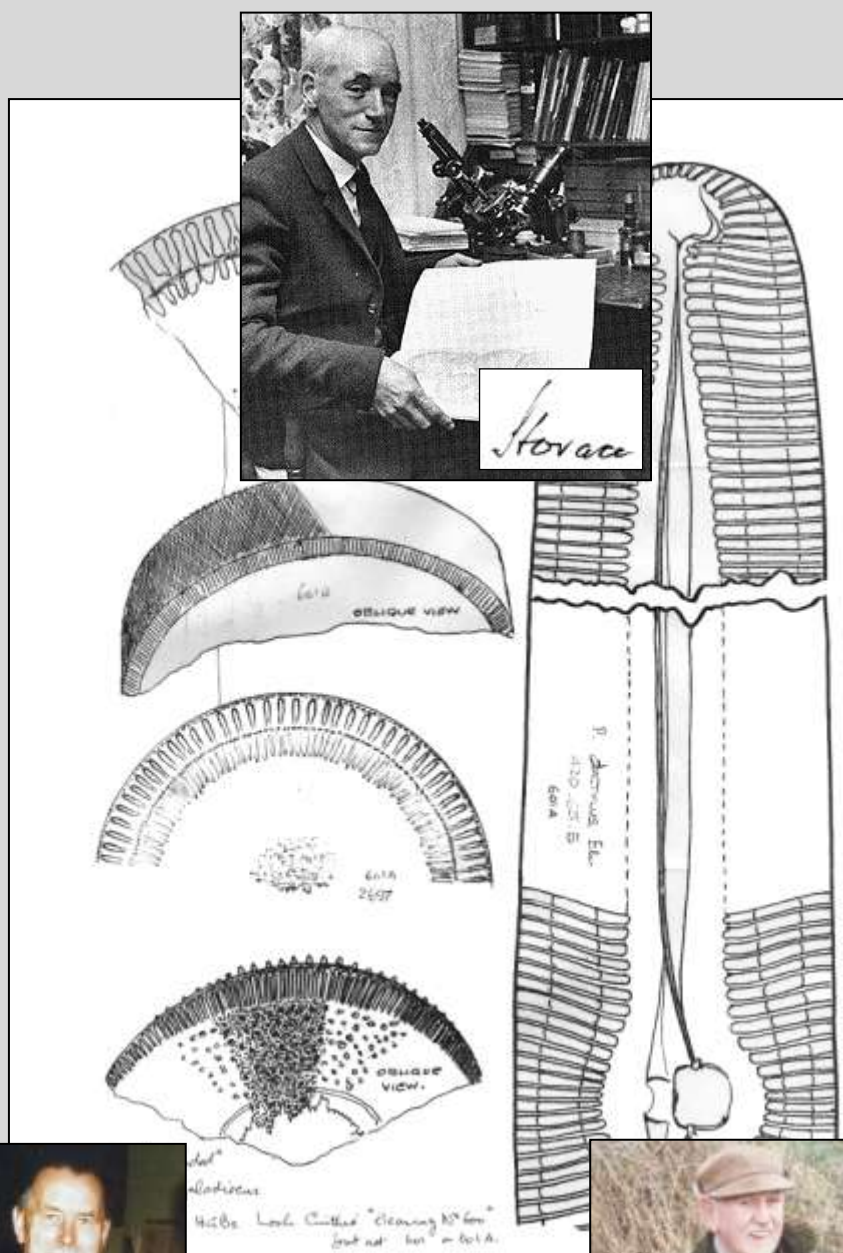


Horace George Barber's Miscellaneous Diatom Plates



Processed and Compiled by Steve Gill and Steve Edgar

Horace George Barber's Miscellaneous Diatom Plates

Annotated by Horace Barber, Bernard Hartley and John Carter

These plates were originated by Horace George Barber and sent to both John Ripley Carter and Bernard Hartley for comment, criticism and identification.

The copies herein are those sent to Bernard Hartley (and archived by him) and include annotations and names mainly by the recipient. Locations, dimensions, slide numbers and some of the name suggestions are by Horace Barber.

It is likely that these plates, as originals no longer exist, as Horace cut these up to paste into his notebooks following comment by Carter and Hartley. This is quoted as being the case in a letter to Bernard from Horace as follows:

Hafan
91 Mancetter Road
Nuneaton
February 1972

Dear Bernard,

Your slides travelled quite safe and am very pleased to receive them. The R. Thames one is most interesting and the *Hydrosera* a welcome addition. You will see I've made a sketch of same, somewhat skeleton-wise but I am sure you will recognise sufficient to give an idea of the form. Too complete I often find makes for too heavy an effect and Indian Ink, however fine, defeats its object and appears a Bloody Black Mass, whereas it should be a picture of a glass object!

Personally I think Mr. Gleave [sic] (H. H. Gleave of Bexhill-on-Sea, formerly of Thornton Heath, Surrey) should bring this form to notice thro the journal [published – *Hydrosera triquetra*, a diatom new to European waters – *Diatom Research* 8, 65-71] and if he is a poorer sketcher than I then no doubt my arm could be suitably twisted! The *P. angulatum* I've a bucket full from many years ago and my forms are frail; this is generally the case when there is a bloom of them!

Regarding the check-list I cannot say that I have great confidence in such affairs for I always ask myself "how reliable is the identification, all due respects to the author, but there are so many, many synonyms, poor illustrations, doubtful forms, etc., etc., vital points often ignored or not seen, that it is like building sand castles. When all said and done identification, other than seeing the original forms, is hard. So often it's just personal opinion and this can be dangerously elastic. I know, I've done it! And suppose still do. Only sheer experience of seeing many gatherings, sketching as accurately as possible and realising the characteristic features which are stable! When I look at some of my earlier efforts I smile to myself, there are innumerable forms which I just don't know and am not afraid of admitting. Far better this than live with one's head in a bag.

Now I am enclosing the diatoms I've sketched this last fortnight or so and prior to sending them to John (Carter) for his views – you will note I have put in my remarks – Each form in linked by dimension numbers – such as 31.7.14 or 31 μ long, 7 μ broad 14 stria in 10 μ . With *Nitzschia* there are 4 numbers, the fourth is rate of Keel punctae in 10 μ .

You are quite at liberty to take copies of these but please look after the originals and do not fold etc.

I shall, of course, get copies made to send to JRC. The originals will be cut up and worked in amongst the rest.

Please return the notes along with the sketches.

Well must close and go to bed.

Yours,
Horace

These plates were left to Klaus-Dieter Kemp as part of Bernard's bequest and have been passed to the Editors for compilation and publication as he recognised their value to other diatomists.

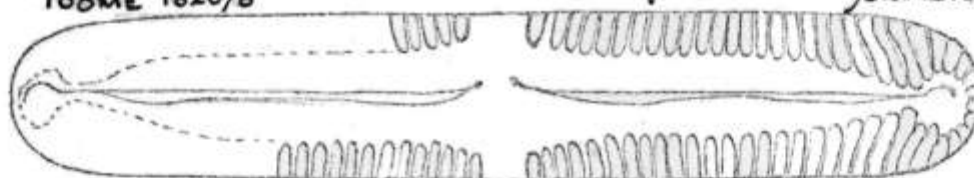
Horace George Barber's Miscellaneous Diatom Plates

The following Miscellaneous Plates exist in the archive and are reproduced as the body of this work. The plates are contained in two Lever Arch Files.

File 1	File 2
1-12	333-341
14-80	343-348
82-101	350-358
160	360-369(x2)
162-163	370-386
165	390 (x2)
170-171	391-417
173-174	421-457
181	(no plate 458 existed - this is noted in the archive)
183-190	459-466
192-200A	
202-203	
206-214	
230-233	
235-237	
244-245	
248	
254-297	
Re-used numbers 294-297 (different plates)	
298-323	
No. of Plates - 226	No. of Plates -132
No .of Figures – 1800+	No .of Figures -2000+

Whether the missing numbers actually existed, are lost or simply were not sent to Bernard Hartley is unknown at this time.

Pinnularia brevicostata Cleve.
 = *(Pinnularia crucifera, A. Cleve)* 64.10.9.
 TOOME 1620/B

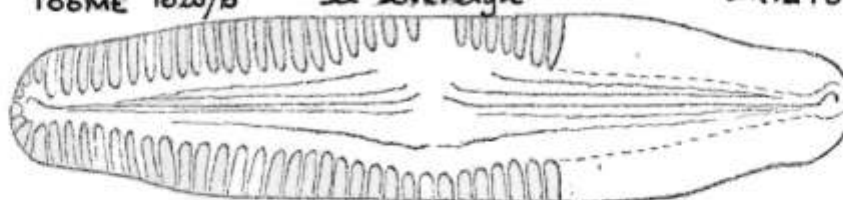


*Pinnularia
 nodosa* Ehrh.

TOOME 1620/B

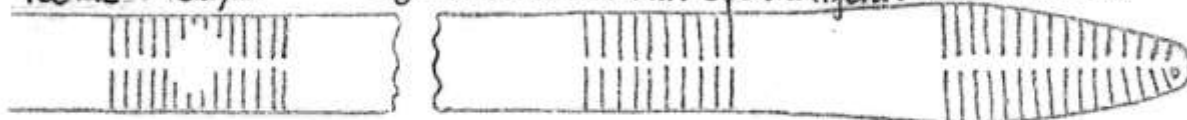
Sea Sovereign

54.12.8.



TOOME 1620/B

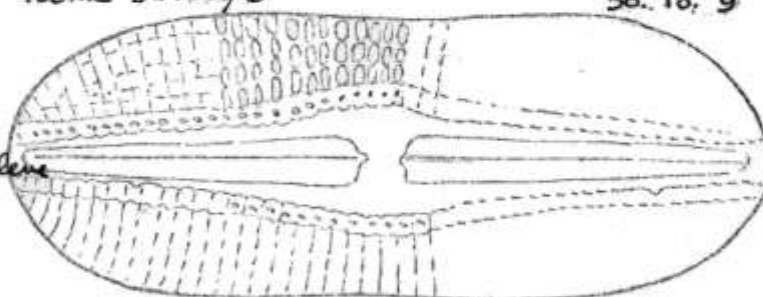
Synedra ulna var. *spathulifera* Grun. 280.6.9.



TOOME B. 1620/B

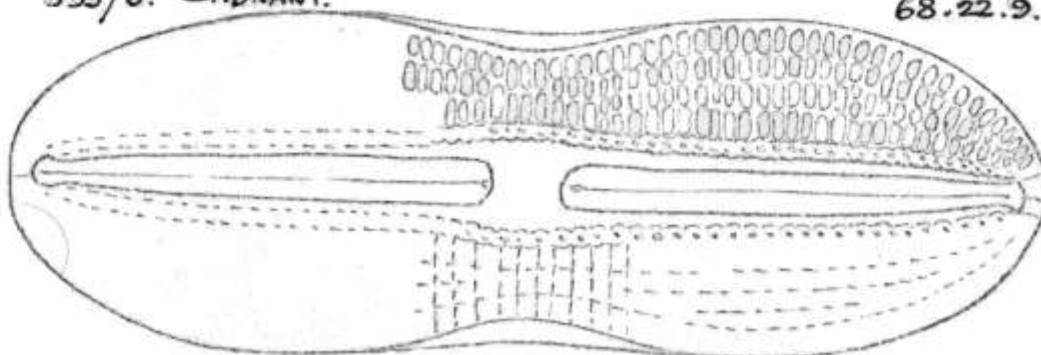
50.18.9

Diploneis doublittensis
 var. *subconstricta* A. Cleve
 [Hust 1076 & LH 398].



535/B. CADNANT.

68.22.9.

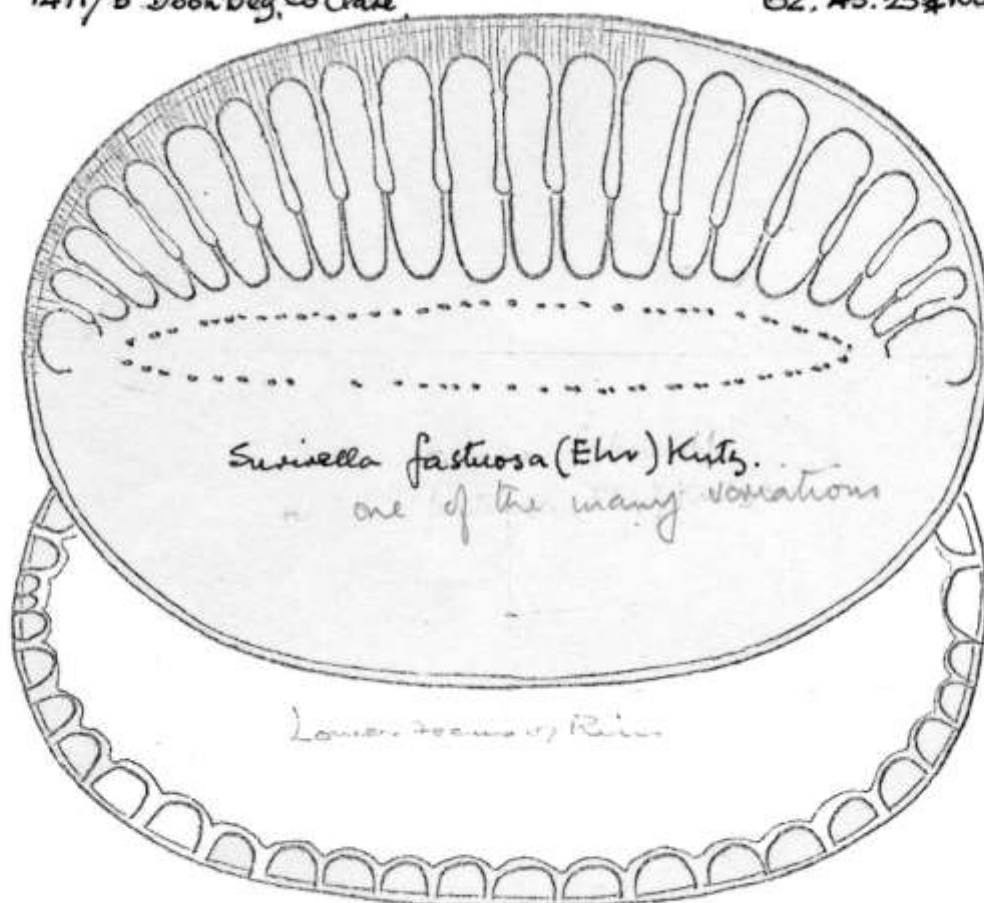


Diploneis didyma (Ehrh.) Cleve.
 H.G.B. says Dup. doublittensis var

Miscellaneous Plate 2

1471/B Doon Beg, Co. Clare

62, 43.23 $\frac{1}{4}$ 100.



PIDD 1658/B.

50.4.x



? Girdle or diatom

Pidd. 1658/B.

56.3/230.11 mm.

?

Nitzschia confinis Hust

or *Nitzschia bryophila* Hust



48.5. 20



PIDD 1658/B

Synedra = *aperta*

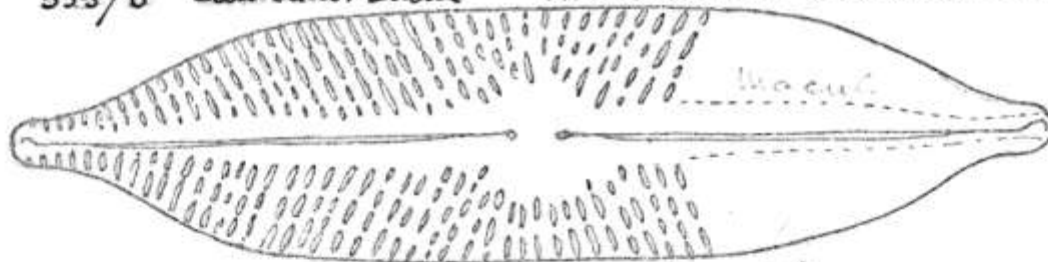
54.5.20.

varieties of
Synedra affinis. Kütz.
= *S. tabulata*

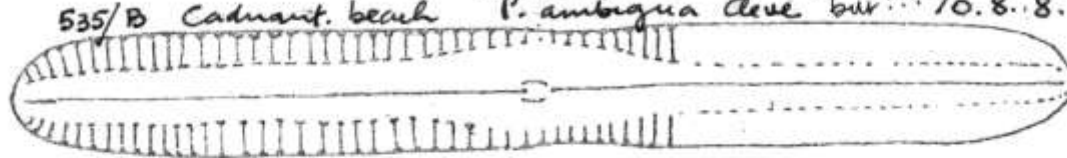


PIDD. 1658/B.

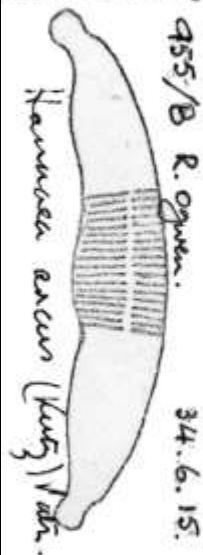
535/B Cadnant. beach Nav. mauroloa Donkin 68.16.8.



535/B Cadnant. beach H.G.B. says side view of P. ambigua Cleve but??? 70.8.8.

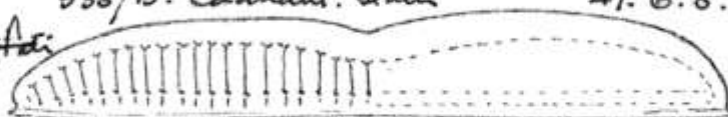


H.G.B. says
Synedra arcus. but
See Hammea (Ceratoneis) arcus.
(Hammea) (Ceratoneis) arcus
var amphioxys.



455/B R. Owen.
34.6.15.

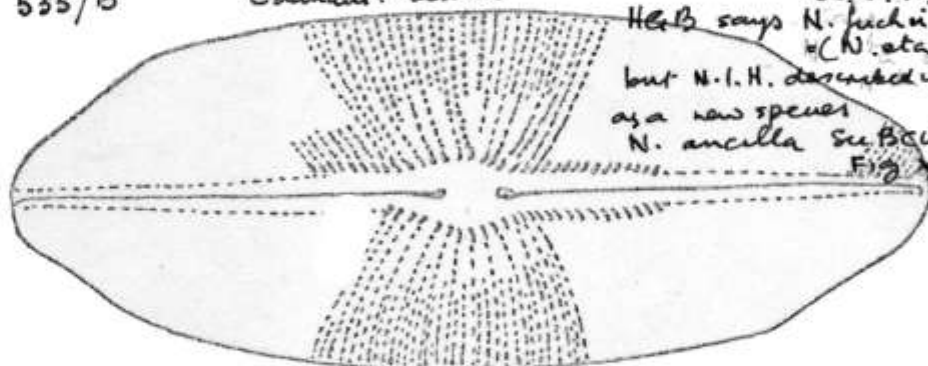
538/B. Cadnant. beach 47.6.8.



Girdle view.

535/B

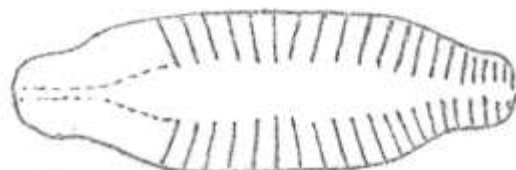
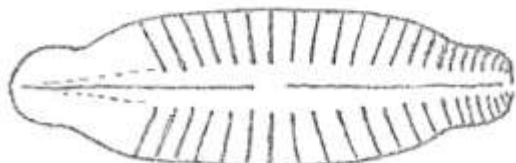
Cadnant. beach



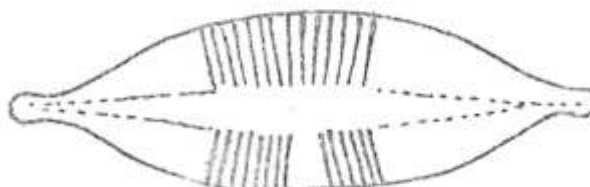
60.24.15
H.G.B. says N. fuchii
(N. ata)
but N.I.H. described it later
as a new species
N. ancilla See B&W
Fig XXI/12.



375/XH
Landport
17.5.15 W.I.C. C.A.E.



Achmanthes plönerensis Hust.



1389/B. R.W. Bay.

38.12.9

Achmanthes haynaldii Scharschm

Miscellaneous Plate 4

Nav. anglica Halp.

15.7 15



375H

HGB not happy about central area



Navicula schrenkii 12.2 21. Kütz



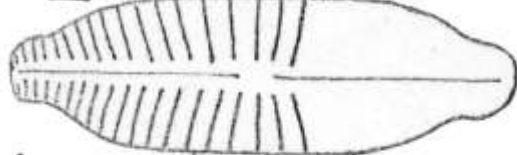
1460/B. Owen, Verge & Co Donnegall x2.

Achnanthes plöerensis



x2

Not *A. kolpae* (see LH 279).

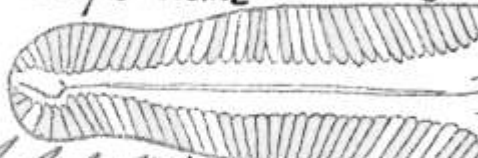


x2

1545/B TOOME

? *P. legumens* (but with a few and striae)

67.11.12



HGB says see *A. C. Ent* 1093

P. rigida - No!

A. C. Ent 1086.

P. laevigata fr.

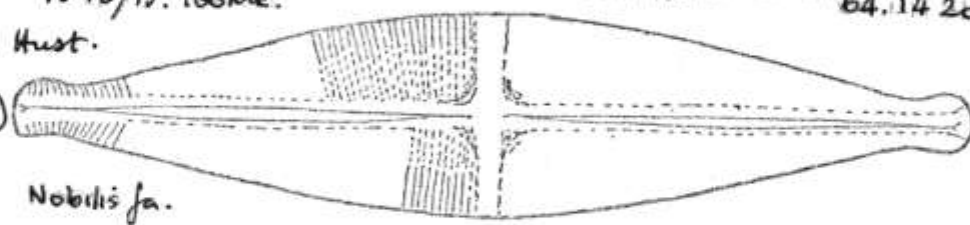
? *Strobilophoroides*

27. *Stauroneis alabamiae* Hust. = (*S. nobilis* Schumann)

1545/B. TOOME.

P. strobilophoroides var. *varia* HGB says the area are not constant *Stauroneis* 64.14 20 may

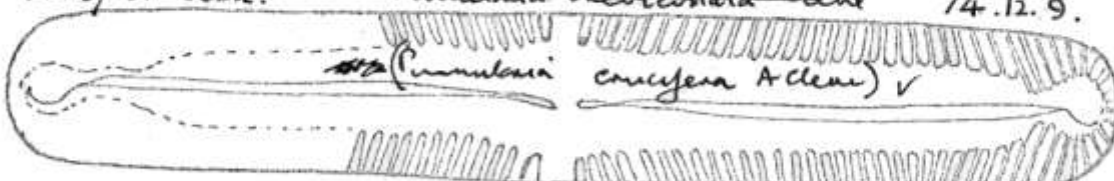
Nobilis fa.



1545/B. TOOME.

? *Pinnularia brevicostata* Cleve

74.12.9.

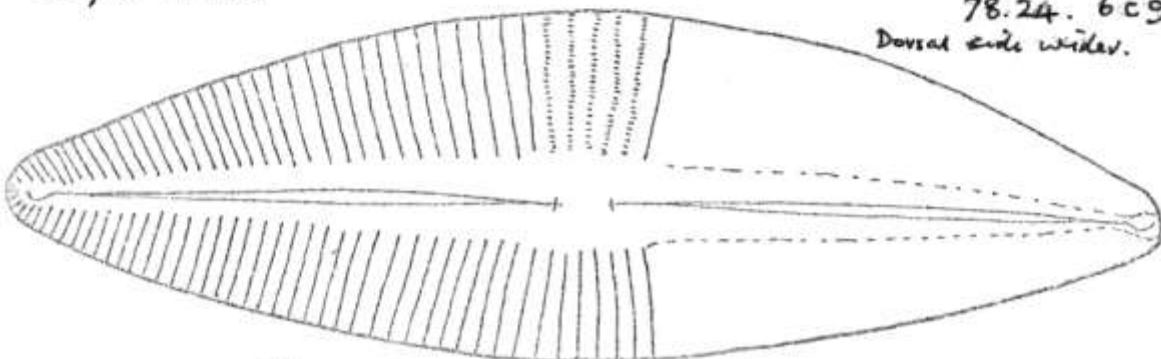


(Pinnularia crucifera A. Cleve) ✓

1545/B TOOME

78.24. 6 C 9 E.

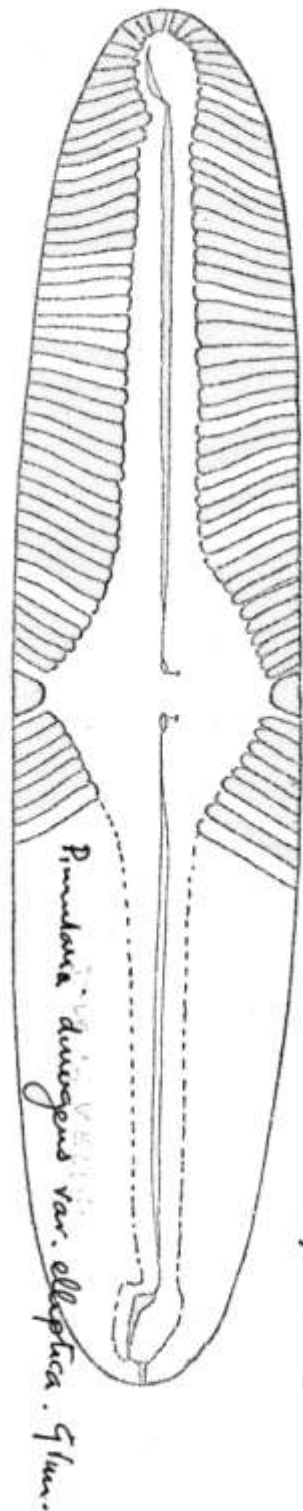
Dorsal side wider.



Cymbella ehrenbergii Kütz.

Toome B1.

87.18.12



Pinnularia divergens var. *elliptica*. Gilv.

955/B. R. Ogden

94.6.15



Hammaria acuta

= (*Ceratonereus acutus* Kütz.) which H.G.B. calls *Synedra acuta*.

1389B. R.W. Bay.

227.14.9 6 mic

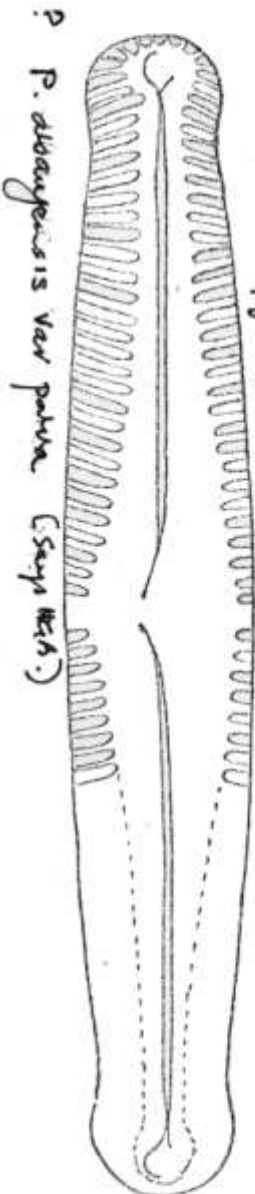


is the a half size version of *Nitidula spectabilis* (Ehr.) Kütz.

to *Nitidula claviformis* says H.G.B.

L. Corriou Copy 519

75.12.8½



? *P. divergens* var. *parva* (Sayp 1854.)

Miscellaneous Plate 6

975/B Battle. (Earth floor - fresh soil). 46.8.20



975/B Battle

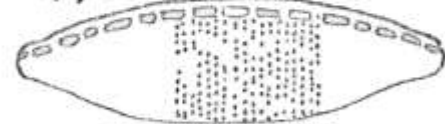
47.8.20



975/B Battle

28.8.21

Nitzschia vitrea



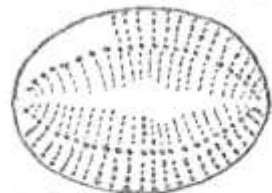
Amphora

14.3 x



No striae visible. 1003/B Tenks Present in Maltvaeth.

16.12.12 CAE.



1389/B R.W. Bay.

Cocconeis fluminaensis

975/B Battle

26.4.16



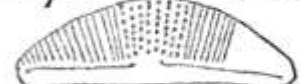
Amphora 975/B Battle

24.4.16



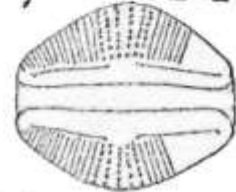
1003/B

18.5.22

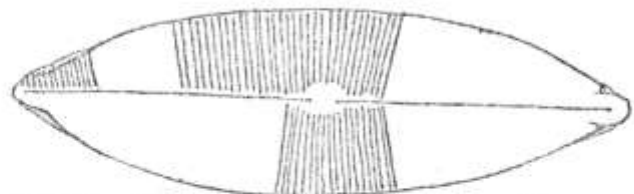
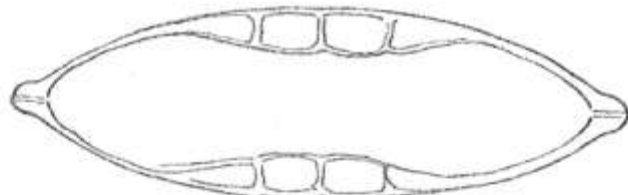


Tenks. *Amphora veneta*

1003/B 14.5.22



Tenks.



535/B Cadzant. (Mare) Mastogloia ? exigua

43.12.21

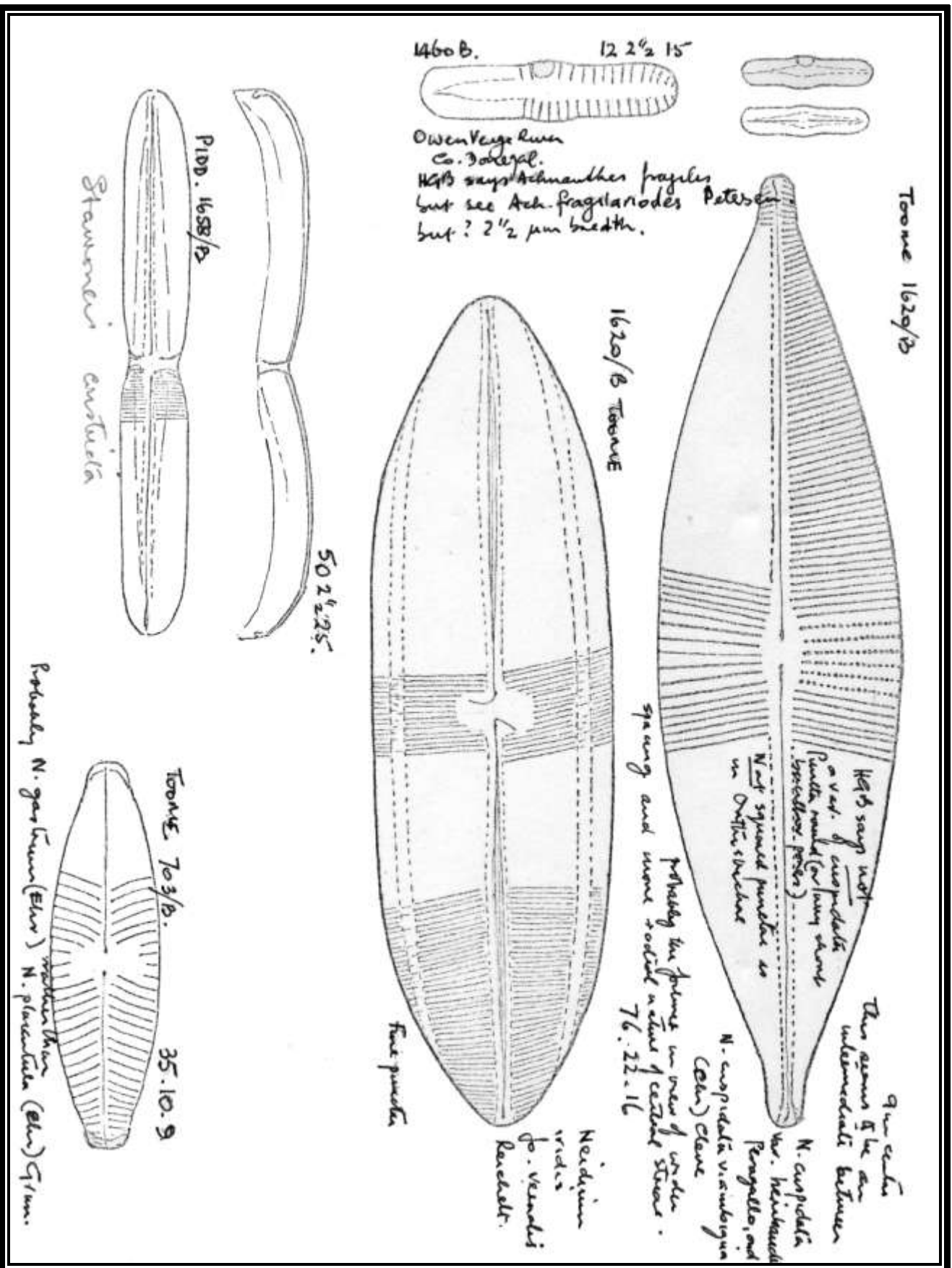
K4.2.3.



Note: only one short stria 1389/B R.W. Bay.

47.8.24. Cos 8-9 KP.

? *Nitzschia rhopalodes* See Hustedt - "Beaufort"

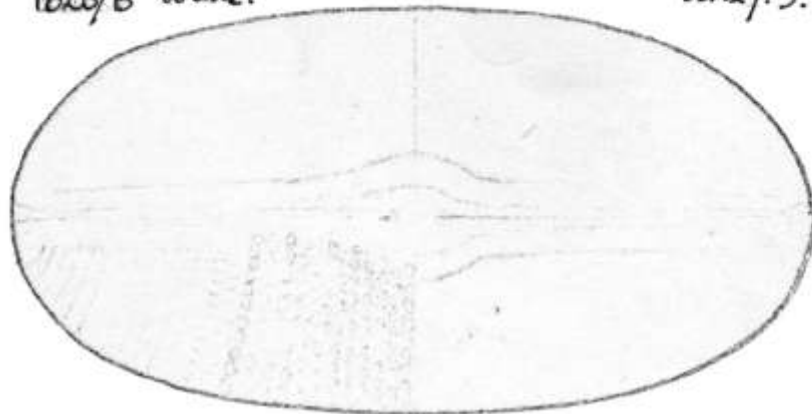
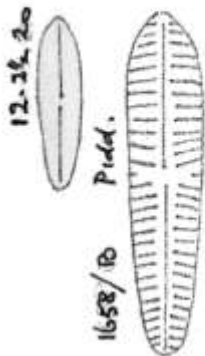


Miscellaneous Plate 8

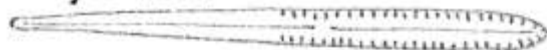
many of these forms are from Piddinghoe in Sussex

1620/B Toome.

54.27.9. ^P 10½



1658/B Pidd.



1471/B Doon Beg, Co. Clare.

40.17.8.

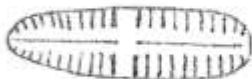


18.3.20. *Thalassiosira*



Crabro form. *Diploneis Crabro* Ehr.
or possibly *Dip. Crabro* v. *excavata* Hust.

8.2½.20.



1658/B. Pidd.



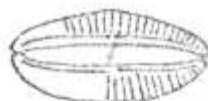
12.2.18

1658/B. Pidd. 35.4.16.

Synedra Fragilium *incurvata* Hust.



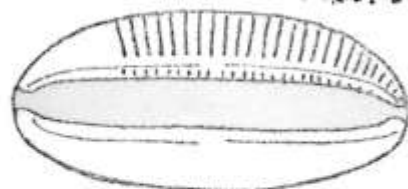
1658/B Pidd. *Amphora* *terreina* ?



14.3.18 CAE



16.2½.20



1658/B Pidd.

1658/B Pidd. *Amphora*

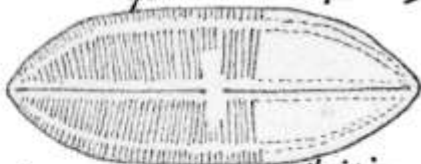


18.3½.20



1658/B Pidd.

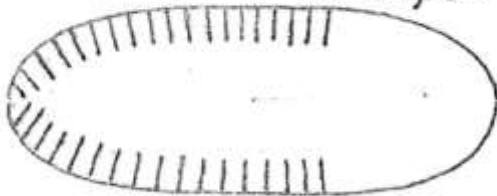
Landport.
RIF. 1659/B 27.10.19



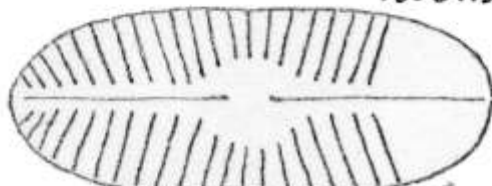
Radiate throughout : *Neidium dubium* (E) Cleve
or *Neidium dilatatum* (E) Cleve



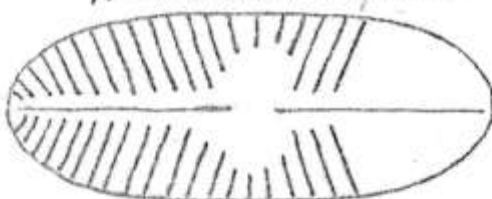
RIF 1659/B.



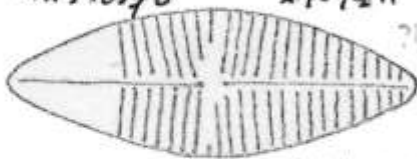
18.6.15



Achnanthes rupestris



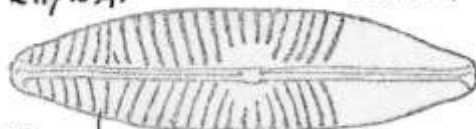
RIF/1659/B 27.9.11



? *Nav. meniscus*

chitate neta

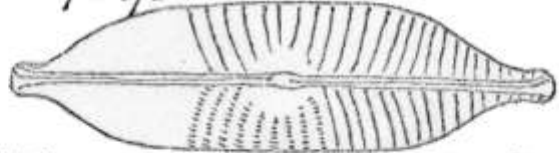
RIF/1659? 30.8.11



Nav. cavi ?
Not Rhync.

? *Nav. graciloides*. A Mayer
493 says ? *N. cavi* Ehn.
The says central area is wrong for *graciloides*

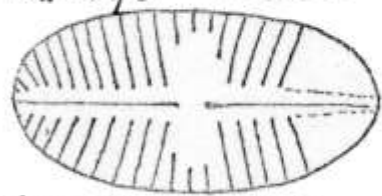
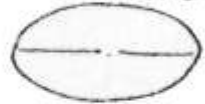
RIF/1659/B. 35.10.10



Navicula ? *rhynchocephal*

12.6.16

SWIC
CAE
RIF1659/B



Achnanthes rupestris??

RIF1659/B 20.6.19.

Navicula
? var *earled*



RIF1659/B. 20.6.20+

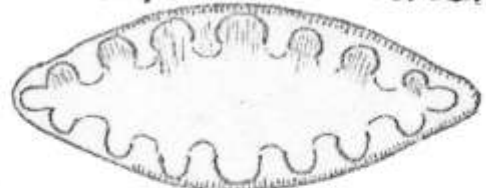
SWIC
CAE



? *Nav. tenuipunctata* Hux.

RIF 1659/B.

30.12.23 in 100
µm

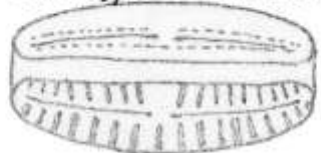


RIF. 1659/B. 18.3.11 X

Amphora
perpusilla

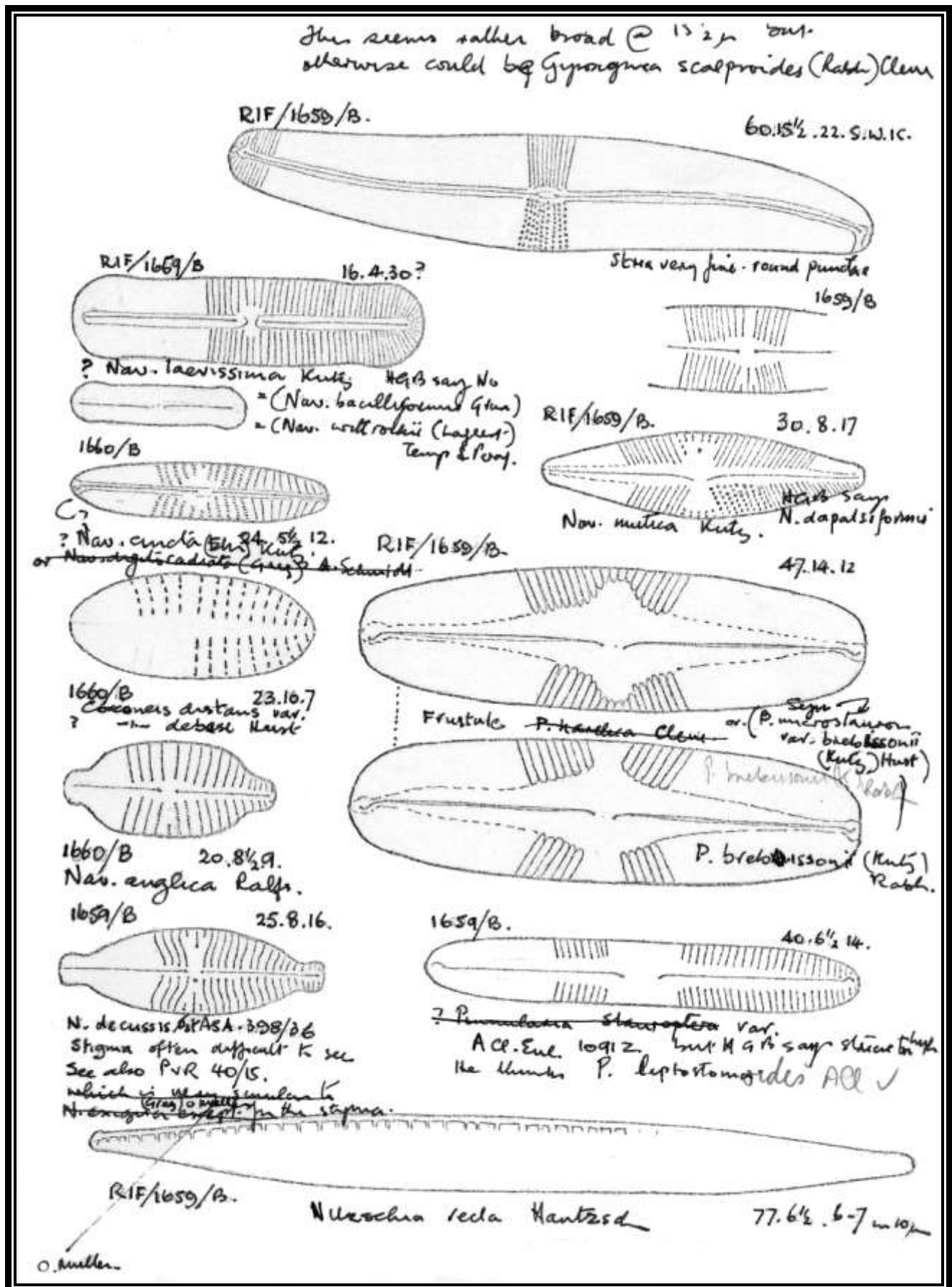


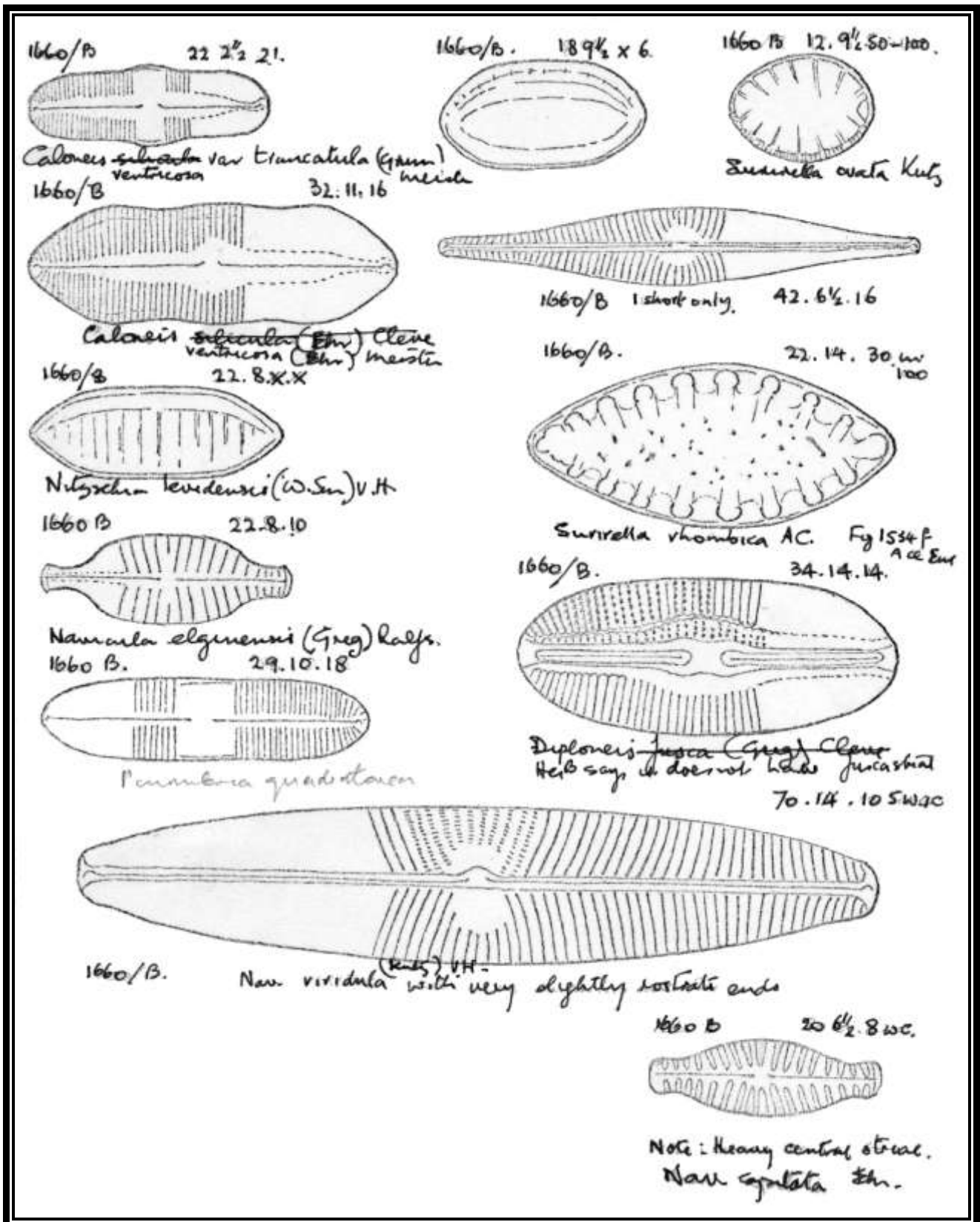
RIF1659/B. 10.5.16.

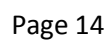


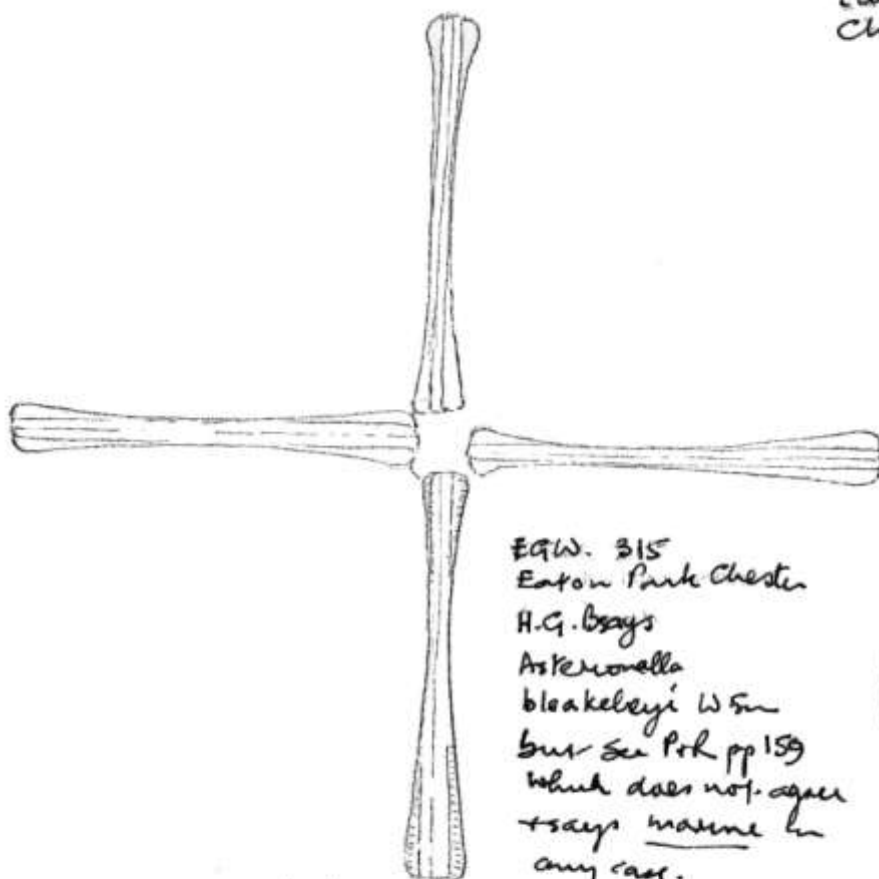
Cymbella sinuata Greg.

Miscellaneous Plate 10

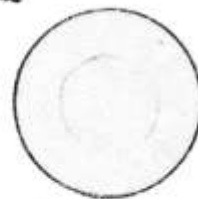






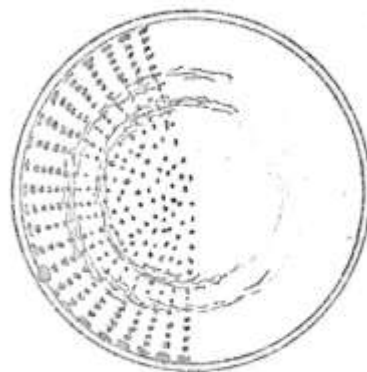
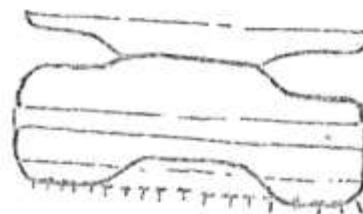


EQ.W. 215
Eaton Park
Chester.



? Size

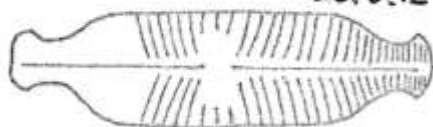
EQ.W. 315
Eaton Park Chester
H.G. says
Asterionella
bleakeyi W Sm
but see Polk pp 159
which does not agree
+ says maxima in
any case.



Check with *A. formosa* Hass when a
valve view is illustrated.

1344/B 4131

26.8.12



Nannula dicephala (Ehr) W Sm
more parallel sided than normal

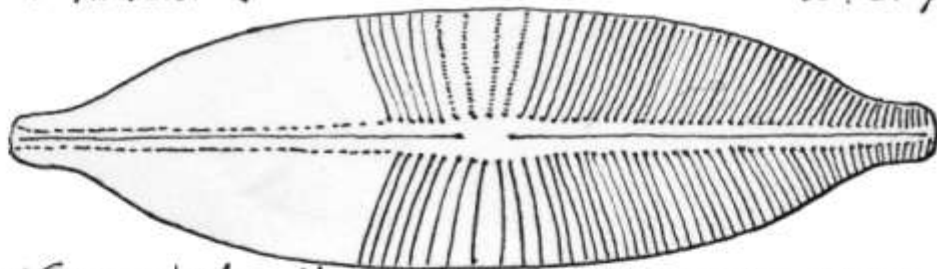
? Size

Miscellaneous Plate 15

418/B Pan m Q

21/22 CMW

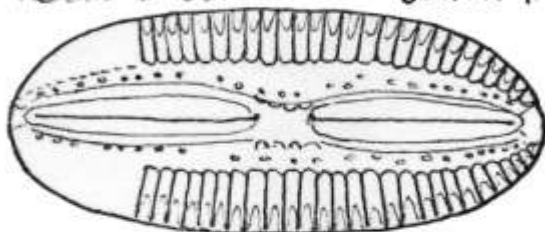
58.16. 6/15



See Hurler's description of N. accurata puncta not as in Group 7 End of
Stem larger puncta.

Re 380/B PUP

35.14.9

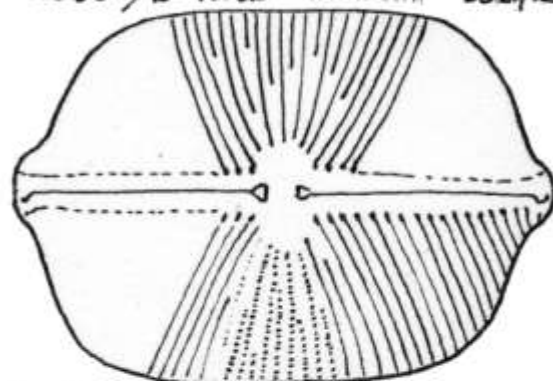


7 Dip. effusus/punctus on a
small Dip. eudoxia

Re 380/B RWB

Humerosa

352912

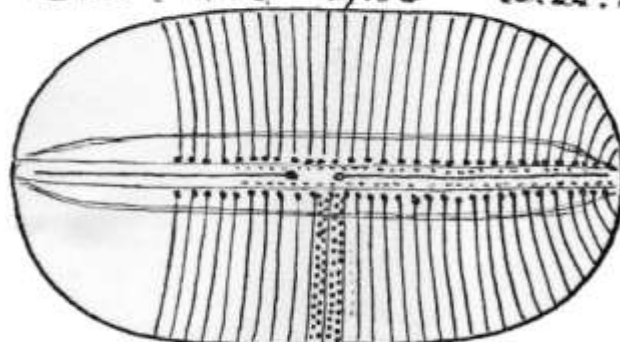


a small N. humerosa

Re 380/B RWB

24/16C

38.22.9



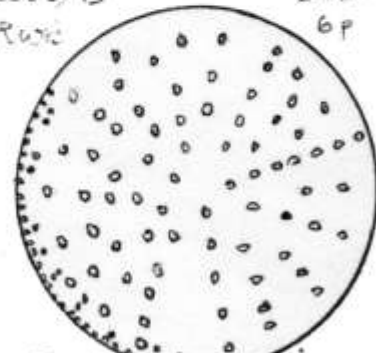
some narrow radial ridge at Punctate!
Not lateralis

Re 380/B

RWB

24D

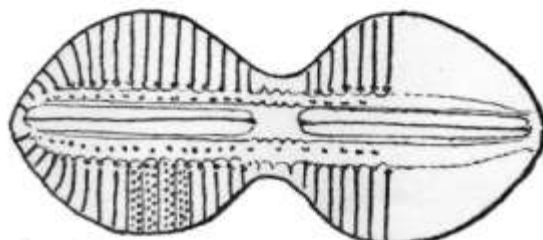
6P



Coscinodiscus nitida

Re 380/B RWB

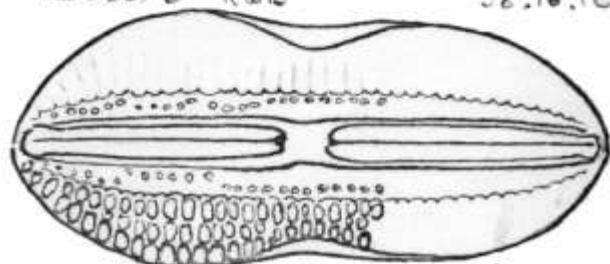
38.16.10



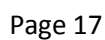
Re 380/B RWB

24/16C

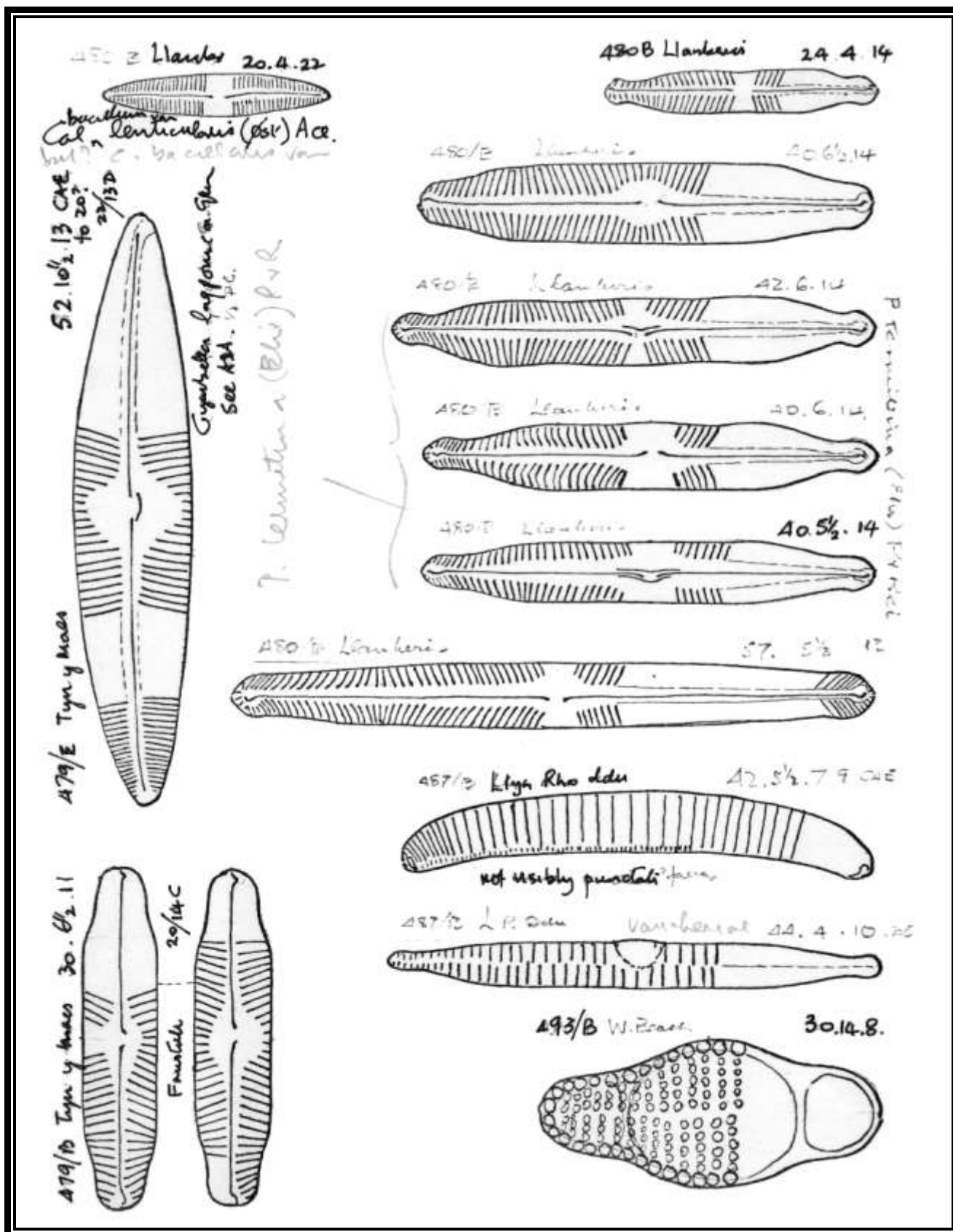
35.15.11

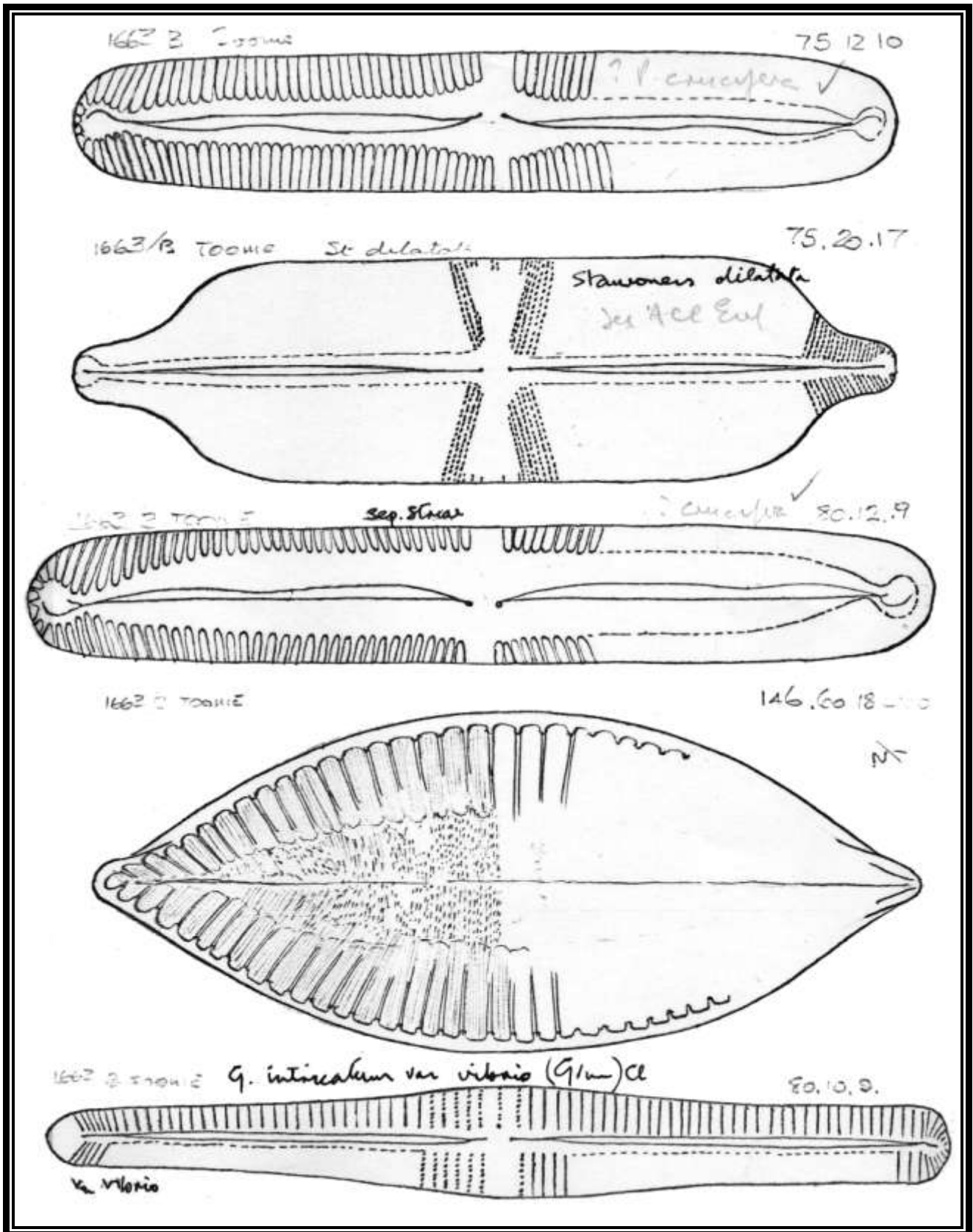


Dip. bombus or didyma



Miscellaneous Plate 17

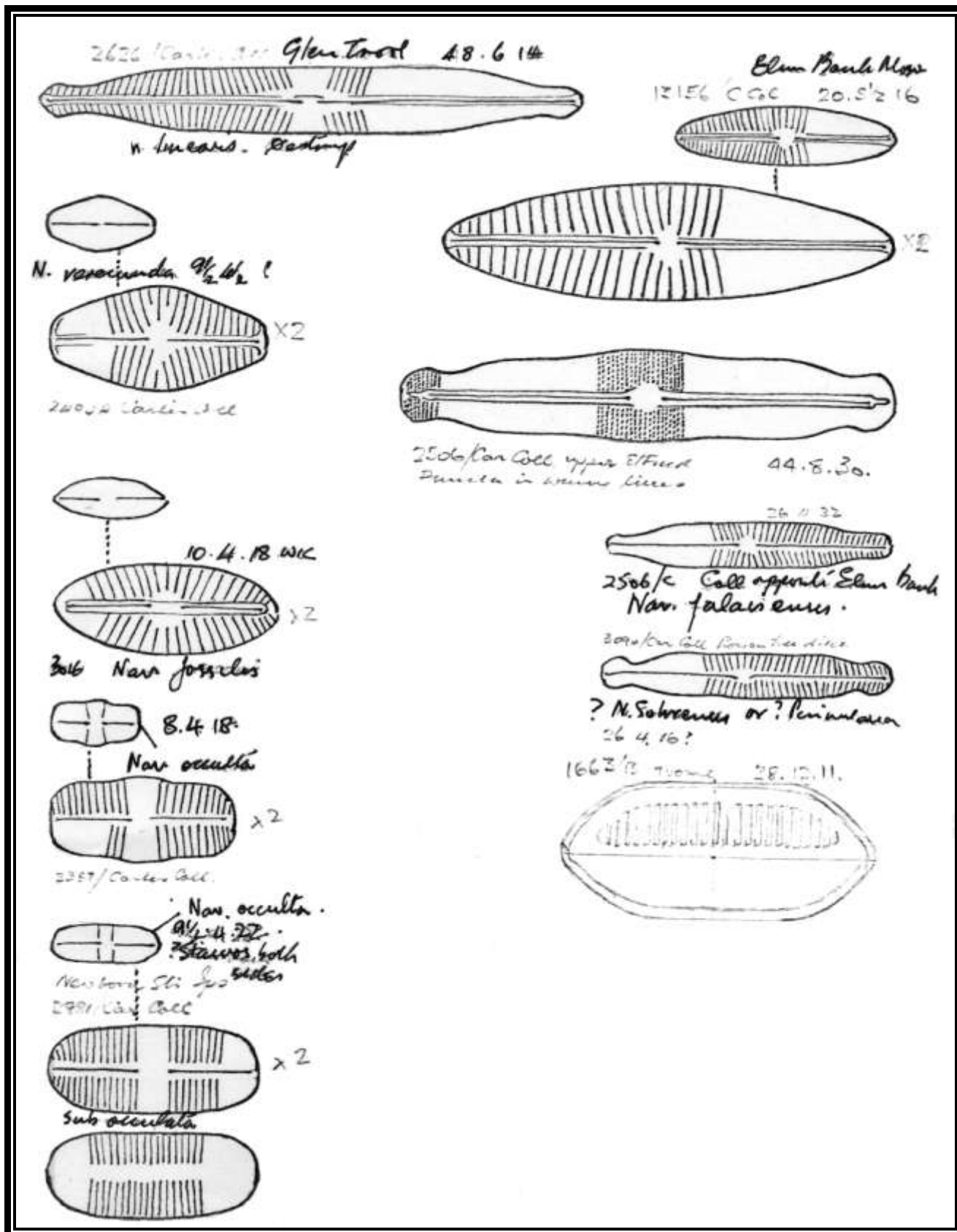




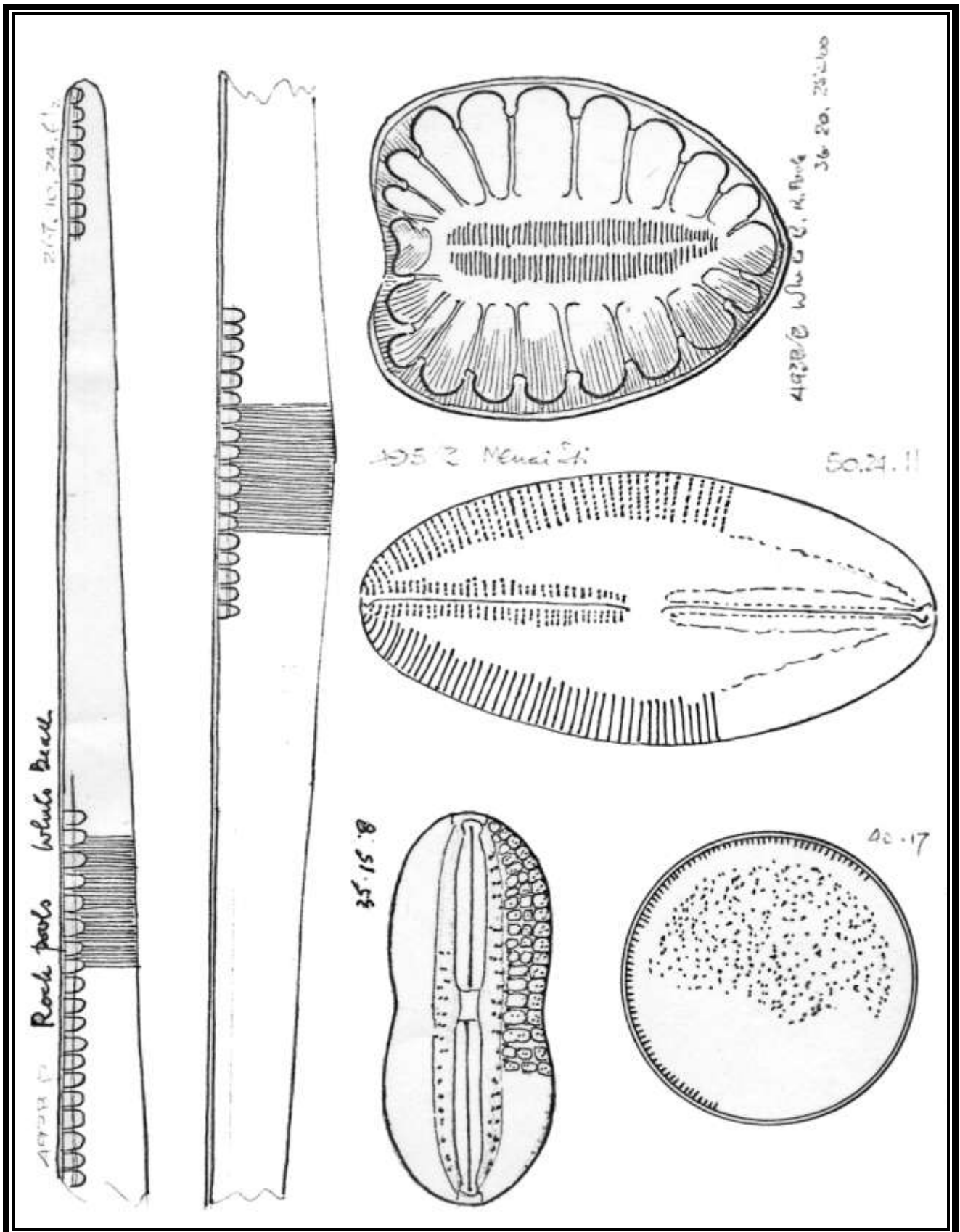




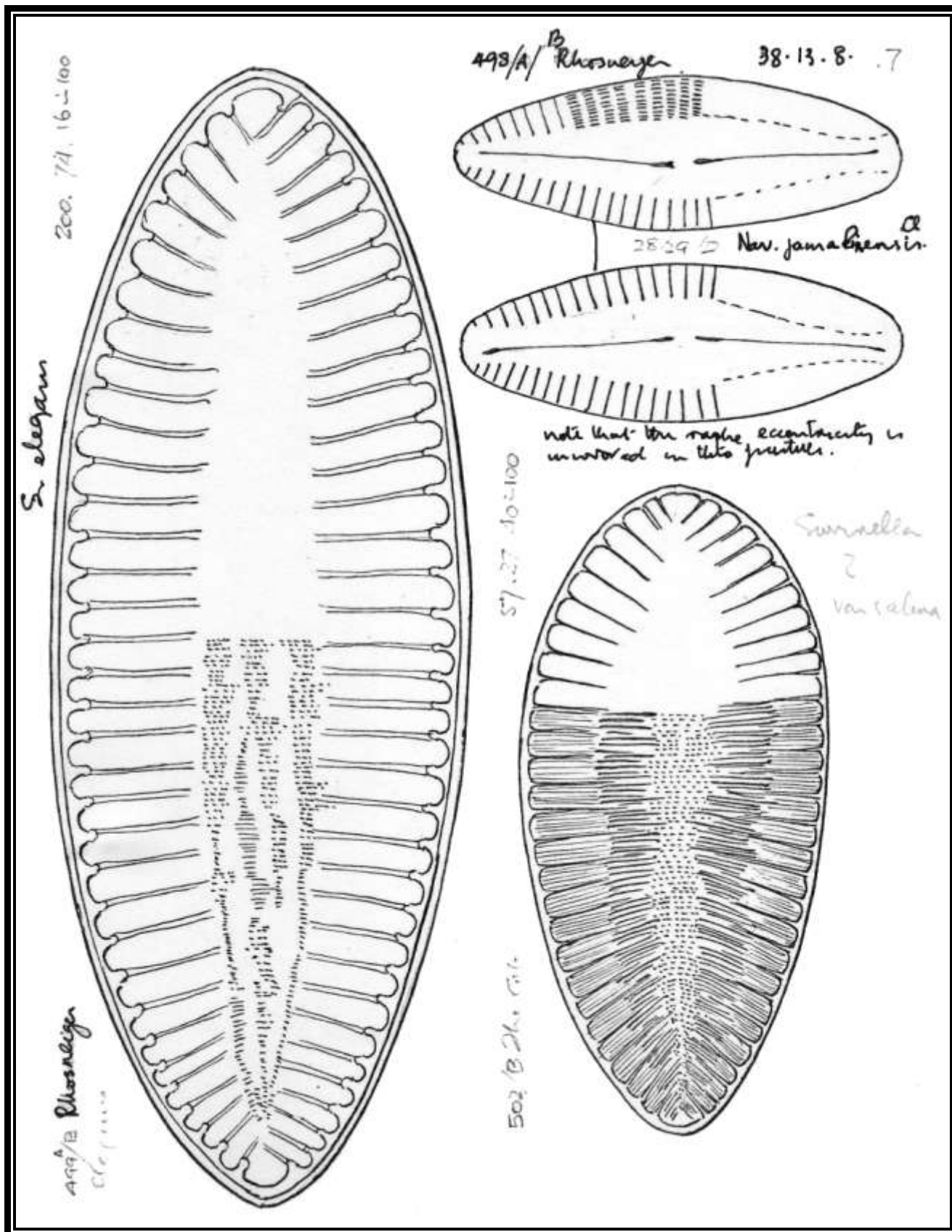
Miscellaneous Plate 21

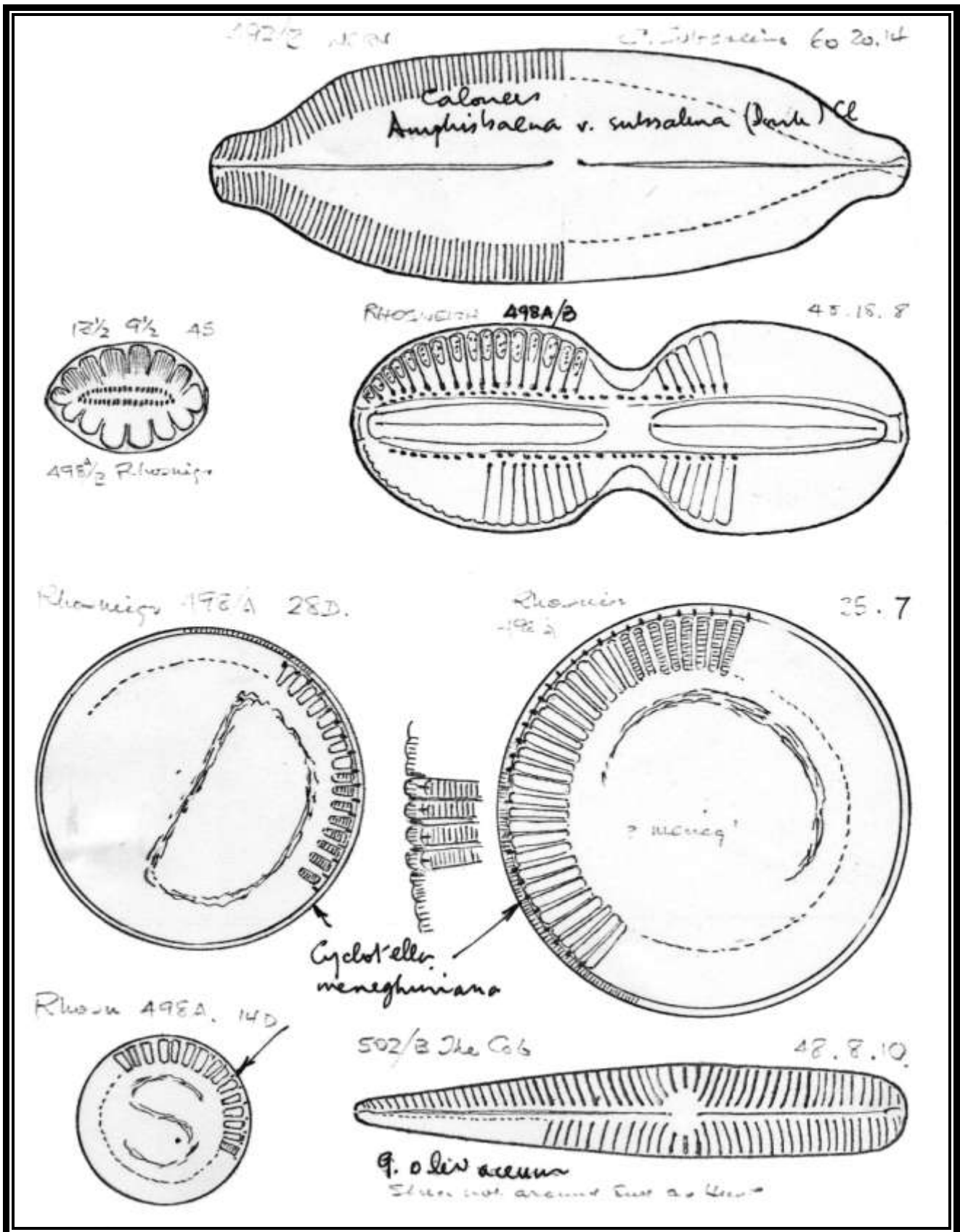


Miscellaneous Plate 22

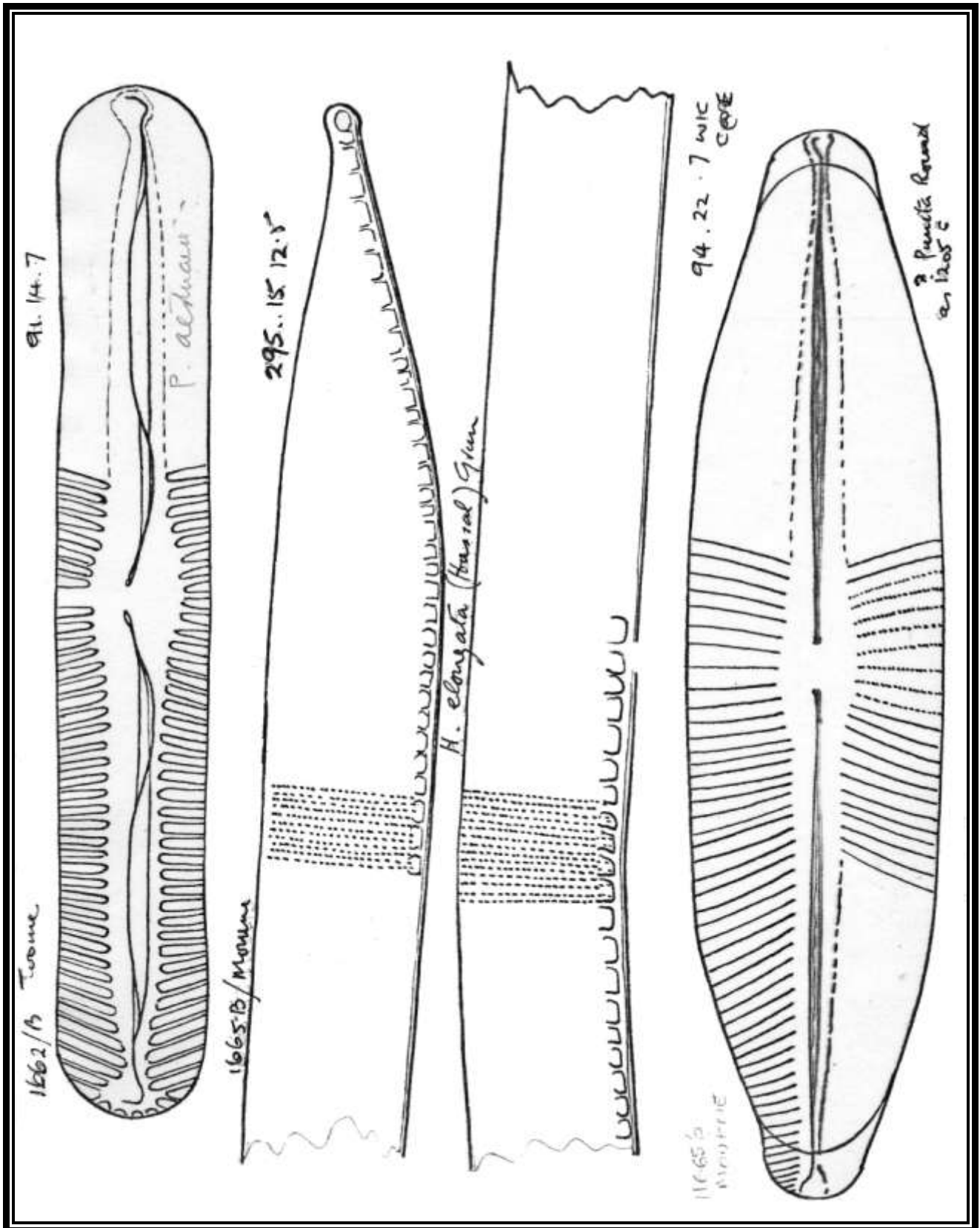


Miscellaneous Plate 23



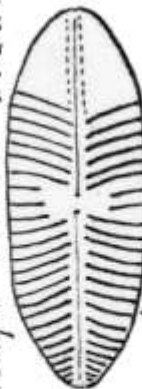






Miscellaneous Plate 27

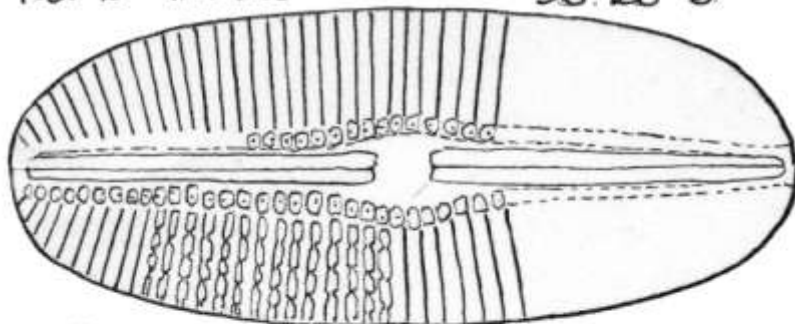
1665/10 Moune 24.8 1/2 11 wne
eac



fine spind-
? distance of striae

1665 B Moune

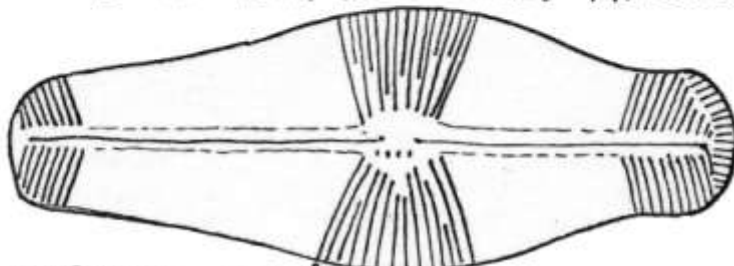
50.20 8



Striae dist 5 normal

1665 B D. Gou outline ver 94.35.8

x 1/2.

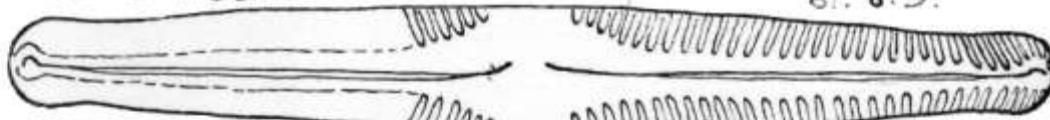


MOURNE. not frequent.

1665 B MOURNE

P. slowoptera

67.8.9.

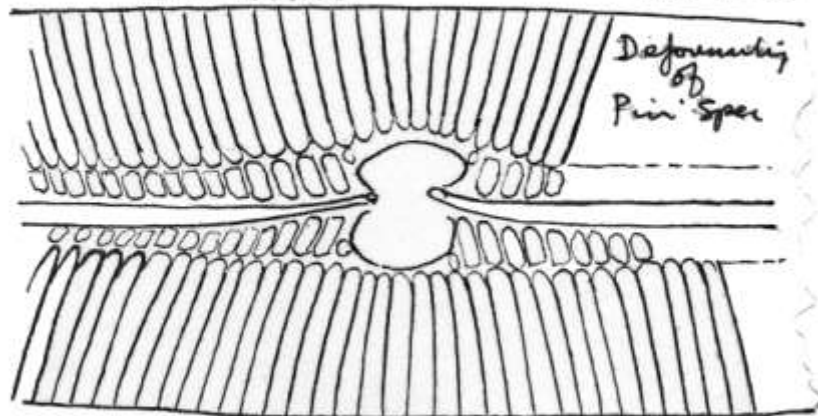


P. amphicephala?
held
Pavla type

End stria not as close as in P. granii

1665 B MOURNE

200.27.6



Deformity
of
Pav. Spec

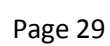
P. major v. scabrosa ACP

? Synedra 18.4 1/2 9

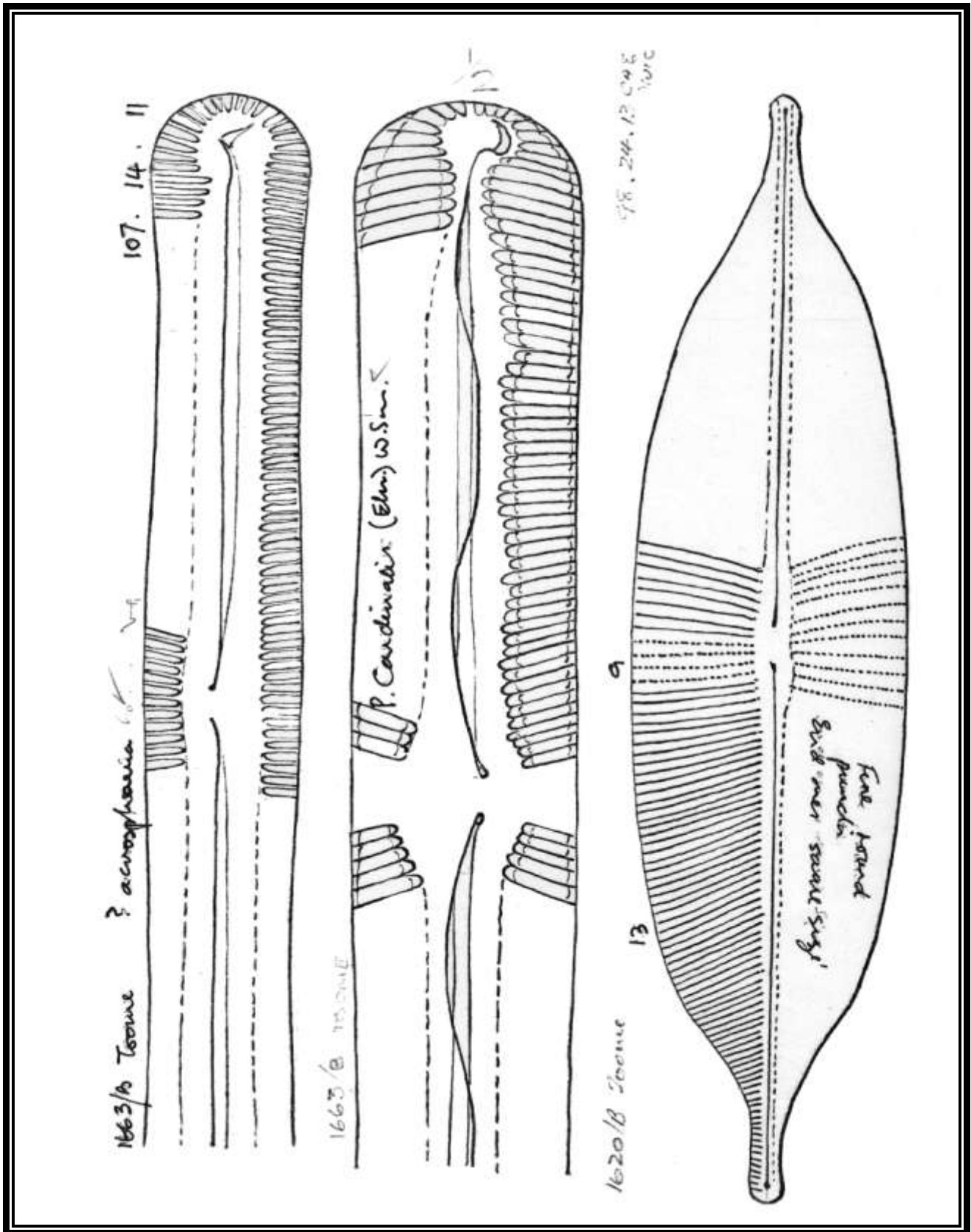


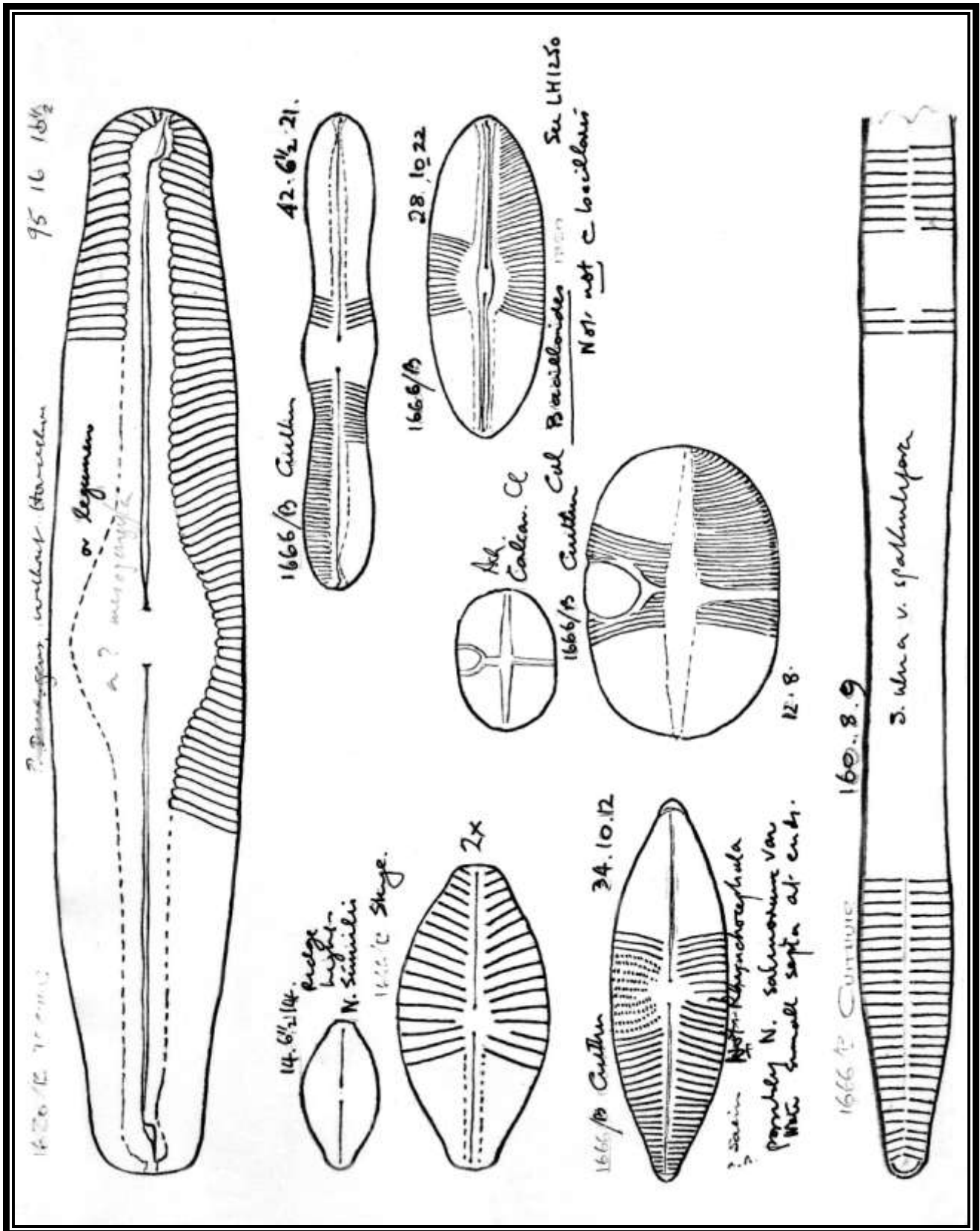
1665/8 TOOME

Synedra berolinensis
H. B. says there are Synedra
berolinensis but
but they look like S. vacuolatus

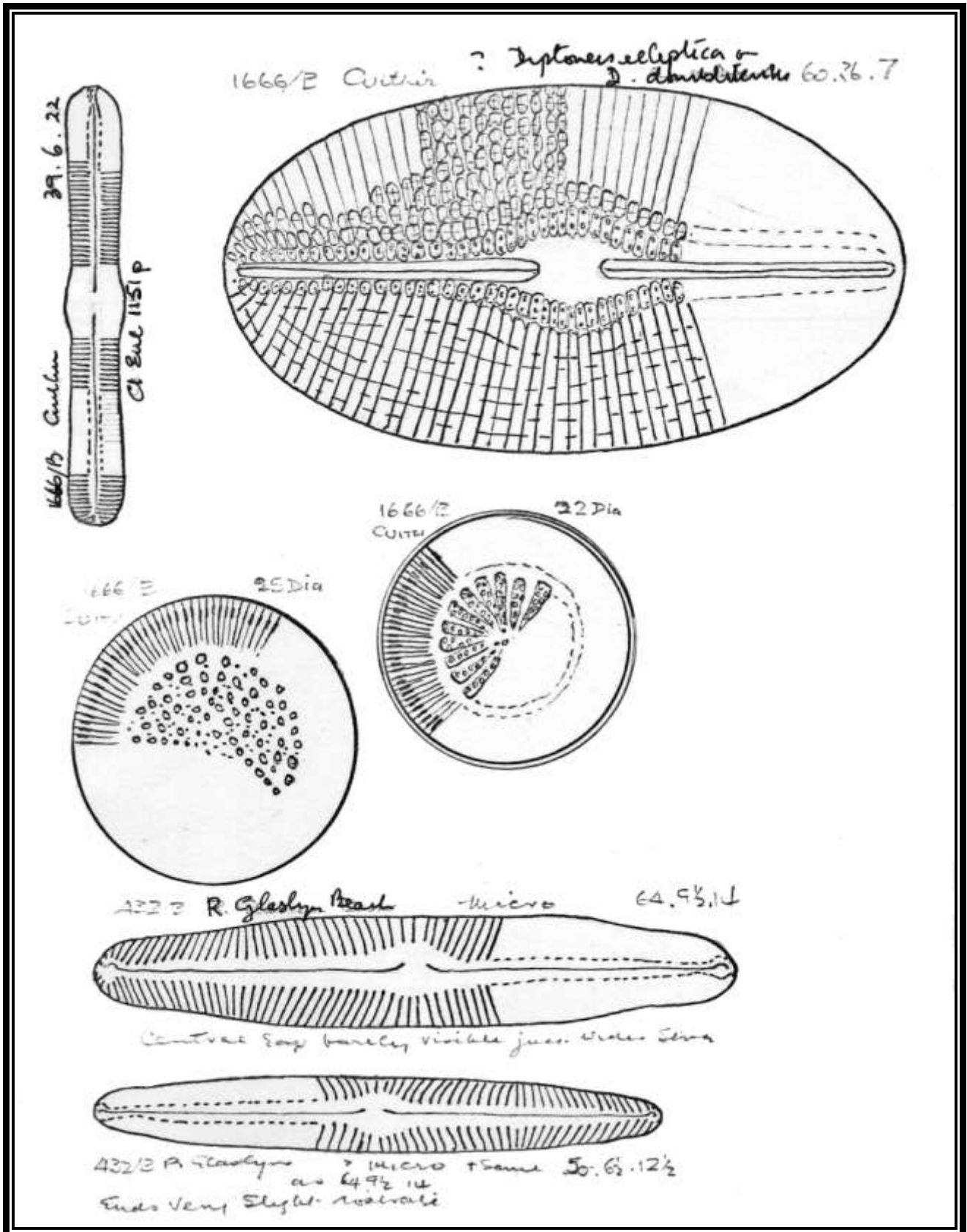


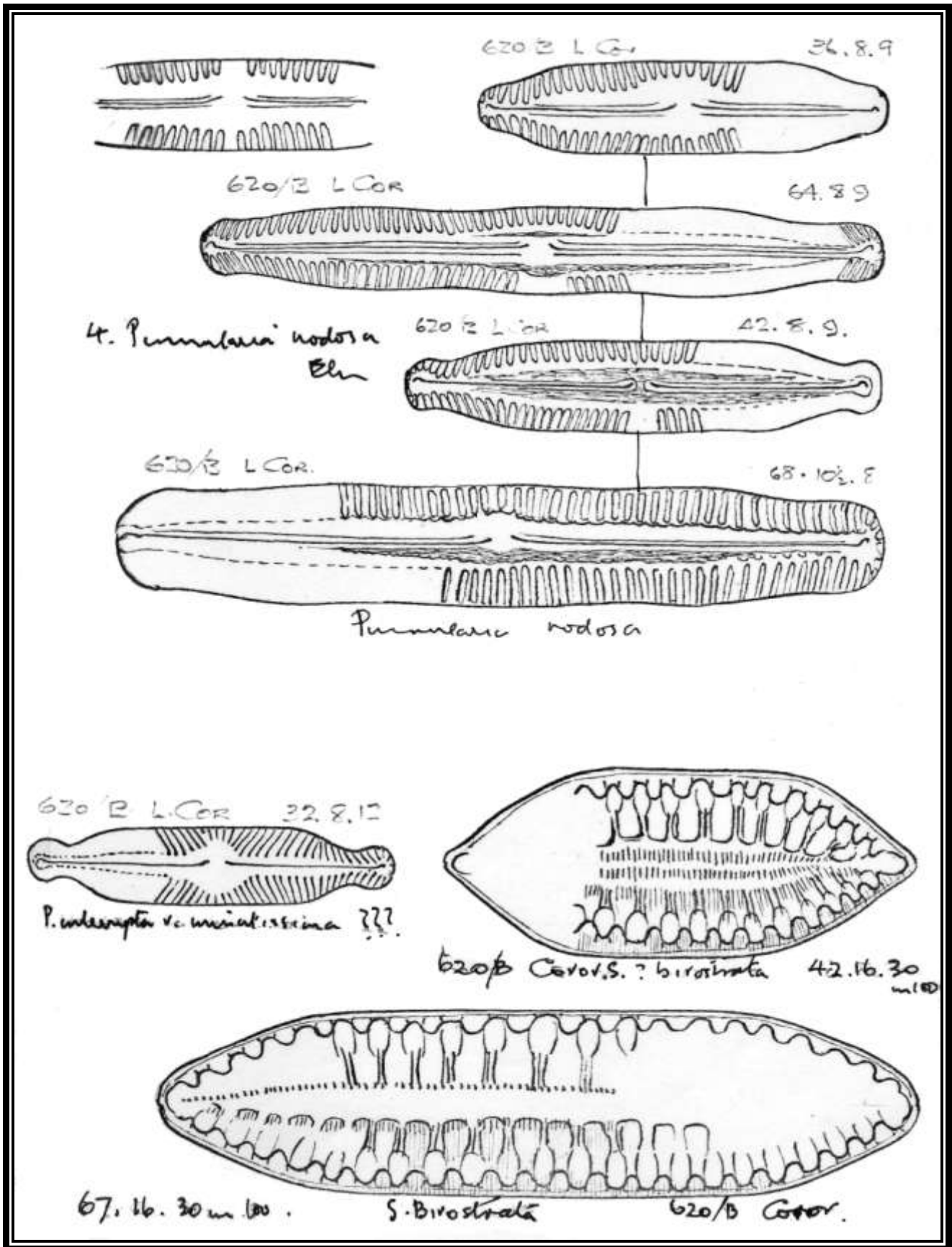
Miscellaneous Plate 29



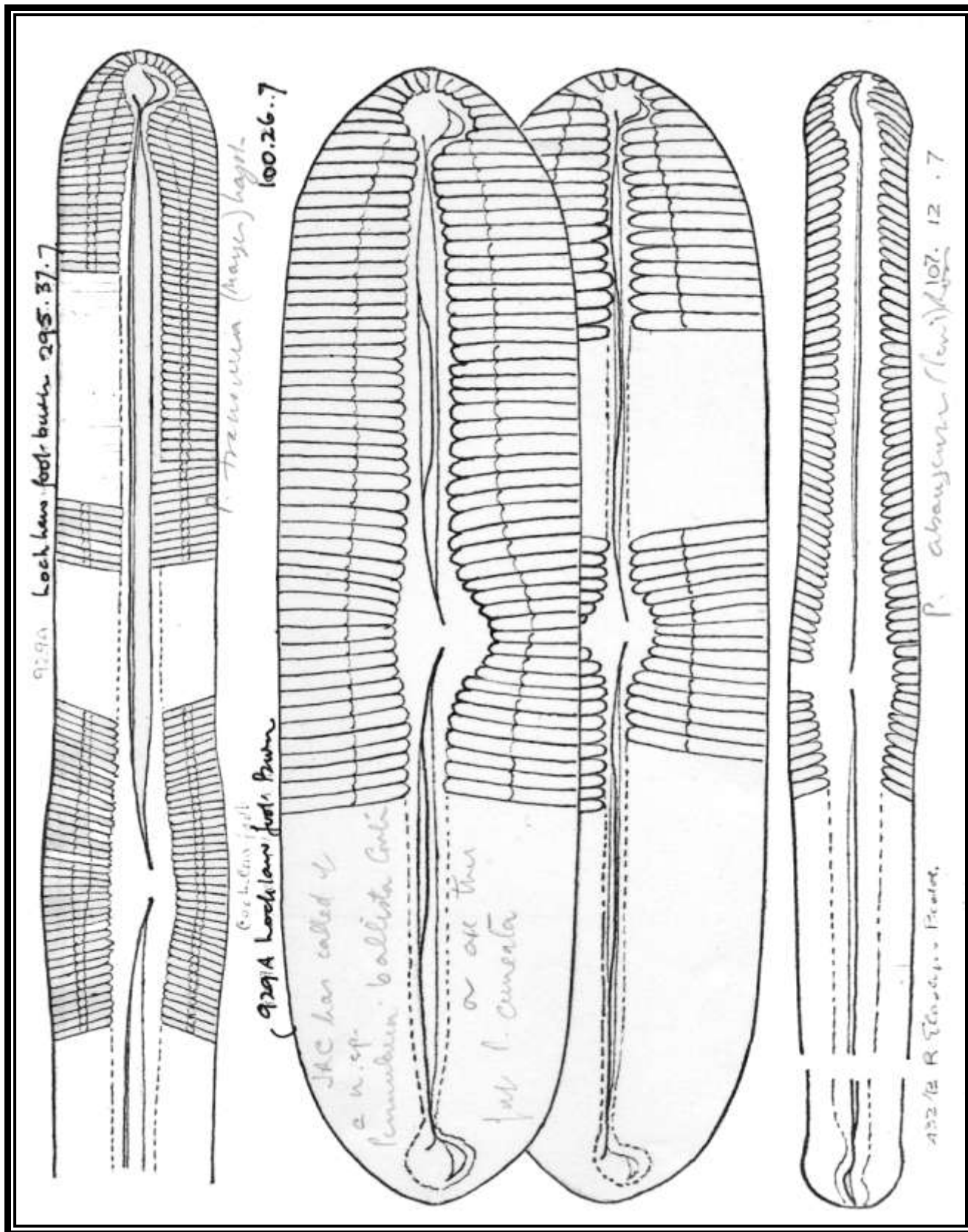


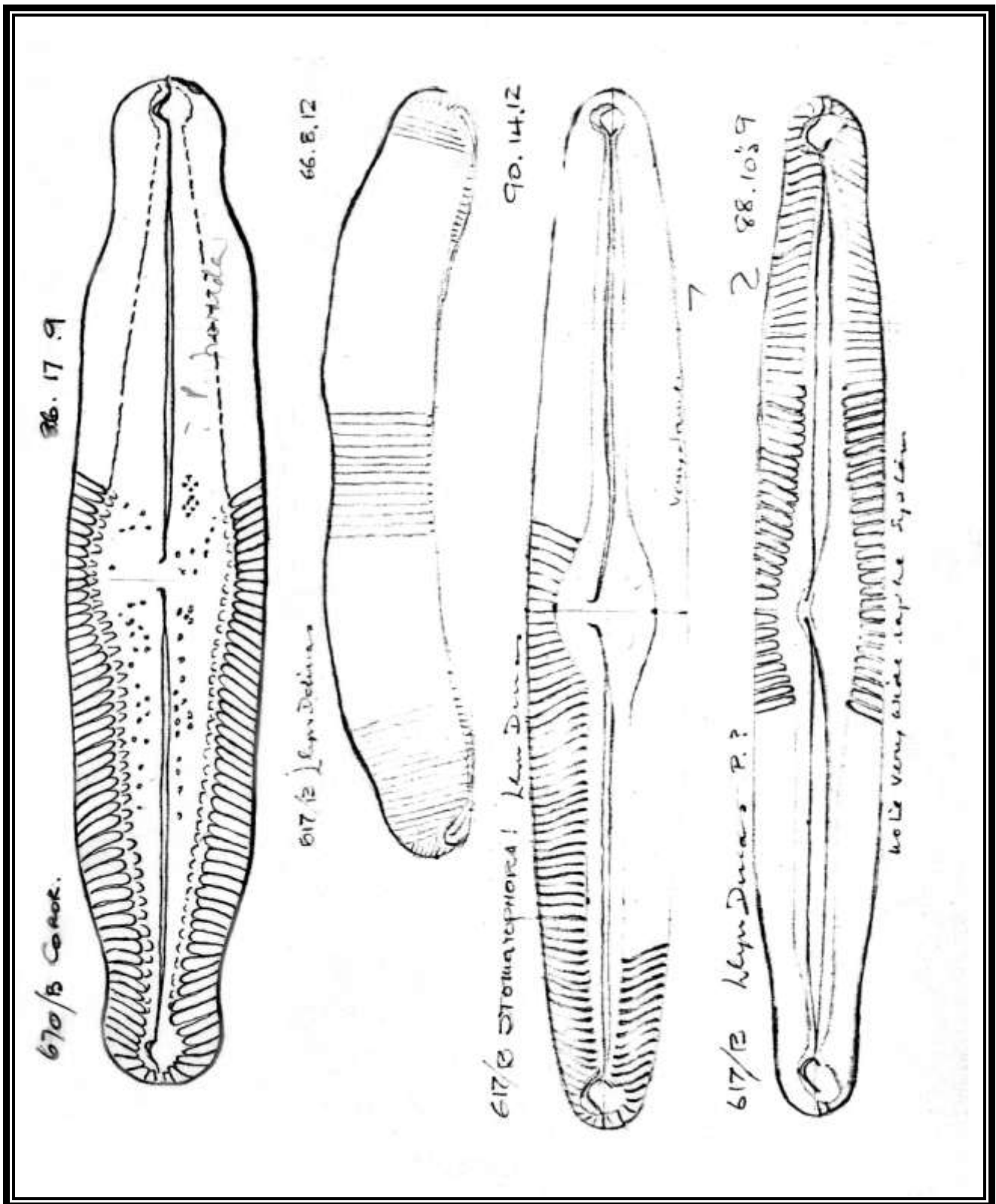
Miscellaneous Plate 31



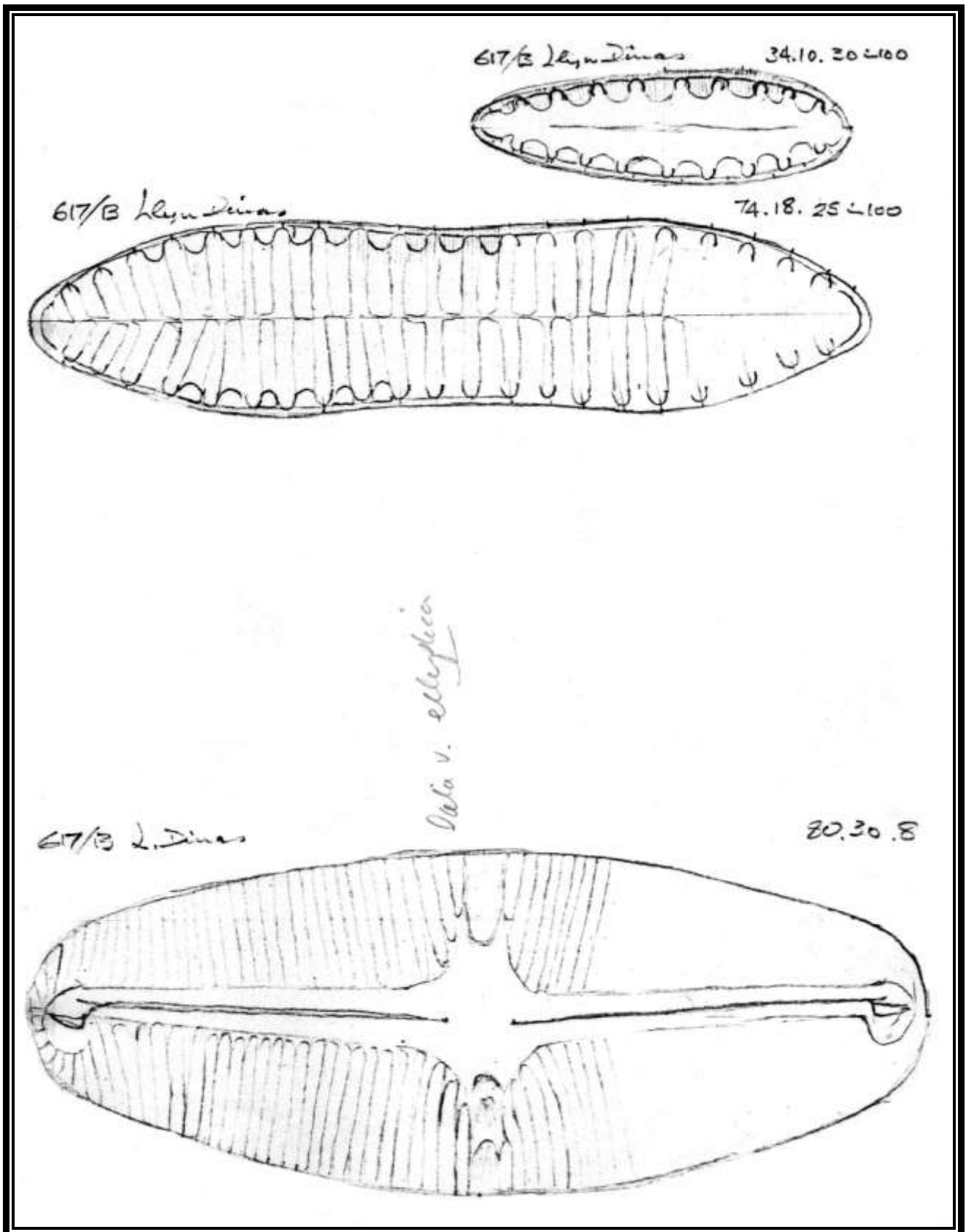


Miscellaneous Plate 33

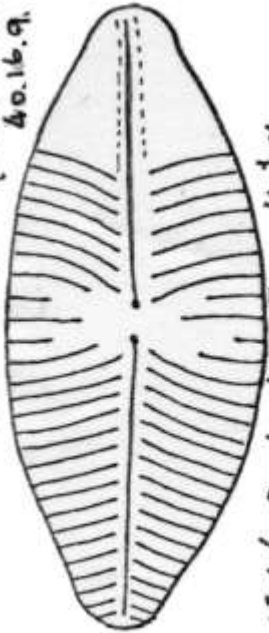




Miscellaneous Plate 35



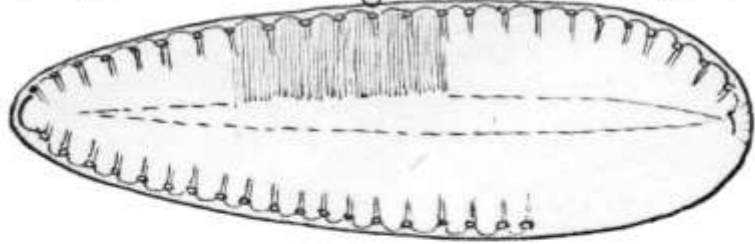
Nov. *Gastropus* *Fine punctured line*
40.16.9.



1526/B Buckenham Ferry N. J. J. J.

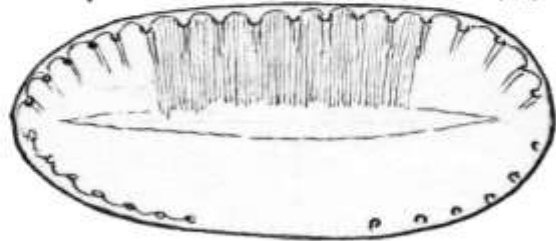
1029/B Lenses - Beddingham.

48.16.45 in 100



1529/B Lenses

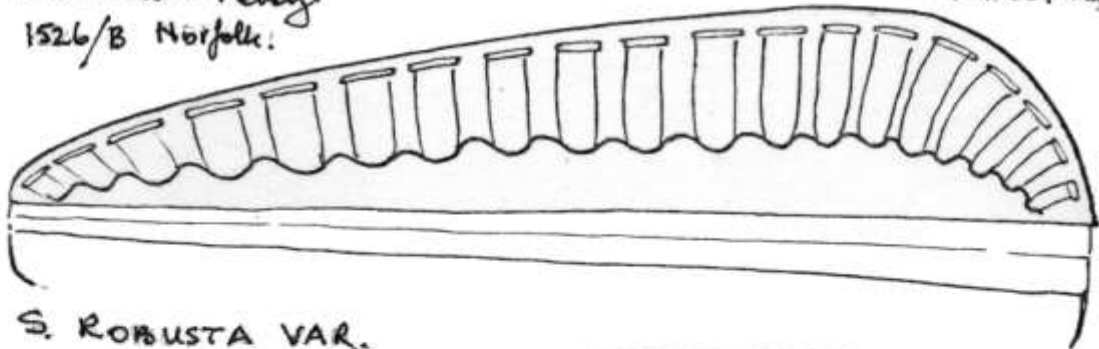
35.16.45



Susutella salina.

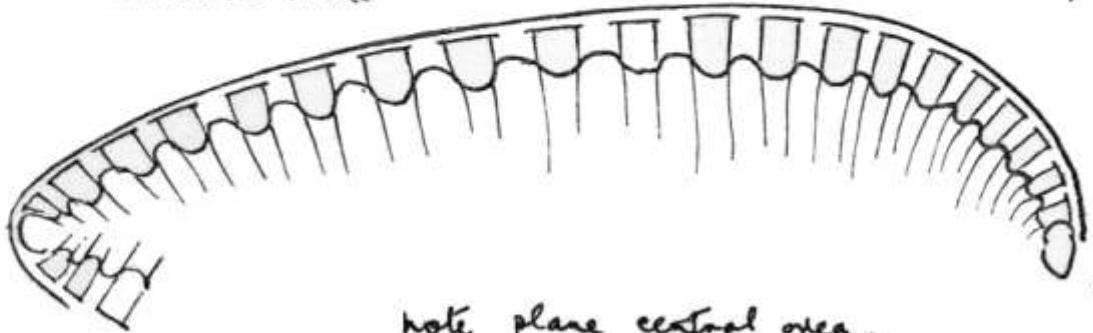
Buckenham Ferry.
1526/B Norfolk.

140. 30.15 in 100



$\frac{1}{2}$

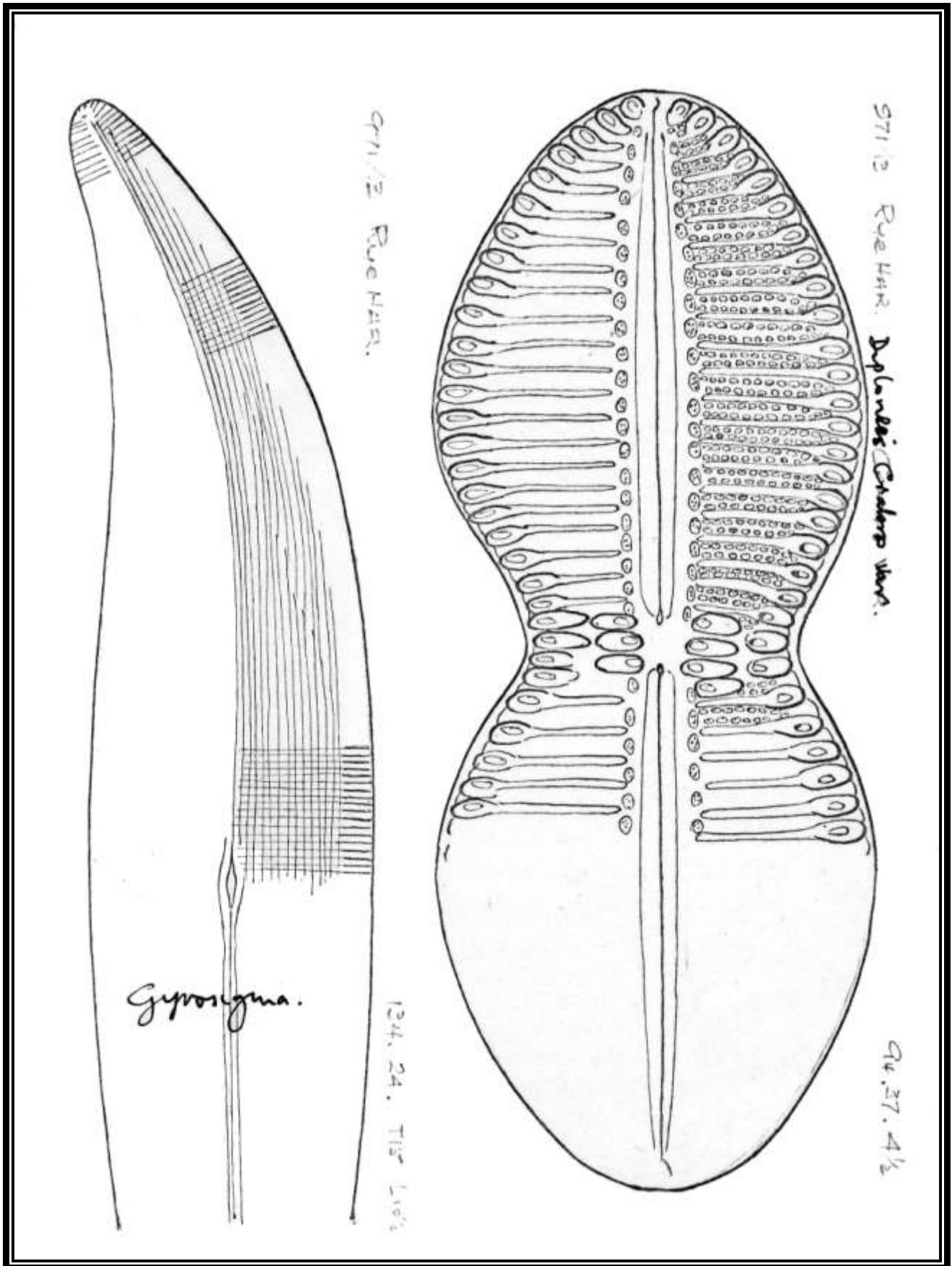
S. ROBUSTA VAR.

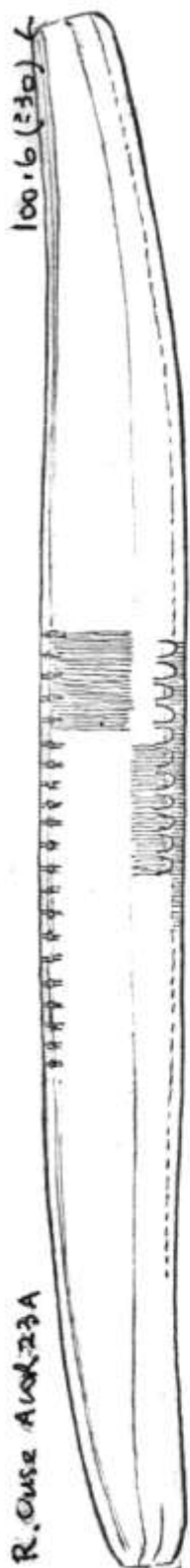


$\frac{1}{2}$

note plane central area.

Miscellaneous Plate 37



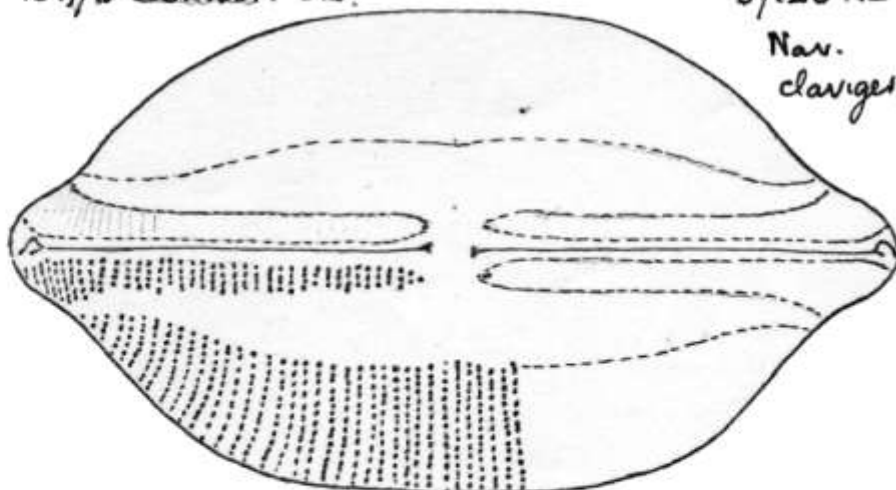


Seems to small for big. sigmoides

1517/B Comber. Sx.

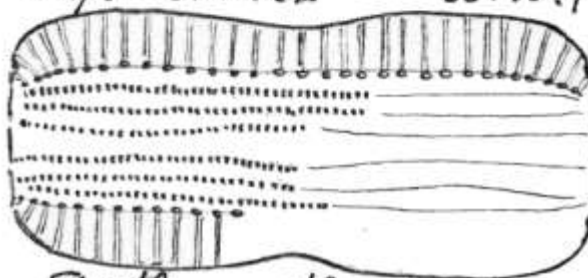
57.30.12

Nav.
clavigera.



1517/B Comber Sx

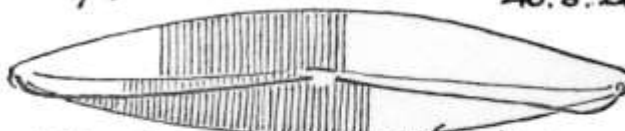
39.16.7



Girdle of P. ambigua

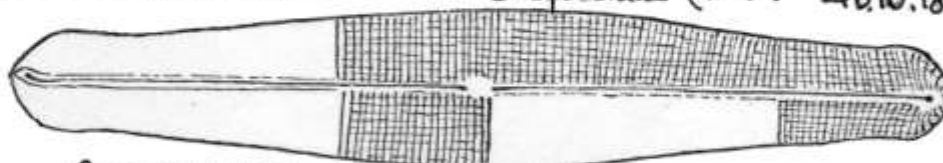
1517/B Comber Sx.

40.8.20



Tropidoneis gibberula (Grun) Cl.

R. Cuse Sx AWR23A? Nav. scapularum (Bröl. 40.10.18

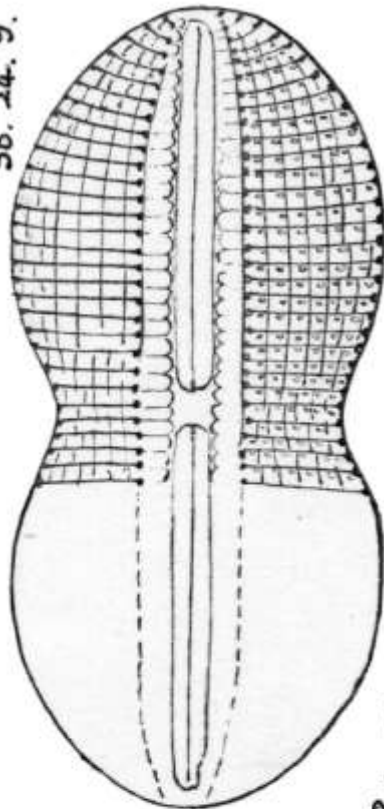


Rows of round punctures in wavy lines.

Possibly N. scapularum v. belgica but?

Miscellaneous Plate 39

50. 24. 9.



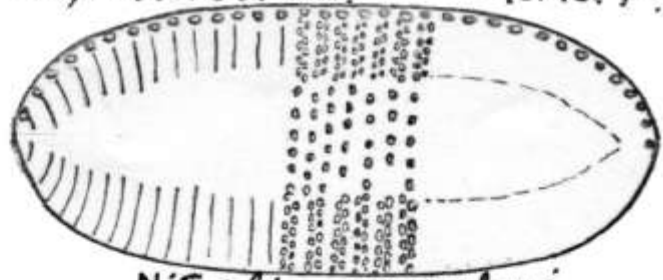
1131/B Tenby.

? *D. chesterensis*

1132/B CALDEY Is.

422/B Penard Est.

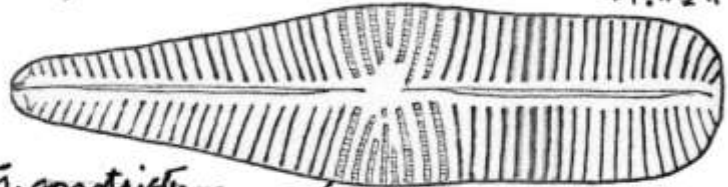
40. 16. 7. 7



Nitzschia naviculoides

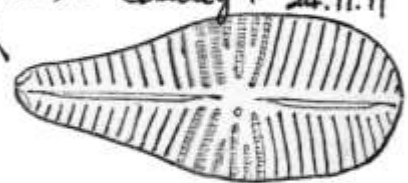
1132/B CALDEY I.

44. 11½ 11

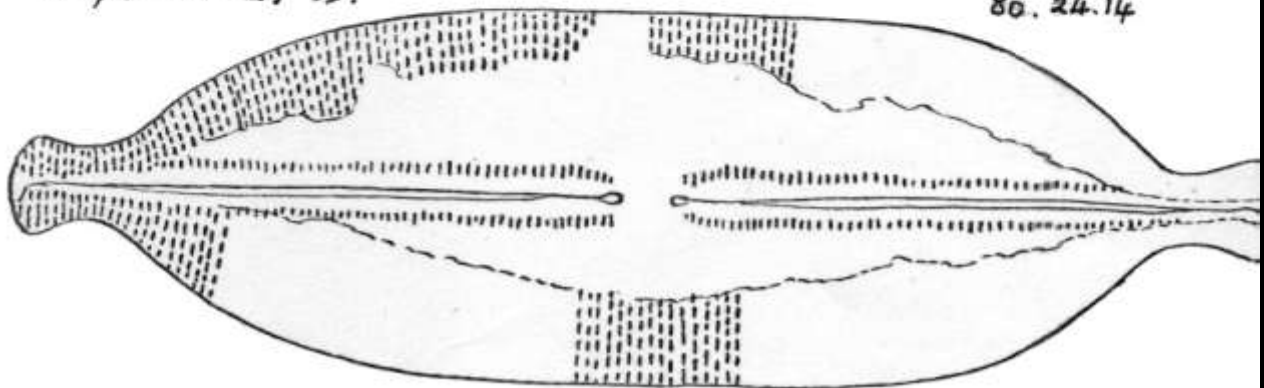


G. constrictum
varieties

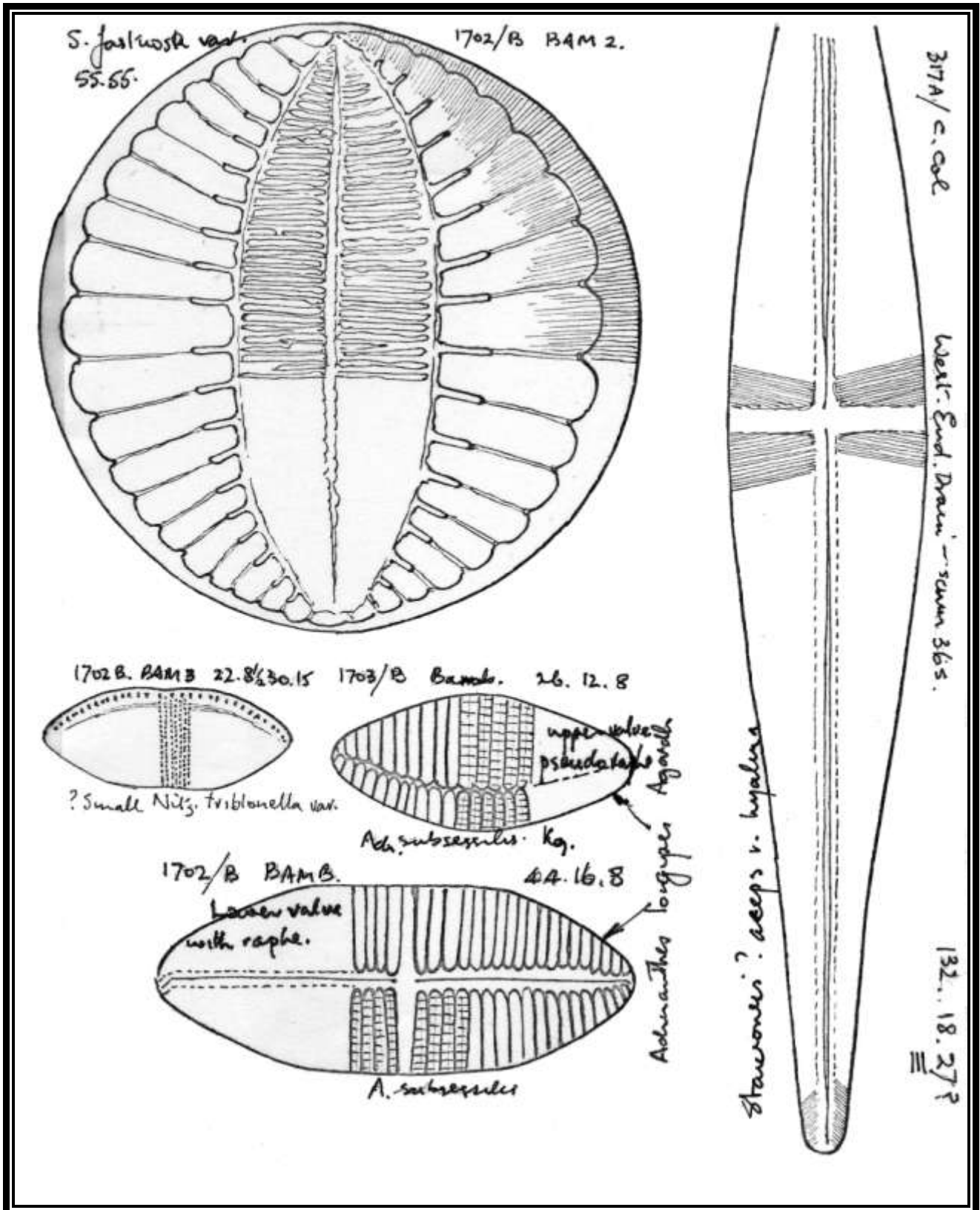
1132/B Caldey I. 24. 11. 11

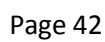


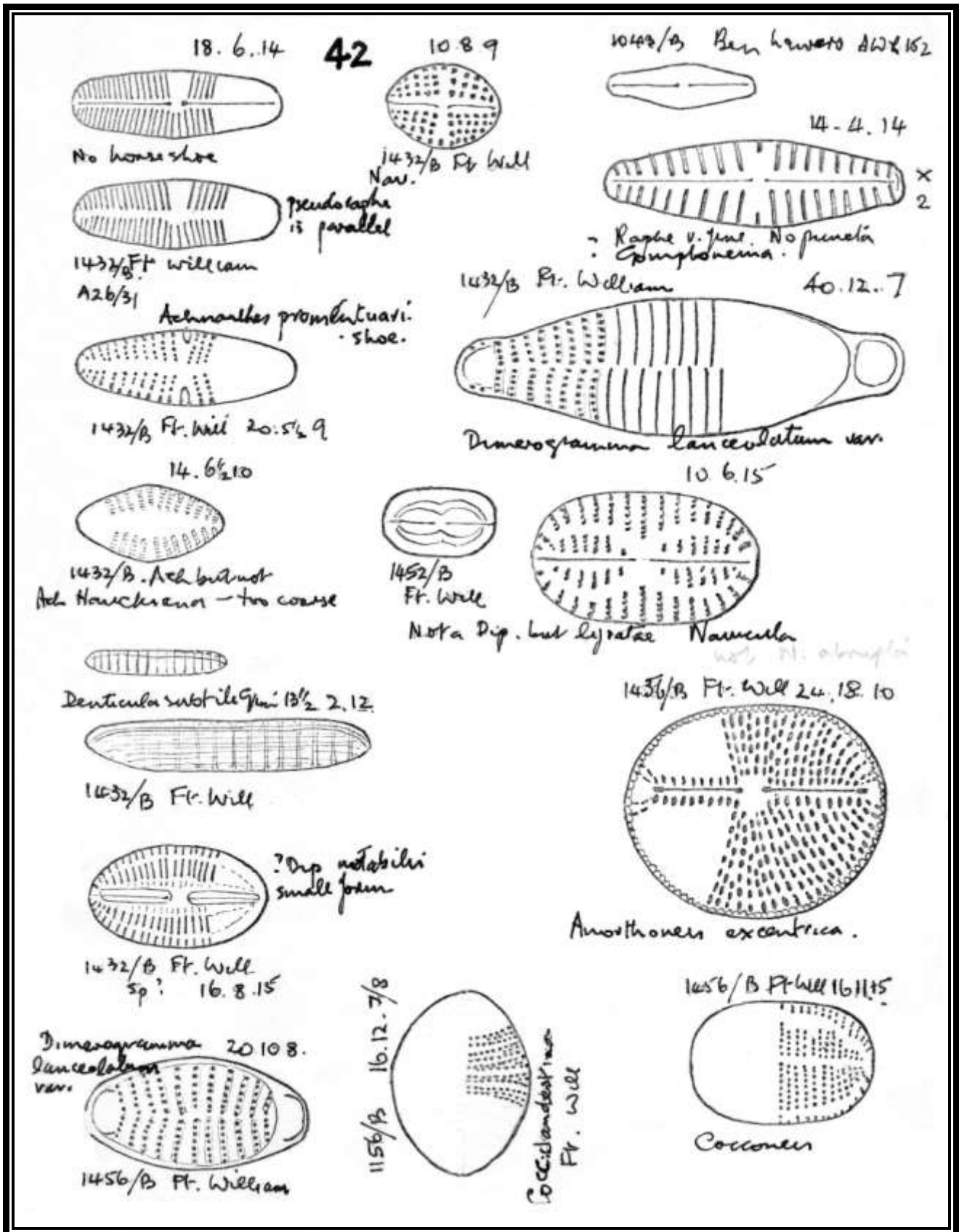
80. 24. 14



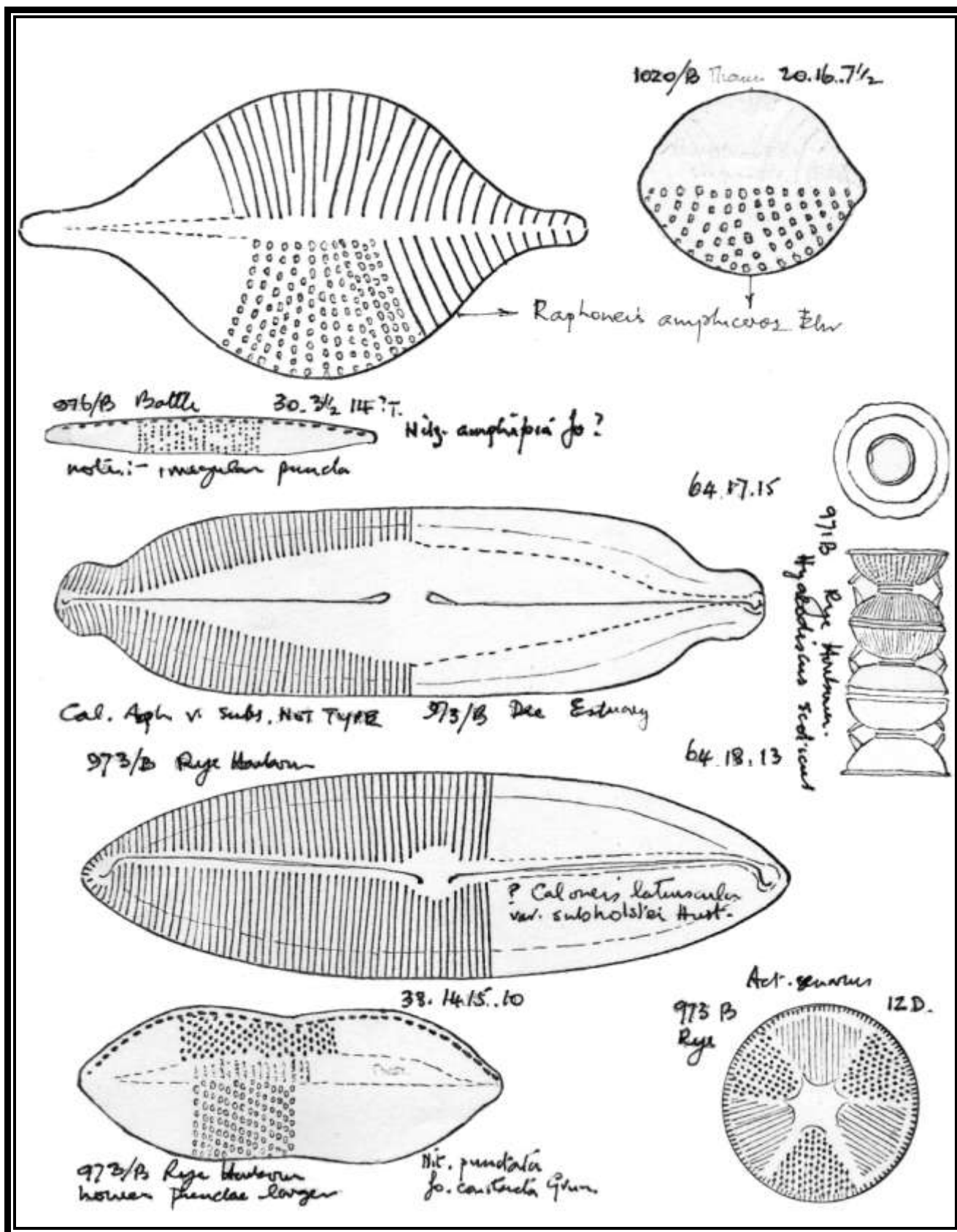
Anomoeoneis sculpta var. *capitata*.







