

A new genus of Gesneriaceae in China and the transfer of *Briggsia* species to other genera

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ABSTRACT. Since the transfer of several species of *Briggsia* to *Oreocharis*, including the type species *Briggsia longifolia*, the remaining 16 species of *Briggsia* have been in taxonomic limbo. We address this unsatisfactory situation by transferring 10 further species into *Oreocharis* on morphological grounds and by raising a new genus, with two species, based on previously published molecular data and their morphological distinction from other genera. This leaves only four species for which, at present, no satisfactory solution is available but, for pragmatic reasons until further research can be done, we place them in *Loxostigma* to which they are morphologically most similar and in which one already has a combination. Several names are lectotypified.

Keywords. *Briggsia*, Didymocarpaceae, Gesneriaceae, *Glabrella*, lectotypification, *Loxostigma*, new combinations, *Oreocharis*

Introduction

Species placed in the now synonymised genus *Briggsia* Craib in the Gesneriaceae, subtribe Didymocarpaceae (Weber et al., 2013), have a complex taxonomic history, being moved in and out of a number of genera as taxonomic concepts changed, e.g. *Roettlera* Vahl, *Didymocarpus* Wall., *Chirita* Buch.-Ham. ex D.Don, *Didissandra* C.B. Clarke and *Loxostigma* C.B. Clarke. These numerous changes did not necessarily indicate a progressively better understanding of these taxa but rather the difficulties of placing species displaying conflicting characteristics in genera that were narrowly defined primarily on floral characteristics.

The genus *Briggsia* was established by Craib (1919a) with three new species. In a separate paper, but which was published in the same issue (Craib, 1919b), he transferred 11 species from *Didissandra* to *Briggsia* and defined *Briggsia* as having

species with a large, distinctly bilabiate ventricose corolla with gradually inarching filaments and four anthers cohering in pairs, irrespective of other characters such as growth habit as both caulescent and acaulescent species were included.

Of the three new species in Craib (1919a), *Briggsia longifolia* Craib was later designated as the lectotype (Burt, 1954). Craib (1919b) described an additional variety along with the transfers from *Didissandra*. His concept of *Briggsia* included two truly caulescent species, i.e., *B. amabilis* (Diels) C.B. Clarke (later synonymised into *B. kurzii* (C.B. Clarke) W.E. Evans) and *B. cavaleriei* (H. Lév. & Vaniot) Craib (later transferred to *Loxostigma* as *L. cavaleriei* (H. Lév. & Vaniot) B.L. Burt). It also contained *Briggsia longipes* Craib that can produce short stems up to six cm, with the remaining 11 species being acaulescent and rosette-forming. Chun (1946) later added two more rosette species, Burt (1955) described a further rosette species, and Burt (1958) transferred the rosette species *Briggsia rosthornii* (Diels) B.L. Burt from *Didissandra*. In Pan (1988) one species was synonymised (*Briggsia fritschii* = *B. mihieri*) and six new species and three varieties were added to the genus, including two further caulescent species, *B. longicaulis* W.T. Wang & K.Y. Pan and *B. dongxingensis* Chun ex K.Y. Pan, with stems 20 to 60 cm long. In Wang et al. (1990), Pan reduced *Briggsia crenulata* Hand.-Mazz. to a variety of *B. rosthornii* (*B. rosthornii* var. *crenulata* (Hand.-Mazz.) K.Y. Pan). Lastly, a further truly caulescent species, *Briggsia damingshanensis* L. Wu & B. Pan was recently described (Wu et al., 2012), bringing the total to 22 species and four varieties. *Briggsia dulongensis* H. Li is an invalid name without a Latin description (Li, 1993).

