4. Thelephoraceae Fr.

27. *Stereum rugosum* Fr. Epicr. p. 552.

Hab. ad ramos *Fagi antarcticae* etc. Ushuaia 7/5 1896 Punta Arenas 16/12 1895 (P. Dusén n:o 206, 207, 52, vario gradu evolutionis ex ætate).

Obs. Forma fuegiana quam europaea magis pileata et tenuior, sed cetera omnia, praecipue structura, optime concordant.

28. *Hymenochaete tenuissima* Berk. Cuban Fungi n:o 408.

Hab. ad ramos *Fagi antarcticae*, Ushuaia 5/5 1896 et Rio Condor 26/2 1896 (P. Dusén n:o 193 et 146). — Forma vetusta, setulis rarissimis: Punta Arenas 16/12 1895 (P. Dusén n:o 51).

5. Clavariaceae Fr.

29. *Clavaria aurea* Schaeff. Icon. Bav. tab. 287.

Hab. ad terram, Rio Condor 26/2 1896 (P. Dusén n:o 156).

Obs. In alcoole ex integro nigra evasa, sed e notis a cl. Dusén datis, forma et sporis a *Clav. aurea* non distinguenda.

6. Tremellaceae Fr.

30. *Tremella mesenterica* Retz. in Vet. Ak. Handl. 1769 p. 249.

Hab. ad truncos putridos, Ushuaia 7/5 1896 (O. Nordenskjöld n:o XX).

Discomyceteae.

7. Pezizaceae Fr.

31. *Helotium lenticulare* Bull. p. 248, tab. 300, f. a—c.

Hab. ad ramulos siccos in Isla Desolacion, Puerto Angosto, 11/4 1896 (P. Dusén n:o 183).

8. Dermateaceae Fr.

32. *Ameghiniella australis* Speg. Fungi Fueg. p. 138.

Hab. ad ramos putridos, Ushuaia 4/5 1896 (P. Dusén n:o 191).

REPORT ON THE DIATOMS OF THE MAGELLAN TERRITORIES

BY

P. T. CLEVE.

The Expedition under Dr. O. Nordenskjöld to the Magellan territories collected some samples containing diatoms, which were delivered to me for examination. Some of them derived from the æstuaries of Rio Grande on the east coast of Tierra del Fuego and some from Isla Desolacion on the west. Besides, I examined a number of geological specimens in order to decide whether of marine or fresh water origin. The result of the microgeological examination has already been published in this series, Part I No. 2, but as one of the samples contained some interesting forms I will here treat of them more completely.

1. Marine and brackish diatoms from the æstuaries of Rio Grande.[1]

Actinoptychus undulatus Ehb. *c.*
Amphora lineolata Ehb. *c.*
Biddulphia aurita Lyngb. *r.*
B. rhombus Ehb. *r.*
Cocconeis scutellum var. *genuina* Cl. *r.*
Coscinodiscus decipiens Grun. (Van Heurck Syn. XCI. 10) *r.*
C. excentricus Ehb. (Van Heurck Syn. CXXX. 8) *r.*
C. Oliverianus O'Meara (Van Heurck Syn. CXVIII. 5 — *C. polyradiatus* Castr. Challenger Reports, Diatoms III. 4) *rr.*

[1] Of the signs used in the following *r* denotes rare, *rr* very rare, + not rare, *c* common and *cc* very common.

C. sp. akin to *C. concinnus* or *C. centralis* +.
Entopyla incurvata Arnott. *r.*
Epithemia musculus Kütz. *rr.*
Hantzschia virgata Roper *cc.*
Hyalodiscus radiatus O'Meara (*Pixidicula rad.* O'Meara Linn. Soc. Journ. Bot. Vol. XV Pl. I. 9, 1877 — *Hyalod. rad.* Castr. Challenger Rep. Diat. X. 1 — *Hyalod. maximus* P. Pet. Diat. de Campbell Island IV. 7 1877) +.
H. scoticus Kütz. +.
Melosira nummuloides Bory +.
Navicula anglica var. subsalsa Grun. *r.*
N. avenacea Bréb. *r.*
N. cincta Ehb. +.
N. gregaria Donk. +.
N, pygmæa Kütz. *r.*
N. salinarum Grun. *r.*
N. subinflata Grun. +.
N. (Scoliopleura) tumida Breb. *cc.*
Nitzschia apiculata Greg. *c.*
N. constricta var. subconstricta Grun. *r.*
N. panduriformis Greg. *r.*
N. sigma W. Sm. (carinal puncta 9, striæ 22 in 0,01 mm.) *cc.*
Paralia sulcata var. radiata Grun. +.
Pleurosigma Normanii Ralfs. *r.*
P. nubecula var. intermedia W. Sm. *r.*
P. rigidum W. Sm. *r.*
Podosira maxima Kütz. +.
Rhabdonema arcuatum Ag. +.
R. minutum Kütz. *r.*
Rhaphoneis amphiceros Ehb. *r.*
Stauroneis salina W. Sm. *c.*
Surirella gemma Ehb. *r.*
S. striatula Turp. *r.*
Triceratium affine Grun. *c.*

