
Proposal of *Phycocalidia* Santiañez & M.J.Wynne *nom. nov.* to replace *Calidia* L.-E.Yang & J.Brodie *nom. illeg.* (Bangiales, Rhodophyta)

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In their most recent study on the economically important and speciose genus *Pyropia* J.Agardh, Yang *et al.* (2020) made considerable changes in the taxonomy and classification of the group by redefining *Pyropia*, describing four new genera (viz, *Calidia* L.-E.Yang & J.Brodie, *Neoporphyra* J.Brodie & L.-E.Yang, *Neopyropia* J.Brodie & L.-E.Yang, and *Uedaea* J.Brodie & L.-E.Yang), and taxonomically reinstating *Porphyrella* G.M.Smith & Hollenberg with an emended description.

The genus *Calidia* was described using both morphological and molecular characters, based on the new species *Calidia pseudolobata* L.-E.Yang, J.Brodie & Q.-Q.Lu (Yang *et al.* 2020). Unfortunately, that genus name is illegitimate, being a later homonym of *Calidia* J.Stirton in King *et al.* (1876), a genus of lichens that is presently considered to be a later taxonomic synonym of *Byssoloma* Trevisan, 1853 (James, 1971).

We here propose a new genus name to replace the red algal genus *Calidia* L.-E.Yang & J.Brodie, as well as transfer species that had been assigned to this segregate genus.

Phycocalidia* Santiañez & M.J.Wynne, *nom. nov.

Replaced name: *Calidia* L.-E.Yang & J.Brodie *Journal of Phycology* 56(3): [3], figs 2–4, 2020, *nom. illeg. non Calidia* J.Stirton (in T.King *et al.* 1876).

Description: Yang *et al.*, *Journal of Phycology* 56(3): [3], figs 2–4, 2020.

Etymology: *Phykos*, Greek, wrack, seaweed; *calida*, Latin, warm, hot, referring to the tropical and subtropical distribution of most species of this genus.

Type: ***Phycocalidia pseudolobata*** (L.-E.Yang, J.Brodie & Q.-Q.Lu) Santiañez & M.J.Wynne, *comb. nov.*

Basionym: *Calidia pseudolobata* L.-E.Yang, J.Brodie & Q.-Q.Lu in Yang *et al.*, *Journal of Phycology* 56(3):[4], figs 2–4, 2020.

Note: On the basis of Art. 55.1 of the ICN (Turland *et al.* 2018), *Calidia pseudolobata* is treated as a legitimate name and is here transferred to *Phycocalidia*. *Phycocalidia pseudolobata* is designated the generic type of *Phycocalidia*.

Additional transfers proposed:

Phycocalidia acanthophora (E.C.Oliveira & Coll) Santiañez, *comb. nov.*

Basionym: *Porphyra acanthophora*, E.C.Oliveira & Coll, *Botanica Marina* 18: 192, figs 6, 14–16, 19, 21. 1975.

Homotypic synonyms: *Pyropia acanthophora* (E.C.Oliveira & Coll) M.C.Oliveira, D.Milstein & E.C.Oliveira in Sutherland *et al.*, *Journal of Phycology* 47(5): 1142. 2011. *Calidia acanthophora* (E.C.Oliveira & Coll) L.-E.Yang & J.Brodie in Yang *et al.*, *Journal of Phycology* 56(3): [5], 2020, *nom. illeg.*

Phycocalidia denticulata (Levring) Santiañez & M.J.Wynne, *comb. nov.*

Basionym: *Porphyra denticulata* Levring, *Arkiv för Botanik, Uppsala Ser. 2*, 2: 467, figs 5, 6A–G. 1953.

Homotypic synonyms: *Pyropia denticulata* (Levring) J.A.Phillips & J.E.Sutherland in Sutherland *et al.*, *Journal of Phycology* 47(5): 1143. 2011. *Calidia denticulata* (Levring) L.-E.Yang & J.Brodie in Yang *et al.*, *Journal of Phycology* 56(3): [5], 2020, *nom. illeg.*

Phycocalidia islae (Dumilag) Santiañez, *comb. nov.*

Basionym: *Pyropia islae* Dumilag in Dumilag & Yap, *Botanica Marina* 61(5): 474, figs 10–14. 2018.

Note: *Pyropia islae* is clustered within the other *Pyropia* species that were recently transferred by Yang *et al.* (2020) to their genus *Calidia* L.-E.Yang & J.Brodie (Dumilag & Yap 2018, fig. 2). Thus, this species is also transferred to *Phycocalidia*.

Phycocalidia lunae (Dumilag) Santiañez, *comb. nov.*

Basionym: *Pyropia lunae* Dumilag in Dumilag & Yap, *Botanica Marina* 61(5): 471, figs 3–9. 2018.

Note: Similar to its sympatric species *Pyropia islae*, *Pyropia lunae* is within the clade of species that were recently transferred by Yang *et al.* (2020) to their genus *Calidia* L.-E.Yang & J.Brodie. As such, we also include the transfer of this species to *Phycocalidia*.

Phycocalidia suborbiculata (Kjellman) Santiañez & M.J.Wynne, *comb. nov.*

Basionym: *Porphyra suborbiculata* Kjellman, *Bihang til Kongliga Svenska Vetenskaps-Akademiens Handlingar, Afd. III* 23(4): 10, pl. 1: figs 1-3; pl. 2: figs 5-9; pl. 5: figs 4-7. 1897.

Homotypic synonyms: *Phyllona suborbiculata* (Kjellman) Kuntze, *Revisio generum plantarum. Pars III* (3): 420. 1898. *Pyropia suborbiculata* (Kjellman) J.E.Sutherland, H.G.Choi, M.S.Hwang & W.A.Nelson in Sutherland *et al.*, *Journal of Phycology* 47(5): 1145. 2011. *Calidia suborbiculata* (Kjellman) L.-E.Yang & J.Brodie in Yang *et al.*, *Journal of Phycology* 56(3): [5], 2020, *nom. illeg.*

Phycocalidia tanegashimensis (I.Shinmura) Santiañez, *comb. nov.*

Basionym: *Porphyra tanegashimensis* I.Shinmura, *Bulletin of the Japanese Society of Scientific Fisheries* 40: 735, figs 1, 3–5, 9; pl. 1. 1974.

Homotypic Synonyms: *Pyropia tanegashimensis* (I.Shinmura) N.Kikuchi & E.Fujiyoshi in Sutherland *et al.*, *Journal of Phycology* 47(5): 1145, 2011. *Calidia tanegashimensis* (I.Shinmura) L.-E.Yang & J.Brodie in Yang *et al.*, *Journal of Phycology* 56(3): [5], 2020, *nom. illeg.*

Phycocalidia vietnamensis (Tak.Tanaka & P.H.Hô) Santiañez & M.J.Wynne, *comb. nov.*

Basionym: *Porphyra vietnamensis* Tak.Tanaka & P.H.Hô, *Memoirs of the Faculty of Fisheries, Kagoshima University* 11: 34, figs 10, 11. 1962.

Homotypic synonyms: *Pyropia vietnamensis* (Tak.Tanaka & P.H.Hô) J.E.Sutherland & Monotilla in Sutherland *et al.*, *Journal of Phycology* 47(5): 1145. 2011. *Calidia vietnamensis* (Tak.Tanaka & P.H.Hô) L.-E.Yang & J.Brodie in Yang *et al.*, *Journal of Phycology* 56(3): [5], 2020, *nom. illeg.*

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