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## OLD WORLD GESNERIACEAE

### V. Suprageneric names

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Names of the Old World tribes of Gesneriaceae are updated both nomenclaturally and taxonomically. The most important change is that *Epithemateae* (Meisn.) C.B. Clarke antedates, and therefore replaces, *Klugieae* Fritsch. All other suprageneric names known to have been validly published are quoted in synonymy of the appropriate tribe.

*Keywords.* *Cyrtandreae*, *Cyrtandroideae*, *Epithemateae*, *Klugieae*, subtribe, tribe.

### INTRODUCTION

In a previous paper (Burtt, 1963) tribal names were used in giving tentative keys to the Old World genera of Gesneriaceae, and under the tribal names full synonymy (as far as then known) was given. Not unexpectedly, after more than 30 years, further work on the old literature, changes in the Code of nomenclature and changes that have been proposed in the classification itself have made a restatement necessary.

The question of whether changes in the rank of suprageneric names are to be regarded as transfers, with the previous author being cited in parenthesis, or whether they are to be treated as independent names has never been clearly answered. For instance, in ICBN 1993 under Art. 19.4 Ex. 1 & 2 they are treated as independent names, whereas the examples under Rec. 19A are given as transfers. The difference may be due to one author actually citing the previous use of a group name in another rank, whereas another author does not do so. However, it seems sensible that when suprageneric names are homotypic, the first author to give a group name at any legitimate suprageneric level should be cited in parenthesis when the rank is changed, whether or not the second author made any reference to him. That is the course followed here.

Names are given here with only the authority and the original place of publication, except where extensive use has attributed the name to a later author; in such cases that author is also cited. In accordance with ICBN Art. 19.6 all names have been given the Latin termination appropriate to the rank in which they were used. The incorrect forms of the names have not been cited.

It may be noted that the name *Cyrtandreae* Blume (1826), although cited by De Candolle (1845) as a tribal name, was simply proposed for a 'section' of Bignoniaceae. This misuse of section for a suprageneric group means that the name is not validly published according to the Code (Art. 33:5).

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Dr J.L. Reveal has pointed out that there are earlier publications of the names *Cyrtandroideae* (as type Acanthaceae subtype Cyrtandridae Burnett: 1835) and *Cyrtandreae* (as Acanthaceae B. *Cyrtandrea* Bartling: 1830). These names are not invalid, through the use of unauthorized categories, as might be supposed from a quick reference to the particular pages cited below. Dr Reveal discovered that Burnett refers elsewhere in the text to 'type or family' and 'subtype or subfamily', while Bartling's apparently unranked groups A, B and C are mentioned as being at the rank of tribe. Acceptance of these names is therefore in accord with ICBN Art. 35.4, which enjoins that, where there is doubt about the ranking of names, the whole work concerned must be examined.

Two major items in the literature were overlooked in the previous paper (Burt, 1963). The first is C.F. Meisner's *Plantarum vascularium genera*, of which the fascicle relevant to the Old World Gesneriaceae (Cyrtandraceae) was published in 1840. Meisner cites directly from De Candolle's *Prodromus MSS*, of which he had been given full use. However, he made his own judgement on some points. De Candolle died in 1841 and when his account was finally published (1845) it had been revised by Alphonse De Candolle.

Meisner published the following subtribal names: *Epithematinae* [DC. ex] Meisn.; *Anomorhegmiinae* Meisn.; *Ramondiinae* [DC. ex] Meisn.

The second item overlooked was the table of classification given by C.B. Clarke for the genera represented among his Cyrtandraceae from Bengal (Clarke, 1874). In this he was the first to raise Meisner's subtribe *Epithematinae* to tribal rank. When Fritsch established the tribe *Klugieae* (Fritsch, 1893), he did not include *Epithema*, which he left in the American tribe *Beslerieae*. However, it is now placed in *Klugieae* and that name must therefore be replaced by the earlier *Epithemateae*. The loss of the tribal name *Klugieae* is unfortunate as it has recently come to the fore in a series of important papers by A. Weber (1975–1988).

Burt (1963) previously recognized two tribes, *Klugieae* and *Loxonieae*. The former contained *Rhynchoglossum* Bl. (including *Klugia* Schlecht.), *Monophyllaea* R. Br., *Moultonia* Balf.f. & W.W. Sm. (now included in *Monophyllaea* – Burt, 1978) and *Epithema* Bl., while *Loxonieae* included *Loxonia* Jack (revised by Weber, 1977), *Stauranthera* Benth., *Whytockia* W.W. Sm. and *Cyrtandromoea* Zoll. (now transferred to Scrophulariaceae – Burt, 1965). Weber (1976) showed that *Whytockia* may well be closely related to the stock from which *Monophyllaea* evolved; furthermore, it is now clear that *Epithema* and *Stauranthera* ought not to be separated at tribal level. The tribe *Loxonieae* should therefore be included in *Epithemateae*.

