

Nomenclatural notes on names of diatom taxa of J. Frenguelli. II. Resolving the nomenclatural history of *Pinnularia delicata* Frenguelli (*Pinnulariaceae*, *Bacillariophyta*)

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Navicula delicata was described from Quaternary sediments at Miramar, Buenos Aires Province, Argentina by Frenguelli (1926: 37, pl. II: figs 1, 2, as '*Navicula (Pinnularia) delicata*.'). Subsequently, Frenguelli (1942: 131, pl. III: fig. 38) described *Pinnularia delicata* for a diatom collected in a small stream near Copahue volcano (Neuquén Province, Argentina). In a further publication, Frenguelli (1945: 180), mentioned "*Pinnularia delicata* Freng. - Lám. IX, fig. 19 - *Diat. Prebelgranense*, pág. 37, lám. 2, figs 1-2 (1926)", seemingly referring to his *Navicula delicata* but without doing a formal transfer. In the same article Frenguelli added the following explanation to rectify the homonymy with *Pinnularia delicata* Frenguelli 1942: "*Inadvertidamente, al describir las formas vivientes en un arroyito cerca del volcán Copahue, en la Cordillera del Neuquén, indiqué con el mismo nombre otra especie de Pinnularia (Diat. Neuquén, pág. 131, lám. 3. fig. 38, 1942), próxima a P. subcapitata Greg. Aprovecho esta oportunidad para proponer para esta segunda especie, cuya denominación necesariamente debe ser cambiada, el nuevo nombre de P. delicatula n. nom.*" ["Inadvertently, when describing the extant forms from a small stream near the Copahue volcano, in the Cordillera of Neuquén, I reported with the same name another species of *Pinnularia* (*Diat. Neuquén*, p. 131, lam. 3. fig. 38, 1942), close to *P. subcapitata* Greg. I take this opportunity to propose for this second species, whose denomination must necessarily be changed, the new name of *P. delicatula* n. nom."].

Pinnularia delicatula Frenguelli (1945) is not referred to in most catalogues including that of VanLandingham (1978) and Sar & al. (2009). Although it was included in the catalogue of Luchini & Verona (1972) as a valid name, it was erroneously treated as a synonym of *Navicula delicata* Frenguelli 1926. When comparing the original descriptions and illustrations of *N. delicata* (Frenguelli 1926) and *P. delicata* (Frenguelli 1942), they are without doubt different taxa (see the original illustrations in Kociolek & al. 2021a, 2021b).

According to VanLandingham (1975: 2507; 1978: 3224), "*Pinnularia delicata* (Frenguelli 1926) F.W. Mills 1934, p. 1023" is the valid name for "*Navicula delicata* Frenguelli 1926, p. 37, 2/1-2 (*Pinnularia*)", and "*Pinnularia delicata* Frenguelli 1942, p. 131, 3/38" is an illegitimate name. Following his criteria, we considered the name *Pinnularia delicata* Frenguelli, 1942 an illegitimate later homonym of "*Pinnularia delicata* (Frenguelli) F.W. Mills" and proposed the replacement name *Pinnularia copahuensis* Guerrero & Vouilloud for the former species (Vouilloud & Guerrero, 2021).

After the publication of the new name, we became aware of Frenguelli's (1945) replacement name and this led us to re-examine the nomenclatural history of both taxa. The entry for this taxon in Mills (1934:1023) is as follows: "*Navicula delicata*, (Pinn.) Freng. Miramar, 1926, p. 37, 2/1, 2", written in upper case letters, and thus considered a valid name, whereas there is no entry for *Pinnularia delicata*. Thus, Mills (1934) never made the transfer to *Pinnularia* as understood by VanLandingham (1975). Consequently, *Pinnularia delicata* is the valid name for the taxon validated in 1942 according to the principle of priority (Turland & al. 2018, Art. 11.4) and *Pinnularia delicata* Frenguelli 1945 is a later homonym and thus illegitimate.



Additionally, we found that Mills (1934:1278) quoted as a valid name “*Pinnularia delegata*, Freng. Miramar, 1926, p. 37, 2/1, 2”, written in upper case letters, clearly referring to *Navicula delicata* Frenguelli 1926, but the specific epithet is clearly misspelled.

Considering this convoluted nomenclatural history, the following nomenclature change is required:

Pinnularia delicata Frenguelli, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 5(20), p. 131, pl. 3: fig. 38, 1942.

Homotypic synonyms: *Pinnularia delicatula* Frenguelli, *Revista del Museo de La Plata (Nueva Serie), Sección Paleontología* 3: 180, 1945, *nom. illeg.* *Pinnularia copahuensis* Guerrero & Vouilloud, *Notulae Algarum* 220: 2, 2021, *nom. illeg.*

Pinnularia maidanae Guerrero & Vouilloud, *nom. nov.*

Replaced name: *Pinnularia delicata* (Frenguelli) Frenguelli, *Revista del Museo de La Plata (Nueva Serie), Sección Paleontología* 3: p. 180, 1945, *nom. illeg. non Pinnularia delicata* Frenguelli, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 5(20): 131, pl. 3: fig. 38, 1942.

Homotypic synonym: *Navicula delicata* Frenguelli, *Boletín de la Academia Nacional de Ciencias de Córdoba* 29: 37, pl. 2: figs. 1-2, 1926,

Note: Named in honour of our colleague Nora I. Maidana, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina.

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