Studies in the Gesneriaceae of the Old World

X.—The Genus Beccarinda

B. L. Burtt

The name *Slackia* was used no less than three times in the posthumous papers of William Griffith, one of that remarkable band of Surgeon-Botanists employed by the East India Company in the early part of the nineteenth century. The first usage which received publication (1848) was for the genus that we now know as *Decaisnea* Hook. f. & Thoms.; this use can be ignored as no proper generic description was published. The second publication (1851) was for a genus of palms and a full description renders this the legitimate use of the name *Slackia*: the genus is now considered synonymous with *Iguanura* Bl. Unfortunately it is in its third and latest sense (1854) that the name has been retained; this was for a member of the *Gesneriaceae* collected in the Naga Hills, Assam. Griffith did not propose any specific name nor did he discuss the affinity of the genus.

This genus of Gesneriaceae was re-named *Beccarinda* by O. Kuntze in 1891, on the ground that the name *Slackia* belonged to the palm genus to which it had also been applied by Griffith. M. L. Green considered the case of *Slackia* in her paper on generic homonyms (in Kew Bull. 1935, 494) and concluded, rightly I think, that there were no cogent reasons for conserving *Slackia* for this genus of *Gesneriaceae*. The name *Beccarinda* must now be adopted.

Bentham, in his account of the family Gesneriaceae for the Genera Plantarum, placed *Slackia* between *Stauranthera* and *Epithema*, remarking, however, that in the absence of fruit its position must remain somewhat uncertain. Bentham's lead was followed by C. B. Clarke (1883) who was the first to describe the only species then known; he named it *Slackia Griffithii*.

Slackia remained a monotypic genus, apart from Kraenzlin's misplaced *S. philippinensis* (1913), until 1926 when Pellegrin described a second species from French Indo-China, *S. tonkinensis*. However, it was not until four years later that he made the much needed revision of the position of the genus within the family. Then, in Lecomte's Flore Générale de l'Indo-Chine, Pellegrin placed *Slackia* in its correct affinity near *Didissandra* and its allies among the tetrandrous *Didymocarpeae*.

In 1934, J. Anthony published a new genus which he named *Petrodoxa*. Of this there were two species, *P. cordifolia* from N.E. Upper Burma and *P. argentea* from S.E. Yunnan. In 1952 I received on loan from the Arnold Arboretum a large collection of unnamed Chinese *Gesneriaceae* and it was noted with interest that this material extended the known range of *Petrodoxa* from Burma and Yunnan through Kwangsi to Hainan. Almost immediately it was found that one of these Hainan plants had already been determined by Dr. W. Y. Chun as *Slackia tonkinensis* Pellegr. From this point it was but a short step to the demonstration that *Slackia* and *Petrodoxa* are one and the same genus.

Although Pellegrin correctly transferred *Slackia* from the affinity of *Stauranthera* and *Epithema* to that of *Didissandra*, no discussion of the relationship of the genus has yet appeared. Of *Petrodoxa* Anthony said it was akin to *Petrocosmea*, but the differences between these two genera, which he reported accurately, are rather large. It is too early yet to attempt a detailed discussion of the affinities of any single genus in *Gesneriaceae*; the general classification of the family must be considerably improved before that is feasible. As things stand at present, however, it seems clear that *Didissandra* sect. *Stilpnothrix* C.B.Cl. is the group which is the most difficult to distinguish from *Beccarinda*, as we must now call the gesneriaceous *Slackia*. In floral structure adequate distinction is only given by the bent filaments of the anterior stamens of *Beccarinda* and by the less tubular corolla of that genus. Vegetatively *Didissandra* sect. *Stilpnothrix* is much more woody, but the basic habit of a terminal crown of leaves subtending axillary inflorescences is the same in both. If we pay less attention to the possession of four fertile stamens it is necessary to compare *Beccarinda* with *Didymocarpus* sect. *Loxocarpus*. In this group we find a short corolla and the fruit dehiscing on one side only, as in *Beccarinda*. The best distinguishing character, apart from the stamens, lies perhaps in the silky indumentum of *Didymocarpus* sect. *Loxocarpus*.

