



***Euastrum bombayense* var. *gwalioiense* (D.S.Agarkar) comb. nov. (Desmidiaceae, Zygnematophyceae)**

Anatoliy Levanets¹ & Michael D. Guiry²

¹Unit for Environmental Sciences and Management, North-West University, Potchefstroom, South Africa (correspondence: Anatoliy.Levanets@nwu.ac.za, 20868421@nwu.ac.za)

²AlgaeBase, Ryan Institute, University of Galway, H91 TK33, Ireland

Based upon material collected by N. Woodhead and R.D. Tweed from Sierra Leone, Brandham (1967) described several new taxa of desmids. He also introduced replacement names in the genus *Euastrum* for several illegitimate names.

He proposed *Euastrum bombayense* Brandham as a replacement name for *Euastrum irregulare* Gonzalves & Gangla (1947: 11, figs 1–4) and even though Brandham cited a page range (“pp. 9–12”) his replacement name is valid as pp. 9–12 is the page range is of the entire paper which deals with only one name (ICN Art. 41, Note 1; Turland & al. 2025) and is thus coextensive with the protologue. *Euastrum irregulare* Gonzalves & Gangla was a later homonym of *Euastrum irregulare* Maskell (1889: 14, pl. II [2]: fig. 14) as was *Euastrum irregulare* Förster (1964: 359, pl. 5: fig. 7; pl. 39: fig. 3).

Brandham (1967) also proposed a replacement name, *Euastrum obliquiporum* Brandham (as “*obliqueporum*”) for *Euastrum irregulare* Förster (1964: 359, pl. 5: fig. 7; pl. 39: fig. 3). Förster (1981: 244), attempted a validation of “*Euastrum obliquiporum* Brandh.” by designating an “diag. et ikonotypus T. 5: 7 als *E. irregulare* Först. (1964: 359)”. But, if “*Euastrum irregulare* Först.” were invalid, then Brandham’s intended replacement name would also have been invalid. However, *Euastrum irregulare* Förster, 1964 is a valid name as it was described from a single gathering (Art. 8.2), “Conceição (Goyaz)...”, (see Förster 1964: 326 for details of the collection), was provided with a Latin description and was illustrated. Thus, *Euastrum irregulare* Förster, 1964 is valid but illegitimate, and Brandham’s proposed replacement name is valid; Förster’s (1981: 244) attempted validation was unnecessary. In accordance with Art. 60.11, the orthography of Brandham’s adjectival epithet is correctable to “*obliquiporum*”.

Brandham (1967: 192) also introduced a new name, *Euastrum bombayense* Brandham, for *Euastrum irregulare* Gonzalves & Gangla (1947: 11, figs 1–4, reproduced here as Fig. 1), *nom. illeg.* and described a new variety, *Euastrum bombayense* var. *gracile* Brandham (1967: 192, fig. 4, reproduced here as Fig. 5) from the Ogun River [Odò Ògùn], Nigeria. The dimensions of this new variety were as in the nominal, but cells were not so strongly rounded; semicells in front view had deeper constrictions above the upper lateral lobes, making the lateral and polar lobes notably slenderer; and granules were absent from the centres of the tumours.

Subsequently, two new varieties of *Euastrum bombayense* were discovered and described from freshwater habitats of tropical Africa and Asia: *Euastrum bombayense* var. *simplex* Rino (1972: 218, pl. XXI [21]: figs. 13–15, reproduced here as Fig. 2) was described from a small ditch near Cascata, Namaacha, Mozambique. It was described as different from the nominal and the var. *gracile* Brandham in having less wavy lateral margins, only one lateral lobe, and 1–3 crowns of warts on the front of the semicells. *Euastrum bombayense* var. *gokakense* Bongale & Kaulapur (1989: 107, figs 1–14, reproduced here as Fig. 4) was described from a stream leading to waterfalls at Gokak, Belgaum district, Karnataka State, India. It differs considerably from the nominal in being larger, in the number of lobes, sinus being not extremely dilated, pyrenoids not always single,



and in the absence of large granules on central protuberances. It also differs from other known varieties in most of the characters. Later the following year, the same alga was reported in Bongale & Kaulapur (1990: 74, figs 1–14). Further investigation of this supposed variety may result in species status.

Here we propose a new combination based on *Euastrum irregulare* var. *gwaliorensense* D.S. Agarkar described from Madhya Pradesh in India (Agarkar 1971) in accordance with Art. 41.1.

***Euastrum bombayense* var. *gwaliorensense* (D.S. Agarkar) comb. nov.**

Basionym: *Euastrum irregulare* var. *gwaliorensense* D.S. Agarkar *Phykos* 10(1–2): 57, figs 16–18, 1971 (as ‘*Euastrum irregulare* Gonzalves & Gangla var. *gwaliorensis*’), reproduced here as Fig. 3.

Type: No. DS/23. deposited at the Department of Botany, Government Science College, Gwalior, India.

Description (Latin and English): Agarkar (1971: 57)

Type locality: “Collected as a plankton from Tighra lake.” [India: Madhya Pradesh, 12 km west of Gwalior, Tighra Lake].

Registration (of name): <http://phycobank.org/106196>.

We are grateful to the reviewers for their helpful comments.

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