Miscellaneous Plate 43



II. 1063 Psa. coll. 40 5 1/2 18



both valves of one frustule



Nav. pupula var. rectangularis.

1063 24.4.22

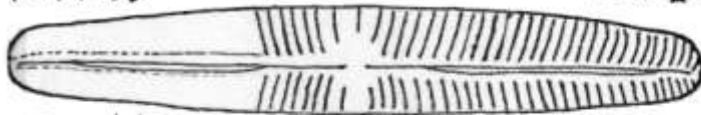


Cal? tepidula.

44

All 1063

45.7 1/2 12



Gyrodonta

a form of Amphioxys veneta



20 3 1/2 28 cae

P11 1063



? not veneta or normani.
maybe gracillima
Stria very fine to poles & all away rows

P11 1063

35.6 1/2 22



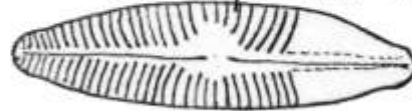
P11. 1063 Peabody Collection

31.6 1/2 22



fine puncta marked Stauroneis
dorsal area very narrow parvula var
See Note 2/6/81 Promonula

P11 1063 Peabody 27.7. 14 5/8 CAE

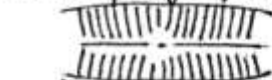


3201 C

22 5 1/2 14

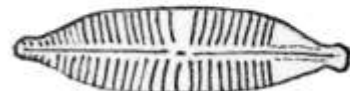
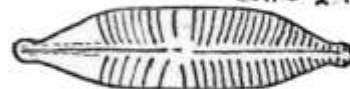


Kelley-Craig - Yorks



c. form 1 frustule

22.5 1/2 13 CAE



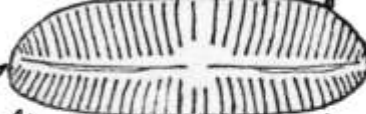
13201 C.

24.4.23



? macro

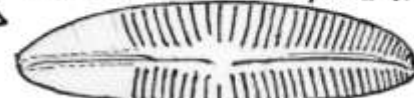
13201 C Kelley-Craig 24.8. 13/11



Gyrodonta obtusa small form

13201 C

27 6 1/2 11 CAE



c. obtusa

Miscellaneous Plate 45

13201/C Kilnsey Crag 44.6.9 CAE. 13201C. 24.5.15 D/12 V

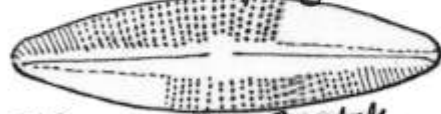


Closely punctate. ? Gough. sub clavatum
C. helveticum v. pennae
(Friedl) Hust.



Striae fairly robust. Punctate close set. Cymbella
hyalinaeformis

13201 C. Kilnsey Crag 28.8.15 CAE



Striae punctate Cymbella

13202/C 18.2.13.



Slapstone Sinter



13201/C 37.6.35.

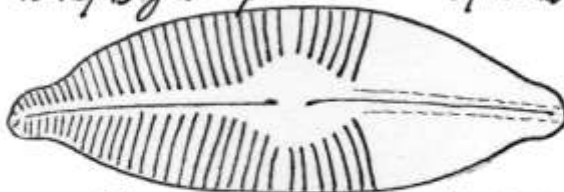


Frustrulia

note v. saxomra ? for. undulata
type Hust.

1346/B Greatip. SE

37.12.13. 12 DOR
WIC CAE



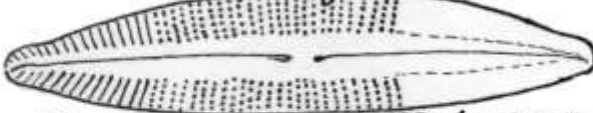
puncta not visible ? Cymbella naviculiformis ?

1060 B Ices tip 28.8.12 12 DOR
3 V WIC CAE



Note Ventral striae shorter
at centron area!

13201 C Kilnsey Crag. Jokes 39.8.15 CAE



Striae punctate see ABA 377 figs 8.9.10.

13201C 24.4.21



finely punctate striae
Kilnsey Crag. Cymbella
? microcephala



? N. Kuttywagana

30.6.13.30



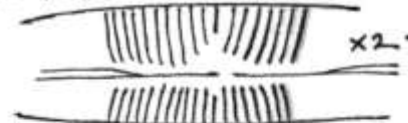
13202 C Slapstone sike

13202 C

32.6.17 WIC
seae



Cymbella delicatula. Kutty.
centres variable @ times



13202 C 22.4.21?

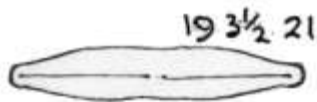


AND. exilis

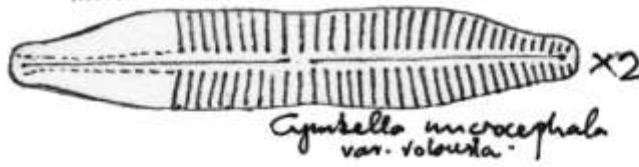


13202 C Slapstone sike

N. case 48.10.12



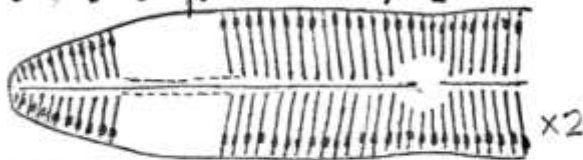
3124 Car Slapstone Sike
Moulted A 5005



Cymbella microcephala
var. *volucra*

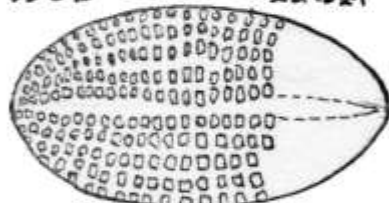


3124 Car Slapstone Sike .27 9 1/2 .25



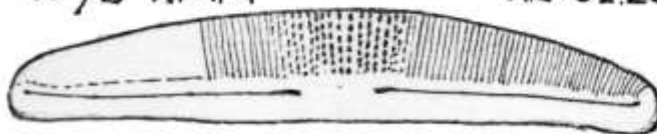
MARKED 27 9 1/2 .25
to this a *Wavicular*

556 B 25 13 1/2 11



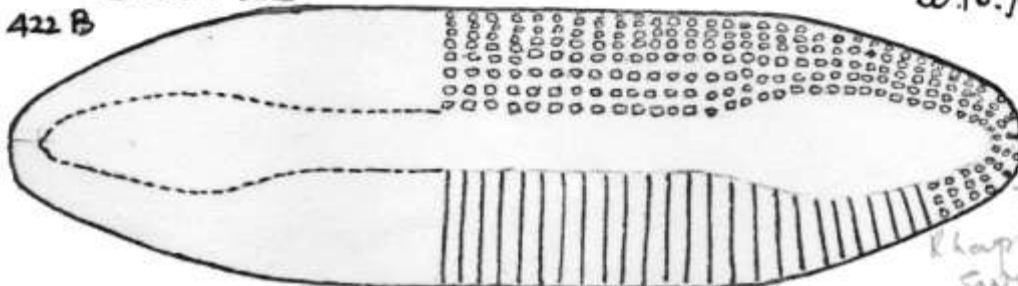
Puncta more angular
Well kept large Bay

856/B RIV.PK



Petard Lake

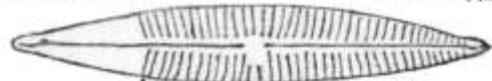
422 B



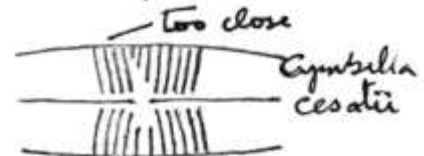
60.18.7

Rhaphoneis
Sinella sp.

3124 c Car Coll. 32.5.15

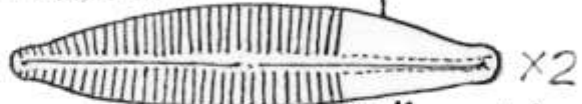


No puncta + only 2 short striae



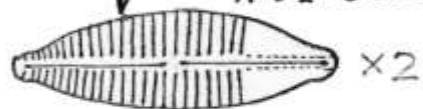
Central area variable

12449/CAR.C.



Cymbella microcephala

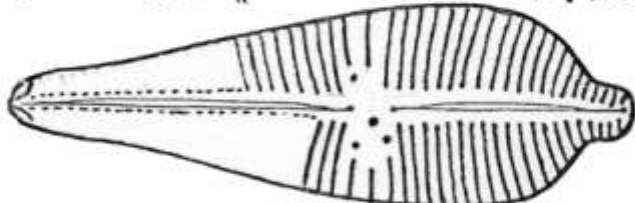
note
parallel
striae



11.3 1/2 23 CAE

856 B RIV.PK

41.14.10

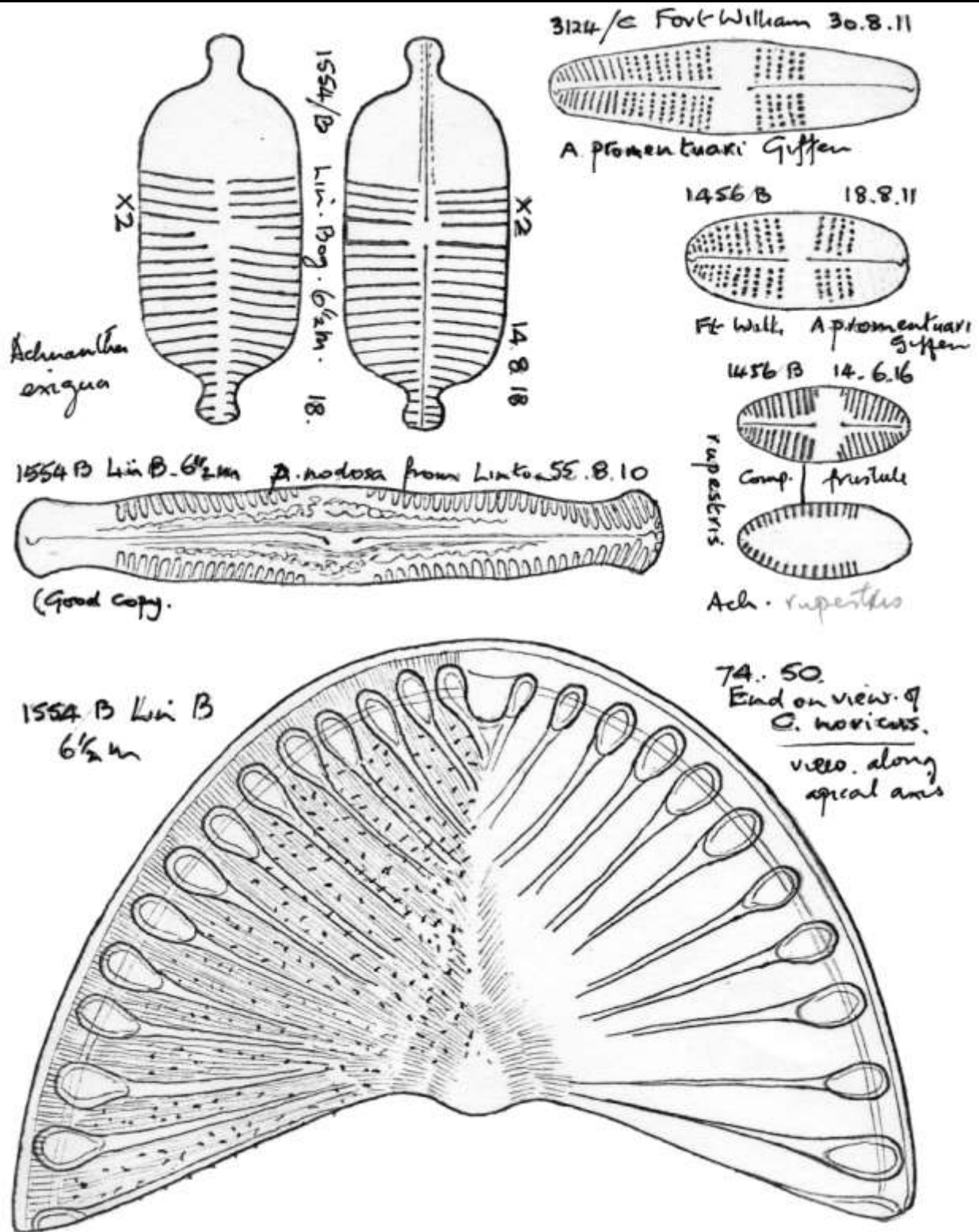


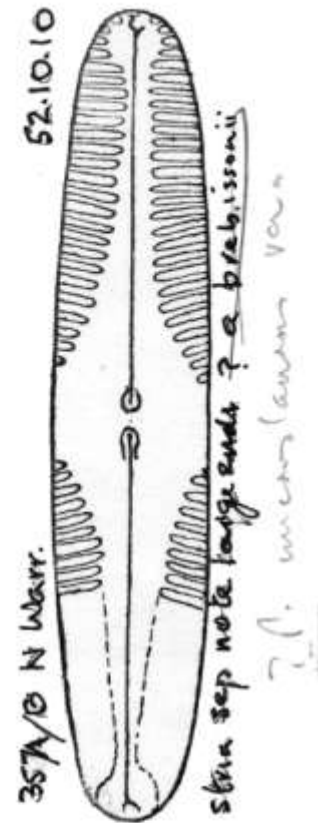
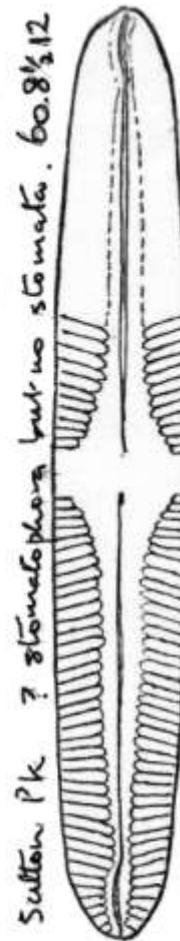
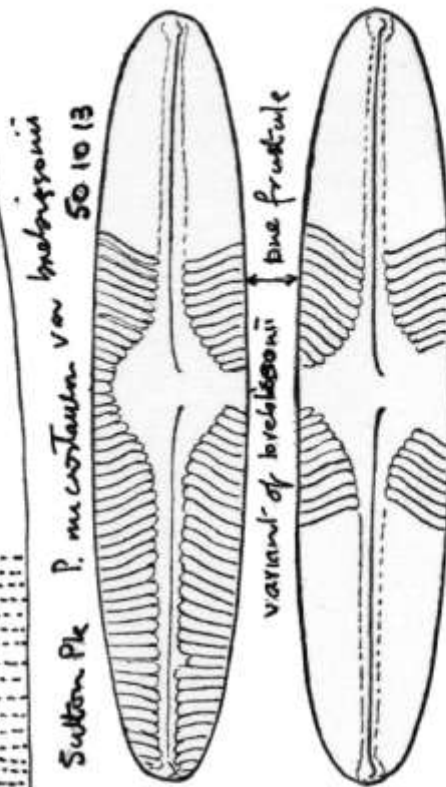
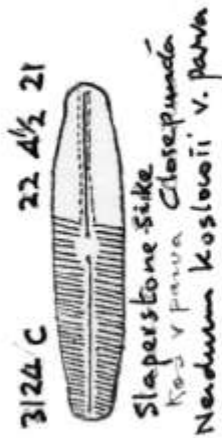
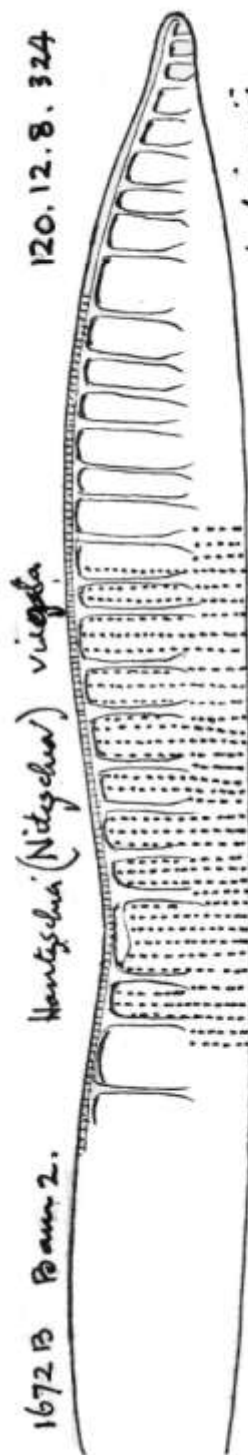
Gomphonema angust. var.
G. olivaceoides

42.6 1/2 20 striae

Amphioxys
veneta

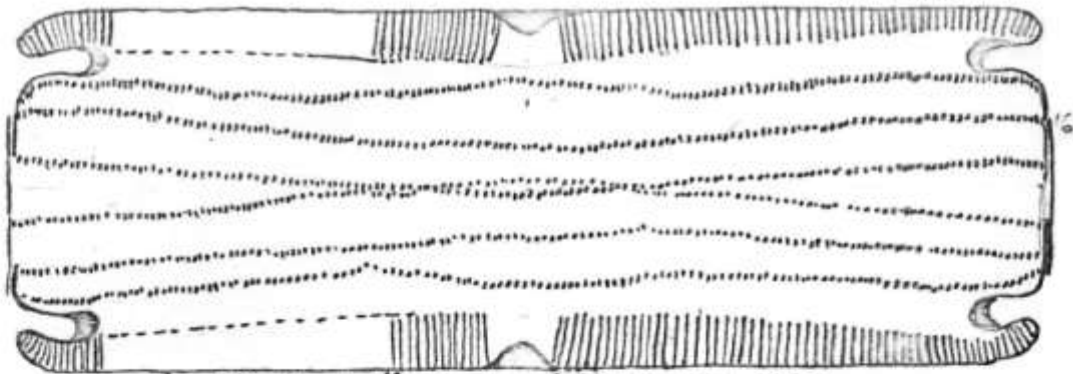
Miscellaneous Plate 47





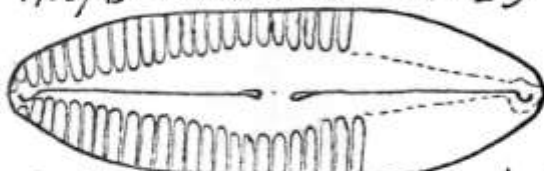
Miscellaneous Plate 49

135.24.13



St. acuta - Prist. girdle view. RIF hand post 1970

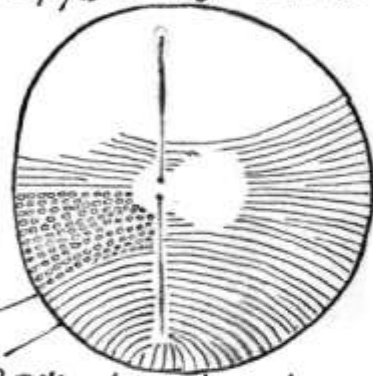
1700/B Sutton Park 35.10 1/2 9



See Hust Hemiptera which A.C. Eul places back into *P. acuminata*.

Anorthoneis excentrica

1672/B Bamb 24D.15

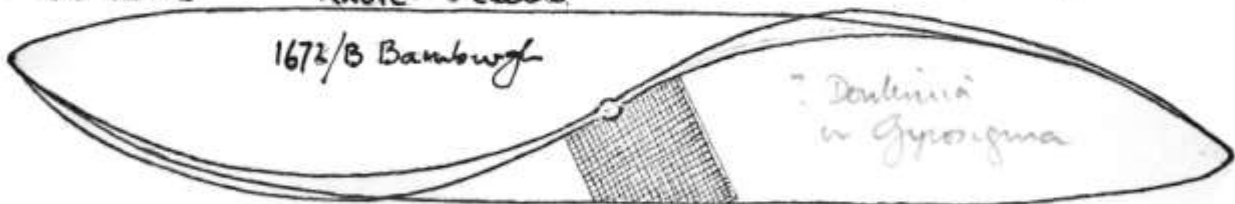


80-12.18

Rhoic ocean

?? (rounded Puncta: drop in size to centre)

1672/B Bamburgh

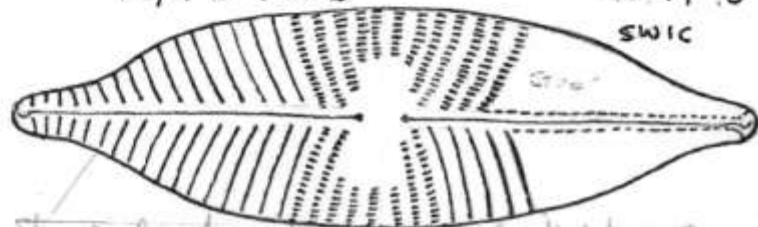


Denticula
in *Gyrogonia*

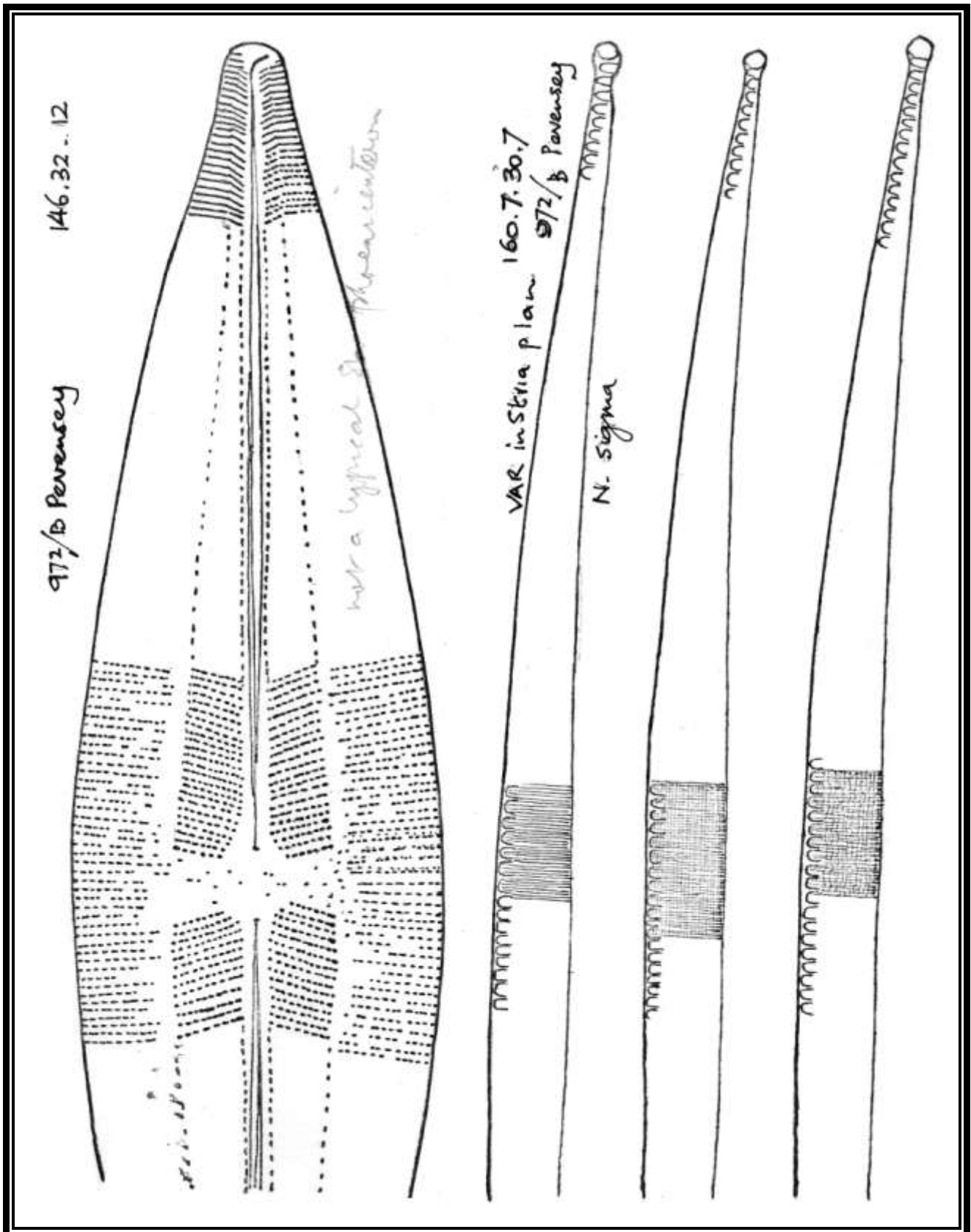
1672 B Bamb

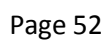
48.14.8

SWIC



Sketch show for rhynchocephala high form murens

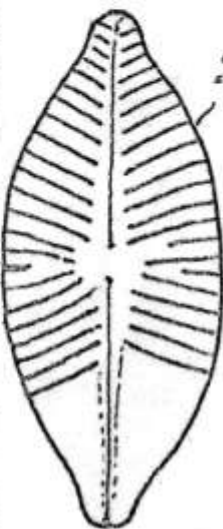




13-13XC N. Z. R. PUNCTATE

125.6.20.9

Lin. 20. 6. 12. 14 125.4.12.9



10 frust. - raphe straight "odd form of N. placitula"

132/2 146.28

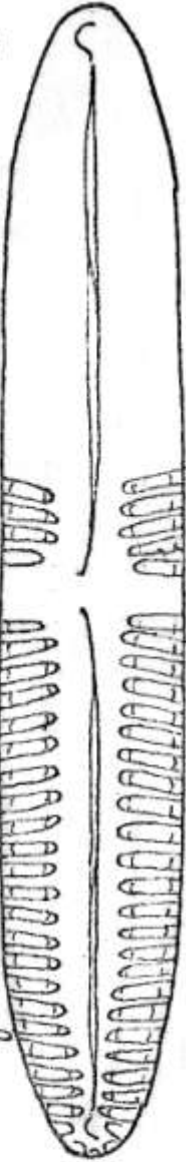


See Rabh. Fig 831

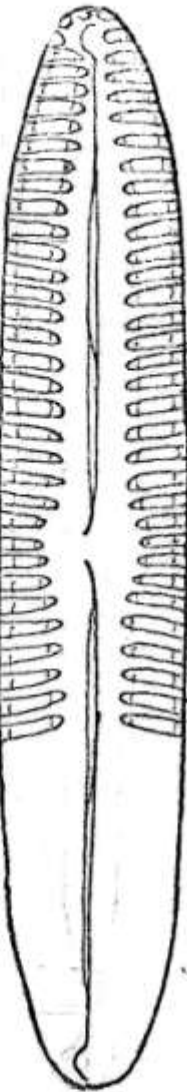
of *Achnanthes hungarica* v. *helvetica*.

P. 120. 12. 14 (E. 2. 12. 14) Cleve
JAC says cleve should have said P. 120. 12. 14

62.10.8.1/2



Note LBs + Raphe Unides type but narrow
no. LBs " Same form non interrupted
58.10.7.1/2



1557/13 EVERETT MOSS

432/13 RGLASYN

44.8.11/11

WIC. CAE

Like a wide form of *C. caesi*

HAB through Cymb. spicula Hart.

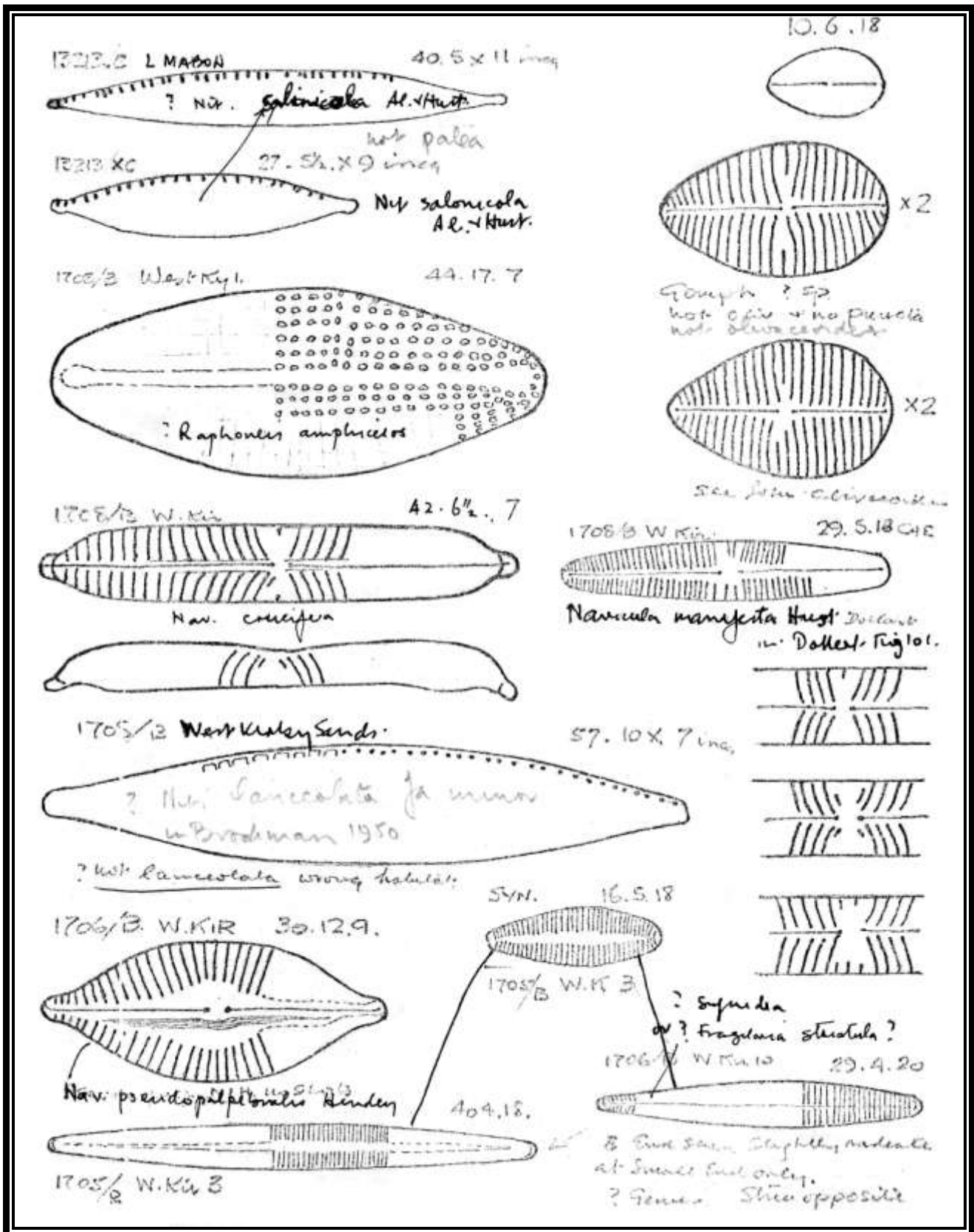
Synedra ? Sp 408/13 W 13

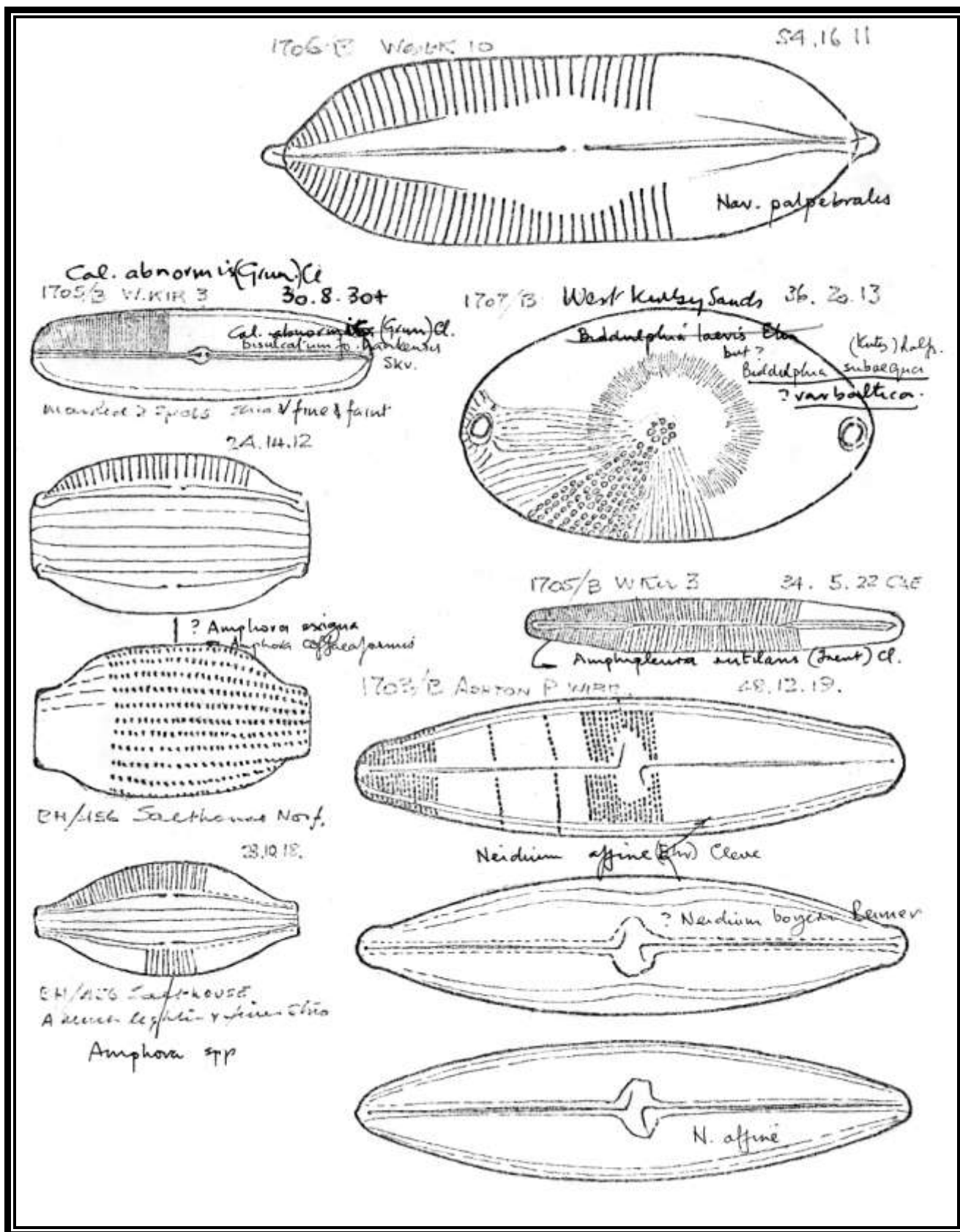
67.6.16



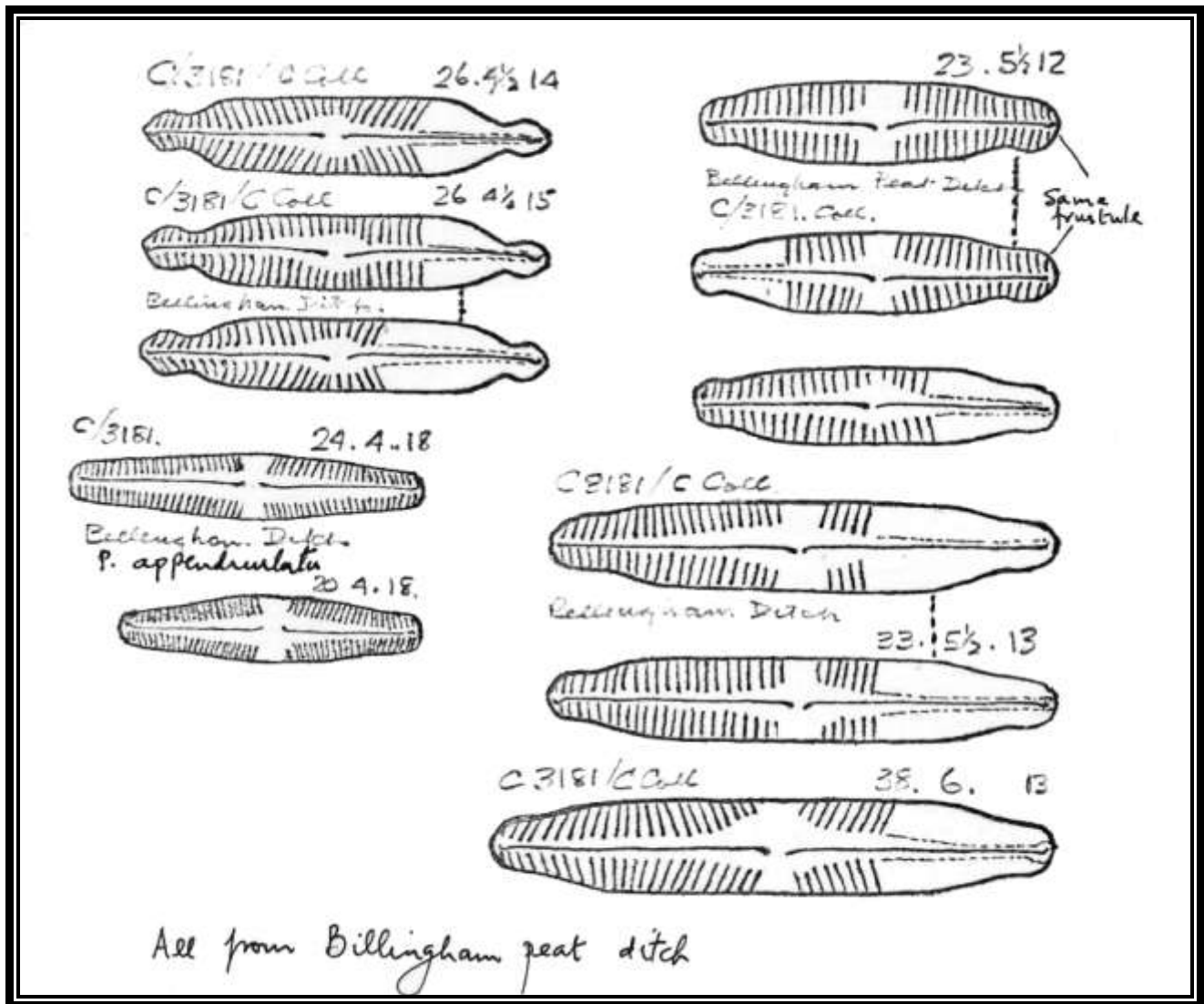
only edge punctate no central pseudo raphe.
Possibly a guide or minor plate.

Miscellaneous Plate 53

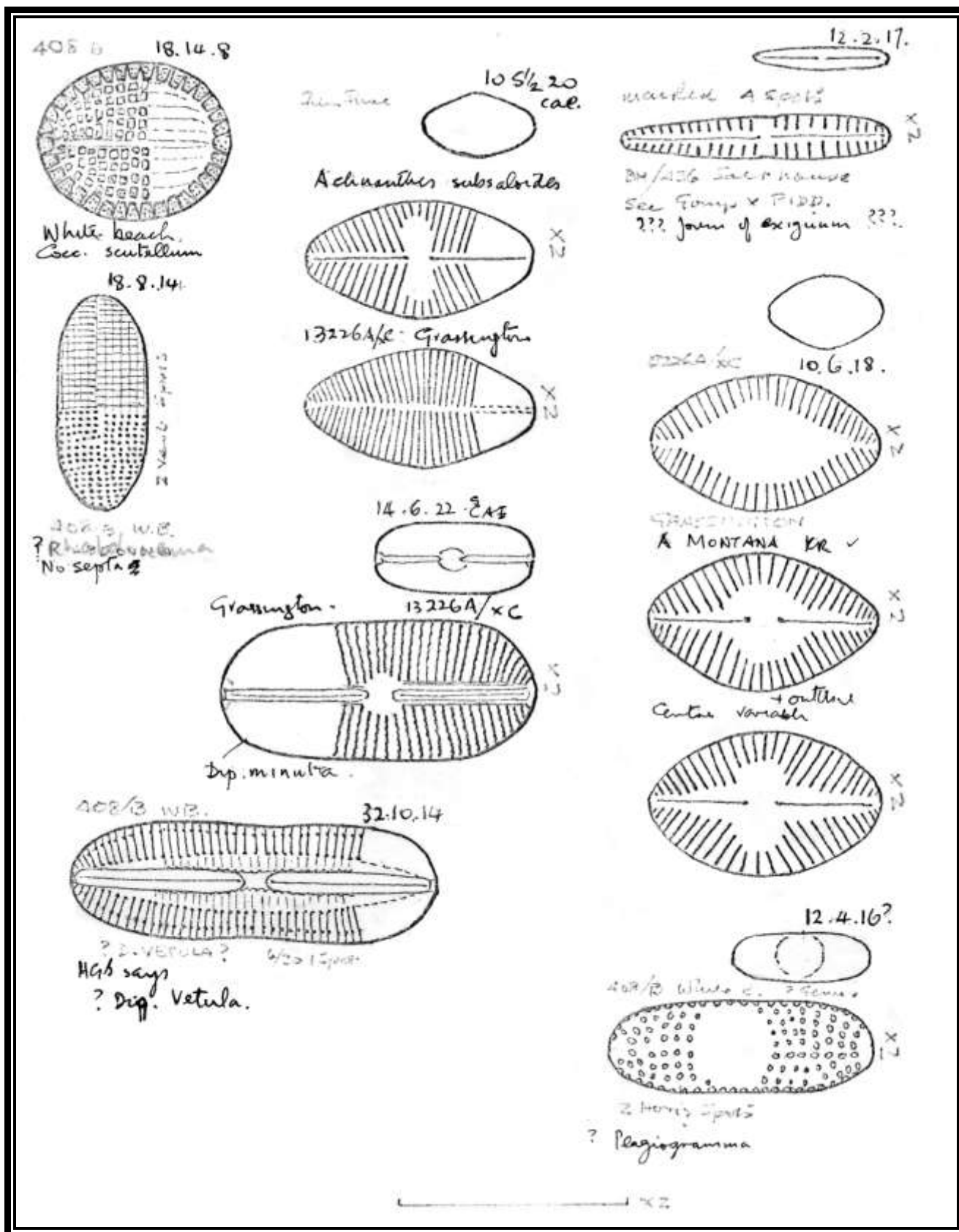




Miscellaneous Plate 55

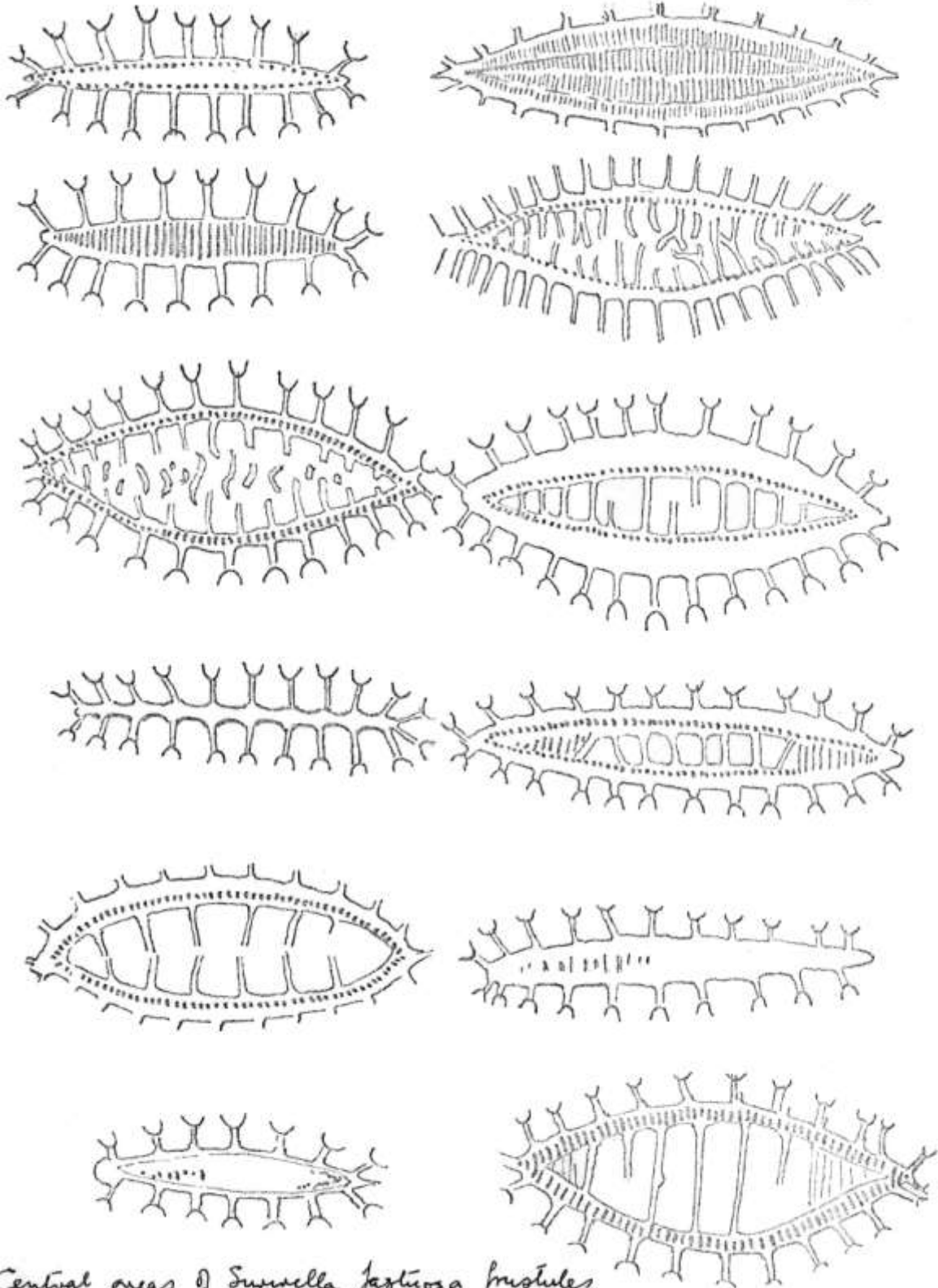


Miscellaneous Plate 56

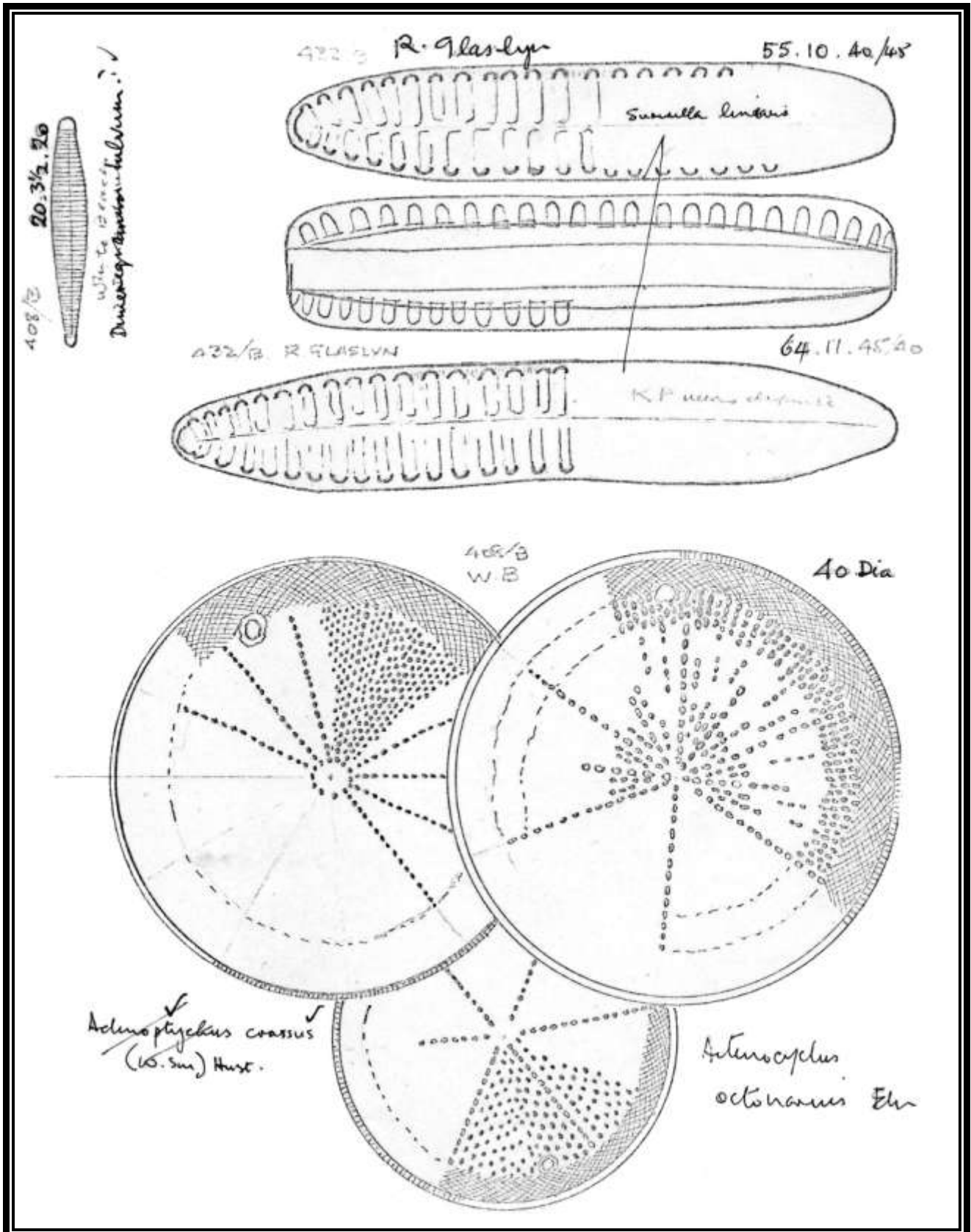


Miscellaneous Plate 57

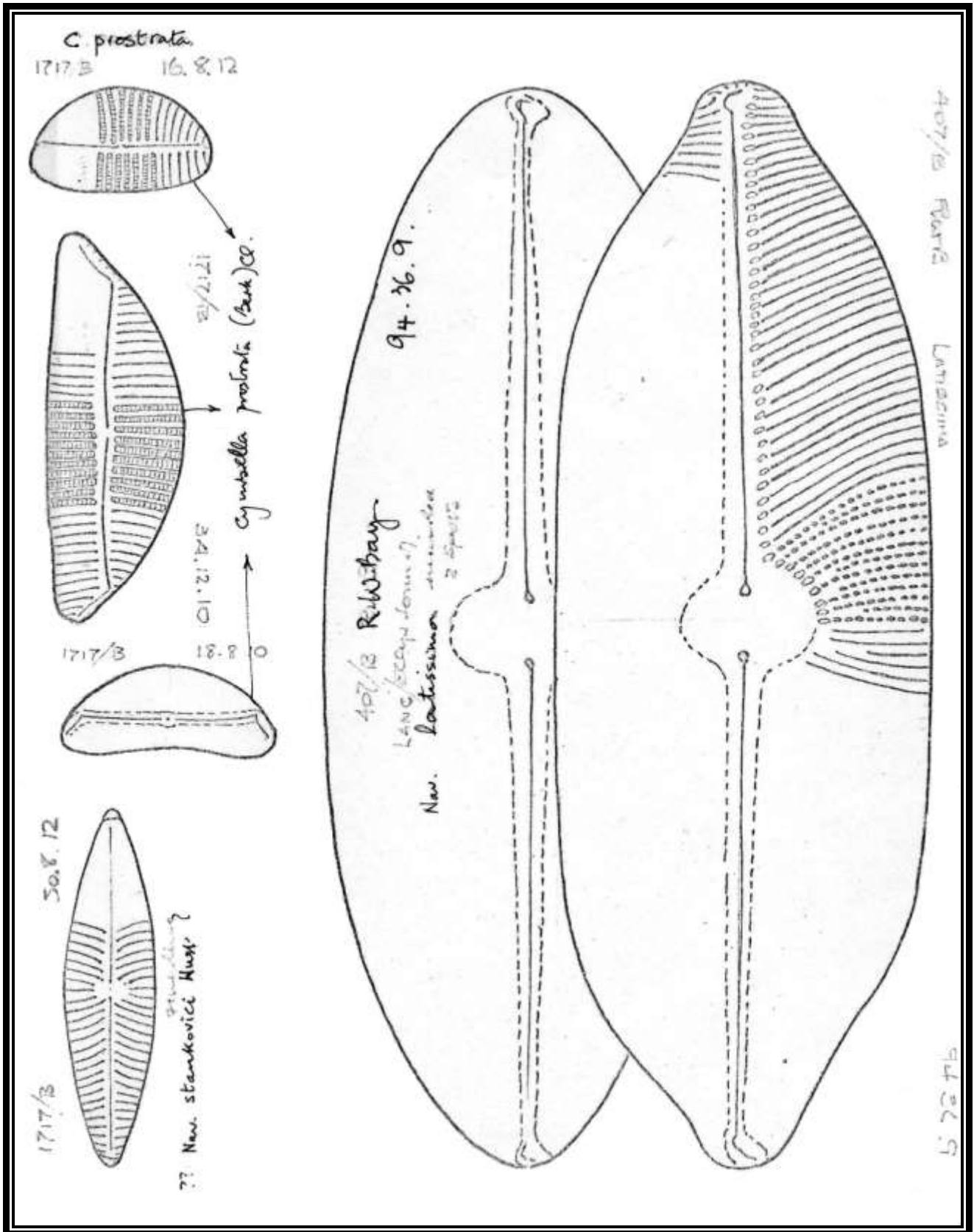
408/B White Bay.

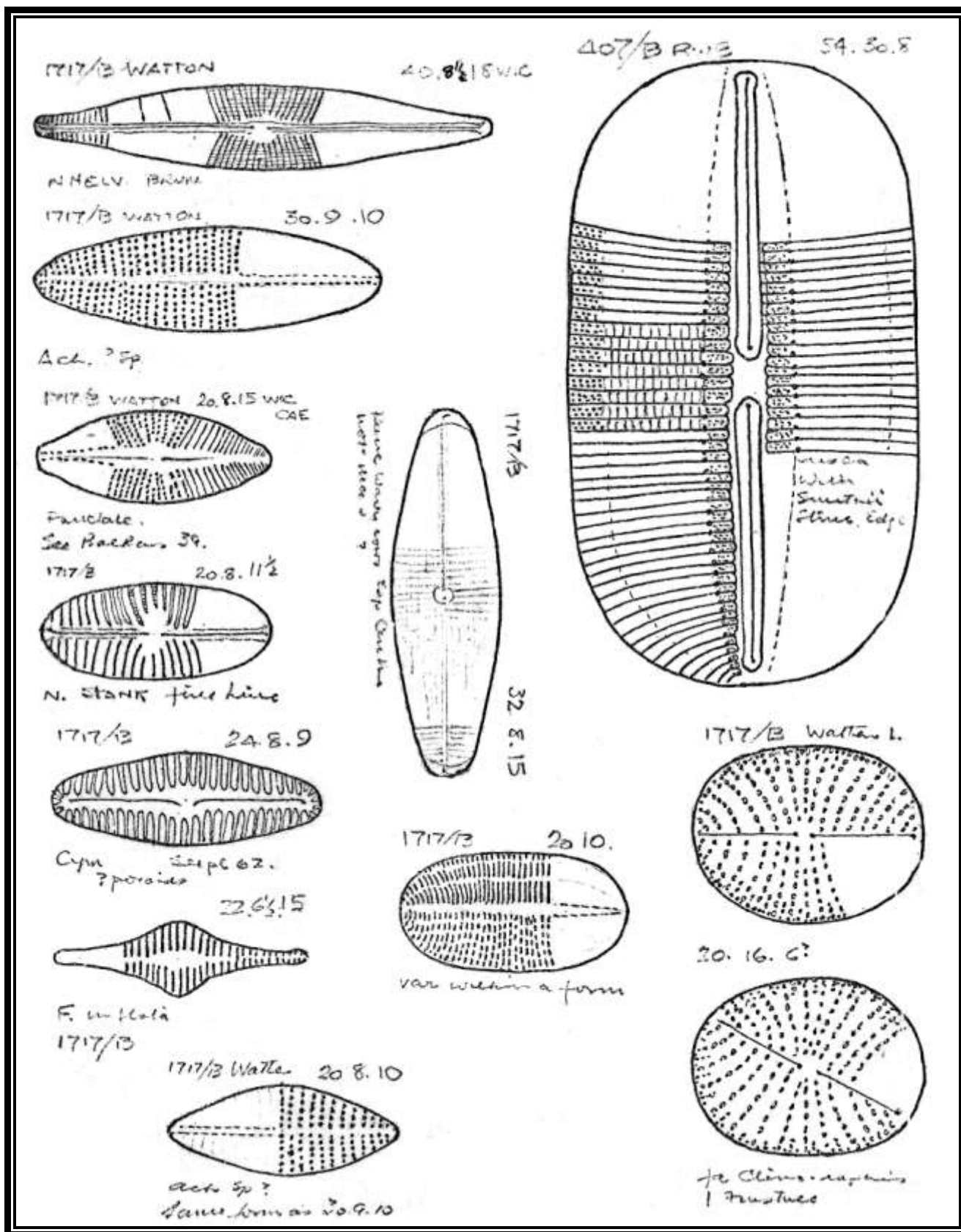


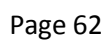
Central areas of *Synella fastuosa* frustules



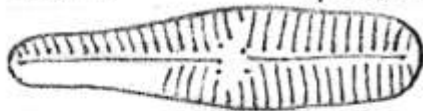
Miscellaneous Plate 59



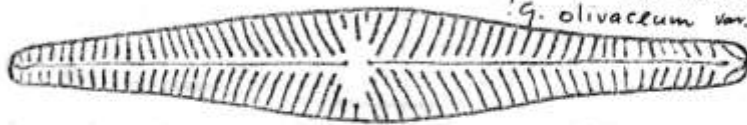




1717/B. Watton Loch 27.6.12



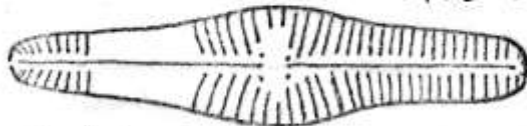
G. olivaceoides ✓



48.7.12
? *G. olivaceum* var. *calcareum* Cl.

2 views a slightly wider 1717/B NO FIGURE

34.8.12.



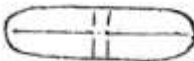
G. olivaceoides 1717/B

20 4 1/2 30?



Cal. ? 2 valves.

? *Cal. bacillaris* Greg



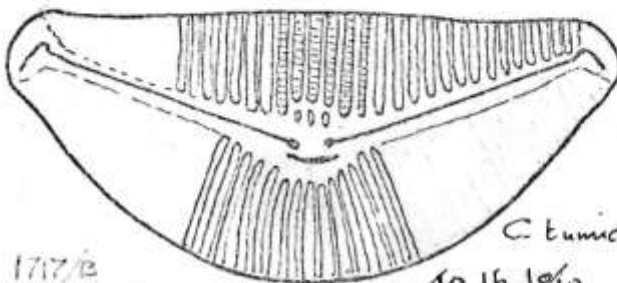
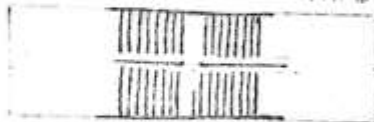
12.3 1/2 27?



x2

2 valves

1717/B

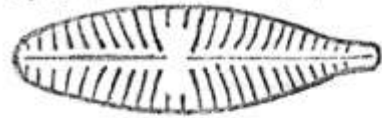


C. tumida

40 16.10/10

1717/B

1717/B 24.7.10

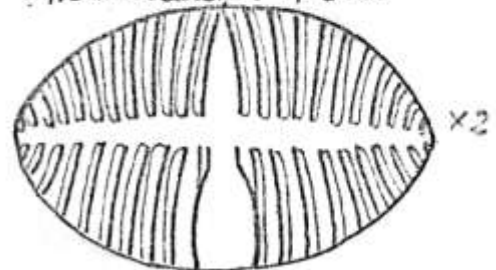


Loch. Watton. CAITH.
Gomph. olivacea



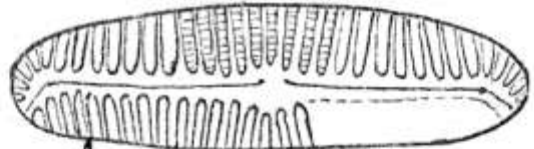
1717/B WATTON

? *Ach. calcar* ?? 14.8.12



x2

1717/B 2 views DMS 34.9 1/2 9

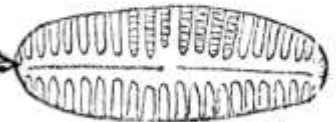


NOT *fenestrata*. ? *Cymbella*. ? *brevistris*.
2000 & 2000 *fenestrata* & *brevistris*

1717/B 20.6.10



Capitate *Gym. sinuata*
Loch. Watton.



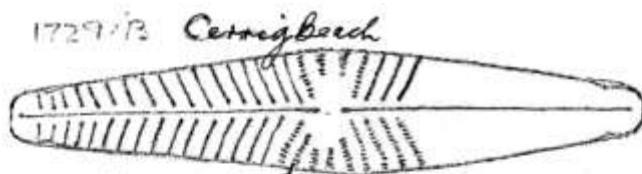
1717/B 20.8 1/2 .9

22.8.9



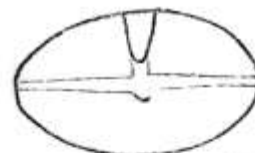
1717/B Watton. *Sinusta*
Normal *Gym. sinuata*

Miscellaneous Plate 63



1729/B Cetrighbach

Nannula inflexa

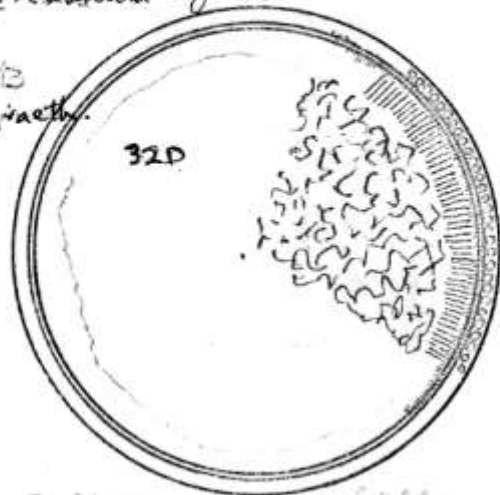


1717/B Watten

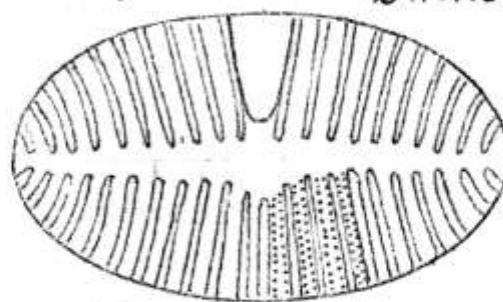
16.10.13

448/B

Pentiaeth.



32D



X2

Achnanthes calcar

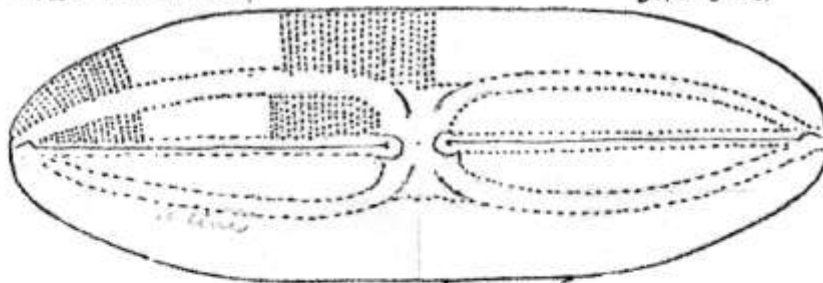
1717/B Watten

15D

? *Mellonea cyclotella*

1728/B Carrig

54.18.18.



? *Nav. forcipata*

See Pollard's
? *Cyclotella tenuis* Hurst
See Hurst's Pollard's

1717/B Watten

20D

1728/B Carrig

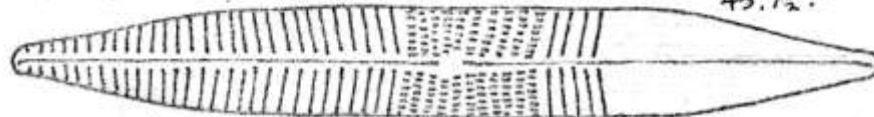
Amphioxaproteus

48.8.11.



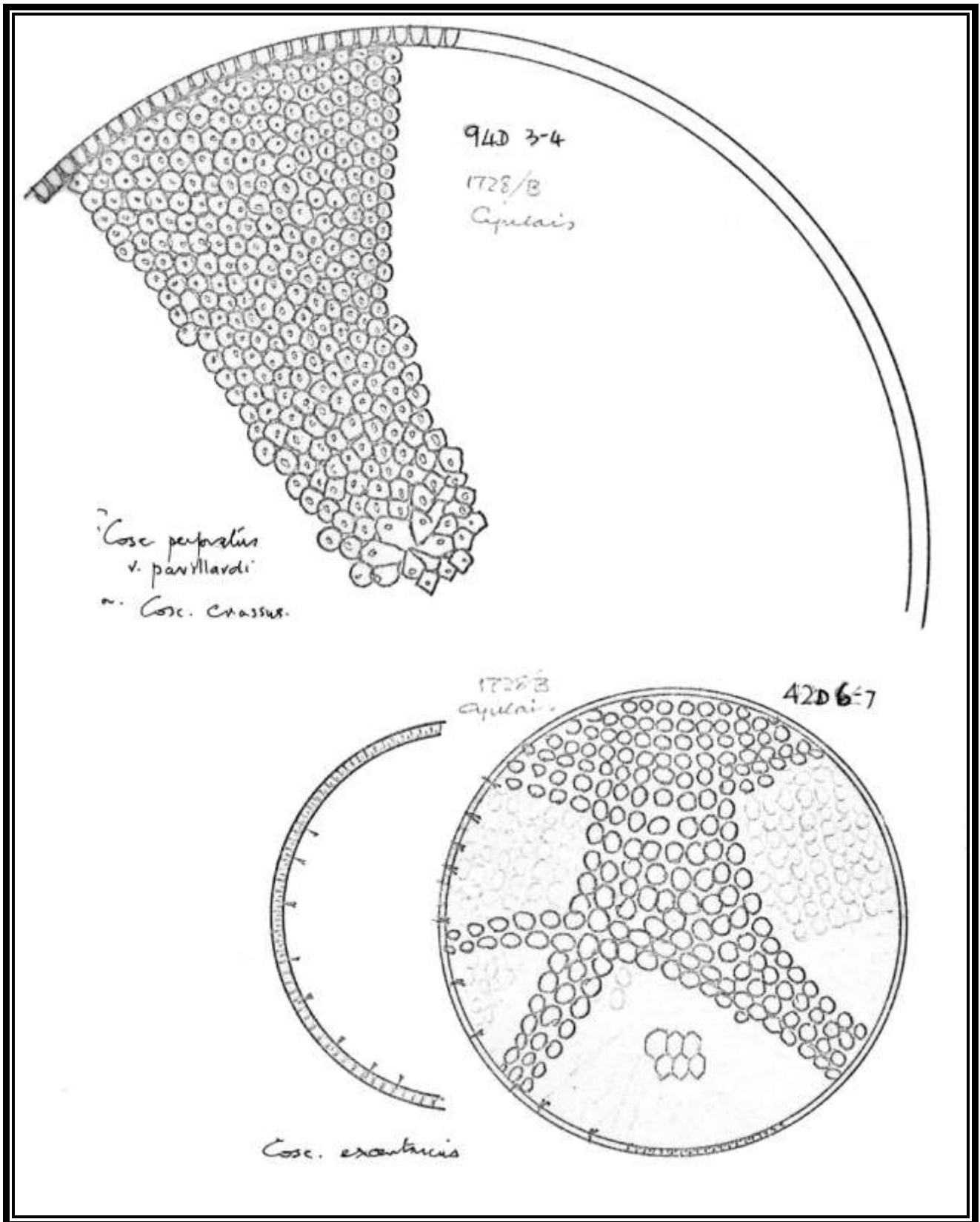
1728/B Carrig 2nd

See Pollard's
Cyclotella Comta (Ehrh)
See Hurst's Pollard's
43.7 1/2 .11

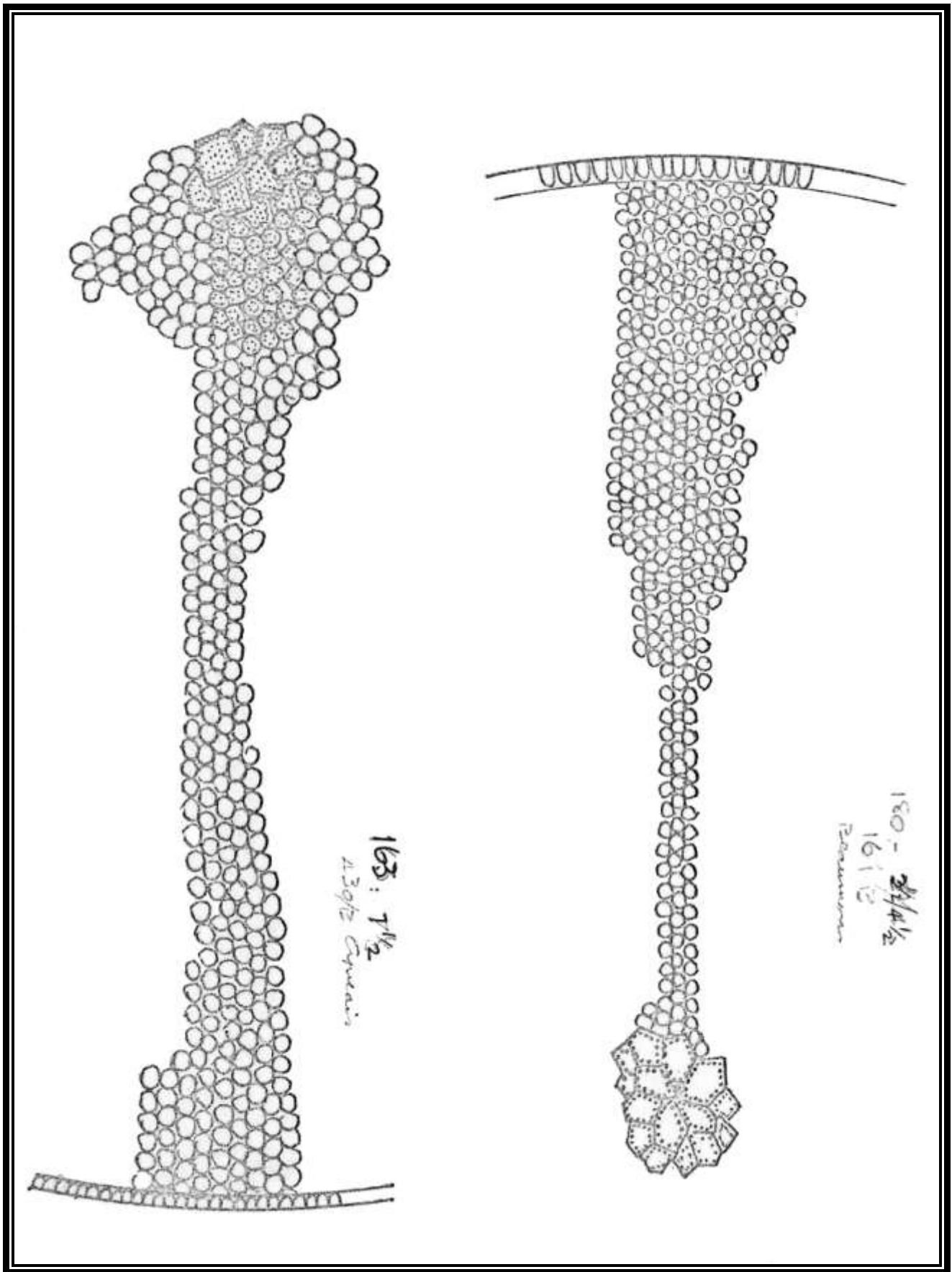


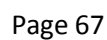
Nav. planatica

Small white in alcohol. Same as
Hurst's *planatica*

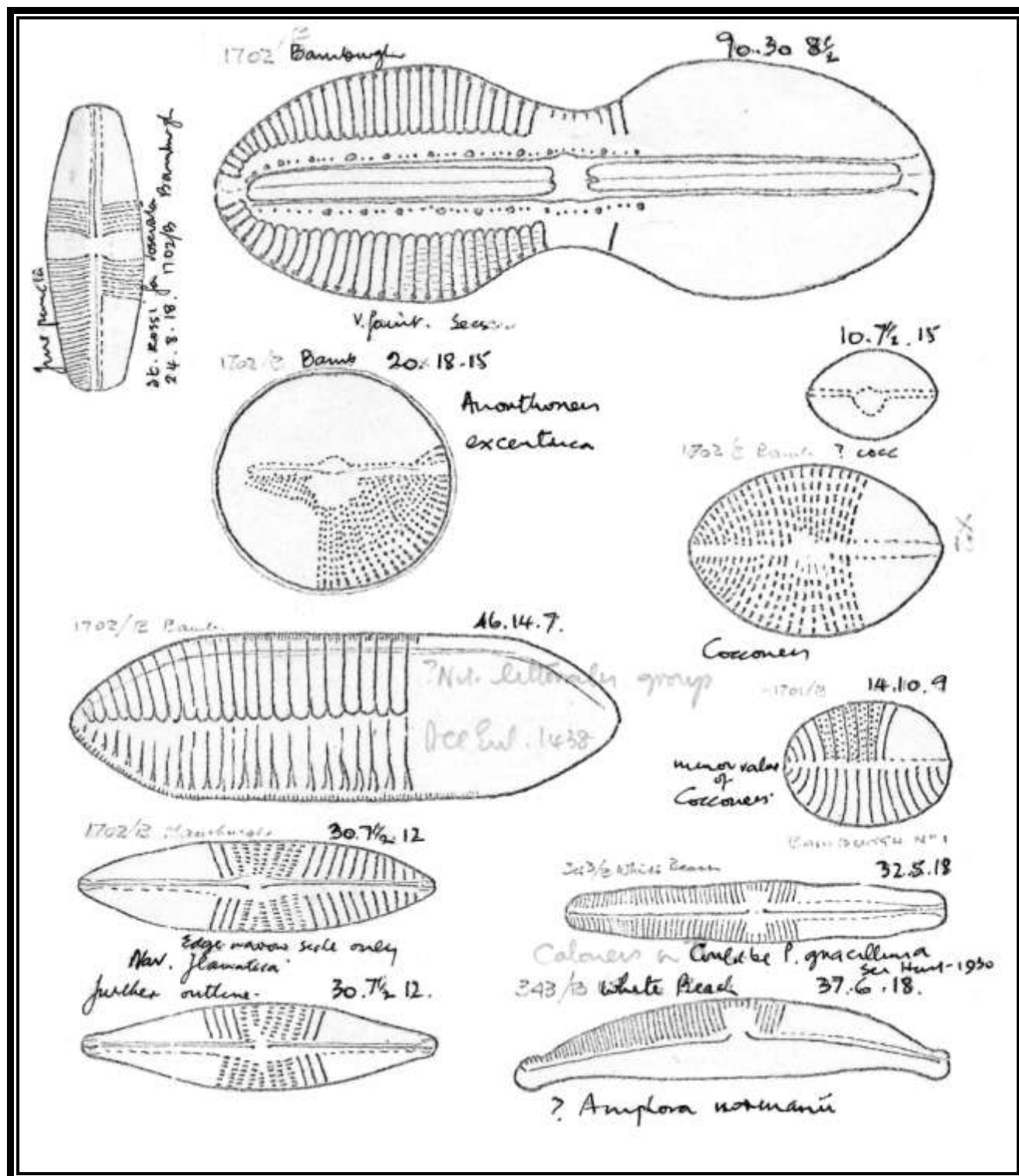


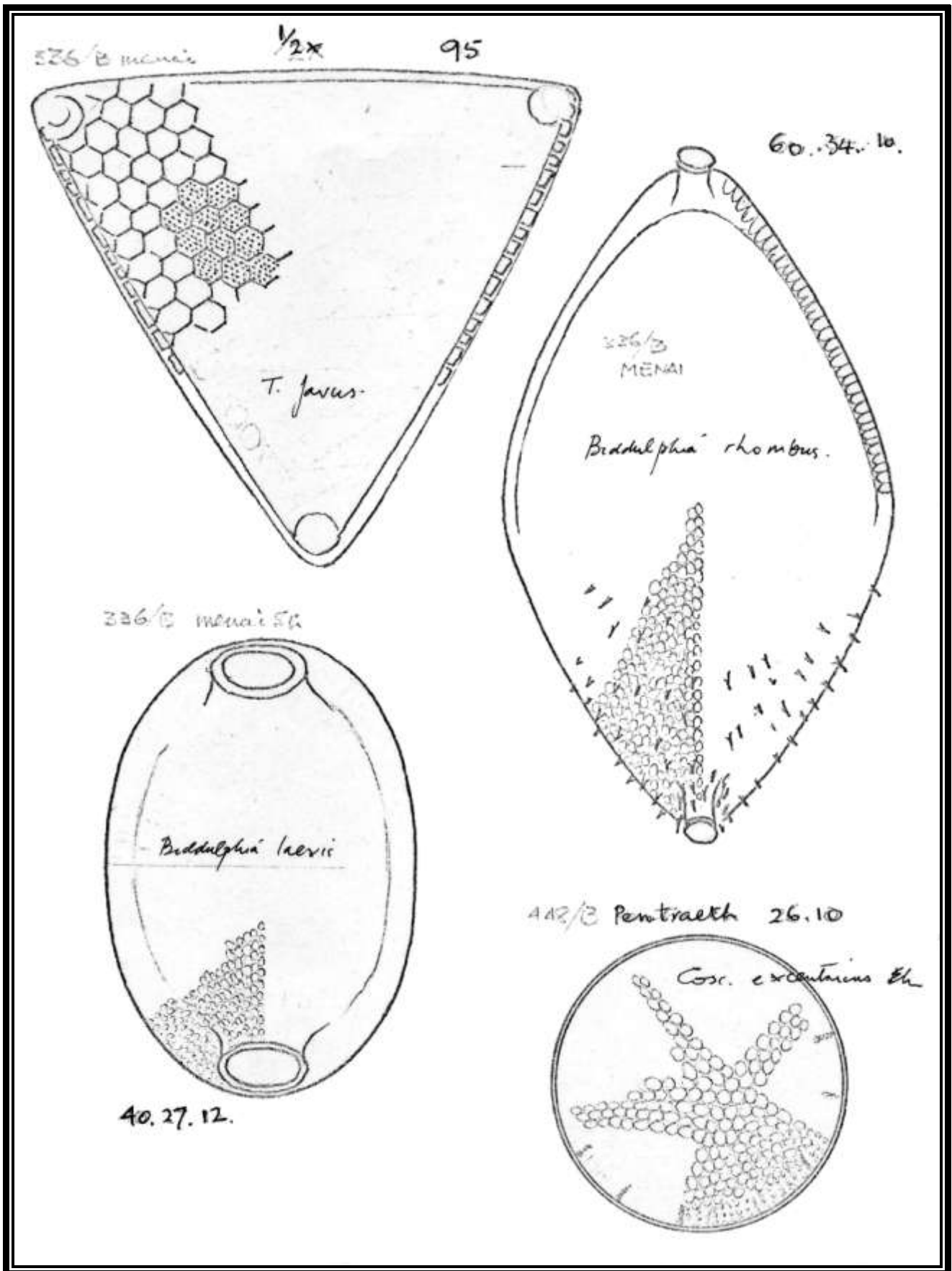
Miscellaneous Plate 65



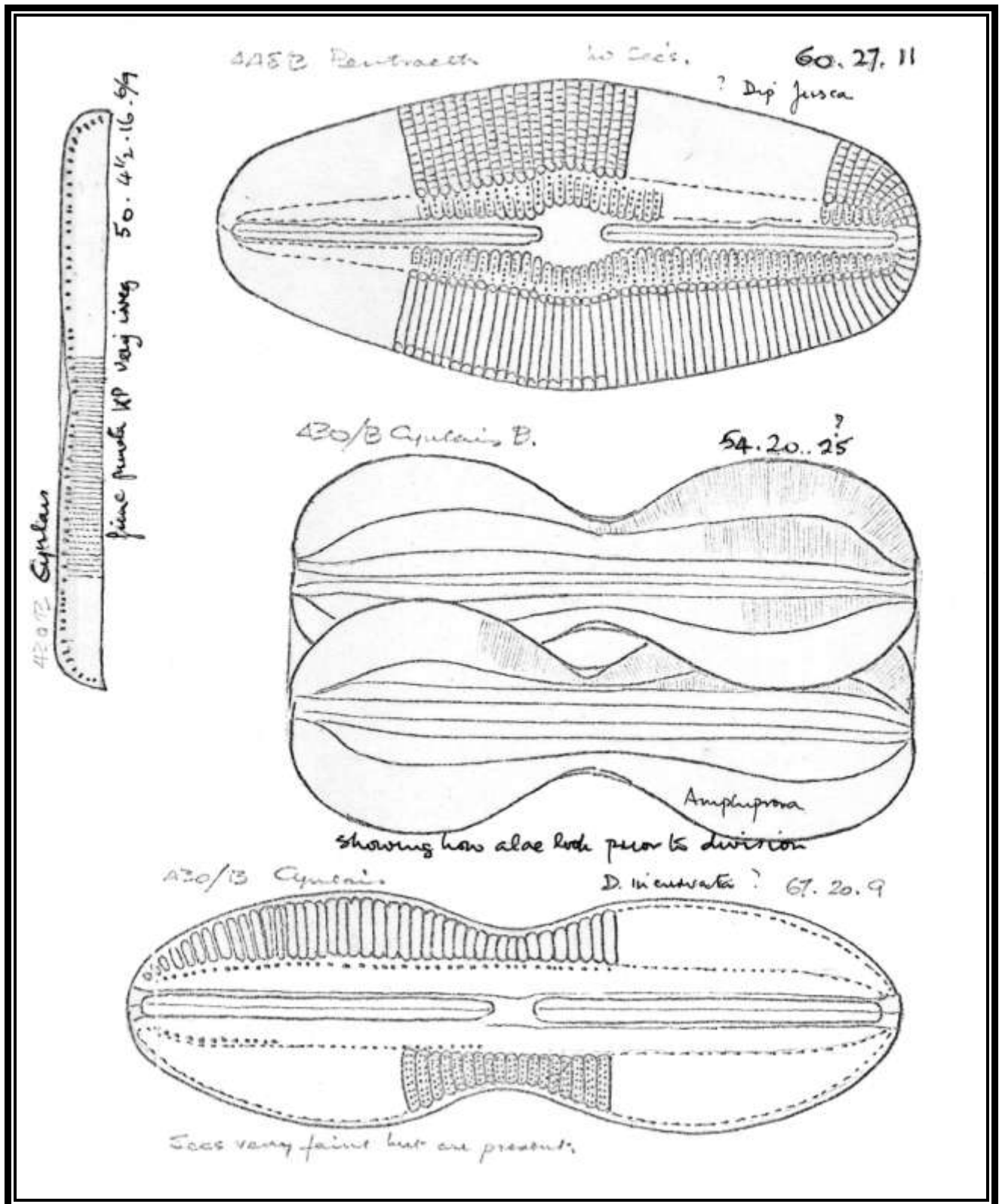


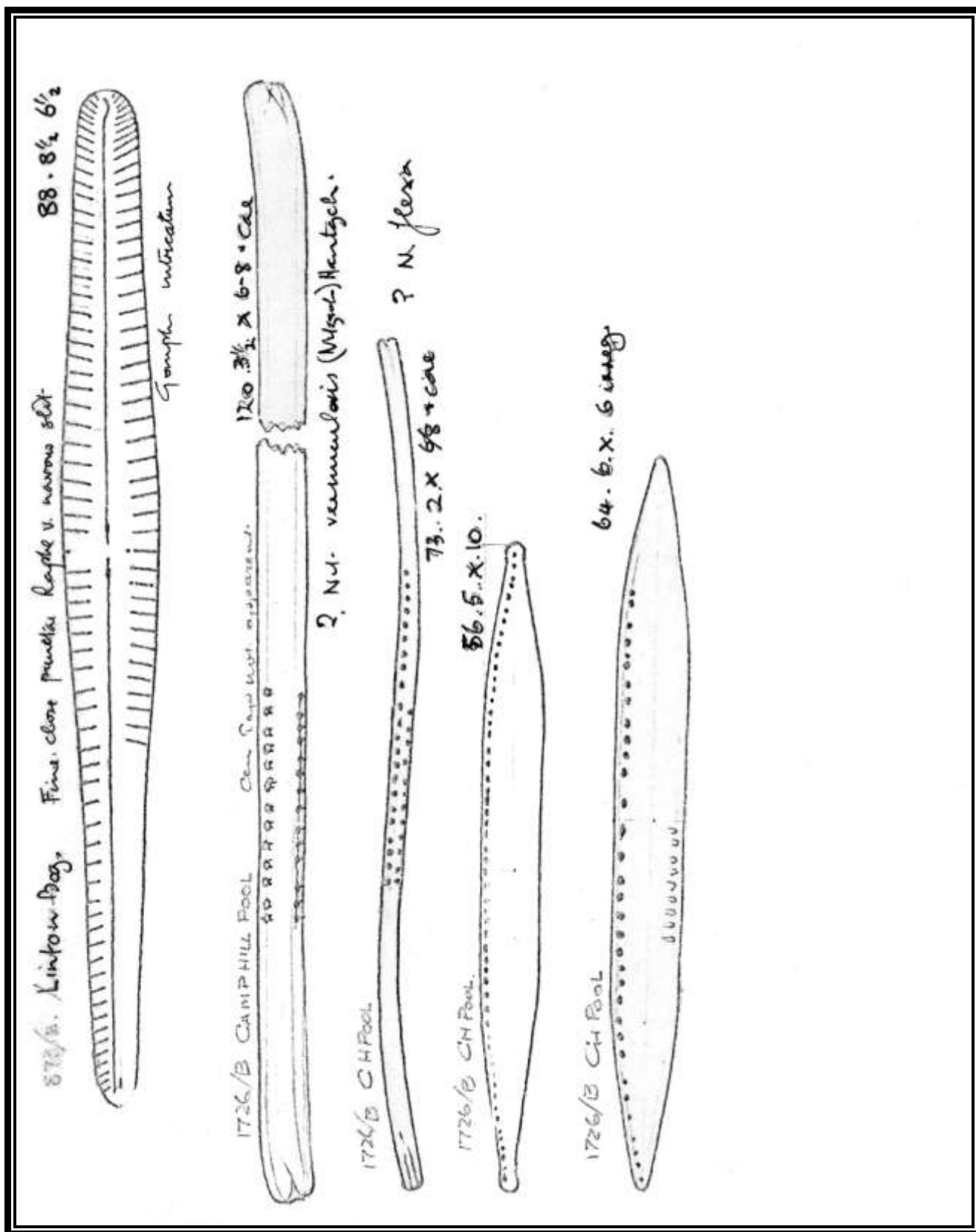
Miscellaneous Plate 67





Miscellaneous Plate 69





Miscellaneous Plate 71

Gomph.
12.5½. 12/5



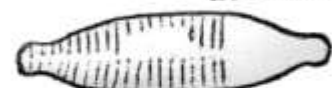
1773/B
KIDD PK Gomph. parvulum



WIC CAE



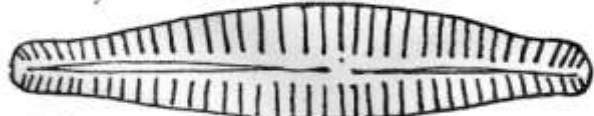
20.5.14



KIDD FORK
Cap Synedra bivalensis
Gen. & V. variable
Lema

1797/B

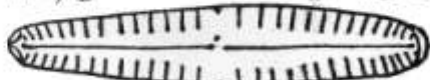
37.7½. 8D. 7½ v.



G/C ancyli Gomphonema ancyli.
Sunbiggin Tarn orlon (Cleve) Hust

1797/B

27 5½. 10 CAE



SUNbigg T. x Peab
Gomphonema intarsatum v. pumila.

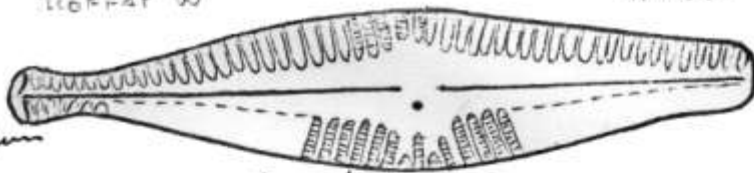


1797/B Sunbigg T.

38.5½. 8 CAE

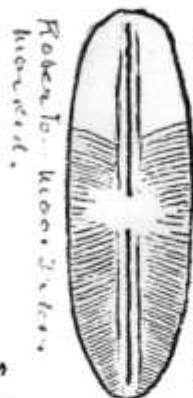
HOFFAT W

47.10.11



Gomphonema ventricosum

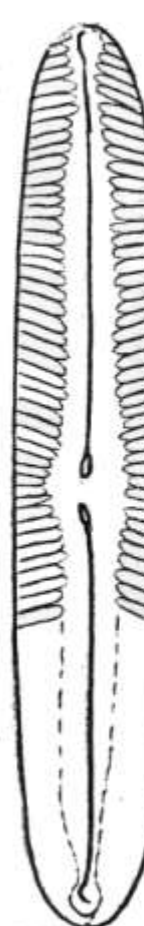
3242 C



25.8.27

Robertson. Kinn. J. & Co.
Hartland.

Sec



3248 C

ARK. T. & E. Co.
Gomph.

? P. microgynia

58.9½. 12



3248 C

ARKINGARIN T. & F. MARKED

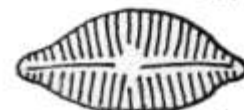
62.10.11

630. on C.C. & H. Co. Gony.
Sunderland

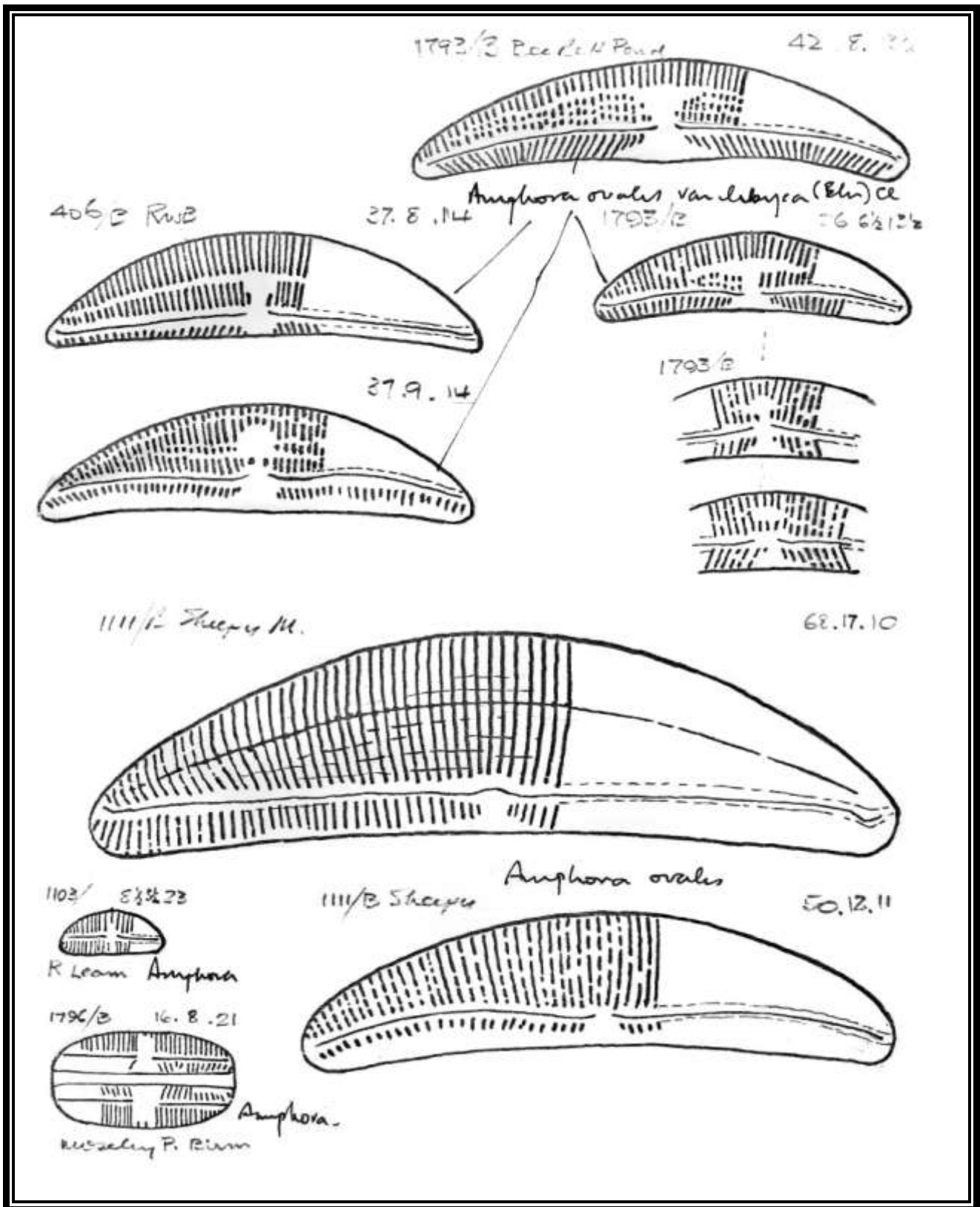
P. microgynia

Cymbella

15.6.13

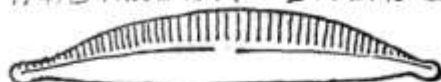


1797/B Sunbigg T.
dotusiuscula



Miscellaneous Plate 73

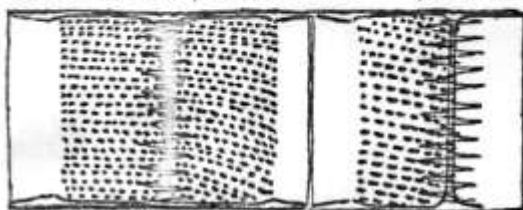
774/B ANCH R.F. 28.5.15 CAE.



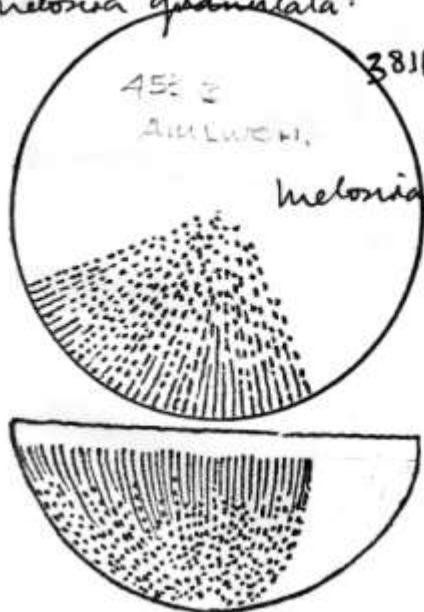
Amphioxus notmani

453/B ANILWCH

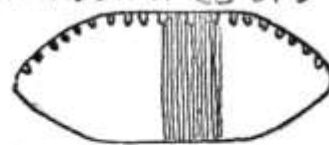
10.16



Melosira granulata

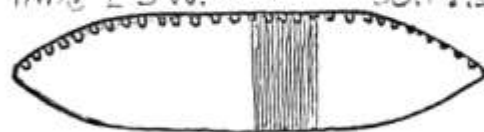


1771/B LSW. 30.8.9 27+



Nitzschia

1771/B LSW. 30.7.9.27+



1771/B LSW. 34.5.16.7



28.5.16.7

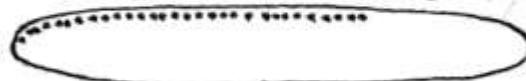
Nitzschia amphibia



16.4 16.7



1771/B LSW. 33.5.X.9/12



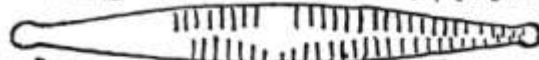
KP variable each valve

20.5.X.9/12

Nitzschia

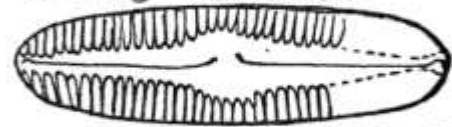


1772/B G.M. tail 34.3.13



? *Fragilaria vaucheriae* n. F.

17249 C C.M. Simon



P. debilis
(Pant.)
C.

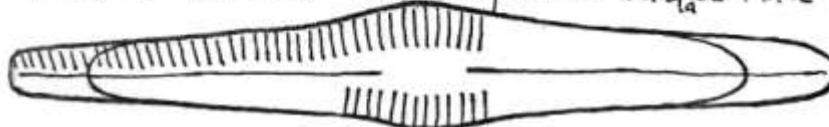
28.7.12

See ACL Eul 1041 B.

a *P. hemiptera* x *pumila* K.

See ACL Eul 1042 C.

1773/B Kila PK RHODOSPHEMIA cova 55.8.12

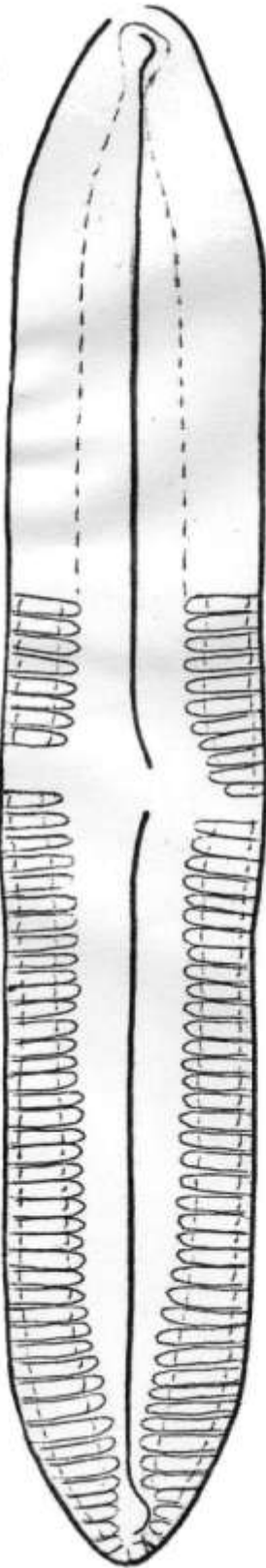


100. 18. 8

P. mullerica

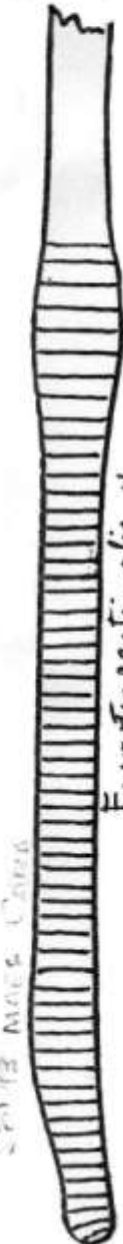
? *P. Hemiptera*

5.81 '13 Kues Canad



7-8

114. 4.



E. ventralis

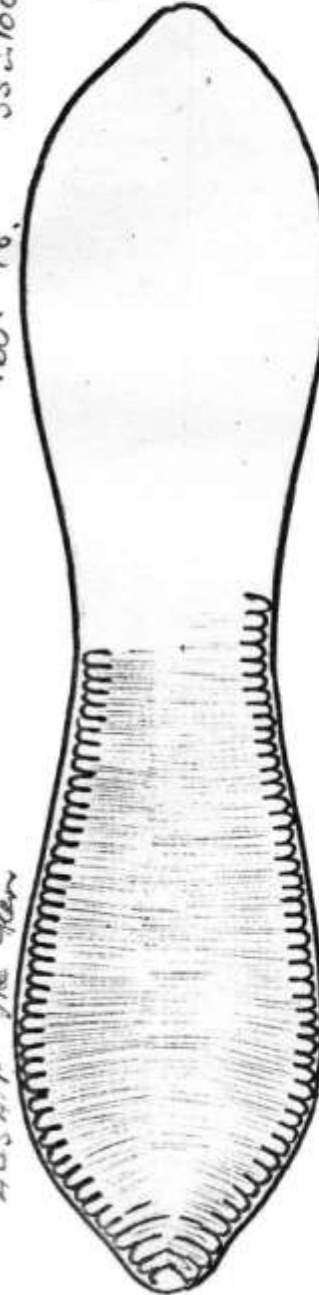
4.5.5.1/10 The Glen

160. 18.

53. 100

55"

Cymato pleura
solea



1799/3

150.4 x. 10



ABR. 1305.

Nitzschia.

note N. Hemmi See rounded Kp.

Miscellaneous Plate 75

448 12 Pentraeth Rub.

57.10.14

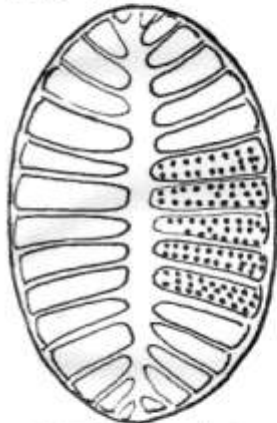
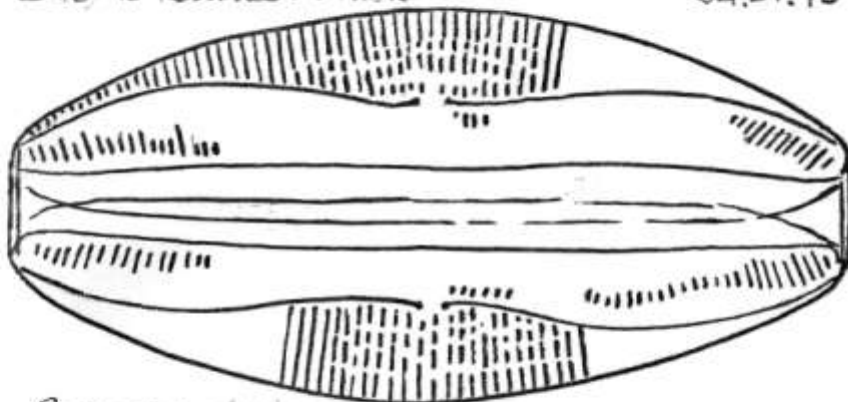


Amphora

448/13 Pentraeth Rub.

54.24.13

27.17.5

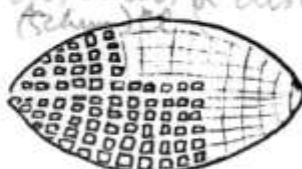


1800 1/2 Kirkwall

Cocconeis clandestina A.Sch

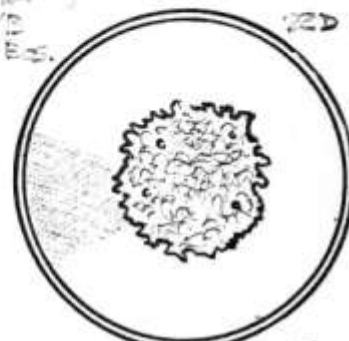
Cocconeis scutellum Gray
(describing to discolored Hurl)
(Schum.)

1799 1/2
Abr. Es.



1800 1/2 18.10.9

KIRK WALL



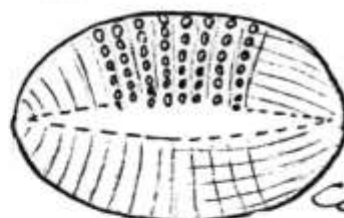
Hyalodiscus scoticus

30.10.22.11



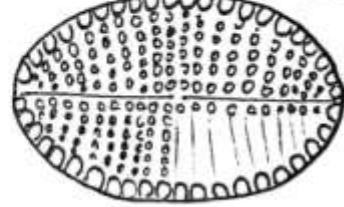
Quaker Ness

1809/13 *Witzschia panduriformis*
v. *contundens* Grun



Cocconeis scutellum v. *parva*
Perag.

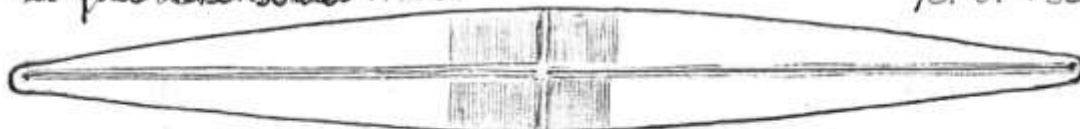
1800 1/2 Kirkwall 22 13.10



FERRA

Nav. quatuorseriensoides Hust.

70. 8. ? 30



See P. 50 Vol 3/1 RAB

HOLCOMBE

1798/13



Side View of

HOLCOMBE 1798/13.

72. 6 1/2. ? 25



? *Stauroneis constricta*

HOLCOMBE 1798/13

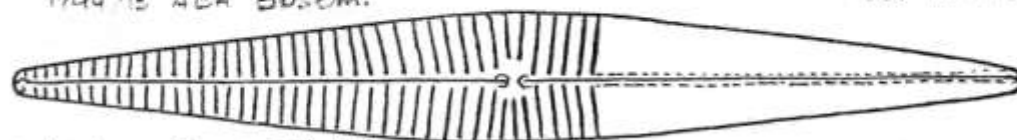
67. 4. X 5



Nitzschia

1799/13 ABH BOSOM.

66. 9. . 10

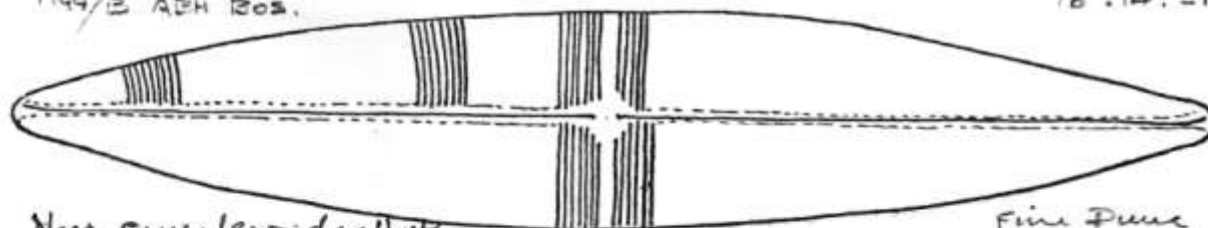


? *N. directa* v. *subtilis* Greg. REV XII.

Line Line

1799/13 ABH BOS.

78. 14. 21

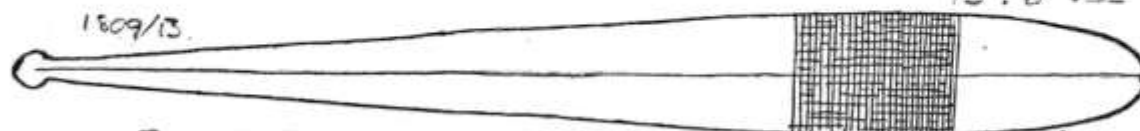


Nav. cruxiferoides Hust

Fine Fine

1809/13.

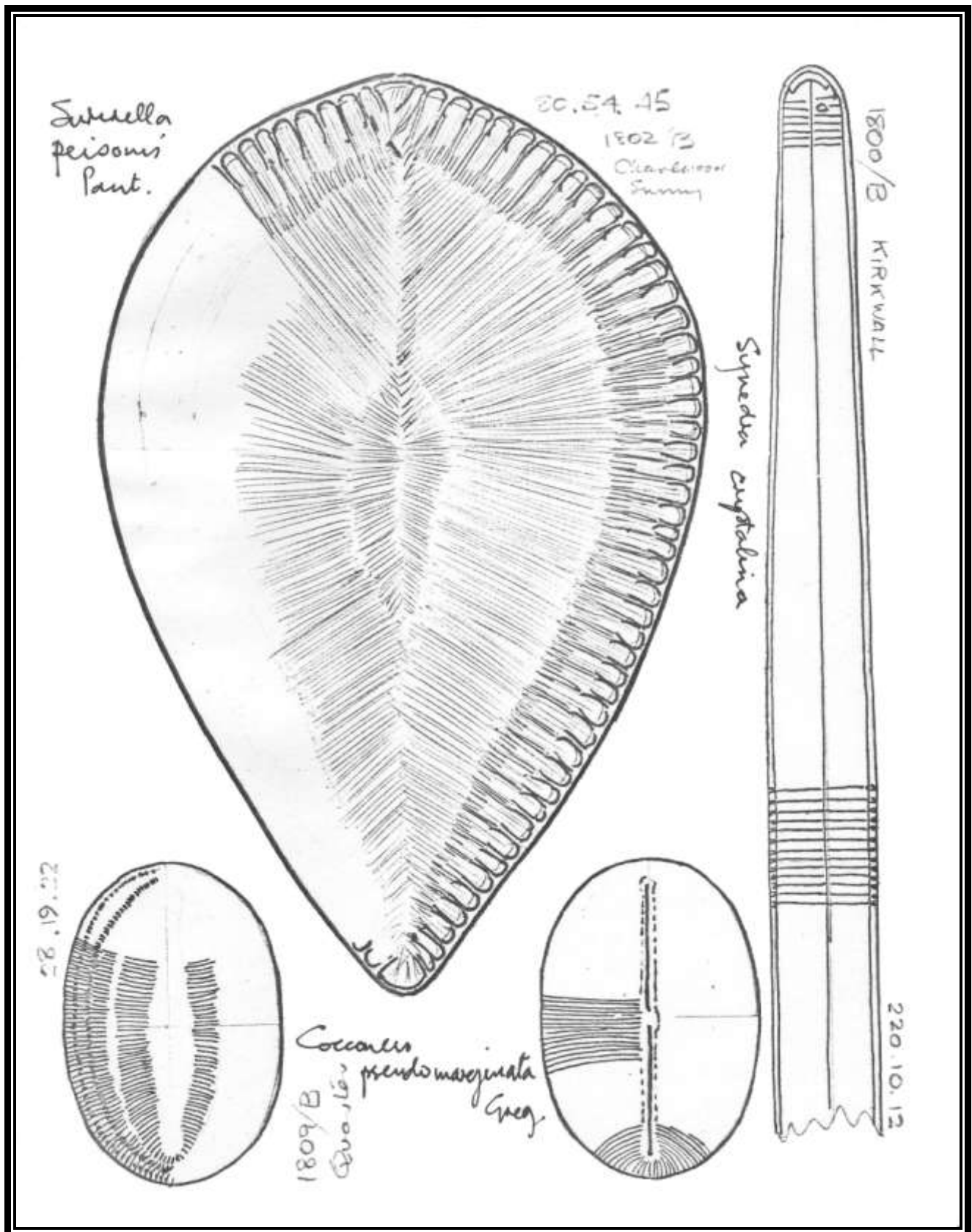
75. 8. 22



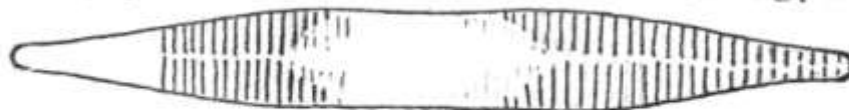
QUARTERNESS. ORKNEY

Lichmophora frabellata (Carm.) Ag.

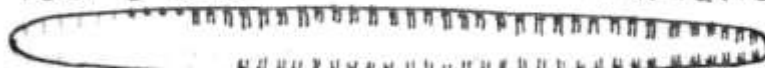
Miscellaneous Plate 77



1807 B Beal. *Synedra* 48.5½. 15



1807 B Beal 44.42.10

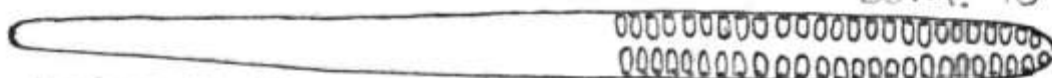


G. MARINA

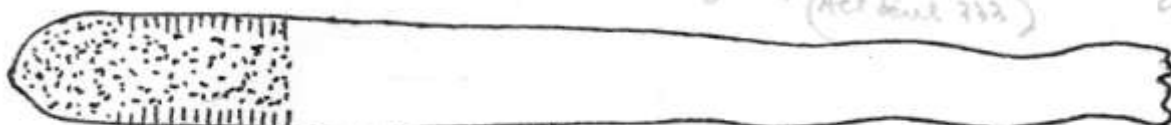
122½. 10



60.4. 10



High says *Gyrodactylus magna* but
Plagiosgramma robertsoni Green
(Act Biol 232)

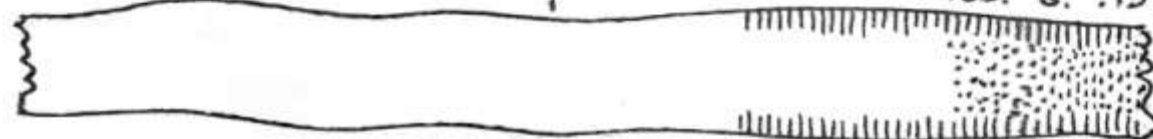


Quarterness Skerry

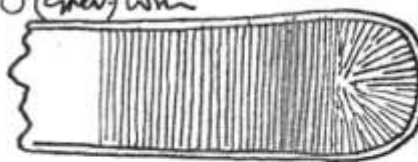
ORKNEY 1809 *Synedra undulata* Bailey.



460. 8. .13



1809 B G. ORK. *Synedra fulgens* (Green) Wh. 200. 10 .17

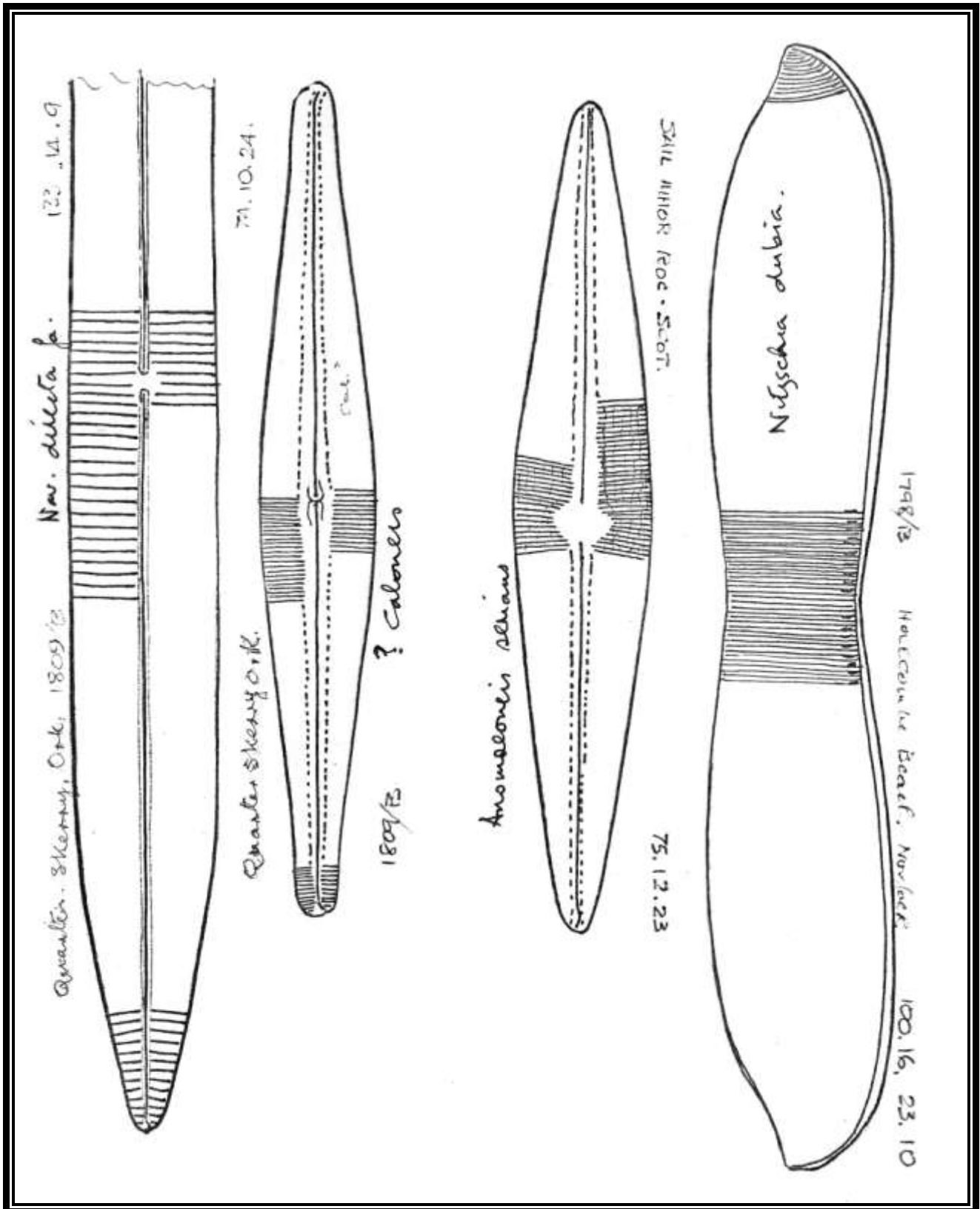


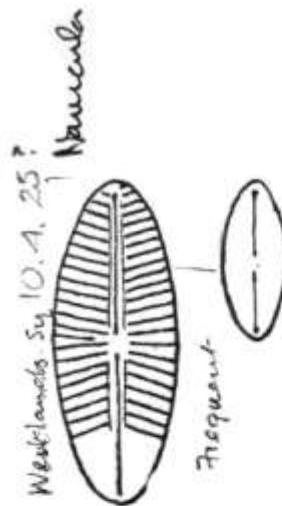
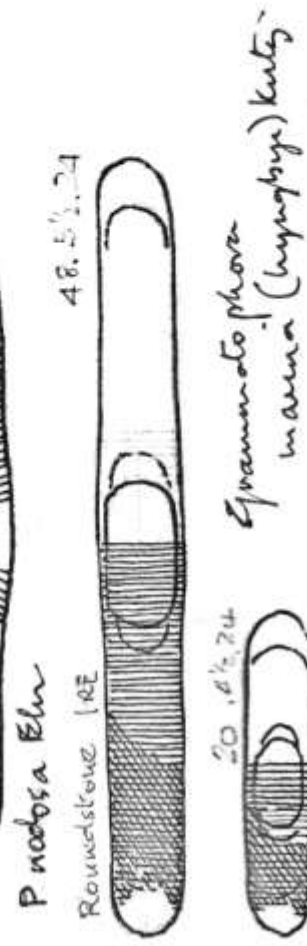
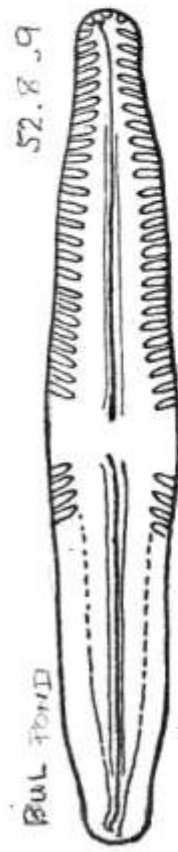
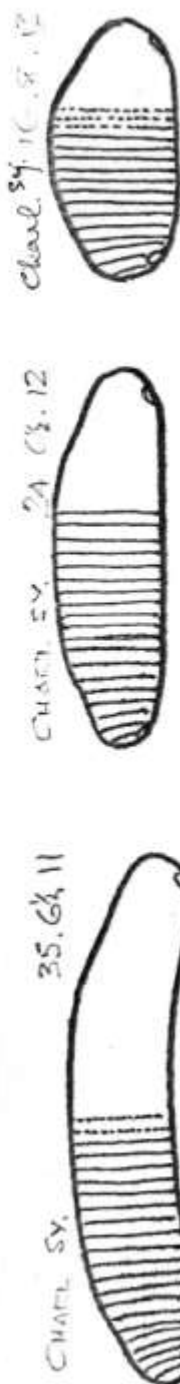
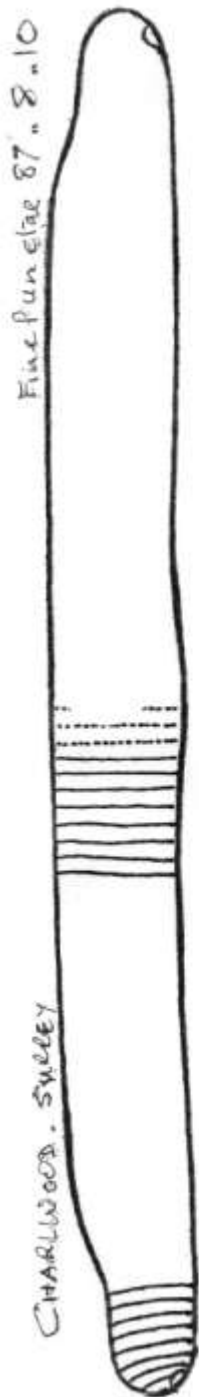
Nav. subtilissima Cl.

Sail Nov Roe Scot.
28.4 X. X2

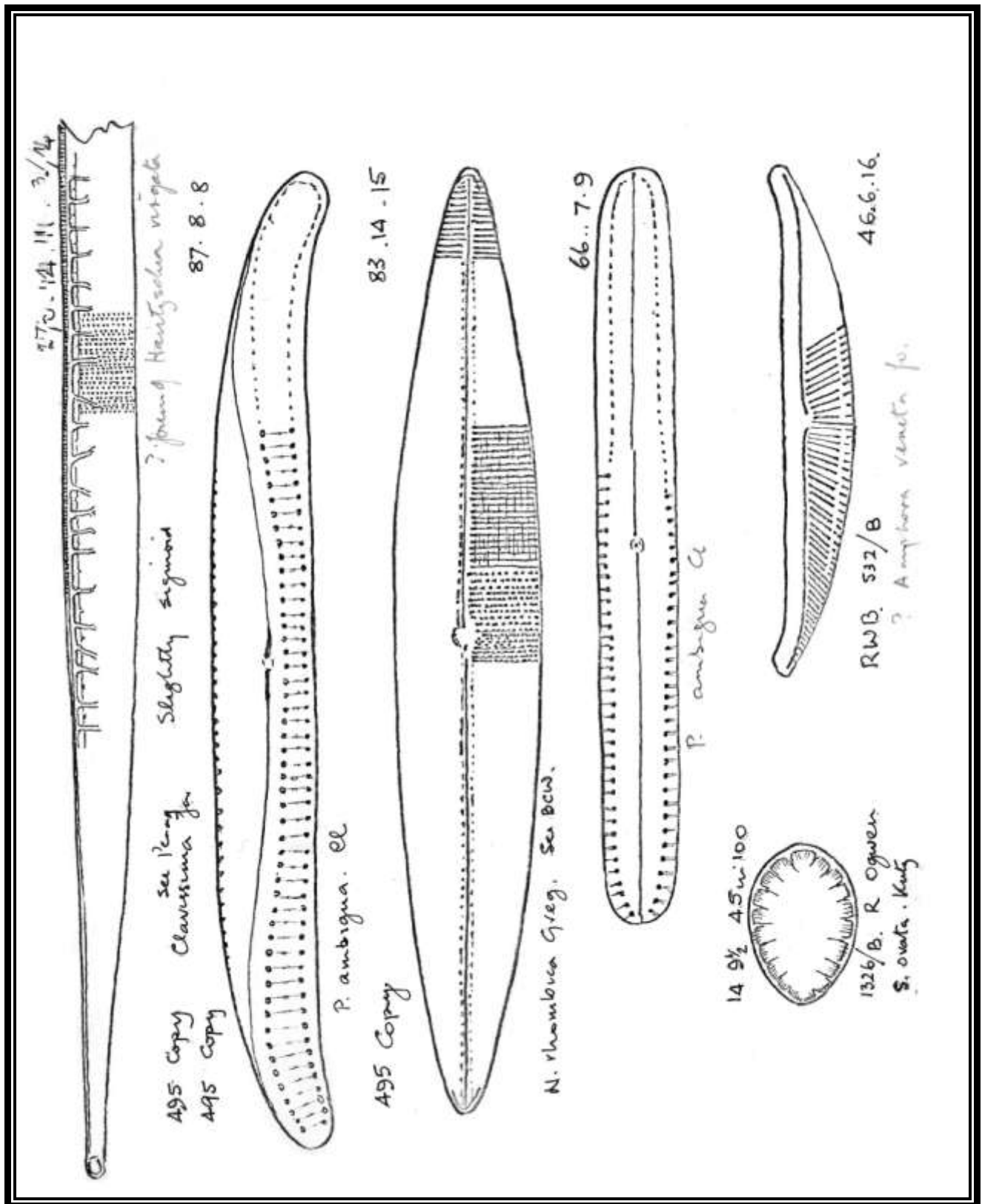


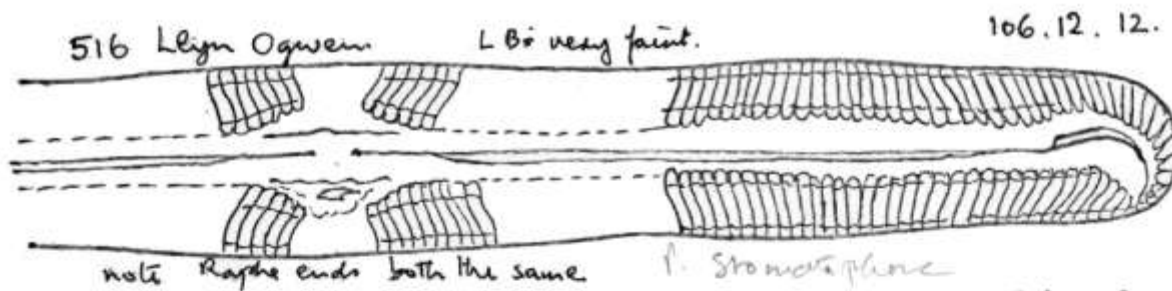
Miscellaneous Plate 79





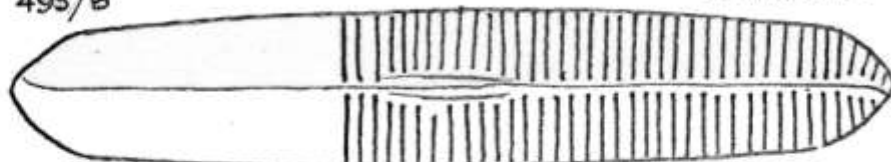
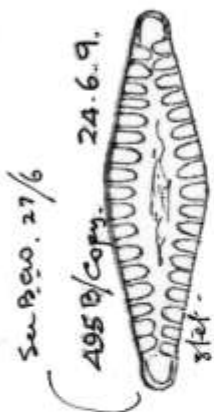
Miscellaneous Plate 82





495/B

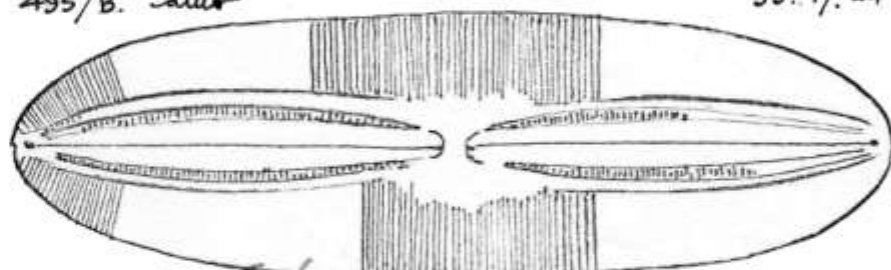
55.10.12



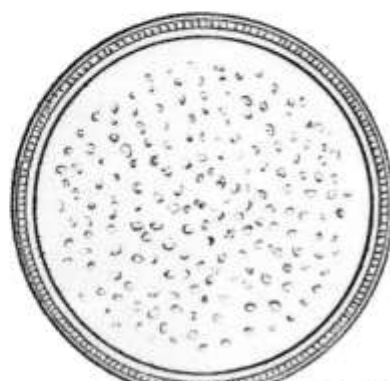
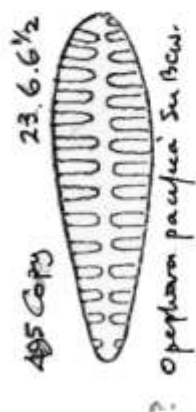
Cerrig Cynlas Beaches Anglesey.

495/B. ditto

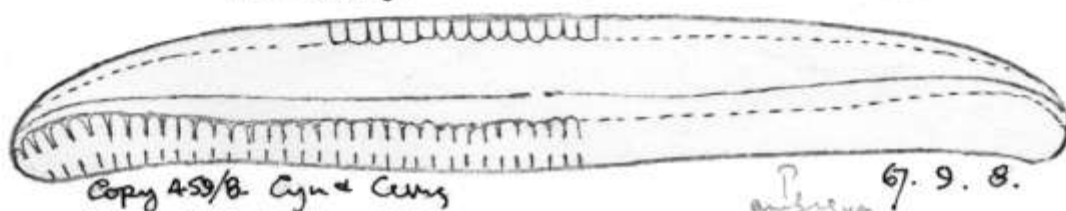
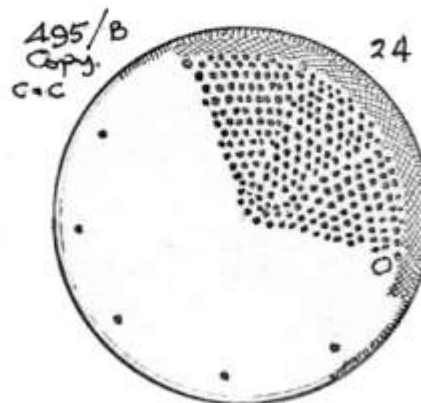
55.17.24



? H. abrupta (Gung) Domb.



M. moniliformis See B.C.W



94. 4. x. 3-5 in. long

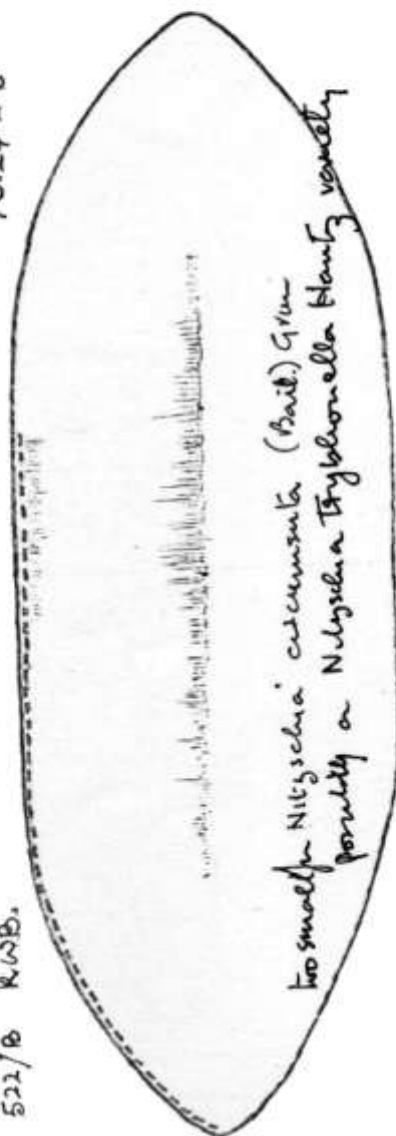


532/B R.W.B.

not in Parag.

70.24 x 8

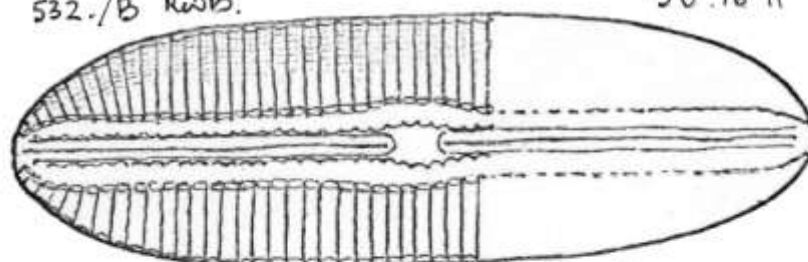
522/B R.W.B.



too small for *Nitzschia circumscissa* (Brit.) Grun
possibly a *Nitzschia thyblonella* Hantz variety

532./B R.W.B.

50.16 11



D. littoralis v. *clathrata* (Øst.) Cl ?

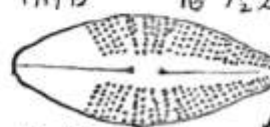
No striae

27.5.11

Amphora



562/B Newborough Waven
1717 B 16 7 1/2 20

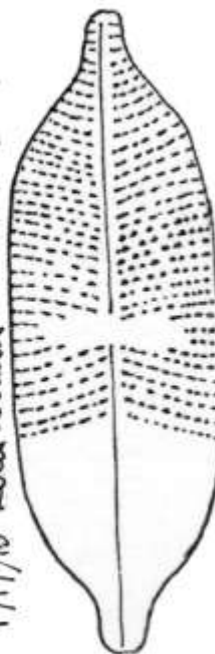


Watton Loch

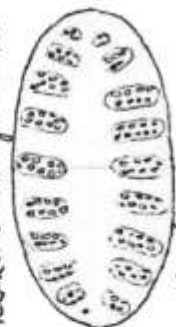
Achnanthes



1717/B Loch Watton 40.12 1/2 12.

