

New combinations in the genera *Atractylocarpus* and *Metzleria*

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Abstract: The type species of *Atractylocarpus* has revealed to be a species of a genus which was later introduced as *Campylopodia*. To avoid taxonomic confusions, it was proposed to keep the current use of *Atractylocarpus* and *Campylopodia* by amending the genus *Atractylocarpus*. This proposal was rejected by the ICBN committee. Therefore the valid genus for all species so far comprised in *Atractylocarpus* is *Metzleria* and all species so far included in *Campylopodia* must be transferred to *Atractylocarpus*. Accordingly, all necessary new combinations are introduced here: *Atractylocarpus himalayanus* (Broth.) J.-P. Frahm, *Atractylocarpus malagensis* (Herz.) J.-P. Frahm, *Metzleria comosa* (Dix.) J.-P. Frahm, *Metzleria madagascariensis* (Thér.) J.-P. Frahm, *Metzleria nana* (Williams) J.-P. Frahm, *Metzleria patagonica* (Herz. et Thér.) J.-P. Frahm

The genera *Atractylocarpus* Mitt. and *Metzleria* Schimp. were both described in the same year 1869. Both genera revealed later as synonymous. For that reason, Limpricht introduced the new name *Metzleriella* for the species so far included in *Metzleria*. In addition, the orthographic incorrect versions of *Metzleria* and *Metzleriella*, *Metzlera* and *Metzlerella* were used, which all resulted in continuous confusions. The name *Atractylocarpus* was later proposed for conservation by H.N. Dixon and conserved against *Metzleria* in the Cambridge Rules (Briquet et al. 1935). The conservation was, however, unnecessary, because *Atractylocarpus* Mitt published in June 1869 predates *Metzleria*, published in August-September 1869 (cf. Frahm & Isovita 1988). Due to this conservation, *Atractylocarpus* has been used since for the genus.

Accordingly, the genus was monographed by Padberg & Frahm (1985) under this name.

The type of the genus was usually indicated with *Atractylocarpus costaricensis* (C. Müll.) Williams (*Leptotrichum costaricense* C. Müll. 1858), however, in the monograph of *Atractylocarpus* (Padberg & Frahm 1985) an earlier synonym was overlooked, *Dicranum flagellaceum* C. Müll. 1851. The necessary new combination was not made, because in a revision of the Paraleucobryoideae (Müller & Frahm 1987) it turned out, that the type species differs from all other species included in the genus by a different transverse section of the costa, longer capsules, and the presence of an annulus, thus showing all characters of the genus *Campylopodia* Card. 1908.

As a consequence, all species of *Atractylocarpus* except for the type species should be excluded

from the genus and the species formerly included in *Campylopododiella* should have been newly combined to *Atractylocarpus*. Thus the circumscription of the two genera had to be changed in opposite, which would have caused an enormous confusion.

Frahm & Isoviita (1988) proposed two solutions: (1) to transfer all species of *Atractylocarpus* except for the type species to *Metzleria* and to keep the genus for the species so far included in *Campylopododiella*. (2) to keep the current use of *Atractylocarpus* and *Campylopododiella* and to amend the circumscription of *Atractylocarpus*. The second proposal was favoured, because it (a) would have stabilized the nomenclature by protecting names as they are used now and taxonomic concepts as were used over the past 60 years,

(b) because it would supersede a well-stabilized name (*Campylopododiella*),

(c) *Metzleria* has not been used at all during the past 60 years, and

(d) it required only one new combination (*Campylopododiella flagellacea* (C. Müll.) Frahm & Isoviita).

(e) the generic circumscription of one genus and not of two genera have to be changed.

However, at the ICBN in Tokyo, the proposal to amend the moss *Atractylocarpus* was rejected by hepaticologists, the majority in the committee (Zijlstra 1993), although Art. 14.2 ICBN recommends conservation as an aim to serve stability of nomenclature. Instead, the mechanical solution was favoured, which causes to use *Atractylocarpus/Metzleria* and *Atractylocarpus/Campylopododiella* in different senses and to use the name *Atractylocarpus* now even for a genus of a different subfamily, resulting in a total nomenclatural confusion. Therefore *Atractylocarpus* becomes now the correct name for the species currently placed in *Campylopododiella* whereas *Metzleria* has to be used for the species currently placed in *Atractylocarpus*. *Atractylocarpus* Mitt. remains conserved in App. III ICBN, although now totally unnecessarily.

