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DIATOMS FROM
SOUTHWEST GREENLAND

BY
NIELS FOGED

WITH 2 FIGURES AND 1 TABLE IN THE TEXT,
AND 29 PLATES

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Abstract

In material collected in 1957 and 1970 in localities situated between 59°44'N and 61°22'N in SW Greenland a total of 465 oligohalobous diatoms and 260 mesohalobous and polyhalobous diatoms is shown, 4 nov. var. and 4 nov. fo. included. A great number of the species and their varieties are not previously shown in Greenland.

Chemical analyses of 31 water samples are given. 439 photos of 284 different diatoms (193 oligohalobous and 91 mesohalobous or polyhalobous forms) are reproduced in 29 plates.

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PREFACE

In 1957 the board of the Geological Survey of Greenland did me the favour of permitting as a diatomologist to take part in the summer expedition to the Ivigtut area. Thus I obtained possibilities of transport and residence during my collection of diatom material.

I am much obliged to the board of the Geological Survey of Greenland, and I express my gratitude particularly to professor A. NOE NYGAARD and professor A. ROSENKRANTZ, who have followed my diatom investigations with interest and who in every possible way have supported me inestimably during the years I have devoted to diatoms.

In 1970 I was enabled to collect diatoms somewhat more southerly as the principal of the school in Narssaq Mr. S. A. GJELSTRUP took care of the transport and quartering in the area. For this I am gratefull.

At the same time Mr. B. FREDSKILD, museum keeper, collected diatom material for me in the southernmost part of Greenland, and my thanks for material from there are due to him as well as to other participants in the Kap Farvel Expedition 1970.

The water samples, brought home by me in 1957 and by the Kap Farvel Expedition 1970, are analysed by the chemical laboratory of the Geological Survey of Denmark, and I am obliged to the leader there, Mr. H. WERNER CHRISTENSEN, state geologist, for the analyses.

I also have to thank the diatomologist MAX MØLLER, Odense, for constant interest in my investigations, for many valuable and inciting discussions of the material treated, and for some of the photos (marked with an asterisk), brought in this paper.

Finally I offer the board of the CARLSBERG FOUNDATION my respectful thanks for valuable support to the performance of the treatise.

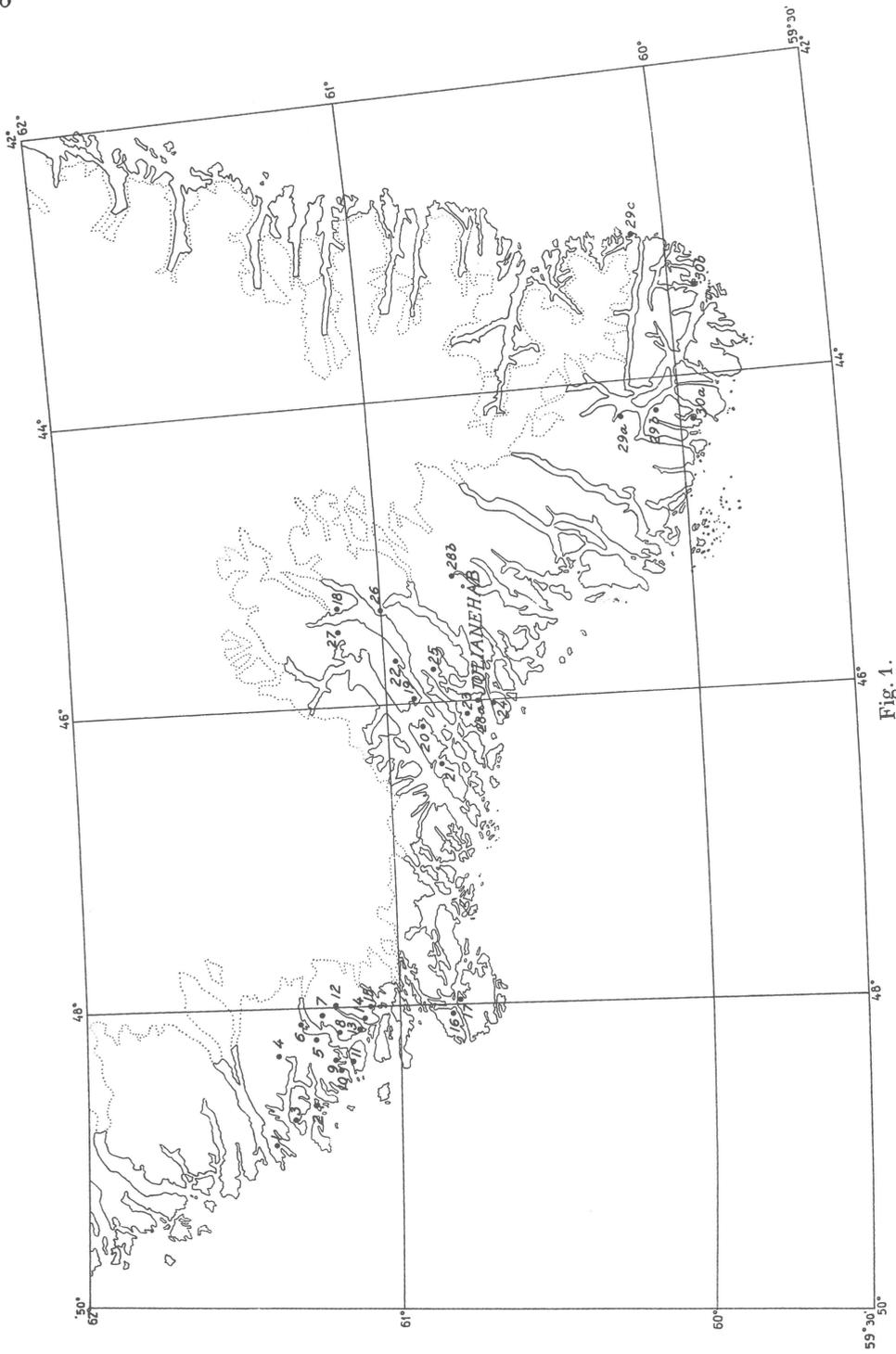


Fig. 1.

INTRODUCTION

This treatise ranks with my previous papers on Greenland diatoms. In N. FOGED, 1953 the flora of freshwater diatoms in an area of Peary Land, North Greenland, is treated. In N. FOGED, 1958 the flora of freshwater diatoms in an area between Upernavik and Egedesminde in the western part of Greenland is dealt with, and in N. FOGED, 1955 the material originated in an arid area of the interior part of Sdr. Strømfjord in West Greenland. In the last-mentioned paper the diatom flora as well in freshwater localities as in more haline localities is treated. These three papers all of them deal with the recent flora, whereas N. FOGED, 1972 discusses the subfossil diatom flora in 2 cores in Peary Land and 2 cores from the southernmost Greenland.

I collected the material for the present treatise in 1957 in the neighbourhood of Ivigtut (localities Nos 1-17), and in 1970 in the surroundings of Narssaq (Loc. Nos 18-26). The samples from the localities Nos 27-30 are collected by participants of the Kap Farvel Expedition 1970.

The localities Nos 1-30 are situated in the southwestern part of Greenland between $59^{\circ}44'N$ and $61^{\circ}22'N$. They are marked on the map fig. 1.

WATER SAMPLES AND WATER ANALYSES

For chemical analyses 3 litres of water were brought home from each locality. The analyses are performed by the chemical laboratory of the Geological Survey of Denmark. The pH values, given in the passage Localities and Samples, are determined in the locality colorimetrically by Merck's Universalindikator, simultaneously with the collection of the diatoms.

The results of the chemical analyses are given in table 1 and in the diagram fig. 2. It is seen that apart from the samples Nos. 21 and xx (thermal spring), the content of dissolved substances (electrolytes) is very small, the anion- milliequivalent/l varying between 0.17 and 1.67. Even the highest of the values is lower than the values we use to find in Danish localities very poor in electrolytes.

There is a considerable resemblance to Greenland localities further to the north from where similar analyses are given in N. FOGED, 1958. The analyses in this paper are tabulated in the same way as the analyses there in order to facilitate comparison.

As in the area between Egedesminde and Upernavik, investigated in 1952, very low Cl^- values are observed here in the freshwater localities of SW Greenland, though all localities are situated near the sea.

The content of SO_4^{--} here is also markedly low. Thus the values are almost all of them lower than the values found in the northerly area. This is also true of the content of Ca^{++} in most of the samples.

No particular importance can be attached to the CO_2 value, the analyses being performed several weeks after the sampling. The O_2 consumption, determined by KMnO_4 , is possibly nearly at a minimum of what to be found in newly sampled water, but no doubt the content of organic matter in natural fresh water in by far the greatest number of Greenland localities is very small the greater part of the year.

Water sample No. 21 is a typical brackishwater sample, much similar to the sample Umanak No. 2 in N. FOGED, 1958 pp. 10-11. The sample xx (thermal spring) is absolutely diverging from the rest, its content of anions being almost 16 milliequivalent/l. Cl^- ions are extremely dominating, but also SO_4^- ions are present in rather large quantities. The hardness of the water from the thermal spring, the temperature of which

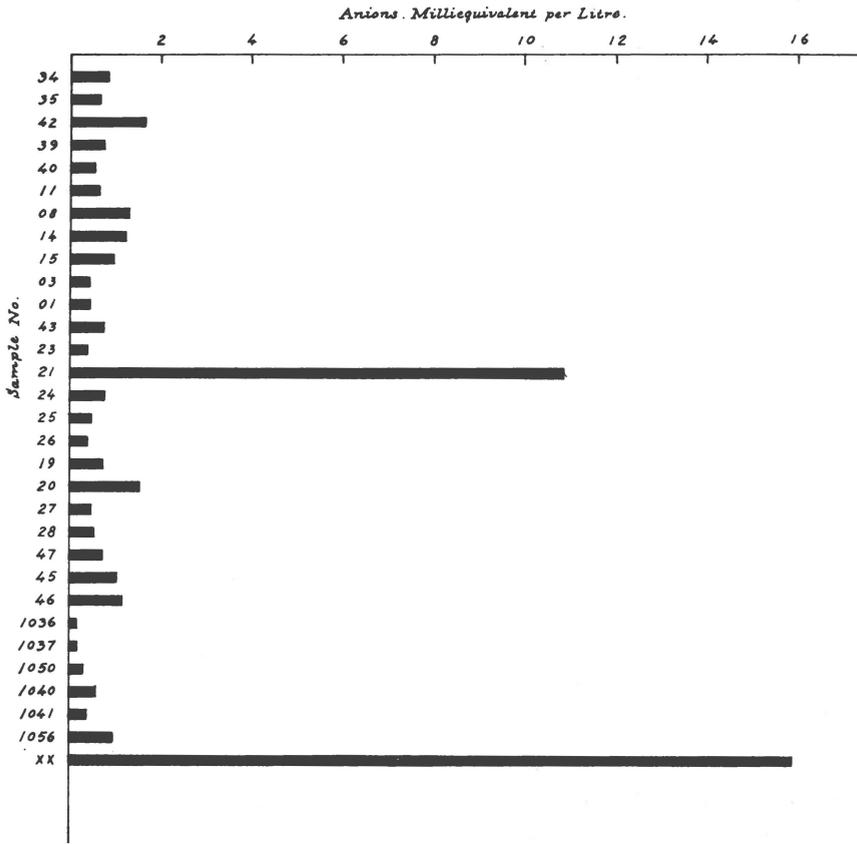


Fig. 2.

is determined to 32° C, is on a level with that of very hard subsoil water in Denmark, whereas the hardness of the rest of the water samples is exceedingly low.

It is remarkable that the thermal water contains rather great quantities of F-ions, 4.3 mg/l, and small quantities of Zn-ions, 0.08 mg/l (not stated in table 1).

NaHCO₃ is not shown in the water samples from 1957, whereas it is present in rather considerable quantities in 3 samples from 1970.

Tabl

Locality No.	Water sample No.	Diatom sample No.	mg/l									
			HCO ₃ ⁻	SO ₄ ⁻⁻	Cl ⁻	NO ₃ ⁻	Ca ⁺⁺	Mg ⁺⁺	Fe ⁺⁺	Na ⁺	SiO ₂	O cor
1	34	405-408	34	3.1	9	0	7.3	0.4	<0.1	11	0.2	1.8
1	35	416-418	24	2.4	7	0	6.3	0.6	<0.1	7	<0.1	1.8
2	42	504, 506	49	5.3	27	0	13	1.4	<0.1	21	0.2	2.8
3	31	369	24	1.1	12	0	3.4	0.6	<0.1	12	<0.1	0.8
4	40	473	21	3.6	4	0	3.1	0.5	<0.1	8	0.2	1.8
5	11	115	24	1.6	7	0	3.7	0.7	<0.1	9	0.1	2.0
6a	8	69	27	5.5	26	0	7.3	2.8	<0.1	16	0.6	1.7
6b	14	141	24	6.9	24	0	6.7	1.7	<0.1	17	1.0	1.7
6b	15	148	12	3.5	24	0	1.6	0.9	<0.1	18	0.1	1.5
7	3	21	24	1.6	1	0	3.6	0.5	<0.1	6	<0.1	1.6
8	1	09	24	2.6	1	0	3.6	1.4	<0.1	3	0.2	3.6
8	43	516	40	1.0	2	0	8.4	0.9	<0.1	6	0.4	1.2
9	23	284	15	2.1	4	0.4	3.1	0.5	<0.1	5	<0.1	0.9
10	21	245, 246	31	20.0	352	0.2	19	20	<0.1	190	0.2	2.4
11	24	308	34	1.2	7	0	8.3	1.2	<0.1	6	<0.1	1.8
11	25	316, 320	24	0.4	3	0	4.4	0.5	<0.1	5	0.4	2.0
11	26	327	18	1.6	2	0.2	2.9	0.5	<0.1	5	<0.1	0.9
14	19	211	34	4.1	3	0	7.4	0.8	<0.1	6	<0.1	0.8
14	20	224, 225	24	6.9	35	0.2	6.3	2.4	<0.1	23	0.4	0.8
15	27	341	21	0.7	4	0	3.9	0.7	<0.1	5	1.2	1.8
15	28	350	18	0.2	8	+	2.0	0.3	<0.1	9	<0.1	1.7
16	47	547-550	18	1.7	13	0	2.4	0.6	<0.1	12	1.0	1.2
17	45	529	15	3.5	25	-	2.7	1.7	<0.1	17	1.2	1.0
17	46	538, 541	24	1.9	25	0	3.7	1.5	<0.1	20	0.6	0.8
29	1036	19 K.F.	3.0	2.0	2.8	0	0.99	0.36	<0.05	1.9	0.3	-
29	1037	13 K.F.	1.9	1.0	4.6	+	0.89	0.37	<0.05	3.0	0.6	-
29	1050	18 K.F.	7.3	3.0	4.2	0	1.8	0.75	<0.05	3.0	1.1	-
30	1040	17 K.F.	6.5	4.0	14.0	0	1.6	0.83	<0.05	9.5	1.4	-
30	1041	21 K.F.	0.7	3.0	11.0	0	1.2	0.64	<0.05	5.4	0.3	-
30	1056	20 K.F.	10.0	8.0	22.0	0	1.9	1.6	<0.05	15	1.5	-
28	xx	08 K.F.	18	43	520	0	112	0.93	<0.1	232	36	1.5

O ₂ ee	Hard- ness total	millieq./l								Anions millieq./l	NH ₄ ⁺ mg/l	NaHCO ₃ mg/l
		HCO ₃ ⁻	SO ₄ ⁻	Cl ⁻	Ca ⁺⁺	Mg ⁺⁺	Na ⁺	CO ₂ free	Hard- ness total			
-	1.09	0.55	0.065	0.25	0.36	0.033	0.47	0	0.39	0.865	0.1	
4	1.01	0.40	0.050	0.20	0.31	0.049	0.29	0.20	0.36	0.650	0.1	
-	2.16	0.80	0.11	0.76	0.65	0.12	0.90	0	0.77	1.67	<0.1	
-	0.62	0.40	0.023	0.34	0.17	0.049	0.54	0	0.22	0.763	0.1	
-	0.53	0.35	0.075	0.11	0.15	0.041	0.34	0	0.19	0.535	<0.1	
-	0.67	0.40	0.033	0.20	0.18	0.058	0.40	0	0.24	0.633	0.1	
3	1.65	0.45	0.11	0.73	0.36	0.23	0.70	0.15	0.59	1.29	0.1	
3	1.32	0.40	0.14	0.68	0.33	0.14	0.75	0.15	0.47	1.22	<0.1	
3	0.42	0.20	0.073	0.68	0.08	0.074	0.80	0.15	0.15	0.753	<0.1	
2	0.62	0.40	0.033	0.03	0.18	0.041	0.24	0.10	0.22	0.463	<0.1	
2	0.84	0.40	0.054	-	0.18	0.12	0.15	0.10	0.30	0.454	<0.1	
2	1.37	0.65	0.021	0.06	0.42	0.072	0.24	0.10	0.49	0.731	0	
-	0.53	0.25	0.044	0.11	0.15	0.041	0.21	0	0.19	0.404	0.1	
-	7.26	0.50	0.42	9.93	0.95	1.64	8.26	0	2.59	10.85	0.2	
2	1.43	0.55	0.025	0.20	0.41	0.099	0.27	0.10	0.51	0.775	<0.1	
3	0.73	0.40	0.008	0.08	0.22	0.041	0.23	0.15	0.26	0.488	<0.1	
3	0.50	0.30	0.033	0.06	0.14	0.041	0.21	0.15	0.18	0.393	<0.1	
2	1.23	0.55	0.085	0.08	0.37	0.066	0.28	0.10	0.44	0.715	0.1	
-	1.43	0.40	0.14	0.99	0.31	0.20	1.02	0	0.51	1.53	<0.1	
3	0.70	0.35	0.015	0.11	0.19	0.058	0.23	0.15	0.25	0.475	0	
4	0.36	0.30	0.004	0.22	0.10	0.025	0.40	0.20	0.13	0.524	0	
4	0.48	0.30	0.035	0.37	0.12	0.049	0.54	0.20	0.17	0.705	0	
3	0.76	0.25	0.073	0.71	0.13	0.14	0.76	0.15	0.27	1.033	0.2	
2	0.84	0.40	0.040	0.71	0.18	0.12	0.85	0.10	0.30	1.150	0.1	
-	0.22	0.05	0.04	0.08	0.05	0.03	0.09	-	0.08	0.17	-	16
-	0.20	0.03	0.02	0.13	0.04	0.03	0.13	-	0.07	0.18	-	14
-	0.42	0.12	0.06	0.12	0.09	0.06	0.13	-	0.15	0.30	-	
-	0.42	0.11	0.08	0.39	0.08	0.07	0.41	-	0.15	0.58	-	5.9
-	0.31	0.01	0.06	0.31	0.06	0.05	0.23	-	0.11	0.38	-	24
-	0.62	0.17	0.17	0.62	0.09	0.13	0.65	-	0.22	0.96	-	
-	15.9	0.30	0.90	14.66	5.59	0.076	10.09	-	5.67	15.86	0.8	

LOCALITIES AND SAMPLES

In the map fig. 1 all localities investigated are indicated.

The geographical latitudes and longitudes (West of Greenwich) given in the text are approximately determined on maps in scale 1:100.000 (Loc. Nos 1–17) and 1:80.000 (Loc. Nos 18–26). The positions of Loc. Nos 27–30 are given by B. FREDSKILD.

1957

1

Tigssalúp ilua

61°22' N, 48°46'–55' W

Water samples Nos. 34, 35. 12 localities. 24 diatom samples. 1957 July 16th–17th.

Nos. 394, 395/1957: Moss from a dip in a bog with rain water.

Nos. 396, 397/1957: Vegetation from a puddle, 1 m², in a bog.

Nos. 405, 406, 408/1957: Scrapings from boulders from a depth of 1 m in a largish lake(1), 80 m a.s.l. Clear water. pH 6.5. Water sample No. 34.

Nos. 409, 410, 411/1957: Mud from a depth of 1.5 m in a mountain pool (diam. 20 m). pH 6.4.

No. 416/1957: Moss, No. 417/1957: Mud from a depth of 1 m, and No. 418/1957: *Chara* from a lake(2) 20 m a.s.l. Maximum depth 1 m. pH 6.4. Water sample No. 35.

No. 422/1957: Scrapings from stones in a rock pool (50×5–10 m, max. depth 2 m). pH 7.3.

No. 423/1957: Sediment from the bottom of the above-mentioned pool.

No. 424/1957: Mud from a pool, 50×5–10 m. Maximum depth 2 m. pH 7.3.

No. 425/1957: *Potamogeton* from a depth of 0.5 m in a pool in a bog.

Nos. 427, 429/1957: Scrapings from stones (depth 10–30 cm) in a pool (diam. 50 m) with boulders at the bottom. Depth more than 2 m. pH 6.8.

No. 432/1957: *Potamogeton* and No. 433/1957: Bottom sediment from a pool, 20×8 m, depth 50–75 cm. pH 8.0.

- No. 435/1957: Coatings on stones and No. 436/1957: Bottom sediment from a pool (diam. 50 m) with sandy bottom almost without vegetation. pH 6.7.
- No. 444/1957: Crusts at the bottom of a pool (diam. 5 m and depth 40–50 cm) in a meadow with *Salix*, 50 m from the shore and 10 m a.s.l.

2

Isa

61°16'–17' N, 48°38'–42' W

- Water sample No. 42. 3 localities. 4 diatom samples. 1957 July 19th.
- No. 498/1957: Crust on sandy bottom from a depth of 30–40 cm in a pool with clear water, 100 m from the coast, 30–40 m a.s.l. Dimensions 10×5 m, depth 30–40 cm. pH 5.5.
- No. 502/1957: Mud from an *Isoëtes* pool, 100 m from the coast, 20–30 m a.s.l. Dimensions 15×5 m, depth 30–50 cm. Pale brownish water.
- No. 504/1957: Plant residues washed up near the shore and No. 506/1957: Scrapings from stones from a depth of 20–30 cm in a lake, 125×50 m, depth 1.5–2.0 m, in a bog near the coast. pH 6.3. Water sample No. 42.

3

Törnârssuk

61°22' N, 48°44' W

- Water sample No. 31. 3 localities. 4 diatom samples. 1957 July 15th.
- No. 369/1957: Mud from a depth of 1.5 m in a lake. Water sample No. 31.
- No. 376/1957: Mud from the bottom at a depth of 1.5 m and No. 377/1957: Mud taken 10 cm beneath the bottom at a depth of 1.5 m in a pool, diameter 20 m, depth 2–3 m. pH 6.4.
- No. 387/1957: Mud from the bottom of a pool, diam. 8 m, depth 1.5 m. pH 6.3.

4

Törnârssuk

61°22' N, 48°18'–22' W

- Water sample No. 40. 2 localities. 3 diatom samples. 1957 July 18th.
- No. 473/1957: Scrapings from boulders at a depth of 1 m in a lake, 100×125 m, with a steep fall towards greater depth. Clear water. pH 6.3. Water sample No. 40.
- No. 479/1957: Scrapings from stones at a depth of 10–30 cm and No. 481/1957: Moss from a depth of 50–75 cm in a pool, 30×20 m, depth 75 cm. pH 6.3.

5

Bjørnedal

61°19' N, 48°13' W

- Water sample No. 11. 9 localities. 10 diatom samples. 1957 July 5th.
- No. 93/1957: Mucous coatings from the bottom of a pool (4×5 m) with boulders.
- No. 94/1957: Green-blackish coatings from an oozing rock wall.
- No. 95/1957: Moss from another oozing rock wall (gradient 60°).
- No. 96/1957: Moss from the source of a spring poor in water. pH 6.3.
- No. 99/1957: Gelatinous coatings and No. 100/1957: Mud from the bottom of a shallow puddle, 0.75×1.0 m, depth 2–3 cm. pH 6.2.
- No. 106/1957: Lumps of algae (*Nostoc?*) from a groove in a bog area. pH 6.0.
- No. 111/1957: Moss from a puddle (0.8×0.4 m). pH 6.2.
- No. 115/1957: Mud from the bottom of a *Sparganium* pool (20×15 m, max. depth 0.5–0.75 m). Clear water. pH 6.2. Water sample No. 11.
- No. 136/1957: Moss from stones in a small watercourse 50 m a.s.l.

6

Bjørnefjeld

a. 61°18' N, 48°07' W

- Water sample No. 8. 3 localities. 3 diatom samples. 1957 July 4th.
- No. 59/1957: *Callitriche* from fast-running water in outlet from a lake. pH 6.2.
- No. 69/1957: *Myriophyllum* from a lake with clear water. pH 6.4. Water sample no. 8.
- No. 72/1957: Moss with coatings of green algae from fast-running water in the outlet from above-mentioned lake.

b. 61°18'–20' N, 48°07'–08' W

- Water samples Nos. 14, 15. 6 localities. 6 diatom samples. 1957 July 4th.
- No. 141/1957: Scrapings from stones in a lake on the north-eastern slope of Bjørnefjeld. Clear water. pH 6.5. Water sample No. 14.
The lake has an outlet to Arasuk Fjord.
- No. 147/1957: Scrapings from stones in the same lake as No. 141, but from the opposite shore.
- No. 148/1957: Scrapings from stones in a lake situated at a higher level than the above-mentioned. Clear water. *Sparganium* all over the shallow lake. pH 6.2. Water sample No. 15.
- No. 152/1957: Floating brown mucous masses in a small pool (1.0×1.5 m), situated 20 m from the last-mentioned lake in a flat ground with *Betula*. pH 6.5

- No. 153/1957: Floating brown mud in a pool (1.0×1.5 m), situated 2 m from above-mentioned pool.
- No. 156/1957: *Myriophyllum* from a depth of 1.5 m in a lake with clear water and boulders at the shore, but gravel, sand and clay farther away. pH 7.2.

7

61°14' N, 48°03'–06' W

- Water sample No. 3. 4 localities. 4 diatom samples. 1957 July 2nd.
- No. 21/1957: Scrapings from stones from a depth of 10–30 cm in Langesø, 280 m a.s.l. The length of the lake is 3 km, the breadth varying. Clear water. pH 6.4. Water sample No. 3.
- No. 26/1957: Moss in outflow from oozing spring 10 m above the water surface of Langesø and 50 m from the shore of the lake, situated on a faintly sloping hillside partly covered with herbs and partly with willow.
- No. 28/1957: *Callitriche* from the outlet from an oozing spring 10 m above lake level near Langesø. pH 6.4.
- No. 36/1957: Moss from the outlet of Langesø, 200 m from the lake. Clear water. pH 6.3.

8

Iviglut

61°10'–13' N, 48°10'–12' W

- Water samples Nos. 1, 43. 8 localities. 10 diatom samples. 1957 July 1st, 14th and 22nd.
- No. 01/1957: Scrapings from stones in a pool (8×8 m, max. depth 50 cm) in the mountains between Ivigtut and Taylers Havn.
- No. 04/1957: Moss from an oozing outlet from the above-mentioned pool.
- No. 09/1957: *Myriophyllum* from Lake 1, Ivigtut South, from a depth of 50 cm. Clear water. pH 6.4. Water sample No. 1.
- No. 10/1957: *Chara* from the bottom of the above-mentioned lake from a depth of 1 m.
- No. 16/1957: Mud from a small river in the mountains near Ivigtut.
- No. 356/1957: Scrapings from stones from the river dam above the waterworks in Ivigtut. pH 6.3.
- No. 357/1957: *Myriophyllum* from the bottom of the river (pond) above the dam.
- No. 367/1957: Mud from a pool (25 m diam.) with boulders near Ivigtut. pH 6.3.
- No. 516/1957: Mud from a depth of 1.0 m in the waterworks pond in Ivigtut. pH 6.7. Water sample No. 43.
- No. 528/1957: Mud from a depth of 50–75 cm from the big pool SE of the water tank in Ivigtut.

9

Inínguit

61°13' N, 48°33' W

Water sample No. 23. 5 localities. 5 diatom samples. 1957 July 11th.

No. 279/1957: Mud from a small basin in outlet from a spring near lake (1), 10–15 m above the lake surface. pH 6.4.

No. 284/1957: Moss on stones in outlet from lake(1). Water sample No. 23.

No. 287/1957: Moss from shore of lake (1).

No. 295/1957: Sandy mud from a depth of 50 cm in lake (3). pH 6.2.

No. 303/1957: Moss from shore of a *Sphagnum* pool, 6×3 m, depth 10–15 cm, situated in a *Sphagnum-Carex* bog. pH 5.2.

10

Kûngnât Bugten

61°10'–12' N, 48°23'–30' W

Water sample No. 21. 6 localities. 8 diatom samples. 1957 July 10th.

No. 241/1957: Brownish coatings on the sand bottom at the shore by low tide.

No. 242/1957: *Phaeophyceae* threads on stones on the tidal flat.

Nos. 243, 244/1957: Brownish mucous masses in a pool (3×4 m) in a salt meadow.

Nos. 245, 246/1957: Moss from an irregular *Hippuris* pool (25×6–7 m) in a *Carex* meadow. pH 4.8. Water sample No. 21.

No. 257/1957: Moss from a fast-running small torrent with moss on banks and bottom.

No. 260/1957: Moss from slow-running, oozing water in a groove in a bog area.

11

Arsuk Ø

61°09' N, 48°23' W

Water samples Nos. 24, 25, 26. 5 localities. 7 diatom samples. 1957 July 11th and 12th.

No. 275/1957: *Chlorophyceae* in fast-running water of a largish torrent W of Arsuk.

No. 308/1957: Mud from a depth of 1.0–1.5 m in a lake (1), 100×30 m. Clear water. *Potamogeton* in the lake at a depth of 50–75 cm. pH 6.2. Water sample No. 24.

Nos. 316, 320/1957: Moss from the shore and No. 317/1957: Scrapings from stones at a depth of 2–5 cm in a lake (2). Sparse vegetation of *Hippuris* and *Eriophorum* all over the very shallow lake, situated a few meters a.s.l. Water sample No. 25.

- No. 318/1957: *Callitriche* and moss from a depth of 20 cm in a *Hippuris-Eriophorum* pool (30×15 m). pH 6.4.
 No. 327/1957: Moss from fast-running water in a largish river (1). Water sample No. 26.

12

Íka

61°07' N, 48°00' W

- 7 localities. 7 diatom samples. 1957 July 8th and 9th.
 No. 163/1957: Crusts of algae on bottom of a pool, diam. 1 m, depth 5 cm, situated in a meadow with *Salix*. pH 6.2.
 No. 165/1957: *Chlorophyceae* from a pool, 5×3 m, depth 10 cm, with *Batrachium*. pH 6.7.
 No. 168/1957: *Batrachium* from a big irregular pool in a bog. pH 6.7.
 No. 171/1957: Withered *Carex* leaves from a pool, 6×2.5 m, depth 20–30 cm, with *Sparganium* vegetation. pH 6.6.
 No. 195/1957: Algae from bottom of a pool, 3×2 m, depth 5 cm, in herb meadow. pH 6.3.
 No. 205/1957: Scrapings from stones in the outlet of a river in a system of beach ridges.
 No. 206/1957: Coatings from stones in a pool, 30×10 m, depth 30–40 cm, in a system of beach ridges. pH 6.5.

13

Ikapynt

61°07' N, 48°08'–10' W

- 3 localities. 3 diatom samples. 1957 July 10th.
 No. 231/1957: Brown floating masses at the bottom of a pool (3×2 m, depth 10–15 cm) in a salt meadow.
 No. 233/1957: Moss with brown coatings in a pool.
 No. 235/1957: Moss from a pool (3×2 m) in a bog with *Empetrum*, *Salix* and *Carex*.

14

Kangârssuk (west)

61°07' N, 48°06' W

- Water samples Nos. 19, 20. 7 localities. 8 diatom samples. 1957 July 19th.
 No. 208/1957: Bottom mud and algae from a pool, 3×1 m, situated 3 m from a large lake, on a slope with *Salix* and *Carex*.
 No. 211/1957: Scrapings from boulders near shore in a large lake. Water sample No. 19.
 No. 217/1957: Moss and mud from a pool (2), diam. 50 cm.

- No. 219/1957: Moss between boulders in outlet from a small lake.
 No. 220/1957: Crusts of algae on the bottom of a pool, 5×4 m, depth 5–10 cm, in a *Carex* bog. pH 6.2.
 No. 221/1957: Brownish masses of algae, floating and from the bottom of a pool, 5×4 m, depth 5–10 cm, in a bog. pH 6.2.
 No. 224/1957: Scrapings from stones from a depth of 20–30 cm in a lake near the coast. pH 6.6. Water sample No. 20.
 No. 225/1957: Brown mucous masses from the above-mentioned lake.

15

Kangârssuk (east)
 61°06' N, 48°00' W

- Water samples Nos. 27, 28. 3 localities. 4 diatom samples. 1957 July 16th.
 No. 341/1957: Scrapings from stones from a depth of 10–20 cm and No. 342/1957: Moss from a depth of 1 m in a large lake between Kangârssuk and Qornoq Fjord. Belt of moss at a depth of 0.75–1.00 m. Clear water. pH 6.3. Water sample No. 27.
 No. 344/1957: Floating moss and crust on bottom in a shallow pool, depth up to 15 cm, 30×10 m, situated in a bog with *Eriophorum* and *Carex* together with *Sphagnum*.
 No. 350/1957: Scrapings from stones a depth of 20–30 cm in a small lake, 100×25 m. Sparse vegetation of *Sparganium*. pH 6.2. Water sample No. 28.

16

Alángorssuaq
 60°46'–47' N, 48°02'–03' W

- Water sample No. 47.3 localities. 7 diatom samples. 1957 July 25th.
 Nos. 547, 548/1958: Scrapings from stones on shore, No. 549/1957: Moss and mucous coatings at a depth of 10–30 cm, No. 550/1957: Moss from stones at a depth of 10–15 cm in a lake. pH 5.7. Water sample No. 47.
 No. 552/1957: Mud from a pool, 1.5×2.0 m, 15 m from the above-mentioned lake.
 Nos. 554, 555/1957: Mud and moss from stones with mucous coatings in outlet from above-mentioned lake.

17

Nunarssuit
 60°44' N, 47°48' W

- Water samples Nos. 45, 46. 5 localities. 7 diatom samples. 1957 July 24th.
 No. 529/1957: Scrapings from stones from a depth of 30–50 cm in a pool, 40×15 m, 100 m from the coast, 5–10 m a.s.l. *Callitriche* and moss

here and there on the bottom of the pool. Clear water. pH 5.3. Water sample No. 45.

No. 533/1957: Moss from the bottom of a pool, diam. 75 m, 100–150 m from the coast, 10 m a.s.l. Maximum depth 50 cm. pH 5.2.

No. 537/1957: Moss and mud from groove in a bog.

Nos. 538, 541/1957: Scrapings from stones from a depth of 10–30 cm, and No. 540/1957: *Chlorophyceae* and moss from stones in a largish lake, 200–300×100 m. Clear water. pH 5.2. Water sample No. 46.

No. 543/1957: Scrapings from stones from a depth of 20–30 cm in a lake, 300×50 m, at a distance of 50 m from the above-mentioned lake. With *Callitriche* and moss. pH 5.3.

1970

18

Narssarssuaq at the fiord Tunugdliarfik

61°10' N, 45°25' W

2 localities. 2 diatom samples. 1970 July 6th.

No. 14/1970: Moss from a torrent in the valley between the hotels. pH 6.4.

No. 17/1970: Brown mud from a pool, 3×3 m, in the torrent valley below the dam at the water lake.

19

The neighbourhood of Narssaq

60°54'–57' N, 46°00'–06' W

5 localities. 5 diatom samples. 1970 July 7th and 8th.

No. 20/1970: Moss at the edge of a pool on Kvanefjeld. Clear water. pH 6.0.

No. 29/1970: Mud from a depth of 10 cm in a large *Hippuris* pool W of Narssaq. Clear water. pH 6.0.

No. 37/1970: Green algae in outlet from a pool W of Narssaq. pH 6.0.

No. 44/1970: Vegetation from a small square lake with clear water and sandy-gravelly bottom W of Narssaq. pH 5.7.

No. 46/1970: Scrapings from stones from a depth of 10–15 cm in an irregular *Menyanthes*-pool in a bog W of Narssaq. pH 5.3.

20

Tugtutôq, northern part

60°52'–55' N, 46°12'–15' W

7 localities. 7 diatom samples. 1970 July 8th and 12th.

No. 52/1970: Scrapings from stones at the shore of lake 1. Sandy bottom. Clear water. pH 6.0.

- No. 54/1970: Scrapings from stones from a depth of 20 cm in the large lake 2, placed higher up in the valley than lake 1. Bottom with boulders and sand. Clear water. pH 6.0.
- No. 59/1970: Brown gelatinous coatings on stones at the edge of a small lake between lake 1 and 2.
- No. 61/1970: Scrapings from floating *Menyanthes*-rhizomes in a large *Menyanthes* pool in a bog at the upper end of lake 1. pH 6.0.
- No. 94/1970: Scrapings from stones in outlet from a lake. pH 6.0.
- No. 100/1970: Scrapings from stones from a depth of 20–30 cm in a lake. Clear water. pH 6.0.
- No. 97/1970: Floating moss from a *Hippuris* pool. pH 5.1.

21

Tugtutôq, central part
60°50'–52' N, 46°25'–27' W

8 localities. 8 diatom samples. 1970 July 12th.

- No. 101/1970: Scrapings from stones in outlet from lake 1. Clear water. pH 5.8.
- No. 104/1970: Scrapings from stones from the shore of lake 1 (150×50 m). pH 6.8.
- No. 109/1970: Scrapings from stones from a depth of 10–20 cm in lake 3 (200×100 m). Clear water. pH 5.5.
- No. 111/1970: Scrapings from stones from a depth of 20–30 cm in lake 4 (150×75 m). No visible outlet from the lake. Clear water. pH 5.5.
- No. 113/1970: Brown crusts from stones from a depth of 20–30 cm in lake 3, upper end.
- No. 115/1970: Moss from a depth of 30–40 cm in lake 5 (30×30 m). pH 5.0.
- No. 118/1970: Scrapings from stones from a depth of 30 cm in the largest lake (6) in the valley. Steep banks. Clear water. pH 5.8.
- No. 119/1970: Mud from bottom of a pool, 10×10 m, in a bog area at the pass NW of lake 6. Clear water. pH 5.3.

22

Nunasarnaq, NE of Narssaq
a. The Ilua bay area
60°57'–59' N, 45°43'–49' W

2 localities. 3 diatom samples. 1970 July 10th.

- No. 69/1970: Brown mud from a depth of 10 cm in a pool, 3×2 m.
- No. 70/1970: Mucous brown coatings on stones from a depth of 20–30 cm at the shore in a largish lake with outlet in the bay Ilua. Clear water. pH 6.5.

No. 72/1970: Scrapings from stones from a depth of 20–30 cm in above-mentioned lake.

b. The Ipiutaq area, 4 km further NE of Ilua
61°00' N, 45°44' W

3 localities. 3 diatom samples. 1970 July 10th.

No. 77/1970: Scrapings from stones in lake 1 (100×50 m). Vegetation of *Menyanthes*. Clear water. pH 6.5.

No. 80/1970: Scrapings from stones from a depth of 10–20 cm in lake 2 (150×100 m). Vegetation of *Menyanthes*. Clear water. pH 4.8.

No. 84/1970: Brown mire near the shore of lake 3. Vegetation of *Menyanthes* and *Sphagnum*. pH 6.2.

23

An area at the north coast of the peninsula
8 km northwest of Julianehåb
60°46'–47' N, 46°02'–06' W

5 localities. 7 diatom samples. 1970 July 18th.

No. 198/1970: Scrapings from stones from a depth of 10–20 cm in lake 1. Clear water. pH 6.0.

No. 204/1970: Scrapings from stones and mud between boulders at the shore of lake 2. Sparse vegetation of *Hippuris*. Clear water. pH 6.0.

No. 209/1970: Scrapings from stones from a depth of 10–30 cm in lake 3. Clear water. pH 6.0.

No. 214/1970: Scrapings from stones from a depth of 10–30 cm in lake 4. A shallow lake, boulders rising above the water surface all over the lake. Clear water. pH 6.0.

No. 215/1970: *Chlorophyceae*, mud and scrapings from stones from lake 4.

Nos. 221, 222/1970: Scrapings from stones and mud between boulders in pool-like widening of the outlet from lake 4. Sparse vegetation of *Hippuris*. Clear water. pH 6.0.

24

Akia south of Julianehåbsfjord
60°40'–41' N, 46°03'–06' W

4 localities. 6 diatom samples. 1970 July 15th.

No. 129/1970: Scrapings from stones from a depth of 20–30 cm in lake 1 (150×30 m). Clear water. pH 6.0.

No. 135/1970: Scrapings from stones from a depth of 30 cm in lake 2 (150×50 m). Clear water. pH 5.5.

Nos. 141, 142, 144/1970: Scrapings from stones from a depth of 20–30 cm in lake 3, diam. 300–400 m. Some *Hippuris* vegetation. Clear water. pH 5.9.

No. 148/1970: Dead moss between boulders at the shore in lake 4 (100×40 m). Clear water. pH 5.5.

25

Kanásut at Igaliko Fjord

60°46'–47' N, 45°45' W

3 localities. 4 diatom samples. 1970 July 15th.

No. 161/1970: Floating masses of algae in a bog near ruined Northman buildings. pH 5.7.

No. 168/1970: Scrapings from stones at a depth of 30 cm and No. 169/1970: Brown gritty mud from the bottom near shore of the large lake Kanásut tasiat. Clear water. pH 6.3.

No. 173/1970: Moss from stones from a small waterfall in the outlet from the lake Kanásut tasiat.

26

Igaliko

60°59'–61°01' N, 45°25'–27' W

4 localities. 4 diatom samples. 1970 July 16th.

No. 174/1970: *Chlorophyceae* and moss from spring scantily supplied with water on the northern side of the heights between Igaliko and Tunugdliarfik. pH 5.8.

No. 179/1970: Mud from pool with *Carex* and *Menyanthes* close to No. 174. pH 6.2.

No. 183/1970: Scrapings from stones from a depth of 10–30 cm in the large lake between Igaliko and Tunugdliarfik. Clear water. pH 6.0.

No. 185/1970: Scrapings from stones from a depth of 30–40 cm in an almost circular lake, diam. 150–200 m, near Igaliko. Clear water. pH 6.2.

The Kap Farvel Expedition 1970

27

Localities north of 61°N

2 localities. 2 diatom samples.

No. 01/Kap Farvel 1970. From a lake at the watershed between Qagsiarssuk and Tasiussaqa. 61°10' N, 45°37' W. 1970 July 5th.

No. 16/Kap Farvel 1970: Sample collected by plankton-net from Comarum Sø, Qagssiarssuk. 61°08' N, 45°32' W. 1970 July 4th. (U. RØEN leg.).

28 (a, b)

Localities between 60°30' N and 61°00' N

1 water sample. 4 localities. 5 diatom samples.

No. 09/Kap Farvel 1970: 28 a. 60°46' N, 45°13' W. The large lake below the waterfall. 1970. July 4th.

- No. 10/Kap Farvel 1970: 28 a. Torrent and brook tributaries to the large lake. 1970 July 4th.
 No. 11/Kap Farvel 1970: 28 a. Lake 150 m above the waterfall. 1970 July 4th.
 No. 07/Kap Farvel 1970: 28a. Julianehåb. 60°45' N, 46°02' W. Pond 50×5 m. 1970 July 8th.
 No. 08/Kap Farvel 1970: 28 b. Thermal springs (up to 38° C). Unartoq. 60°31' N, 45°21' W. 1970 Sept. 4th. Water sample xx.

29 (a, b, c)

Localities between 60°00' N and 60°30' N

3 water samples. 8 localities. 8 diatom samples.