Most of the above species occur along the coasts of the northern Europe, the only characteristic forms being *Navicula inflata*, that lives in the Arctic Sea and is frequently found on the drift ice in the arctic regions, and the antarctic forms *Coscinodiscus Oliverianus*, *Entopyla incurvata* (noted from S:t Pauls Island, Cape of Good Hope, Port Natal, Ischaboe guano from W. Africa and Patagonian guano), *Hyalodiscus radiatus* (noted from Campbell Island, south of N. Zealand, and Kerguelen's Land, fossil in Hungary) and *Triceratium affine* (Ischaboe guano, S. Australia, Samoa and the West Indies).

The marine diatoms, collected by La Romanche Expedition at Cape Horn have been examined by P. Petit,[1] who noted a considerable number of forms, not found by me, which will be accounted for by the different nature of the samples, as Petit's gatherings were oceanic, mine more brackish. Among the forms mentioned by Petit the following are also found in the Arctic Sea:

Navicula (Rhoikoneis) Bolleana Grun.
N. glacialis Cl.
N. septentrionalis Cl.
Grammatophora arctica Cl.
G. islandica Ehb.
Triceratium arcticum Brightw.
Thalassiosira Nordenskiöldii Cl.? (I suppose it may be the same as Petit has named *Systephania anglica* Donk.).

II. Fresh water forms from Rio Grande.

Besides the above marine and brackish diatoms, rare specimens of the following fresh water forms have been noted:

Amphora pediculus Kütz.
Cymbella aspera Ehb.
Frustulia rhomboides Ehb.
Hantzschia elongata Grun.

Melosira sp. There were found some few frustules of a Melosira (fig. 15), diameter of the valve 0,025 mm., having as *M. crenulata* and *M. Roescana* a constriction near the suture, but different from both. The thick walled valve is finely striate, striæ 15 in 0,01 mm., punctate, puncta 20 in 0,01 mm.

The chaotic state, that rules at present in our knowledge of the genus *Melosira*, forbids me to name this form.

Neidium (oblique striatum var.?) *Magellanicum* Cl. — Valve elongate, about 7 times longer than broad, slightly triundulate, with non-protracted ends. L. 0,28; B. 0,04 mm.

[1] Mission scientifique du Cap Horn 1882—1883. Vol. V. Bot. Diatomacées. Paris 1888. 4:o.

Striæ 13 in 0,01 mm., slightly oblique, coarsely punctate; puncta 11 in 0,01 mm. — Fig. 5.

This species was also found in the Magellan clay.

Pinnularia borealis Ehb.

P. (*viridis var.*) *commutata* Grun.

P. (*divergens var.*) *elliptica* Grun.

P. gibba (Ehb.) W. Sm.

P. lata Bréb.

P. latevittata Cl.

P. (*gibba var.*) *luculenta* A. Sm.

P. major Kütz. (*var. linearis* Cl.).

P. nodosa Ehb. a very small variety, L. 0,03, B. 0,006 mm. Striæ 11 in 0,01 mm.

P. stauroptera Grun.

P. viridis Nitzsch.

Rhoicosphenia curvata Kütz.

Rhopalodea gibba Kütz.

Stauroneis phoenicenteron var. amphilepta Ehb.

Surirella guatemalinensis Ehb. (= *S. cardinalis* Kitt.).

S. splendida var. tenera Greg. (= *S. splendidula* A. S., *S. diaphana* Bleisch).

Fresh water species from Isla Desolacion.

