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Desmids of some polyhumic lakes in the Wigry National Park, north-eastern Poland

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ABSTRACT: The desmid flora was studied in four polyhumic lakes (called “suchary”) in the Wigry National Park in north-eastern Poland. A total of 81 taxa of desmids belonging to 23 genera were found. “Suchar” Rzepiskowy was the richest in desmids (53 taxa), whereas “suchar” Wielki was characterized by the lowest number of desmid species. Some taxonomic novelties are presented as follows: *Euastrum ansatum* Ehrenb. ex Ralfs var. *dideltiforme* Ducell. is reduced to a form – *E. ansatum* fo. *dideltiforme* (Ducell.) G. H. Tom. & W. W. Kow., *stat. nov.*; *Pleurotaenium minutum* (Ralfs) Delp. var. *groenbladii* Croasd. and *Staurastrum dickiei* Ralfs var. *latum* Hirano are transferred to the genera *Haploaenium* Bando and *Staurodesmus* Teil. as *H. minutum* (Ralfs) Bando var. *groenbladii* (Croasd.) G. H. Tom. & W. W. Kow., *comb. nov.* and *S. dickiei* (Ralfs) Lillier. var. *latus* (Hirano) G. H. Tom. & W. W. Kow., *comb. nov.*, respectively.

KEY WORDS: Zygnematales, Mesotaeniaceae, Desmidiales, taxonomy, Poland, polyhumic lakes

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INTRODUCTION

The demid flora of the small polyhumic lakes called “suchary” (pronounced “sukhary”) in Pojezierze Suwalskie (=Suwałki Lakeland) in north-eastern Poland is not well known. Ryppowa (1927) was the first to record some desmids in these water bodies. In five “suchary” situated near Krzywe and Wigry lakes, namely Dembowski, Zachodni, Wschodni, Wielki and Rzepiskowy (Fig. 1) she found 160 species, including 106 taxa of desmids. Since then, no detailed algological studies have been carried out in this area, although it holds many rare and interesting species. The only exception is the work by Wołowski (1991) on euglenophytes of these lakes.

During excursions organized by the Phycological Section of the Polish Botanical Society at the VIIIth Annual Meeting (25–28 May 1989) in the Wigry National Park samples were taken from four “suchary”. The material was collected from the lake waters, as well as from *Sphagnum* carpets floating at the edges. Two “suchary”, i.e. II and III (2 and 3), called Huciańskie, are located near Lake Czarne close to Lake Krzywe. The other two

“suchary”, Wielki and Rzepiskowy (12 and 13), are situated near Lake Wigry between lakes Muliczne and Białe (Fig. 1).

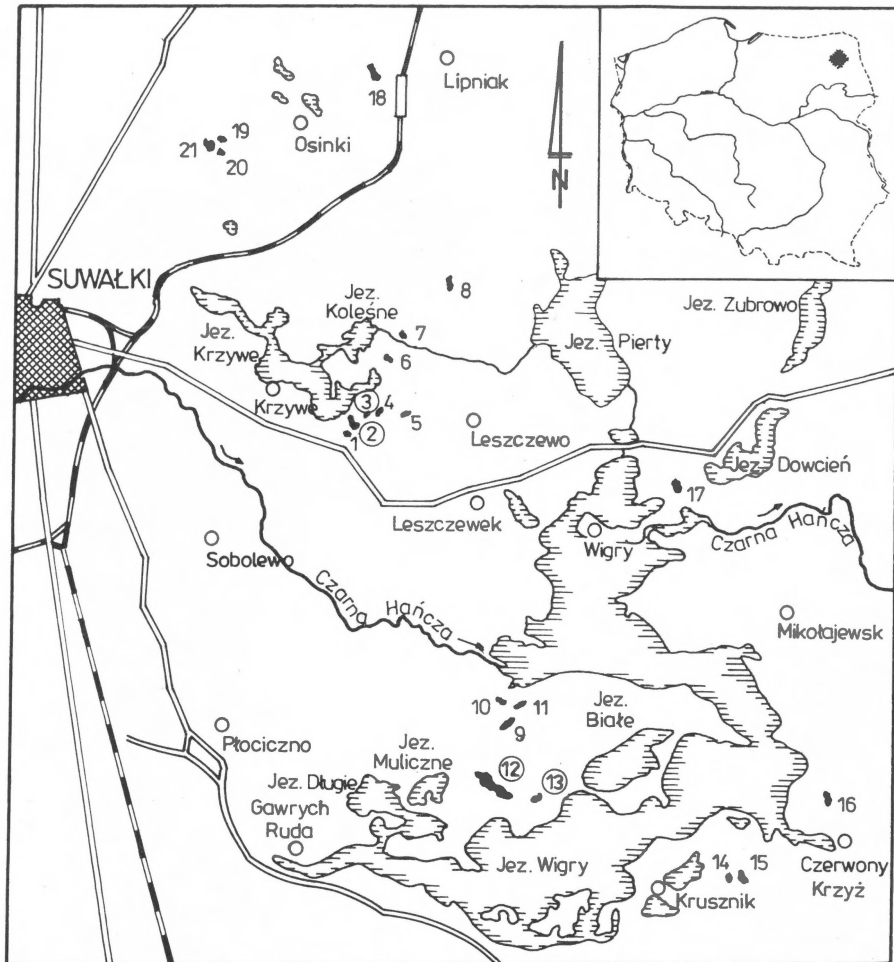


Fig. 1. Distribution of the suchars of the Wigry National Park. 1 – Suchar I; 2 – Suchar II; 3 – Suchar III; 4 – Suchar IV; 5 – Suchar V; 6 – Suchar VI (Brzozowy Mszar); 7 – Suchar VII (Generalski); 8 – Suchar Wądołek; 9 – Suchar Dembowskich; 10 – Suchar Zachodni; 11 – Suchar Wschodni; 12 – Suchar Wielki; 13 – Suchar Rzepiskowy; 14 – Suchar Zielone Ślepe; 15 – Suchar Stanowisko; 16 – Suchar Wygorzele; 17 – Suchar Mozguć; 18 – Suchar Linowo; 19 – Suchar Drobny; 20 – Suchar Tłusty; 21 – Suchar Widny (after Sobotka 1967). Encircled numbers indicate “suchary” investigated during the present study.

The aforementioned “suchary” are small, shallow (depth 1.9–3.6 m), humotrophic water bodies which have neither an inflow nor an outflow. Their areas range from 0.33 to 8.9 ha. They are surrounded by pine forests comprising a high percentage of spruce. The pH value and electrolytic conductivity ranges from 4.6 to 6.8 and from 13 to 31 μS , respectively. The calcium content is low (1.6–3.6 mg/dm^3). Detailed description and flora and vegetation of the “suchary” is given by Sobotka (1967), whereas information concerning their hydrochemistry is available in the paper by Zdanowski (1986).

AN ANNOTATED LIST OF SPECIES

Abbreviations are used:

- | | | |
|-------------------|--------------|----------------------|
| - cell length | str. | - striae |
| - cell breadth | th. | - thickness of cell |
| - breadth at base | occur. | - occurrence |
| - isthmus breadth | cc | - very often |
| - polar lobe | c | - often |
| - apex | r | - rare |
| - spine | rr | - sporadically |
| - processes | 2, 3, 12, 13 | - number of "suchar" |

ZYGNEMATALES

Mesotaeniaceae

Bréb. var. condensata (Fig. 2.10)

Lg. 19.6–20.4 µm, lg./br. 3.50–5.10x. Occur.: 13rr.

Cylindrocystis brebissonii (Menegh. ex Ralfs) de Bary var. *brebissonii* (Fig. 5.52)

Lg. 49.6–68.9 µm, br. 17.3–22.3 µm, lg./br. 2.39–3.10x. Occur.: 2c, 3cc, 13rr.

var. *curvata* Rabanus

Lg. 70.7–72.2 µm, br. 19.6–20.5 µm, lg./br. 3.52–3.60x. Occur.: 3rr.

C. crassa de Bary var. *crassa* (Fig. 5.51)

Lg. 36.7–42.1 µm, br. 20.1–22.6 µm, lg./br. 1.80–1.90x. Occur.: 2r, 3cc.

Netrium digitus (Ehrenb. ex Bréb.) Itzigs. & Rothe var. *digitus* (Fig. 2.12–13)

Lg. 224.1–232.4 µm, br. 59.8–64.4 µm, ap. 20.7–23.0 µm, lg./br. 3.50–3.88x. Occur.: 2c, 3r, 13rr.

var. *lamellosum* (Bréb.) Grönbl.

Lg. 160.0–257.6 µm, br. 32.2–46.0 µm, ap. 18.4–20.7 µm, lg./br. 5.00–5.60x. Occur.: 2rr.

DESMIDIALES

Gonatozygaceae

Gonatozygon kinahanii (W. Archer) Rabenh. var. *kinahanii*

Lg. 213.5–219.8 µm, br. 10.9–14.1 µm, lg./br. 15.60–19.60x. Occur.: 13rr.

Peniaceae

Penium polymorphum (Perty) Perty (Fig. 7.68)

Lg. 53.4–67.8 µm, br. 20.4–29.9 µm, lg./br. 2.30–2.60x, str. 13–15/10 µm. Occur.: 3c.

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525	9		stat. et comb. nov.	stat. nov.
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ERRATA

***P. spirostriolatum* Barker var. *spirostriolatum***

(Fig. 7.77 & 8.5)

Lg. 128.9–176.3 μm , br. 17.2–24.3 μm , isth. 20.4–22.1 μm , ap. 14.2–15.8 μm , lg./br. 5.80–7.30x, str. 6–7/10 μm . Occur.: 2rr, 3rr.

var. ***amplificatum* Schmidt**

(Fig. 2.11)

Cells large, their dimensions exceed the upper limit of this parameter given in the literature. Lg. 218.5–273.9 μm , br. 21.8–29.9 μm , isth. 18.4–20.7 μm , ap. 13.8–20.7 μm , lg./br. 8.61–13.50x, str. 6/10 μm . Occur.: 3rr.

Closteriaceae***Closterium acutum* Bréb. var. *acutum***

Cells large, their dimensions oscillate around the upper limit noted for individuals of this variety. Lg. 141.3–152.3 μm , br. 5.5–7.0 μm , ap. 1 μm , lg./br. 21.80–25.70x. Occur.: 2rr.