There was a second item of importance in the classificatory table given by C.B. Clarke (1874). This was the establishment of *Ramondeae* as a tribe; it had previously been ranked as a subtribe by Meisner (1840) and De Candolle (1845) and as a family by Grenier & Godron (1853). The tribal rank has currently been attributed to Fritsch (1893), but the tribe is not maintained here.

Two new tribes of *Cyrtandroideae* were recognized by Ivanina in the course of a general carpological survey of Gesneriaceae (Ivanina 1965 (Russian), 1966 (English)

& 1967 (Russian)). *Saintpaulieae* covered the genera *Saintpaulia* Wendl., *Carolofritschia* Engl., *Acanthonema* Hook.f. and *Linnaeopsis* Engl. *Linnaeopsis* is certainly close to *Saintpaulia*; *Acanthonema* now includes *Carolofritschia*; if the tribe were to be maintained it should probably include *Nodonema* B.L. Burtt (1981), but as previously explained (Burtt, 1963) it seems best at present to maintain the tribe *Didymocarpeae* in a very broad sense: its subdivisions or segregates are at present weakly defined and the whole group needs overhaul when more information on such characters as seed-coats, pollen and chromosome numbers has become available.

The second new tribe recognized by Ivanina was *Rhynchotecheae*, based on *Rhynchotechum* Bl. and *Isanthera* Nees (which is better included in *Rhynchotechum* – Burtt, 1962). It is true that *Rhynchotechum* stands somewhat apart from *Cyrtandra* and their fleshy berries may have evolved independently: furthermore *Rhynchotechum* shows some noteworthy resemblances to the capsular genus *Boeica* C.B. Clarke. Nevertheless, the tribal diagnosis given by Ivanina is weak and it is better not to disturb the present arrangement until much stronger arguments for doing so can be advanced.

Additionally, Ivanina retained a group for all the genera with spirally twisted capsules, reducing the tribe *Streptocarpeae* Fritsch to a subtribe of *Didymocarpeae*. It has been argued elsewhere (Burtt, 1963) that plants with twisted fruits have evolved independently more than once in Gesneriaceae and to group all such plants together results in a highly artificial unit.

Finally, Burtt (1963) referred two small austral tribes, *Coronantherae* and *Mitriarieae* found in New Caledonia, E Australia and New Zealand and S America, to the New World subfamily *Gesnerioideae*, chiefly because they do not have the unequal cotyledons characteristic of the Old World *Cyrtandroideae*. More recently, in a wide-ranging study of *Gesnerioideae*, Wiehler (1983) has recognized the austral genera, whether in S America or Australasia, as forming a separate subfamily, *Coronantheroideae*. This is characterized particularly by the nectary being embedded in the ovary wall, a morphological feature that is reinforced by cytology, for, so far as is known, all these southern genera are high polyploids. Wiehler also gives reasons for not accepting two distinct tribes in this subfamily. His classification is followed here.

The presentation of these suprageneric names in the format of four main tribes and their synonyms serves two distinct purposes. It corrects the names and citations of these four tribes that are currently in use, but it also shows the whole range of suprageneric names that are already available for a re-classification. It is not intended to express approval of the current tribal arrangement. *Trichosporeae* are still defined only by their appendaged seeds; yet the boundary between seeds with fine points and seeds with appendages will be seen differently by different workers: the genus *Anna* Pellegr., transferred from *Didymocarpeae* to *Trichosporeae* by Professor Wang Wen-tsai (Wang & Pan, 1982), is a case in point. Furthermore, it may well be that *Lysionotus* Maxim. and *Loxostigma* C.B. Clarke are more closely related to genera of *Didymocarpeae* than they are to *Aeschynanthus* and *Agalmyla*, which are now, because of their shared seed appendages, their neighbours in *Trichosporeae*. It is

likely that a future classification of Old World Gesneriaceae will look very different from that now in use. Much more detailed data are needed before major changes can be made.

In the following revised list of subfamily and tribal names, the type genera are shown only when the current generic name is not the basis of the name of the higher taxon.

#### REVISED LIST OF SUBFAMILY AND TRIBAL NAMES

Subfam. **Cyrtandroideae** (Jack) Burnett, *Outl. Bot.* 963, 1095, 1107 (1835); Endl., *Gen. Pl.* 715 (1839).

Syn.: *Didymocarpaceae* D. Don in *Edinb. Phil. J.* 7: 83 (1822).

*Cyrtandraceae* Jack in *Trans. Linn. Soc.* 14(1): 24 (1823).

Trib. 1 **Cyrtandreae** (Jack) Bartl., *Ord. Nat. Pl.* 185 (1830); G. Don, *Gen. Syst.* 4: 644 (1837–38).

Syn.: trib. *Eucyrtandreae* Endl., *Gen. Pl.* 718 (1839).

trib. *Rhynchotecheae* Ivanina in *Bot. Zhurn.* 50: 42 (1965) & in *Notes Roy. Bot. Gard. Edinb.* 26: 401 (1966).

Trib. 2 **Trichosporeae** Nees in *Flora* 8: 143 (1825); Fritsch in *Engl. & Prantl, Natürl. Pflanzenfam.* 4(3B): 142 (1893), 152 (1894).

