

Nomenclatural notes on algae. VI. Validation or replacement of various algal names

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The present article is the sixth instalment on our series resolving nomenclatural issues arising from non-compliance with articles of the ICN (Turland & al. 2018), mostly involving invalid designations or illegitimate names. For the general framework for our work, please refer to the first number of the series (Molinari & al. 2021).

We here propose nine combinations at the species rank, two at the variety rank, a replacement names for a genus and for a species, and we validate nine species names and a varietal name.

Aclistochara jaisalmerensis (S.B.Bhatia & Mannikeri) Molinari & Guiry, *comb. nov.*

Basionym: *Stellatochara jaisalmerensis* S.B.Bhatia & Mannikeri, *Geologica et Palaeontologica* 11: 192, 1977 (*Charophyta, Characeae*).

Notes: Wang & al. (2005) considered *Stellatochara jaisalmerensis* as a synonym of “*Aclistochara yunnanensis*”, intended as a combination for “*Euaclistochara yunnanensis*.” However, “*Euaclistochara lufengensis*”, the intended type of the genus, was published without indication of type (Art. 40.2) and is thus invalid. With no valid type, the genus “*Euaclistochara*” is also invalid, as are all subsequently published infrageneric taxa (Wang & al. 1976). Therefore, the earliest valid and legitimate name is *Stellatochara jaisalmerensis* S.B.Bhatia & Mannikeri.

Aclistochara nuguishanensis Molinari & Guiry, *sp. nov.*

Description: Ovoid to spherical gyrogonite, truncated at the top and round at the base, 293–363 µm long, 283–352 µm wide. With 7–9 ridges in sideview, blunt, with irregular suture grooves, equatorial angle 11–17°. Apical pore in a flat surface, basal pore pentagonal, 43–52 µm diameter (*Charophyta, Characeae*).

Iconography: Wang & al. (2005: pl. 3, figs. 1–8).

Type: CHINA: Tibet Autonomous Region, Qiangtang Basin, catalogue number 19976, deposited at the palaeobotanical collection of the Nanjing Institute of Geology and Palaeontology (**PB**), illustrated by Wang & al. (2005: pl. 3, fig. 3).

Notes: This species was invalidly published as “*Euaclistochara nuguishanensis*” without designation of type (Wang & al. 1976), we follow Wang & al. (2005) for its current taxonomic assignation.

Aclistochara yongpingensis Molinari & Guiry, *sp. nov.*

Description: Ellipsoidal gyrogonite, truncated at the top and narrow at the base. 330 µm long, 243 µm wide. With 8 ridges in sideview, narrow, equatorial angle ≈16°. Apical pore with a depression, basal pore pentagonal, 43 µm diameter (*Charophyta, Characeae*).

Iconography: Wang & al. (2005: pl. 3, fig. 12).

Type: CHINA: Tibet Autonomous Region, Qiangtang Basin, catalogue number 19986, deposited at the palaeobotanical collection of the Nanjing Institute of Geology and Palaeontology (**PB**), illustrated by Wang & al. (2005: pl. 3, fig. 12).

Notes: This species was invalidly published as “*Euaclistochara yongpingensis*” without designation of type (Wang & al. 1976), we follow Wang & al. (2005) for its current taxonomic assignation.

Bifurcaria palaeobifurcata (Givulescu) Molinari & Guiry, *comb. nov.*

Basionym: *Fucus palaeobifurcatus* Givulescu in Givulescu & Nicorici, *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen* 110(2): 182, 1960 (*Ochrophyta*, *Sargassaceae*).

Notes: Givulescu (1968) proposed the previous combination without referring to the place of valid publication of the basionym (Art. 41.5), rendering his nomenclatural act invalid.

Dodekovaea Molinari & Guiry, *nom. nov.*

Replaced name: *Guttula* Dodekova, *Palaeontology, Stratigraphy and Lithology* 18: 36, 1983 (*Dinophyceae incertae sedis*), *nom. illeg., non Guttula* Skvortsov & Noda (1969: 101), *Thaumatomonadaceae*.

Type species: *Guttula camellae* Dodekova (by monotypy).

Notes: This genus of fossil dinoflagellates, found in Bathonian limestones of the Dobrič Formation from north-eastern Bulgaria, is renamed after its original author, Lilia Delcheva Dodekova-Sapunova (1934–2016).

Species: ***Dodekovaea camellae*** (Dodekova) Molinari & Guiry, *comb. nov.* Basionym: *Guttula camellae* Dodekova, *Palaeontology, Stratigraphy and Lithology* 18: 37, 1983.

Harrisichara yunlongensis Molinari & Guiry, *sp. nov.*

Description: Sub-ovate to sub-cylindrical gyrogonite, 696 µm long, 543 µm wide at the middle.

Apical pore stalked, basal pore large, pentagonal, 141 µm diameter. 9 ridges, with an equatorial angle of $\approx 17^\circ$ (*Charophyta*, *Characeae*).

