

The reinstatement of *Lychaete* J.Agardh (Ulvophyceae, Cladophoraceae)

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Boedeker *et al.* (2016) provided evidence for the reinstatement of the green algal genus *Acrocladus* Nägeli (1847: 166) as a segregate genus of *Cladophora*, assigning a total of 19 species to the genus. This group of species belonged to the “Longi-articulatae clade” of Boedeker *et al.* (2016), corresponding to the Section *Longi-articulateae* of Hamel (1924) and also recognized [as Section *Longi-articulatae*] by van den Hoek (1963, 1984) and van den Hoek & Chihara (2000). The concept of the Boedeker *et al.* (2016) “Longi-articulatae clade” was an emended sense of *Acrocladus* according to the authors. Their conclusions, based on molecular studies, had been earlier supported by the work of Hanyuda *et al.* (2002), Leliaert *et al.* (2009) and Ichihara *et al.* (2013). The generitype of *Acrocladus* is *A. mediterraneus* Nägeli, but this species has been shown by various workers (e.g., Hauck 1885; De Toni 1889; van den Hoek 1963) to be a later taxonomic synonym of *Cladophora pellucida* (Hudson) Kützinger. Accordingly, the accepted name for the generitype of *Acrocladus* is *A. pellucidus* (Hudson) Boedeker in Boedeker *et al.* (2016).

Included in the species assigned to *Acrocladus* is *Acrocladus mirabilis* (C.Agardh) Boedeker. That species was first validated by C. Agardh (1820: pl. IX) as *Conferva mirabilis* based on a collection made by Chamisso at the Cape of Good Hope, South Africa.

The genus *Lychaete* was validated by J. Agardh (1846a: 104), who listed ten species of *Conferva* belonging to the genus but without any of them being designated the generitype (Farr *et al.* 1979), and also without any being transferred to *Lychaete* in that new combinations were not effected. These species included *C. tortuosa* Dillwyn, *C. moluccana* C.Agardh, *C. linoides* C.Agardh, *C. linum* O.F.Müller, *C. aerea* Dillwyn, *C. antennina* Bory, *C. melagonium* F.Weber & D.Mohr, *C. flagelliformis* Suhr, *C. virgata* Roth, and *C. mirabilis* C.Agardh. Later in the same year, J. Agardh (1846b: pl. IX) validated the binomial *Lychaete mirabilis* (C.Agardh) J.Agardh, and in so doing he effectively lectotypified the genus with that species.

Lychaete J.Agardh (1846) predates *Acrocladus* Nägeli (1847), and on this basis the taxa assigned to *Acrocladus* by Boedeker in Boedeker *et al.* (2016) are here transferred to *Lychaete*.

Lychaete J.Agardh 1846a: 104.

Lectotype: *Lychaete mirabilis* (C.Agardh) J.Agardh 1846b: [2], pl. IX.

Papenfuss (1940) presented evidence for treating *Cladophora hospita* (Mertens ex Chamisso) Kützinger [basionym: *Conferva hospita* Mertens ex Chamisso (1821)] as a taxonomic synonym of *Cladophora mirabilis* (C.Agardh) Rabenhorst. Silva *et al.* (1996: 775) pointed out that if a later starting date were not recognized for certain groups of blue-green algae, then *Conferva mirabilis* C.Agardh (1820) (Fig. 1, below) would be a later homonym of *Conferva mirabilis* Dillwyn (1808), and the binomial *Cladophora hospita* (Mertens ex Chamisso) Kützinger would take priority over *C. mirabilis*.

These following species that were recognized within *Acrocladus* are here transferred to *Lychaete*:

Lychaete bainesii (Müller & Harvey ex Harvey) *comb. nov.* Basionym: *Cladophora bainesii* Müller & Harvey ex Harvey. *Phycologia australica*. Vol. 2. pl. 112, 1859.

Lychaete battersii (C.Hoek) *comb. nov.* Basionym; *Cladophora battersii* C.Hoek, *Revision of the European species of Cladophora*, p. 92, figs 317-322, 1963.

Lychaete dotyana (W.J.Gilbert) *comb. nov.* Basionym: *Cladophora dotyana* W.J.Gilbert, *Pacific Science* Vol. 19: 486, fig. 3, 1965.