The advent of molecular phylogenetic methods has enabled us to examine problematic species' placement with new suites of characters. These techniques have already proven useful for delimiting other problematic Gesneriaceae genera (Weber et al., 2011a, 2011b, 2011c; Middleton & Möller, 2012; Middleton et al., 2013) and have also led to the descriptions of new genera (Wei et al., 2010; Middleton & Möller, 2012; Middleton et al., 2014, submitted). Möller et al. (2011b) used the results of molecular phylogenetic studies to greatly enlarge the genus *Oreocharis* Benth. to include all species of nine other genera (*Ancylostemon* Craib, *Bournea* Oliv., *Dayaoshania* W.T. Wang, *Deinocheilos* W.T. Wang, *Isometrum* Craib, *Opithandra* B.L. Burt., *Paraisometrum* W.T. Wang, *Thamnocharis* W.T. Wang and *Tremacron* Craib), and part of *Briggsia*. In Möller et al. (2011b) five species and four varieties of *Briggsia* were transferred to *Oreocharis*, including the type species *B. longifolia*, leaving the remaining species in a taxonomic limbo. On the basis of additional molecular studies on the enlarged genus *Oreocharis*, a further species, *Briggsia speciosa* Craib, is in the process of being transferred to *Oreocharis* by Chen et al. (2014). All *Briggsia* species transferred to *Oreocharis* thus far have been rosette-forming plants. This leaves 16 species unplaced, including the caulescent species. The molecular phylogenetic studies conducted so far indicate that these caulescent species are not closely related to the acaulescent species now placed in *Oreocharis* (Möller et al., 2011a). Furthermore, the truly caulescent *Briggsia dongxingensis* and *B. kurzii* do not form a clade. They

appear in two different positions in the phylogenetic trees so far published and are in unsupported positions with respect to clades containing *Petrocosmea* Oliv., *Loxostigma* and *Pseudochirita* W.T.Wang species, intermixed with *Raphiocarpus* Chun species. For *Briggsia damingshanensis* no molecular data are available, but the species differs only marginally from *B. dongxingensis* from the same region in Guangxi province (Wu et al., 2012). The (indirect) link of the truly caulescent species to *Loxostigma* is interesting since in the *Flora of China* (Wang et al., 1998), their generic placement in *Briggsia* was questioned by Weitzman and Skog who suggested that *B. dongxingensis* and *B. longicaulis* probably belong to *Loxostigma*. Vitek et al. (2000) placed *Briggsia kurzii* in *Loxostigma* but acknowledged that this has not been followed by other authors. However, though phylogenetically close, a case for the placement of these truly caulescent species in *Loxostigma* is not easily made since *Loxostigma* is closely related to *Pseudochirita*. *Loxostigma* and *Pseudochirita* share the presence of rhizomes and mainly differ in the former having four stamens and appendaged seeds, the latter two stamens and unappendaged seeds. Rhizomes, diandry and appendaged seeds are unknown in the truly caulescent *Briggsia* species. Because of these morphological differences and their uncertain phylogenetic position a taxonomic placement of these species is, at present, difficult to predict. However, given their current nomenclaturally unacceptable position we include them in *Loxostigma* where *Briggsia kurzii* already has a combination. We are well aware, however, that more work is needed here and their status may change in the future.

Briggsia longipes and *B. mihieri* form a strongly supported sister clade. Their phylogenetic position is isolated from the other former *Briggsia* species and all other didymocarpoid genera (Möller et al., 2011a) and a new genus is necessary to satisfactorily place these species. The two species can be clearly differentiated from other species formerly placed in *Briggsia* by their glabrous petiole and leaf blade (only puberulous when young), combined with their short, 5–6 cm, stems. The remaining ten unplaced *Briggsia* species are truly stemless and possess a dense pubescence on the petioles and adaxial and abaxial leaf surfaces. These are characteristics they share with most members of the expanded *Oreocharis* and the transfers are, therefore, made here. This is preferred to the alternative of withholding their transfer until leaf material for DNA analysis eventually becomes available. This might be years since some species are rare and have not recently been collected and thus the herbarium material is also unsuitable for DNA extraction. The traditional taxonomic approach using morphological data was undertaken in the case of the dismantling of *Chirita* (Weber et al., 2011a) for those species that were not included in the molecular analyses, and for the recently described *Somrania* D.J.Middleton which was established on the basis of morphology alone (Middleton & Triboun, 2012; see also Puglisi, 2014).

We have designated a number of lectotypes below. In each case we have chosen the most complete specimen showing the range of characters from amongst the available candidates. An appendix is attached listing all *Briggsia* names and their current status.

