

## Typification of *Chara andina* and *C. armata* (Characeae, Charophyceae)

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A recent examination of specimens of *Chara andina* (A.Braun) Cáceres (1985: 57) from South America showed that the original material: ‘Bolivia, Prov. Omasuyos: Viciniis Achacache: in lacu Titicaca alt. 3900 m.; 3. Juni 1859, *G. Mandon* No. 6’ cannot be traced (Blindow & al., 2018). It is also not traceable in available lists of specimens by the collector of original material (Mandon 1865; Martius, sine anno). In absence of original material, a neotype, a specimen collected from the same lake by the same collector in the same year but in another month, and the identification was confirmed by R.D.Wood, H.Schubert, and I.Blindow, is suggested here. The material of *C. armata* Meyen (1857: 113) is only represented by images by Kützing (1857: pl. 75, [2020], a, a', a"; Wood 1965) based on the original material collected by Meyen in Hawaii, because the specimens stored in **B** appear to be lost, and no duplicates were located (Wood 1965: 249). These images were designated here as a neotype according to ICN Art. 9.8, 9.11, and 9.13 (Madrid Code, Turland & al. 2025).

*Chara andina* (A.Braun) Cáceres 1985: 57

≡ *Chara baltica* var. *andina* A.Braun (in Braun & Nordstedt) 1882: 157–158

≡ *Chara vulgaris* f. *andina* (A.Braun) R.D.Wood 1962: 8

Holotype (A.Braun in Braun & Nordstedt 1882: 157): Bolivia: Bolivia, Prov. Omasuyos: Viciniis Achacache: in lacu Titicaca alt. 3900 m., 3. Juni 1859, *G. Mandon* No. 6 (**B?**, not located, probably lost).

**Neotype (here designated for the above holotype):** Bolivia: [Bolivia, La Paz], Omasuyos [Prov.], viciniis Achacache, prope Pocoata, in lacu Titicaca, reg. alpina, [alt.] 3919 m [a.s.l.], Jan[uary] 1859, *Mandon*, *Mandon Plantae Andium Bolivienis*, No. 1811 – *Chara intermedia* A.Braun var. *andina* A.Braun [*in herb.*] (NY 01089298).

Registration (of neotype): <http://phycobank.org/106016>

Note: Braun (Braun & Nordstedt 1882) regarded his variety as very similar to *Chara baltica* (Hartman 1820: 376) Bruzelius (1824: 11), reporting “keinen Anhalt” [no possibility] for delineating this variety with certainty. Wood (1965: 765) proposed a new combination and species rank for *C. andina* (A.Braun) R.D.Wood in the “Microspecies appendix” without referring to the places of valid publication of the basionym (ICN Art. 41.5, Madrid Code, Turland & al. 2025), and without citations of basionym, rendering his nomenclatural act invalid. New combination and species rank later suggested for *C. andina* by Cáceres (1985: 57) were validly published.

*Chara armata* Meyen 1835: 113

= *Chara polyphylla* β. [var.] *meyenii* A.Braun 1849: 300, *nom. illeg.*

≡ *Chara gymnopus* β. [var.] *armata* (Meyen) Nordstedt 1878: 23

= *Chara variabilis* Filarszky 1934: 721, figs. 75–80

≡ *Chara zeylanica* f. *armata* (Meyen) Zaneveld 1940: 210

Original material (Kützing, 1857: 30): USA: Sandwich-Inseln [Hawaii, Oahu], [1831], *Meyen* (*Herb. Hampe*) *Herb. gener. Berol.* (**B?** not located, probably lost).

**Neotype (icon! here designated):** Kützing 1857: pl. 75, a, a', a".

Registration (of neotype): <http://phycobank.org/106018>

Note: *Chara polyphylla* var. *meyenii* was described on the basis of the original material of *C. armata* (Braun 1849: 300).