Lychaete echinus (Biasoletto) *comb. nov.* Basionym: *Conferva echinus* Biasoletto, *Relazione del viaggio fatto nella primavera dell'anno 1838 dalla Maestà del Re Federico Augusto di Sassonia nell'Istria, Dalmazia e Montenegro*, p. 202, 1841.

Lychaete feredayi (Harvey) *comb. nov.* Basionym: *Cladophora feredayi* Harvey, *Phycologia australica*. Vol. 1: pl. 47, 1858.

Lychaete feredayoides (Kraft) *comb. nov.* Basionym: *Cladophora feredayoides* Kraft & Millar ex Kraft, *Australian Systematic Botany* 13: 556, fig. 19 A-F, 2000.

Lychaete herpestica (Montagne) *comb. nov.* Basionym: *Conferva herpestica* Montagne 1842. *Prodromus generum specierumque phycearum novarum*, p. 15, 1842.

Lychaete japonica (Yamada) *comb. nov.* Basionym: *Cladophora japonica* Yamada, *Journal of the Faculty of Science, Hokkaido Imperial University*, ser. 5, 1, p. 65, pl. 16, 1931.

Lychaete japonica* var. *kajimurae (C.Hoek & Chihara) *comb. nov.* Basionym: *Cladophora japonica* var. *kajimurae* C.Hoek & Chihara. *National Science Museum Monographs* 19: 73, fig. 32, 2000.

Lychaete longicellulata (C.Hoek) *comb. nov.* Basionym: *Cladophora longicellulata* C.Hoek *Journal of Phycology* 5: 13 figs 7-11, 1969.

Lychaete minisakii (C.Hoek & Chihara) *comb. nov.* Basionym: *Cladophora minisakii* C.Hoek & Chihara. *National Science Museum Monographs* 19:108, figs 48 A, C, 49, 2000.

Lychaete ohkuboana (Holmes) *comb. nov.* Basionym: *Cladophora ohkuboana* Holmes, *Journal of the Linnean Society of London, Botany* 31: 249, 1895.

Lychaete pellucidoidea (C.Hoek) *comb. nov.* Basionym: *Cladophora pellucidoidea* C.Hoek. *A taxonomic revision of the American species of Cladophora (Chlorophyceae) in the North Atlantic Ocean and their geographic distribution*, p. 179, figs 358-359, 1982

Lychaete pellucida (Hudson) *comb. nov.* Basionym: *Conferva pellucida* Hudson 1762. *Flora anglica*, p. 483.

Lychaete pseudobainesii (C.Hoek & Searles) *comb. nov.* Basionym: *Cladophora pseudobainesii* C.Hoek & Searles. *Botanica Marina* 31: 521, figs 1-3, 1988.

Lychaete pygmaea (Reinke) *comb. nov.* Basionym: *Cladophora pygmaea* Reinke, *Berichte der deutschen botanischen Gesellschaft* 6: 241, 1888.

Lychaete radiosa (Suhr) *comb. nov.* Basionym: *Conferva radiosa* Suhr, *Flora* 17 (46, 47): 741, 1834.

Lychaete rhodolithicola (Leliaert) *comb. nov.* Basionym: *Cladophora rhodolithicola* Leliaert. *European Journal of Phycology* 44: 164, figs 1-20, 2009.

Lychaete sakaii (I.A.Abbott) *comb. nov.* Basionym: *Cladophora sakaii* I.A.Abbott, *Phycologia* 11: 259-265, 1972.

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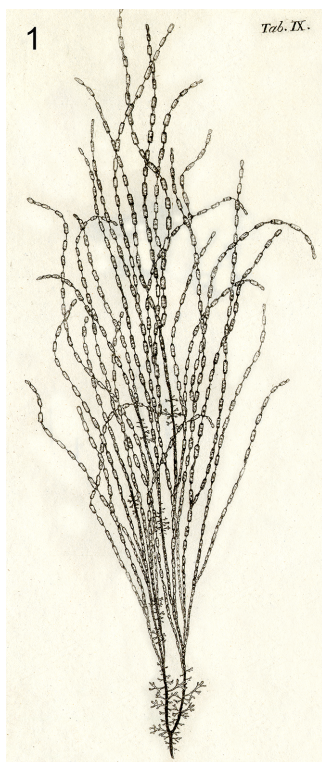


Fig 1. *Conferva mirabilis* C.Agardh (1820, pl. IX).