Achnanthes Biasolettiana Kütz. *rr.*

A. exigua Grun. *rr.*

A. linearis W. Sm. *r.*

Anomoeoneis brachysira (Bréb.) Grun. *c.*

A. serians Bréb. *c.*

A. sphærophora Kütz. *rr.*

Caloneis magellanica Cl. n. sp. — Valve linear, with parallel margins and somewhat cuneate, obtuse ends. L. 0,06; B. 0,009 mm. Axial area not distinct; central area small, orbicular. Longitudinal lines at some distance from the margin. Striæ not interrupted, 28 in 0,01 mm. (24 in the central part), slightly radiate in the central part, almost parallel towards the ends. Fig. 8.

Not rare in some samples.

Cymbella antarctica Cl. n. sp. — Valve almost symmetrical, with slightly protracted ends. L. 0,025 to 0,035; B. 0,005 mm. No areas. Median line nearly straight and central. Striæ 12 in 0,01 mm., almost parallel and finely transversely lineate. — Fig. 14.

Nearly akin to *C. angustata* W. Sm., from which it is distinguished by coarser, nearly parallel striæ.

Not rare in some samples.

C. aspera Ehb. *r.*

C. gracilis Rabh, +.

C. microcephala Grun. +.

C. naviculiformis Auersw. *r.*

C. spuria Cl. *r.*

Diploneis elliptica Kütz. *r.*

Eunotia arcus Ehb., a form intermediate between the typical one and *E. Nymaniana*, L. 0,03 to 0,04; B. 0,004 mm. Striæ 14 to 15 in 0,01 mm., thus as in *E. fallax* A. Cl., but it is larger than the last named form.

E. (*lunaris* var.?) *alpina* Nægeli (Grun. in Van Heurck Syn. XXXV, 5). — L. 0,05; B. 0,0002 mm. Striæ 22 in 0,01 mm. +.

E. (*lunaris* var.?) *attenuata* Cl. — Valve arcuate, gradually attenuate towards the ends. L. 0,07; B. 0,004 mm. Striæ 19 in 0,01 mm. *r.* — Fig. 19.

E. exigua Grun. *r.*

E. lunaris (Ehb.) Grun. (L. 0,09; B. 0,002 mm. Striæ 18 in 0,01 mm.) +.

E. (*bidens* var.?) *obesa* Cl. n. sp. — Valve short and stout with almost globular ends and two rounded dorsal elevations. L. 0,035 to 0,055; B. 0,02 to 0,01 mm. Striæ 14 to 16 in 0,01 mm., on the dorsal side frequently alternately longer and shorter. — Fig. 16.

Rather common.

This form has a very characteristic outline, but nevertheless I consider it to be akin to *E. bidens*, that can scarcely be a variety of *E. major*, as is usually believed. A somewhat similar form occurs in diatomaceous earth from Mobile in Alabama (L. 0,065; B. 0,017 mm. Striæ 13 in 0,01 mm. Fig. 17). *E. bidens* from Stavanger (L. 0,065; B. 0,012 mm.) has also 13 striæ in 0,01 mm.

E. (*veneris* var.) *obtusiuscula* (Van Heurck Syn. XXXIV, 5 B). L. 0,025; B. 0,004 mm. Striæ 15 in 0,01 mm. +.

E. pectinalis var. *stricta* RABH.? — It is with hesitation I refer to the named form an *Eunotia* with scarcely narrowed ends. L. 0,045 to 0,11 mm. Striæ 13 in 0,01 mm. Fig. 13. +.

E. (pectinalis var.?) *ternaria* EHB. — L. 0,032; B. 0,006 mm. Striæ 18 in 0,01 mm. +. Fig 18.

The same form occurs in Brazil (striæ 12 in 0,01 mm.) and in Australia (Murray River. Striæ 13 in 0,01 mm).

E. tridentata EHB. (Microgeolog. XXXV A. 2). EHRENBERG mentions a form from Tierra del Fuego that possibly may be the same as is represented by the fig. 20, 21. The ends are obliquely truncate as in *E. arcus*, but the dorsal side is provided with 3 to 4 elevations. L. 0,03 to 0,037; B. 0,006 to 0,01 mm. Striæ 13 to 15 in 0,01 mm.

