Nomenclatural note on *Eunotia indica* var. *gracilis* Frenguelli and validation of *Eunotia hustedtii* Guerrero & Vouilloud, *stat. nov. & nom. nov.* (*Eunotiaceae, Bacillariophyceae*)

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The designation "Eunotia zygodon var. gracilis" was not published validly by Hustedt (1913: pl. 287: fig. 10) because it only consisted in a scientific name, a locality ["River Demerara" Guyana] and an illustration (see ICN Art. 38.9, Turland & al. 2025) but lacked a diagnosis. Simonsen (1987a: 37) provided a brief Latin diagnosis to validate Hustedt's designation. However, he overlooked that a diagnosis had already been provided by Zimmermann (1915: 51) who validated Hustedt's designation by adding a description in Portuguese and referring to Hustedt's figures, thus fulfilling all provisions for valid publication in accordance with ICN Art. 33.1.

When Frenguelli (1933: 454, pl. IX [9]: figs. 16, 17) published *Eunotia indica* var. *gracilis* as a new taxon, he compared his taxon with the similar "Eunotia zygodon var. gracilis" Hustedt. He published the scientific name with illustrations and a diagnosis and indicated this taxon "n. var.?". Even though he used a question mark indicating taxonomic doubt, he accepted his taxon in his original publication so that this name should be treated as validly published in accordance with ICN Art. 36.1. Later, Frenguelli (1941: 307) synonymised his *Eunotia indica* var. *gracilis* Frenguelli with Hustedt's "Eunotia zygodon var. gracilis". Further, he provided the full and direct reference to Zimmermann (1915). Thus, Frenguelli (1941) used Hustedt's name as validated by Zimmermann (1915) as basionym for *Eunotia pseudoindica* var. *gracilis* (Hustedt ex C.Zimmermann) Frenguelli (1941: 307). All these authors used the rank of a variety.

When Vouilloud & al. (2026) evaluated Frenguelli's specimens, they intended to lectotypify Frenguelli's variety and came to the conclusion that Hustedt's taxon should be raised to the rank of a species. Because the provisions of Arts 41.5 and 41.6 were not met, we here validate *Eunotia hustedtii*, *stat. nov. & nom. nov*. This new name is necessary because of the prior existence of *Eunotia gracilis* W.Smith (1853: 16, pl. 30: fig. 249).

Eunotia hustedtii is a species illustrated in Simonsen (1987b). Currently we assess *Eunotia indica* var. *gracilis* Frenguelli (1933) a heterotypic later synonym of Hustedt's variety as validated by Zimmermann (1915). To our knowledge, *Eunotia hustedtii* is restricted to South America with observations from Argentina, Guyana, and Brazil.

Eunotia hustedtii Guerrero & Vouilloud, *stat. nov. & nom. nov.*
Replaced basionym: *Eunotia zygodon* var. *gracilis* Hustedt ex C.Zimmermann in *Brotéria, Série Botânica* 13: 51. 1915.
≡ *Eunotia pseudoindica* var. *gracilis* (Hustedt ex C.Zimmermann) Frenguelli in *Revista del Museo de La Plata (Nueva Serie) Botánica* 3: 307. 1941.
– "Eunotia hustedtii" Guerrero & Vouilloud in *Fottea* 26(2): 130. 2026, *inval*., ICN Art. 38.14.
– "Eunotia zygodon var. gracilis" Hustedt in *Schmidt's Atlas der Diatomaceenkunde* 73: pl. 287: fig. 10. 1913, *inval*., ICN Art. 38.9.
Holotype of *Eunotia zygodon* var. *gracilis* Hustedt ex C.Zimmermann, cited by Simonsen (1987a: 37, specimen illustrated in Simonsen 1987b: pl. 34, figs 1-3): **BRM** ex **B** Coll. Hustedt L4/23,

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see Archive material: **BRM** ex **B** 40 0048361 [http://herbarium.bgbm.org/object/B400048361] Guyana, Demerara River before 1913. According to ICN Art. 52.2, the illustration in Hustedt (1913) indicates the specimen published by Simonsen (1987b).

= *Eunotia indica* var. *gracilis* Frenguelli in *Anales del Museo Nacional de Historia Natural* 37: 454, pl. IX [9]: figs 16, 17.

Lectotype of *Eunotia indica* var. *gracilis* Frenguelli (designated here by Guerrero & Vouilloud: **LPC** Frenguelli Collection (Museo de La Plata, Buenos Aires, Argentina) Slide 265(3) Finder N/38-1, illustrated in Vouilloud & al. (2026: fig. 54), Argentina, Corrientes, Yberá.

Registrations: http://phycobank.org/107787 (new name), http://phycobank.org/107786 (replaced synonym), http://phycobank.org/107788 and http://phycobank.org/107853 (types)

Note: Guerrero & Vouilloud in *Fottea* 26: 131 intended to lectotypify Frenguelli's variety. To clarify that Frenguelli's variety is a heterotypic synonym we here repeat the lectotypification under the corrected treatment.

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Curators Herbarium B (2000+). *Digital specimen images at the Herbarium Berolinense.* [Dataset]. Version: 30 Sep 2026. Data Publisher: Botanic Garden and Botanical Museum Berlin. https://hustedt.bo.berlin/ [http://herbarium.bgbm.org/object/B400048361]

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