Iconography: Wang & al. (2005: pl. 8, fig. 9).

Type: CHINA: Tibet Autonomous Region, Qiangtang Basin, catalogue number 19945 (**PB**), illustrated by Wang & al. (2005: pl. 8, fig. 9).

Notes: This species was originally proposed without designation of type (Wang & al. 1976). We follow Wang & al. (2005) for its current taxonomic assignation.

Ktenodiscus harrensis (J.Fenner) Molinari & Guiry, *comb. nov.*

Basionym: *Pseudopyxilla harrensis* J.Fenner, *Aarhus Geoscience* 1: 115, 1994 (*Bacillariophyta incertae sedis*).

Ktenodiscus kittonianus var. ***kamtschaticus*** (Gaponov) Molinari & Guiry, *comb. nov.*

Basionym: *Pyxilla kittoniana* var. *kamtschatica* Gaponov, *Materialy po geologii i polesnym iskopaemym Dal'nego Vostoka* 49: 15, 1927 (*Bacillariophyta incertae sedis*).

Ktenodiscus kittonianus var. ***minutus*** (J.Fenner) Molinari & Guiry, *comb. nov.*

Basionym: *Pterotheca kittoniana* var. *minuta* J.Fenner, *Aarhus Geoscience* 1: 117, 1994 (*Bacillariophyta incertae sedis*).

Ktenodiscus minutus (J.Fenner) Molinari & Guiry, *comb. nov.*

Basionym: *Pseudopyxilla minuta* J.Fenner, *Aarhus Geoscience* 1: 115, 1994 (*Bacillariophyta incertae sedis*).

Notes: We follow Suto & al. (2009) for the taxonomy, and Blanco & Wetzel (2016) for the nomenclature of *Ktenodiscus/Pterotheca*. *Pseudopyxilla minuta* and *Pterotheca tuffata* were published simultaneously and thus have equal priority, but priority of the former was established by Suto & al. (2009), in accordance with Art. 11.5, by placing *P. tuffata* in its synonymy.

Lamprothamnium ellipticum Martín-Closas ex Molinari & Guiry, *sp. nov.*

Description: See Li & al. (2016: 194) for an English description (*Charophyta*, *Characeae*).

Iconography: Li & al. (2016: 184, fig. 4 E–G)

Type: CHINA: Shandong Province, Tongjiazhuang, catalogue number 21992 (**PB**), illustrated by Li & al. (2016: 184, fig. 4 F–G).

Notes: This species was originally proposed by Martín-Closas (in Li & al. 2016) as a combination of the invalid “*Euaclistochara mundula* var. *elliptica*”. *Lamprothamnium ellipticum* includes all Chinese gyrogonites previously assigned to *Porochara mundula* (R.E.Peck) Shaikin, (Li & al. 2016).

Leptolyngbya amplivaginata (Goor) Molinari & Guiry, *comb. nov.*

Basionym: *Lyngbya amplivaginata* Goor, *Reçueil des Travaux Botaniques Néerlandais* 15: 260, 1918 (*Cyanobacteria*, *Leptolyngbyaceae*).

Notes: Anagnostidis & Komárek (1988) proposed and accepted simultaneously two combinations, under two different genera, based on the same species by Goor (1918), rendering both invalid. We here validate one of them following the taxonomic opinion of Komárek & Anagnostidis (2005).

Lychnothamnus lapingensis Molinari & Guiry, *sp. nov.*

Description: Prolate-perprolate gyrogonite 459–590 µm long, 308–360 µm wide. Base flat, basal pore pentagonal-stellate, 98–100 µm diameter, apical pore also pentagonal, 66–82 µm diameter. 9–11 ridges, fanning with various equatorial angles from the basal pore (*Charophyta*, *Characeae*).

Iconography: Wang & al. (1976: pl. 6: figs. 22–25).

Type: CHINA: Yunnan Province, Lanping, catalogue number 5115 (**PB**), illustrated by Wang & al. (1976: pl. 6: fig. 25 a–c).

Notes: The invalid “*Obtusochara lapingensis*” was originally proposed without designation of type (Wang & al. 1976). It belongs to the genus *Lychnothamnus*, according to Tian & al. (2020). It has, according to Wang & al. (2005) a variety.

Lychnothamnus lapingensis* var. *brevis Molinari & Guiry, *var. nov.*

Diagnosis: Differing from the typical variety by being notably shorter (402–478 µm long) and wider (354–398 µm wide).

Iconography: Wang & al. (2005: pl. 7: figs. 14–16).

Type: CHINA: Tibet Autonomous Region, Qiangtang Basin, catalogue number 19936 (**PB**), illustrated by Wang & al. (2005: pl. 7: fig. 16).

Mariaramirezia lapathifolia (Kützing) Molinari & Guiry, *comb. nov.*

Basionym: *Halymenia lapathifolia* Kützing, *Tabulae phycologicae* 16: 35, pl. 99 a, b, 1866 (*Rhodophyta*, *Halymeniaceae*).