Taxonomic Treatments

Glabella Mich.Möller & W.H.Chen, **gen. nov.**

Differs from other Chinese genera of Gesneriaceae by the combination of indistinct short stem, 5–6 cm long; glabrous petiole and leaf blade, leaf base cuneate or narrowly peltate; fertile stamens 4, cohering in pairs at apex; capsule straight in relation to the pedicel, not twisted; and seeds unappendaged. TYPE: *Glabella mihieri* (Franch.) Mich.Möller & W.H.Chen

Plants stemless or stems to 5–6 cm tall, glabrous. Leaves basal or crowded at apex of short stem; petiole glabrous; leaf blade narrowly obovate to elliptic, glabrous, apex rounded to acute; lateral veins 3 to 5 on each side of midrib. Cymes few-flowered; peduncle (5–)8–23 cm; bracts 2, linear to narrowly triangular or lanceolate, 1–4 × 0.5–1.5 mm, glabrous, margin entire. Calyx segments lanceolate to narrowly ovate to narrowly triangular, margin entire. Corolla blue-purple or pale purple to pale yellow, inside usually spotted, (3.2–)4–6 cm, outside glabrous to sparsely glandular pubescent or puberulent, inside puberulent; tube 2.1–4 × 1.1–1.8(–2.6) cm; adaxial lip 5–9 mm, lobes semiorbicular, 3–7 × 6–9 mm, apex rounded; abaxial lip 1–1.4 cm, lobes oblong to semiorbicular, 6–7 × 4–8 mm, apex obtuse to rounded. Adaxial stamens adnate to corolla 8–9 mm above base, abaxial ones adnate to corolla 8–1.2 cm above base, 1.2–1.7 cm long; filaments glabrous or sparsely glandular pubescent; anthers ovoid, thecae not confluent; staminode 0.8–1 mm. Pistil 2.5–3 cm; ovary pubescent; style 0.7–2 mm, glabrous to sparsely pubescent. Capsule 3.4–7 cm, glabrescent, straight in relation to the pedicel, not twisted. Seeds numerous, unappendaged. Fl. Sept–Oct, fr. Nov–Dec.

Distribution. Two species, endemic to China.

Etymology. After the distinctly hairless leaves.

Key to *Glabella*

- 1a. Leaf blade base cuneate, margin crenate-serrate; calyx segments 4–7 × 1.5–3 mm; peduncle glabrous to glabrescent *G. mihieri*
- 1b. Leaf blade base peltate or rounded to nearly cuneate, margin entire to shallowly serrate; calyx segments 8–11 × 2–5 mm; peduncle sparsely brownish villous, rarely glabrescent *G. longipes*

Glabella longipes (Hemsl. ex Oliv.) Mich.Möller & W.H.Chen, **comb. nov.** — *Didissandra longipes* Hemsl. ex Oliv., Hooker's Icon. Pl. 24: pl. 2379 (1895); Hemsl., Bull. Misc. Inform. Kew 1895: 114 (1895). — *Briggsia longipes* (Hemsl. ex Oliv.) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 262 (1919). TYPE: China, Yunnan province, Mengtze, Dec 1843, W. Hancock 50 (holotype K! [K000858088]).

Distribution. China: Chongqing (Hechuan Xian), Guangxi (Longlin Xian, Tianlin Xian), SE Yunnan.

Glabrella mihieri (Franch.) Mich.Möller & W.H.Chen, **comb. nov.** — *Didissandra mihieri* Franch., Bull. Mens. Soc. Linn. Paris 1: 450 (1885). — *Didymocarpus mihieri* (Franch.) H.Lév., Compt. Rend. Assoc. Franç. 34: 427 (1906), *nom. inval.* — *Briggsia mihieri* (Franch.) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 262 (1919). TYPE: China, Kouy-Tchéou (Guizhou) province, 1858, *P.H. Perny s.n.* (holotype P! [P03511310]).

Didissandra fritschii H.Lév. & Vaniot, Compt. Rend. Assoc. Franç. 34: 425 (1906). — *Didymocarpus fritschii* (H.Lév. & Vaniot) H.Lév., Compt. Rend. Assoc. Franç. 34: 428 (1906), *nom. inval.* — *Briggsia fritschii* (H.Lév. & Vaniot) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 262 (1919). TYPE: China, Guizhou, Tsin-gay, Montagnes du Lion, 24 Oct 1898, *Laborde & Bodinier 2464* (holotype E! [E00387546]).