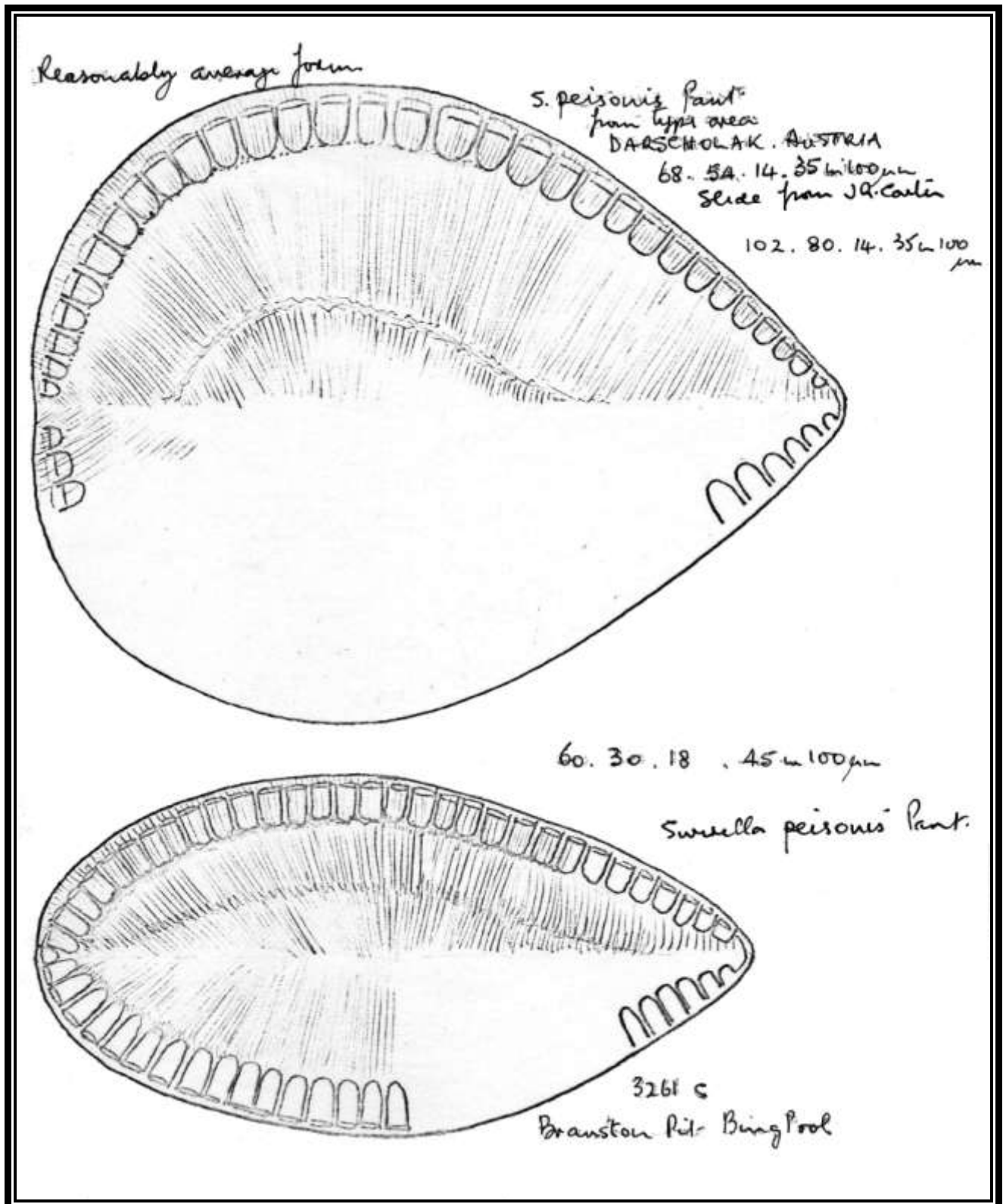


Nitzschia tuscana (Ehr.) Grun
but? *N. menziesii* Henden
Hibson's *N. pseudotuscan* Kutz. Orkney 20.10.6

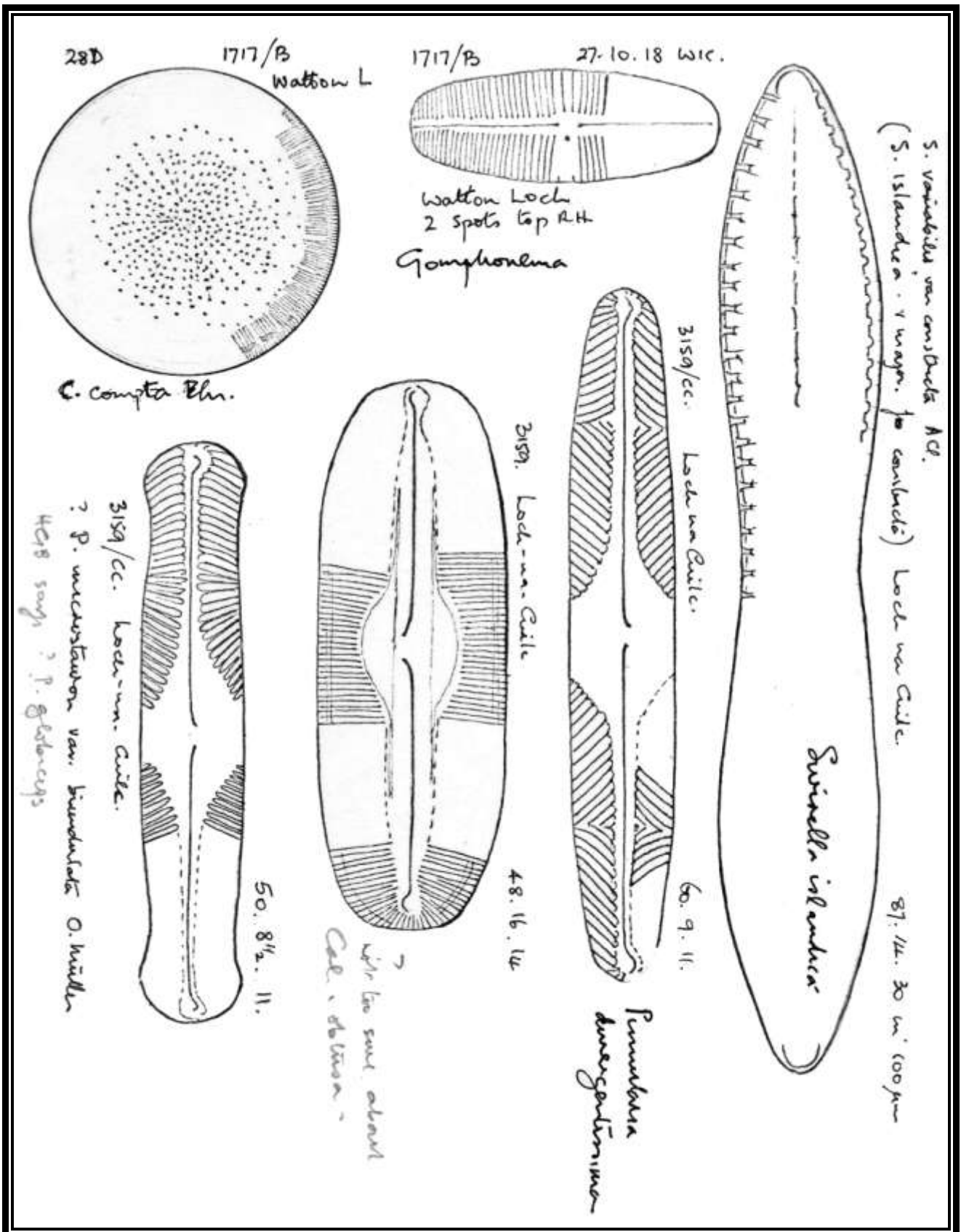


1800/B
Cocconeis ~~*pinnata*~~ Grun. See Parag 12 pgs 11-14

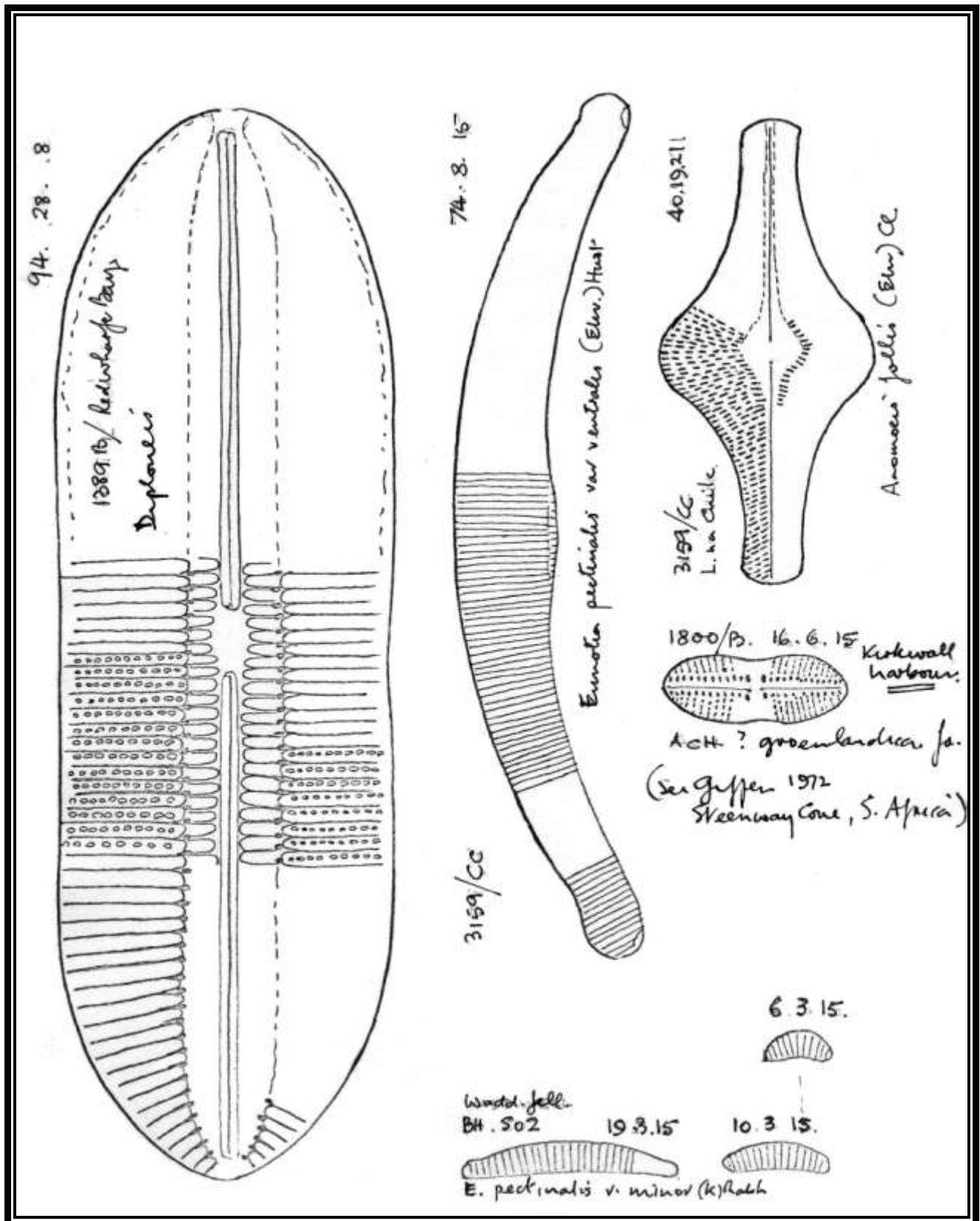
Miscellaneous Plate 86

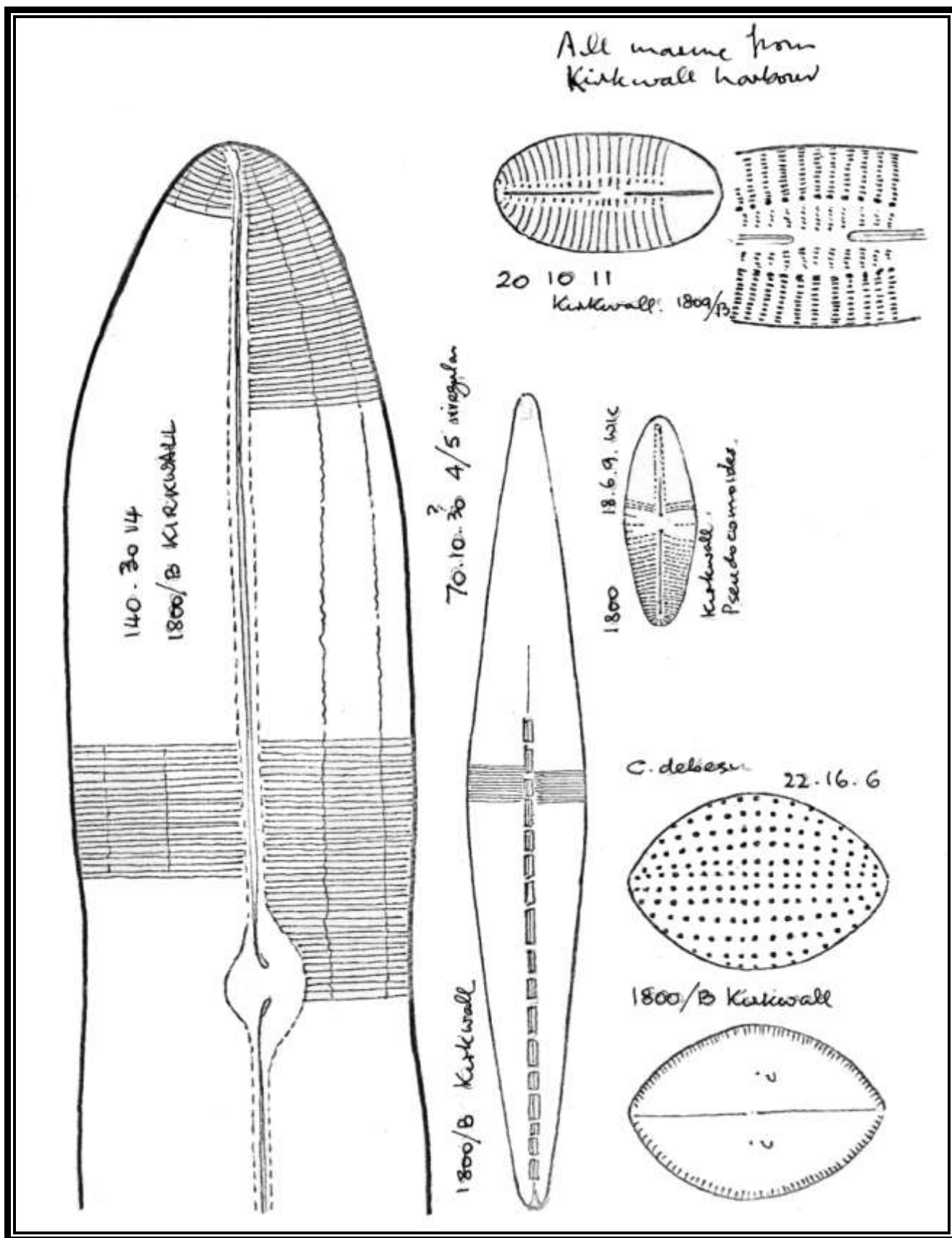


Miscellaneous Plate 87

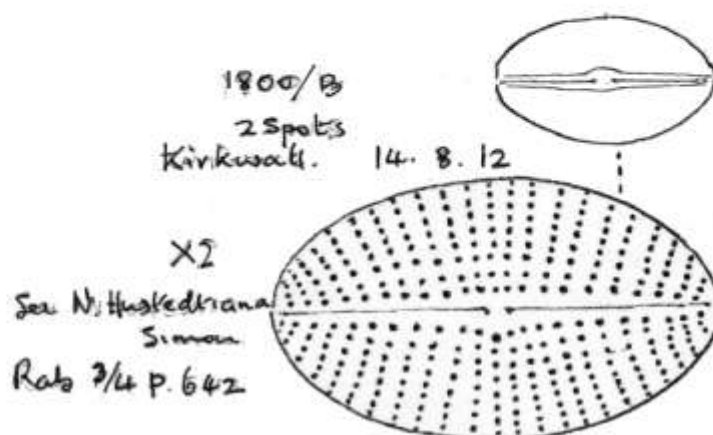
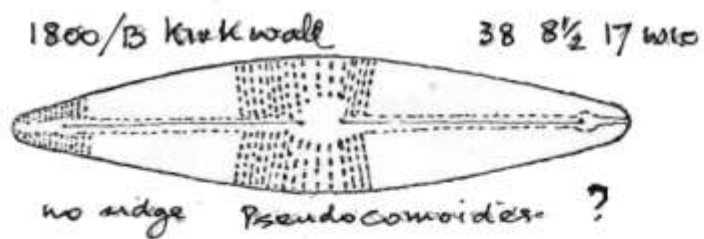
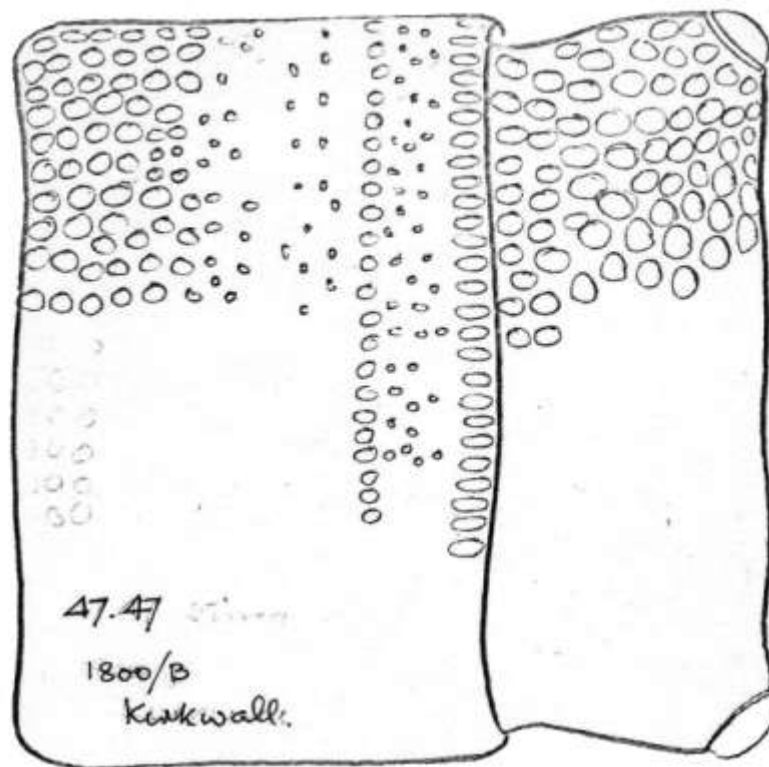
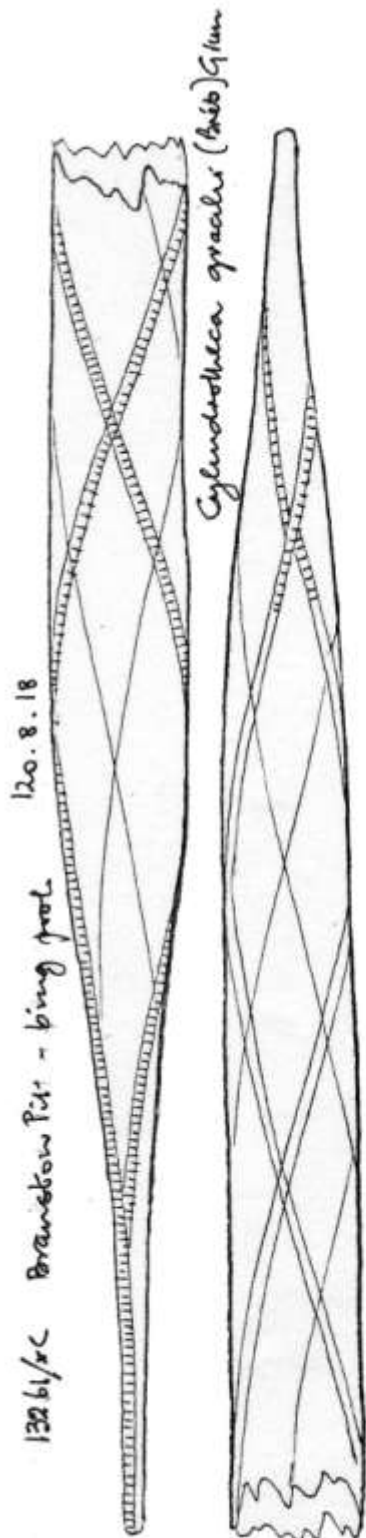


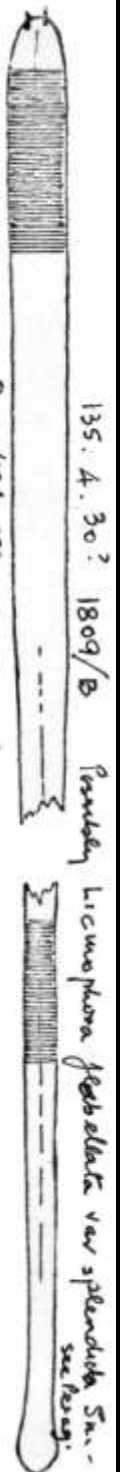
Miscellaneous Plate 88



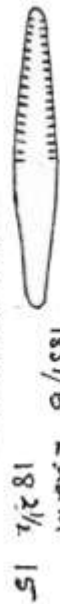


Miscellaneous Plate 90

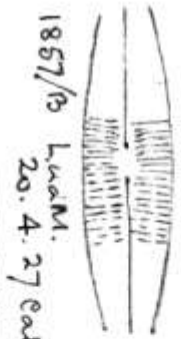
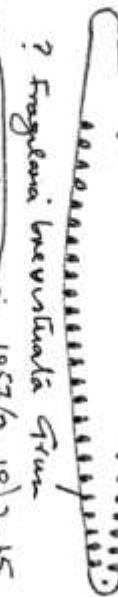




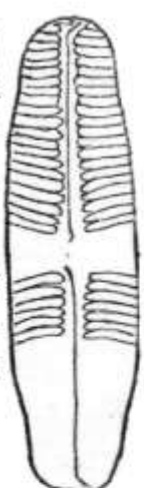
Quarterness



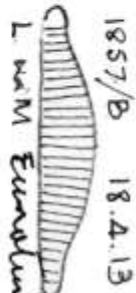
Ammoniaea villosa



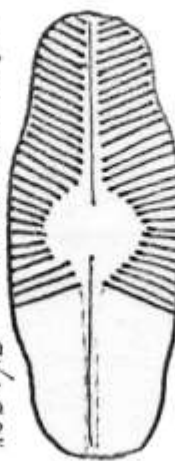
Polydentula



1857/B L.N.M. 30. 8. 12 p. microplasma



See Pl. 17/56 Achnanthes sublaevis var. crassa. Reimer.

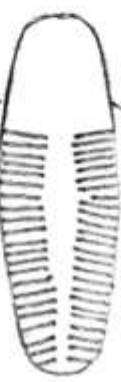


1857/B L.N.M. 182 1/2 15

Achnanthes



Achnanthes lineare fine puncta

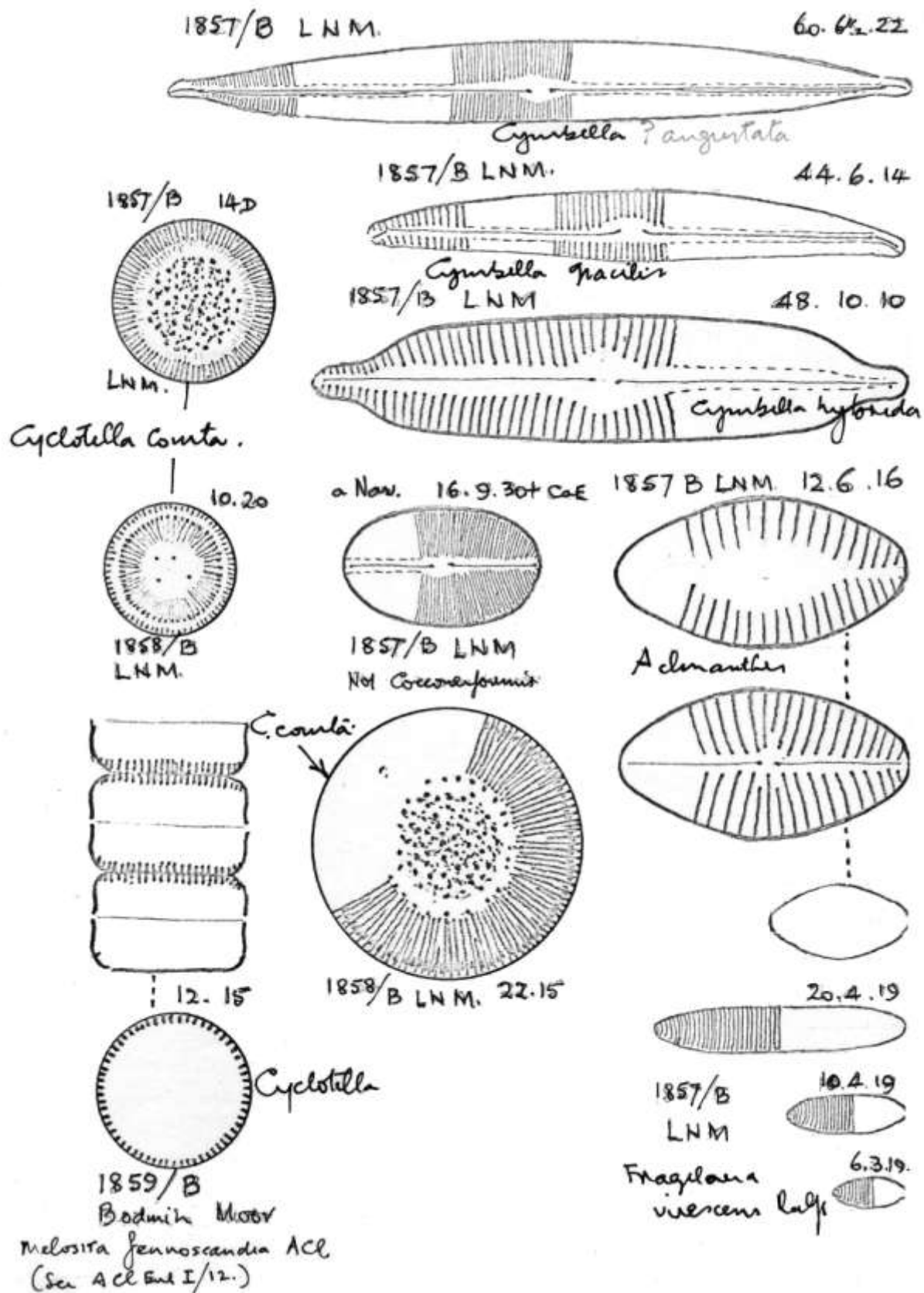


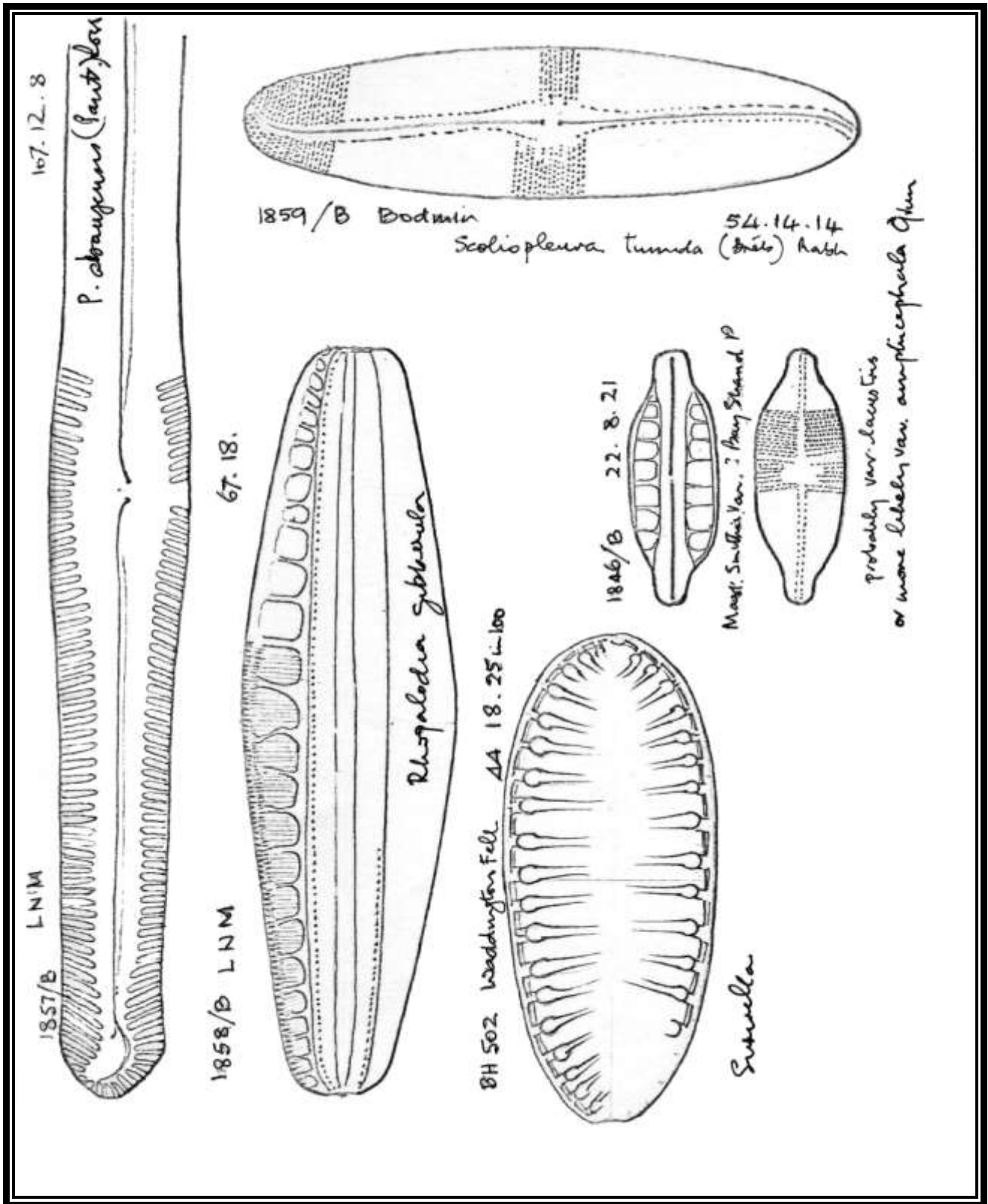
1857/B L.N.M.



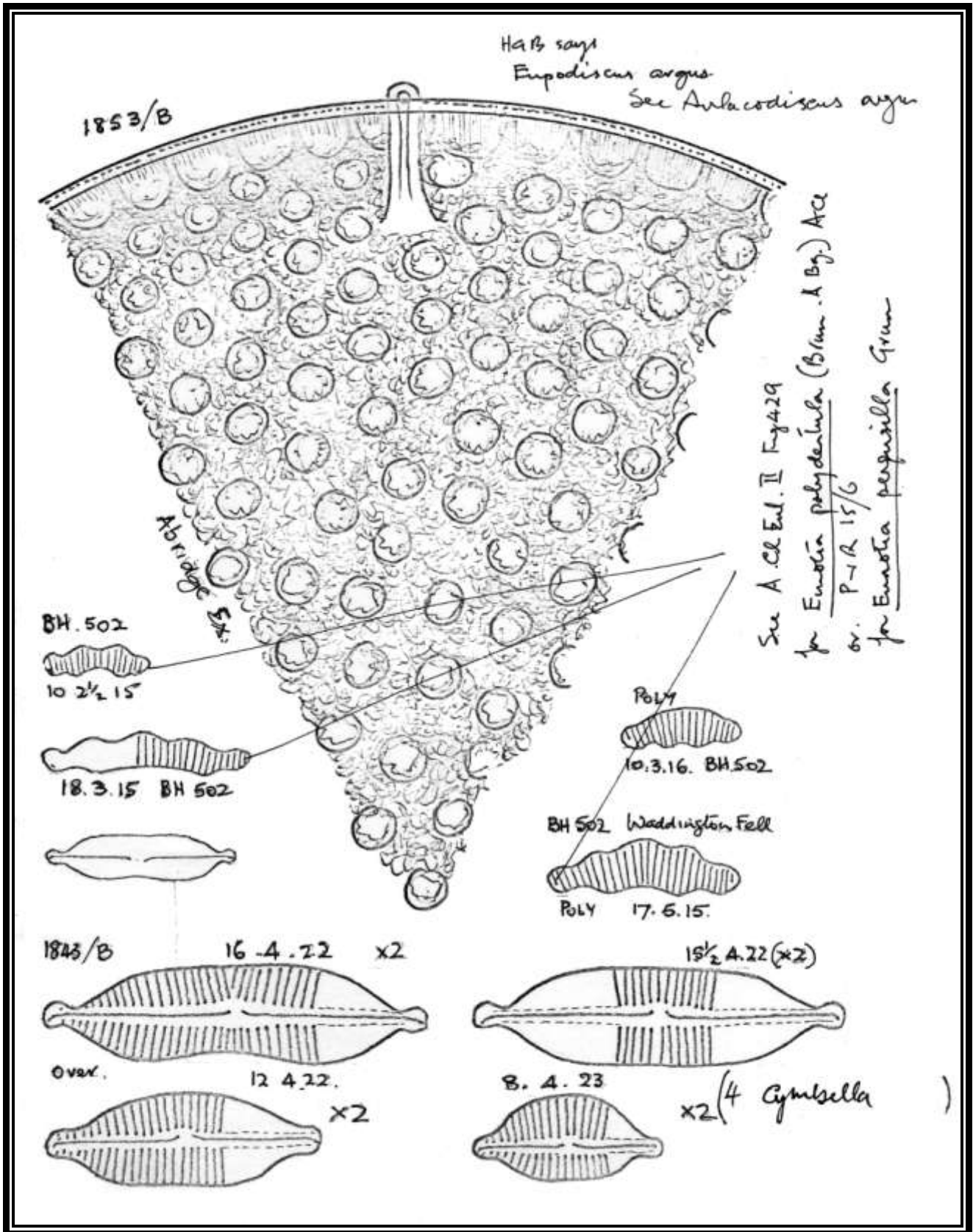
12. 4. 24

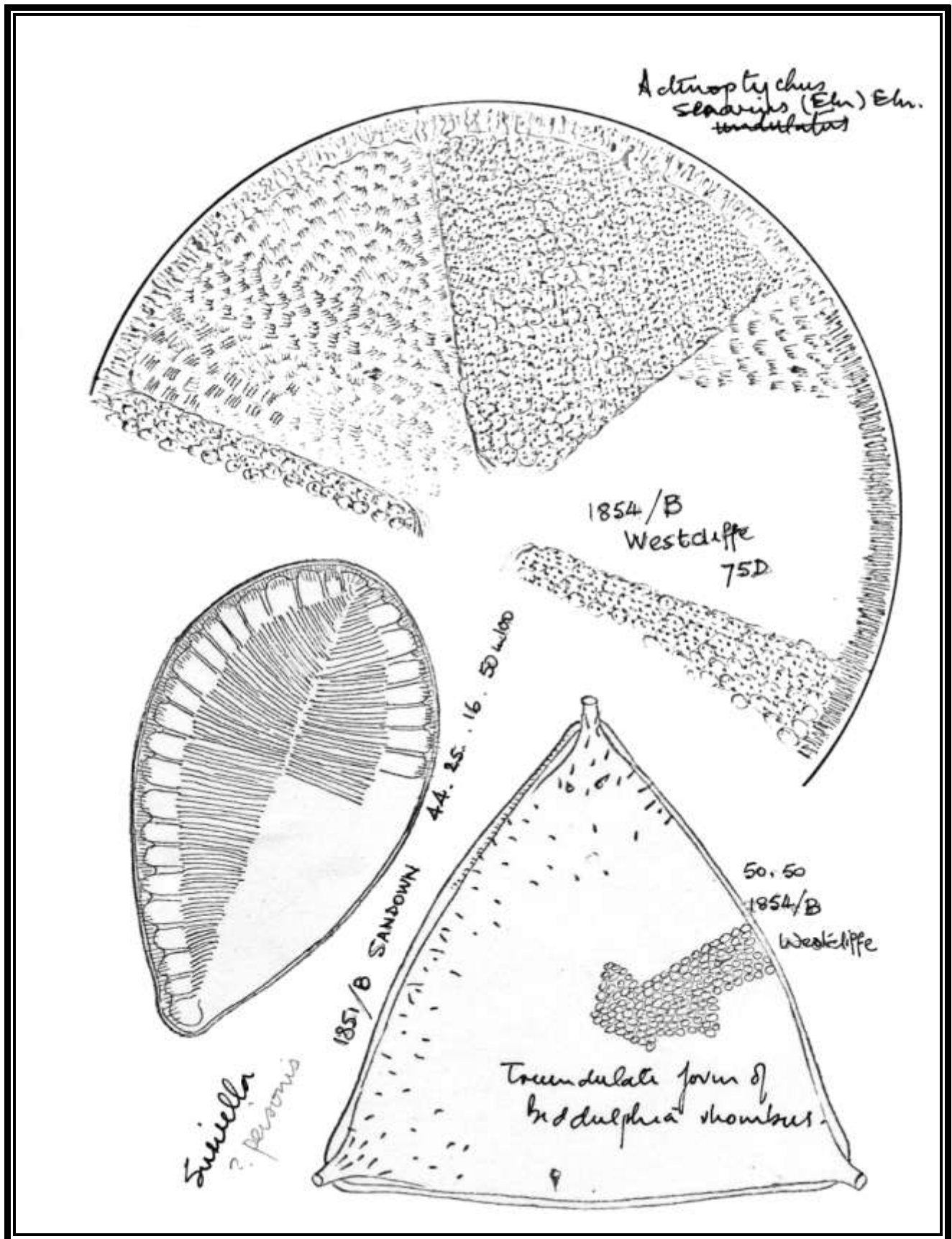
Miscellaneous Plate 92



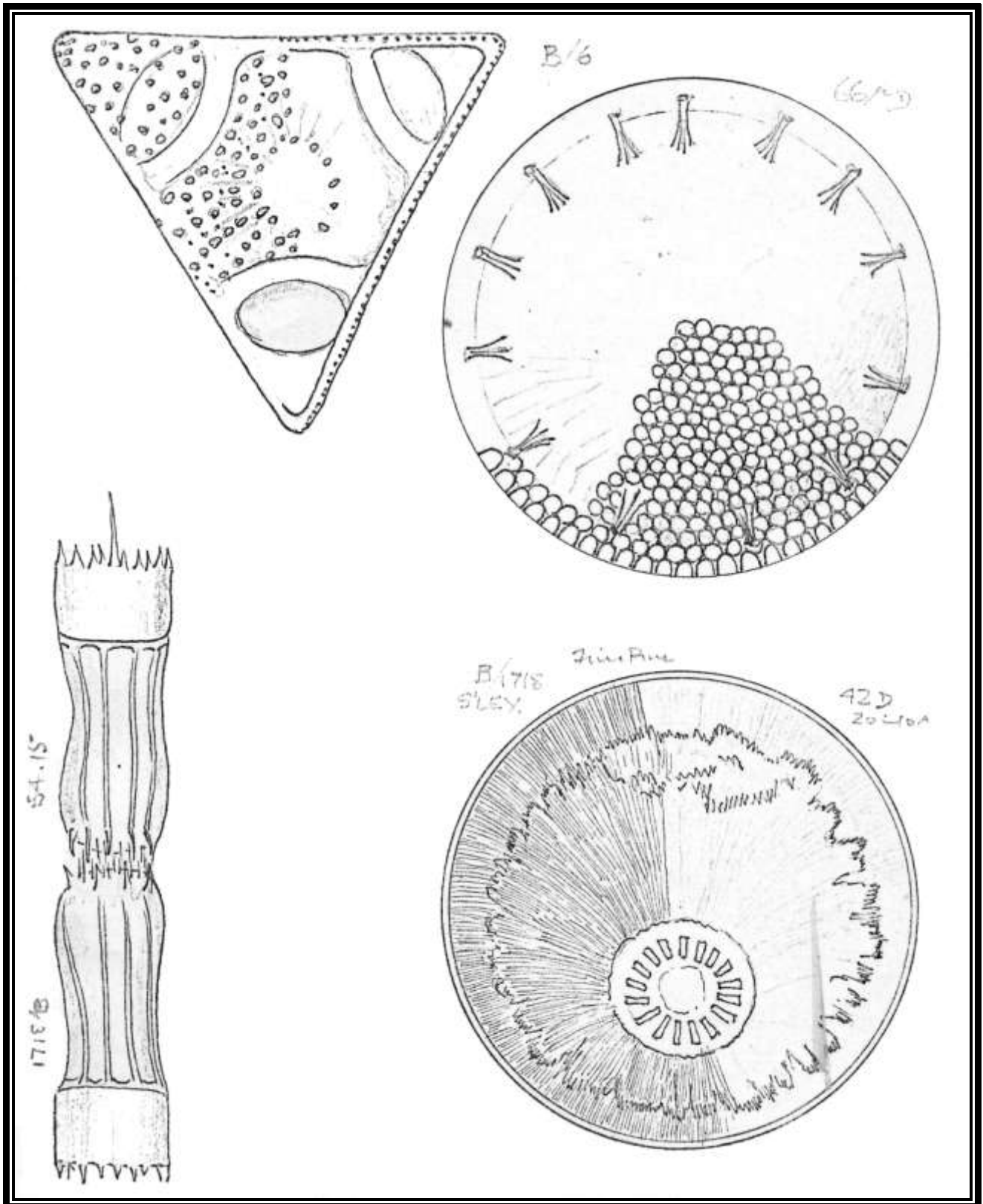


Miscellaneous Plate 94

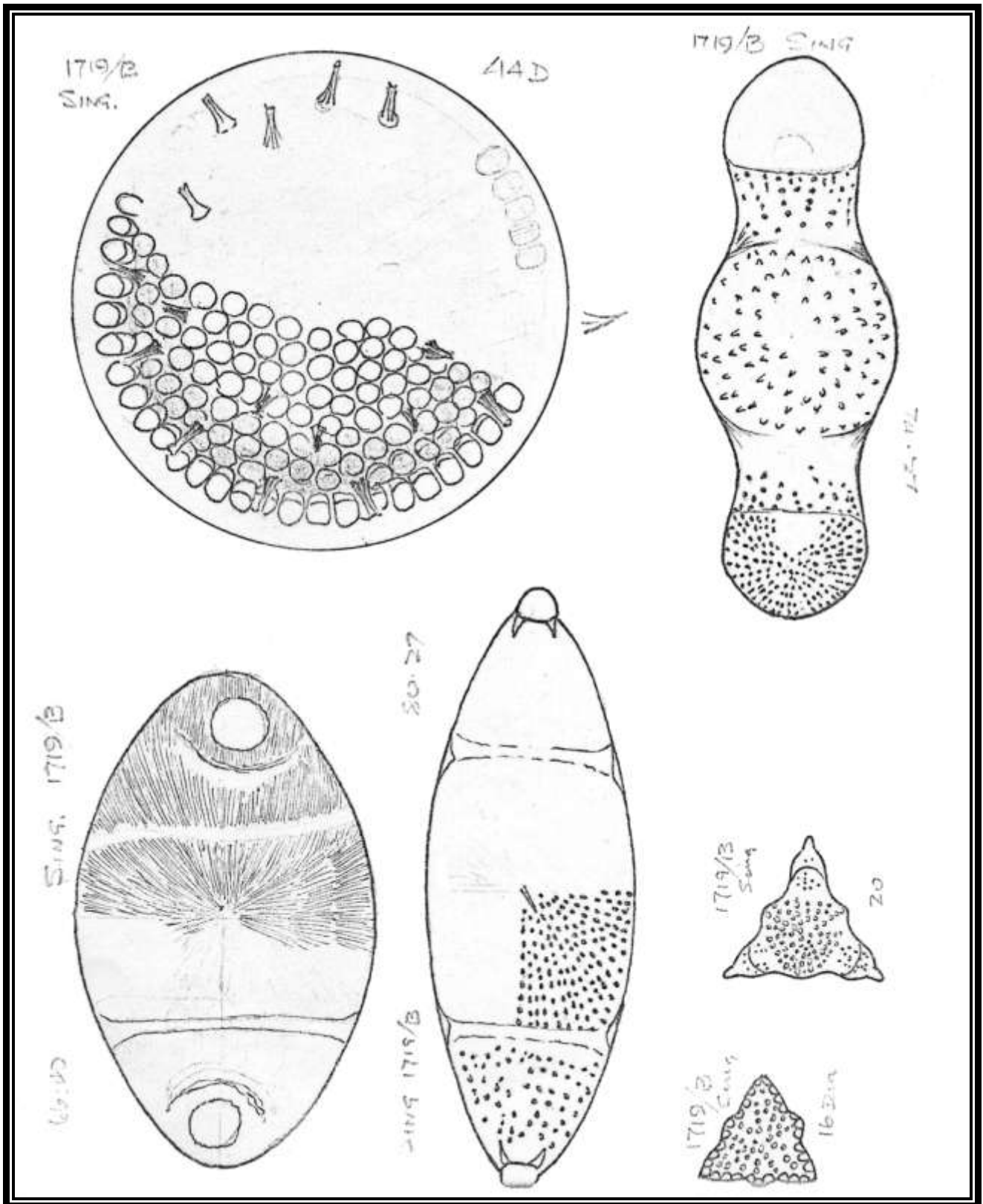




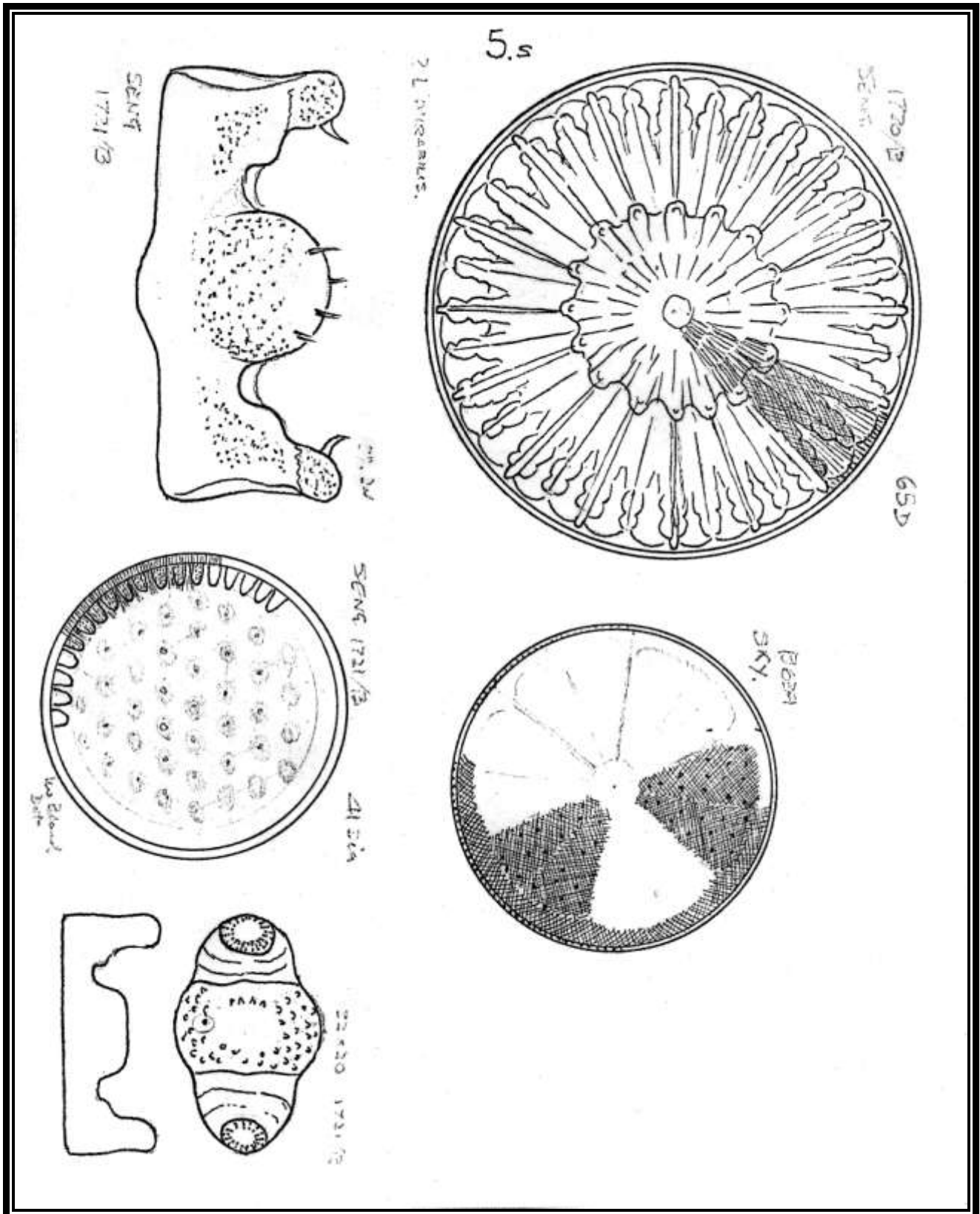
Miscellaneous Plate 96

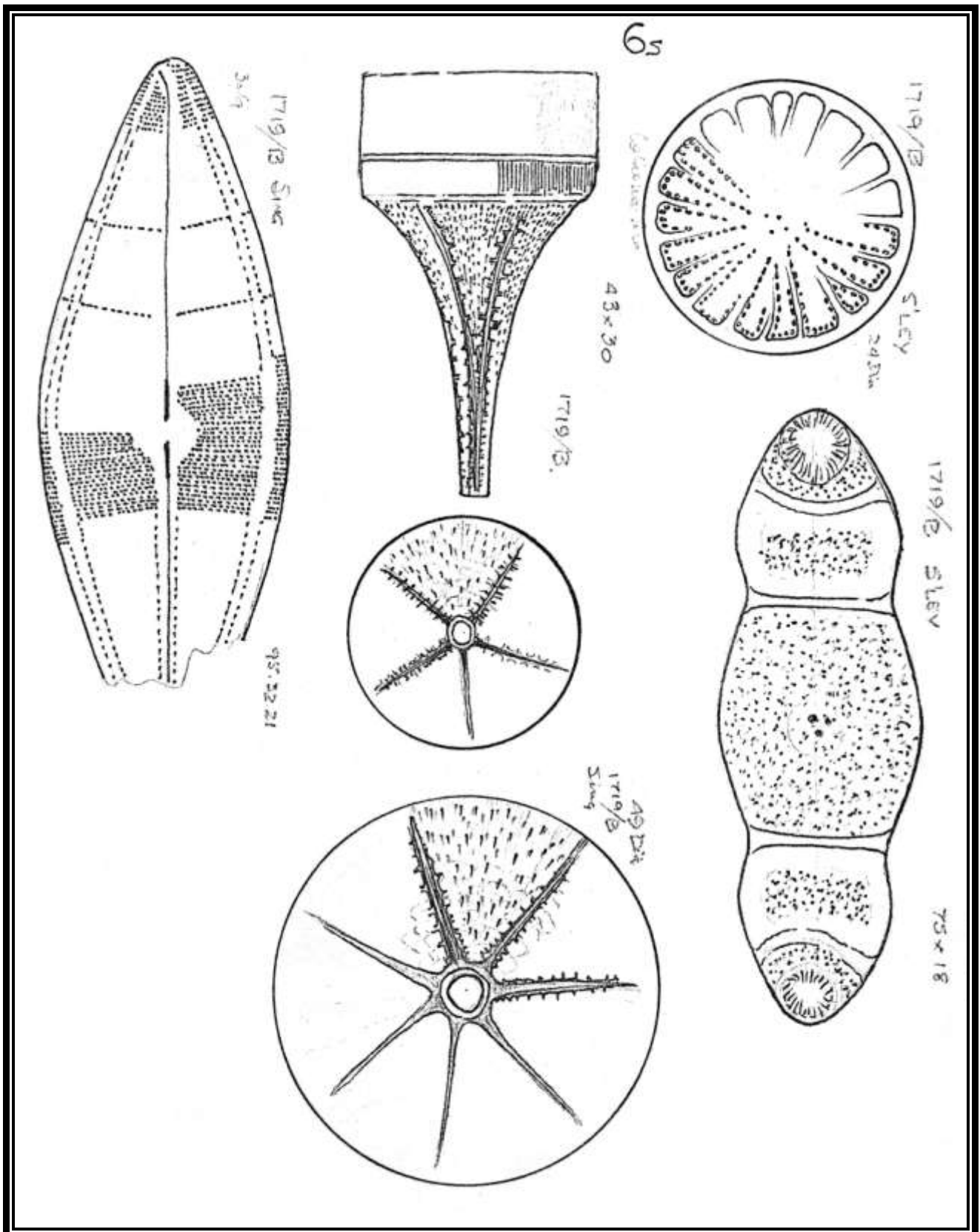


Miscellaneous Plate 97

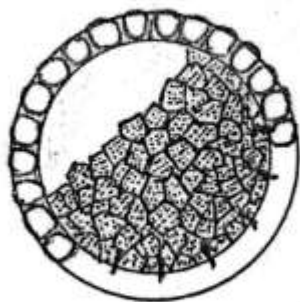


Miscellaneous Plate 98



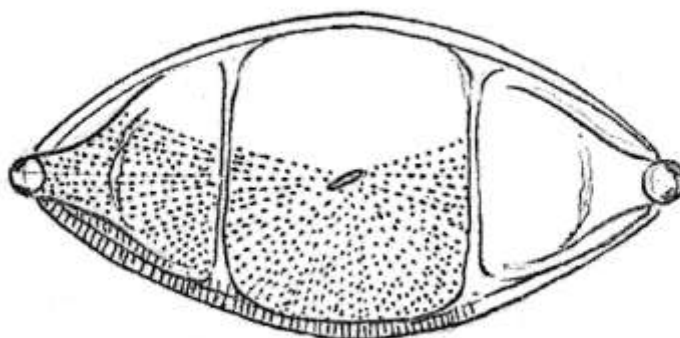


Miscellaneous Plate 100

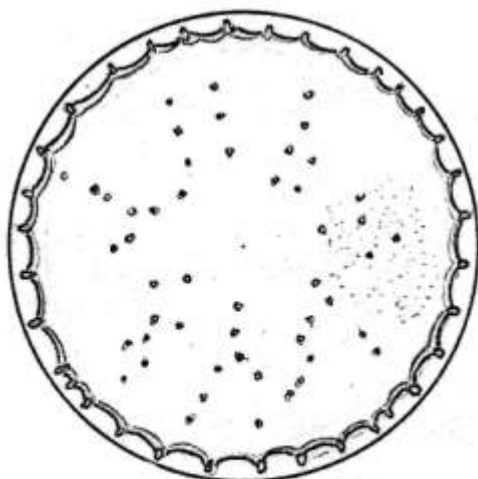


26 Dia 1746/B

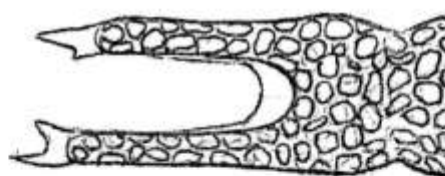
119



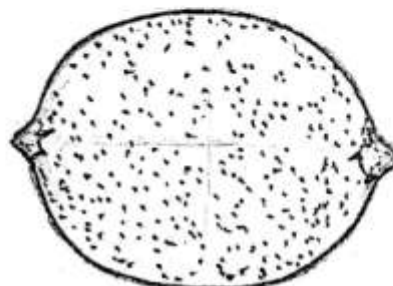
60.30 1746/B



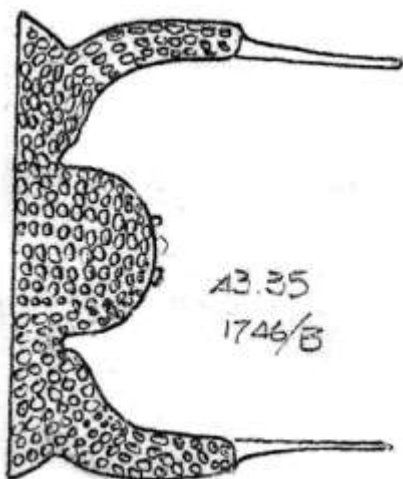
44 Dia 1746/B



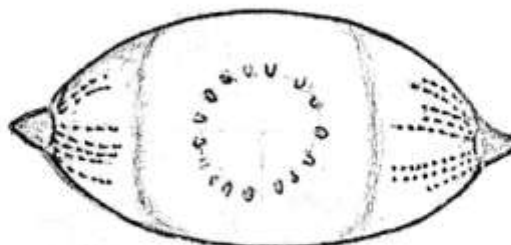
40.15 1746/B



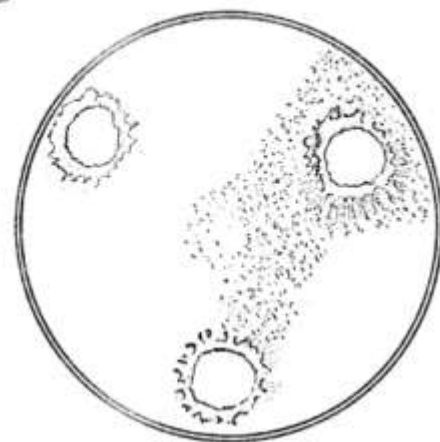
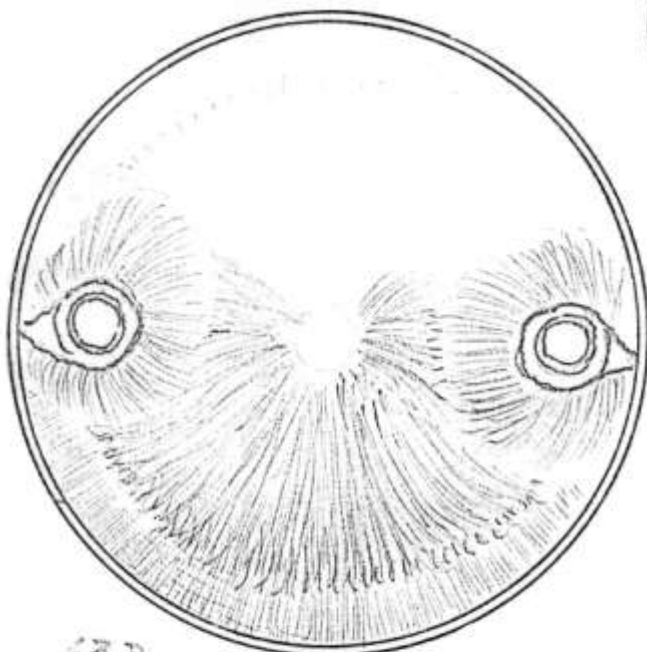
36.26 1746/B



43.35
1746/B

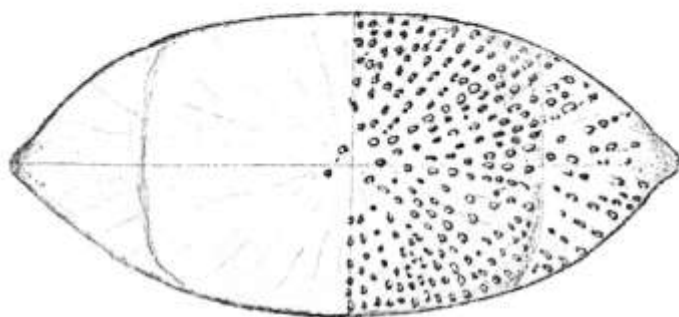


47.22 1746/B



42D. 1748/12 SKY
Vt P. Piney
Some = head + body.

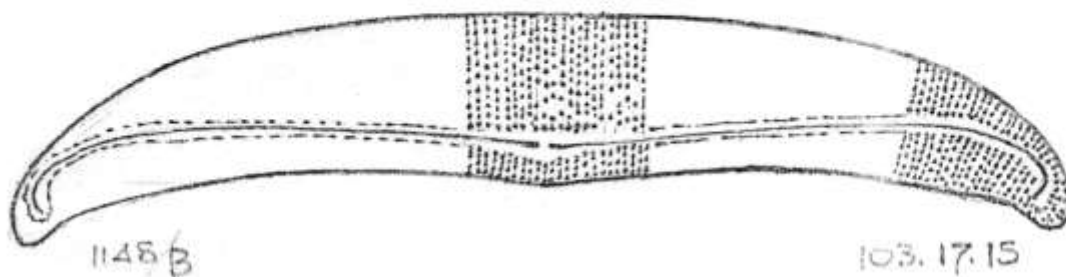
63D
1748/13 SKY Piney V. 7. 1748/13



663D 1148/13



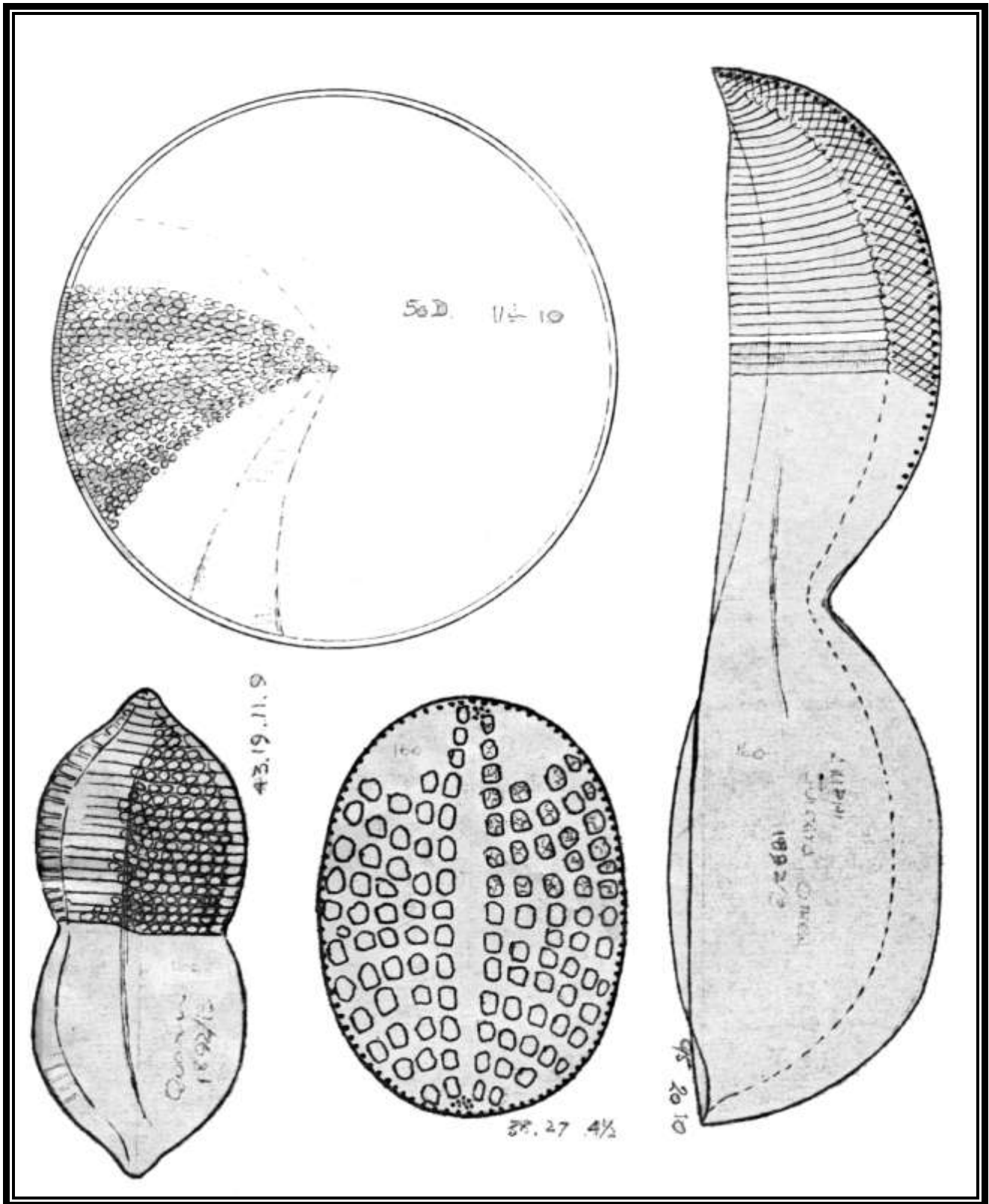
36D. 1748/13 SKY
Hatched 250x

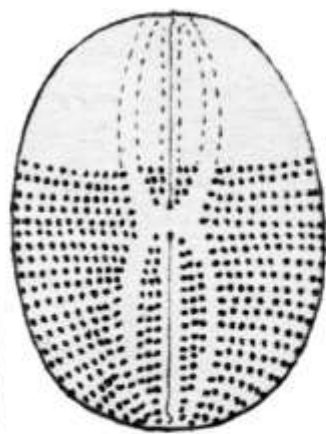
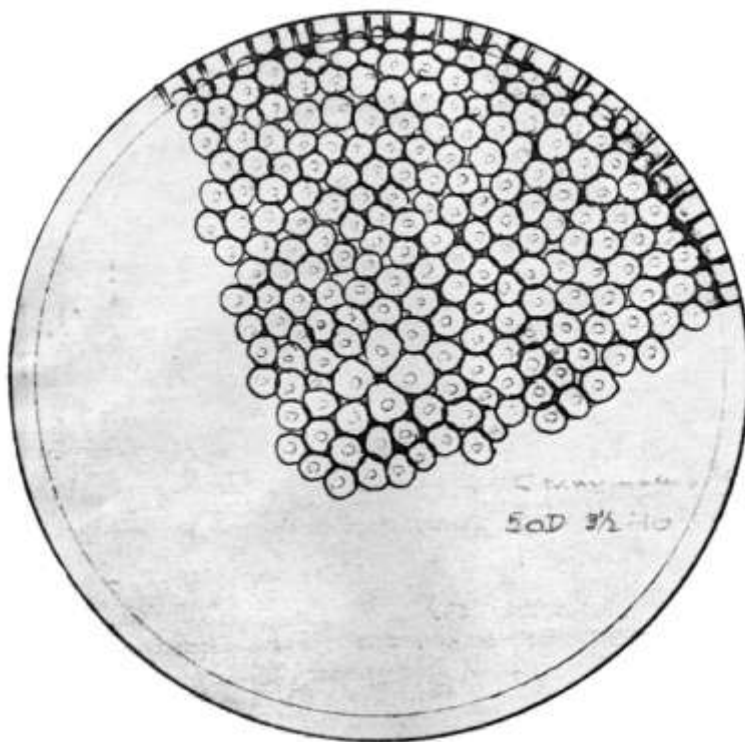


1148/13

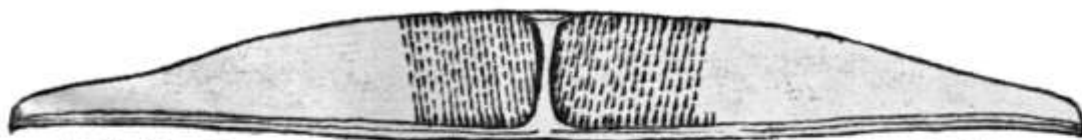
103. 17. 15

Miscellaneous Plate 160

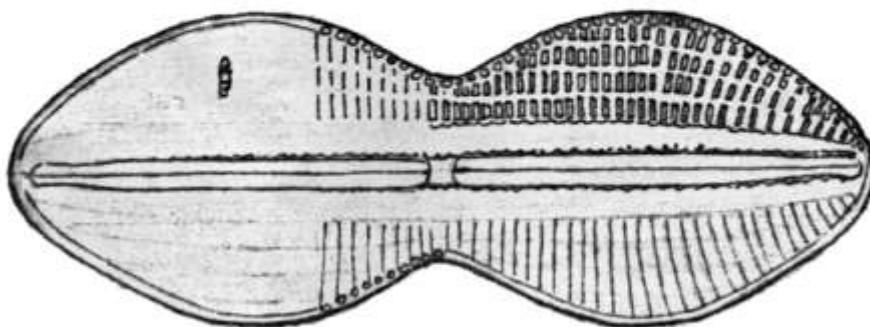




28.30.10



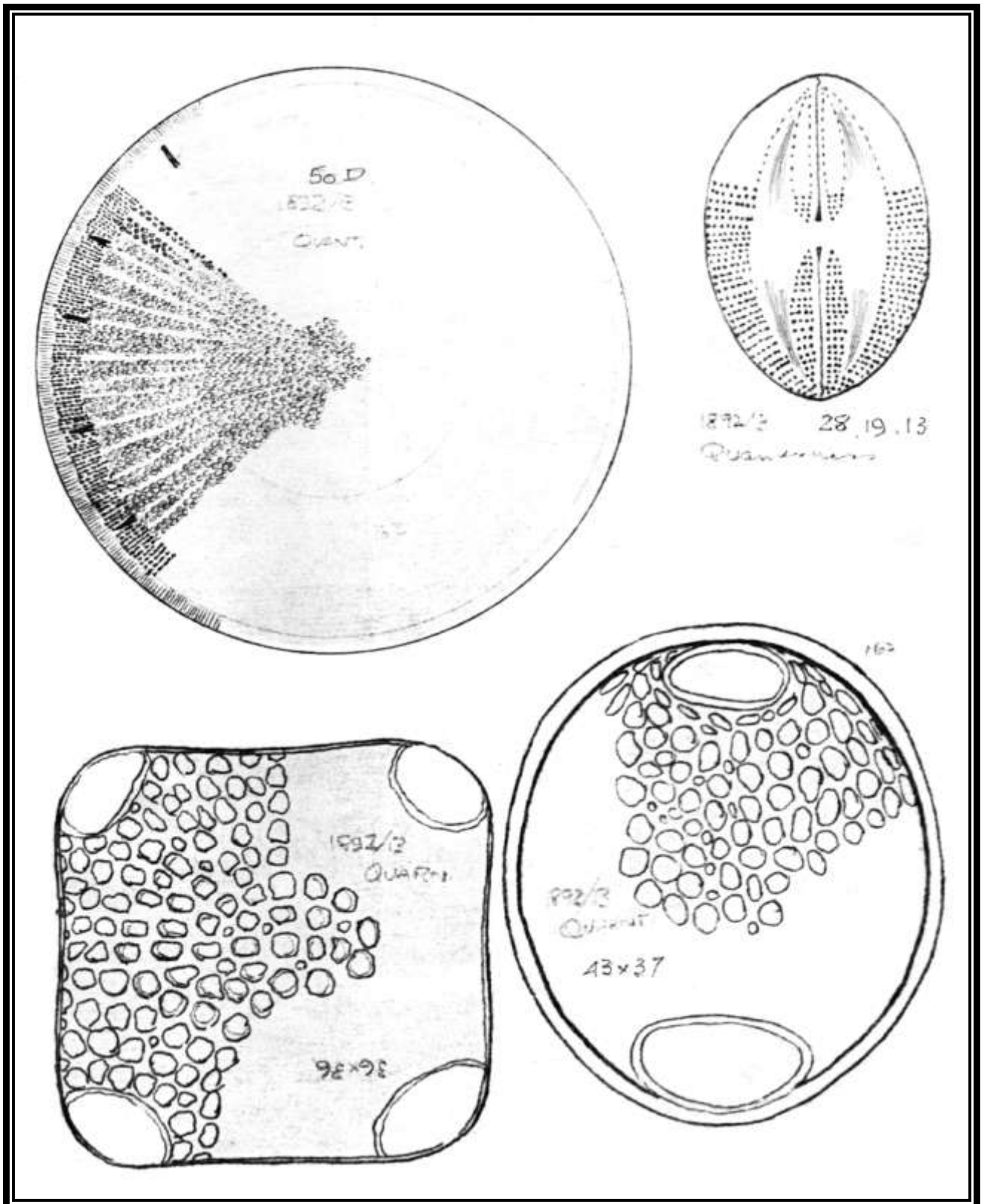
70.8.18c

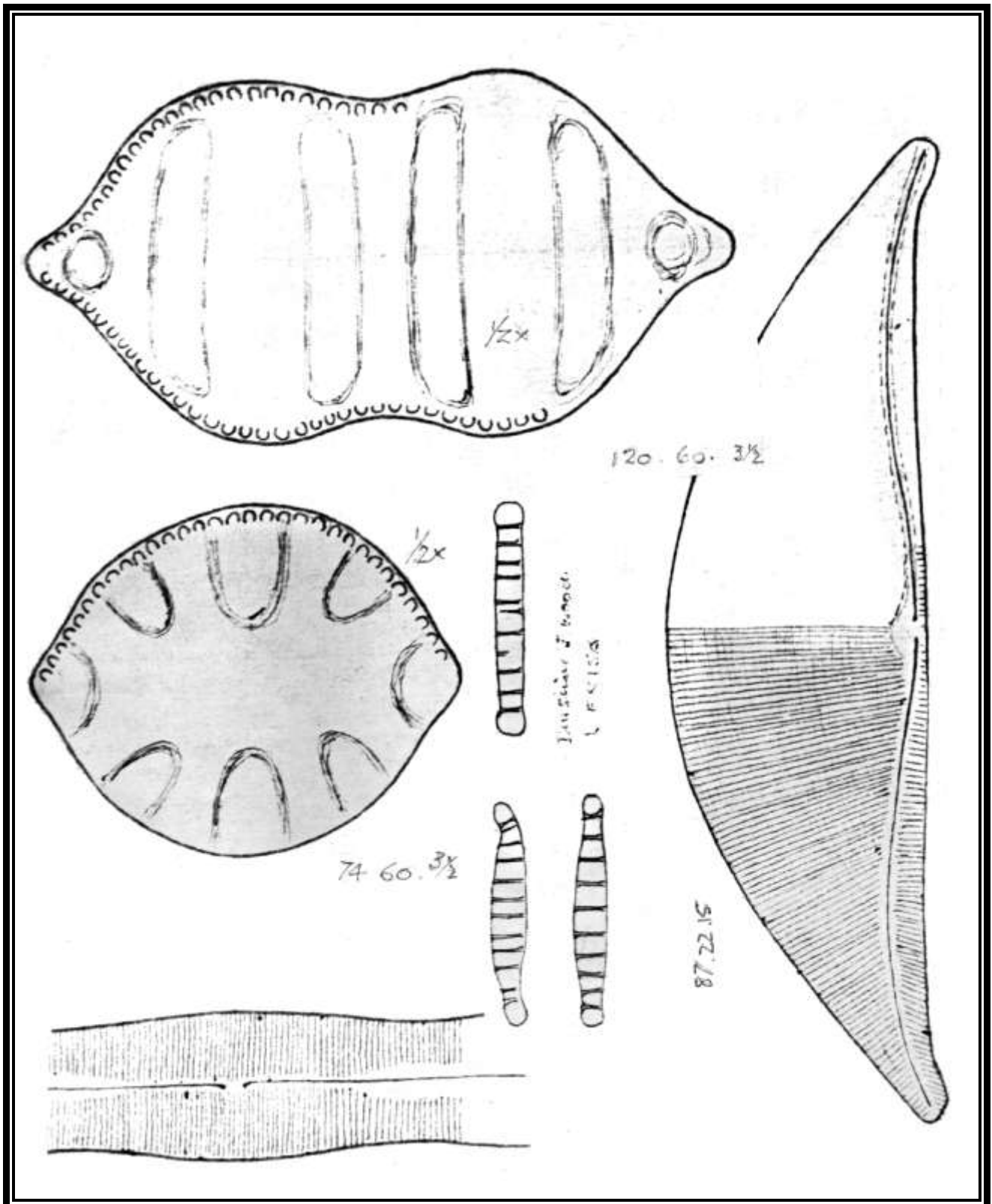


56.21.10 1/2

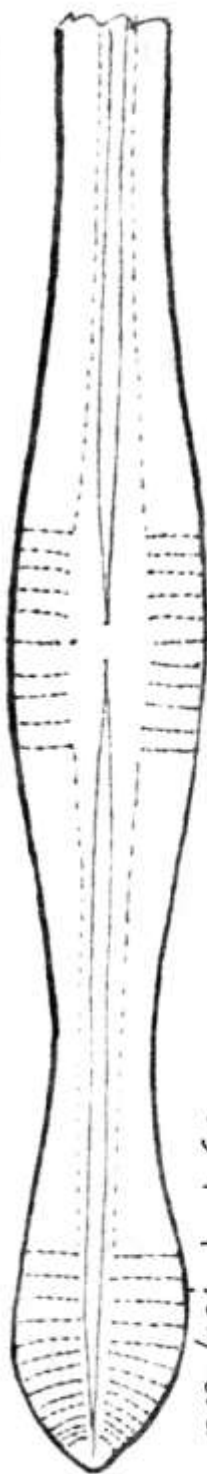
Good Chersonesus

Miscellaneous Plate 163





Miscellaneous Plate 170

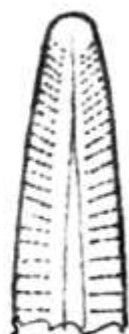


13430/XC: Loch Cranaig.

112.12 7½



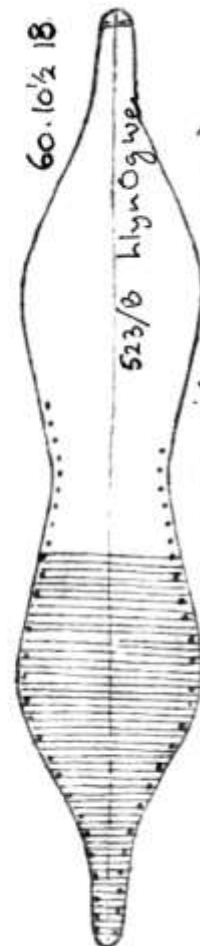
? a form of *Gomphonema acuminatum*
probably var. *brevissonii* (Kütz.) Cleve



523/B Llyn Ogwen

66.8.11

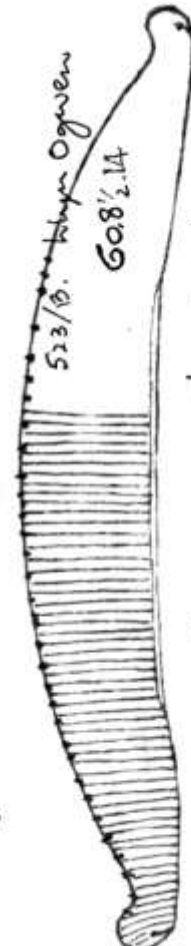
Emotia pectinialis var. *undulata*
Ralfs.



60.10½ 18

1892/B Quantenness 26.17.7

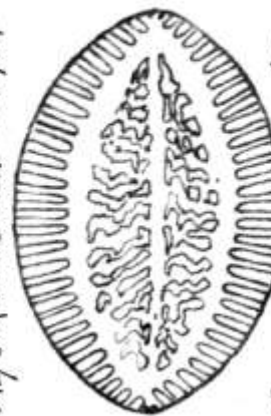
Fragilaria constricta Ehrb. (= *F. undata* W. Sm.)



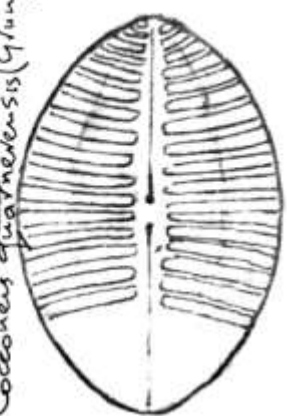
523/B Llyn Ogwen

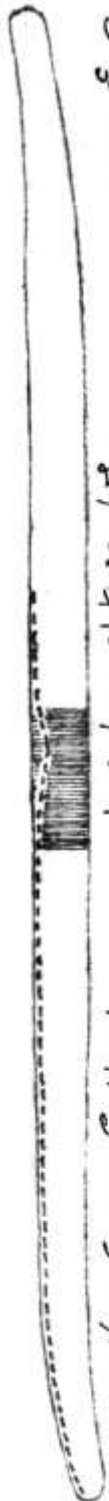
60.8½.14

Emotia denticulata var. *fenestrata* Hust.
(See Hust. in Rabenh. 757.)



Cocconeis guerneensis (Grun.) Schmidt





13438/xc Sanna Scotland

Nitzschia obtusa Huston

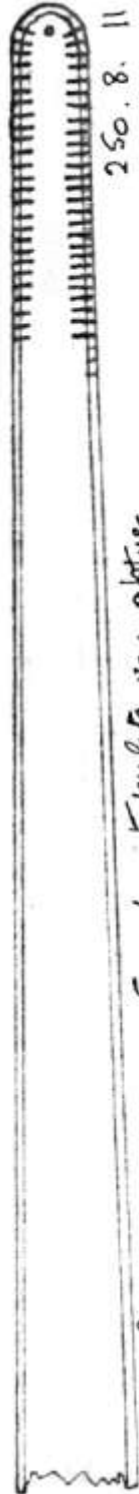
100.4.30.9



522/B Libyn Ogives

140.7. x 5 1/4 irregular

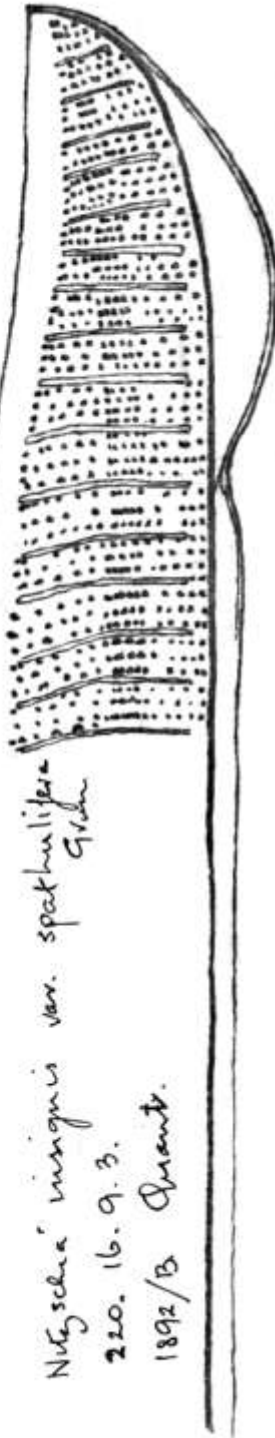
Nitzschia ?



1647/B Boddington

Synedra tabulata var. *abtusca*

250.8.11

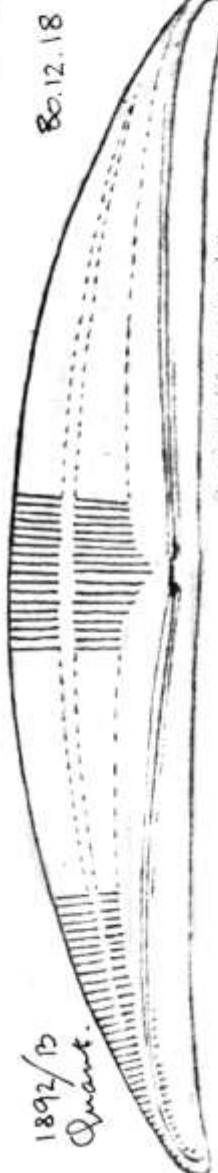
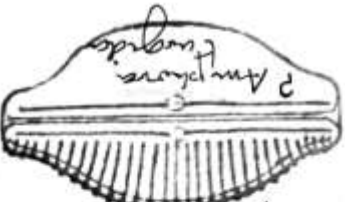


Nitzschia *iniquis* var. *spatulifera*
Grain

220.16.9.3.

1892/B Quant.

1892/B Quant. 22.12.14

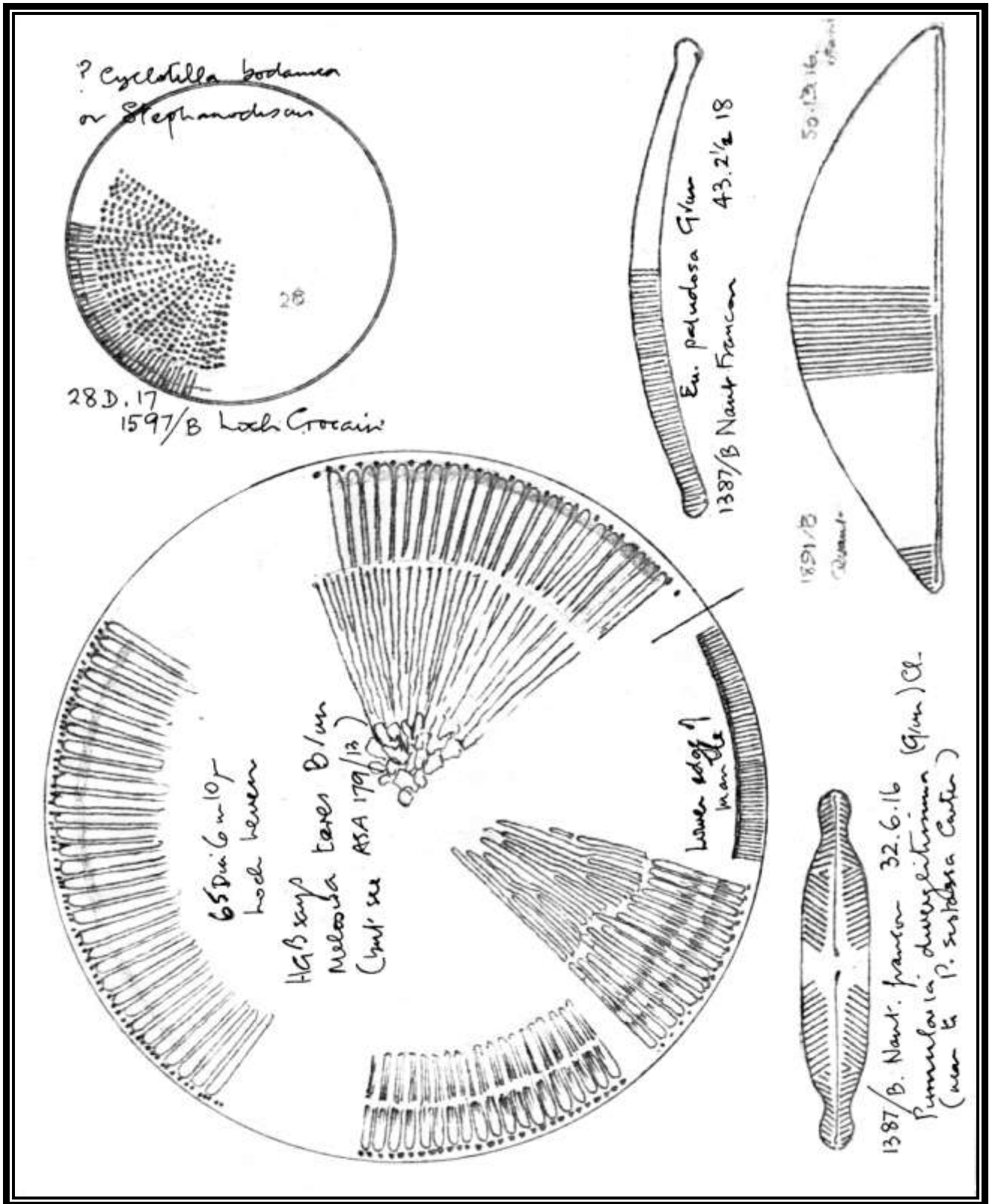


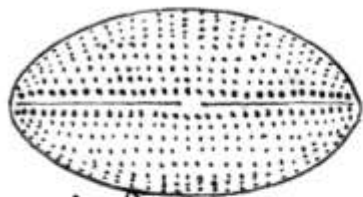
80.12.18

1892/B Quant.

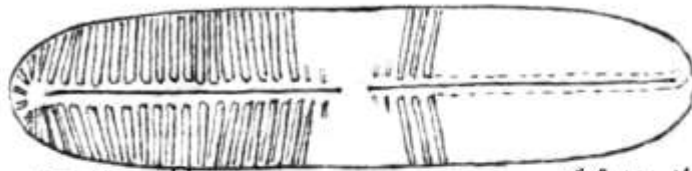
Amphora graeffii (? var minor Perag)
Note var minor has rounded raphe See Perag 46/14
whereas the type has straight raphe See Perag 46/20.

Miscellaneous Plate 173

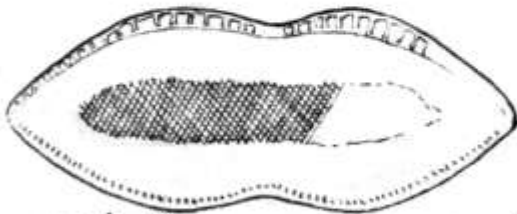




1892/B Quant. 23.12.11



1892/B Quant. (marked) 44.10.16
Pinuloxia quadrata (AS) CC
 var. *soderlundii* CC



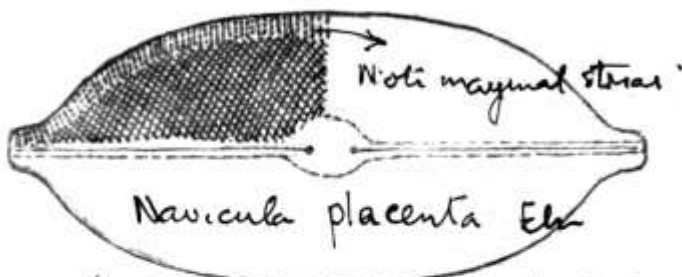
1892/B Quant. 34.14.21.10



1892/B. Quant. 36.6.13 1/2
 HGB says *Caloneis clementis*



1892/B Quant. 149 *Stauroneis spicula* Griseb. 68.10.28?
 HGB says H1H was registered in Griseb.

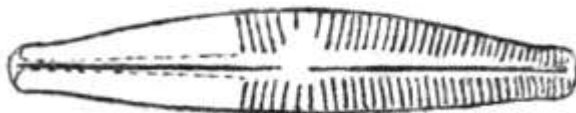


Navicula placenta Ehr
 3485/cc hochdruck 41.18.23

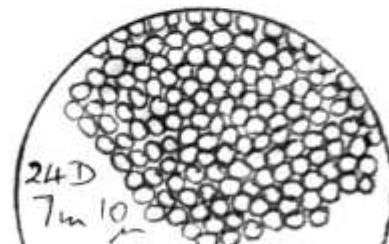


3485/cc. 17.5.16.

Squid na Squid
 ? *Eu. bactriana* Ehr.

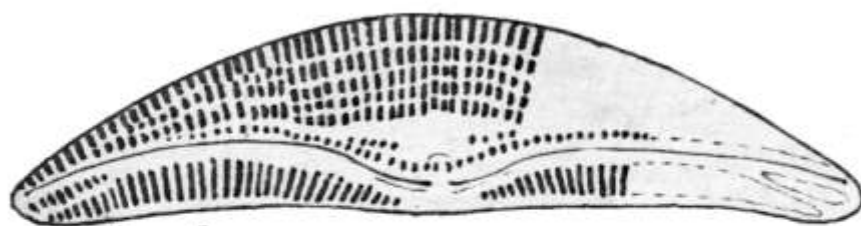


L. FRIED MULL 38 6 1/2 15
 3461/cc x BM. h. fuge. scae wic
 ? *Cymbella aequalis* Wm



24 D 7 in 10
 Harbinger *Melobesia distans*
 3485/cc Squid-na-Squid

Miscellaneous Plate 181



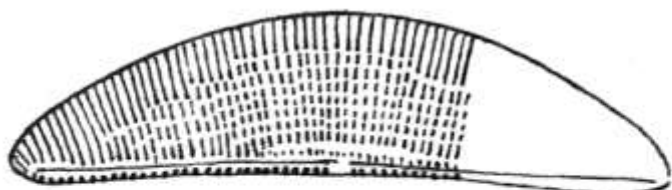
1892/B Quant.

56 12½ 12



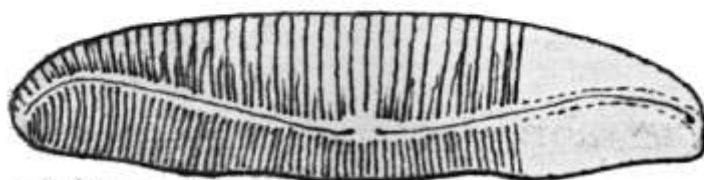
1892/B Quant.

46 6 8½ 10



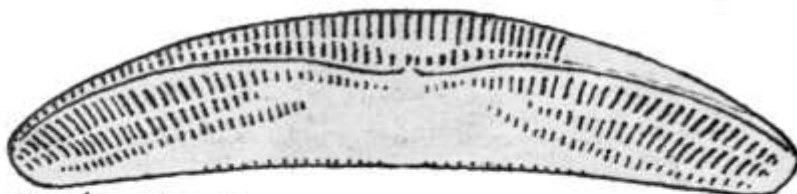
1892/B Quant

43 10½ 14



1892/B Quant

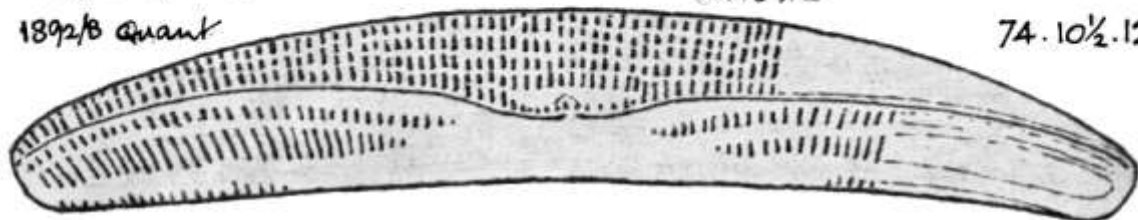
46 11 10-15



1892/B Quant.

58 10 12

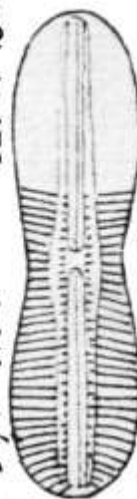
1892/B Quant



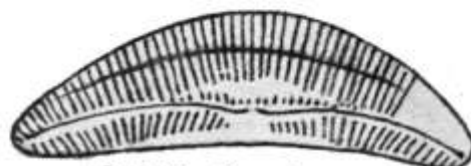
74 10½ 12.

32. 8. 16 SW 16

1892/B Quant

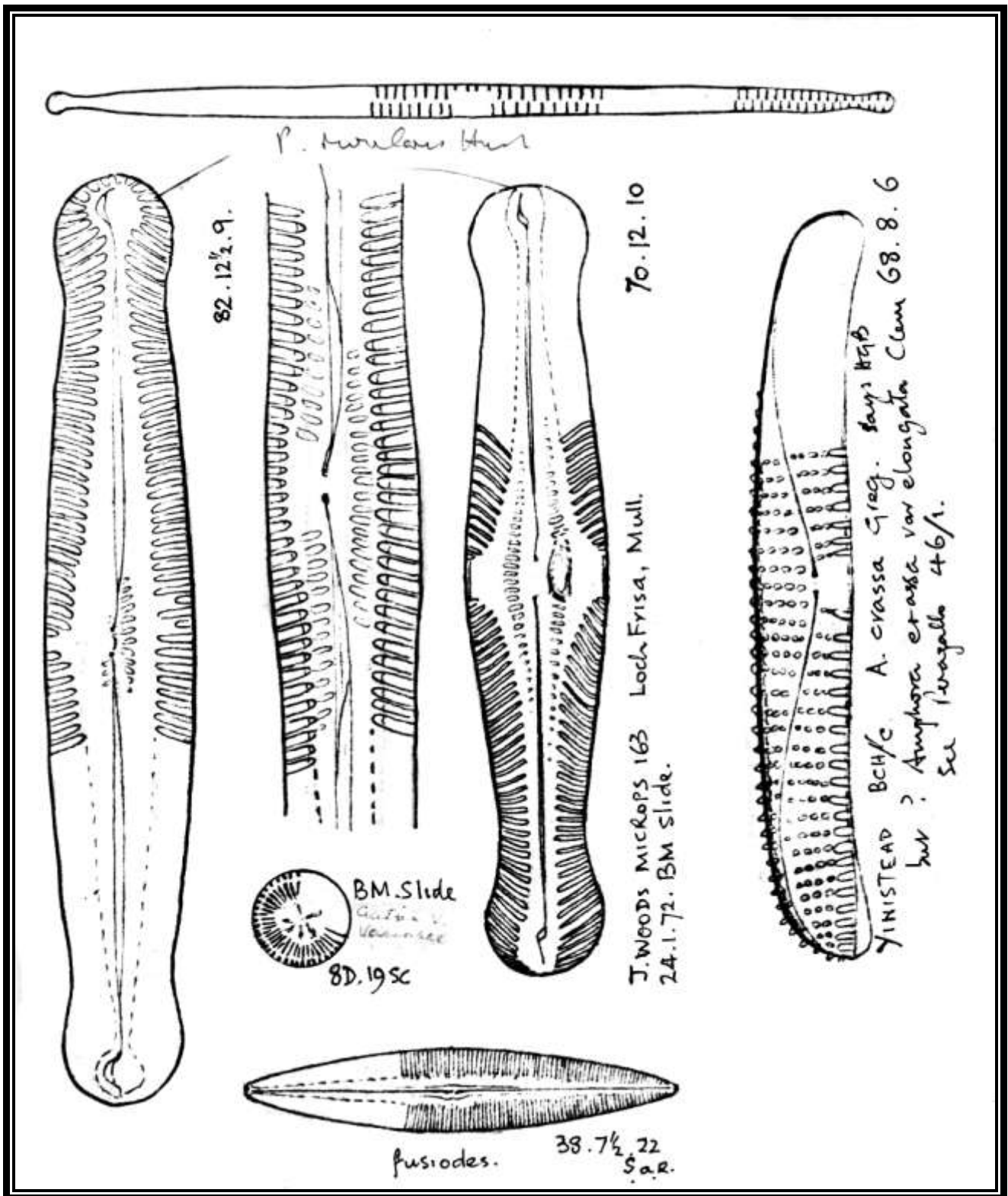


27. 5. 15.

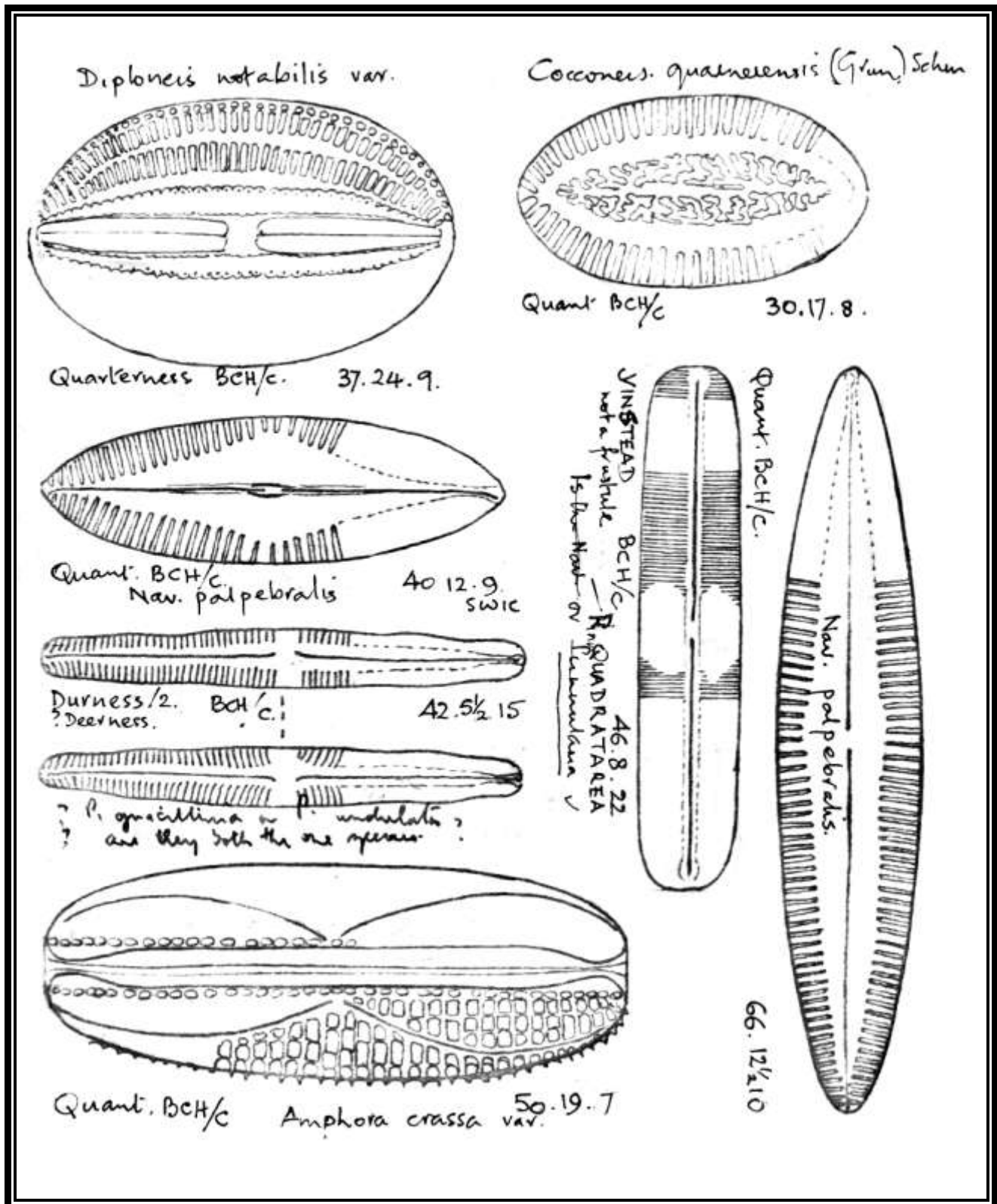


1892/B Quant
MEXICANA var.

31. 8½ 15



Miscellaneous Plate 184



30.17.8

H.G.B. says he had 15 illustrations of:

Cocconeis quarnerensis

Cocconeis pinnata

Cocconeis ornata

...and he seems uncertain where one starts and the others finish.

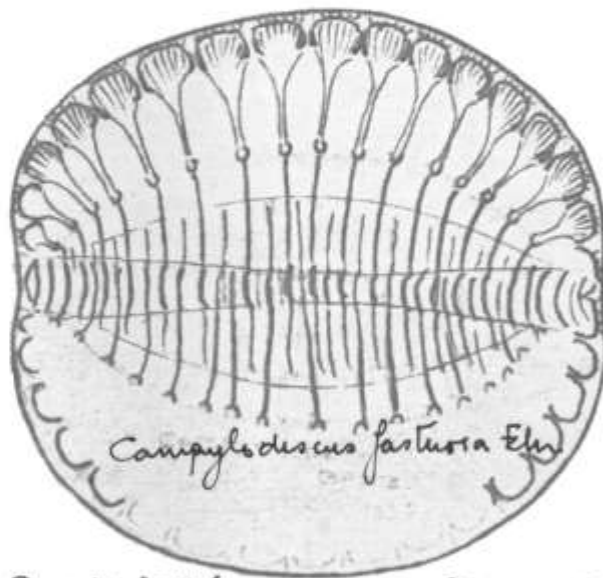
300 10. X 6



Quant. BCH/c 30.18.8



Quant BCH/c 20.6.24.18kp

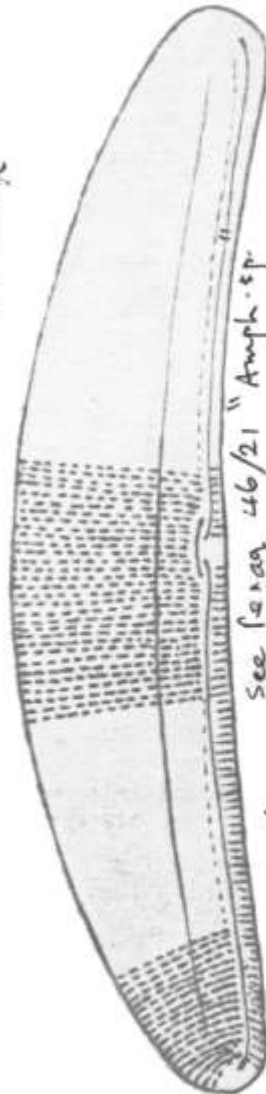
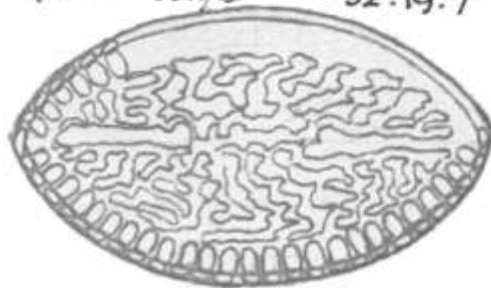


Quant BCH/c

39 38.25 cm/100.

Quant BCH/c

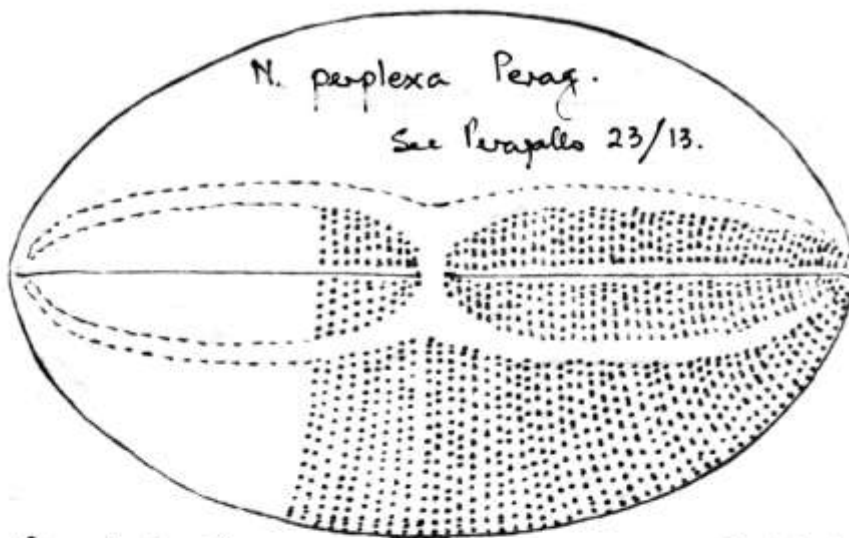
32.19.7



Quant. BCH/c

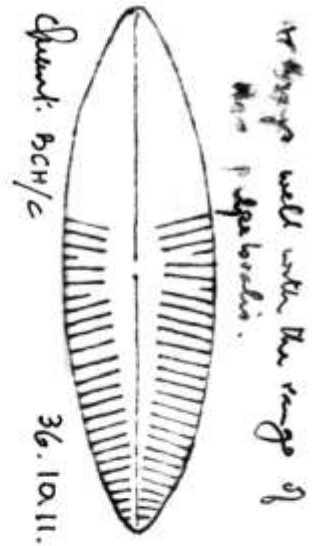
75.14.15.

Miscellaneous Plate 186



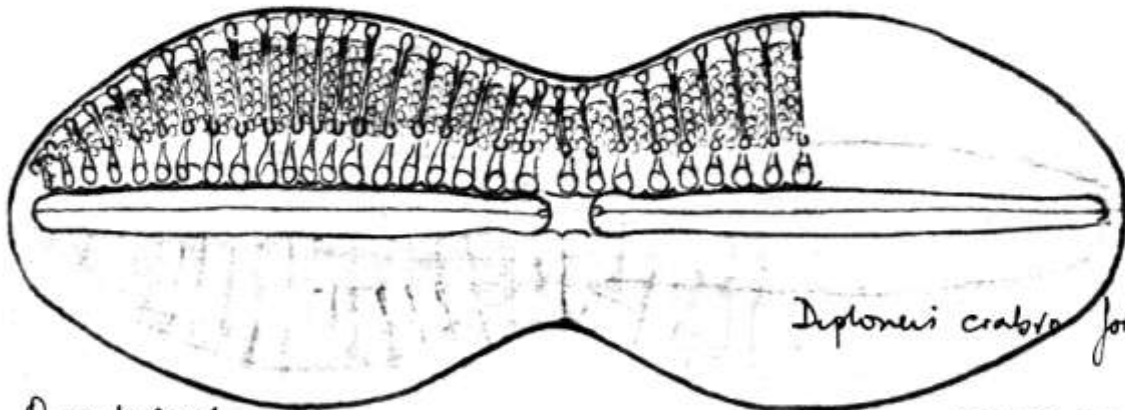
Quant BCH/c

57.36.10



Quant: BCH/c

36.10.11.

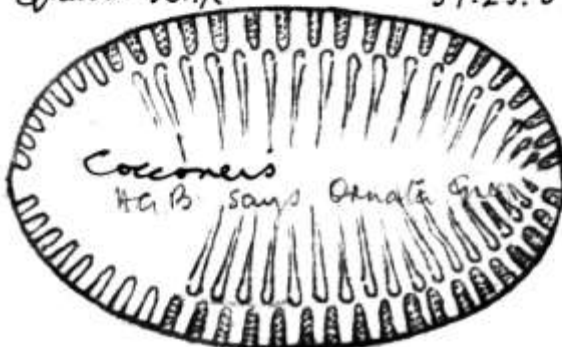


Quant: BCH/c

Quant: BCH/c

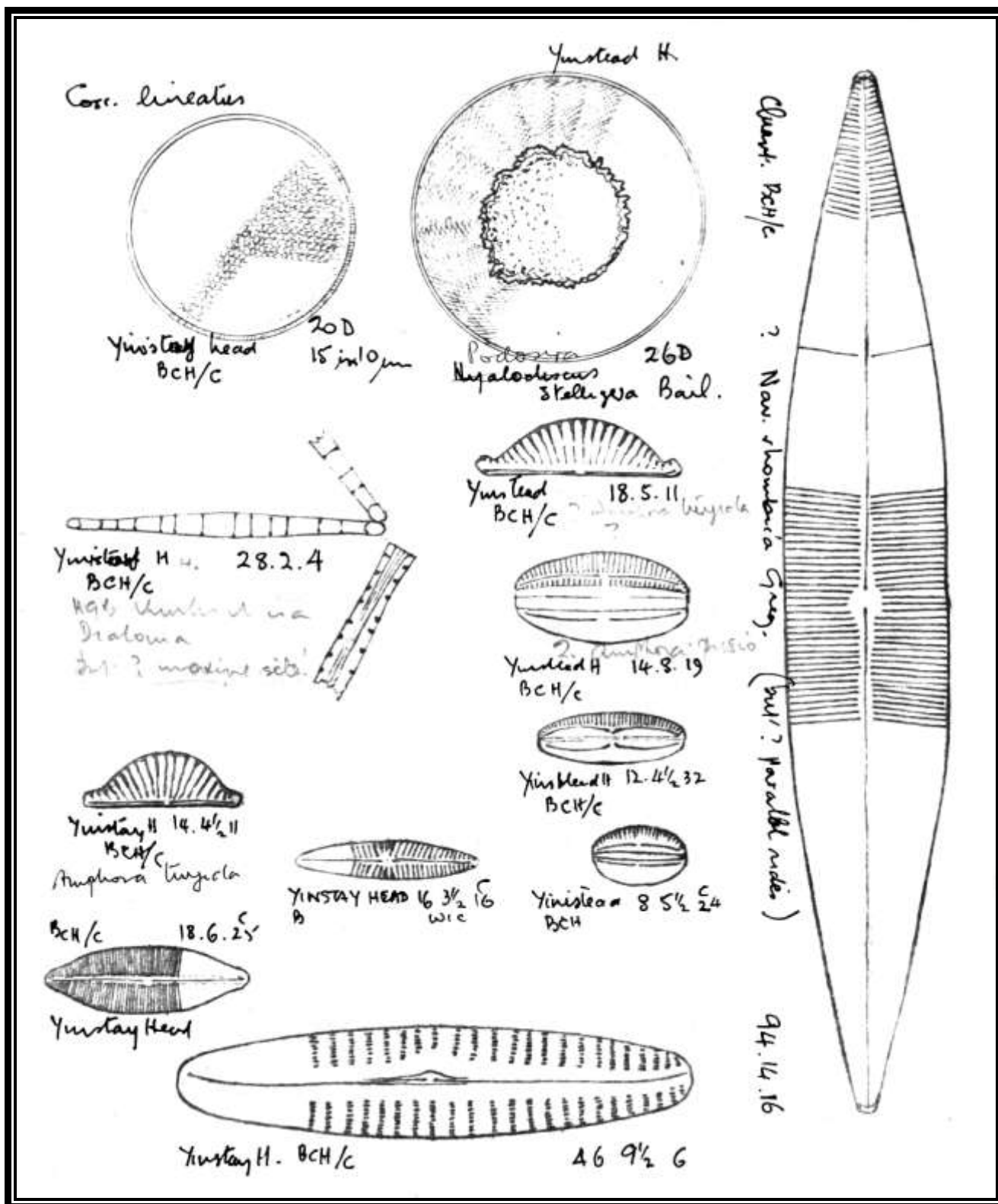
37.23.5

75.27.5

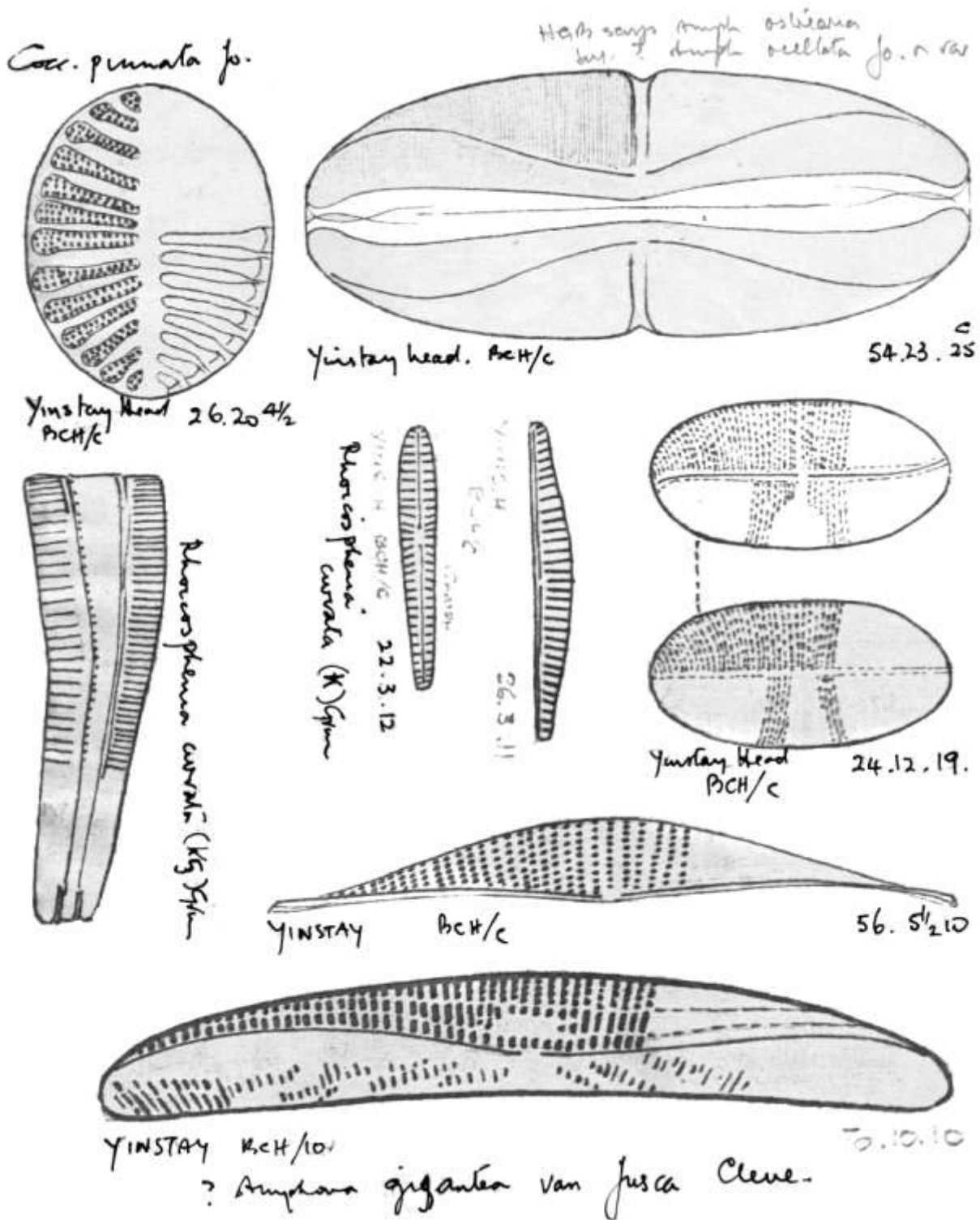


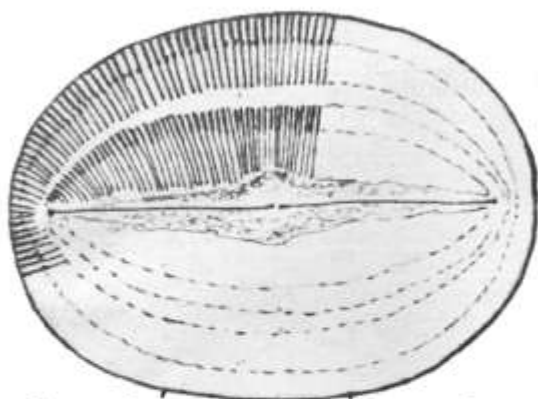
Quant BCH/c

30.18.4½

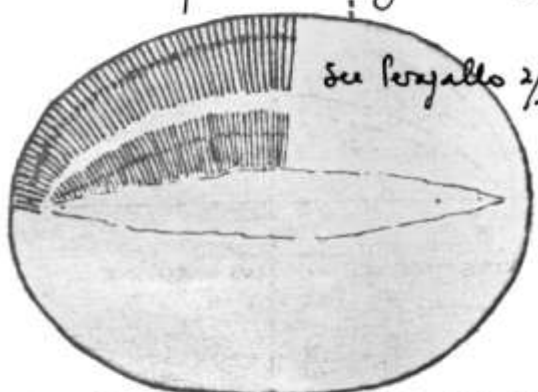


Miscellaneous Plate 188





Coconeis pseudo-marginata Gray



See Perryatto 2/21-24

YIMSTAY Head BCH/C 35. 26. 16.

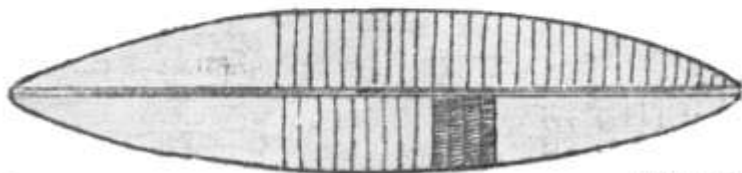


Yimasty Htl

22.10.22

Grammastophora
? *oceanica* n
? *marina* var.

43. 13 13



YINZ HB BCH/C

Stria gently curved
around center



48.11.9



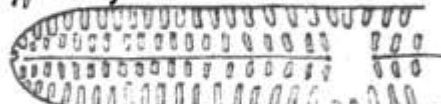
Yimasty Htl

26. 6 18
Swic



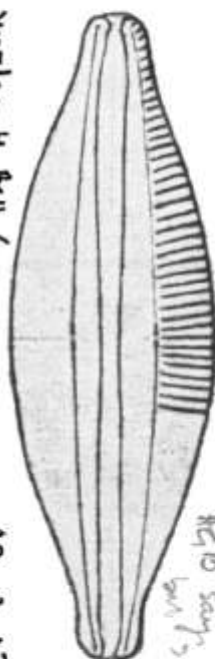
Yimasty Htl

23. 3 1/2 16.



? *N. blanda* var. ? *N. etgadenensis*
Pinnipedia

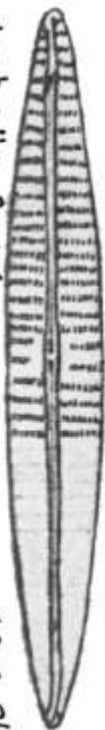
(Gray) Ralfs
modified



Yimasty Htl. BCH/C

Nitzschia dentata Gray

Yimasty Htl. BCH/C



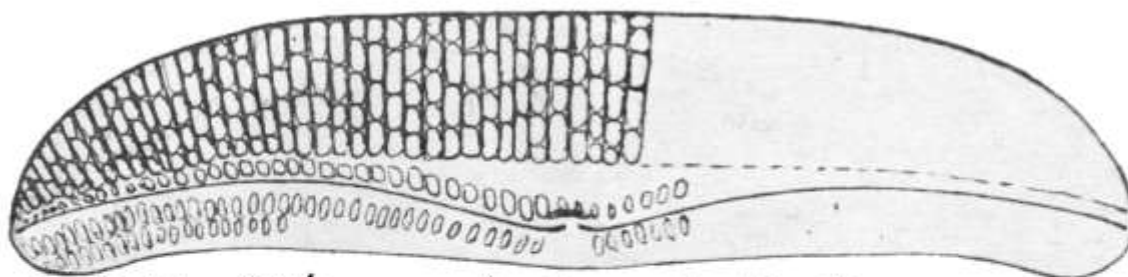
? *Nitzschia cancellata* Dunk. + 14/15 often with
transverse striae

49. 6. 8 1/2

68. 5 1/2 x 3-4

HG B says *Amphioxus* sp. Gray
but's - in *Capitulum* Gray

Miscellaneous Plate 190



Ymslay Hd. BCH/c

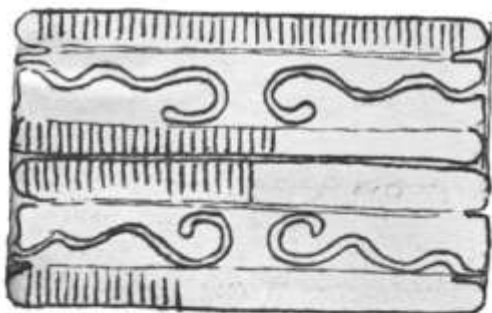
Amphora robusta Greg

74.18.8



Nav. sp

Ymslay Hd. BCH/c very "widely" linear. 54.8 1/2 9 Serials Plate 189. 48.11.9.



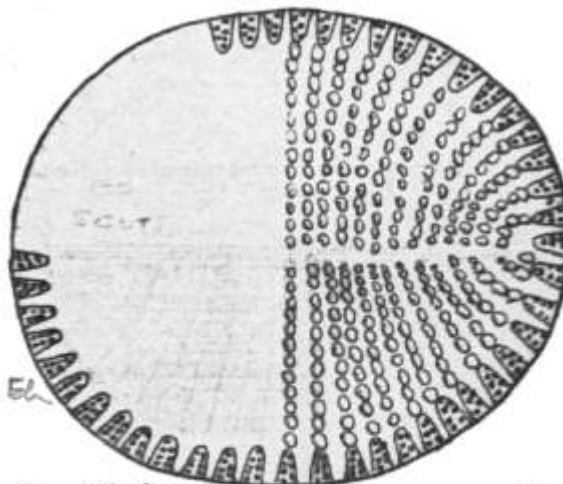
Ymslay Hd. BCH/c 32.20.13

Traumatophora angulosa var *istandica* Eh



Ymslay Hd. BCH/c. 34.4.x

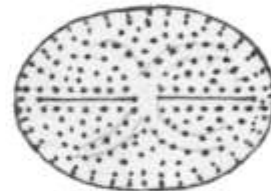
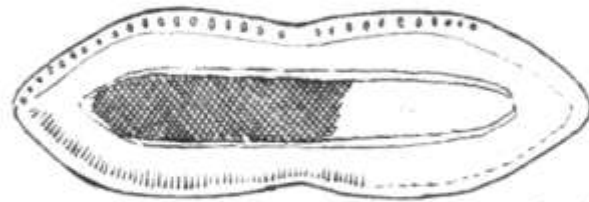
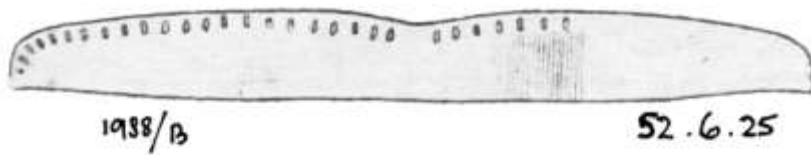
Amphora brevis Ehm
or? *bigibba*



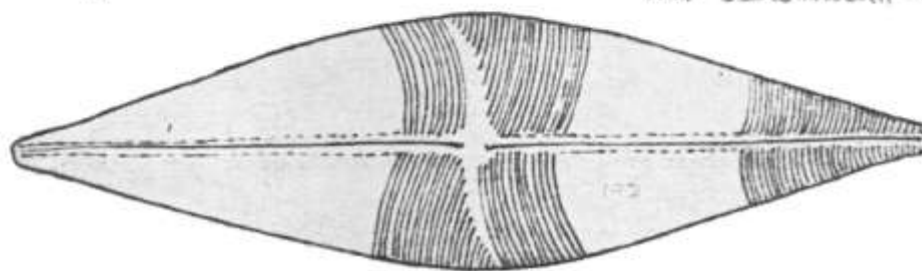
Ymslay Hd. BCH/c

37. 32. 5 1/2

Miscellaneous Plate 192



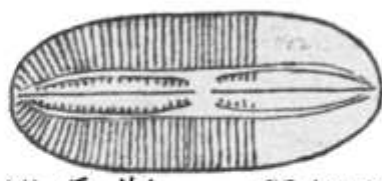
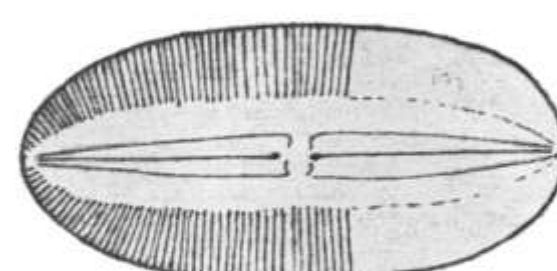
38.13.25 9



60.17.22



62.2 1/2 8.5.

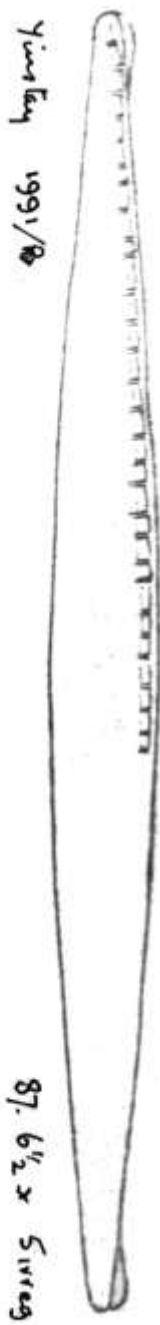


25 10 15

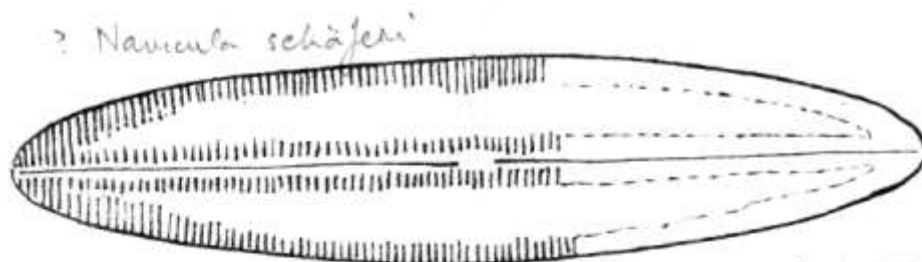
Yinstay Htd. 1991/B 36 17 15



60.3. x 8

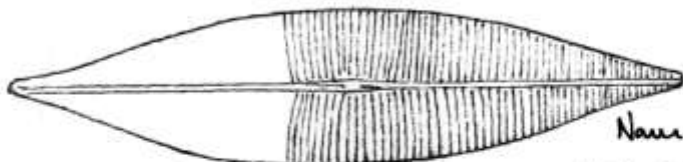


Miscellaneous Plate 193



Yurkay Hst. 1991/B. Reconstructed

60.14.15



Naucula

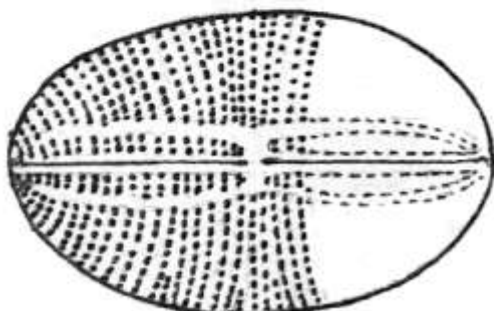
Kirkwall Hst. 2016/B

44.10.15



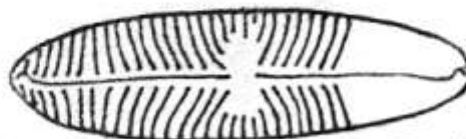
Kirkwall 2016/B

68.24 ? .9

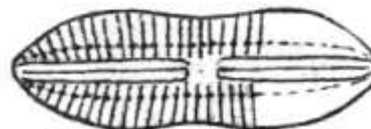


Quamkeess sketchy 28.20.11

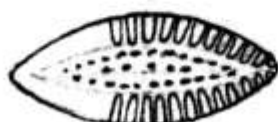
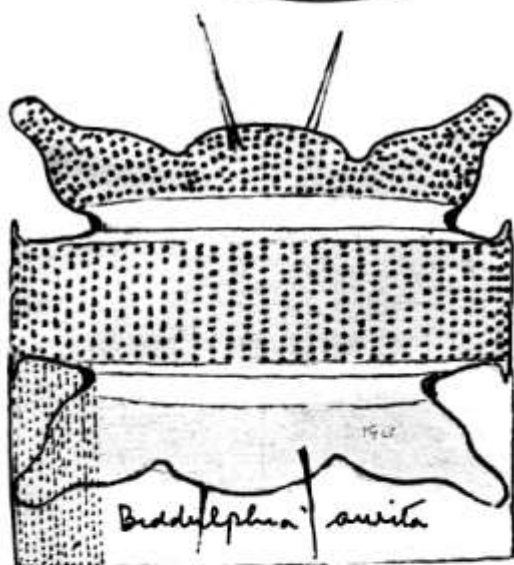
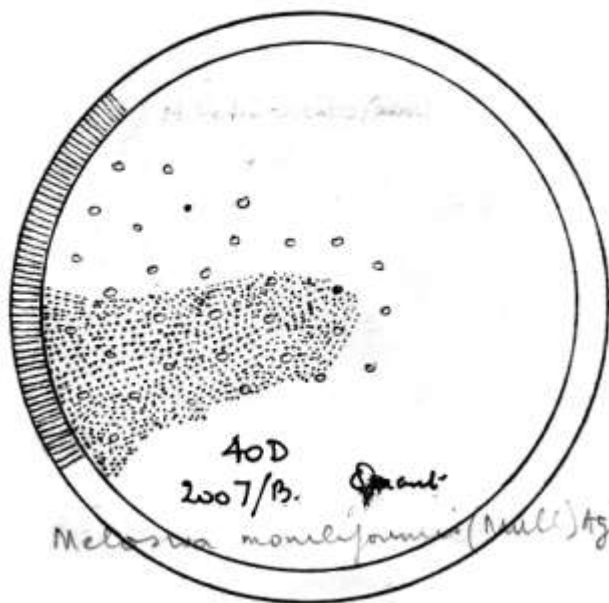
2007/B Naucula v. deformis Hst



Sand Side Bay 2007/B 30.9.15
Nitzschia
Nitzschia digitata v. elliptica DES.

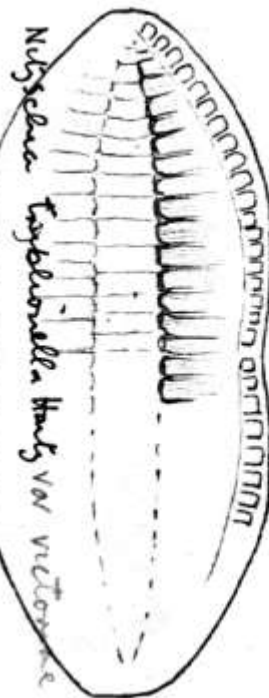


2015/B Quand 24.8.12
Diplomeis subadvena Hst



Kirkwale 2003/B

46.19 x 7.



45.8.10

2005/B Quant. Amphora



35.5½ 27.

2018/Quant.

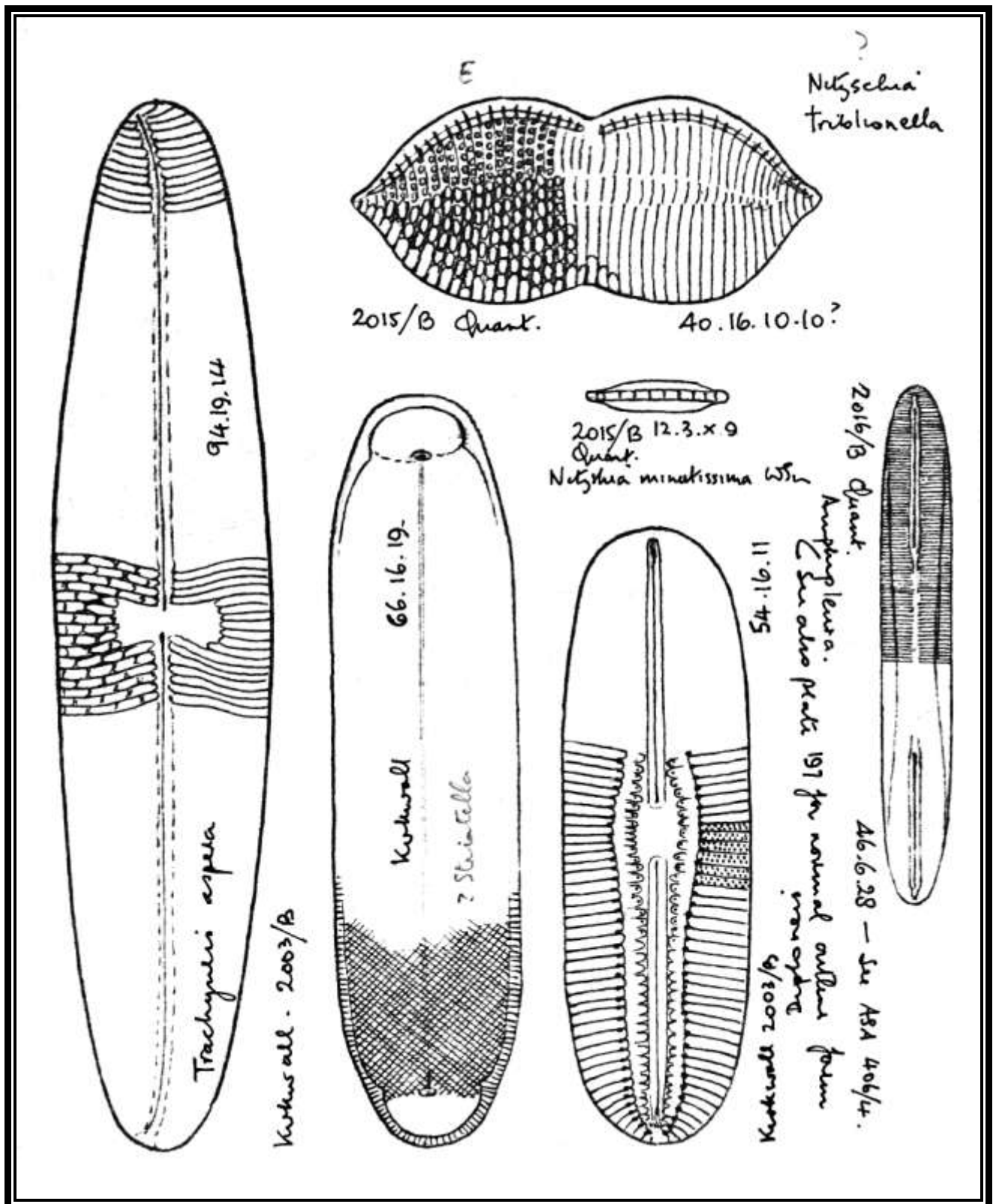
Small Sea Bay. Orkney

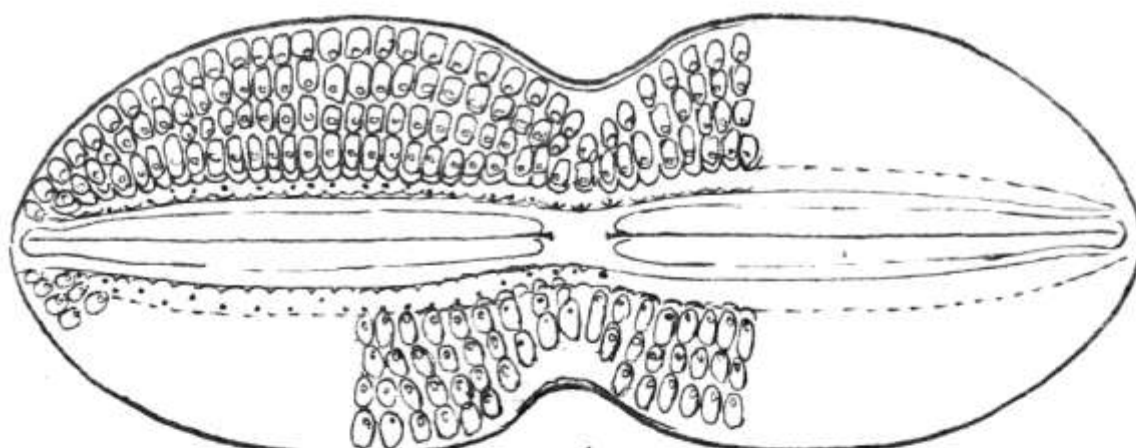
Hantzschia amphioxys.

