

“*Ulnaria ulna* var. *acus*” (*Ulnariaceae*, *Bacillariophyta*), an invalid designation

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The designation* “*Ulnaria ulna* var. *acus*” appears frequently in the diatom literature. For example, a Google search (10th January 2019) yielded over 600 results, including peer-reviewed papers, online and printed floras, online databases, Genbank and GBIF, yet this combination appears never to have been validly published. Where does the name come from?

“*Ulnaria ulna* var. *acus*” appears in AlgaeBase (Guiry & Guiry 2019; as “*Ulnaria ulna* var. *acus* (Kützing) Lange-Bertalot”; basionym: *Synedra acus* Kützing), but we suspect it first entered the literature via Metzeltin & García-Rodríguez (2003), who, on p. 70 in the caption of their pl. 12, refer to the three specimens in their figs 8-10 as “*Ulnaria ulna* var. *acus* (Kützing) Compère” (Metzeltin & García-Rodríguez 2003). The reference to Compère is probably to that author’s paper proposing the use of the genus *Ulnaria* for the freshwater species of *Synedra*, for example for *Ulnaria ulna* (Kützing) Compère (Metzeltin & García-Rodríguez 2003, pl. 12, figs 1-5); but Compère (2001) does not mention *Synedra acus*. Later, in Metzeltin *et al.* (2005: 264, pl. 10, figs 12-14), the three specimens from Metzeltin & García-Rodríguez (2003, pl. 12, figs 1-5) are referred to as “*Fragilaria* spec. cf. *acus* sensu auct.” with no reference made to either the genus *Ulnaria* or *Synedra*.

It is difficult to know to what the records of taxa with the designation “*Ulnaria ulna* var. *acus*” actually refer, although it is most probably *Ulnaria acus* (Kützing) Aboal (in Aboal *et al.* 2003: 105) – *Ulnaria acus* and *Ulnaria ulna* are treated as separate species in Lange-Bertalot & Ulrich (2014) and *Ulnaria acus* is currently being revised (Williams, in prep.). Regardless, we recommend that the use of the name “*Ulnaria ulna* var. *acus*” — along with “*Ulnaria ulna* var. *acus* (Kützing) Lange-Bertalot” and “*Ulnaria ulna* var. *acus* (Kützing) Compère” — be discontinued as it is an invalid designation.

Aboal, M., Álvarez Cobelas, M., Cambra, J. & Ector, L. (2003). Floristic list of the non-marine diatoms (Bacillariophyceae) of Iberian Peninsula, Balearic Islands and Canary Islands. Updated taxonomy and bibliography. *Diatom Monographs* 4: [1]-639.

Compère, P. (2001). *Ulnaria* (Kützing) Compère, a new genus name for *Fragilaria* subgen. *Alterasynedra* Lange-Bertalot with comments on the typification of *Synedra* Ehrenberg. In: *Lange-Bertalot Festschrift. Studies on diatoms dedicated to Prof. Dr. Dr. h.c. Horst Lange-Bertalot on the occasion of his 65th birthday.* (Jahn, R., Kociolek, J.P., Witkowski, A. & Compère, P. Eds), pp. 97-101. Ruggell: A.R.G. Gantner Verlag K.G.

Guiry, M.D. & Guiry, G.M. 2019. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. <http://www.algaebase.org>; searched on 16 January 2019.

Lange-Bertalot, H. & Ulrich, S. (2014). Contributions to the taxonomy of needle-shaped *Fragilaria* and *Ulnaria* species. *Lauterbornia* 78: 1-73.

Metzeltin, D. & García-Rodríguez, F. (2003). *Las diatomeas uruguayas*. pp. [1]-207, 74 pls. D.I.R.A.C., Facultad de Ciencias, Universidad de la República, Montevideo, Uruguay.

Metzeltin, D., Lange-Bertalot, H. & García-Rodríguez, F. (2005). Diatoms of Uruguay. Compared with other taxa from South America and elsewhere. *Iconographia Diatomologica* 15: [1]-736.

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

* For a definition of the term “designation” see the Glossary in Turland *et al.* (2018).

Congress Shenzhen, China, July 2017. *Regnum Vegetabile*, Vol. 159. pp. [i]-xxxviii, 1-253.
Oberreifenberg: Koeltz Botanical Books.