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Eunotia flexuosa (Bréb.) Kütz. var. *rilensis* n. var.
(Bacillariophyceae) w potoku Maljovica (Riła — Bulgaria)

Eunotia flexuosa (Bréb.) Kütz. var. *rilensis* n. var.
(Bacillariophyceae) in the Maljovica stream (Rila — Bulgaria)

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Abstract: — The described variety of *Eunotia flexuosa* was found in the Maljovica stream in the Rila Mountains in Bulgaria (at an altitude of 2400—1750 m). *Eunotia flexuosa* (Bréb.) Kütz. var. *rilensis* n. var. differs from the species and varieties described so far in a wider spacing of striae and greater breadth of the cell.

The Maljovica stream (altitude about 2400—1250 m) flowing in the western part of the Rila Mountains, is one of the numerous montane tributaries of the River Iskar. In the algological material collected along the stream course in August 1969 a new variety of *Eunotia flexuosa* was encountered. The variety occurred in the upper course of the stream (at an altitude of 2400—1750 m), chiefly in a peloreophilous environment on a wide terrace crossing the slope. It appeared in small numbers in the varied as to species diatom community, and was registered as *Eunotia* sp. (Kawicka 1974).

Eunotia flexuosa (Bréb.) Kütz. var. *rilensis* n. var. (fig. 1)

In profile the cell lengthened, the valves slender, slightly arched with parallel margins, sometimes undulated. The ends slightly spherical, rounded on the poles. Apical axes thick with ramifications in the form of a short line directed to the centre of the valve. The length of the valve

75—200 μm , breadth 6.6—7.5 μm . 9—12 striae occur in 10 μm . They are distinctly punctate, in the middle part regular, at the ends frequently alternately long and short.

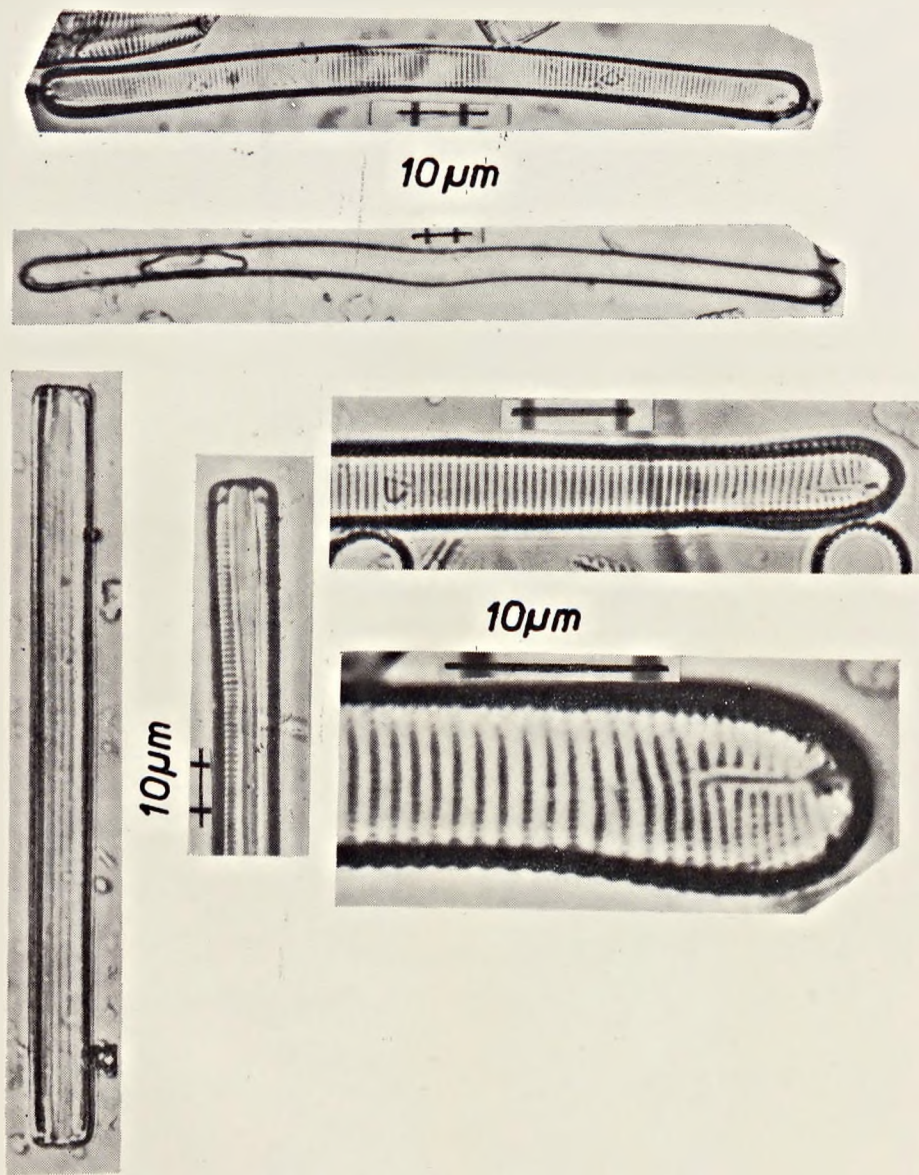
The variety differs from the form of *Eunotia flexuosa* in a characteristic combination of features: an exceptionally small number of striae in 10 μm with a considerable breadth of the cells.