87.8.14.6



Miscellaneous Plate 195

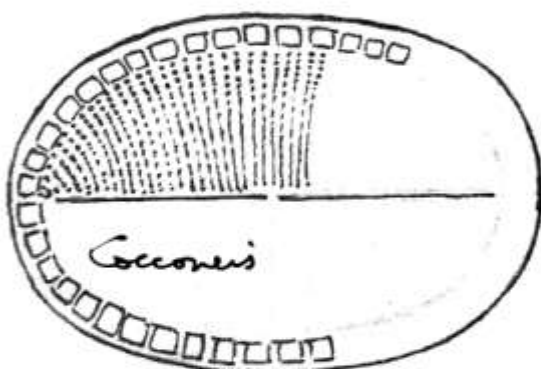




2015/B Quant.

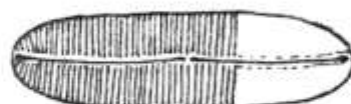
Dipleuris bombus. Ehr

74.28.6



2015/B Quant.

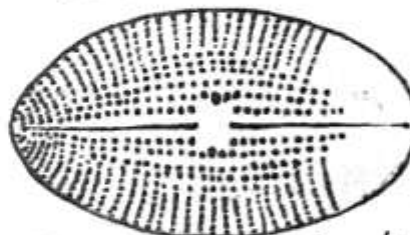
35.23.12



2015/B Quant.

22.6.21

Navicula



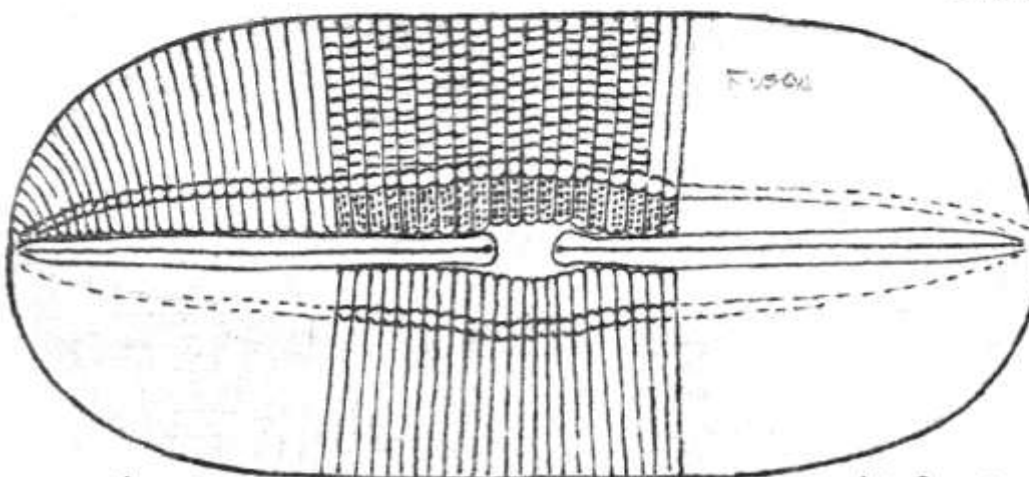
See 1240.

2015/B Quant.

26.14/212.

Nav. fraudentula
As.

In AA 70/60

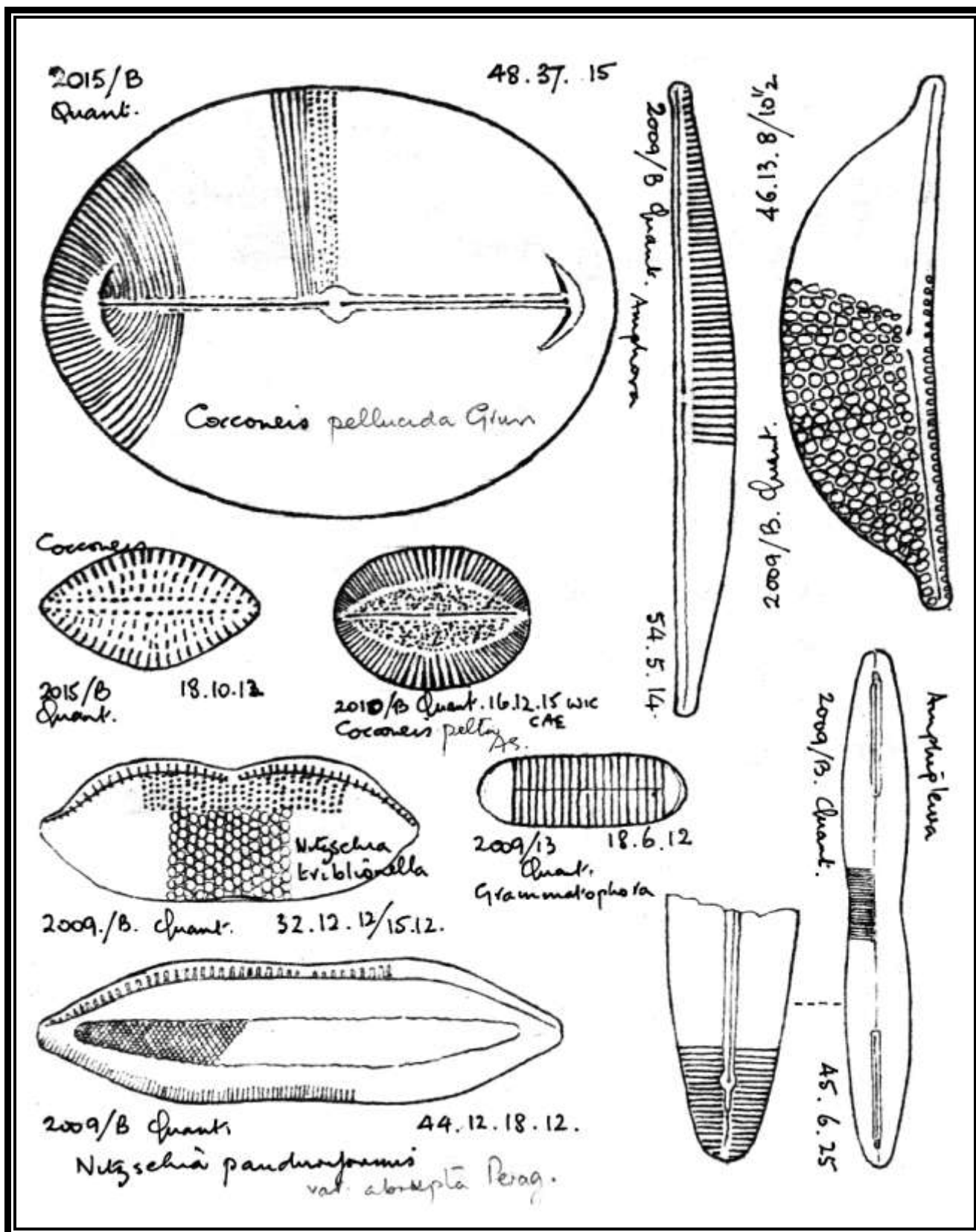


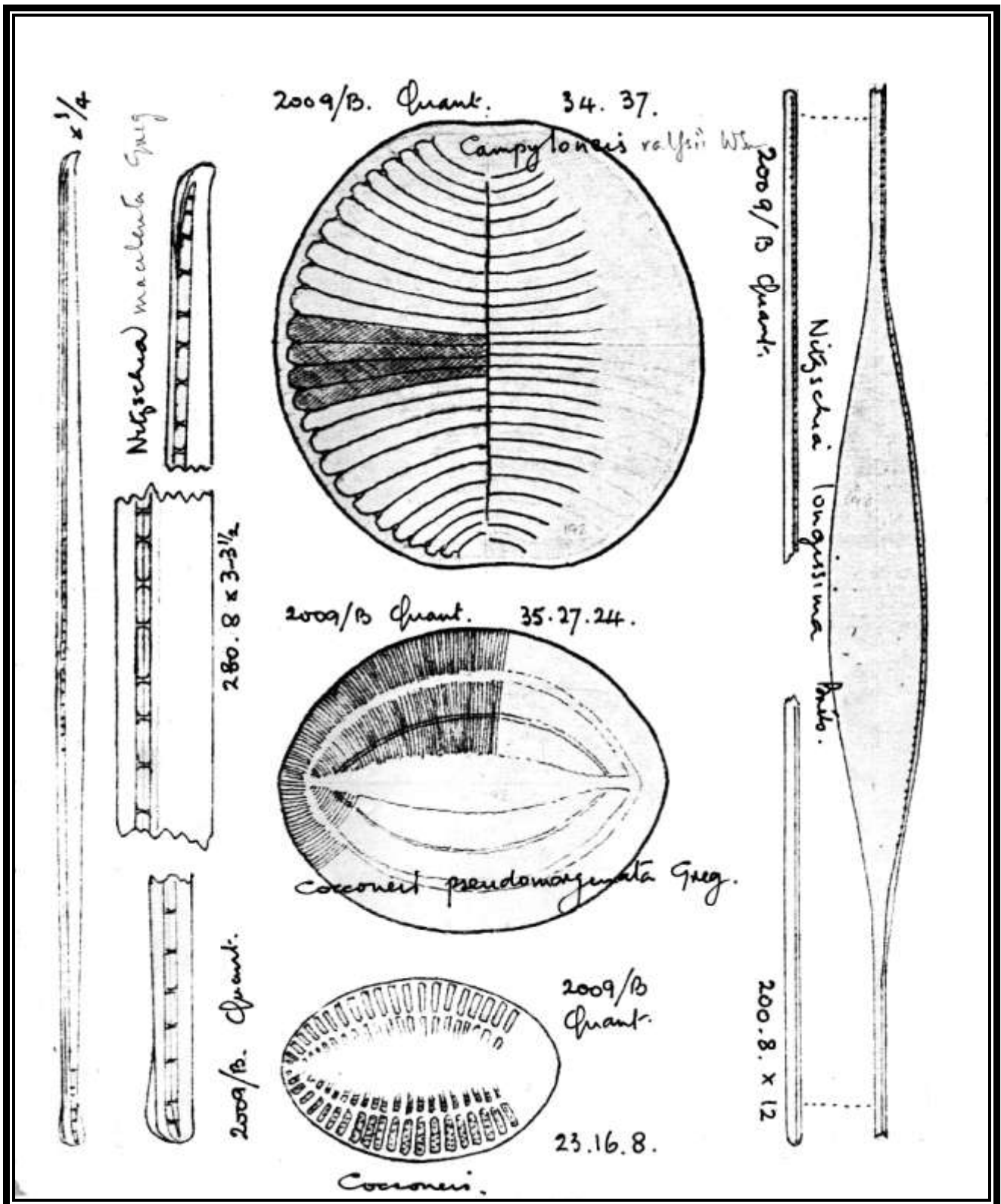
2015/B Quant.

Dipleuris fusca

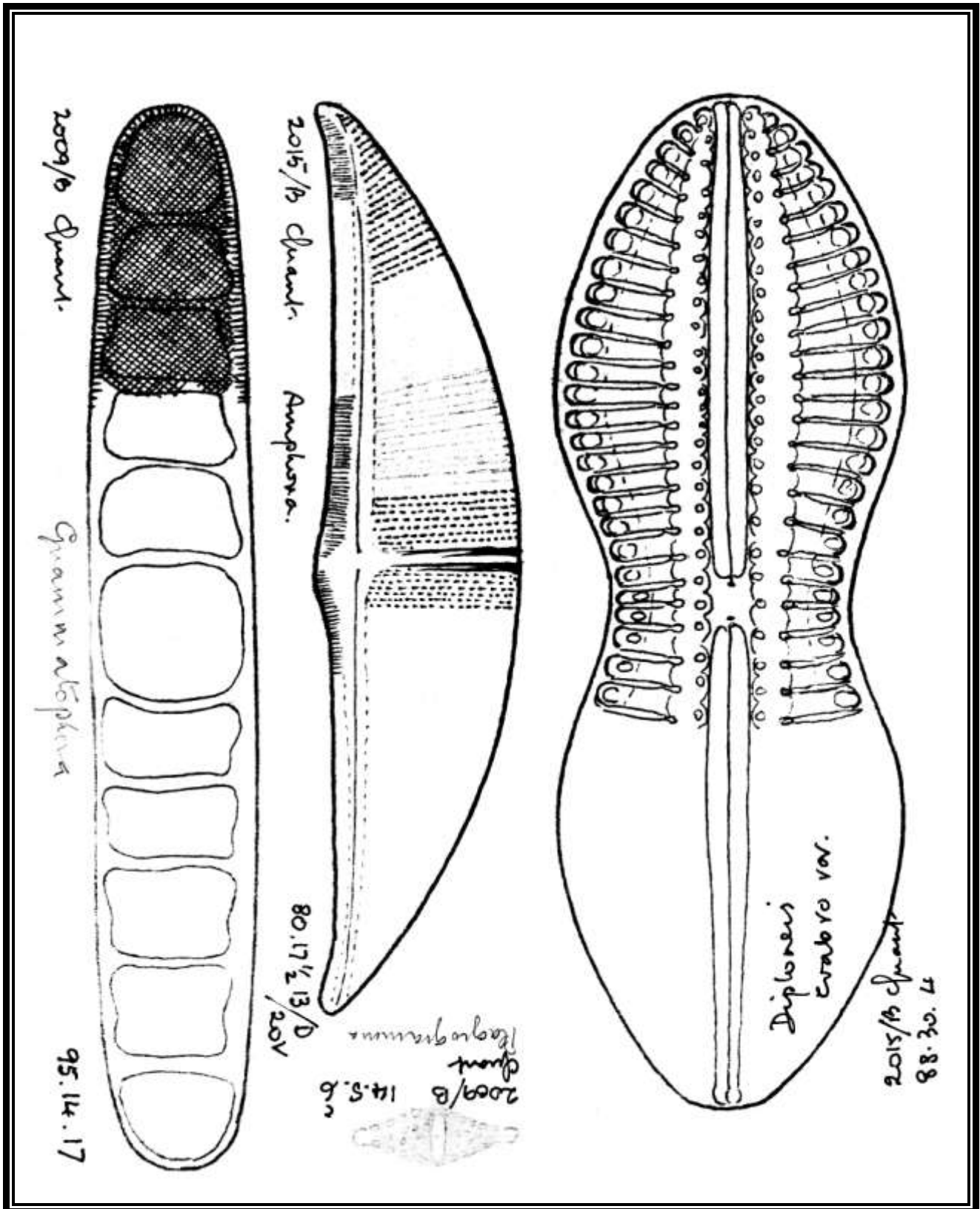
66.31.8

Miscellaneous Plate 197

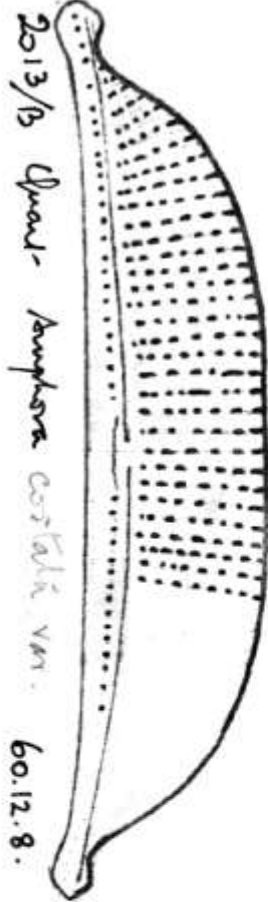




Miscellaneous Plate 199



2013/B. Quant.



2013/B- Nitzschia
with lateral or stagonum



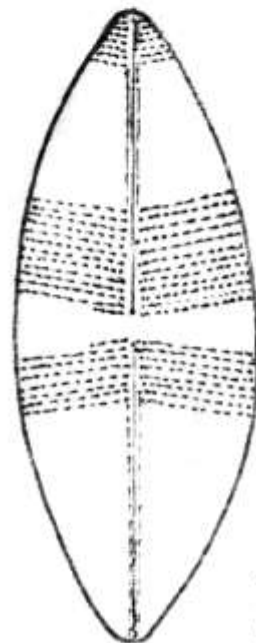
2013/B Quant.
Cocconeis peltoides Hunt



Nauvulus ? Amphirochorda

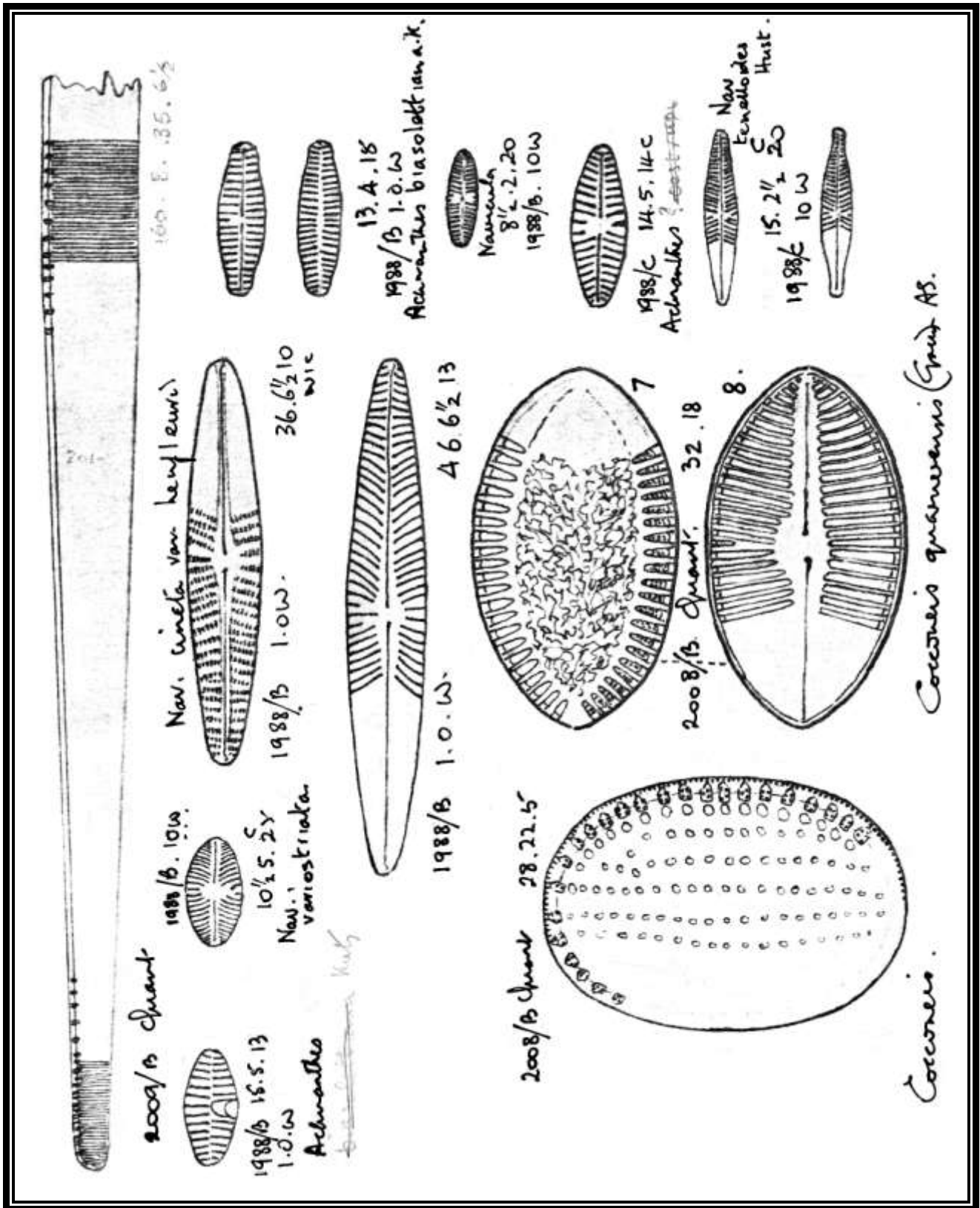


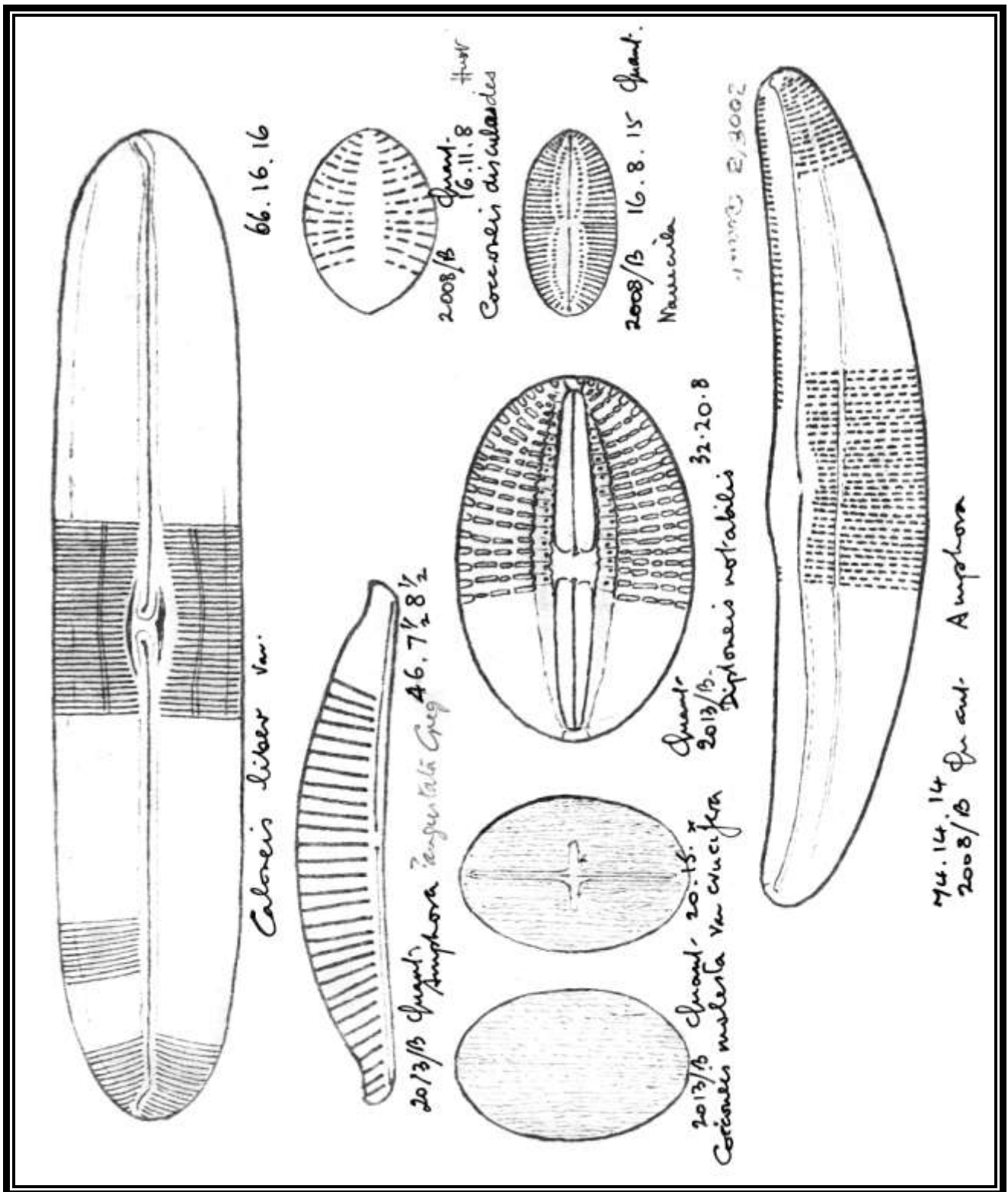
Kentmore BH 270 44.8 1/2 10



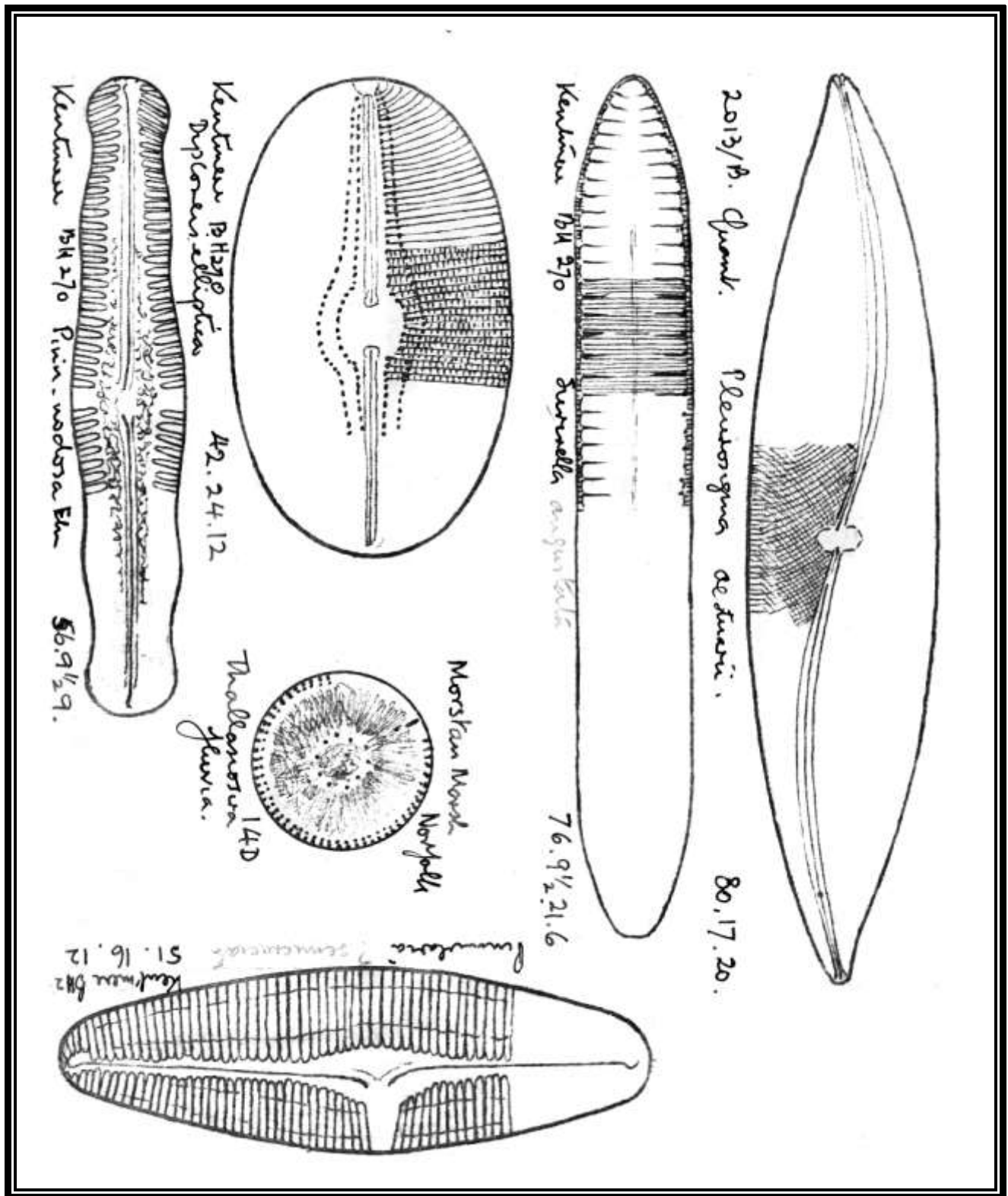
Kentmore BH 270. 42.16.19
Pachanthes obliqua (Gray) Hunt

Miscellaneous Plate 200A





Miscellaneous Plate 203





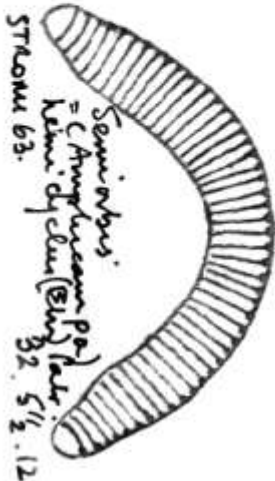
Wells 11.4.15
Norfolk
Pinnularia



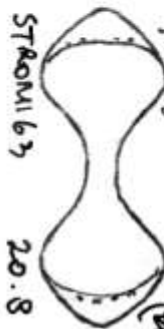
Wells. Norfolk BH 206 48.6.23
Amphora lineolata (Eh) Grun *Fini punctata*



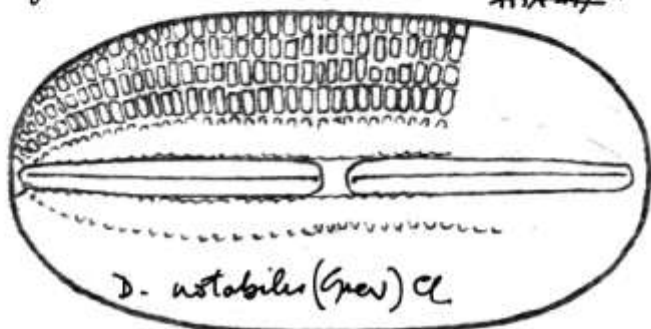
Wells. Norfolk 206 38.6.22
Amphora lineolata for *A. ostreata*



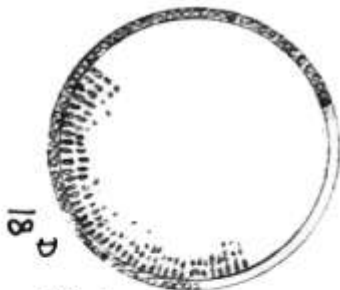
Stromi 63.
Semiorbis
= *Amphiscum* (P. A.)
known by clear (B. A.)
32.5 1/2.12



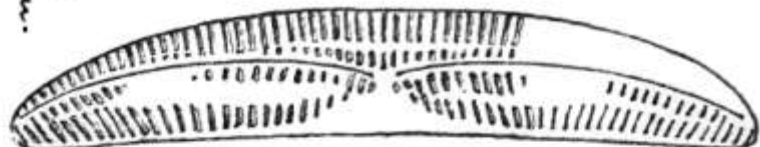
Stromi 63 20.8
Septa of *Taetia linealis*
(B. A.) Grun.



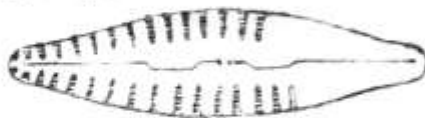
D. notabilis (Grun) Cl
Wells Norfolk 40.20.10



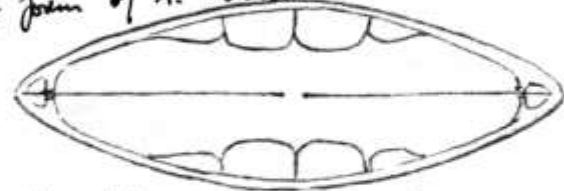
18 D
Malosira.



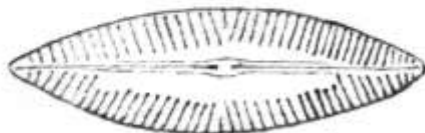
Wells Norfolk 47.8.13/12
? *Amphora attenuata* or a small
fine form of *A. robusta*.



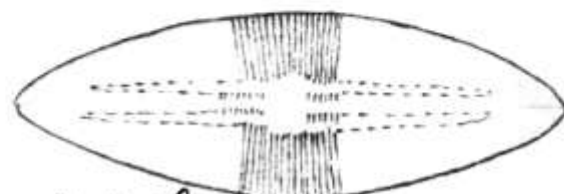
Stromi 63 26.6 1/2 9.
? *Achnanthes*.



Stromi 63 34.12.23.

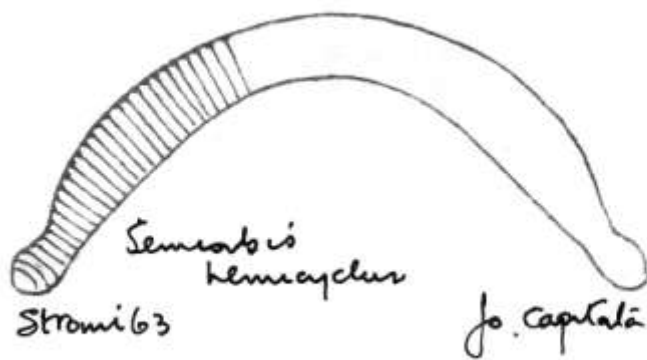


Stromi 63 26.8.15
N. palpestris group

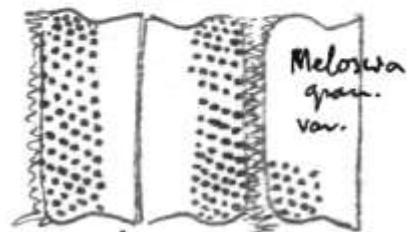
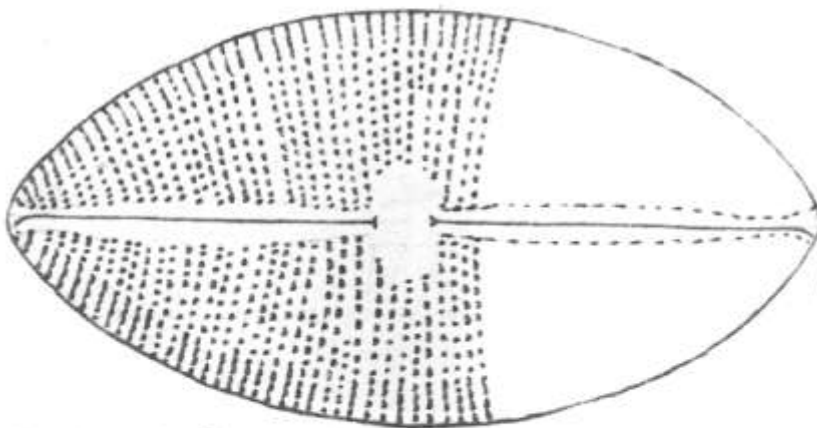
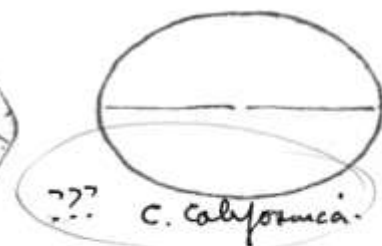
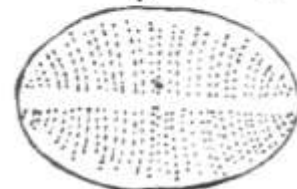


Mastogloia pusilla Grun.
plumula (Grun) Cl

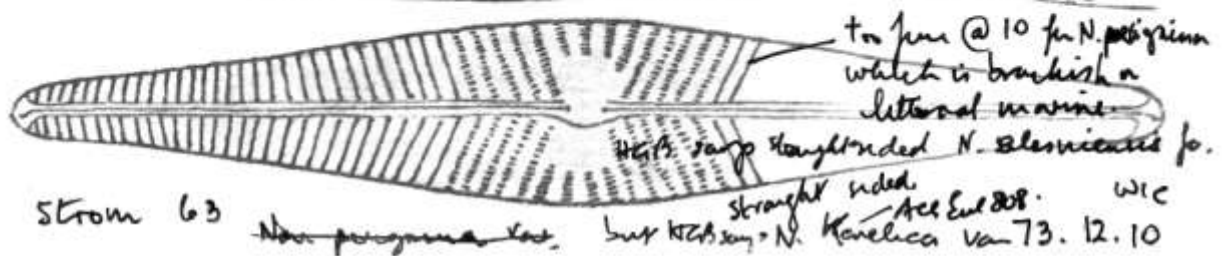
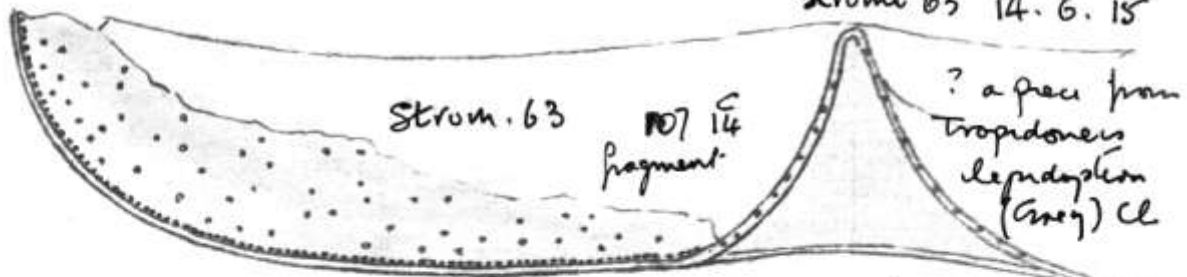
Miscellaneous Plate 207

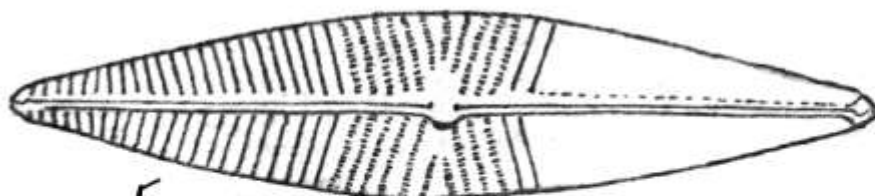


Stromi 63 28.7.10
See also Plate 206/28. 6 1/2 9.



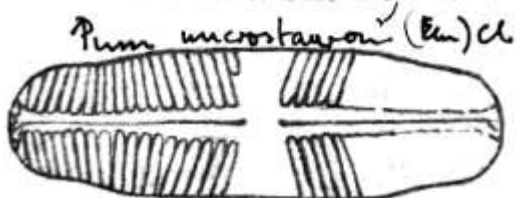
Stromi 63 14.6.15





Cross with 43 striae

55. 12. 11



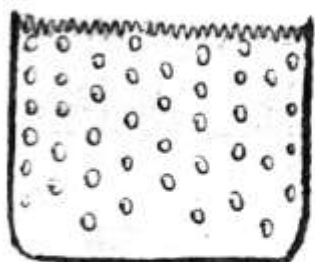
Cross with 43 striae

32. 9 1/2. 14



Cross with 43 striae
P. undulata Greg

40. 6. 25



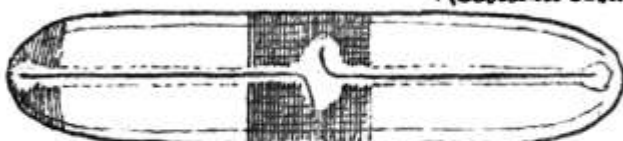
19 D



Melonja granulata



Quilken 46.



Meridium bisulcata

Quilken 46

40. 8. 30

P. intermedia Hay.



Quilken 46

39. 6 1/2. 7

Cyrtosira belgica var.

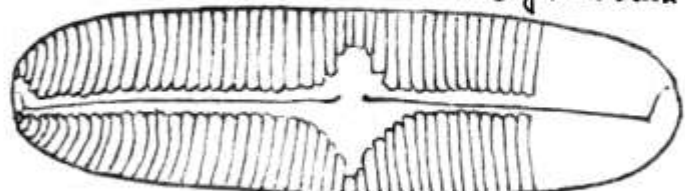
Plagiosira van Landii Grun



429/B. Cylindri

30. 3 1/2. 10

P. concavensis Bruch ✓



44. 12. 14

Miscellaneous Plate 209

? *Caloneis pulchra* Merikommer,

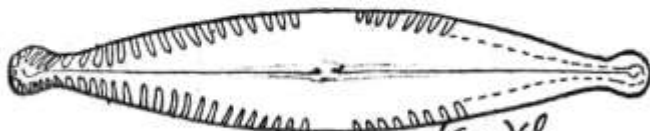


1021/B Aberdeen

42.5 $\frac{1}{2}$.22



848/B Spr. Wood NTON 40.6 $\frac{1}{2}$.21.9 in
1 Rad



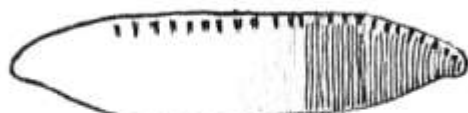
605/B L. Cororion. P. braunii (Grun) Cl. 44.8.11



605/B P. braunii (Grun) Cl. 46.8 $\frac{1}{2}$.11



Loch @ Broken Brough, Shetland 37.6 $\frac{1}{2}$.13.
P. hantzschii (K) Rath



1003/B Tewkes. 31.7.23.9
near to Hantzschia amphioxys



1003/B Tewkes 38.6.20.

? *Fragilaria virescens* Lalp

615/B TAI NEU

57.6 $\frac{1}{2}$.30.6.

? *S. delicatissima* Lewis

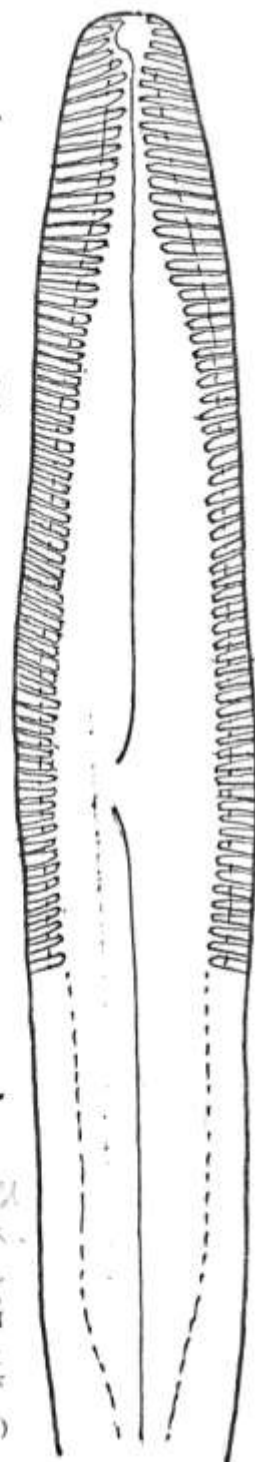
Hq B still
thinner than should
be a *Stenopterotheca*.

1021/B Aberdeen

C. Braucroft

2 N. A. UNIV. 1021

1021/B Aberdeen

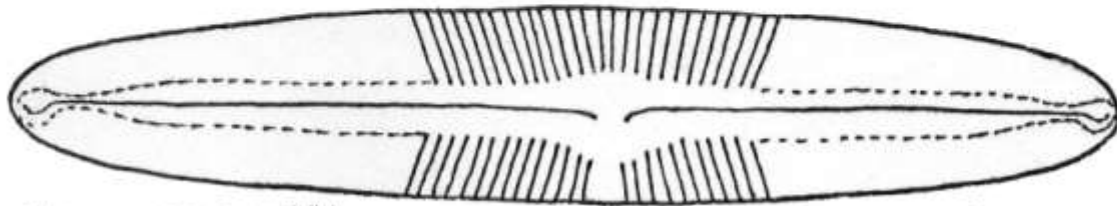


Note Hq B lumps Hantzschia with
Nitzschia and does not accept separation



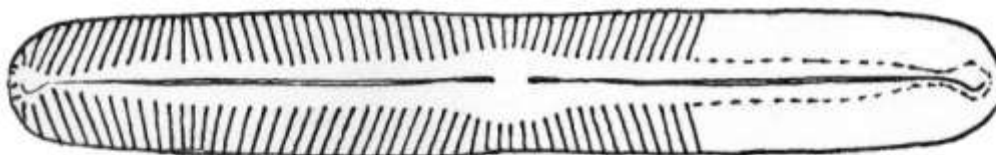
TYPE *Pinn. sudetica* - Hise.

69. 11. 12



Sema INTERRUPTA!

69. 12. 12.



Pinn. rupestris Hantzsch Bréb Type I.V.V.

62. 8½ 12

Mounted by R. Ross 6x147

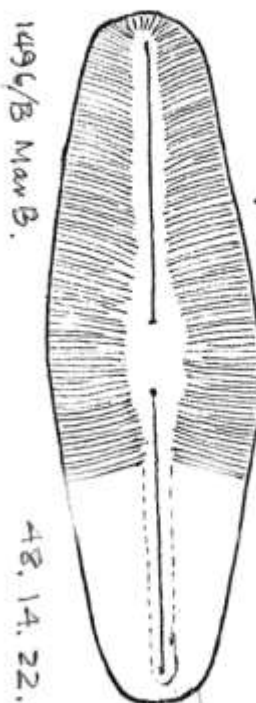
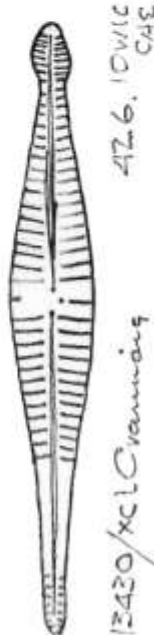
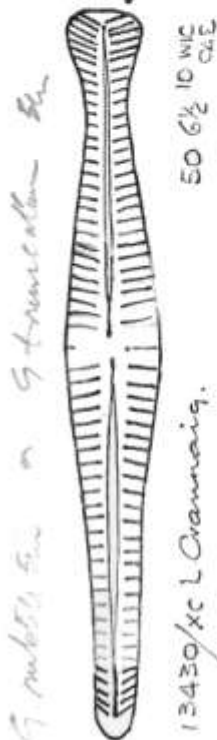
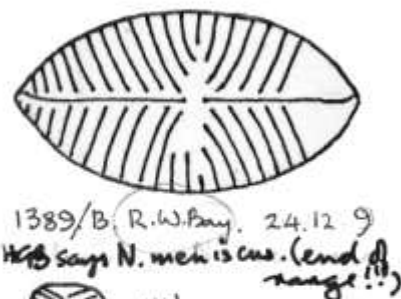
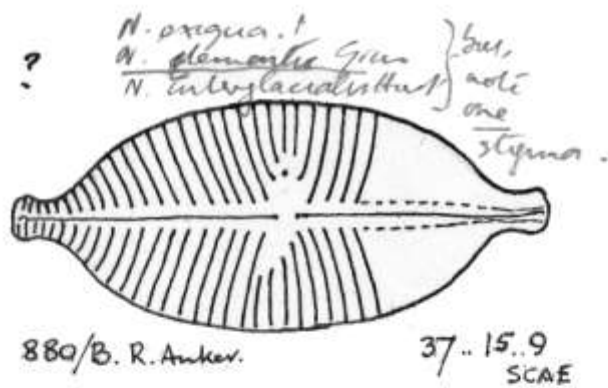
Rabenhorst algen europas No 1203

G.N. Resin - Krippengrund Switzerland Sep. 1861. BM. 36065.

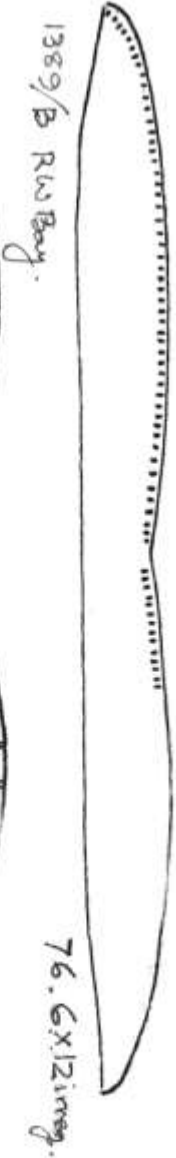
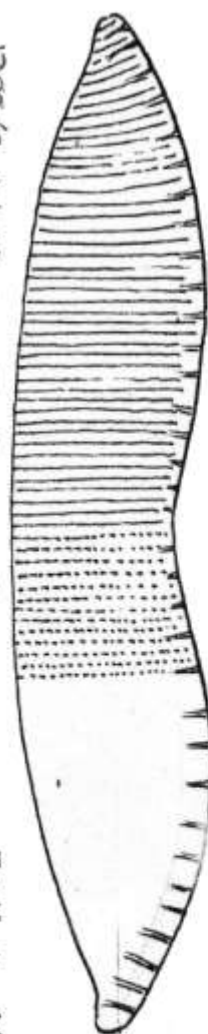
but - see A.C. Eul Sw & Finland IV pp. 5
in which she makes rupestris a
var of P. sudetica



Miscellaneous Plate 211A



1389/B R.W. Bay. See Fig. 17. *Hantzschia amphioxys* var. 70. 14. 11. 4/5.

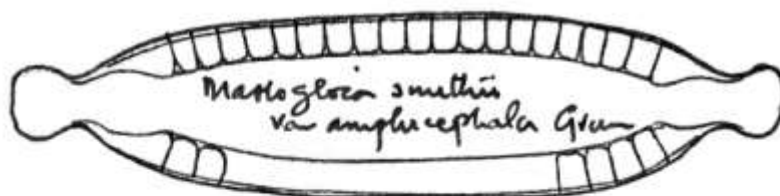


HGB says *Nais. Cocconeiformis* even though above clams divergens



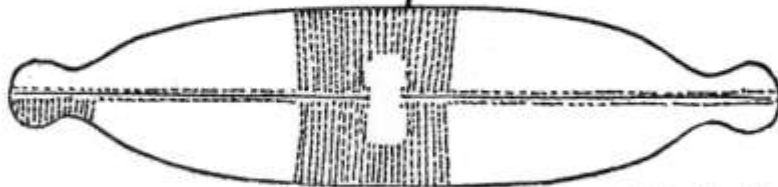
Anomoeoneis zernans var.

Miscellaneous Plate 212

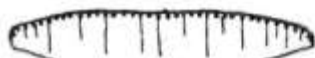


13430/xc. L. Crannaig.

51.12.18.

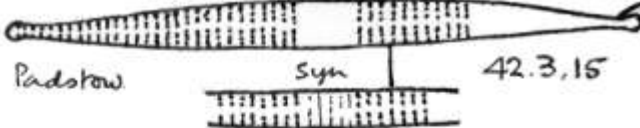


H&B say *Nitzschia* *disputata* Grun. but check again with *N. denticulata* Grun.
Padstow. 26. 2½ x 15 irreg.



Padstow. 20.3. x 15 irreg.

? *Synedra amphicephala* K



Padstow

Syn

42.3.15



PADSTOW.

22.2½.15

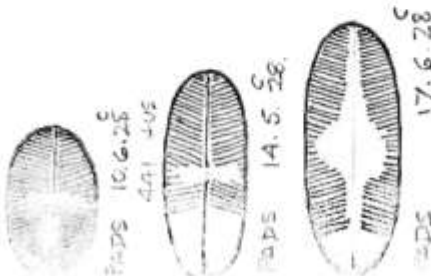


Padstow. no. punctum 24. 7½ 15.
Gemistrona



Padstow

26.3 x 15



10.6.28
4.11.4.05

14.5.28.

17.6.28
5.12.18



521/B 12½.3.16

LLYN OG.

Eunotia mentenii

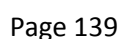
E. septentrionalis

106.16.12

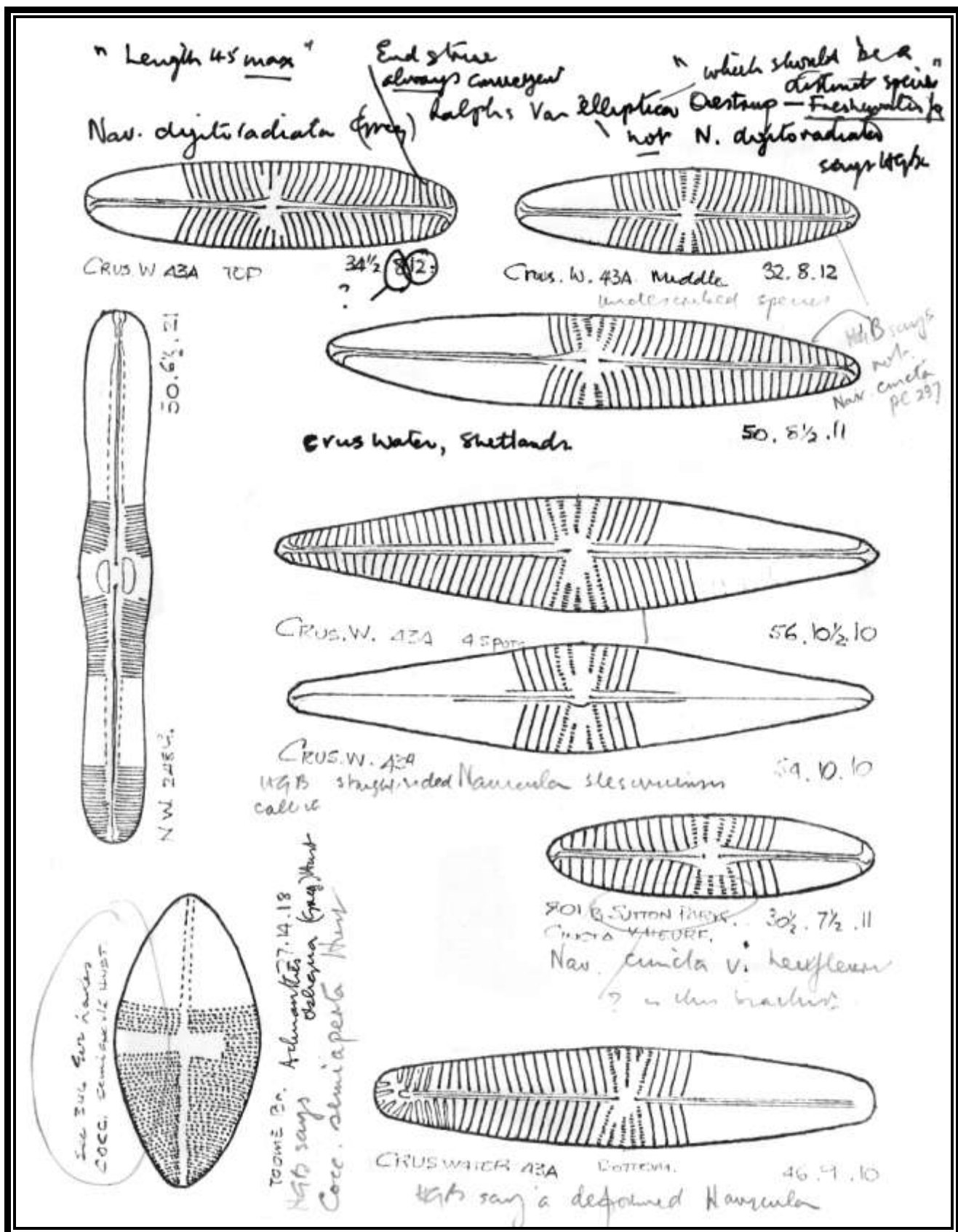
P. divergens

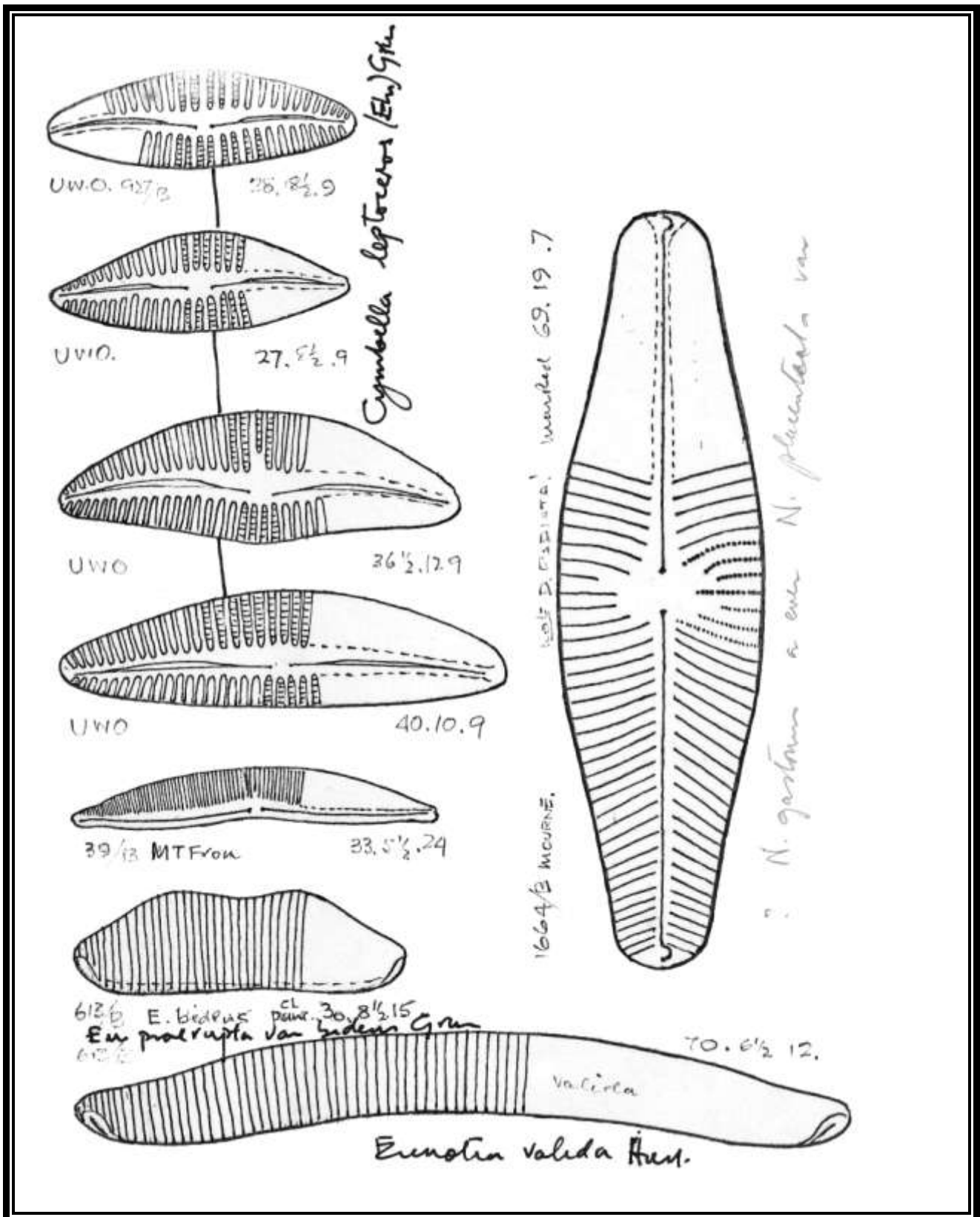
Achnanthes ? *marginulata* Hust

13430/xc. L. Crannaig

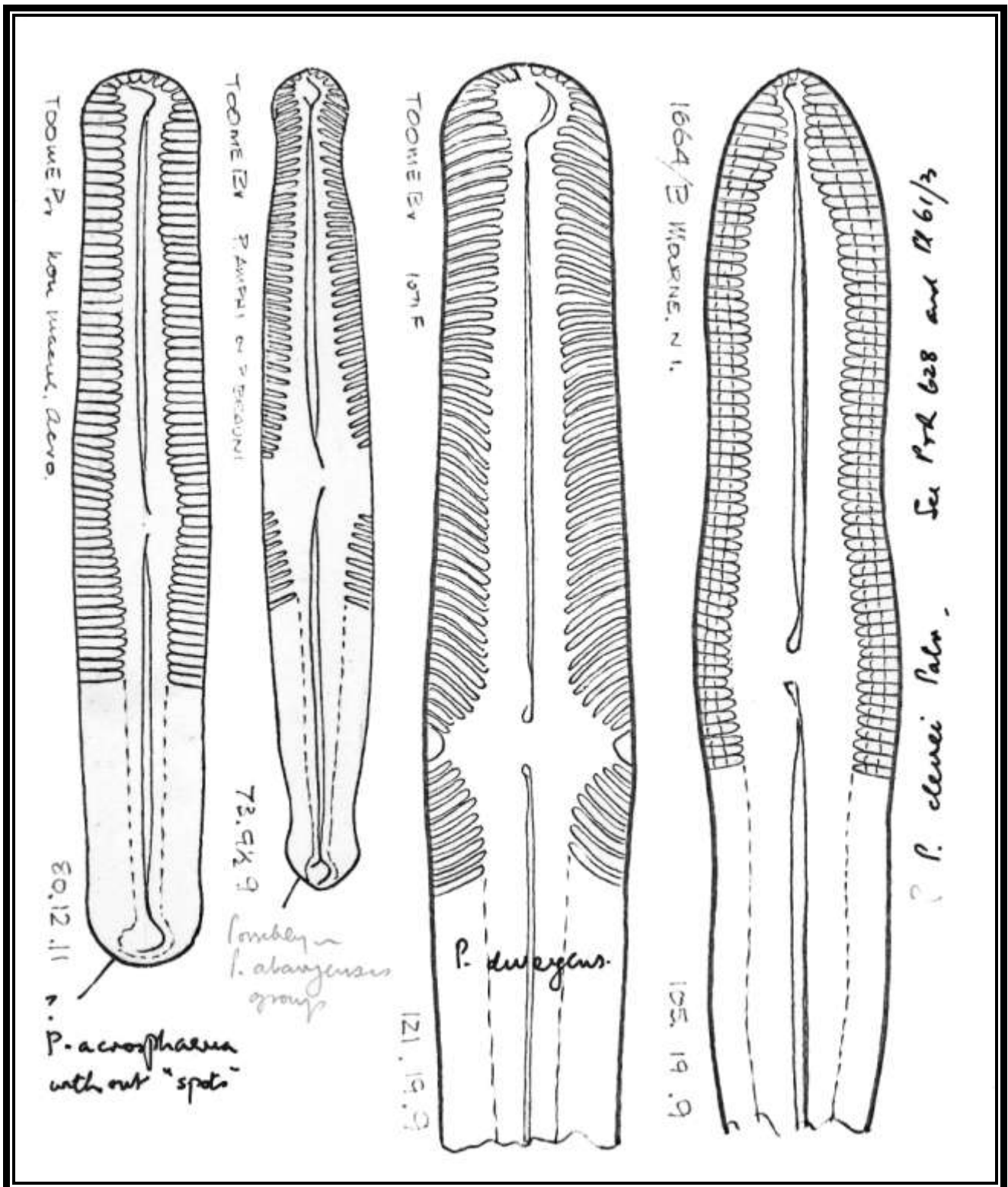


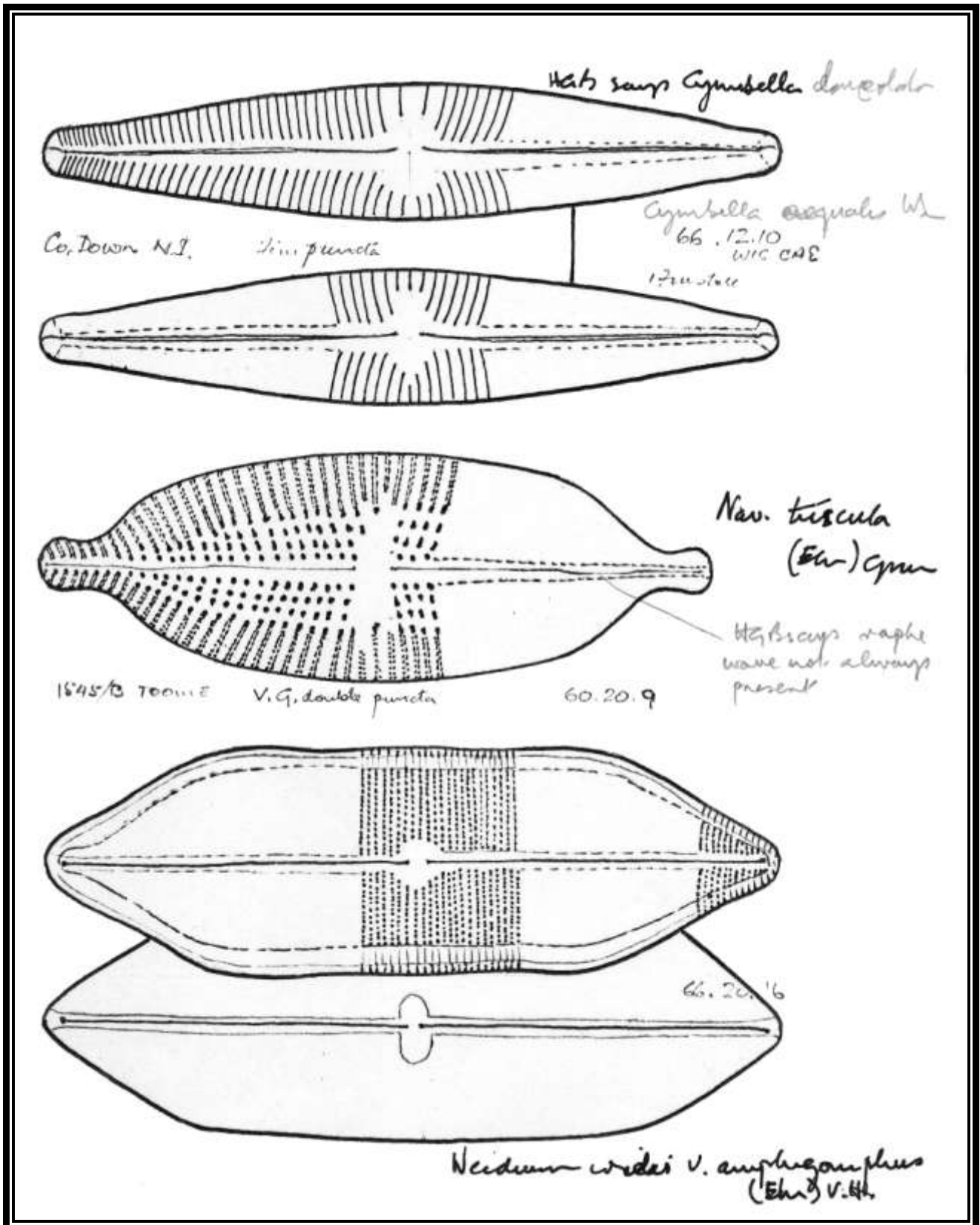
Miscellaneous Plate 214





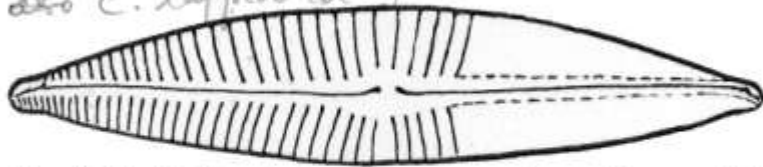
Miscellaneous Plate 231



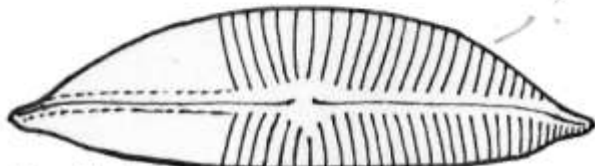


Miscellaneous Plate 233

HGP say
Cymbella hillyardii Butcher
also C. lapponica Grun

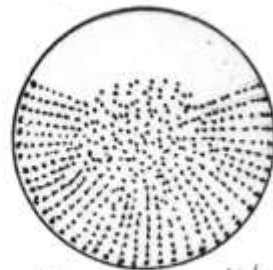


Moshela No 51 Sketch (HILLIARDII). 48. 10.9/12.

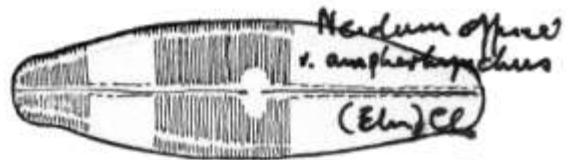


Moshela No 57 Sketch. 38. 10 10/12

? Stephanodiscus
? Cyclotella.

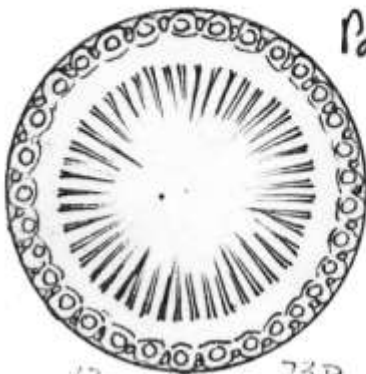


Mos. 51. Sketch 16 1/2 D 12.

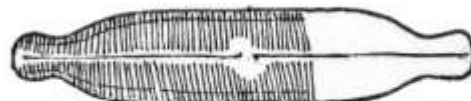


Mos. 51 Sketch. 30. 9. 20

Paralia sulcata
(Ehr) Cl.



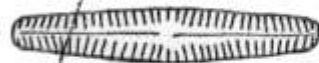
1/3 PADS 3. 23 D



MOSHELE No 51. ? 30 6 1/2 27
Nardum
longiceps
(Grev) Ross



PADS. KROCKII 21. 3. 16



PADS. KROCKII 20. 3. 16
N.F.

HGP say P. Krockii

but ?

P. hilseana Janssch

= (P. subcapitata v hilseana (Janssch) O. Muller)

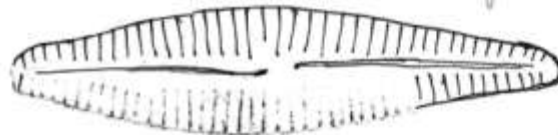
— 1/3 PADS 3. See HSH 58/24 all 46. 34. 12/5
C. Coccoid formis H S. or NF Nitida
Coc. nitidus Grev var?
no axial area

Cymbella belgici Grun

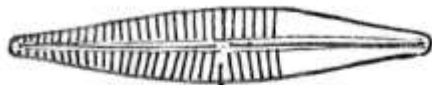


2080/B. 20.4.9
Pads 3,

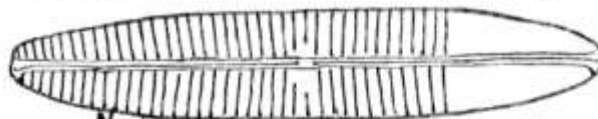
Agb Say? *Gomphrogynella anchi*



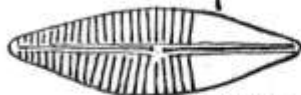
2080/B Pad 3 37.8.13/11



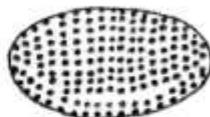
2080/B N gregaria 28.5 1/2. 15
PAD 3



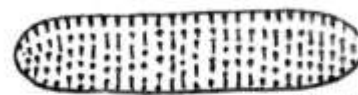
Nav. 2080/B RAMOSSIMA. (Ag) CL 40.7 1/2. 12-13



2080/B 20.9.16
PAD 3 N gregaria



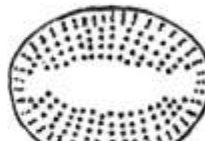
2080/B 11.7 1/2. 11



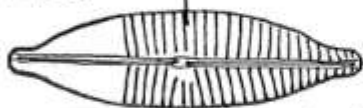
2080/B 24.5 1/2. 13
Achnanthes costata



2080/B 18.9.16
PAD 3 N



2080/B 14.10 1/2. 15



2080/B 21.5 1/2. 16
PAD 3 N. gregaria



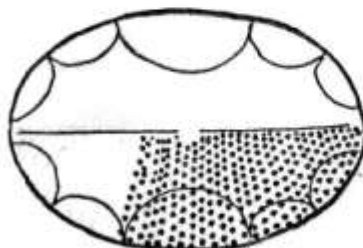
2080/B 8.2 1/2. 20



Biddulphia reticulata
(Blas) Boyer

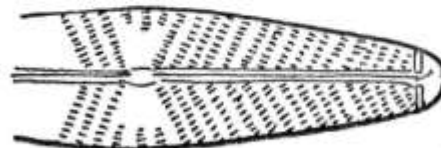


2080/B

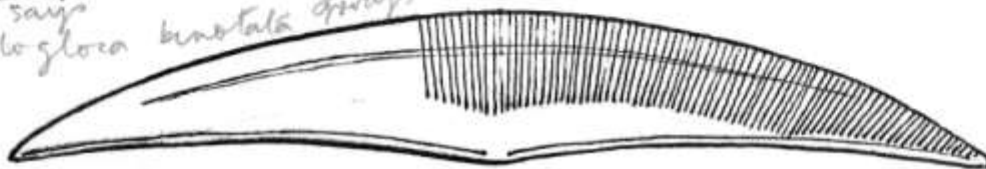


24.18.12
/B
Pads 3.

Agb Say
Maroligora cristata group



x2

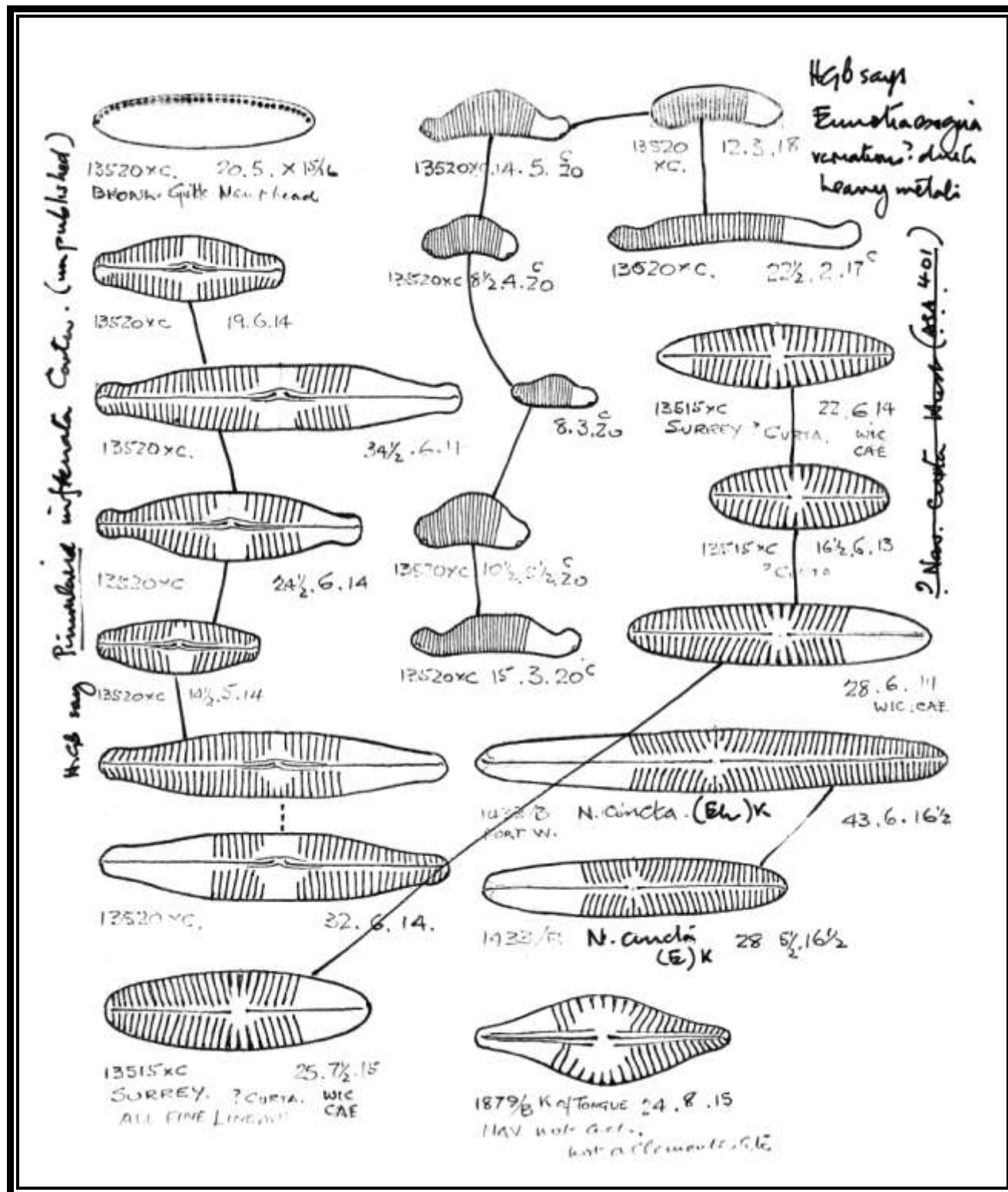


PAD 3

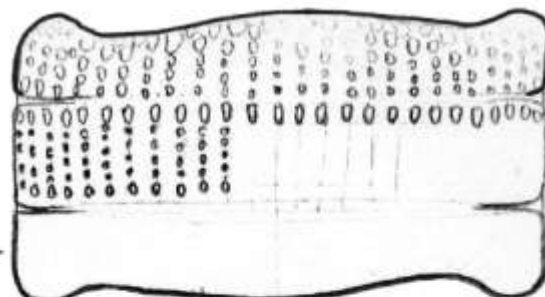
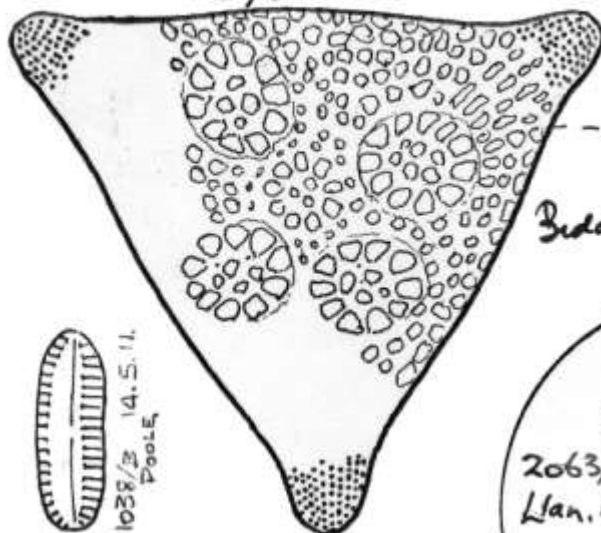
67.10.17

Amphora graeffi v. *minor* Perag.
See Kenden 37/8 and Perag 46/14.

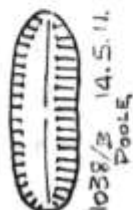
Miscellaneous Plate 237



40x40µ
1038/B. Poole



Biddulphia reticulata (Ehr) Boyer



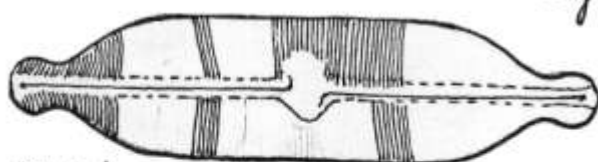
HGB say
Pini. ambigua Cleve
but Hensley says they are
larger than this.



Cyclotella

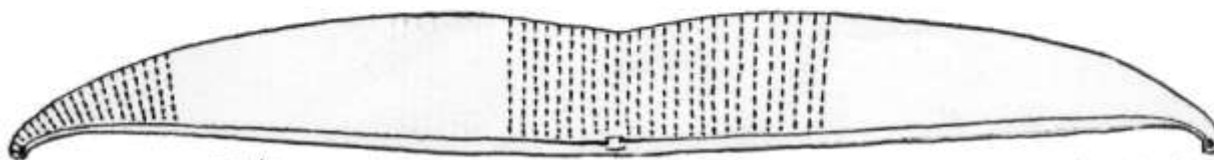


2064/B
Coccolithus
? 45.63.12



1908/B Afr. Poch. ? Amphiox 40.9 1/2 .27

Neidium amphioxius (Ehr) Pfitzer
= (*N. affine* v. *amphioxius* (Ehr) Cleve)



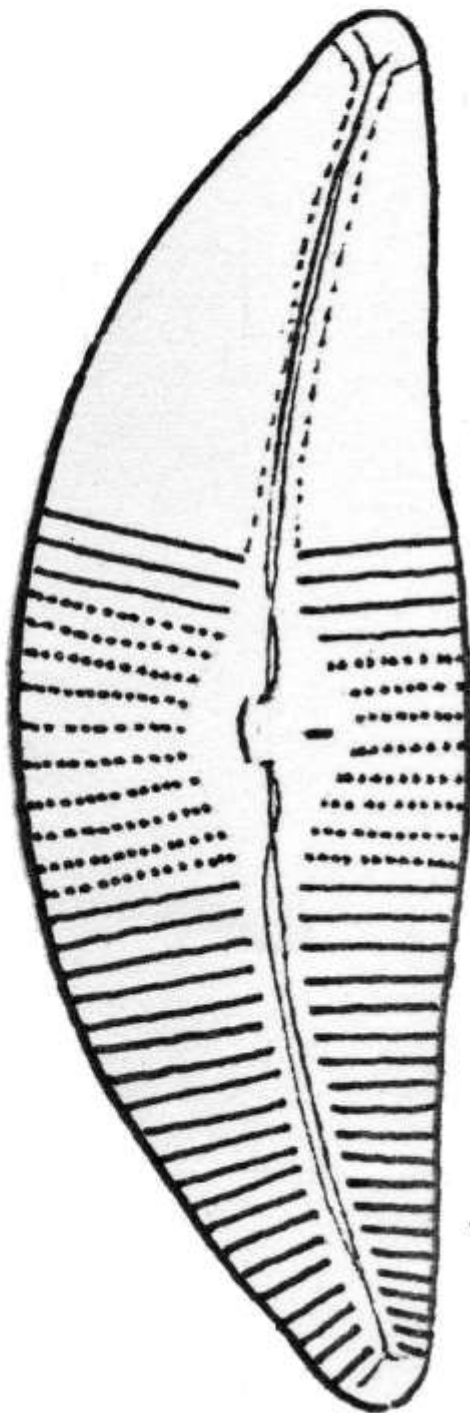
1035/B Ehrh. v. liguliformis

83.10.12

? *Perag* XLIII/14. *A. peragalli* v. *baleauai* Cl.

Miscellaneous Plate 244a

44 6 1/2 . 14

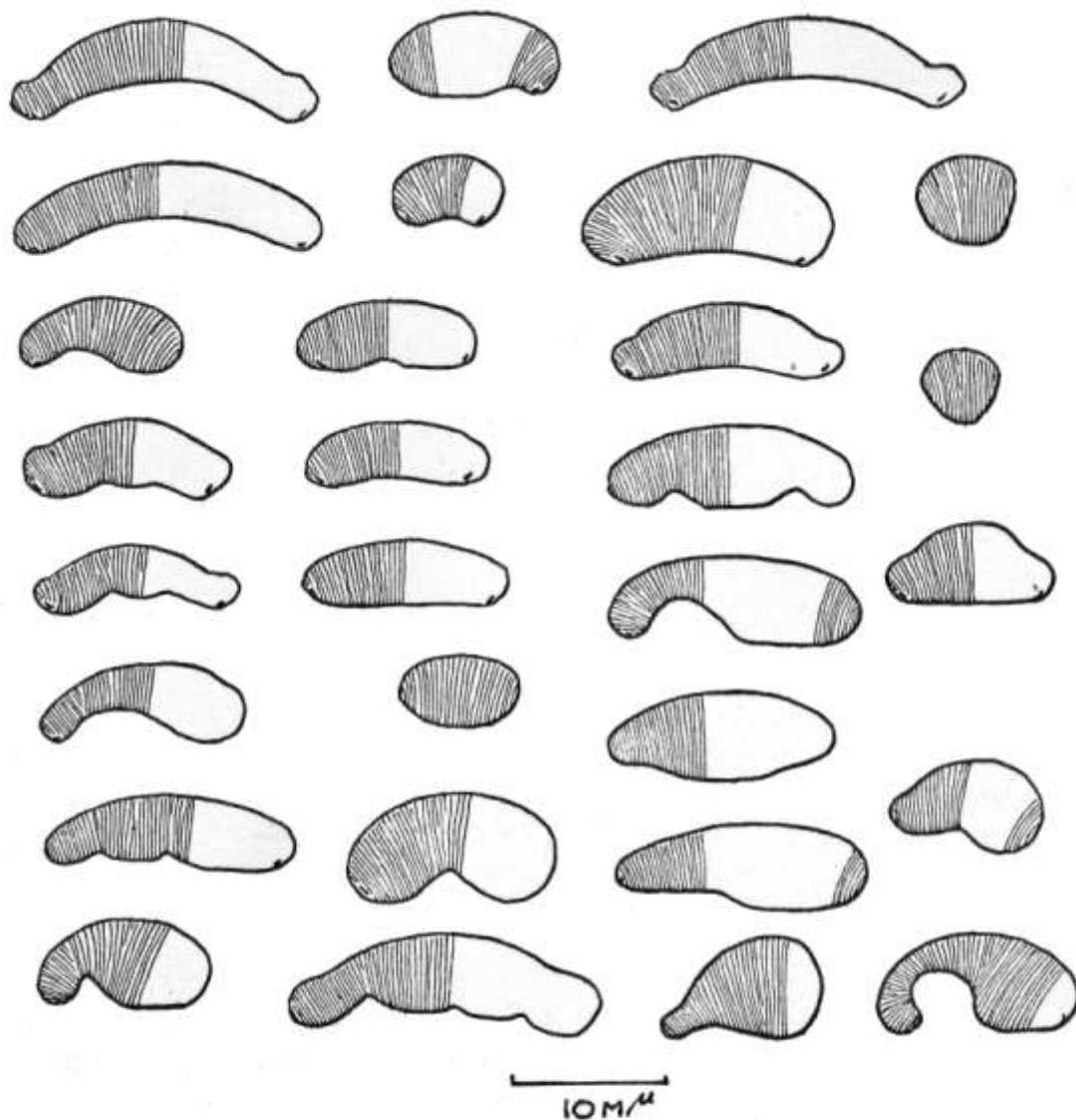


3547/CC R.TEVIOT.

50.16. 10^{wie}/₁₀

Cymbella tumida (Brets) V.H.

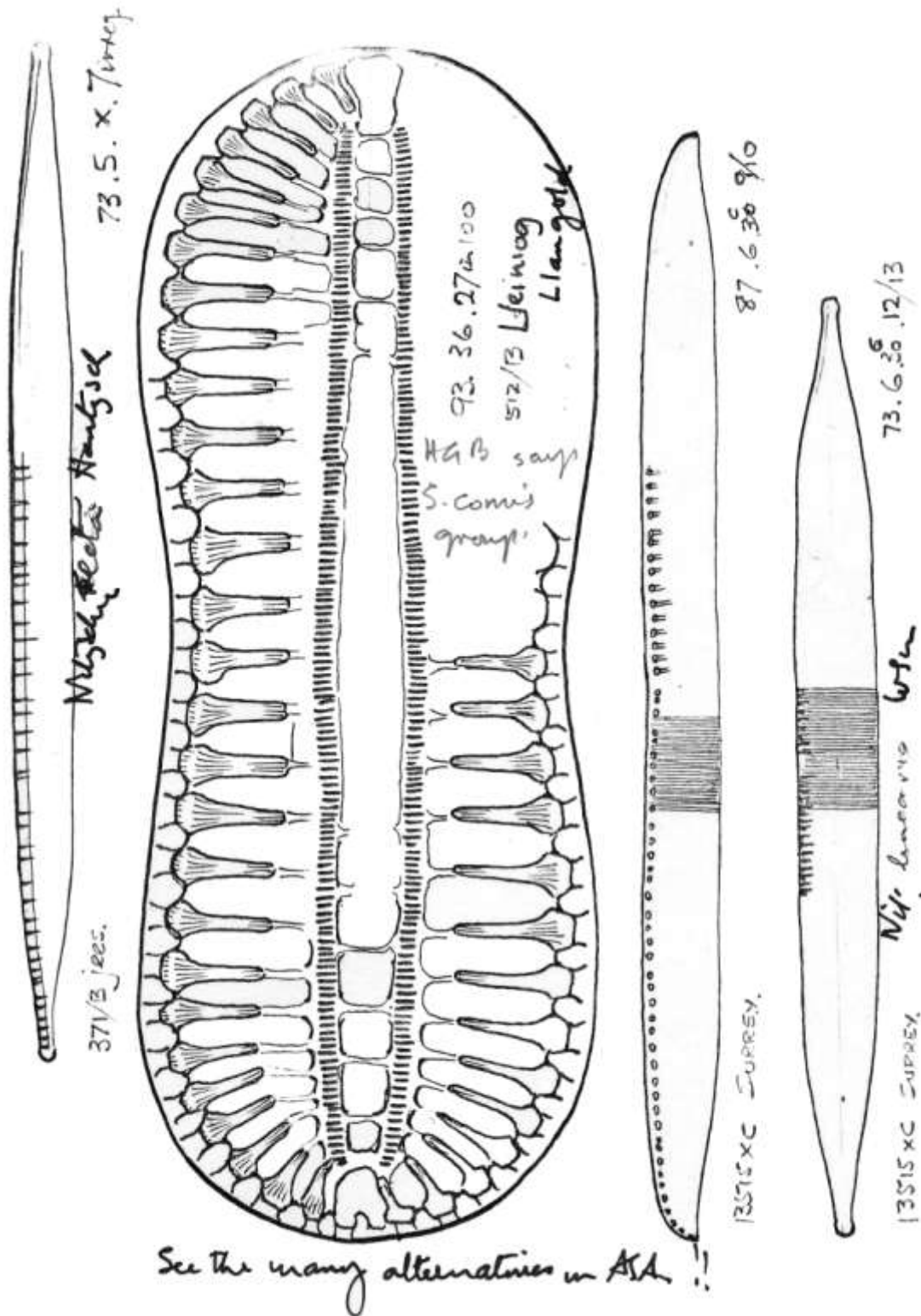
or this could be a variation on
Cy. costula

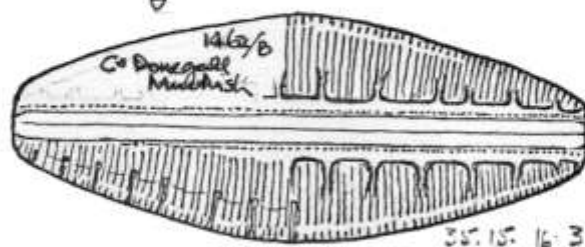
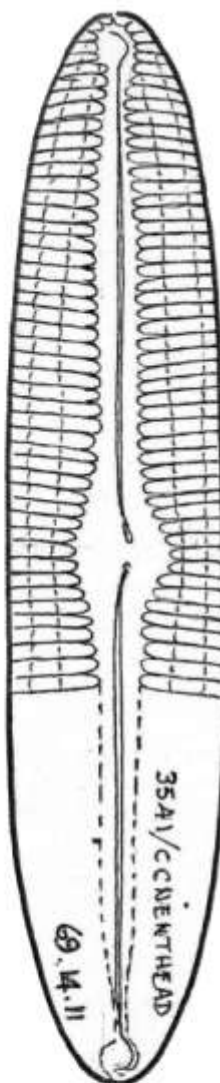
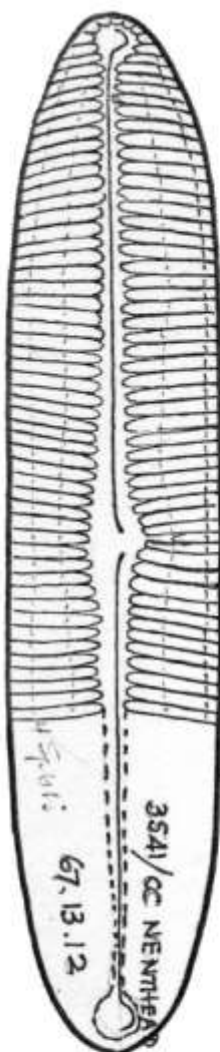
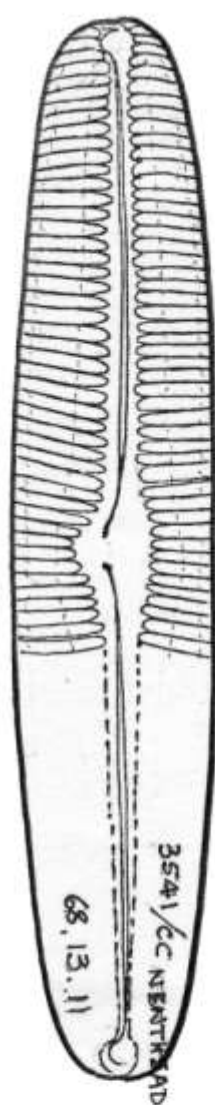


H.G.B. says all are variations of *Eunotia oxigua*
from an Irish copper mine.
They are possibly toxic deformities

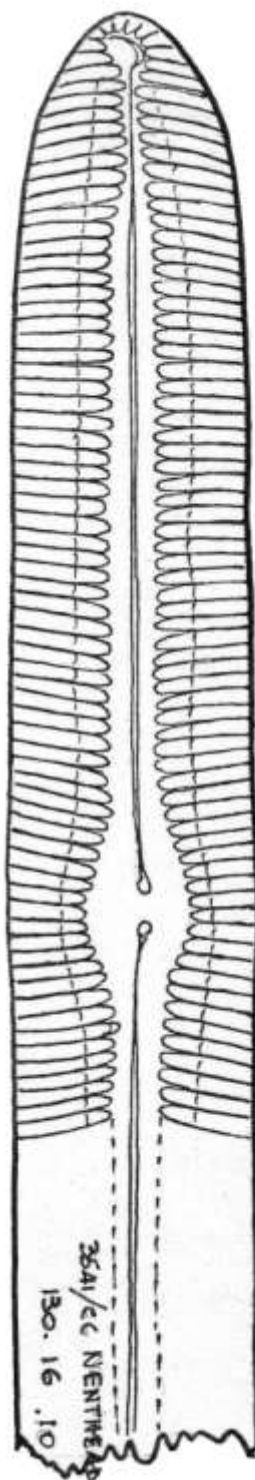
Whilst Nos 1 & 3 look like *E. oxigua*, many of
the others look nearer to *Eunotia tenella* (Ehr) Hust.

Miscellaneous Plate 247





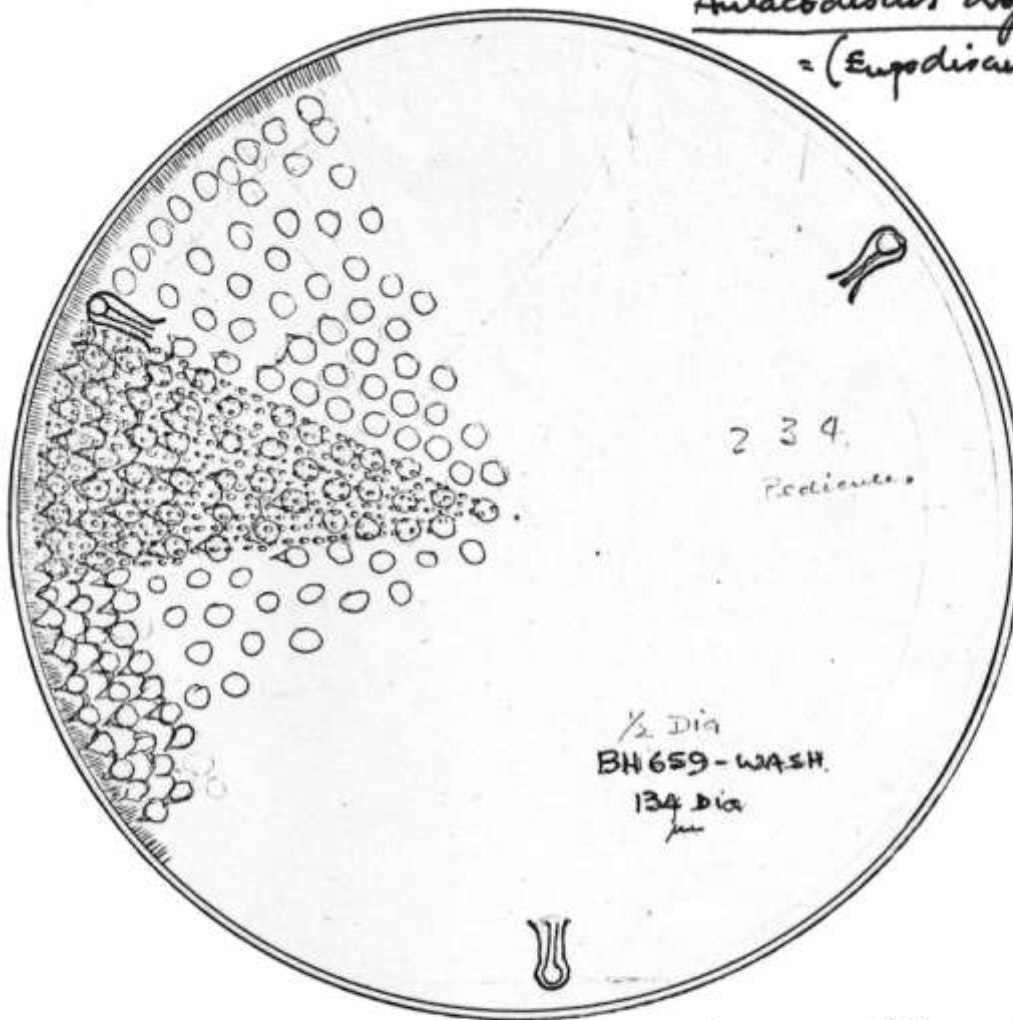
HCIB says (Kütz) O. Müller
Rhopalodia musculus Van
 but Hervey uses
Epithemia musculus Kütz
 However see ASA 255/13-18
 = *Rhopalodia gibberula* V. Van Hervey
 O. Müller



Major type raphe Probably *P. lateralis* Cl or alto *P. medioconstructa* Fort
 But: P.V. any *P. superstitia* has a simple raphe according to P. & P. 631.
 See V & Cl Ent. 1101 a-c

Miscellaneous Plate 254

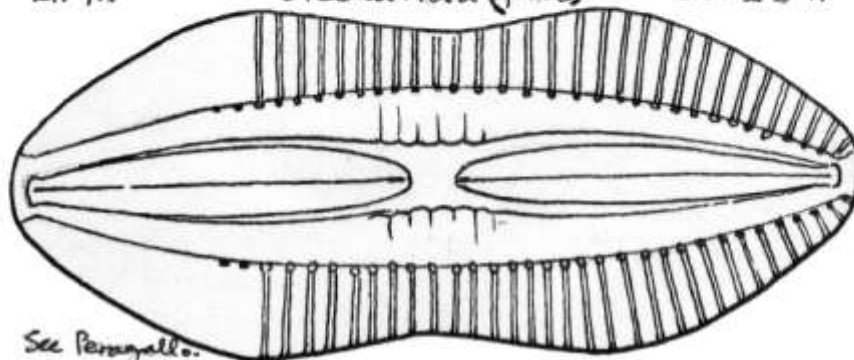
Aulacodiscus argus (Ehr) A.S.
= (*Eupodiscus argus* Ehr)



1/2 Dia
BH 659 - WASH.
134 Dia
juv

BH 711

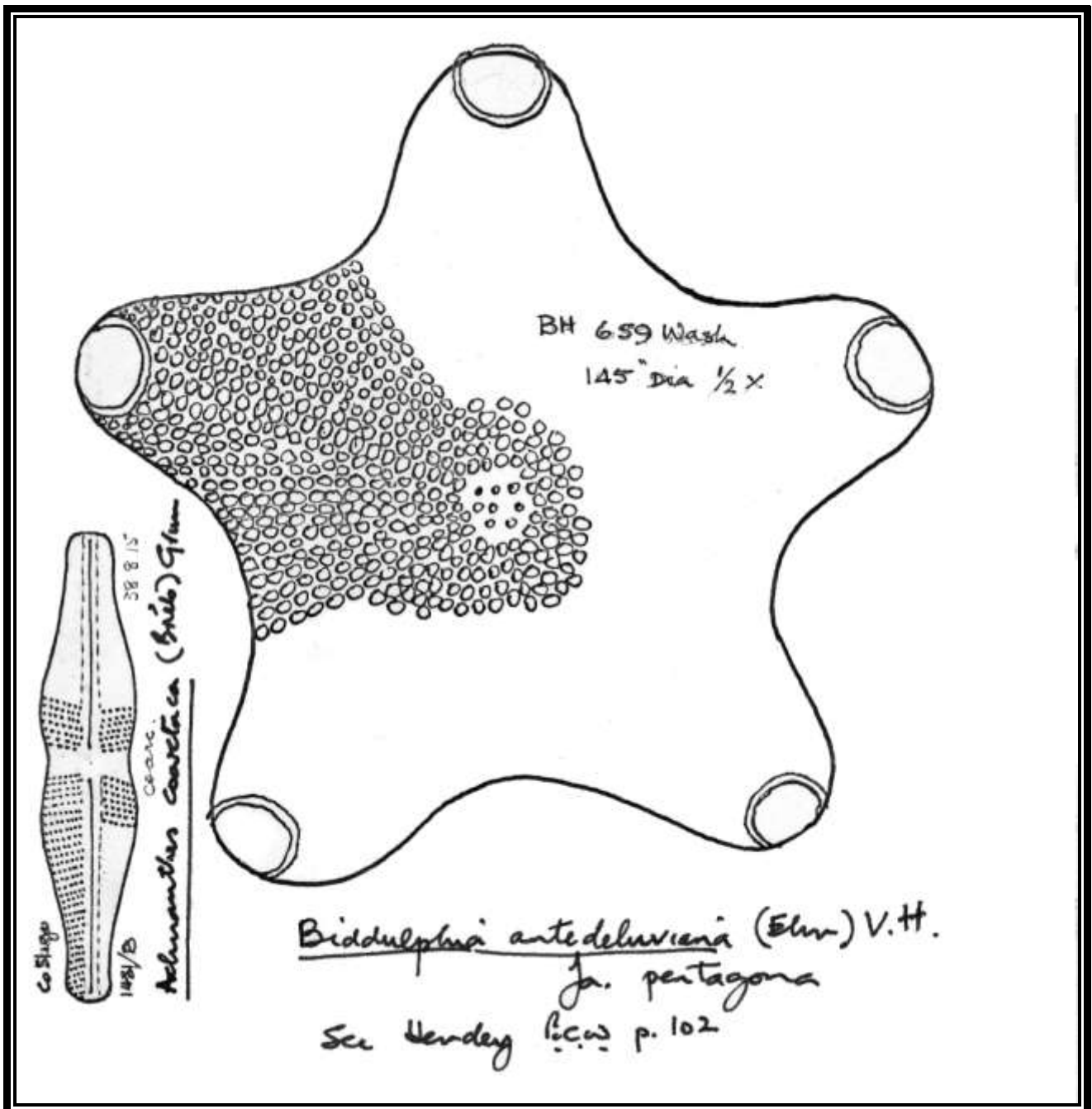
= (*N. donkinii* A.S.)
D. constricta (Grun.) *Close* 58. 22.7



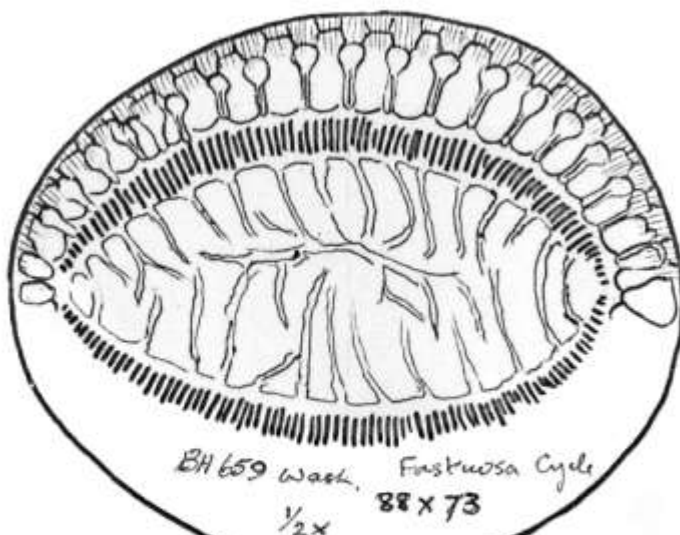
See Peragallo.

xvii/11

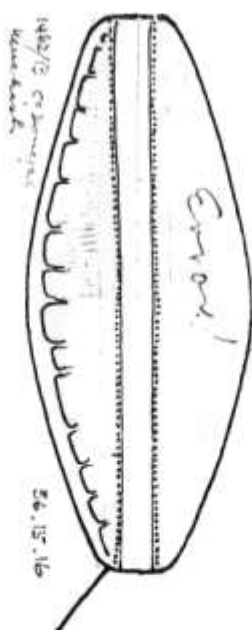
See also Hendey Gen. and ASA 12/63-64.



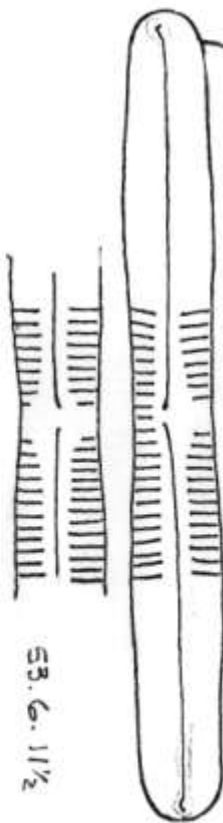
Miscellaneous Plate 256



Surirella fastuosa (Ehr.) Kütz.



See earlier
plate 248
Rhopilella uniusculus



H.G.B. says
P. pulchra

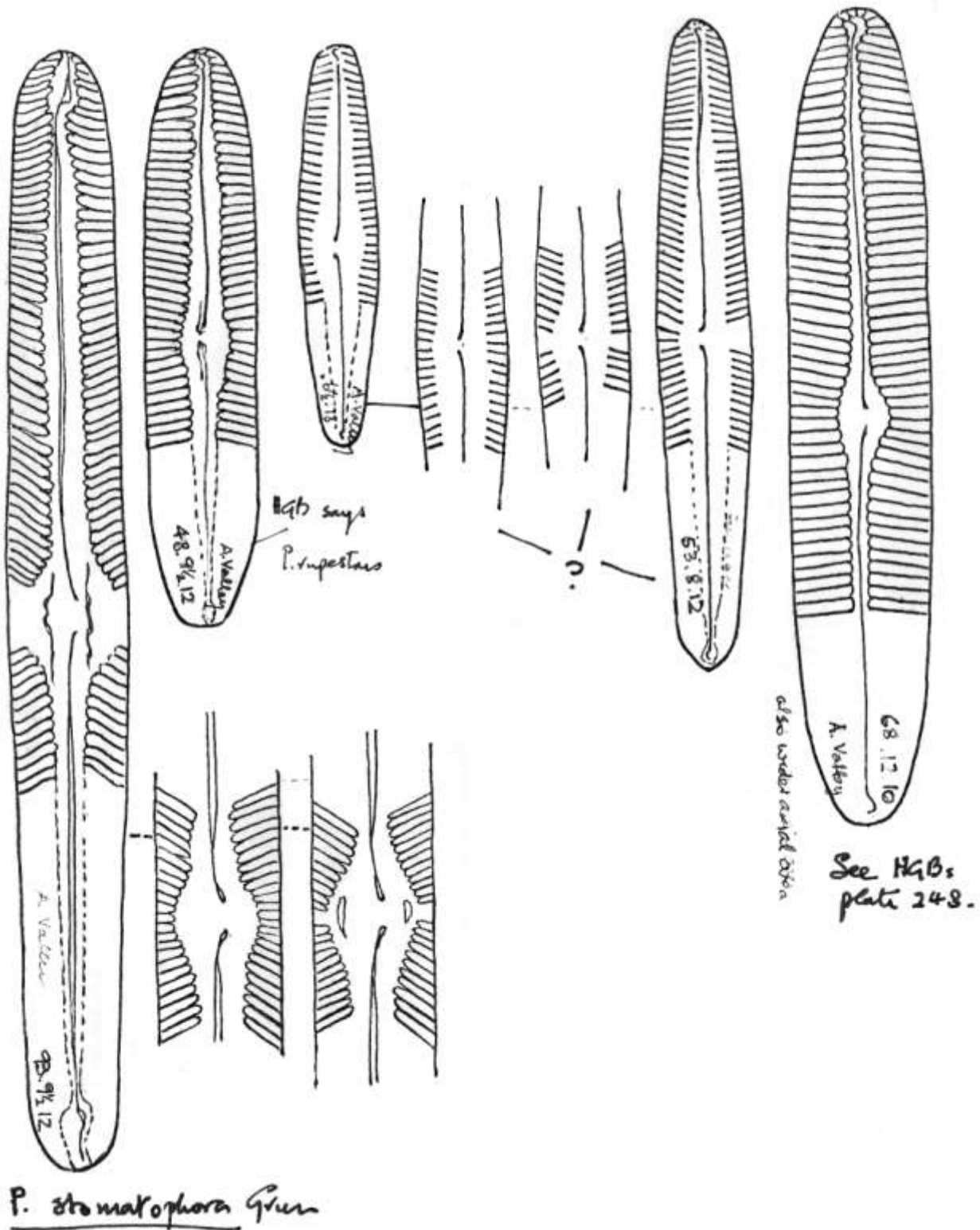


Cymbella gracilis (Rabenh) Cleve

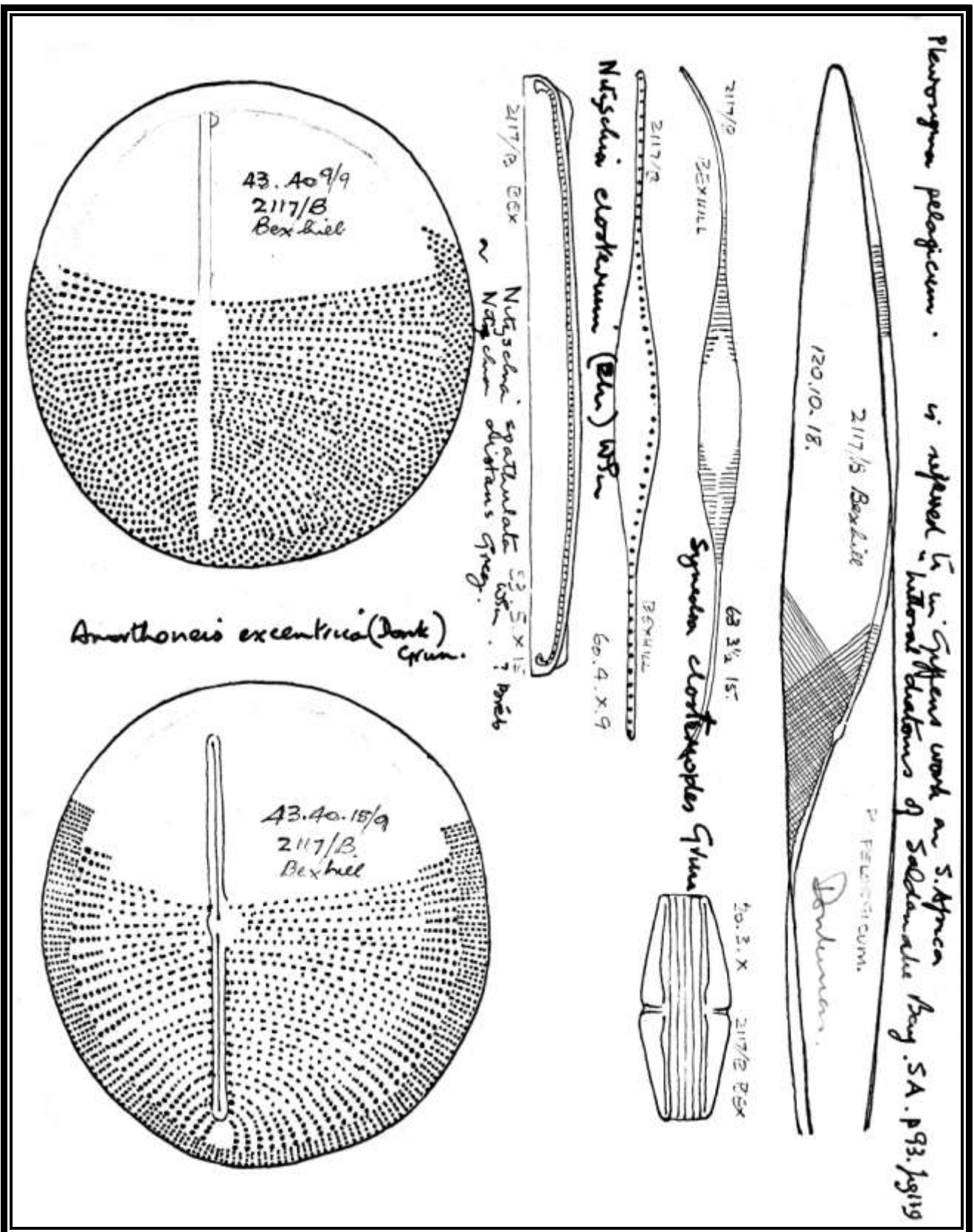


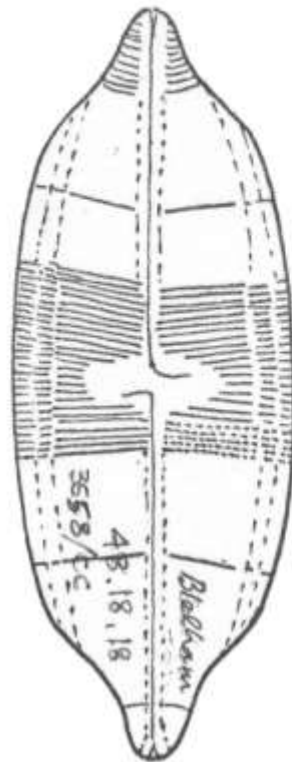
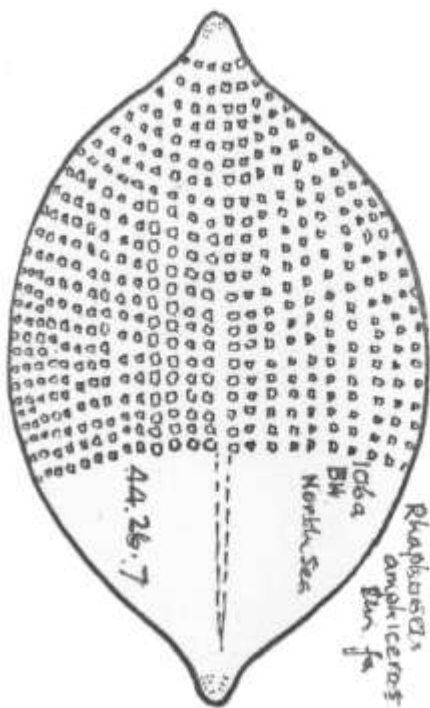
Nitzschia obtusa (Ehr.)

H.G.B. says
N. obtusa

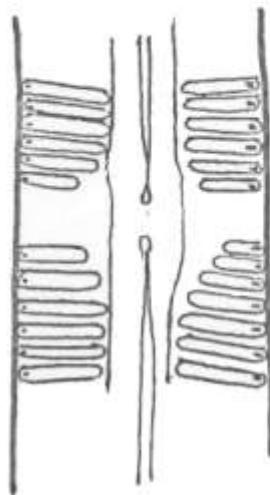
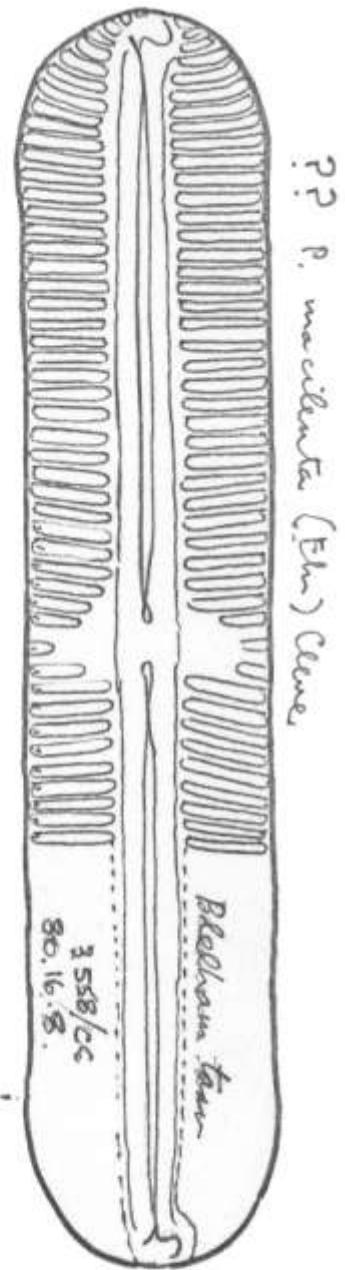


Miscellaneous Plate 258

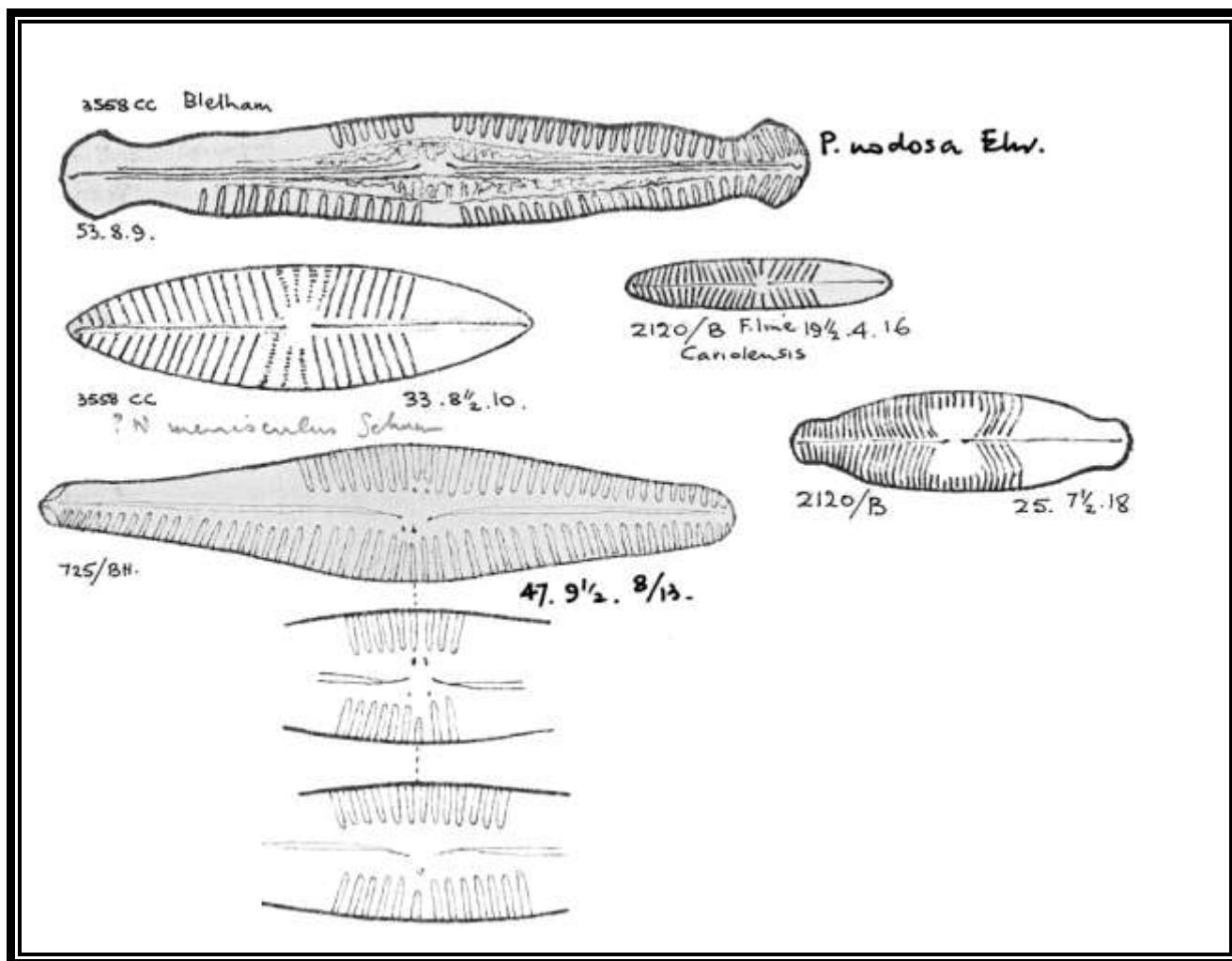




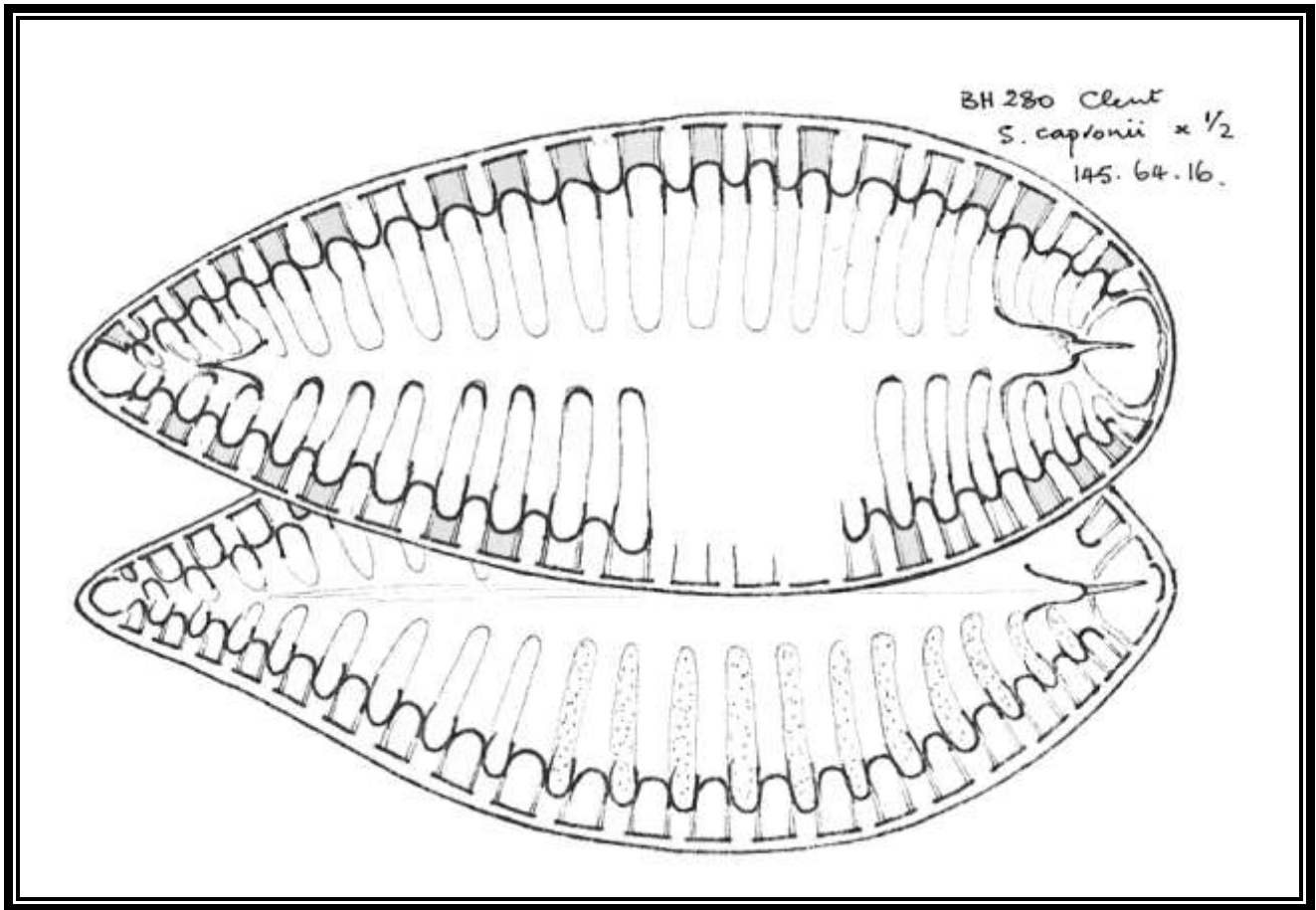
*Neidicum
apiculatum
Kermes.*



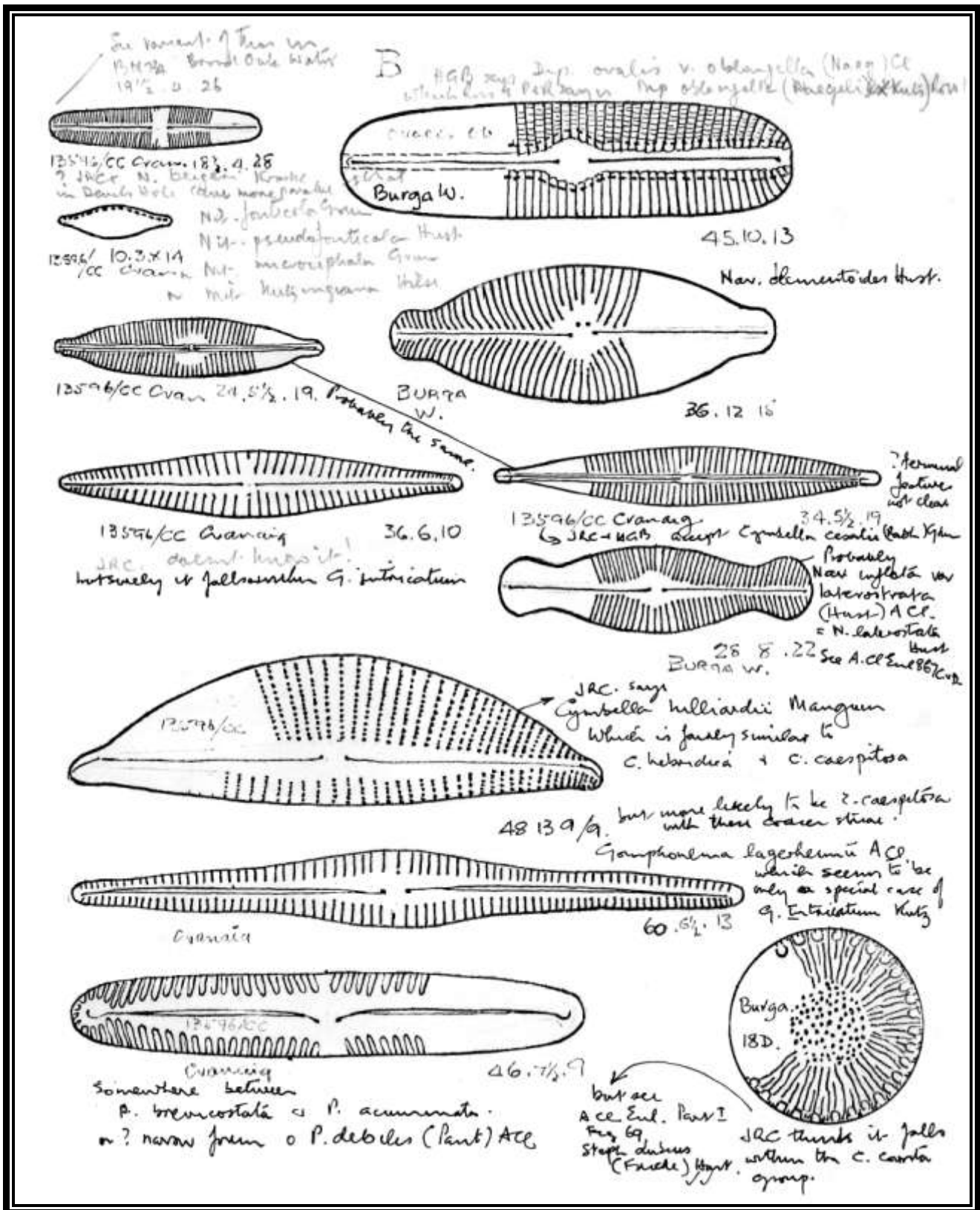
Miscellaneous Plate 260



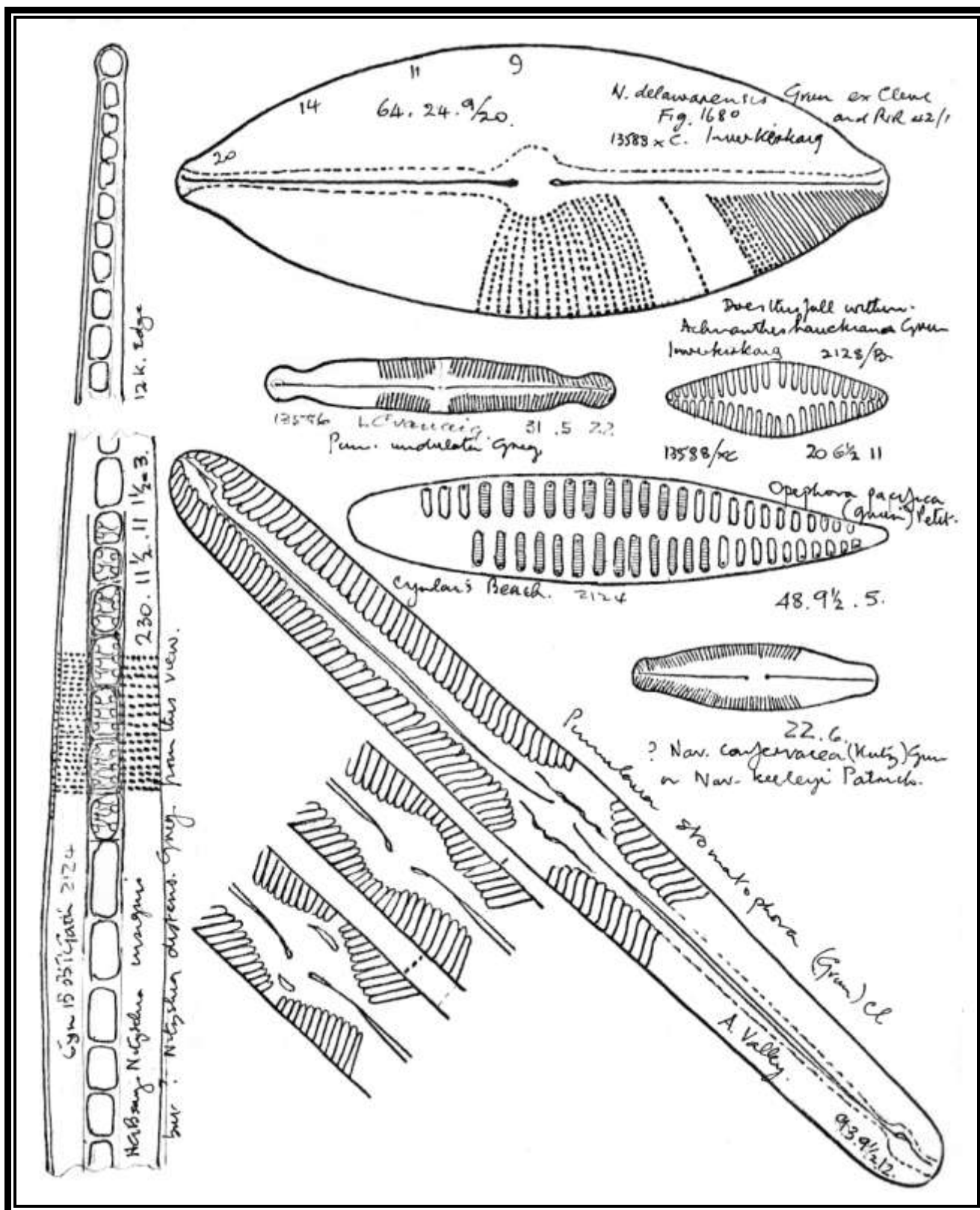
Miscellaneous Plate 261

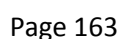




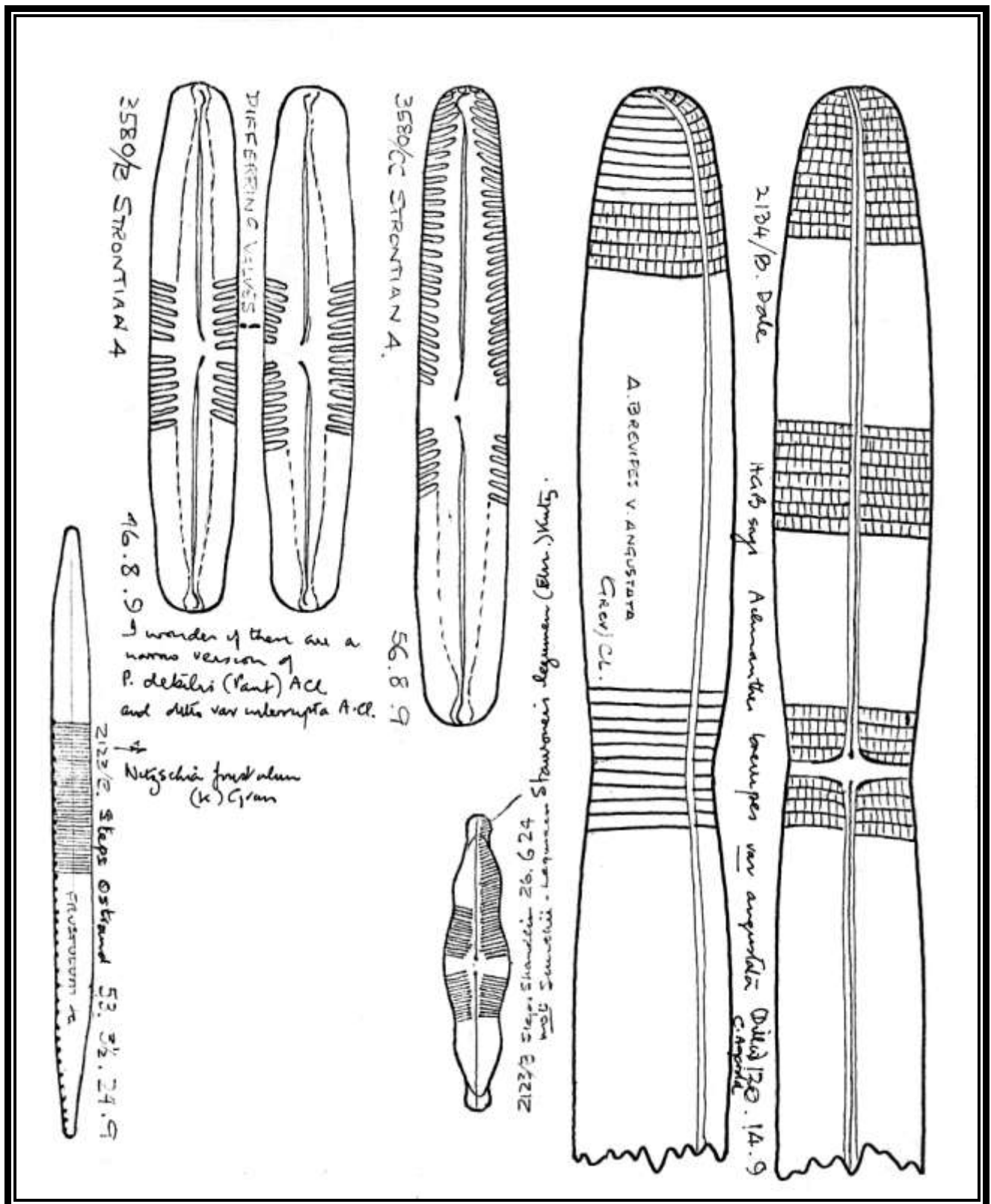


Miscellaneous Plate 264





Miscellaneous Plate 266



? *Nitzschia socialis* Grun.

F



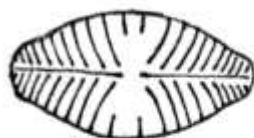
2123/B Ostrand; I.O.W. 32, 3½ x 7-10



Burga Water
Shetland 4sp.