E. tridentula forma *perminuta* (VAN HEURCK Syn. XXXIV. 29) *r.*

Frustulia rhomboides EHB., very common and in many varieties.

Var. *amphipleuroides* GRUN. *rr.*

Gomphonema (gracile var.) *auritum* AL. BR. *rr.*

Mastogloia imperfecta CL. n. sp. — Valve linear, with cuneate and obtuse ends. L. 0,065; B. 0,013 mm. Median line not flexuose. Striæ 22 in 0,01 mm., slightly radiate around the central area, uninterrupted, finely punctate, puncta not forming longitudinal rows. Loculi small, 5 to 6 in 0,01 mm. — Fig. 6.

Rather rare.

This species resembles *M. Dansei* but has finer striæ and an almost rudimentary loculiferous rim.

Navicula atomus NÆGELI. *rr.*

N. bacillum var. *minor* VAN HEURCK. +.

N. radiosa KÜTZ., in one sample *c.*

N. subtilissima CL. +.

Neidium (affine var.) *amphirhynchum* EHB. forma *major* and *minor. c.*

N. productum W. SM. *r.*

Nitzschia frustulum KÜTZ., in one sample +.

Pinnularia completa CL. n. sp. Sectio *Tabellariæ.* — Valve linear, with broad and obtuse, frequently subrostrate ends, sometimes slightly triundulate. L. 0,06 to 0,09; B. 0,01 to 0,012 mm. Median line filiform. Terminal fissures comma-like. Axial area very narrow, or indistinct. Central area small and rounded. Striæ 13 to 14 in 0,01 mm., slightly radiate in the central part, convergent at the ends. The two median striæ frequently more distant than the others. — Fig. 11.

Rather common. The same species occurs at Caldas (Brazil) and at Demerara River. — It seems to be nearest akin to *P. subsolaris*, but has closer, less radiate striæ, comma-like terminal fissures and smaller central area.

P. microstauron EHB. *r.*

P. sphærophora CL. n. sp. Sectio *Capitatæ.* — Valve narrow, linear, with parallel margins and protracted, capitate ends. L. 0,027; B. 0,0025 mm. No areas. Striæ 16 in 0,01 mm., radiate in the middle, parallel near the ends. — Fig. 9.

Rather rare.

P. viridis NITZSCH *r.*

Stauroneis (phoeniceenteron var.) *amphilepta* EHB. +.

Surirella (Stenopterobia) anceps LEWIS (L. 0,12; B. 0,005 mm. Striæ 28 in 0,01 mm. Marginal folds 5 in 0,01 mm.) *r.*

S. delicatissima LEWIS (L. 0,08; B. 0,007 mm. Striæ 28 in 0,01 mm., pervious. Marginal folds 5 in 0,01 mm.) *r.*

S. linearis W. SM. (A. S. Atlas XXIII 32, 33) +.

Fossil diatoms from Cullen River.

Dr. O. NORDENSKJÖLD[1] has already published a list of the diatoms, which I found in a sample of clay which was met with between tertiary strata, containing lignite and impressions of leafs of *Fagus*, and unstratified (glacial) boulder-clay.

The diatoms met with in this clay were the following:

A. Marine.

Actinoptychus undulatus EHB. *c.*

A. vulguris SCHUM. *r.*

Arachnoidiscus Ehrenbergii BAIL. A fragment only.

Biddulphia rhombus EHB. *rr.*

Endictya minor A. SCHM. *r.*

Grammatophora marina LYNGB. *rr.*

[1] This series Vol. I N. 2 pag. 36.

Gyrosigma Wansbeckii Donk. *rr.*

Hyalodiscus scoticus Kütz.

Navicula (?) *canaliculata* Cl. n. sp. — Valve elongate, with parallel margins and cuneate, obtuse ends, 5 to 6 times longer than broad. L. 0,16; B. 0,028 mm. No areas. Median line straight, enclosed between two, transversely striate furrows. Striæ nearly parallel, 11 in 0,01 mm., composed of coarse puncta forming irregular longitudinal rows. — Fig. 2.

Very rare.

This diatom has the appearance of a *Mastogloia*, from which the loculiferous rim has been detached, and is, so far I can see, not nearly akin to any other known form than the *Mastogloia* (?) *dubia* Cl. (Synops. of the naviculoid diatoms II pag. 162 Pl. II. 38), of which I found one specimen in Barbados earth (oligocene). The longitudinal furrows along the median line seem to indicate some relation to *Scoliopleura*.