***C. baillyanum* (Bréb.) Bréb. var. *alpinum* (Viret) Grönbl.**

(Fig. 2.2–4)

In samples from the "suchar" III (3) typical individuals of var. *alpinum* (Lg. 423.3–514.6 μm , br. 27.6–29.9 μm , ap. 13.8 μm , lg./br. 14.16–17.93x; fig. 2.4) as well as smaller specimens (Lg. 282.2–415.0 μm , br. 27.6–29.9 μm , ap. 11.5–13.8 μm , lg./br. 9.44–13.88x; figs 2.2–3), whose dimensions are close to those of var. "*parvulum*" distinguished by Grönblad (1919) were found. The problem is whether to consider the above-mentioned variety as a distinct taxonomic unit. It may be that the specimens identified as var. "*parvulum*", are only juvenile forms of var. "*alpinum*". It seems reasonable, therefore, to treat var. "*parvulum*" as a taxon identical to var. "*alpinum*" following Růžička (1977).

Lg. 282.2–514.6 μm , br. 27.6–29.9 μm , ap. 11.5–13.8 μm , lg./br. 9.44–17.93x. Occur.: 2r, 3cc, 12c.

C. costatum* Corda ex Ralfs var. *costatum

Lg. 279.4–356.4 μm , br. 31.4–36.1 μm , ap. 9.4–11.0 μm , lg./br. 8.90–9.90x, str. 2/10 μm . Occur.: 12rr.

C. directum* W. Archer var. *directum

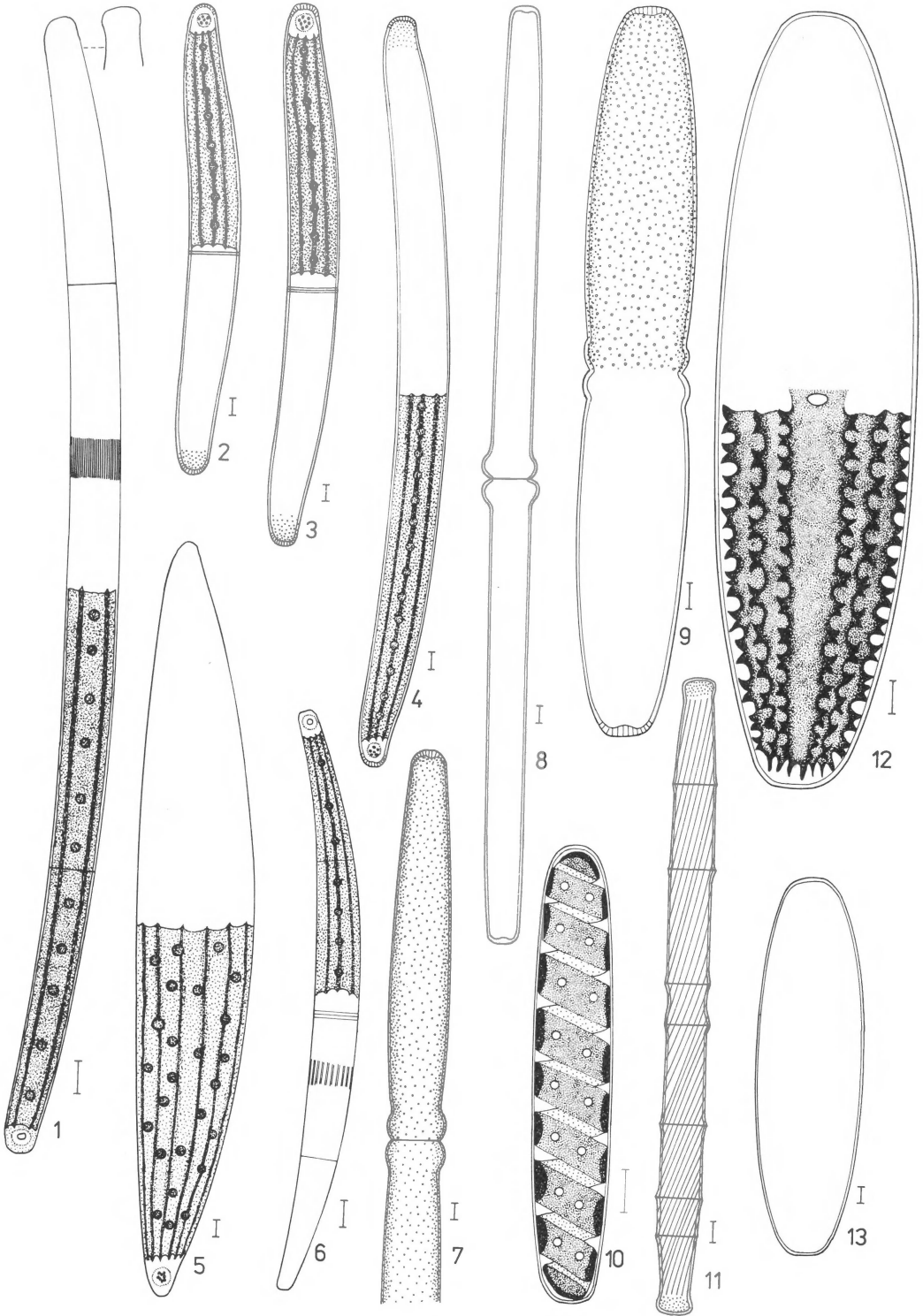
(Fig. 2.1)

Cell wall densely striated. Lg. 304.3–348.6 μm , br. 16.1 μm , ap. 10.3–11.5 μm , lg./br. 21.14–21.65x, str. 17–18/10 μm . Occur.: 3c.

C. incurvum* Bréb. var. *incurvum

Lg. 42.3–50.3 μm , br. 6.3–9.4 μm , ap. 1.1–1.6 μm , lg./br. 5.40–6.70x. Occur.: 12rr.

Fig. 2. 1. *Closterium directum* W. Archer var. *directum*. 2–4. *C. baillyanum* (Bréb.) Bréb. var. *alpinum* (Viret) Grönbl. 5. *C. lunula* (O. F. Müll.) Nitzsch ex Ralfs var. *lunula*. 6. *C. intermedium* Ralfs var. *intermedium*. 7 & 9. *Pleurotaenium trabecula* Ehrenb. ex Näg.: 7. var. *trabecula*; 9: var. *crassum* Witttr. 8. *Haplotaenium minutum* (Ralfs) Bando var. *groenbladii* (Croasd.) G. H. Tom. & W. W. Kow. (morpha). 10. *Spirotaenia condensata* Bréb. var. *condensata*. 11. *Penium spirostriolatum* Barker var. *amplificatum* Schmidt. 12–13. *Netrium digitus* (Ehrenb. ex Bréb.) Itzigs. & Rothe var. *digitus*.



C. intermedium Ralfs var. *intermedium* (Fig. 2.6)

Lg. 156.4–224.1 μm , br. 14.9–18.4 μm , ap. 6.9 μm , lg./br. 9.50–13.38x, str. 5–6/10 μm .
Occur.: 3c.

C. lunula (O. F. Müll.) Nitzsch ex Ralfs var. *lunula* (Fig. 2.5)

Lg. 444.0–506.3 μm , br. 69.0–78.8 μm , ap. 11.5–16.6 μm , lg./br. 5.94–6.57x. Occur.: 2cc.

C. navicula (Bréb.) Lütkem. var. *navicula* (Fig. 7.75)

Lg. 45.3–57.8 μm , br. 12.4–14.7 μm , ap. 5.4–7.1 μm , lg./br. 3.70–3.90x. Occur.: 2rr.

C. striolatum Ehrenb. ex Ralfs var. *striolatum* (Fig. 3.19)

Lg. 232.4–327.8 μm , br. 31.0–42.5 μm , ap. 11.5 μm , lg./br. 7.20–9.50x, str. 8–9/10 μm .
Occur.: 2c, 3cc.

Desmidiaceae***Haplotaenium minutum*** (Ralfs) Bando var. *groenbladii* (Croasdale) G. H. Tom. & W. W. Kow., *comb. nov.* – morpha (Fig. 2.8)

Pleurotaenium minutum (Ralfs) Delp. var. *groenbladii* Croasdale in Prescott, Croasdale & Vinyard, Syn. N. Am. Desm. 2(1): 124. 1975.

P. rectum Delp. var. *rectissimum* (West & West) Grönl., Acta Soc. F. Fl. Fennica 55(3): 4, pl. 1, f. 10–11. 1924 (orig. descrip., iconotypus).

Cells long, attenuate towards the apical region, apices straight; basal inflation well-marked; wall smooth. Specimens fit the description of var. *groenbladii* with the exception of the basal inflation, which is faintly visible in typical individuals of this variety.

Lg. 431.6–564.4 μm , br. 24.1–27.6 μm , br. at bas. 31.0–32.2 μm , isth. 21.8–23.0 μm , ap. 18.4 μm , lg./br. 15.64–20.45x. Occur.: 13rr.

Pleurotaenium trabecula (Ehrenb.) ex Näg. var. *trabecula* (Fig. 2.7)

Lg. 345.0–481.4 μm , br. 31.0–34.5 μm , br. at ba. 29.9–36.8 μm , isth. 23.0–29.9 μm , ap. 18.4–20.7 μm , lg./br. 10.67–13.96x. Occur.: 13r.