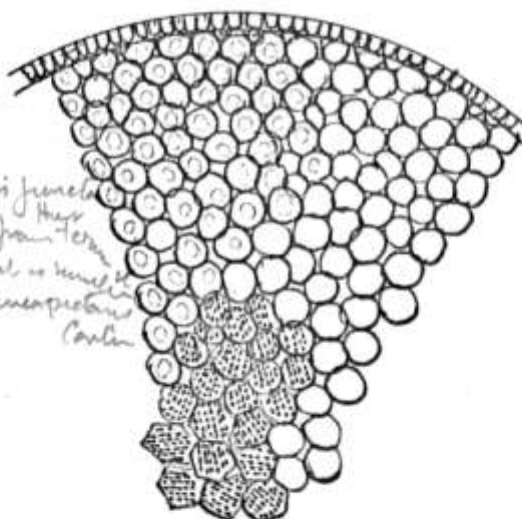
29.6½.23

Nov. des Juncels
apart from the
foetus it is similar to
N. incipiens Carlin



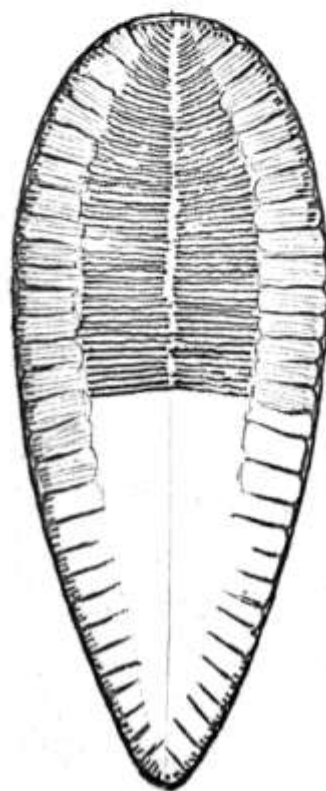
Burga W. 10½.8.12
Shet.

Nov. anglica Ralps

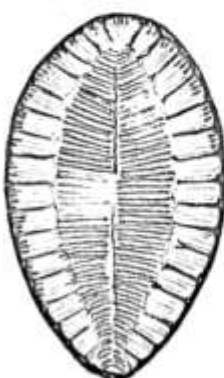


2124/B Gynlais
Langold
53 dia
3-4 into an

Coscinodiscus
apiculatus Ehr
v. ambiguus Grun
C. nodulifer Schmalt



50.20.16.5



24.14.16.5

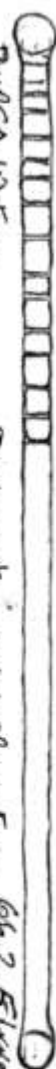
3606/cc R. MORDAKT.

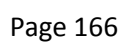
Surirella ovalis Brato

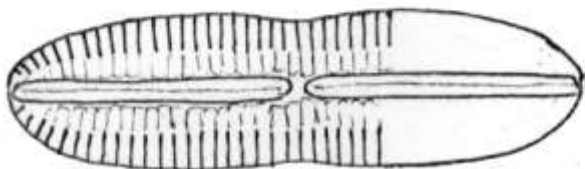
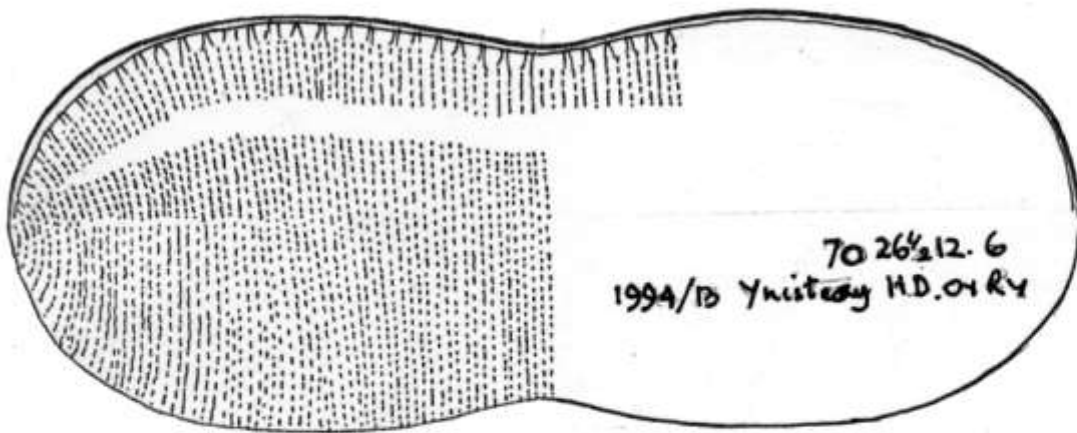
— most be brachisti

Burga Water.

Diatoma tenuis var. elongatum Grun. 66.2.5. Elliptical
hyaline

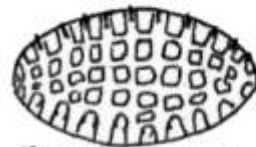






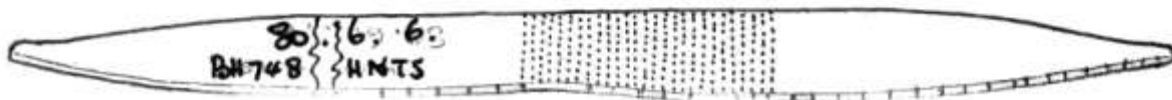
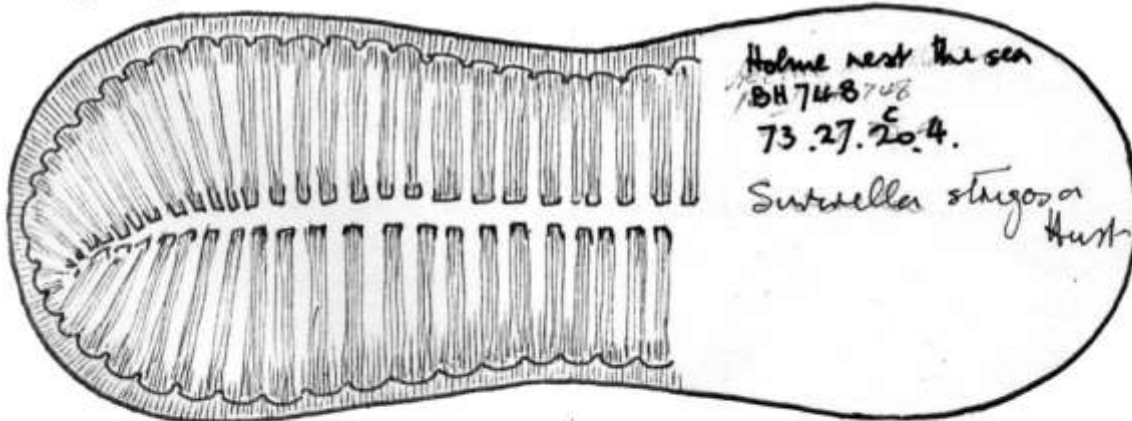
1994/13. Ynisteay H.D.

38. 10. 12.

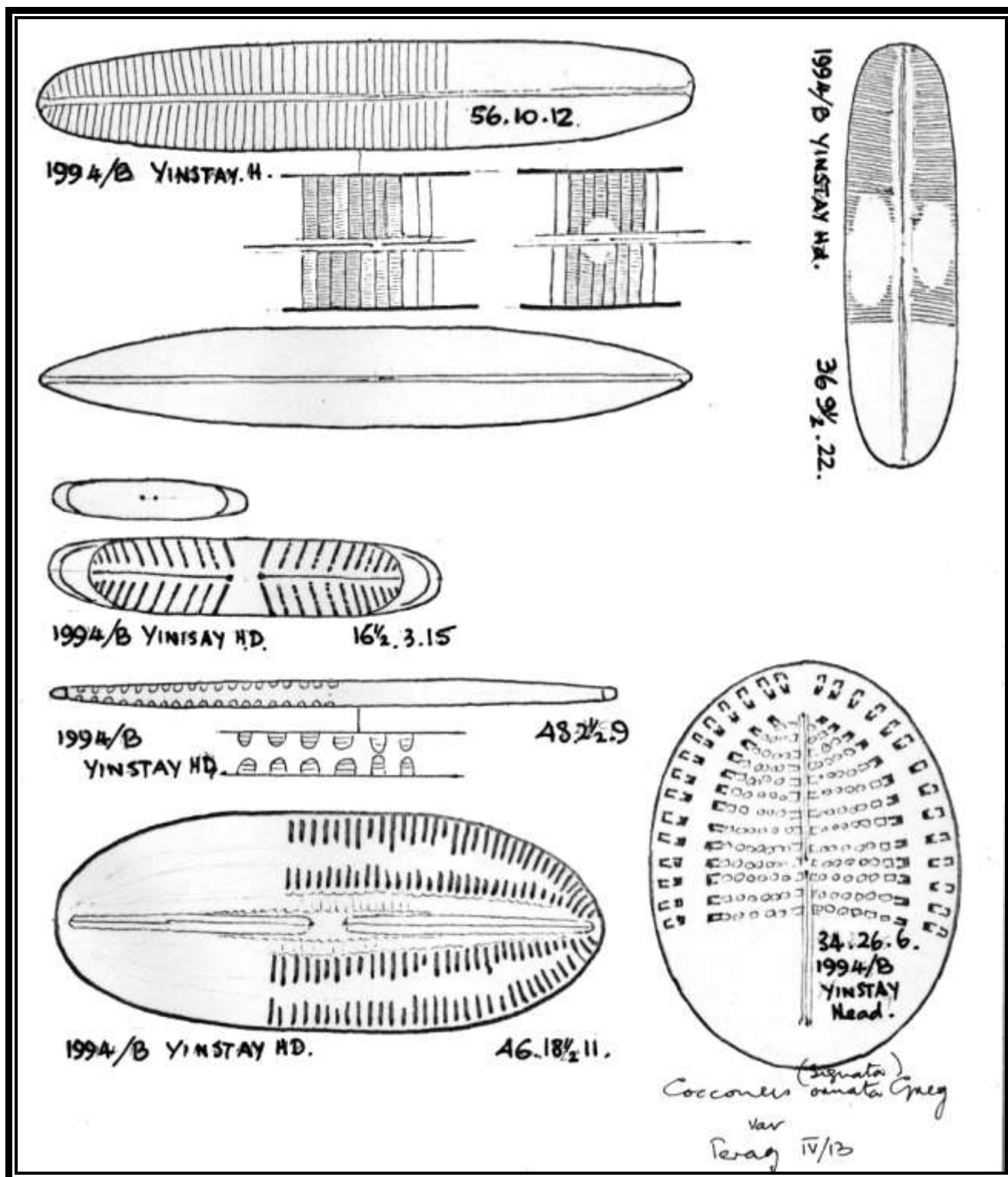


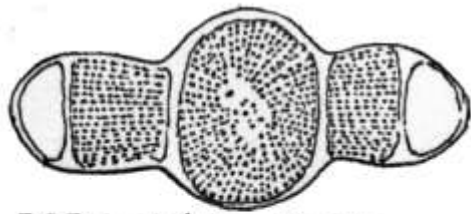
Cocconeis
discolor
Schum

BH 748 16 1/2 8 1/2 6
HNTS.

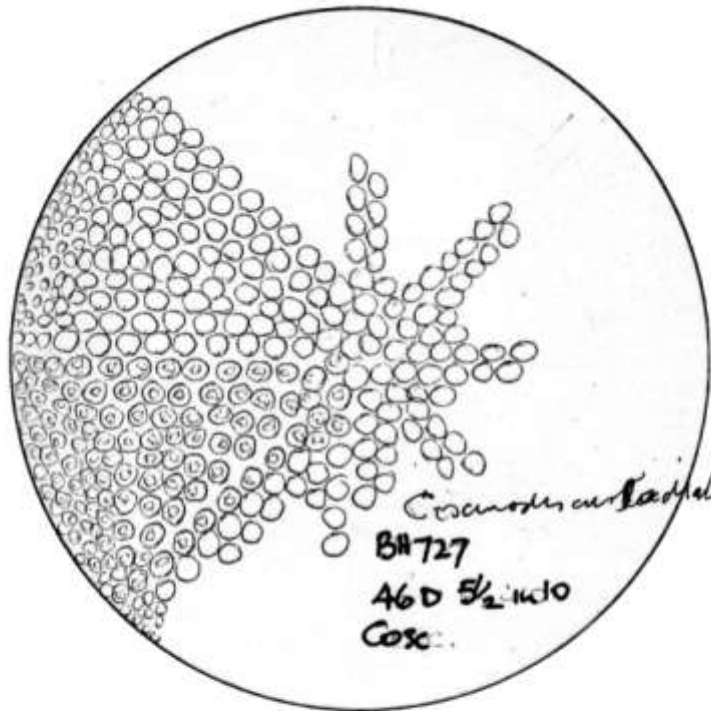
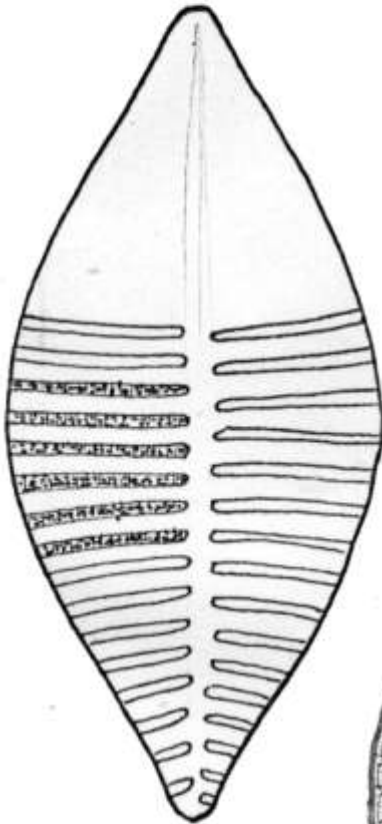


Miscellaneous Plate 270

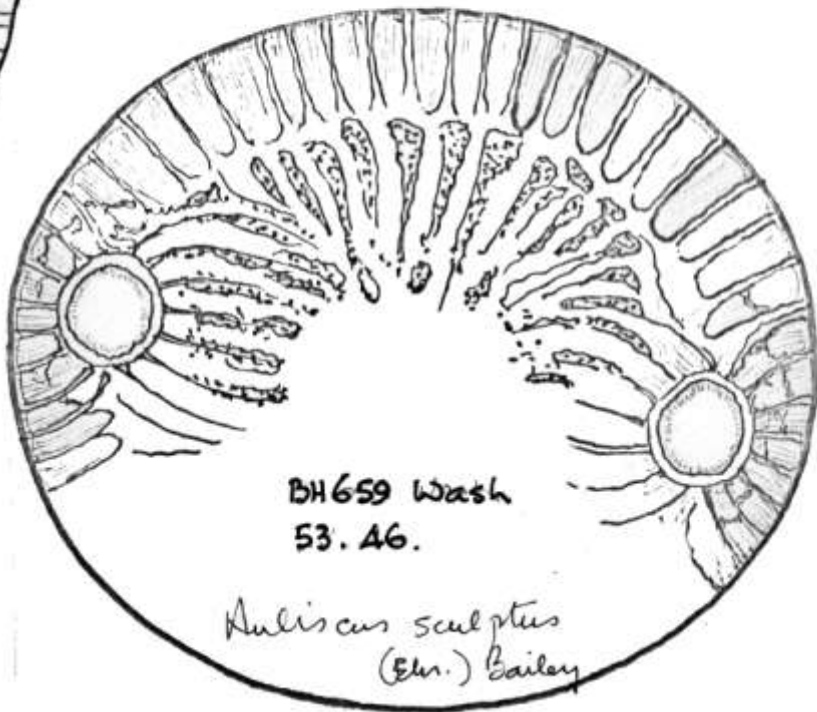




BH 727 Carbova 30x14



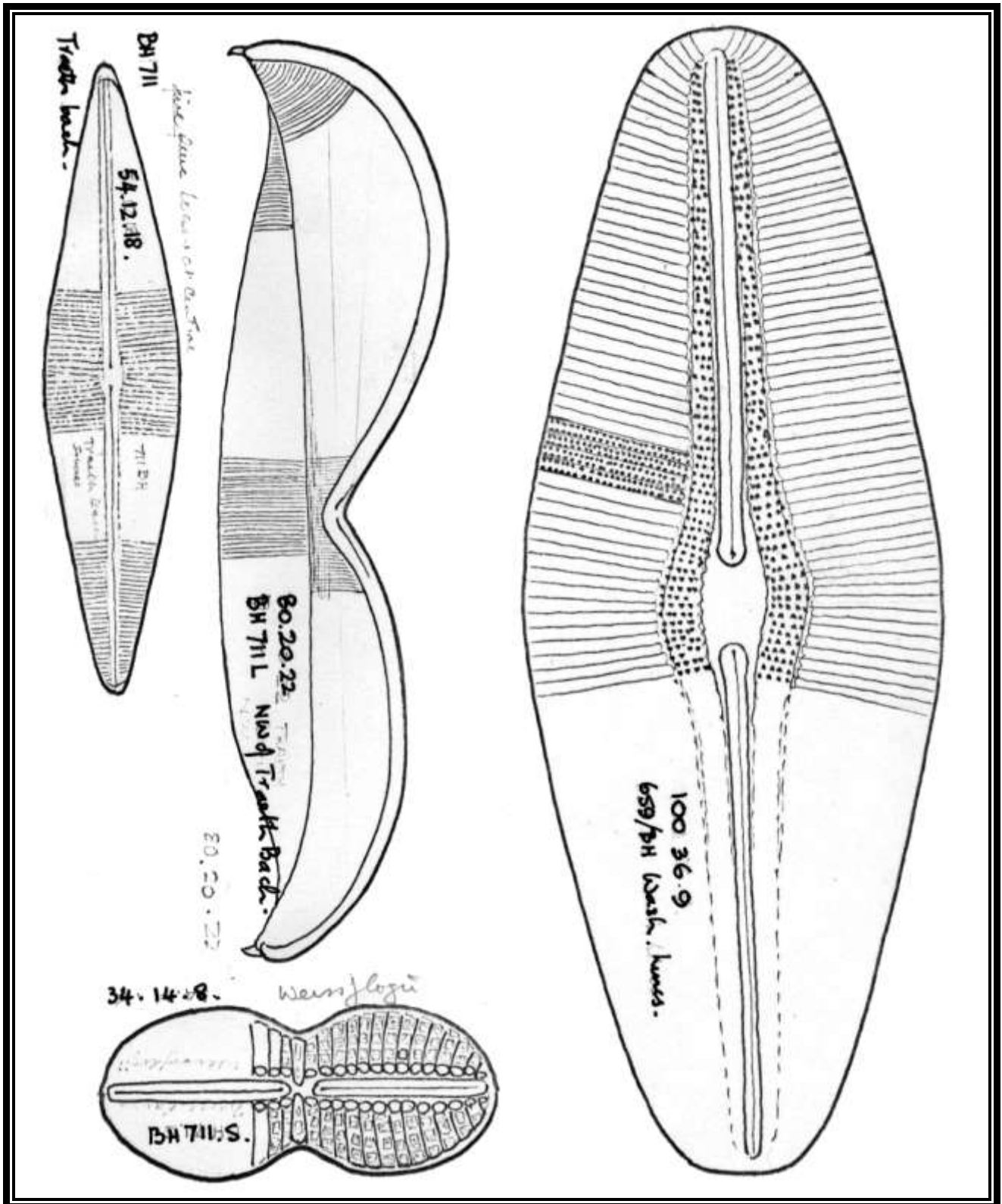
Coscinodiscus radiatus
BH 727
460 5 1/2 inch
Cox

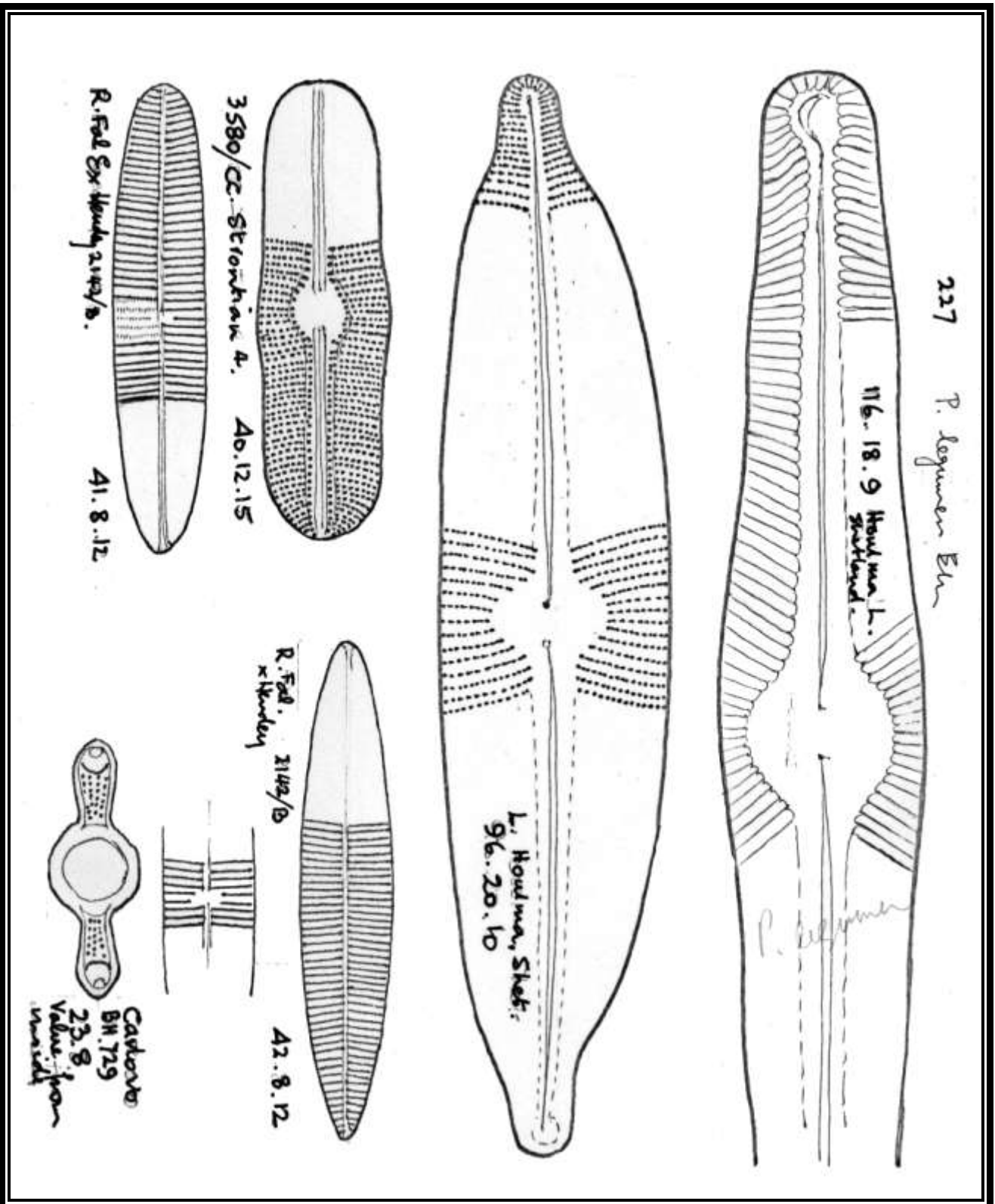


BH 659 Wash
53.46.

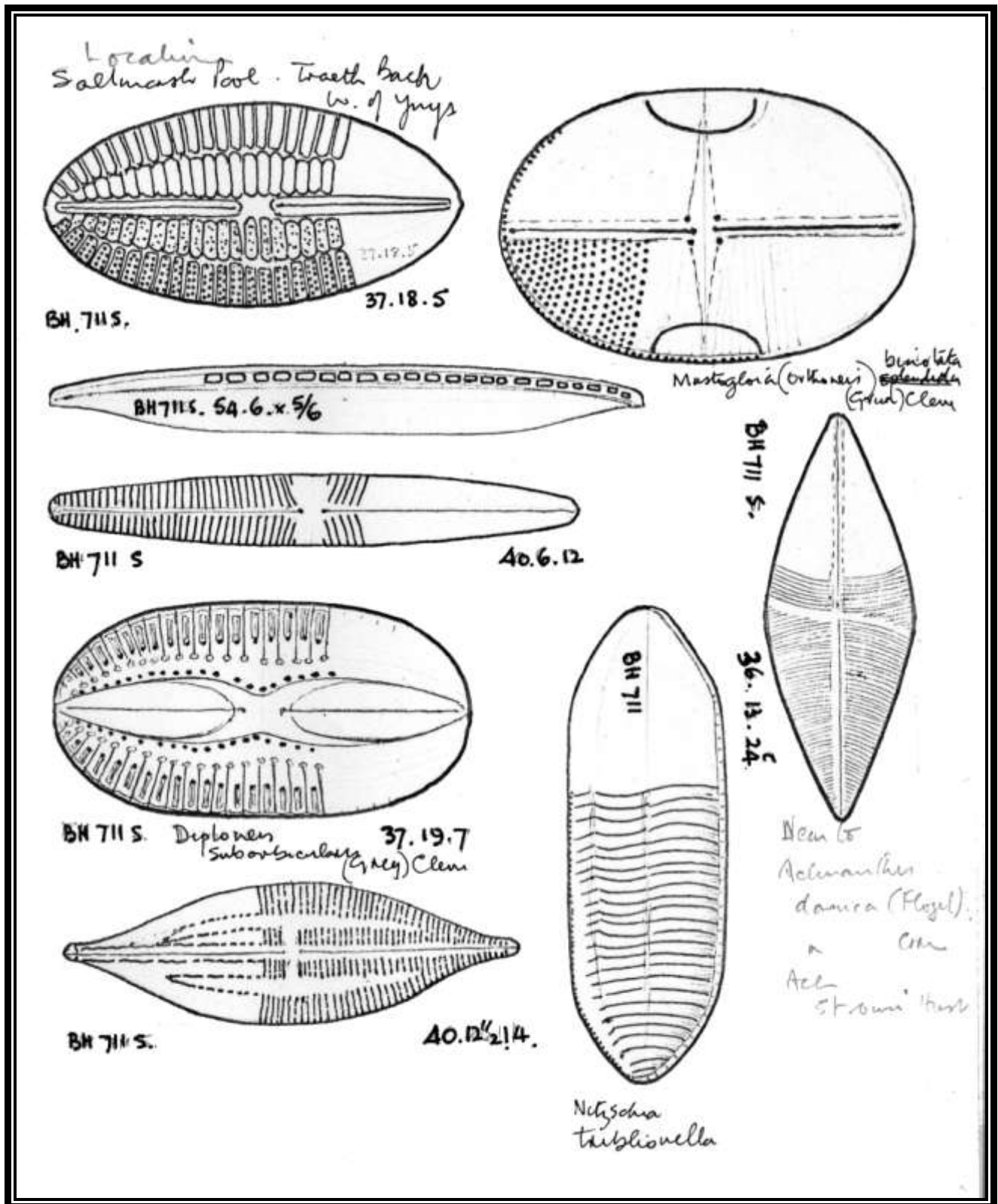
Auliscus sculptus
(Ehr.) Bailey

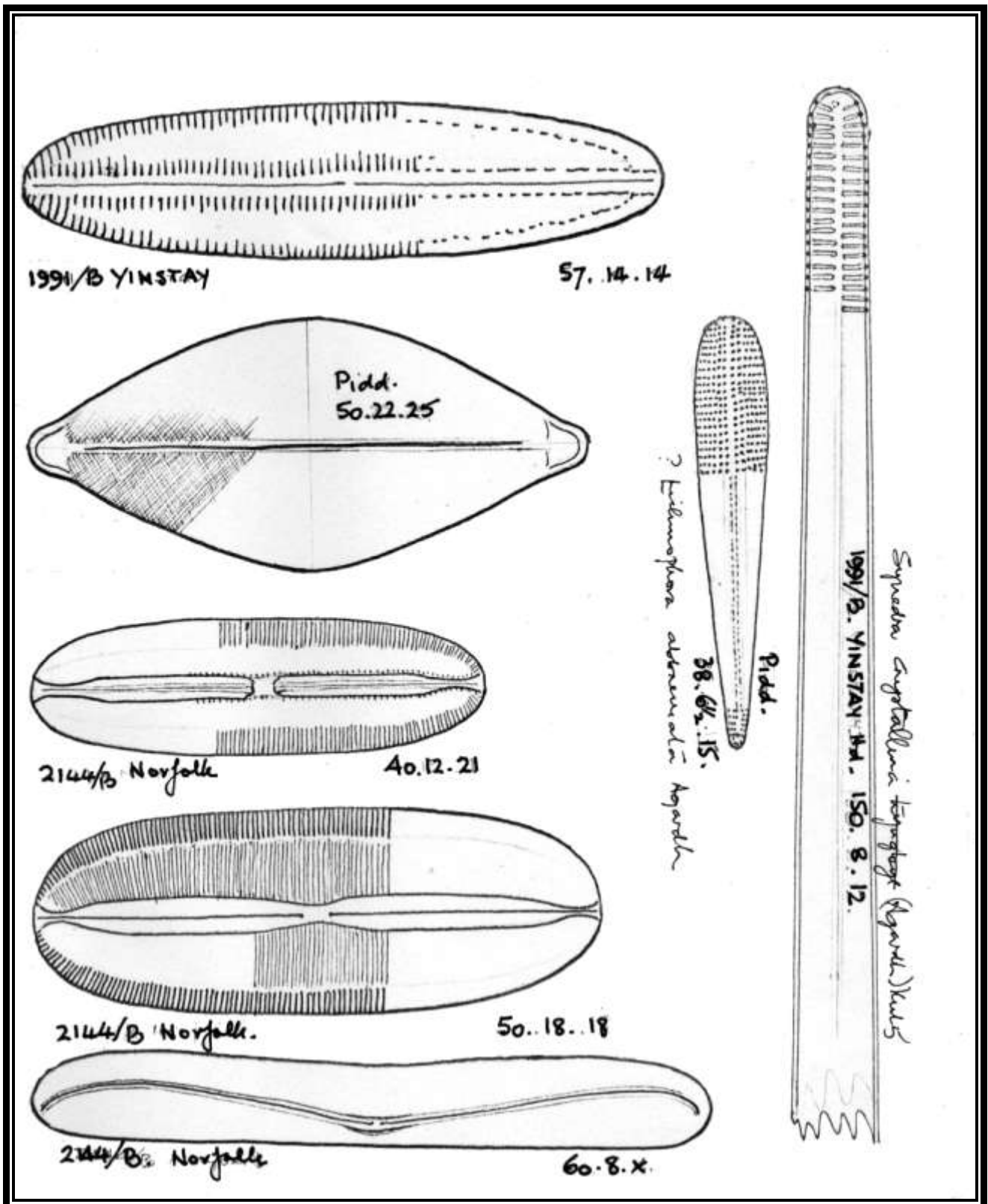
Miscellaneous Plate 272



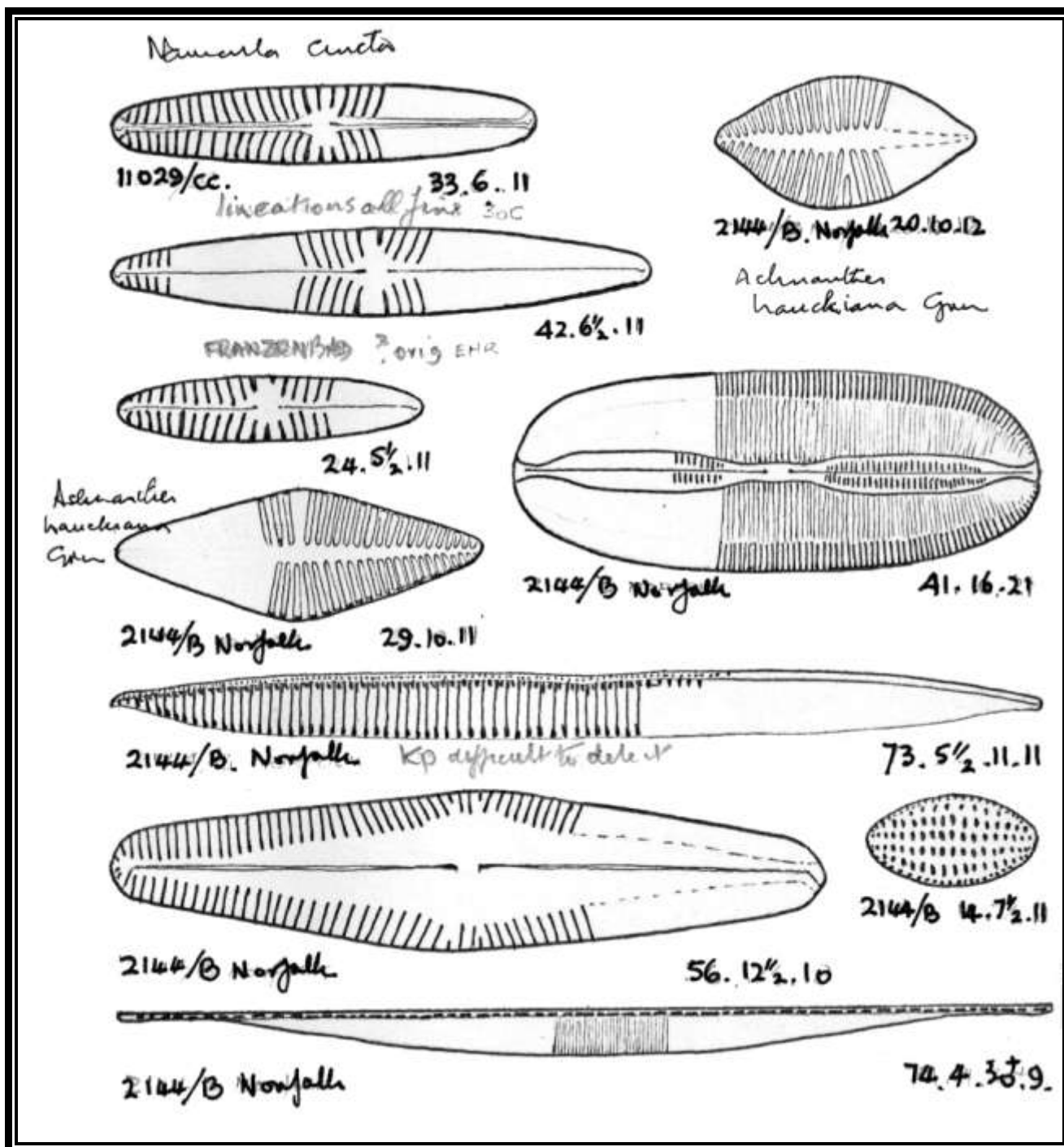


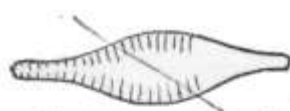
Miscellaneous Plate 274



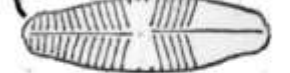


Miscellaneous Plate 276





869/B Lin. Bog. 18.5.16
? *N. seminebulosa*
or *N. arceuthota*

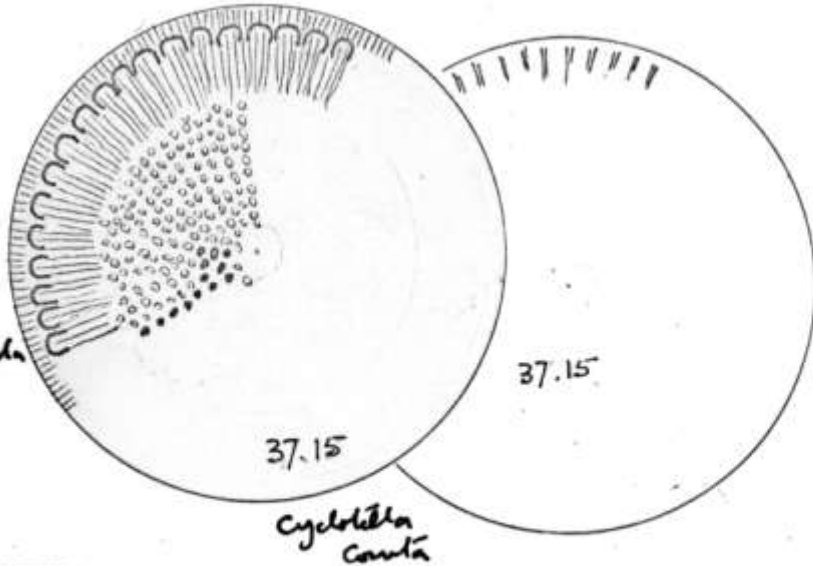


869/B L. Bog. 16.5.18 WIG

JEC says small *N. Canallata*



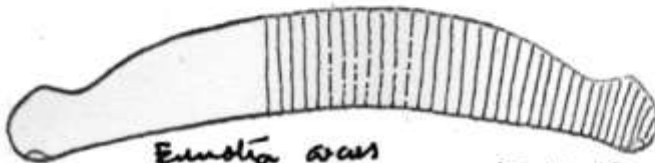
1128/B Tenby 16 1/2, 7 1/2, 11



37.15

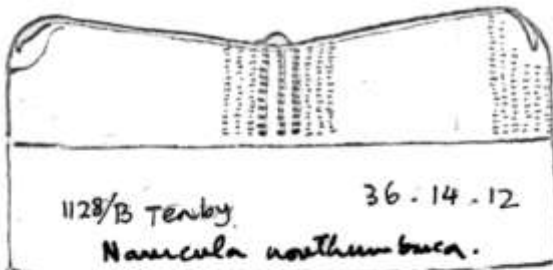
37.15

Cyclotella
Conata



Eunotia *ovata*

42, 10, 12



1128/B Tenby

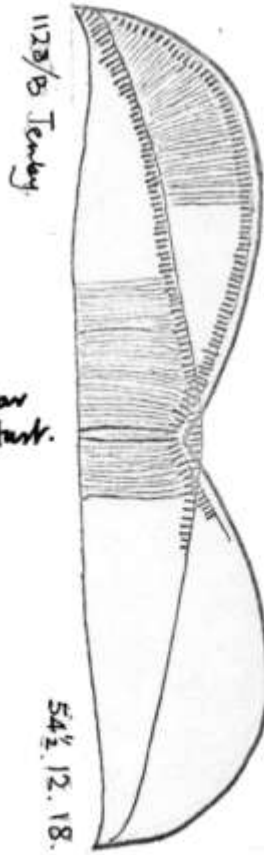
36.14.12

Nannula northumbra



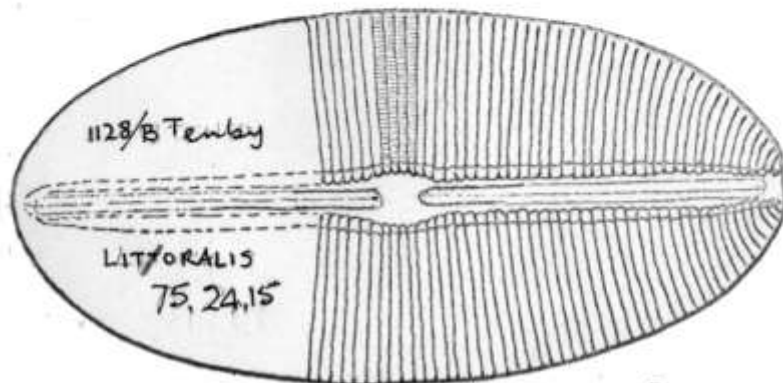
869/B Lin. Bog. 18.5.16

Fragilaria
brachistota var
inflata (Pant.) Hust.



1128/B Tenby

54 1/2, 12, 18.

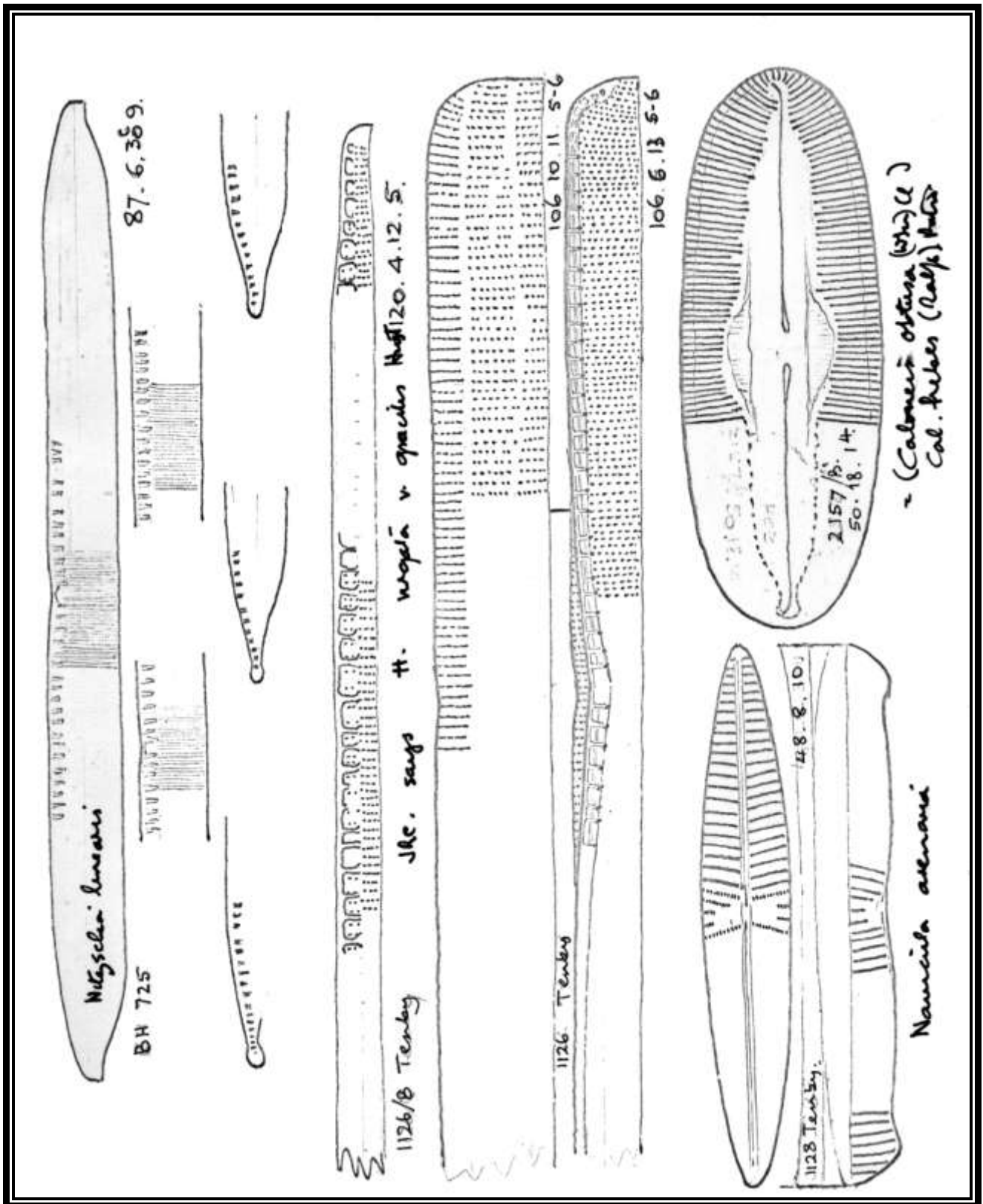


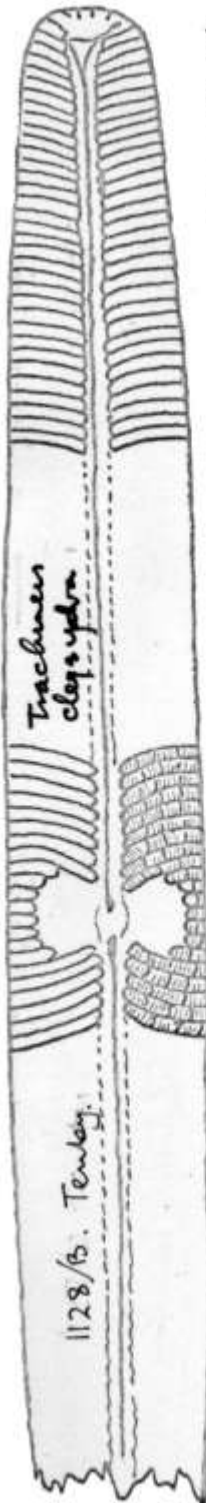
1128/B Tenby

LIT/OTALIS
75, 24, 15

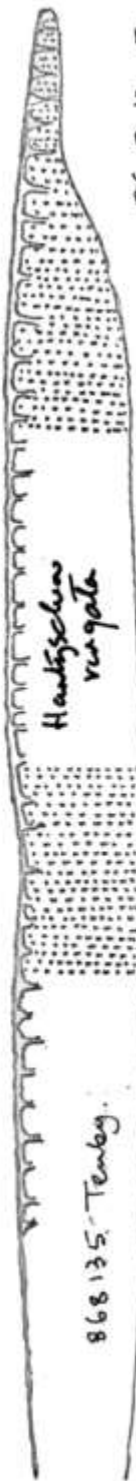
Diploneis littoralis (Pant.) Hust.

Miscellaneous Plate 278





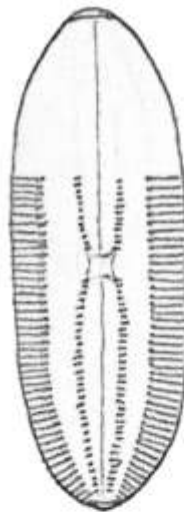
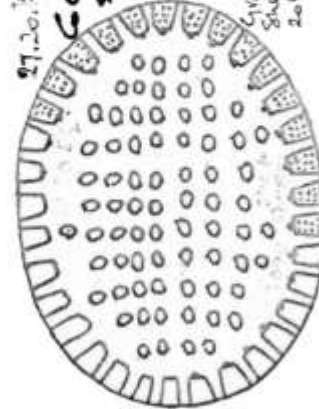
120. $12\frac{1}{2}$. $12\frac{1}{2}$



86. 8. 13. 5.



2008/B Quant. 26. 8. 13
Achnanthes hantzschiana

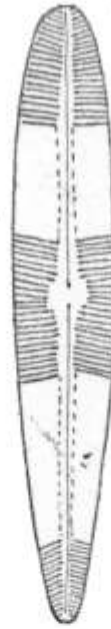


Tenby.
 $32\frac{1}{2}$. 11. 18.
Diploneis marginostriata

48. $8\frac{1}{2}$. $12\frac{1}{2}$



JAC. says ? *N. longleyi*



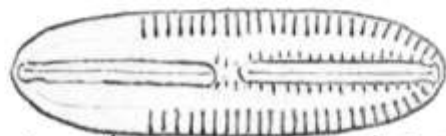
2014/B Quant.
 40 . $6\frac{1}{2}$. 26 .
Gomphonema carlesii Fozd



Cal bacillum 28. $6\frac{1}{2}$. 21

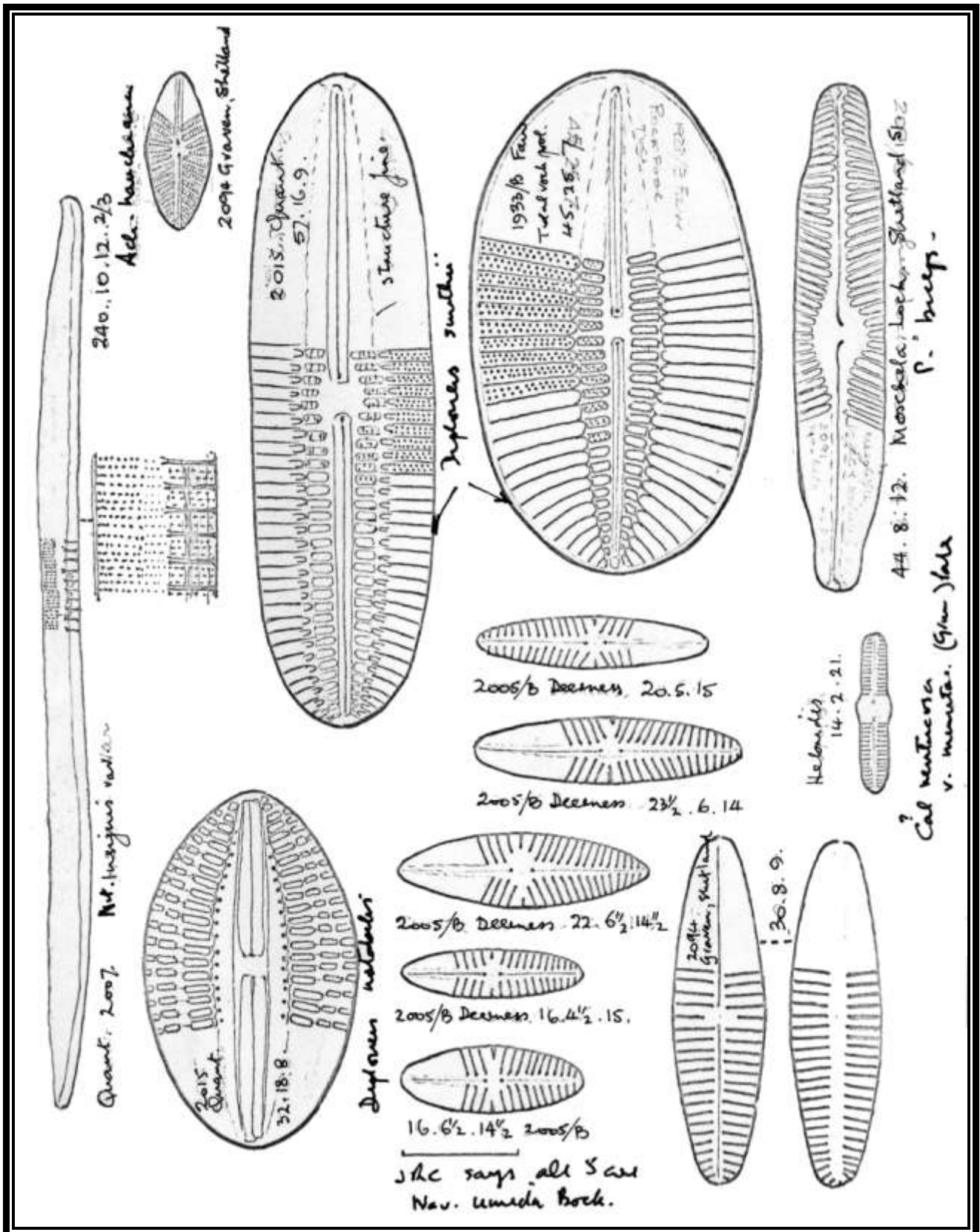


2008/B Quant. 26. $8\frac{1}{2}$. 9. 5ae.
Achnanthes hantzschiana



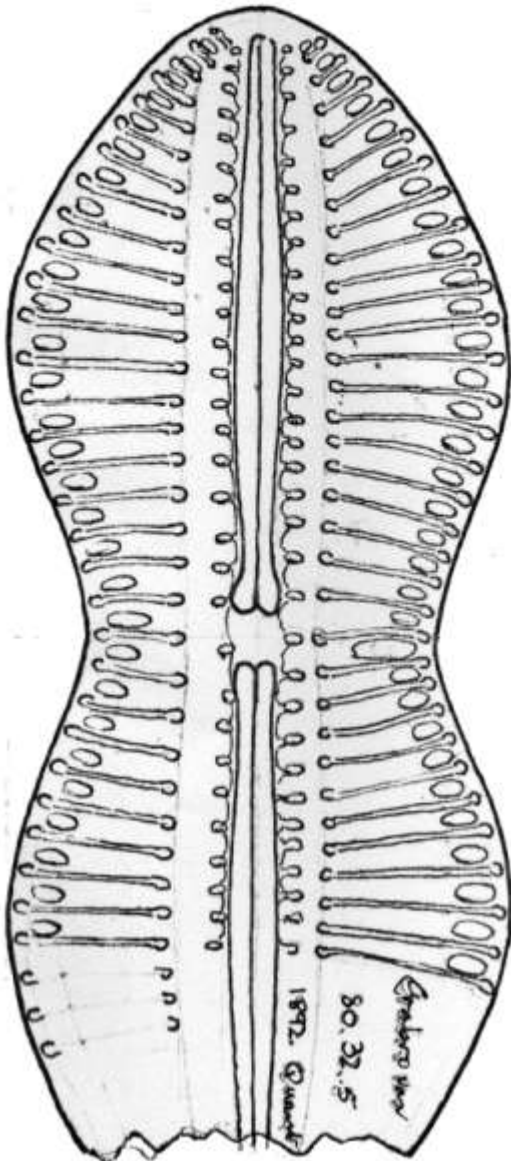
2008/B. Quant. $28\frac{1}{2}$. 8. 12.
Diploneis marginostriata

Miscellaneous Plate 280

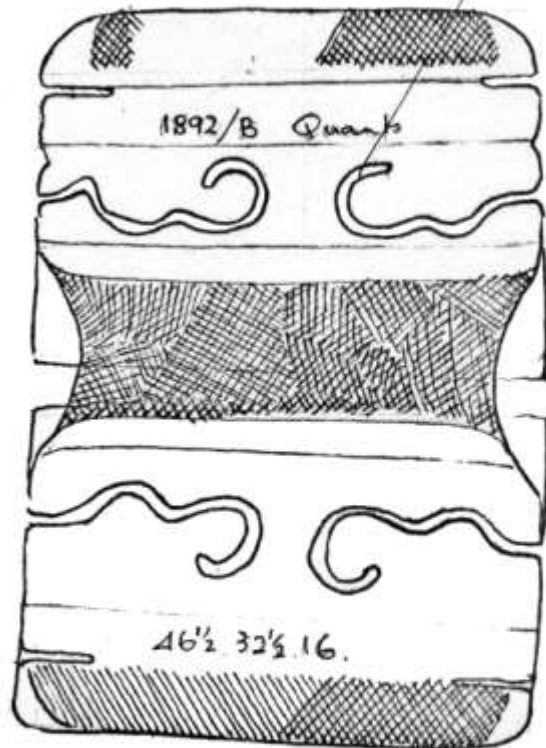


Quanterness Skerry, Orkney.

Diploneis crabro Eln. var.

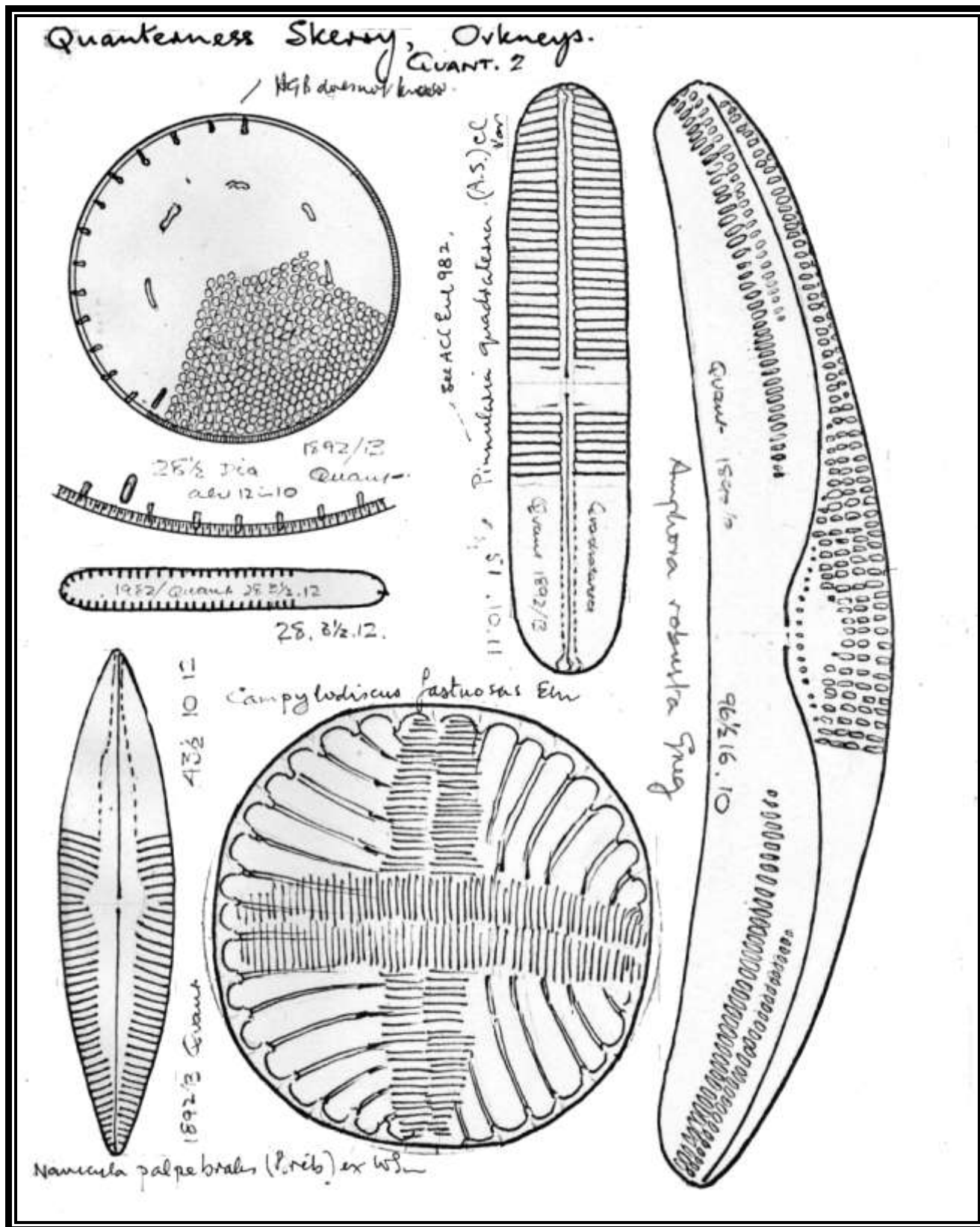


unequal curving
backwards towards
the valve

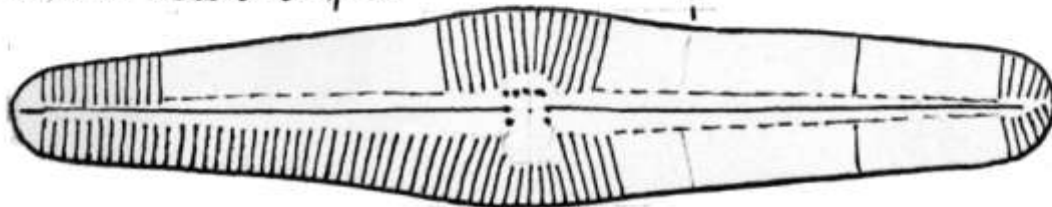
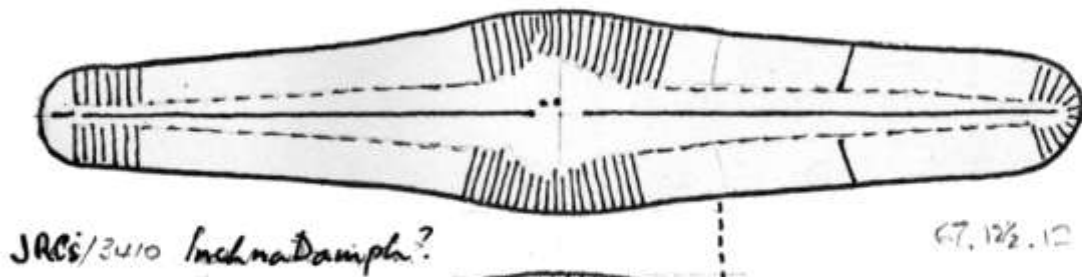
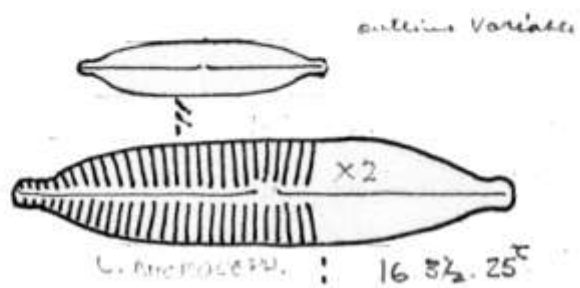
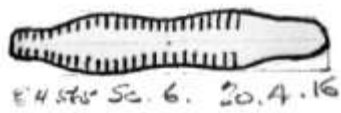
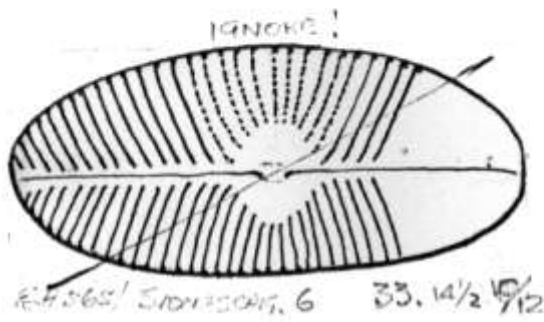
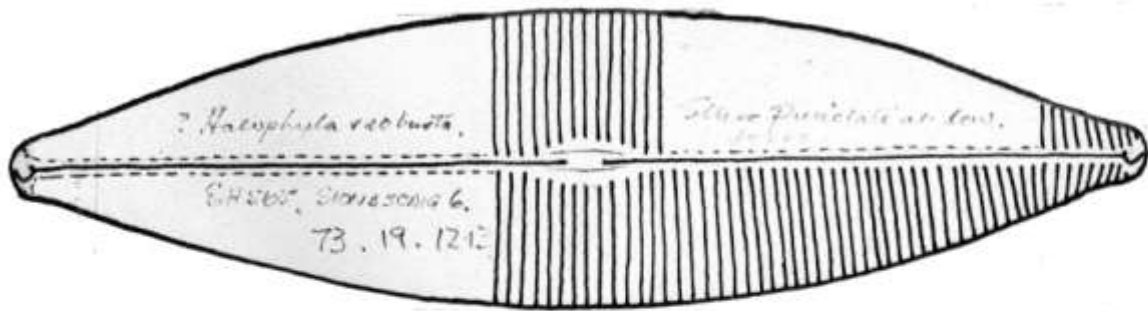


Quanter
Eln

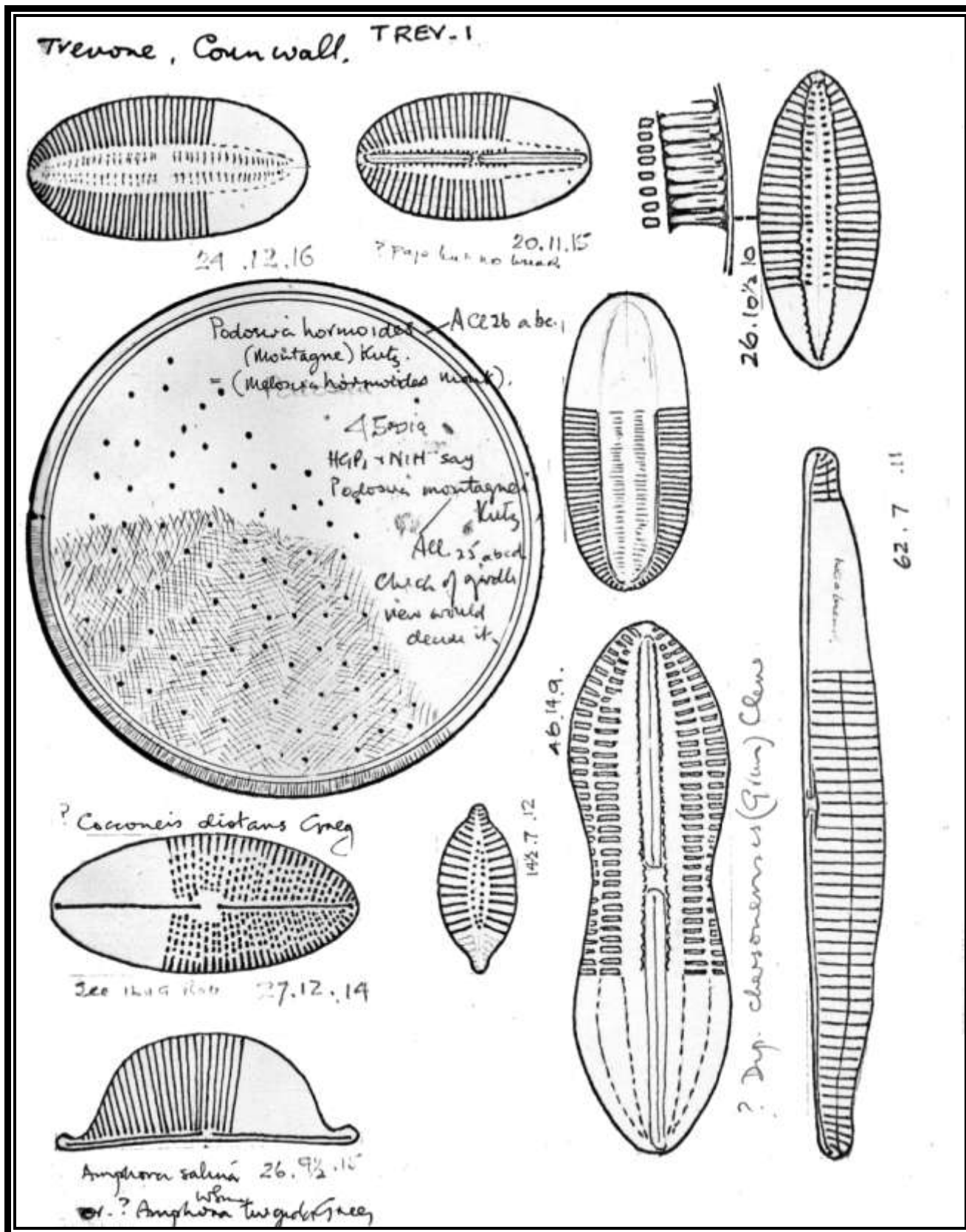
Miscellaneous Plate 281



Loch Sioascarg. m. E.Y. Haworth
E.Y.H.

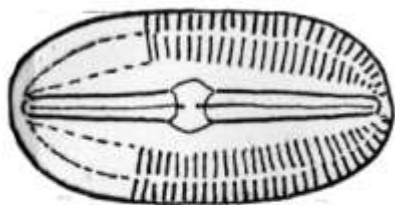


Miscellaneous Plate 283

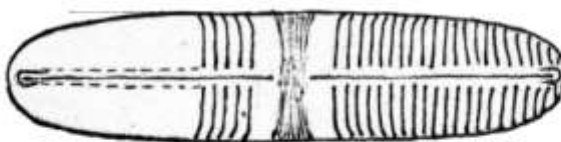


Trevone, Cornwall.

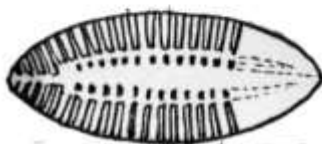
TREV. 2



25.13.14



36 1/2. 8 1/2. 14

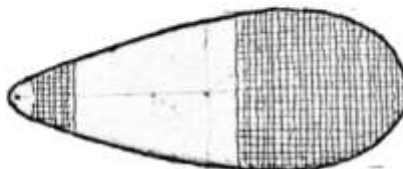


20 8 1/2. 10



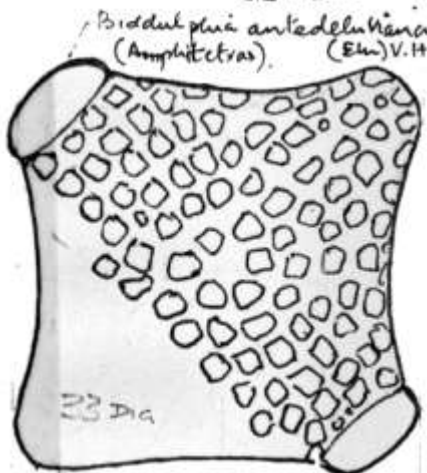
16. 2 1/2. 10

? Opephora Kuttneri A. Cl.



26. 10. 16

? Podocystis spp.
or hemicphora sp.



Biddulphia antedellmaniana
(Amphitetras) (Em.) V. H.

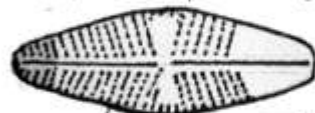
23 Dia



Sept. 1 side 16 10.
Grammatophora angulosa var.

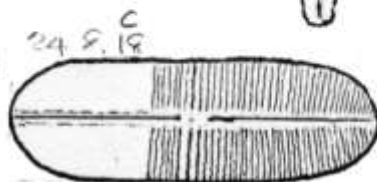


18 1/2. 5 1/2. 24. 12



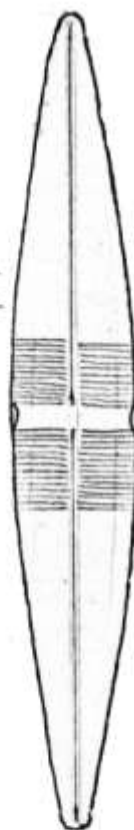
20 6 1/2. 14

looks like
N. nuntia without
the pectinose



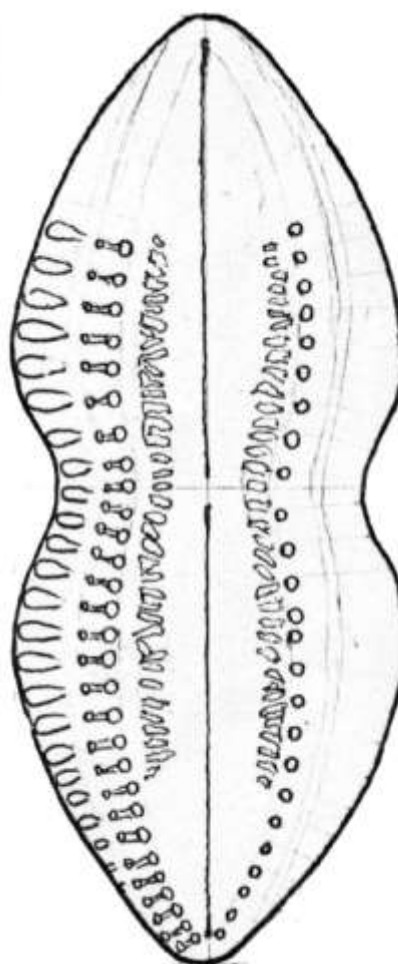
24 8. 18

Striatifera



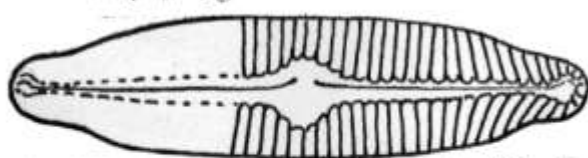
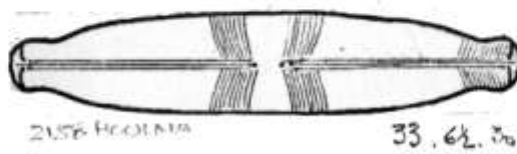
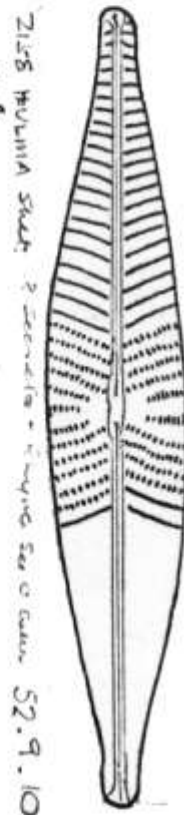
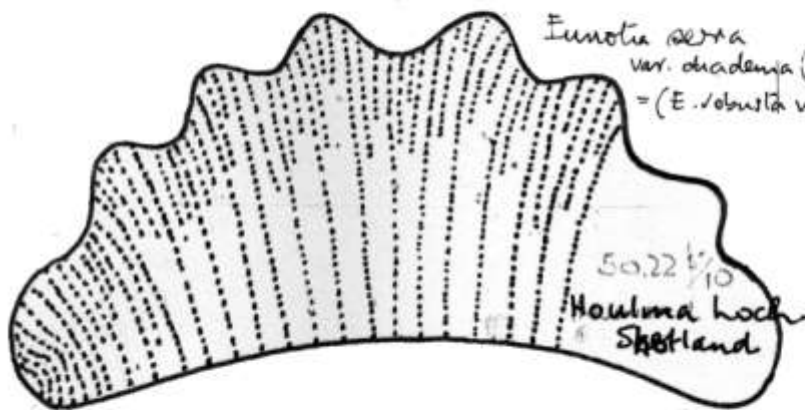
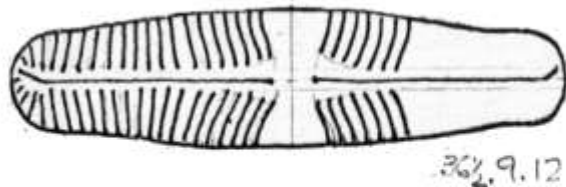
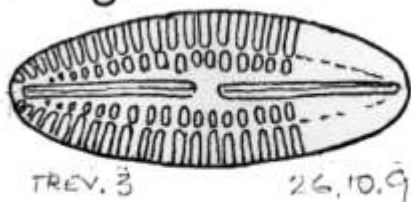
53. 8. 20

Stria very close



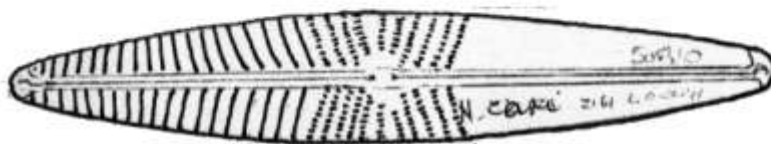
Miscellaneous Plate 285

Trevone, Cornwall. TREV. 3
N2 only.

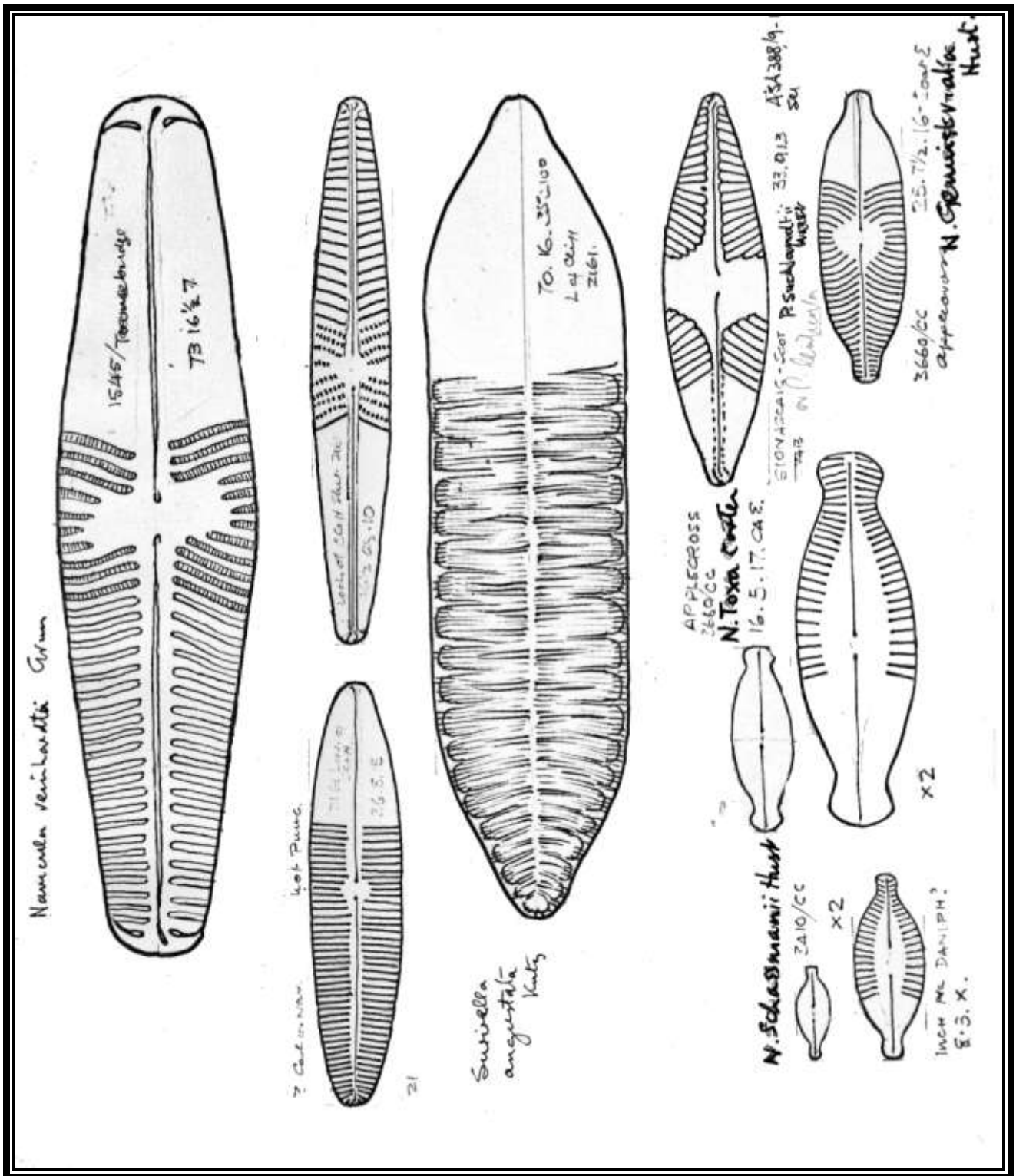


Houlma 25.6

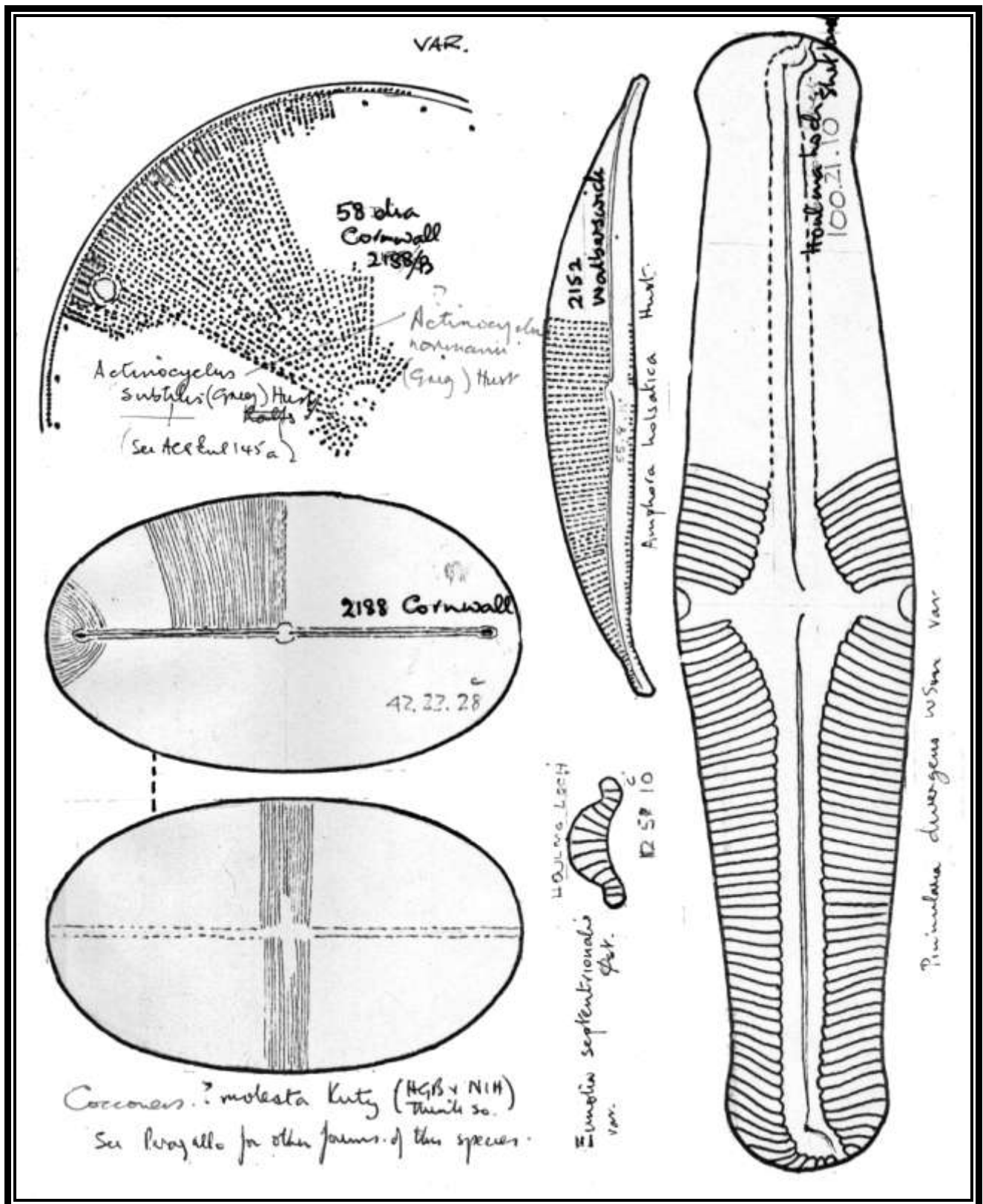
18.5.18

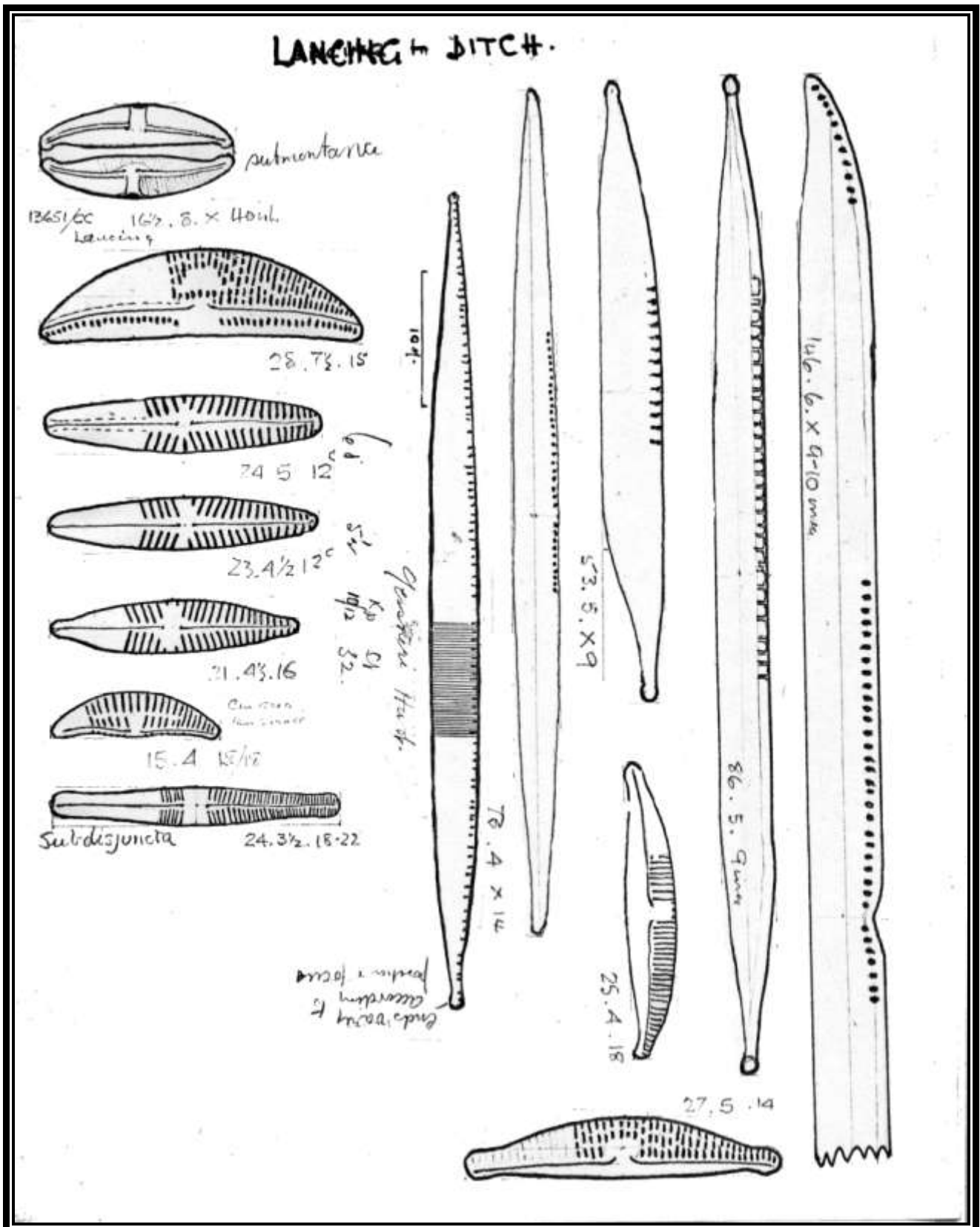


10

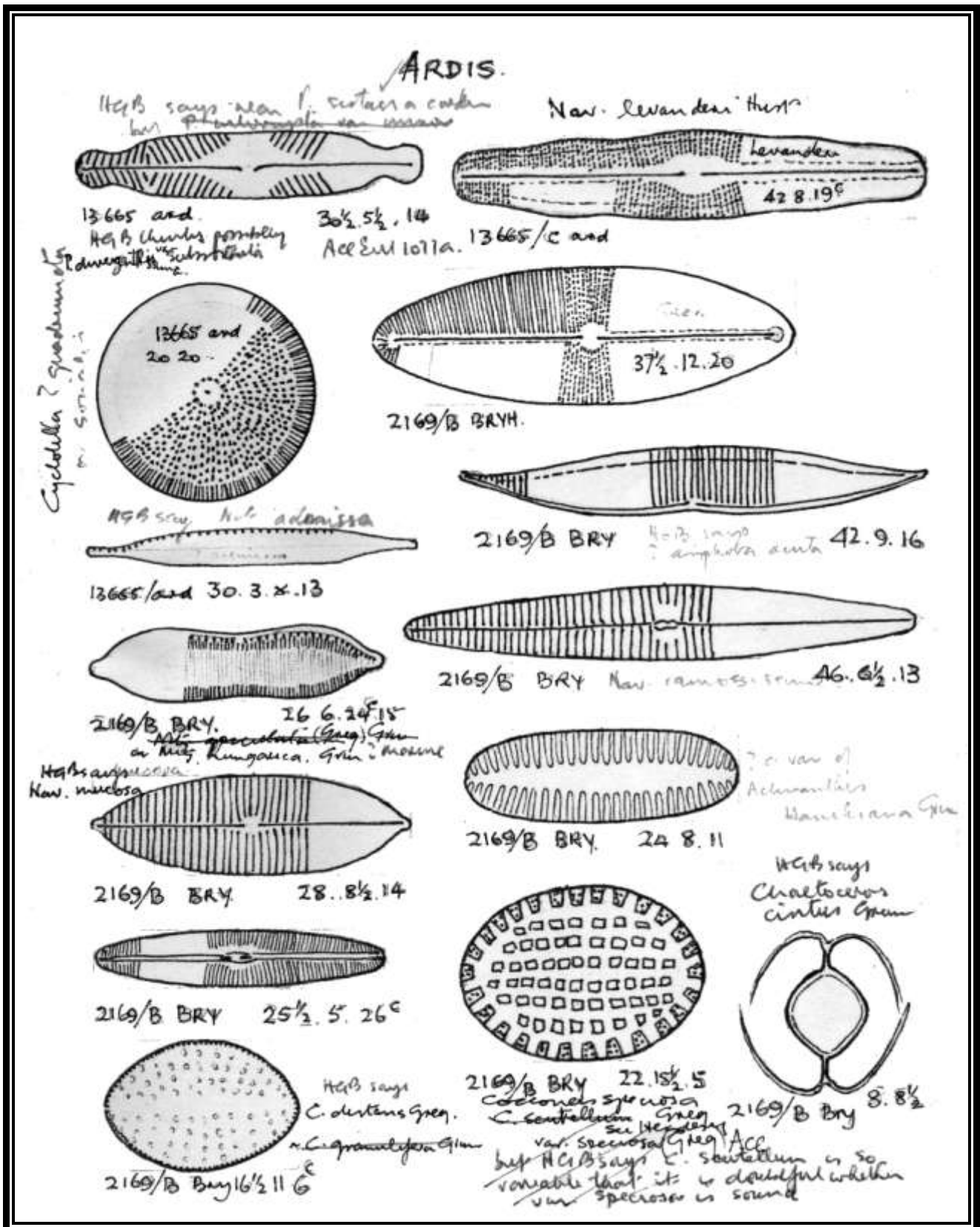


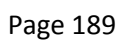
Miscellaneous Plate 287



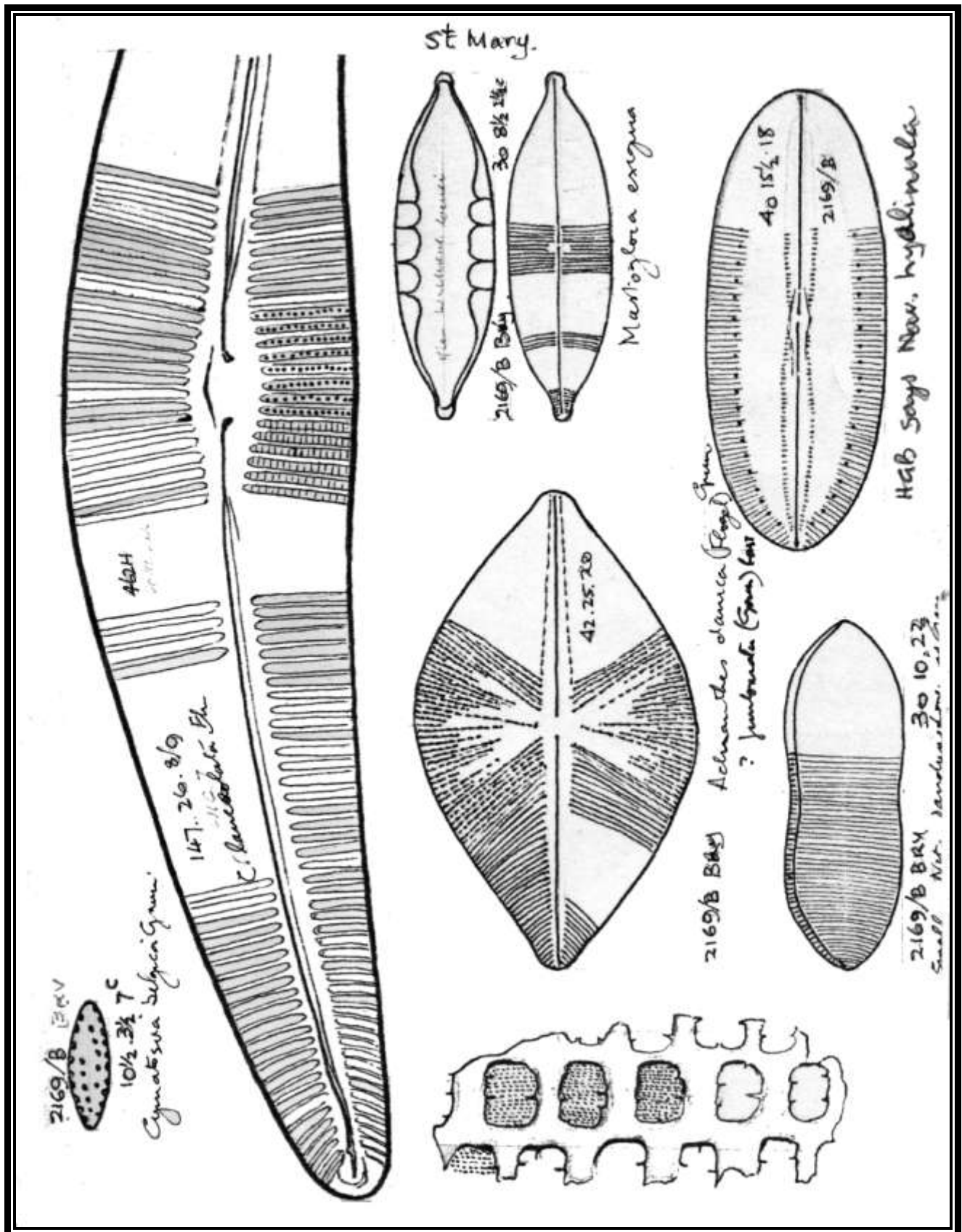


Miscellaneous Plate 289





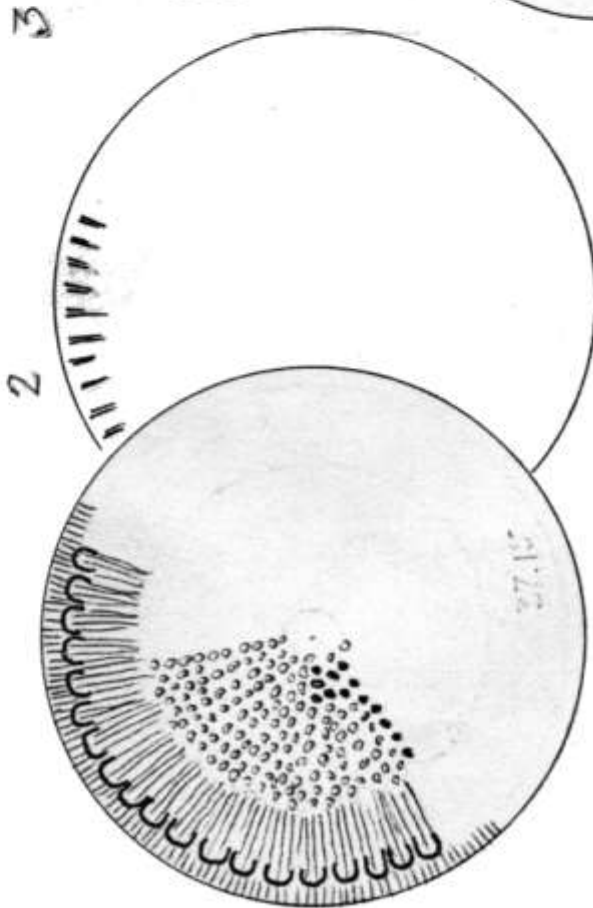
Miscellaneous Plate 291



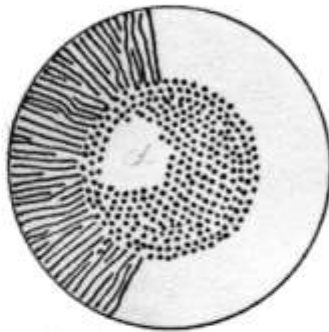
Sponx verovs (Pl 292 of Floria.)

2B

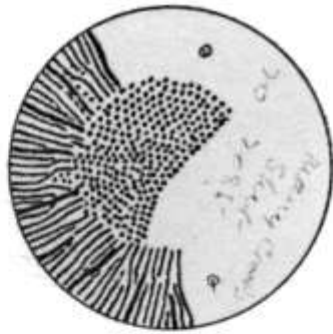
2



3



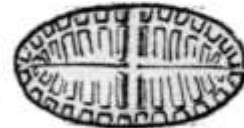
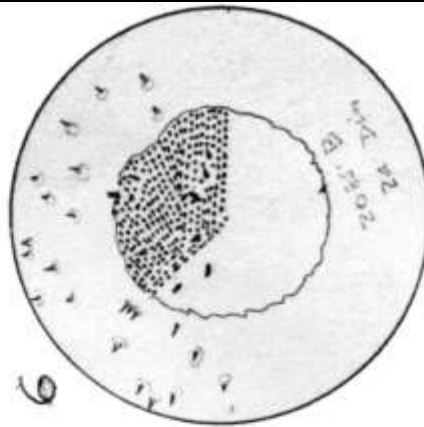
4



5



6



14 7 1/2 . 9



14 7 1/2 . 120

Miscellaneous Plate 293 Notes

(1) 120.18.6 *P. viridis* var. *minor* according to H.G.B. P.v.R.

B.H. - ? *streptoraphe* or *flexuosa*

J.R.C. - ? *nobilis*

E.Y.H. - P.&R. *sudetica* or *viridis* var. *minor*

According to key:

Hust. 1930 – *viridis*

A.Cl.Eu. – *viridis*

(2) 80.13½.10 *P. sudetica* according to H.G.B. a very close form except for the fine oblique raphe.

B.H. –

J.R.C. – probably fall into *viridis*

E.Y.H. – P.&R. *viridis* var. *minor*

Keys:

Hust. – *viridis*

A.Cl.Eu. – *sudetica*

(3) 83.15½.7½ *P. hemiptera*

B.H. –

J.R.C. –

E.Y.H. - P.&R. *viridis* var. minor

Keys:

Hust. – near *esox* or *sudetica*

A.Cl.Eu. – *sudetica* or *cuneata*

(4) 93.16.7½ acceptable as *P. viridis* (the type)

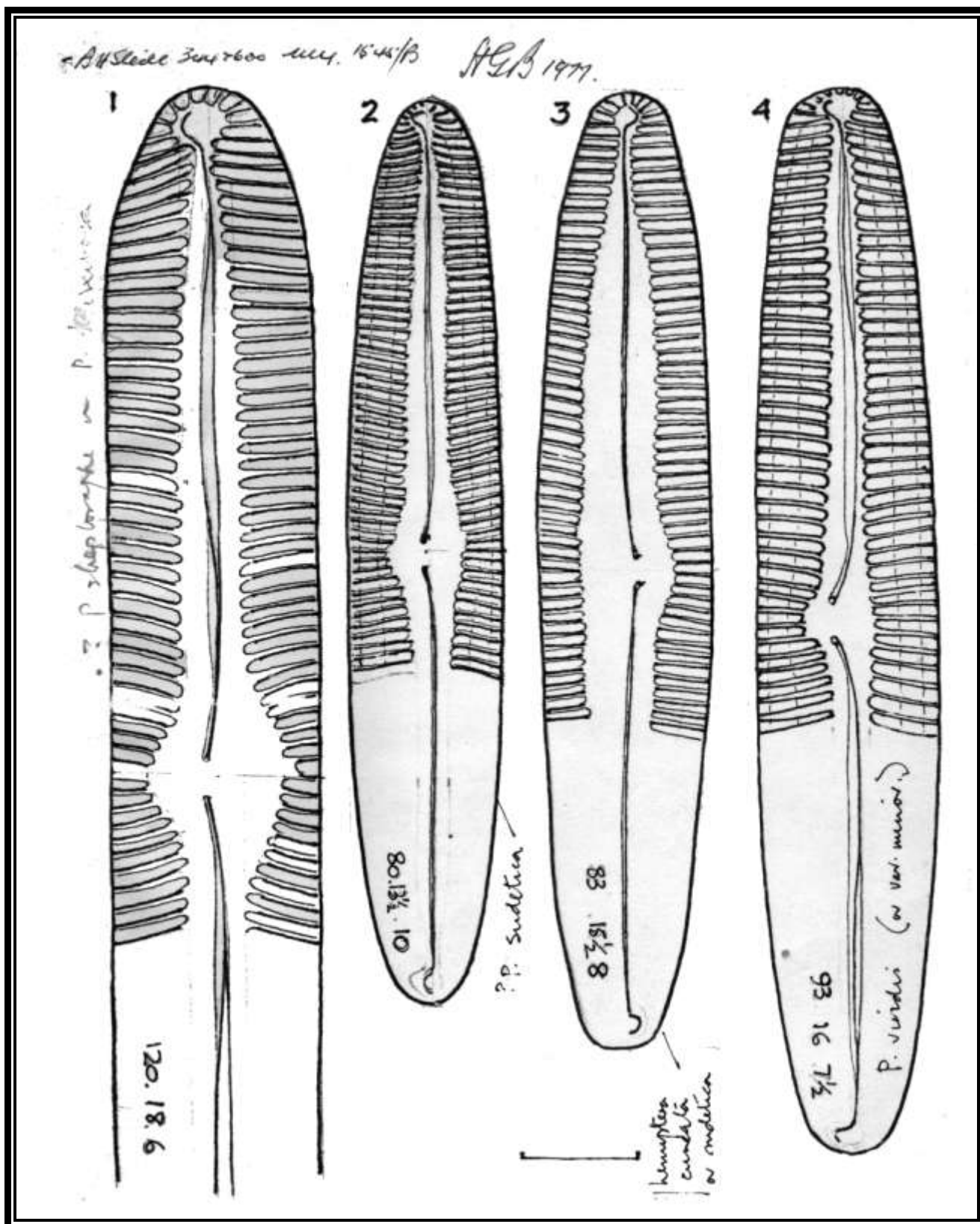
B.H. & J.R.C. –

E.Y.H. – P.&R. *viridis* var. *minor*

Keys:

Hust. – *viridis*

E.Cl.Eu. – *viridis*



Miscellaneous Plate 294 Notes

(5) 126.20.8 *P. esox*

B.H. – could well be *P. esox*

J.R.C. –

E.Y.H. – P.&R. *viridis* var. *minor* or *gentilis*

Keys:

Hust. – *viridis*

A.Cl.Eu. – *viridis*

(6) 66.14½.10 *P. sudetica* var. *leptogonglya* (inflated central outline)

B.H. – ? cuneate but not *gonglya* raphe

J.R.C. – could fall in *bipectinalis*

E.Y.H. – *P. clevei* [*esox subsolaris*] [*sudetica* var. of *cuneata*]

(7) 97.16½.8 *P. viridis* var. *intermedia* (according to A.Cl.Eu!)

B.H. –

J.R.C. –

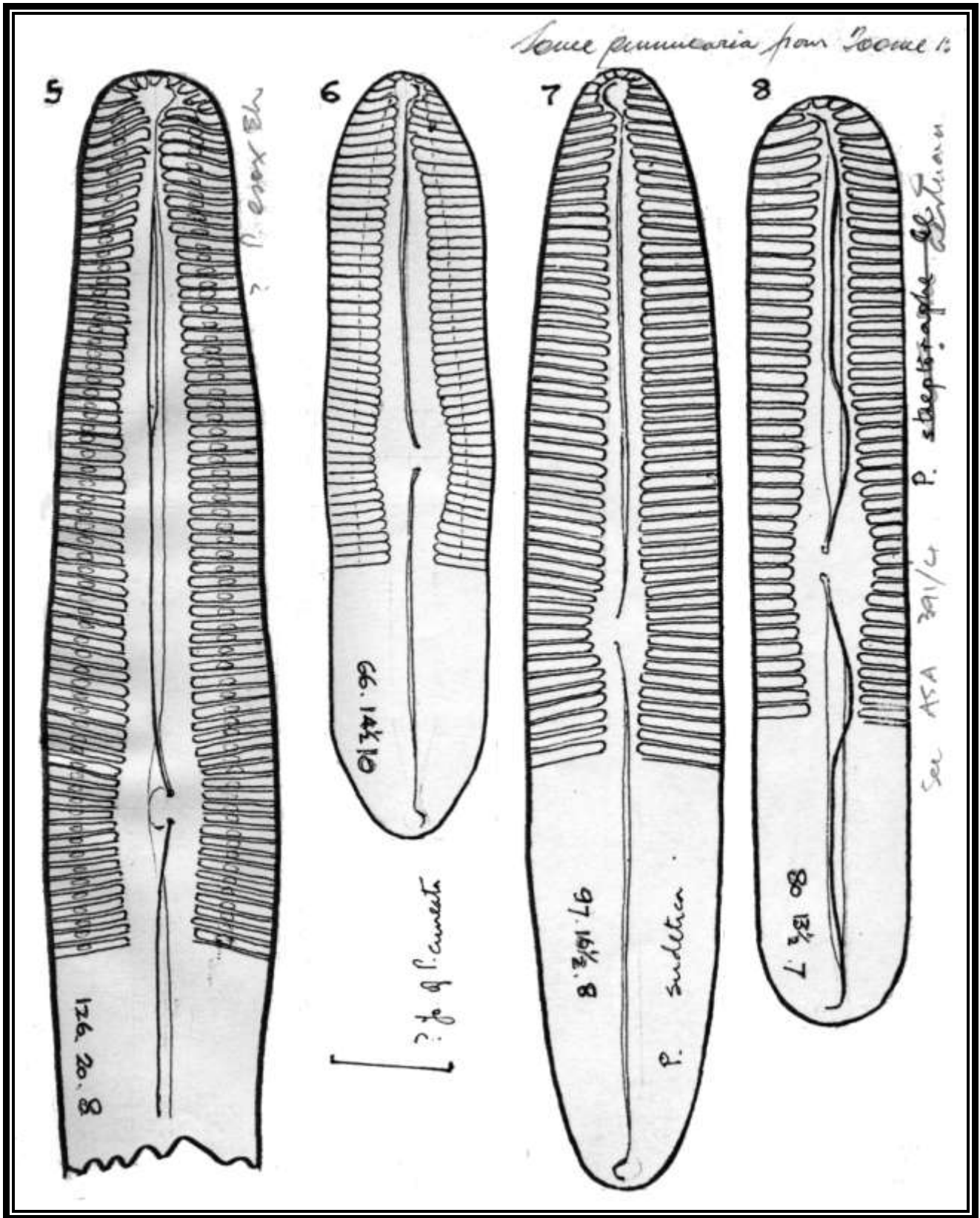
E.Y.H. – *sudetica*

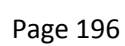
(8) 80.13½.7 *P. aestuarii*

B.H. – *streptoraphe* (see ASA 391/4)

J.R.C. –

E.Y.H. – *viridis* var. *minor* (near *gentilis*, *P. viridis*) (As A.Cl.Eu. between *streptoraphe* and *gentilis*)





Miscellaneous Plate 295 Notes

(9) 68.11.9 *P. rupestris*

B.H. –

J.R.C. –

E.Y.H. – *sudetica*, var. *sudetica*

(10) unfinished

(11) 64.12.9 *Pinnularia*

B.H. –

J.R.C. – probably falls within *viridis*

E.Y.H. – *sudetica* – *P. viridis* var. *sudetica*

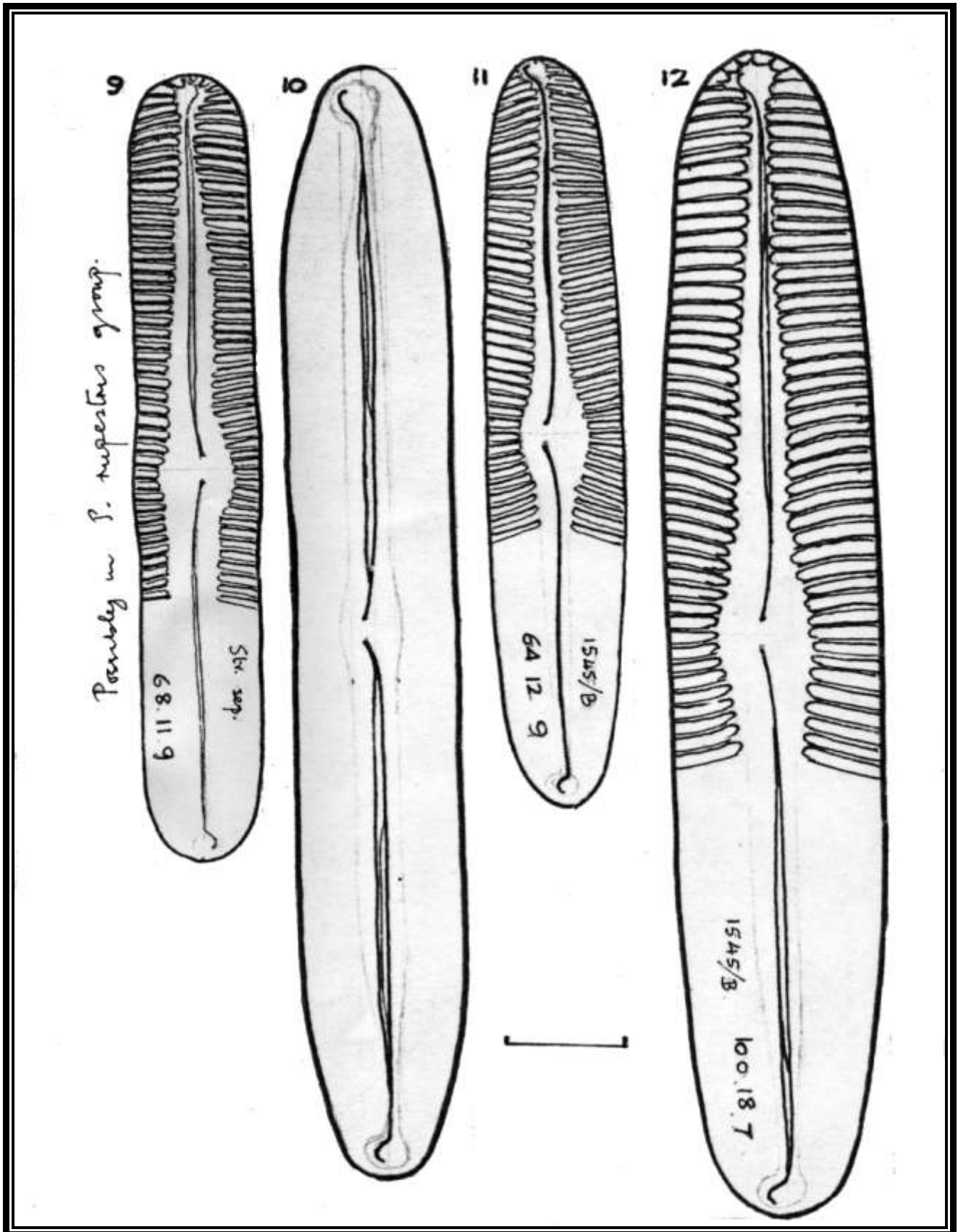
(12) 106.18.7 *Pinnularia* ? *intermedia*

B.H. –

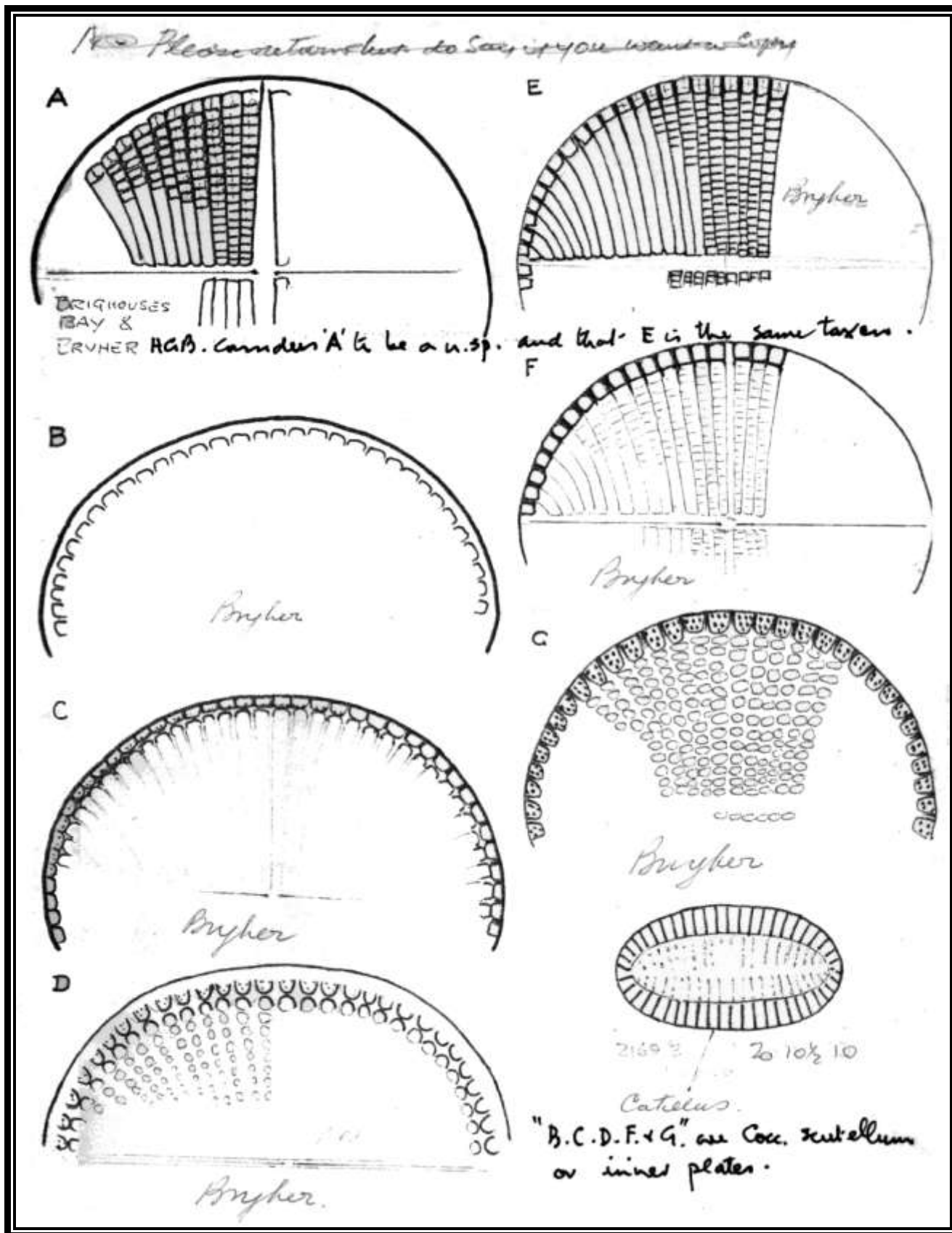
J.R.C. –

E.Y.H. – *P. sudetica*, *P. viridis*

Miscellaneous Plate 295



Miscellaneous Plate 295(2)



Miscellaneous Plate 296 Notes

(13) 83.16.8 *P. intermedia* Cl.

B.H. –

J.R.C. –

E.Y.H. – *P. scrabro*, *P. viridis*, *P. sudetica*

(14) 113.19.6 *P. distinguenda* Cleve

B.H. – *streptoraphe*

J.R.C. –

E.Y.H. – *sudetica viridis*

(15) 86.14.10 *P. ? rupestris*

B.H. – could be *kraskei* (see ASA 391/7-8)

J.R.C. –

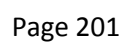
E.Y.H. – *sudetica*, *viridis* var. *sudetica*

(16) 93.16.10 *P. ? rupestris*

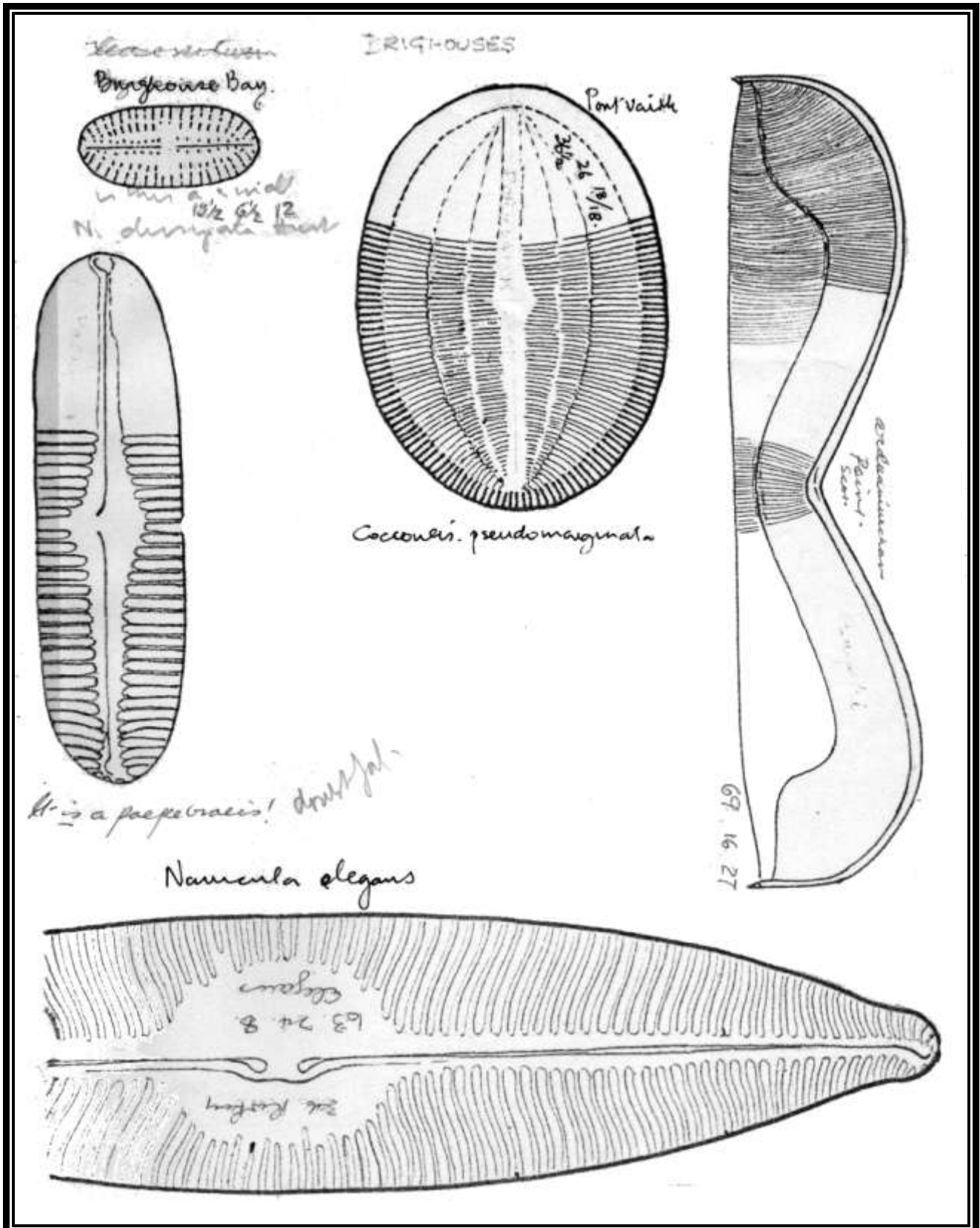
B.H. – could be *kraskei* (ASA 391/7-8)

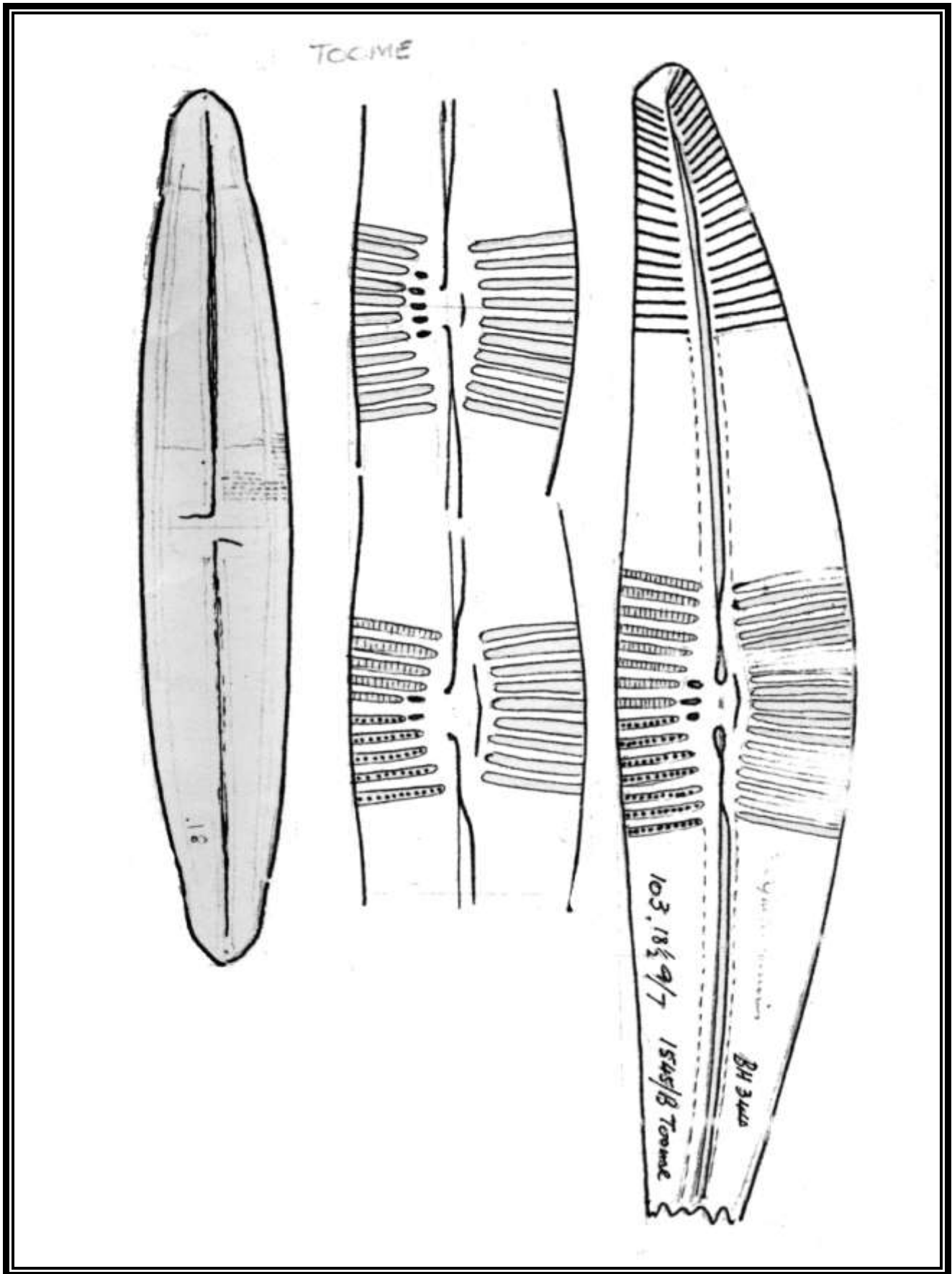
J.R.C. –

E.Y.H. – *sudetica*, *viridis* var. *sudetica*

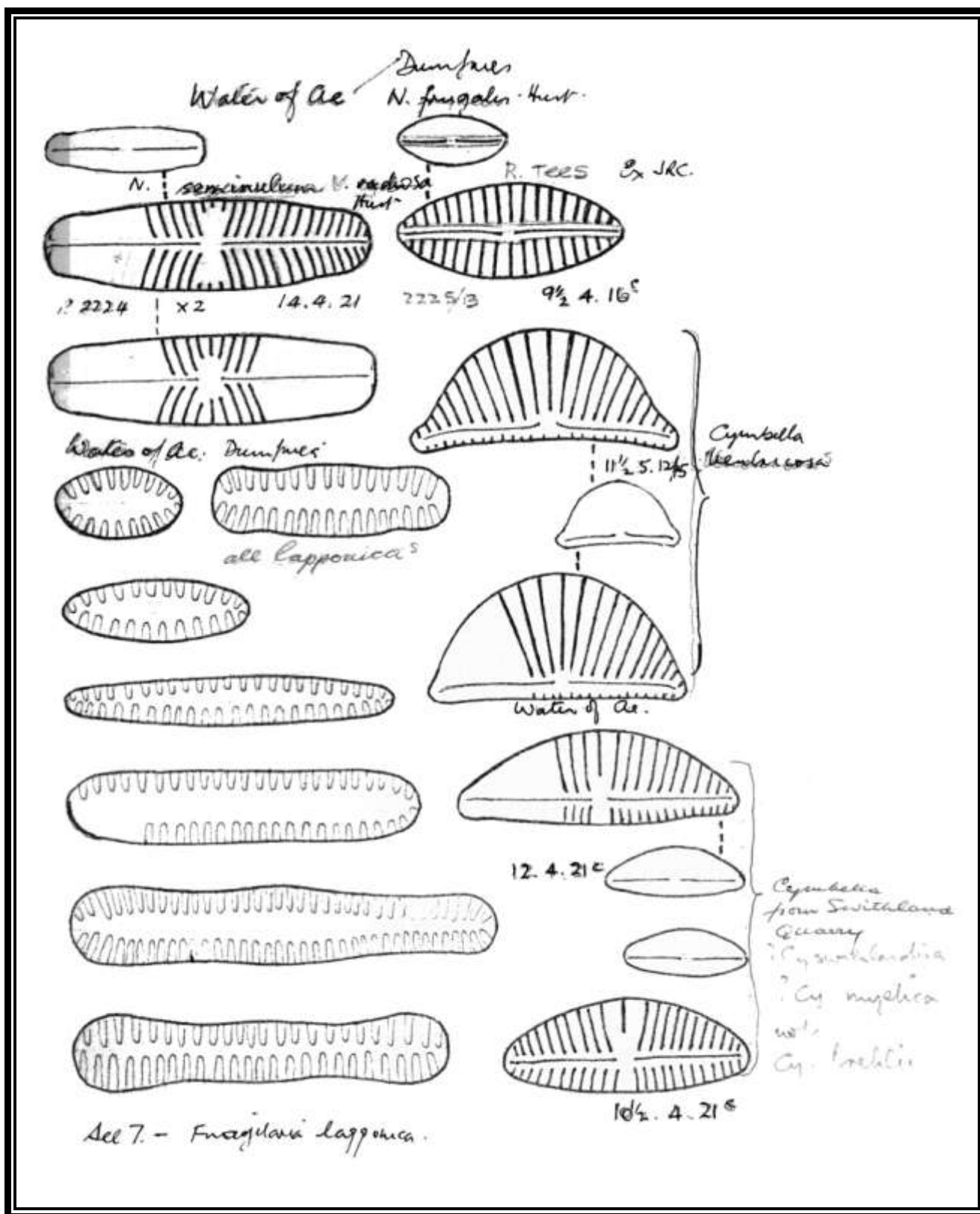


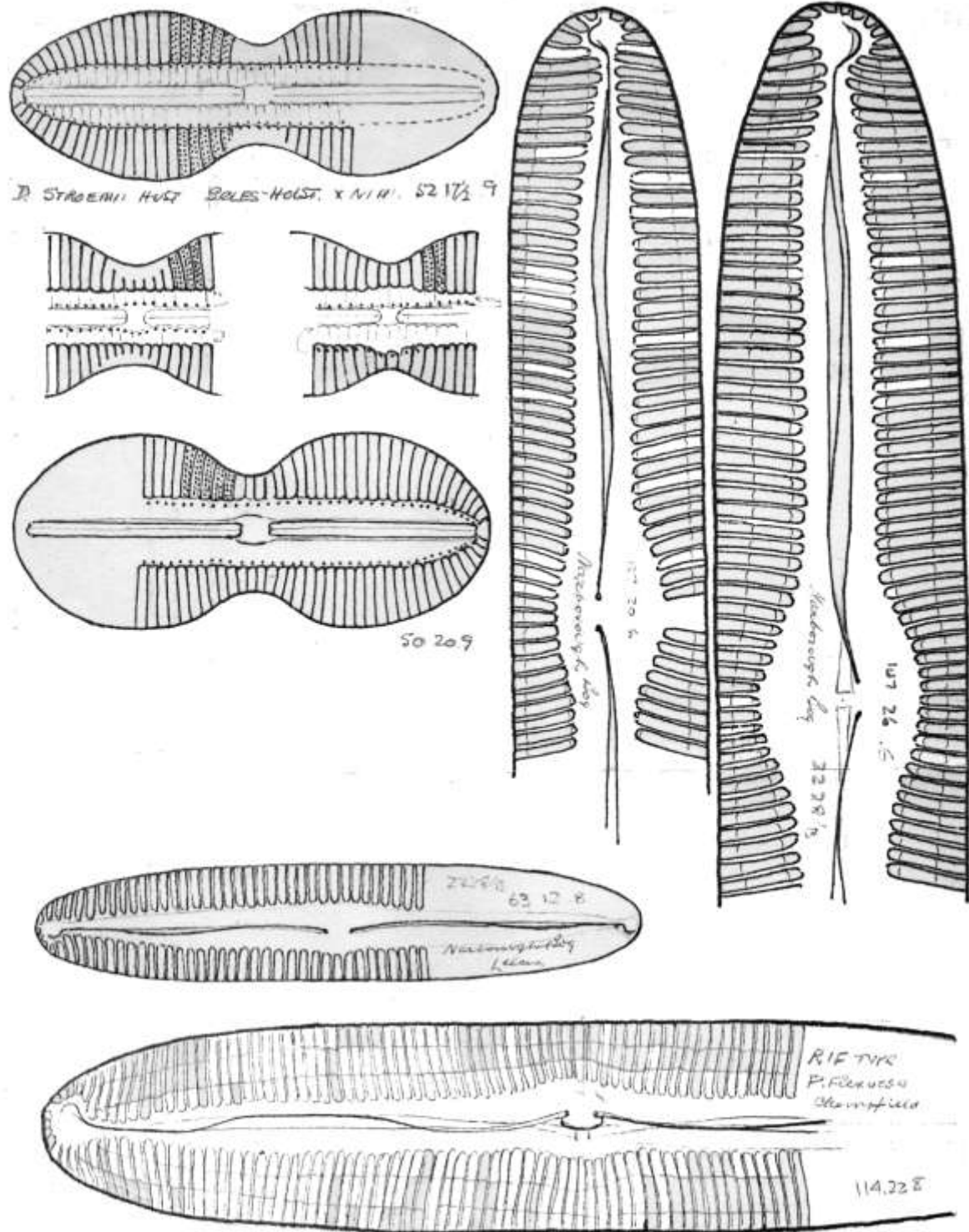
Miscellaneous Plate 296(2)



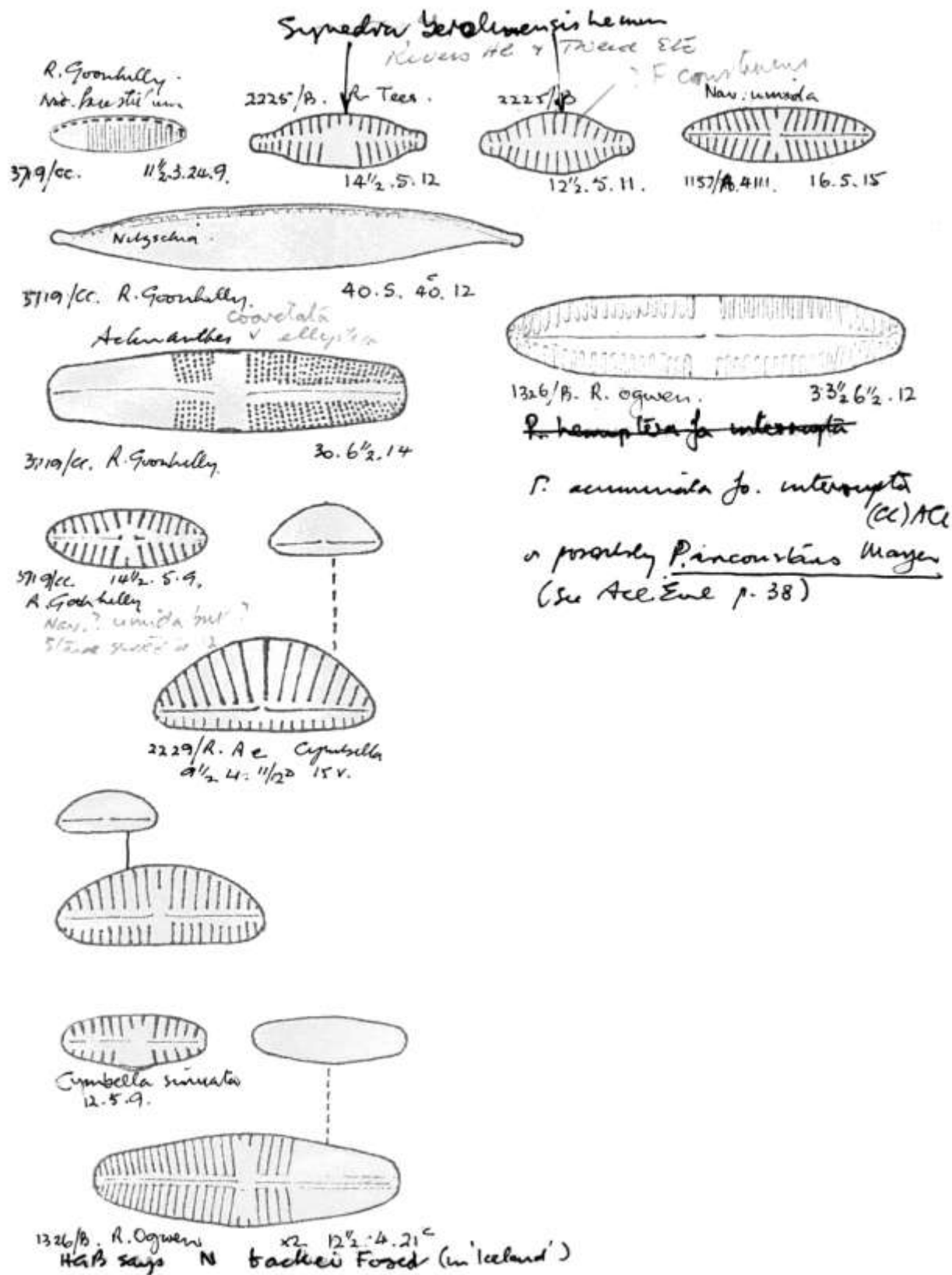


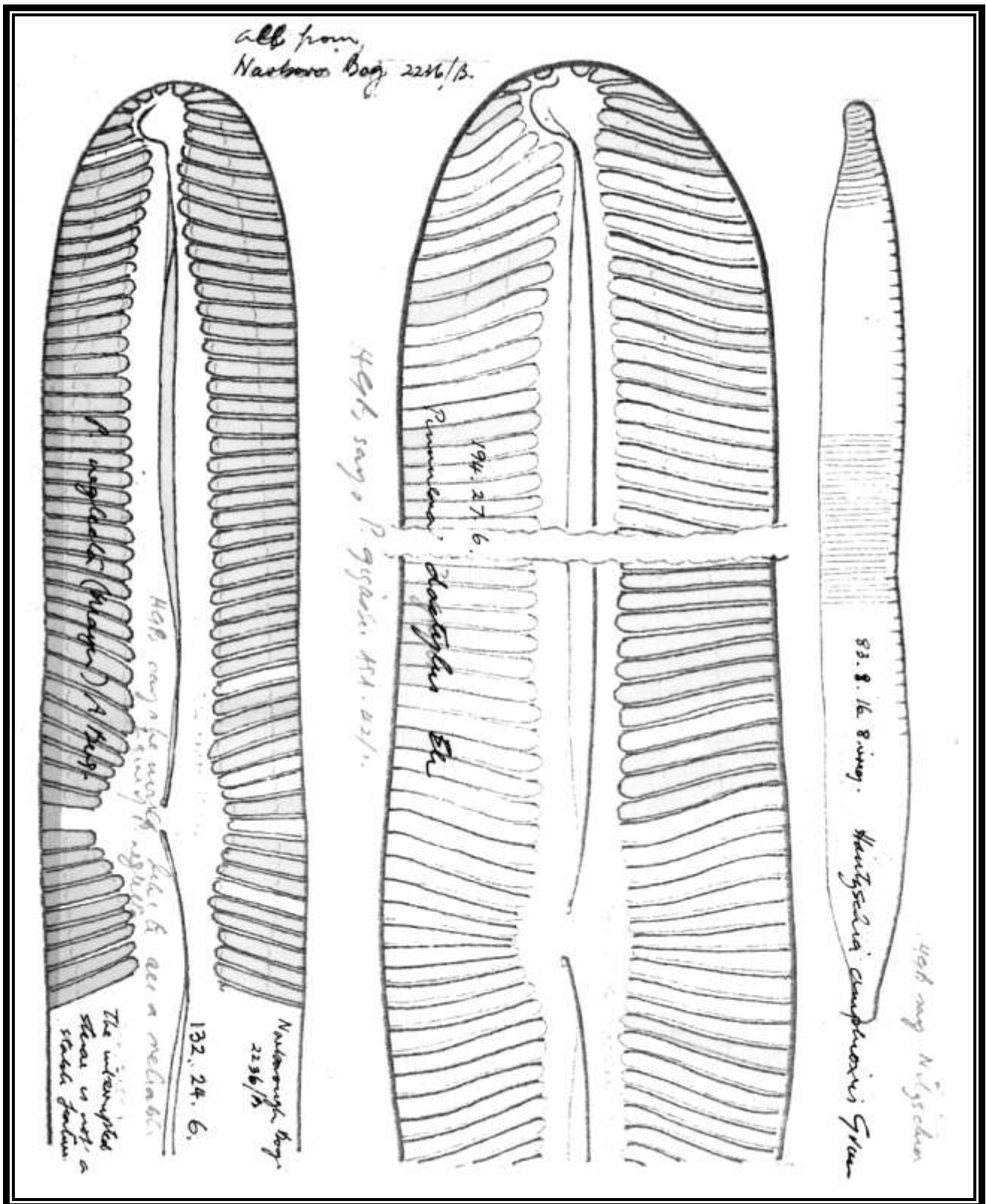
Miscellaneous Plate 297(2)

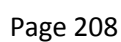


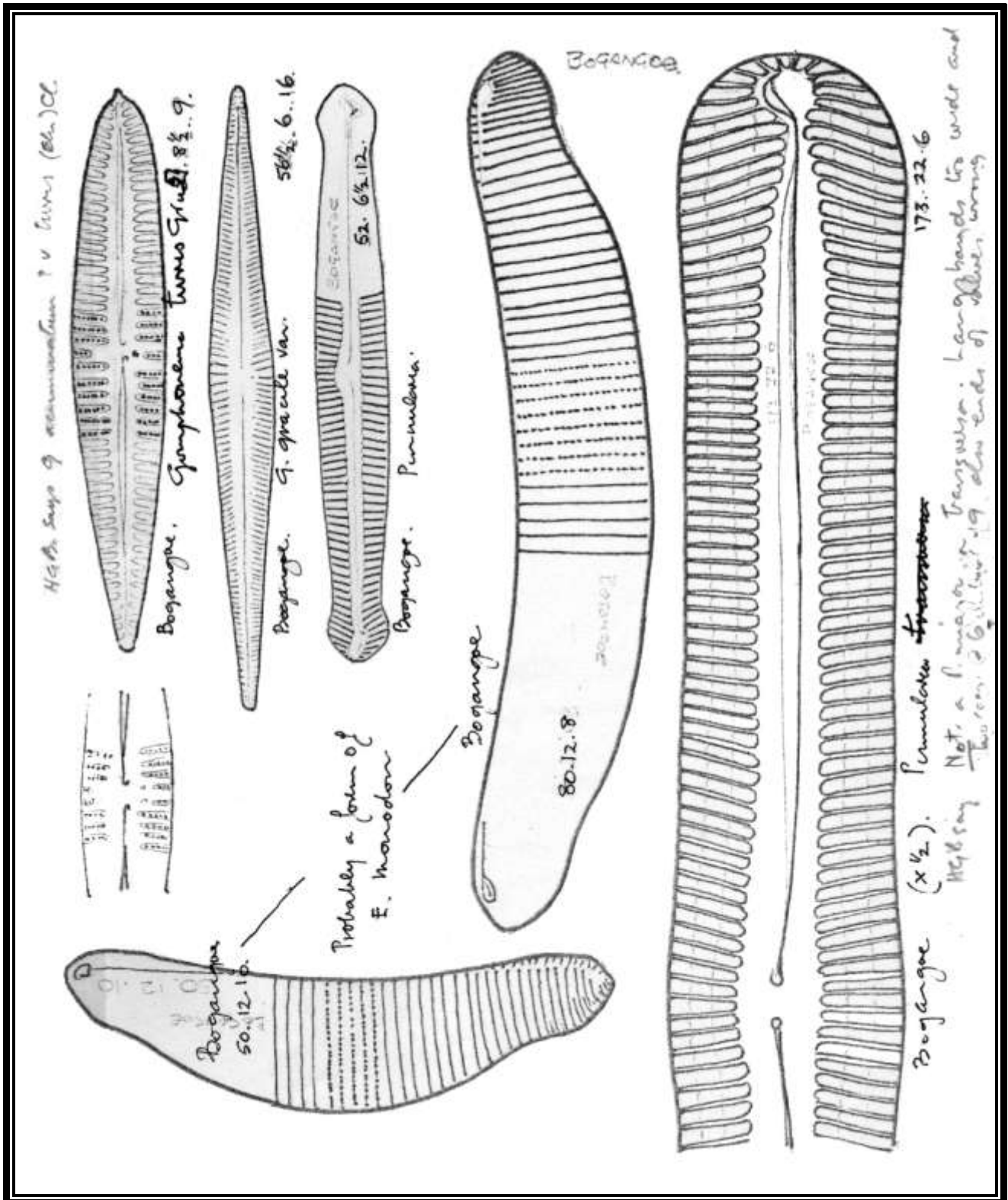


Miscellaneous Plate 299

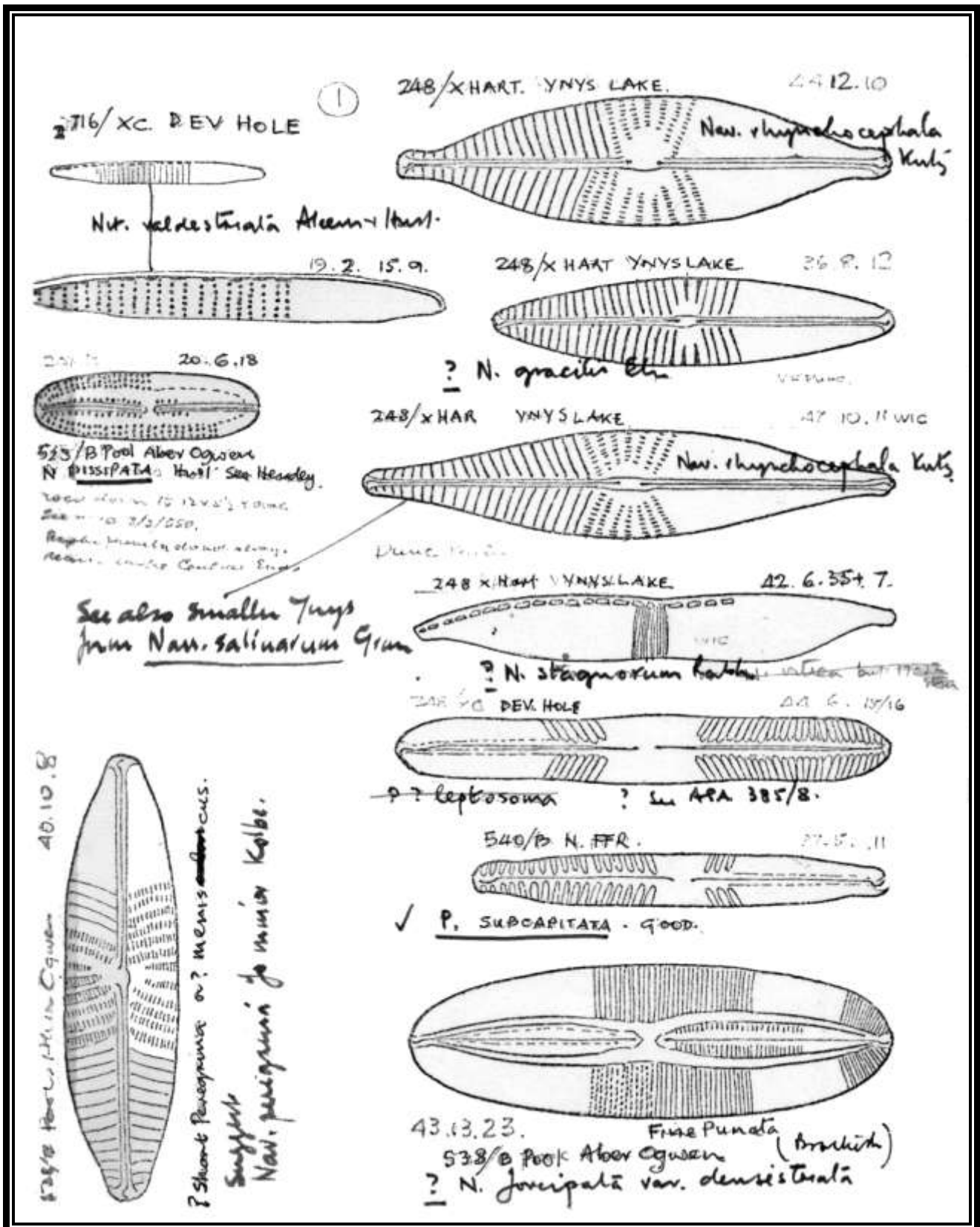


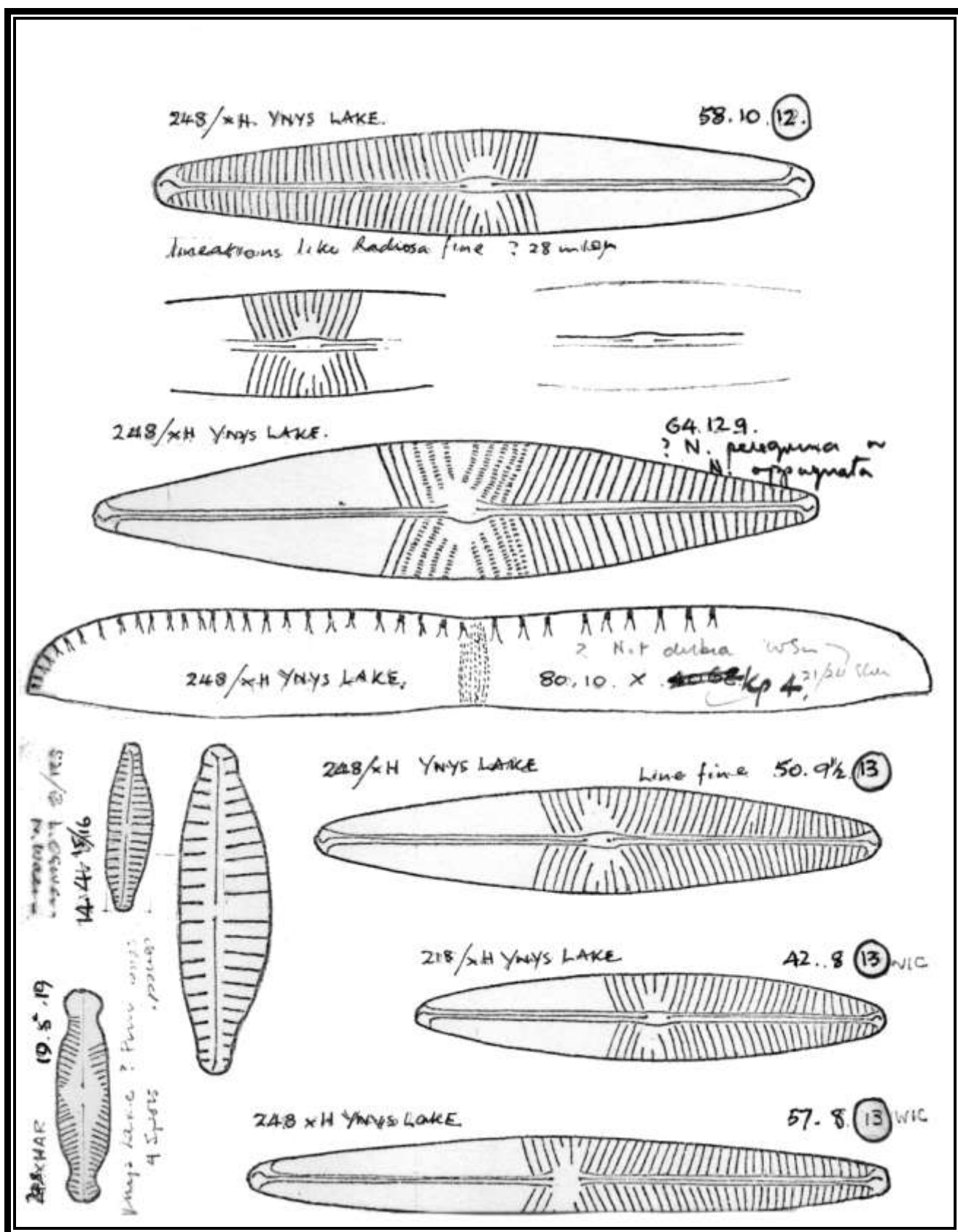




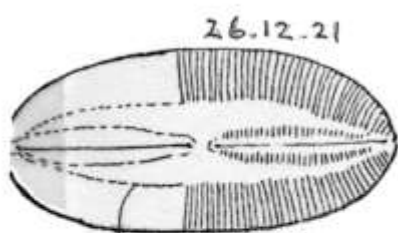


Miscellaneous Plate 303





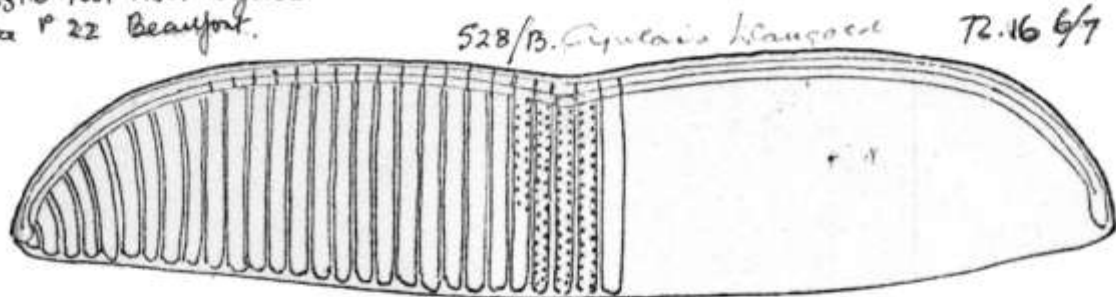
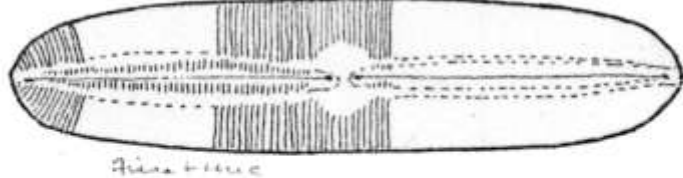
Miscellaneous Plate 305



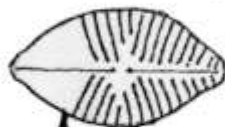
538/B. Pool Aber Ogwen
See P 22 Beaufort.

