

Diatom Flora of the Low Countries

***Fragilaria vaucheriae* (F.T. Kützing) J.B. Petersen 1938.**

Basionym: *Exilaria vaucheriae* F.T. Kützing 1833

Synonym: *Fragilaria capucina* var. *vaucheriae* (Kützing) Lange-Bertalot.

Morphology

Valves linear, narrow with rostrate to subcapitate ends, the central margin and -area are unilaterally expanded. Striae mostly subparallel to slightly radiate towards the valve apices, alternate. Ghost striae may be present in central area. Not colony forming, at most two cells can loosely attached to each other.

Morphometrics

Source	Length (µm)	Width (µm)	Striae (in 10 µm)	Areolae (in 10 µm)
Own data (n=8)	16.8-28.1	4.3-5.3	10-14	
Wetzel & Ector 2015	14-50	4.0-5.0	11-14	

Related species

Fragilaria uliginosa Kulikovskiy, Lange-Bert., Witkowski & Dorofeyuk (wider axial area, shorter, more striae); *Fragilaria deformis* (has more sturdy valves with protracted, rostrate to capitate apices; length never exceed 30 µm; 13-15 striae in 10 µm); *Fragilaria pectinalis* (O.F. Müll.) Lyngb. (more dense striae, thinner); *Fragilaria microvaucheriae* Wetzel & Ector (lanceolate in larger specimens to rhombic-lanceolate in smaller specimens, slightly rostrate to cuneate ends, narrower 2.5-3.8, more striae: 15-16 10 µm).

Distribution

Type location Quellen bei Leisling, Weissenfels Germany; Bovenloop Aalderstroom, Drostendiep Stieltjeskanaal, Schoonebeekerdiep benedenloop, Spokenplas Noordwolde, Zandwinning Mildam Roelofs den Ham, Schiermonnikoog Banckspolder, Kuipersveer Oude Maas, Brielse Meer spuikanaal, Kampen, Drienerbeek benedenloop, Poederrijen afgedamde Maas, Schuitenbeek Putten, Valleikanaal Hooglandeseweg Amersfoort, Peelse Loop, Sterkselsche Aa, Dommel, Zuiderkanaal, Wilhelminakanaal, 's-Gravenmoerse Vaart, Bovenste Leij, Roer Bonnerskoel (NL); Noordermark, Leie, Schulensmeer, Krommedijkbeek (B)

Ecology

Occurs in eutrophic and α -mesosaprobic freshwater habitats.

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Ecological values

Indicator values (Van Dam et al. 1994)

R	H	N	O	S	T	M
4	2	2	3	3	5	3

IPS
(Cemagref 1982)

IPS-S	IPS-V
3.4	1

Rott et al. 1997, 1999

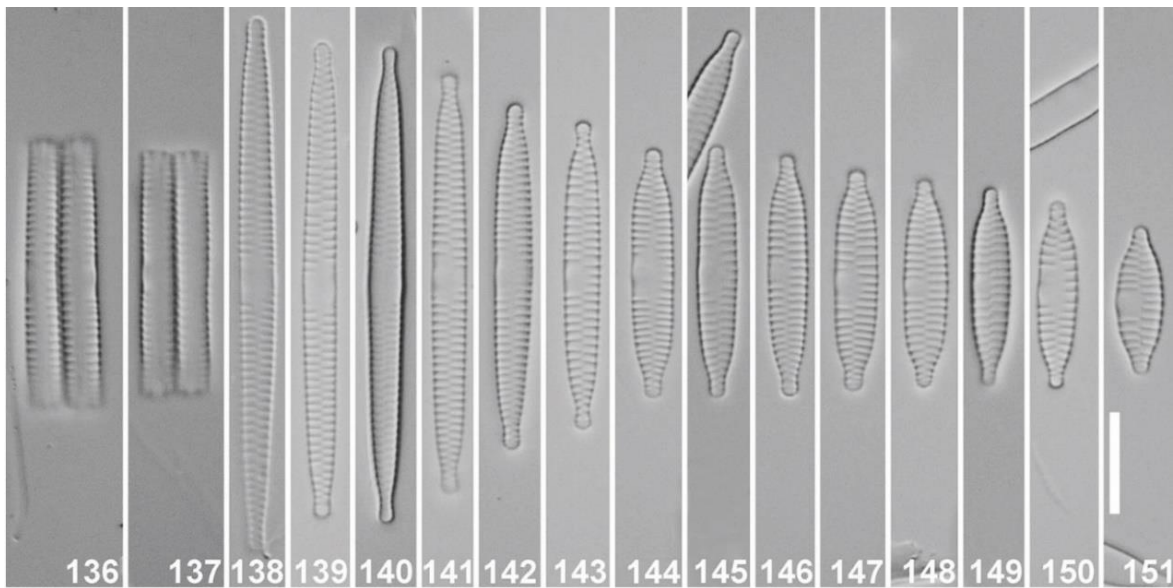
Rott SI s	Rott SI v	Rott TI s	Rott TI v
2.5	2	1.8	1

TDI
(Kelly & Whitton 1995)

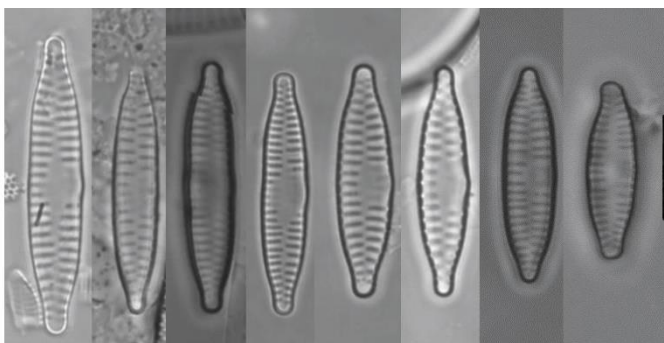
TI-S	TI-V
3	2

Remarks

The Netherlands



Fragilaria vaucheriae (Kütz.) J.B.Petersen. Images taken from the type population (Quellen bei Leisling, Weissenfels, Germany) Van de Vijver et al. 2020



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References:

- Wetzel, C.E. et L. Ector (2015) Taxonomy and ecology of *Fragilaria microvaucheriae* sp. nov. and comparison with the type materials of *F. uliginosa* and *F. vaucheriae*.
- Van de Vijver B., Mertens A. & Ector L. (2020) Analysis of the type material of *Synedra deformis* W. Sm. and *Synedra vaucheriae* var. *deformis* Grunow (Fragilariaceae, Bacillariophyta).
- Lange-Bertalot, H., G. Hofmann, M. Werum & M. Cantonati (2017) Freshwater Benthic Diatoms of Central Europe.

Citation:

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