Distribution. China: Guangxi (Longlin Xian), Guizhou, S Sichuan.

Loxostigma C.B.Clarke

Loxostigma damingshanensis (L.Wu & B.Pan) Mich.Möller & H.Atkins, **comb. nov.** — *Briggsia damingshanensis* L.Wu & B.Pan, Ann. Bot. Fenn. 49(1–2): 79 (2012). TYPE: China, Guangxi, Nanning, Damingshan Natural Reserve, 23 28'N, 108 25'E, alt. 1250 m, 5 Aug 2010, *Lei Wu & Rihong Jiang D0320* (holotype IBK!; isotypes IBK!, PE).

Distribution. China: Guangxi (Nanning).

Loxostigma dongxingensis (Chun ex K.Y.Pan) Mich.Möller & Y.M.Shui, **comb. nov.** — *Briggsia dongxingensis* Chun ex K.Y.Pan, Acta Phytotax. Sin. 26: 451 (1988). TYPE: China, Guangxi, Dongxing, Shiwandashan, *X.R.Liang 70078* (holotype IBSC [0649548], image seen; isotype A [A00353708], image seen).

Distribution. China: Guangxi (Dongxing Xian); N Vietnam.

Loxostigma kurzii (C.B.Clarke) B.L.Burtt, Notes Roy. Bot. Gard. Edinburgh 34: 104 (1975). — *Didymocarpus kurzii* C.B.Clarke, Commelyn. Cyrtandr. Bengal. t. 66 (1874). — *Chirita kurzii* (C.B.Clarke) C.B.Clarke, J. Linn. Soc. 15: 145 (1876). — *Roettlera kurzii* (C.B.Clarke) Kuntze, Rev. Gen. Pl. 2: 476 (1891). — *Briggsia kurzii* (C.B.Clarke) W.E.Evans, Notes Roy. Bot. Gard. Edinburgh 16: 133 (1928). TYPE: India, Sikkim, Kursiong, *Kurz s.n.* (holotype CAL n.v.).

Didissandra amabilis Diels, Notes Roy. Bot. Gard. Edinburgh 5: 224 (1912). — *Briggsia amabilis* (Diels) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 263 (1919). TYPE: China, Yunnan, Tali Range [now Dali Range], *Forrest* 2689 (lectotype E! [E00387561], designated by Vitek et al. (1998); isolectotypes E! [E00387559, E00387560]).

Briggsia amabilis var. *taliensis* Craib, Notes Roy. Bot. Gard. Edinburgh 11: 263 (1919). TYPE: China, Yunnan, eastern flank of the Tali Range [now Dali Range], Lat. 25° 40' N, alt. 9,000–10,000 ft., fl. Jul–Aug 1906, *G. Forrest* 4385 (lectotype E! [E00387582], designated here; isolectotype IBSC [IBSC0004824], image seen).

Distribution. China: SW Sichuan, NW Yunnan; NE India: Sikkim; Nepal; Bhutan; Myanmar [Burma]

Loxostigma longicaule (W.T.Wang & K.Y.Pan) Mich.Möller & Y.M.Shui, **comb. nov.** — *Briggsia longicaulis* W.T.Wang & K.Y.Pan, Acta Phytotax. Sin. 26: 450 (1988). TYPE: China, Sichuan, alt. 2500 m, 24 Aug 1959, *Exped. Pl. Econ. Liangshan* 5836 (holotype PE [PE00030680], image seen; isotype PE [PE00030681], image seen).

Distribution. China: Sichuan (Butuo Xian, Dechang Xian, Kangding Xian).

Oreocharis Benth.

Oreocharis acutiloba (K.Y.Pan) Mich.Möller & W.H.Chen, **comb. nov.** — *Briggsia acutiloba* K.Y.Pan, Acta Phytotax. Sin. 26: 455 (1988). TYPE: China, Yunnan, Yuxi, alt. 2250 m, 23 Sept 1958, *S.K. Wu* 61 (holotype KUN! [KUN484366]).

Distribution. China: Yunnan (Yuxi Xian).

