an earlier stage of development. Moreover, a species cannot be distinguished on slightly longer corolla tube only. In consideration of these facts these are merged here as follows.

**Pavetta birmahica** Bremek. in Fedde Repert. 37: 115. 1934 (Type: Burma, Thayetungo dist., Minhe, 17. 12. 1904, J.H. Lace 2698, holotype K! iso. CAL!).

**P. birmahica** Bremek. var. *glabrescens* Bremek. l.c. (=var. *birmahica*).

**P. birmahica** Bremek. var. *tomentosa* Bremek. l.c. (type: Burma, Griffith 3010, holotype K!, iso. CAL!) syn. nov.

**P. gamblei** Bremek. l.c. 114 (Type: Burma, Irawaddy, Mejanoung, 4. 5. 1872, J. S. Gamble 115, holotype K!, photo CAL!) syn. nov.

(5) In describing **Pavetta indica** L., Hook. f. (1880) considered about 20 names involved and treated them under five varieties, viz. var. *indica proper* (=*indica*), var. *polyantha*, var. *tomentosa*, var. *montana*, and var. *minor*. Bremekamp (1934) upgraded them as species and further postulated *P. amabilis*, *P. assamica*, *P. bengalensis*, *P. griffithii*, *P. neglecta*, *P. polyneura*, *P. thomsonii* and *P. praecox* and few varieties therein, on the basis of specimens treated by Hooker f. (l.c.) under those varieties. From a critical study of the specimens involved along with new gatherings not examined by Hooker f. or Bremekamp, we are convinced that Hooker f.’s treatment of the first three varieties
and the var. montana treated by Bremekamp as a species (P. blanda) are justified. The last variety, var. minor, treated by Bremekamp as a variety under a different species (P. thomsonii Bremek. var. puberula Bremek.) deserves a specific status. The other new species described by Bremekamp do not stand and become synonyms under the varieties of Hook.f.

P. neglecta Bremek. and P. amabilis Bremek. (1934: 92, 100) agree with P. indica L. var. polyantha Hook.f. with leaves narrowly obovate, oblanceolate or elliptic-lanceolate, acute or caudate at apex, acute at base, puberulous beneath or only on nerves, stipules ovate, cymes pubescent, flowers densely crowded. There is no difference in floral characters. The shape of leaves in P. neglecta described in the protologue as "rhomboidal" is actually found to be elliptic-lanceolate or obovate. In P. amabilis, the stipules described as "subquadratve cuspidate" are ovate cuspidate. P. bengalensis Bremek. and P. polyneura Bremek. (1934: 99, 120) agree with each other in all respects and differ from P. indica L. var. polyantha Hook.f. in leaves broadly obovate, pubescent on the nerves beneath. P. griffithii Bremek. (1934: 99) differs from it in leaves lanceolate, corolla tube pubescent at throat. P. assamica Bremek. (1934: 119) differs from the same in having small leaves, broadly elliptic with slender lateral nerves closely arranged. The leaf shape and hairiness are variable in this taxon. So, these differences are not taxonomically justified and these species do not deserve any infra specific status even and are synonymous with P. indica L. var. polyantha Hook.f.

P. praecox Bremek. (1934: 114) was based on a single gathering, Ritchie 352. It is characterised by small broadly elliptic (4x3 cm) leaves, obtuse at both ends. It agrees fully with P. indica L. var. tomentosa (Roxb. ex Sm.) Hook.f. where leaves are variable in size (4-26.5 x 1-12 cm), shape, hairiness etc. The apex may be acute, acuminate, subacute, obtuse or rounded. There is no difference in floral characters. So P. praecox does not stand as a distinct species. P. indica L. var. mollis Bremek. (l.c. 199) was based on Gamble 15021 and Campbell 60 and 259. It agrees fully with P. indica L. var. tomentosa (Roxb. ex Sm.) Hook.f. in the hairiness of stem, leaves and inflorescence. There is no distinction in floral characters and it is therefore synonymous with the latter variety.

P. blanda Bremek. (1934: 94) was based on specimens (including type) of P. indica L. var. montana Hook.f. (1880: 150) and some Indian specimens belonging to P. indica L. var. minor Hook.f. (l.c.) and P. breviflora DC. var. subcoriacea Gamble. This species appears to be limited to Sri Lanka only. The Indian specimens included under it by Bremekamp are different and are treated under other species or varieties.

