

Validation of the diatom genera *Eolimna* (Sellaphoraceae) and *Miosira* (Aulacoseiraceae)

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According to the International Code of Nomenclature (ICN, Turland & al. 2018), diatoms (fossil and Recent) share all provisions with recent algae. It was overlooked by some diatomists that for descriptions and diagnoses Art. 44.1. must be met, not Art. 43.1 (Turland & al. 2018) due to changes in the Melbourne Code (McNeill & al. 2012).

The generic names “*Eolimna*” and “*Miosira*” were validly published in accordance with the Tokyo Code (Greuter & al. 1994: Art. 36.2) but resulting from amendments in the Melbourne Code (McNeill & al. 2012: Art. 1.2, 39.1, 44.1) a Latin description or diagnosis was retroactively required, and these names became invalid designations; see the different wording in the Vienna Code (McNeill & al. 2006: Art.1.2, 36.1, 36.2). Although Lange-Bertalot & Schiller in Moser & al. (1998: 150, 151) provided a Latin diagnosis, the type of the genus lacked a type specimen and a full and direct reference to Schiller & Lange-Bertalot (1997), thus the species and genus remained invalid.

In the case of *Eolimna* this had a knock-on effect as many recent taxa have been assigned to this genus or have been later combined with other genera. The aim of this note is to provide validated names for both genera and their types.

Eolimna Lange-Bertalot & W.Schiller, *gen. nov.*

Replaced designation: “*Eolimna*” Lange-Bertalot & W.Schiller, *Paläontologische Zeitschrift* 71(3/4): 166, 1997, *nom. inval.*

Description (English): W.Schiller & Lange-Bertalot (1997: 166)

Type: *Eolimna martinii* W.Schiller & Lange-Bertalot, *sp. nov.*

Etymology: *Eo-limna* “Eos” is the name of the ancient Greek goddess of the dawn (meaning: early), “limna” stands for freshwater; *Eolimna* is an early representative of freshwater diatoms.

Registration (of genus name): <http://phycobank.org/104378>.

Eolimna martinii W.Schiller & Lange-Bertalot, *sp. nov.*

Replaced designation: “*Eolimna martinii*” W.Schiller & Lange-Bertalot, *Paläontologische Zeitschrift* 71(3/4): 168, figs 2, 6–12. 1997, *nom. inval.*

Description (English): W.Schiller & Lange-Bertalot (1997: 168).

Holotype: **FR** A656 depicted as figs 2, 6 (SEM negative 15.02.95: 31), Senckenberg Gesellschaft für Naturforschung: Senckenberg Forschungsinstitut und Naturmuseum, (Frankfurt/Main, Germany): stub ‘Sieblos 1994/2, 28.05 m. E.’, Goethe-Universität, Institut für Geowissenschaften (Frankfurt/Main, Germany).

Etymology: the species is dedicated to Prof. Dr Erlend Martini (1932–, Berlin-Charlottenburg), of the Geologisch-Paläontologisches Institut, Johann Wolfgang Goethe-Universität, Frankfurt/Main, Germany.

Type locality: Poppenhausen/Rhön, Ortsteil Sieblos, TK 5525 Gersfeld R: 3565430, H: 5596280.

Type stratum: Lower Oligocene, core Sieblos 1994/2, depth 28.05 m (fossil species).

Registration (of species name): <http://phycobank.org/104379>.

Miosira Krammer, Lange-Bertalot & W.Schiller, *gen. nov.*

Replaced designation: “*Miosira*” Krammer, Lange-Bertalot & W.Schiller, *Paläontologische Zeitschrift* 71(1/2): 10. 1997, *nom. inval.*

Description (English): Krammer & al. (1997: 10).

Type: *Miosira rhoenana* Lange-Bertalot & W.Schiller, *sp. nov.*

Etymology: “Mio” derives from the Miocene (in the Tertiary), the epoche in which the fossil lived; “sira” means band (filament).

Registration (of genus name): <http://phycobank.org/104380>.

Miosira rhoenana Krammer, Lange-Bertalot & W.Schiller, *sp. nov.*

Replaced designation: “*Miosira rhoenana*” Krammer, Lange-Bertalot & W.Schiller, *Paläontologische Zeitschrift* 71(1/2): 10, figs 1–29. 1997, *nom. inval.*

Description (English): Krammer & al. (1997: 17).

Holotype: **B** prep. 896A (Herbarium Berolinense, Berlin, Germany; formerly the Krammer Collection, Inst. für Oberflächenanalyse, Meerbusch, and **BRM** prep. 896A, Alfred-Wegener-Institut für Polar- und Meeresforschung, Bremerhaven, Germany).

Isotypes: **B** 894A, **B** 895A.

Type locality: Miocene limnic sediments from Guckas near Rüdenschwinden, Hohe Rhön, Bavaria, Germany; TK 5426 Hilders R: 357884, H: 559819.

Type stratum: (? Lower) Miocene (fossil species).

Etymology: The species epithet points to the German “*Rhön*”, a landscape between Bavaria, Thuringia, and Hesse. *Rhön* may be derived from a Celtic word for “hill”.

Registration: <http://phycobank.org/104381>

We warmly acknowledge the scientific contribution of Dr Kurt Krammer (1925-2020) in our validation of *Miosira* to meet the current nomenclatural rules. The Krammer collection is currently being transferred to **B** (Dr Nélida Abarca, pers. comm.).

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Krammer, K., Lange-Bertalot, H. & Schiller, W. (1997). *Miosira rhoenana* n. gen. n. sp. (Bacillariophyceae) aus miozänen limnischen Sedimenten der Rhön im Vergleich mit anderen zentrischen Diatomeen. *Paläontologische Zeitschrift* 71(1/2): 5–18.

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Paläontologische Zeitschrift 71(3/4): 163–172.

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