Oreocharis agnesiae (Forrest ex W.W.Sm.) Mich.Möller & W.H.Chen, **comb. nov.** — *Didissandra agnesiae* Forrest ex W.W.Sm., Notes Roy. Bot. Gard. Edinburgh 8: 334 (1915). — *Briggsia agnesiae* (Forrest ex W.W.Sm.) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 263 (1919). TYPE: China, Yunnan, Mountains of the Yung Peh, Lat. 26° 40' N, alt. 9,000–10,000 ft, fl. Jul 1914, *G. Forrest* 12,829 (lectotype E! [E00135143], designated here; isolectotypes E! [E00135142, E00135144], K! [K000858909], IBSC [IBSC0004823], image seen).

Distribution. China: Sichuan (Muli Xian), Yunnan (Yongsheng Xian).

Oreocharis billburttii Mich.Möller & W.H.Chen, **nom. nov.** — *Briggsia aurantiaca* B.L.Burt, Notes Roy. Bot. Gard. Edinburgh 21: 237 (1955). TYPE: China, Xizang,

Kongbo, Molo, Lilung Chu, 3050 m, 26 Jun 1938, *F. Ludlow, G. Sherriff & G. Taylor* 5670 (holotype BM [BM000041735], image seen).

Distribution. China: S Gansu, N Sichuan, W Yunnan, Xizang; N Myanmar.

Etymology. To commemorate B.L. Burt's contribution to the taxonomy of the genus *Oreocharis*.

Oreocharis elegantissima (H.Lév. & Vaniot) Mich.Möller & W.H.Chen, **comb. nov.** — *Didissandra elegantissima* H.Lév. & Vaniot, Compt. Rend. Assoc. Franç. Avancem. Sci. 34: 425 (1906). — *Didymocarpus elegantissimus* (H.Lév. & Vaniot) H.Lév., Compt. Rend. Assoc. Franç. 34: 428 (1906), nom. inval. — *Briggsia elegantissima* (H.Lév. & Vaniot) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 265 (1919). TYPE: China, Kouy-Tcheou [Guizhou], Pin-Fa, *J. Cavalerie* 239[b] (lectotype E! [E00387550], designated here; PE [PE00030663] n.v.).

Distribution. China: Guizhou (Pingfa Xian, Dushan Xian).

Oreocharis latisejala (Chun ex K.Y.Pan) Mich.Möller & W.H.Chen, **comb. nov.** — *Briggsia latisejala* Chun ex K.Y.Pan, Acta Phytotax. Sin. 26: 454 (1988). TYPE: China, Zhejiang, Yunhe, 10 Oct 1932, *S. Chen* 837 (holotype IBSC [IBSC0649550], image seen).

Distribution. China: Zhejiang (Yunhe Xian).

Oreocharis parva Mich.Möller & W.H.Chen, **nom. nov.** — *Briggsia humilis* K.Y.Pan, Acta Phytotax. Sin. 26: 453 (1988). TYPE: China, Hubei, Lichuan, alt. 1300 m, 27 Aug 1975. *G.R. Huang* 3535 (holotype HMDB, n.v.; isotypes PE [PE00030685, image seen], HIB [HIB0087078] n.v.).

Distribution. China: W Hubei.

Etymology. Named to reflect its small size.

Oreocharis parvifolia (K.Y.Pan) Mich.Möller & W.H.Chen, **comb. nov.** — *Briggsia parvifolia* K.Y.Pan, Acta Phytotax. Sin. 26: 457 (1988). TYPE: China, Guizhou, sine loco, *J. Cavalerie* 3122 (holotype K! [K000858099]; isotype E! [E00135151]).

Distribution. China: Guizhou.

Oreocharis pinfaensis (H.Lév.) Mich.Möller & W.H.Chen, **comb. nov.** — *Didissandra pinfaensis* H.Lév., Repert. Spec. Nov. Regni Veg. 9: 328 (1911). — *Briggsia pinfaensis* (H.Lév.) Craib, Notes Roy. Bot. Gard. Edinburgh 11: 264 (1919). TYPE: China, Kouy-Tcheou [Guizhou], Pin-Fa, moist rocks, *J. Cavalerie 3315* (lectotype E! [E00265025], designated here; isolectotype K! [K000858091]).

Distribution. China: Guizhou (Pingfa Xian).