P. thomsonii Bremek. (1934: 99) var. glaberrima Bremek. (= thomsonii) was based on specimens belonging to P. indica L. var. indica. It fully agrees with P. indica L. var. indica and deserves to be merged with it. P. thomsonii Bremek. var. puberula Bremek. (l.c.) was based on specimens (including types) belonging to P. indica L. var. minor Hook.f. (1880: 150). It is distinct from P. indica in the leaves being narrowly oblanceolate or elliptic-lanceolate, acute or acuminate at apex, calyx teeth long, subulate, acute, puberulous, cymes puberulous. It deserves to be treated as a distinct species. Hence a new combination is made, raising it to specific status.

The taxonomic status and synonymy of P. indica L. are as follows.


I. paniculata Lam. Encycl. 3: 344. 1789.


(a) var. indica


P. indica L. var. glabra Bremek. in Fedde Repert. 37: 119. 1934.

P. indica L. var. indica proper Hook.f. FI. Brit. Ind. 3: 150. 1880.

P. thomsonii Bremek. var. glaberrima Bremek. (=thomsonii) in Fedde Repert. 37: 99. 1934 (Type: Mysore, Thomson s.n., holo. K!, photo CAL!) syn. nov.


(b) var. glabrescens (Kurz) Deb et Rout comb. nov.

Basionym: Ixora tomentosa var. glabrescens Kurz, For. Fl. Brit. Burm. 2: 19. 1877 (Type: Burma, Pegu, 23.2.1871, S. Kurz 3057 CAL, right hand specimen is selected as the lectotype, the other sheet of the same no. is isolec.
to.).

P. tomentosa Roxb. ex Sm. var. glabrescens (Kurz) Bremek. l.c. 114.

P. amabilis Bremek. in Fedde Repert. 37: 100. 1934 (Type: Upper Burma, 1911-12, S.M. Toppin 3032, holo. E!, iso. CAL!) syn. nov.

P. assamica Bremek. in Fedde Repert. 37: 119. 1934 (Type: Assam, Guahati, Simons 16, holo. K!, photo CAL!) syn. nov.

P. bengalensis Bremek. in Fedde Repert. 37: 99. 1934 (Type: Bengal, Nov. 1850, Hooker & Thomson s.n., holo. K!, photo CAL!) syn. nov.


P. indica L. var. polyantha Hook.f. Fl. Brit. Ind. 3: 150. 1880 (type: Meghalaya, Silhet Mt. (Jowai), F.De Silva s.n. ex Wall. Cat. 6176, holo. K!, photo & microfische CAL!).

P. indica Wall. Cat. 6175 F, nom. nud.

P. neglecta Bremek. in Fedde Repert. 37: 92. 1934 (Type: Mizoram, S. Lushai Hills, Thady forest, 1050 m, Aug. 1928, Wenger 214, holo. K!, photo CAL!) syn. nov.

P. polyantha Wall. Cat. 6176, nom. nud.

P. polyantha (Hook.f.) Bremek. in Fedde Repert. 37: 103. 1934 & 47: 22. 1939. syn. nov.

P. polyneura Bremek. in Fedde Repert. 37: 119. 1934 (Type: Burma, S. Tenasserim, Kyein Chaum, 12. 2. 1926, Maung Law Tek 1379, holo. K!, photo CAL!) syn. nov.

P. rothiana DC. Prodr. 4: 1830.

P. villosa Heyne in Roth, nov. sp. 89. 1821.

As per Art. 56.1 of ICBN (1988) the new combination at the varietal status is necessary.

(c) var. tomentosa (Roxb. ex Smith) Hook.f. Fl. Brit. Ind. 3: 150. 1880.

P. tomentosa Roxb. ex Smith in Rees Cycl. 26, n. 2, 1819 (Type: Roxb. ill. no. 169 CAL! as in Wight Icon. t. 186. 1340); Bremek. in Fedde Repert. 37: 113. 1934 p.p.

P. tomentosa Roxb. ex Smith var. roxburghii (Kurz) Bremek. l.c. 114.


P. praecox Bremek. in Fedde Repert. 37: 114. 1934 (Type: Karnataka, Canara, Belgaum, April 1831, Ritchie 352, holo. K!, photo CAL!) syn. nov.


(d) P. blanda Bremek. in Fedde Repert. 37: 94. 1934 p.p. (excl. synonyms and Indian specimens).


(e) P. minor (Hook.f.) Deb & Rout comb. et stat. nov.

Basionym: P. indica L. var. minor Hook.f. Fl. Brit. Ind. 3: 150. 1880 (Type: Tamil Nadu, Shevaghiry hills, R. Wight s.n. (Kew Distrib. No. 1483), holo. K!, photo CAL!).

P. blanda Bremek. in Fedde Repert. 37: 94. 1934 p.p. (excl. type from Sri Lanka)

P. thomsonii Bremek. var. puberula Bremek. in Fedde Repert. 37: 99. 1934.

References


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