- No. 19/Kap Farvel 1970: 29 a. Hollow after dead ice. 60°20' N, 44°14' W. Water sample No. 1036.
 No. 02/Kap Farvel 1970: 29 b. 60°11.5' N, 44°16' W. Pond 10×15 m with *Callitriche*. 1970 July 12th.
 No. 03/Kap Farvel 1970: 29 b. 60°11.5' N, 44°16' W. Lake. 1970 July 12th. Water sample No. 1037.
 No. 12/Kap Farvel 1970: 29 b. Pamiagdlok. 60°07' N, 44°19' W. Water moss from the edge of a bog. 1970 July 11th.
 No. 14/Kap Farvel 1970: 29 b. Pamiagdlok. 60°03' N, 44°14' W. The northernmost "Rift valley lake". 1970 August 1st.
 No. 15/Kap Farvel 1970: 29 b. 60°04' N, 44°16' W. 2 km south of the main camp. 1970 August 17th.
 No. 18/Kap Farvel 1970: 29 b. "Rift valley lake", localities 182–185. 60°03' N, 44°14' W. Water sample No. 1050.
 No. 05/Kap Farvel 1970: 29 c. Prins Christian Sund. 60°06' N, 43°06' W. 1970 August. (U. RØEN leg.).

30 (a, b)

Localities south of 60°00' N

3 water samples. 4 localities. 4 diatom samples.

- No. 17/Kap Farvel 1970: 30 a. Spongilla Sø, depth 125–130 cm. 59°58' N, 44°21' W. Water sample No. 1040.
 No. 21/Kap Farvel 1970: 30 a. Isoëtes Sø. 59°58' N, 44°21' W. Water sample No. 1041.
 No. 20/Kap Farvel 1970: 30 a. Triangelsø. Eggers Ø. 59°44.5' N, 43°44.5' W. Water sample No. 1056.
 No. 04/Kap Farvel 1970: 30 b. Qernertoq. 59°54.5' N, 43°30' W.

TAXONOMY

For practical reasons this passage is divided in two sections. In A the diatoms in the freshwater samples are treated and in B the diatoms found in brackish and salt water.

In Plate I–XXIX photos of a great number of the shown diatoms are given, many of them not previously found in Greenland.

The genera are arranged alphabetically and the species are also given in alphabetical order under each genus.

The dimensions (length \times width) of the photographed specimen and the numbers of striae in 10 μ are given in the taxonomic passage together with information of the sample in which it originates.

The majority of the diatom species in section A is oligohalobous or halobion-indifferent, furthermore pH-indifferent (circumneutral) or acidophilous. So no halobion- or pH-spectra are calculated. The trophic conditions are also rather uniform, nearly all localities being oligotrophic. Only in the immediate vicinity of the towns or in them pollution of watercourses or ponds may occur. But no samples from such localities are treated in this investigation.

A. Freshwater Diatoms

Achnanthes BORY 1822

A. calcar CLEVE. (F. HUSTEDT, 1930–66, II, p. 412, fig. 866).

Loc. Nos. 1, 10, 14.

A. clevei GRUN. (F. HUSTEDT, 1930–66, II, p. 391, figs. 839 a, b).

Loc. No. 1.

– – var. *rostrata* HUST. (F. HUSTEDT, 1930–66, II, p. 391, figs. 839 c, d).

Loc. No. 14.

A. coarctata (BRÉB.) GRUN. (F. HUSTEDT, 1930–66, II, p. 419, fig. 872 a–c).

Loc. No. 11.

A. depressa (CLEVE) HUST. (F. HUSTEDT, 1930–66, II, p. 417, fig. 870).

Loc. Nos. 1, 2, 5, 6, 8, 11, 15, 16, 20–26, 28.

A. flexella (KÜTZ.) BRUN. (F. HUSTEDT, 1930–66, II, p. 415, figs. 869 a–c).

Loc. Nos. 1–4, 6–12, 14, 15, 16, 20–26, 28, 29.

– – var. *alpestris* BRUN. (F. HUSTEDT, 1930–66, II, p. 416, fig. 869 d).

Loc. Nos. 1, 2, 4, 6, 11, 12, 14, 15, 18, 20–26, 28, 29.

- A. holstii* CLEVE (F. HUSTEDT, 1930-66, II, p. 399, fig. 849).
 Plate II, fig. 16: $31 \times 11 \mu$. 12-13 striae in 10μ . No. 341/1957.
 Plate II, fig. 17: $30 \times 10 \mu$. 15 striae in 10μ . No. 341/1957.
 Loc. Nos. 1-5, 8, 9, 15, 16, 20-22, 24, 28, 30.
 The species in N. FOGED, 1958, p. 80, 3: 11 a, b, owing to a lapse of memory called *A. holstii*, is identical with *A. distincta* MESSIKOMMER (E. MESSIKOMMER, 1954, p. 32, I: 2), a species which for the first time was shown at a height of ab. 2250 m in the Alps.
 I am obliged to Dr. E. MESSIKOMMER for bringing to my notice the mistake and the true facts of the case. *A. distincta* is up to now only found in the Alps and in Greenland.
- A. kryophila* PETERSEN. (J. B. PETERSEN, 1924, p. 316, fig. 6. F. HUSTEDT, 1930-66, II, p. 403, fig. 854).
 Loc. Nos. 1, 4, 7, 10, 11, 18, 20, 22, 28, 29.
- A. kryophiloides* FOGED. (N. FOGED, 1964, p. 70, 3: 2 a, b).
 Loc. Nos. 16, 17, 21.
- A. lanceolata* (BRÉB.) GRUN. (F. HUSTEDT, 1930-66, II, p. 408, figs. 863 a-d).
 Loc. Nos. 10, 11, 15, 21, 27.
- fo. *elliptica* (ØSTRUP) HUST. (F. HUSTEDT, 1930-66, II, p. 410, figs. 863 n, o).
 Loc. Nos. 10, 14.
- A. laterostrata* HUST. (F. HUSTEDT, 1930-66, II, p. 392, fig. 840).
 Loc. Nos. 1, 3, 4, 9, 10, 11, 14, 15, 20, 22.
- A. levanderi* HUST. (F. HUSTEDT, 1930-66, II, p. 404, fig. 856).
 Loc. Nos. 1, 2, 6, 8, 9, 17.
- A. linearis* W. SMITH. (F. HUSTEDT, 1930-66, p. 378, figs. 821 a, b).
 Loc. Nos. 1-4, 6-12, 14, 15, 20-22, 25-29.
- A. marginulata* GRUN. (F. HUSTEDT, 1930-66, II, p. 404, fig. 855).
 Plate XXIX, fig. 4: $9 \times 5 \mu$. 18 striae in 10μ . No. 241/1957.
 Plate XXIX, fig. 5: $9 \times 5 \mu$. ca. 27 striae in 10μ . No. 241/1957.
 Loc. Nos. 10, 22.
 A small species, easily overlooked. Rather widely distributed in Europe, "northern alpine". It occur also in North America. C. S. BOYER (1927, p. 236) mentions it as shown in Greenland.
- A. minutissima* KÜTZ. (F. HUSTEDT, 1930-66, II, p. 376, figs. 820 a-c).
 Loc. Nos. 1, 3-12, 18, 20-22, 25-29.
- var. *cryptocephala* GRUN. (F. HUSTEDT, 1930-66, II, p. 377, figs. 820 d, e).
 Loc. Nos. 1-4, 6, 7, 9-12, 14, 15, 18, 20-26, 28.
- A. quadratarea* (ØSTRUP) M. MØLLER. (E. ØSTRUP, 1910, p. 124, 3: 77).
 Syn.: *Cocconeis quadratarea* ØSTRUP, 1910, p. 127, 3: 77.
Achnanthes laevis ØSTRUP, 1910, p. 130, 3: 80.
A. lapponica HUSTEDT, 1924, p. 549, 17: 8, 9.

Loc. Nos. 1, 3-8, 11-15, 18, 20-22, 25-29.

On the raphe valve this widely distributed and common *A.* species has a onesidedly developed central area, extended to the margin of the valve, as stated by MAX MØLLER and confirmed (orally) by F. HUSTEDT.

A. recurvata HUST. (F. HUSTEDT, 1945-50, p. 434, 36: 28-30. A. SCHMIDT's Atlas 409: 34-37).

Loc. Nos. 1, 2, 6, 8-11, 20-26, 29, 30.

The species very common in Northern Europe, is also very frequent here in Greenland. As it also is shown in Alaska it seems to be circumpolar.

A. rupestris KRASSKE. (F. HUSTEDT, 1930-66, II, p. 405, fig. 859).

Loc. Nos. 4, 22, 28.

A. oestrupii (A. CLEVE) HUST. (F. HUSTEDT, 1930-66, II, p. 411, fig. 864).

Loc. Nos. 1, 3, 11.

Actinella LEWIS, 1864

A. punctata LEWIS. (A. SCHMIDT's Atlas 291: 15-22).

Plate II, fig. 1: $87 \times 4 \mu$. 16 striae in 10μ . No. 541/1957.

Loc. Nos. 10, 16, 17, 21, 23, 24.

This species, very easy to identify and difficult to overlook, is not previously found in Greenland. Here in SW Greenland it is common in some places. Previously it is shown as well in Northern Europe as in North America, but not common.

Amphicampa EHR. 1849

A. hemicyclus (EHR.) KARST. (F. HUSTEDT, 1930-66, II, p. 257, fig. 736).

Plate II, fig. 2: $35 \times 5 \mu$. 10 striae in 10μ . No. 538/1957.

Plate II, fig. 3: $29 \times 4 \mu$. 10-11 striae in 10μ . No. 541/1957.

Plate II, fig. 4: $16 \times 5 \mu$. 10 striae in 10μ . No. 552/1957.

Plate II, fig. 5: $25 \times 9 \mu$. 11 striae in 10μ . No. 111/1970.

Loc. Nos. 15, 16, 17, 21, 23, 24, 28, 29, 30.

As *Actinella punctata* this species is a very variable species, easy to identify. It is common in many places here in SW Greenland, but not previously shown in Greenland. Ecologically the two species resemble each other, being most frequent in dystrophic to oligotrophic, faintly acid localities.

Amphora EHR. 1840

A. ovalis KÜTZ. (F. HUSTEDT, 1930, p. 342, fig. 628).

Plate XVIII, fig. 1: $46 \times 12 \mu$. 12 striae in 10μ . No. 241/1957.

Loc. Nos. 1-4, 6, 8-11, 15, 20-22, 26-29.

- A. ovalis* KÜTZ. var. *libyca* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 342.
 A. SCHMIDT's Atlas 26: 102-111).
 Loc. Nos. 1-3, 6, 8-12, 14, 15, 20-22, 25-29.
- - var. *pediculus* KÜTZ. (F. HUSTEDT, 1930, p. 343, fig. 629).
 Loc. Nos. 1, 3, 21, 22.
- A. parallelistriata* MANGUIN. (E. MANGUIN, 1960, p. 278, 2: 25).
 Plate XVIII, fig. 2: 23×10 μ . 17-18 striae in 10 μ . No. 377/1957.
 Plate XVIII, fig. 3: 20×5 μ . 16-17 striae in 10 μ . No. 377/1957.
 Previously only shown in Alaska.
 Loc. Nos. 3.
- A. veneta* KÜTZ. (F. HUSTEDT, 1930, p. 345, fig. 631).
 Loc. Nos. 1-3, 6, 25, 26, 28, 30.

Anomoeoneis PFITZER 1871

- A. exilis* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 751, figs. 1114 a-c).
 Loc. Nos. 1, 3, 4, 6, 8, 10, 11, 12, 14, 15, 18, 20, 21, 23, 26.
- - fo. *lanceolata* A. MAYER. (F. HUSTEDT, 1930-66, II, p. 752, fig. 1114 d).
 Loc. Nos. 1-4, 6-9, 11, 12, 14, 17, 19-26, 28-30.
- A. seriens* (BRÉB.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 747, fig. 1112 a).
 Plate II, fig. 24: 33×9 μ . No. 552/1957.
 Loc. Nos. 20, 24, 25, 28-30.
- - var. *brachysira* (BRÉB.) CLEVE. (F. HUSTEDT, 1930-66, p. 748, figs. 1112 e-h).
 Plate II, fig. 25: 26×6.2 μ . No. 552/1957.
 Loc. No. 16.
- - - fo. *thermalis* (GRUN.) HUST. (F. HUSTEDT, 1930-66, II, p. 749, figs. 1112 i-l).
 Loc. Nos. 1, 4, 16.
- A. styriaca* (GRUN.) HUST. (F. HUSTEDT, 1930-66, II, p. 754, figs. 1116 a, b).
 Plate II, fig. 22: 40×7 μ . No. 406/1957.
 Loc. Nos. 1, 2, 6, 8, 9, 11, 14-17, 20-26, 28, 29.
- A. zellensis* (GRUN.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 753, fig. 1115 a).
 Loc. Nos. 1, 4, 9, 11, 20, 21, 24.
- - fo. *difficilis* (GRUN.) HUST. (F. HUSTEDT, 1930-66, II, p. 753, figs. 1115 b, c).
 Plate II, fig. 23: 35×5 μ . No. 406/1957.
 Loc. Nos. 1, 3, 4, 6, 8-11, 14, 20-26, 28.

Caloneis CLEVE, 1891

- C. bacillum* (GRUN.) CLEVE. (F. HUSTEDT, 1930, p. 236, fig. 360).
 Plate VI, fig. 9: 38×7 μ . 16(-17) striae in 10 μ . No. 111/1970.
 Loc. Nos. 3, 12, 14, 15, 20, 21, 28.

C. backmanii CLEVE-EULER. (A. L. BACKMAN & A. CLEVE-EULER, 1922, p. 54, fig. 3 a).

Plate VI, fig. 8: $40 \times 8 \mu$. 18 striae in 10μ . No. 195/1957.

Loc. Nos. 1, 2, 4, 7, 18, 20, 22, 25–27.

The striae of *C. backmanii* CLEVE-EULER are not punctate (vide VI: 8), whereas the striae of *Navicula pseudosilicula* HUST. have a distinct punctation (vide Plate VI, fig. 15).

Caloneis silicula (EHR.) CLEVE var. *alpina* CLEVE is—as it appears from F. HUSTEDT, 1930, fig. 366—identical with *Navicula pseudosilicula* HUST., whereas *Navicula limosa* “KÜTZ” in N. G. W. LAGERSTEDT, 1873, p. 30, 1: 6, if anything, is to be classed with *C. backmanii* CLEVE-EULER.

Navicula pseudosilicula has not been noticed in Greenland, but is common as well in Spitzbergen (N. FOGED, 1964, p. 88, 11: 12, 13) as in Northern Norway (N. FOGED, 1968, p. 28).

VI: 15 is a specimen from the Varanger Peninsula, Northern Norway (Sample No. 205/1964).

C. digitus JØRGENSEN. (E. G. JØRGENSEN, 1948, p. 49, 2: 27).

Plate VI, fig. 10: $48 \times 7 \mu$. 22–24 striae in 10μ . No. 08/Kap Farvel 1970.

Loc. No. 28.

Previously only found in a Jutland lake, Denmark, pH 5.0–5.9.

In E. G. JØRGENSEN's description of the species 1948, p. 49 the number of striae in 10μ is stated to be 30. MAX MØLLER has supervised the original material and only found 22–24 striae in 10μ in the middle of the valve, but close on 30 at the apices.

VI: 10 is in absolute agreement with the holotype.

The species is only found infrequently in a single locality in Greenland.

C. holstii CLEVE. (P. T. CLEVE, 1881, p. 11, 16: 1. A. SCHMIDT's Atlas 50: 48. N. FOGED, 1953, 3: 11. 1972, 3: 3, 4).

Plate V, fig. 12: $39 \times 15.5 \mu$. 13 striae in 10μ . No. 550/1957.

Plate V, fig. 13: $45 \times 16 \mu$. 12 striae in 10μ . No. 498/1957.

Plate V, fig. 14: $47 \times 19 \mu$. 12–13 striae in 10μ . No. 94/1970.

Plate V, fig. 15: $54 \times 14 \mu$. 12–13 striae in 10μ . No. 148/1957.

Loc. Nos. 2, 6, 16, 20.

Vide N. FOGED, 1972, p. 60, where the occurrence of the species is commented.

C. obtusa (W. SMITH) CLEVE. (F. HUSTEDT, 1930, p. 240, fig. 373).

Plate VI, fig. 3: $52 \times 18 \mu$. 14 striae in 10μ . No. 423/1957.

Plate VI, fig. 4: $52 \times 18 \mu$. 16 striae in 10μ . No. 423/1957.

Plate VI, fig. 5: $43 \times 19 \mu$. 16 striae in 10μ . No. 425/1957.

Loc. Nos. 1, 6, 12, 20, 22, 25.

C. schroederi HUST. (F. HUSTEDT, 1930, p. 235, fig. 356).

Loc. Nos. 1, 3, 8.

The species depicted in N. FOGED, 1958, p. 120, 11: 8, with some doubt is called *Pinnularia isostauroon* (EHR. ? GRUN.) CLEVE. Probably the species in question is *C. schroederi* HUST., as all striae are radial, and the raphe is not complex. *Pinnularia isostauroon* has convergent apical striae and a complex raphe.

C. schumanniana (GRUN.) CLEVE. (F. HUSTEDT, 1930, p. 239, fig. 369).

Loc. No. 3.

— var. *biconstricta* GRUN. (F. HUSTEDT, 1930, p. 240, fig. 370).

Loc. Nos. 1, 3, 20, 29.

C. silicula (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 236, fig. 362).

Plate VI, fig. 2: $73 \times 14 \mu$. 16–17 striae in 10μ . No. 377/1957.

Loc. Nos. 1, 3, 6, 8–12, 15, 20, 22.

— var. *truncatula* GRUN. (F. HUSTEDT, 1930, p. 238, figs. 363, 364).

Loc. Nos. 1, 3, 6, 8, 11, 12, 25, 27.

Ceratoneis EHR. 1840

C. arcus (EHR.) KÜTZ. (F. HUSTEDT, 1930–66, II, p. 179, figs. 684 a, b).

Loc. Nos. 1, 4, 7, 8, 10–13, 22, 25, 27.

— var. *amphioxys* (RABH.) GRUN. (F. HUSTEDT, 1930–66, II, 179, fig. 684 d).

Plate II, fig. 6: $25 \times 5.5 \mu$. 18 striae in 10μ . No. 479/1957.

Loc. Nos. 4, 8, 10, 25.

— var. *linearis* HOLMBOE. (F. HUSTEDT, 1930–66, II, p. 180, fig. 684 c).

Loc. Nos. 1, 4, 7–14, 18, 20–22, 25, 28.

Cocconeis EHR. 1838

C. diminuta PANT. (F. HUSTEDT, 1930–66, II, p. 346, fig. 800).

Loc. Nos. 1, 10.

C. disculus (SCHUM.) CLEVE. (F. HUSTEDT, 1930–66, II, p. 345, fig. 799).

Loc. Nos. 10.

C. pediculus EHR. (F. HUSTEDT, 1930–66, p. 350, fig. 804).

Loc. Nos. 10, 17.

C. placentula EHR. (F. HUSTEDT, 1930–66, II, p. 347, figs. 802 a, b).

Loc. Nos. 1, 2, 7, 10, 12, 18, 20, 22, 23, 25, 26, 28.

— var. *euglypta* (EHR.) CLEVE. (F. HUSTEDT, 1930–66, II, p. 349, fig. 802 c).

Loc. Nos. 1–3, 6, 14, 15, 20, 21, 26.

— var. *klinoraphis* GEITLER. (F. HUSTEDT, 1930–66, II, p. 348, fig. 803).

Loc. No. 27.

— var. *lineata* (EHR.) CLEVE. (F. HUSTEDT, 1930–66, II, p. 346, fig. 802 d).

Loc. Nos. 2, 14.

- C. thumensis* A. MAYER. (F. HUSTEDT, 1930–66, II, p. 346, fig. 801).
 Plate II, fig. 12: $12 \times 8 \mu$. 13–14 striae in 10μ . No. 407/1957.
 Loc. No. 1.

Cyclotella KÜTZ. 1834

- C. antiqua* W. SMITH. (F. HUSTEDT, 1930–66, I, p. 349, fig. 180).
 Plate I, fig. 3: diam. 22μ . No. 405/1957.
 Plate I, fig. 6: diam. 33μ . No. 424/1957.
 Loc. No. 1.
- C. bodanica* EULENST. (F. HUSTEDT, 1930–66, I, p. 356, fig. 184).
 Loc. No. 7.
- – var. *intermedia* MANGUIN. (E. MANGUIN, 1960, p. 268, I: 1).
 Plate I, fig. 5: diam. 22μ . No. 211/1957.
 Loc. Nos. 7, 14, 20, 21, 24–26.
 This variety is rather frequent and widely distributed here in SW Greenland, whereas *C. bodanica* only is found infrequently in locality No. 7. Previously *C. bodanica* is found in many places as well in Europe as in North America, but the variety *intermedia* up to now is shown only in Alaska (E. MANGUIN, 1960; N. FOGED, 1972).
- C. comta* (EHR.) KÜTZ. (F. HUSTEDT, 1930–66, I, p. 354, figs. 183 a–d).
 Plate I, fig. 7: diam. 20.7μ . No. 427/1957.
 Loc. No. 1.
- – var. *oligactis* (EHR.) GRUN. (F. HUSTEDT, 1930–66, I, p. 355, figs. 183 e, f).
 Plate I, figs. 8 a, b: diam. 14μ . No. 211/1957.
 Loc. Nos. 6, 7, 9, 14, 20.
- C. kützingiana* THWAITES. (F. HUSTEDT, 1930–66, p. 338, fig. 171 a).
 Loc. Nos. 1, 9, 10, 14, 15, 20–26, 28.
- – var. *planetophora* FRICKE. (F. HUSTEDT, 1930–66, I, p. 339, fig. 171 c).
 Loc. Nos. 1, 10, 14, 15, 20, 21, 24–26, 28.
- – var. *radiosa* FRICKE. (F. HUSTEDT, 1930–66, I, p. 338, fig. 171 b).
 Loc. Nos. 14, 15, 20–26, 28.
- C. ocellata* PANT. F. HUSTEDT, 1930–66, I, p. 340, fig. 173).
 Loc. Nos. 14, 20–23.
- C. stelligera* CLEVE & GRUN. (F. HUSTEDT, 1930–66, I, p. 339, fig. 172).
 Loc. Nos. 1, 6, 9, 15, 20–26, 28.

Cymbella AGARDH, 1830

- C. aequalis* W. SMITH. (F. HUSTEDT, 1955 b, p. 52–54, figs. 17–21).
 Plate XV, fig. 10: $39 \times 8 \mu$. Dorsal 12, ventral 16 striae in 10μ .
 No. 553/1957.
 Loc. Nos. 16, 28.

- C. affinis* KÜTZ. (F. HUSTEDT, 1930, p. 362, fig. 671).
 Plate XVII, fig. 15: $40 \times 12.5 \mu$. 10 striae and 16–17 puncta in 10μ .
 No. 377/1957.
 Loc. Nos. 1, 3, 6, 10, 11.
- C. amphicephala* NAEGELI. (F. HUSTEDT, 1930, p. 355, fig. 651).
 Loc. Nos. 1–3, 5, 6, 8, 9, 11, 12, 15–17, 20, 21, 23–25, 29, 30.
- C. angustata* (W. SMITH) CLEVE. (F. HUSTEDT, 1930, p. 351, fig. 639).
 Plate XVII, fig. 6: $56 \times 10 \mu$. 14–15 striae in 10μ . No. 405/1957.
 Plate XVII, fig. 7: $45 \times 9 \mu$. Dorsal 12, ventral 15–16 striae in 10μ .
 No. 405/1957.
 Loc. Nos. 1, 10, 18, 25–28.
- – var. *linearis* (FONTELL) ROSS. (R. ROSS, 1947, p. 216).
 Loc. No. 4.
- C. aspera* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 365, fig. 680).
 Loc. Nos. 1, 7, 8, 11, 12, 20–22, 25, 26, 28.
- C. borealis* CLEVE. (P. T. CLEVE, 1891, p. 46, 2: 19. A. CLEVE-EULER 1955, IV, p. 143, fig. 1204).
 Syn.: *C. kriegeri* KRASSKE 1943, p. 87, figs. 28–29.
 Plate XV, fig. 14: $49 \times 9 \mu$. ca. 12 striae in 10μ . No. 548/1957.
 Plate XVII, fig. 5: $64 \times 8 \mu$. 10 striae in 10μ . No. 69/1970.
 Loc. Nos. 16, 22.
 Previously only known from the Northern Scandinavia.
- C. cesatii* (RABH.) GRUN. (F. HUSTEDT, 1930, p. 351, fig. 638).
 Loc. Nos. 1–4, 6–12, 14–26, 28–30.
- C. cistula* (HEMPR.) GRUN. (F. HUSTEDT, 1930, p. 363, fig. 676 a).
 Plate XV, fig. 7: $39 \times 12 \mu$. 12 striae in 10μ . No. 409/1957.
 Plate XV, fig. 8: $32 \times 10 \mu$. 8 striae in 10μ . No. 422/1957. Anormal specimen.
 Plate XVI, fig. 7: $74 \times 17 \mu$. Dorsal 7–8, ventral 8 striae in 10μ .
 No. 211/1957.
 Plate XVI, fig. 8: $60 \times 11 \mu$. Dorsal 8, ventral 9 striae in 10μ . No. 211/1957.
 Plate XVI, fig. 9: $68 \times 15 \mu$. Dorsal 8, ventral 9 striae in 10μ . No. 168/1957.
 Plate XVI, fig. 10: $70 \times 17 \mu$. Dorsal 8, ventral 9 striae in 10μ . No. 424/1957.
 Loc. Nos. 1–4, 6–12, 14, 16, 19–26, 28.
- – fo. *gracilis* HUST. (F. HUSTEDT, 1955 b, p. 62, figs. 39, 40).
 Loc. Nos. 18–20, 23, 25, 26, 28.
- – var. *maculata* (KÜTZ.) v. HEURCK. (A. SCHMIDT's Atlas 71: 21, 22).
 Plate XV, fig. 4: $49 \times 13 \mu$. 10 striae in 10μ . No. 01/Kap Farvel 1970.
 Loc. No. 27.

- C. cuspidata* KÜTZ. (F. HUSTEDT, 1930, p. 357. A. SCHMIDT's Atlas 9: 50, 52).
 Plate XVII, fig. 1: $74 \times 17 \mu$. Dorsal 7–8, ventral 8 striae in 10μ . No. 211/1957.
 Plate XVII, fig. 2: $83 \times 20 \mu$. 8 striae in 10μ . No. 425/1957.
 Plate XVII, fig. 3: $48 \times 14 \mu$. Dorsal 8, ventral 10 striae in 10μ . No. 528/1957.
 Plate XVII, fig. 4: $41 \times 14 \mu$. 10 striae in 10μ . No. 163/1957.
 Loc. Nos. 1, 3, 6, 8, 11, 12, 14–16, 20–26, 28, 29.
- C. cymbiformis* (AG. ? KÜTZ.) v. HEURCK. (F. HUSTEDT, 1930, p. 362, fig. 672).
 Loc. Nos. 1, 3, 6–8, 11, 12, 15, 20–23, 25–30.
- C. delicatula* KÜTZ. (F. HUSTEDT, 1930, p. 352, fig. 642).
 Loc. No. 1.
- C. ehrenbergii* (RABH.) CLEVE. (F. HUSTEDT, 1930, p. 356, fig. 656).
 Loc. Nos. 22–24.
- C. gracilis* (RABH.) CLEVE. (F. HUSTEDT, 1930, p. 359, fig. 663).
 Plate XV, fig. 11: $34 \times 7 \mu$. 12–13 striae in 10μ . No. 554/1957.
 Plate XVII, fig. 10: $34 \times 4.5 \mu$. 10 striae in 10μ . No. 96/1957.
 Loc. Nos. 1–17, 19–26, 28–30.
- C. hauckii* v. HEURCK. (F. HUSTEDT, 1930, p. 355, fig. 654).
 Plate XVII, fig. 8: $64 \times 17 \mu$. 10–11 striae in 10μ . No. 396/1957.
 Plate XVII, fig. 9: $64 \times 15 \mu$. 11–12 striae in 10μ . No. 96/1957.
 Loc. Nos. 1, 5.
- C. hebridica* (GREG.) GRUN. (F. HUSTEDT, 1930, p. 359, fig. 662).
 Loc. Nos. 1–6, 8–17, 19–26, 28–30.
- C. helvetica* KÜTZ. (F. HUSTEDT, 1930, p. 364, fig. 678).
 Plate XVI, fig. 4: $80 \times 16 \mu$. 8 striae in 10μ . No. 425/1957.
 Plate XVI, fig. 5: $62 \times 13 \mu$. 8 striae in 10μ . No. 09/Kap Farvel 1970.
 Plate XVI, fig. 6: $64 \times 12 \mu$. Dorsal 8–9, ventral 9–10 striae in 10μ . No. 211/1957.
 Loc. Nos. 1–3, 6–8, 10–12, 14, 15, 20, 22, 25, 26, 28.
- – var. *compacta* ØSTRUP. (E. ØSTRUP, 1910, p. 54, 2: 39).
 Loc. No. 3.
- C. heteropleura* (EHR.) KÜTZ. (A. SCHMIDT's Atlas 374: 15, 16).
 Plate XV, fig. 15: $102 \times 32 \mu$. Dorsal 9(–10), ventral 9 striae in 10μ . No. 144/1970.
 Loc. Nos. 15, 24.
- – var. *minor* CLEVE. (A. SCHMIDT's Atlas 374: 11. A. CLEVE-EULER 1955, IV, p. 149, fig. 1220 c).
 Loc. Nos. 1–4, 6–9, 11, 12, 15, 25, 28.
- C. hustedtii* KRASSKE. (F. HUSTEDT, 1930, p. 363, fig. 674).
 Loc. No. 1.

- C. hybrida* GRUN. (F. HUSTEDT, 1930, p. 357, fig. 652).
Loc. No. 24.
- C. incerta* GRUN. (F. HUSTEDT, 1930, p. 360, fig. 665).
Plate XV, fig. 13: $49 \times 8 \mu$. 18 striae in 10μ . No. 550/1957.
Loc. Nos. 1–30.
- C. lanceolata* (EHR.) v. HEURCK. (F. HUSTEDT, 1930, p. 364, fig. 679).
Plate XVI, fig. 1: $84 \times 15 \mu$. 8 striae in 10μ . No. 211/1957.
Plate XVI, fig. 2: $98 \times 17 \mu$. 8 striae in 10μ . No. 405/1957.
Plate XVI, fig. 3: $96 \times 16 \mu$. Dorsal 8, ventral 9 striae in 10μ . No. 211/1957.
Loc. Nos. 1, 6, 14.
- C. latens* KRASSKE. (G. KRASSKE, 1937, p. 43, fig. in the text).
Plate XVII, fig. 11: $21 \times 8 \mu$. 14 striae in 10μ . No. 425/1957.
Loc. Nos. 1, 14.
- C. leptoceros* (EHR.?) GRUN. (F. HUSTEDT, 1930, p. 353, fig. 645).
Plate XVII, fig. 13: $28 \times 10 \mu$. Dorsal 8, ventral 10 striae in 10μ . No. 357/1957.
Plate XVII, fig. 14: $44 \times 12 \mu$. 10 striae in 10μ . No. 405/1957.
Loc. Nos. 1, 3, 6–8, 14, 15.
- var. *rostrata* HUST. (F. HUSTEDT, 1942, p. 132, figs. 52–54. A. SCHMIDT's Atlas 378: 58–60).
Plate XVII, fig. 12: $39 \times 10 \mu$. Dorsal 9–10, ventral 12 striae in 10μ . No. 423/1957.
Loc. No. 1.
- C. microcephala* GRUN. (F. HUSTEDT, 1930, p. 351, fig. 637).
Loc. Nos. 1, 2, 6–9, 11, 14, 15, 20–22, 25, 26.
- C. mülleri* HUST. var. *groenlandica* var. nov. Plate XV, fig. 1.
Striis apicalibus in latere dorsale valvae plus radiantibus, in latere ventrale parallelibus, area axiale latiore et valva conveciore a *C. mülleri* differt.
Differs from *C. mülleri* by more radial apical striae on the dorsal side and parallel apical striae on the ventral side, and by a broader axial area and a more convex valve.
Plate XV, fig. 1: $62 \times 19 \mu$. Dorsal 11, ventral 8–9 striae in 10μ . No. 44/1970.
Illustration slide and holotype: FOGED Coll., Odense, No. 44/1970.
Type locality: Freshwater pond near Narssaq, South Greenland.
Plate XV, fig. 2: $54 \times 23 \mu$. Dorsal 10, ventral 8 striae in 10μ . No. 425/1957.
Loc. Nos. 1, 19.
- C. mülleri* F. HUSTEDT, 1949 b, p. 115, 9: 1–7 has faintly radial apical striae on the dorsal side, and extremely convergent apical striae on the ventral side, somewhat acute apices and fairly flat valves.

XV: 1, 2 can hardly be identified with the tropical *C. mülleri* as it appears from F. HUSTEDT 1949 b, 9: 1-7 and 1937-39, 26: 1-4, in the last-mentioned paper called *C. mülleri* var. *javanica*, which is included under the type species in F. HUSTEDT, 1949 b.

It is not unlike *C. turgida* (GREG.) CLEVE, which is very common in Greenland, but it seems closer related to *C. mülleri*.

- C. norvegica* GRUN. (F. HUSTEDT, 1930, p. 359, fig. 664).
 Plate XV, fig. 9: $43 \times 8 \mu$. 12 striae in 10μ . No. 432/1957.
 Plate XV, fig. 12: $33 \times 6.5 \mu$. 14 striae in 10μ . No. 357/1957.
 Loc. Nos. 1, 8, 22, 28.
- C. obtusa* GREG. (F. HUSTEDT, 1930, p. 361, fig. 667).
 Loc. Nos. 1, 3, 6, 15, 18-20, 22-28, 30.
- C. perpusilla* A. CLEVE. (F. HUSTEDT, 1930, p. 361, fig. 666).
 Loc. Nos. 21, 24, 25, 28.
- C. prostrata* (BERKELEY) CLEVE. (F. HUSTEDT, 1930, p. 357, fig. 659).
 Loc. No. 25.
- C. sinuata* GREG. (F. HUSTEDT, 1930, p. 361, figs. 668 a, b).
 Loc. Nos. 1, 8, 11, 12, 14, 20, 25, 28.
 - - fo. *ovata* HUST. (F. HUSTEDT, 1930, p. 361, fig. 668 c).
 Loc. No. 8.
- C. spuria* CLEVE. (P. T. CLEVE, 1894-95, I, p. 166).
 Loc. Nos. 3, 9, 24.
- C. tumida* (BRÉB.) v. HEURCK. (F. HUSTEDT, 1930, p. 366, fig. 677).
 Loc. Nos. 1, 3, 6, 8, 14.
 - - var. *fossilis* (GRUN.) CLEVE. (A. CLEVE-EULER, 1955, IV, p. 166, figs. 1255 c, d).
 Plate XV, fig. 5: $47 \times 12 \mu$. Dorsal 10, ventral 9 striae in 10μ . No. 425/1957.
 Plate XV, fig. 6: $52 \times 14.5 \mu$. Dorsal 8, ventral 9-10 striae in 10μ . No. 10/1957.
 Loc. Nos. 1, 7, 8.
- C. turgida* (GREG.) CLEVE. (F. HUSTEDT, 1930, p. 358, fig. 660).
 Plate XV, fig. 3: $51 \times 19 \mu$. 8 striae in 10μ . No. 165/1957.
 Loc. Nos. 1, 3, 6-12, 14, 15, 17-19, 21, 22, 26-29.
- C. ventricosa* KÜTZ. (F. HUSTEDT, 1930, p. 359, fig. 661).
 Loc. Nos. 1-4, 6-16, 18-23, 25-28.

Cymbellonitzschia HUST. 1924

- C. diluviana* HUST. (F. HUSTEDT, 1950, p. 395, 41: 56-60. 1954, p. 453, figs. 23-25. N. FOGED, 1960, p. 289, figs. 3, 4).
 Plate XXVII, fig. 16: $22 \times 3 \mu$. 10 keel puncta and 25 striae in 10μ . No. 241/1957.
 Loc. No. 10.

This rare species, first shown in interglacial sediment in Northern Germany (F. HUSTEDT, 1950), is afterwards found as well recent as subfossil in many places in Northern Europe and in U.S.A. Here in Greenland it is so far only found in sample No. 241/1957 from Loc. No. 10, where it is considered washed out from a freshwater locality, the species being pronouncedly oligohalobous.

A confusion with the haline *C. hossamedinii* SALAH, 1955, p. 101, 2: 9 is hardly a possibility, as this species differs somewhat in shape of valve and has somewhat coarser striae (18–20 in 10 μ). However the two species seem to be closely related as regards shape of valve and structure.

Denticula KÜTZ. 1844

D. tenuis KÜTZ. (F. HUSTEDT, 1930, p. 381, fig. 723).

Plate XVIII, fig. 19: 40 \times 5 μ . 5–6 costae in 10 μ . No. 425/1957.

Plate XVIII, fig. 20: 22 \times 4 μ . 6–7 costae in 10 μ . No. 425/1957.

Loc. Nos. 1, 7, 28.

— var. *crassula* (NAEGELI) HUST. (F. HUSTEDT, 1930, p. 381, fig. 724).

Loc. Nos. 1, 3, 4, 6–8, 12, 14, 15, 18, 20, 22, 25–28.

Diatoma A. P. DE CANDOLLE 1805

D. anceps (EHR.) KIRSCHNER (F. HUSTEDT, 1930–66, II, p. 104, fig. 632).

Loc. No. 8.

D. elongatum (LYNGBYE) AG. (F. HUSTEDT, 1930–66, II, p. 99, figs. 629 a, b).

Loc. Nos. 1, 2, 6, 10–14, 16, 20, 22, 25–28.

D. hiemale (LYNGBYE) HEIBERG. (F. HUSTEDT, 1930–66, II, p. 102, figs. 631 a–d).

Loc. No. 28.

— var. *mesodon* (EHR.) GRUN. (F. HUSTEDT, 1930–66, II, p. 103, figs. 631 e–h).

Loc. Nos. 1, 3, 4, 7–15, 17, 18, 20–22, 28.

D. vulgare BORY var. *producta* GRUN. (F. HUSTEDT, 1930–66, II, p. 98, figs. 628 e, f).

Loc. No. 20.

Diatomella GREV. 1855

D. balfouriana GREV. (F. HUSTEDT, 1930–66, II, p. 440, fig. 822).

Plate II, fig. 7: 19 \times 9 μ . 16–17 striae in 10 μ . No. 425/1957.

Loc. Nos. 1, 7, 8, 10–12, 22, 26.

Diploneis EHR. 1840

D. domblitensis (GRUN.) CLEVE. (F. HUSTEDT, 1930–66, II, p. 688, figs. 1076 a, b).

Loc. No. 12.

- D. oculata* (BRÉB.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 675, fig. 1068 a).
 Loc. Nos. 6, 8, 11, 12.
- D. ovalis* (HILSE) CLEVE. (F. HUSTEDT, 1930-66, II, p. 671, figs. 1065 a-e).
 Plate VI, fig. 11: $25 \times 14 \mu$. 14 striae in 10μ . No. 408/1957.
 Loc. Nos. 1-12, 14, 15, 20, 22, 24, 26, 29.
- - var. *oblongella* (NAEG.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 672, figs. 1065 f-h).
 Plate VI, fig. 12: $28.5 \times 9.5 \mu$. 20-22 striae in 10μ . No. 195/1957.
 Loc. Nos. 1, 2, 5-8, 11, 12, 15, 26, 29.
- D. peterseni* HUST. (F. HUSTEDT, 1930-66, II, p. 676, figs. 1068 f-h).
 Loc. No. 8.

Epithemia BRÉB. 1838

- E. argus* KÜTZ. (F. HUSTEDT, 1930, p. 383, fig. 727 a).
 Plate XIX, fig. 8: $67 \times 14 \mu$. No. 422/1957.
 Loc. Nos. 1, 8.
- - var. *alpestris* GRUN. (F. HUSTEDT, 1930, p. 383, fig. 727 b).
 Loc. No. 1.
- - var. *longicornis* GRUN. (F. HUSTEDT, 1930, p. 384, fig. 727 c).
 Loc. No. 1.
- E. sorex* KÜTZ. (F. HUSTEDT, 1930, p. 388, fig. 736).
 Plate XIX, fig. 1: $68 \times 15 \mu$. No. 422/1957.
 Plate XIX, fig. 2: $62 \times 11 \mu$. No. 444/1957.
 Plate XIX, fig. 3: $60 \times 16 \mu$. No. 423/1957.
 Plate XIX, fig. 4: $47 \times 13 \mu$. No. 408/1957.
 Plate XIX, fig. 5: $41 \times 13 \mu$. No. 317/1957.
 Plate XIX, fig. 6: $35 \times 12 \mu$. No. 367/1957.
 Loc. Nos. 1, 2, 6-11, 15, 20-22, 25-27.
- - var. *gracilis* HUST. (F. HUSTEDT, 1930, p. 388, fig. 737).
 Loc. Nos. 1, 11.
- E. turgida* (EHR.) KÜTZ. (F. HUSTEDT, 1930, p. 387, fig. 733).
 Loc. No. 1.
- - var. *granulata* (EHR.) GRUN. (F. HUSTEDT, 1930, p. 387, fig. 734).
 Loc. Nos. 1, 6, 8, 11, 20, 26.
- E. zebra* (EHR.) KÜTZ. (F. HUSTEDT, 1930, p. 384, fig. 729).
 Loc. Nos. 1, 2, 11, 20, 26.
- - fo. *porcellus* (KÜTZ.) GRUN. (F. HUSTEDT, 1930, p. 385, fig. 731).
 Plate XIX, fig. 7: $62 \times 11 \mu$. No. 416/1957.
 Loc. Nos. 1, 6, 11, 12, 20, 22, 25, 26.
- - fo. *saxonica* (KÜTZ.) GRUN. (F. HUSTEDT, 1930, p. 385, fig. 730).
 Loc. Nos. 1, 6, 8, 11, 12, 20, 24-26.

Eunotia EHR. 1837

- E. alpina* (NAEG.) HUST. (F. HUSTEDT, 1930-66, II, p. 304, fig. 770).
 Loc. Nos. 6, 8, 9, 15-17, 19-24, 26, 30.
- E. arcus* EHR. (F. HUSTEDT, 1930-66, II, p. 282, figs. 748 a-c).
 Plate IV, fig. 13: $57 \times 8.5 \mu$. 10 striae in 10μ . No. 405/1957.
 Loc. Nos. 1, 2, 4, 6, 8, 11, 12, 14-17, 19-26, 28-30.
- var. *bidens* GRUN. (F. HUSTEDT, 1930-66, II, p. 284, fig. 748 d).
 Plate IV, fig. 14: $50 \times 9 \mu$. 10-11 striae in 10μ . No. 09/1957.
 Loc. No. 8.
- E. bidentula* W. SMITH. (F. HUSTEDT, 1930-66, II, p. 277, fig. 744).
 Plate IV, fig. 2: $56 \times 6-9 \mu$. 14 striae in 10μ . No. 550/1957.
 Loc. Nos. 2, 4, 6, 9, 15-17.
- E. bigibba* KÜTZ. (F. HUSTEDT, 1930-66, II, p. 282, figs. 747 B a, b).
 Plate III, fig. 10: $39 \times 9.5 \mu$. 10 striae in 10μ . No. 538/1957.
 Plate III, fig. 11: $29 \times 4.5-7 \mu$. 14-15 striae in 10μ . No. 104/1970.
 Loc. Nos. 2-4, 6, 8-14, 16, 17, 19-25, 28, 29.
- var. *pumila* GRUN. (F. HUSTEDT, 1930-66, II, p. 282, figs. 747 B c-h).
 Loc. Nos. 1, 2, 6, 9, 10, 16, 17, 19, 22-26, 28-30.
- E. crista-galli* CLEVE. (F. HUSTEDT, 1930-66, II, p. 294, fig. 760).
 Plate IV, fig. 3: $18 \times 7 \mu$. 12 striae in 10μ . No. 357/1957.
 Loc. Nos. 1, 8.
- E. denticulata* (BRÉB.) RABH. (F. HUSTEDT, 1930-66, II, p. 290, figs. 757 a-d).
 Loc. Nos. 11, 24.
 Plate IV, fig. 6: cell: $30 \times 19 \mu$. 16-17 striae in 10μ . No. 04/Kap Farvel 1970.
 Loc. Nos. 2, 8-10, 15-17, 20-24, 28-30.
- var. *fennica* HUST. (F. HUSTEDT, 1930-66, II, p. 291, figs. 757 e-i).
 Plate IV, fig. 5: $45 \times 5.5 \mu$. 16-17 striae in 10μ . No. 148/1970.
 Loc. Nos. 11, 24.
- E. diodon* EHR. (F. HUSTEDT, 1930-66, II, p. 276, fig. 742).
 Plate III, fig. 12: $32 \times 14 \mu$. 14 striae in 10μ . No. 553/1957.
 Plate III, fig. 13: $42 \times 9 \mu$. 11-12 striae in 10μ . No. 394/1957.
 Plate III, fig. 14: $62 \times 7 \mu$. 13 striae in 10μ . No. 553/1957.
 Loc. Nos. 1-4, 6-17, 19-24, 26, 28-30.
- E. elegans* ØSTRUP. (E. ØSTRUP, 1910, p. 172, 5: 105. F. Hustedt 1930-66, II, p. 287, fig. 752).
 Plate IV, fig. 18: $24 \times 3 \mu$. 16 striae in 10μ . No. 10/Kap Farvel 1970.
 Loc. Nos. 1, 2, 4, 6, 16, 20-26, 28-30.
- E. exigua* (BRÉB.) GRUN. (F. HUSTEDT, 1930-66, II, p. 285, figs. 751 a-c).
 J. B. PETERSEN, 1950, p. 6, 1: 3-13).
 Loc. Nos. 1, 2, 4-8, 10, 12, 14-17, 20-26, 28-30.
- var. *compacta* HUST. (F. HUSTEDT, 1930-66, II, p. 286, figs. 751 s-u).
 Plate IV, fig. 4: $30 \times 5 \mu$. 16 striae in 10μ . No. 05/Kap Farvel 1970.
 Loc. Nos. 2, 8, 10, 19, 20, 22, 24, 25, 28-30.