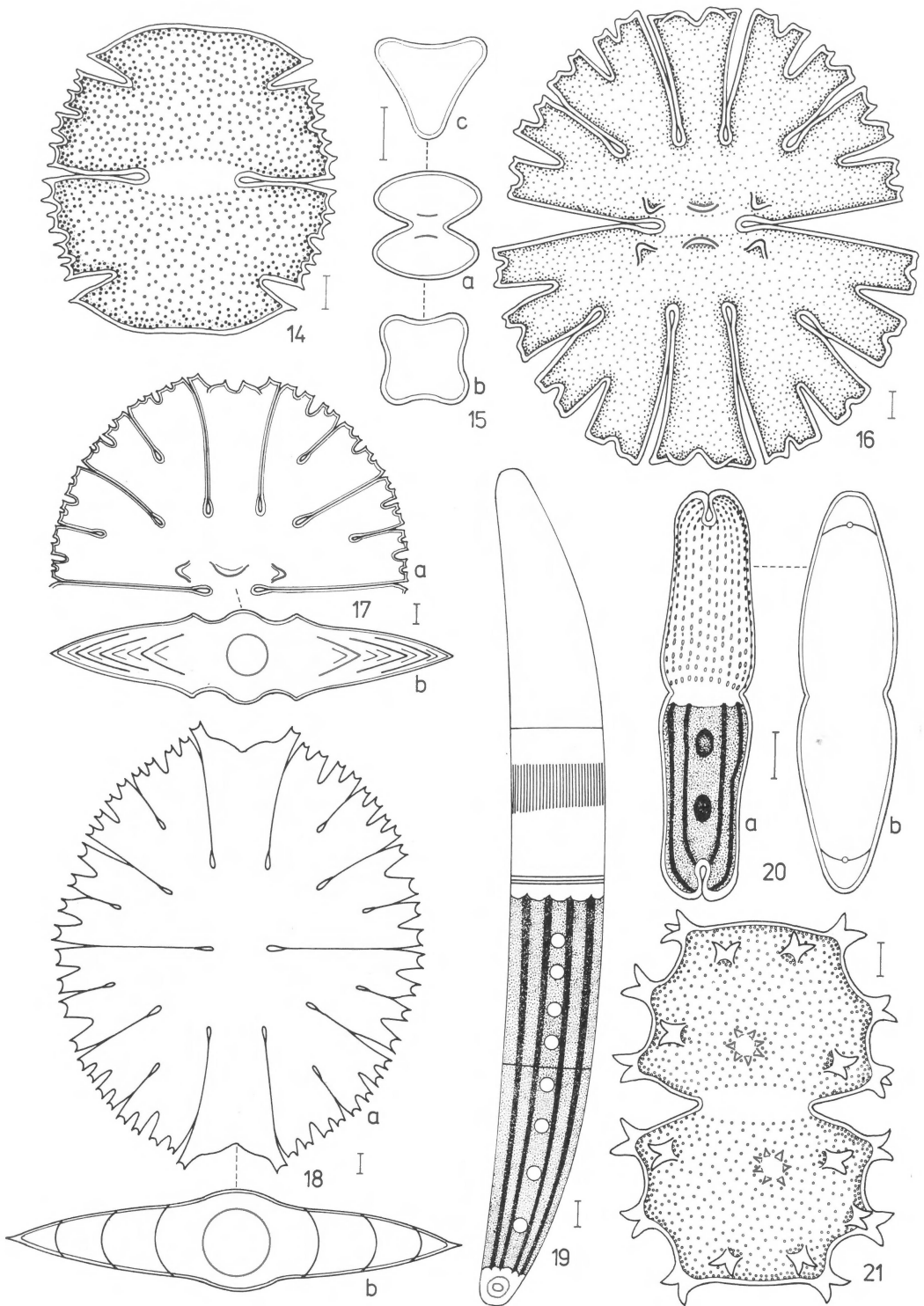
var. *crassum* Wittr. (Fig. 2.9)

Lg. 275.0–303.6 μm , br. 39.1–41.4 μm , br. at bas. 34.5–39.1 μm , isth. 27.6–29.9 μm , lg./br. 6.64–7.76x. Occur.: 12rr, 13c.

Tetmemorus brebissonii (Menegh.) Ralfs ex Ralfs var. *brebissonii* fo. *minor* (de Bary) Kosinsk. (Fig. 3.20)

Specimens collected from “suchar” Wielki (12) fit the dimensions of var. *minor* de Bary (Lg. 87.4–108.1 μm , br. 20.7–23.0 μm , isth. 16.1–17.2 μm , ap. 13.8–16.1 μm , lg./br. 4.22–4.89; fig. 3.20) and the type variety – var. *brebissonii* (Lg. 115.0–119.6 μm , br. 21.8 μm , isth. 16.1–18.4 μm ,

Fig. 3. 14. *Micrasterias truncata* (Corda) ex Bréb. var. *truncata*. 15. *Cosmoastrum muticum* (Bréb.) Pal.-Mordv. var. *muticum*. 16–17. *Micrasterias thomasiana* W. Archer: 16. var. *notata* (Nordst.) Grönl. (morpha); 17. var. *notata*. 18. *M. rotata* (Grev.) Ralfs ex Ralfs var. *rotata*. 19. *Closterium striolatum* Ehrenb. ex Ralfs var. *striolatum*. 20. *Tetmemorus brebissonii* (Menegh.) Ralfs ex Ralfs var. *brebissonii* fo. *minor* (de Bary) Kosinsk. 21. *Xanthidium armatum* (Bréb.) ex Bréb. var. *armatum*.



ap. 18.4 μm , lg./br. 5.28–5.49x). The cell length in the latter, slightly exceeds the upper limit of this parameter given for individuals of var. *minor* and at the same time it falls within the lower limit of var. *brebissonii*. It may be assumed that there is no sharp border between the dimensions of these two varieties. Sometimes specimens whose dimensions are on the border of these two taxa can be found. This concerns mainly large populations. It is likely that the separation of var. *minor* is unnecessary, since specimens intermediate between var. *minor* and var. *brebissonii* are found. If this taxon is maintained it should be given the rank of a form (as proposed by Kosinskaya 1960), not a variety.

Lg. 87.4–119.6 μm , br. 20.7–23.0 μm , isth. 16.1–18.4 μm , ap. 13.9–18.4 μm , lg./br. 4.22–5.49x. Occur.: 12cc, 13r.

T. granulatus (Bréb.) Ralfs ex Ralfs var. *granulatus* (Fig. 7.78)

Lg. 124.2–216.3 μm , br. 28.7–38.9 μm , isth. 25.9–33.8 μm , ap. 13.9–19.8 μm , lg./br. 4.60–5.60x. Occur.: 13rr.

T. laevis (Kütz.) ex Ralfs var. *laevis* (Fig. 4.26 & 8.7)

Lg. 75.9–97.3 μm , br. 20.7–28.3 μm , isth. 19.4 μm , ap. 13.8 μm , lg./br. 3.67–3.78x. Occur.: 3rr, 12r, 13r.

var. *minutus* (de Bary) W. Krieg.

Lg. 54.9–64.4 μm , br. 17.3–19.5 μm , isth. 15.7–17.3 μm , ap. 7.9–11.5 μm , lg./br. 3.20–3.30x. Occur.: 2rr, 12rr.

Euastrum ansatum Ehrenb. ex Ralfs var. *ansatum* fo. *dideltiforme* (Ducell.)

G. H. Tom. & W. W. Kow., *stat. n. nov.* (Fig. 5.43)

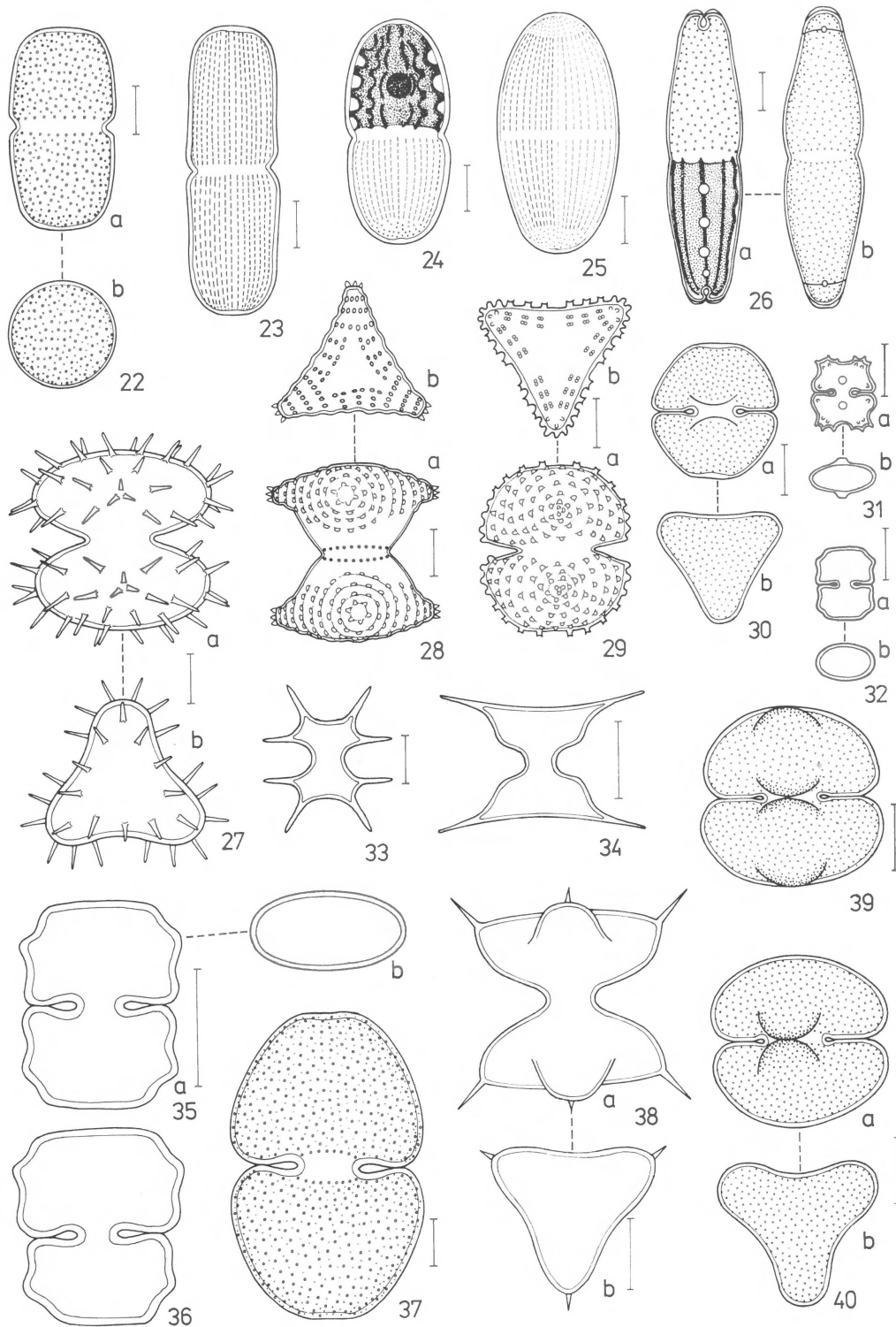
Euastrum ansatum Ehrenb. ex Ralfs var. *dideltiforme* Ducellier, Bull. Soc. Bot. Genève, sér. 2, 10: 42, f. 16–19. 1918.

Lateral lobes divided to the second order, lower lobes broadly rounded, upper lobes slightly protruded. Cell appearance fits the drawings of var. *dideltiforme* in the papers of Prescott *et al.* (1977, pl. 59, fig. 15) and Förster (1982, pl. 43, fig. 5).