It will be noticed that both these suggested allies of *Beccarinda*, *Didissandra* sect. *Stilpnothrix* and *Didymocarpus* sect. *Loxocarpus* are Malaysian groups. The geographical distribution of *Beccarinda* itself is such as to indicate a tropical affinity. The range Assam-Burma-S. China-Tonkin-Hainan is of a decidedly different type to that of most of the Sino-Himalayan genera of Gesneriaceae, of which one may instance *Corallodiscus*, *Briggsia*, *Ancylostemon*, *Petrocosmea* and others. All these are more obviously northern where they run off the main Himalayan range and the presence of an occasional southern outlier (such as *Petrocosmea Parryorum* C. E. C. Fisher in the Lushai Hills of S. Assam) in no way alters the general picture.

The species of *Beccarinda* are not yet thoroughly understood, and it is unfortunate that nearly all the most interesting Chinese material available to me is in fruit. *B. Griffithii* has not, to my knowledge, been collected again from the Naga Hills, and I know of only one further specimen which could belong to it and the inadequate material leaves that somewhat doubtful. *B. argentea* seems clear enough, but whether it is *B. cordifolia* or *B. tonkinensis* that ranges into S. China and Hainan, or whether there is some other species there, is by no means certain. The position of the recently described *B. sinensis* (Chun) is also doubtful, it sounds in many ways very like *B. argentea*, but in the absence of authentic material I hesitate to form a definite opinion. The arrangement which follows is therefore of necessity a very tentative one: the main purpose of this note is to effect the union of *Slackia* and *Petrodoxa* under the correct name, *Beccarinda*.

Beccarinda O. Kuntze, Rev. Gen. ii, 470 (1891).

Syn.: *Slackia* Griff. Notulae, iv, 158 (1854);* Benth. in Benth. & Hook. fil. Gen. Plant. ii, 1017 (1873); C. B. Clarke in DC. Mon. Phan. v, 188 (1883); K. Fritsch in Osterr. Bot. Zeitschr. xliii, 84 (1893) et in Engl. &

* Non *Slackia* Griff. Itin. Notes, 187 (1848) [=Decaisnea Hook. fil. et Thoms.], nec *Slackia* Griff. Notulae, ii, 162 (1851) [=Iguanura Bl.].

Prantl, Nat. Pflanzenfam. iv, 3B, 142-144 (1895); Dalla Torre & Harms, Gen. Siphon. 473 (1904); Pellegrin in Lecomte, Fl. Gén. Indo-chine, iv, 489, 517 (1930).

Petrodoxa Anthony in Notes Roy. Bot. Gard. Edin. xviii, 20 (1934).

Key to the species

1. Leaves ovate or ovate orbicular, cordate at the base.
   2. Indumentum of white hairs. — 2. *sinensis*
   2. Indumentum of fawn or brown hairs.
      3. Leaves generally ovate, acute at apex. — 3. *cordifolia*
      3. Leaves ovate-orbicular, blunt at apex.
         4. Pedicels well-developed (up to 2 cm. long), inflorescence umbelliform.
            5. Fruit 1·5 cm. long. — 4. *sp. nov.*
            5. Fruit 2·5 cm. long. — 5. *tonkinensis*
         4. Pedicels very short (about 2 mm. long), inflorescence pseudocapitate. — 6. *Griffithii*
1. Leaves elliptic, not cordate (though sometimes rounded) at base.
   6. Indumentum of white hairs. — 1. *argentea*
   6. Indumentum of reddish-purple hairs. — 7. *sp. nov.*

1. **B. argentea** (Anthony) B. L. Burtt, **comb. nov.**

Syn.: *Petrodoxa argentea* Anthony in Notes Roy. Bot. Gard. Edinburgh, xviii, 20 (1934).

YUNNAN. Mengtze, 1800 m., S.E. mountain forests, blue flowers, *Henry* 10960 (holotype, E). Ping-pien Hsien, 1400 m., herb on rock, 29 June 1934, *H. T. Tsai* 60492 (AA).

Tsai 60492 is a fruiting specimen and its correlation with Henry's flowering material must be treated with a little reserve. If it does belong, it shows that this species has a fruit 2·5–3 cm. long, somewhat longer than is recorded for *B. sinensis*.

2. **B. sinensis** (Chun) B. L. Burtt, **comb. nov.**

Syn.: *Slackia sinensis* Chun in Sunyatsenia, vi, 285 (1946).

KWANTUNG. *C. Wang* 32172 (ex Chun).