Arguments: According to the description of Hustedt (1930, 1932), Proškina-Lavrenko (1949/50), and Siemińska (1964), the species *Eunotia flexuosa* has cells 90—300 μm long, 2—5 μm wide, and 14—18 distinctly punctate striae in 10 μm . According to many authors the number of striae in 10 μm is smaller. Van Heurck (1899) quotes 11—12 striae in 10 μm . In the springs and streams of the Transvaal massif in South Africa Cholnoký (1955) found cells of *Eunotia flexuosa* with 12—13 striae in 10 μm . In *Eunotia flexuosa* occurring in the swamps of Malaya Provse (1962) found 12—18 striae in 10 μm , while Monquin and Dubois-Tylski (1969) report 11—12 striae with the species encountered in the Ardennes swamps in France.

Eunotia flexuosa has several varieties. *E. flexuosa* var. *eurycephala* Grun., 80—265 μm long and 1.5—4 μm wide, has 13—18 striae in 10 μm (Patrick 1966). *E. flexuosa* var. *transvaalensis* Cholnoký differs from the typical form in the small size of cells and small number of striae in 10 μm (12—13) and, in very short forms (the author does not give the dimensions), in a change in shape at the poles of the cell (Cholnoký 1955). Van Heurck (1899) describes *E. flexuosa* var. *bicapitata* Grun., which differs from the typical species in having wider cells (the author does not give the width either of the species or of the variety) and in having more broadened ends of cells. Proškina-Lavrenko (1949/50) also mentions the variety *E. flexuosa* var. *ventralis* Savaljeva-Doglova with the following dimensions: length 168 μm , width 3 μm (in the middle of the cell 5—6 μm), and 15 striae in 10 μm , but she doubts whether it belongs to this species. Cleve-Euler (1953) reports four variants of the species: *E. flexuosa* α *bicapitata* Grun. (100—250 \times 4—8, 11—13 striae in 10 μm), β *pachycephala* Grun. v.H. (which differs from the former in having 14—16 striae in 10 μm), γ *eurycephala* Grun. v.H. (80—200 \times 1.5—2.5; 18—19 striae in 10 μm), and δ *paradoxa* (Å. Bg) mh. (100—120 \times 1.5; 20 striae in 10 μm).

Diagnosis: *Eunotia flexuosa* (Bréb.) Kütz. var. *rilensis* nova var.

Frustula a latere visa elongata; valvae tenues, leviter arcuatae, marginibus paralellis, nonnunquam undulatae. Partes polares parum incrassatae, subcapitifformes, polis rotundati. Nodi polares crassi, ramiferi, ramo ad instar lineae brevis ad medium valvae versae. Valva 75—200 μm longa, 6,6—7,5 μm lata, striae 9—12 in 10 μm , distincte punctatae, in parte centrali regulares, prope polos longae et breves invicem sequentes.



Ryc. 1. *Eunotia flexuosa* (Bréb.) Kütz. var. *rilensis* n. var.
Fig. 1. *Eunotia flexuosa* (Bréb.) Kütz. var. *rilensis* n. var.

Varietas provenit in torrente Maljovica in montibus Rila (Bulgaria), altitudine ca. 2400—1750 m. supra aequor maris saepissime aecotopo pelorheophilo. Holotypus in laboratorio Hydrobiologiae Academiae Scientiarum Polonae, Cracoviae, asservatur.

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STRESZCZENIE

Opisana nowa odmiana *Eunotia flexuosa* (Bréb.) Kütz. var. *rilensis* n. var. wystąpiła w potoku Maljovica w górach Rila w Bułgarii na wysokości 2400—1250 m n.p.m. Odmiana posiada wymiary: długość 75—200 μm , szerokość 6,6—7,5 μm , 9—12 prążków w 10 μm w środkowej partii regularnych, przy końcach często na przemian długich i krótkich. Różni się od dotychczas opisanych odmian rzadziej ustawionymi prążkami oraz większą szerokością komórki.

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