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Phycoflabellina nomen novum (Delesseriaceae, Rhodophyta), a replacement name for *Flabellina* Selivanova & Zhigadalova (2016), *nom. illeg., non* Korde (1986)

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Flabellina avachensis, a new genus and species of Delesseriaceae (Ceramiales, Rhodophyta), was described by Selivanova & Zhigadalova (2016), with a type locality of Besymyannaya Inlet (growing at a depth 12-14 m), Avacha Bay, Avacha Gulf, Kamchatka, Russia, north-western Pacific Ocean. This generic name *Flabellina*, however, was validated earlier by Korde (1986) for a Lower Cambrian fossil alga from the right bank of the Dzhida River of E. Sajan, Russia. That fossil algal species was *F. multiformis* K.B.Korde and was thought to be either Rhodophycean or Phaeophyceaen affinities. The family name Flabellinaceae was also proposed by Korde (1986). Although Korde's descriptions of the new genus and new family lacked both Latin and English descriptions, a Latin or English description or diagnosis was not a requirement of the Code for a new fossil-taxon prior to 1 January 1996 (Art. 43.1, Melbourne Code, McNeill *et al.* 2012). It should be noted that Mankiewicz (1992) later included *Flabellina* in a category of "dubiofossils" (i.e., objects unlikely to be of biological origin).

The following replacement name is therefore proposed:

Phycoflabellina M.J.Wynne & C.W.Schneider *nomen novum pro Flabellina* Selivanova & Zhigadalova *nom. illeg*., *Marine Biology, Nauka* 42(3): 182, 2016, *non Flabellina* Korde, *New algal species of the early Paleozoic*…, 106).

Generitype (designated here): ***Phycoflabellina avachensis*** (Selivanova & Zhigadalova) M.J.Wynne & C.W.Schneider *comb. nov*.

Basionym: *Flabellina avachensis* Selivanova & Zhigadalova, *Marine Biology, Nauka* 42(3): 183, figs 1-5, 2016.

Selivanova & Zhigadalova (2016) compared their new genus with several other related Delesseriacean genera, namely, *Haraldiophyllum*, *Hideophyllum* and *Myriogramme*. These genera are all currently placed in the tribe *Myriogrammeae* (Hommersand & Fredericq 1997; Wynne 2014). An additional related genus, *Neoharaldiophyllum*, has recently been described by Kang *et al.* (2017), with *Neoharaldiophyllum udoense* (M.S.Kim & J.C.Kang) J.C.Kang & M.S.Kim designated as generitype. *Haraldiophyllum* and *Neoharaldiophyllum* can be distinguished from *Phycoflabellina* in that both produce carposporangia as solitary structures terminating gonimoblast filaments (Zinova 1981; Maggs & Hommersand 1993). As in *Hideophyllum* and *Myriogramme*, carposporangia in *Phycoflabellina* are produced in short chains terminating gonimoblast fiaments. *Phycoflabellina* can be separated from *Hideophyllum* by the number of layers in the blade, the much smaller size of the thallus, the solitary blades with smooth margins and lacking serrations and proliferations, and the presence of veins that do not reach the blade margin (Selivanova & Zhigadalova 2016). In both *Myriogramme* and *Phycoflabellina* a central cell of the blade cuts off two pairs of pericentral cells opposite one another on each side of the thallus. The first of each pair of cells forms a sterile vegetative cell (= the cover cell) and the second forms the procarp. *Myriogramme* is distinguished by its procarp consisting of a carpogonial branch and a 1- or 2-celled lateral sterile cell group and a one-celled basal sterile cell group (Hommersand & Fredericq 1997, for *Myriogramme livida*, the generitype), whereas the procarp of *Phycoflabellina* consists of a carpogonial branch and two groups of sterile cells (the first group contains up to three cells and the second group up to two cells) (Selivanova & Zhigadalova 2016, as *Flabellina avachensis*). It is

clear that there needs to be a molecular phylogenetic assessment of these closely related genera, but for now, we have validated a replacement for the illegitimate generic name introduced by Selivanova & Zhigadalova (2016).

Hommersand, M.H. & Fredericq, S. (1997). Characterization of *Myriogramme livida*, *Myriogrammeae* trib. nov. (Delesseriaceae, Rhodophyta). *Journal of Phycology* 33: 106-121.

Kang, J.C., Yang, M.Y. & Kim, M.S. (2017). *Neoharaldiophyllum*, a new genus of Delesseriaceae (Rhodophyta) based on carposporophyte development and molecular data. *Botanica Marina* 60: 18 pp. DOI 10.1515/bot-2017-003

Korde, K.B. (1986). [New algal species of the early Paleozoic from the eastern Sayan Mountains and the Zabaikalye Region.] pp. 105-111, 2 pls. In: Sokolov, B.S. *et al.,* eds. *Aktual'nye voprosy sovremennoĭ paleoal'gologii: abornik nauchnykh trudov.* [*Present-day problems of modern paleoalgology*]. Kiev (USSR): Naukova. [In Russian.]

Maggs, C.A. & Hommersand, M.H. (1993). *Seaweeds of the British Isles. Volume 1. Rhodophyta. Part 3A. Ceramiales*. pp. [i]-xv, 1-444, 129 figs, map. London: HMSO.

Mankiewicz, C. (1992). Proterozoic and Early Cambrian calcareous algae. Pp. 981-998. In: *The Proterozoic Biosphere: a multidisciplinary study.* (J.W. Schopf & C. Klein, eds.) Cambridge University Press.

McNeill, J., Barrie, F.R., Buck, W.R., Demoulin, V., Greuter, W. Hawksworth, D.L., Herendeen, P.S., Knapp, S., Marhold K., Prado, J., Prud'homme van Reine, W.F., Smith, G.F., Wiersema, J.H. & Turland, N.J. (Eds.) (2012). *International code of nomenclature for algae, fungi, and plants (Melbourne Code). Regnum Vegetabile* 154. Koeltz Scientific Books.

Selivanova, O.N. & Zhigadalova, G.G. 2016. *Flabellina avachensis* gen. et sp. n. — a new genus and species of the family Delesseriaceae (Rhodophyta) from the near Kamchatka waters of the Pacific Ocean. *Marine Biology, Nauka* 42(3) 179-188, 5 figs. [In Russian, with abstract and description in English.]

Wynne, M.J. (2014, '2013'). *The red algal families Delesseriaceae and Sarcomeniaceae*. pp. [1]-326, 118 figs. Königstein: Koeltz Scientific Books.

Zinova, A.D. (1981). *De positione systematica Nitophylli (Myriogrammes) yezoensis* (Yamada et Tokida) Mikami (Delesseriaceae). *Novitates Systematicae Plantarum non Vascularium* 18: 10-15. [In Russian.]