KWANGSI. *A. N. Steward & C. Y. Cheo* 166 (type—ex Chun). *R. C. Ching* 8389 (ex Chun). The following fruiting specimen may possibly belong to this species:—

S.E. YUNNAN. Mar-li-po, Chung dzei, 1600–1800 m., common herb in mixed forests, 6–8 in., 3 Nov. 1947, *K. M. Feng* 12793 (AA).

3. **B. cordifolia** (Anthony) B. L. Burtt, **comb. nov.**

Syn.: *Petrodoxa cordifolia* Anthony in Notes Roy. Bot. Gard. Edinburgh, xviii, 204 (1920).

UPPER BURMA. Htawgaw Bum, 26° 10′ N, 98° 25′ E, 2100 m., June 1924, *Forrest* 24549 (holo. E). Hills S.E. of Htawgaw, 26° N, 98° 30′ E, 1800–2010 m., June 1925, *Forrest* 26840 (E); ibid. Oct. 1925, *Forrest* 27354 (E). Chang Wang, 1500 m., Apr. 1920, *Farrer* 1507 (E). Moku Tra, [27° 50′ N, 98° 21′ E], 2700 m., on moss covered granite boulders in the deep shade of

the rain forest, 2 Nov. 1922, *Kingdon Ward* 5488 (E). Nam Tamai Valley, 1800 m., 22 May 1942, *Kingdon Ward* 15001 (E).

4. **Beccarinda sp. nov.**
S.E. YUNNAN. Si-chour-hsien, Faa-doon, 1500 m., common herb 4 in. high in mixed forests, fruit green, 17 Sept. 1947, *K. M. Feng* 11823 (AA).
KWANGSI. Yao Shan, Ping Nan, herb in dense forest, fruit red, 21 May 1936, *C. Wang* 39214 (AA). Ling Wan district, herb in dense woods, leaf pubescent, green above, pale green beneath, fruit reddish brown, 18 June 1937, *S. K. Lau* 28426 (AA).

The above three specimens are in fruit only. The short fruit, tapering rapidly from a rather broad base, seems to be different from that of either *B. cordifolia* or *B. tonkinensis* and when flowering material becomes available it will almost certainly be possible to recognize a distinct species.

5. **B. tonkinensis** (Pellegrin) B. L. Burtt, **comb. nov.**
Syn.: *Slackia tonkinensis* Pellegrin in Bull. Soc. Bot. France, lxxiii, 428 (1926), et in Lecomte, Fl. Gén. Indo-Chine, iv, 518 (1930); Chun in Sunyatsenia, vi, 287 (1946).
TONKIN. Massif de Pia Ouac, 1300 m., *Pètelot* 704 (holo. P).
HAINAN. Lobetung, erect herb in dense woods, 1 July 1936, *S. K. Lau* 27377 (AA).
KWANGSI. Yao Shan, Ping Nan, herb at road-side, 10 June 1936, *C. Wang* 39363 (AA).

6. **B. Griffithii** (C.B. Cl.) O Kuntze, Rev. Gen. ii, 471 (1891).
Syn.: *Slackia Griffithii* C.B. Cl. Mon. Cyrt. 188 (1883).
UPPER BURMA. Hukawng Valley, Delvi Nempea, [N. of Mainkwang], 20 May 1837, *Griffith* (holo. K, iso. P).

The following specimen may belong to this species. It appears to have the characteristic short pedicels but the material is inadequate for thorough investigation. It will be noted that it was found at an altitude of only 600 m., much lower than any of the records for *B. cordifolia*:—
UPPER BURMA. Nam Ti, 600 m., flowers white with a few purple spots deep down in the throat of the corolla, on shaded banks in the jungle, 14 Nov. 1922, *Kingdon Ward* 5557 (E).

7. **Beccarinda sp. nov.**
YUNNAN. Ho-Kou, 1700 m., herb in woodland with purplish fruit, 20 Jan. 1932, *H. T. Tsai* 52629 (AA).
A very distinct species which is unfortunately only known to me from this one fruiting specimen. The acutely serrate elliptic leaves, narrowed to base and apex, are quite unlike those of the other species. The fruits are 3 cm. long.

SPECIES EXCLUDENDA

Slackia philippinensis Kraenzlin in Phil. Journ. Sc. viii, 171 (1913) = *Cyrtandra villosissima* Merrill, fide Merrill, Enum. Phil. Fl. Pl. iii, 465 (1923).

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