538 B Pool Aber Ogwen

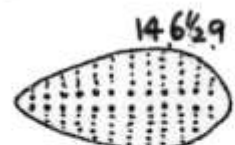
44.10.23



SCOLIOTRIPS SEPTENTRIONALIS A. C. EU.



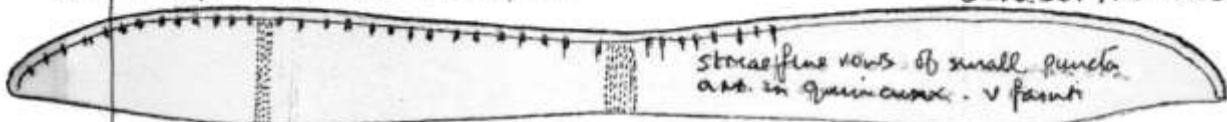
See P 20 Cont.
to p 22



Cyrtella Langsd.
22/17 B

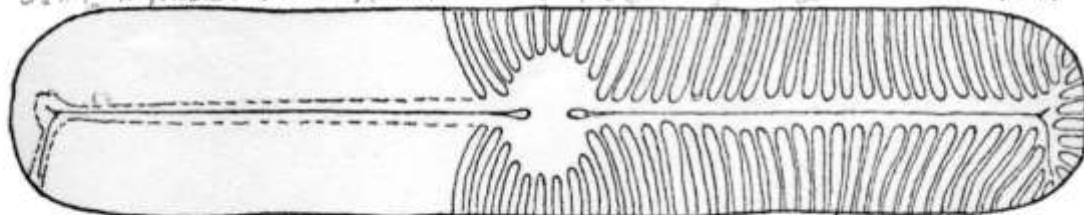
528/B Cyrtella Langsd.

80.8.30? TMS. in vacuo

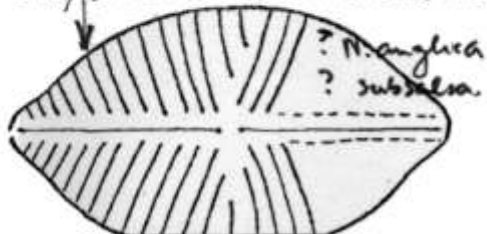


528/B Cyrtella Langsd. & reclarification

70.14.9.

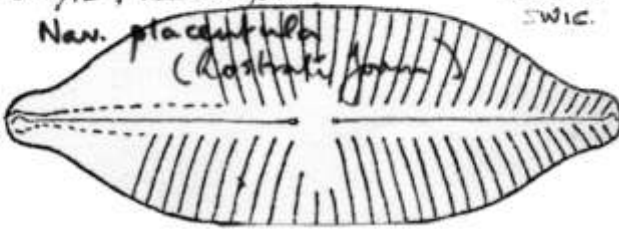


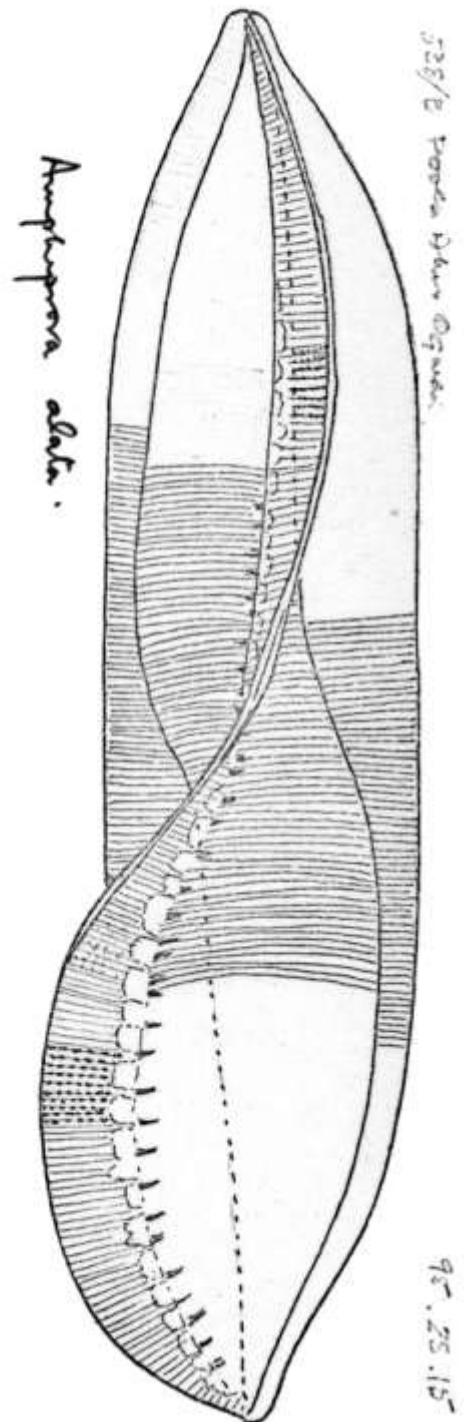
510/B Glen Llangorse 15.8.12 SWIC



510/B Glen Llangorse

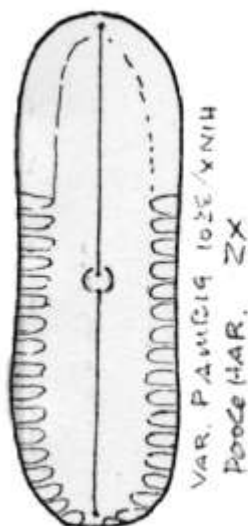
40.15.9
SWIC.





Miscellaneous Plate 307

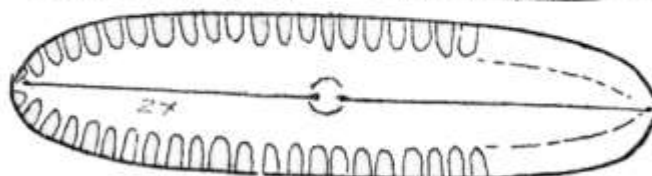
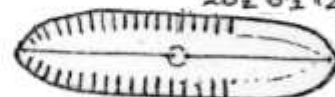
5. 1038/XN114 Poole HAR 54.10.9



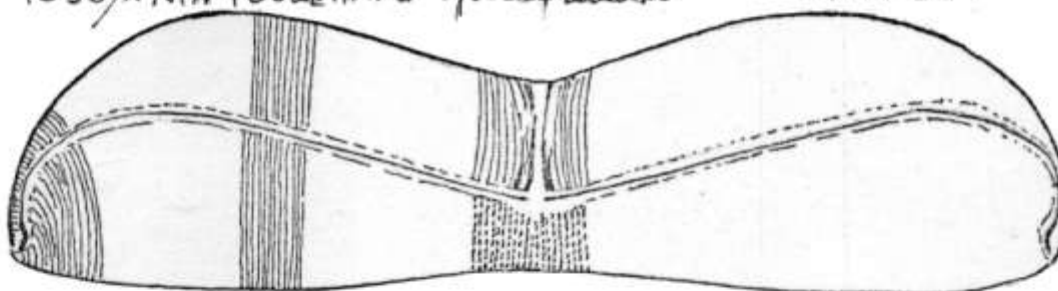
Plagiosaurina stauraphora (Greg) Heib.
but see also ASA 200/46 *P. corallatum* Gies.

20 1/2 6 1/2 12

1038/XN114 Poole



1038/XN114 POOLE HAR finefornata 67.18.25?



1038 XN114 Poole

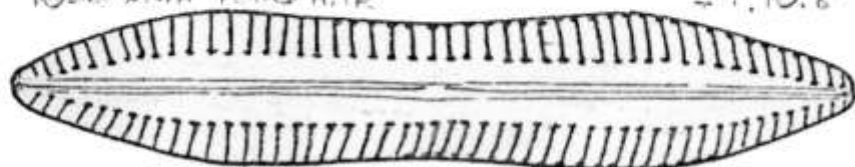
A. RUTILANS.

24.3 X



1038/XN114 Poole HAR

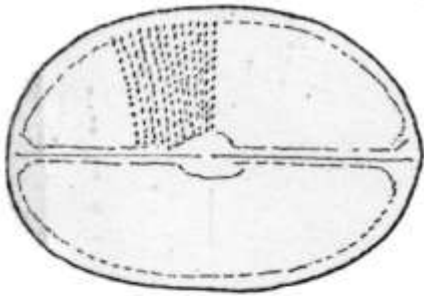
54.10.8



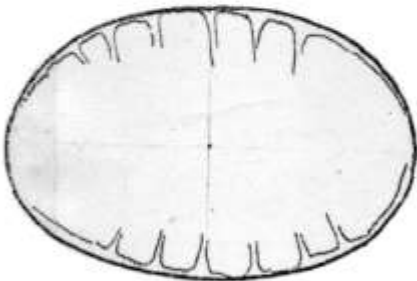
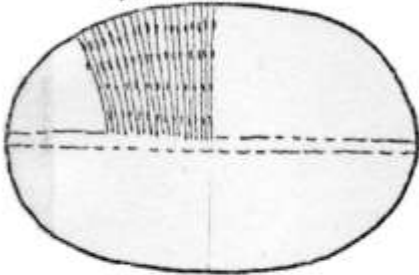
P. AMBIGUA. ✓

10 1/2

710/B BURNFORD ALE - SECT.



27.18.18.



6

1278/B. 18.4.18



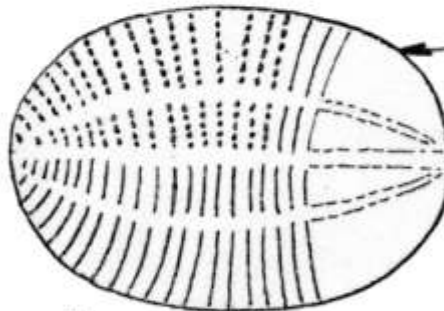
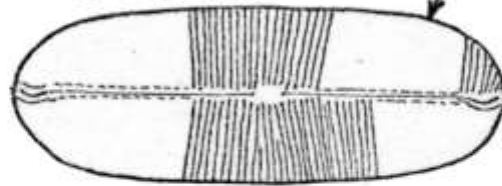
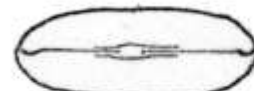
HOUGH, HEATH & NA CREWE
the smallest. Pinn. are gone off.



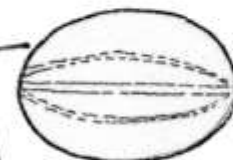
? *Pinnularia minutissima*...
2 spots

16.6.34.

13063/XC LTAY.



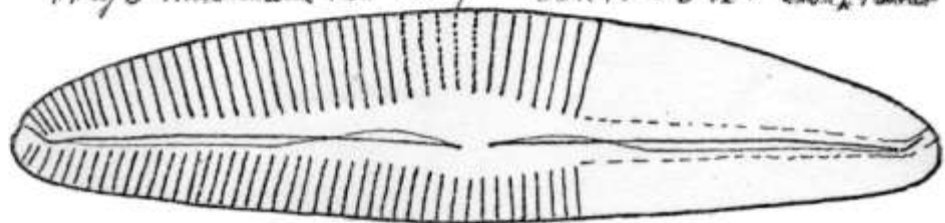
Near *C. flammensis*



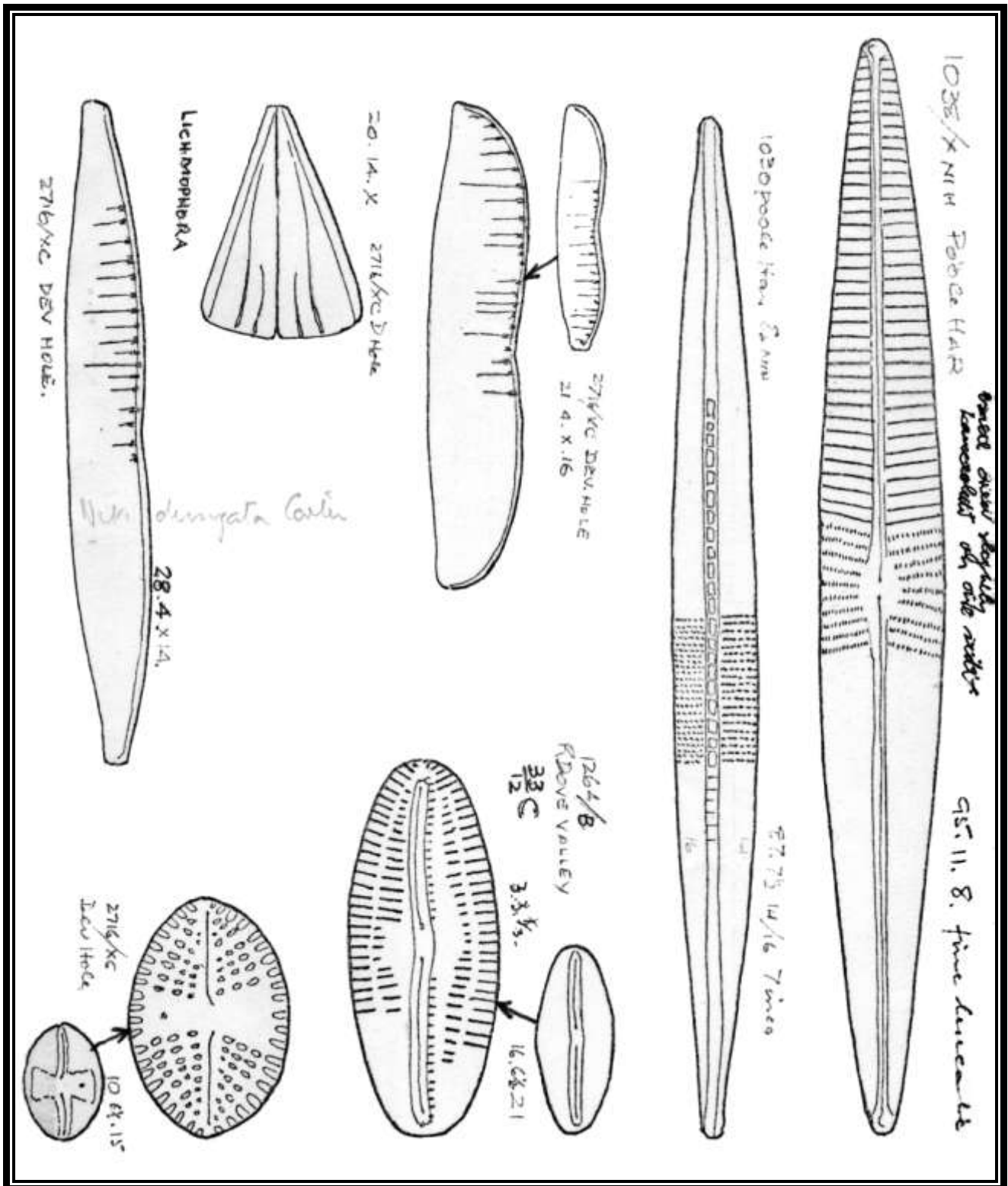
1038/X Hough
Pools 14-
14.10.14

?
C. austriaca
sup H.G.B.

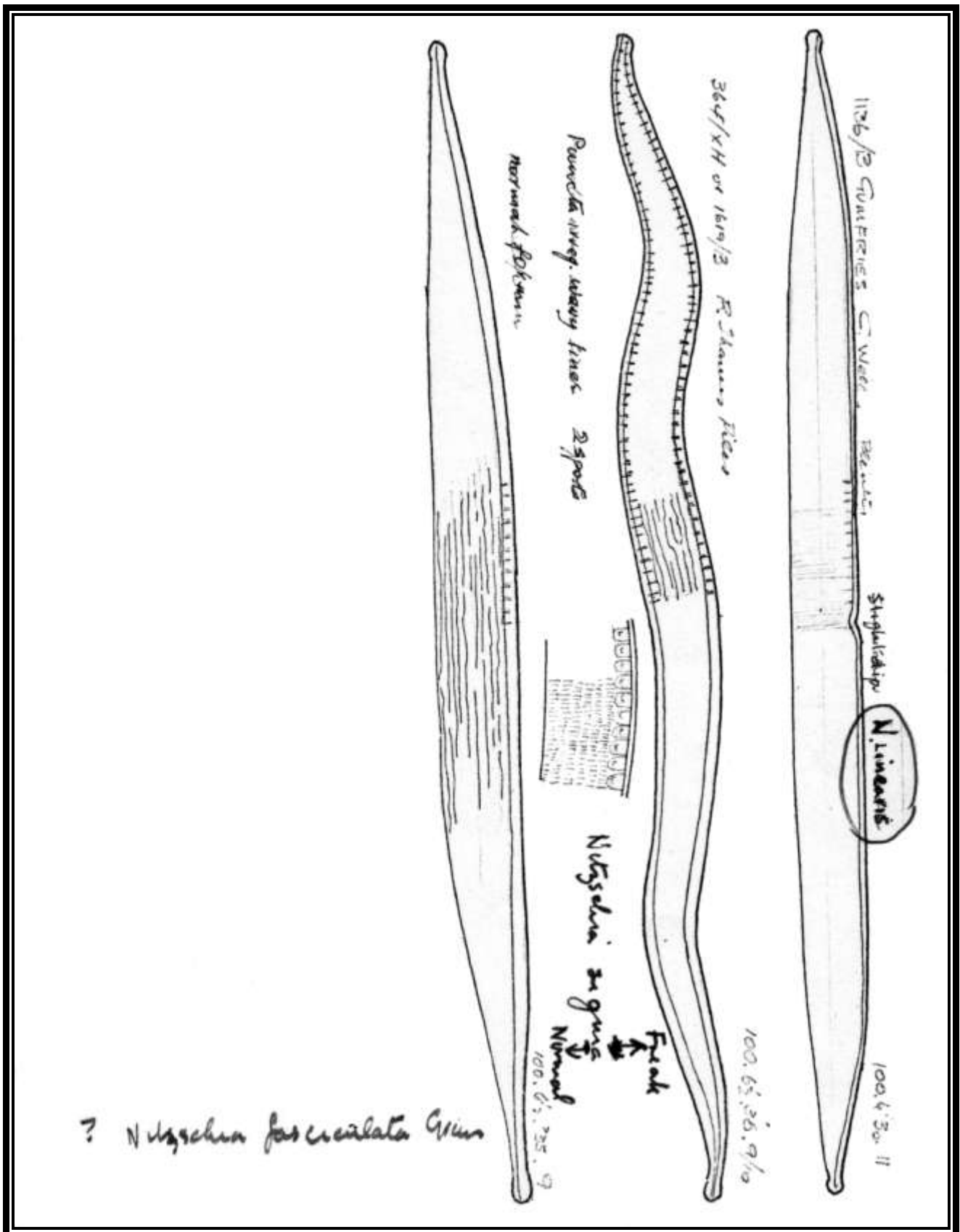
774/B Anachron Ret. Pump 60.14.10 D 12 V. Dine & Pander



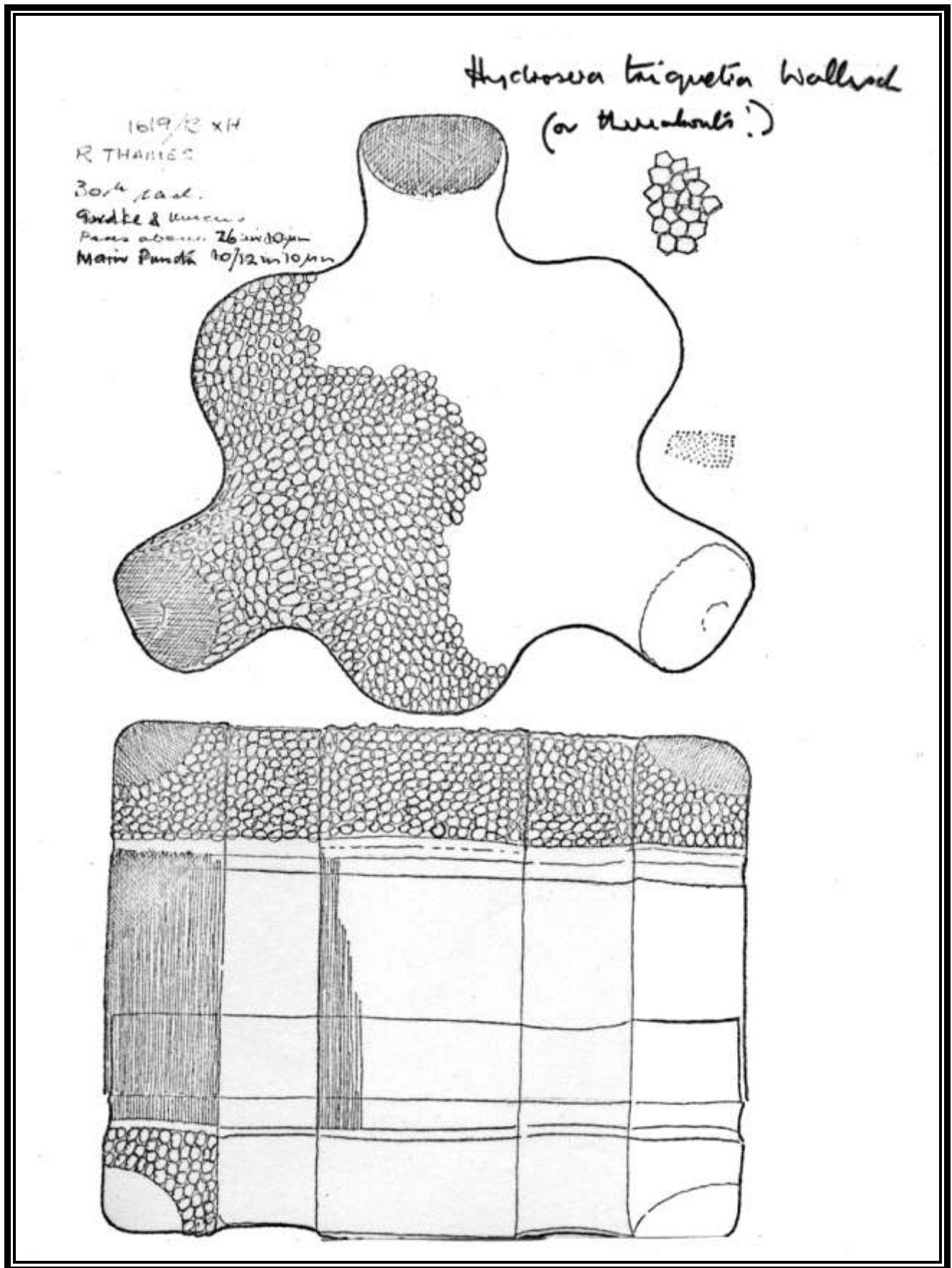
Miscellaneous Plate 309

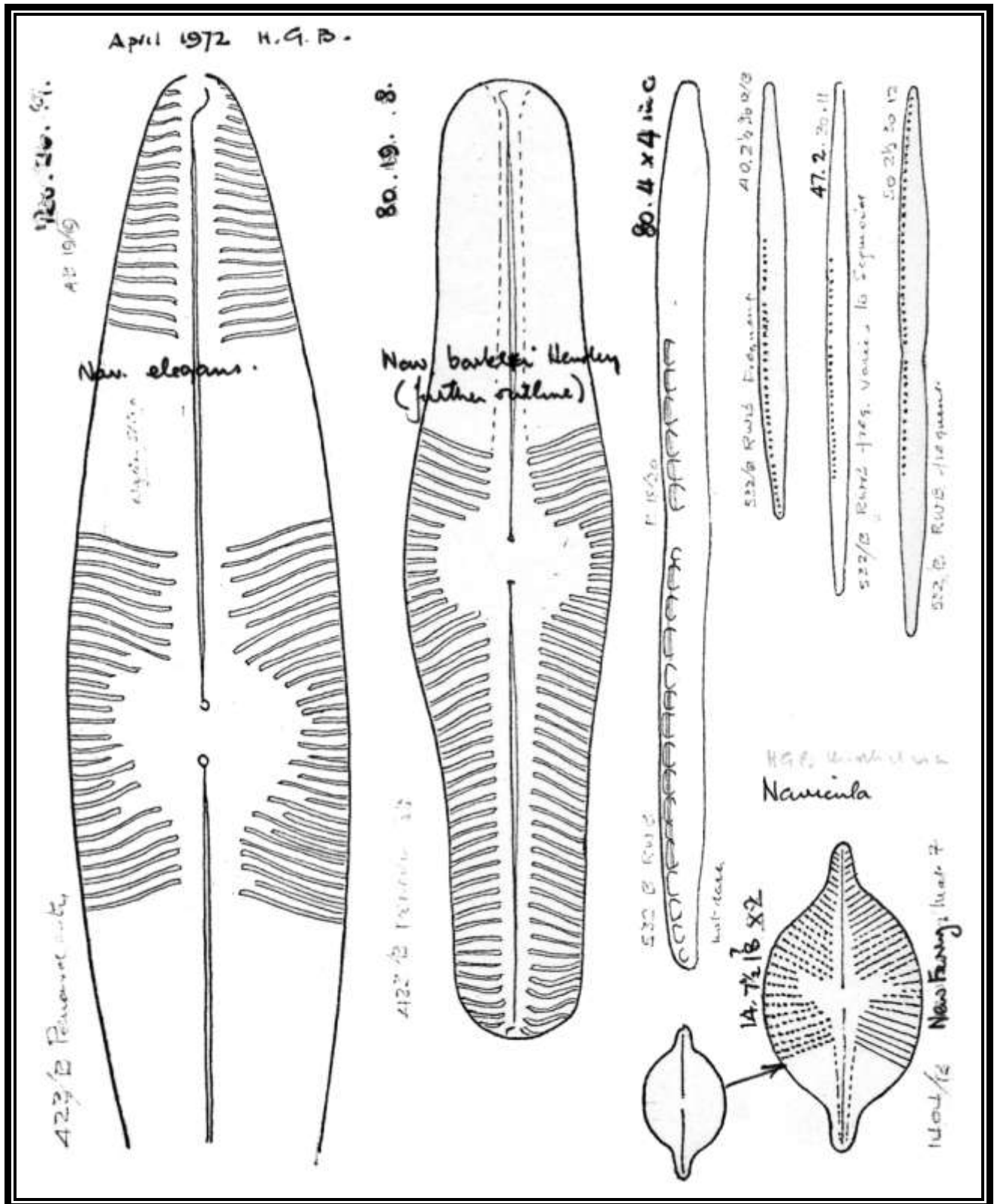


Miscellaneous Plate 310

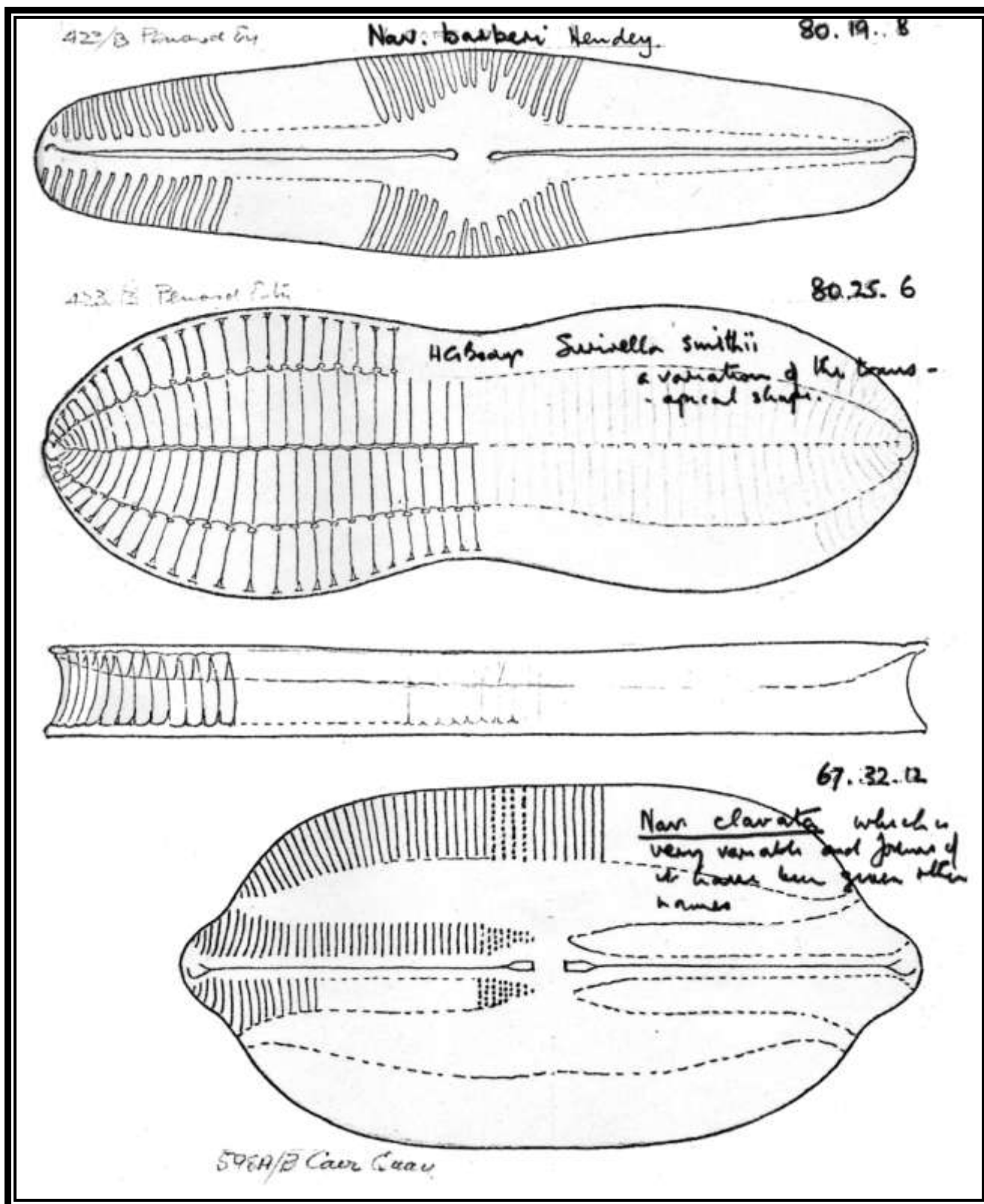


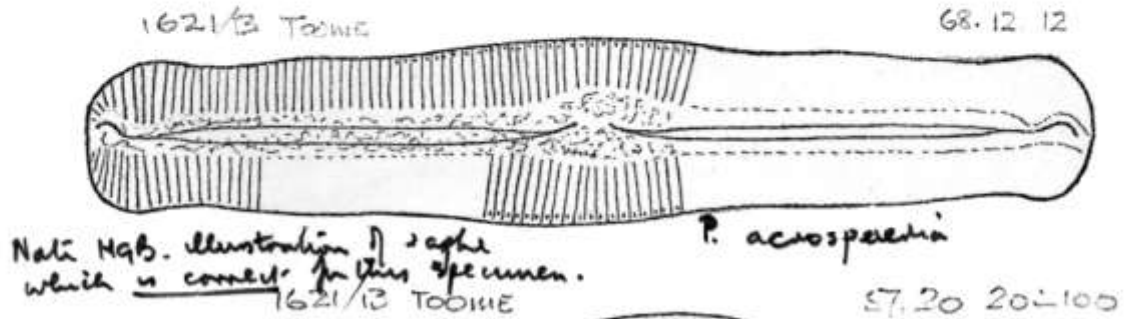
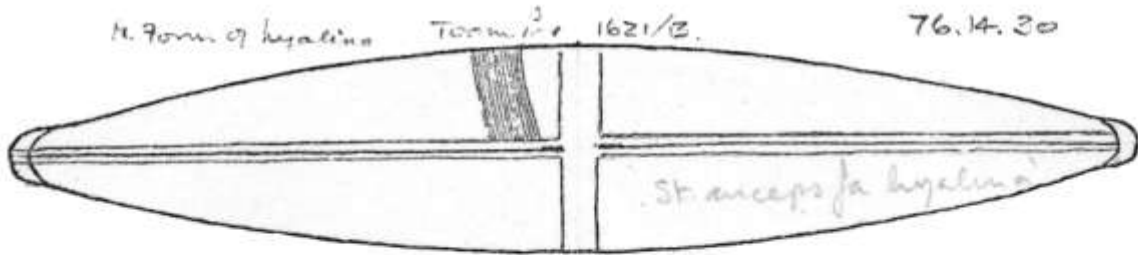
Miscellaneous Plate 311



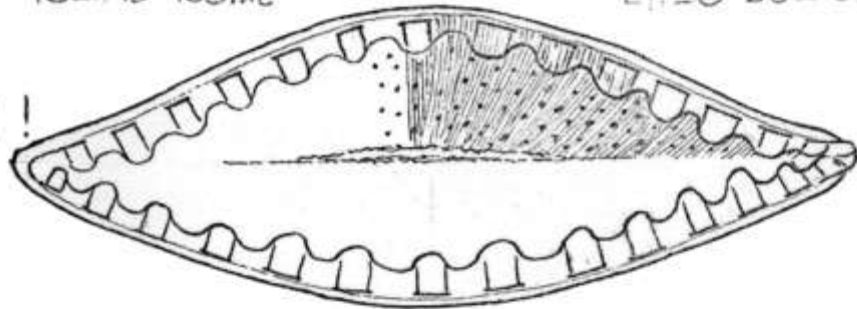


Miscellaneous Plate 312a



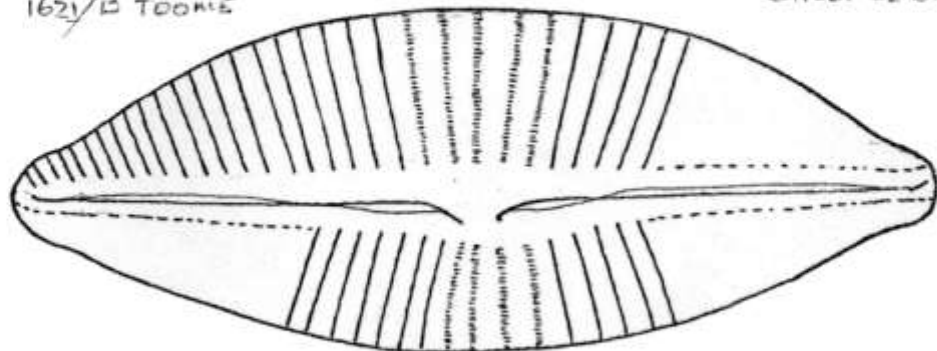


H.G.B. says
Sennella turgida!



1621/B TOOMEY

61.23. 62 WIG CHS

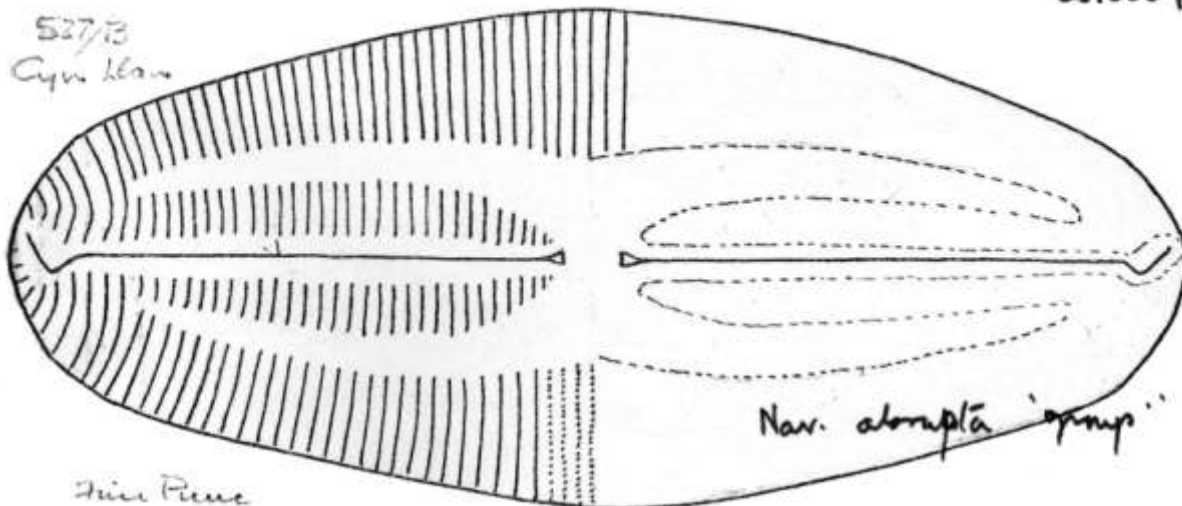


Cymbella schenckii

Miscellaneous Plate 314

80.35.9.

527/13
Cyr. lina

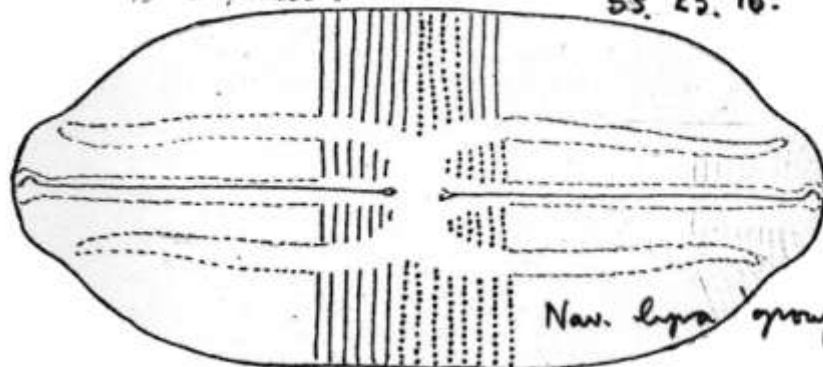


Nav. abrupta 'group'

Thin Piece

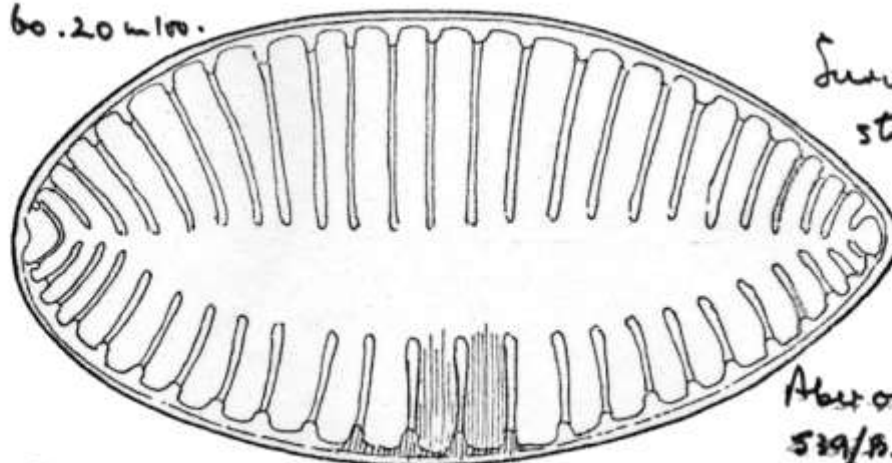
527/13 Cylind.

55.23.10.



Nav. lina 'group'

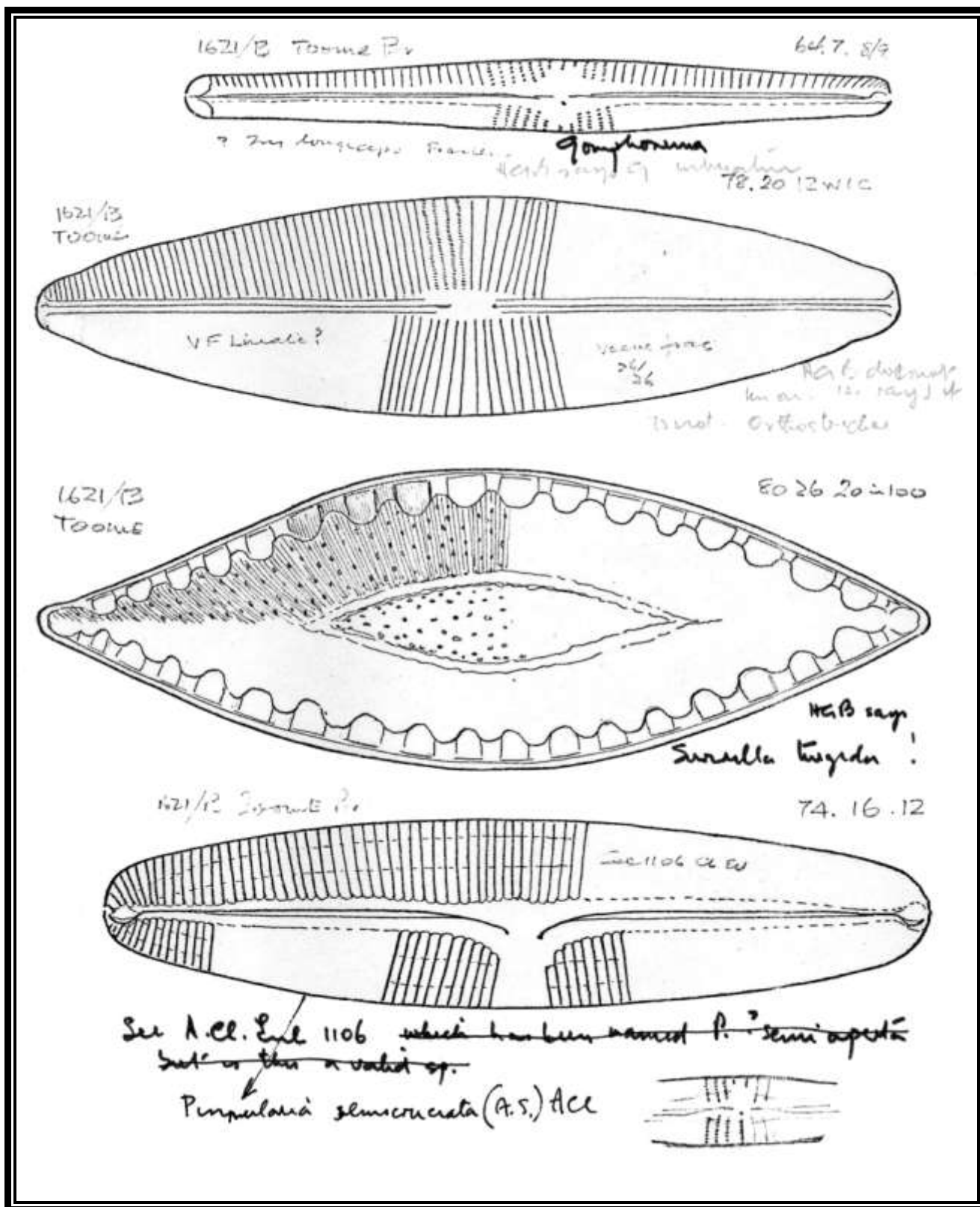
120. 60.20-100.



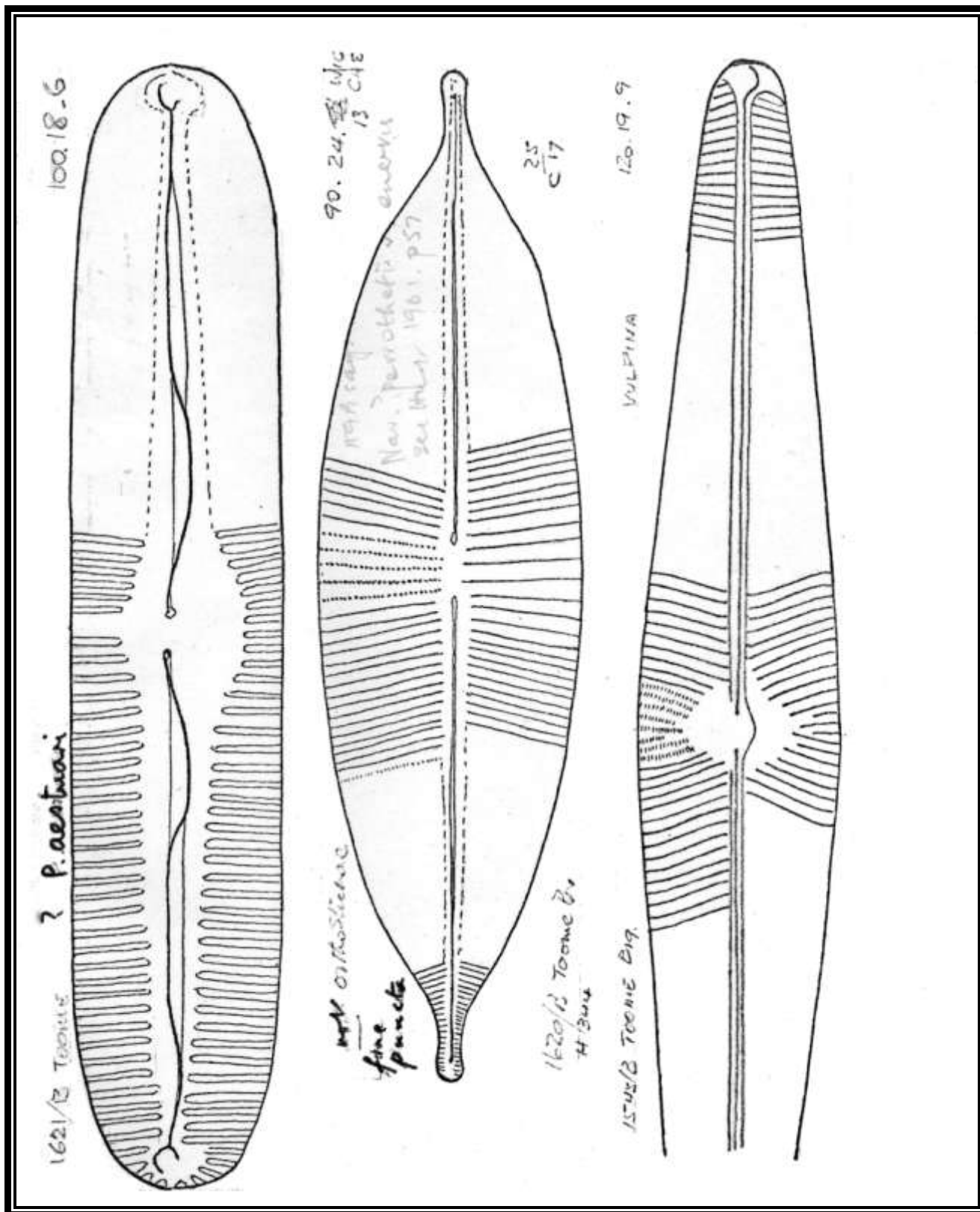
Surirella
strobilata
Turepin

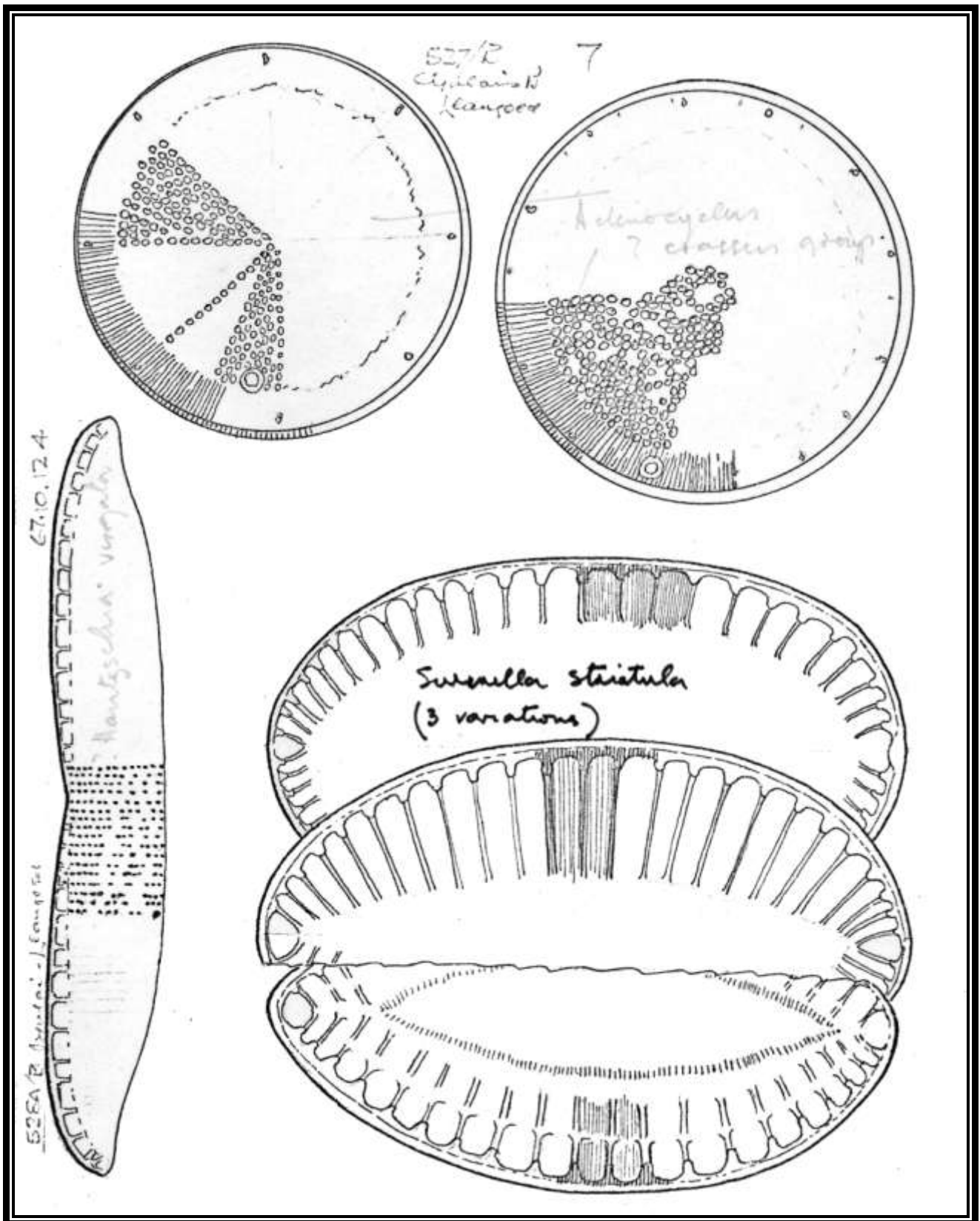
Aberogwen
529/18.

120. 60.20-100.



Miscellaneous Plate 316

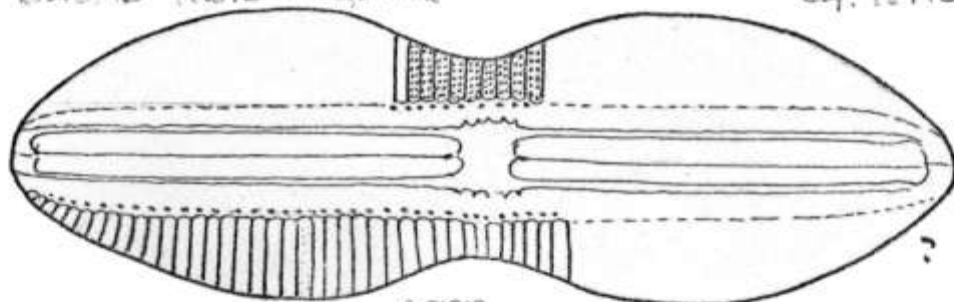




Miscellaneous Plate 318

546/B RWIR Ship Inn

64.18.10



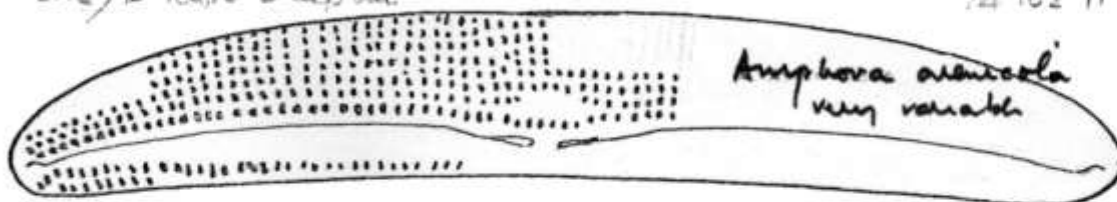
? *Dip. smithii*
forma



Smithii Structure

546/B RWIR Ship Inn

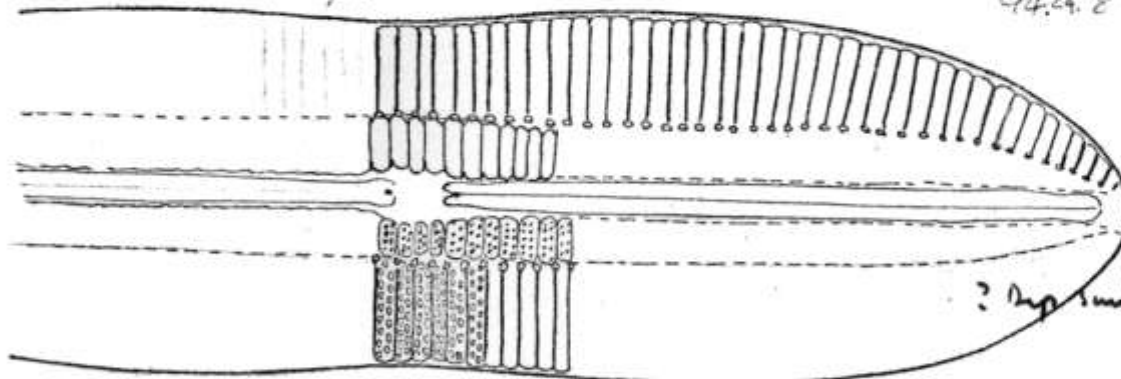
74.10.11



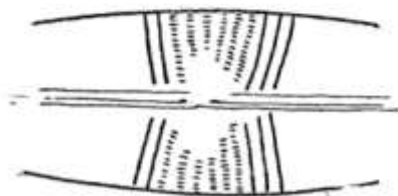
Amphora aruicola
very variable

546/B RWIR Ship Inn

94.29.8



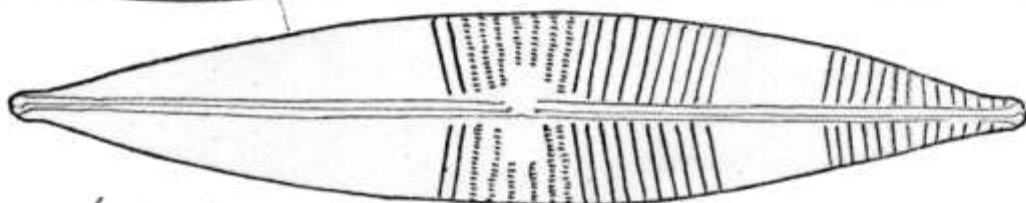
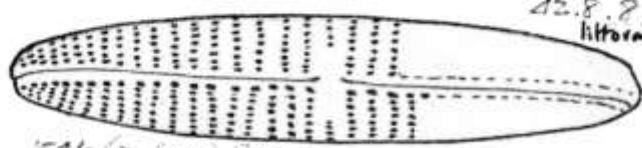
? *Dip. smithii*



42.8.8
littoral margin

546/B RWIR Ship Inn

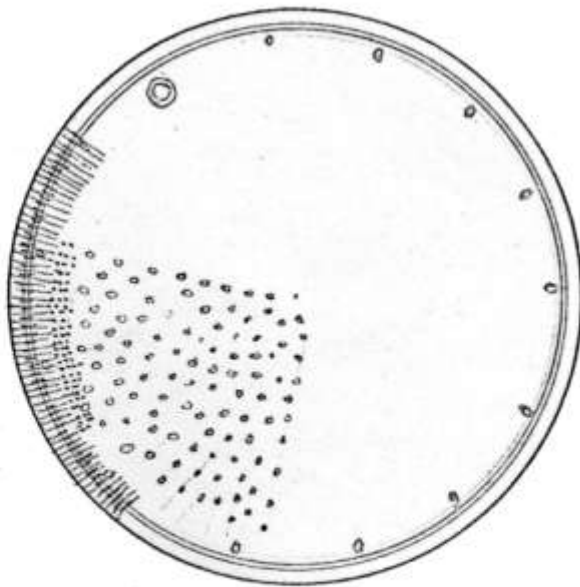
new 18/12.2 acco 5979



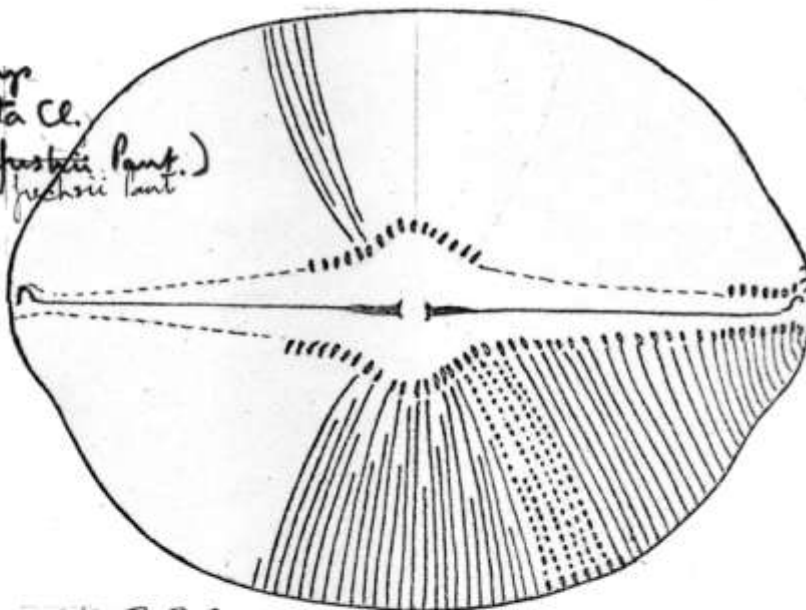
546/B RWIR Ship Inn

line like meniso. *Peregrina* 67.10.10

17/21

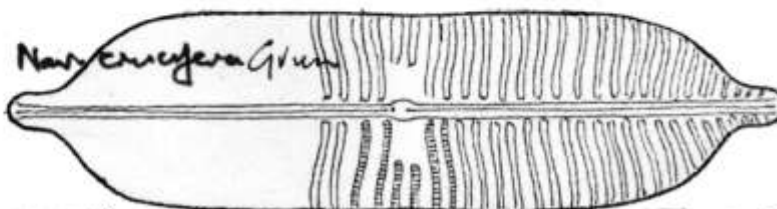


HGB says
Nav. eta Cl.
= (N. *justii* Pant.)
justii Pant.



546/B RUB S. Inn.

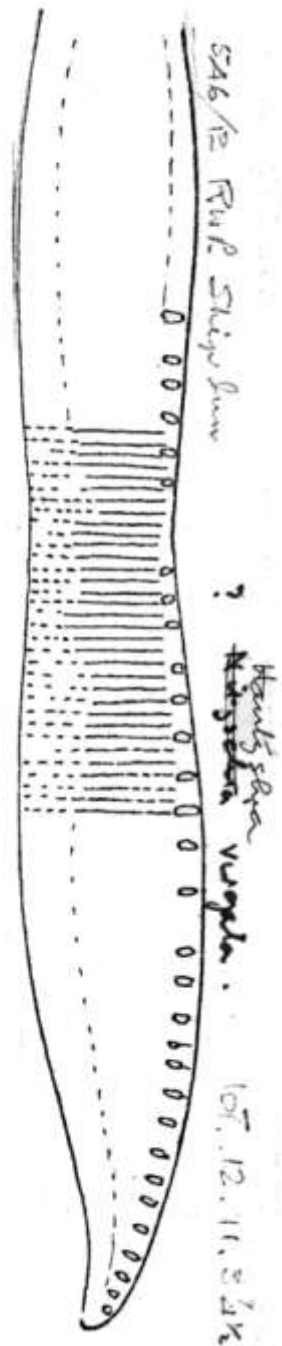
54.40. E



546/B RUB S. Inn

~~Nav. eta Cl. = (N. *justii* Pant.) var. *hale*~~

52.14. E



546/B RUB S. Inn

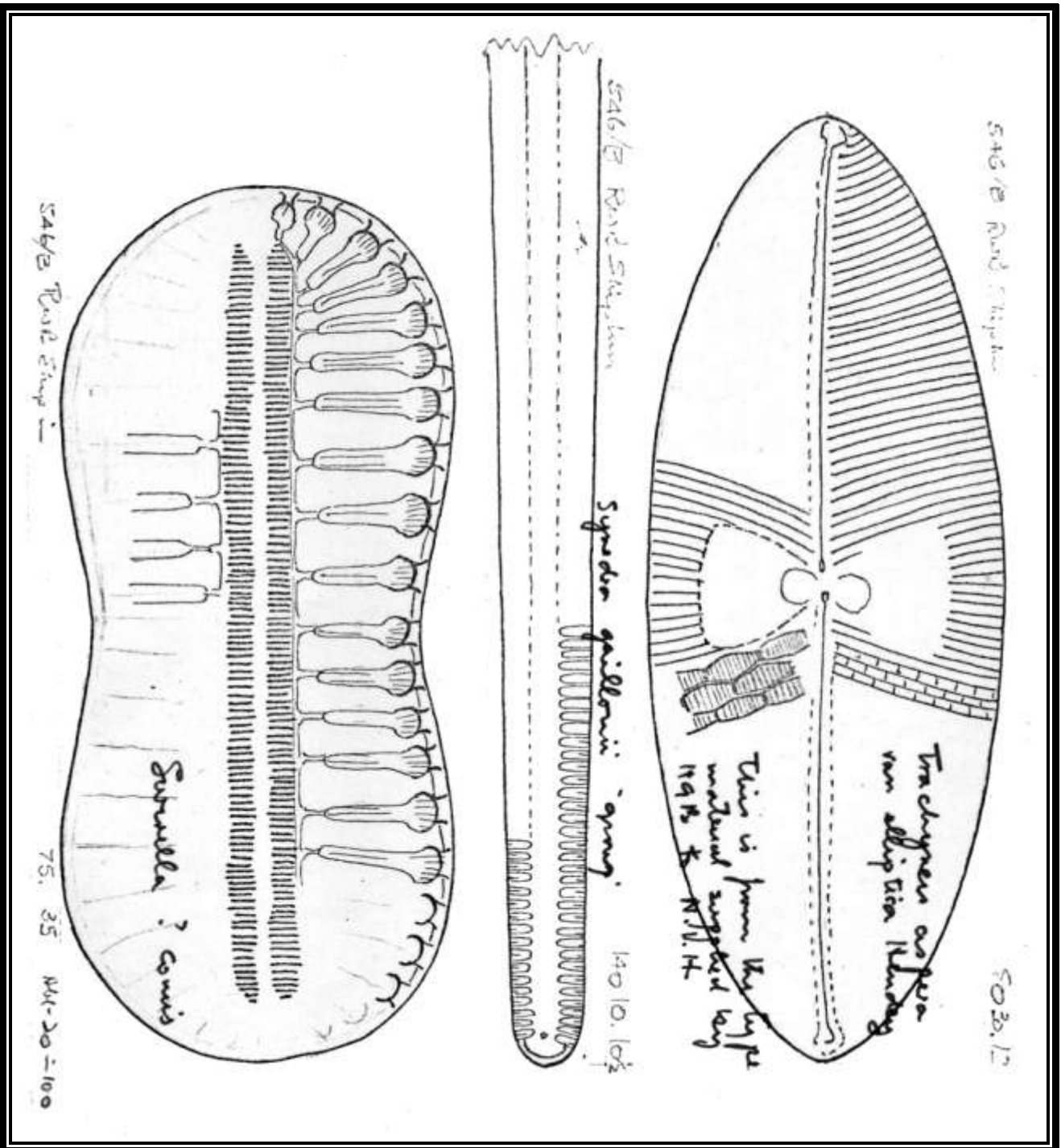
?

Nav. eta
justii Pant.

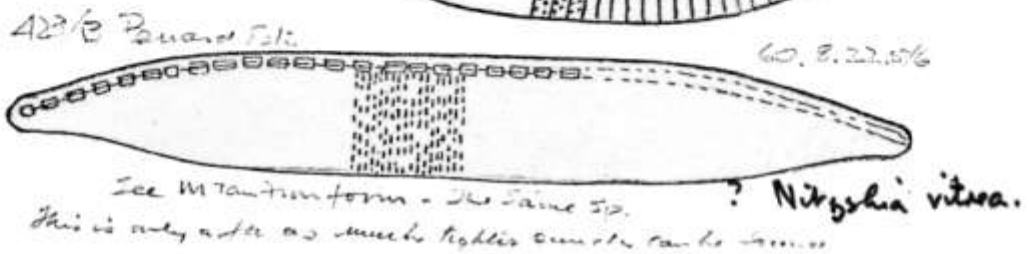
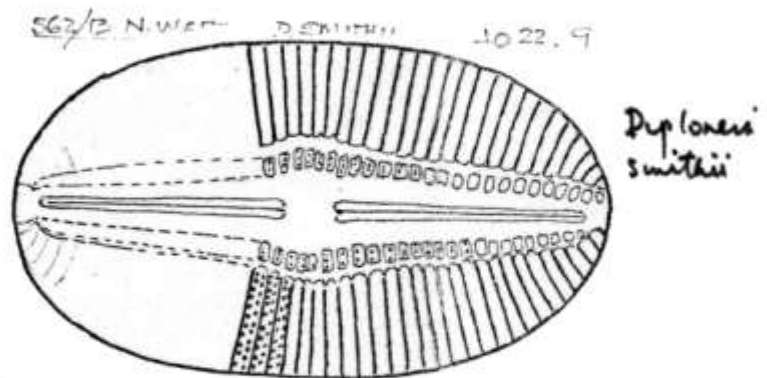
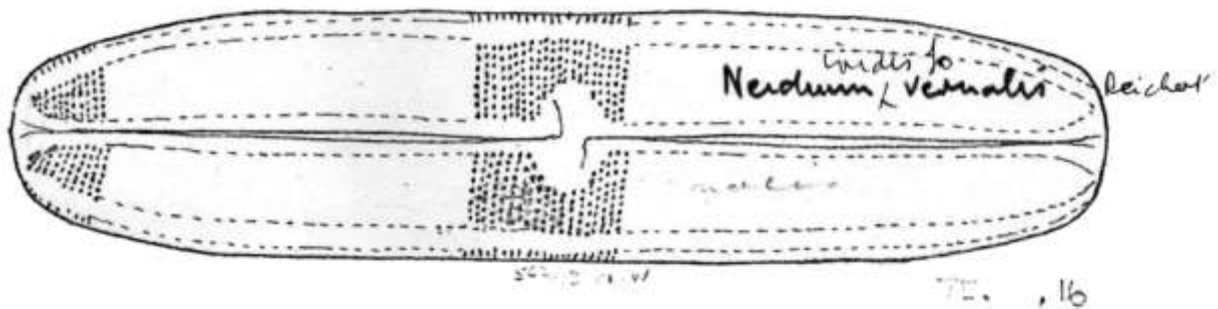
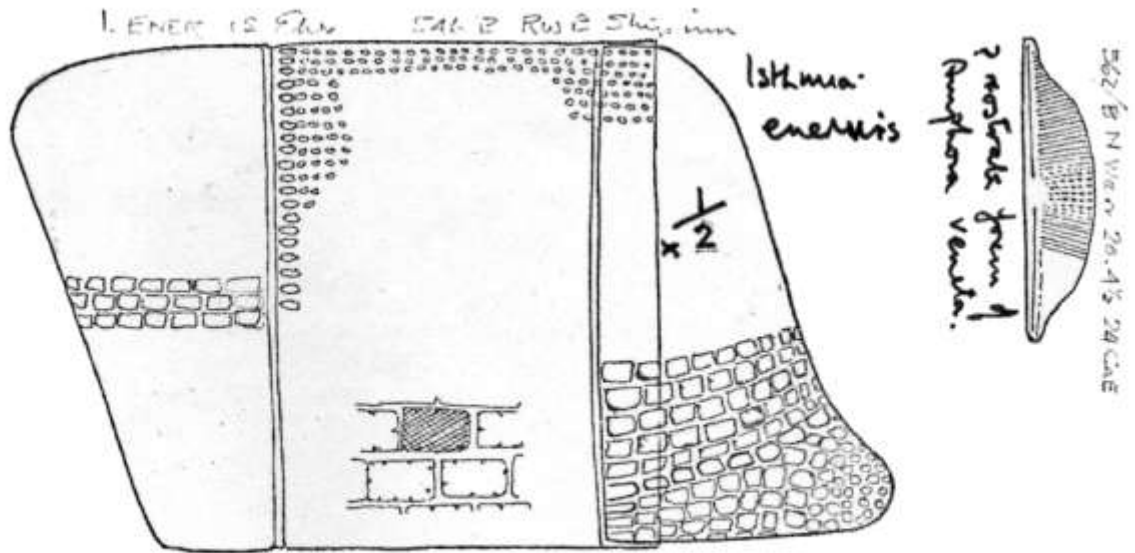
var. hale

107.12.11. E

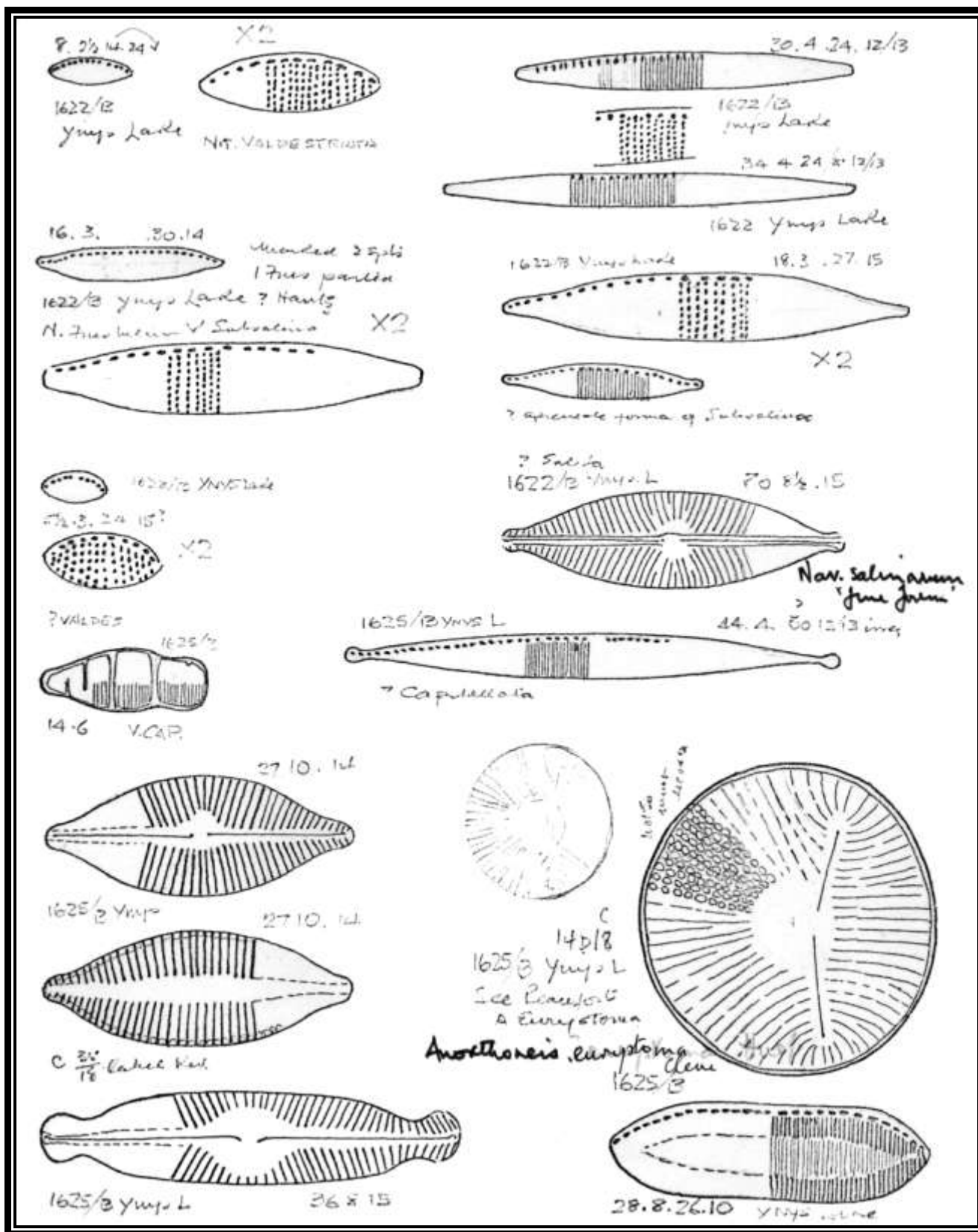
Miscellaneous Plate 320



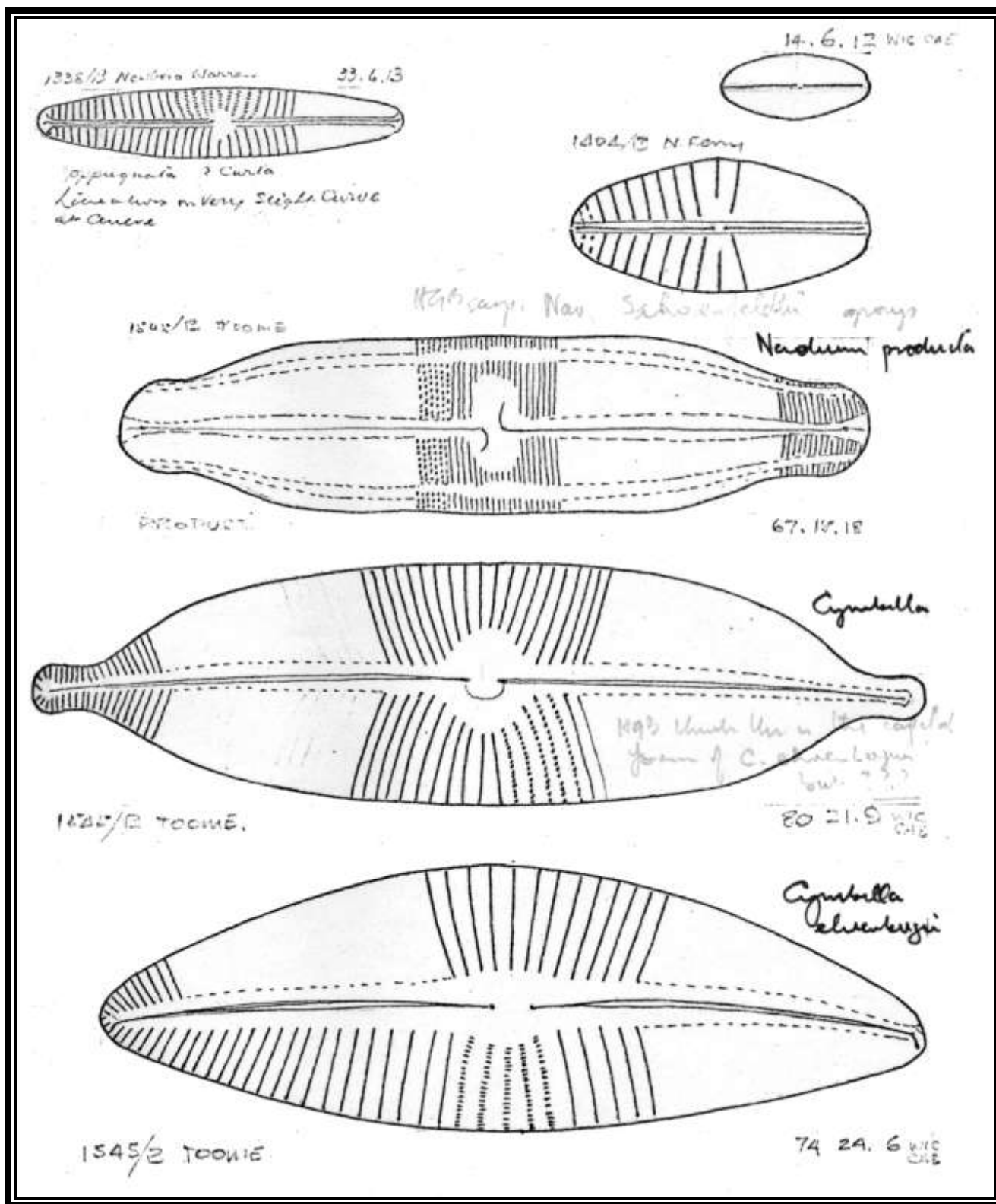
Miscellaneous Plate 321

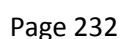


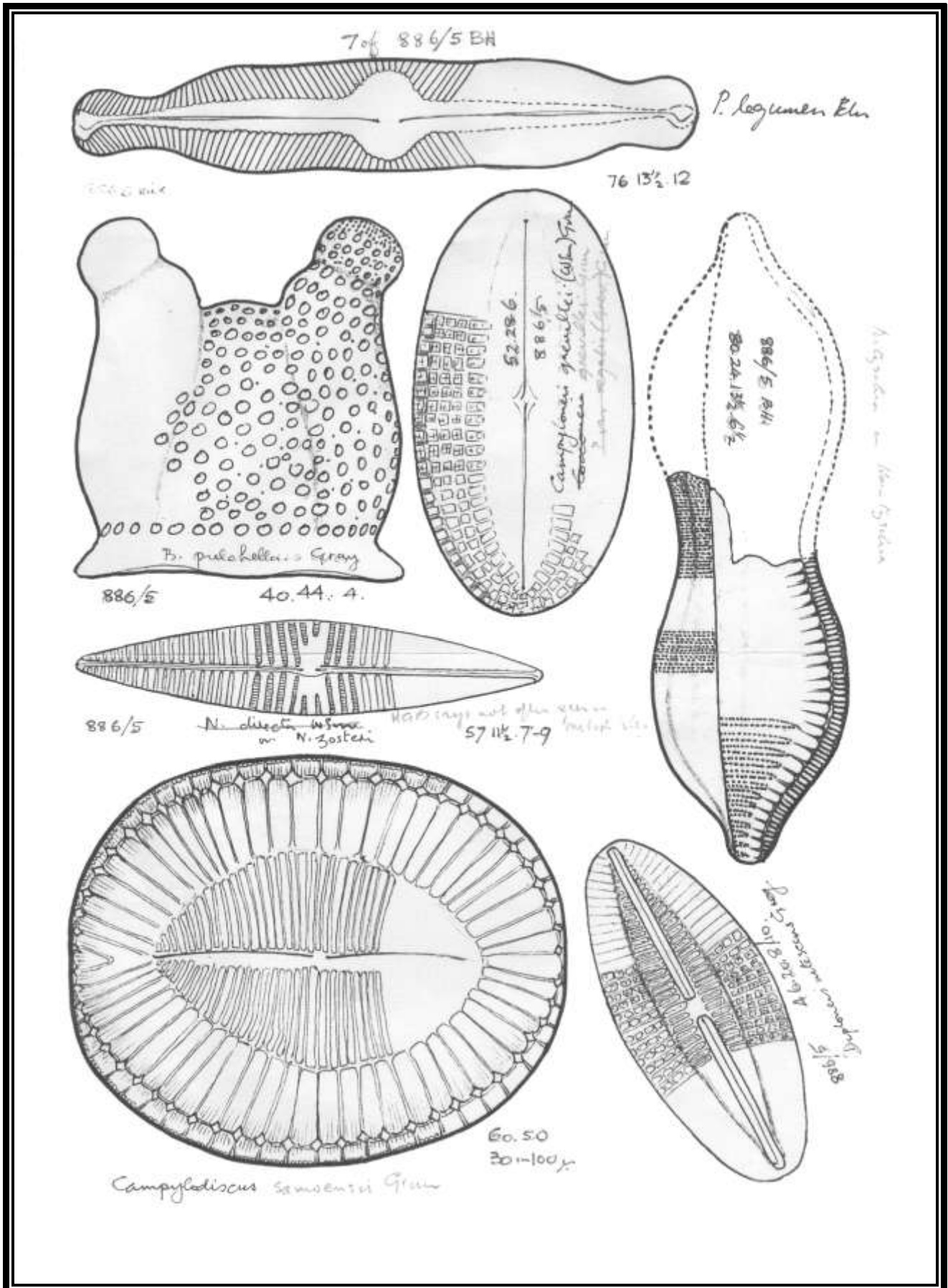
Miscellaneous Plate 322

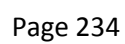


Miscellaneous Plate 323

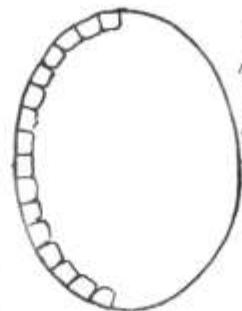
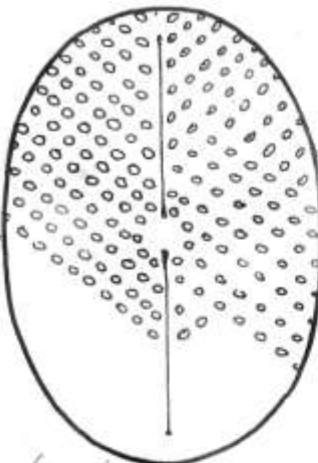
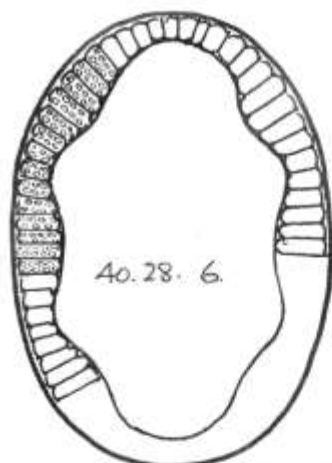






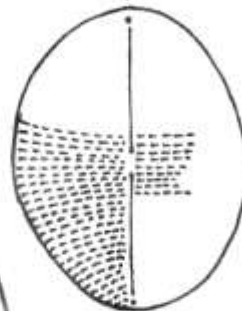
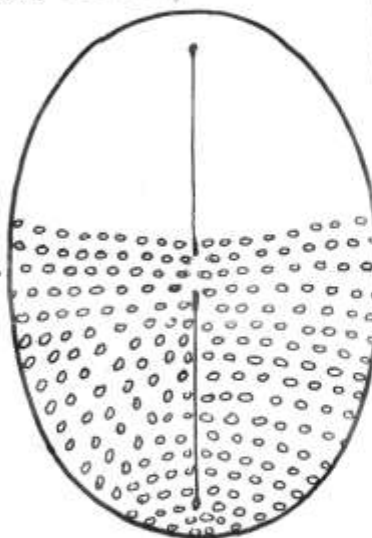
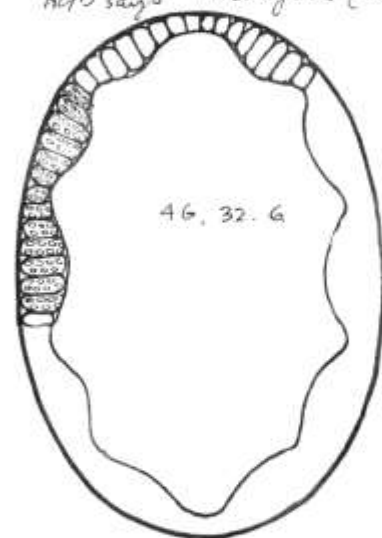


886/5 SHEET

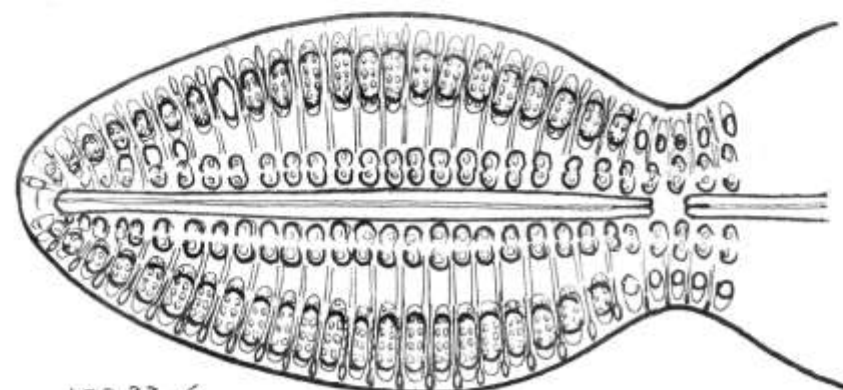


HG 13 say 1
Mastogloia
ovata var
intermedia
Pierg.
(Det. Pierg.
1891/15)

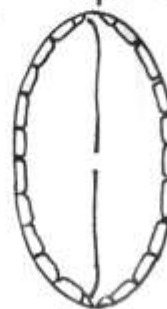
HG 13 say 1 Mastogloia imbricata (author)



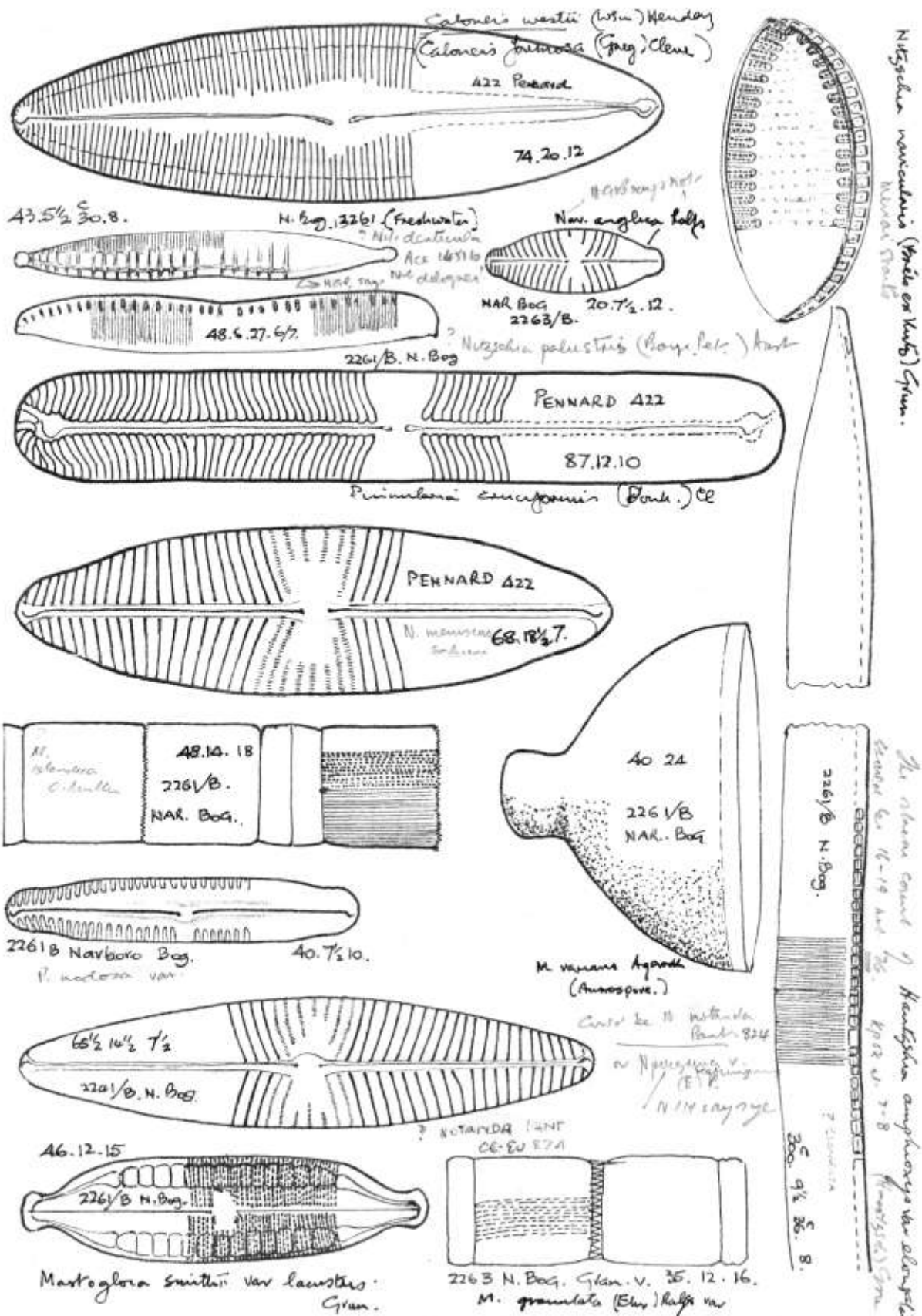
HG 13. Say 1
Mastogloia
? barbotensis
(Grev) Ch.
See also in
Pierg.
fig. 891

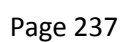


Diploneis exilis var.

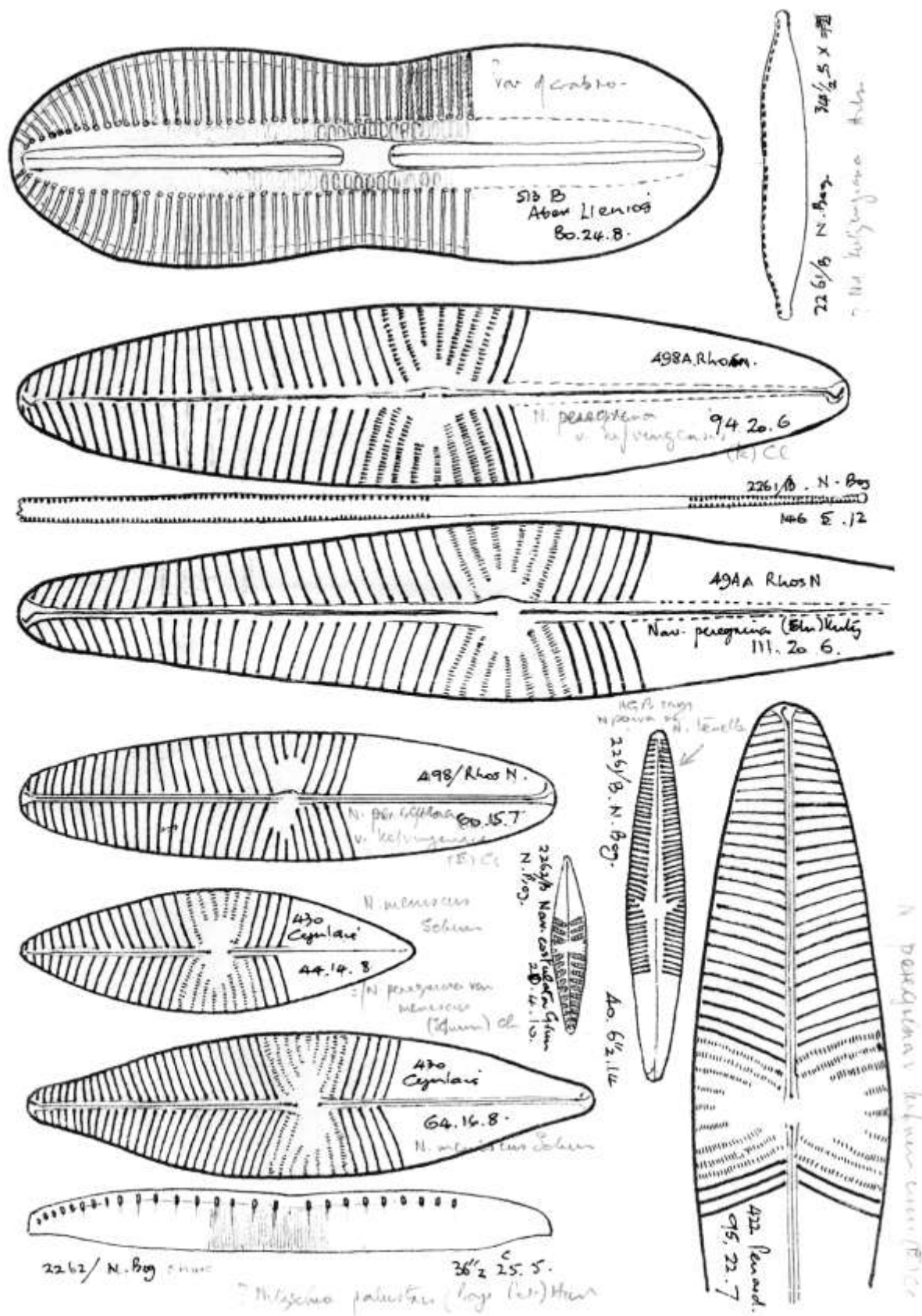


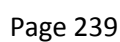
Miscellaneous Plate 337



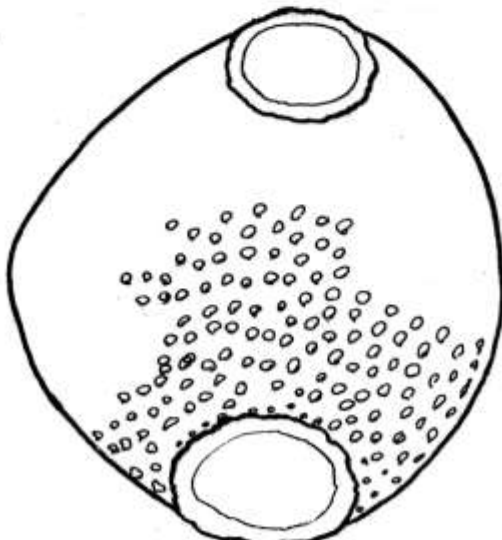
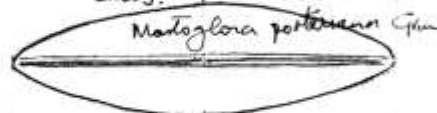
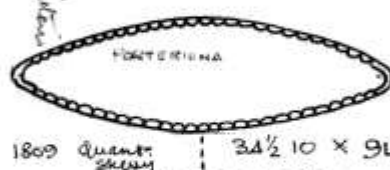
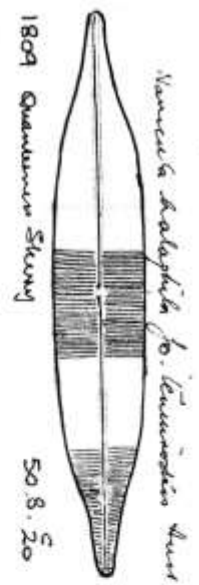
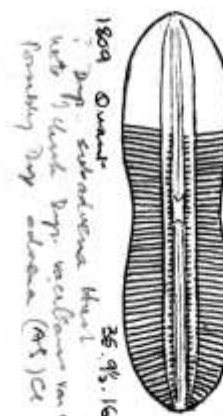
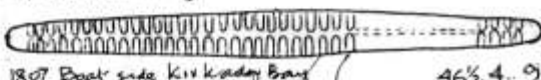
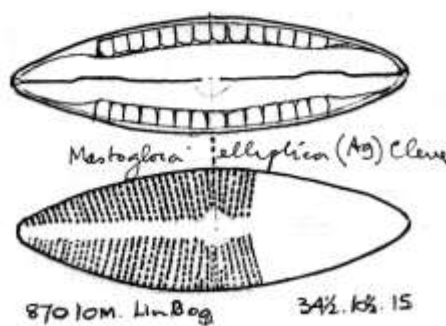
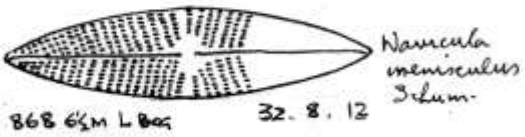
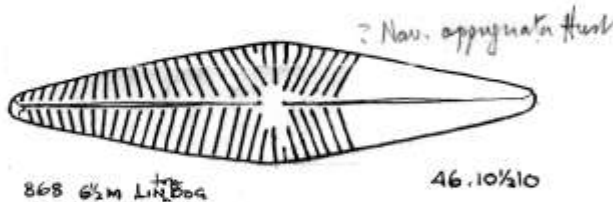
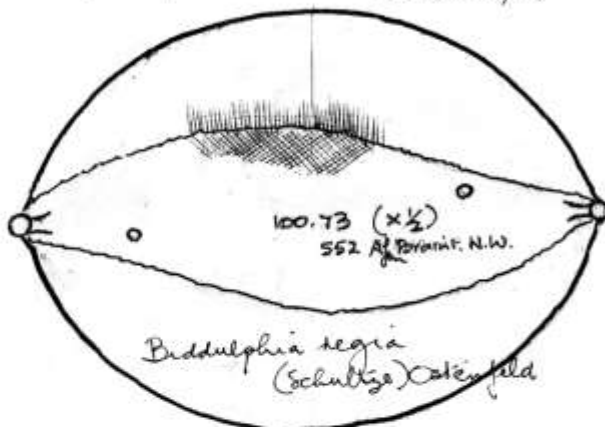
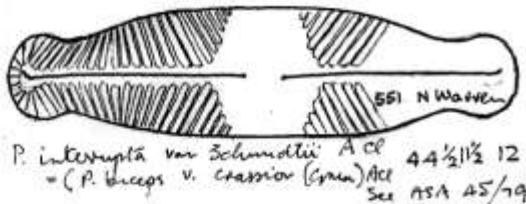


Miscellaneous Plate 339

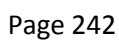




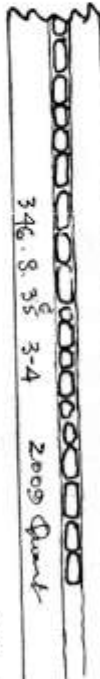




W.C. says see Newbotayl for K. 1809. p. 203 N. Warren



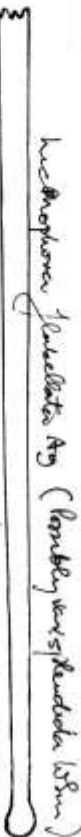
Parabry Nitzschia wacandii Grun but what does Nitzschia wacandii Grun look like.



346. 8. 35 3-4 2009 Grun

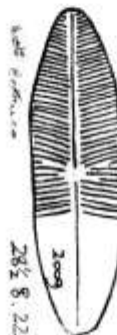


160. 9. 30 2009 Grun

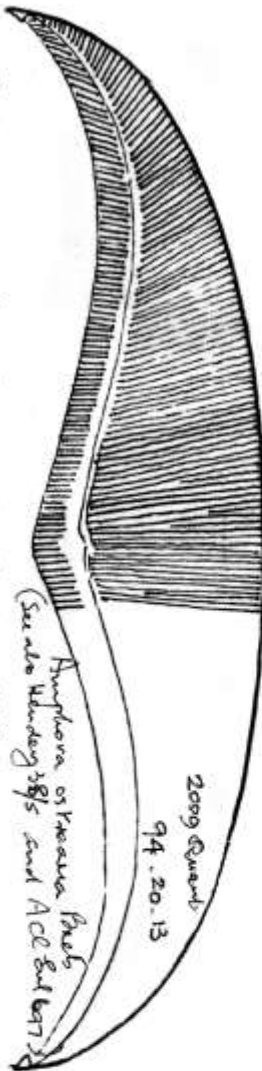


Lucinophora fasciata Ag (Parabry Nitzschia 15m)

Also East plate 28 9. 30.



2009 28 8. 22

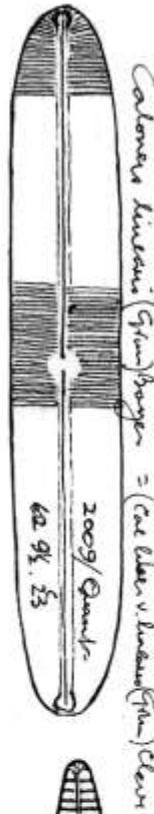


2009 Grun 94. 20. 13



42. 10. 15

Amphioxys 2009



2009 Grun 62. 9. 33

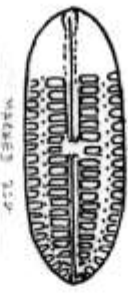
Caloneis lineata (Grun) Boyer = (*Caloneis lineata* (Grun) Cleve)

Amphioxys or *Neosira* Rely (See also Hantzsch 1885 and ACE East 1872)



2009 Grun 73 10 10

Nitzschia (105m) Rely

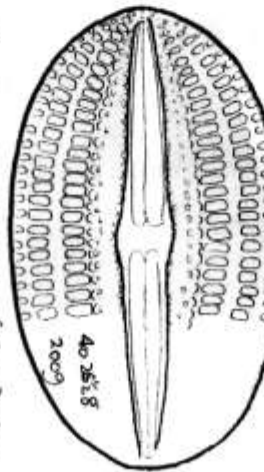


2009 12. 2



2009 Grun 55. 19. 8. 8.

Nitzschia punctata 103m.

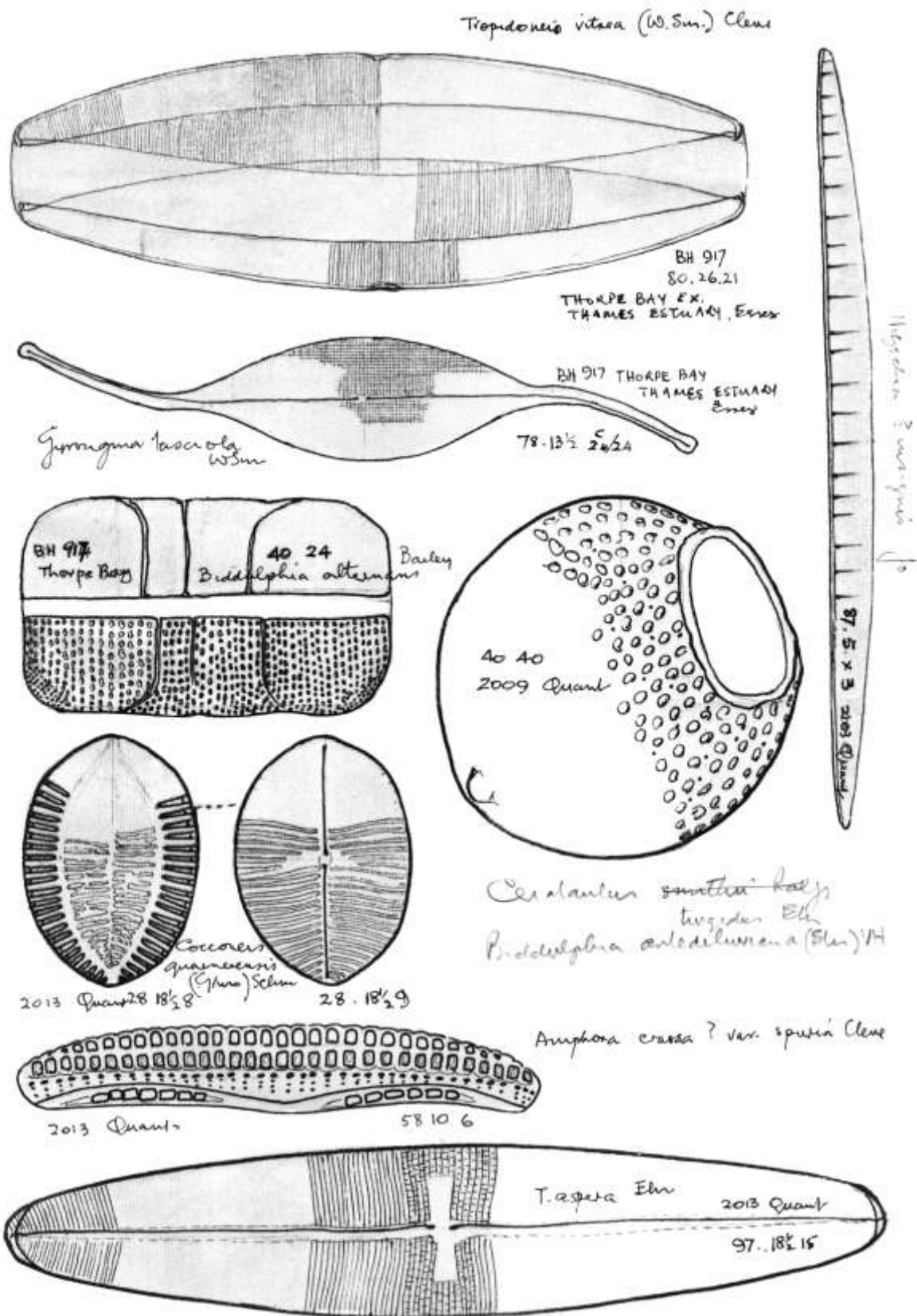


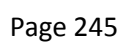
40 28 8 2009

Amphioxys not *Amphioxys* (Grun) Cleve

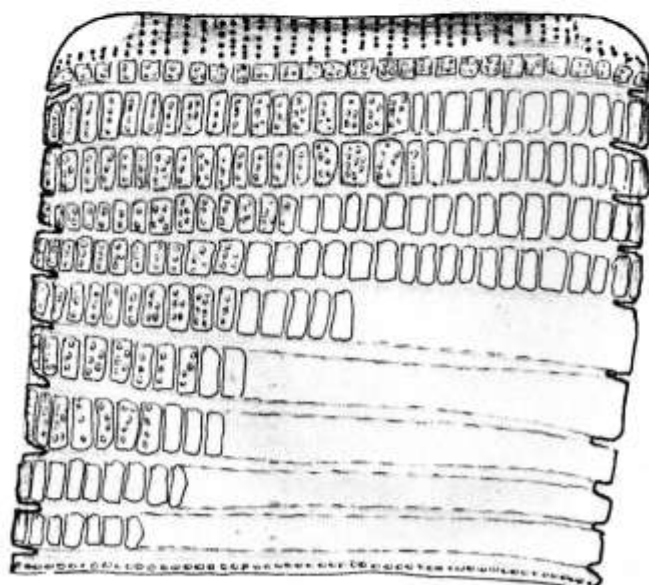
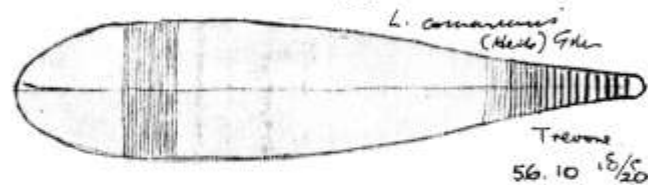
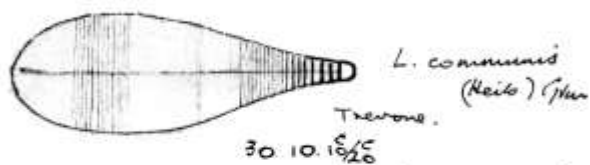
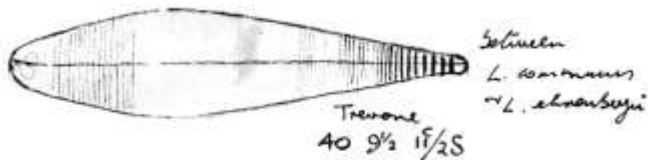
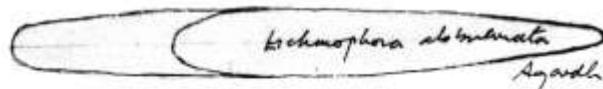
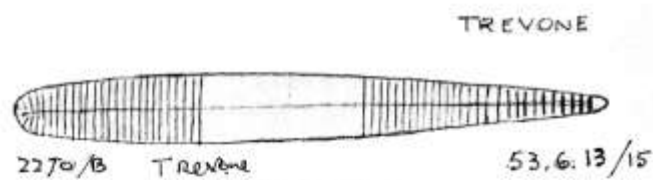
2009 Grun 24. 8. 10
See Barbour 1909 Plate 9/24
Diploneis agnata (H. S.) Grun

Miscellaneous Plate 346



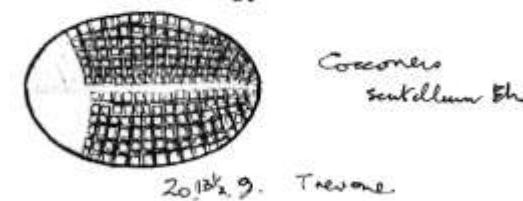
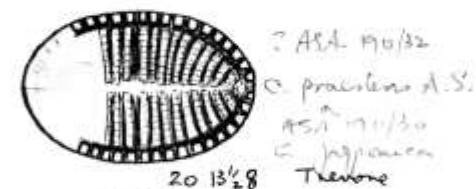
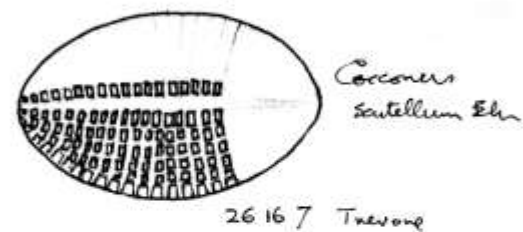
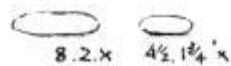
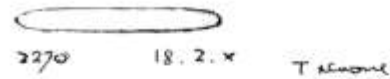
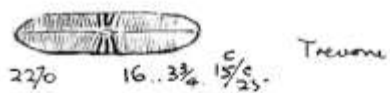


Miscellaneous Plate 348



Rhabdonema acutatum Kütz

? *Navicula haemata* Grun
Lindores 18th
century Hb



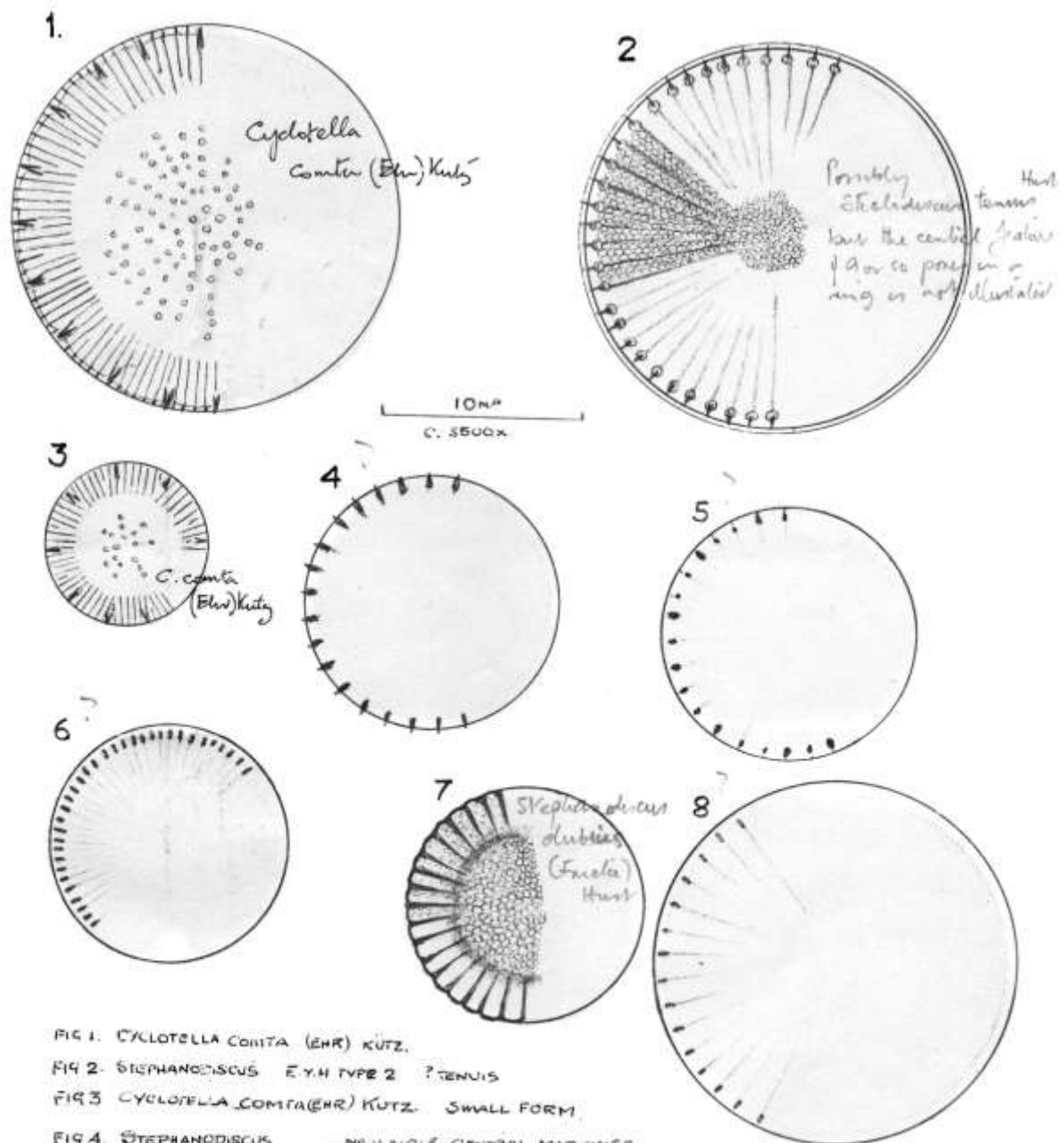


FIG 1. CYCLOTELLA COMITA (EHR) KÜTZ.

FIG 2. STEPHANODISCUS E.Y.H TYPE 2 ? TENUIS

FIG 3. CYCLOTELLA COMITA (EHR) KÜTZ. SMALL FORM.

FIG 4. STEPHANODISCUS NO VISIBLE CENTRAL MARKINGS

FIG 5. E.Y.H TYPE 4. SOME VERY FAINT RADIAL PATTERN BUT UNABLE TO RESOLVE.

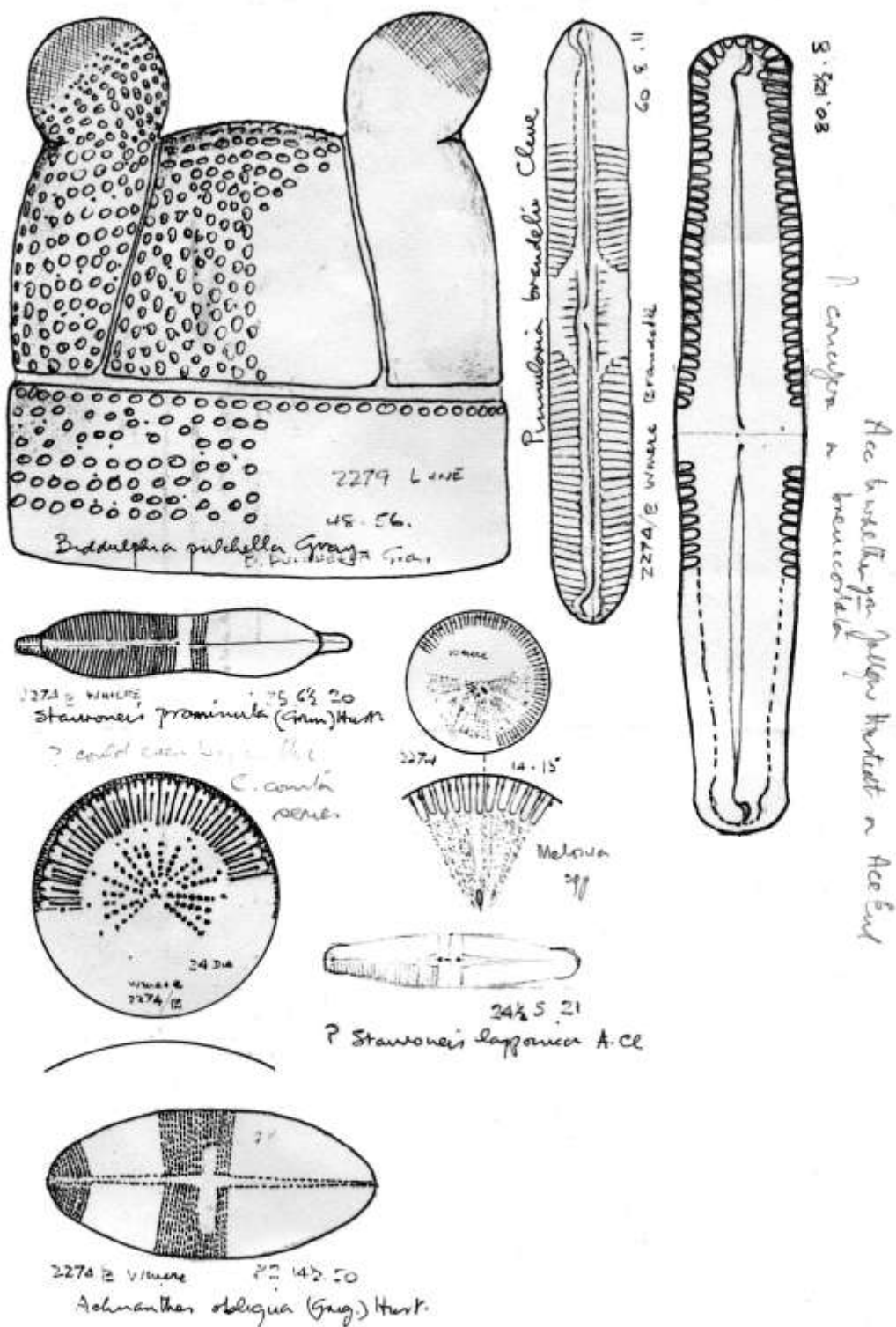
FIG 6. E.Y.H TYPE 7. CF CYCLOTELLA IRREGULARIS GROWN IN HUST 1930

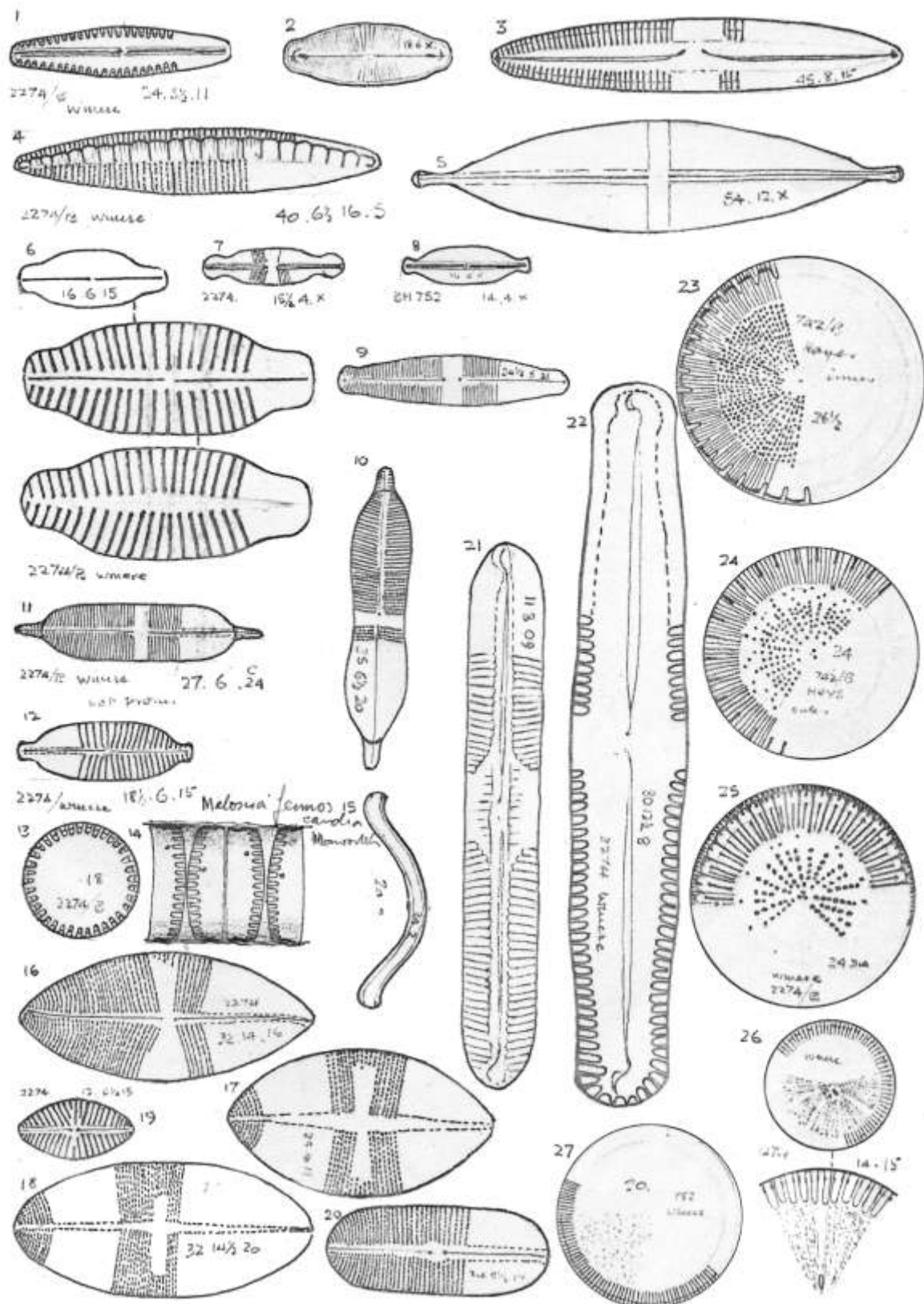
FIG 7. ?

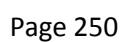
FIG 8. ?

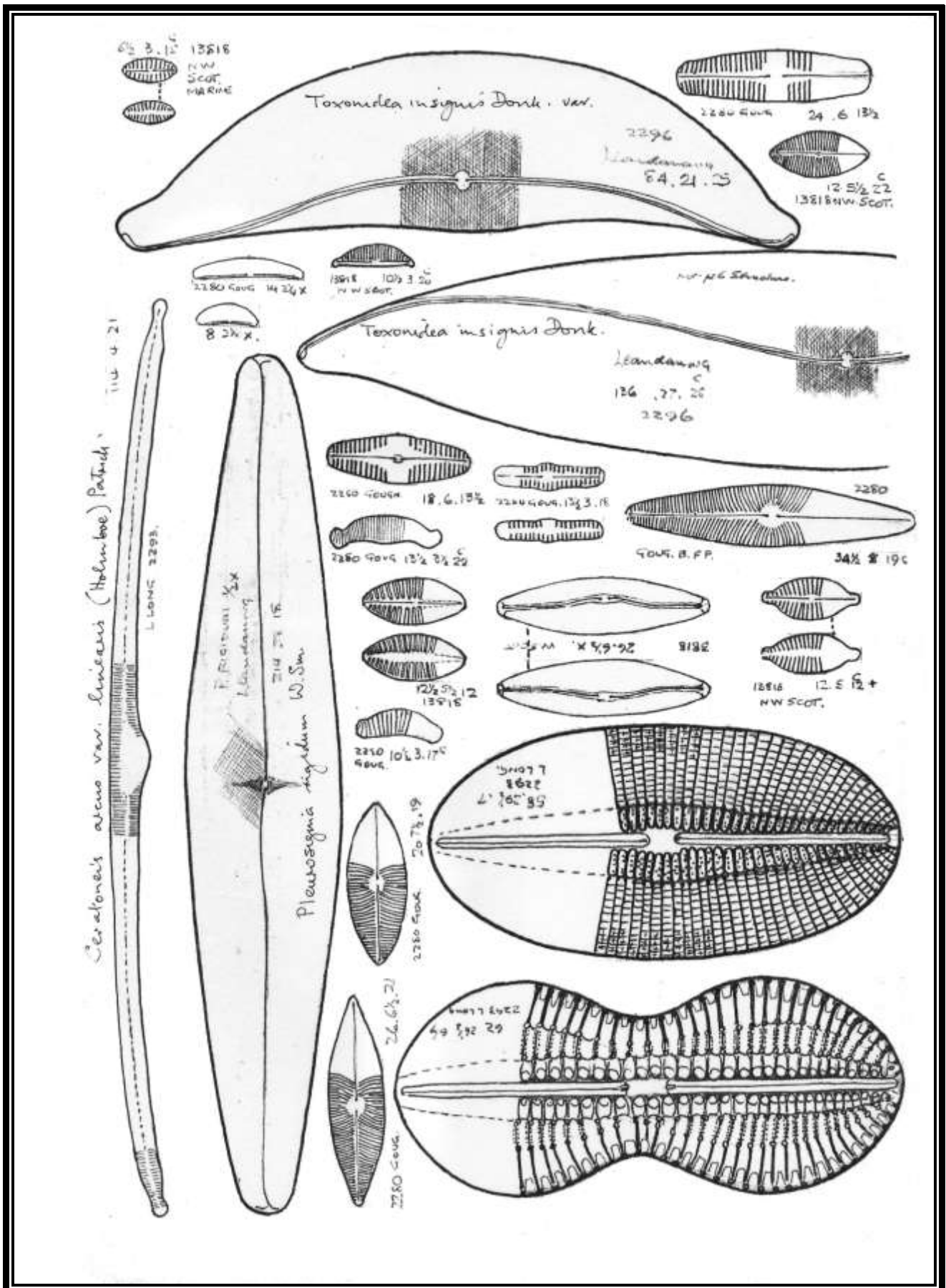
VERY FAINT RADIAL MARKS
UNABLE TO RESOLVE.