- E. faba* (EHR.) GRUN. (F. HUSTEDT, 1930-66, II, p. 301, fig. 767).
 Plate IV, fig. 15: $42 \times 19 \mu$. 18 striae in 10μ . No. 548/1957.
 Plate IV, fig. 11: $28 \times 12 \mu$. 16-17 striae in 10μ . No. 148/1957.
 Plate IV, fig. 12: $25 \times 10.5 \mu$. 14 striae in 10μ . No. 209/1970.
 Loc. Nos. 1-4, 6-12, 14-17, 20-26, 28-30.
- - var. *rhomboides* FOGED. (N. FOGED, 1972, p. 62, D II: 5).
 Plate IV, fig. 16: $37 \times 10 \mu$. 18 striae in 10μ . No. 548/1957.
 Plate IV, fig. 17: cell: $42 \times 19 \mu$. 16-17 striae in 10μ . No. 548/1957.
 Loc. Nos. 16, 17.
 The form in N. FOGED, 1958, p. 72, 2: 14 is the same variety. Here it is also stated that this asymmetrical form is very constant and frequent in material from Denmark, Norway, Sweden and Greenland. In SW Greenland however it is rare.
- E. fallax* A. CLEVE. (F. HUSTEDT, 1930-66, II, p. 288, fig. 753).
 Loc. Nos. 17, 19, 24, 29.
- E. flexuosa* (BRÉB.) KÜTZ. (F. HUSTEDT, 1930-66, II, p. 312, fig. 778).
 Loc. Nos. 4, 6, 8, 9, 11, 17, 20, 21, 23-29.
- E. gracilis* (EHR.) RABH. (F. HUSTEDT, 1930-66, II, p. 305, fig. 771).
 Loc. Nos. 1, 3, 4, 7, 8, 10, 11, 13-15, 17, 19, 21, 22, 28-30.
- E. iatriaensis* FOGED. (N. FOGED, 1970, p. 180, fig. 14).
 Loc. Nos. 20, 23, 24.
 Previously shown subfossil in South Norway.
- E. lapponica* GRUN. (F. HUSTEDT, 1930-66, II, p. 295, fig. 762).
 Loc. Nos. 1, 2, 4, 6, 8, 9, 11, 12, 14-17, 21.
- E. lunaris* (EHR.) GRUN. (F. HUSTEDT, 1930-66, II, p. 302, figs. 769 a, b).
 Loc. Nos. 1, 2, 4, 6, 8, 11, 12, 14-17, 19-27.
- - var. *subarcuata* (NAEG.) GRUN. (F. HUSTEDT, 1930-66, II, p. 304, figs. 769 f-h).
 Loc. Nos. 4, 6, 9, 11, 21, 24, 25, 27.
- E. maior* EHR. var. *scandia* A. CLEVE-EULER fo. *ventricosa* A. CLEVE. (A. CLEVE, 1895, p. 27, 1: 37. A. CLEVE-EULER, 1953, II, p. 119, figs. 456 d, e).
 Plate V, fig. 1: $110 \times 22 \mu$. 9-10 striae in 10μ . No. 28/1957.
 Plate V, fig. 2: $140 \times 16 \mu$. 9-10 striae in 10μ . No. 28/1957.
 Loc. No. 7.
 Previously shown in North Sweden.
- E. meisteri* HUST. (F. HUSTEDT, 1930-66, II, p. 289, figs. 755 a-l).
 Loc. Nos. 20, 23-25, 28-30.
- E. monodon* EHR. (F. HUSTEDT, 1930-66, II, p. 305, figs. 772 a, b).
 Plate V, fig. 3: $54 \times 16 \mu$. 8 striae in 10μ . No. 317/1957.
 Loc. Nos. 1-4, 6-17, 19-30.
- - var. *bidens* (GREG.) W. SMITH. (F. HUSTEDT, 1930-66, II, p. 306, fig. 772).
 Loc. Nos. 16, 28, 29.

- E. monodon* EHR. var. *maior* (W. SMITH) HUST. (F. HUSTEDT, 1930–66, II, p. 306, fig. 772 c).
 Loc. Nos. 1–4, 6–9, 11, 12, 15–26, 29, 30.
- E. papilio* (GRUN.) HUST. (F. HUSTEDT, 1930–66, II, p. 278, fig. 745).
 Plate III, fig. 4: 40×14 – 26μ . 10 striae in 10μ . No. 10/Kap Farvel 1970.
 Loc. Nos. 2, 12, 28.
- E. parallela* EHR. (F. HUSTEDT, 1930–66, II, p. 302, fig. 768).
 Loc. Nos. 4, 9, 17, 19, 21, 24, 28.
- E. pectinalis* (KÜTZ.) RABH. (F. HUSTEDT, 1930–66, II, p. 296, fig. 763 a).
 Plate V, fig. 8: $49 \times 7 \mu$. 12 striae in 10μ . No. 206/1957.
 Plate V, fig. 9: $53 \times 7 \mu$. 11 striae in 10μ . No. 241/1957.
 Plate V, fig. 10: $56 \times 7 \mu$. 10 striae in 10μ . No. 516/1957.
 Plate V, fig. 11: $53 \times 5 \mu$. 12–13 striae in 10μ . No. 03/Kap Farvel 1970.
 Loc. Nos. 1, 2, 6, 8, 9, 10, 12, 15–17, 21, 24, 29.
- – var. *minor* (KÜTZ.) RABH. (F. HUSTEDT, 1930–66, II, p. 298, figs. 763 d–f).
 Loc. Nos. 1–15, 18, 20–29.
- – – fo. *impressa* HUST. (F. HUSTEDT, 1930–66, II, p. 298, figs. 763 g, h).
 Loc. Nos. 1, 11.
- – fo. *ventralis* (EHR.) HUST. (F. HUSTEDT, 1930–66, II, p. 297, figs. 763 b, c).
 Loc. Nos. 1, 20.
- E. polydentula* BRUN. (F. HUSTEDT, 1930–66, II, p. 292, figs. 759 a, b).
 Loc. Nos. 1, 4, 5, 7–15, 17, 21, 22, 24, 26–29.
- E. polyglyphis* GRUN. (F. HUSTEDT, 1930–66, II, p. 294, fig. 761).
 Plate IV, fig. 1: 42×6 – 7μ . 14–15 striae in 10μ . No. 367/1957.
 Loc. Nos. 1, 2, 8–11, 14, 15, 17, 19–25, 27–30.
- E. praerupta* EHR. (F. HUSTEDT, 1930–66, II, p. 280, figs. 747 a–e).
 Plate V, fig. 6: $57 \times 11 \mu$. 11 striae in 10μ . No. 04/1957.
 Plate V, fig. 7: $50 \times 11 \mu$. 11 striae in 10μ . No. 217/1957.
 Loc. Nos. 1–17, 19–26, 28, 29.
- – var. *bidens* (W. SMITH) GRUN. (F. HUSTEDT, 1930–66, II, p. 281, figs. 747 i–m).
 Plate III, fig. 8: $68 \times 14 \mu$. 10 striae in 10μ . No. 243/1957.
 Plate III, fig. 9: $32 \times 10 \mu$. 14 striae in 10μ . No. 195/1957.
 Loc. Nos. 1–5, 7–12, 17, 22, 26, 28, 29.
- – var. *muscolica* PETERSEN. (J. B. PETERSEN, 1928, p. 377, fig. 3. F. HUSTEDT, 1930–66, II, p. 280, fig. 747 A n).
 Loc. No. 1.
- E. rhomboidea* HUST. (F. HUSTEDT, 1945–50, p. 435, 36: 34–41).
 Loc. Nos. 1, 2, 4, 6–10, 15–17, 19–21, 23–26, 28–30.

- E. robusta* RALFS. (F. HUSTEDT, 1930-66, II, p. 273, figs. 740 a-h).
 Plate III, fig. 1: $37 \times 10-14 \mu$. 8 striae in 10μ . No. 387/1957.
 Plate III, fig. 2: $40 \times 14 \mu$. 10 striae in 10μ . No. 543/1957.
 Plate III, fig. 3: $32 \times 13 \mu$. 12 striae in 10μ . No. 17/Kap Farvel 1970.
 Loc. Nos. 1, 3, 4, 6, 9, 11, 15-17, 20-26, 30.
- var. *diadema* (EHR.) RALFS. (F. HUSTEDT, 1930-66, II, p. 274, 1940, fig. 205).
 Loc. No. 16.
- var. *tetraodon* (EHR.) RALFS. (F. HUSTEDT, 1930, p. 273, fig. 740 i).
 Loc. Nos. 1, 11.
- E. septentrionalis* ØSTRUP. (E. ØSTRUP, 1897, p. 274, 1: 10. F. HUSTEDT, 1930-66, II, p. 292, fig. 758).
 Loc. Nos. 1, 2, 9, 22.
- E. sudetica* (O. MÜLLER) HUST. (F. HUSTEDT, 1930-66, II, p. 299, figs. 764 a, b).
 Plate IV, fig. 7: $40 \times 6 \mu$. 12-13 striae in 10μ . No. 206/1957.
 Plate IV, fig. 8: $53 \times 10 \mu$. 9 striae in 10μ . No. 548/1957.
 Plate IV, fig. 9: $56 \times 16 \mu$. 9 striae in 10μ . No. 233/1957.
 Plate IV, fig. 10: $33 \times 9 \mu$. 10 striae in 10μ . No. 543/1957.
 Loc. Nos. 4, 10-14, 16, 17, 20, 23, 25, 26, 28, 30.
- E. tenella* (GRUN.) HUST. (F. HUSTEDT, 1930-66, II, p. 284, fig. 749).
 Loc. Nos. 1, 2, 4-26, 28-30.
- E. testudinata* BERG. (Å. BERG, 1939, p. 425, fig. 10. N. FOGED, 1972, p. 62, D II: 2, 3).
 Plate V, fig. 4: $51 \times 18 \mu$. 8-9 striae in 10μ . No. 17/Kap Farvel 1970.
 Plate V, fig. 5: $40 \times 14.5 \mu$. 11 striae in 10μ . No. 17/Kap Farvel 1970.
 Loc. No. 30.
 Previously only found recent in the southern Lapland, Sweden (Å. BERG, 1939, p. 425, fig. 10), and subfossil in the southernmost part of Greenland (N. FOGED, 1972, p. 62, D II: 2, 3).
- E. triodon* EHR. (F. HUSTEDT, 1930-66, II, p. 274, fig. 744).
 Plate III, fig. 5: $88 \times 17 \mu$. 18-20 striae in 10μ . No. 115/1957.
 Plate III, fig. 6: $47 \times 20 \mu$. 18-20 striae in 10μ . No. 543/1957.
 Plate III, fig. 7: $39 \times 19 \mu$. 16 striae in 10μ . No. 543/1957.
 Loc. Nos. 2, 4-6, 9, 10, 14-25, 28-30.
- E. valida* HUST. (F. HUSTEDT, 1930-66, II, p. 288, fig. 754).
 Loc. Nos. 2, 7, 8, 9, 17, 28.
- E. veneris* (KÜTZ.) O. MÜLLER. (F. HUSTEDT, 1930-66, II, p. 300, fig. 766).
 Loc. Nos. 1, 3, 4, 7-10, 17, 20-22, 25, 28-30.

Fragilaria LYNGBYE 1819

- F. brevistriata* GRUN. (F. HUSTEDT, 1930-66, II, p. 168, figs 676 a-e).
 Loc. Nos. 1, 14, 15.

- F. capucina* DESMAZ. (F. HUSTEDT, 1930-66, II, p. 144, figs. 659 a-c).
Loc. Nos. 1, 3, 11, 15, 20, 23, 26-29.
- - var. *mesolepta* RABH. (F. HUSTEDT, 1930-66, II, p. 145, figs. 659 h, i).
Loc. Nos. 1, 22.
- F. constricta* EHR. (F. HUSTEDT, 1930-66, II, p. 166, figs. 674 a-c).
Plate II, fig. 13: $54 \times 7-13 \mu$. 16-18 striae in 10μ . No. 111/1970.
Plate II, fig. 14: $36 \times 4-7 \mu$. 14 striae in 10μ . No. 05/Kap Farvel 1970.
Plate II, fig. 15 a: $34 \times 5.5-11 \mu$. 14 striae in 10μ . No. 550/1957.
Plate II, fig. 15 b: $24 \times 9-11 \mu$. 14 striae in 10μ . No. 72/1970.
Loc. Nos. 1, 5, 6, 9, 10, 14-17, 19-24, 28-30.
Previously not shown in Greenland in spite of the fact that it is rather common as well in Northern Europe as in North America. It is often found together with *Actinella punctata* and *Amphicampa hemicyclus*.
- - fo. *stricta* A. CLEVE. (F. HUSTEDT, 1930-66, II, p. 166, figs. 674 d, e).
Loc. Nos. 1, 6, 14-16, 21-24, 28-30.
By Å. BERG, 1945, p. 6 stated to be found in the area between Holsteinsborg and Christianshåb, but no further information about locality is given.
- - fo. *tetranodis* A. CLEVE. (F. HUSTEDT, 1930-66, II, p. 166, fig. 674 g).
Loc. No. 17.
- F. construens* (EHR.) GRUN. (F. HUSTEDT, 1930-66, II, p. 156, figs. 670 a-c).
Loc. Nos. 1, 3, 6, 8, 10-12, 14, 15, 20-22, 25.
- - var. *binodis* (EHR.) GRUN. (F. HUSTEDT, 1930-66, II, p. 158, figs. 670 d-g).
Plate II, fig. 19: $19 \times 4.2 \mu$ 14-15 striae in 10μ . No. 405/1957.
Loc. Nos. 1, 3, 4, 6-8, 10-12, 15, 20-22, 25, 26.
- F. intermedia* GRUN. (F. HUSTEDT, 1930-66, II, p. 152, fig. 666).
Loc. Nos. 20, 22, 25, 26.
- F. lapponica* GRUN. (F. HUSTEDT, 1930-66, II, p. 170, fig. 678).
Plate II, fig. 20: $25 \times 7 \mu$. 6-7 striae in 10μ . No. 425/1957.
Loc. Nos. 1, 3, 4, 6, 8, 10-12, 14, 20, 22, 26.
- F. leptostauron* (EHR.) HUST. (F. HUSTEDT, 1930-66, II, p. 153, figs. 668 a-f).
Loc. Nos. 1, 3, 7, 8, 12, 18, 22, 27, 28.
- F. pinnata* EHR. (F. HUSTEDT, 1930-66, II, p. 160, figs. 671 a-i).
Plate II, fig. 18: $12.5 \times 5 \mu$. 12-13 striae in 10μ . No. 01/1957.
Loc. Nos. 1-3, 6-8, 10-12, 14, 20, 22, 25-28.
- F. vaucheriae* (KÜTZ.) PETERSEN. (J. B. PETERSEN, 1938, p. 167, fig. 1).
Loc. Nos. 1, 11, 15, 18, 22, 23, 26, 28.
- F. virescens* RALFS. (F. HUSTEDT, 1930-66, II, p. 162, figs. 672 A a, b).
Loc. Nos. 1-17, 19-26, 28-30.

Frustulia C. AGARDH 1824

- F. rhomboides* (EHR.) DE TONI. (F. HUSTEDT, 1930-66, II, p. 728, fig. 1098 a).
 Plate VI, fig. 6: $80 \times 17.5 \mu$. No. 111/1970.
 Loc. Nos. 1-4, 6, 9, 15-17, 19-25, 28-30.
- - var. *saxonica* (RABH.) DE TONI. (F. HUSTEDT, 1930-66, II, p. 729, fig. 1099 a).
 Plate VI, fig. 7: $52 \times 14 \mu$. No. 16/1957.
 Loc. Nos. 1-6, 8-26, 28-30.
- - - fo. *capitata* A. MAYER. (F. HUSTEDT, 1930, p. 221).
 Loc. Nos. 1, 2, 5, 8, 9, 11, 12, 15-17, 21-26, 28, 29.
- F. vulgaris* (THWAITES) DE TONI. (F. HUSTEDT, 1930-66, II, p. 730, fig. 1100 c).
 Loc. Nos. 8-16, 22, 26.

Gomphonema C. AGARDH 1824

- G. acuminatum* EHR. (F. HUSTEDT, 1930, p. 370, fig. 683).
 Loc. Nos. 3, 6, 11, 12, 15, 20-23, 26, 27.
- - forma.
 Plate XVIII, fig. 16: $34 \times 4-6.5 \mu$. 12 striae in 10μ . No. 111/1970.
 Loc. No. 21.
 A rarely occurring form, probably an anormal *G. acuminatum*.
- - var. *brébissonii* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930, p. 370, fig. 685).
 Plate XVIII, fig. 4: $54 \times 8.5 \mu$. 9-10 striae in 10μ . No. 09/Kap Farvel 1970.
 Loc. Nos. 1, 3, 4, 6, 11, 15, 19, 22, 25, 27, 28.
- - var. *coronata* (EHR.) W. SMITH. (F. HUSTEDT, 1930, p. 370, fig. 684).
 Plate XVIII, fig. 5: $72 \times 11 \mu$. 10 striae in 10μ . No. 405/1957.
 Loc. Nos. 1-4, 6, 8-11, 14, 15, 20-26, 28.
- - var. *trigonocephala* (EHR.) GRUN. (F. HUSTEDT, 1930, p. 371, fig. 686).
 Loc. Nos. 15, 21, 23, 24, 27.
- - var. *turris* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 372, fig. 687).
 Loc. Nos. 8, 15, 20, 22, 25.
- G. angustatum* (KÜTZ.) RABH. (F. HUSTEDT, 1930, p. 373, fig. 690).
 Loc. Nos. 1, 3-12, 14, 16, 18, 20-22, 24-30.
- - var. *linearis* HUST. (F. HUSTEDT, 1930, p. 373, fig. 692).
 Loc. Nos. 2, 4, 8, 9, 18, 22.
- - var. *producta* GRUN. (F. HUSTEDT, 1930, p. 373, fig. 693).
 Loc. Nos. 3, 8, 9, 11-13, 18, 20-22, 25, 26, 28, 29.
- - var. *sarcophagus* (GREG.) GRUN. (F. HUSTEDT, 1930, p. 373, fig. 691).
 Loc. Nos. 1, 5, 20-22, 25, 26.
- - var. *undulata* GRUN. (F. HUSTEDT, 1930, p. 373, fig. 694).
 Loc. No. 23.

- G. bipunctata* KRASSKE. (G. KRASSKE, 1943, p. 87, figs. 33, 34).
Loc. No. 8.
- G. brasiliense* GRUN. (O. MÜLLER, 1903, 1: 9. H. OKUNO, 1952, 28: 10, 11, 13. N. FOGED, 1966, p. 107, 21: 4, 5).
Plate XVIII, fig. 17: $19 \times 5 \mu$. 12 striae in 10μ . No. 342/1957.
Plate XVIII, fig. 18: $34 \times 6 \mu$. 12 striae in 10μ . No. 341/1957.
Loc. No. 15.
Remarkable find of a *Gomphonema* species rarely observed. Perhaps it is cosmopolitan, since it is shown in Africa (O. MÜLLER, 1903; N. FOGED, 1966), in Asia (P. T. CLEVE, 1894; H. OKUNO, 1953), in the Soviet Union (S. VAN LANDINGHAM, 1971, IV) and in South America (P. T. CLEVE, 1894).
- G. clevei* FRICKE. (A. SCHMIDT's Atlas 234: 44–46).
Loc. Nos. 1, 20, 21.
- G. constrictum* EHR. (F. HUSTEDT, 1930, p. 377, fig. 714).
Loc. Nos. 1, 3, 20–26.
- – var. *capitata* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 377, fig. 715).
Plate XVIII, fig. 9: $54 \times 14 \mu$. 10 striae in 10μ . No. 231/1957.
Plate XVIII, fig. 10: $51 \times 9 \mu$. 10–11 striae in 10μ . No. 422/1957.
Loc. Nos. 1, 3, 4, 6–9, 11, 13, 14, 15, 21–24, 26–28, 30.
- G. gracile* EHR. (F. HUSTEDT, 1930, p. 376, fig. 702).
Loc. Nos. 1, 2, 6, 11, 12, 15, 17, 20–27.
- – fo. *turris* HUST. (F. HUSTEDT, 1937–39, p. 439. 28: 14–16).
Loc. No. 2.
- – var. *lanceolata* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930, p. 376, fig. 703).
Loc. Nos. 6, 8, 15, 20, 25.
- G. intricatum* KÜTZ. (F. HUSTEDT, 1930, p. 375, fig. 697).
Loc. Nos. 1, 3, 6, 20, 28, 29.
- – var. *vibrio* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 376, fig. 698).
Loc. No. 1.
- G. lagerheimii* A. CLEVE. (F. HUSTEDT, 1942, p. 146, figs. 78–82).
Plate XVIII, fig. 21: $46 \times 5 \mu$. 14–15 striae in 10μ . No. 77/1970.
Loc. Nos. 11, 16, 20–23, 26, 28, 29.
- – fo. *simplex* fo. nov. Plate XVIII, fig. 13.
Valvis fere lanceolatis et apicibus acuminatoribus a typo differt.
Differs from the type species by having almost lanceolate valves and more acuminate apices.
Plate XVIII, fig. 13: $36 \times 5.5 \mu$. 12 striae in 10μ . No. 02/Kap Farvel 1970.
Plate XVIII, fig. 14: $31 \times 6 \mu$. 12 striae in 10μ . No. 17/Kap Farvel 1970.
Plate XVIII, fig. 15: $25 \times 5 \mu$. 12 striae in 10μ . No. 46/1970.
Illustration slide and Holotype: FOGED Coll., Odense, No. 02/Kap Farvel 1970.

Type locality: Freshwater pond, Kap Farvel, South Greenland. A small *Gomphonema* species, presumably to be included under *G. lagerheimii*, which is fairly much distributed and common in Greenland.

Loc. Nos. 19, 29, 30.

G. lanceolatum GRUN. (F. HUSTEDT, 1930, p. 376, fig. 700).

Plate XVIII, fig. 7: $39 \times 7 \mu$. 9 striae in 10μ . No. 10/Kap Farvel 1970.

Plate XVIII, fig. 8: $47 \times 10.5 \mu$. 10 striae in 10μ . No. 59/1970.

Plate XVIII, fig. 12: $68 \times 11 \mu$. 12 striae in 10μ . No. 341/1957.

Loc. Nos. 1, 15, 20, 21, 28, 29.

— — var. *insignis* (GREG.) CLEVE. (F. HUSTEDT, 1930, p. 376, fig. 701).

Loc. No. 11.

G. longiceps EHR. (F. HUSTEDT, 1930, p. 375, fig. 704).

Plate XVIII, fig. 11: $52 \times 8 \mu$. 8 striae in 10μ . No. 165/1957.

Loc. Nos. 1, 11–13, 22, 24.

— — var. *montana* (SCHUM.) CLEVE. (F. HUSTEDT, 1930, p. 375, fig. 707).

Loc. Nos. 3, 4, 7–11, 14, 18, 28.

— — fo. *suecica* GRUN. (F. HUSTEDT, 1930, p. 375, fig. 708).

Loc. Nos. 15, 23.

— — var. *subclavata* GRUN. (F. HUSTEDT, 1930, p. 375, fig. 705).

Loc. No. 20.

— — fo. *gracilis* HUST. (F. HUSTEDT, 1930, p. 375, fig. 706).

Loc. No. 15.

G. parvulum KÜTZ. (F. HUSTEDT, 1930, p. 372, fig. 713 a).

Loc. Nos. 2, 4, 6–9, 11, 12, 15–17, 20–24, 26, 28–30.

— — var. *micropus* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930, p. 373, fig. 713 c).

Loc. Nos. 16, 30.

G. subtile EHR. (F. HUSTEDT, 1930, p. 376, fig. 709).

Plate XVIII, fig. 6: $62 \times 8 \mu$. 10 striae in 10μ . No. 09/Kap Farvel 1970.

Loc. Nos. 1–3, 6, 8, 11, 15, 20–22, 25, 26, 28.

Hantzschia GRUN. 1888

H. amphioxys (EHR.) GRUN. (F. HUSTEDT, 1930, p. 394, fig. 747).

Loc. Nos. 1, 9, 21, 24.

— — var. *maior* GRUN. (F. HUSTEDT, 1930, p. 394, fig. 749).

Loc. Nos. 1, 3, 8, 11, 15, 20, 29.

— — var. *vivax* (HANTZSCH) GRUN. (F. HUSTEDT, 1930, p. 394, fig. 750).

Loc. Nos. 4, 20, 21.

Melosira C. A. AGARDH 1824

M. ambigua (GRUN.) MÜLLER. (F. HUSTEDT, 1930–66, I, p. 256, fig. 108).

Loc. Nos. 20, 22.

- M. distans* (EHR.) KÜTZ. (F. HUSTEDT, 1930-66, I, p. 262, figs. 110 a-e).
Loc. Nos. 1-17, 19-30.
- - var. *alpigena* GRUN. (F. HUSTEDT, 1930-66, I, p. 263, fig. 110 g).
Plate I, fig. 15: Cell: $9 \times 10 \mu$. 12-13 striae in 10μ . No. 02/Kap Farvel 1970.
Loc. Nos. 1, 2, 4-6, 8, 9, 11, 12, 26, 28, 29.
- - var. *lirata* (EHR.) BETHGE. (F. HUSTEDT, 1930-66, I, p. 264, figs. 111 a-c).
Plate I, fig. 9: diam.: 19μ . No. 221/1957.
Plate I, fig. 13: width: 14.5μ . 8 puncta in 10μ . No. 342/1957.
Plate I, fig. 14: width: $9-10 \mu$. No. 09/ Kap Farvel 1970.
Loc. Nos. 1-6, 8-17, 19-26, 28-30.
- - - fo. *seriata* MÜLLER. (F. HUSTEDT, 1930-66, I, p. 264, fig. 111 d).
Loc. No. 14.
- M. islandica* O. MÜLLER. (F. HUSTEDT, 1930-66, I, p. 252, fig. 106 a).
Loc. No. 21.
- M. italica* (EHR.) KÜTZ. (F. HUSTEDT, 1930-66, I, p. 257, figs. 109 c, d).
Loc. Nos. 6, 15, 20, 26.
- - subspec. *subarctica* MÜLLER. (F. HUSTEDT, 1930-66, I, p. 261, fig. 109b).
Loc. Nos. 9, 14, 20, 22.
- - var. *valida* GRUN. (F. HUSTEDT, 1930-66, I, p. 260, fig. 109 a).
Plate I, fig. 16: width 15μ . No. 100/1970.
Loc. Nos. 15, 20, 22.
- M. pfaffiana* REINSCH. (F. HUSTEDT, 1930-66, I, p. 265, fig. 110 h).
Syn.: *M. distans* var. *africana* MÜLLER.
Plate I, fig. 10: cell: $9.5 \times 10 \mu$. No. 548/1957.
Plate I, fig. 11: $19 \times 13 \mu$. No. 02/Kap Farvel 1970.
Loc. Nos. 16, 21, 29.
- - fo. *perglabra* ØSTRUP. (E. ØSTRUP, 1910, p. 213, 5: 124).
Plate I, fig. 12: $16 \times 11 \mu$. ca. 10 striae in 10μ . No. 02/Kap Farvel 1970.
Loc. No. 28, 29.
- M. roeseana* RABH. (F. HUSTEDT, 1930-66, I, p. 231, fig. 95).
Plate I, fig. 1: diam.: 39μ . No. 95/1957.
Plate I, fig. 2: diam.: 33μ . No. 377/1957.
Plate I, fig. 4: cell: $57 \times 27 \mu$. No. 04/Kap Farvel 1970.
Loc. Nos. 3, 5, 10, 12, 14, 30.

Meridion C. A. AGARDH 1824

- M. circulare* (GREV.) AG. (F. HUSTEDT, 1930-66, II, p. 93, figs. 627 a-f).
Loc. Nos. 1-4, 7-12, 15-18, 20-22, 27, 28.
- - var. *constricta* (RALFS) V. HEURCK. (F. HUSTEDT, 1930-66, II, p. 93, figs. 627 g, h).
Loc. Nos. 4, 8, 10-12, 14, 20, 22, 24, 27, 28.

Navicula BORY 1824

- N. abiskoensis* HUST. (F. HUSTEDT, 1942, p. 118, fig. 36).
Plate X, fig. 9: $47 \times 10 \mu$. 13 striae in 10μ . No. 432/1957.
Loc. Nos. 1, 2.
- N. amphibola* CLEVE. (F. HUSTEDT, 1930, p. 309, fig. 554).
Loc. No. 13.
- N. avenacea* (BRÉB.) GRUN. (F. HUSTEDT, 1930, p. 297. C. BROCKMANN, 1950, p. 17, 1: 6).
Loc. No. 2.
- N. bacillum* EHR. (F. HUSTEDT, 1930, p. 280, fig. 465).
Loc. Nos. 1, 3, 4, 8, 11, 15.
- N. bryophila* PETERSEN. (J. B. PETERSEN, 1928, p. 388, fig. 13. 1946, p. 87, fig. 21).
Loc. Nos. 1-5, 7-12, 15, 17-26, 28-30.
- N. cari* EHR. var. *angusta* GRUN. (F. HUSTEDT, 1930, p. 299).
Plate X, fig. 10: $46 \times 6 \mu$. 11-12 striae in 10μ . No. 10/Kap Farvel 1970.
Loc. Nos. 1-5, 8-13, 15, 20, 21, 28.
This variety easily is mistaken for *N. lobeliae* E. G. JØRGENSEN, 1948, p. 59, 2: 21 (vide Plate X, fig. 16). *N. cari* var. *angusta* however has linear to faintly elliptical valves, whereas the valves of *N. lobeliae* have absolutely parallel margins which suddenly curve inwards near the apices. In addition you on *N. lobeliae* will find a strongly marked axial rib, on one side sharply demarcated by the axial area, whereas you will see no or at least a much less developed rib on *N. cari* var. *angusta*. Furthermore the striae of *N. lobeliae* have coarse lines (35-37 in 10μ), while *N. cari* var. *angusta* has 26-28 longitudinal lines in 10μ .
The ecological conditions seem to be equal.
According to F. R. SCHOEMANN, 1970, p. 56 *Navicula cari* var. *angusta* has to be established as a species apart, called *N. angusta* GRUN. (VAN HEURCK, 1880-1881, 7: 17), as it differs from *N. cari* as well structurally as ecologically. Thus *N. cari* occurs in alkaline water, whereas var. *angusta* is found in acid to neutral water.
- N. clementis* GRUN. (A. SCHMIDT'S Atlas 398: 12).
Loc. No. 10.
- N. cocconeiformis* GREG. (F. HUSTEDT, 1930-66, III, p. 132, fig. 1266).
Plate IX, fig. 11: $29 \times 13 \mu$. 20-22 striae in 10μ . No. 473/1957.
Plate IX, fig. 12: $20 \times 11 \mu$. 22 striae in 10μ . No. 225/1957.
Loc. Nos. 1-17, 19-26, 28-30.
The shape of the valve is very variable. As well the longish rhomboid to lanceolate (IX: 11) as the short broadly elliptical valves (IX: 12)

are common in the material. Real transitions between the two forms appear rarely here. Moreover the polar fissures of the raphe are deflected in opposite directions.

- N. contenta* GRUN. (F. HUSTEDT, 1930–66, III, p. 209, figs. 1328 a–d).
Loc. Nos. 4, 21, 26.
- fo. *biceps* (ARNOTT) GRUN. (F. HUSTEDT, 1930–66, III, p. 209, figs. 1328 h, i).
Loc. Nos. 1, 11, 21, 23, 24, 26.
- fo. *parallela* PETERSEN. (J. B. PETERSEN, 1928, p. 15, fig. 2. F. HUSTEDT, 1930–66, III, p. 209, figs. 1328 e–g).
Loc. No. 28.
- N. cryptocephala* KÜTZ. (F. HUSTEDT, 1930, p. 295, fig. 496).
Loc. Nos. 1, 2, 4, 6, 8, 10–12, 20, 22, 26, 28, 29.
- var. *intermedia* GRUN. (F. HUSTEDT, 1930, p. 295, fig. 497 b).
Loc. Nos. 1, 2, 6, 8, 9, 15, 20, 22, 25, 26.
- var. *veneta* (KÜTZ.) GRUN. (F. HUSTEDT, 1930, p. 295, fig. 497 a).
Loc. Nos. 22, 25, 26.
- N. cuspidata* KÜTZ. (F. HUSTEDT, 1930–66, III, p. 59, fig. 1206 a).
Plate IX, fig. 6: $64 \times 17 \mu$. 16 striae in 10μ . No. 195/1957.
Plate IX, fig. 7: $76 \times 18 \mu$. 14–15 striae in 10μ . No. 341/1957.
Loc. Nos. 12, 15, 20–22, 28, 29.
- var. *héribaldi* PERAG. (F. HUSTEDT, 1930–66, III, p. 60, fig. 1207).
Plate IX, fig. 8: $84 \times 29 \mu$. ca. 14 striae in 10μ . No. 504/1957.
Loc. Nos. 2, 3, 9, 15.
- N. dicephala* (EHR.) W. SMITH. (F. HUSTEDT, 1930, p. 302, fig. 526).
Plate X, fig. 11: $35 \times 10 \mu$. 10 striae in 10μ . No. 357/1957.
Loc. Nos. 7, 8.
- N. disjuncta* HUST. (F. HUSTEDT, 1930–66, III, p. 143, figs. 1275 a–e).
Loc. No. 8.
- N. elegans* W. SMITH. (F. HUSTEDT, 1930, p. 312, fig. 562).
Loc. Nos. 10, 14, 24.
- N. exigua* (GREG.) O. MÜLLER. (F. HUSTEDT, 1930, p. 305, fig. 538).
Loc. No. 14.
- N. explanata* HUST. (F. HUSTEDT, 1948, p. 207, figs. 7, 8. 1930–66, III, p. 805, fig. 1776).
Plate X, fig. 12: $27 \times 11 \mu$. 13 striae in 10μ . No. 432/1957.
Loc. Nos. 1, 2, 12, 15, 22.
- N. festiva* KRASSKE. (F. HUSTEDT, 1930, p. 289, fig. 489).
Loc. Nos. 24, 29.
- N. gracilis* EHR. (F. HUSTEDT, 1930, p. 299, fig. 514).
Loc. No. 1.
- N. grimmei* KRASSKE. (F. HUSTEDT, 1930–66, III, p. 769, figs. 1742 a–d).
Loc. No. 22.

- N. gysingensis* FOGED. (N. FOGED, 1952, p. 167, 2: 7).
Loc. Nos. 4, 8, 15, 22.
- N. jentzschii* GRUN. (F. HUSTEDT, 1930-66, III, p. 642, fig. 1644).
Loc. Nos. 20, 22.
- N. järnefelti* HUST. (A. SCHMIDT's Atlas 404: 6-13).
Loc. Nos. 1, 3, 8, 10, 11, 14, 20, 22, 25, 28.
- N. kirchneriana* FLORIN. (M.-B. FLORIN, 1970, p. 679, figs. 4 l, 17 a, b).
Loc. Nos. 2, 3, 6, 12.
Previously shown subfossil in U.S.A.
- N. lanceolata* (AG.) KÜTZ. (F. HUSTEDT, 1930, p. 305, fig. 540).
Loc. Nos. 1, 8-11, 15, 20, 22, 28.
- N. levanderi* HUST. (A. SCHMIDT's Atlas 397: 30-32. F. HUSTEDT, 1930-66, III, p. 98, fig. 1245).
Loc. Nos. 1, 2, 6, 11, 12, 21, 22, 24, 25, 28, 29.
- N. lobeliae* JØRGENSEN. (E. G. JØRGENSEN, 1948, p. 59, 2: 21).
Plate X, fig. 16: $68 \times 7 \mu$. 11 striae in 10μ . A specimen from fresh-water in Denmark.
- N. minima* GRUN. (F. HUSTEDT, 1930-66, III, p. 249, fig. 1374).
Loc. No. 1.
- N. modica* HUST. (F. HUSTEDT, 1930-66, III, p. 154, fig. 1286).
Loc. Nos. 1, 22.
- N. mutica* KÜTZ. (F. HUSTEDT, 1930-66, III, p. 583, figs. 1592 a-f).
Loc. Nos. 6, 26.
- fo. *lanceolata* FRENGUELLI. (F. HUSTEDT, 1930-66, III, p. 585, fig. 1592 u).
Plate X, fig. 4: $36 \times 10 \mu$. 16 striae in 10μ . No. 113/1970.
Plate X, fig. 5: $31 \times 8.5 \mu$. 18 striae in 10μ . No. 473/1957.
Loc. Nos. 4, 21.
- N. naumanni* HUST. var. *simplex* var. nov. Plate X, fig. 17.
Apicibus admodum extensis, non capitatis a typo differt.
Differs from *N. naumanni* HUST. by having faintly extended, not capitate apices.
Plate X, fig. 17: $23 \times 7 \mu$. 18-20 striae in 10μ . No. 10/Kap Farvel 1970.
Loc. No. 28.
Illustration slide and holotype: FOGED Coll., Odense, No. 10/Kap Farvel 1970.
Type locality: Freshwater brook, Amitsuarssuk, South Greenland.
N. naumanni is found, but rarely, in Scotland, Ireland and Alaska.
MAX MØLLER, Odense, has found var. *simplex* in Sphagnum material from Thailand (Bot. Mus., Copenhagen).
- N. opportuna* HUST. (F. HUSTEDT, 1945-50, p. 436, 39: 21, 22).
Loc. No. 22.

- N. paludosa* HUST. (F. HUSTEDT, 1957, p. 286, 7: 4–6).
Loc. No. 19.
- N. perpusilla* GRUN. (F. HUSTEDT, 1930–66, III, p. 213, fig. 1330).
Loc. Nos. 1, 3, 4, 6–8, 10–12, 14, 18, 22, 26, 28.
- N. peterseni* HUST. (A. SCHMIDT'S Atlas 402: 1–7. F. HUSTEDT, 1937, p. 192, figs. 17–20).
Plate X, fig. 14: $29 \times 9 \mu$. 12 striae in 10μ . No. 171/1957.
Plate X, fig. 15: $39 \times 9 \mu$. No. 317/1957.
Loc. Nos. 1–4, 11, 12, 25, 26.
- N. protracta* (GRUN.) CLEVE. (F. HUSTEDT, 1930–66, III, p. 315, fig. 1433).
Loc. No. 14.
- N. pseudobryophila* HUST. (F. HUSTEDT, 1930–66, III, p. 92, fig. 1239).
Loc. No. 22.
- N. pseudoscutiformis* HUST. (F. HUSTEDT, 1930–66, III, p. 630, fig. 1628).
Loc. Nos. 1, 3, 4, 6, 8–12, 17, 20, 22, 28, 29.
- N. pupula* KÜTZ. (F. HUSTEDT, 1930–66, III, p. 120, figs. 1254 a–g).
Loc. Nos. 1, 2, 6, 12, 16, 20, 22, 25–27.
- fo. *capitata* SKVORTZOV & MEYER. (F. HUSTEDT, 1930–66, III, p. 121, figs. 1254 i–m).
Loc. Nos. 1, 2, 6, 11.
- fo. *rectangularis* (GREG.) GRUN. (F. HUSTEDT, 1930–66, p. 121, figs. 1254 n–q).
Loc. Nos. 1, 6, 8, 11, 12, 15, 20–22, 24–26.
- N. pusilla* W. SMITH. (F. HUSTEDT, 1930–66, III, p. 722, fig. 1704).
Plate X, fig. 1: $48 \times 23 \mu$. 14 striae in 10μ . No. 394/1957.
Plate X, fig. 2: $34 \times 11 \mu$. 18 striae in 10μ . No. 394/1957.
Loc. Nos. 1, 6, 11, 26.
- N. pusio* CLEVE. (F. HUSTEDT, 1930–66, III, p. 134, fig. 1267).
Plate IX, fig. 13: $24 \times 12 \mu$. No. 341/1957.
Loc. Nos. 4, 9, 10, 14, 15.
- N. radiosa* KÜTZ. (F. HUSTEDT, 1930, p. 299, fig. 513).
Plate X, fig. 6: $43 \times 9 \mu$. 11 striae in 10μ . No. 432/1957.
Plate X, fig. 7: $68 \times 9 \mu$. 10 striae in 10μ . No. 473/1957.
Loc. Nos. 1–4, 6, 9, 11, 12, 14, 15, 20–30.
- N. rhynchocephala* KÜTZ. (F. HUSTEDT, 1930, p. 296, fig. 501).
Loc. Nos. 1–3, 8, 10, 11, 14–16, 20–22, 26–30.
- N. rotaeana* (RABH.) GRUN. (F. HUSTEDT, 1930–66, III, p. 200, fig. 1319).
Loc. Nos. 4, 8, 12, 13, 16, 20, 23, 28.
- N. schadei* KRASSKE. (F. HUSTEDT, 1930–66, III, p. 222, fig. 1340).
Loc. No. 8.
- N. schönfeldii* HUST. (F. HUSTEDT, 1930, p. 301, fig. 520).
Loc. Nos. 4, 9, 15, 17, 20, 21.