Oreocharis shweliensis Mich.Möller & W.H.Chen, **nom. nov.** — *Briggsia forrestii* Craib, Notes Roy. Bot. Gard. Edinburgh 11: 237 (1919). TYPE: China, Yunnan, Shweli-Salwin divide, alt. 8–9,000 ft., fl. & fr. Jun 1918, *G. Forrest 17,552* (lectotype E! [E00096870], designated here; isolectotypes K n.v., PE [PE00030661] n.v.).

Distribution. China: Yunnan (Ruili Xian).

Etymology. Named after a collection locality, the Shweli valley.

Oreocharis tongchouanensis Mich.Möller & W.H.Chen, **nom. nov.** — *Briggsia mairei* Craib, Notes Roy. Bot. Gard. Edinburgh 11: 239 (1919). TYPE: China, Yunnan, Tong-tchouan [Dongchuan], alt. 2700 m, fl. Sept, *E.E. Maire 213* (lectotype E! [E00396440], designated here; IBSC [IBSC0004831], image seen).

Distribution. China: Yunnan (Dongchuan Xian).

Etymology. Named after the old spelling of the collection locality, Dongchuan.

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References

- Burtt, B.L. (1954). Studies in the Gesneriaceae of the New World II. Types and lectotypes of certain genera and groups of lower rank. *Notes Roy. Bot. Gard. Edinburgh* 21: 193–208.
- Burtt, B.L. (1955). Studies in the Gesneriaceae of the Old World VIII. *Briggsia muscicola* and a new allied species. *Notes Roy. Bot. Gard. Edinburgh* 21: 234–238.

- Burtt, B.L. (1958). Studies in the Gesneriaceae of the Old World XIII. Miscellaneous transfers and reductions. *Notes Roy. Bot. Gard. Edinburgh* 22: 305–314.
- Chen, W.H., Shui, Y.M. & Möller, M. (2014). Two new combinations in *Oreocharis* Benth. (Gesneriaceae) from China. *Candollea* 69(2): 179–182
- Chun, W.Y. (1946). Gesneriacearum plantae nova Sinicarum. *Sunyatsenia* 6: 271–304, pl. 44–47.
- Craib, W.G. (1919a). Gesneracearum novitates. *Notes Roy. Bot. Gard. Edinburgh* 11: 233–254.
- Craib, W.G. (1919b). *Didissandra* and allied genera in China and N. India. *Notes Roy. Bot. Gard. Edinburgh* 11: 255–268.
- Li, H. (1993). Gesneriaceae. In: Li, H. (ed) *Flora of Dulongjian Region*. Pp. 299–302. Kunming: Yunnan Science and Technology Press.
- Middleton, D.J. & Möller, M. (2012). *Tribounia*, a new genus of Gesneriaceae from Thailand. *Taxon* 61: 1286–1295.
- Middleton, D.J. & Triboun, P. (2012). *Somrania*, a new genus of Gesneriaceae from Thailand. *Thai Forest Bull., Bot.* 40: 9–13.
- Middleton, D.J., Weber, A., Yao, Y.T., Sontag, S. & Möller, M. (2013). The current status of the species hitherto assigned to *Henckelia* (Gesneriaceae). *Edinburgh J. Bot.* 70: 385–404.
- Middleton, D.J., Atkins, H., Truong, L.H., Nishii, K. & Möller, M. (2014). *Billolivia*, a new genus of Gesneriaceae from Vietnam with five new species. *Phytotaxa* 161 (4): 241–269.
- Middleton, D.J., Nishii, K., & Möller, M. (submitted). *Chayamaritia* (Gesneriaceae: Didymocarpoideae), a new genus from Southeast Asia. *Plant Syst. Evol.*
- Möller, M., Forrest, A., Wei, Y.G. & Weber, A. (2011a). A molecular phylogenetic assessment of the advanced Asiatic and Malesian Didymocarpoid Gesneriaceae with focus on non-monophyletic and monotypic genera. *Plant Syst. Evol.* 292: 223–248.
- Möller, M., Middleton, D., Nishii, K., Wei, Y.-G. Sontag, S. & Weber, A. (2011b). A new delineation for *Oreocharis* incorporating an additional ten genera of Chinese Gesneriaceae. *Phytotaxa* 23: 1–36.
- Pan, K.Y. (1988). New taxa of *Briggsia* Craib (Gesneriaceae) from China. *Acta Phytotax. Sin.* 26: 450–457.
- Puglisi, C. (2014). *Systematic studies in the Boea group*. Unpublished PhD thesis, University of Edinburgh.
- Vitek, E., Weber, A. & Burtt, B.L. (1998). Generic position of the species hitherto referred to *Didissandra*. *Beitr. Biol. Pflanzen* 70: 275–291.
- Vitek, E., Weber, A. & Burtt, B.L. (2000). Names, types, and current placement of the species hitherto referred to *Didymocarpus*, *Loxocarpus*, *Codonoboena*, *Platyadenia* and *Henckelia* (Gesneriaceae). *Ann. Naturhist. Mus. Wien, B* 102: 477–530.
- Wang, W.T., Pan, K.Y., Zhang, Z.Y. & Li, Z.Y. (1990). Gesneriaceae. In: Wang, W.T. (ed) *Flora Reipublicae Popularis Sinicae* 69: 125–581. Beijing: Science Press.
- Wang, W.T., Pan, K.Y., Li, Z.Y., Weitzman, A.L. & Skog, L.E. (1998). Gesneriaceae. In: Wu, Z.Y. & Raven, P.H. (eds) *Flora of China* 18: 244–401. Beijing, China: Science Press and St. Louis, Missouri, USA: Missouri Botanical Garden Press.
- Weber, A., Middleton, D.J., Forrest, A., Kiew, R., Lim, C.L., Rafidah, A.R., Yao, T.L. & Möller, M. (2011a). Molecular systematics and remodeling of *Chirita* and associated genera (Gesneriaceae). *Taxon* 60: 767–790.
- Weber, A., Wei, Y.G., Puglisi, C., Wen, F., Mayer, V. & Möller, M. (2011b). A new definition of the genus *Petrocodon* (Gesneriaceae). *Phytotaxa* 23: 49–67.