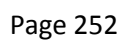
Miscellaneous Plate 351

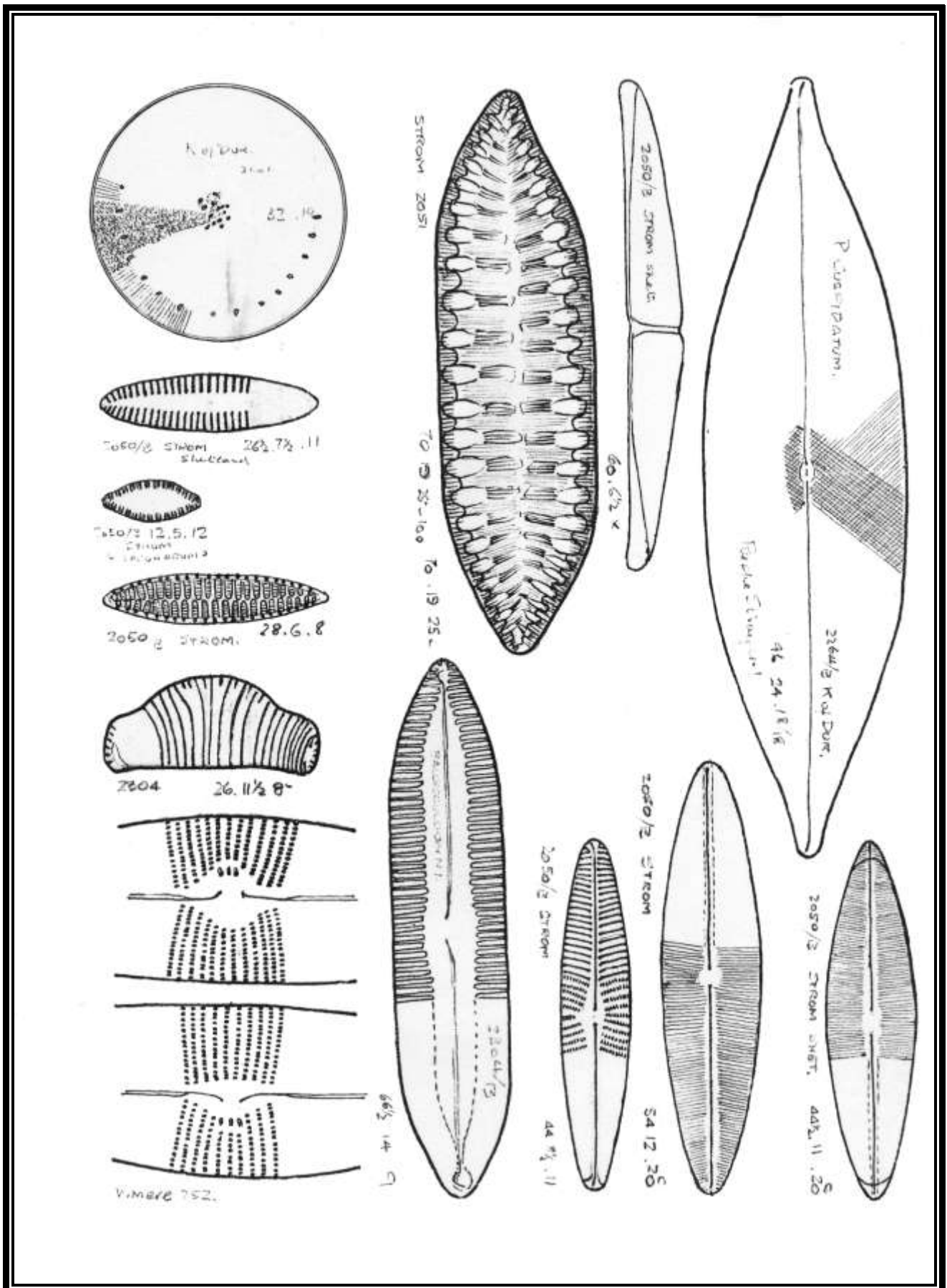




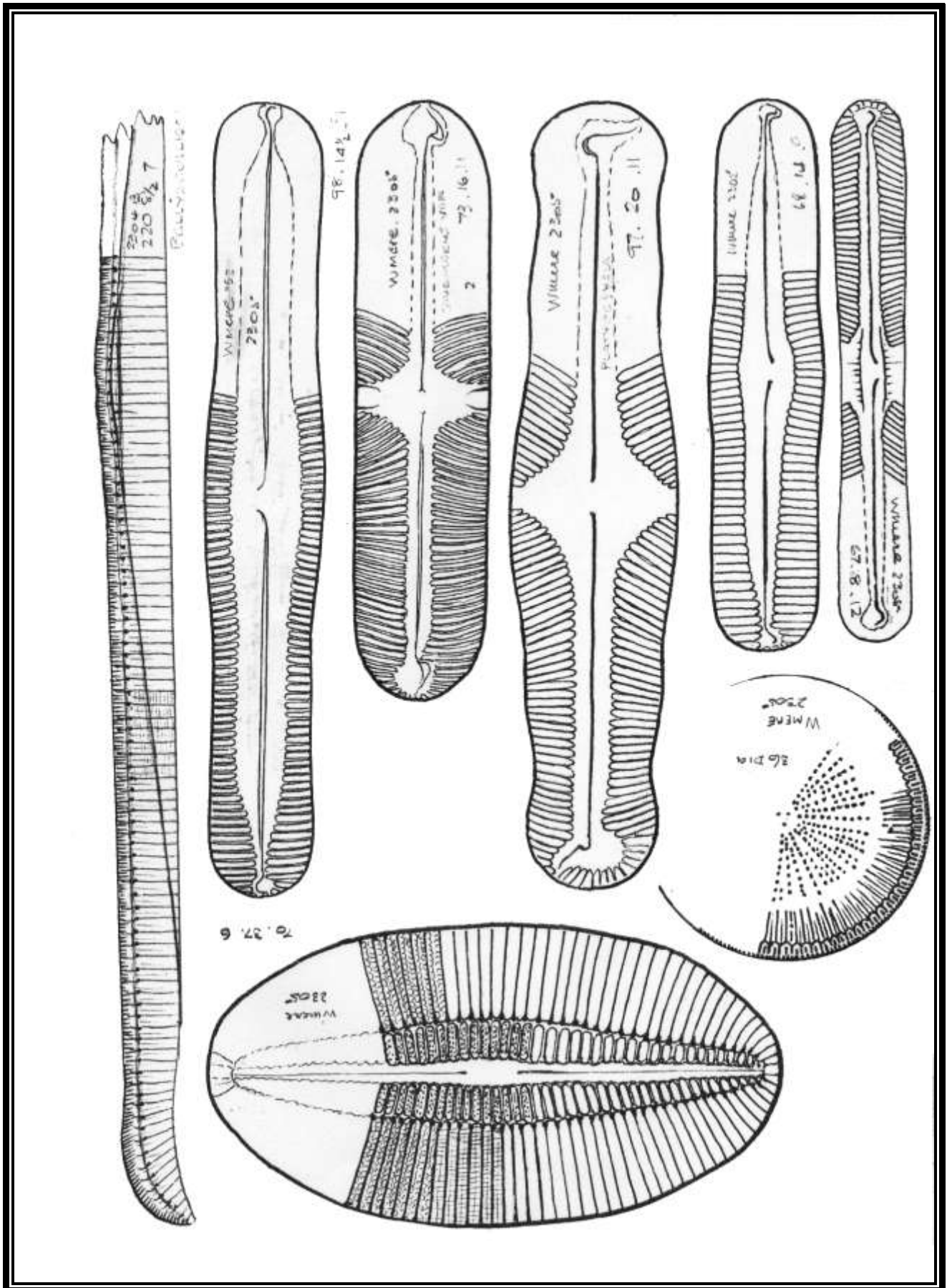






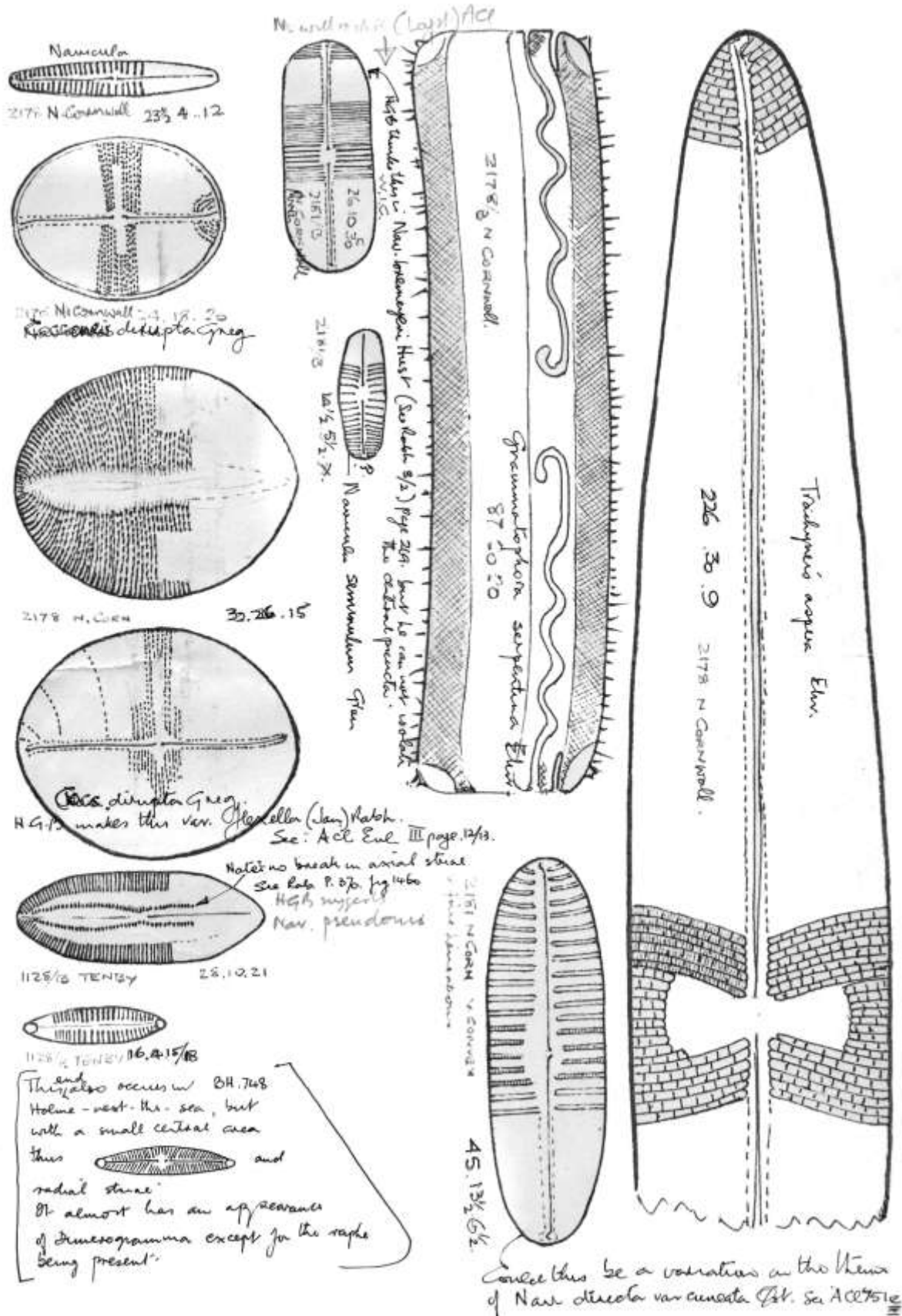


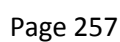
Miscellaneous Plate 357





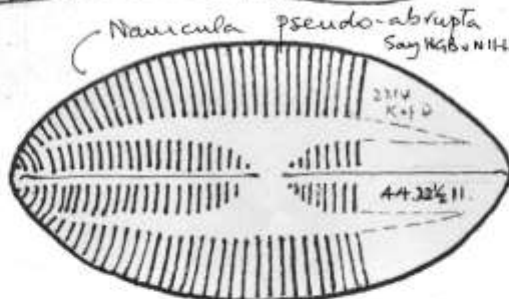
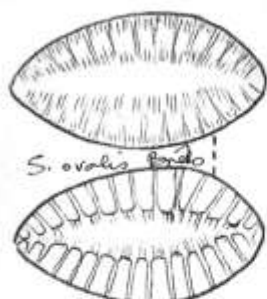
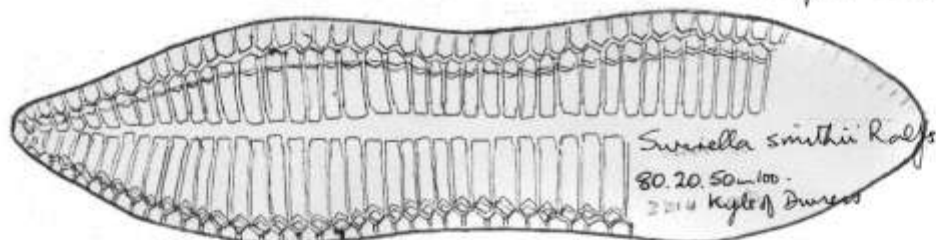
Miscellaneous Plate 360





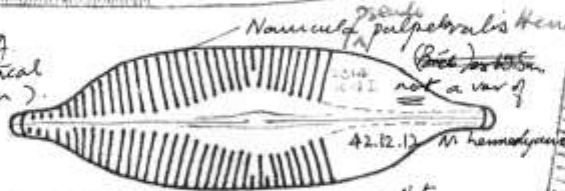
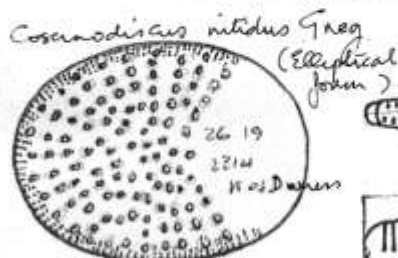
Miscellaneous Plate 362

Note: Kyle of Bruners slide K4960 per JAC
wks from sand ripples at low tide!

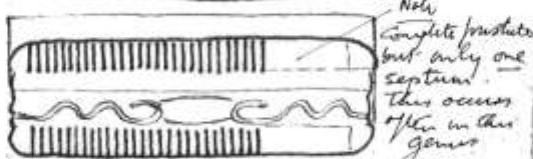


30.12 50. 2214 K of D.

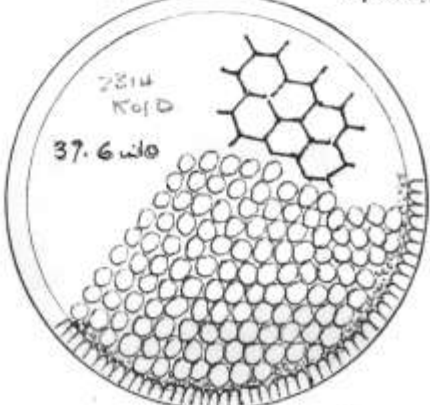
Check again the terminal features as otherwise it looks like Nav. scopulosum Rolfs (60-800) (1-16) (6-24) 120 per line



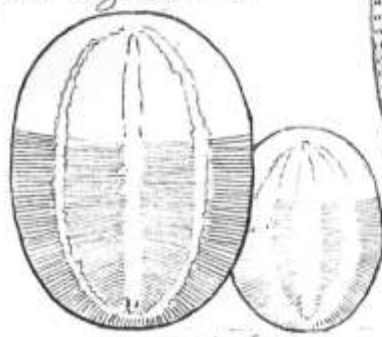
? Nitzschia taylori Rolfs var. detrita (Arndt) A. Mayer



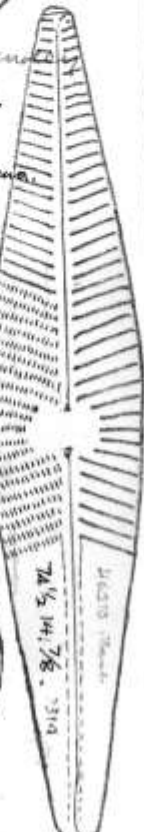
Granulophora angulosa Elv.



Coscinodiscus lineatus Elv.

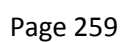


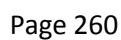
Soth. like a lot Nitzschia indicata Hurst?



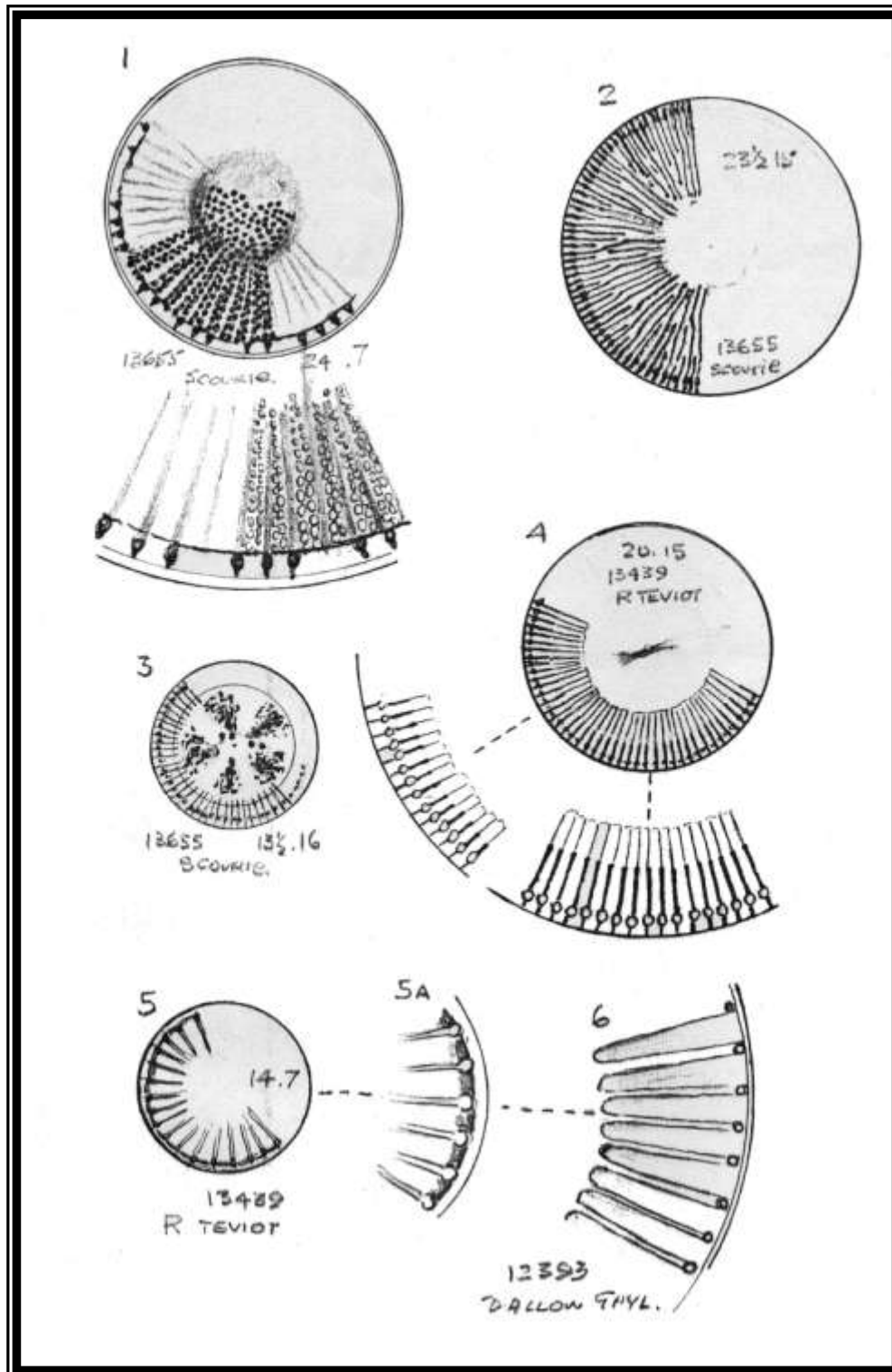
Nitzschia virgata var.

See P. 362. LXV 1/3-4

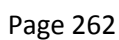


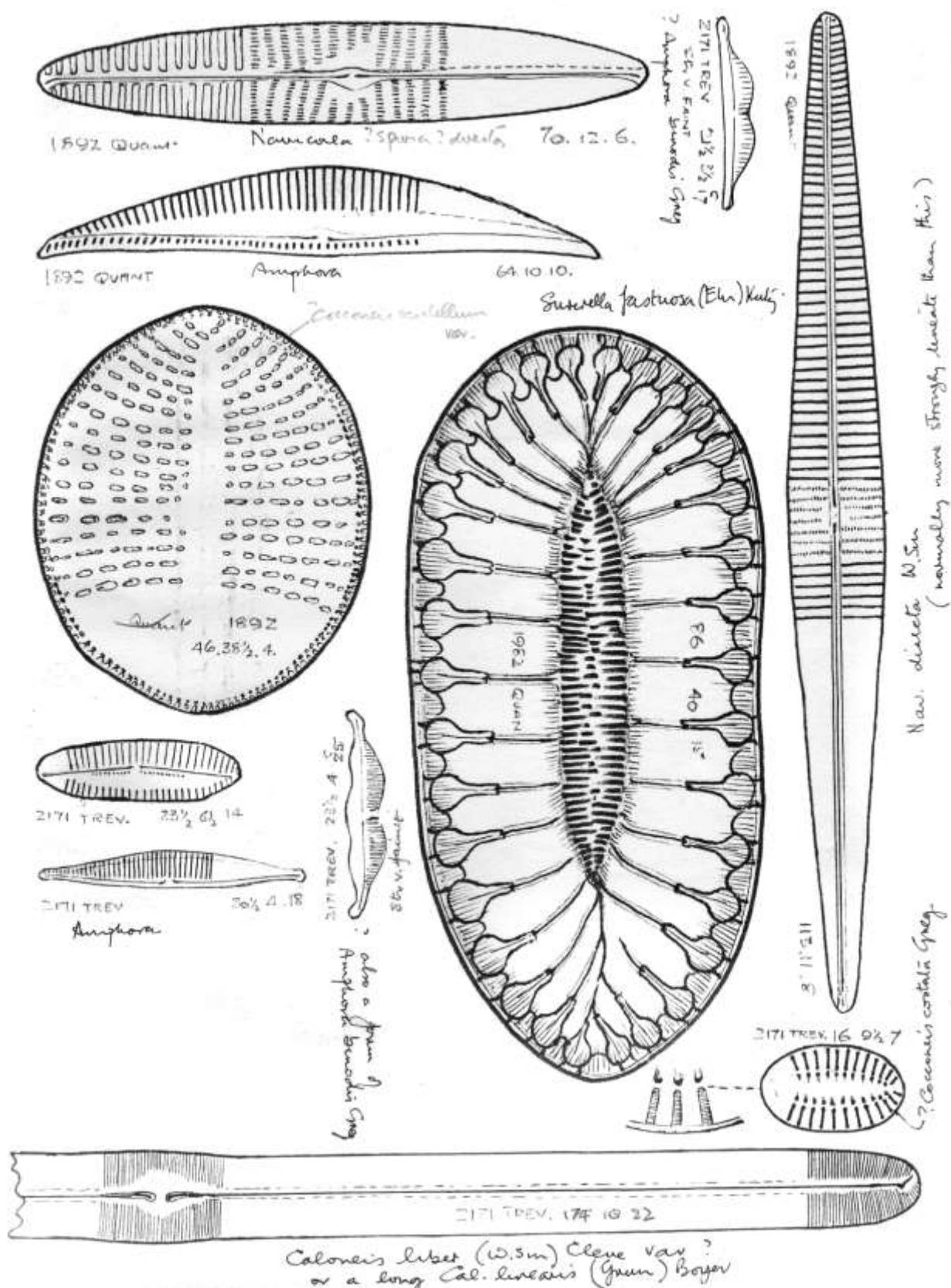


Miscellaneous Plate 365

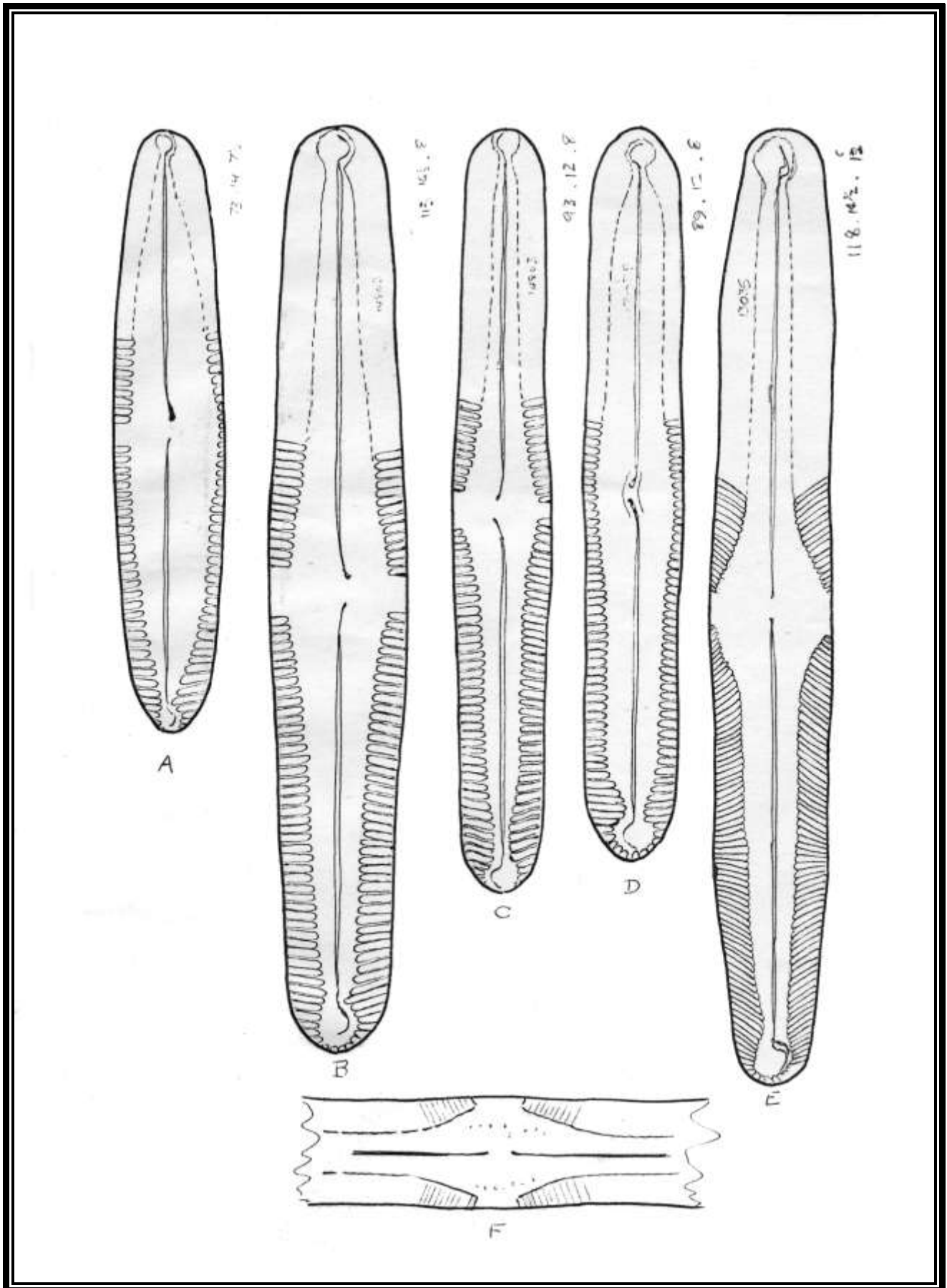


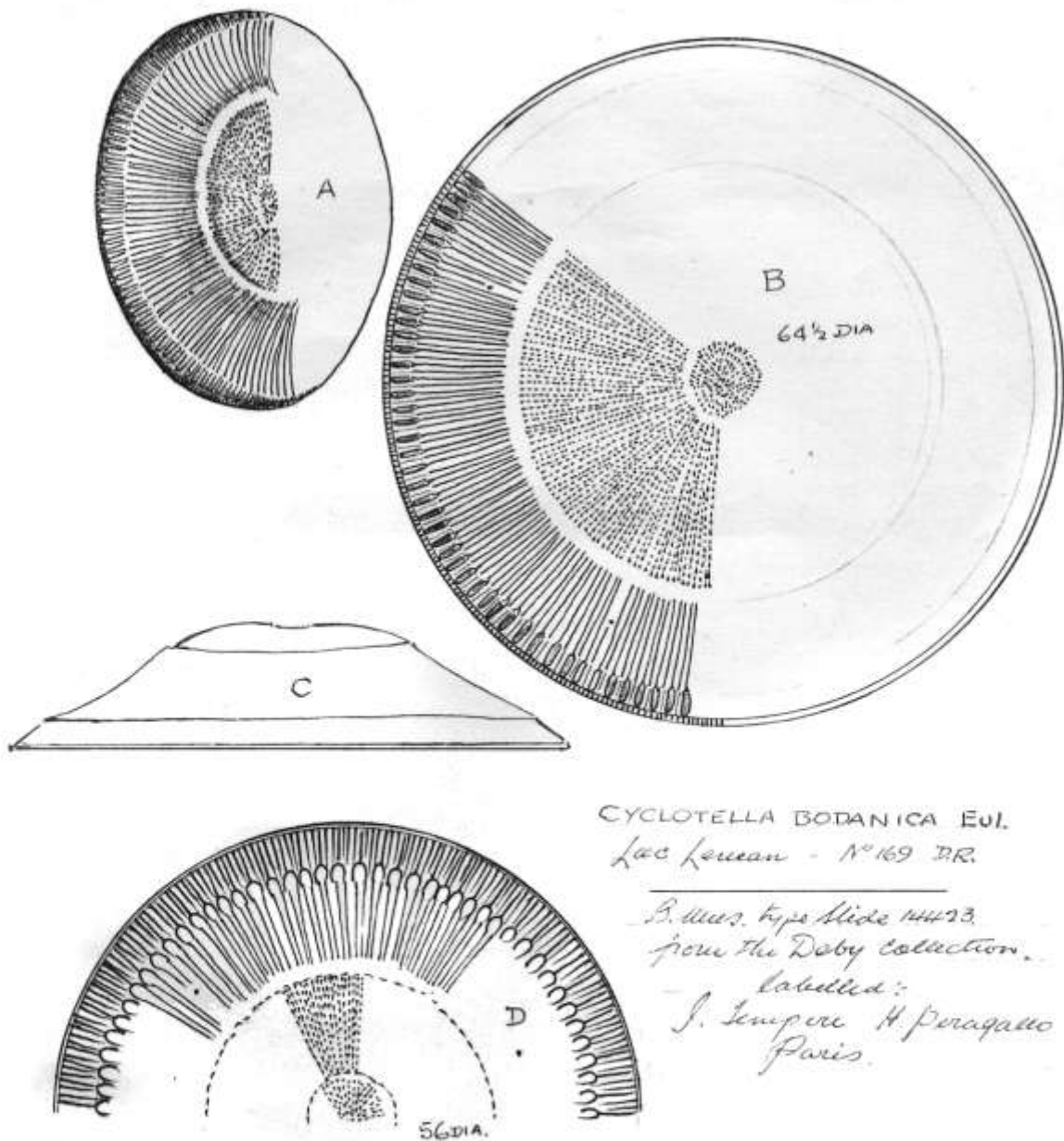
1. This is not like the usual *Steph. astraea* I find. Note irregular spines, Central area not typical.
2. I question as being *Cyc. striata*. There are quite a few but often broken valves.
3. *Cyc. commensis* OK.
4. You say this is *C. kutzingiana* but *C. kutzingiana* is striae 12-14 OK, near enough but these striae in the Central area are same length, not like the figures for *kutzingiana*. See Flora plates for latter. Plate 3, 14, 16 etc. Note length of radial stria vary and there is a central fold. See *striata* in Hust. 14, 30. See Pl. 4 for figs 5, 6, 7 for your 13402/C, I have these as *C. striata* var. *ambigua* Grun.
6. The *C. meneghiniana* on 12393/C are quite like I usually find. See Pl. 3, 7, 8, 9, etc. The R. Teviot ones 13439/C 5, 5A are all smaller and no twist visible also minor stria just fade out and not like fig, 6. ? a habitat variation?
- H. "I have had another very careful look at 13439 and am pretty certain it really is *kutzingiana*. Striae are 13 – not quite equal, so the valve is tangentially curved on the one surface. I agree not quite to your plate 2 but still with the sp. The equal like the above length is shewn in Hustedt (1930) in his fig. of var. *radiosa*. – all very tricky and subjective."



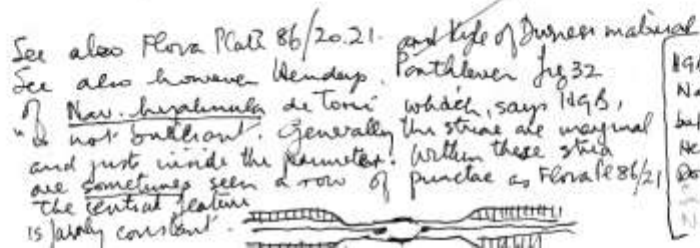


Miscellaneous Plate 368

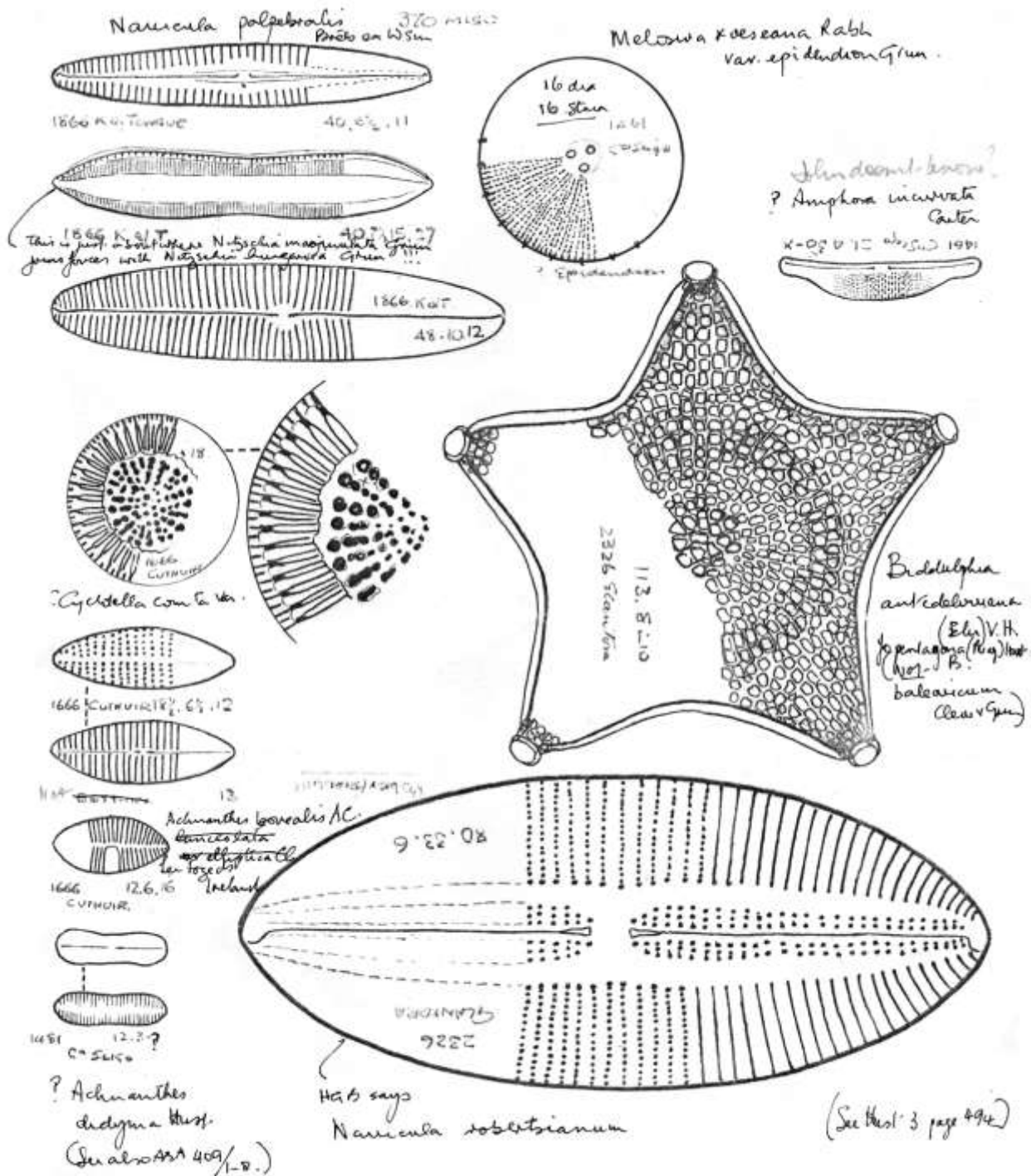




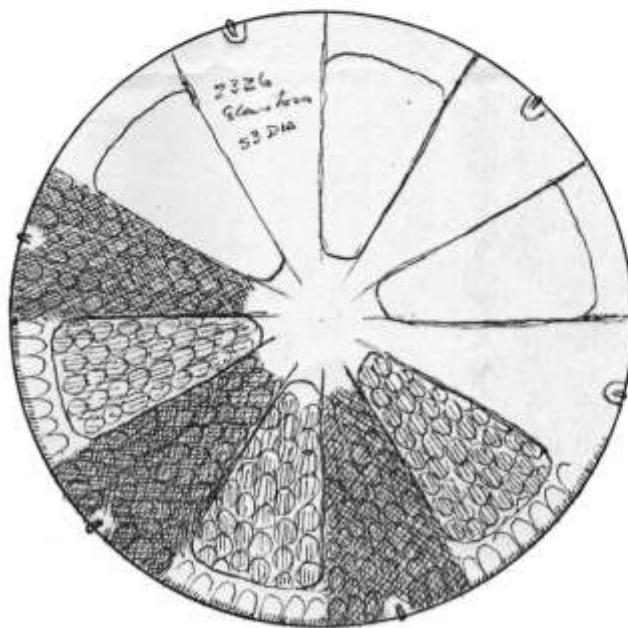
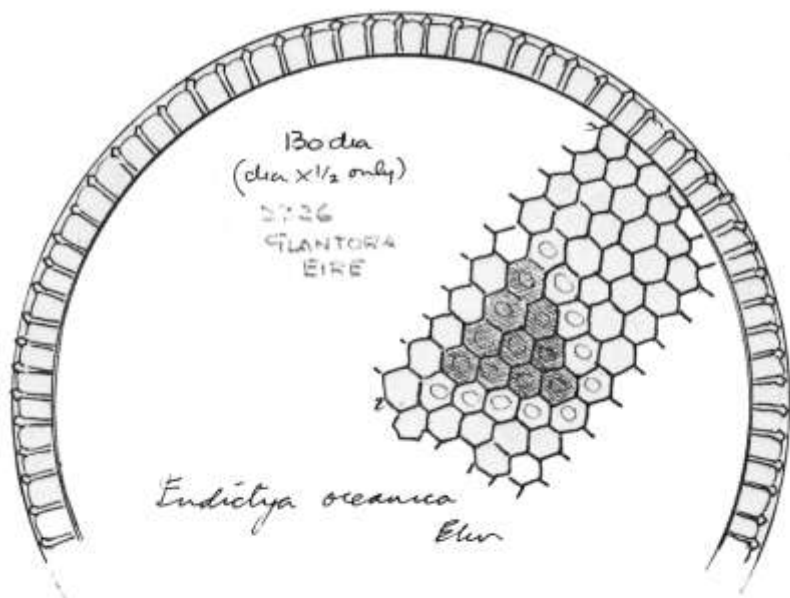
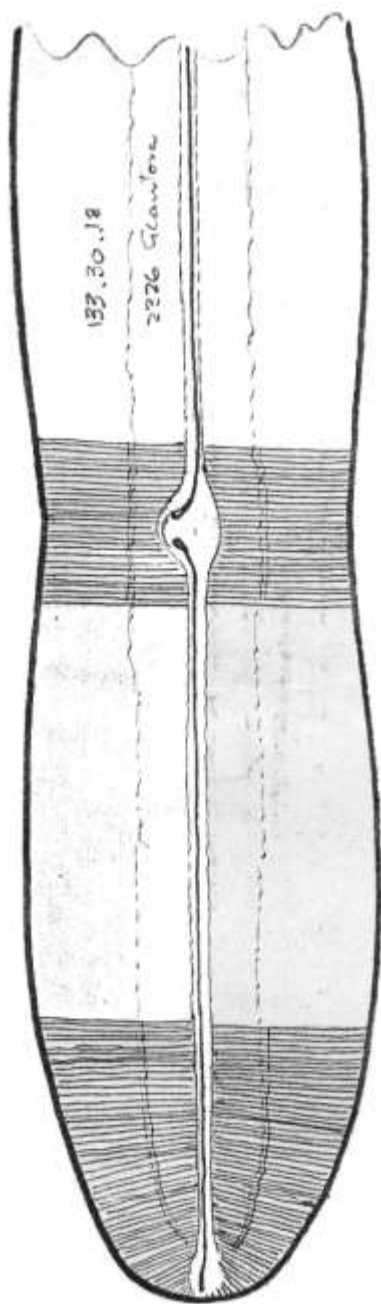
- A - Conjectural view of tilted valve as it was not possible for me to find one strictly on edge.
- B - Presentation of outer surface of valve and a large specimen. The average diameter being about two thirds this diameter.
- C - Cross section of a valve as far as I can tell by differential focussing.
- D - Presentation of inner surface of valve.
- Note - I do not see the cross section of what valves seem as that figured by some diatomists.



See also Plate
2, 1

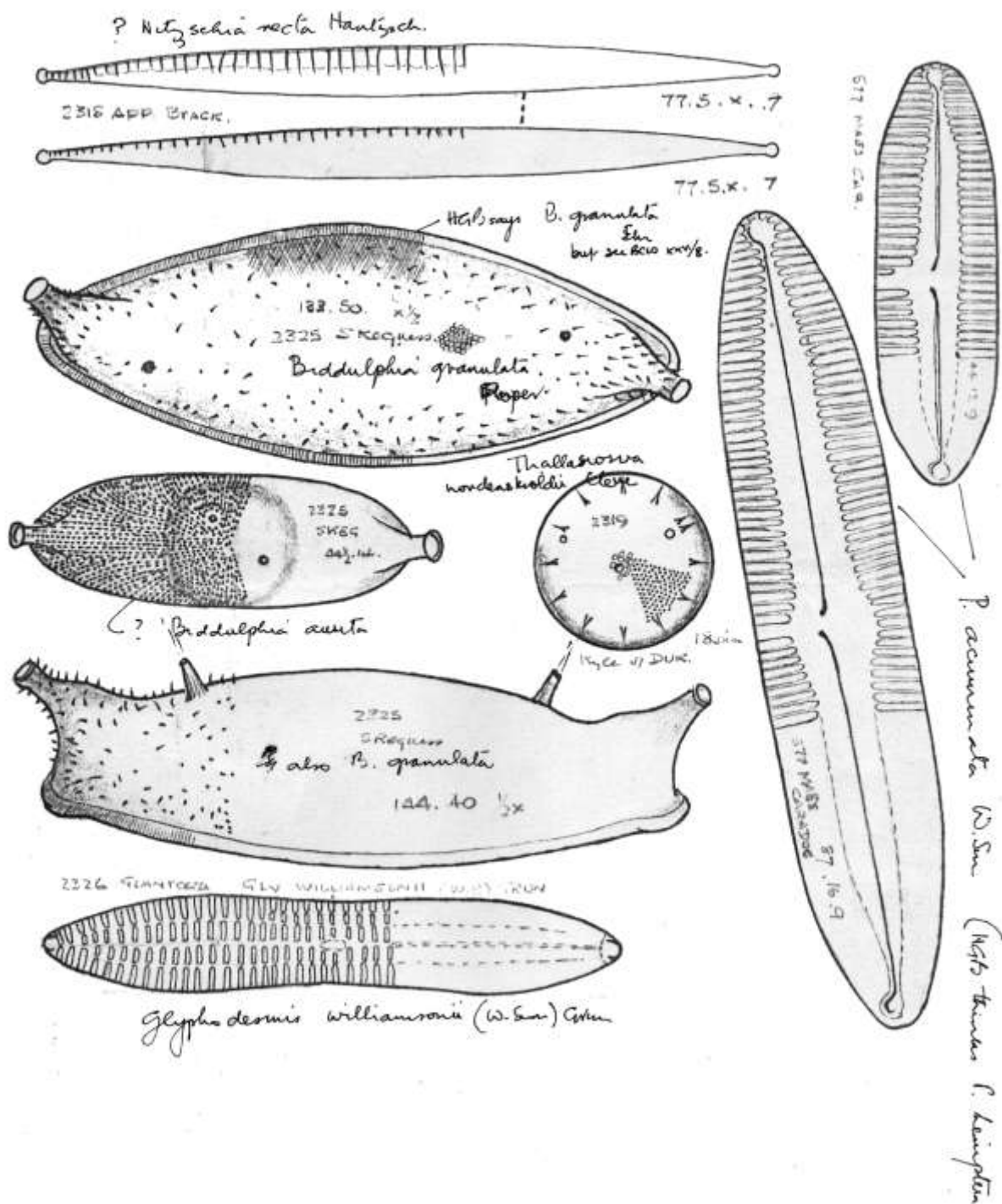


Miscellaneous Plate 371

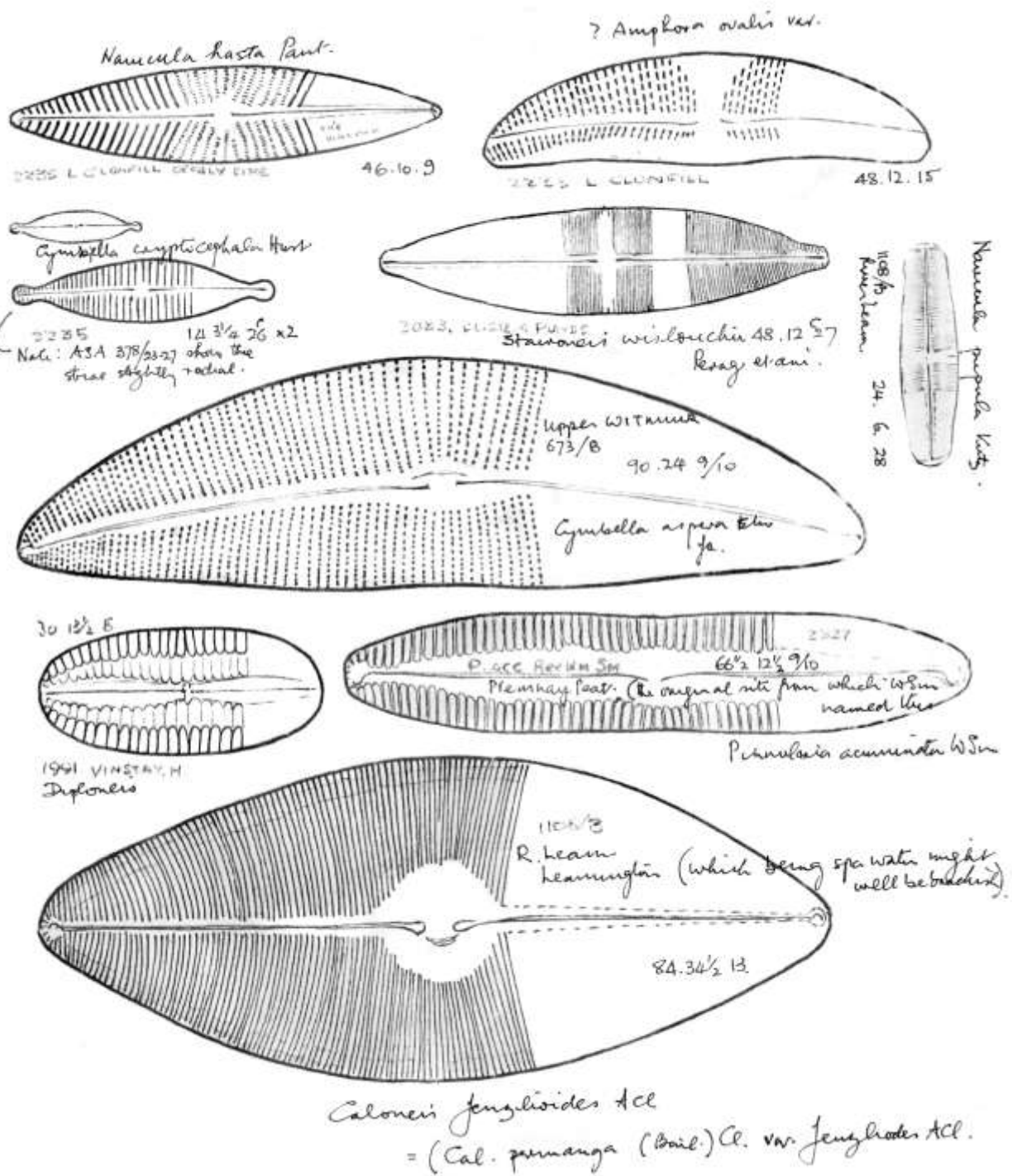


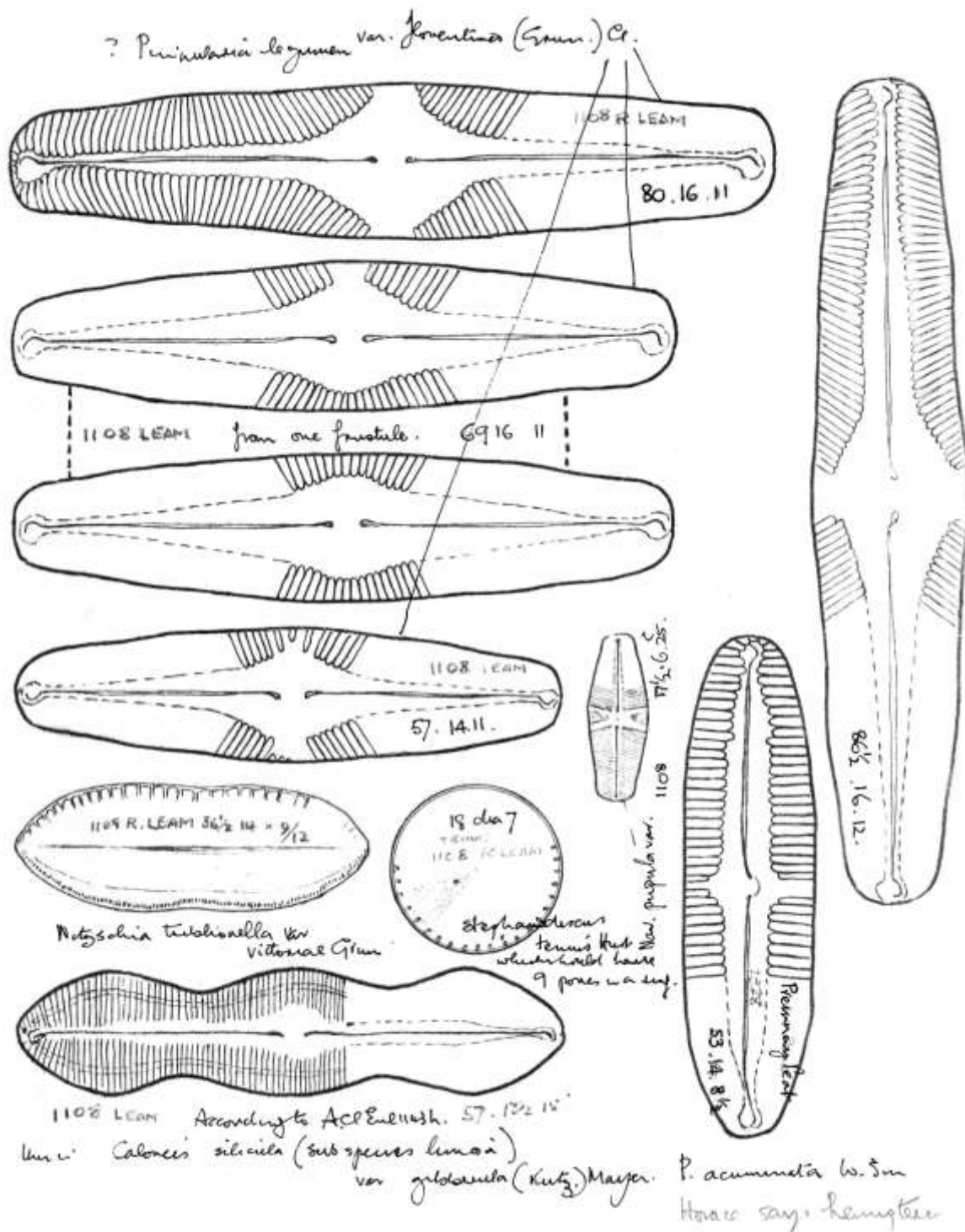
Actinopterychus senarius Ehrh.

HGB says
Caloneis maxima (Greg) Gr
 but is this just another
 variation of
Caloneis libens W. Sm
 Van Landingham thinks so.

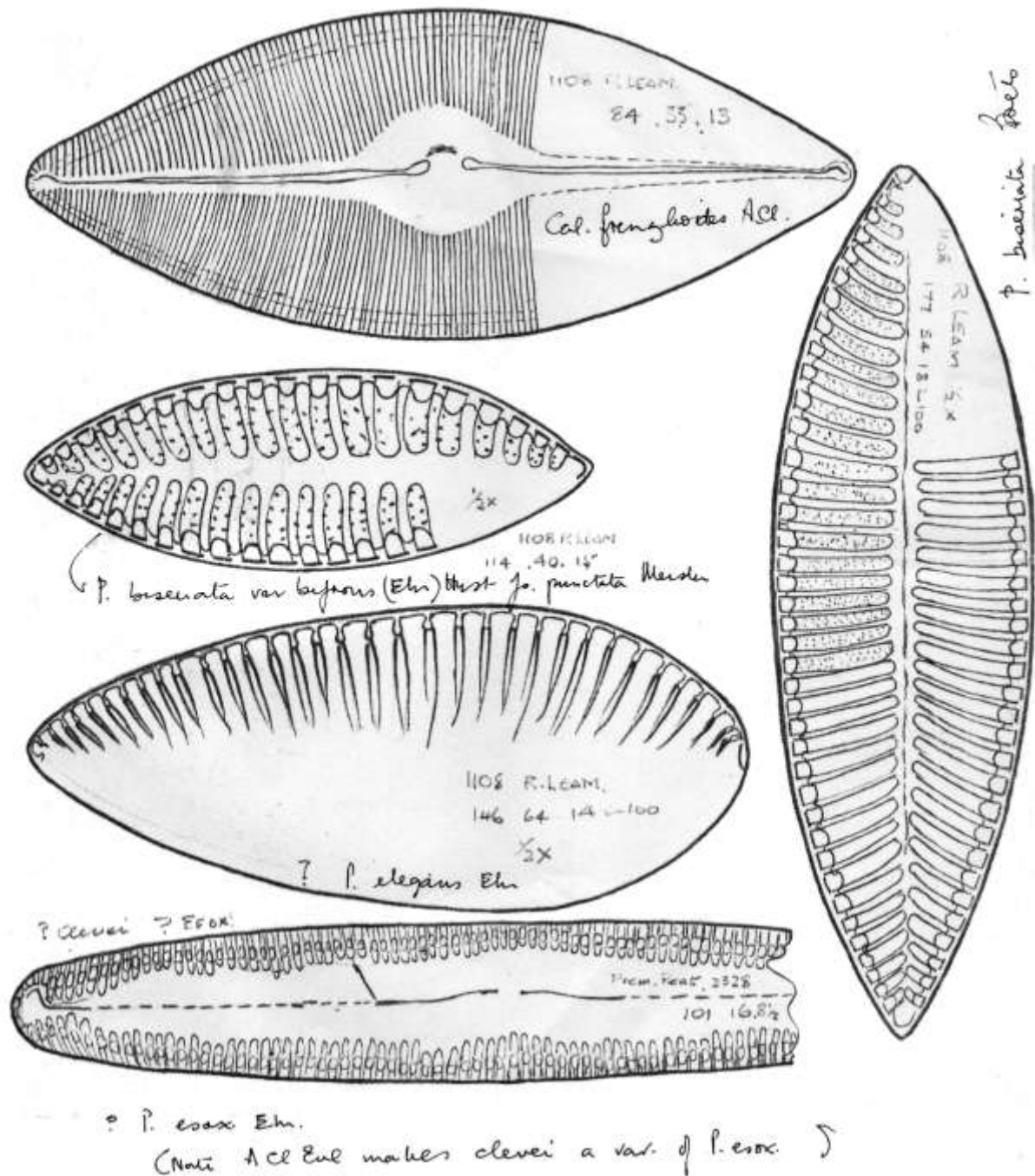


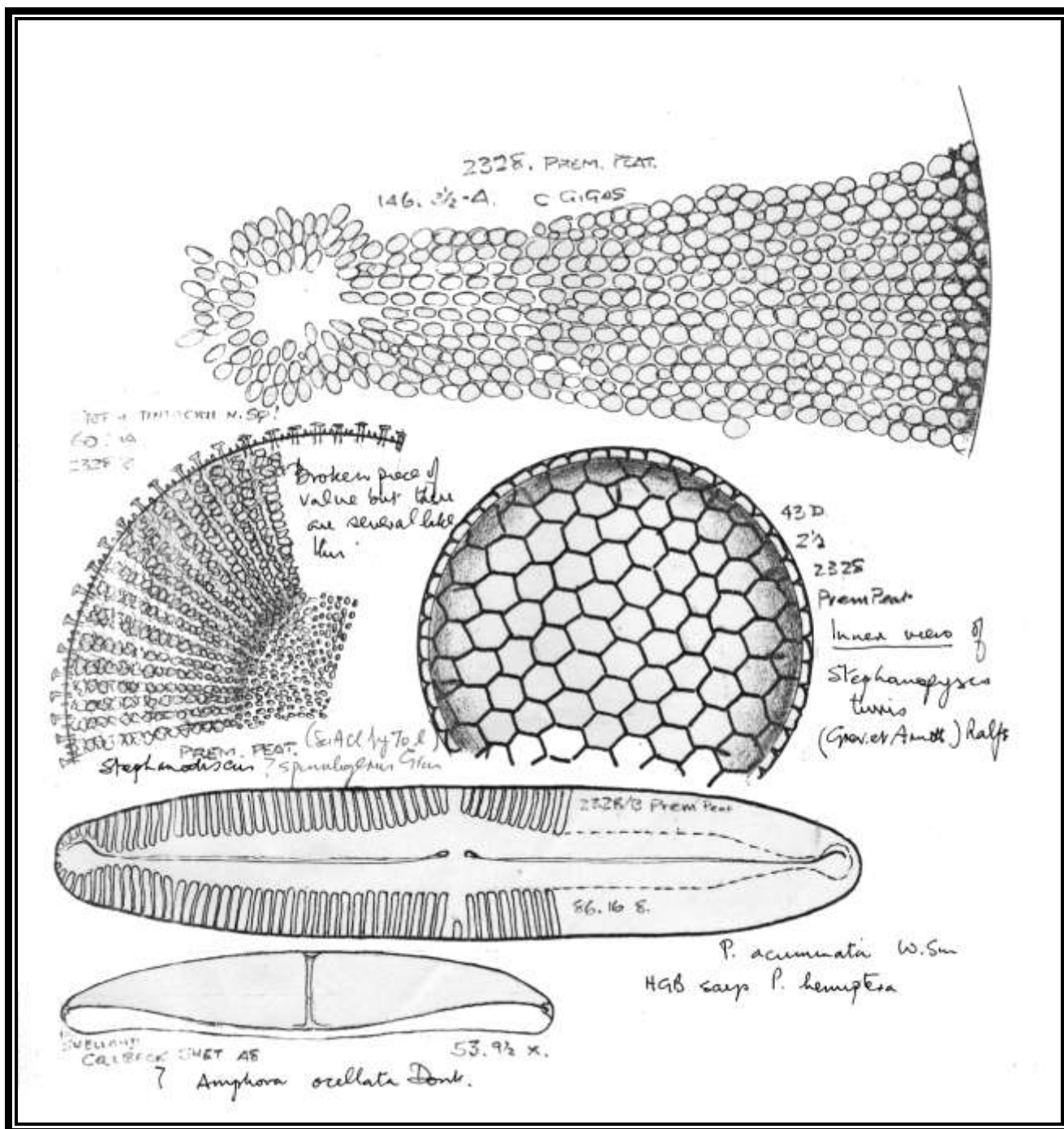
Miscellaneous Plate 373



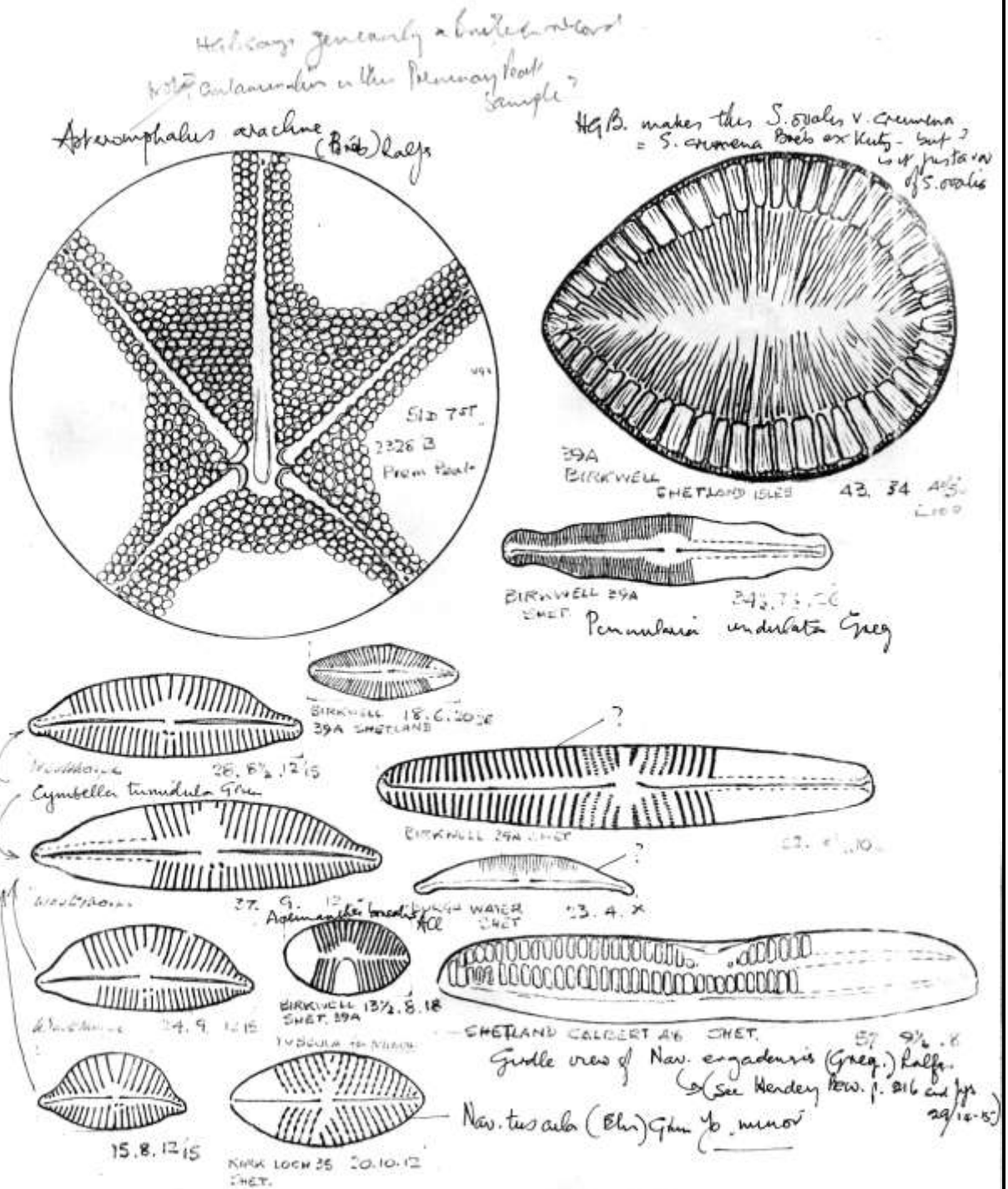


Miscellaneous Plate 375





Miscellaneous Plate 377

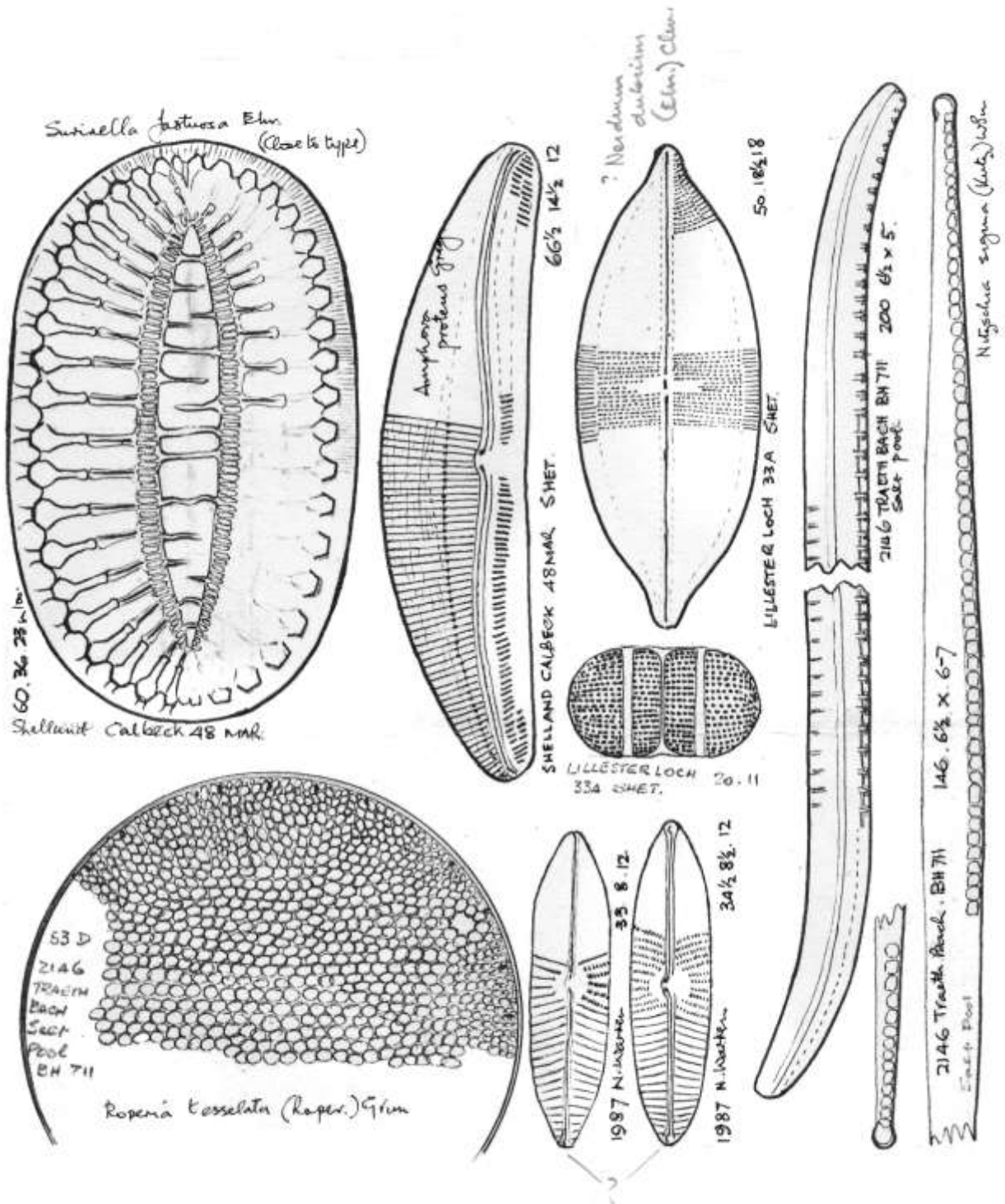


Note: Hustedt gives

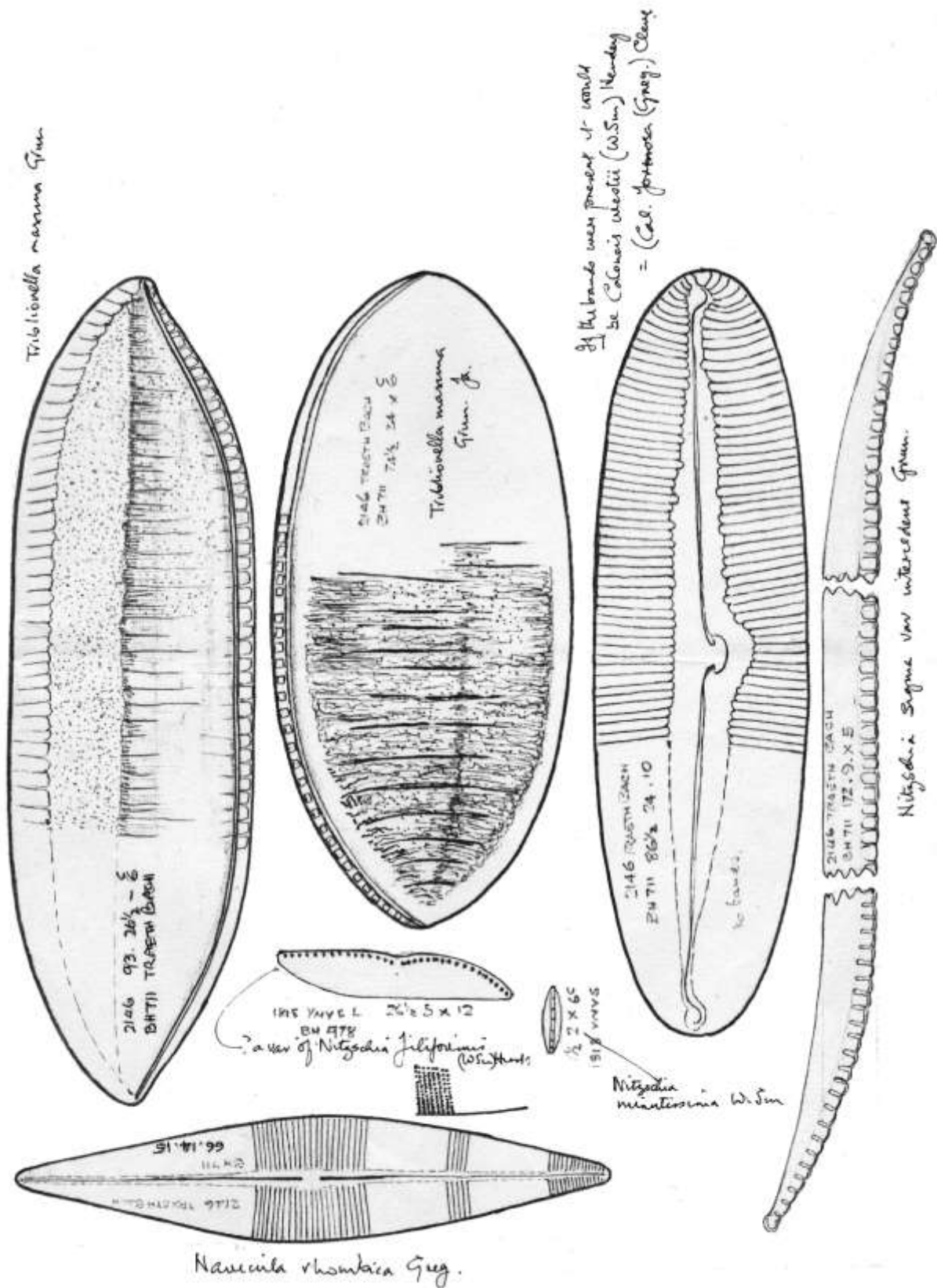
C. tumidula (fig 699) L 25/35. B 6/9 Str 14/18.

C. tumidula (fig 670) L 30/50 B 10/15 Str 9-10.

An average of 8 random specimens on
slide BH 915. gave average width of 8 1/4 μ + length 22-34 (av. 30.)
and the striae 15-18 μ 10 μ



Miscellaneous Plate 379



Probably an old form of *Angulosa* *Costa*
— *Amph.* *1875*



3146 TRAETH BACH BH 711 103. 9 1/2 G. NEW HADNE!



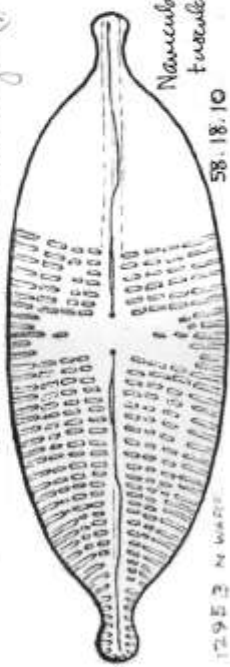
12952 N. WARE
WASHINGTON FOUNDRY # FINE
33 6 1/2 13



1818 VVVS 2 1/2 8 21
BH 1111 New. Gargua (Garg) 10 M. 1818 VVVS 2 1/2 8 21



40 10 17
1795 E N. WARE
42. 6. 15



12953 N. WARE

Navicula
tuscula (Ehrh.) Grun.

58. 18. 10



12954 N. WARE
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13153 N. W



Pinnularia borealis Eln

382 MISC



2337. SCALPH.

43 1/2. 10.6

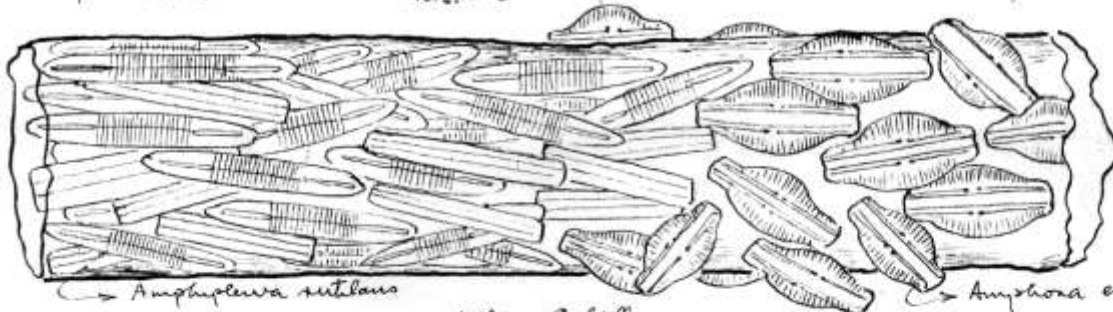
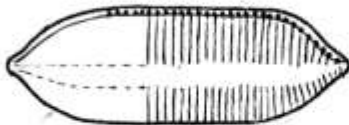
Nitzschia epitheoides Grun

(See also ACE 1450, a-c)



2346 E. SUFFOLK

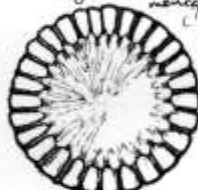
40.12. X 3/4.

→ *Amphipleura subtilans*→ *Amphora exiguu*

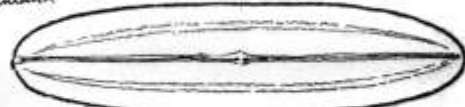
2346 E SUFFOLK "301015" 10

Heßlarde. Nil. angustata
but it is a long grower
Nil. angustata or a small
kind of *Amphipleura*

H.G.B. Cyclotella meneghiniana



17 DIA 2346 E SUFFOLK



2346 E SUFFOLK

40 1/2 X.

(See also ACE 1450, a-c)



2346 E SUFFOLK

56 1/2 10 X 15. WIG.

? *Nitzschia dubia* W. Grun

H.G.B. thanks these

Campylodiscus samacensis Grun.

(as Perag 414/6,7,8.

but see also.

ASA

15/5. *C. truncatus* A.S.18/4. *C. intermedius* Grun.18/4. *C. undulatus* Grun.59/10. *C. Schmidtii* Grun

But Van Landuyt says that

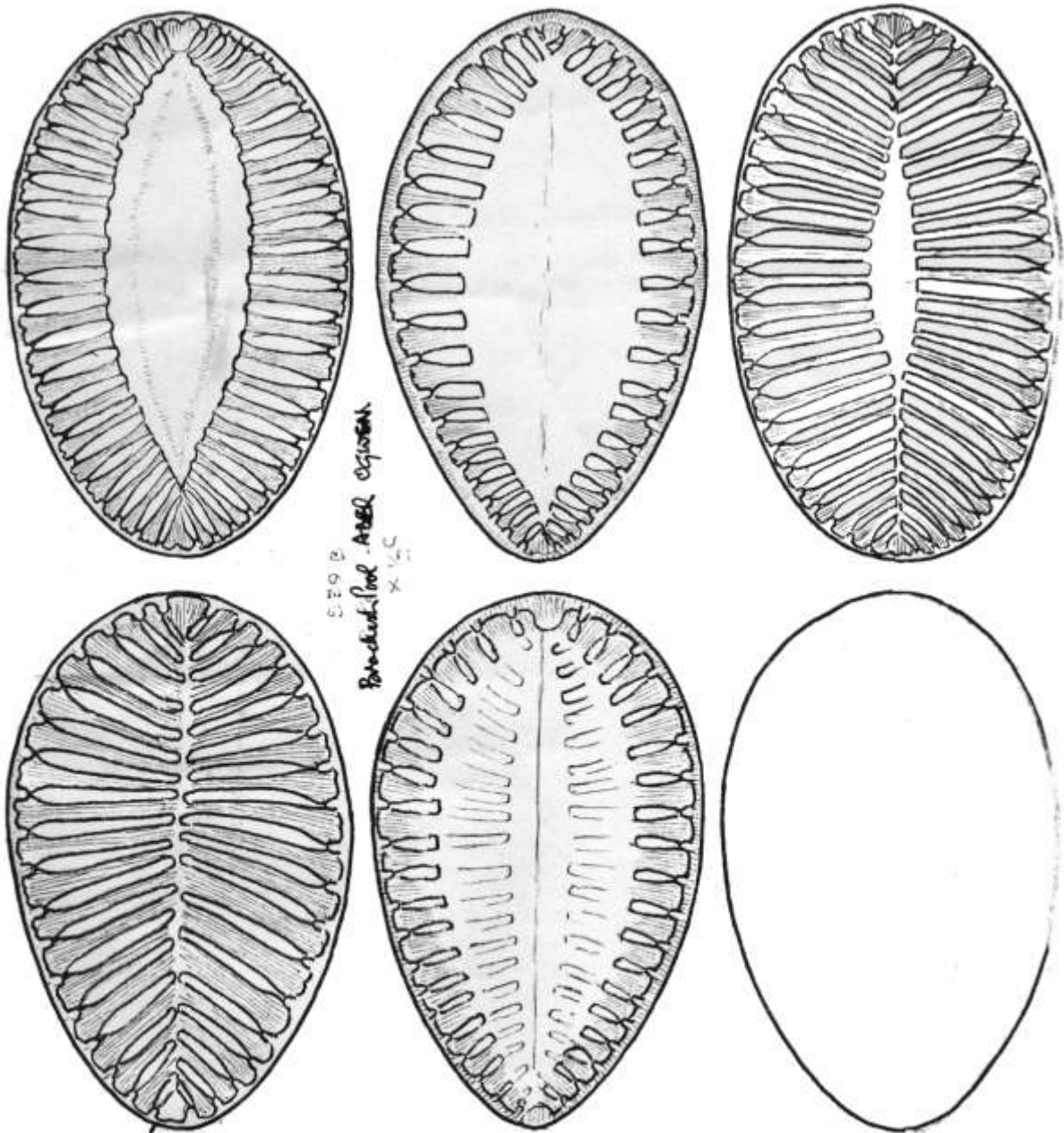
C. samacensis Grun (ASA 15/13-2) is only a synonym for*Campylodiscus incertus* Schmidt (as ASA 15/13-15.)

2346 E SUFFOLK

46 1/2 AB

C. SAMACENSIS GRUN.

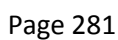
Miscellaneous Plate 383

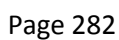


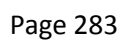
5792
Rounded, oval, ABEL, cyrenoid
x 1/2

Swinella striatula Turpin (x 1/2).
(see Slide BH 1044 and 1044a.)

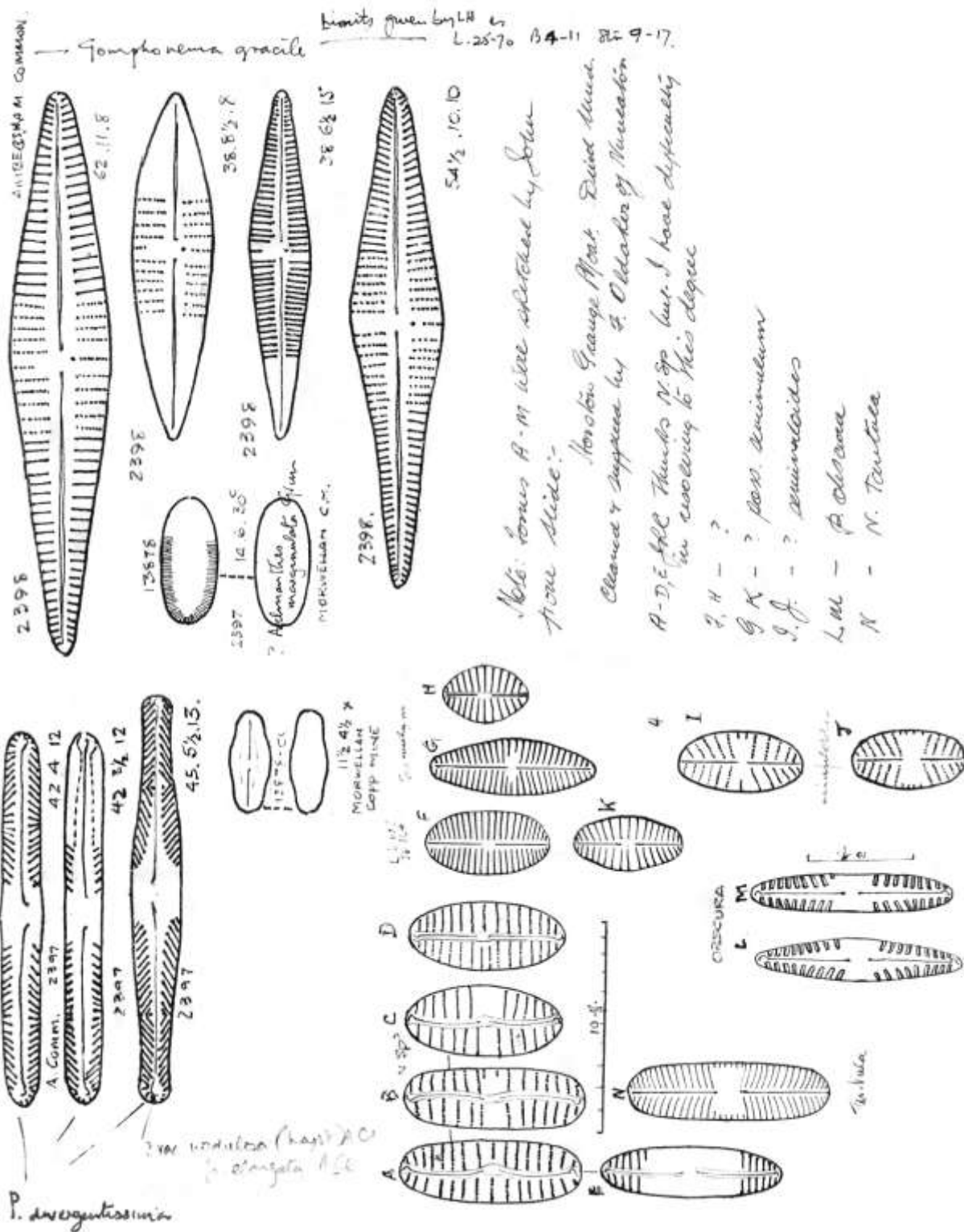
— 'Normal' pattern

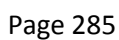


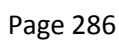


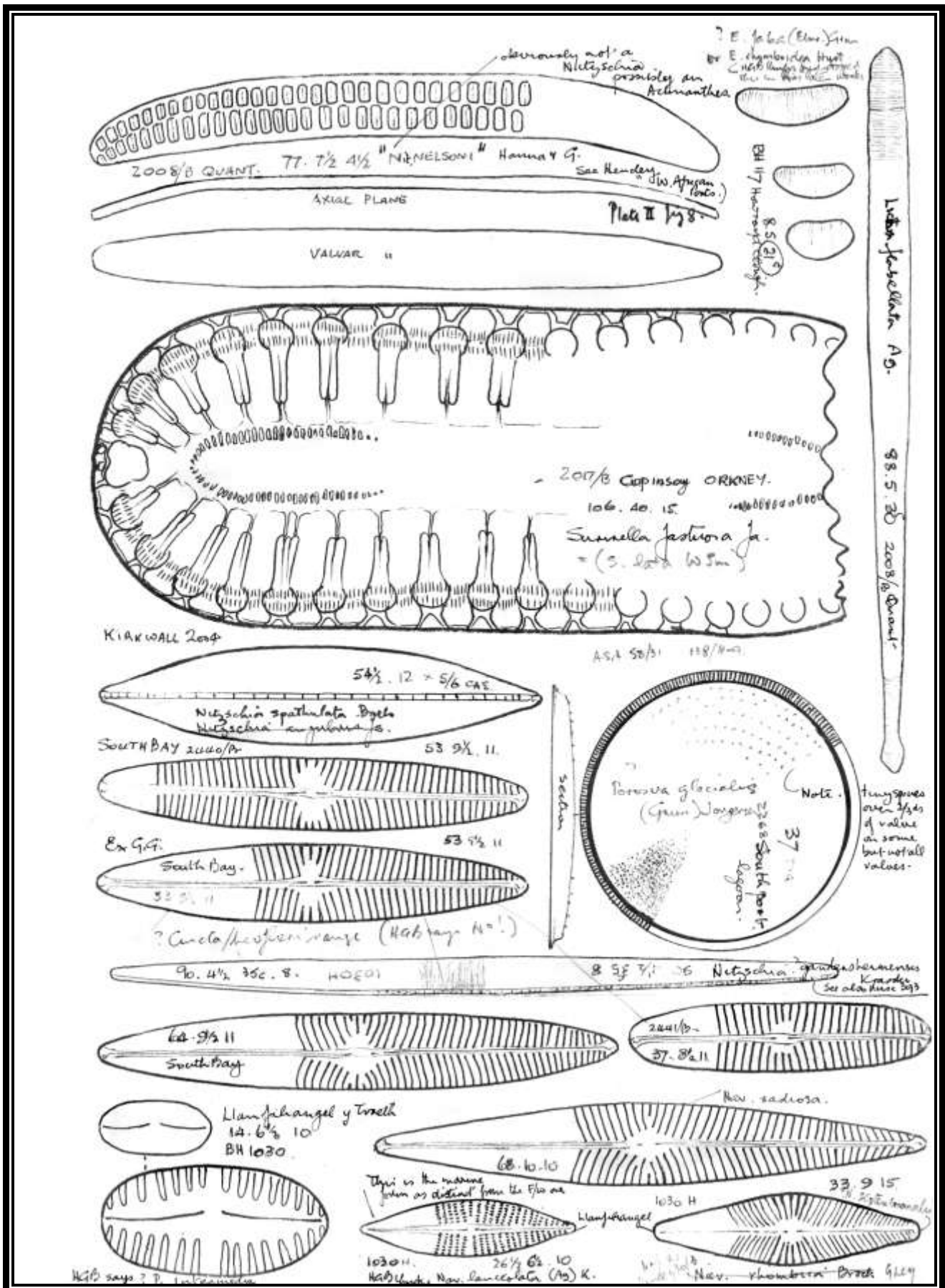


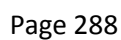
Miscellaneous Plate 390

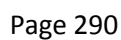


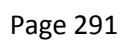




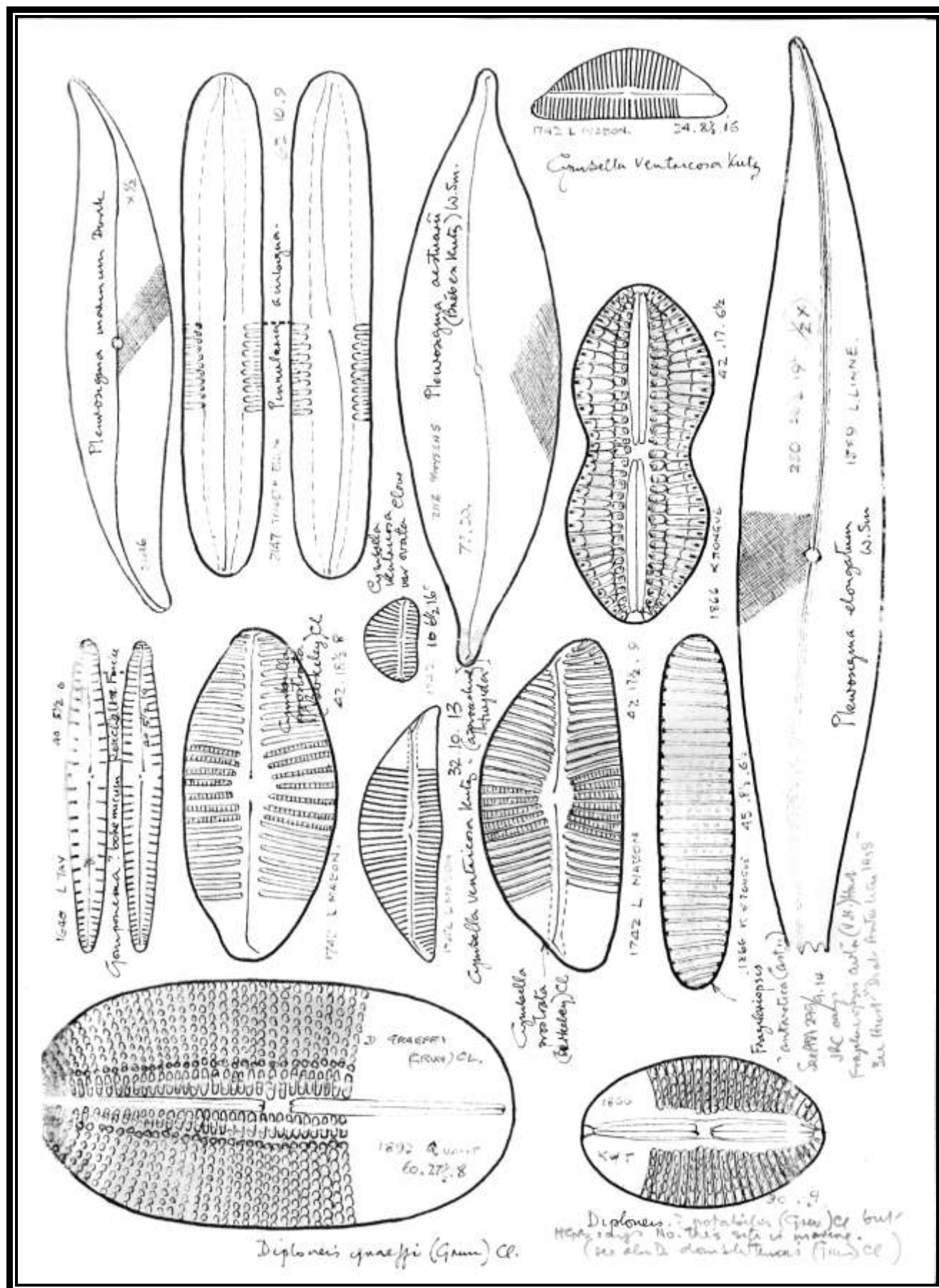


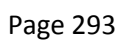




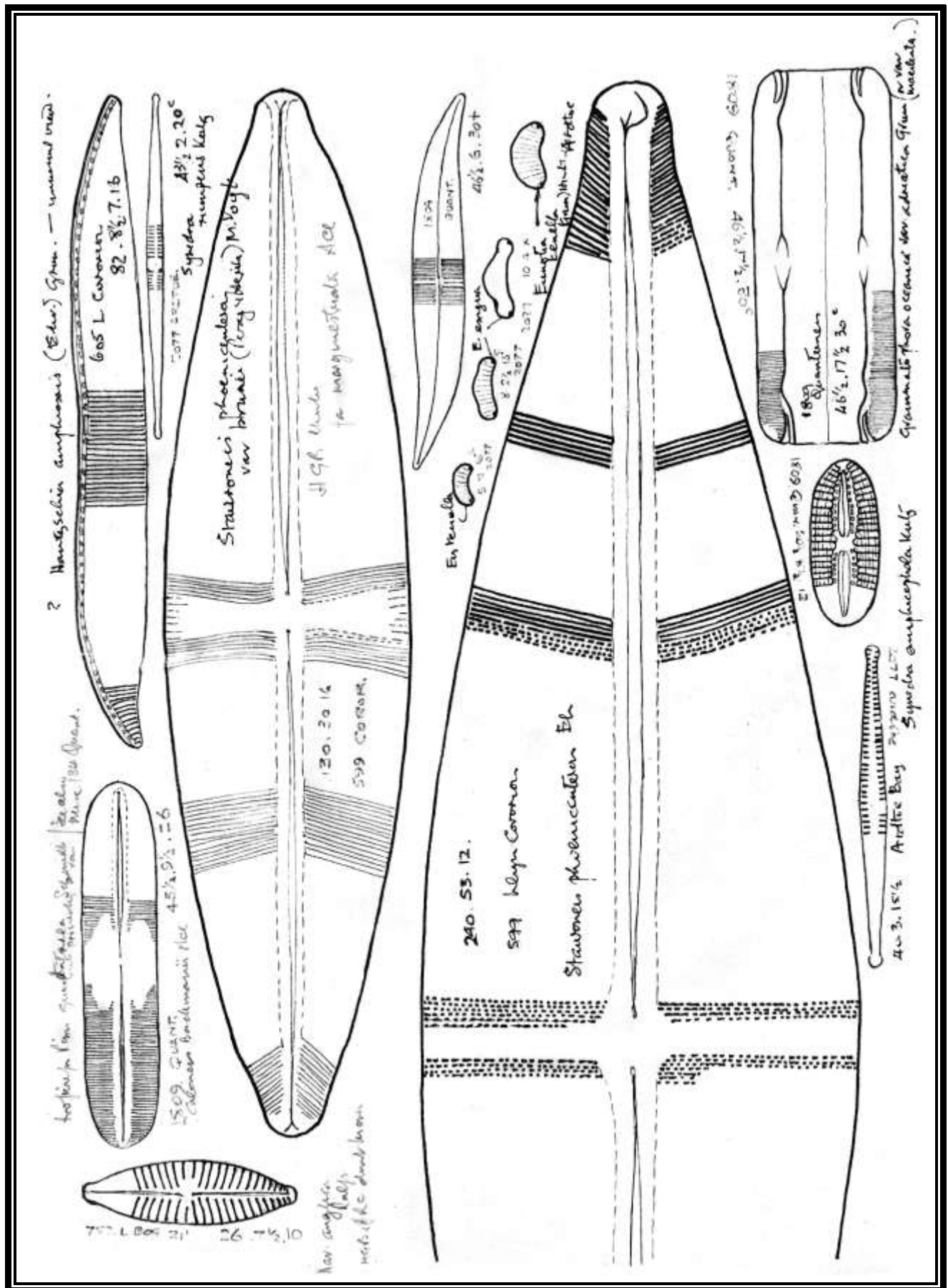


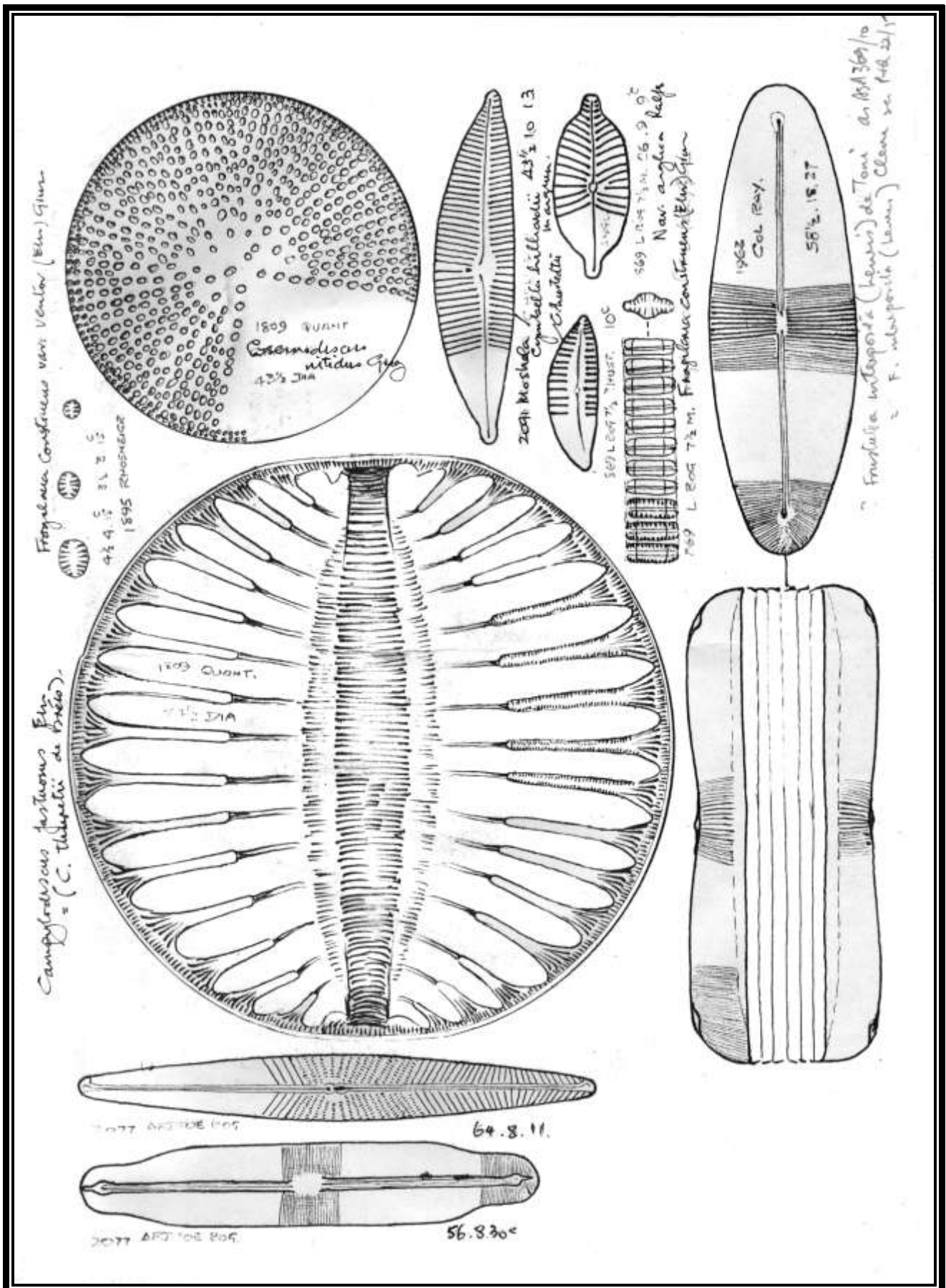
Miscellaneous Plate 397



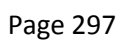


Miscellaneous Plate 399

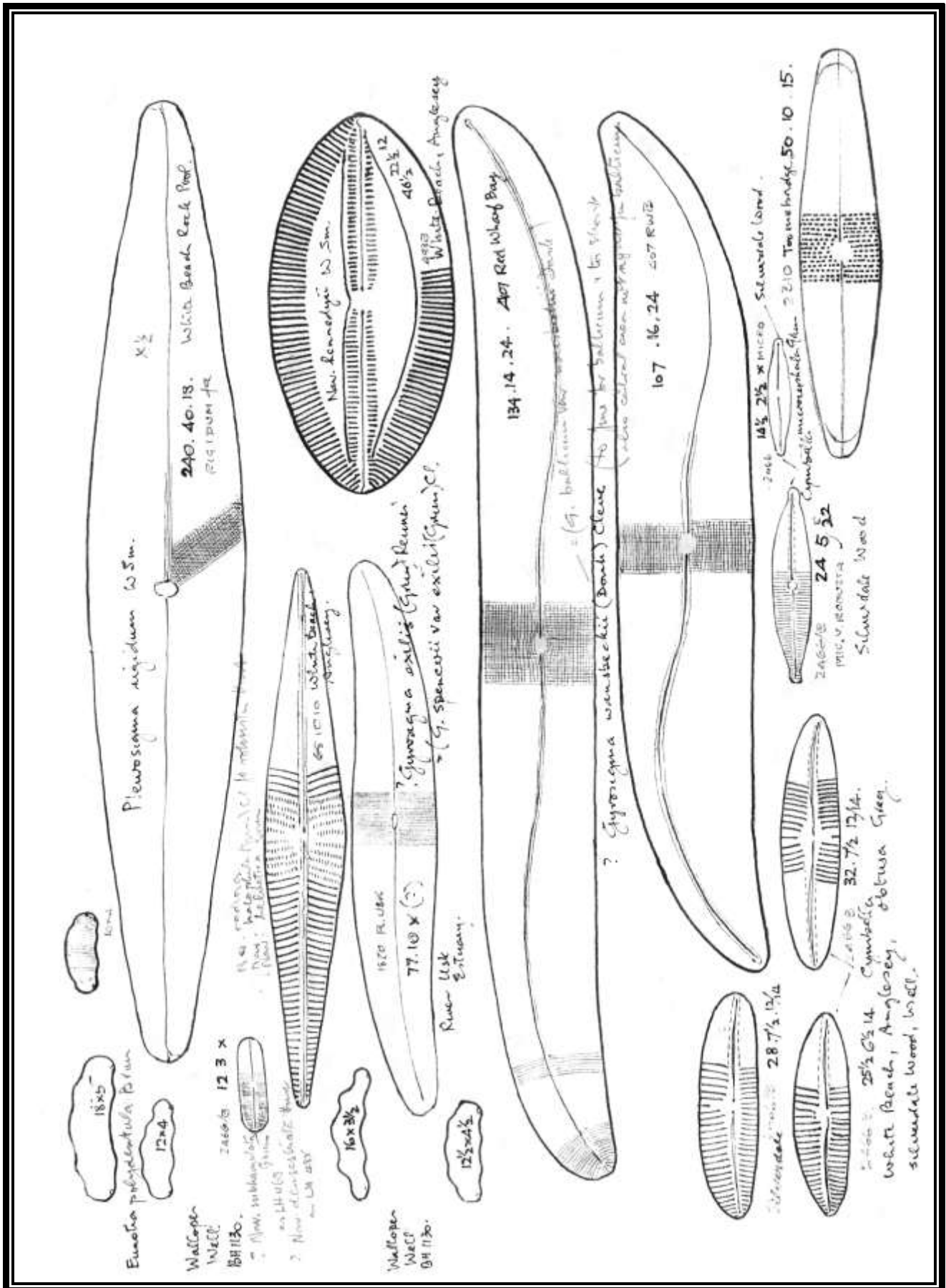


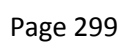




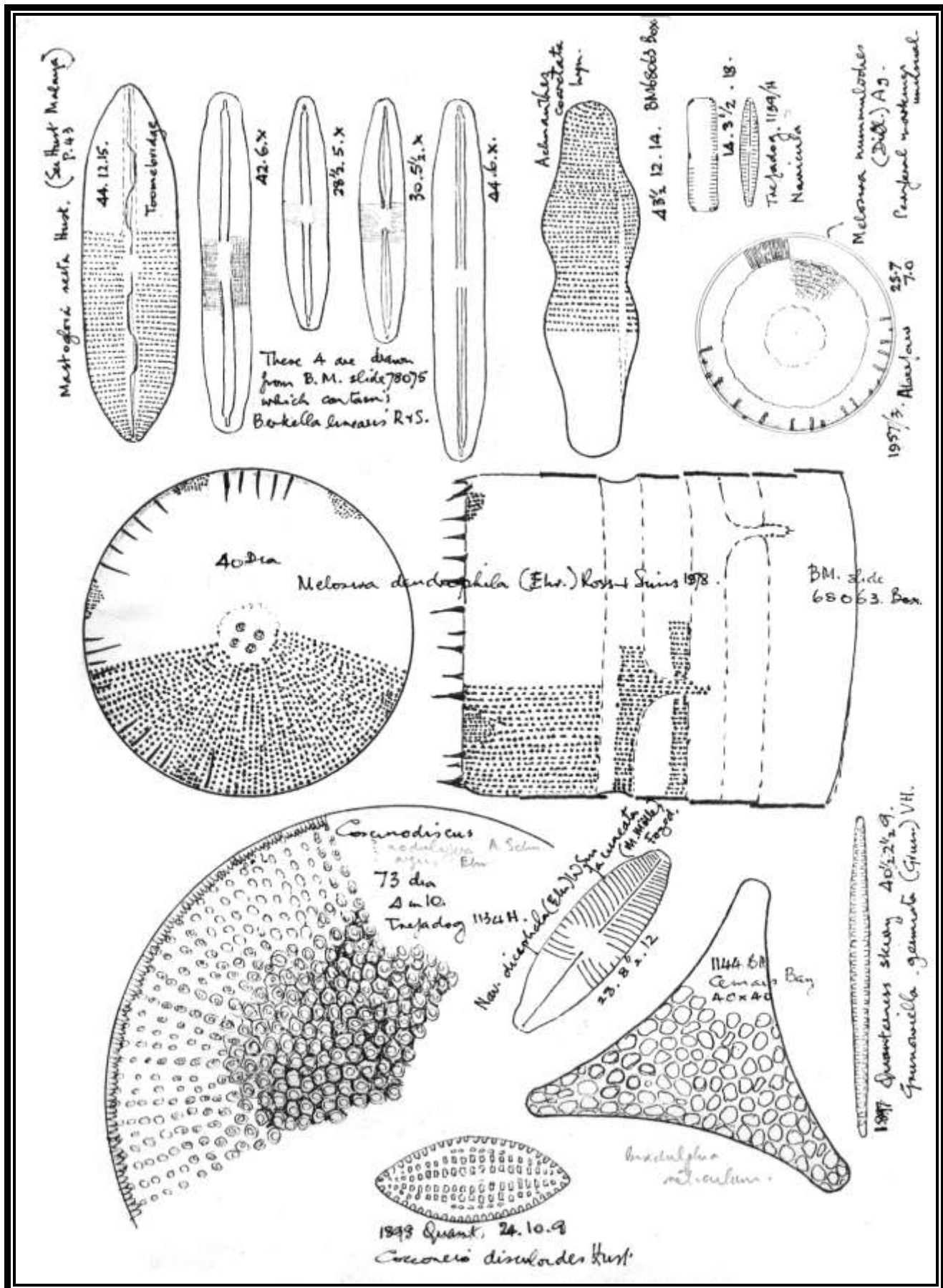


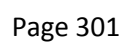
Miscellaneous Plate 403

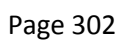


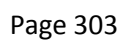


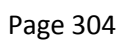
Miscellaneous Plate 405

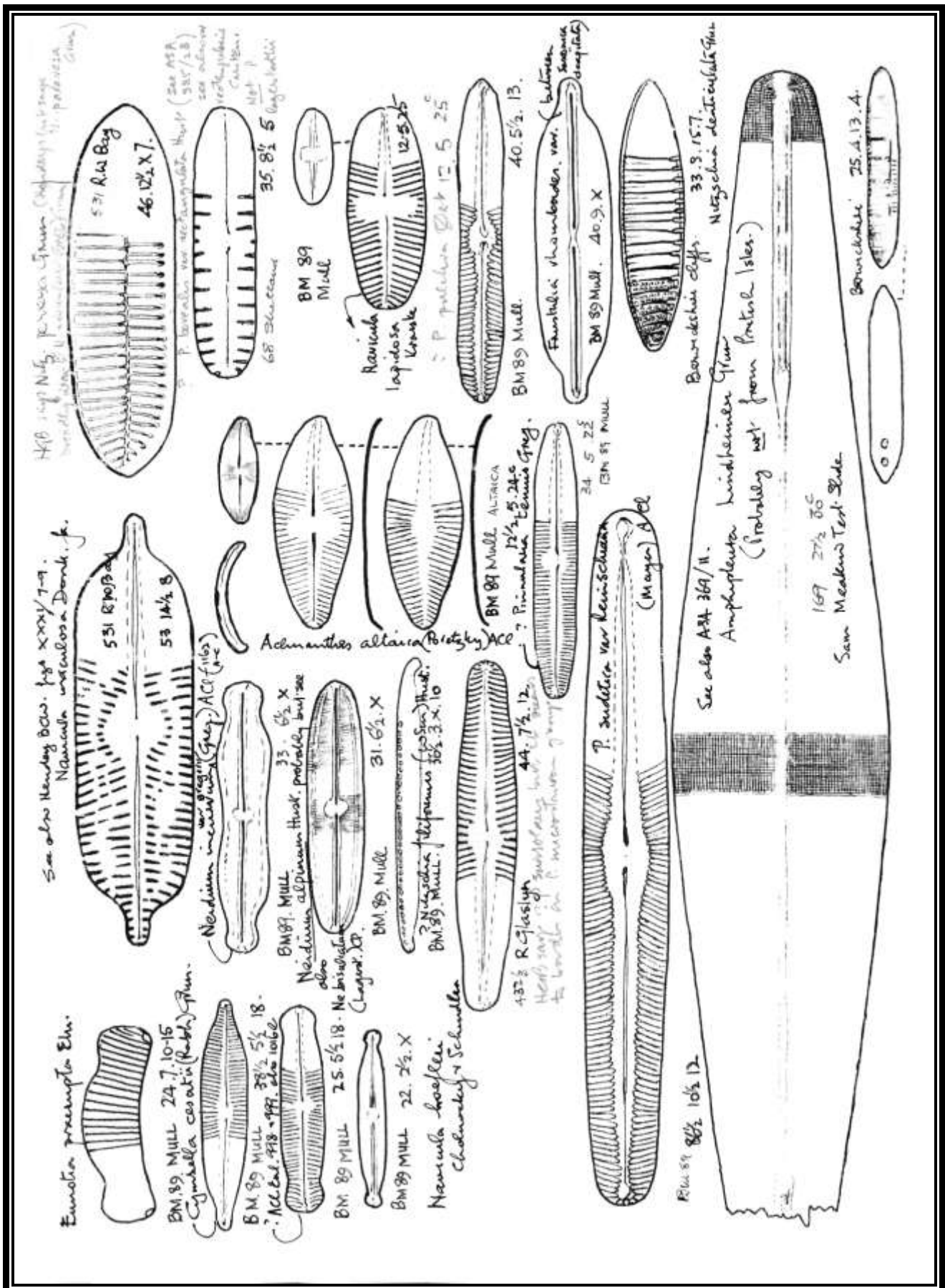




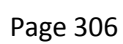


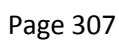


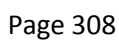




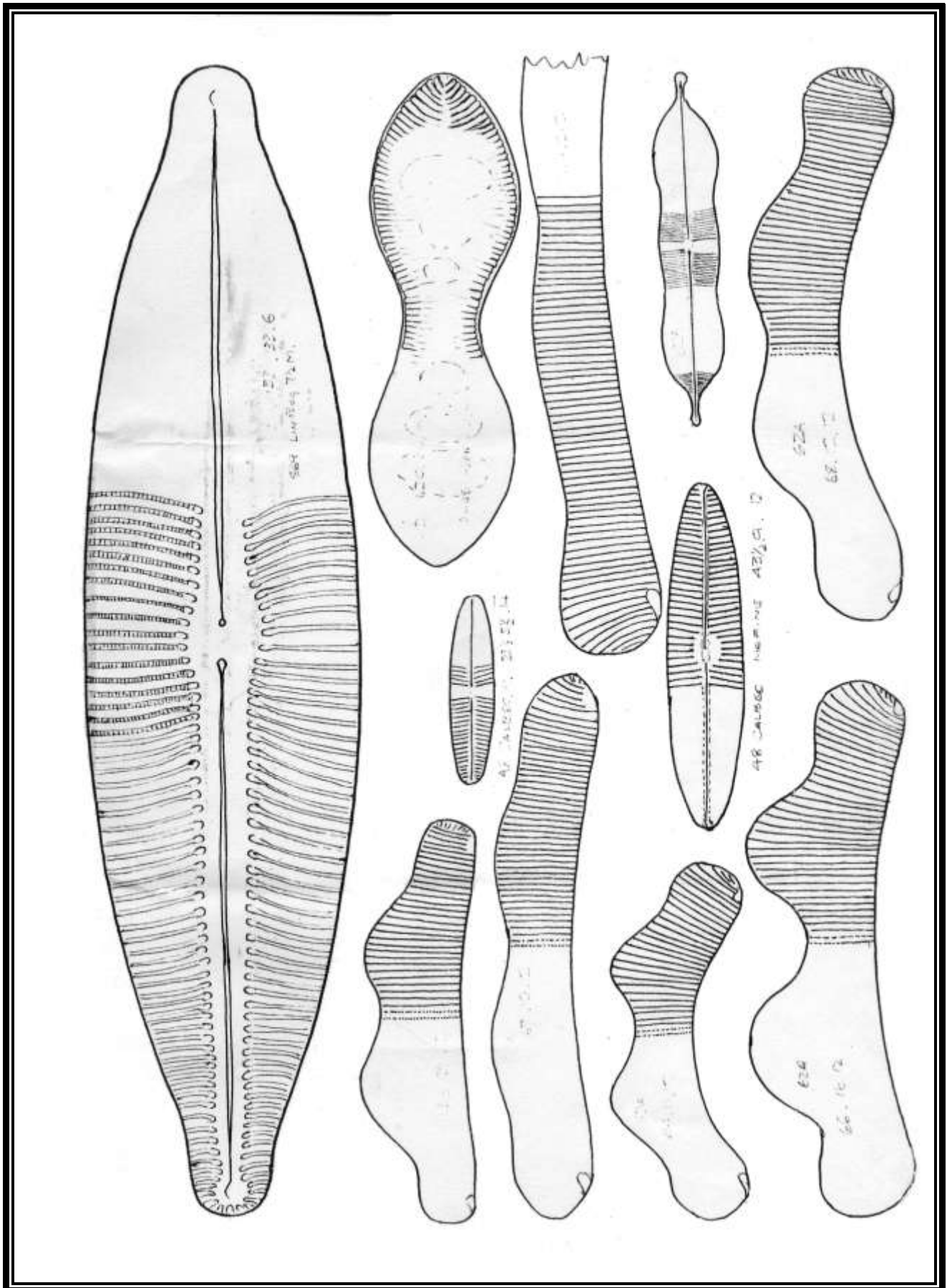
- A. HGB says Max Moller confirmed this as *Nitzschia perversa* Grun. *Nitzschia perversa* Grun seems to be very near to *Nitzschia navicularis* (Breb.) Grun., but HGB says the latter has different striae with double rows of punctae.
- B. *Neidium alpinum* has striae diagonal throughout whereas *N. bisulcatum* has striae radiate of diagonal at centre, diagonal at midway length and slightly convergent at ends – according to Reimer.
- C. HGB says *P. krookei* is quite distinct from *P. globiceps*. The former could be with continuous or interrupted striae even in one frustule but no one says so!



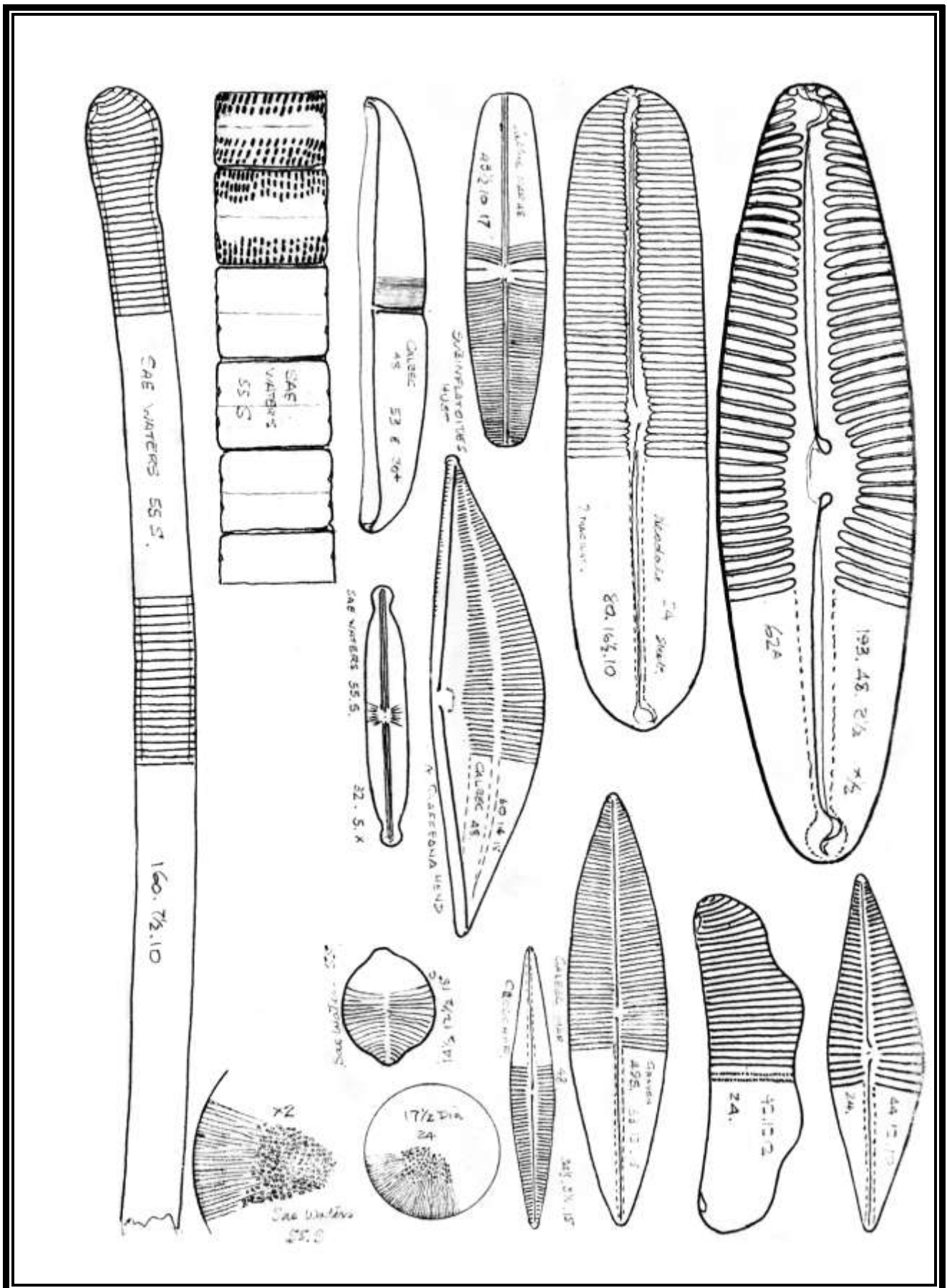


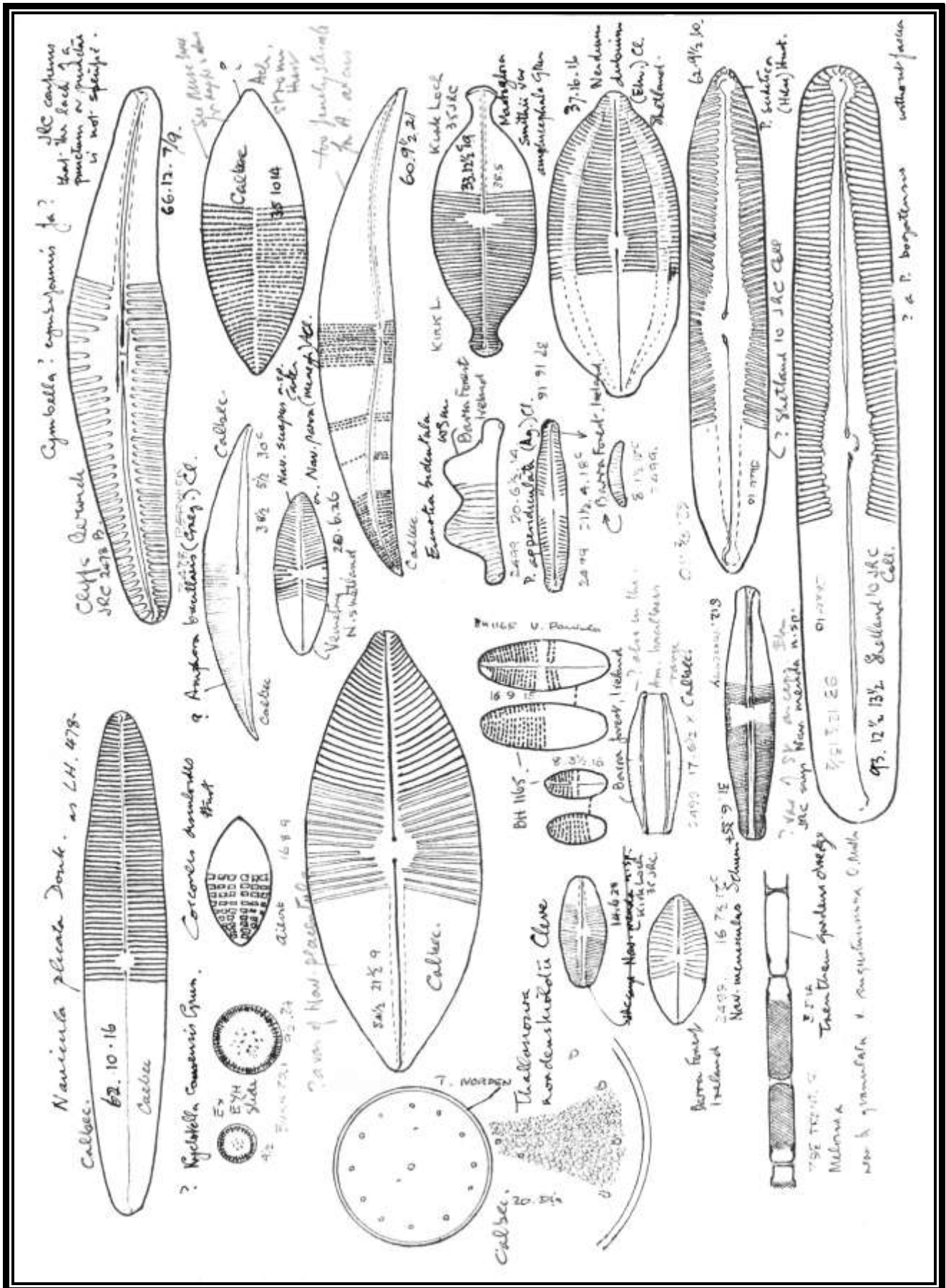


Miscellaneous Plate 414

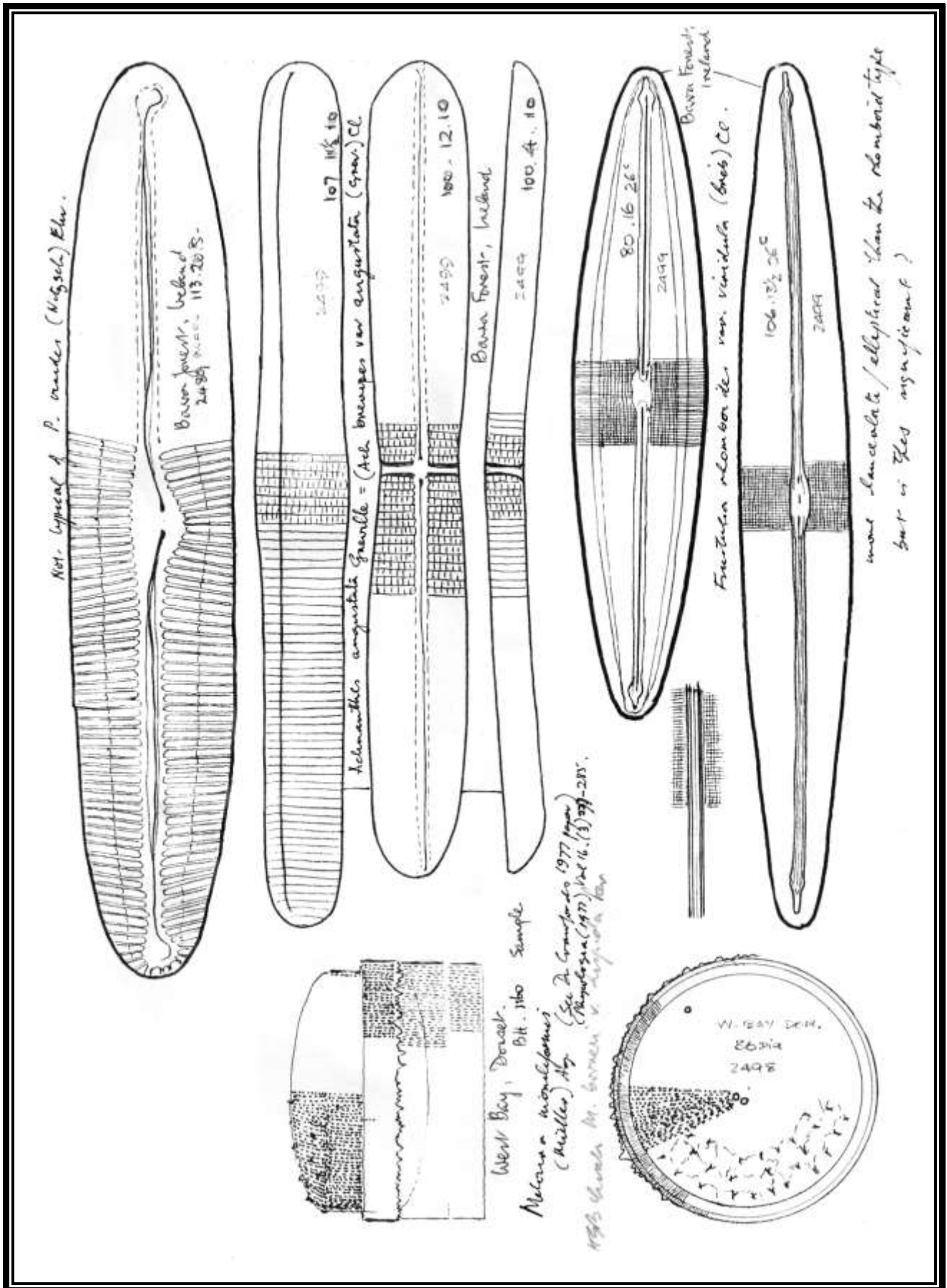


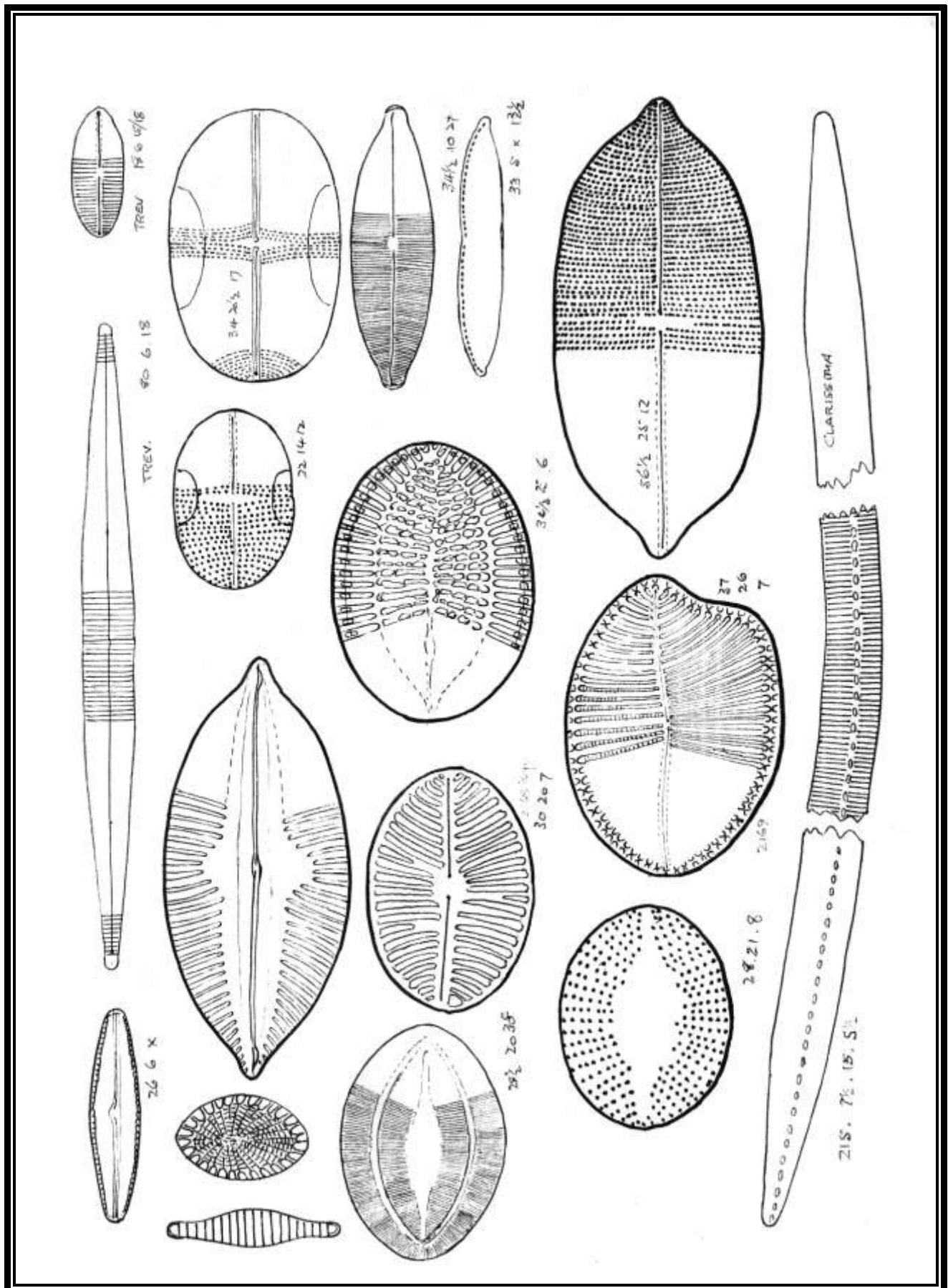
Miscellaneous Plate 415



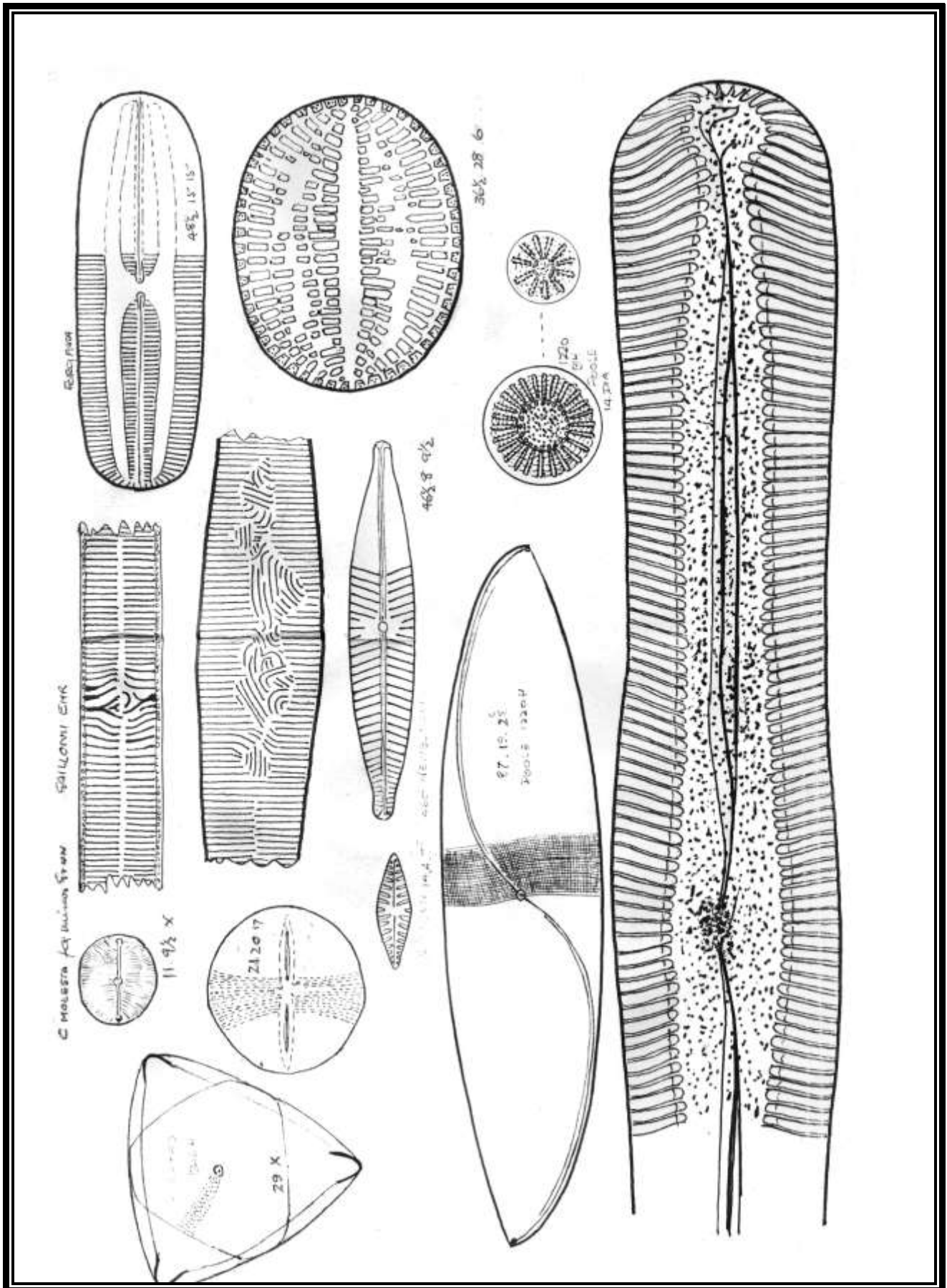


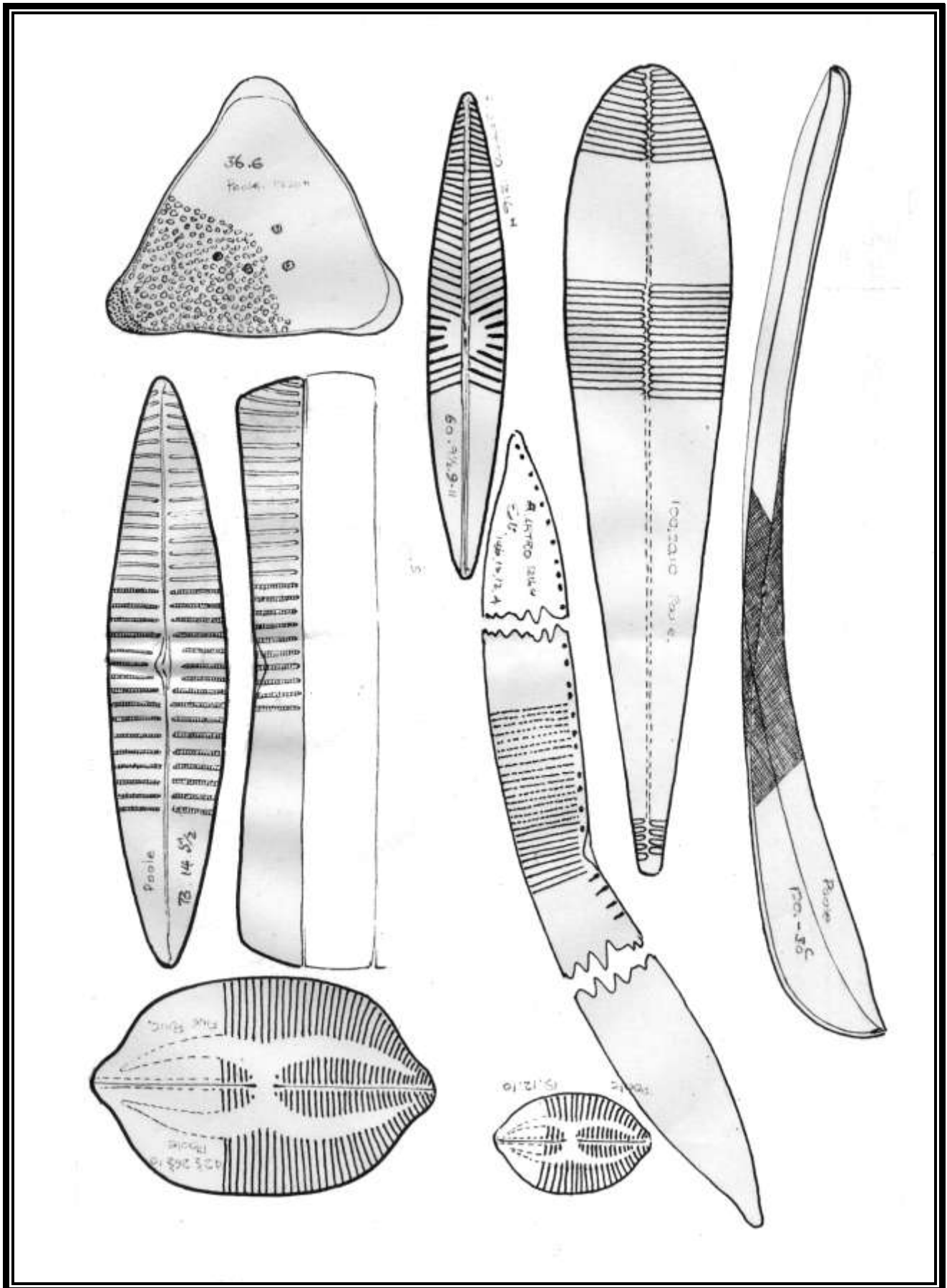
Miscellaneous Plate 417





Miscellaneous Plate 422





Miscellaneous Plates 424 & 425 (Accompanying text)

Some *Pinnularia* from Charlwood Rectory Pond in Wood, Charlwood R.P.