Kosinskaya (1960) and Růžička (1981) consider this variety as a taxon identical to the type variety. This opinion is explained by the fact that cells with variously developed lateral lobes ranging from entire (in the type variety) and slightly retuse in the middle to lobes of the second order can be found in the same sample. We did not find any intermediate forms but only specimens fitting the description of the var. *dideltiforme* distinguished by Ducellier (1918). Since the specimens which are intermediate forms between var. *ansatum* and var. *dideltiforme* can sometimes be found we suggest that the latter be given the rank of a form, not a variety.

Lg. 80.5–85.1 μm , br. 47.1–48.3 μm , isth. 11.5 μm , lob. pol. br. 19.5–20.7 μm , lg./br. 1.71–1.76x. Occur.: 2c.

Fig. 4. 22. *Actinotaenium cucurbita* (Bréb. ex Ralfs) Teil. var. *cucurbita*. 23–25. *A. silvae-nigrae* (Rabanus) Kouwets & Coesel: 23. var. *parallelum* (W. Krieg.) Kouwets & Coesel; 24. var. *silvae-nigrae*; 25. var. *silvae-nigrae* (morpha). 26. *Tetmemorus laevis* (Kütz.) ex Ralfs var. *laevis*. 27. *Cosmoastrum teliferum* (Ralfs) Pal.-Mordv. var. *teliferum*. 28. *Staurastrum proboscideum* (Bréb.) W. Archer var. *proboscideum*. 29. *Cosmoastrum scabrum* (Bréb.) Pal.-Mordv. (morpha). 30, 39–40. *C. orbiculare* (Ralfs ex Ralfs) Pal.-Mordv.: 30. var. *hibernicum* (W. West) Pal.-Mordv. (morpha). 31. *Euastrum gayanum* de Toni var. *gayanum*. 32, 35–36. *Cosmarium regnellii* Wille var. *pseudoregnellii* (Messik.) W. Krieg. 33. *Arithrodesmus octocornis* Ehrenb. ex W. Archer var. *octocornis*. 34. *Staurodesmus isthmusosus* (Heimerl) Croasd. var. *isthmusosus*. 37. *Cosmarium pyramidatum* Bréb. var. *pyramidatum*. 38. *Staurodesmus dejectus* (Bréb. ex Bréb.) Teil. var. *dejectus*. 39–40. *Cosmoastrum orbiculare* (Ralfs ex Ralfs) Pal.-Mordv. var. *depressum* (Roy & Bisset) Pal.-Mordv.



var. *pyxidatum* Delponte (Fig. 5.42)

Lg. 82.8–92.0 µm, br. 41.4–44.8 µm, isth. 9.2–13.8 µm, lob. pol. br. 18.4–21.8 µm, th. 23.0–25.3 µm, lg./br. 1.95–2.11x. Occur.: 13cc.

E. binale (Turp.) Ehrenb. ex Ralfs var. *sectum* (W. B. Turn.) W. Krieg. (Fig. 5.48)

Polar lobes with pointed angles. In each semicell, a small median swelling is visible, which in frontal view is very rarely observed in this species.

Lg. 19.9–24.8 µm, br. 13.6–18.9 µm, isth. 3.7–4.6 µm, lob. pol. br. 9.9–10.9 µm, lg./br. 1.40–1.50x. Occur.: 2rr, 13r.

E. crassum (Bréb.) Kütz. ex Ralfs var. *crassum* (Fig. 5.54)

Incisions between polar and upper lateral lobes are open. Lg. 186.8–196.3 µm, br. 86.4–95.8 µm, isth. 26.7–29.8 µm, lob. pol. br. 53.4–55.0 µm, lg./br. 1.90–2.30x. Occur.: 13rr.

E. elegans (Bréb.) Kütz. ex Ralfs var. *elegans* (Fig. 5.49–50)

Deep median incisions on polar lobe, usually closed, sometimes also open (Fig. 5.50). Lg. 27.1–32.3 µm, br. 19.2–22.1 µm, isth. 3.8–5.7 µm, lob. pol. br. 15.1–16.3 µm, lg./br. 1.40–1.50x. Occur.: 13rr.

E. gyanum de Toni var. *gyanum* (Fig. 4.31)

Lg. 13.8 µm, br. 12.6 µm, isth. 2.3 µm, lob. pol. br. 9.2 µm, th. 8.0 µm, lg./br. 1.10x. Occur.: 12r, 13c.

E. humerosum Ralfs var. *humerosum* (Fig. 5.47)

Lg. 121.9–128.8 µm, br. 63.2–69.0 µm, isth. 20.7 µm, lob. pol. br. 25.3–29.9 µm, lg./br. 1.87–1.93x. Occur.: 2rr, 13c.

Morpha (Fig. 5.46)

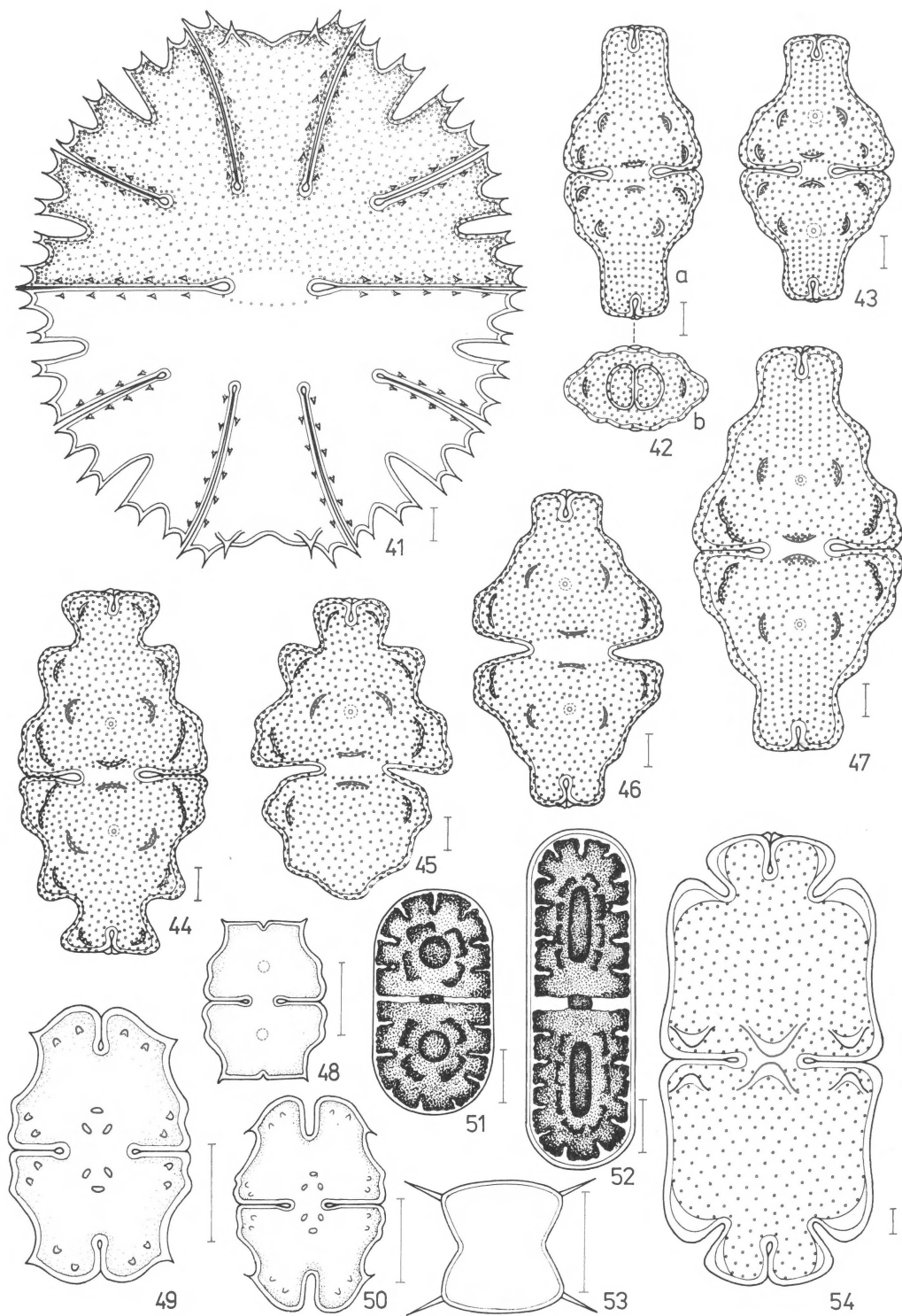
Cells differ slightly from typical specimens of *E. humerosum*. Polar lobes short, not inflated at angles, lateral margins parallel; lower lobes of the second order slightly retuse in the middle, upper lobes slightly visible; sinus open, acute-angled. General cell appearance similar to that of *E. humerosum* var. *parallelum* W. Krieger (1937, p. 526, pl. 69, Fig. 9). They differ from the latter in the following characteristics: the presence of a median mucilage pore, five well developed prominent swellings, and the shape of the sinus. Růžička (1981) did not distinguish *E. humerosum* var. *parallelum* but considers it to be identical to var. *humerosum*.

Lg. 94.3–95.4 µm, br. 57.5 µm, isth. 16.1–25.3 µm, lob. pol. br. 21.8–25.3 µm, lg./br. 1.64–1.66x. Occur.: 13r.

var. *affine* (Ralfs ex Ralfs) Wallich (Figs 5.44–45 & 8.4)

We sometimes found cells which were in the process of development (Fig. 5.45).

Fig. 5. 41. *Micrasterias papillifera* Bréb. var. *papillifera*. 42–43. *Euastrum ansatum* Ehrenb. ex Ralfs: 42. var. *pyxidatum* Delponte; 43. var. *ansatum* fo. *dideltiforme* (Ducell.) G. H. Tom. & W. W. Kow. 44–47. *E. humerosum* Ralfs: 44–45. var. *affine* (Ralfs ex Ralfs) Wallich; 46. var. *humerosum* (morpha); 47. var. *humerosum*. 48. *E. binale* (Turp.) Ehrenb. ex Ralfs var. *sectum* (W. B. Turn.) W. Krieg. 49–50. *E. elegans* (Bréb.) Kütz. ex Ralfs var. *elegans*. 51. *Cylindrocystis crassa* de Bary var. *crassa*. 52. *C. brebissonii* (Menegh. ex Ralfs) de Bary var. *brebissonii*. 53. *Staurodesmus incus* (Bréb. ex Ralfs) Teil. var. *incus* fo. *minor* (West & West) Teil. 54. *Euastrum crassum* (Bréb.) Kütz. ex Ralfs var. *crassum*.