- Weber, A., Wei, Y.G., Sontag, S. & Möller, M. (2011c). Inclusion of *Metabriggsia* into *Hemiboea* (Gesneriaceae). *Phytotaxa* 23: 37–48.
- Weber, A., Möller, M. & Clark, J.L. (2013). A new formal classification of Gesneriaceae. *Selbyana* 31: 68–94.
- Wei, Y.G., Wen, F., Chen, W.H., Shui, Y.M. & Möller, M. (2010). *Litostigma*, a new genus from China: a morphological link between basal and derived Didymocarpoide Gesneriaceae. *Edinburgh J. Bot.* 67(1): 161–184.
- Wu, L., Pan, B., Yang, J.C. & Xu, W.B. (2012). *Briggsia damingshanensis* (Gesneriaceae), a new species from Guangxi, China. *Ann. Bot. Fenn.* 49: 79–82.

Appendix. List of *Briggsia* names with their current status (**bold**).

- Briggsia acutiloba* K.Y.Pan = ***Oreocharis acutiloba*** (K.Y.Pan) Mich.Möller & W.H.Chen
- Briggsia agnesiae* (Forrest ex W.W.Sm.) Craib = ***Oreocharis agnesiae*** (Forrest ex W.W.Sm.) Mich.Möller & W.H.Chen
- Briggsia amabilis* (Diels) Craib = ***Loxostigma kurzii*** (C.B.Clarke) B.L.Burtt
- Briggsia aurantiaca* B.L.Burtt = ***Oreocharis billburttii*** (B.L.Burtt) Mich.Möller & W.H.Chen
- Briggsia beauverdiana* (H.L.Lév.) Craib = ***Briggsiopsis delavayi*** (Franch.) K.Y.Pan
- Briggsia cavaleriei* (H.L.Lév. & Vaniot) Craib = ***Loxostigma cavaleriei*** (H.L.Lév. & Vaniot) B.L.Burtt
- Briggsia chienii* Chun = ***Oreocharis chienii*** (Chun) Mich.Möller & A.Weber
- Briggsia crenulata* Hand.-Mazz. = ***Oreocharis rosthornii*** var. ***crenulata*** (Hand.-Mazz.) Mich.Möller & A.Weber
- Briggsia damingshanensis* L.Wu & B.Pan = ***Loxostigma damingshanensis*** (L.Wu & B.Pan) Mich.Möller & H.Atkins
- Briggsia delavayi* (Franch.) Chun = ***Briggsiopsis delavayi*** (Franch.) K.Y.Pan
- Briggsia dongxingensis* Chun ex K.Y.Pan = ***Loxostigma dongxingensis*** (Chun ex K.Y.Pan) Mich.Möller & Y.M.Shui
- Briggsia dulongensis* H.Li, nom. inval.
- Briggsia elegantissima* (H.L.Lév. & Vaniot) Craib = ***Oreocharis elegantissima*** (H.L.Lév. & Vaniot) Mich.Möller & W.H.Chen
- Briggsia forrestii* Craib = ***Oreocharis shweliensis*** (Craib) Mich.Möller & W.H.Chen
- Briggsia fritschii* (H.L.Lév. & Vaniot) Craib = ***Glabrella mihieri*** (Franch.) Mich.Möller & Y.M.Shui