Since this decision none of the necessary new combinations have been made. Current new projects such as the generic mossfloras of the Neotropics and tropical Africa require a solid

taxonomic base. To clear this situation, all necessary new combinations are formally made here, following the rejection of the proposal (Frahm & Isoviita 1988), resulting in totally unnecessary confusions and procedure against the spirit of the ICBN:

Atractylocarpus Mitt., J. Linn. Soc. Bot. 12: 13, 1869 [*Campylopododiella* Card. sensu Chopra 1975, Frahm 1984 (Bryologist 87: 249-250), Gangulee 1971, Kumar & Verma 1979 (Bryologist 82: 585), Müller & Frahm 1987 (Nova Hedwigia 45: 286-292), Noguchi 1964 (Candollea 19: 170-171), Robinson 1966 (Bryologist 69: 105-107), Takaki 1971 (Misc. Bryol. Lich. 5: 135-137), Takaki 1973 (J. Hattori Bot. Lab. 37: 511-517)].

Type: *A. mexicanus* (= *flagellaceus*)

Atractylocarpus flagellaceus (C. Müll.)

Williams, Bryologist 31 : 110, 1928

Dicranum flagellaceum C. Müll., Syn. Musc. Frond. 2: 579, 1851

Atractylocarpus stenocarpus (Wils. In Seem.) Zander, Bryologist 85: 128, 1982.

Atractylocarpus costaricensis (C. Müll.) Williams, Bryologist 31: 110, 1928

Atractylocarpus mexicanus Mitt., J. Linn. Soc. Bot. 12: 13, 1869

Atractylocarpus himalayanus (Broth.) J.-P. Frahm, comb. nov.

Brothera himalayana Broth., Nat. Pfl. Ed. 1: 330, 1901

Campylopododiella himalayana (Broth.) J.-P. Frahm, Bryologist 87: 249, 1984.

Atractylocarpus malagensis (Herz.) J.-P. Frahm comb. nov.

Campylopus malagensis Herz., Bibl. Bot. 87 : 23, 1916

Campylopododiella malagensis (Herz.) J.-P. Frahm, Bryologist 87 : 250, 1984.

Metzleria Schimp. ex Milde, Bryol. Siles. 75, 1869 [*Atractylocarpus* Mitt. sensu Augier 1966, Chopra 1975 (Taxon. Indian Mosses), Corley et

al. 1982 (Mosses of Europe), Corley & Crundwell, J. Bryol. 16: 338, 1991), De Sloover 1973 (Not. Bryol. Afr. 1), Düll 1984 (Distr. Eur. Macar. Mosses), Eddy 1988 (Handb. Malesian Mosses, Frahm et al. 1985 (Acta Bot. Fennica 131: 66), Miller et al. 1985 (Prodr. Fl. Musc. Polynesiae), Norris & Koponen (Acta Bot. Fenn. 139: 21), Nyholm 1986 (Ill. Fl. Nordic Mosses), Ochyra & Sharp (J. Hattori Bot. Lab. 65: 339), Podpera 1954, Potier de la Varde (Ark. Bot. ser. 2,3: 137), Schultze-Motel & Menzel (Laubmoose Bryotrop Exp. Peru)].
Type: *M. alpina*

Metzleria alpina Schimp. ex Milde, Bryol. Siles. 75, 1869

Metzleria alticaulis Broth. In Mildbr., Wiss. Erg. Deut. Zentr. Afr. Exp., Bot. 142. 1910

Metzleria brasiliensis (Broth.) Par., Ind. Bryol. Suppl. 244, 1900

Metzleria comosa (Dix.) J.-P. Frahm comb. nov.
Atractylocarpus comosus Dix., Ann. Bryol. 7 : 22, 1934

Metzleria longiseta (Hook.) Broth., Bot. Jahrb. Syst. 56: 5, 1920

Metzleria madagascariensis (Thér.) J.-P. Frahm comb. nov.

Metzlerella madagascariensis Thér.,
Recueil Publ. Soc. Havraise Etudes Div.
1925: 132, 1926

Metzleria nana (Williams) J.-P. Frahm comb. nov.

Atractylocarpus nanus Williams, The Bryologist 31: 109, 1928.

Metzleria patagonica (Herz. et Thér.) J.-P. Frahm comb. nov.

Atractylocarpus patagonicus Herz. et Thér., Ann. Bryol. 6 : 124, 1933.

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