Lg. 101.2–121.9 μm , br./ 57.5–64.4 μm , isth. 13.8–20.7 μm , lob. pol. br. 25.4–32.2 μm , lg./br. 1.69–2.00x. Occur.: 2rr, 13c.

E. pectinatum* (Bréb.) ex Bréb. var. *pectinatum

Lg. 62.4–75.2 μm , br. 35.3–45.5 μm , isth. 11.2–12.6 μm , lob. pol. br. 29.8–36.1 μm , lg./br. 1.65–1.77x. Occur.: 12r.

E. pinnatum* Ralfs var. *pinnatum

Lg. 127.3–138.2 μm , br. 65.9–73.8 μm , isth. 16.5–22.0 μm , lob. pol. br. 36.2–43.9 μm . lg./br. 1.87–1.93x. Occur.: 13rr.

Micrasterias papillifera* Bréb. var. *papillifera (Fig. 5.41)

Lg. 119.3–147.2 μm , br. 114.6–135.7 μm , isth. 18.8–23.0 μm , lob. pol. br. 40.8–46.0 μm , lg./br. 1.00–1.10x. Occur.: 13rr.

M. rotata* (Grev.) Ralfs ex Ralfs var. *rotata (Figs 3.18 & 8.9)

Lg. 224.1–244.8 μm , br. 186.3–224.1 μm , isth. 29.9–41.5 μm , lob. pol. br. 55.2–58.1 μm , th. 48.3 μm , lg./br. 1.09–1.26x. Occur.: 2rr, 3c.

***M. thomasiana* W. Archer var. *notata* (Nordst.) Grönbl.** (Figs 3.17 & 8.3)

Lg. 216.2–219.9 μm , br. 179.4–200.1 μm , isth. 23.0–36.8 μm , lob. pol. br. 43.7–48.3 μm , th. 46.0 μm , lg./br. 1.08–1.23x. Occur.: 2r, 3c.

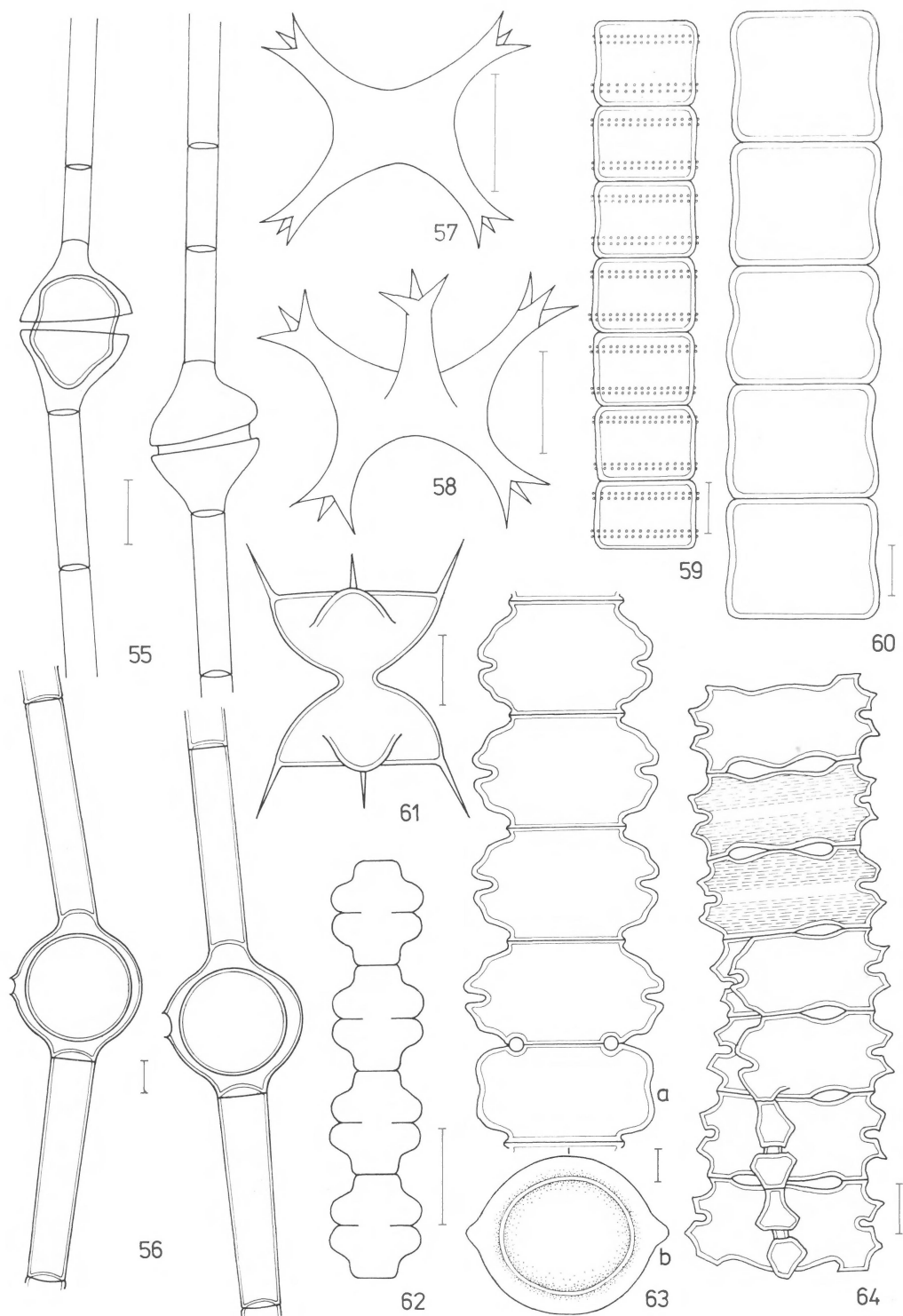
Morpha (Fig. 3.16)

Cells large: polar lobe long, not protruded over lateral lobes, narrowly cuneate with distinct median notch and rounded angles; lateral lobes divided to fourth order, incisions between polar lobe and lateral lobes slightly open, between lateral lobes of the second order closed for most of the length or only at the end, between lobes of the third order – deep and open for the entire length. Apices of lateral lobes are variously shaped – rounded-flattened, emarginate or with 2 obtuse teeth. Sinus dilated at the isthmus, closed, open at remaining length. Three less-developed swellings above the isthmus. Cell wall minutely punctate.

They are closest to specimens of *M. thomasiana* var. *notata* (polar lobe does not protrude over lateral lobes, three swellings above the isthmus, cell wall without teeth). However, it can be seen from the description that they differ from them basically. Nevertheless, we do not consider them as a separate taxon, but we think that they represent some stage of morphogenesis of specimens *M. thomasiana* var. *notata* formed from a zygospore. This may be confirmed by the fact that the cells are smaller and the lateral lobes are divided only to the fourth order, whereas in mature specimens of *M. thomasiana* var. *notata* they are divided to the fifth order.

Lg. 173.6–177.1 μm , br. 162.1–163.3 μm , isth. 18.4–31.0 μm , lob. pol. br. 36.8–39.1 μm , lg./br. 1.07–1.08x. Occur.: 2rr.

Fig. 6. 55. *Oedogonium pusillum* Kirchner var. *pusillum*. 56. *Oe. sociale* Wittr. var. *sociale*. 57–58. *Pseudostaurastrum hastatum* (Reinsch) Chodat var. *hastatum*. 59. *Hyalotheca mucosa* (Mert.) Ehrenb. ex Ralfs var. *mucosa*. 60. *H. dissiliens* (J. E. Smith) ex Bréb. var. *dissiliens*. 61. *Staurodesmus connatus* (P. Lundell) Thom. var. *connatus*. Fig. 62. *Spondylosium pulchellum* (W. Archer) W. Archer var. *pulchellum*. 63. *Desmidium grevillei* (Kütz. ex Ralfs) de Bary var. *grevillei*. 64. *D. swartzii* (C. Agardh) C. Agardh ex Ralfs var. *swartzii*.



M. truncata* (Corda) ex Bréb. var. *truncata (Figs 3.14 & 8.10)

Lg. 78.2–101.2 μm , br. 78.2–87.4 μm , isth. 16.1–28.7 μm , lob. pol. br. 57.5–63.2 μm , lg./br. 1.00–1.16x. Occur.: 2r, 3cc, 12c, 13c.

Actinotaenium cucurbita* (Bréb. ex Ralfs) Teil. var. *cucurbita (Fig. 4.22)

Lg. 31.4–44.8 μm , br. 16.1–23.0 μm , isth. 14.9–19.4 μm , lg./br. 1.75–2.16x. Occur.: 3c, 12c, 13c.

A. inconspicuum* (West et West) Teil. var. *inconspicuum

Lg. 14.2–17.3 μm , br. 4.7–7.1 μm , lg./br. 2.43–3.02x. Occur.: 3rr.

A. silvae-nigrae* (Rabanus) Kouwets & Coesel var. *silvae-nigrae (Fig. 4.24)

Lg. 47.1–57.5 μm , br. 20.7–25.3 μm , isth. 19.5–23.0 μm , lg./br. 2.00–2.40x. Occur.: 3cc, 12cc.

Morpha (Fig. 4.25)

Cells elliptical, without median constriction. Remaining features correspond to those of the type variety. Probably, in *Actinotaenium silvae-nigrae* the size of the median construction varies. In literature specimens with a well-marked (Rabanus 1923, pl. 2, figs 5–6), very shallow – faintly visible (Růžicka 1977, pl. 5, figs 1–2), as well as a sharply broad (Croasdale & Grönblad 1964, pl. 1, fig. 35) isthmus were described.

Lg. 51.0 μm , br. 25.5 μm , lg./br. 2.00x. Occur.: 3rr.

var. *parallelum* (W. Krieg.) Kouwets & Coesel (Fig. 4.23)

Lg. 50.6–72.2 μm , br. 19.5–20.7 μm , isth. 18.4–19.5 μm , lg./br. 2.59–3.68x. Occur.: 3r, 12cc.

Cosmarium abbreviatum* Racib. var. *abbreviatum (Fig. 7.76)

Cells small; in vertical view oval-shaped with a median tubercle on each side. Lg. 11.0 μm , br. 12.6 μm , isth. 2.4 μm , th. 6.9 μm , lg./br. 0.87x. Occur.: 13rr.