- N. scutiformis* GRUN. (F. HUSTEDT, 1930–66, III, p. 630, fig. 1627).
Loc. No. 15.
- N. similis* KRASSKE. (F. HUSTEDT, 1930, p. 303, fig. 528).
Plate X, fig. 13: $20 \times 7 \mu$. 15 striae in 10μ . No. 344/1957.
Loc. Nos. 1, 14, 15, 20.
- N. subatomoides* HUST. (F. HUSTEDT, 1930–66, III, p. 271, fig. 1400).
Loc. No. 28.
- N. subrotundata* HUST. (F. HUSTEDT, 1930–66, III, p. 272, figs. 1402 a–m).
Loc. No. 1.
- N. subtilissima* CLEVE. (F. HUSTEDT, 1930–66, III, p. 89, fig. 1235).
Loc. Nos. 5, 16, 17, 20, 21, 29.
- N. söhrensensis* KRASSKE. (F. HUSTEDT, 1930–66, III, p. 214, figs. 1331 a–d).
Loc. No. 22.
- fo. *musculicola* (PETERSEN) KRASSKE. (F. HUSTEDT, 1930–66, III, p. 215, figs. 1331 f–h).
Loc. Nos. 4, 9, 22, 29, 30.
- N. tenuicephala* HUST. (F. HUSTEDT, 1942, p. 113, figs. 16–20).
Loc. Nos. 2, 13, 21, 24, 28, 29.
- N. tuscula* (EHR.) GRUN. (F. HUSTEDT, 1930, p. 308, fig. 552).
Plate X, fig. 3: $70 \times 21 \mu$. 11 striae in 10μ . No. 436/1957.
Loc. Nos. 1, 2.
- N. variostrata* KRASSKE. (F. HUSTEDT, 1930–66, III, p. 201, fig. 1320).
Loc. Nos. 1–15, 17, 19–26, 28, 29.
- N. ventralis* KRASSKE. (F. HUSTEDT, 1930–66, III, p. 140, figs. 1273 a–d).
Loc. No. 6.
- N. viridula* KÜTZ. (F. HUSTEDT, 1930, p. 297, fig. 503).
Loc. Nos. 6, 10, 12, 15–17, 22.
- N. vulpina* KÜTZ. (F. HUSTEDT, 1930, p. 297, fig. 504).
Plate IX, fig. 9: $74 \times 15.5 \mu$. 10 striae in 10μ . No. 435/1957.
Plate IX, fig. 10: $100 \times 17 \mu$. 9–10 striae in 10μ . No. 444/1957.
Loc. Nos. 1, 3, 8, 10, 20, 22, 26, 27.
- N. wittrockii* (LAGERST.) CLEVE. (F. HUSTEDT, 1930–66, III, p. 124, fig. 1256).
Loc. Nos. 1, 6, 10–12, 14, 15, 20, 22, 24–27.

Neidium PFITZER 1871

- N. affine* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 242, fig. 376).
Loc. Nos. 1, 4, 6, 11–13, 15–17, 19–26, 28–30.
- fo. *hercynica* (A. MAYER) HUST. (F. HUSTEDT, 1930, p. 243).
Plate IX, fig. 5: $45 \times 11 \mu$. 24–26 striae in 10μ . No. 548/1957.
Loc. Nos. 16, 17.
- var. *amphirhynchus* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 243, fig. 377).

Plate VIII, fig. 12: $42 \times 11 \mu$. ca. 24 striae in 10μ . No. 554/1957.

Loc. Nos. 1-4, 6, 8, 10-12, 16, 17, 20, 21, 23, 25, 26, 30.

N. affine var. *amphirhynchus* fo. *undulata* (GRUN.) CLEVE. (F. HUSTEDT, 1930, p. 243).

Plate VII, fig. 10: $74 \times 14 \mu$. 18 striae in 10μ . No. 168/1957.

Loc. Nos. 3, 6, 12, 25, 28.

- - var. *capitata* MÖLDER. (K. MÖLDER, 1937, p. 30, fig. 1).

Loc. Nos. 1, 11, 20, 23, 25, 30.

- - var. *humerus* REIMER. (C. W. REIMER, 1959, p. 12, 4: 3. R. PATRICK & C. W. REIMER, 1966, p. 392, 35: 5).

Plate VII, fig. 9: $41 \times 13 \mu$. 22-24 striae in 10μ . No. 516/1957.

Loc. No. 8.

- - var. *longiceps* (GREG.) CLEVE. (F. HUSTEDT, 1930, p. 244, fig. 378).

Plate VIII, fig. 10: $24 \times 6.2 \mu$. 22-24 striae in 10μ . No. 09/Kap Farvel 1970.

Plate VIII, fig. 11: $30 \times 7.5 \mu$. 24 striae in 10μ . No. 327/1957.

Loc. Nos. 11, 28.

N. binodis (EHR.) HUST. (F. HUSTEDT, 1930, p. 276, fig. 455).

Syn.: *Navicula binodis* EHR.

Loc. Nos. 6, 15, 16, 20, 22, 26, 28, 29.

N. bisulcatum (LAGERST.) CLEVE. (F. HUSTEDT, 1930, p. 242, fig. 374).

Loc. Nos. 1-5, 8-12, 15, 16, 19-26, 28-30.

N. dubium (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 245, fig. 384 a).

Loc. Nos. 1, 16, 28.

N. incurvum (GREG.) ØSTRUP. (E. ØSTRUP, 1918, p. 8, 1: 5).

Plate VI, fig. 14: $55 \times 11 \mu$. 22 striae in 10μ . No. 93/1957.

Loc. Nos. 5, 9, 11.

N. iridis (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 245, fig. 379).

Plate VIII, fig. 1: $80 \times 26 \mu$. 15 striae in 10μ . No. 425/1957.

Plate VIII, fig. 2: $70 \times 19 \mu$. 18-19 striae in 10μ . No. 05/Kap Farvel 1970.

Loc. Nos. 1, 2, 4, 6, 9, 11, 15-17, 20-24, 28-30.

- - fo. *vernalis* REICHEL. (F. HUSTEDT, 1930, p. 245, fig. 380).

Loc. Nos. 1, 2, 9, 16, 17, 19-21, 24, 28-30.

- - fo. *obtusa* GRUN. (F. HUSTEDT, 1945-50, p. 438, figs. 2, 3).

Plate VIII, fig. 13: $41 \times 14 \mu$. 18-20 striae in 10μ . No. 357/1957.

Loc. No. 8.

- - var. *ampliata* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 245, fig. 381).

Plate VIII, fig. 3: $76 \times 18 \mu$. 18 striae in 10μ . No. 16/1957.

Plate VIII, fig. 4: $70 \times 16 \mu$. 18-19 striae in 10μ . No. 168/1957.

Plate VIII, fig. 5: $62 \times 14 \mu$. 20 striae in 10μ . No. 147/1957.

Loc. Nos. 1, 6, 8, 12, 21, 24, 25.

- N. iridis* var. *amphigomphus* (EHR.) v. HEURCK. (F. HUSTEDT, 1930, p. 245, fig. 382).
 Plate VIII, fig. 6: $110 \times 22 \mu$. 20–24 striae in 10μ . No. 554/1957.
 Loc. Nos. 8, 15–17, 21, 24, 28–30.
- – var. *porsildii* FOGED. (N. FOGED, 1972, p. 63, 3: 1, 2).
 Plate IX, fig. 1: $60 \times 20 \mu$. 18–19 striae in 10μ . No. 396/1957.
 Plate IX, fig. 2: $58 \times 15 \mu$. 16–17 striae in 10μ . No. 205/1957.
 Plate IX, fig. 3: $74 \times 17 \mu$. 16–17 striae in 10μ . No. 498/1957.
 Plate IX, fig. 4: $60 \times 15 \mu$. 18 striae in 10μ . No. 208/1957.
 Loc. Nos. 1, 2, 12, 14.
- N. knuthii* FOGED. (N. FOGED, 1953, p. 44, 5: 8).
 Plate VII, fig. 7: $38 \times 10 \mu$. 12 striae in 10μ . No. 341/1957.
 Loc. No. 15.
- N. ladogensis* (CLEVE) FOGED var. *densestriata* HUST. (F. HUSTEDT, 1930, p. 234, fig. 354).
 Syn.: *Caloneis ladogensis* CLEVE var. *densestriata* HUST.
 Plate VII, fig. 8: $27 \times 15 \mu$. 24 striae in 10μ . No. 03/Kap Farvel 1970.
 Loc. No. 29.
- N. productum* (W. SMITH) CLEVE. (F. HUSTEDT, 1930, p. 245, fig. 383).
 Plate VI, fig. 13: $42 \times 12 \mu$. 18–19 striae in 10μ . No. 341/1957.
 Loc. Nos. 1, 2, 8, 15, 16, 21–25, 28.
 VI: 13 is an extremely capitate form with much extended apices. Since *N. productum* like other *Neidium* species is very variable as well in shape as in dimensions, VI: 13 can probably be included under the species.
- N. temperei* REIMER. (C. W. REIMER, 1959, p. 33, 4: 2. R. PATRICK & C. W. REIMER, 1966, p. 406, 37: 9).
 Plate VIII, fig. 7: $53 \times 19 \mu$. 15 striae in 10μ . No. 341/1957.
 Plate VIII, fig. 8: $36 \times 17 \mu$. 16 striae in 10μ . No. 425/1957.
 Plate VIII, fig. 9: $46 \times 18 \mu$. 16 striae in 10μ . No. 94/1957.
 Loc. Nos. 1, 5, 15.
 This species resembles *N. dubium*, but differs by having rather coarsely punctate striae, radial in the middle of the valve, but faintly convergent towards the apices.
 The species, to be found in U.S.A., is not previously shown in Greenland.

Nitzschia HASSALL 1845

- N. acuta* HANTZSCH. (F. HUSTEDT, 1930, p. 412, fig. 790).
 Loc. Nos. 2, 4, 6, 8, 9, 15, 20, 23, 25, 26.
- N. angustata* (W. SMITH) GRUN. (F. HUSTEDT, 1930, p. 402, fig. 767).
 Loc. Nos. 1, 2, 6, 8.

- N. angustata* var. *acuta* GRUN. (F. HUSTEDT, 1930, p. 402, fig. 768).
Loc. Nos. 1-3, 6, 7, 9-11, 14, 15, 20-26, 28, 29.
- N. amphibia* GRUN. (F. HUSTEDT, 1930, p. 414, fig. 793).
Loc. No. 3.
- N. denticula* GRUN. (F. HUSTEDT, 1930, p. 407, fig. 780).
Loc. Nos. 1-4, 6, 10, 15, 20, 22, 25-27.
- N. dissipata* (KÜTZ.) GRUN. (F. HUSTEDT, 1930, p. 412, fig. 789).
Loc. Nos. 12, 14.
- N. fonticola* GRUN. (F. HUSTEDT, 1930, p. 415, fig. 800).
Loc. No. 1.
- N. frustulum* (KÜTZ.) GRUN. (F. HUSTEDT, 1930, p. 414, fig. 795).
Loc. Nos. 1-12, 14, 15, 17-26, 28.
- var. *perpusilla* (RABH.) GRUN. (F. HUSTEDT, 1930, p. 415).
Loc. Nos. 1-6, 8-12, 14-16, 19-23, 25, 26.
- N. gracilis* HANTZSCH. (F. HUSTEDT, 1930, p. 416, fig. 794).
Loc. Nos. 1-3, 7, 8, 20, 22, 23, 25-29.
- N. hantzschiana* RABH. (F. HUSTEDT, 1930, p. 415, fig. 797).
Loc. Nos. 8, 21, 24.
- N. ignorata* KRASSKE. (F. HUSTEDT, 1930, p. 422, fig. 819).
Loc. Nos. 10, 21, 23, 26.
- N. linearis* W. SMITH. (F. HUSTEDT, 1930, p. 409, fig. 784).
Loc. Nos. 21, 27.
- N. mahihaensis* FOGED. (N. FOGED, 1959, p. 85, 13: 5).
Loc. No. 26.
- N. palea* (KÜTZ.) W. SMITH. (F. HUSTEDT, 1930, p. 416, fig. 801).
Loc. Nos. 6, 7, 10, 12, 15, 25, 26.
- N. palustris* HUST. (F. HUSTEDT, 1934, p. 395, figs. 17-19).
Loc. Nos. 24, 26, 29.
- N. perminuta* GRUN. (F. HUSTEDT, 1930, p. 415).
Loc. No. 21.
- N. recta* HANTZSCH. (F. HUSTEDT, 1930, p. 411, fig. 785).
Loc. No. 14.
- N. sinuata* (W. SMITH) GRUN. (F. HUSTEDT, 1930, p. 408, fig. 781).
Loc. No. 1.
- N. tirstrupensis* FOGED. (N. FOGED, 1963, p. 53, 6: 7).
Plate XIX, fig. 15: $65 \times 5 \mu$. 8 keel puncta and 18 striae in 10μ .
No. 432/1957.
Loc. Nos. 1, 6, 11, 20, 22, 25, 26.

Opephora PETIT 1888

- O. martyi* HÉRIB. (F. HUSTEDT, 1930-66, II, p. 135, fig. 654).
Plate X, fig. 21: $11 \times 6 \mu$. 8 striae in 10μ . No. 241/1957.
Loc. Nos. 1, 10, 12, 14, 22, 27.

Peronia BRÉB. & ARNOTT 1868

- P. héribaldi* BRUN & PERAG. (F. HUSTEDT, 1930–66, II, p. 262, fig. 739).
Loc. Nos. 15, 16, 21, 23, 24.

Pinnularia EHR. 1840

- P. balfouriana* GRUN. (F. HUSTEDT, 1930, p. 326, fig. 599).
Loc. Nos. 1, 3, 7, 8, 10, 12, 14, 15, 19, 20, 22, 28, 29.
- P. bipectinalis* (SCHUM.) A. CLEVE-EULER. (A. CLEVE-EULER, 1955, IV, p. 77, fig. 1108 c).
Plate XII, fig. 6: $74 \times 13 \mu$. 8 striae in 10μ . No. 504/1957.
Loc. No. 2.
XII: 6 seems to be almost identical with A. CLEVE-EULER, 1955, IV, fig. 1108 c.
However the axial area of XII: 6 apparently is somewhat narrower than to be seen from A. CLEVE-EULER's drawing.
Not previously shown in Greenland.
- var. *lata* var. nov. Plate XII, fig. 7.
Valvis multo latioribus et area axiali multo angustiore a typo differt.
Differs from the type species by having proportionally much broader valves and a much narrower axial area.
Plate XII, fig. 7: $64 \times 15 \mu$. 9 striae in 10μ . No. 245/1957.
Illustration slide and holotype: FOGED Coll., Odense, No. 245/1957.
Type locality: Freshwater pond at Kûngnât Bugten, South Greenland.
Loc. No. 10.
- P. borealis* EHR. (F. HUSTEDT, 1930, p. 326, fig. 597).
Plate XIII, fig. 3: $50 \times 14 \mu$. 5.5 striae in 10μ . No. 498/1957.
Plate XIII, fig. 4: $40 \times 9 \mu$. 5 striae in 10μ . No. 195/1957.
Plate XIV, fig. 12: $33 \times 10 \mu$. 5 striae in 10μ . No. 354/1957.
Loc. Nos. 2, 12, 15, 16.
- P. brandelii* CLEVE. (F. HUSTEDT, 1930, p. 328, fig. 606).
Plate XIV, fig. 2: $72 \times 8.5 \mu$. 10 striae in 10μ . No. 377/1957.
Plate XIV, fig. 3: $68 \times 9 \mu$. 12 striae in 10μ . No. 317/1957.
Plate XIV, fig. 4: $52 \times 8 \mu$. 11–12 striae in 10μ . No. 211/1957.
Plate XIV, fig. 5: $49 \times 9 \mu$. 10 striae in 10μ . No. 377/1957.
Loc. Nos. 3, 11, 14.
- P. brevicostata* CLEVE. (F. HUSTEDT, 1930, p. 329, fig. 609).
Plate XII, fig. 9: $58 \times 11 \mu$. 10 striae in 10μ . No. 04/1957.
Loc. Nos. 7, 8.
- P. dactylus* EHR. (F. HUSTEDT, 1930, p. 332, fig. 615).
Loc. No. 1.

- P. divergens* W. SMITH. (F. HUSTEDT, 1930, p. 323, fig. 589).
 Plate XIII, fig. 7: $73 \times 14 \mu$. 10 striae in 10μ . No. 10/Kap Farvel 1970.
 Loc. Nos. 1-3, 5-8, 10-13, 15, 17, 19, 21, 22, 25, 26, 28, 29.
- var. *elliptica* GRUN. (F. HUSTEDT, 1930, p. 323, fig. 590).
 Plate XIV, fig. 1: $97 \times 23 \mu$. 6 striae in 10μ . No. 377/1957.
 Loc. Nos. 1-3, 5-7, 9-15, 18, 19, 21, 22, 28-30.
- P. divergentissima* (GRUN.) CLEVE. (F. HUSTEDT, 1930, p. 320, fig. 581).
 Plate XI, fig. 13: $23 \times 6.5 \mu$. 14 striae in 10μ . No. 396/1957.
 Plate XI, fig. 14: $38 \times 10 \mu$. 11-12 striae in 10μ . No. 357/1957.
 Plate XI, fig. 15: $35 \times 7 \mu$. 12 striae in 10μ . No. 96/1957.
 Plate XI, fig. 16: $31 \times 5 \mu$. 15 striae in 10μ . No. 208/1957.
 Plate XI, fig. 17: $29 \times 7 \mu$. 14 striae in 10μ . No. 17/Kap Farvel 1970.
 Loc. Nos. 1-6, 8-14, 16, 17, 19-26, 28-30.
P. divergentissima is a very varying species. It is difficult to distinguish some of the established varieties, and since transition between the species and its varieties seems to take place the value of maintaining them is somewhat problematic.
- P. episcopalis* CLEVE. (F. HUSTEDT, 1930, p. 323, fig. 592).
 Loc. Nos. 3, 7, 15, 16, 20, 25, 28.
- P. gentilis* (DONKIN) CLEVE. (F. HUSTEDT, 1930, p. 335, fig. 618).
 Plate XII, fig. 5: $125 \times 17.5 \mu$. 6 striae in 10μ . No. 394/1957.
 Loc. No. 1.
- P. gibba* EHR. (F. HUSTEDT, 1930, p. 327, fig. 600).
 Loc. Nos. 1, 2, 4, 6, 8-13, 15, 16, 19-28, 30.
- var. *linearis* HUST. (F. HUSTEDT, 1930, p. 327, fig. 604).
 Loc. Nos. 1, 2, 4, 6, 8, 9, 11, 12, 15, 16, 20-24, 26, 27, 30.
- var. *mesogongyla* (EHR.) HUST. (F. HUSTEDT, 1930, p. 327, fig. 603).
 Plate XII, fig. 3: $58 \times 14 \mu$. 8-10 striae in 10μ . No. 10/Kap Farvel 1970.
 Loc. Nos. 1, 2, 12, 15, 26, 28, 29.
- var. *parva* (EHR.) GRUN. (F. HUSTEDT, 1930, p. 327, fig. 602).
 Loc. Nos. 19-22, 25, 26.
- fo. *subundulata* MAYER. (F. HUSTEDT, 1930, p. 327, fig. 601).
 Loc. Nos. 28, 29.
- P. globiceps* GREG. (F. HUSTEDT, 1930, p. 319, fig. 579).
 Loc. Nos. 2, 9, 10, 14, 26.
- P. gracillima* GREG. (F. HUSTEDT, 1930, p. 315, fig. 564).
 Loc. Nos. 1, 2, 4-15, 18, 20-22, 25, 26, 28, 29.
- P. hemiptera* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930, p. 329, fig. 608).
 Plate XII, fig. 8: $54 \times 12 \mu$. 10 striae in 10μ . No. 231/1957.
 Loc. Nos. 1, 8, 11, 13, 29.

P. hemiptera var. *groenlandica* var. nov. Plate XIII, fig. 9.

Valvis brevioribus, comparatione angustioribus et apicibus manifeste rotundatis a typo differt.

Differs from the type species by having shorter and proportionally narrower valves with extremely rounded apices.

Plate XIII, fig. 9: $35 \times 7.5 \mu$. 11 striae in 10μ . No. 506/1957.

Plate XIII, fig. 8: $30 \times 7 \mu$. 11 striae in 10μ . No. 550/1957.

Plate XIII, fig. 10: $29 \times 7 \mu$. 10 striae in 10μ . No. 148/1957.

Plate XIII, fig. 11: $34 \times 7 \mu$. 10 striae in 10μ . No. 02/Kap Farvel 1970.

Illustration slide and holotype: FOGED Coll., Odense, No. 506/1957.

Type locality: Freshwater lake, the island Isa, South Greenland.

Loc. Nos. 2, 6, 16, 29.

P. iatriaensis FOGED. (N. FOGED, 1970, p. 184, fig. 4).

Plate XII, fig. 10: $37 \times 9 \mu$. 12 striae in 10μ . No. 506/1957.

Plate XII, fig. 11: $35 \times 10 \mu$. 10(-11) striae in 10μ . No. 554/1957.

Loc. Nos. 2, 16.

Previously shown in South Norway. There it was found in subfossil sediment, deposited in more or less saline water. So it was supposed to be halophilous to mesohalobous. Here in SW Greenland it is found in freshwater material.

However its similarity to *P. cruciformis* DONK., an extremely haline species, is so great that a near relationship is possible.

P. intermedia LAGERST. sensu LUND. (J. W. G. LUND, 1946, p. 92, figs. A-J).

Plate XIII, fig. 13: $19 \times 4.5 \mu$. 12 striae in 10μ . No. 10/Kap Farvel 1970.

Loc. Nos. 1, 26, 28.

P. interrupta W. SMITH. (F. HUSTEDT, 1930, p. 317, fig. 573).

Loc. Nos. 1-6, 12, 16, 17, 19-25, 27-30.

-- fo. *biceps* GREG. (P. T. CLEVE, 1894-95, II, p. 76. A. CLEVE-EULER, 1955, IV, p. 62, figs. 1088 a, c, d. F. HUSTEDT, 1930, p. 317, fig. 573 a).

Plate XI, fig. 1: $63 \times 12 \mu$. 11 striae in 10μ . No. 396/1957.

Plate XI, fig. 2: $63 \times 12 \mu$. 11-12 striae in 10μ . No. 396/1957.

Plate XI, fig. 3: $64 \times 10 \mu$. 10 striae in 10μ . No. 12/Kap Farvel 1970.

Plate XI, fig. 4: $59 \times 9 \mu$. 10-11 striae in 10μ . No. 46/1970.

Loc. Nos. 1, 19, 29.

This form, by F. HUSTEDT, 1930, p. 317, fig. 573 a, included under the type-species, was at first established as a species apart (*P. biceps* GREG. 1856). As it does not appear with a central area extended to the margins of the valve, it seems to be reasonable to maintain it as a characteristic forma even though it very often is found together with typical valves of *P. interrupta*.

P. interrupta fo. *minutissima* HUST. (F. HUSTEDT, 1930, p. 317, fig. 574).

Loc. Nos. 1, 2, 6, 8, 10, 11, 16, 20, 21, 23, 24, 26.

P. islandica ØSTRUP. (E. ØSTRUP, 1918, p. 32, 3: 47).

Plate XIV, fig. 15: $102 \times 15 \mu$. 7–8 striae in 10μ .

This *P.* species, shown by E. ØSTRUP in Iceland, is not found in Greenland up to now. However the species given below seems to be rather closely related to *P. islandica*.

As regards shape of valve and number of striae this species has some resemblance to *P. maior* (KÜTZ.) CLEVE, but the striae have not the narrow longitudinal band characteristic of *P. maior*.

XIV: 15 is a photo of the holotype in E. ØSTRUP'S original slide with Iceland material (ØSTRUP 223, I 1 a, Bot. Mus., Copenhagen).

– – fo. *ikaensis* fo. nov. Plate XIV, fig. 6.

Valvis multo minoribus et area axiali angustiore a typo differt. Differs from *P. islandica* by having much smaller valves and a narrower axial area.

Plate XIV, fig. 6: $57 \times 11 \mu$. 8 striae in 10μ . No. 168/1957.

Illustration slide and holotype: FOGED Coll., Odense, No. 168/1957.

Type locality: Freshwater pool at Ika, South Greenland.

Loc. No. 12.

P. karelica CLEVE. (F. HUSTEDT, 1930, p. 322, fig. 586).

Loc. No. 22.

P. krookii GRUN. (F. HUSTEDT, 1930, p. 319, fig. 580).

Plate X, fig. 18: $27 \times 7 \mu$. 16–18 striae in 10μ . No. 241/1957.

Plate X, fig. 19: $15 \times 5 \mu$. 20 striae in 10μ . No. 241/1957.

Plate X, fig. 20: $24 \times 7 \mu$. ca. 16 striae in 10μ . (Holotype).

Loc. Nos. 1, 2, 4–6, 10–15, 20, 22, 26, 27.

X: 18 is a rather typical specimen. Without doubt identical with *Navicula oculus* ØSTRUP, 1899, p. 269, 1: 6 from Greenland.

X: 19 is probably a small specimen of the species.

X: 20 is a photo of the holotype (*Navicula oculus* ØSTRUP) in ØSTRUP'S original slide 171 Grønland F. Præp 1879 (Bot. Mus., Copenhagen).

P. lata (BRÉB.) W. SMITH. (F. HUSTEDT, 1930, p. 324, fig. 595).

Plate XIII, fig. 1: $80 \times 28 \mu$. 3 striae in 10μ . No. 394/1957.

Plate XIII, fig. 2: $105 \times 30 \mu$. 3 striae in 10μ . No. 394/1957.

Loc. Nos. 1, 6, 10, 17, 19, 20, 22, 23, 25, 26, 28, 29.

– – fo. *thuringiaca* (RABH.) A. MAYER. (F. HUSTEDT, 1930, p. 326, fig. 596).

Plate XIV, fig. 11: $45 \times 12 \mu$. 4 striae in 10μ . No. 394/1957.

Loc. No. 1.

P. legumen EHR. (F. HUSTEDT, 1930, p. 322, fig. 587).

Loc. Nos. 3, 15.

- P. leptosoma* GRUN. (F. HUSTEDT, 1930, p. 316, fig. 567).
 Plate XIV, fig. 13: $42 \times 7 \mu$. 16 striae in 10μ . No. 409/1957.
 Loc. No. 1.
- P. maior* (KÜTZ.) CLEVE. (F. HUSTEDT, 1930, p. 331, fig. 614).
 Loc. Nos. 1-3, 6, 8-17, 19-23, 25, 26, 28-30.
- P. mesolepta* (EHR.) W. SMITH. (F. HUSTEDT, 1930, p. 319, fig. 575 a).
 Plate XI, fig. 11: $59 \times 12 \mu$. 10 striae in 10μ . No. 377/1957.
 Loc. Nos. 1-6, 8, 9, 11, 12, 14-16, 18-30.
- fo. *angusta* CLEVE. (F. HUSTEDT, 1930, p. 319, fig. 575 b).
 Plate XI, fig. 18: $41 \times 5 \mu$. 10 striae in 10μ . No. 163/1957.
 Loc. Nos. 5, 8, 10-12, 20, 21, 24, 25.
- P. microstauron* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 320, fig. 582).
 Plate XIV, fig. 7: $44 \times 10 \mu$. 10 striae in 10μ . No. 498/1957.
 Loc. Nos. 1, 2, 4-6, 8-14, 16, 17, 19-26, 28-30.
 XIV: 7 has much resemblance to *P. bryophila* ØSTRUP 1918, 3: 47,
 but like this it probably is a somewhat peculiar form of *P. micro-*
stauron, characterized inter alia by a one-sidedly developed central
 area.
- var. *brébissonii* (KÜTZ.) HUST. (F. HUSTEDT, 1930, p. 321, fig. 584).
 Plate XI, fig. 8: $43 \times 8 \mu$. 14 striae in 10μ . No. 550/1957.
 Loc. Nos. 1, 3-5, 9-11, 14-16, 19-26, 28, 29.
- fo. *diminuta* GRUN. (F. HUSTEDT, 1930, p. 322, fig. 585).
 Plate XIV, fig. 8: $36 \times 8.5 \mu$. 11 striae in 10μ . No. 548/1957.
 Plate XIV, fig. 9: $30 \times 8 \mu$. 13 striae in 10μ . No. 07/Kap Farvel 1970.
 Loc. Nos. 16, 22, 28, 29.
- fo. *biundulata* O. MÜLLER. (F. HUSTEDT, 1930, p. 320, fig. 583).
 Plate XIV, fig. 14: $44 \times 12 \mu$. 10 striae in 10μ . No. 37/1970.
 Plate XI, fig. 5: $37 \times 8 \mu$. 12 striae in 10μ . No. 46/1970.
 Loc. No. 19.
- P. molaris* GRUN. (F. HUSTEDT, 1930, p. 316, fig. 568).
 Loc. Nos. 1, 2, 4, 12.
- P. nodosa* EHR. (F. HUSTEDT, 1930, p. 320, fig. 611).
 Loc. Nos. 1, 4, 6, 11, 22, 25, 27.
- P. obscura* KRASSKE. (J. B. PETERSEN, 1935, p. 147, fig. 6. A. CLEVE-
 EULER, 1955, IV, p. 31, figs. 1035 c, d).
 Plate XIII, fig. 12: $23 \times 5 \mu$. 12(13) striae in 10μ . No. 111/1970.
 Loc. Nos. 21, 22.
- P. parva* (GREG.) CLEVE. (A. CLEVE-EULER, 1955, IV, p. 28, figs. 1030 a-g).
 Loc. Nos. 16, 28.
- var. *minuta* ØSTRUP. (E. ØSTRUP, 1918, p. 36, 4: 55. J. B. PETERSEN,
 1928, p. 408, fig. 29).
 Syn.: *P. lagerstedti* (CLEVE) HUST. (F. HUSTEDT, 1934, p. 390).
 Loc. Nos. 1, 14, 25, 26.

- P. platycephala* (EHR.) CLEVE. (F. HUSTEDT, 1930, p. 324, fig. 593).
Plate XIII, fig. 5: $81 \times 17.5 \mu$. 10 striae in 10μ . No. 425/1957.
Plate XIII, fig. 6: $98 \times 21 \mu$. 10 striae in 10μ . No. 12/Kap Farvel 1970.
Loc. Nos. 1, 20, 24, 25, 28, 29.
- P. pluviana* SOVEREIGN. (H. E. SOVEREIGN, 1963, p. 362, fig. 14).
Plate XI, fig. 12: $38 \times 10 \mu$. 11–12 striae in 10μ . No. 317/1957.
Loc. No. 11.
XI: 12 is identical with H. E. SOVEREIGN's *Pinnularia* species from the western U.S.A. It has great resemblance to *P. microstauron* and it may possibly be a triundulate form of this species.
- P. pulchra* ØSTRUP. (F. HUSTEDT, 1930, p. 329, fig. 607).
Plate XI, fig. 7: $59 \times 11 \mu$. 6 striae in 10μ . No. 395/1957.
Plate XI, fig. 19: $46 \times 7 \mu$. 10 striae in 10μ . No. 10/Kap Farvel 1970.
Loc. Nos. 1–4, 8, 10, 16, 18, 20, 22, 25, 26, 28, 29.
- P. silvatica* PETERSEN. (J. B. PETERSEN, 1935, p. 147, fig. 7).
Syn.: *Navicula falaisensis* J. B. PETERSEN, 1915, p. 292.
Loc. Nos. 1, 9.
- P. similis* HUST. fo. *subundulata* fo. nov. Plate XI, fig. 9.
Apicibus rostratis, marginibus valvae triundulatis et in rhapsis centralis densis a typo differt.
Differs from the type species by having rostrate apices, faintly triundulate valve margins and raphe with central pores close to each other.
Illustration slide and holotype: FOGED Coll., Odense. No. 10/Kap Farvel 1970.
Type locality: Freshwater river 28 a, Amitsuarssuk, South Greenland.
Plate XI, fig. 9: $58 \times 8 \mu$. 12 striae in 10μ . No. 10/Kap Farvel 1970.
Plate XI, fig. 10: $54 \times 7 \mu$. 11 striae in 10μ . No. 195/1957.
Loc. Nos. 12, 28.
XI: 9 is closely related to *P. similis*, but they are probably not absolutely identical. *P. similis* is a tropical species related to *P. leptosoma* GRUN., a species found in this material. However XI: 9 seems more distantly related to *P. leptosoma* than to *P. similis*, and so it is grouped with this. It also seems closely related to *P. subsimilis* H. P. GANDHI, 1970, p. 789, figs. 116–118 from the Jog-Falls, Mysore State, India.
- P. stomatophora* GRUN. (F. HUSTEDT, 1930, p. 327, fig. 605).
Plate XII, fig. 12: $64 \times 9 \mu$. 12 striae in 10μ . No. 394/1957.
Loc. Nos. 1, 2, 4–15, 18–20, 22, 25, 26, 28, 29.
- P. streptoraphe* CLEVE. (F. HUSTEDT, 1930, p. 327, fig. 620).
Loc. No. 1.

- P. subcapitata* GREG. (F. HUSTEDT, 1930, p. 317, fig. 571).
 Loc. Nos. 1–14, 16, 17, 20, 22, 23, 25, 26, 28, 29.
- P. subsolaris* (GRUN.) CLEVE. (F. HUSTEDT, 1930, p. 322, fig. 588).
 Loc. Nos. 1, 2, 6, 24.
- P. undulata* GREG. (F. HUSTEDT, 1930, p. 315, fig. 565).
 Loc. Nos. 1–4, 6, 8–11, 15–17, 19–22, 25, 26, 28, 29.
- P. viridis* (NITZSCH) EHR. (F. HUSTEDT, 1930, p. 334, fig. 617 a).
 Plate XII, fig. 1: $70 \times 14 \mu$. 10 striae in 10μ . No 05/Kap Farvel 1970.
 Plate XIV, fig. 10: $54 \times 9 \mu$. 10 striae in 10μ . No. 101/1970.
 Loc. Nos. 1–30.
- – var. *intermedia* CLEVE. (F. HUSTEDT, 1930, p. 335).
 Loc. No. 4.
- – var. *rupestris* (HANTZSCH) CLEVE. (F. HUSTEDT, 1930, p. 335.
 A. SCHMIDT's Atlas 45: 38–44).
 Plate XII, fig. 4: $52 \times 12 \mu$. 10(–11) striae in 10μ . No. 377/1957.
 Loc. No. 3.
- – var. *sudetica* (HILSE) HUST. (F. HUSTEDT, 1930, p. 335, fig. 617 b).
 Plate XII, fig. 2: $68 \times 11 \mu$. 10(–11) striae in 10μ . No. 10/Kap Farvel
 1970.
 Loc. Nos. 1, 2, 4–10, 12, 15, 17, 18, 20, 22, 23, 25, 26, 28–30.

Rhopalodia O. MÜLLER 1895

- R. gibba* (EHR.) O. MÜLLER. (F. HUSTEDT, 1930, p. 390, fig. 740).
 Loc. Nos. 1, 6, 8, 20, 22, 25, 26.
- R. parallela* (GRUN.) O. MÜLLER. (F. HUSTEDT, 1930, p. 389, fig. 739).
 Plate XIX, fig. 9: $62 \times 11 \mu$. No. 444/1957.
 Plate XIX, fig. 10: $58 \times 21 \mu$. No. 444/1957. (anormal specimen).
 Loc. No. 1.

Stauroneis EHR. 1843

- S. acuta* W. SMITH. (F. HUSTEDT, 1930–66, II, p. 819, fig. 1163).
 Plate VII, fig. 5: $105 \times 20 \mu$. 12–13 striae in 10μ . No. 318/1957.
 Loc. Nos. 1, 3, 11, 20–22.
- S. agrestis* PETERSEN. (F. HUSTEDT, 1930–66, II, p. 783, fig. 1128).
 Loc. No. 11.
- S. anceps* EHR. (F. HUSTEDT, 1930–66, II, p. 771, fig. 1120 a).
 Loc. Nos. 1–6, 8–30.
- – fo. *gracilis* RABH. (F. HUSTEDT, 1930–66, II, p. 771, fig. 1120 b).
 Loc. Nos. 1, 2, 5, 6, 8, 9, 11, 15, 16, 21, 23, 30.
- – var. *hyalina* BRUN & PERAG. (F. HUSTEDT, 1930–66, II, p. 773, fig.
 1120 g).
 Loc. Nos. 1, 2, 5, 8, 11, 12, 20, 22, 25, 26.
- – var. *sibirica* GRUN. (F. HUSTEDT, 1930–66, II, p. 773, fig. 1120 f).
 Loc. Nos. 1, 3.

- S. javanica* (GRUN.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 813, fig. 1159).
Plate VII, fig. 4: $88 \times 18 \mu$. 16 striae in 10μ . No. 96/1957.
Loc. Nos. 5, 22.
- S. legumen* (EHR.) KÜTZ. (F. HUSTEDT, 1930-66, II, p. 809, fig. 1156).
Loc. No. 26.
- S. obtusa* LAGERST. (F. HUSTEDT, 1930-66, II, p. 817, fig. 1161).
Loc. Nos. 6, 11, 16.
- S. phoenicenteron* (NITZSCH) EHR. (F. HUSTEDT, 1930-66, II, p. 766, fig. 1118 a).
Plate VII, fig. 1: $98 \times 26 \mu$. 18 striae in 10μ . No. 444/1957.
Plate VII, fig. 2: $83 \times 20 \mu$. 18 striae in 10μ . No. 425/1957.
Plate VII, fig. 3: $66 \times 18 \mu$. 16-18 striae in 10μ . No. 444/1957.
Loc. Nos. 1-4, 8-16, 18-30.
- var. *brunii* (PERAG. & HÉRIB.) M. VOIGT. (F. HUSTEDT, 1930-66, II, p. 769, fig. 1118 d).
Loc. Nos. 1-3, 6-9, 11-15, 17, 20-26, 28-30.
- S. producta* GRUN. (F. HUSTEDT, 1930-66, II, p. 807, fig. 1154).
Plate VII, fig. 6: $41 \times 11 \mu$. 22 striae in 10μ . No. 548/1957.
Loc. Nos. 1, 2, 4, 9-12, 14, 16, 20, 22, 24-26, 28, 29.
- S. prominula* (GRUN.) HUST. (F. HUSTEDT, 1930-66, II, p. 805, fig. 1153).
Loc. Nos. 2, 6, 20, 21, 23, 25.
- S. smithii* GRUN. (F. HUSTEDT, 1930-66, II, p. 810, figs. 1157 a-c).
Loc. Nos. 1, 16, 21.
- var. *incisa* PANT. (F. HUSTEDT, 1930-66, II, p. 810, figs. 1157 d-g).
Loc. Nos. 2, 9, 11, 14-16, 22-26, 28.

Stenopterobia BRÉB. 1867

- S. arctica* A. CLEVE. (A. CLEVE-EULER, 1952, V, p. 101, fig. 1523).
Loc. Nos. 1, 3, 4.
- S. intermedia* LEWIS. (F. HUSTEDT, 1930, p. 428, fig. 830).
Loc. Nos. 1, 2, 6, 9, 15, 16, 21-25, 28-30.

Stephanodiscus EHR. 1845

- S. astraea* (EHR.) GRUN. (F. HUSTEDT, 1930-66, I, p. 368, fig. 193).
Loc. Nos. 3, 5.
- var. *minutula* (KÜTZ.) GRUN. (F. HUSTEDT, 1930-66, I, p. 369, figs. 193 d, e).
Loc. No. 26.

Surirella TURPIN 1828

- S. amphioxys* W. SMITH. (F. HUSTEDT, 1930, p. 435, fig. 842).
Syn.: *S. moelleriana* GRUN.
Plate XX, fig. 8: $59 \times 10 \mu$. ca. 26 alae in 100μ . No. 220/1957.
Loc. Nos. 10, 14, 15, 26.

S. angusta KÜTZ. var. *crassa* var. nov. Plate XIX, fig. 14.

Apicibus obtusis rotundioribus et in 100 μ alis multo paucioribus a typo differt.

Differs from the type species by having more rounded obtuse apices and much less alae in 100 μ .

Plate XIX, fig. 14: 38 \times 9 μ . 25–30 alae in 100 μ . No. 195/1957.

Illustration slide and holotype: FOGED Coll., Odense, No. 195/1957.

Type locality: Freshwater pool, Ika. South Greenland.

XIX: 14 can hardly be included under the somewhat similar *S. terryi* WARD. var. *arctica* R. PATRICK & L. R. FREESE, 1961, p. 285, 4: 21, the latter having 50–60 alae in 100 μ and 22–30 striae in 10 μ , while XIX: 14 only has 25–30 alae in 100 μ and 16–20 striae in 10 μ .

Loc. No. 12.

S. delicatissima LEWIS. (F. HUSTEDT, 1930, p. 436, figs. 846, 847).

Plate XIX, fig. 11: 67 \times 4 μ . 50 alae in 100 μ . No. 444/1957.

Plate XIX, fig. 16: 46 \times 6 μ . 30 alae in 100 μ . No. 553/1957.

Loc. Nos. 1, 2, 6, 8–10, 14, 16, 17, 19, 21–23, 28, 29.

S. linearis W. SMITH. (F. HUSTEDT, 1930, p. 434, figs. 837, 838).

Plate XX, fig. 1: 60 \times 13 μ . 30 alae in 100 μ . No. 436/1957.

Plate XX, fig. 2: 62 \times 15 μ . 40 alae in 100 μ . No. 425/1957.

Plate XX, fig. 3: 52 \times 12 μ . ca. 32 alae in 100 μ . No. 93/1957.

Plate XX, fig. 12: 33 \times 10 μ . 40 alae in 100 μ . No. 498/1957.

Loc. Nos. 1–6, 8, 9, 11–16, 19–26, 28–30.

– var. *constricta* (EHR.) GRUN. (F. HUSTEDT, 1930, p. 438, fig. 839).

Plate XX, fig. 4: 56 \times 11 μ , 26 alae in 100 μ . No. 541/1957.

Plate XX, fig. 5: 70 \times 11 μ . 26–30 alae in 100 μ . No. 69/1970.

Plate XX, fig. 6: 72 \times 12 μ . 28 alae in 100 μ . No. 341/1957.

Plate XX, fig. 7: 90 \times 11.2 μ . 30 alae in 100 μ . No. 429/1957.

Loc. Nos. 1–3, 6, 9, 11–13, 15–17, 19–24, 26, 28, 29.

S. ovalis BRÉB. (F. HUSTEDT, 1930, p. 441, figs. 860, 861).

Loc. Nos. 10, 12, 14, 15.

S. ovata KÜTZ. (F. HUSTEDT, 1930, p. 442, figs. 863, 864).

Plate XIX, fig. 12: 24 \times 16 μ . No. 206/1957.

Plate XIX, fig. 13: 36 \times 25 μ . No. 341/1957.

Loc. Nos. 12, 15.

– var. *crumena* (BRÉB.) v. HEURCK. (F. HUSTEDT, 1930, p. 443, fig. 867).

Plate XXVIII, fig. 11: ca. 24 \times 19 μ . No. 241/1957.

Loc. Nos. 10, 14.

S. robusta EHR. (F. HUSTEDT, 1930, p. 437, fig. 850).

Loc. Nos. 1, 9, 11, 15, 22.

- S. robusta* var. *splendida* (EHR.) V. HEURCK. (F. HUSTEDT, 1930, 437, figs. 851, 852).
Plate XX, fig. 9: ca. $180 \times 46 \mu$. 16–17 alae in 100μ . No. 220/1957.
Loc. Nos. 12, 14.
- S. tenera* GREG. var. *nervosa* A. SCHMIDT. (F. HUSTEDT, 1930, p. 439, figs. 854, 855).
Loc. No. 1.
- S. tenuissima* HUST. (F. HUSTEDT, 1937–39, p. 504, 43: 8–10. A. SCHMIDT's Atlas 299: 15).
Plate XX, fig. 10: $24 \times 10 \mu$. ca. 30 alae in 100μ . No. 211/1957.
Plate XX, fig. 11: $26 \times 11 \mu$. ca. 40 alae in 100μ . No. 342/1957.
Loc. Nos. 12, 14, 15.
XX: 11 differs somewhat from typical specimens, the valves here (XX: 11) being more cuneate, the apices acuminate and the number of alae smaller in 100μ . Perhaps the arctic form has to be established as a separate variety since the species up to now only was found in the tropics.

Synedra EHR. 1830

- S. acus* KÜTZ. (F. HUSTEDT, 1930–66, II, p. 201, fig. 693 a).
Loc. No. 26.
- – var. *angustissima* GRUN. (F. HUSTEDT, 1930–66, II, p. 202, fig. 693 c).
Loc. No. 1.
- S. parasitica* (W. SMITH) HUST. (F. HUSTEDT, 1930–66, II, p. 204, figs. 695 a, b).
Loc. Nos. 1, 6, 12, 14, 21.
- S. tenera* W. SMITH. (F. HUSTEDT, 1930–66, II, p. 211, fig. 703).
Loc. Nos. 1, 2, 4, 6–9, 11, 12, 14, 15, 26.
- S. ulna* (NITZSCH) EHR. (F. HUSTEDT, 1930–66, II, p. 195, figs. 691 A a–c).
Loc. Nos. 1, 7, 8, 10–12, 14, 18, 20, 22, 25–29.
- – var. *aequalis* (KÜTZ.) HUST. (F. HUSTEDT, 1930–66, II, p. 199, fig. 691 A d).
Loc. Nos. 1, 18, 22, 26–28.
- – var. *biceps* (KÜTZ.) VON SCHÖNF. (F. HUSTEDT, 1930–66, II, p. 200, fig. 691 A g).
Loc. No. 22.
- S. vaucheriae* KÜTZ. (F. HUSTEDT, 1930–66, II, p. 194, figs. 689 a–c).
Loc. No. 16.