N. magellanica Cl. n. sp. — Valve elongate-elliptical, obtuse. L. 0,16; B. 0,036 mm. Axial area very narrow, somewhat dilated around the central nodule. Striæ transverse, 28 in 0,01 mm., slightly curved at the ends of the valve, finely punctate, puncta forming obliquely decussating rows, about 26 in 0,01 mm. — Fig. 1.

Very rare, one specimen only.

This is a very characteristic species of the section *Decussatæ*, if it not be a *Mastogloia*, that loosed its loculiferous rim. In the latter case it is nearest akin to *M. decussata* Grun.

N. tumida Bréb. *r.*

Nitzschia panduriformis Greg. *r.*

N. scoliotropis Cl. n. sp. — Valve elongate, gradually tapering from the middle to the ends, slightly sigmoid. L. 0,19; B. 0,012 mm. Keel sigmoidal bent in the central part, thence approximate to the margins; puncta 9 to 10 in 0,01 mm. Striæ 23 in 0,01 mm. punctate. Fig. 3, 4.

Very rare, one specimen only.

This remarkable form has the keel bent exactly in the same manner as in *Amphiprora*.

N. sigma Kütz. *r.*

Paralia sulcata Ehb. *r.*

Pyxidicula cruciata Ehb. — One specimen similar to *Stephanopyxis turris* var. *arctica* Grun. (Franz Jos. Land. D. V. 18).

Rhabdonema arcuatum Lyng. *rr.*

Rhaphoneis amphiceros Kütz. *r.*

Trachyneis aspera Ehb. +.

Triceratium affine Grun. *r.*

B. Fresh water forms.

Epithemia turgida Kütz. *r.*

E. zebra Kütz. *r.*

Eunotia decussata Cl. n. sp. — I found in the Magellan clay a fragment of a species, very similar to *E. Clevei*, for which it was at first mistaken. A closer examination proved its non-identity. It measured in length about 0,12, in breadth 0,025 mm. The striæ are close, 16 in 0,01 mm., composed of quincuncially arranged puncta. Oblique striæ 16 in 0,01 mm. Fig. 12.

This species differs from *E. Clevei* by its closer and obliquely decussating striæ.

E. prærupta forma *compacta* Grun. *rr.*

Frustulia rhomboides Ehb. *rr.*

Mastogloia imperfecta Cl. (see above p. 278) *rr.*

Melosira Roeseana var. *dendroteres* Ehb. *rr.*

Neidium magellanicum Cl. (see above p. 275) *rr.*

Orthosira sculpta Ehb. *rr.*

Pinnularia borealis Ehb. *rr.*

P. (*viridis* var.) *commutata* Grun. *rr.*

P. dactylus Ehb. *rr.*

P. divergens W. Sm. *rr.*

P. lata Bréb. *rr.*

P. subundulata Cl. n. sp. — Sectio *Divergentes*. Valve elongate, very slightly biconstricted, with cuneate ends. L. 0,2; B. 0,035 mm. Axial area less than 1/3 as broad as the valve. Central area a transverse fascia. Striæ 6 in 0,01 mm., central radiate, terminal nearly parallel. — Fig. 10.