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- Blindow, I., Marquardt R., Schories, D. & Schubert, H. (2018) Charophyceae of Chile – taxonomy and distribution. Part 1. Subfamily Chareae. *Nova Hedwigia* 107(1–2): 1–47.
- Braun, A. (1849). Characeae Indiae orientalis et insularum maris pacifici; or characters and observations on the Characeae of the East Indian Continent, Ceylon, Sunda Islands, Marians, and Sandwich Islands. *Hooker's Journal of Botany and Kew Garden Miscellany* 1: 292–301.
- Braun, A. & Nordstedt, C.F.O. (1882). Fragmente einer Monographie der Characeen von Hr. A. Braun. Nach den hinterlassenen Manuscripten A. Braun's herausgegeben von Hr. Dr. Otto Nordstedt. *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften* 1882(1): 1–211, 7 pls.
- Bruzellius, A. (1824). *Observationes in genus Charae, quae venia ampliss. Ord. Philos. Lund, respondente Eberhard Liljevalch. [Dissertation]*. pp. [1]–24. Londini Gothorum: Ex Officina Berlingiana.
- Cáceres, E.J. (1985). Novedades carológicas argentinas.III. *Chara andina* en la República Argentina. *Physis, Secciones B* 43(104): 57–61.
- Filarszky, F. (1934). Die Characeen der Deutschen Limnologischen Sunda-Expedition. *Archiv für Hydrobiologie. Suppl. 12 Tropische Binnengewässer* 4: 705–726.
- Hartman, C.J. (1820). *Handbok i Skandnaviens flora, innefattande sveriges och norriges vexter, till och med mossorna: Med inledning, af handlande grunderna för botanikens studium, samt tvanne plancher*. pp. 1–32, i–lxiii, 1–488, 12 leaves: ill., 2 folded pl. Stockholm: Z. Haeggstrom.
- Kützing, F.T. (1857). *Tabulae phycologicae; oder, Abbildungen der Tange*. Bd. VII. pp. i–ii, 1–40, 100 pls. Nordhausen: Gedruckt auf Kosten des Verfassers (in commission bei W. Köhne).
- Mandon, M.G. (1865). Première liste des plantes des Andes Boliviennes recueillies et distribuées par M.G. Mandon. *Bulletin de la Société Botanique* 12: Paris: 79–83.
- Martius, F. von (sine anno). *Accession number 493: Plantae Andium Boliviensium, coll. a G. Mandon, Communic. Ab H.A. Weddell, Octobr. 1864*, pp. 1–10. Accessed: <https://plants.jstor.org/stable/10.5555/al.ap.visual.brmt0108>
- Meyen, F.J.F. (1835). *Reise um die Erde, ausgeführt auf dem Königlich Preussischen Seehandlungs-Schiffe Prinzess Louise, commandiert von Captain W. Wandt, in den Jahren 1830, 1831, und 1832. Zweiter theil. Historischer Bericht mit einem Plane von Canton, zwei Steintafeln und Tabellen*. pp. i–vi, 1–411. Berlin: in der Sander'schen Buchhandlung.
- Nordstedt, C.F.O. (1878). De algis aquae dulcis et de Characeis ex insulis Sandvicensibus a Sv. Bergren 1875 reportatis. *Minnesskrift utgifven af Kongliga Fysiografiska Sällskapet i Lund* 7: 1–24, 2 pls.
- Turland, N.J., Wiersema, J.H., Barrie, F.R., Gandhi, K.N., Gravendyck, J., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Klopfer, R.R., Knapp, S., Kusber, W.-H., Li, D.-Z., May, T.W., Monro, A.M., Prado, J., Price, M.J., Smith, G.F. & Zamora Señoret, J.C. editors (2025). *International code of nomenclature for algae, fungi, and plants (2025 Edition Madrid Code)* Regnum Vegetabile Volume 162. pp. [i]–xlvi, 1–303. Chicago & London: The University of Chicago Press.
- Wood, R.D. (1962). New combinations and taxa in the revision of Characeae. *Taxon* 11: 7–25.
- Wood, R.D. (1965). A revision of the Characeae. In: Wood, R.D. & Imahori, K. (Eds.) *A revision of the Characeae, 1*, J. Cramer, Weinheim, pp. i–xxiv, 1–904.
- Zaneveld, J.S. (1940). The Charophyta of Malaysia and adjacent countries. *Blumea* 4: 1–223.