Tabellaria EHR. 1840

- T. binalis* (EHR.) GRUN. (F. HUSTEDT, 1930–66, II, p. 30, fig. 559).
Plate II, fig. 8: width 19μ . No. 548/1957.
Plate II, fig. 9: $20 \times 2.5 \mu$. 14 striae in 10μ . No. 538/1957.

Loc. Nos. 6, 16, 17, 21, 23, 24, 28-30.

A species, like *Amphicampa hemicyclus*, *Actinella punctata*, *Fragilaria constricta* and others, characteristic of dystrophic to oligotrophic, faintly acid localities. Previously considered to be rare, but as time goes on it is found in many places as well in Europe as in North America. Previously not found in Greenland.

According to B. J. CHOLNOKY, 1966, p. 339 it has its pH-optimum about 5.5.

T. fenestrata (LYNGB.) KÜTZ. (F. HUSTEDT, 1930-66, II, p. 26, fig. 554).

Loc. Nos. 1-4, 6-11, 13-30.

T. flocculosa (RABH.) KÜTZ. (F. HUSTEDT, 1930-66, II, p. 28, fig. 558).

Loc. Nos. 1-30.

Tetracyclus J. RALFS 1843

T. emarginatus (EHR.) W. SMITH. (F. HUSTEDT, 1930-66, II, p. 15, fig. 546).

Loc. No. 28.

B. Brackish- and salt-water Diatoms

Achnanthes BORY 1822

A. biasolletiana (KÜTZ.) GRUN. var. *sublinearis* GRUN. (F. HUSTEDT, 1930-66, II, p. 380. H. & M. PERAGALLO, 1897-1908, p. 7, 1: 26).

Plate XXIX, figs. 6, 7: $9 \times 5 \mu$. 28-30 striae in 10μ . No. 241/1957.

Loc. No. 10.

XXIX: 6, 7 are in absolute agreement with *A. biasolletiana* var. *sublinearis* as it appears from VAN HEURCK's type No. 1. (Bot. Mus., Copenhagen), with which it has been compared.

It is a rare diatom previously only recorded from brackish water in Belgium.

A. brevipes AG. (F. HUSTEDT, 1930-66, II, p. 424, figs. 877 a-c).

Plate XXII, fig. 1: $43 \times 20 \mu$. 9 striae in 10μ . No. 243/1957.

Plate XXII, fig. 2: $38 \times 16 \mu$. 10 striae in 10μ . No. 243/1957.

Plate XXII, fig. 3: $42 \times 13 \mu$. 8 striae in 10μ . No. 244/1957.

Plate XXII, fig. 4: $58 \times 13 \mu$. 8 striae in 10μ . No. 241/1957.

Plate XXII, fig. 5: $97 \times 17.5 \mu$. 9 striae in 10μ . No. 242/1957.

Plate XXII, fig. 6: $92 \times 15 \mu$. 8 striae in 10μ . No. 225/1957.

Plate XXII, fig. 7: $25 \times 13 \mu$. ca. 12 striae in 10μ . No. 241/1957.

Loc. Nos. 10, 14.

A. delicatula KÜTZ. (F. HUSTEDT, 1930-66, II, p. 389, fig. 836).

Loc. No. 10.

A. hauckiana GRUN. (F. HUSTEDT, 1930-66, II, p. 388, fig. 834).

Loc. No. 14.

- A. hauckiana* var. *rostrata* SCHULZ. (P. SCHULZ, 1926, p. 191, fig. 40).
Plate XXII, figs. 10 a, b: $22.5 \times 10 \mu$. 11 striae in 10μ . No. 244/1957.
Loc. No. 10.
- A. longipes* AG. (F. HUSTEDT, 1930-66, II, p. 427, fig. 878).
Loc. No. 10.
- A. punctata* ROUND. (F. E. ROUND, 1959, p. 524, fig. 1).
Loc. No. 10.
- A. septata* A. CLEVE. (F. HUSTEDT, 1930-66, II, p. 422, fig. 875).
Loc. No. 10.
- Actinocyclus* EHR. 1837
- A. ehrenbergii* RALFS. (F. HUSTEDT, 1930-66, I, p. 525, fig. 298).
Loc. No. 10.
- Amphipleura* KÜTZ. 1844
- A. rutilans* (TRENT.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 720, figs. 1093 a, b).
Plate II, fig. 11: $33 \times 4 \mu$. ca. 27 striae in 10μ . No. 244/1957.
Loc. No. 10.
- Amphiprora* EHR. 1841
- A. alata* KÜTZ. (F. HUSTEDT, 1930, p. 340, fig. 625).
Loc. No. 10.
- A. costata* HUST. (F. HUSTEDT, 1930, p. 338, fig. 623).
Plate XXVIII, fig. 1: $60 \times 7-17 \mu$. ca. 25 striae and 3-5 ribs in 10μ .
No. 244/1957.
Loc. No. 10.
- A. paludosa* W. SMITH. (F. HUSTEDT, 1930, p. 339, fig. 624).
Loc. Nos. 10, 14.
- Amphora* EHR. 1840
- A. angustissima* HEIDEN & KOLBE. (H. HEIDEN & R. W. KOLBE, 1928, p. 637, 1: 8).
Loc. No. 10.
- A. exigua* GREG. (P. T. CLEVE, 1894-95, II, p. 123. A. CLEVE-EULER, 1953, III, p. 99, fig. 686 c. N. I. HENDEY, 1964, p. 266).
Plate XXVII, fig. 15: Cell: $22 \times 8 \mu$. 18-19 striae in 10μ . No. 244/1957.
Loc. No. 10.
- A. holsatica* HUST. (F. HUSTEDT, 1930, p. 345, fig. 633).
Loc. Nos. 10, 14.
- A. hyalina* KÜTZ. (H. & M. PERAGALLO, 1897-1908, p. 226, 50: 7. N. I. HENDEY, 1964, p. 265, 37: 10. A. SCHMIDT's Atlas 26: 52-55).
Plate XXVII, fig. 11: $44 \times 10.5 \mu$. ca. 32 striae in 10μ . No. 244/1957.
Plate XXVII, fig. 12: $44 \times 10.5 \mu$. ca. 32 striae in 10μ . No. 244/1957.
Loc. No. 10.

- A. ocellata* DONKIN. (H. & M. PERAGALLO, 1897-1908, p. 218, 49: 4.
N. I. HENDEY, 1964, p. 268, 38: 13, 14).
Loc. No. 10.
- A. proteus* GREG. (H. & M. PERAGALLO, 1897-1908, p. 200, 44: 24-28.
N. I. HENDEY, 1964, p. 262).
Plate XXVIII, fig. 4: $74 \times 13.5 \mu$. 11 striae in 10μ . No. 244/1957.
Loc. Nos. 10, 14.
- A. ventricosa* GREG. (N. I. HENDEY, 1964, p. 269, 38: 12).
Loc. No. 13.

Anorthoneis GRUN. 1867

- A. excentrica* (DONK.) GRUN. (F. HUSTEDT, 1930-66, II, p. 319, fig. 780.
N. I. HENDEY, 1964, p. 182, 36: 10. H. & M. PERAGALLO, 1897-1908,
p. 24, 5: 1).
Plate XXI, fig. 6: $30 \times 25 \mu$. 12 striae in 10μ . No. 244/1957.
Loc. No. 10.
- A. hyalina* HUST. (F. HUSTEDT, 1955, p. 15, 2: 3, 4).
Loc. No. 10.
Previously shown at the coasts of North Carolina.

Asteromphalus EHR. 1844

- A. robustus* CASTR. (F. HUSTEDT, 1930-66, I, p. 496, fig. 278).
Loc. No. 10.

Biddulphia GRAY 1821

- B. aurita* (LYNGB.) BRÉB. & GODEY. (F. HUSTEDT, 1930-66, I, p. 846,
fig. 501).
Plate XXI, fig. 2: width of cell 28μ . ca. 11 striae in 10μ . No.
244/1957.
Loc. No. 10.
- -var. *obtusa* (KÜTZ.) HUST. (F. HUSTEDT, 1930-66, I, p. 848, fig. 502).
Loc. No. 10.

Caloneis CLEVE 1891

- C. brevis* (GREG.) CLEVE. (N. I. HENDEY, 1964, p. 229, 29: 1).
Plate XXIII, fig. 3: $51 \times 23 \mu$. 14 striae in 10μ . No. 243/1957.
Loc. Nos. 10, 14.
- C. westii* (W. SMITH) HENDEY. (N. I. HENDEY, 1964, p. 230, 44: 5-10,
45: 1-13).
Syn.: *C. formosa* (GREG.) CLEVE, 1894.
Plate VI, fig. 1: $86 \times 21 \mu$. 12-13 striae in 10μ . No. 246/1957.
Loc. No. 10.

Cocconeis EHR. 1838

- C. costata* GREG. (F. HUSTEDT, 1930-66, II, p. 332, fig. 785).
Plate XXII, fig. 8: $17 \times 10 \mu$. 9 striae in 10μ . No. 242/1957.

Plate XXII, fig. 13: $35 \times 11 \mu$. 6(-7) striae in 10μ . No. 243/1957.

Loc. Nos. 10, 11, 16.

C. scutellum EHR. (F. HUSTEDT, 1930-66, II, p. 337, fig. 790).

Plate XXII, fig. 12: $35 \times 27 \mu$. No. 243/1957.

Loc. No. 10.

-- var. *parva* GRUN. (F. HUSTEDT, 1930-66, II, p. 338, fig. 791).

Loc. Nos. 10, 14.

-- var. *stauroneiformis* W. SMITH. (F. HUSTEDT, 1930-66, II, p. 339, fig. 792).

Plate XXII, fig. 9: $18 \times 10.5 \mu$. ca. 14 striae in 10μ . No. 244/1957.

Loc. Nos. 10, 14, 26.

Coscinodiscus EHR. 1838

C. divisus GRUN. (F. HUSTEDT, 1930-66, I, p. 410, fig. 218).

Plate XXI, fig. 1: diam.: 70μ . No. 244/1957.

Loc. No. 10.

Dimerogramma RALFS 1861

D. minor (GREG.) RALFS. (F. HUSTEDT, 1930-66, II, p. 118, fig. 640).

Loc. Nos. 10, 14.

Diploneis EHR. 1840

D. didyma (EHR.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 685, figs. 1075 a, b).

Plate XXIII, fig. 7: $52 \times 19 \mu$. 10 striae in 10μ . No. 243/1957.

Loc. Nos. 10, 17.

D. fusca (GREG.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 654, fig. 1053).

Loc. No. 10.

D. incurvata (GREG.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 593, figs. 1012 b, d).

Plate XXIII, fig. 11: $41 \times 9-14 \mu$. (11-)12 striae in 10μ . No. 243/1957.

Loc. No. 10.

D. interrupta (KÜTZ.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 602, fig. 1019 a).

Plate XXIII, fig. 6: $46 \times 8-14 \mu$. 11(-12) striae in 10μ . No. 243/1957.

Loc. No. 10.

-- var. *clancula* (A. S.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 604, fig. 1019 b).

Plate XXIII, fig. 5: $53 \times 14-23 \mu$. 10 striae in 10μ . No. 243/1957.

Loc. No. 10.

D. litoralis (DONK.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 665, fig. 1062 a).

Plate XXIII, fig. 12: $46 \times 23 \mu$. 12 striae in 10μ . No. 244/1957.

Loc. No. 10.

- D. smithii* (BRÉB.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 647, fig. 1051).
Plate XXIII, fig. 8: $48 \times 19 \mu$. 9 striae in 10μ . No. 244/1957.
Loc. No. 10.
- D. stroemii* HUST. (F. HUSTEDT, 1930-66, p. 608, fig. 1022).
Plate XXIX, fig. 16: $63 \times 13-20 \mu$. 10 striae in 10μ . and 20 puncta
in 10μ . No. 244/1957.
Loc. No. 10.
- D. subcincta* (A. S.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 680, fig. 1072).
Plate XXII, fig. 14: $75 \times 19-23 \mu$. ca. 20 striae and 7 loculi in 10μ .
No. 244/1957.
Loc. No. 10.

Fragilaria LYNGB. 1819

- F. striatula* LYNGB. (F. HUSTEDT, 1930-66, II, p. 150, fig. 663).
Loc. No. 10.

Fragilariopsis HUST. 1913

- F. cylindrus* (GRUN.) HELMCKE & KRIEGER. (F. HUSTEDT, 1930-66, II,
p. 152, fig. 665).
Syn.: *Fragilaria cylindrus* GRUN. 1884.
Loc. No. 10.

Frustulia AG. 1824

- F. creuzburgensis* (KRASSKE) HUST. (F. HUSTEDT, 1957, p. 256).
Plate XXIX, figs. 10, 11, 12: $32 \times 6 \mu$. 24-26 striae in 10μ . No.
241/1957.
Loc. No. 10.

Gomphonema AG. 1824

- G. exiguum* KÜTZ. var. *septentrionale* (ØSTRUP) CLEVE-EULER. (A. CLEVE-
EULER, 1915, p. 20).
Syn.: *G. septentrionale* ØSTRUP, 1895, p. 414, 3: 9.
Plate XVIII, fig. 23 a: $11 \times 2.2 \mu$. 18-20 striae in 10μ . No. 241/1957.
Plate XVIII, fig. 23 b: $14 \times 1.0-3.5 \mu$. (cells in girdle view). No.
241/1957.
No central area is seen at XVIII: 23 a. In A. SCHMIDT'S Atlas 233:
28, 29 a central area is shown.
Loc. No. 10.
- G. kamtschaticum* GRUN. (P. T. CLEVE, 1894-95, I, p. 188. A. SCHMIDT'S
Atlas 213: 46-51).
Syn.: *G. groenlandicum* ØSTRUP, 1895, p. 414, 3: 11, 12.
-- var. *islandicum* ØSTRUP, 1918, p. 356, fig. 8.
Plate XVIII, fig. 22: ca. $34 \times 7 \mu$. 12 striae in 10μ . No. 241/1957.
Loc. No. 10.

Grammatophora EHR. 1839

- G. arcuatum* EHR. (F. HUSTEDT, 1930-66, p. 42, fig. 567).
 Plate XXI, fig. 7: $31 \times 7 \mu$. 14 striae in 10μ . No. 243/1957.
 Plate XXI, fig. 9: $46 \times 11 \mu$. 7-8 striae in 10μ . No. 244/1957.
 Loc. No. 10.
- G. angulosa* EHR. (F. HUSTEDT, 1930-66, II, p. 39, fig. 564).
 Loc. No. 10.
- G. marina* (LYNGB.) KÜTZ. (F. HUSTEDT, 1930-66, II, p. 43, fig. 569).
 Loc. No. 10.
- G. oceanica* (EHR.) GRUN. var. *macilenta* (W. SMITH) GRUN. (F. HUSTEDT, 1930-66, p. 47, fig. 574).
 Loc. No. 10.
- G. serpentina* (RALFS) EHR. (F. HUSTEDT, 1930-66, p. 49, fig. 577).
 Loc. No. 10.

Hantzschia GRUN. 1880

- H. virgata* (ROPER) GRUN. (F. HUSTEDT, 1930, p. 395, fig. 752).
 Plate XXVIII, fig. 5: $88 \times 7-8 \mu$. 4-5 keel puncta, 11-12 striae and ca. 20 puncta in 10μ . No. 244/1957.
 Loc. No. 10.

Hyalodiscus EHR. 1845

- H. scoticus* (KÜTZ.) GRUN. (F. HUSTEDT, 1930-66, II, p. 60, fig. 582).
 Loc. Nos. 10, 14.

Licmophora AG. 1830

- L. gracilis* (EHR.) GRUN. (F. HUSTEDT, 1930-66, II, p. 60, fig. 582).
 Loc. No. 10.
- var. *anglica* (KÜTZ.) PERAG. (F. HUSTEDT, 1930-66, II, p. 60, fig. 583).
 Loc. No. 10.

Mastogloia THWAITES 1856

- M. elliptica* (AG.) CLEVE. (F. HUSTEDT, 1930-66, II, p. 501, fig. 927 a).
 Plate XXIII, fig. 9: $31 \times 14 \mu$. ca. 18 striae in 10μ . No. 367/1957.
 Plate XXIII, fig. 10: $31 \times 14 \mu$. 8 loculi in 10μ . No. 367/1957.
 Loc. Nos. 8, 10, 14.
- M. exigua* LEWIS. (F. HUSTEDT, 1930-66, II, p. 569, fig. 1003).
 Plate XXIX, fig. 13: $32 \times 12 \mu$. 3 loculi in 10μ . No. 244/1957.
 Plate XXIX, fig. 14: $32 \times 12 \mu$. 22-24 striae in 10μ . No. 244/1957.
 Loc. Nos. 10, 14.

Navicula BORY 1824

- N. agnita* HUST. (F. HUSTEDT, 1955 a, p. 27, 9: 13-16).
 Plate XXIX, fig. 17: $32 \times 6.5 \mu$. 13 striae in 10μ . No. 241/1957.
 Loc. No. 10.
- XXIX: 17 seems closely related to *N. agnita* as well as to *N. abunda*

HUSTEDT, 1955, p. 27, 9: 10–12. However it has delicately lined striae just as *N. agnita*, whereas *N. abunda* has coarsely lined striae. So XXIX: 17 is identified with *N. agnita*.

N. agnita is rather common at the coasts of North America. Not previously found in Greenland.

N. approximata GREV. fo. *morei* (O'MEARA) HUST. (F. HUSTEDT, 1930–66, III, p. 416, fig. 1491).

Plate XXVI, fig. 6: $78 \times 33 \mu$. ca. 10 striae in 10μ . No. 244/1957.

Plate XXVI, fig. 7: $64 \times 30 \mu$. 10 striae and ca. 20 puncta in 10μ . No. 244/1957.

Loc. No. 10.

Previously mainly found in warmer seas.

N. arenaria DONK. (C. BROCKMANN, 1950, p. 18, 1: 5. N. I. HENDEY, 1964, p. 196, 30: 15).

Plate X, fig. 8: $48 \times 16 \mu$. (9)–10 striae in 10μ . No. 206/1957.

Loc. No. 12.

N. bottnica GRUN. (A. SCHMIDT's Atlas 399: 4–9. A. CLEVE-EULER, 1953, III, p. 161, fig. 823).

Plate XXIV, fig. 4: $56 \times 14 \mu$. 10 striae in 10μ . No. 242/1957.

Plate XXV, fig. 10: $39 \times 10 \mu$. 14 striae in 10μ . No. 206/1957.

Loc. Nos. 10, 12.

Previously shown in the Gulf of Finland and the Baltic.

N. cancellata DONK. (N. I. HENDEY, 1964, p. 203, 30: 18–20. A. SCHMIDT's Atlas 46: 29, 30).

Plate XXIV, fig. 15: $49 \times 10 \mu$. 8 striae in 10μ . No. 242/1957.

Loc. No. 10.

N. crucicula (W. SMITH) DONK. (F. HUSTEDT, 1930, p. 284, fig. 471).

Plate XXV, fig. 8: $54 \times 18 \mu$. 10 striae in 10μ . No. 242/1957.

Loc. No. 10.

N. cruciculoides BROCKMANN. (C. BROCKMANN, 1950, p. 15, 4: 7–10. N. I. HENDEY, 1964, p. 191, 30: 4).

Plate XXV, fig. 1: $93 \times 17 \mu$. 18 striae in 10μ . No. 243/1957.

Plate XXV, fig. 13: $72 \times 12 \mu$. 16 striae in 10μ . No. 241/1957.

Loc. No. 10.

N. cruciculoides is similar to *N. crucicula*, but differs from this by having lanceolate central area, no "stauron" and very convex valves. Previously found in the North Sea.

N. digitoradiata (GREG.) A. SCHMIDT. (F. HUSTEDT, 1930, p. 301, fig. 518).

Plate XXIV, fig. 1: $67 \times 16 \mu$. 8(–9) striae in 10μ . No. 241/1957.

Plate XXIV, fig. 2: $53 \times 11.5 \mu$. 10 striae in 10μ . No. 243/1957.

Plate XXIV, fig. 3: $54 \times 12 \mu$. 9 striae in 10μ . No. 357/1957.

Loc. Nos. 7, 8, 10.

- N. digitoradiata* fo. *acuta* fo. nov. Plate XXIX, fig. 18.
Apicibus manifeste acutis a typo differt.
Differs from *N. digitoradiata* by having extremely acute apices.
Plate XXIX, fig. 18: $44 \times 10 \mu$. 10 striae and 32 lines in 10μ . No. 241/1957.
Loc. No. 10.
Illustration slide and holotype: FOGED Coll., Odense, No. 241/1957.
Type locality: The coast of Kûngnât Bugten, South Greenland.
Brackish water.
- fo. *rostrata* HUST. (F. HUSTEDT, 1939, p. 627, figs. 96, 97).
Plate XXIV, fig. 7: $44 \times 12 \mu$. 12–13 striae in 10μ . No. 377/1957.
Loc. No. 3.
- var. *minor* FOGED. (N. FOGED, 1953, p. 45, 5: 1, 2).
Loc. Nos. 8, 10.
- N. diploneoides* HUST. (F. HUSTEDT, 1930–66, III, p. 549, fig. 1586).
Loc. No. 10.
Previously shown on both sides of the Atlantic Ocean, in Norwegian fiords and at the coasts of North America.
- N. directa* (W. SMITH) RALFS. (N. I. HENDEY, 1964, p. 202. W. SMITH, 1853, p. 56, 18: 172).
Plate XXVI, fig. 1: $100 \times 12.5 \mu$. 8 striae and 30 puncta in 10μ . No. 244/1957.
Loc. Nos. 10, 14.
- var. *subtilis* GREG. (H. & M. PERAGALLO, 1897–1908, p. 90, 12: 8).
Plate XXIV, fig. 10: $70 \times 10 \mu$. striae in 10μ . No. 243/1957.
Loc. No. 10.
- N. elegans* W. SMITH. (F. HUSTEDT, 1930, p. 312, fig. 562).
Plate XXVI, fig. 3: $78 \times 25 \mu$. 8–9 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. finmarckia* (CLEVE & GRUN.) CLEVE. (C. BROCKMANN, 1950, p. 18, 2: 15. N. I. HENDEY, 1964, p. 198, 30: 5).
Plate XXIV, fig. 12: $29 \times 12 \mu$. 12 striae in 10μ . No. 244/1957.
Loc. No. 10.
Previously found at the coasts of the Finmark, the North Sea and the English Channel.
- N. flantica* GRUN. (N. I. HENDEY, 1964, p. 211, 33: 8, 9. C. BROCKMANN, 1950, p. 18, 2: 42).
Plate XXV, fig. 4: $38 \times 6.5 \mu$. 14 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. forcipata* GREV. (N. I. HENDEY, 1964, p. 211, 33: 8, 9. F. HUSTEDT, 1930–66, III, p. 531, fig. 1568).
Plate XXVII, fig. 3: $44 \times 19 \mu$. ca. 15 striae in 10μ . No. 244/1957.
Plate XXVII, fig. 4: $26 \times 10 \mu$. ca. 20 striae in 10μ . No. 244/1957.

- Plate XXVII, fig. 5: $22 \times 10 \mu$. ca. 20 striae in 10μ . No. 243/1957.
Plate XXIX, fig. 15: $37 \times 17 \mu$. ca. 14 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. formenterae* CLEVE. (H. & M. PERAGALLO, 1897–1908, p. 101, 11: 15).
Loc. No. 10.
- N. gregaria* DONK. (F. HUSTEDT, 1930, p. 269, fig. 437).
Loc. Nos. 3, 10, 12, 14.
- N. grevillei* (AG?) HEIBERG. (F. HUSTEDT, 1930–66, III, p. 302, fig. 1422).
Plate XXV, fig. 2: $67 \times 17 \mu$. 18–19 striae in 10μ . No. 241/1957.
Loc. No. 10.
Frequent at the coasts of Northern Europe and in the Arctic Ocean.
- Navicula hudsonis* GRUN. (F. HUSTEDT, 1930–66, III, p. 537, fig. 1573).
Plate XXV, fig. 11: $30 \times 11 \mu$. ca. 24 striae in 10μ . No. 224/1957.
Plate XXV, fig. 12: $30 \times 12 \mu$. ca. 24 striae in 10μ . No. 243/1957.
Loc. Nos. 10, 14.
Previously known from the North Sea and the western Baltic.
- N. humerosa* BRÉB. (F. HUSTEDT, 1930, p. 311, fig. 559).
Plate XXVI, fig. 4: $72 \times 30 \mu$. 12 striae and 17 puncta in 10μ . No. 244/1957.
Loc. No. 10.
- N. hummei* HUST. (F. HUSTEDT, 1955, p. 23, 8: 8–10, 24. 1930–66, III, p. 378, fig. 1466).
Loc. No. 10.
Widespread and not rare at tropical and subtropical atlantic coasts of North America. Not previously observed at Greenland.
- N. hyalinula* DE TONI. (F. HUSTEDT, 1930–66, III, p. 554, fig. 1591. N. I. HENDEY, 1964, p. 215, 37: 6).
Syn.: *N. plathii* BROCKMANN, 1950, p. 19, 3: 25–27.
Plate XXV, fig. 14: $41 \times 16 \mu$. ca. 20 striae in 10μ . No. 244/1957.
Plate XXV, fig. 15: $56 \times 17 \mu$. 18 striae in 10μ . No. 244/1957.
Loc. No. 10.
Not rare at the coasts of Northern Europe. Not previously observed at Greenland.
- N. hyalosira* CLEVE. (F. HUSTEDT, 1930–66, III, p. 334, fig. 1447).
Plate XXV, fig. 7: $31 \times 4 \mu$. ca. 20 striae in 10μ . No. 244/1957.
Loc. No. 10.
Previously only shown at the coasts of the North Sea.
- N. kryokonites* CLEVE. (F. HUSTEDT, 1930–66, III, p. 69, fig. 1214).
Plate XXV, fig. 9: $36 \times 12.5 \mu$. 16–17 striae in 10μ . No. 241/1957.
Loc. No. 10.
An arctic marine species, previously found, but rarely, at the coasts of Siberia and Eastern Greenland.

- N. lyra* EHR. (F. HUSTEDT, 1930–66, III, p. 500, fig. 1548 a).
Loc. No. 10.
- – var. *atlantica* A. SCHMIDT. (F. HUSTEDT, 1930–66, III, p. 509, fig. 1555).
Plate XXV, fig. 16: $41 \times 20 \mu$. 10–11 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. manifesta* HUST. (F. HUSTEDT, 1939 b, p. 633, fig. 121).
Plate XXIX, figs. 19, 20, 21: $27 \times 6 \mu$. 20 striae in 10μ . (different focus). No. 244/1957.
Loc. No. 10.
The species depicted in XXIX: 19, 20, 21 has somewhat more radial striae and more obtuse apices than *N. manifesta* HUST., 1939, fig. 121. It seems closely related to this species, even though it has some similarity to *N. ulvacea* (DICKEI) CLEVE. The latter however has right-angled valves.
- N. meniscus* SCHUM. (N. I. HENDEY, 1964, p. 201, 37: 4).
Plate XXIV, fig. 13: $44 \times 11 \mu$. 8 striae and 16–18 puncta in 10μ . No. 244/1957.
Loc. No. 10.
- N. palpebralis* BRÉB. (H. & M. PERAGALLO, 1897–1908, p. 82, 10: 17, 18).
Plate XXVI, fig. 5: $62 \times 17 \mu$. 9 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. pellucidula* (CLEVE) HUST. (F. HUSTEDT, 1930–66, III, p. 296, fig. 1417 a).
Syn.: *Stauroneis pellucida* P. T. CLEVE, 1883, p. 475, 35: 10.
Loc. No. 10.
- N. peregrina* (EHR.) KÜTZ. (F. HUSTEDT, 1930, p. 300, fig. 516).
Plate XXVI, fig. 2: $66 \times 17 \mu$. 6–7 striae in 10μ . No. 244/1957.
Plate XXIV, fig. 14: $50 \times 19 \mu$. 8 striae and 18 puncta in 10μ . No. 243/1957. (forma?).
Loc. No. 10.
- N. phyllepta* KÜTZ. (C. BROCKMANN, 1950, p. 16, 2: 10–12. N. I. HENDEY, 1964, p. 190, 37: 3).
Plate XXV, fig. 5: $38 \times 8 \mu$. 14 striae in 10μ . No. 244/1957.
Loc. No. 10.
Frequent at the coasts of the North Sea and the English Channel.
- N. plicata* DONK. (F. HUSTEDT, 1930–66, III, p. 328, fig. 1443).
Plate XXV, fig. 3: $53 \times 15 \mu$. ca. 20 striae in 10μ . No. 243/1957.
Loc. No. 10.
- N. pseudony* HUST. (F. HUSTEDT, 1955, p. 23, 8: 11. 1930–66, III, p. 370, fig. 1460).
Plate XXIX, figs. 8, 9: $11 \times 6 \mu$. ca. 25 striae in 10μ . No. 244/1957.
Loc. No. 10.

Previously only found in tropical oceans, at the coasts of North Carolina and very rarely in the Gulf of Naples.

N. pygmaea KÜTZ. (F. HUSTEDT, 1930-66, III, p. 538, fig. 1574).

Loc. Nos. 10, 14.

N. rostellata KÜTZ. (F. HUSTEDT, 1930, p. 297, fig. 502. N. I. HENDEY, 1964, p. 200, 30: 41).

Plate XXIV, fig. 9: $55 \times 10 \mu$. 10 striae in 10μ . No. 244/1957.

Loc. No. 10.

N. salinarum GRUN. (F. HUSTEDT, 1930, p. 295, fig. 498).

Plate XXV, fig. 6: $32 \times 10 \mu$. 16 striae in 10μ . No. 244/1957.

Loc. Nos. 3, 10, 14.

N. scopulorum BRÉB. (F. HUSTEDT, 1930-66, III, p. 25, fig. 1186 a).

Plate XXVII, fig. 10: $130 \times 8 \mu$. 18-19 striae in 10μ . No. 244/1957.

Loc. No. 10.

N. stuxbergii CLEVE. (P. T. CLEVE, 1880, p. 13, 1: 15. E. ØSTRUP, 1895, p. 420. H. & M. PERAGALLO, 1897-1908, p. 87, 11: 18).

Plate XXIV, fig. 5: $37 \times 9 \mu$. 14 striae in 10μ . No. 241/1957.

Plate XXIV, fig. 6: $41 \times 9 \mu$. 12(-13) striae in 10μ . No. 241/1957.

Loc. No. 10.

N. subinflata GRUN. (F. HUSTEDT, 1930-66, III, p. 292, fig. 1415).

Syn.: *N. sleensis* SIMONSEN, 1959, p. 82, 11: 21).

Plate XXVII, fig. 1: $36 \times 9 \mu$. 22-25 striae in 10μ . No. 244/1957.

Plate XXVII, fig. 2: $23 \times 8 \mu$. ca. 20 striae in 10μ . No. 243/1957.

Loc. No. 10.

N. subtilis (GREG.) RALFS. (G. KARSTEN, 1899, p. 53, fig. 47).

Syn.: *N. directa* var. *subtilis* (GREG.) CLEVE, 1894-95, II, p. 27.

Loc. No. 17.

N. transistans CLEVE. (P. T. CLEVE, 1894-95, II, p. 27. A. SCHMIDT's Atlas 259: 14, 15).

Plate XXIV, fig. 8: $55 \times 13 \mu$. 10 striae in 10μ . No. 241/1957.

Plate XXIV, fig. 11: $56 \times 14 \mu$. 10 striae in 10μ . No. 242/1957.

Plate XXIV, fig. 16: $68 \times 14 \mu$. 10 striae and 30 lines in 10μ . No. 241/1957.

Loc. No. 10.

Previously found in the Arctic Ocean and at the coasts of East Greenland.

Nitzschia HASSALL 1845

N. angularis SMITH. (H. & M. PERAGALLO, 1897-1908, p. 284, 73: 6, 7).

Plate XXVIII, fig. 7: $186 \times 15 \mu$. 5-6 keel puncta and ca. 30 striae in 10μ . No. 244/1957.

Loc. No. 10.

- N. bilobata* SMITH. (H. & M. PERAGALLO, 1897–1908, p. 273, 70: 26).
Plate XXVIII, fig. 6: 101×11 – 15μ . 8 keel puncta and 19–20 striae in 10μ . No. 244/1957.
Loc. No. 10.
- N. closterium* (EHR.) W. SMITH. (F. HUSTEDT, 1930, p. 424, fig. 822).
Loc. No. 10.
- N. distans* GREG. (H. & M. PERAGALLO, 1897–1908, p. 283, 73: 3).
Loc. Nos. 12, 14.
- N. fogedi* MØLLER. (M. MØLLER, 1950, p. 212, fig. 14).
Syn.: *Hantzschia fogedi* (MØLLER) R. SIMONSEN, 1962, p. 99.
Plate XXVIII, fig. 2: $82 \times 5.5 \mu$. 9 keel puncta in 10μ . No. 224/1957.
Plate XXVIII, fig. 3: 62×6 – 7μ . 7–8 keel puncta in 10μ . No. 244/1957.
Loc. Nos. 10, 14.
Previously found in the Præstø Fjord, Denmark, in the western Baltic and in the Kattegat.
- N. lanceolata* W. SMITH. (H. & M. PERAGALLO, 1897–1908, p. 285, 73: 20).
Loc. No. 10.
- fo. *minima* VAN HEURCK. (H. & M. PERAGALLO, 1897–1908, p. 286, 73: 19).
Loc. No. 10.
- N. obtusa* W. SMITH. (F. HUSTEDT, 1930, p. 422, fig. 817 a).
Loc. No. 10.
- N. sigma* (KÜTZ.) W. SMITH. (F. HUSTEDT, 1930, p. 420, fig. 813).
Loc. Nos. 10, 14.
- N. tryblionella* HANTZSCH. (F. HUSTEDT, 1930, p. 399, fig. 757).
Loc. No. 10.

Opephora P. PETIT 1888

- O. marina* (GREG.) PETIT. (F. HUSTEDT, 1930–66, II, p. 136, fig. 656).
Plate XXIX, fig. 3: $23 \times 5 \mu$. 9 striae in 10μ . No. 244/1957.
Loc. No. 10.
- O. schulzi* (BROCKMANN) SIMONSEN. (R. SIMONSEN, 1962, p. 33, 1: 3).
Syn.: *Fragilaria schulzii* C. BROCKMANN, 1950, p. 13, 3: 12, 4: 14.
Plate II, fig. 10: $21 \times 7 \mu$. ca. 18 striae and 20–25 puncta in 10μ .
No. 241/1957.
Loc. No. 10.
Previously known from the tidal areas of the North Sea and from the western Baltic.

Pinnularia EHR. 1840

- P. ambigua* CLEVE. (P. T. CLEVE, 1894–95, II, p. 94. N. I. HENDEY, 1964, p. 233, 34: 5–8).
Loc. No. 10.

- P. boecheri* FOGED. (N. FOGED, 1953, p. 50, 9: 7).
 Plate XI, fig. 6: $43 \times 12.5 \mu$. 8(-9) striae in 10μ . No. 241/1957.
 Loc. No. 10.
 XI: 6 is identical with N. FOGED, 1953, p. 50, 9: 7. It is probably closely related to *P. cruciformis* DONK. var. *faeroeensis* ØSTRUP, 1901, p. 275, fig. 40.
 Both species occur in brackish water.
- P. cruciformis* (DONK.) CLEVE. (N. I. HENDEY, 1964, p. 232, 34: 12).
 Plate XXIX, fig. 22: $57 \times 12 \mu$. ca. 10 striae in 10μ . No. 244/1957.
 Loc. No. 10.
- P. isostauron* GRUN. (A. SCHMIDT'S Atlas 313: 26, 27).
 Plate XXVII, fig. 6: $78 \times 13 \mu$. 7 striae in 10μ .
 Loc. No. 10.
 The specimen photographed is from Iceland, but the species has been found in No. 244/1957.
- P. quadratarea* (A. SCHMIDT) CLEVE. (N. I. HENDEY, 1964, p. 232. A. CLEVE-EULER, 1955, IV, p. 10, fig. 982 a).
 Plate XXVII, fig. 7: $53 \times 16.5 \mu$. 10 striae in 10μ . No. 244/1957.
 Plate XXVII, fig. 8: $37 \times 9.5 \mu$. 12 striae in 10μ . No. 241/1957.
 Plate XXVII, fig. 9: $31 \times 9 \mu$. 12 striae in 10μ . No. 241/1957.
 Loc. No. 10.
- var. *constricta* ØSTRUP. (A. SCHMIDT'S Atlas 260: 3-8).
 Loc. No. 10.
- P. rectangulata* (GREG.) RABH. (N. I. HENDEY, 1964, p. 233, 34: 10).
 Loc. No. 10.
- P. trevellyana* (DONK.) RABH. (N. I. HENDEY, 1964, p. 232, 34: 11).
 Loc. No. 10.

Plagiogramma GREV. 1859

- P. pulchellum* GREV. var. *pygmaea* (GREV.) PERAG. (F. HUSTEDT, 1930-66, II, p. 108, fig. 634).
 Loc. No. 10.

Pleurosigma W. SMITH 1852

- P. aestuarii* (BRÉB. ex KÜTZ.) W. SMITH. (N. I. HENDEY, 1964, p. 247, 36: 5).
 Plate XXIII, fig. 1: $88 \times 19 \mu$. 18-20 oblique striae in 10μ . No. 241/1957.
 Plate XXIII, fig. 2: $88 \times 21 \mu$. 18-20 oblique striae in 10μ . No. 241/1957.
 Loc. No. 10.
- P. angulatum* (QUEKETT) W. SMITH. (N. I. HENDEY, 1964, p. 245, 35: 1-3, 41: 6).
 Loc. No. 10.

P. salinarum GRUN. (H. & M. PERAGALLO, 1897–1908, p. 166, 33: 16).
Loc. No. 10.

P. strigosum W. SMITH. (N. I. HENDEY, 1964, p. 246, 36: 7).
Loc. No. 10.

Rhabdonema KÜTZ. 1838

R. arcuatum (LYNGB. ? AG.) KÜTZ. (F. HUSTEDT, 1930–66, II, p. 20, figs. 549 a, b, f, g).
Plate XXI, fig. 10: $67 \times 38 \mu$. 6 striae in 10μ . No. 241/1957.
Loc. No. 10.

R. minutum KÜTZ. (F. HUSTEDT, 1930–66, II, p. 18, figs. 548 a–d, f).
Plate XXI, fig. 8: $27 \times 12.5 \mu$. 9 striae in 10μ . No. 243/1957.
Loc. No. 10.

Rhoicosphenia GRUN. 1867

R. curvata (KÜTZ.) GRUN. (F. HUSTEDT, 1930–66, II, p. 430, fig. 879).
Loc. Nos. 10, 14.

Rhopalodia O. MÜLLER 1895

R. musculus (KÜTZ.) O. MÜLLER. (F. HUSTEDT, 1930, p. 392, fig. 745).
Loc. Nos. 10, 14, 21, 22, 29.

Scoliopleura GRUN. 1860

S. tumida (BRÉB. ex KÜTZ.) RABH. (N. I. HENDEY, 1964, p. 234, 29: 6).
Loc. Nos. 10, 14.

Scoliotropis CLEVE 1894

S. latestriata (BRÉB.) CLEVE. (P. T. CLEVE, 1894–95, I, p. 72. H. & M. PERAGALLO, 1897–1908, p. 164, 28: 13–15. A. SCHMIDT's Atlas 261: 4, 5).
Loc. No. 10.

Stauroneis EHR. 1843

S. amphioxys GREG. var. *obtusa* HENDEY. (N. I. HENDEY, 1964, p. 220, 43: 7–9).
Loc. No. 10.

S. constricta (EHR. ? W. SMITH) CLEVE. (F. HUSTEDT, 1930–66, II, p. 825, fig. 1168).
Plate XXVII, fig. 14: $33 \times 24 \mu$. ca. 24–25 striae in 10μ . No. 241/1957.
Plate XXIII, fig. 4: $37 \times 15 \mu$. ca. 28 striae in 10μ . No. 244/1957.
Loc. No. 10.

S. elata HUST. (F. HUSTEDT, 1930–66, II, p. 794, fig. 1139).

Plate XXII, fig. 11: $39 \times 15 \mu$. ca. 35 striae in 10μ . No. 244/1957.

Loc. No. 10.

Previously found in the southern part of the North Sea and in the Gulf of Finland.

- S. exigua* ØSTRUP. (E. ØSTRUP, 1895, p. 441, 3: 20).
 Loc. No. 10.
 A small *S.* species, the first time shown by E. ØSTRUP at the coast of Eastern Greenland 1895.
- S. gregorii* RALFS. (F. HUSTEDT, 1930–66, II, p. 790, fig. 1135. N. I. HENDEY, 1964, p. 219, 37: 13, 14).
 Syn.: *S. amphioxys* GREG. 1856.
 Plate XXIX, fig. 23: $57 \times 11 \mu$. 15–16 striae in 10μ . No. 241/1957.
 Loc. No. 10.
- S. salina* W. SMITH. (F. HUSTEDT, 1930–66, II, p. 786, fig. 1133).
 Loc. No. 10.

Surirella TURPIN 1828

- S. gemma* EHR. (H. & M. PERAGALLO, 1897–1908, p. 254, 68: 4).
 Loc. No. 4.
- S. gemmoides* ØSTRUP. (E. ØSTRUP, 1897, p. 277, fig. 4).
 Plate XXVIII, fig. 9: $53 \times 39 \mu$. 25–30 alae in 100μ . No. 244/1957.
 Plate XXVIII, fig. 10: $66 \times 44 \mu$. ca. 28 alae in 100μ . No. 241/1957.
 Loc. No. 10.
 First shown by E. ØSTRUP at the coast of East Greenland.
- S. ovalis* KÜTZ. var. *maxima* GREV. (A. SCHMIDT's Atlas 365: 4–6).
 Syn.: *S. peisonis* PANT.
 Plate XXIX, fig. 24: $41 \times 29 \mu$. ca. 40 alae in 100μ . No. 241/1957.
 Loc. No. 10.
- S. smithii* RALFS. (H. & M. PERAGALLO, 1897–1908, p. 257, 56: 7).
 Plate XXVIII, fig. 8: 71×18 – 22μ . 5 alae in 100μ . No. 241/1957.
 Loc. No. 10.

Synedra EHR. 1830

- S. barbatula* KÜTZ. (F. HUSTEDT, 1930–66, II, p. 211, fig. 702).
 Plate XXIX, fig. 2: $16 \times 4 \mu$. 22–23 striae in 10μ . No. 241/1957.
 Loc. No. 10.
- S. famelica* KÜTZ. (F. HUSTEDT, 1930–66, II, p. 210, fig. 701).
 Plate XXIX, fig. 1: $24 \times 10 \mu$. 24–25 striae in 10μ . No. 244/1957.
 Loc. No. 10.
- S. pulchella* (RALFS) KÜTZ. (F. HUSTEDT, 1930–66, II, p. 191, fig. 688 a).
 Loc. Nos. 10, 12, 13, 14.
- – var. *naviculacea* O'MEARA. (F. HUSTEDT, 1930–66, p. 192, figs. 688 f, g).
 Loc. No. 10.
- S. tabulata* (AG.) KÜTZ. (F. HUSTEDT, 1930–66, II, p. 218, figs. 710 a–d).
 Loc. Nos. 10, 14.
- – var. *fasciculata* (KÜTZ.) GRUN. (F. HUSTEDT, 1930–66, II, p. 218, figs. 710 i–l).

Plate II, fig. 21: $32 \times 3.8 \mu$. 16–16 striae in 10μ . No. 425/1957.
Loc. No. 1.

