

Nomenclatural notes on algae. II. Replacement names for some diatoms

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Recently, some diatoms with illegitimate names from Lake Baikal and the Atacama Desert have come to our attention.

Lake Baikal, an ancient rift lake and the largest freshwater lake by volume in the world, is a prime location for the study of diatoms, and is particularly known for its extraordinarily high level of endemism (e.g., Flower 1994) and the presence of relict populations (e.g., Genkal & Bondarenko 2006) of these and other algae. Furthermore, the ecological dynamics of the lake, such as biomass production, sedimentation, and succession in aquatic ecosystems, have been studied with emphasis on the diatom communities (e.g., Mackay & al. 1998, Popovskaya & al. 2006), giving us insights on these processes and their relationship with climatic change (Roberts & al. 2018). Despite its world-scale importance, relatively few studies on the richness of the locality have been done in the area (see Edlund 2013), among them Skvortzov & Meyer (1928), Skvortzov (1937), and Skabitshevsky (1936, 1952, 1976, 1987). Two new species, *Achnanthes rhombica* and *Gomphonema naviculoides* were introduced by Skabitshevsky (1987). These were collected from deep water near the small settlement of Davsha (Давша). However, both these names are later homonyms. Since the Russian species are currently considered to be taxonomically correct and accepted (Kulikovskiy, pers. comm.), new names are needed for them (Art. 53.1, Turland & al., 2018).

Achnanthes buriata Molinari, Guiry & D.Ponce, *nom. nov.*

Replaced name: *Achnanthes rhombica* Skabitshevsky, *Novosti sistematiki nizshikh rastenii* 24: 74, 1987, *nom. illeg.*, *non Achnanthes rhombica* Østrup (1910: 215).

Note: the epithet is derived from the Siberian Republic of Buryatia (Республика Бурятия), which borders the eastern shores of Lake Baikal, and has an existing Latin adjective (*buriatus*, -a, -um).

Gomphonema davshaense Guiry, D.Ponce & Molinari, *nom. nov.*

Replaced name: *Gomphonema naviculoides* Skabitshevsky, *Novosti sistematiki nizshikh rastenii* 24: 77, 1987, *nom. illeg.*, *non Gomphonema naviculoides* W.Smith (1856: 98).

Note: the epithet is derived from Davsha, a rural locality on the eastern shores of Lake Baikal in the Severo-Baykalsky District, Republic of Buryatia, Russia.

Gioacchino Frenguelli (or “Joaquín”, as he became known in South America; 1883-1958) was an Italian physician who emigrated to Argentina. His interests were wide and included geology, palaeontology, geography, and ethnography. He also studied fossil diatoms from northern Chile, particularly those found in diatomite samples from the Quaternary (Frenguelli 1934, 1936). He discovered a clear predominance of oligohalobic species of great variety, able to live even without prospering, in brackish waters. Something characteristic of the area is that thermophilic diatoms (such as *Denticula thermalis* Kützing) were found, which he believed indicated a climate with a elevated thermal regime (Frenguelli 1936). His conclusions proved to be correct, since it is believed now that the Atacama Desert was a hot, humid place where the sea and marshes promoted life and,

eventually, human settlements during the late Quaternary (Latorre & al. 2013). However, one of his new species is a later homonym, so a new name is required:

Pinnularia atacamensis D.Ponce, Molinari & Guiry, *nom. nov.*

Replaced name: *Pinnularia chilensis* Frenguelli, *Revista Chilena de Historia Natural* 38: 163, 1934, *nom. illeg., non Pinnularia chilensis* Ehrenberg (1843: 420, pl. I: fig. II.2).

Note: According to Patrick (1936: 417), the name *Pinnularia chilensis* as described by Bleisch was incorrectly credited to Rabenhorst; it seems, however, that Bleisch (1859: 28) was using Ehrenberg's name, and did not intend to create a new name. The material described by Bleisch from a quarry in Poland was distributed as No. 885 of Rabenhorst's *Algen Sachsens* exsiccata and is referable to *P. borealis* Ehrenberg.

We are grateful to Drs M.S. Kulikovskiy D.M. Williams for their help.

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