- Briggsia hians* Chun = ***Oreocharis rosthornii*** (Diels) Mich.Möller & A.Weber
- Briggsia humilis* K.Y.Pan = ***Oreocharis parva*** (K.Y.Pan) Mich.Möller & W.H.Chen
- Briggsia kurzii* (C.B.Clarke) W.E.Evans = ***Loxostigma kurzii*** (C.B.Clarke) B.L.Burtt
- Briggsia latisejala* Chun ex K.Y.Pan = ***Oreocharis latisejala*** (Chun ex K.Y.Pan) Mich.Möller & W.H.Chen
- Briggsia longicaulis* W.T.Wang & K.Y.Pan = ***Loxostigma longicaule*** (W.T.Wang & K.Y.Pan) Mich.Möller & Y.M.Shui
- Briggsia longifolia* Craib = ***Oreocharis longifolia*** (Craib) Mich.Möller & A.Weber
- Briggsia longifolia* var. *multiflora* S.Y.Chen ex K.Y.Pan = ***Oreocharis longifolia*** var. ***multiflora*** (S.Y.Chen ex K.Y.Pan) Mich.Möller & A.Weber
- Briggsia longipes* (Hemsl. ex Oliv.) Craib = ***Glabrella longipes*** (Hemsl. ex Oliv.) Mich.Möller & Y.M.Shui

- Briggsia mairei* Craib = ***Oreocharis tongtchouanensis*** (Craib) Mich.Möller & W.H.Chen
Briggsia mihieri (Franch.) Craib = ***Glabrella mihieri*** (Franch.) Mich.Möller & Y.M.Shui
Briggsia muscicola (Diels) Craib = ***Oreocharis muscicola*** (Diels) Mich.Möller & A.Weber
Briggsia parvifolia K.Y.Pan = ***Oreocharis parvifolia*** (K.Y.Pan) Mich.Möller & W.H.Chen
Briggsia penlopi C.E.C.Fisch. = ***Oreocharis muscicola*** (Diels) Mich.Möller & A.Weber
Briggsia pinfaensis (H.Lév.) Craib = ***Oreocharis pinfaensis*** (H.Lév.) Mich.Möller & W.H.Chen
Briggsia rosthornii (Diels) B.L.Burtt = ***Oreocharis rosthornii*** (Diels) Mich.Möller & A.Weber
Briggsia rosthornii var. *crenulata* (Hand.-Mazz.) K.Y.Pan = ***Oreocharis rosthornii*** var. ***crenulata*** (Hand.-Mazz.) Mich.Möller & A.Weber
Briggsia rosthornii var. *wenshanensis* K.Y.Pan = ***Oreocharis rosthornii*** var. ***wenshanensis*** (K.Y.Pan) Mich.Möller & A.Weber
Briggsia rosthornii var. *xingrenensis* K.Y.Pan = ***Oreocharis rosthornii*** var. ***xingrenensis*** (K.Y.Pan) Mich.Möller & A.Weber
Briggsia speciosa (Hemsl.) Craib = ***Oreocharis speciosa*** (Hemsl.) Mich.Möller & W.H.Chen
Briggsia stewardii Chun = ***Oreocharis stewardii*** (Chun) Mich.Möller & A.Weber