Thalassiosira CLEVE 1873

T. gravida CLEVE. (F. HUSTEDT, 1930–66, I, p. 325, fig. 161. E. PAASCHE, 1960, p. 204, pl. 2, 3).

Plate XXI, fig. 3.: diam.: 27μ . 18 striae and 18 puncta in 10μ .
No. 244/1957.

Loc. No. 10.

A common plankton species in the Norwegian Sea (E. PAASCHE, 1960, p. 24) between Iceland, Jan Mayen and Spitzbergen.

T. hyalina (GRUN.) GRAN. (F. HUSTEDT, 1930–66, I, p. 323, fig. 159).

Plate XXI, fig. 5: diam.: 29μ . 19–21 striae and 8 spinae in 10μ .
No. 244/1957.

Loc. No. 10.

T. mendiolanum RYTTER HASLE. (G. RYTTER HASLE, 1970, p. 570, 9: 52).

Loc. No. 10.

T. nordenskiöldii CLEVE. (F. HUSTEDT, 1930–66, I, p. 321, fig. 157).

Plate XXI, fig. 4: diam.: 19μ . No. 241/1957.

Loc. No. 10.

Tropidoneis CLEVE 1891

T. lepidoptera GREG. (N. I. HENDEY, 1964, p. 256, 36: 2, 4).

Loc. Nos. 10, 14.

T. vitrea (W. SMITH) CLEVE. (N. I. HENDEY, 1964, p. 255, 36: 3).

Plate XXVII, fig. 13: $84 \times 23 \mu$. 18 striae in 10μ . No. 241/1957.

Loc. No. 10.

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PLATES

Plate I

1. *Melosira roeseana* RABH.
2. *Melosira roeseana* RABH.
3. *Cyclotella antiqua* W. SMITH
4. *Melosira roeseana* RABH.
5. *Cyclotella bodanica* EULENSTEIN var. *intermedia* MANGUIN
6. *Cyclotella antiqua* W. SMITH
7. *Cyclotella comta* (EHR.) KÜTZ.
8. *Cyclotella comta* (EHR.) KÜTZ. var. *oligactis* (EHR.) GRUN.
9. *Melosira distans* (EHR.) KÜTZ. var. *lirata* (EHR.) BETHGE
10. *Melosira pfaffiana* REINSCH
11. *Melosira pfaffiana* REINSCH
12. *Melosira pfaffiana* REINSCH fo. *perglabra* ØSTRUP
13. *Melosira distans* (EHR.) KÜTZ. var. *lirata* (EHR.) BETHGE
14. *Melosira distans* (EHR.) KÜTZ. var. *lirata* (EHR.) BETHGE
15. *Melosira distans* (EHR.) KÜTZ. var. *alpigena* GRUN.
16. *Melosira italica* (EHR.) KÜTZ. var. *valida* GRUN.

Scales 10 μ

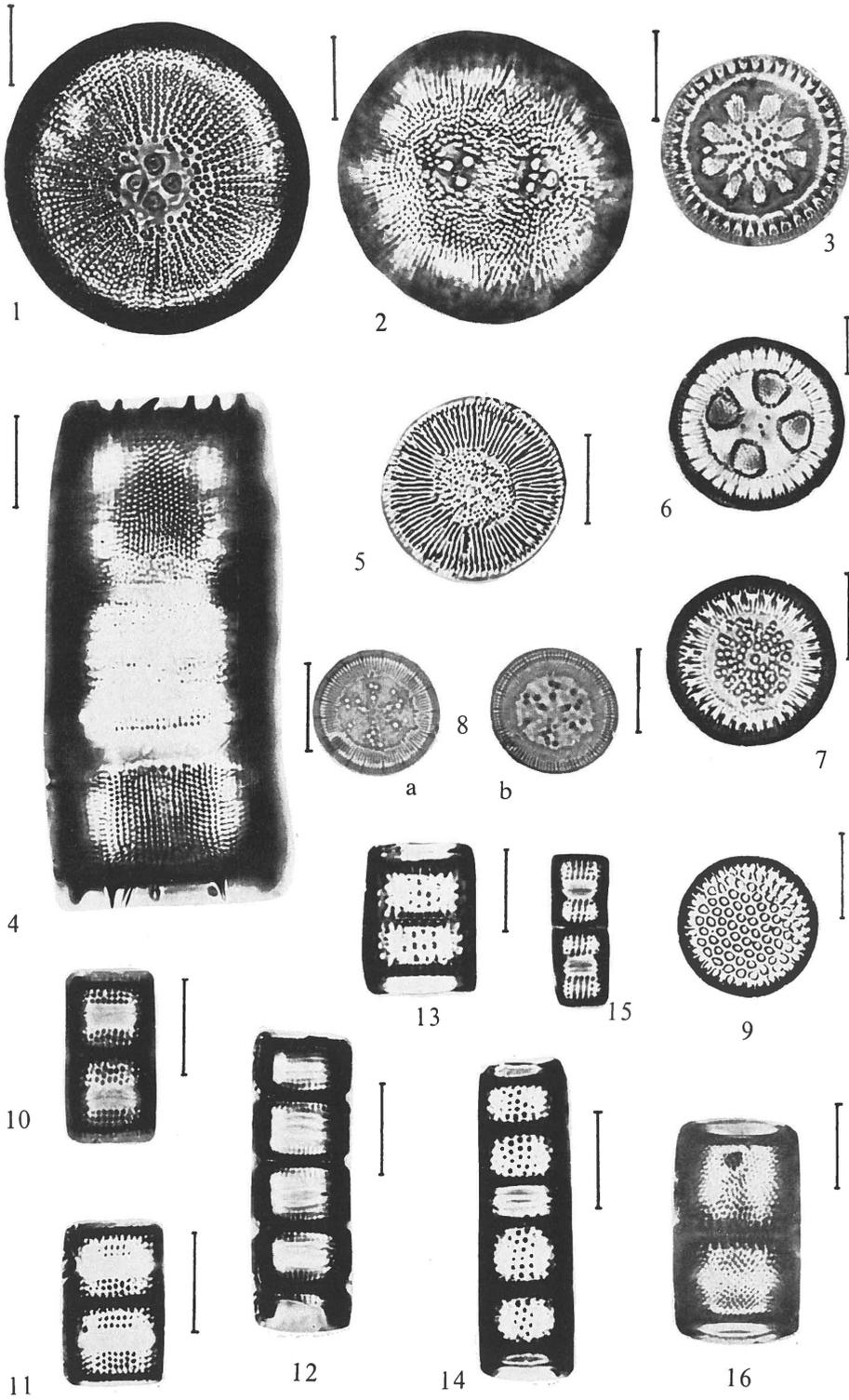


Plate II

1. *Actinella punctata* LEWIS
2. *Amphicampa hemicyclus* (EHR.) KARST.
3. *Amphicampa hemicyclus* (EHR.) KARST.
4. *Amphicampa hemicyclus* (EHR.) KARST.
5. *Amphicampa hemicyclus* (EHR.) KARST.
6. *Ceratoneis arcus* (EHR.) KÜTZ. var. *amphioxys* (RABH.) GRUN.
7. *Diatomella balfouriana* GREV.
8. *Tabellaria binalis* (EHR.) GRUN.
9. *Tabellaria binalis* (EHR.) GRUN.
10. *Opephora schulzi* (BROCKMANN) R. SIMONSEN
11. *Amphipleura rutilans* (TRENT.) CLEVE
12. *Cocconeis thumensis* A. MAYER
13. *Fragilaria constricta* EHR.
14. *Fragilaria constricta* EHR.
15. *Fragilaria constricta* EHR.*
16. *Achnanthes holstii* CLEVE
17. *Achnanthes holstii* CLEVE
18. *Fragilaria pinnata* EHR.
19. *Fragilaria construens* (EHR.) GRUN. var. *binodis* (EHR.) GRUN.
20. *Fragilaria lapponica* GRUN.
21. *Synedra tabulata* (AG.) KÜTZ. var. *fasciculata* (KÜTZ.) GRUN.
22. *Anomoeoneis styriaca* (GRUN.) HUST.
23. *Anomoeoneis zellensis* (GRUN.) CLEVE fo. *difficilis* (GRUN.) HUST.
24. *Anomoeoneis serians* (BRÉB.) CLEVE
25. *Anomoeoneis serians* (BRÉB.) CLEVE var. *brachysira* (BRÉB.) CLEVE

Scales 10 μ

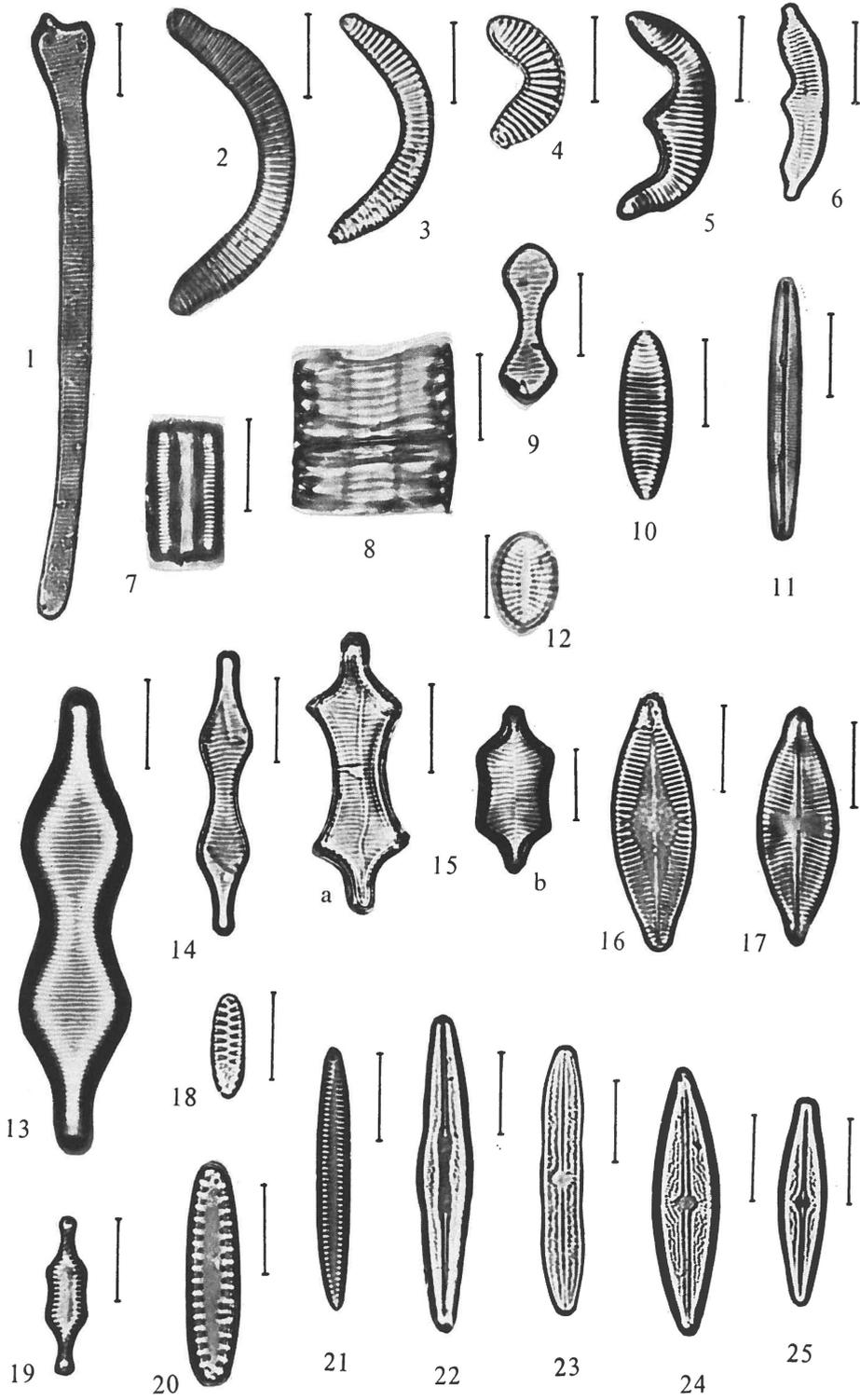


Plate III

1. *Eunotia robusta* RALFS
2. *Eunotia robusta* RALFS
3. *Eunotia robusta* RALFS
4. *Eunotia papilio* (GRUN.) HUST.
5. *Eunotia triodon* EHR.
6. *Eunotia triodon* EHR.
7. *Eunotia triodon* EHR.
8. *Eunotia praerupta* EHR. var. *bidens* (W. SMITH) GRUN.
9. *Eunotia praerupta* EHR. var. *bidens* (W. SMITH) GRUN.
10. *Eunotia bigibba* KÜTZ.
11. *Eunotia bigibba* KÜTZ.
12. *Eunotia diodon* EHR.
13. *Eunotia diodon* EHR.
14. *Eunotia diodon* EHR.

Scales 10 μ

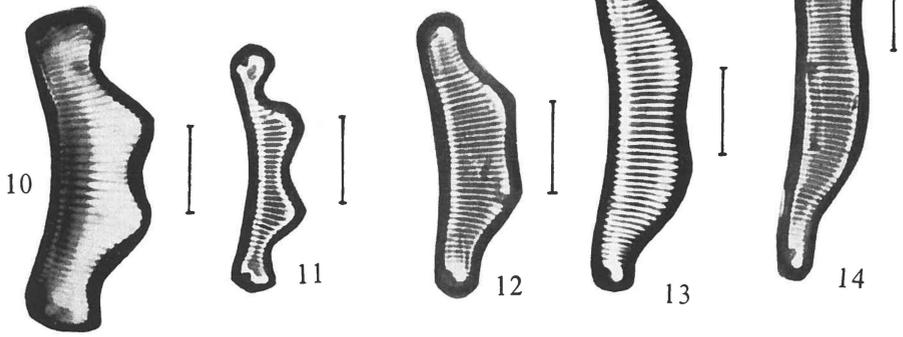
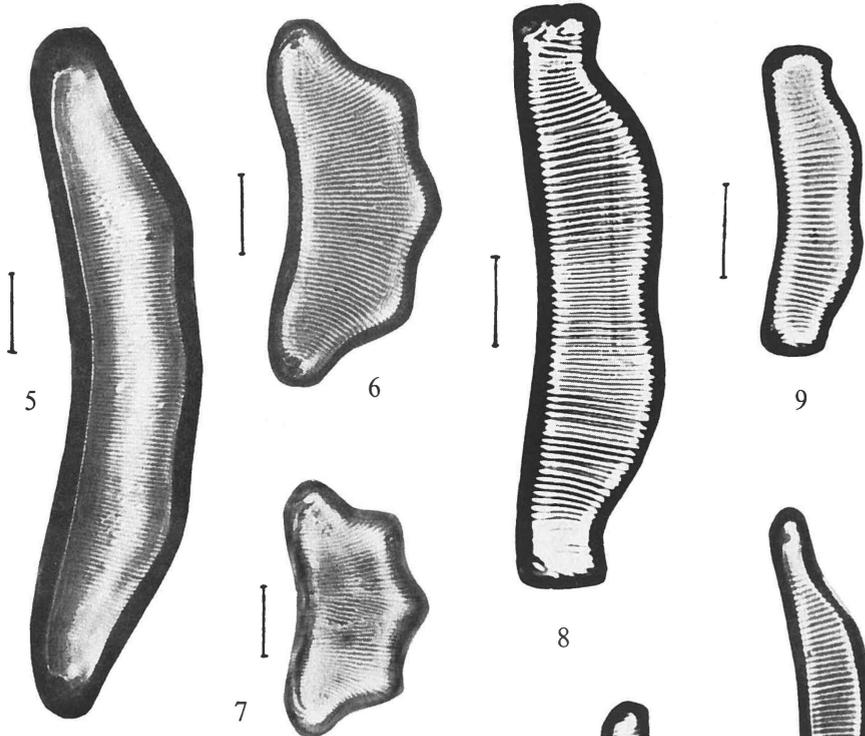
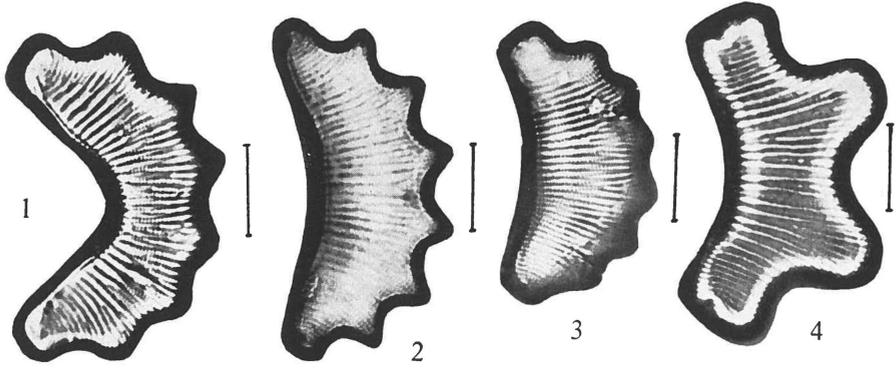


Plate IV

1. *Eunotia polyglyphis* GRUN.
2. *Eunotia bidentula* W. SMITH
3. *Eunotia crista-galli* CLEVE
4. *Eunotia exigua* (BRÉB.) RABH. var. *compacta* HUST.
5. *Eunotia denticulata* (BRÉB.) RABH. var. *fennica* HUST.
6. *Eunotia denticulata* (BRÉB.) RABH.
7. *Eunotia sudetica* (O. MÜLLER) HUST.
8. *Eunotia sudetica* (O. MÜLLER) HUST.
9. *Eunotia sudetica* (O. MÜLLER) HUST.
10. *Eunotia sudetica* (O. MÜLLER) HUST.
11. *Eunotia faba* (EHR.) GRUN.
12. *Eunotia faba* (EHR.) GRUN.
13. *Eunotia arcus* EHR.
14. *Eunotia arcus* EHR. var. *bidens* GRUN.
15. *Eunotia faba* (EHR.) GRUN.
16. *Eunotia faba* (EHR.) GRUN. var. *rhomboidea* FOGED
17. *Eunotia faba* (EHR.) GRUN. var. *rhomboidea* FOGED
18. *Eunotia elegans* ØSTRUP*

Scales 10 μ

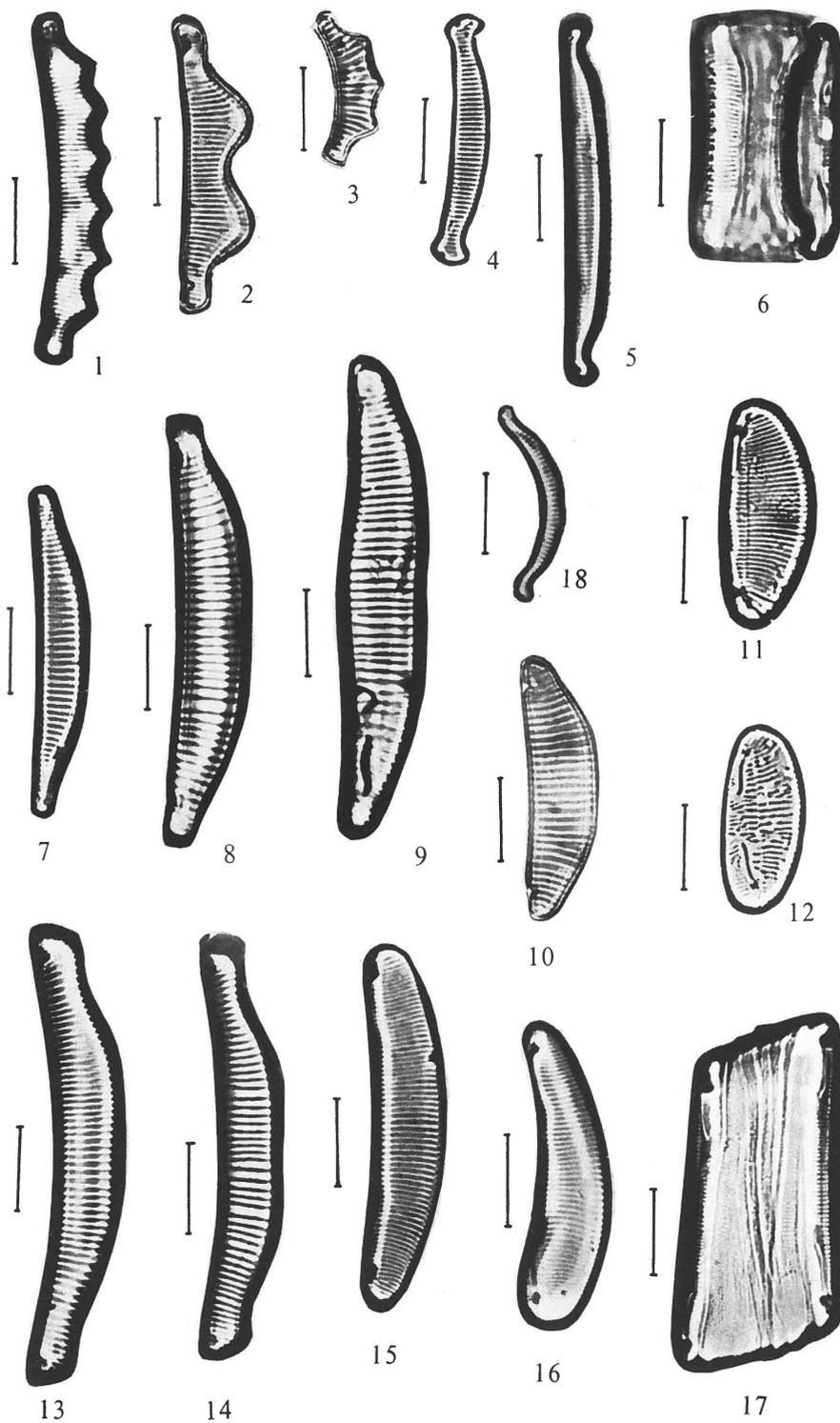


Plate V

1. *Eunotia maior* EHR. var. *scandia* A. CLEVE-EULER fo. *ventricosa* A. CLEVE
2. *Eunotia maior* EHR. var. *scandia* A. CLEVE-EULER fo. *ventricosa* A. CLEVE
3. *Eunotia monodon* EHR.
4. *Eunotia testudinata* Å. BERG
5. *Eunotia testudinata* Å. BERG
6. *Eunotia praerupta* EHR.
7. *Eunotia praerupta* EHR.
8. *Eunotia pectinalis* (KÜTZ.) RABH.
9. *Eunotia pectinalis* (KÜTZ.) RABH.
10. *Eunotia pectinalis* (KÜTZ.) RABH.
11. *Eunotia pectinalis* (KÜTZ.) RABH.
12. *Caloneis holstii* CLEVE
13. *Caloneis holstii* CLEVE
14. *Caloneis holstii* CLEVE*
15. *Caloneis holstii* CLEVE

Scales 10 μ

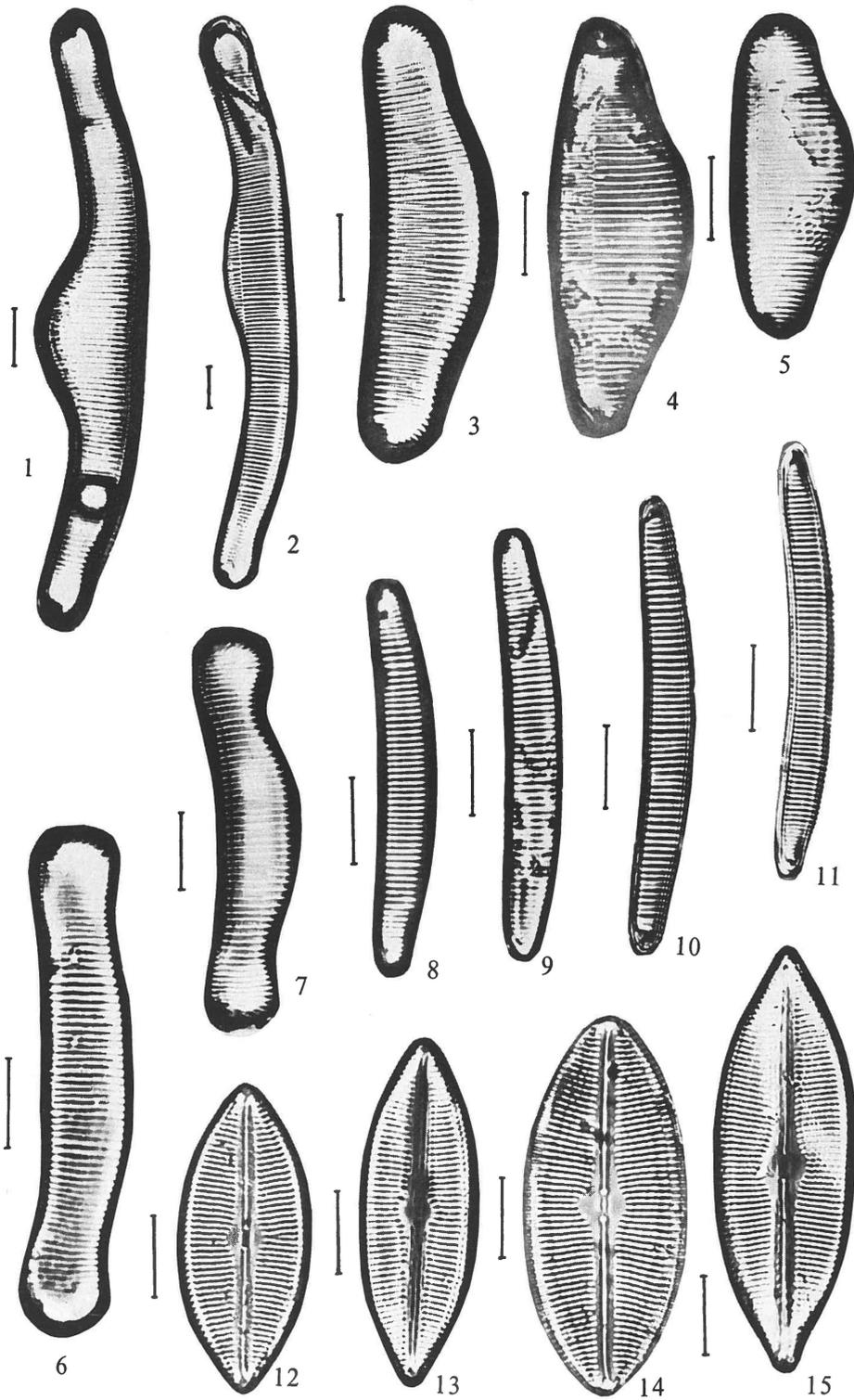


Plate VI

1. *Caloneis westii* (W. SMITH) HENDEY
2. *Caloneis silicula* (EHR.) CLEVE
3. *Caloneis obtusa* (W. SMITH) CLEVE
4. *Caloneis obtusa* (W. SMITH) CLEVE
5. *Caloneis obtusa* (W. SMITH) CLEVE
6. *Frustulia rhomboides* (EHR.) DE TONI
7. *Frustulia rhomboides* (EHR.) DE TONI var. *saxonica* (RABH.) DE TONI
8. *Caloneis backmanii* CLEVE-EULER
9. *Caloneis bacillum* (GRUN.) CLEVE
10. *Caloneis digitus* E. G. JØRGENSEN
11. *Diploneis ovalis* (HILSE) CLEVE
12. *Diploneis ovalis* (HILSE) CLEVE var. *oblongella* (NAEG.) CLEVE
13. *Neidium productum* (W. SMITH) CLEVE
14. *Neidium incurvum* (GREG.) ØSTRUP
15. *Navicula pseudosilicula* HUST.

Scales 10 μ

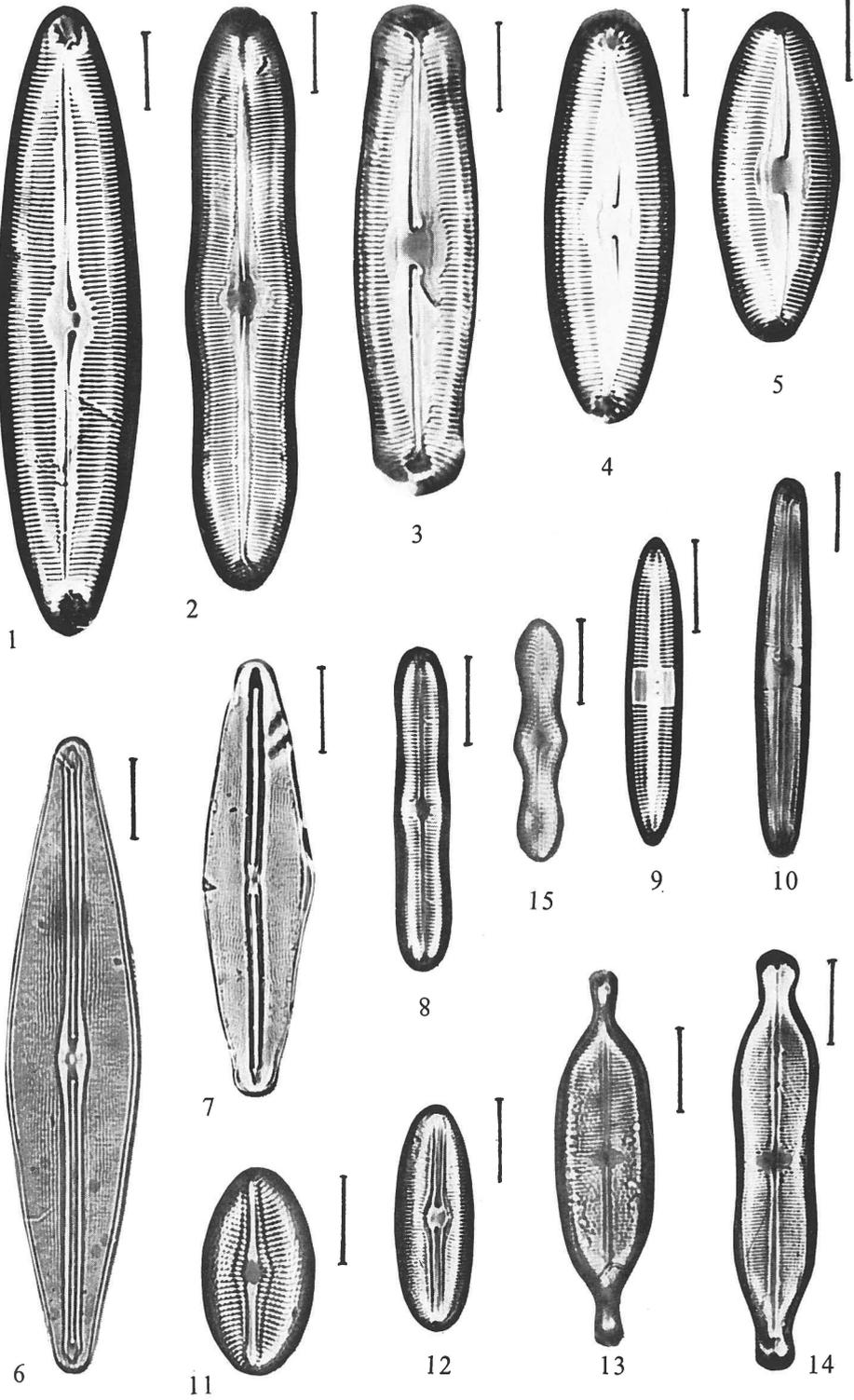


Plate VII

1. *Stauroneis phoenicenteron* (NITZSCH) EHR.
2. *Stauroneis phoenicenteron* (NITZSCH) EHR.
3. *Stauroneis phoenicenteron* (NITZSCH) EHR.
4. *Stauroneis javanica* (GRUN.) CLEVE
5. *Stauroneis acuta* W. SMITH
6. *Stauroneis producta* GRUN.
7. *Neidium knuthii* FOGED
8. *Neidium ladogense* (CLEVE) FOGED var. *densestriata* HUST.
9. *Neidium affine* (EHR.) CLEVE var. *humerus* REIMER
10. *Neidium affine* (EHR.) CLEVE var. *amphirhynchus* (EHR.) CLEVE fo. *undulata*
(GRUN.) CLEVE

Scales 10 μ

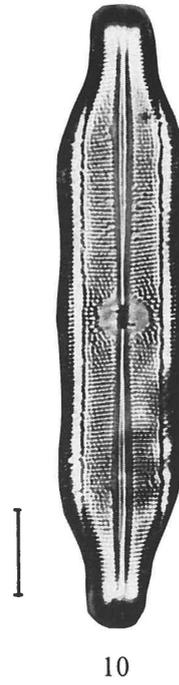
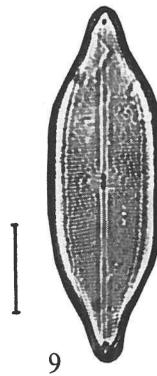
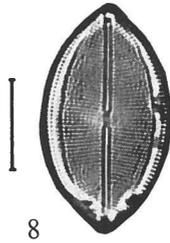
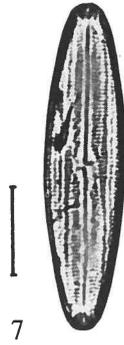
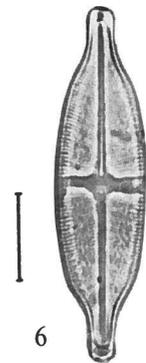
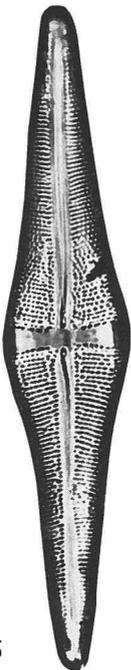
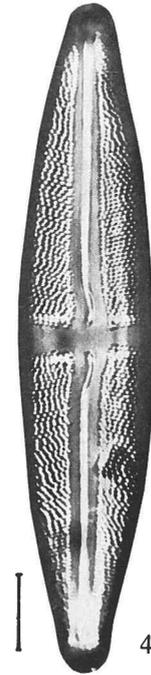
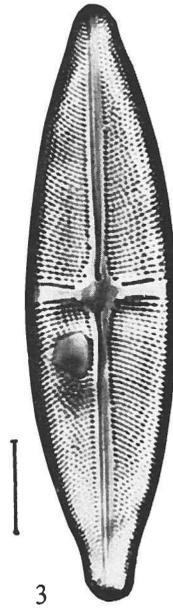
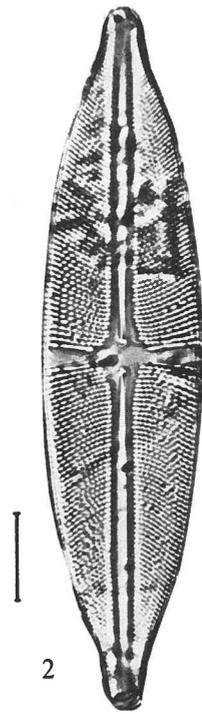
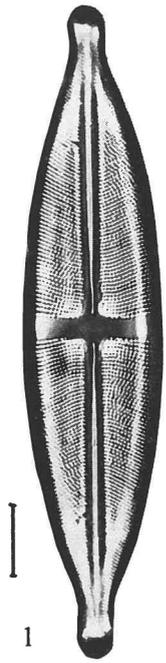


Plate VIII

1. *Neidium iridis* (EHR.) CLEVE
2. *Neidium iridis* (EHR.) CLEVE
3. *Neidium iridis* (EHR.) CLEVE var. *ampliata* (EHR.) CLEVE
4. *Neidium iridis* (EHR.) CLEVE var. *ampliata* (EHR.) CLEVE
5. *Neidium iridis* (EHR.) CLEVE var. *ampliata* (EHR.) CLEVE
6. *Neidium iridis* (EHR.) CLEVE var. *amphigomphus* (EHR.) VAN HEURCK
7. *Neidium temperei* REIMER
8. *Neidium temperei* REIMER
9. *Neidium temperei* REIMER
10. *Neidium affine* (EHR.) CLEVE var. *longiceps* (GREG.) CLEVE
11. *Neidium affine* (EHR.) CLEVE var. *longiceps* (GREG.) CLEVE
12. *Neidium affine* (EHR.) CLEVE var. *amphirhynchus* (EHR.) CLEVE
13. *Neidium iridis* (EHR.) CLEVE fo. *obtusa* GRUN.

Scales 10 μ

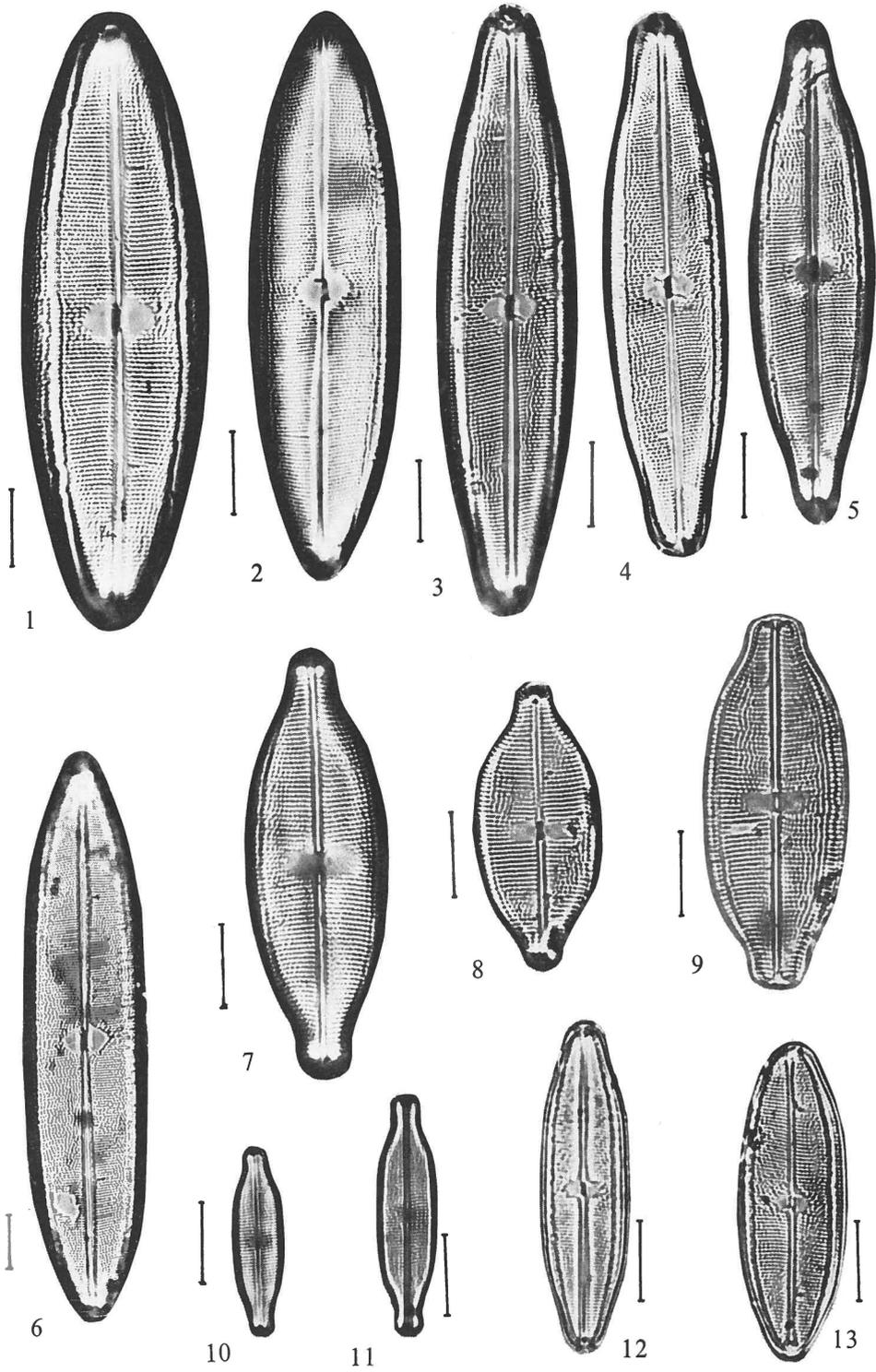


Plate IX

1. *Neidium iridis* (EHR.) CLEVE var. *porsildii* FOGED
2. *Neidium iridis* (EHR.) CLEVE var. *porsildii* FOGED
3. *Neidium iridis* (EHR.) CLEVE var. *porsildii* FOGED
4. *Neidium iridis* (EHR.) CLEVE var. *porsildii* FOGED
5. *Neidium affine* (EHR.) CLEVE fo. *hercynica* (A. MAYER) HUST.
6. *Navicula cuspidata* KÜTZ.
7. *Navicula cuspidata* KÜTZ.
8. *Navicula cuspidata* KÜTZ. var. *héribaldi* PÉRAG.
9. *Navicula vulpina* KÜTZ.
10. *Navicula vulpina* KÜTZ.
11. *Navicula cocconeiformis* GREG.
12. *Navicula cocconeiformis* GREG.
13. *Navicula pusio* CLEVE

Scales 10 μ

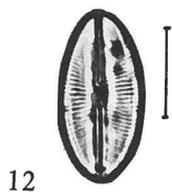
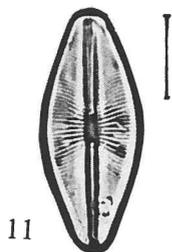
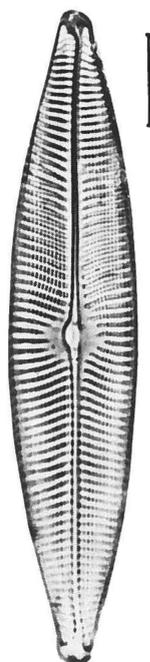
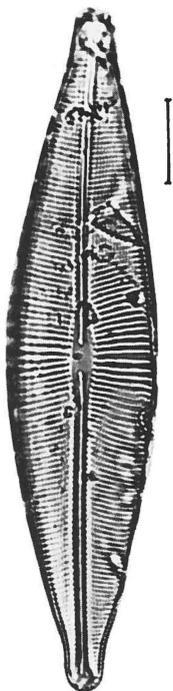
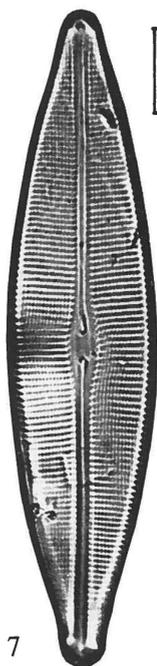
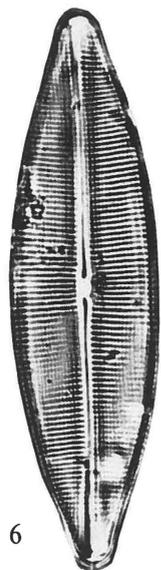
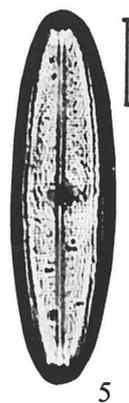
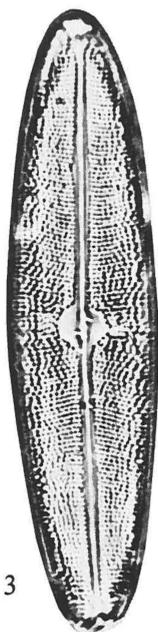
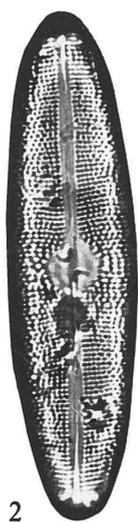
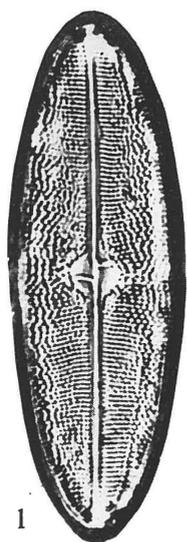


