



Notes on Early Land Plants Today. 69. Circumscription of Plagiophilaceae (Marchantiophyta) with a preliminary infrageneric subdivision of *Plagiochila*

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Abstract

Plagiophilaceae is here circumscribed to include 10 genera, *Acrochila*, *Chiastocaulon*, *Dinckleria*, *Pedinophyllopsis*, *Pedinophyllum*, *Plagiochila*, *Plagiochilidium*, *Plagiochilion*, *Pseudolophocolea* and *Xenochila*. For the forthcoming world checklist of hornworts and liverworts we here summarize the current knowledge and identify the sections of *Plagiochila* that are currently recognized by morphological and molecular studies. *Plagiochila* is provisionally divided into 28 sections based on recent morphological and molecular studies. *Plagiochila ecuadorica* and *Plagiochila sciophila* subsp. *ciliigera* are new combinations, *Plagiochila umbrosioides* is a nomen novum.

Circumscription of Plagiophilaceae

The family Plagiophilaceae Müller (1956: 877) was originally circumscribed to include the genera *Mylia* Gray (1821: 693), *Pedinophyllum* (Lindberg 1874: 366) Lindberg (1875: 504) and *Plagiochila* (Dumortier 1831: 42) Dumortier (1835: 14). *Mylia* was transferred to Jungermanniaceae by Grolle (1962) forming a new subfamily, subfam. Mylioideae Grolle (1962: 15), which was later elevated to its own family, Myliaceae Schliakov (1975: 308). Later, several genera, mostly segregates from *Plagiochila* were established and referred to the family. Crandall-Stotler *et al.* (2009) included *Acrochila* Schuster (1963: 285), *Chiastocaulon* Carl (1931a: 58), *Dinckleria* Trevisan (1877: 421), *Pedinophyllopsis* R.M.Schust. et Inoue in Schuster & Engel (1981: 311), *Pedinophyllum*, *Plagiochila*, *Plagiochilidium* Herzog (1931: 186), *Plagiochilion* Hattori (1947: 7) and *Xenochila* Schuster (1959a: 15). Söderström *et al.* (2013) moved the genus *Pseudolophocolea* R.M.Schust. et Inoue in Schuster & Engel (1982: 71) from Lophocoleaceae Vanden Berghen (1956: 208) to Plagiophilaceae. Plagiophilaceae is related to Lophocoleaceae and several genera have shifted positions between the families. Other genera that have been included in Plagiophilaceae in various publications are either synonyms with any of the mentioned genera, or now included in other families. In addition to *Plagiochila*, the following genera are now recognized within the family.

Acrochila was established to accommodate *Acrochila simpsonii* (W.Martin & E.A.Hodgs. in Martin 1950: 497) Schuster (1963: 285) [= *Acrochila biserialis* (Lehm. et Lindenb. in Lindenberg 1843: 126) Grolle (1964a: 236)] and *Acrochila etesseana* (Stephani 1908: 152) Schuster (1963: 285) [= *Acrochila caledonica* (Stephani 1908: 32) Inoue 1967: 182], two segregates from *Plagiochila*. The genus was included in the molecular study of Groth (2005) with conflicting results. One marker placed it in Plagiophilaceae and another marker as a sister to *Adelanthus* Mitten (1864: 243). However, we here retain it in Plagiophilaceae until further studied.

Chiastocaulon was established to accommodate *Chiastocaulon dendroides* (Nees 1830: 77) Carl (1931a: 59), *Chiastocaulon flagelliferum* Stephani (1918: 155) Carl (1931a: 60) and *Chiastocaulon minutifolium* Stephani (1921: 185) Carl (1931a: 60). All three species were united to one species by Dugas (1929) who considered it a *Plagiochila* species. This view was followed by most authors until Groth & Heinrichs (2003) in a molecular study showed it to be distinct from *Plagiochila*.