
Replacement names for two *Gomphonema* (*Gomphonemataceae*, *Bacillariophyta*) species described from Lake Baikal, Russia.

J. Patrick Kociolek, *Museum of Natural History and Department of Ecology and Evolutionary Biology, University of Colorado, Boulder, Colorado 80309, USA* (corresponding author: Patrick.Kociolek@Colorado.edu)

Michael D. Guiry, *AlgaeBase, Ryan Institute, National University of Ireland, Galway, University Road, Galway, H91 TK33, Ireland* (michael.guiry@nuigalway.ie)

Kociolek *et al.* (2018) validly introduced the name *Gomphonema sibiricum* Kulikovskiy, Kociolek & Solak. The valid *Gomphonema sibiricum* Skvortzov & K.I.Meyer, was introduced by Skvortzov & Meyer (1928: 26, pl. II: fig. 90, ‘*sibirica*’). According to Art. 53.2 of the ICN Code (Turland *et al.* 2018):

“When two or more names of genera or species based on different types are so similar that they are likely to be confused (because they are applied to related taxa or for any other reason) they are to be treated as homonyms (see also Art. 61.5). ...”

Although the spelling of the specific epithet is slightly different, the two names are so similar that there is a strong possibility of confusion particularly as both species were described from Lake Baikal and are likely to be endemic to it or at least to similar deep-water lakes in Siberia.

Accordingly, we here propose to treat *Gomphonema sibiricum* Kulikovskiy, Kociolek & Solak as an illegitimate later homonym and to propose a replacement name as follows:

Gomphonema lacifrigidum M.Kulikovskiy, Kociolek & Solak, *nom. nov.*

Replaced synonym: *Gomphonema sibiricum* M.Kulikovskiy, Kociolek & Solak in Kociolek *et al.*, *Cryptogamie, Algologie* 39: 371, figs 23-43, 2018

Non *Gomphonema sibiricum* Skvortzov & K.I.Meyer 1928: 26, pl. 2: fig. 90.

Etymology: an adjective, referring to the cold waters of Lake Baikal, where this species was discovered.

Additionally, in Kociolek *et al.* (2018), the name *Gomphonema boreale* M.Kulikovskiy, J.P.Kociolek & Solak was introduced [as ‘*borealis*’], and it is also an illegitimate name, as it is a later homonym of the *Gomphonema boreale* Østrup described from Greenland (off Kap Amélie, East Greenland) by Østrup (1910: 239, pl. XIV [pl. II in the text]: fig. 5). A replacement name for the later homonym is proposed here:

Gomphonema magnaqua M.Kulikovskiy, Kociolek & Solak, *nom. nov.*

Replaced synonym: *Gomphonema boreale* M.Kulikovskiy, Kociolek & Solak in Kociolek *et al.* *Cryptogamie, Algologie* 39: 368, figs 1-22, 2018.

Non *Gomphonema boreale* Østrup, 1910: 239, pl. 14:fig. 5.

Etymology: a noun, “great water” is in reference to the enormous extent of Lake Baikal, the largest freshwater lake by volume in the world, where this species was discovered.

We are grateful to Dr Craig Schneider for his scholarly advice on compound epithets.

Kociolek, J.P., Kulikovskiy, M.S., Kuznetsova, I.V., Glushchenko, A.M. & Solak, C.N. (2018). A putative species flock in the diatom genus *Gomphonema* Ehrenberg (Bacillariophyta: Gomphonemataceae) from Lake Baikal, Russia. *Cryptogamie, Algologie* 39: 365-388.

- Østrup, E. (1910). Diatoms from North-East Greenland. (Part 1, Marine Diatoms, Part 2, Freshwater diatoms). *Meddelelser om Grønland, Kjøbenhavn* 43:199-256.
- Skvortzov, B.W. & Meyer, K.I. (1928). A contribution to the diatoms of Baikal Lake. *Proceedings of the Sungaree River Biological Station* 1(5): 1-55.
- Turland, N.J., Wiersema, J.H., Barrie, F.R., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T.W., McNeill, J., Monro, A.M., Prado, J., Price, M.J. & Smith, G.F. editors (2018). *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code)* adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. *Regnum Vegetabile*, Vol. 159. pp. [i]-xxxviii, 1-253. Glashütten: Koeltz Botanical Books.