Plate X

1. *Navicula pusilla* W. SMITH
2. *Navicula pusilla* W. SMITH
3. *Navicula tuscula* (EHR.) GRUN.
4. *Navicula mutica* KÜTZ, fo. *lanceolata* FRENGUELLI
5. *Navicula mutica* KÜTZ. fo. *lanceolata* FRENGUELLI
6. *Navicula radiosa* KÜTZ.
7. *Navicula radiosa* KÜTZ.
8. *Navicula arenaria* DONK.
9. *Navicula abiskoensis* HUST.
10. *Navicula cari* EHR. var. *angusta* GRUN.*
11. *Navicula dicephala* (EHR.) W. SMITH
12. *Navicula explanata* HUST.
13. *Navicula similis* KRASSKE
14. *Navicula peterseni* HUST.
15. *Navicula peterseni* HUST.
16. *Navicula lobeliae* E. G. JØRGENSEN*
17. *Navicula naumanni* HUST. var. *simplex* var. nov.*
18. *Pinnularia krookii* GRUN.*
19. *Pinnularia krookii* GRUN.*
20. *Pinnularia krookii* GRUN.*
21. *Opephora martyi* HÉRIB.*

Scales 10 μ

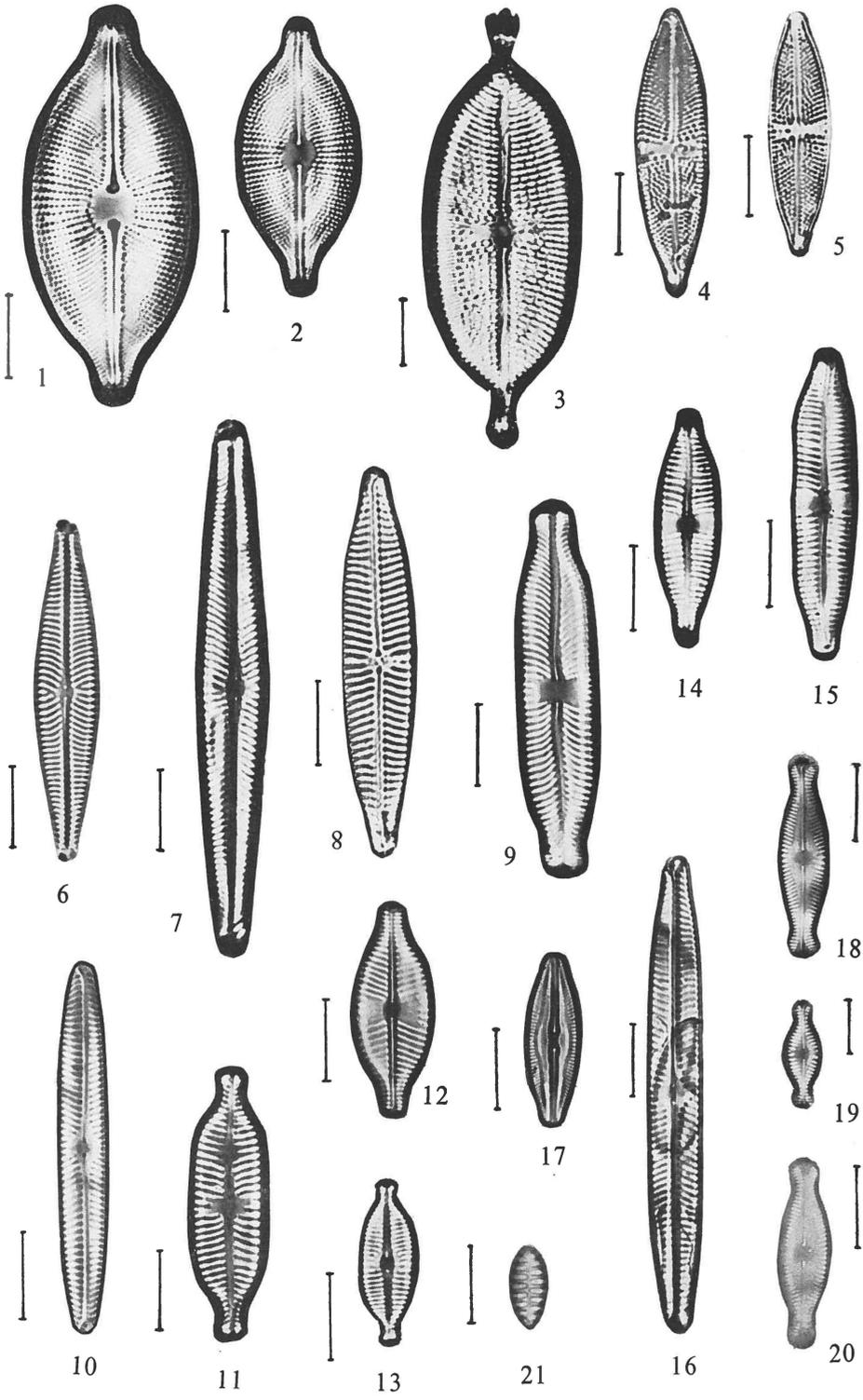


Plate XI

1. *Pinnularia interrupta* W. SMITH fo. *biceps* GREG.
2. *Pinnularia interrupta* W. SMITH fo. *biceps* GREG.
3. *Pinnularia interrupta* W. SMITH fo. *biceps* GREG.
4. *Pinnularia interrupta* W. SMITH fo. *biceps* GREG.
5. *Pinnularia microstauron* (EHR.) CLEVE fo. *biundulata* O. MÜLLER
6. *Pinnularia boecheri* FOGED
7. *Pinnularia pulchra* ØSTRUP
8. *Pinnularia microstauron* (EHR.) CLEVE var. *brébissonii* (KÜTZ.) HUST.
9. *Pinnularia similis* HUST. fo. *subundulata* fo. nov.
10. *Pinnularia similis* HUST. fo. *subundulata* fo. nov.
11. *Pinnularia mesolepta* (EHR.) W. SMITH
12. *Pinnularia pluviana* SOVEREIGN
13. *Pinnularia divergentissima* (GRUN.) CLEVE
14. *Pinnularia divergentissima* (GRUN.) CLEVE
15. *Pinnularia divergentissima* (GRUN.) CLEVE
16. *Pinnularia divergentissima* (GRUN.) CLEVE
17. *Pinnularia divergentissima* (GRUN.) CLEVE
18. *Pinnularia mesolepta* (EHR.) W. SMITH fo. *angusta* CLEVE
19. *Pinnularia pulchra* ØSTRUP

Scales 10 μ

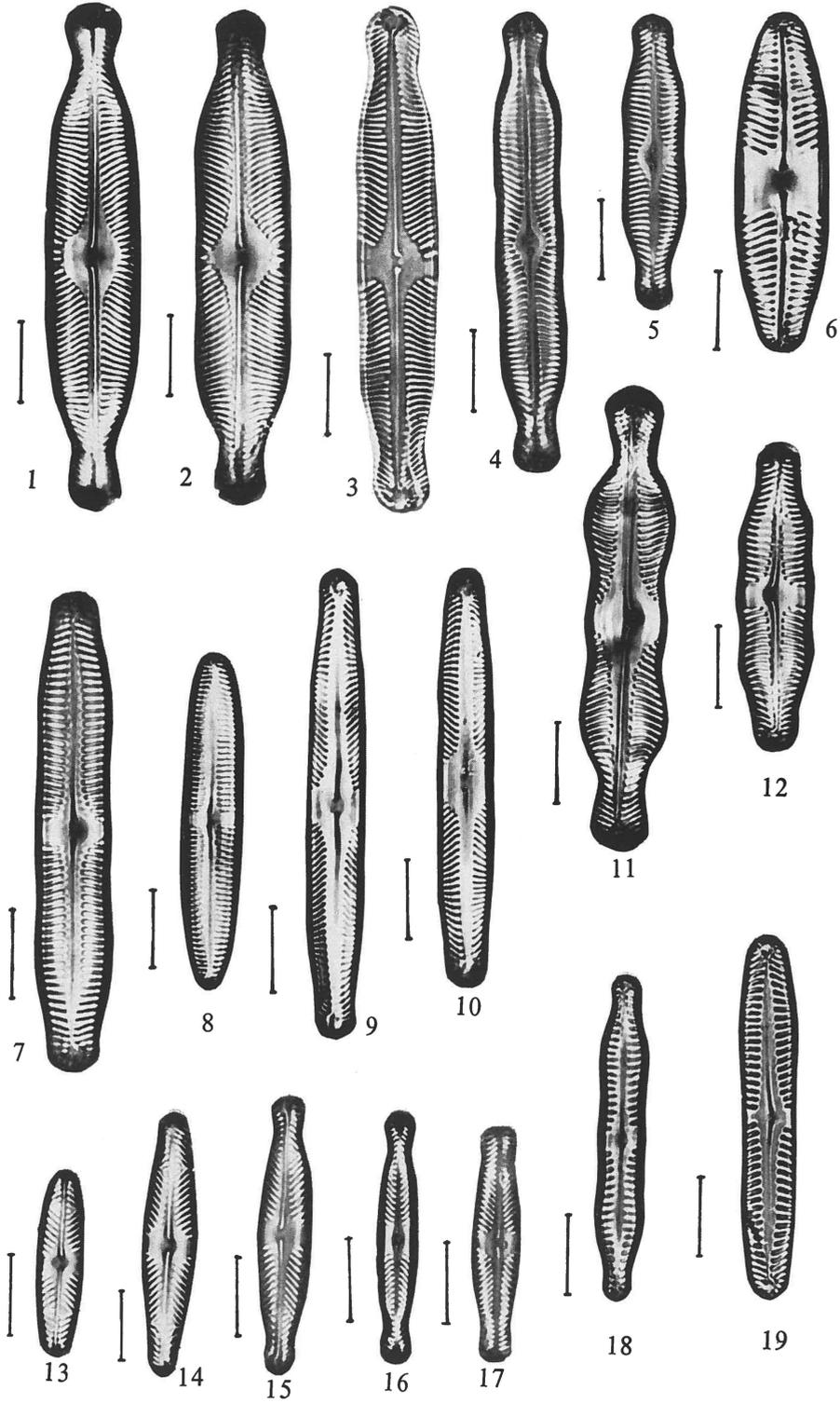


Plate XII

1. *Pinnularia viridis* (NITZSCH) EHR.
2. *Pinnularia viridis* (NITZSCH) EHR. var. *sudetica* (HILSE) HUST.*
3. *Pinnularia gibba* EHR. var. *mesogongyla* (ERH.) HUST.*
4. *Pinnularia viridis* (NITZSCH) EHR. var. *rupestris* (HANTZSCH) CLEVE
5. *Pinnularia gentilis* (DONK.) CLEVE
6. *Pinnularia bipectinalis* (SCHUM.) A. CLEVE-EULER
7. *Pinnularia bipectinalis* (SCHUM.) A. CLEVE-EULER var. *lata* var. nov.
8. *Pinnularia hemiptera* (KÜTZ.) CLEVE
9. *Pinnularia brevicostata* CLEVE
10. *Pinnularia iatriaensis* FOGED
11. *Pinnularia iatriaensis* FOGED
12. *Pinnularia stomatophora* GRUN.

Scales 10 μ

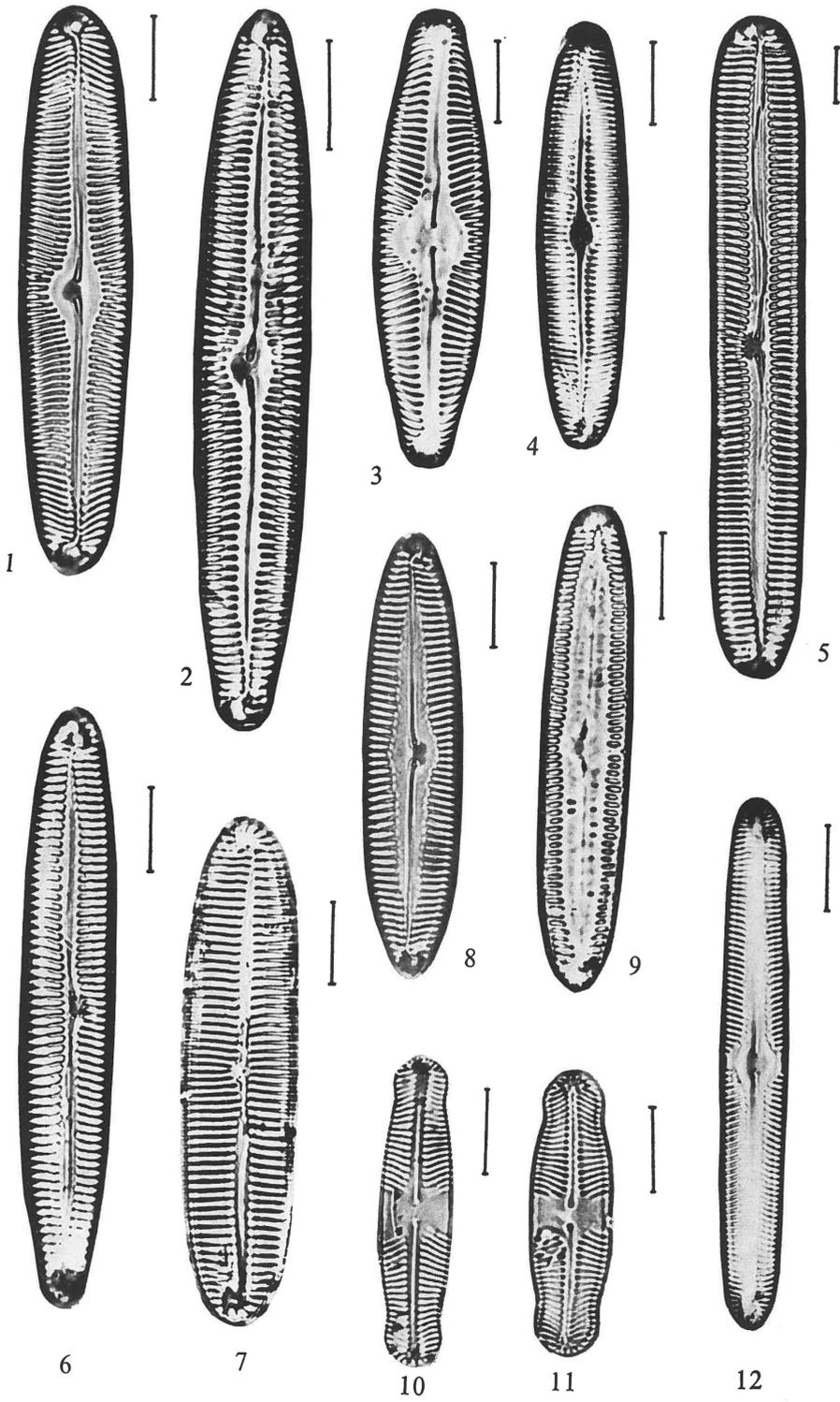


Plate XIII

1. *Pinnularia lata* (BRÉB.) W. SMITH
2. *Pinnularia lata* (BRÉB.) W. SMITH
3. *Pinnularia borealis* EHR.
4. *Pinnularia borealis* EHR.
5. *Pinnularia platycephala* (EHR.) CLEVE
6. *Pinnularia platycephala* (EHR.) CLEVE
7. *Pinnularia divergens* W. SMITH
8. *Pinnularia hemiptera* (KÜTZ.) CLEVE var. *groenlandica* nov. var.
9. *Pinnularia hemiptera* (KÜTZ.) CLEVE var. *groenlandica* nov. var.
10. *Pinnularia hemiptera* (KÜTZ.) CLEVE var. *groenlandica* nov. var.
11. *Pinnularia hemiptera* (KÜTZ.) CLEVE var. *groenlandica* nov. var.
12. *Pinnularia obscura* KRASSKE
13. *Pinnularia intermedia* LAGERST.

Scales 10 μ

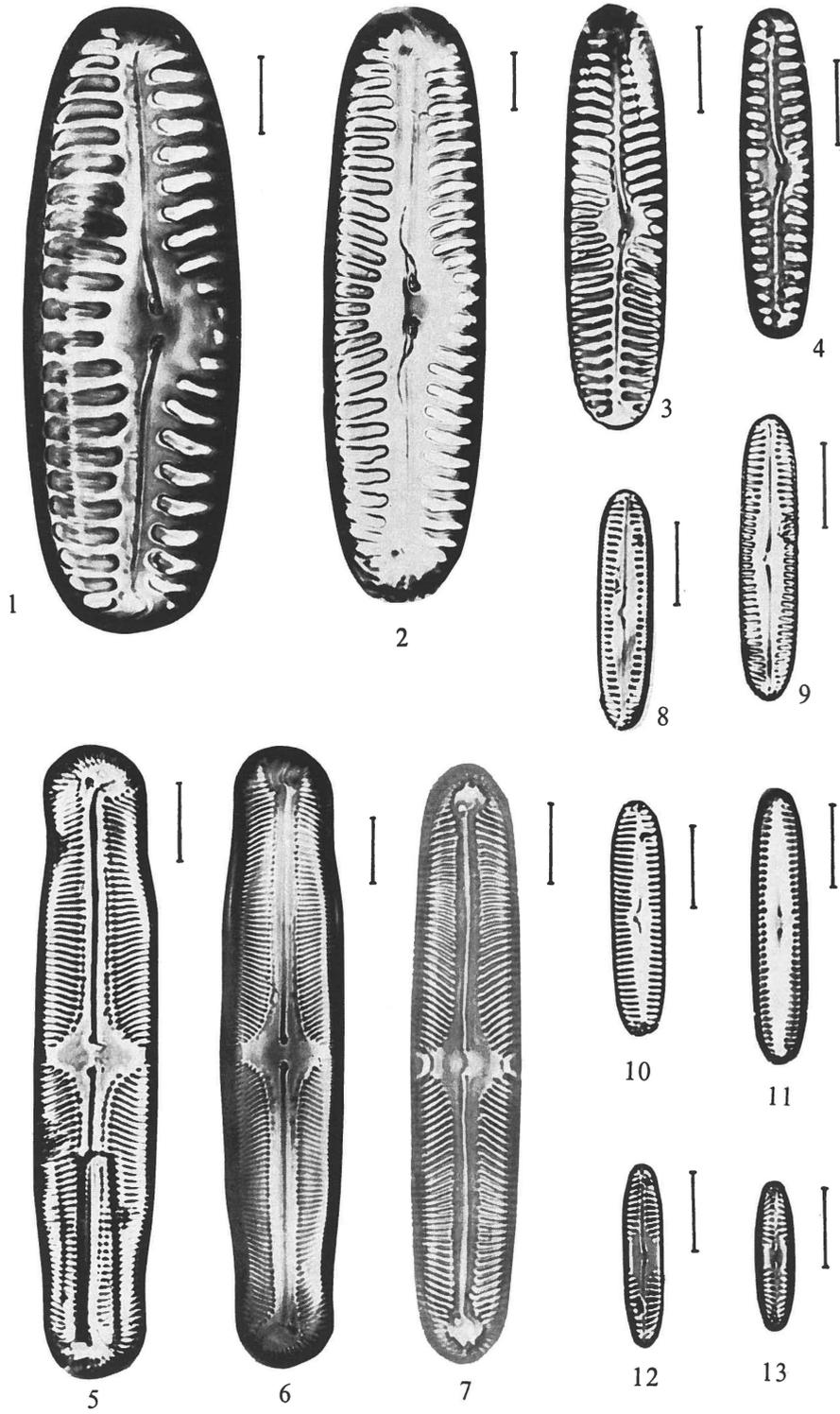


Plate XIV

1. *Pinnularia divergens* W. SMITH var. *elliptica* GRUN.
2. *Pinnularia brandelii* CLEVE
3. *Pinnularia brandelii* CLEVE
4. *Pinnularia brandelii* CLEVE
5. *Pinnularia brandelii* CLEVE
6. *Pinnularia islandica* ØSTRUP fo. *ikaensis* fo. nov.
7. *Pinnularia microstauron* (EHR.) CLEVE
8. *Pinnularia microstauron* (EHR.) CLEVE var. *brébissonii* (KÜTZ.) HUST.
fo. *diminuta* GRUN.
9. *Pinnularia microstauron* (EHR.) CLEVE var. *brébissonii* (KÜTZ.) HUST.
fo. *diminuta* GRUN.
10. *Pinnularia viridis* (NITZSCH) EHR.
11. *Pinnularia lata* (BRÉB.) W. SMITH var. *thuringiaca* (RABH.) A. MAYER
12. *Pinnularia borealis* EHR.
13. *Pinnularia leptosoma* GRUN.
14. *Pinnularia microstauron* (EHR.) CLEVE fo. *biundulata* O. MÜLLER
15. *Pinnularia islandica* ØSTRUP*

Scales 10 μ

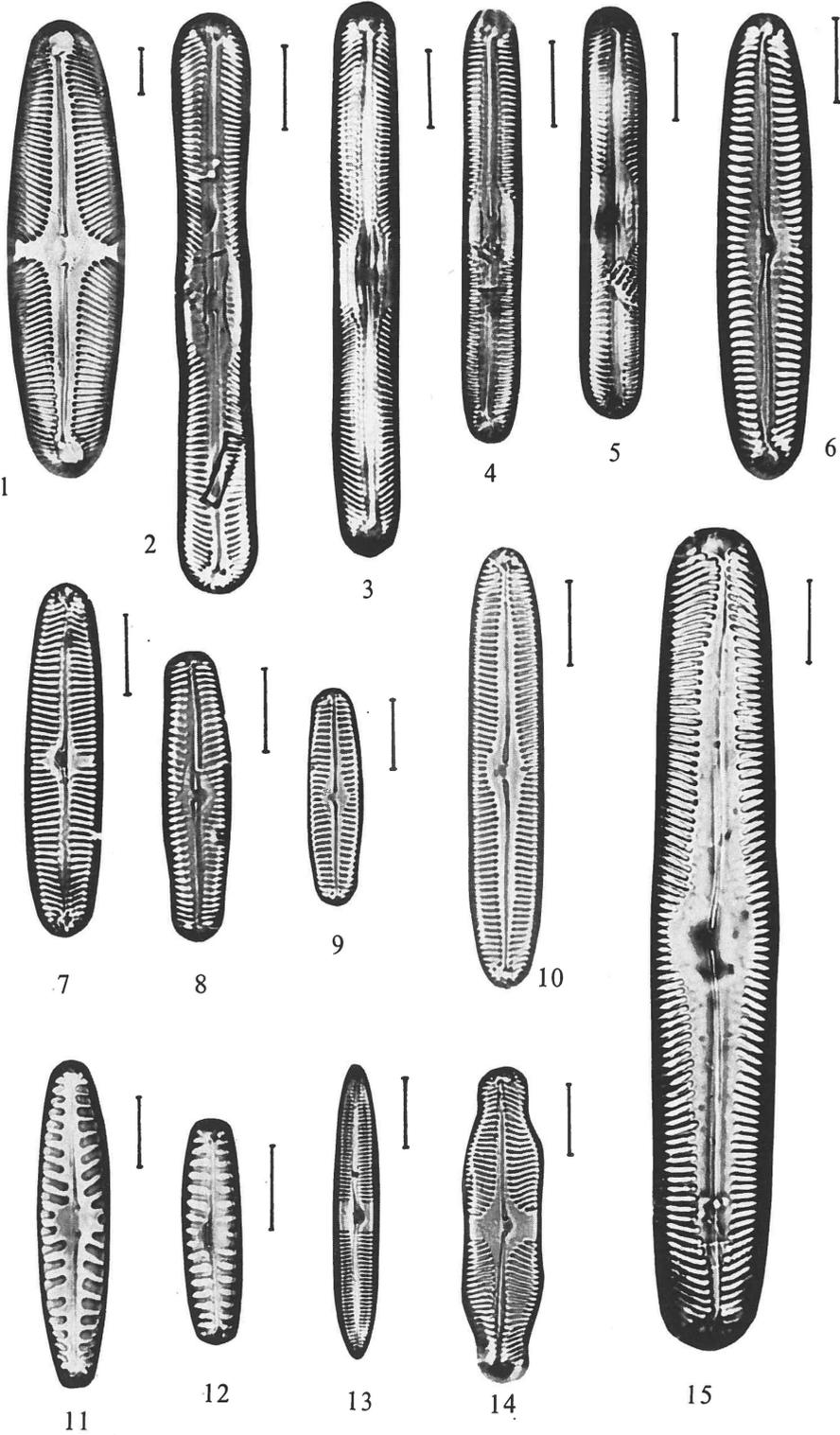


Plate XV

1. *Cymbella mülleri* HUST. var. *groenlandica* nov. var.
2. *Cymbella mülleri* HUST. var. *groenlandica* nov. var.
3. *Cymbella turgida* (GREG.) CLEVE
4. *Cymbella cistula* (HEMPR.) GRUN. var. *maculata* (KÜTZ.) VAN HEURCK
5. *Cymbella tumida* (BRÉB.) VAN HEURCK var. *fossilis* (GRUN.) CLEVE
6. *Cymbella tumida* (BRÉB.) VAN HEURCK var. *fossilis* (GRUN.) CLEVE
7. *Cymbella cistula* (HEMPR.) GRUN.
8. *Cymbella cistula* (HEMPR.) GRUN.
9. *Cymbella norvegica* GRUN.
10. *Cymbella aequalis* W. SMITH
11. *Cymbella gracilis* (RABH.) CLEVE
12. *Cymbella norvegica* GRUN.
13. *Cymbella incerta* GRUN.
14. *Cymbella borealis* CLEVE
15. *Cymbella heteropleura* (EHR.) KÜTZ.

Scales 10 μ

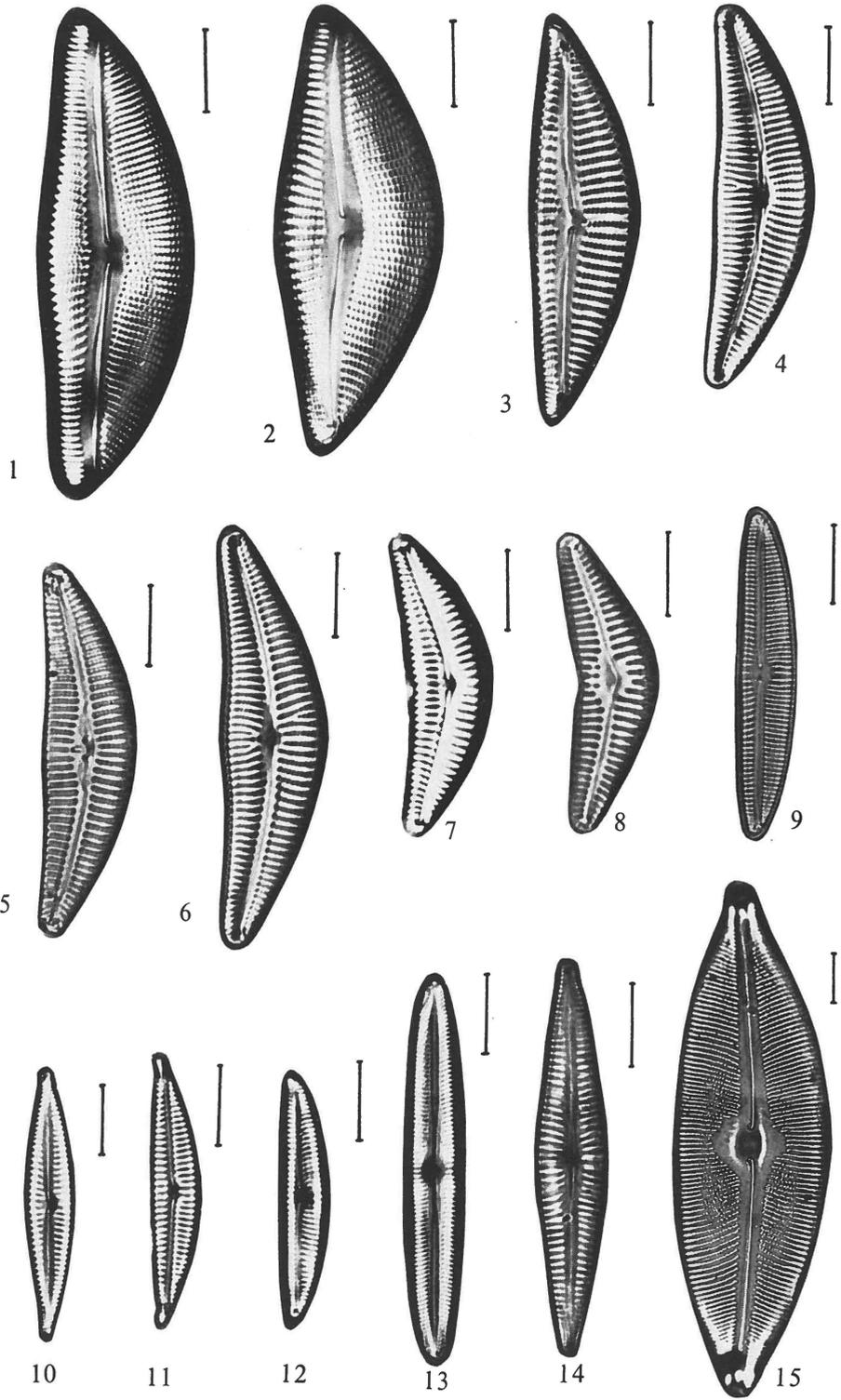


Plate XVI

1. *Cymbella lanceolata* (EHR.) VAN HEURCK
2. *Cymbella lanceolata* (EHR.) VAN HEURCK
3. *Cymbella lanceolata* (EHR.) VAN HEURCK
4. *Cymbella helvetica* KÜTZ.
5. *Cymbella helvetica* KÜTZ.
6. *Cymbella helvetica* KÜTZ.
7. *Cymbella cistula* (HEMPR.) GRUN.
8. *Cymbella cistula* (HEMPR.) GRUN.
9. *Cymbella cistula* (HEMPR.) GRUN.
10. *Cymbella cistula* (HEMPR.) GRUN.

Scales 10 μ

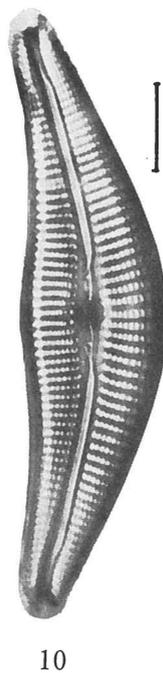
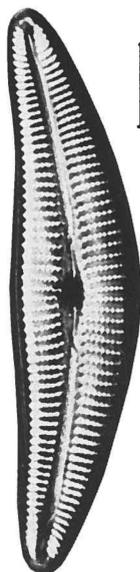
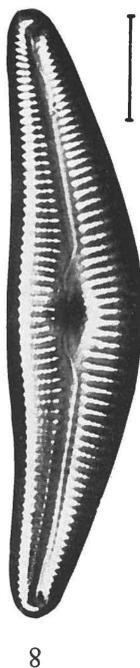
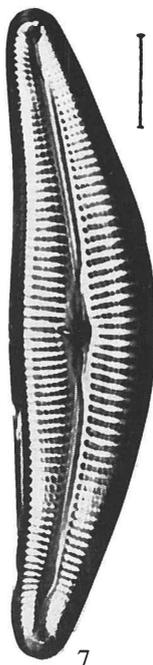
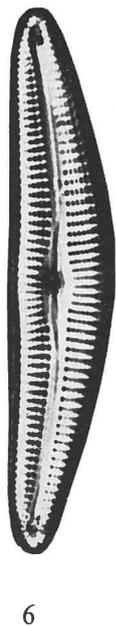
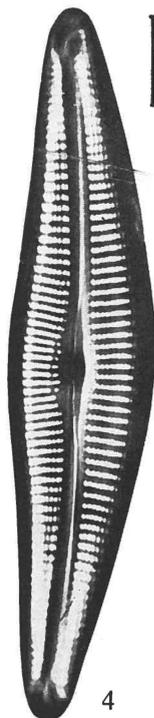
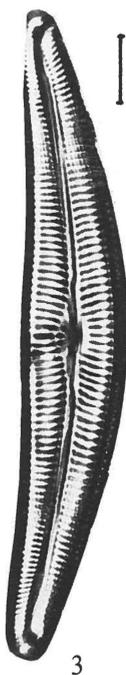
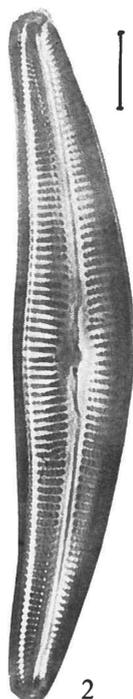


Plate XVII

1. *Cymbella cuspidata* KÜTZ.
2. *Cymbella cuspidata* KÜTZ.
3. *Cymbella cuspidata* KÜTZ.
4. *Cymbella cuspidata* KÜTZ.
5. *Cymbella borealis* CLEVE
6. *Cymbella angustata* (W. SMITH) CLEVE
7. *Cymbella angustata* (W. SMITH) CLEVE
8. *Cymbella hauckii* VAN HEURCK
9. *Cymbella hauckii* VAN HEURCK
10. *Cymbella gracilis* (RABH.) CLEVE
11. *Cymbella latens* KRASSKE
12. *Cymbella leptoceros* (EHR.?) GRUN. var. *rostrata* HUST.
13. *Cymbella leptoceros* (EHR.?) GRUN.
14. *Cymbella leptoceros* (EHR.?) GRUN.
15. *Cymbella affinis* KÜTZ.

Scales 10 μ

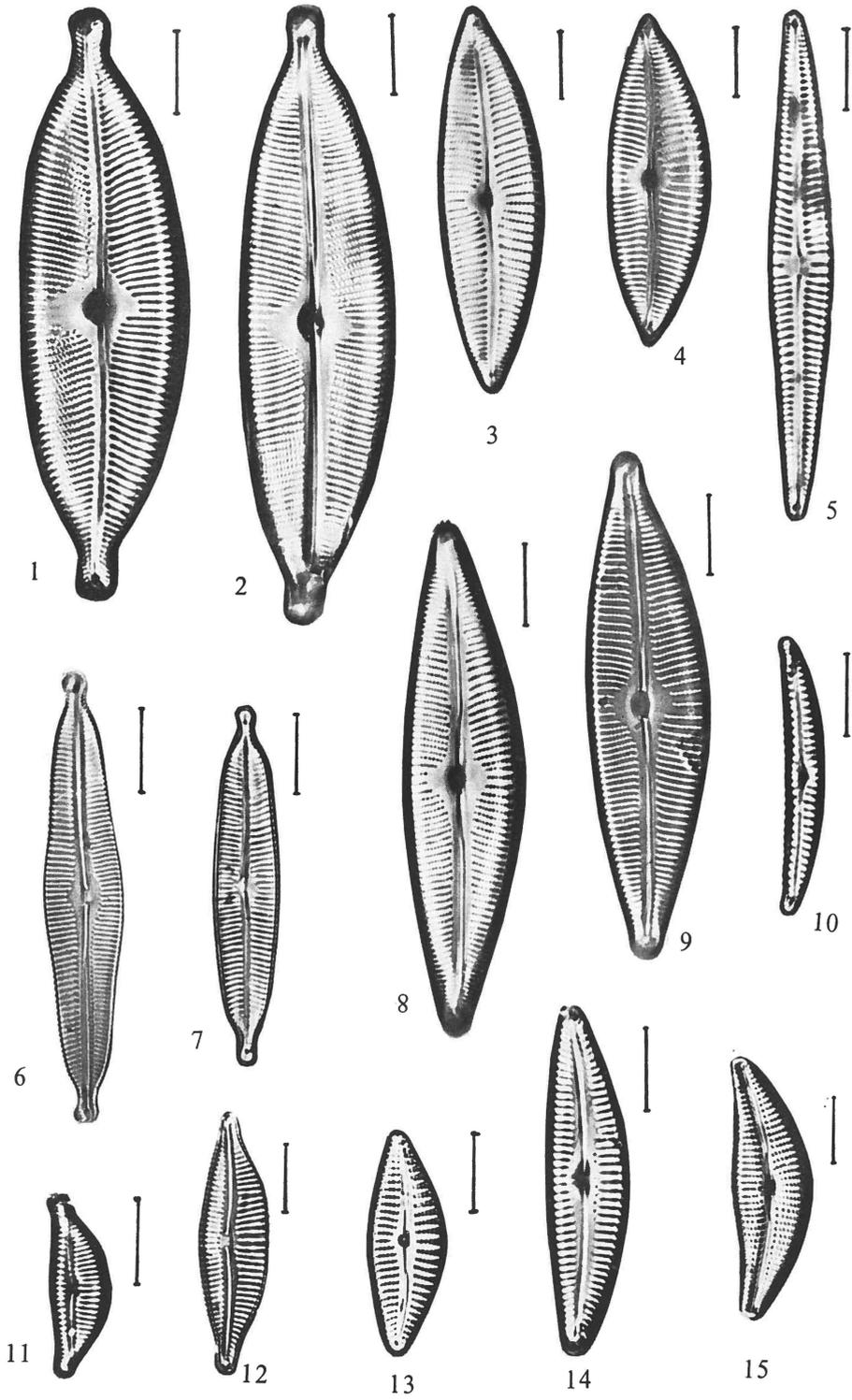


Plate XVIII

1. *Amphora ovalis* KÜTZ.
2. *Amphora parallelistriata* MANGUIN
3. *Amphora parallelistriata* MANGUIN
4. *Gomphonema acuminatum* EHR. var. *brébissonii* (KÜTZ.) CLEVE
5. *Gomphonema acuminatum* EHR. var. *coronata* (EHR.) W. SMITH
6. *Gomphonema subtile* EHR.
7. *Gomphonema lanceolatum* GRUN.
8. *Gomphonema lanceolatum* GRUN.
9. *Gomphonema constrictum* EHR. var. *capitata* (EHR.) CLEVE
10. *Gomphonema constrictum* EHR. var. *capitata* (EHR.) CLEVE
11. *Gomphonema longiceps* EHR.
12. *Gomphonema lanceolatum* GRUN.
13. *Gomphonema lagerheimii* CLEVE fo. *simplex* fo. nov.
14. *Gomphonema lagerheimii* CLEVE fo. *simplex* fo. nov.
15. *Gomphonema lagerheimii* CLEVE fo. *simplex* fo. nov.
16. *Gomphonema acuminatum* EHR. forma
17. *Gomphonema brasiliense* GRUN.
18. *Gomphonema brasiliense* GRUN.
19. *Denticula tenuis* KÜTZ.
20. *Denticula tenuis* KÜTZ.
21. *Gomphonema lagerheimii* A. CLEVE
22. *Gomphonema kamschaticum* GRUN.*
23. *Gomphonema exiguum* KÜTZ. var. *septentrionale* (ØSTRUP) A. CLEVE-EULER*

Scales 10 μ

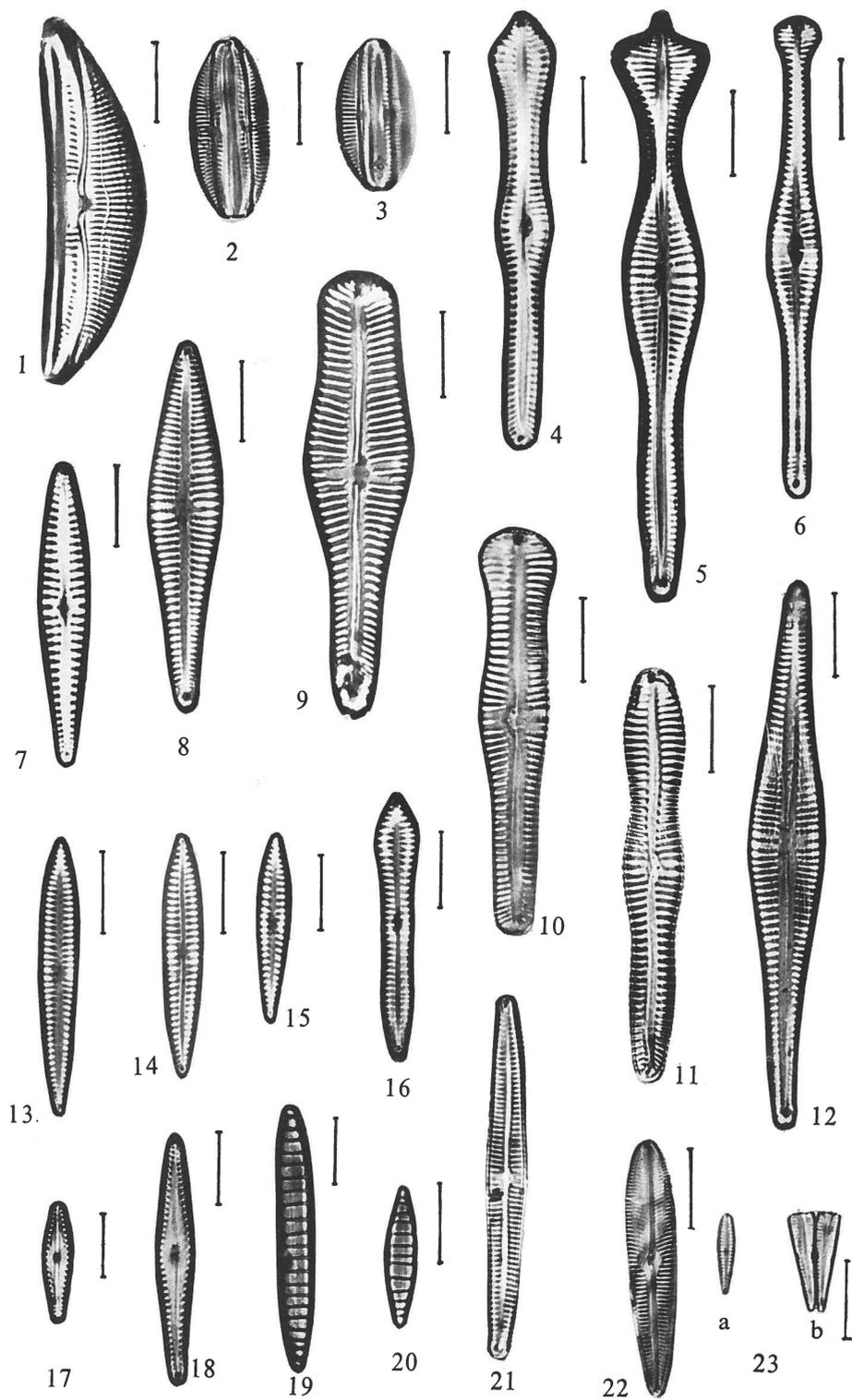


Plate XIX

1. *Epithemia sorex* KÜTZ.
2. *Epithemia sorex* KÜTZ.
3. *Epithemia sorex* KÜTZ.
4. *Epithemia sorex* KÜTZ.
5. *Epithemia sorex* KÜTZ.
6. *Epithemia sorex* KÜTZ.
7. *Epithemia zebra* (EHR.) KÜTZ. var. *porcellus* (KÜTZ.) GRUN.
8. *Epithemia argus* KÜTZ.
9. *Rhopalodia parallela* (GRUN.) O. MÜLLER
10. *Rhopalodia parallela* (GRUN.) O. MÜLLER
11. *Surirella delicatissima* LEWIS
12. *Surirella ovata* BRÉB.
13. *Surirella ovata* BRÉB.
14. *Surirella angusta* KÜTZ. var. *crassa* var. nov.
15. *Nitzschia tirstrupensis* FOGED
16. *Surirella delicatissima* LEWIS