Notes: The genus name *Mariaramirezia* was created to contain the species previously assigned to the illegitimate genus name *Ramirezia* M.S.Calderón, G.H.Boo, A.Mansilla, & S.M.Boo. The intention was to validate two species names under the genus, but the combination for the second one, based on *Halymenia lapathifolia*, was invalid, as no full, direct reference to the basionym or its place of publication was made (Art. 41.5). Since the genus was effectively monotypic at the time (Art. 38.6), it was validly published by Calderón & al. (2016) as a new taxon (Art. 38.5).

Navicula confundens Molinari & Guiry, *nom. nov.*

Replaced name: *Navicula confusa* Laslandes & Kociolek, *Bibliotheca Diatomologica* 61: 27, 2014, *nom. illeg., non Navicula confusa* Manguin (1949: 99), (*Ochrophyta*, *Naviculaceae*).

Obtusochara breviconica Molinari & Guiry, *sp. nov.*

Description: Long, ellipsoid gyrogonite, 420–470 µm long, 400–430 µm wide. Top wide and flat, base flat, basal pore small, apical pore of similar dimensions (*Charophyta*, *Characeae*).

Iconography: Wang & al. (1976: pl. 6: figs. 9–13).

Type: CHINA: Yunnan Province, Yunlong, catalogue number 5101 (PB), illustrated by Wang & al. (1976: pl. 6: fig. 11a–c).

Notes: This species was originally proposed without designation of type (Wang & al. 1976). It is a characteristic charophyte from the Jiangdihe Formation (Wan & al. 2007).

Porochara decursiva Molinari & Guiry, *sp. nov.*

Description: Ovoid-subsphepherical gyrogonite 590–656 µm long, 492–558 µm wide. Base depressed, basal pore pentagonal, 98–100 µm diameter, apical pore also pentagonal, 66–82 µm diameter. 9 ridges, fanning with various equatorial angles from the basal pore. Walls 131 µm thick at the equator, thinning towards the pores to 66–98 µm thick (*Charophyta*, *Porocharaceae*).

Iconography: Wang & al. (1976: pl. 2: figs. 1–4).

Type: CHINA: Yunnan Province, Yejiachong, catalogue number 5034 (PB), illustrated by Wang & al. (1976: pl. 2: fig. 2 a–c).

Notes: This species was originally proposed without designation of type (Wang & al. 1976). It is a characteristic charophyte from the Matoushan Formation (Wan & al. 2007).

Porochara sinica Molinari & Guiry, *sp. nov.*

Description: Long, ellipsoid gyrogonite, 787–856 µm long, 459–590 µm wide. Base flat, basal pore pentagonal, 131–164 µm diameter, apical pore of similar dimensions. With 9–11 ridges, with an equatorial angle of $\approx 27^\circ$ (*Charophyta*, *Porocharaceae*).

Iconography: Wang & al. (1976: pl. 3: figs. 1–4).

Type: CHINA: Yunnan Province, Zhenglian, catalogue number 5045 (PB), illustrated by Wang & al. (1976: pl. 3: fig. 4 a–c).

Notes: This species was originally proposed without designation of type (Wang & al. 1976). Had they succeeded, the name would be illegitimate due the pre-existence of *Porochara oblonga* Grambast. It is a characteristic charophyte from the Matoushan Formation (Wan & al. 2007).

Tectochara subelongata Molinari & Guiry, *sp. nov.*

Description: Ovoid to subcylindrical gyrogonite, 852–918 µm long, 688–787 µm wide. Base elongated to slightly stalked, basal pore pentagonal and infundibuliform, top slightly depressed, apical pore stellate. 7–9 ridges on side view, walls 66–82 µm thick (*Charophyta*, *Characeae*).

Iconography: Wang & al. (1976: pl. 5: figs. 1–4, 8, 10).

Type: CHINA: Yunnan Province, Yunlong, catalogue number 5078 (PB), illustrated by Wang & al. (1976: pl. 5: fig. 2a–c).

Notes: This species was originally proposed without designation of type (Wang & al. 1976). It is a characteristic charophyte from the Yunlong Formation (Gourbet & al. 2017).

Transeauina jogensis (M.O.P.Iyengar) Guiry, *comb. nov.*

Basionym: *Mougeotia jogensis* M.O.P.Iyengar, *Revue Algologique* 6: 263, 1932 (*Charophyta*, *Zygnemataceae*).

Transeauina madrasensis (M.O.P.Iyengar) Guiry, *comb. nov.*

Basionym: *Debarya madrasensis* M.O.P.Iyengar, *Phykos* 2: 55, 1963 (*Charophyta*, *Zygnemataceae*).

Notes: Guiry (2013) introduced the above two names without referring to the place of valid publication of the basionyms (Art. 41.5), rendering the nomenclatural acts invalid.



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