C. amoenum* Bréb. var. *amoenum (Fig. 7.69)

Lg. 46.9–56.8 μm , br. 24.7–29.6 μm , isth. 18.4–23.6 μm , lg./br. 1.78–2.00x. Occur.: 2r, 13rr.

***C. angulosum* Bréb. – morpha** (Fig. 7.67)

Semicells hexagonal, sides distinctly divergent, upper angles obliquely truncate, lower angles rounded. In typical specimens, lateral margins straight and parallel.

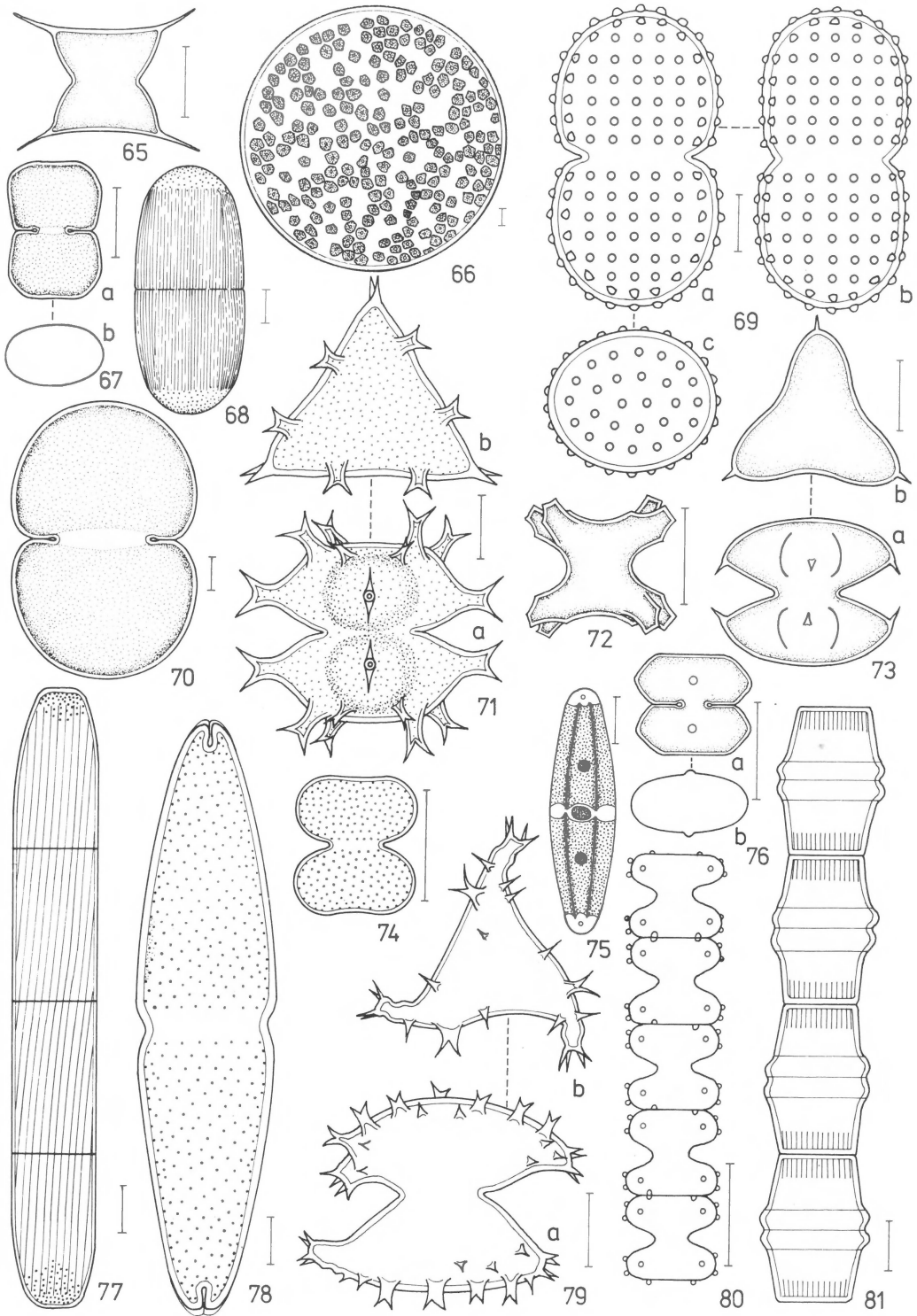
Lg. 20.7 μm , br. 14.1 μm , isth. 3.9 μm , th. 8.0 μm , lg./br. 1.46x. Occur.: 13rr.

C. cucumis* Corda ex Ralfs var. *cucumis (Fig. 7.70)

Lg. 61.2–75.9 μm , br. 39.3–51.7 μm , isth. 23.6–26.7 μm , lg./br. 1.50–1.60x. Occur.: 13rr.

→

Fig. 7. 65. *Staurodesmus boergesenii* (Messik.) Croasd. var. *boergesenii*. **66.** *Eremosphaera viridis* de Bary var. *viridis*. **67.** *Cosmarium angulosum* Bréb. (morpha). **68.** *Penium polymorphum* (Perty) Perty var. *polymorphum*. **69.** *Cosmarium amoenum* Bréb. var. *amoenum*. **70.** *C. cucumis* Corda ex Ralfs var. *cucumis*. **71.** *Staurastrum furcatum* (Ehrenb. ex Ralfs) Bréb. var. *furcatum*. **72.** *S. inconspicuum* Nordst. var. *inconspicuum*. **73.** *Staurodesmus dickiei* (Ralfs) Lillier. var. *latus* (Hirano) G. H. Tom. & W. W. Kow. (morpha). **74.** *Cosmarium tinctum* Ralfs var. *subretusum*. **75.** *Closterium navicula* (Bréb.) Lütke. var. *navicula*. **76.** *Cosmarium abbreviatum* Racib. var. *abbreviatum*. **77.** *Penium spirostriolatum* Barker var. *spirostriolatum*. **78.** *Tetmemorus granulatus* (Bréb.) Ralfs ex Ralfs var. *granulatus*. **79.** *Staurastrum controversum* Bréb. ex Bréb. var. *controversum*. **80.** *Teilingia granulata* (Roy & Bisset) Bourel. var. *granulata*. **81.** *Bambusina brebissonii* Kütz. ex Kütz. var. *brebissonii*.



C. meneghinii* Bréb. var. *meneghinii

Lg. 12.6–22.0 µm, br. 9.4–13.3 µm, isth. 3.2–4.7 µm, lg./br. 1.31–1.65x. Occur.: 13r.

C. pyramidatum* Bréb. var. *pyramidatum

(Figs 4.37 & 8.1)

In some specimens, sinus inflated considerably at the apex, opened outwards. Lg. 66.7–76.1 µm, br. 40.2–47.1 µm, isth. 9.2–14.1 µm, lg./br. 1.59–1.66x. Occur.: 2cc, 13r.

***C. regnellii* Wille var. *pseudoregnellii* (Messik.) W. Krieg.**

(Figs 4.32 & 35–36)

In vertical view semicells oval. They fit the drawings in the papers of Laporte (1931, pl. 11, fig. 133) and Prescott *et al.* (1981, pl. 219, fig. 14). In the specimens of this variety, according to Růžička (1973, pl. 12, fig. 13) a small inflation in the mid-region of the semicell may be seen in both frontal and vertical view.

Lg. 13.8–18.4 µm, br. 10.3–13.8 µm, isth. 2.3–4.6 µm, ap. 8.0–11.5 µm, th. 6.9–9.2 µm, lg./br. 1.20–1.45x. Occur.: 2rr, 3rr, 13r.

***C. tinctum* Ralfs var. *subretusum* Messik.**

(Fig. 7.74)

Semicells with concave apices and broadly rounded lateral margins. The latter is highly variable. Lateral margins may be slightly protruded (practically acute) or rounded, as illustrated in the drawings of Messikommer (1942, pl. 5, fig. 5).

Cell outline and sculpture (wall minutely punctate) correspond to *Cosmarium bioculatum* var. *hians* West & West. However, our specimen is smaller with a slightly shallower sinus.

Lg. 12.6 µm, br. 11.0 µm, isth. 4.7 µm, lg./br. 1.14x. Occur.: 13rr.

Xanthidium armatum* (Bréb.) ex Bréb. var. *armatum

(Fig. 3.21)

Lg. 110.4–135.7 µm, br. 69.0–75.9 µm, isth. 23.0–34.5 µm, sp. 6.9–8.0 µm, th. 59.8 µm, lg./br. 1.52–1.79x. Occur.: 13r.

Arthrodesmus octocornis* Ehrenb. ex W. Archer var. *octocornis

(Fig. 4.33)

Lg. 16.1 µm, br. 12.6 µm, isth. 6.9 µm, sp. 9.2 µm, lg./br. 1.28x. Occur.: 13c.

Stauroidesmus boergesenii* (Messik.) Croasdale var. *boergesenii

(Fig. 7.65)

Specimens described by Messikommer (1942, pl. 11, Fig. 3) and Croasdale and Grönblad (1964, pl. 17, fig. 6) with cells slightly longer than broad (spines not included). Our specimens, however, have cells broader than long. So far, this species was recorded only from Switzerland and Labrador.