Scales 10 μ

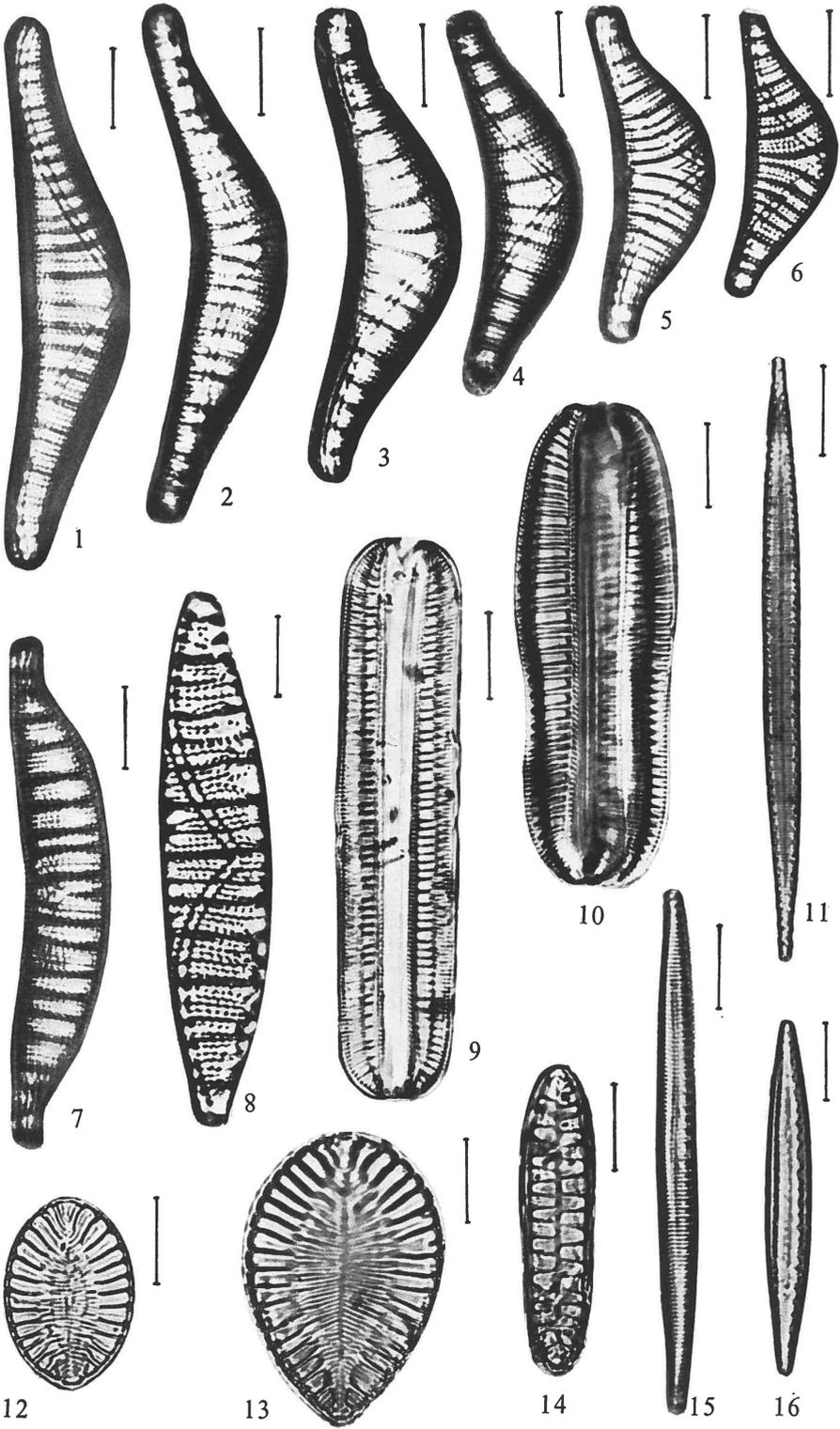


Plate XX

1. *Surirella linearis* W. SMITH
2. *Surirella linearis* W. SMITH
3. *Surirella linearis* W. SMITH
4. *Surirella linearis* W. SMITH var. *constricta* (EHR.) GRUN.
5. *Surirella linearis* W. SMITH var. *constricta* (EHR.) GRUN.
6. *Surirella linearis* W. SMITH var. *constricta* (EHR.) GRUN.
7. *Surirella linearis* W. SMITH var. *constricta* (EHR.) GRUN.
8. *Surirella amphioxys* W. SMITH
9. *Surirella robusta* EHR. var. *splendida* (EHR.) VAN HEURCK
10. *Surirella tenuissima* HUST.
11. *Surirella tenuissima* HUST.
12. *Surirella linearis* W. SMITH

Scales 10 μ

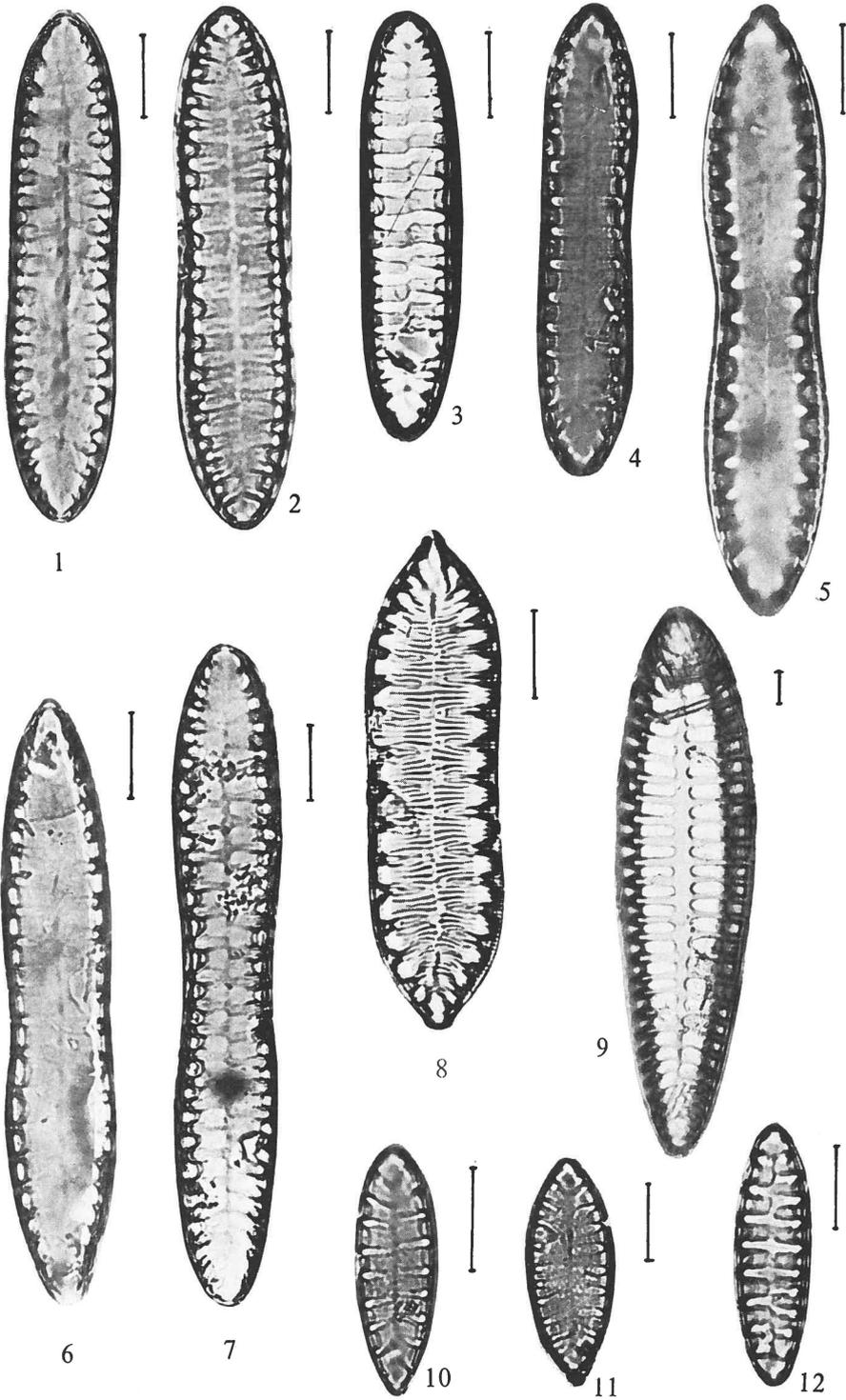


Plate XXI

1. *Coscinodiscus divisus* GRUN.*
2. *Biddulphia aurita* (LYNGB.) BRÉB. & GODEY*
3. *Thalassiosira gravida* CLEVE*
4. *Thalassiosira nordenskiöldii* CLEVE*
5. *Thalassiosira hyalina* (GRUN.) GRAN
6. *Anorthoneis excentrica* (DONK.) GRUN.
7. *Grammatophora arcuatum* (LYNGB.) KÜTZ.
8. *Rhabdonema minutum* KÜTZ.
9. *Grammatophora arcuatum* (LYNGB.) KÜTZ.
10. *Rhabdonema arcuatum* (LYNGB.? AG.) KÜTZ.

Scales 10 μ

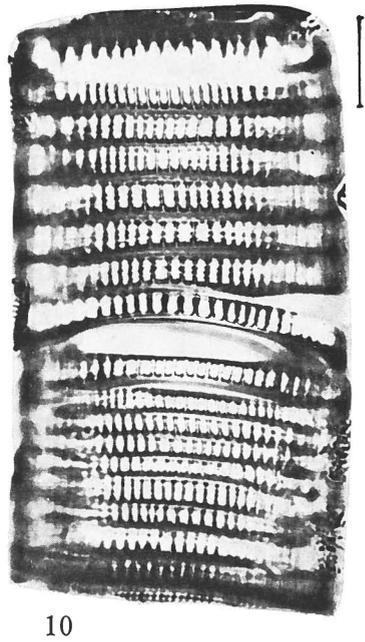
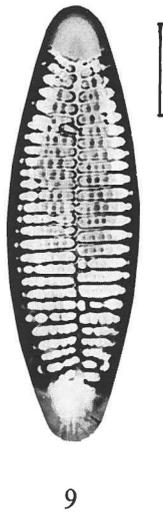
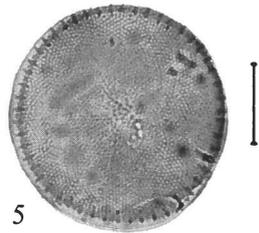
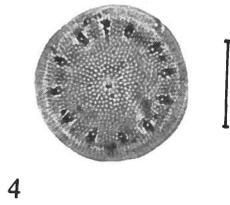
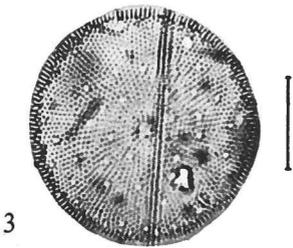
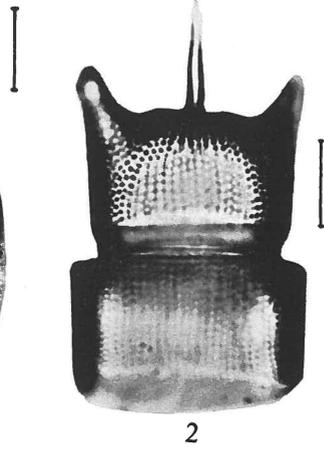
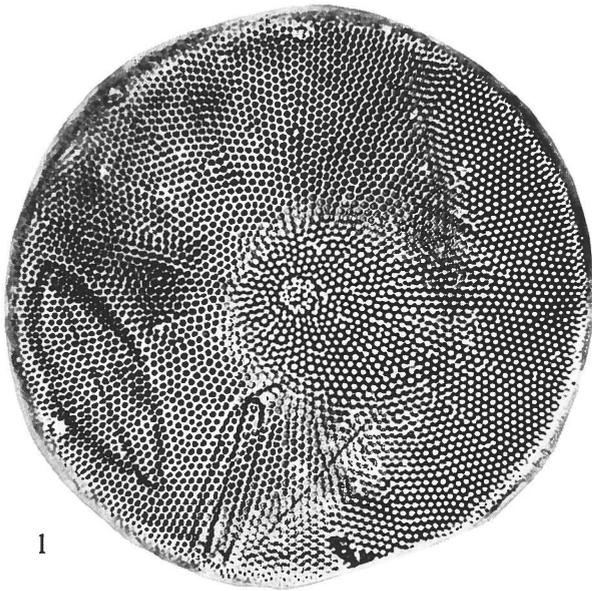


Plate XXII

1. *Achnanthes brevipes* AGARDH
2. *Achnanthes brevipes* AGARDH
3. *Achnanthes brevipes* AGARDH
4. *Achnanthes brevipes* AGARDH
5. *Achnanthes brevipes* AGARDH
6. *Achnanthes brevipes* AGARDH
7. *Achnanthes brevipes* AGARDH
8. *Cocconeis costata* GREG.
9. *Cocconeis scutellum* EHR. var. *stauroneiformis* W. SMITH*
10. *Achnanthes hauckiana* GRUN. var. *rostrata* SCHULZ
11. *Stauroneis elata* HUST.
12. *Cocconeis scutellum* EHR.
13. *Cocconeis costata* GREG.
14. *Diploneis subcincta* (A. SCHMIDT) CLEVE*

Scales 10 μ

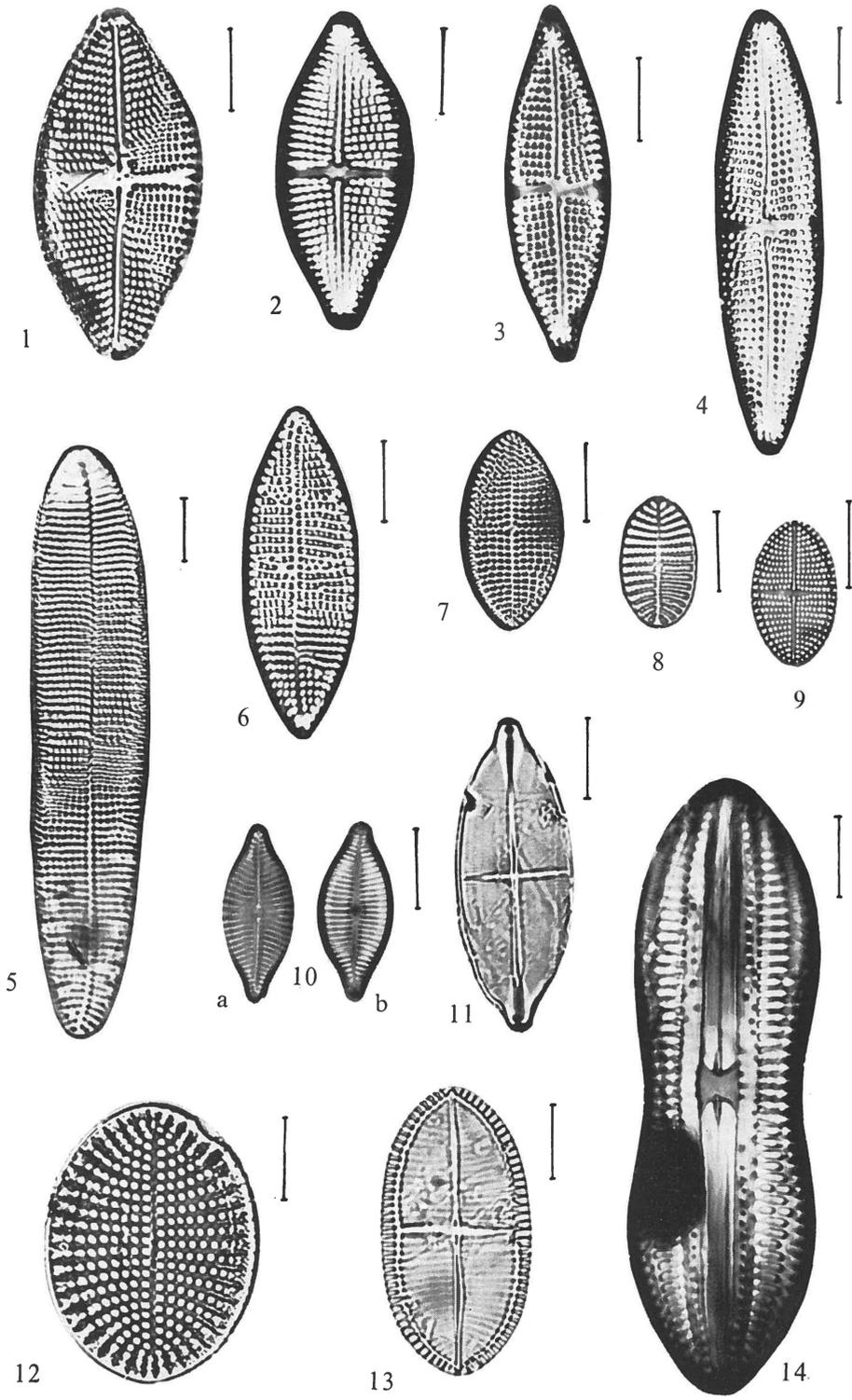


Plate XXIII

1. *Pleurosigma aestuarii* (BRÉB. ex KÜTZ.) W. SMITH
2. *Pleurosigma aestuarii* (BRÉB. ex KÜTZ.) W. SMITH
3. *Caloneis brevis* (GREG.) CLEVE
4. *Stauroneis constricta* (EHR. ? W. SMITH) CLEVE*
5. *Diploneis interrupta* (KÜTZ.) CLEVE var. *clancula* (A.S.) CLEVE
6. *Diploneis interrupta* (KÜTZ.) CLEVE
7. *Diploneis didyma* (EHR.) CLEVE
8. *Diploneis smithii* (BRÉB.) CLEVE
9. *Mastogloia elliptica* (AGARDH) CLEVE
10. *Mastogloia elliptica* (AGARDH) CLEVE
11. *Diploneis incurvata* (GREG.) CLEVE
12. *Diploneis litoralis* (DONK.) CLEVE

Scales 10 μ

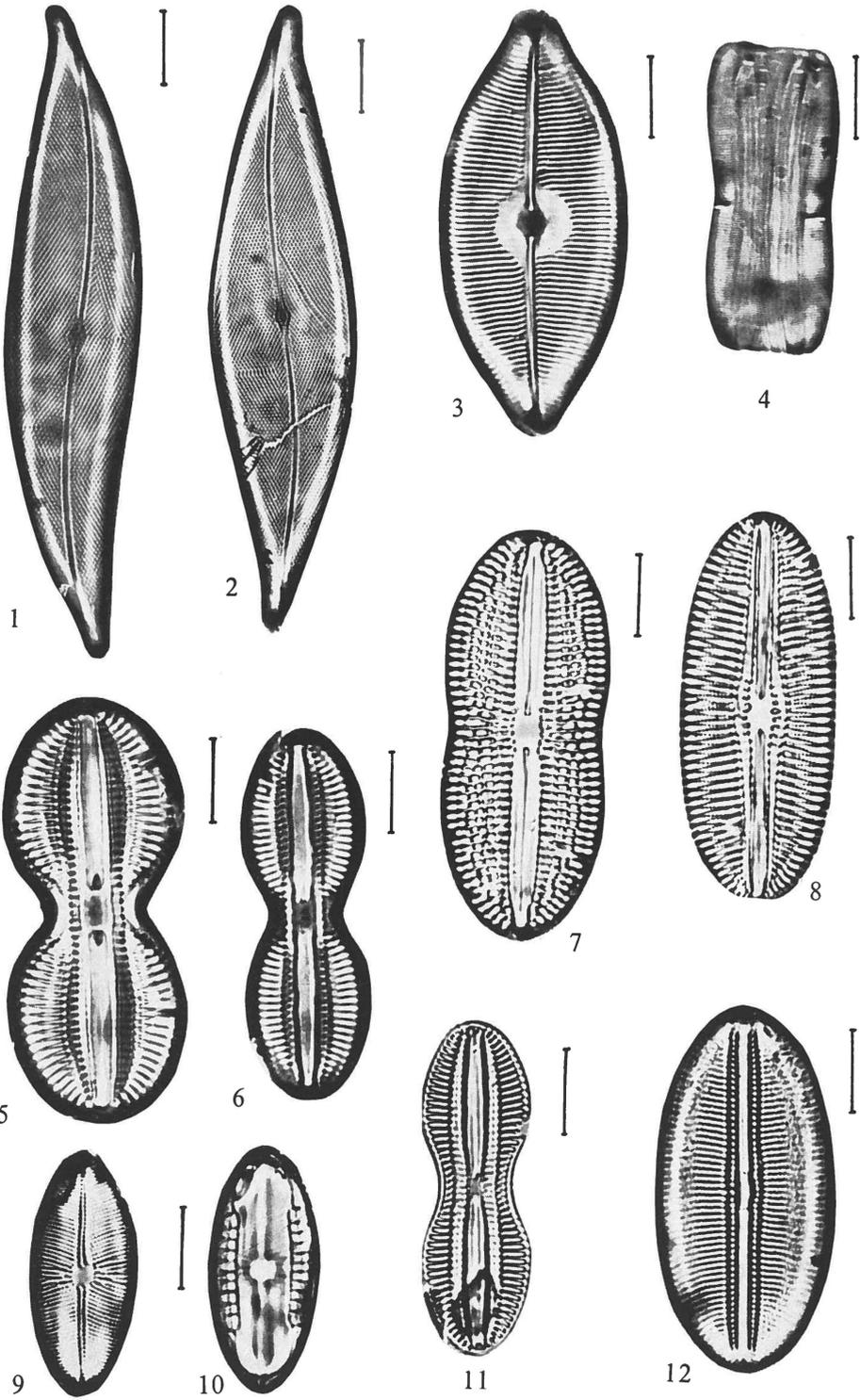


Plate XXIV

1. *Navicula digitoradiata* (GREG.) A. SCHMIDT
2. *Navicula digitoradiata* (GREG.) A. SCHMIDT
3. *Navicula digitoradiata* (GREG.) A. SCHMIDT
4. *Navicula bottnica* GRUN.
5. *Navicula stuxbergii* CLEVE
6. *Navicula stuxbergii* CLEVE
7. *Navicula digitoradiata* (GREG.) A. SCHMIDT fo. *rostrata* HUST.
8. *Navicula transistans* CLEVE
9. *Navicula rostellata* KÜTZ.
10. *Navicula directa* (W. SMITH) RALFS var. *subtilis* GREG.
11. *Navicula transistans* CLEVE
12. *Navicula finmarckia* (CLEVE & GRUN.) CLEVE*
13. *Navicula meniscus* SCHUM.
14. *Navicula peregrina* (EHR.) KÜTZ.
15. *Navicula cancellata* DONK.
16. *Navicula transistans* CLEVE*

Scales 10 μ

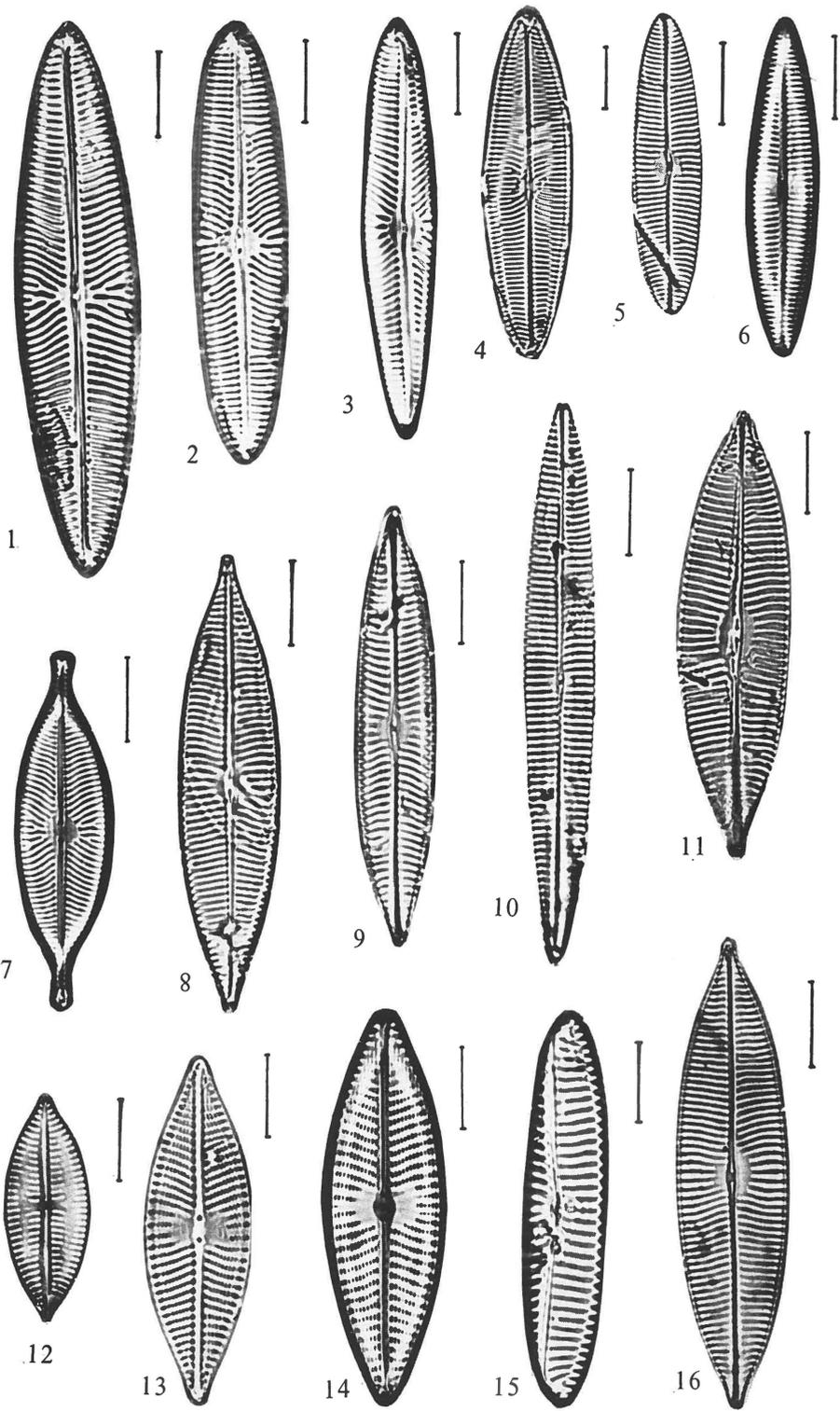


Plate XXV

PLATE XXV

1. *Navicula cruciculoides* BROCKM.
2. *Navicula grevillei* (AG.?) HEIBERG
3. *Navicula plicata* DONK.
4. *Navicula flanatica* GRUN.
5. *Navicula phyllepta* KÜTZ.
6. *Navicula salinarum* GRUN.
7. *Navicula hyalosira* CLEVE
8. *Navicula crucicula* (W. SMITH) DONK.
9. *Navicula kryokonites* CLEVE
10. *Navicula bottnica* GRUN.
11. *Navicula hudsonis* GRUN.
12. *Navicula hudsonis* GRUN.
13. *Navicula cruciculoides* BROCKM.
14. *Navicula hyalinula* DE TONI
15. *Navicula hyalinula* DE TONI*
16. *Navicula lyra* EHR. var. *atlantica* A. SCHMIDT*

Scales 10 μ

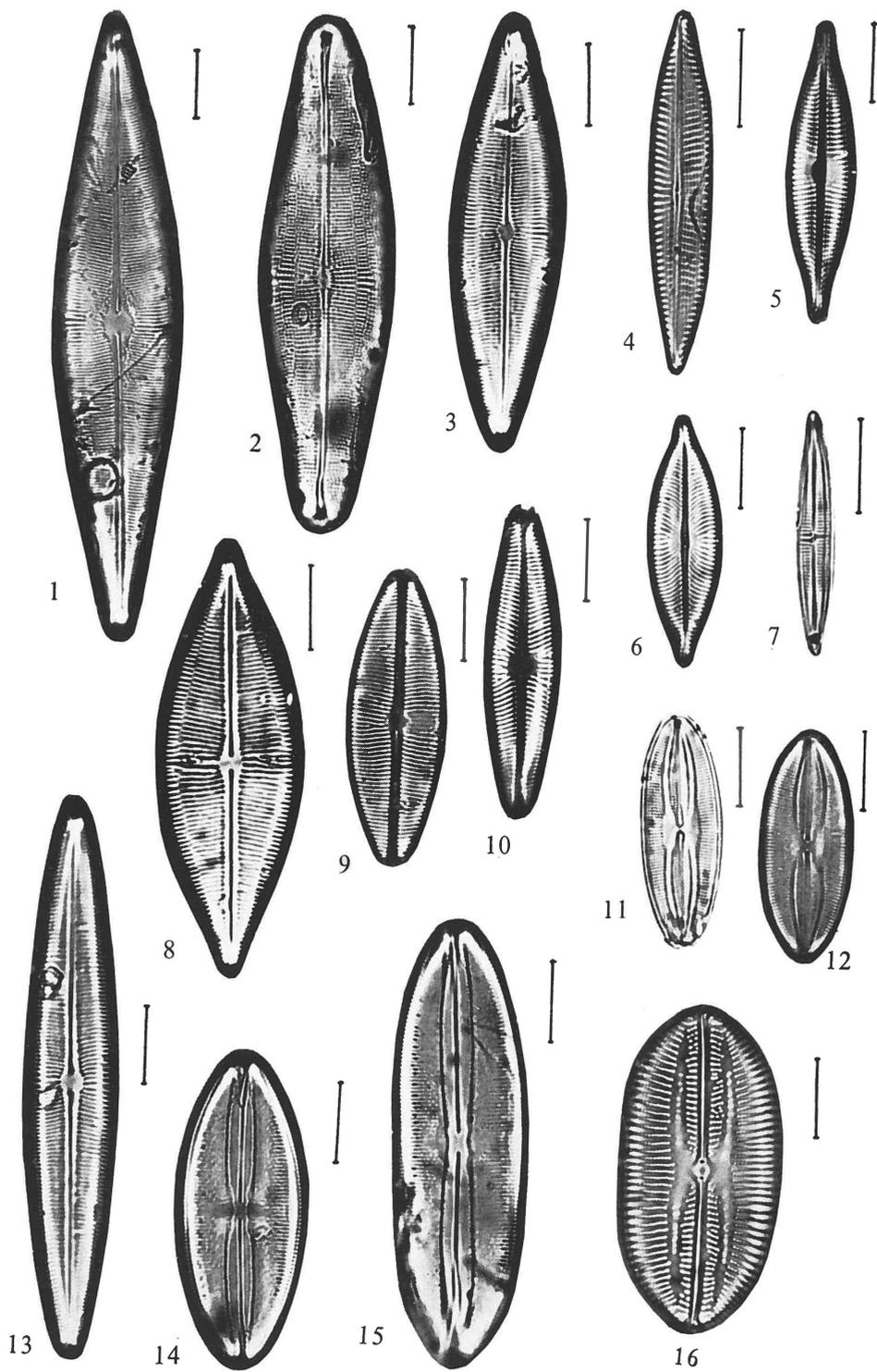
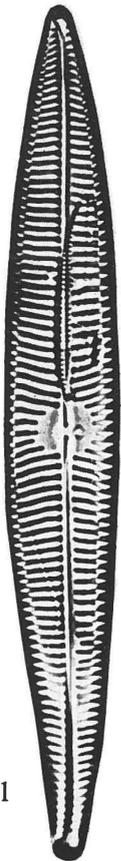


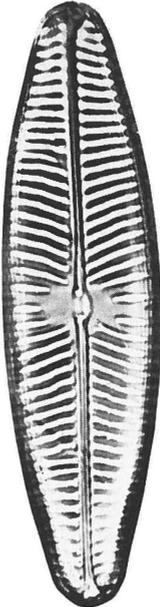
Plate XXVI

1. *Navicula directa* (W. SMITH) RALFS
2. *Navicula peregrina* (EHR.) KÜTZ.
3. *Navicula elegans* W. SMITH
4. *Navicula humerosa* BRÉB.
5. *Navicula palpebralis* BRÉB.
6. *Navicula approximata* GREV. fo. *morei* (O'MEARA) HUST.*
7. *Navicula approximata* GREV. fo. *morei* (O'MEARA) HUST.*

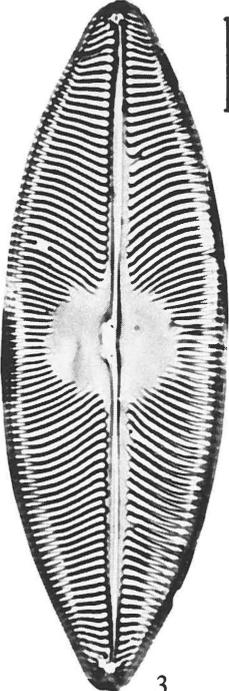
Scales 10 μ



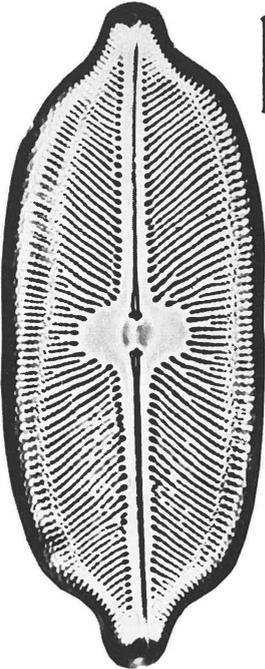
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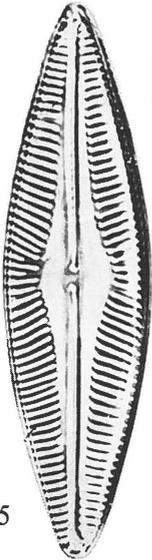
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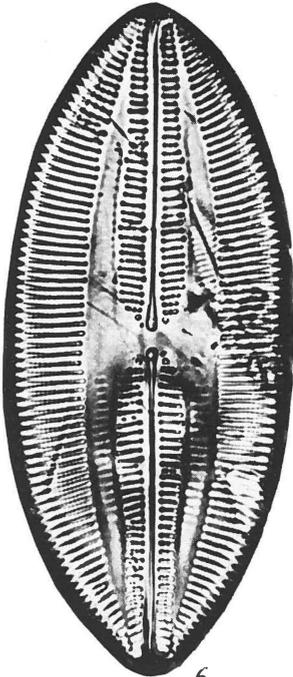
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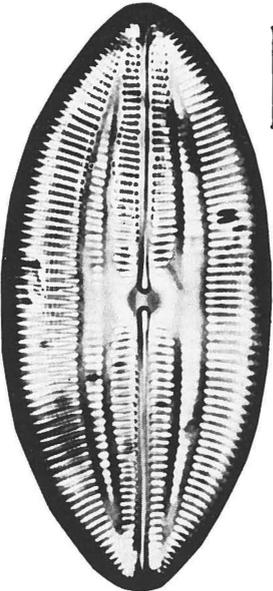
4



5



6



7

Plate XXVII

1. *Navicula subinflata* GRUN.
2. *Navicula subinflata* GRUN.
3. *Navicula forcipata* GREV.
4. *Navicula forcipata* GREV.
5. *Navicula forcipata* GREV.
6. *Pinnularia isostauron* GRUN.*
7. *Pinnularia quadratarea* (A. SCHMIDT) CLEVE*
8. *Pinnularia quadratarea* (A. SCHMIDT) CLEVE
9. *Pinnularia quadratarea* (A. SCHMIDT) CLEVE
10. *Navicula scopulorum* BRÉB.*
11. *Amphora hyalina* KÜTZ.*
12. *Amphora hyalina* KÜTZ.*
13. *Tropidoneis vitrea* (W. SMITH) CLEVE
14. *Stauroneis constricta* (EHR.? W. SM.) CLEVE
15. *Amphora exigua* GREG.
16. *Cymbellonitzschia diluviana* HUST.*

Scales 10 μ

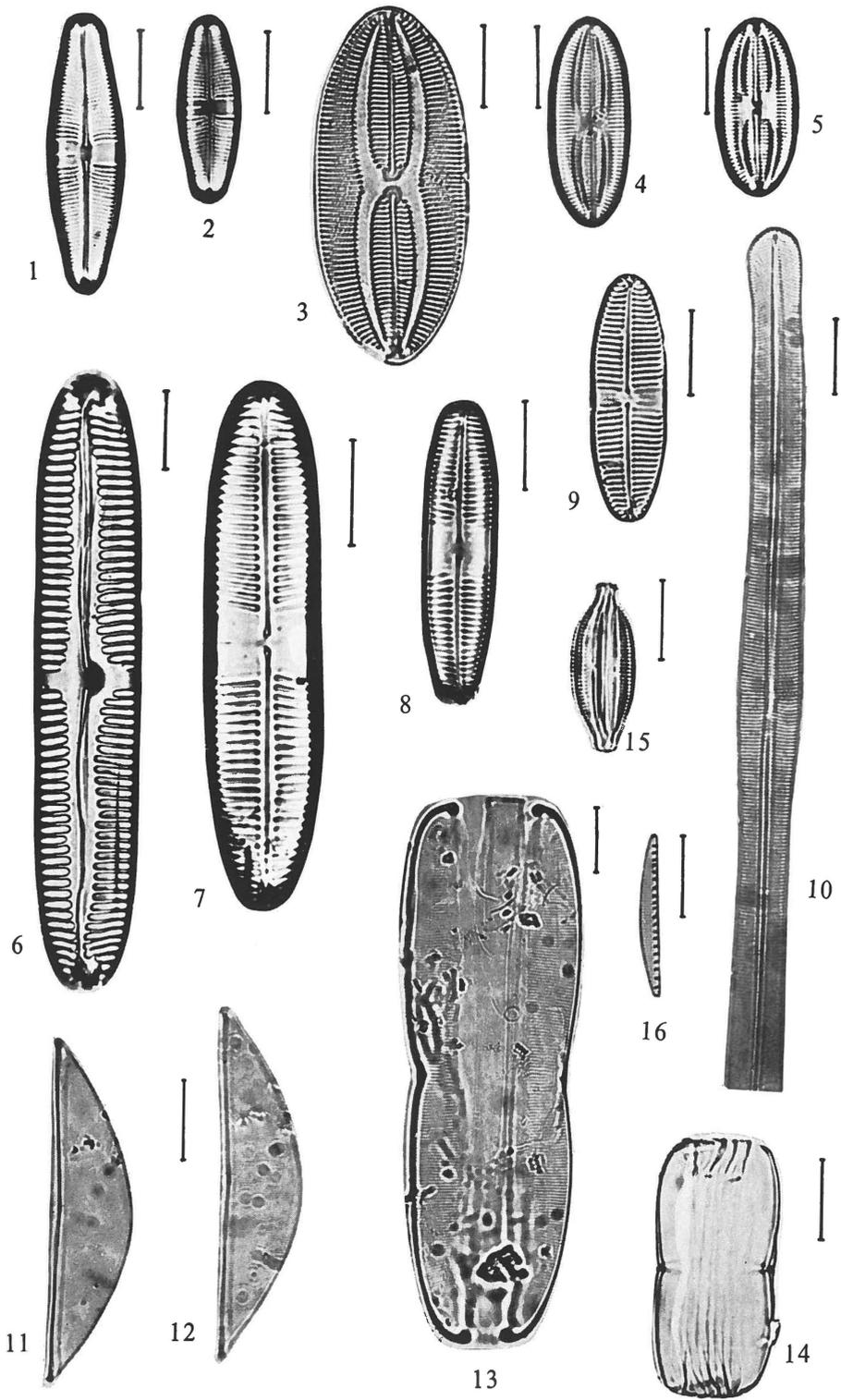


Plate XXVIII

1. *Amphiprora costata* HUST.*
2. *Nitzschia fogedi* M. MØLLER
3. *Nitzschia fogedi* M. MØLLER
4. *Amphora proteus* GREG.*
5. *Hantzschia virgata* (ROPER) GRUN.*
6. *Nitzschia bilobata* SMITH
7. *Nitzschia angularis* SMITH*
8. *Surirella smithii* RALFS*
9. *Surirella gemmoides* ØSTRUP
10. *Surirella gemmoides* ØSTRUP*
11. *Surirella ovata* KÜTZ. var. *crumena* (BRÉB.) VAN HEURCK*

Scales 10 μ

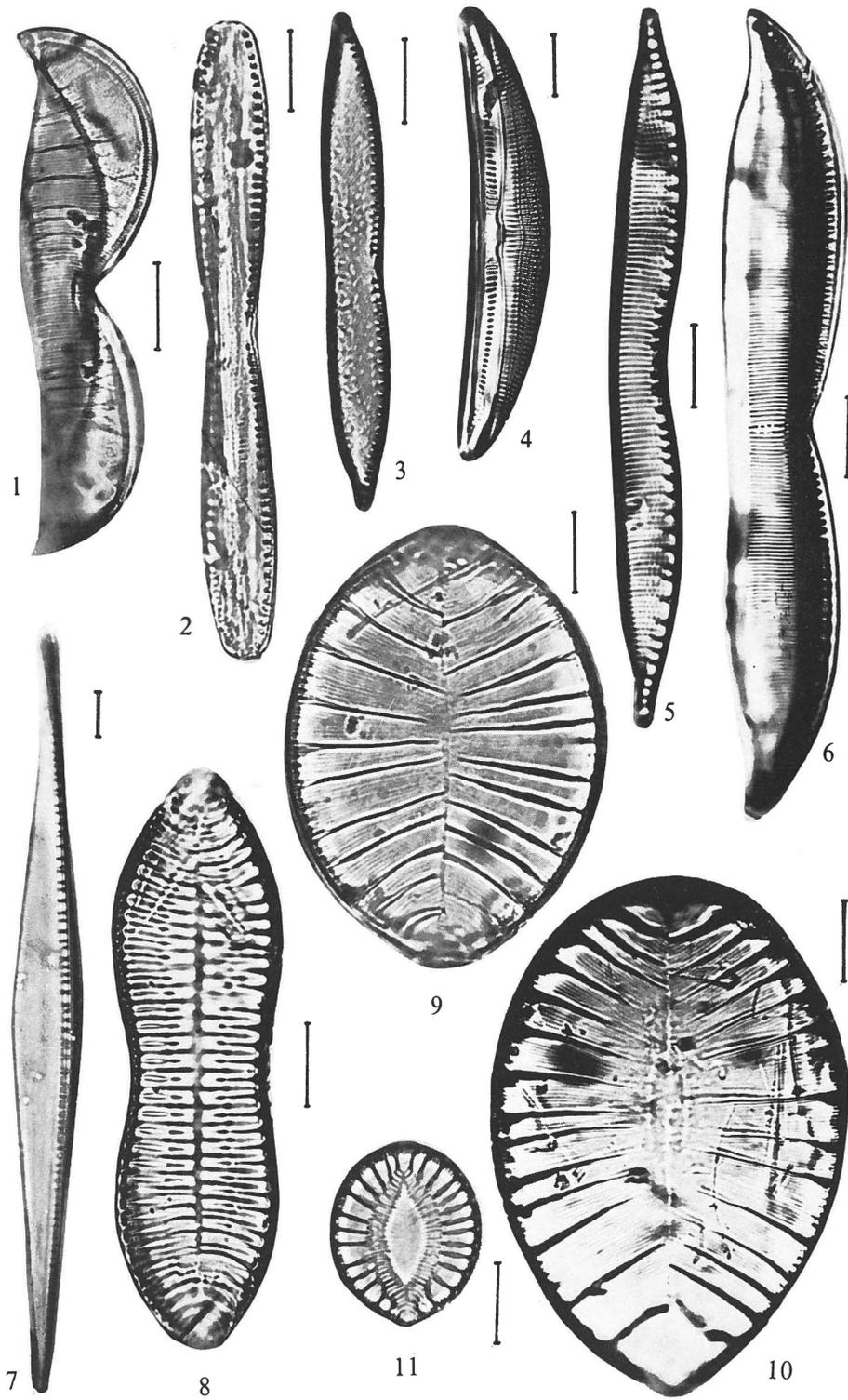


Plate XXIX

1. *Synedra famelica* KÜTZ.*
2. *Synedra barbatula* KÜTZ.*
3. *Opephora marina* (GREG.) PETIT*
4. *Achnanthes marginulata* GRUN.*
5. *Achnanthes marginulata* GRUN.*
6. *Achnanthes biasolletiana* (KÜTZ.) GRUN. var. *sublinearis* GRUN.*
7. *Achnanthes biasolletiana* (KÜTZ.) GRUN. var. *sublinearis* GRUN.*
8. *Navicula pseudony* HUST.*
9. *Navicula pseudony* HUST.*
10. *Frustulia creuzburgensis* (KRASSKE) HUST.*
11. *Frustulia creuzburgensis* (KRASSKE) HUST.*
12. *Frustulia creuzburgensis* (KRASSKE) HUST.*
13. *Mastogloia exigua* LEWIS*
14. *Mastogloia exigua* LEWIS*
15. *Navicula forcipata* GREV.*
16. *Diploneis stroemii* HUST.*
17. *Navicula agnita* HUST.*
18. *Navicula digitoradiata* (GREG.) A. SCHMIDT fo. *acuta* fo. nov.
19. *Navicula manifesta* HUST.*
20. *Navicula manifesta* HUST.*
21. *Navicula manifesta* HUST.*
22. *Pinnularia cruciformis* (DONK.) CLEVE*
23. *Stauroneis gregorii* RALFS*
24. *Surirella ovalis* KÜTZ. var. *maxima* GREV.*

Scales 10 μ

