The Status of the Genus Catanthera F.v.Muell (Melastomataceae)

by

M. P. NAYAR

Industrial Section, Indian Museum,
Botanical Survey of India,
Calcutta-13

The genus *Catanthera* was founded by Baron F. v. Mueller (in Journ. Bot. 24: 289 (1886)) on the basis of specimens *Forbes 451* and *Forbes 419* from New Guinea and he named the type species as *Catanthera lysipetala*. According to F. v. Mueller the "perfectly separated" petals and "completely bent" anthers of the taxon "demand for this vacciniaceous plant a distinct generic position." Mueller (*l. c.*) however, did not mention the reasons for assigning this taxon to the family *Vacciniaceae*, but he indicated its anomalous position by mentioning that the inwardly resupinate anthers of the taxon was "quite exceptional in the tribes *Ericeae* and *Vaccinieae*". Mueller's description of the genus was quite good, but he erroneously assigned the genus *Catanthera* to the family *Vacciniaceae*. The family *Vacciniaceae* is characterised by sympetalous corolla, by its baccate and drupaceous fruits and presence of copious fleshy endosperm.

Nine years later, Stapf (in Hook. f. Ic. Pl. 25: t. 2415 & 2416 (1895)) proposed a new genus *Hederella* on the basis of *Hederella multiflora* Stapf, *H. tetrandra* Stapf, *H. quintuplinervis* (Cogn.) Stapf and *H. forbesii* Stapf. Stapf (*l. c.*) appropriately assigned the genus *Hederella* to the family Melastomataceae because of its polypetalous corolla, the presence of 2 or more side nerves parallel to the margins and the appendaged stamens; and Stapf further placed the genus in the tribe *Dissochaeteae* because of its baccate fruits with numerous seeds, axile placentation and apical porose dehiscence. According to Stapf this homogenous group of species is characterised by 4 or 8 stamens (if 8 with dimorphic anthers), ivy-like habit and the prominent staminal appendages. Gilg (in Engl. & Prantl, Pflanzenfam. 3.7: Nachtr. 266 (1897)) referred *Hederella* Stapf to *Dissochaeta* Bl. Mansfeld [in Engl. Bot. Jahrb. 60: 113, (1925)] while describing the Melastomataceae of Papua, combined *Hederella* with *Medinilla* since his concept of *Medinilla* was a broad one. Bakhuizen fil. [in Meded. Bot. Mus. & Herb. Utrecht, No. 91: 26 (1943)] with hesitation referred *Hederella* to a section of *Medinilla*, since in his opinion it is more closely allied to *Medinilla* than to *Dissochaeta*; however he did not study the genus in detail on account of insufficient material. Nayar (in Kew Bull. 20: 235 (1966)) considered that Stapf's concept of the genus *Hederella*

is justified. It is seen that, among the four species proposed by Stapf (*l. c.*) while establishing the genus *Hederella, Hederella forbesii* Stapf was found to be conspecific with the type species of *Catanthera* F. v. Muell. ie. *C. lysipetala* F. v. Muell. Since a validly published earlier generic name *Catanthera* F. v. Muell. (1886) is available, it is proposed to consider *Hederella* Stapf (1895) as a synonym of the former.

Mansfeld (in Engl. Bot. Jahrb. 60: 113 (1925)) proposed the monotypic genus *Phyllapophysis* on the basis of specimen *Schlechter 20117* from New Guinea. In the key to the Papuan *Dissochaeteae* he grouped the new genus with *Omphalopus* Naud. The nature of anthers and the shape and orientation of the phylloid staminal appendages in the genus *Omphalopus* are quite characteristic. The genus *Omphalopus* has reticulate and bullate anthers, whereas in the genus *Phyllapophysis* the anthers are not reticulate. It is presumed that Mansfeld might have been misled by the shrivelled anthers in the herbarium material. The nature of the staminal appendages, the presence of extra-ovarial chambers descending to the base of the ovary and the ivy-like habit indicate that the taxon *Phyllapophysis schlechteri* Mansf. should be transferred to the genus *Catanthera.* Hence it is proposed to reduce the monotypic genus *Phyllapophysis* Mansf. to a synonym of *Catanthera* F. v. Muell. The nomenclature and the synonymy of the genus *Catanthera* are as follows:

Catanthera F. v. Muell. in Journ. Bot. 24: 289, 1886.

Hederella Stapf in Hook. f., Ic. Pl. 25 Lt. 2415, 1895. *Synon. nov.*

Phyllapophysis Mansf. in Engl. Bot. Jahrb. 60: 113, 1925. *Synon. nov.*

Enumeration of species of Catanthera

1. **Catanthera lysipetala** F. v. Muell. in Journ. Bot. 24: 289, 1886.