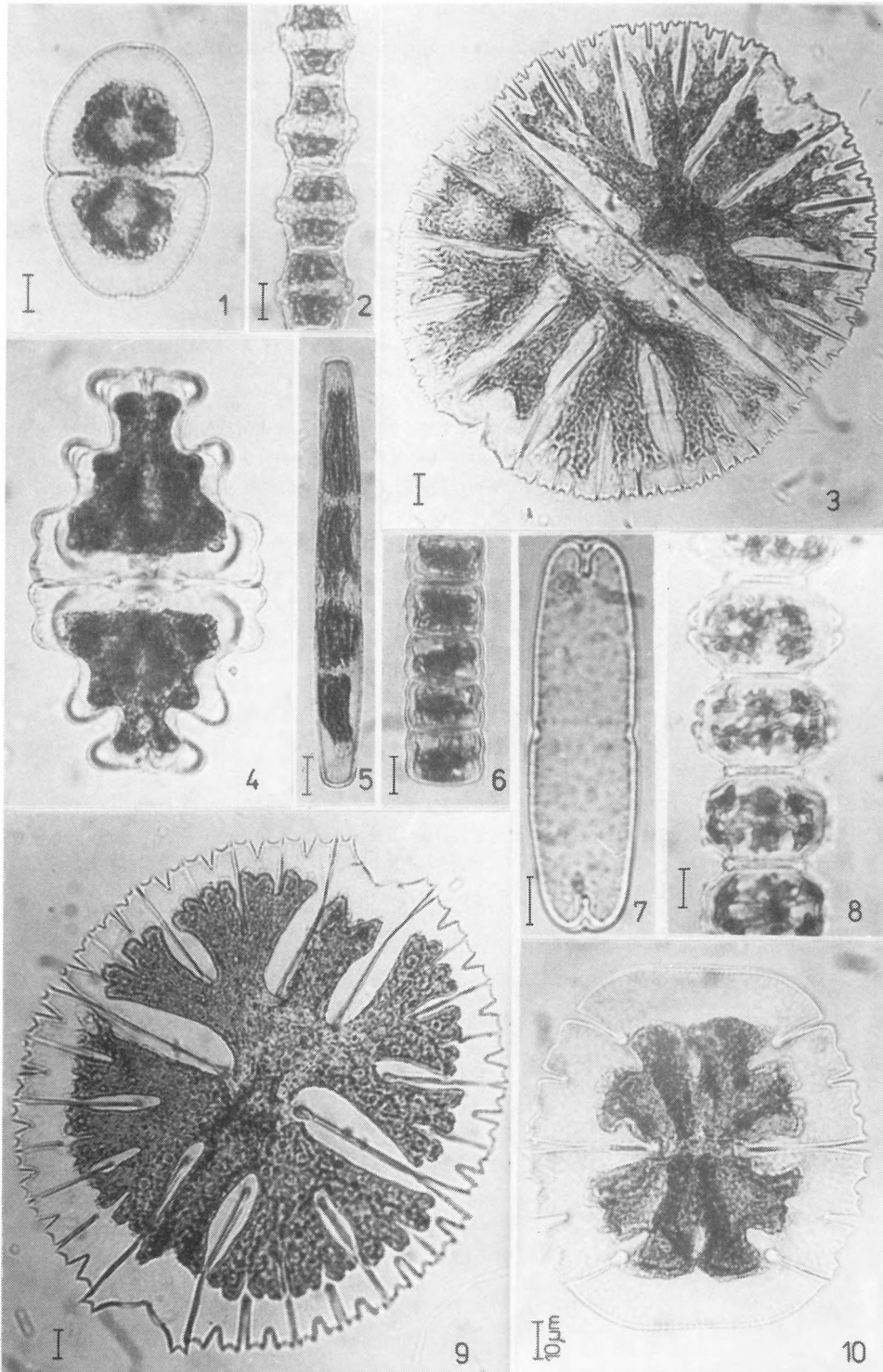
Lg. 13.8 µm, br. 14.9 µm, isth. 9.2 µm, sp. 5.7–6.9 µm, lg./br. 0.94x. Occur.: 13rr.

S. connatus* (P. Lundell) Thom. var. *connatus

(Fig. 6.61)

Specimens with sinus rounded not acute at the isthmus as described by West *et al.* (1923), Teiling (1967) and Prescott *et al.* (1982). Lg. 24.1–26.7 µm, br. 20.4–24.1 µm, isth. 6.3 µm, sp. 8.3–9.4 µm, lg./br. 1.00–1.23x. Occur.: 13rr.

Fig. 8. 1. *Cosmarium pyramidatum* W. Archer var. *pyramidatum*. **2.** *Bambusina brebisonii* Kütz. ex Kütz. var. *brebisonii*. **3.** *Micrasterias thomasiana* W. Archer var. *notata* (Nordst.) Grönbl. **4.** *Euastrum humerosum* Ralfs var. *affine* (Ralfs ex Ralfs) Wallich. **5.** *Penium spirostriolatum* Barker var. *spirostriolatum*. **6.** *Hyalotheca dissiliens* (J. E. Smith) ex Bréb. var. *dissiliens*. **7.** *Tetmemorus laevis* (Kütz.) ex Ralfs var. *laevis*. **8.** *Desmidium grevillei* (Kütz. ex Ralfs) de Bary var. *grevillei*. **9.** *Micrasterias rotata* (Grev.) Ralfs ex Ralfs var. *rotata*. **10.** *M. truncata* (Corda) ex Bréb. var. *truncata* (phot. by W. W. Kowalski).



S. dejectus (Bréb. ex Bréb.) Teil. var. ***dejectus*** (Fig. 4.38)

Lg. 18.8–25.1 μm , br. 18.8–26.7 μm , isth. 4.7–6.3 μm , sp. 2.3–4.7 μm , th. 20.7 μm , lg./br. 0.93–1.06x. Occur.: 13rr.

S. dickiei (Ralfs) Lillier. var. ***latus*** (Hirano) G. H. Tom. & W. W. Kow., *comb. nov.* – morpha (Fig. 7.73)

Staurastrum dickiei Ralfs var. *latum* Hirano, Contr. Biol. Lab. Kyoto Univ. 9: 304, pl. 39, f. 13. 1959.

In frontal view, cell shape differs slightly from the drawing of the iconotype. Our specimens are smaller; apical and ventral margins less convex; spines shorter. Remaining features correspond to those described originally (cell are broader than long; semicells narrowly fusiform).

This taxon was considered to be identical to *Stauroidesmus dickiei* var. *maximus* (West & West) Thom. by Teiling (1967). However, that point of view is controversial. There is a distinct difference between the two taxa in overall appearance, semicell shape and size, when the iconotypes (*Staurastrum dickiei* var. *maximum* West & West 1895, pl. 8, fig. 19 and *Staurastrum dickiei* var. *latum* Hirano 1959, pl. 39, fig. 13) and the drawings of various authors published in the work of Teiling (1967) and Prescott *et al.* (1982) are compared. Cells of var. “*maximum*” are large (Lg. 46 μm , br. 49 μm , isth. 11 μm – after West & West 1895), almost as long as broad, semicells elliptical, spines arranged either horizontally, slightly recurvate as illustrated in the original drawing of West and West (1895), or curvate as in the drawings in the paper of Teiling (1967). Cells of var. “*latum*” are, however, smaller (Lg. 32.2 μm , br. 39 μm , isth. 7.3 μm – after Hirano 1959), slightly broader than long, semicells narrowly fusiform, spines curvate. We, therefore, consider the taxon *Stauroidesmus* (= *Staurastrum*) *dickiei* var. *latus* as a distinct taxonomic unit, and not a synonym of *Stauroidesmus dickiei* var. *maximus*.

Lg. 20.4–23.6 μm , br. 23.6–25.1 μm , isth. 6.3–9.2 μm , sp. 3.2–4.7 μm , th. 19.5 μm , lg./br. 0.86–0.94x. Occur.: 13rr.

S. incus (Bréb. ex Ralfs) Teil. var. ***incus*** fo. ***minor*** (West & West) Teil. (Fig. 5.53)

Specimens with more convex apices, sometimes with a slightly shallower sinus than described by West and West (1912, pp. 92–93, pl. 113, figs 16–18).

Lg. 13.8–15.7 μm , br. 11.5–14.1 μm , isth. 7.8–9.4 μm , sp. 3.1 μm , lg./br. 1.11x. Occur.: 13r.

S. isthmus (Heimerl) Croasd. var. ***isthmus*** (Fig. 4.34)

Lg. 14.2–25.1 μm , br. 14.2–20.5 μm , isth. 4.7–6.3 μm , sp. 6.3–12.6 μm , lg./br. 1.12–1.22x. Occur.: 13r.

Cosmoastrum hirsutum (Bréb.) Pal.-Mordv. var. ***hirsutum***

Lg. 29.9–40.8 μm , br. 25.3–32.6 μm , isth. 7.9–12.6 μm , sp. 1.1–2.3 μm , lg./br. 1.18–1.29x. Occur.: 12r.

C. muricatiforme (Schmidle) G. H. Tom. var. ***muricatiforme***

Lg. 34.5–48.7 μm , br. 29.9–42.4 μm , isth. 9.2–15.7 μm , lg./br. 1.14–1.31x. Occur.: 12c.

C. muticum (Bréb.) Pal.-Mordv. var. ***muticum*** (Fig. 3.15)

Lg. 20.7 μm , br. 20.7 μm , isth. 8.4 μm , th. 14.9–17.2 μm , lg./br. 1.00x. Occur.: 2rr, 13r.

C. orbiculare (Ralfs ex Ralfs) Pal.-Mordv. var. ***depressum*** (Roy & Bisset) Pal.-Mordv. (Figs 4.39–40)

Lg. 19.8–27.6 μm , br. 18.4–26.4 μm , isth. 6.3–8.0 μm , th. 11.5 μm , lg./br. 1.00–1.07x. Occur.: 13cc.