Type: *Trichosporum* D. Don (= *Aeschynanthus* Jack, nom. cons.).

Syn.: subtrib. *Trichosporinae* (Nees) G. Don, *Gen. Syst.* 4: 644, 658 (1837–38).

subtrib. *Aeschynanthinae* A.DC. in DC., *Prodr.* 9: 260 (1845).

subtrib. *Lysionotinae* A.DC. in DC., *Prodr.* 9: 263 (1845).

Trib. 3 **Epithemateae** (Meisn.) C.B. Clarke, *Commelyn. et Cyrtandr. Bengal.* 67 (1874).

Syn.: subtrib. *Loxotinae* G. Don, *Gen. Syst.* 4: 645, 656 (1837–38). Type: *Loxotis* Benth. (= *Rhynchoglossum* Bl.).

subtrib. *Epithematinae* [DC. ex] Meisn., *Gen. Vasc. Pl.* 1: 302 (1840).

subtrib. *Anomorhegmiinae* Meisn., *Gen. Vasc. Pl.* 1: 302 (1840), 2: 212 (1840). Type: *Anomorhegmia* Meisn. (= *Stauranthera* Benth.).

subtrib. *Loxoninae* A.DC. in DC., *Prodr.* 9: 274 (1845).

trib. *Klugieae* Fritsch in *Engl. & Prantl, Natürl. Pflanzenfam.* 4(3B): 143 (1893), 154 (1894). Type: *Klugia* Schlecht. (= *Rhynchoglossum* Bl.).

trib. *Loxonieae* (A.DC.) B.L. Burtt in *Notes Roy. Bot. Gard. Edinb.* 1962, 24: 210 (1963).

Trib. 4 **Didymocarpeae** (D. Don) Endl., *Gen. Pl.* 716 (1839).

Syn.: fam. *Didymocarpaceae* D. Don in *Edinb. Phil. J.*: 83 (1822).

subtrib. *Didymocarpinae* (D. Don) G. Don, *Gen. Syst.* 4: 658 (1837–38).

subtrib. *Eudidymocarpinae* DC., *Prodr.* 9: 258 (1845).

- subtrib. *Liebigiinae* A.DC. in DC., Prodr. 9: 259 (1845).  
 subtrib. *Loxocarpinae* A.DC. in DC., Prodr. 9: 277 (1845).  
 subtrib. *Ramondinae* [DC. ex] Meisn., Pl. Vasc. Gen. 1: 302 (1840), 2:  
 212 (1840).  
 fam. *Ramondaceae* (Meisn.) Gren. & Godr., Fl. France 2(2): 506 (1853).  
 trib. *Ramondeae* (Meisn.) C.B. Clarke, Commelyn. & Cyrtandr. Bengal. 67  
 (1874); Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B): 144 (1893).  
 subtrib. *Leptoboeinae* C.B. Clarke in Hook.f., Fl. Brit. Ind. 4: 337 (1884).  
 trib. *Streptocarpeae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B):  
 142 (1893), 150 (1894).  
 trib. *Hemiboeae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B): 143  
 (1893), 156 (1894).  
 trib. *Championeae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B):  
 143 (1893), 148 (1894).  
 subtrib. *Conandrinae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B):  
 143 (1893), 145 (1894).  
 subtrib. *Oreocharitinae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam.  
 4(3B): 143 (1893), 148 (1894).  
 subtrib. *Roettlerinae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B):  
 143 (1893), 146 (1894) – nom. illegit. Type: *Roettlera* Vahl nom. illegit. =  
*Henckelia* Spreng.  
 subtrib. *Championinae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam.  
 4(3B): 143 (1893), 148 (1894).  
 subtrib. *Trisepalinae* Fritsch in Engl. & Prantl, Natürl. Pflanzenfam. 4(3B):  
 143 (1893), 149 (1894).  
 subtrib. *Streptocarpinae* (Fritsch) Ivanina in Bot. Zhurn. 50: 133 (1965) &  
 in Notes Roy. Bot. Gard. Edinb. 26: 389 (1966).  
 trib. *Saintpaulieae* Ivanina in Bot. Zhurn. 50: 31, 42 (1965) & in Notes Roy.  
 Bot. Gard. Edinb. 26: 400 (1966).

Subfam. **Coronantheroideae** (Fritsch) Wiehler in Selbyana 6: 156 (1982).

Syn. subtrib. *Mitrariinae* Hanst. in Linnaea 26: 198 (1854).

trib. *Coronanthereae* Fritsch in Natürl. Pflanzenfam. 4(3B): 143 (1893),  
 160 (1894).

trib. *Mitrarieae* (Hanst.) B.L. Burtt in Notes Roy. Bot. Gard. Edinb. 1962,  
 24: 216 (1963).

#### ACKNOWLEDGEMENTS

*I am greatly indebted to Dr J.L. Reveal for alerting me to the publication of Cyrtandroideae Burnett and Cyrtandreae Bartling and for justifying the adoption of these names. I also appreciated helpful discussions with Dr R.K. Brummitt.*

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