Taxonomy and nomenclature of desmid names (*Desmidiales*, *Zygnematophyceae*) described by G. Huber-Pestalozzi from Knysna Forest in South Africa

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Gottfried Eduard Huber-Pestalozzi (1877–1966) described several desmid taxa from freshwater habitats in the Knysna Forest in South Africa (Huber-Pestalozzi 1930). Here we propose to update some of the names requiring revision in accordance with the ICN (Turland & al. 2018) based on recent taxonomic studies.

Penium navicula Brébisson has been referred to the genus *Closterium* Nitzsch ex Ralfs as *Closterium navicula* (Brébisson) Lütkemüller (1905), and thus the transfer of the following infraspecific taxon name is necessary. Additionally, we propose a new name as *Penium navicula* f. *majus* Borzęcki, 1920 (‘major’) has priority.

Closterium navicula f. ***knysnaense*** Levanets & Janse van Vuuren, *nom. nov*.
Basionym: *Penium navicula* f. *majus* Huber-Pestalozzi *Zeitschrift für Botanik* 23: 472, no fig. (‘*major*’), *nom. illeg*., 1930 (priority for *Penium navicula* f. *majus* Borzęcki 1920: 6, pl. 1: fig. 12 (‘*major*’), *non Penium navicula* [var. *crassum*] f. *majus* Borzęcki 1920: 6, pl. 1: fig. 13).
Registration: http://phycobank.org/104330
Type locality: South African Union [now Republic of South Africa], Knysna-forest, pond (swamp) in Deep Walls (Forest Research), on the road to the forestry experimental station. Pond is about 25 m in diameter and 20 to 40 cm deep, heavily overgrown with *Potamogeton* and other hydrophytes, no *Sphagnum*, leg. G. Huber-Pestalozzi, October 1926.
Note: We have concluded that this form should be referred to *Closterium navicula* (Brébisson) Lütkemüller to which it is morphologically related.

Closterium dianae f. ***knysnicum*** Levanets & Janse van Vuuren, *nom. nov*.
Replaced name: *Closterium dianae* f. *minus* Huber-Pestalozzi *Zeitschrift für Botanik* 23: 460, no fig. (‘*minor*’), *nom. illeg*., 1930 (priority for *Closterium dianae* f. *minus* Hustedt 1911: 315, no fig., as ‘*minor*’).
Registration: http://phycobank.org/104331
Type locality: Union of South Africa [now Republic of South Africa], Knysna Forest, *Sphagnum* pool at the Groot River Drift near Plettenbergbaai [Plettenberg Bay], about 0.3 m deep brownish water, temperature approx. 15°C, leg. G. Huber-Pestalozzi, 7 October 1926.

Docidium abruptum W.B.Turner is a taxonomically accepted name (Guiry & Guiry 2024) and Huber-Pestalozzi’s combination *Pleurotaenium abruptum* (W.B.Turner) Huber-Pestalozzi (1930: 468), validly published by reference to Turner (1893) is regarded as a synonym. Thus, the transfer of the following infraspecific taxon name is necessary.

Docidium abruptum f. ***longius*** (Huber-Pestalozzi) Levanets & Janse van Vuuren, *comb. nov*.
Basionym: *Pleurotaenium abruptum* f. *longius* Huber-Pestalozzi *Zeitschrift für Botanik* 23: 468, no. fig. (‘*longior’*), 1930.
Type locality: Union of South Africa [currently Republic of South Africa], Knysna Forest, near Harkerville, a shallow swamp about 30 m in diameter, slightly brownish water, abundant hydrophytes, leg. G. Huber-Pestalozzi, 7 October 1926.

Registration: http://phycobank.org/104332
Note: Huber-Pestalozzi (1930: 468) wrote (translated from German): "The form from South Africa is slightly longer and leaner than those named *Docidium abruptum* by Turner (Turner 1893: 32, pl. 4: fig. 11)".

Arthrodesmus bifidus Brébisson was transferred to the genus *Xanthidium* Ehrenberg ex Ralfs as *Xanthidium bifidum* (Brébisson) Deflandre (1929), and therefore the transfer of the following infraspecific taxon name is necessary.

Xanthidium bifidum var. ***iniquispinosum*** (Huber-Pestalozzi) Levanets & Janse van Vuuren, *comb. nov*.
Basionym: *Arthrodesmus bifidus* var. *iniquispinosus* Huber-Pestalozzi *Zeitschrift für Botanik* 23: 467, pl. 7, fig. 5, 1930.
Type locality: Union of South Africa [currently Republic of South Africa], Knysna Forest, near Harkerville, a shallow swamp about 30 m in diameter, slightly brownish water, abundant hydrophytes, leg. G. Huber-Pestalozzi, 7 October 1926.
Registration: http://phycobank.org/104333

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