

Validation of two invalid designations of non-geniculate coralline algae (*Hapalidiales*, *Florideophyceae*)

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The names of two species of non-geniculate coralline algae require validation here.

Boreolithothamnion lemoineae P.W.Gabrielson, Maneveldt, Hughey & V.Peña, *sp. nov.*

Replaced designation: “*Lithothamnium lemoineae*” Adey (1970: 228, no fig.), *nom. inval.*

Phycobank registration: <http://phycobank.org/105584>

Description: Adey (1970: 228, as “*Lithothamnium lemoineae*”, English and Latin)

Diagnostic figures: Adey (1970, pl. III [3]: figs 16, 17, pl. IV[4]: figs 18, 20, pl. VII[7]: figs 31–34 as “*Lithothamnium b*”).

Holotype: Merchant. Island, East Penobscot Bay, Maine, USA, 3–5 m depth, leg. W.H. Adey G1-41 1-6B, US.

Etymology: The specific epithet honours Marie Lemoine (1887–1984) of the Muséum National d’Histoire Naturelle in Paris, whose seminal work on extinct and extant coralline algae has enriched coralline taxonomy.

Note: *Lithothamnion lemoineae* W.H.Adey (1970, 228, as “*Lithothamnium*”) was proposed for the taxon he (Adey 1966a, 1966b) had called *Lithothamnium* “b”. Adey (1970: 228) wrote ‘*Lithothamnium lemoineae* n. sp. = *Lithothamnium* “b” Adey, 1966’, but three papers published by Adey in 1966 are listed in his bibliography, without differentiating them. Art. 44.2 of the ICN (Turland & al. 2018) mandates that, ‘A name of a new species or infraspecific taxon of non-fossil algae published on or after 1 January 1958 is not validly published unless it is accompanied by an illustration or figure showing the distinctive morphological features, or by a reference to a previously and effectively published such illustration or figure.’ In his description of *Lithothamnion lemoineae*, Adey (1970: 228, as “*Lithothamnium*”) wrote, ‘See 5 for detailed morphological, anatomical, ecological treatment.’ The italicized ‘5’ refers to Reference 5, ‘1966. The genera *Lithothamnium*, *Leptophytum* (nov. gen.) and *Phymatolithon* in the Gulf of Maine. *Hydrobiol.* 28: 321–70’, but there is no reference to any figures in this publication.

Roseolithon mirabile (Foslie) P.W.Gabrielson, J.J.Lamb & Hughey, *comb. nov.*

Basionym *Archaeolithothamnion mirabile* Foslie, *Det Kongelige Norske Videnskabers Selskabs Skrifter*, 1898 (6): 3, 1899.

Phycobank registration: <http://phycobank.org/105587>

Note: The designation “*Roseolithon mirabile*” was published without a “full and direct” citation of the intended basionym (Gabrielson & al. 2024) as required by Article 41.5 of the ICN (Turland & al. 2018).

I thank Richard L. Moe, Michael D. Guiry and Giovanni Furnari for helpful discussions.

Adey, W.H. (1966a). The genera *Lithothamnium*, *Leptophytum* (nov. gen.) and *Phymatolithon* in the Gulf of Maine. *Hydrobiologia* 28: 321–370.

Adey, W.H. (1966b). The distribution of saxicolous crustose corallines in the northwestern North Atlantic. *Journal of Phycology* 2: 49–54.

Adey, W.H. (1970). The crustose corallines of the northwestern North Atlantic, including *Lithothamnium lemoineae* n. sp. *Journal of Phycology* 6: 225–229.



- Foslie, M. (1899). Some new or critical lithothamnina. *Det Kongelige Norske Videnskabers Selskabs Skrifter*. 1898 (6): 1–19.
- Gabrielson, P.W., Lamb, J.J. and Hughey, J.R. (2024). *Roseolithon mirabile* (Foslie) comb. nov. (Hapalidiales, Corallinophycidae, Rhodophyta) based on DNA sequencing of the *Archaeolithothamnion mirabile* lectotype. *Botanica Marina* 67: 587–592.
- Gabrielson, P.W., Maneveldt, G.W., Hughey, J.R. and Peña, V. (2023). Taxonomic contributions to Hapalidiales (Corallinophycidae, Rhodophyta): *Boreolithothamnion* gen. nov., *Lithothamnion* redefined and with three new species and *Roseolithon* with new combinations. *Journal of Phycology* 59: 751–774.
- Turland, N.J., Wiersema, J.H., Barrie, F.R., Greuter, W., Hawksworth, D.L., Herendeen, S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T.W., McNeill, J., Monro, A.M., Prado, J., Price, M.J. and Smith G.F. (2018). *International Code of Nomenclature for algae, fungi and plants (Shenzhen Code)*. Koeltz Botanical Books, Oberreifenberg, 254 pp.