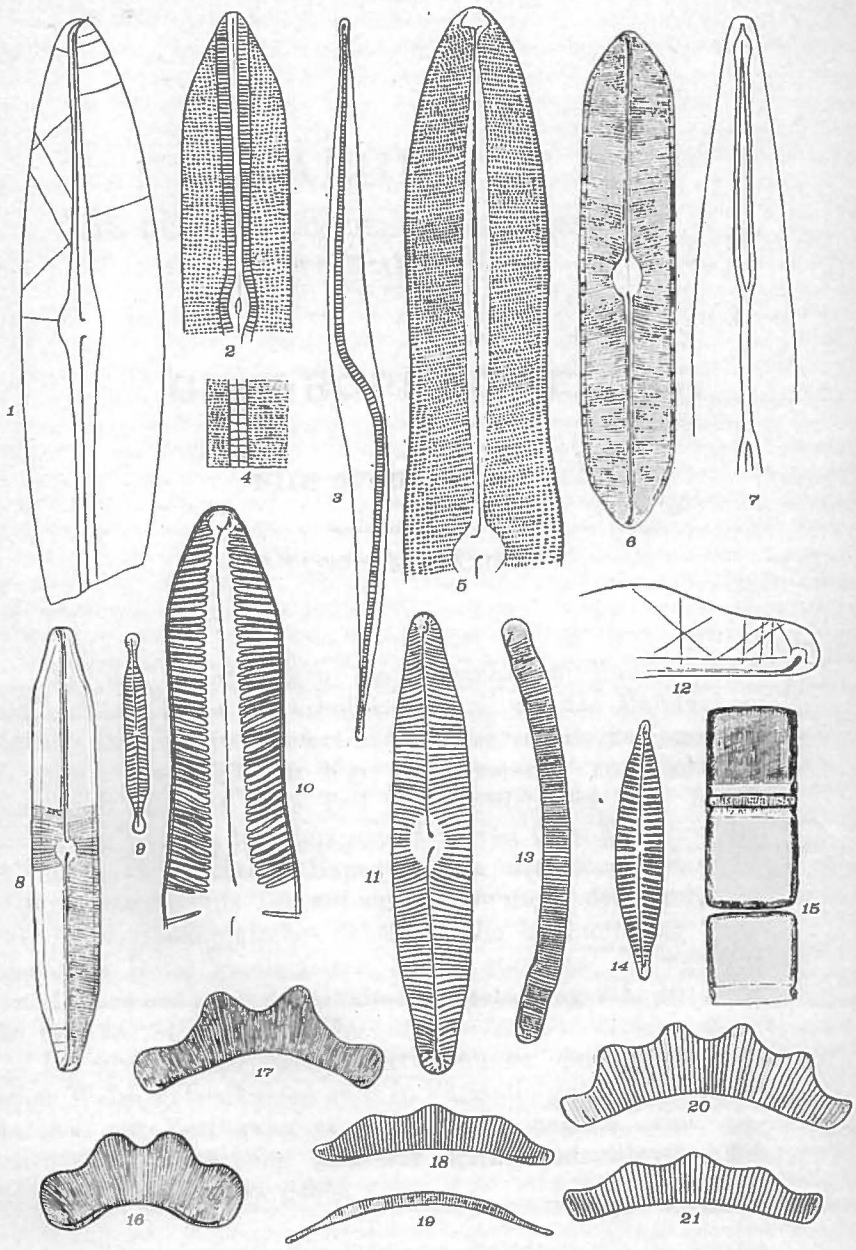
Very rare.

This species seems to be nearest allied to *P. Hartleyana* Grev., but I cannot identify them.

Besides, there was found a fragment of an *Amphipleura*, that seemed to connect *A. Truani* and *Frustulia rhomboides* var. *amphipleuroides* Grun. L. 0,18; B. 0,027 mm. Furca twice as long as the central part of the median line. Striæ very fine. Fig. 7.

Explication of the plate.

		Enlargement.
Fig. 1.	Navicula magellanica Cl.	× 500.
» 2.	N. canaliculata Cl.	× 500.
» 3.	Nitzschia scoliotropis Cl.	× 500.
» 4.	» » part of the valve	×1000.
» 5.	Neidium magellanicum Cl.	× 500.
» 6.	Mastogloia imperfecta Cl.	×1000.
» 7.	Amphipleura sp.	× 500.
» 8.	Caloneis magellanica Cl.	×1000.
» 9.	Pinnularia sphærophora Cl.	×1000.
» 10.	P. subundulata Cl.	× 500.
» 11.	P. completa Cl.	×1000.
» 12.	Eunotia decussata Cl.	× 500.
» 13.	E. pectinalis var. stricta?	× 500.
» 14.	Cymbella antarctica Cl.	×1000.
» 15.	Melosira sp.	× 500.
» 16.	Eunotia obesa Cl.	× 500.
» 17.	E. obesa Cl. var. from Alabama	× 500.
» 18.	E. ternaria Ehb.	×1000.
» 19.	E. lunaris var. attenuata Cl.	× 500.
» 20, 21.	E. tridentata Ehb.	×1000.



P. T. Cleve del.

Ljustryck af Chr. Westphal, Stockholm