- var. *hiber*
 Compared p. 156, pl. 12 gins. In front Lg. 25.3–2 Occur.: 13r.
- C. scabrum* (al.-Mordv. – morpha (Fig. 4.29)
 Overall cell well as from ti almost hemisp acute-angled. 23, fig. 4). Our to *Cosmoastru* Lg. 29.9–3 Occur.: 2rr, 12l
 ice differs from the iconotype described by Ralfs (1848, pl. 35, fig. 20) as gs of West and West (West *et al.* 1923, pl. 140, Figs 1–2). Semicells are pical and ventral margins only slightly convex, sinus slightly inflated – es correspond to *Staurastrum subscabrum* fo. *scabrior* W. West (1892, pl. is are slightly smaller, with a different cell wall sculpture – corresponding *astrum*) *scabrum*.
 or. 27.6–31.0 µm, isth. 9.2–14.9µm, th. 28.7 µm, lg./br. 1.08–1.15x.
- C. teliferum* (il.-Mordv. var. *teliferum* (Fig. 4.27)
 Lg. 39.1 µm Occur.: 13c.
 8 µm, isth. 14.9 µm, sp. 4.6–5.7 µm, th. 27.6–29.9 µm, lg./br. 1.06x.
- Staurastrum* *sum* Bréb. *ex* Bréb. var. *controversum* (Fig. 7.79)
 Lg. 26.8–46 0.95x. Occur.: 1
 with pr. 33.3–49.4 µm, isth. 8.6–11.1 µm, th. 25.3 µm, lg./br. 0.84–
- S. furcatum* (x Ralfs) Bréb. var. *furcatum* (Fig. 7.71)
 Lg. 27.2–37.1 µm, isth. 7.4–14.5 µm, lg./br. 1.00x. Occur.: 13rr.
 with pr. 27.2–37.1 µm, isth. 7.4–14.5 µm, lg./br. 1.00x. Occur.: 13rr.
- S. inconspicu* st. var. *inconspicuum* (Fig. 7.72)
 Some specin Palamar-Mordv: slightly broader isthmus than that described by West *et al.* (1923) and 2).
 Lg. 13.8–22.0 µm, br. with pr. 14.9–26.7 µm, isth. 6.9–11.8 µm, lg./br. 0.82–0.97x. Occur.: 13rr.
- S. proboscideum* (Bréb.) W. Archer var. *proboscideum* (Fig. 4.28)
 Lg. 37.9–39.1 µm, br. with pr. 35.6–36.8 µm, isth. 11.5–14.9 µm, th. 26.4 µm, lg./br. 1.06–1.10x. Occur.: 2rr, 13rr.
- Bambusina brebissonii* Kütz. *ex* Kütz. var. *brebissonii* (Figs 7.81 & 8.2)
 Lg. 21.9–31.0 µm, br. 15.7–23.0 µm, 13.3–21.8 µm, ap. 12.6–14.2 µm, lg./br. 1.30–1.40x. Occur.: 2c, 3c, 13cc.
- Desmidium grevillei* (Kütz. *ex* Ralfs) de Bary var. *grevillei* (Figs 6.63 & 8.8)
Desmidium cylindricum Grev., Scott. Crypt. Fl. 5(59): pl. 293. 1827, *nom. inval.* (Art. 13.1(e) of the ICBN).
 Lg. 24.7–31.0 µm, br. 42.0–56.8 µm, isth. 36.1–51.8 µm, th. 44.8 µm, lg./br. 0.45–0.59x. Occur.: 13cc.
 The specific epithet “*grevillii*” was first used by Kützing (1843), but its spelling is incorrect. The epithet was derived from the name of a famous British botanist – Robert Kay Greville. Therefore, the epithet should read “*grevillei*” which would be in accordance with the recommendations of the ICBN, Art. 73C.1(a) (Greuter *et al.* 1988).

- D. swartzii* (A. Agardh) C. Agardh ex Ralfs var. *swartzii* (Fig. 6.64)
Lg. 17.3–21.0 μm , br. 37.1–49.4 μm , isth. 31.4–43.9 μm , lg./br. 0.43–0.47x. Occur.: 13r.
- Hyalotheca dissiliens* (J. E. Smith) ex Bréb. var. *dissiliens* (Figs 6.60 & 8.6)
Lg. 15.7–27.2 μm , br. 25.1–31.0 μm , isth. 23.6–29.9 μm , lg./br. 0.62–0.88x. Occur.: 2c, 3c, 13r.
- H. mucosa* (Mert.) Ehrenb. ex Ralfs var. *mucosa* (Fig. 6.59)
Lg. 14.9–24.0 μm , br. 16.0–24.0 μm , isth. 14.1–22.7 μm , lg./br. 0.68–1.00x. Occur.: 13r.
- Spondylosium pulchellum* (W. Archer) W. Archer var. *pulchellum* (Fig. 6.62)
Lg. 11.5–14.2 μm , br. 9.2–12.6 μm , isth. 3.1–4.7 μm , ap. 3.9–4.4 μm , lg./br. 1.12–1.21x. Occur.: 2rr, 3rr, 13rr.
- Teilingia granulata* (Roy & Bisset) Bourel. var. *granulata* (Fig. 7.80)
Lg. 6.4–11.2 μm , 6.4–9.6 μm , isth. 3.4–4.8 μm , lg./br. 1.00–1.16x. Occur.: 13rr.

CONCLUDING REMARKS

A total of 81 taxa of desmids representing 23 genera were identified. The number of taxa occurring in each of the "suchary" ranged from 16 in "suchar" Wielki to 53 in "suchar" Rzepiskowy. It should be emphasized that each "suchar" was characterized by a distinct desmid flora, which resulted from different species composition and the quantitative dominance of other taxa (Tables 1 and 2).

ENUMERATION OF OTHER ALGAE FOUND IN THE STUDY AREA

CYANOPHYCEAE

- Gloeocapsa turgida* (Kütz.) Holler. var. *turgida*. Occur.: 2r.
Merismopedia elegans A. Braun var. *elegans*. Occur.: 12r, 13rr.
Merismopedia glauca (Ehrenb.) Näg. var. *glauca*. Occur.: 12rr.
Microcystis aeruginosa Kütz. var. *aeruginosa*. Occur.: 12r.

XANTHOPHYCEAE

- Ophiocytium parvulum* (Perty) A. Braun var. *parvulum*. Occur.: 12rr, 13r.
Pseudostaurastrum hastatum (Reinsch) Chodat var. *hastatum* (Figs 6.57–58). Occur.: 13rr.

Table 1. Dominant taxa of desmids in study area.

Taxa	"Suchary"	II (2)	III (3)	Wielki (12)	Rzepiskowy (13)
<i>Closterium lunula</i>		+			
<i>Cosmarium pyramidatum</i>		+			
<i>Cylindrocystis brebissonii</i>			+		
<i>Cylindrocystis crassa</i>			+		
<i>Closterium baillyanum</i> var. <i>alpinum</i>			+		
<i>Closterium striolatum</i>			+		
<i>Micrasterias truncata</i>			+		
<i>Actinotaenium silvae-nigrae</i>			+	+	
<i>Actinotaenium silvae-nigrae</i> var. <i>parallelum</i>				+	
<i>Témemorus brebissonii</i> fo. <i>minor</i>				+	
<i>Euastrum ansatum</i> var. <i>pyxidatum</i>					+
<i>Cosmoastrum orbiculare</i> var. <i>depressum</i>					+
<i>Bambusina brebissonii</i>					+
<i>Desmidium grevillei</i>					+

BACILLARIOPHYCEAE

Frustulia rhomboides (Ehrenb.) de Toni var. *saxonica* (Rabenh.) de Toni. Occur.: 12r.
Tabellaria flocculosa (Roth) Kütz. var. *flocculosa*. Occur.: 2r, 13r.

CHLOROPHYCEAE

Eremosphaera viridis de Bary var. *viridis* (Fig. 7.66). Occur.: 13rr.
Microthamnion kuetzingianum Näg. var. *kuetzingianum*. Occur.: 2r.
Microthamnion strictissimum Rabenh. var. *strictissimum*. Occur.: 2rr, 3r.
Oedogonium pusillum Kirchn. var. *pusillum* (Fig. 6.55). Occur.: 12r.
Oedogonium sociale Witttr. var. *sociale* (Fig. 6.56). Occur.: 12rr.
Pediastrum angulosum (Ehrenb.) ex Menegh. var. *angulosum*. Occur.: 12r.
Scenedesmus acutus Meyen var. *acutus*. Occur.: 12c.

RHODOPHYCEAE

Batrachospermum vagum (Roth) C. Agardh var. *vagum*. Occur.: 12rr.

Table 2. The number of desmid taxa in the individual "suchary".

Taxa \ "Suchary"	II (2)	II (3)	Wielki (12)	Rzepiskowy (13)
<i>Mesotaeniaceae</i>				
<i>Spirotaenia</i>				1
<i>Cylindrocystis</i>	2	3		1
<i>Netrium</i>	2	1		1
<i>Gonatozygaceae</i>				
<i>Gonatozygodon</i>				1
<i>Peniaceae</i>				
<i>Penium</i>	1	3		
<i>Closteriaceae</i>				
<i>Closterium</i>	5	4	3	
<i>Desmidiaceae</i>				
<i>Haplotaenium</i>				1
<i>Pleurotaenium</i>			1	2
<i>Tetmemorus</i>	1	1	3	3
<i>Euastrum</i>	4		2	9
<i>Micrasterias</i>	4	3	1	2
<i>Actinotaenium</i>		4	3	1
<i>Cosmarium</i>	3	1		8
<i>Xanthidium</i>				1
<i>Arthrodesmus</i>				1
<i>Staurodesmus</i>				6
<i>Cosmoastrum</i>	2		3	4
<i>Staurastrum</i>	1			4
<i>Bambusina</i>	1	1		1
<i>Desmidium</i>				2
<i>Hyalotheca</i>	1	1		2
<i>Spondylosium</i>	1	1		1
<i>Teilingia</i>				1

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STRESZCZENIE

Praca niniejsza dotyczy flory desmidii czterech jeziorok humotroficznych (nazywanych przez miejscową ludność sucharami) Wigierskiego Parku Narodowego, a mianowicie: s. II, s. III, s. Wielkiego oraz s. Rzepiskowego (Fig. 1).

Wyżej wymienione suchary są to małe, płytkie (średnia głębokość 1.9–3.6 m) bezdopływowe i bezodpływowe zbiorniki o dość zróżnicowanej powierzchni (0.33–8.9 ha) otoczone borem sosnowo-świerkowym. Woda ich posiada odczyn od kwaśnego do prawie obojętnego (4.6–6.8 pH), bardzo niskie przewodnictwo elektrolityczne (13–31 μ S), małą zawartość wapnia (1.6–3.6 mg/dm³).

Ogółem, na wszystkich sucharach, zidentyfikowano 81 taksonów reprezentujących 23 rodzaje. Liczba taksonów występujących w poszczególnych sucharach była dość zróżnicowana np. w sucharze Wielkim zanotowano 16 taksonów, natomiast w sucharze Rzepiskowym trzykrotnie więcej (53 taksony). Na szczególne podkreślenie zasługuje wyraźna odrębność flory desmidii każdego z sucharów. Przejawia się ona zarówno odmiennym składem gatunkowym, jak i dominacją ilościową innych taksonów (Tab. 1 i 2).

Dokonano pewnych korekt taksonomicznych, a mianowicie: zaproponowano zmianę rangi taksonu *Euastrum ansatum* Ehrenb. ex Ralfs var. *dideltiforme* Duceell. na *E. ansatum* Ehrenb. ex Ralfs var. *ansatum* fo. *dideltiforme* (Duceell.) stat. nov., przeniesiono takson *Pleurotaenium minutum* (Ralfs) Delp. var. *groenbladii* Croasd. do rodzaju *Haplotaenium* zaś *Staurastrum dickiei* Ralfs var. *latum* Hirano do rodzaju *Staurodesmus*, ponadto poprawiono błąd ortograficzny tkwiący w epitecie gatunkowym taksonu – *Desmidium grevillii*. Właściwa jego nazwa winna brzmieć “*grevillei*”.