   Type: syntypes. *Forbes 419* & *Forbes 451* (BM.).

   Medinilla anomala Cogn., in DC., Monogr. Phan. 7: 1185, 1891. Type: *Forbes 451* (K., BM.).

   Hederella forbesii Stapf in Hook. f., Ic. Pl. 25: t. 2415, 1895. Type: *Forbes 451* (K., BM.).

   Hederella lysipetala (F. Muell.) Nayar in Kew Bull. 20: 237, 1966.

2. **Catanthera multiflora** (Stapf) Nayar comb. nov.

   Hederella multiflora Stapf in Hook. f. Ic. Pl. 25: t. 2415, 1895; Merrill in Journ. St. Br. Roy. As. Soc. 1921, Spec. No.: 446, 1921; Nayar in Kew Bull. 20: 236, 1966. Type: *Haviland 154* (K.).

   Medinilla multiflora (Stapf) Mansf., Engl. Bot. Jahrb. 60: 124, 1926.

3. **Catanthera quintuplinervis** (Cogn.) Nayar comb. nov.

   Dissochaeta quintuplinervis Cogn. in DC., Monogr. Phan. 7: 556, 1891. Type: *Beccari 1802 & 3274* (isosyntypes K.).

   Hederella quintuplinervis (Cogn.) Stapf in Hook. f. Ic. Pl. 25: t. 2416, 1895; Merrill in Journ. Str. Br. Roy. As. Soc. 1921, Spec. No.: 446, 1921; Nayar in Kew Bull. 20: 236, 1966.

4. **Catanthera tetrandra** (Stapf) Nayar comb. nov.

   Hederella tetrandra Stapf in Hook. f. Ic. Pl. 25: t. 2415, 1895; Merrill in Journ. Str. Br. As. Soc. 1921, Spec. No.: 446, 1921; Nayar in Kew Bull. 20: 237, 1966. Type: *Beccari 304* (isotype K.).

5. **Catanthera kinabaluensis** (Nayar) Nayar comb. nov.

   Hederella kinabaluensis Nayar in Kew Bull. 20: 237, 1966. Type: *R.S.N.B. No. 76* (holotype K.).

6. **Catanthera longistylis** (Mansf.) Nayar comb. nov.

   Medinilla longistylis Mansf. in Engl. Bot. Jahrb. 60: 113, 1925. Type: *Schlechter 19258* (isotype K.).

   Hederella longistylis (Mansf.) Nayar in Kew Bull. 20: 238, 1966.

7. **Catanthera brassii** (Nayar) Nayar comb. nov.

   Hederella brassii Nayar in Kew Bull. 20: 238, 1966. Type: *Brass 7044* (holotype K.).

8. **Catanthera ovata** (Nayar) Nayar comb. nov.

   Hederella ovata Nayar in Kew Bull. 20: 238, 1966. Type: *Brass 12726* (holotype K.).

9. **Catanthera paniculata** (Nayar) Nayar comb. nov.

   Hederella paniculata Nayar in Kew Bull. 20: 239, 1966. Type: *Carr 14189* (holotype BM., isotype K.).

10. **Catanthera endertii** (Nayar) Nayar comb. nov.

    Hederella endertii Nayar in Kew Bull. 20: 240, 1966. Type: *Endert 4390* (holotype K.).

11. **Catanthera schlechteri** (Mansf.) Nayar comb. nov.

    Phyllapophysis schlechteri Mansf. in Engl. Bot. Jahrb. 60: 114, 1925; Ohwi in Jap. Bot. Mag. 57: 5, 1943. Type: *Schlechter 20117* (isotype K.).

Acknowledgements

I wish to express my gratitude to Sir George Taylor, Director, Royal Botanic Gardens, Kew, for all facilities and kindness during my stay in U.K. from 1961–67. I must gratefully acknowledge

the helpful discussions I have had with Mr. H. K. Airy Shaw, Kew on the nomenclature and the status of *Catanthera* F. v. Muell. Later on Dr. R. D. Hoogland, CSIRO, Canberra, has also kindly informed me about the status of *Catanthera* and I must thank him for the information. I wish to extend my thanks to the Directors and Staff of the Herbarium, Royal Botanic Gardens, Edinburgh, The British Museum (Nat. Hist.), London, and the Rijksherbarium, Leiden, Netherlands, for their hospitality and help during my visits there. My thanks are also due to Dr. K. Subramanyam, Director, Botanical Survey of India for his encouragement.