Pinnularia 103.20.6½

This form is near to type *viridis* except for the langsbands which are rather narrow. Should be about ½ width of aereole and the raphe fold is rather short, should be longer.

Pinnularia 121.21.5

This may be *P. biclavata*. If one refers to A.Cl-Eu., her illustrations 1111 A-C are not much use and there is only one form. I have sketched an example which agrees somewhat i.e. 200.20.6½ on Plate 2, but nowhere does she give any indication of langsbands or their positions. The question of central striae interruption is not a fixed feature. May or may not be present. If you search the material you will find so.

Forms 180.74.6½ and 121.21.5. Note the langsbands positions. These are very similar, but differing raphes.

Pinnularia 96.16½.7 and 100.18½.6½

Have similar type langsbands, the former just visible at the striae ends for part of the valve. 100.18.6½ not visible at striae ends. The raphe systems here are different. 100.18.5½ is not strongly complex.

Pinnularia 180.24.6½

This form can be found with the odd central stria missing, basically the same as 200.20.6½.

The smaller forms 60.9½.10, 53.9.10, 50.9.9 are all of the same taxon, differing only in minor ways. Even 50.9.9., a case of interrupted central striae. The raphe systems are very fine and idfficult to follow the complexities. Could be one of the *P. viridis* group, possibly "*sub-viridis*", "*near to sudetica*" and 53.9.10 "*near P. rupestris*".

60.9½.10 has the same striae radiation etc. as 53.9.10 but a raphe now close to *viridis* type.

Pinnularia 31.5½.12

In spite of what Euler says I would accept this as *P. brebissonii* var. *diminuta*.

Pinnularia 42.9.13

Although the form looks like A.Cl-Eu. 1108C *P. bipectinalis* there are some points which don't tie up! The form is fairly frequent in the gathering and fairly constant. I wouldn't like to say what.

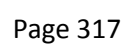
Apart from the *S. ovalis* the other two forms are from Littoral marine sites.

I have not depicted all the *Pinnularia* present in the gathering for certain reasons but I can assure you "it is not 95% pure growth of *P. biclavata*"! as you (Bernard Hartley) suggest.

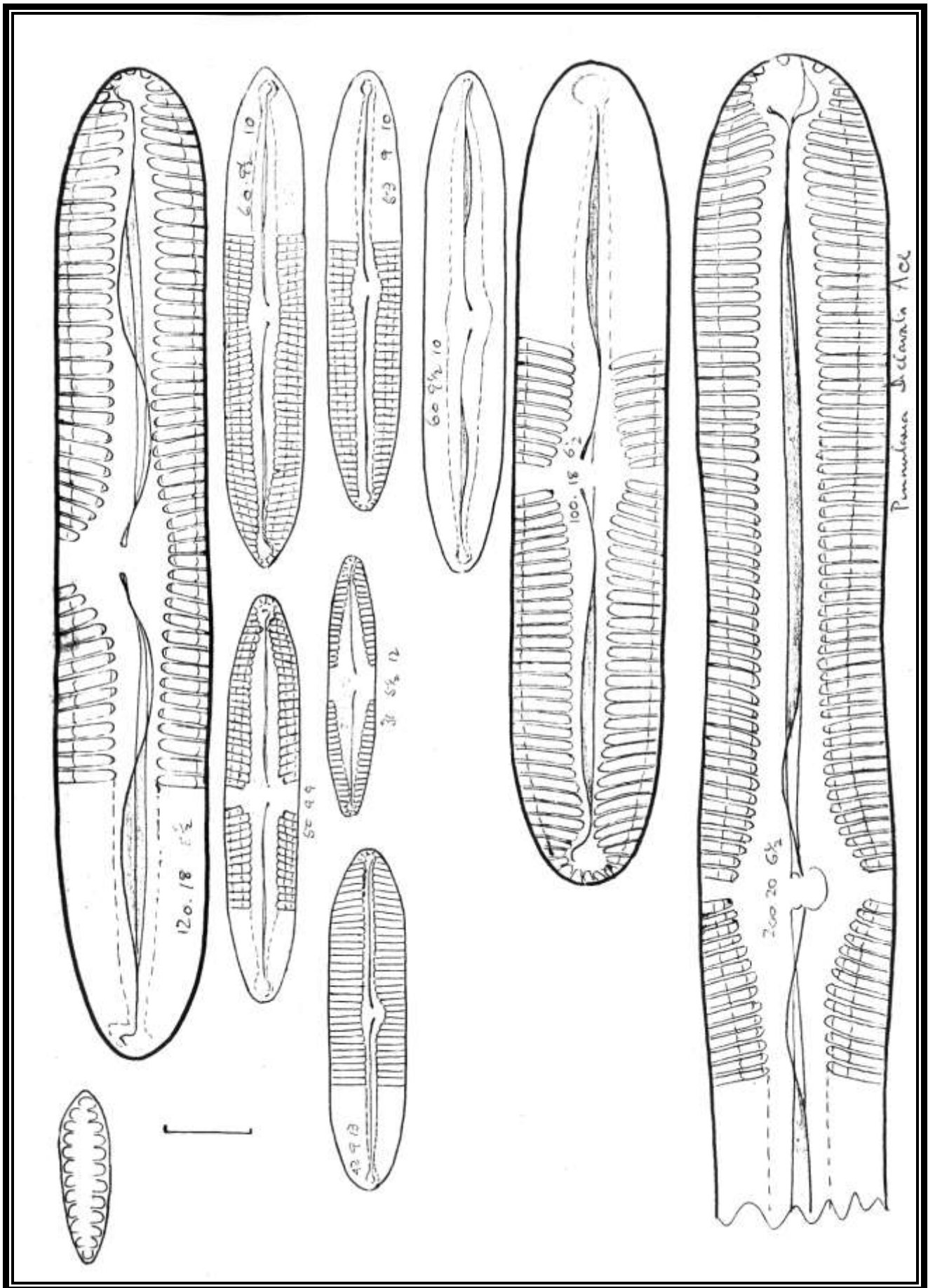
So sorry not to be more conclusive naming the forms but believe me, every gathering one makes of *Pinnularias* begins a host of troubles. Often because of poor illustrations to work to, everybody has different ideas, particular specimens do vary and habitat plays a big part in variation.

There are some features I've slowly got to understand in the *Pinnularias* and there are others I would like to know of but who can say with confidence. A fine admission after 40 years and many hundreds of drawings of the particular genus.

Horace.



Miscellaneous Plate 425



Miscellaneous Plate 425c & 425g (Accompanying text)**Extract from Foged****Spitzbergen (Plate 10)**

Fig. 1.S	<i>N. schonfeldii</i> Hust. fa.
Fig. 2.S	<i>N. schonfeldii</i> Hust.
Fig. 3.S	<i>N. schonfeldii</i> Hust.
Fig. 4.S	<i>N. paludosa</i> Hust.
Fig. 5.S	<i>N. paludosa</i> Hust.
Fig. 6.S	<i>N. ignota</i> (Kras.) Lund var. <i>palustris</i> Lund.
Fig. 7.S	<i>N. ignota</i> (Kras.) Lund
Fig. 8.S	<i>N. paludosa</i> Hust.
Fig. 9.S	<i>N. paludosa</i> Hust. (?)

EirePlate XXVIII – Figs. 12 & 13 too poor to copy (*schonfeldii*)

Plate XXIX

Fig. 30 too poor to copy

Fig. 31.E	<i>N. paludosa</i> (Fig.31 copied but raphe not visible)
-----------	--

Ghana (Plate XVI)

Fig. 4.G	<i>N. paludosa</i> Hust.
Fig. 6.G	<i>N. pseudolagerstedtii</i> Chol.

Extract from A. Cl.-Eu.**Sweden and Finland 1951**

Fig. 795A	<i>N. schonfeldii</i> Hust. 12/25. 6/8. 12/18 (Syn. <i>N. paanaensis</i> Cl.Eu.)
Fig. 795B	<i>N. schonfeldii</i> Hust. (Syn. <i>N. paanaensis</i> Cl.Eu.)
Fig. 880A	<i>N. lagerstedtii</i> Cl. (not a good print) 29/28 6/6½
Fig. 880B	(No Quote)
Fig. 880C	<i>N. ? palustris</i> Hust.
Fig. 880D	<i>N. ? palustris</i> Hust.
Fig. 880E	<i>N. (?var. elliptica) lagerstedtii</i> var. <i>palustris</i> Hust L15 B7

Extract from Hustedt**Middle Europe – 1930**

Fig. 520H	<i>N. schonfeldii</i> Hust.
Fig. 520H	<i>N. schonfeldii</i> Hust.

Macklenburg, Lauenberg & Nordostdeutschland Lakes (Plate XXXVII)

Fig. 31M	<i>N. lagerstedtii</i> var. <i>palustris</i> Hust. fa. <i>minores</i> Hust.
Fig. 32M	<i>N. lagerstedtii</i> var. <i>palustris</i> Hust. fa. <i>minores</i> Hust.
Fig. 33M	<i>N. lagerstedtii</i> var. <i>palustris</i> Hust. fa. <i>minores</i> Hust.
Fig. 34M	<i>N. schonfeldii</i> Hust.
Fig. 35M	<i>N. schonfeldii</i> Hust.
Fig. 36M	<i>N. schonfeldii</i> Hust.
Fig. 37M	<i>N. schonfeldii</i> Hust.

Java & Bali (Plate XVIII)

Fig. 8J.	<i>N. lagerstedtii</i> Hust.
Fig. 9J.	<i>N. lagerstedtii</i> Hust.

Miscellaneous Plates 425c & 425g (Accompanying text) - continued

A. Schmidt's Atlas (Plate 400)

Fig. 27A.S.	<i>N. lagededti</i> var. <i>palustris</i> Hust.
Fig. 28A.S.	<i>N. lagededti</i> var. <i>palustris</i> Hust.
Fig. 29A.S.	<i>N. lagededti</i> var. <i>palustris</i> Hust.
Fig. 33A.S.	<i>N. lagededti</i> Hust.
Fig. 35A.S.	<i>N. lagededti</i> Hust.
Fig. 37A.S.	<i>N. lagededti</i> Hust.

Extract from C. Reimer (Cayler Prairie)

Diatomaceae II

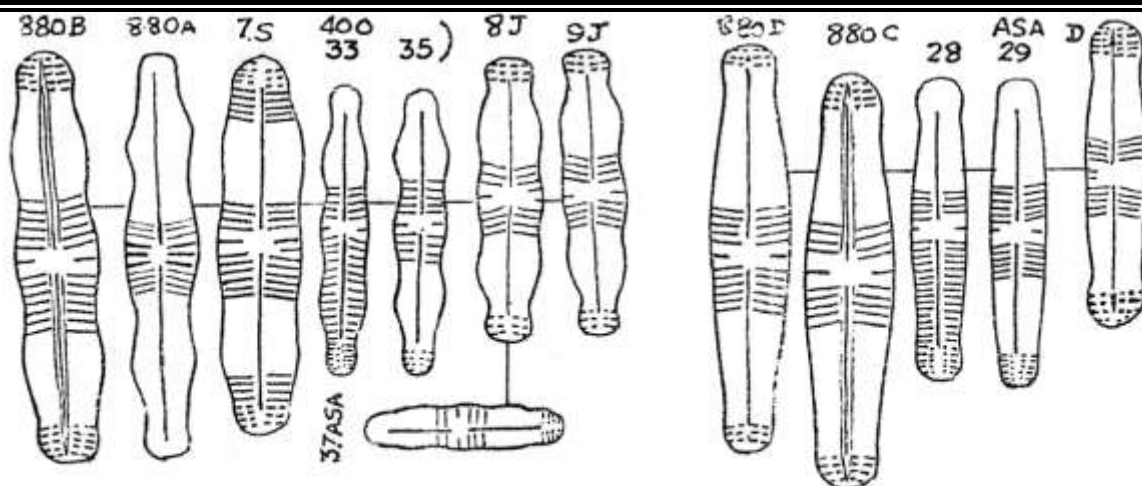
Fig. 1.R.	<i>N. paludosa</i> fa. <i>rhomboidea</i> Reim. 14/22 5/5½ 14/16 (?puncta on one valve only)
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Extract from C. Bock

Diatomaceae II

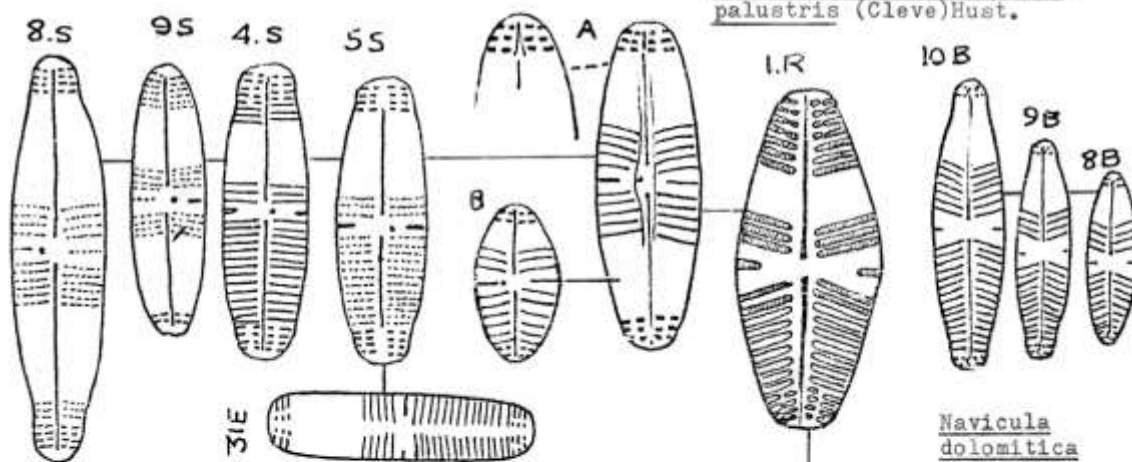
Fig. 8B	<i>N. dolomitica</i> Bock 14/20 4/5 15/18
Fig. 9B	<i>N. dolomitica</i> Bock
Fig. 10B	<i>N. dolomitica</i> Bock (Note Term. Hooks)

Miscellaneous Plate 425c



Navicula lagerstedtii Cleve

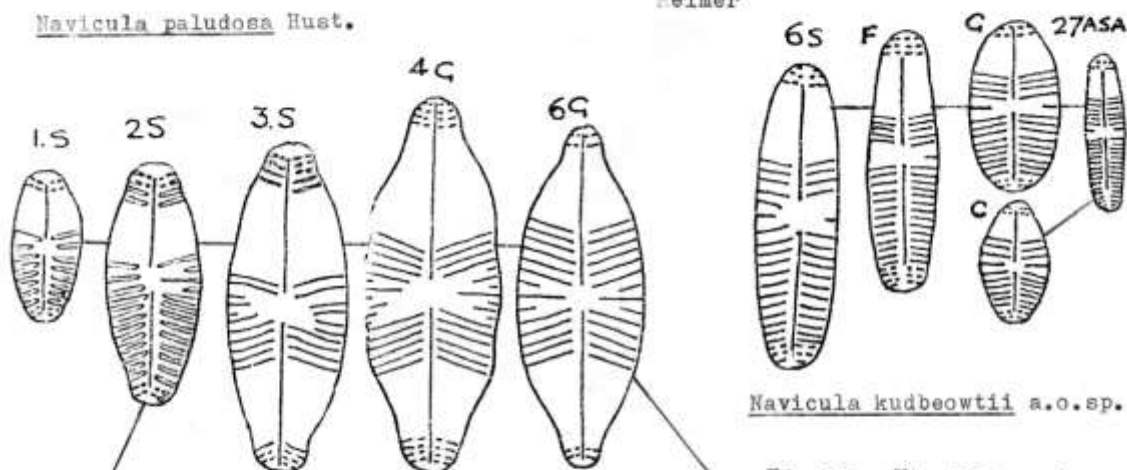
Navicula lagerstedtii var. *palustris* (Cleve) Hust.



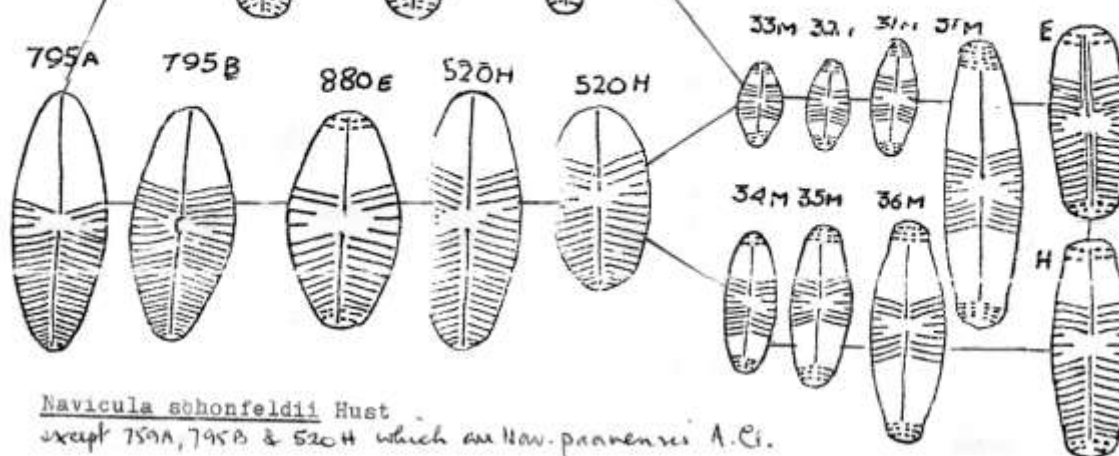
Navicula paludosa Hust.

fa. *rhomboidea* Reimer

Navicula dolomitica Bock.



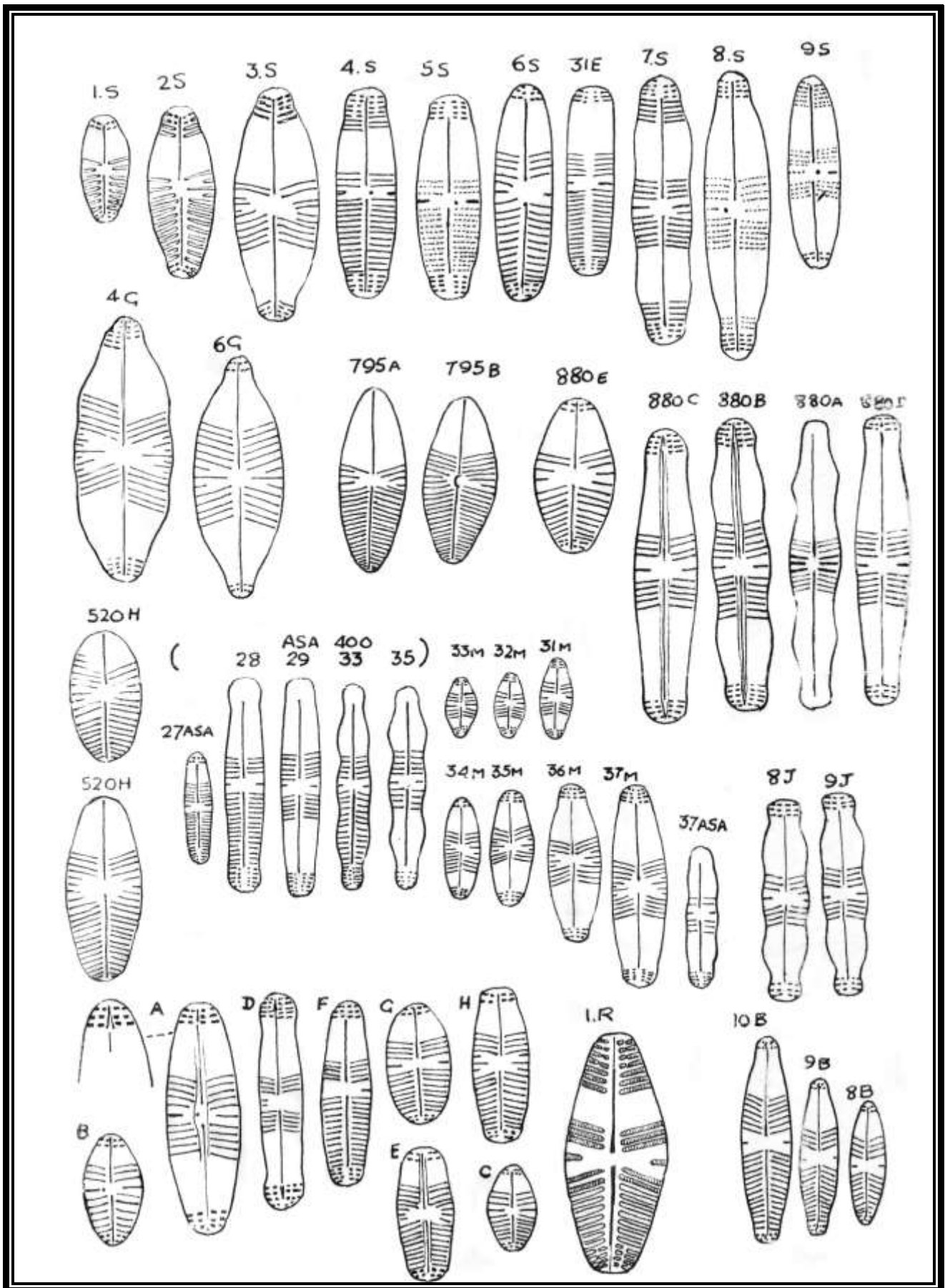
Navicula kudbeowtii a.o.sp.

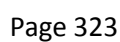


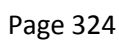
Navicula schonfeldii Hust

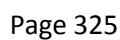
except 795A, 795B & 520H which are *N. pragensis* A.Ci.

Miscellaneous Plate 425g

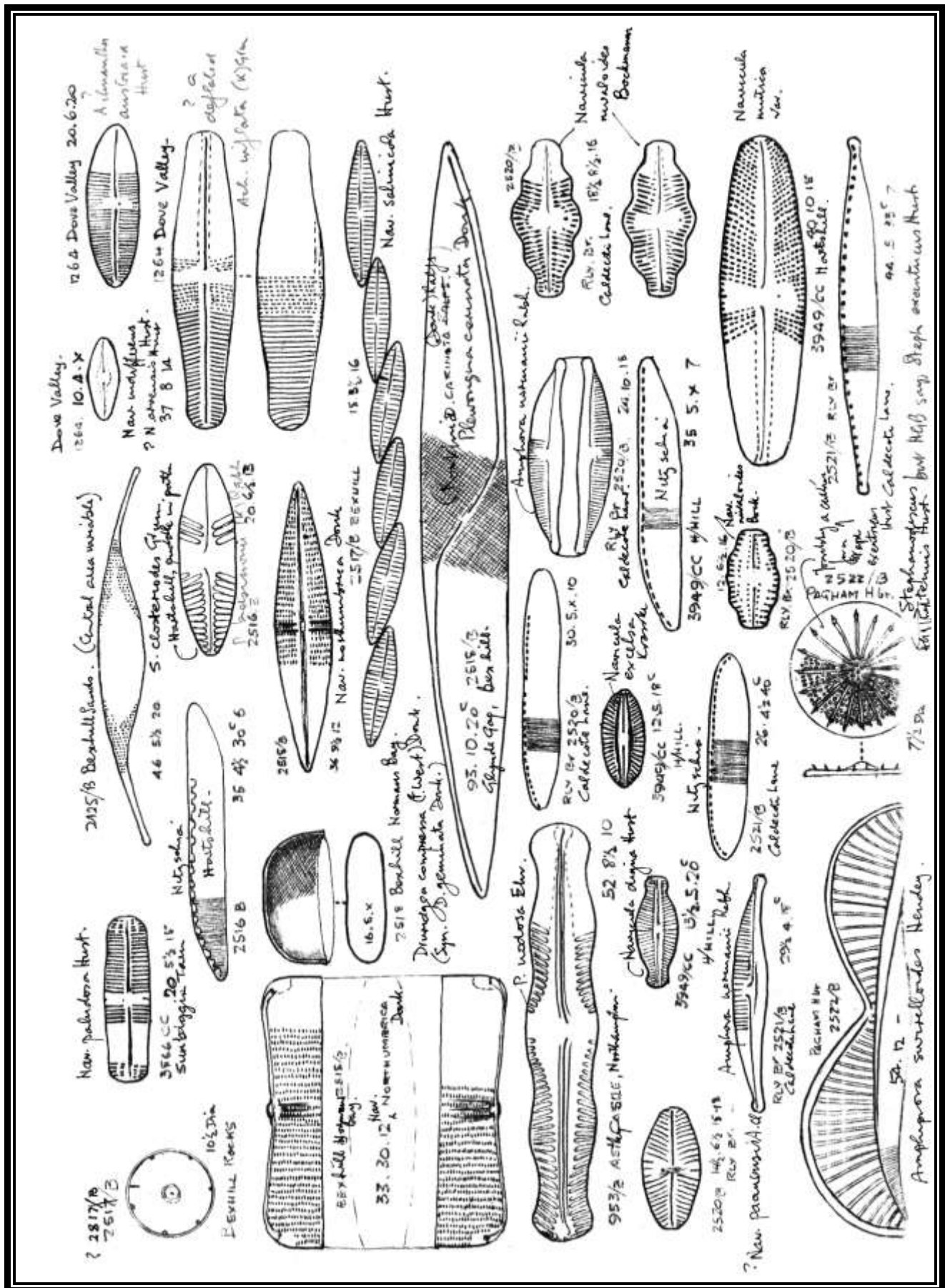


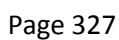


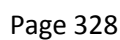




Miscellaneous Plate 429







Miscellaneous Plate 431a & 431b (Accompanying text)
An Illustrated Account of the Diatom Flora from a small Dredging – Edge of
Crosemere, Shropshire
9th November 1980



The accompanying illustrated account was made from about 1.5cc of dredged material some 7 metres from the bank. I would have liked more but had not the means of a suitable container. What was obtained consisted of 95% detritus.

(Plate 1. Fig. 1 is the first occasion to have noted the taxon.)

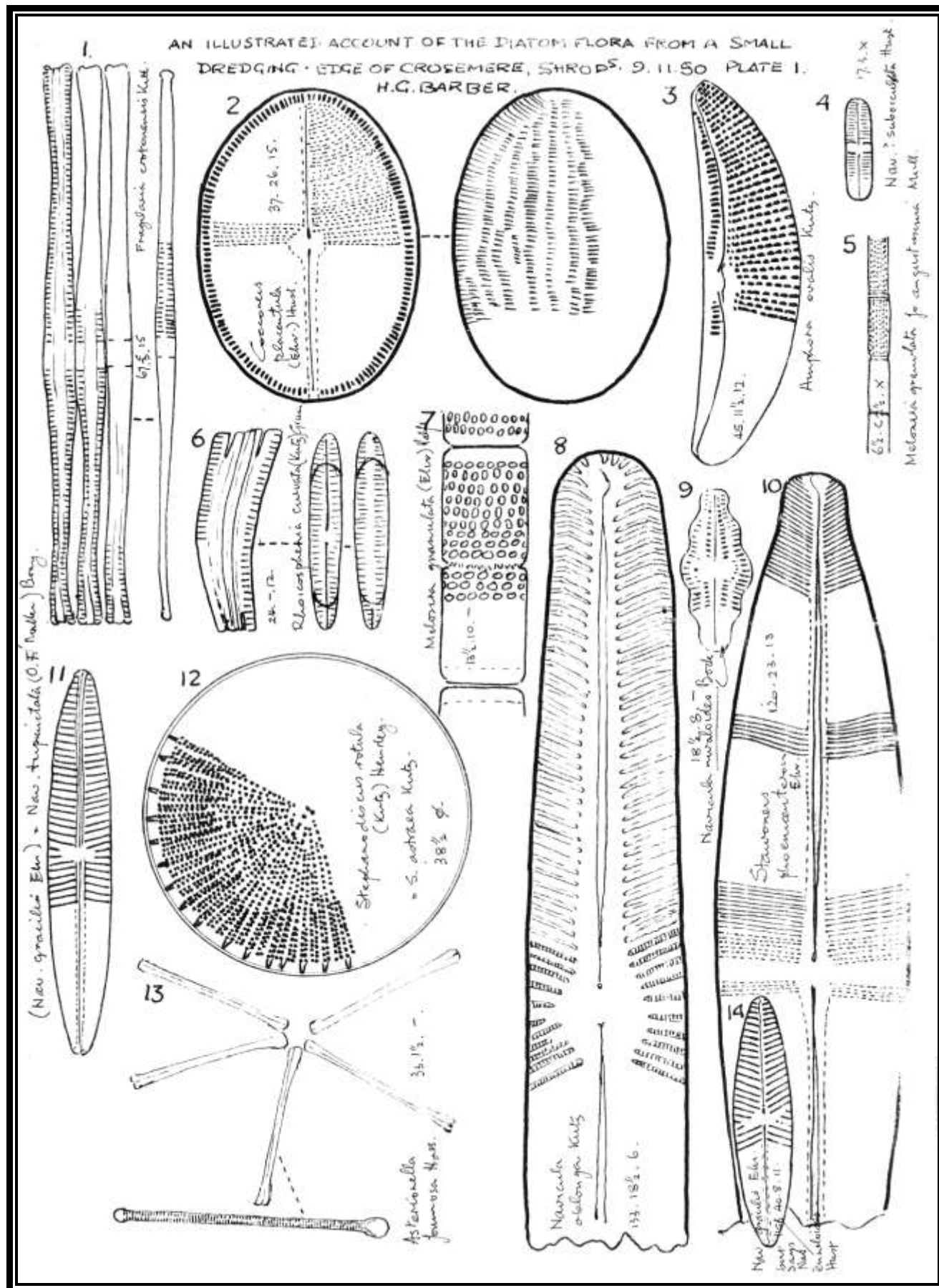
H.G. Barber

Nov. 1980

Plate 1

Figure/dimensions	Name
1/67.3 ^c .15	<i>Fragilaria crotonensis</i> Kitt.
	Very frequent
2/37.26.15	<i>Cocconeis placentula</i> (Ehrenberg) Hust.
	Frequent
3/45.11½.12	<i>Amphora ovalis</i> Kützing.
	Frequent
4/17.3.x	<i>Navicula ?suboculata</i> Hust.
	Very rare
5/6½.2½ ^c .x	<i>Melosira granulata</i> var. <i>angustissima</i> Mull.
	Fairly frequent
6/24.-.12	<i>Rhoicosphenia curvata</i> (Kützing) Grun.
	Fairly frequent
7/13½.10.-	<i>Melosira granulata</i> (Ehrenberg) Ralfs
	Very rare
8/133.18½.6	<i>Navicula oblonga</i> Kützing.
	Frequent
9/18½.8.-	<i>Navicula nivaloides</i> Bock.
	Very rare
10/120.23.18	<i>Stauroneis phoenicentron</i> Ehrenberg
	Very rare
11/40.8.11	<i>Navicula gracilis</i> Ehrenberg
	Very rare
12/38½ dia.	<i>Stephanodiscus astraea</i> (Ehrenberg) Grun.
	Very frequent
13/33.1½.-	<i>Asterionella formosa</i> Hass.
	Very frequent
14/30.6½.12	<i>Navicula bacillodes</i> Hust.
	Very rare

Miscellaneous Plate 431A



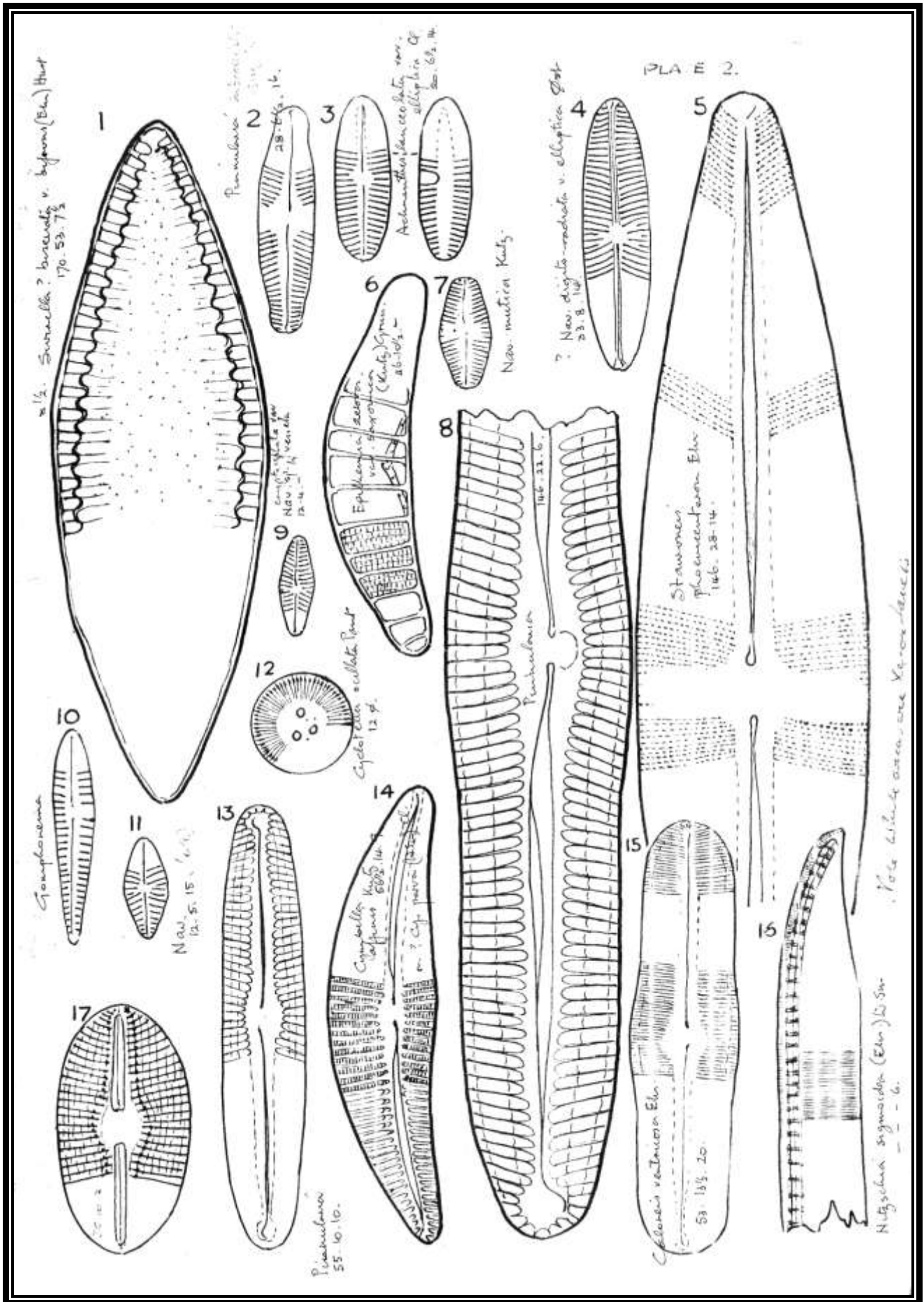
[Editor's Note - The date of collection on the plate is in error - should be 9.11.80]

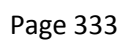
Miscellaneous Plate 431B (Accompanying text)

Figure/dimensions	Name
1/170.53.7½	<i>Surirella ?biseriata</i> var. <i>bifrons</i> (Ehrenberg) Hust.
	Rare (x½ scale)
2/28.6½.16	<i>Pinnularia subcapitata</i> Greg. fa.
	Very rare
3/20.6½.14	<i>Achnanthes lanceolata</i> var. <i>elliptica</i> Cl.
	Very rare
4/33.8.14	<i>Navicula digito-radiata</i> var. <i>elliptica</i> Oes.
	Very rare
5/146.28.14	<i>Stauroneis phoenicentron</i> Ehrenberg
	Very rare
6/46.10½.-	<i>Epithemia zebra</i> var. <i>saxonica</i> (Kützing) Grun.
	Frequent
7/13½.6.-	<i>Navicula mutica</i> Kützing.
	Very rare
8/146.22.6	<i>Pinnularia</i> sp.
	Very rare The nearest I can suggest is <i>P. neglecta</i> (Naeg) It is not <i>P. viridis</i> , <i>P. nobilis</i> . The raphe system is wrong for <i>P. dactylus</i> and <i>P. cuneata</i> is not a good fit.
9/12.4.-	<i>Navicula</i> sp. ? <i>veneta</i>
	Very rare
10/26½.5.10	<i>Gomphonema ?bohemicum</i>
	Very rare
11/12.5.15	<i>Navicula ?anglica</i> Ralfs
	Very rare
12/12 dia	<i>Cyclotella ocellata</i> Pant.
	Rare
13/55.10.10	<i>Pinnularia ?rupestris</i>
	(Near) Very rare
14/56½.14.9	<i>Cymbella affinis</i> Kützing. ? or <i>Cymbella parva</i> (W.Sm.) Cl.
	Very rare
15/53.13½.20	<i>Caloneis ventricosa</i> Ehrenberg
	Very rare
16/-.-.6	<i>Nitzschia sigmaidea</i> (Ehrenberg) Wm.Sm.
	Frequent

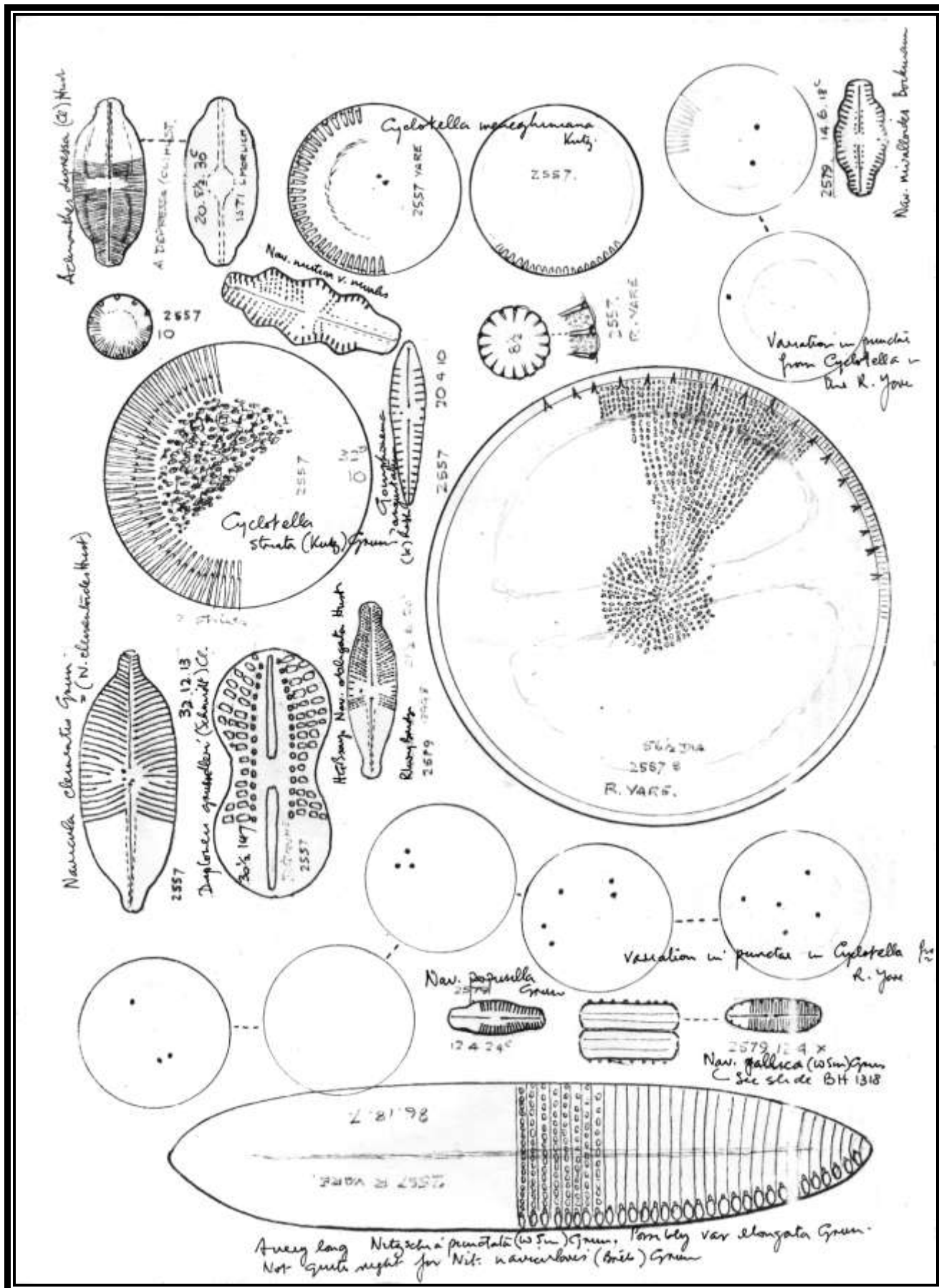
Note: The forms marked 'Very rare' are generally one specimen.

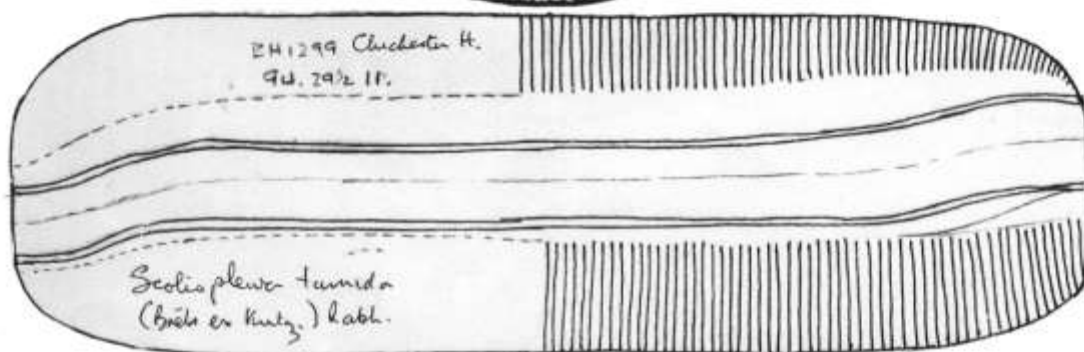
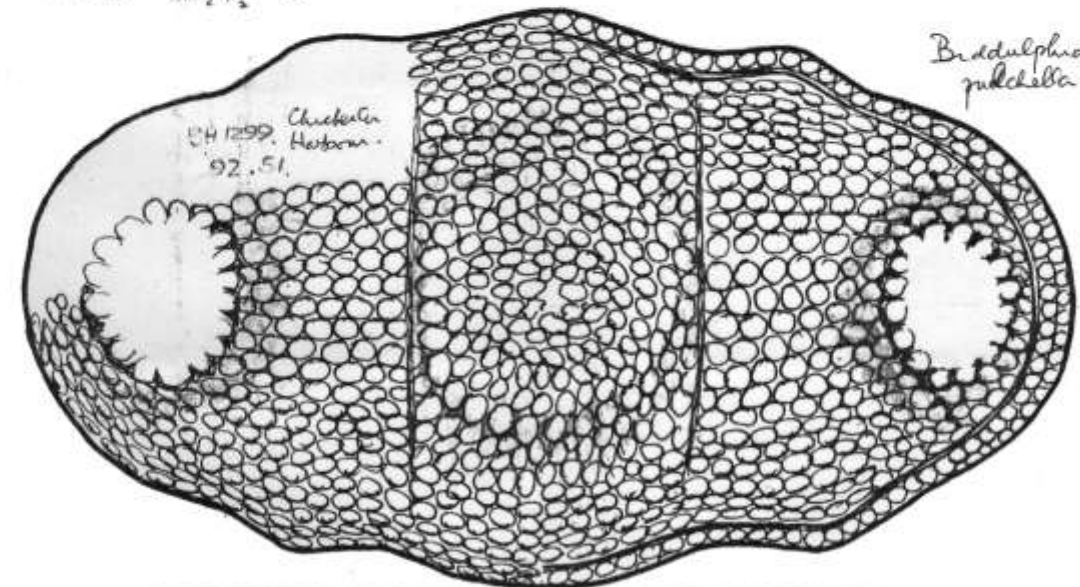
Miscellaneous Plate 431B

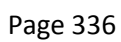


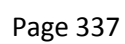


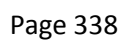
Miscellaneous Plate 433

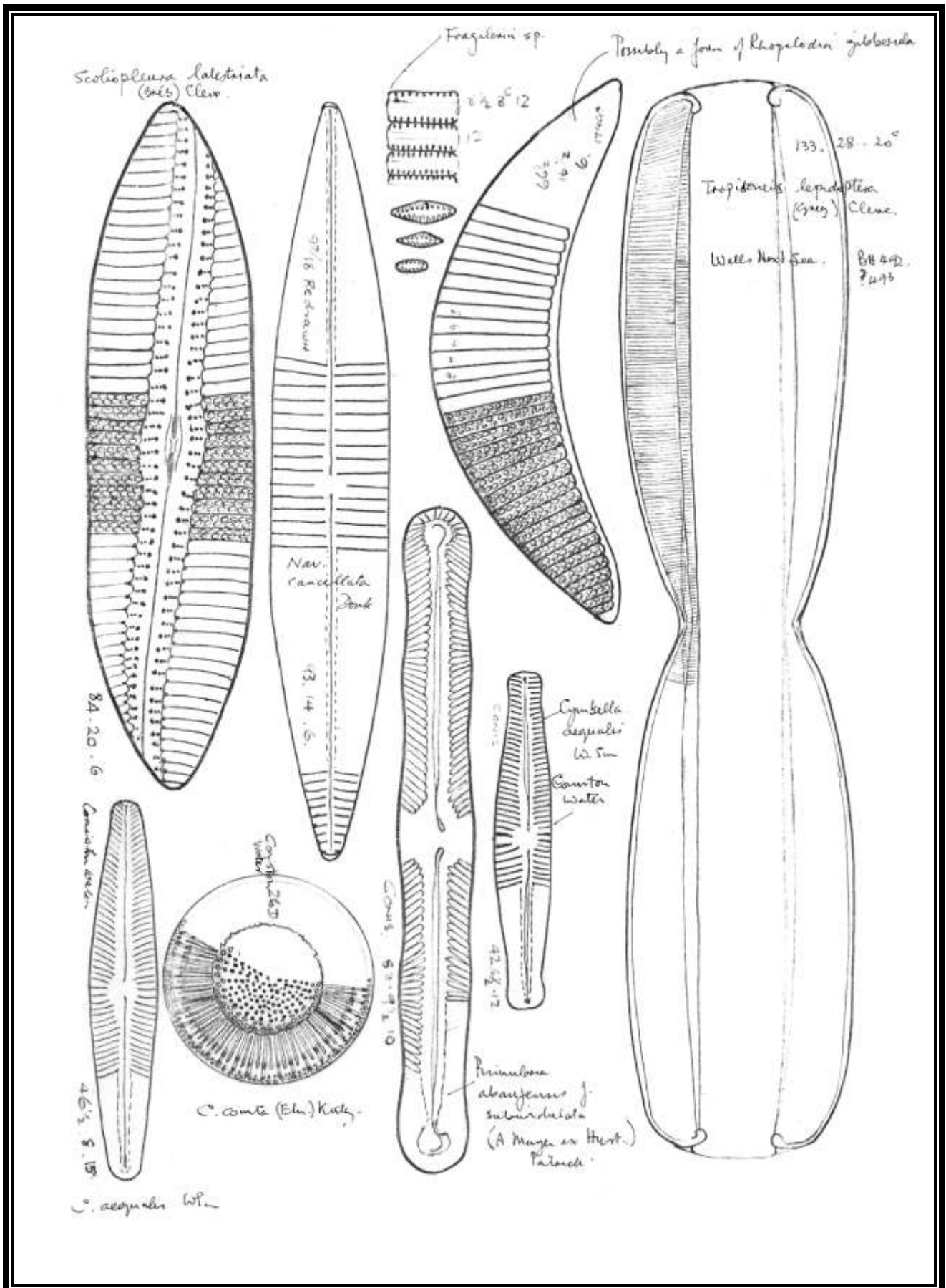


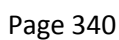


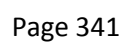




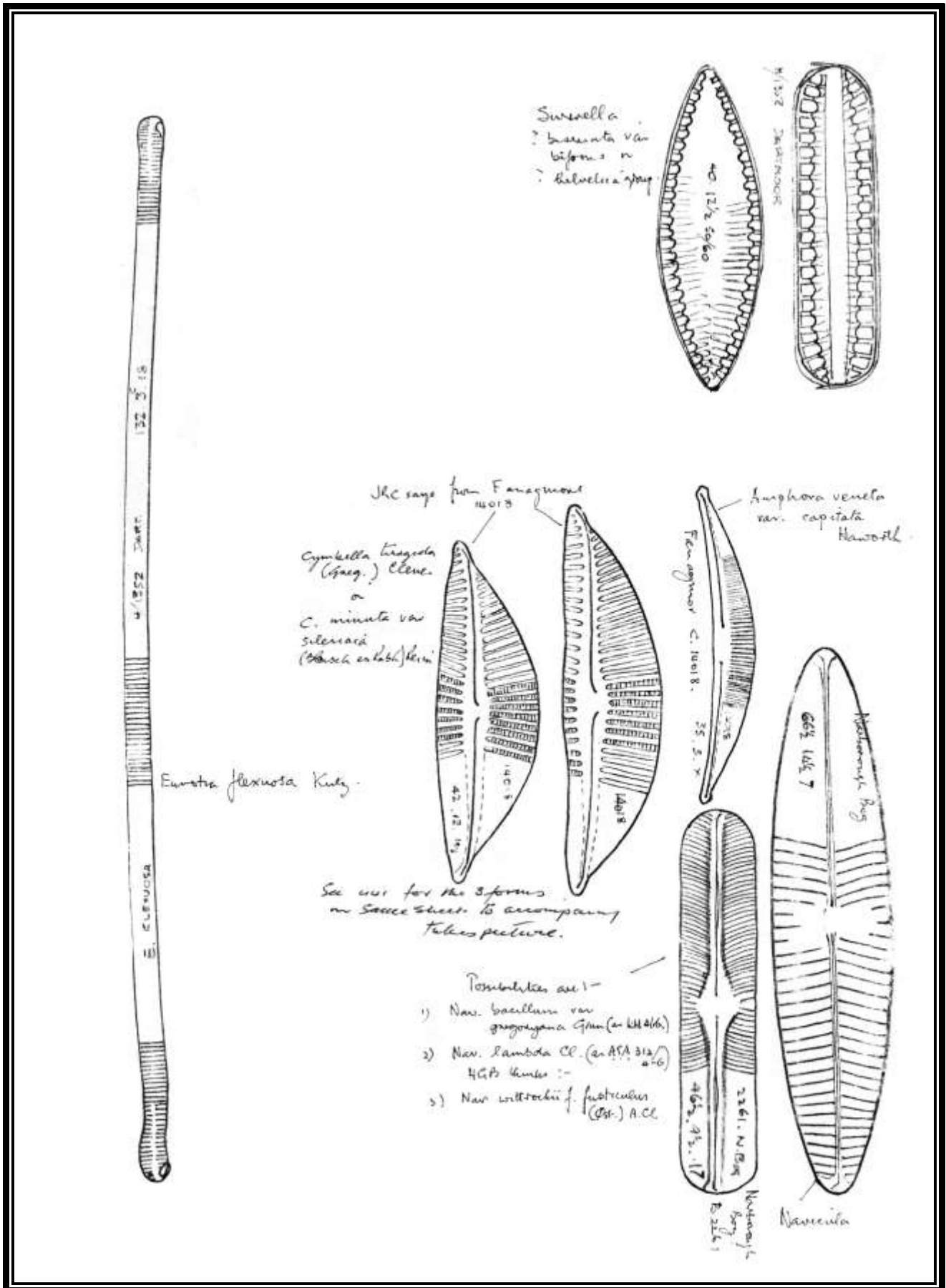




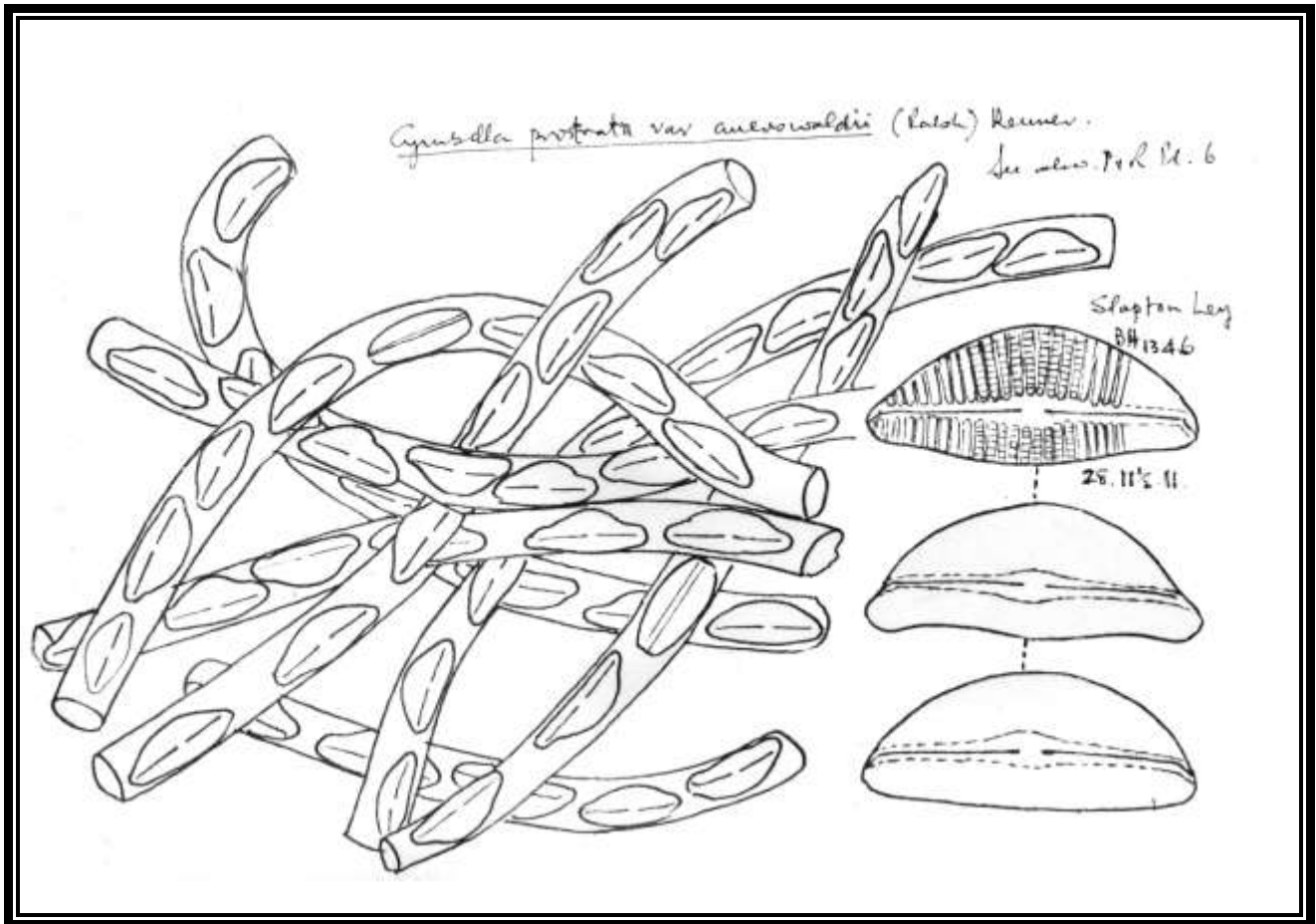




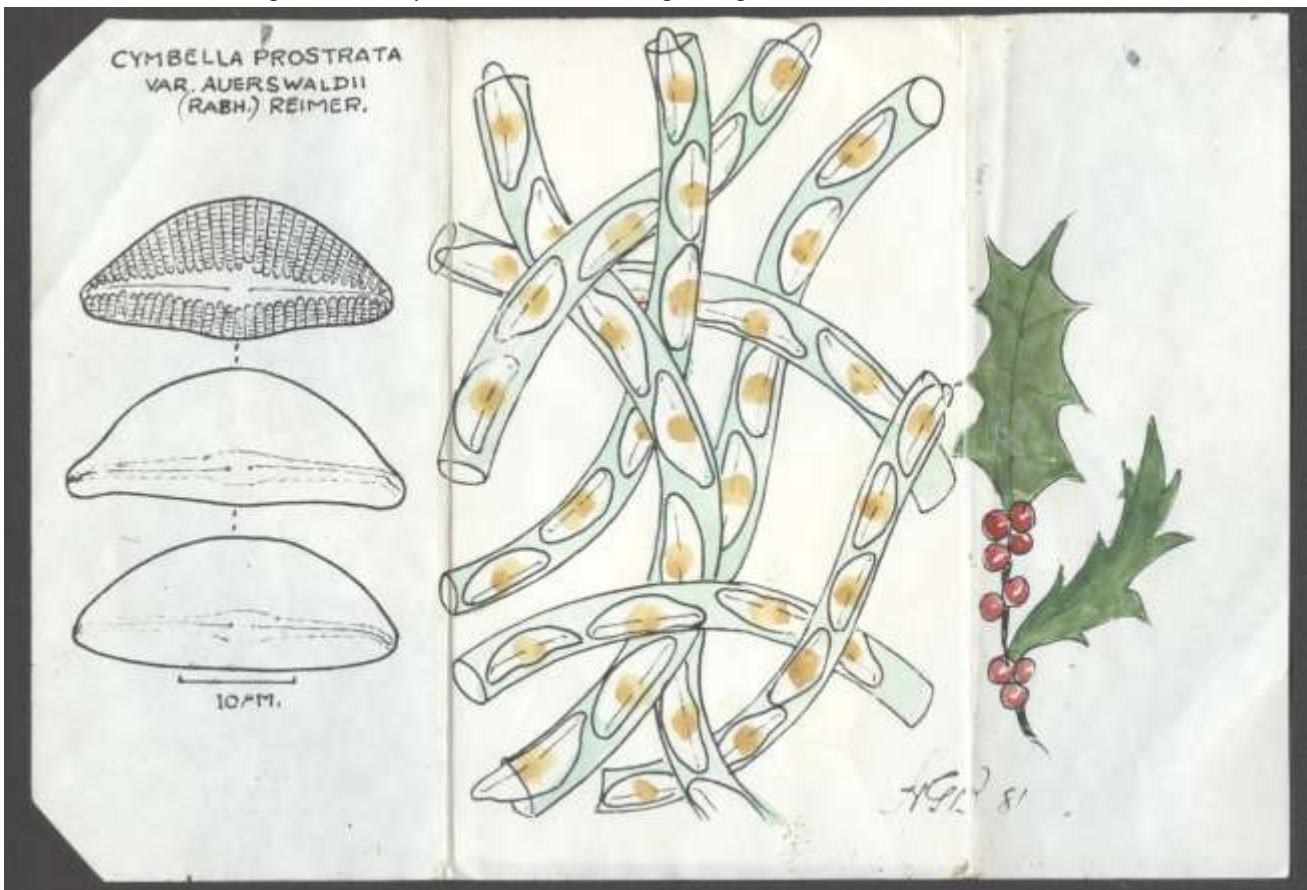
Miscellaneous Plate 440



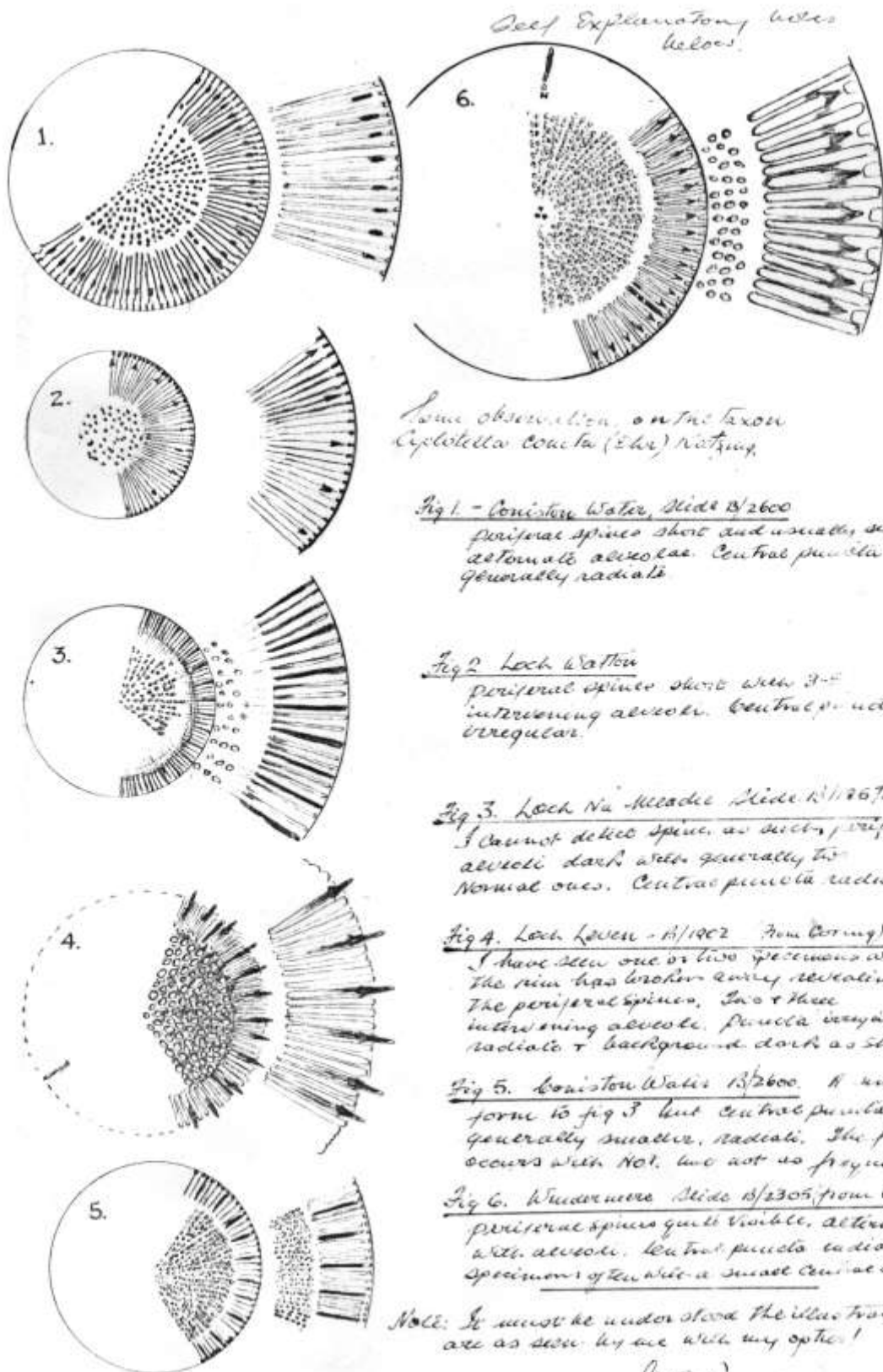
Miscellaneous Plate 441



This derivative of this image was used by Horace as a Christmas greeting in 1981.



Miscellaneous Plate 442



H.G.B. 7-81.

Miscellaneous Plates 443, 444 & 445 (Accompanying text)

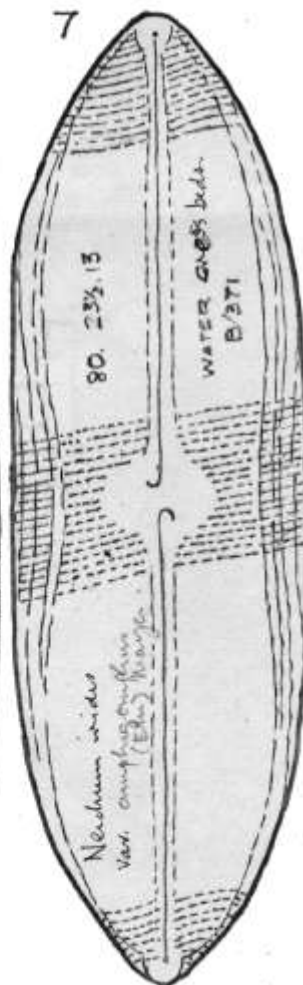
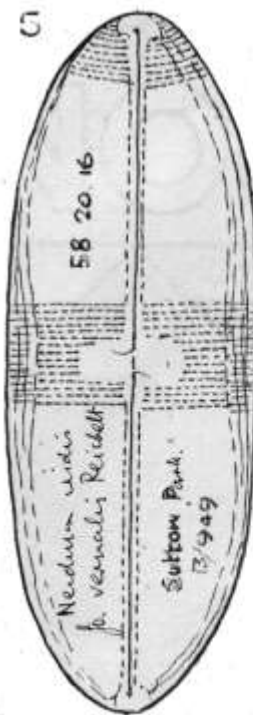
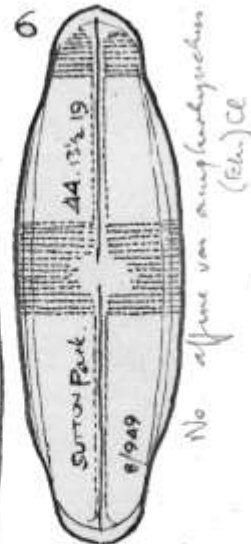
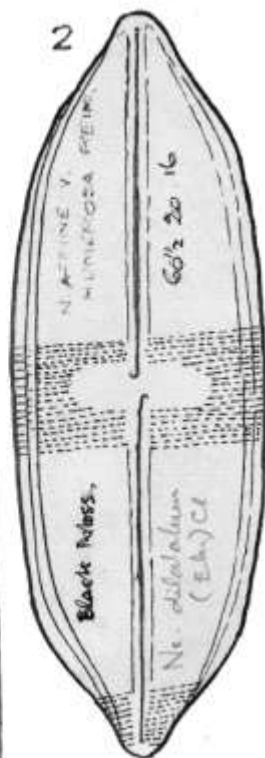
Delineation of the Genus *Neidium* forms from the Firth-Hartley Collection and other slides
August 1981

Plate Misc. 443

Figure/dimensions	Name (according to slide label)
1/60.22.16	<i>Neidium iridis</i>
	Transferred to <i>subampliatum</i> (Grun.) Cleve Site:- L. Cororion
2/60½.20.16	<i>Neidium affine</i> var. <i>humerosa</i> Reimer
	Site:- Black Moss
3/70½.21½.16	<i>Neidium iridis</i> var. <i>ampliatum</i> (Ehrenberg) Cl.
	Site:- Windermere Core
4/145.27.18	<i>Neidium iridis</i> var. <i>subampliatum</i> (Grun.) Cl.-Eu.
	Site:- Ashburton Park Lake
5/58.20.16	-
	Site:- Sutton Coldfield Park HGB Slide 949
6/44.13½.19	-
	I am unable to resolve the type of central terminals other than depicted. Site:- Sutton Coldfield Park
7/80.23½.13	-
	Site:- Water Cress Beds, Hartshill, Nuneaton, Warwickshire HGB Slide 371

Miscellaneous Plate 443

MISC. 443.

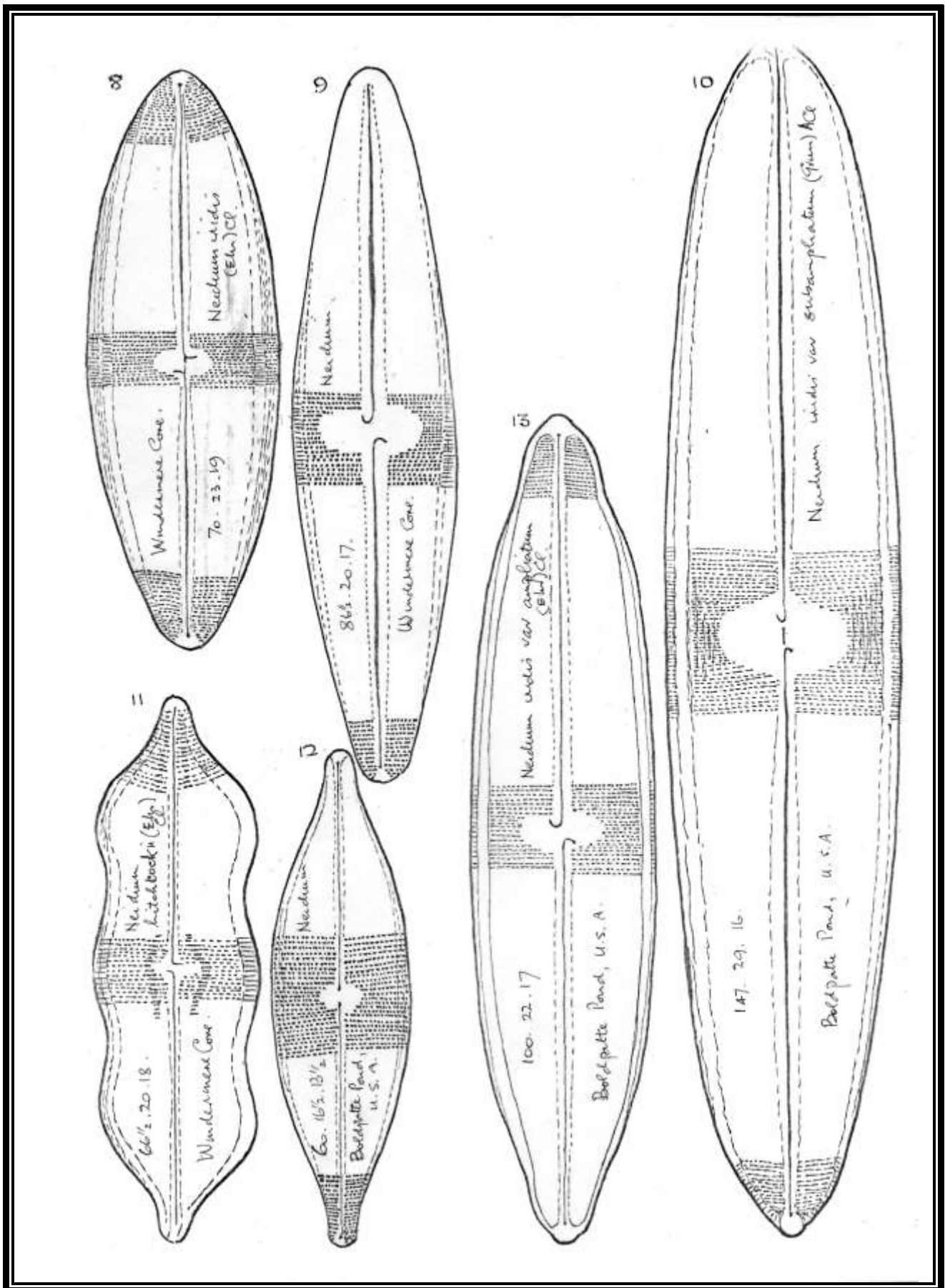


FIVE FIGURES OF THE
GENUS NEDUM -
FIRTH-HARTLEY
COLLECTION
AND
TWO OTHER FIGURES

Miscellaneous Plate 444 (Accompanying text)

Figure/dimensions	Name (according to slide label)
8/70.23.19	-
	Site:- Windermere Core HGB Slide 2305
9/86½.20.17	-
	Site:- Windermere Core HGB Slide 2305
10/147.29.16	-
	Site:- Boldplatte RIF Slide
11/66½.20.18	<i>Neidum hitchcockii</i> (Ehrenberg) Cl.
	Site:- Windermere Core HGB Slide 2305
12/60.16½.13½	-
	I am unable to resolve the type of central terminals other than depicted. Site:- Boldplatte RIF Slide
13/100.22.17	-
	Site:- Boldplatte RIF Slide

Miscellaneous Plate 444



Miscellaneous Plate 445 (Accompanying text)

Figure/dimensions	Name (according to slide label)
14/ 142.36.15	<i>Neidium iridis</i> var. <i>subampliatum</i> (Grun.) Cl.
	Site:- Toombe Bridge RIF Slide
15/ 113½.26½.13½	<i>Neidium iridis</i>
	Site:- L. Cororion RIF Slide
16/ 106.23½.15	<i>Neidium iridis</i> var. <i>ampliatum</i> (Ehrenberg) Cl.
	Site:- Burton Pond RIF Slide
17/ 72.22.15	<i>Neidium iridis</i> var. <i>ampliatum</i> (Ehrenberg) Cl.
	Site:- Black Moss RIF Slide

Criticism of sketches:-

Outlines are fairly accurate to the form depicted, as are also striae directions, central terminal hooks, axial and central areas. With regard to the peripheral 'längsbands' these are more or less an impression.

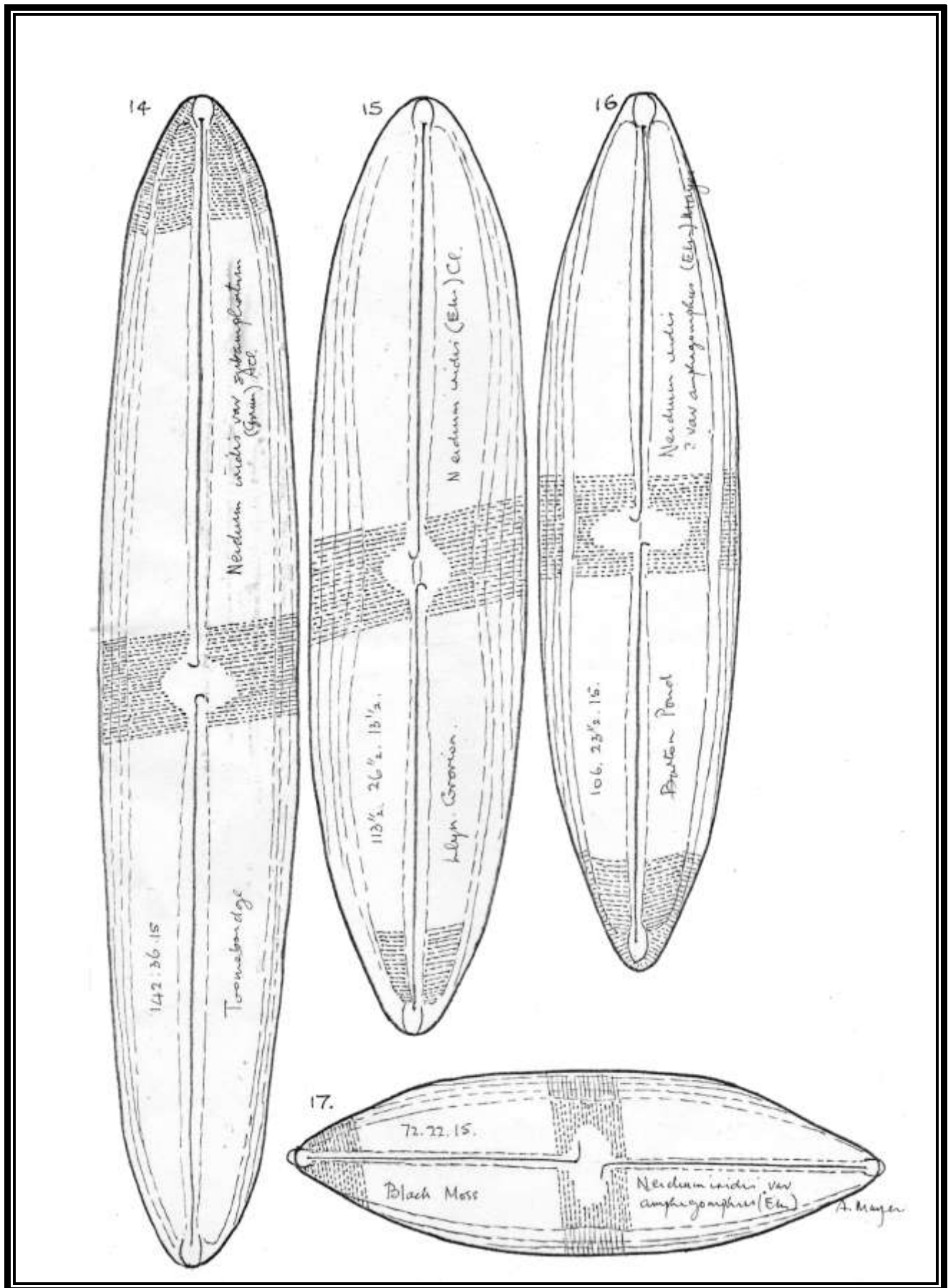
The weak points are punctae often dashes and should be round, striae not to scale, polar terminals not depicted, unable to resolve these so have not guessed. It would appear the ends of the valve are as a raised boss and difficult to portray. On some of the slides are a number of forms but have only depicted certain ones which I think are typical.

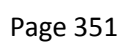
I admit to uncertainty regarding the variety status of *ampliatum* and *subampliatum* and would like to know the specific points determining same. What bearing on identity do the hooks or otherwise have? To my mind *N. iridis* is a polymorphic diatom and its variations have too many names by various authors.

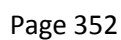
H.G.B.

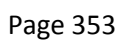
8/81

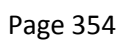
Miscellaneous Plate 445

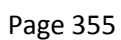


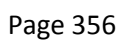


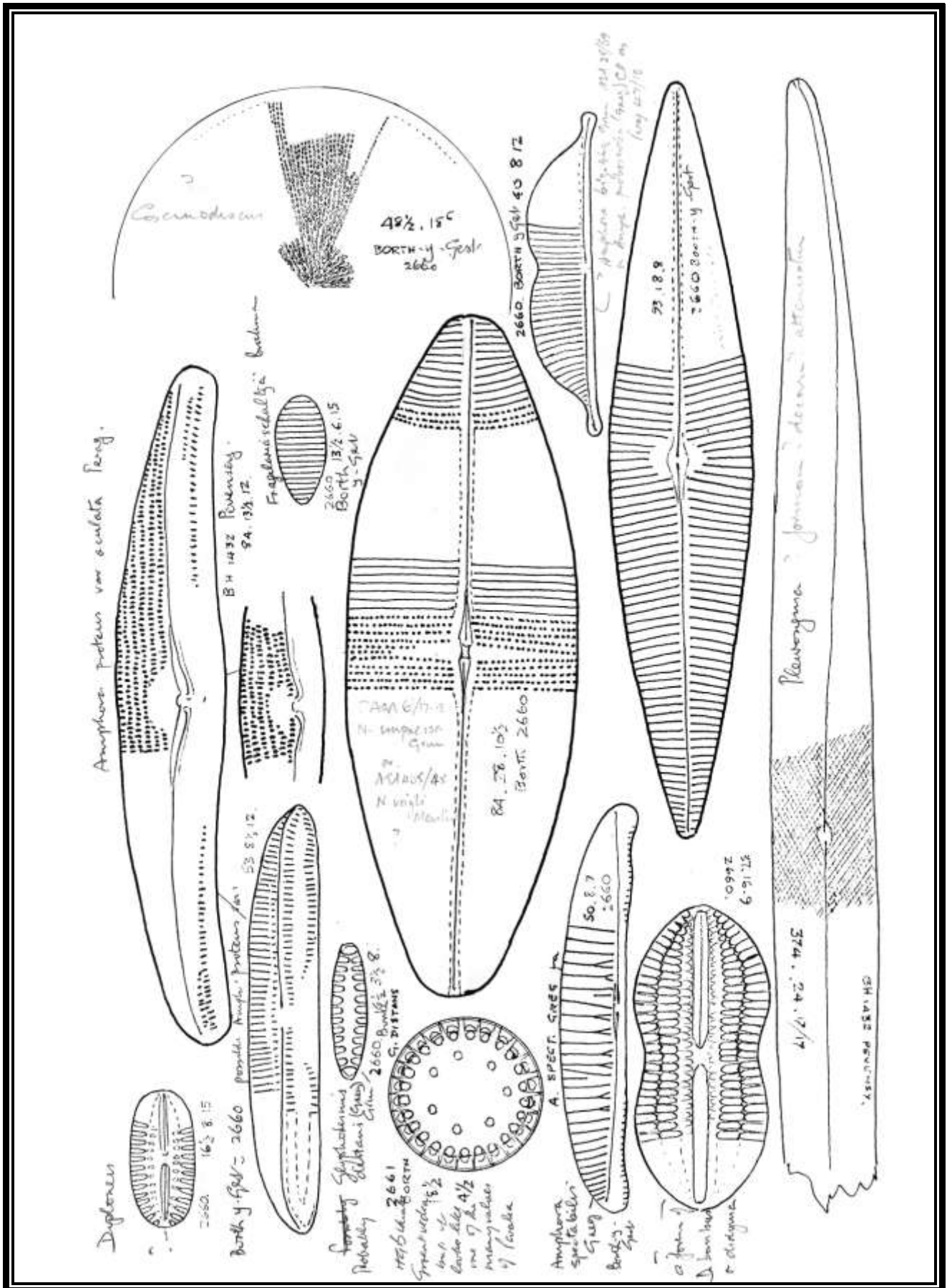


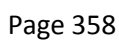


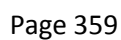


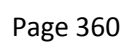




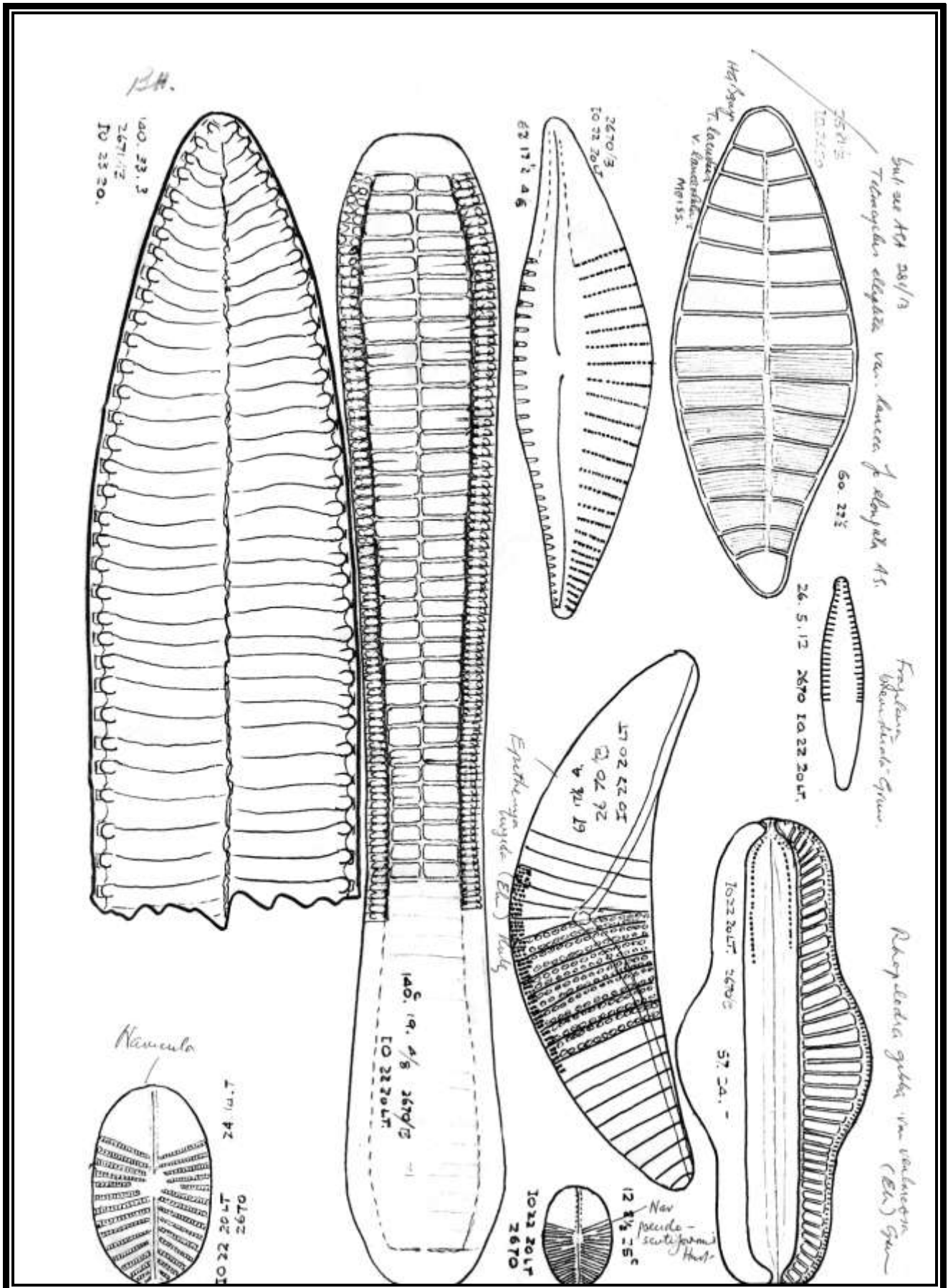




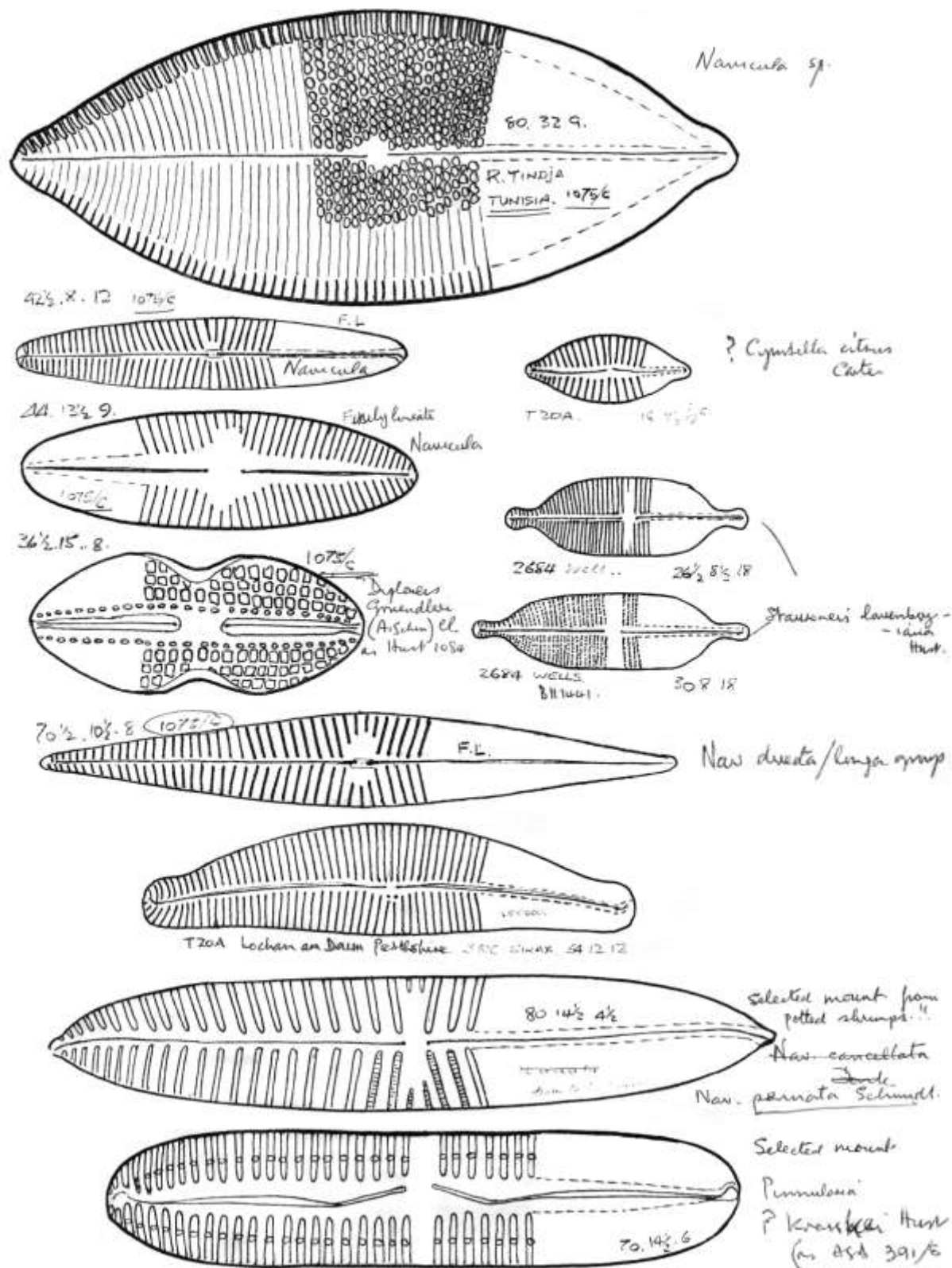




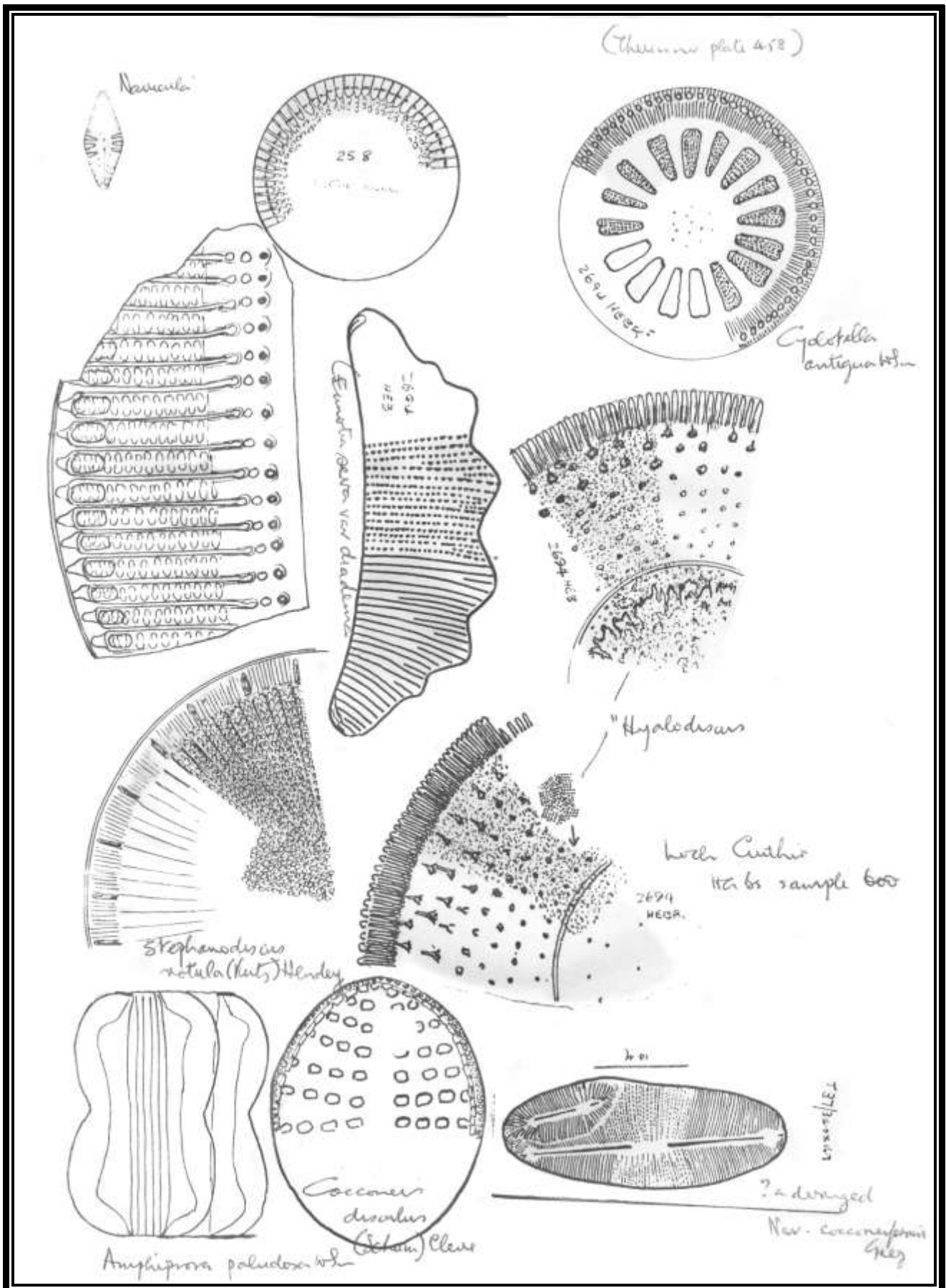
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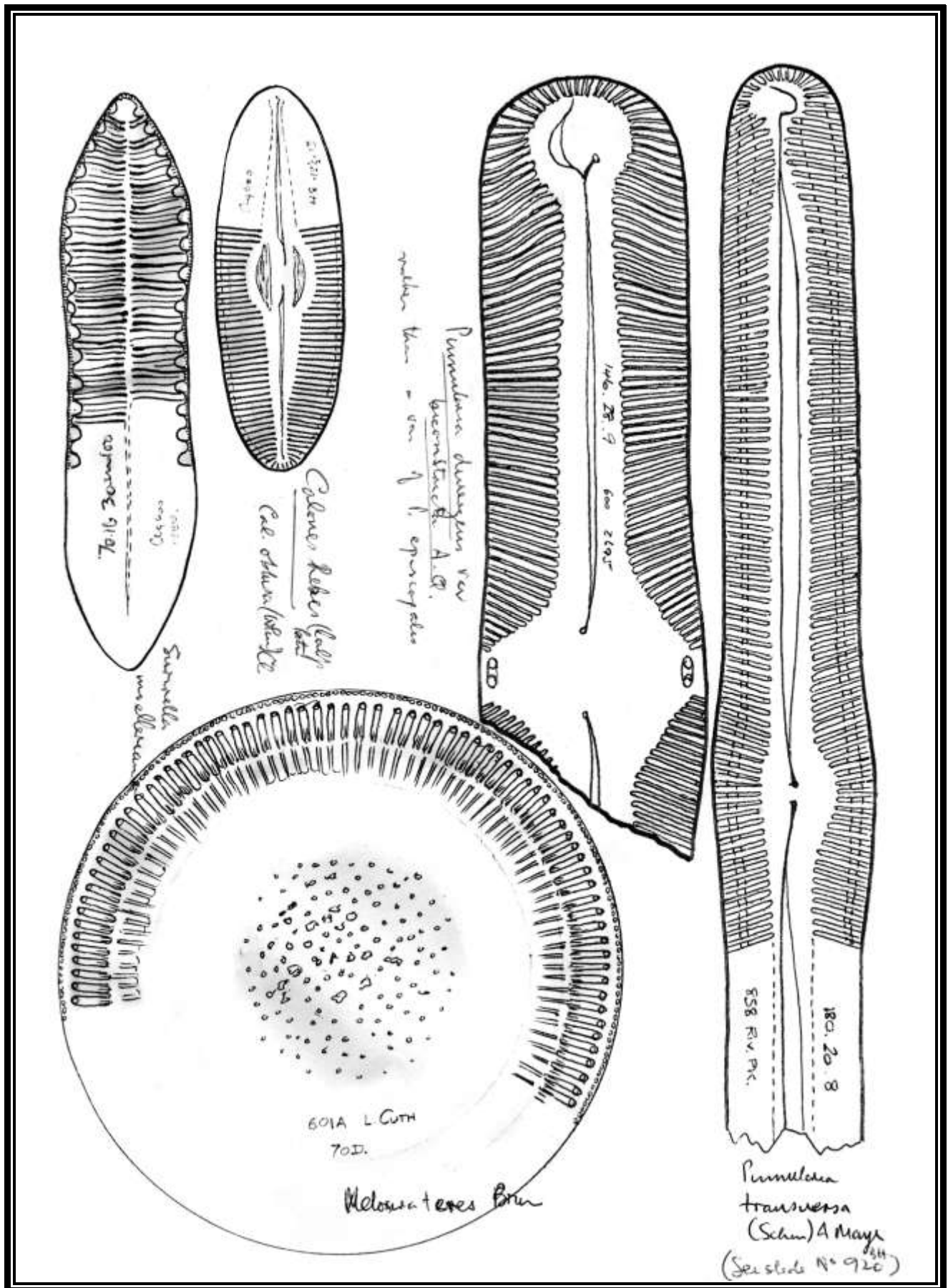
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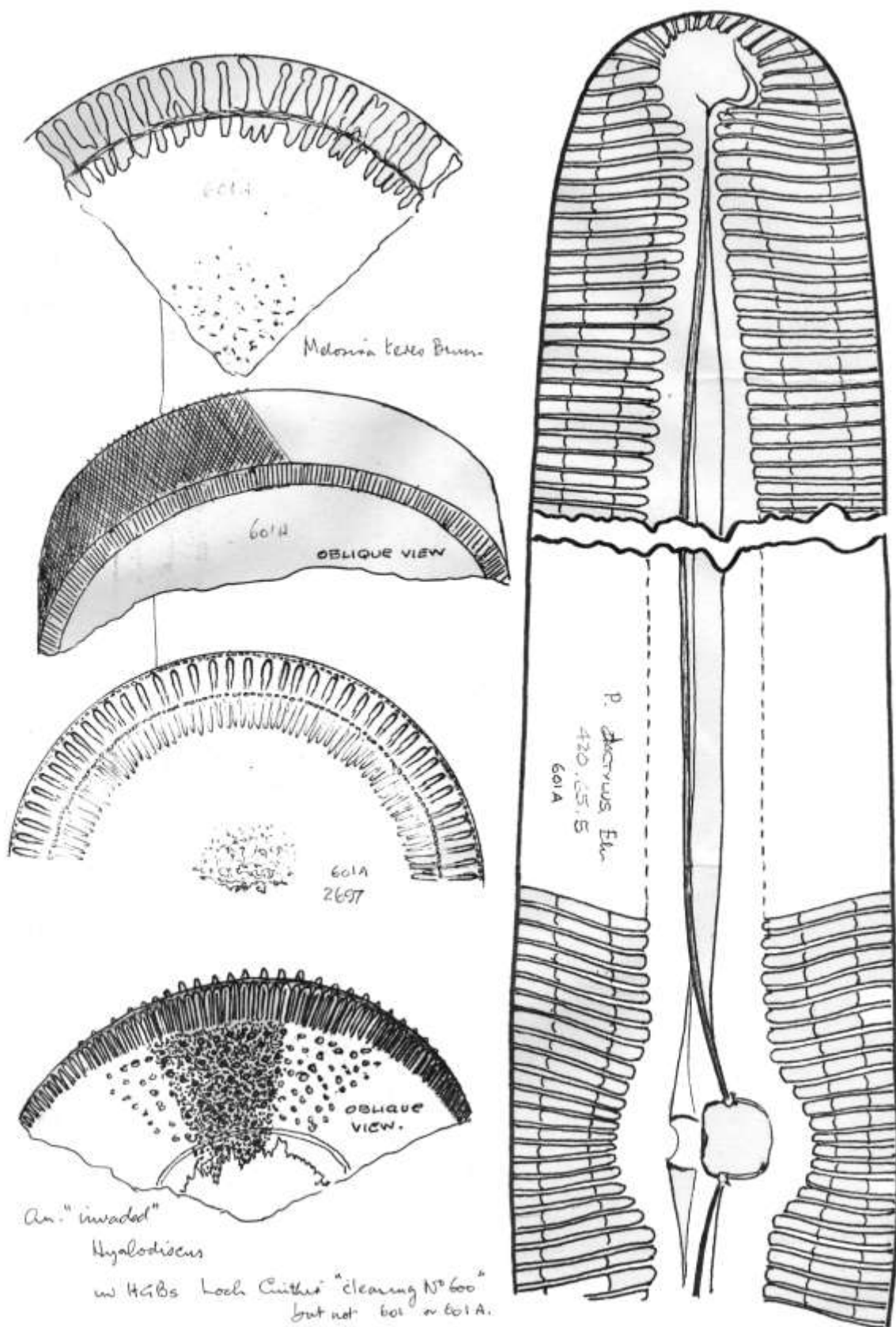


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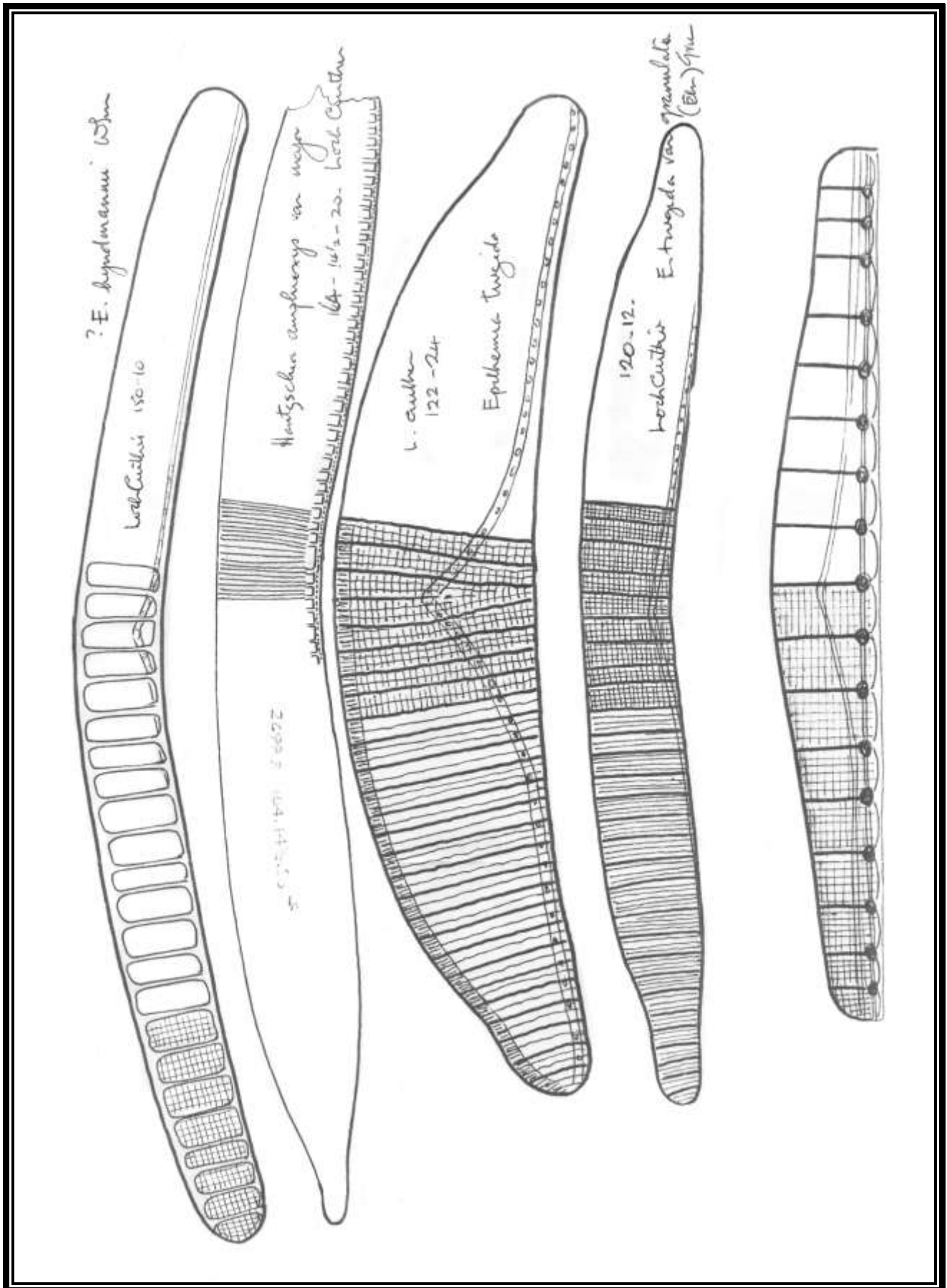


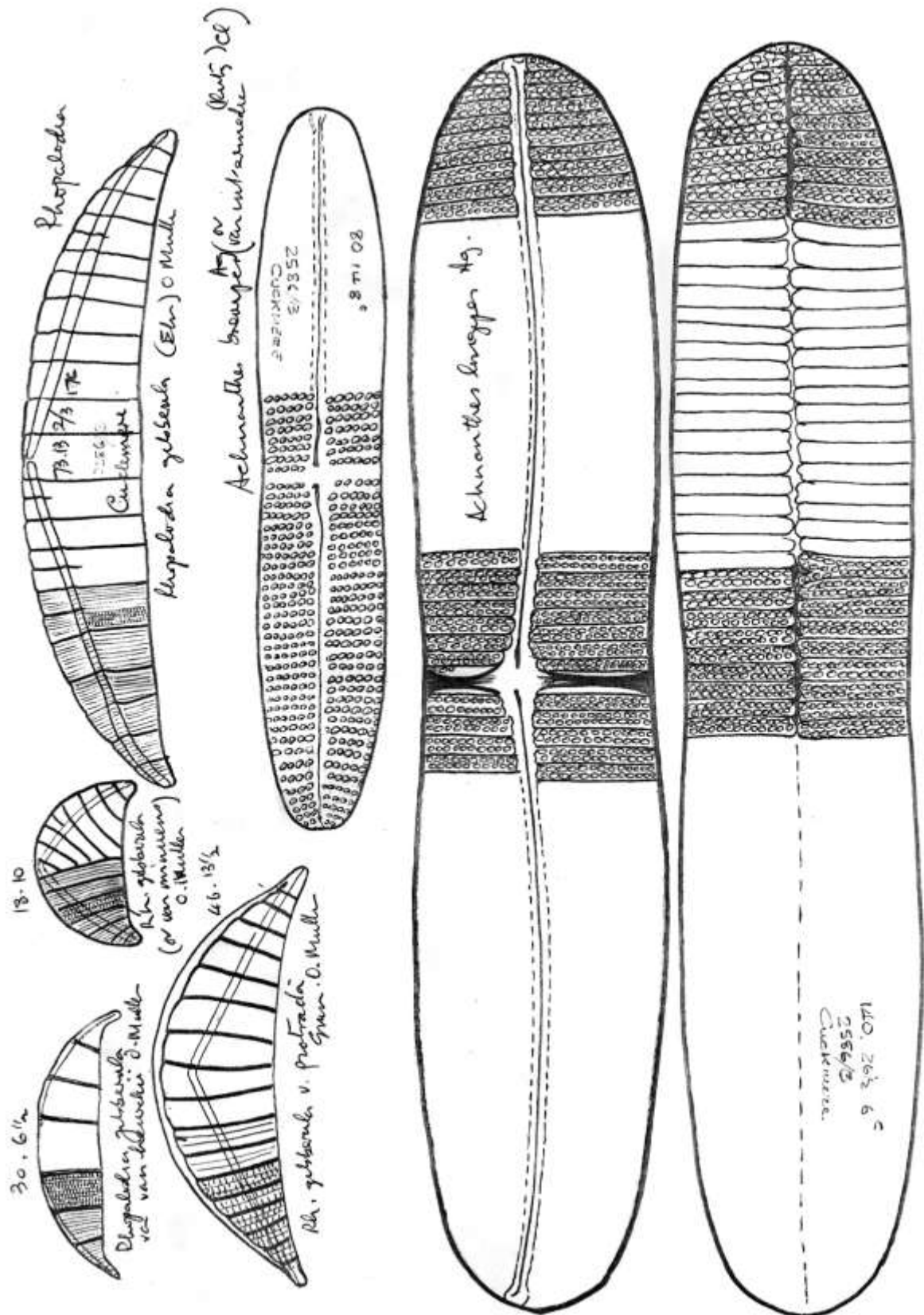
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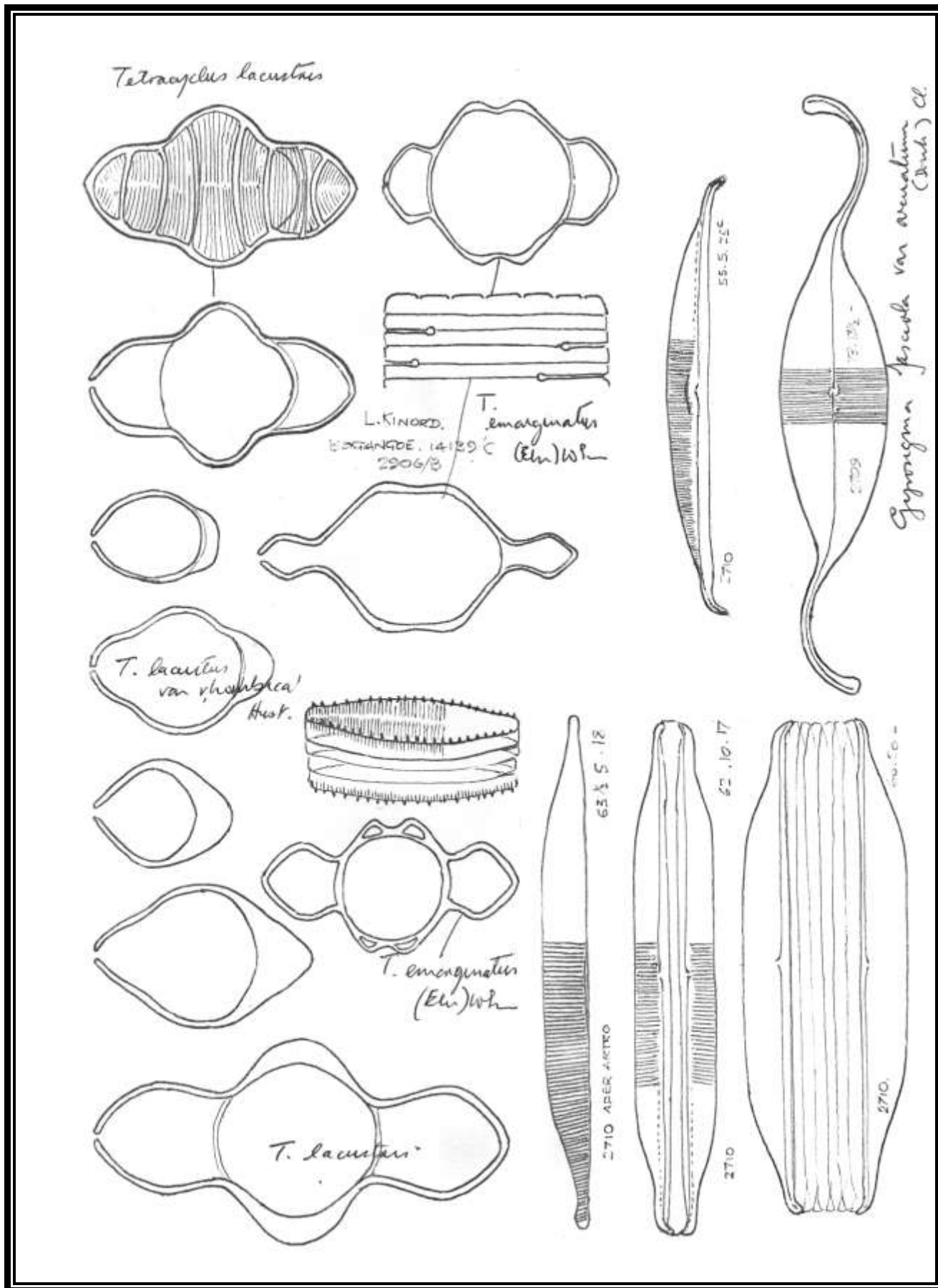


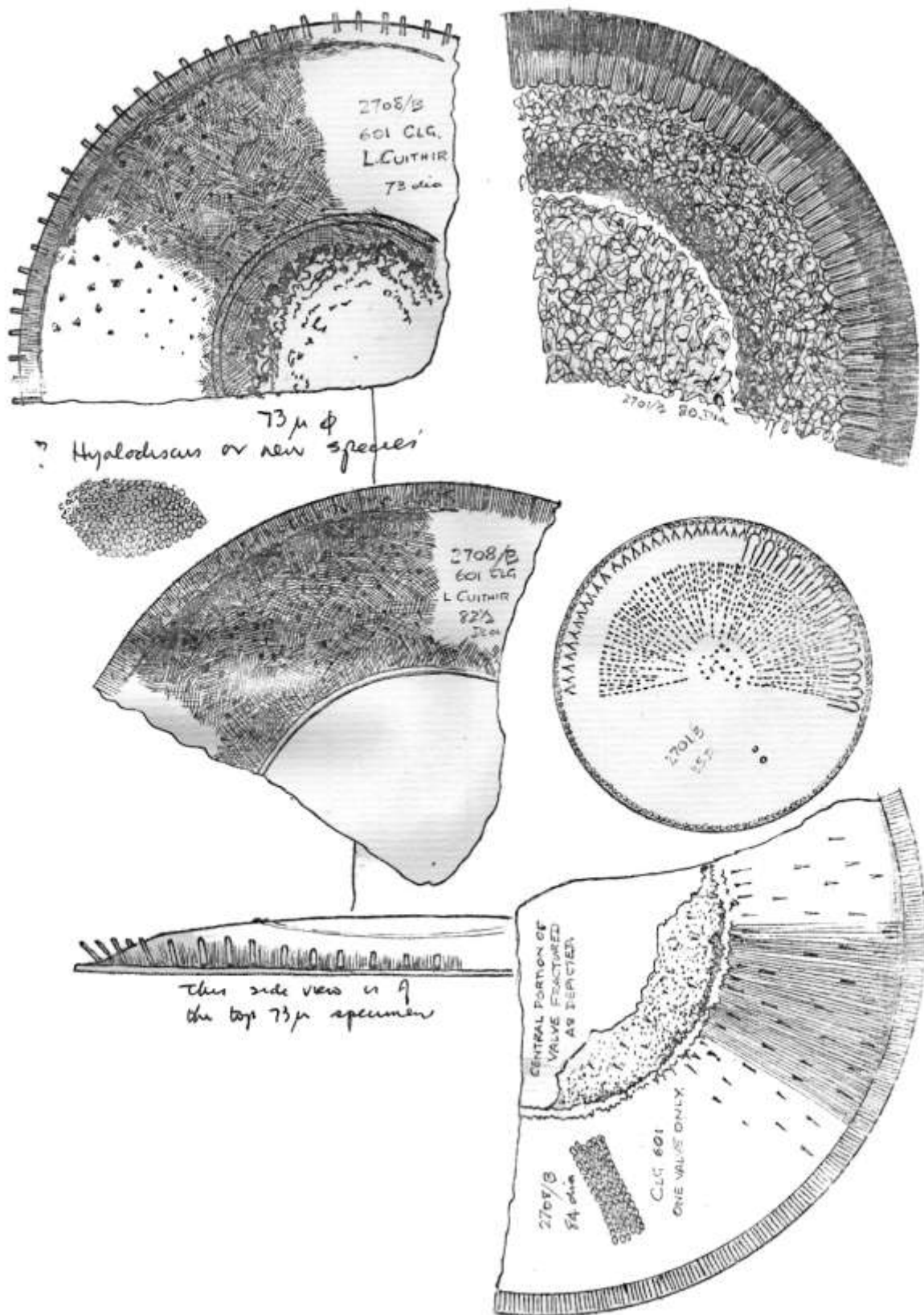
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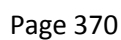




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<i>Diploneis didyma</i>	1, 15
<i>Diploneis domblittensis</i>	31
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<i>Diploneis eudoxia</i>	15
<i>Diploneis fusca</i>	20, 69, 196
<i>Diploneis graeffii</i>	397
<i>Diploneis gruendleri</i>	433, 457
<i>Diploneis incurvata</i>	69
<i>Diploneis littoralis</i>	277
<i>Diploneis littoralis</i> var. <i>clathrata</i>	85
<i>Diploneis marginestriata</i>	279
<i>Diploneis minuta</i>	56
<i>Diploneis nitescens</i>	334
<i>Diploneis notabilis</i>	42, 202, 206, 280, 290, 345, 397
<i>Diploneis notabilis</i> var.	184
<i>Diploneis oblongella</i>	454
<i>Diploneis ovalis</i> var. <i>oblongella</i>	263
<i>Diploneis papula</i>	407
<i>Diploneis puella</i>	407
<i>Diploneis sejuncta</i>	345
<i>Diploneis smithii</i>	280, 321, 341, 426
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<i>Diploneis vetula</i>	56
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<i>Epithemia adnata</i>	436
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<i>Epithemia turgida</i>	61, 456, 462
<i>Epithemia turgida</i> var. <i>granulata</i>	462
<i>Epithemia zebra</i>	390(2), 436
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<i>Eunotia arcus</i>	277, 407
<i>Eunotia arcus</i> var. <i>uncinata</i>	438
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<i>Eunotia bidens</i>	230
<i>Eunotia bidentula</i>	416
<i>Eunotia denticulata</i>	366
<i>Eunotia denticulata</i> var. <i>fennica</i>	170
<i>Eunotia diodon</i> var. <i>minor</i>	447
<i>Eunotia exigua</i>	237, 245, 399, 404
<i>Eunotia faba</i>	386, 392, 447
<i>Eunotia flexuosa</i>	428, 440
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<i>Eunotia hemicyclus</i>	206
<i>Eunotia kocheliensis</i>	386
<i>Eunotia meisterii</i>	212

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<i>Eunotia monodon</i> var. mavor (var. major or maior?)	412
<i>Eunotia paludosa</i>	173
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<i>Eunotia pectinalis</i> var. minor	386
<i>Eunotia pectinalis</i> var. undulata	170
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<i>Eunotia polydentula</i>	91, 94, 403
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<i>Eunotia septentrionalis</i>	404
<i>Eunotia septentrionalis</i> var.	287
<i>Eunotia septentrionalis</i> (septentrionalis?)	212
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<i>Fragilaria</i> ?	8
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<i>Fragilaria constricta</i>	170, 406
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<i>Frustulia rhomboides</i> var. viridula	417
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<i>Gomphonema accuminatum</i>	338
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<i>Gomphonema ancyli</i> (<i>Gomphocymbella ancyli</i> ?)	71
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<i>Gomphonema intricatum</i> var. <i>pumila</i>	71
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<i>Gomphonema marina</i> (<i>marinum</i> ?)	78
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<i>Grammatophora marina</i>	80
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<i>Gyrosigma</i> ?	381
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<i>Gyrosigma eximium</i>	401
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<i>Gyrosigma peisonis</i> (peisone?)	411
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<i>Hantzschia virgata</i>	82, 317, 319, 396
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<i>Hyalodiscus scoticus</i>	43, 75, 466
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<i>Licmophora lynbyei</i>	385
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Melosira distans var. blethamenii	395
Melosira distans var. humilis	466
Melosira fennoscandica	92, 352
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Melosira granulata var.	207
Melosira granulata var. angustissima	431a
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Navicula anglica var. subsalsa	333
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<i>Navicula cari</i> var. <i>cincta</i>	449
<i>Navicula cincta</i>	10, 237, 276, 338, 407
<i>Navicula cincta</i> var. <i>heufleri</i>	214
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<i>Navicula clementoides</i>	433
<i>Navicula cluthensoides</i>	213
<i>Navicula cluthinensis</i> (<i>cluthensis</i> ?)	340
<i>Navicula cocconeiformis</i>	408, 459
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<i>Navicula comoides</i>	430
<i>Navicula concentrica</i>	436
<i>Navicula confervacea</i>	264
<i>Navicula contenta</i>	447
<i>Navicula costulata</i>	339, 426
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<i>Navicula crucifera</i>	16, 53, 319, 449
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<i>Navicula cruciformis</i>	51
<i>Navicula cryptocephala</i> var. <i>subsalina</i>	265
<i>Navicula curta</i>	237
<i>Navicula cuspidata</i>	363
<i>Navicula cuspidata</i> var. <i>ambigua</i>	7, 431
<i>Navicula cuspidata</i> var. <i>heribaudi</i>	7
<i>Navicula cymbula</i>	436
<i>Navicula decussis</i>	10
<i>Navicula delawarensis</i>	264
<i>Navicula dementoides</i> (<i>demararoides</i> ?)	263
<i>Navicula densistriata</i>	403
<i>Navicula detenta</i>	66
<i>Navicula dicephala</i>	14
<i>Navicula dicephala</i> fo. <i>cuneata</i>	405
<i>Navicula digito-radiata</i>	51, 214, 396, 449
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<i>Navicula digna</i>	429, 431
<i>Navicula directa</i>	334, 344, 345, 367, 412
<i>Navicula directa</i> fo.	79
<i>Navicula directa</i> var. <i>cuneata</i>	360, 453
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<i>Navicula elegensis</i> (<i>elginensis</i> ?)	11
<i>Navicula elginensis</i>	340
<i>Navicula elongata</i>	296(2)
<i>Navicula ergadensis</i>	189, 377
<i>Navicula eta</i>	3
<i>Navicula excelsa</i>	429

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<i>Navicula falaisiensis</i>	21, 434
<i>Navicula fauta</i>	395, 428
<i>Navicula feuerborni</i>	380, 453
<i>Navicula florinae</i>	428, 436
<i>Navicula forcipata</i>	63, 422
<i>Navicula forcipata</i> var. <i>densistriata</i>	303
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<i>Navicula fraudulentula</i> (<i>fraudulenta</i> ?)	196
<i>Navicula frugalis</i>	297(2)
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<i>Navicula gallica</i>	433
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<i>Navicula gelida</i>	449
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<i>Navicula gibberula</i>	408
<i>Navicula gibbula</i>	395, 447
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<i>Navicula graciloides</i>	9
<i>Navicula gregaria</i>	235
<i>Navicula grevilleana</i>	430
<i>Navicula grimmei</i>	408
<i>Navicula halophila</i>	306, 343, 403, 407
<i>Navicula halophila</i> fo. <i>robusta</i>	436
<i>Navicula hanatica</i> (<i>hanseatica</i> ?)	63, 67
<i>Navicula hassiaca</i>	447
<i>Navicula hasta</i>	373
<i>Navicula helvetica</i>	403
<i>Navicula hennedyi</i>	369(2), 403
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<i>Navicula humerosa</i>	15, 84
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<i>Navicula hustediana</i>	90, 428
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<i>Navicula hyalinula</i>	361, 384, 391, 412
<i>Navicula ignota</i> var. <i>palustris</i> (<i>Spitzbergen</i>)	425g
<i>Navicula impexa</i>	436
<i>Navicula impressa</i>	452
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<i>Navicula inexpectans</i>	267
<i>Navicula inflata</i>	428
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<i>Navicula inflexa</i>	63
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<i>Navicula lagerstedtii</i> var. <i>palustris</i>	425g, 428, 425c
<i>Navicula lagerstedtii</i> var. <i>palustris</i> ?fa. <i>minores</i>	425g
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<i>Navicula lanceolata</i>	364, 392, 466
<i>Navicula lapidosa</i>	402, 410
<i>Navicula laterostrata</i>	428
<i>Navicula latissima</i>	59
<i>Navicula levanderi</i>	289
<i>Navicula linearis</i>	21
<i>Navicula litoricola</i>	16
<i>Navicula longa/directa</i>	457
<i>Navicula lyra</i>	314, 434
<i>Navicula lyrata</i> (?)	84
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<i>Navicula marina</i>	207
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<i>Navicula menaiana</i>	16
<i>Navicula menda</i>	416
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<i>Navicula meniscus</i>	260, 343, 344, 363, 416
<i>Navicula meniscus</i>	211A, 337, 339, 439, 439
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<i>Navicula mutica</i> fo. <i>lanceolata</i>	333
<i>Navicula mutica</i> var.	429
<i>Navicula mutica</i> var. <i>nivalis</i>	395, 433
<i>Navicula neoventricosa</i>	430, 431
<i>Navicula nivaloides</i>	429, 431a
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<i>Navicula obligata</i>	433
<i>Navicula oblonga</i>	431a
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<i>Navicula oculata</i>	21
<i>Navicula oculiformis</i>	211
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<i>Stauroneis amphioxys</i> var. <i>obtusa</i>	426
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N. Ware	20

Miscellaneous (continued)

Location	Plate
N. Warr.	48
Nor. Bay.	362
North Sea	259
Ox Bow	390(2)
Pan mQ	15
Peabody Collection	44
R Tindja, Tunisia	457
R. Goonhilly	299
River Thames	310, 311
Rowan Tree Ditch	21
Scottish Loch	51
Seng. (Sengelev = Singielewsky)	98
Sheen	353, 363
Silverdale Wood, Well	403
Sing. (Singielewsky)	97, 99
S'ley (Singielewsky)	96, 99
South Bay	392
South Ponds	411
Steps, Ostrand, I.O.W.	266
Stromi'63	206, 207
Thames	43
The Cob	23, 24, 364
The Glen	74
Tid. L. Dale	265
Trent	416
USSR	454, 455
UWO	230
W.O.T.	355
Wash	254, 255, 256, 271, 272
Water Cress Beds	443
Wern	24
Woodhead Loch	66

Slide or Sample/Location/Plate

Cross-reference

Slide/Sample	Location	Plate
26	Sheen	363
28	Coniston Water	437, 438
39	Birkwell, Shetland Isles	377
39	MT Fron	230
63		411
106	North Sea	259
169	Lac Lenean	369
225	Spiggie, Shetland	412
248	Ynys Lake	303, 304
265	Vemetry, North Shetland	413
317		40
327	Red Wharf Bay, Anglesey	394
336	Kyle of Durness, Sutherland	355
336	Menai	68
343	White Beach, Llangoed, Anglesey	67
357	Newborough, Warren, Anglesey	51
364	River Thames	310
371	Jees Quarry, Nuneaton	236
371	Water Cress Beds	443
375	Landport, Portsmouth	3, 4
407	Red Wharf Bay, Anglesey	59
408	White Beach (White Bay), Llangoed, Anglesey	52, 56, 57, 58
410	N. Ware	20
418	Pan mQ	15
420	Cynlais, Anglesey	208
422	Pennard Estuary, Gower Peninsula	39, 46, 312, 312A, 337
423	Pennard Estuary, Gower Peninsula	321
430	Cynlais (Beach), Anglesey	69, 339, 439
432	R. Glaslyn	31, 33, 52, 58, 410
445	Moo Water, Shetland	413
445	The Glen	74
448	Pentraeth, Anglesey	63, 68, 69, 75
449	Cynlais Beach	439
449	White Beach, Anglesey	439
453	Amlwch	73
459	Carrig and Cynlais Beaches	83
479	Tyn y Maes, Blaenau Ffestiniog, Wales	17
480	Llanberis, Snowdonia	17, 355
485	Calbeck, Shetland	412
487	Llyn Rhos-ddu, Anglesey	17, 25
492	Wern	24
493	White Beach (Rock Pool), Llangoed, Anglesey	22, 25, 402, 403, 439
495		83, 84
498	Rhosneigr, Anglesey	23, 24, 339
499	Rhosneigr, Anglesey	23, 401
502	The Cob	23, 24
505	The Cob	364
510	Glen Llangoed, Anglesey	305

Slide/Sample	Location	Plate
512	Lleiniog, Llangoed	236
513	Aber Lleniog	339
516	Llyn Ogwen, Gynedd, Wales	83
521	Llyn	212
522	Llyn Ogwen, Gynedd, Wales	171
523	Aber (Llyn) Ogwen, Bangor, Gwynedd (Caernarvonshire)	170, 303
527		317
528	Cynlais (Beach), Llangoed, Anglesey	16, 317, 305
528	Aber Ogwen, Bangor, Gwynedd (Caernarvonshire)	306
531	Red Wharf Bay, Anglesey	409, 410
532	Red Wharf Bay, Anglesey	82, 84, 85, 312
535	Cadnant Beach, Anglesey	1, 3, 6
537	Cynlais, Llangoed, Anglesey	314
538	Aber Ogwen, Bangor, Gwynedd (Caernarvonshire)	303, 305
539	Aber Ogwen, Bangor, Gwynedd (Caernarvonshire)	314, 383
540		303
546	Red Wharf Bay, Anglesey	318, 319, 320, 321
551	Newborough Warren, Anglesey	343
552	Afon Braint, N.W.	343
556	Red Wharf Bay, Anglesey	46
562	Newborough Warren, Warren, Anglesey	85, 306
563	N. War.	321
565	Newborough Warren, Anglesey	380
568	Llan Beach	380
577	Maes Caradon, Nant Francon	372, 436
581	Maes Caradon	74
596	Din.	364
598	Caernarvon Harbour (Quay)	312A, 436
599	Llyn Cororion	399
603		398
605	Llyn Cororion, Gwynedd, Wales	209, 399
613		230
615		209
617	Llyn Dinas, nr. Beddgelert, Gwynedd, Wales	34, 35
620	Llyn Cororion, Gwynedd, Wales	32
624	East of Roer, Shetland	412
639	Skye	98
670	Llyn Cororion, Gwynedd, Wales	34
673	Upper Witmuir	373
703	Toome Bridge	7
725		260
742	Heys	352
754	Hartshill Hayes, Nuneaton	398
774	Anchrum Road	73, 308
776	Ancrum	394
783	Linton Bog	399
801	Sutton Park	51, 214
809	Loch Mabon	66, 434
848	Spr.Wood, Nton	209
856	Riversley Park, Nuneaton	46
858	Riversley Park, Nuneaton	460
862	Linton Bog	363
868	Linton Bog	343, 394
869	Linton Bog, Scottish Borders	277, 400, 414
870	Linton Bog, Isle of Man	343

Slide/Sample	Location	Plate
872	Linton Bog	363
873	Linton Bog, Scottish Borders	70
877	Llandanwg	333
880	R. Anker, Nuneaton	211A
886		334, 335, 336
901	Llandanwg	335
905	Woodhead Loch	66
919	Melrose	66
927	UWO	230
929	Lochlain	33
949	Sutton Park	443
953	Northampton	429
955	R. Ogwen	3, 5
962		391
971	Rye Harbour, East Sussex	37, 43
972	Pevensey	50
973	Dee Estuary	43
973	Rye Harbour, East Sussex	43
975	Battle, Sussex	6
976	Battle, Sussex	43
1003	Tewks.	6, 209
1008	Chepstow	446
1020	Thames	43
1021	Black Moss, Aberdeen	209, 446
1027	Devils Hole Cave	408
1030	Llanfihangel y Traethau	392
1036	Llandanwg	390(2)
1037	Devils Hole Cave	408
1037	Din.	391
1038	Poole Harbour	244, 307, 308, 309, 446
1039	Co. Antrim	66
1039	Shillanogg, N.I.	213
1043	Ben Lawers	42
1063	Kilnsey Crag, Yorkshire	44
1075	R Tindja, Tunisia	457
1087	Din.	391
1103	River Leam, Leamington Spa	72
1108	River Leam, Leamington Spa	373, 374, 375
1111	Sheepy Mill, Leicestershire	72
1126	Tenby, Wales	278
1128	Southease	401
1128	Tenby, Wales	277, 278, 279, 360
1129	Tenby Sands	446
1132	Caldey Island	39
1134	Trefadog	405
1136		310
1144	Cemaes Bay	405
1148		101
1150	Alvecote Nature Reserve, near Tamworth	340
1157		299
1159	Trefadog	405
1208	Cororion Bay	398
1208	River Windrush	428
1264	River Dove Valley	309, 429, 434
1267	Blakeney	446
1278	Hough Heath, nr. Crewe	308

Slide/Sample	Location	Plate
1295	Newborough Warren, Anglesey	380
1305	Pagham Harbour	434
1307	Heath Marsh, Hints.	434
1326	R. Ogwen	82, 299
1334	Newborough Warren, Anglesey	390(2)
1338	Newborough Warren, Warren, Anglesey	323
1342	Cosby	395
1344		14
1352	Dartmoor	440
1387	Nant Francon	173
1389	Red Wharf Bay, Anglesey	3, 5, 6. 88, 211A
1395	Avonmouth Docks	448
1404	Bel. Bridge	446
1404	New Ferry	312, 323
1431	Sligo	255
1432	Co. Donegal	41
1432	Fort William	42
1433	Fort William	237
1442	Co. Donegal	41
1456	Fort William	42, 47
1460	Owen Verge River, Co. Donegal	4, 7
1461	Co. Sligo	370
1462	Co. Donegal	248, 256
1468	R. Collaun, Co. Clare	408
1469	Co. Donegal	408
1471	Doon Beg (Doonbeg), Co. Clare	2, 8, 466
1475	Bridge of Ross, Co. Clare	66
1481	Co. Sligo	370, 431, 435, 466
1481	Co. Clare	434
1517	Comber, Sussex	38
1526	Buckenham Ferry, Norfolk	36
1529	Lewes, Sussex	36
1531	Cley Marsh	427
1532	Cley Marsh	427
1538	Newbourne Road Bridge, Ipswich	426
1545	Toome Bridge	4, 286, 293, 295, 296, 297, 323
1551	Co. Clare	435
1554	Linton Bog, Scottish Borders	47, 52
1555	Linton Bog	446
1557	Everit Moss	52
1563	Yetholm	428
1568	Piddinghoe, Lewes, East Sussex	2
1571	L. Morlich	433
1589	L. Linne	397
1597	Loch Crocain	173
1606		306
1617	Loughborough	446
1619	River Thames	311
1620	Toome Bridge	1, 7, 8, 30
1621	Toome Bridge	313, 315, 316, 426
1622	Ynys Lake	322
1625	Ynys Lake	322
1640	L. Tay	397
1647	Beddingham	171
1658	Piddinghoe, Lewes, East Sussex	2, 7, 8, 12
1660	Landport, Portsmouth	11, 12

Slide/Sample	Location	Plate
1661	Dunnet Head, Caithness	16, 19
1663	Toomebridge, Mourne, N.I.	18, 26, 27, 29, 385
1664	Mourne, N.I.	213, 230, 231
1665	Toomebridge Mourne, N.I.	26, 27, 28
1666	Cuithir, Skye	30, 31, 370
1672	Bamburgh, Northumberland	48
1700	Scottish Loch	51
1700	Sutton Park	49
1702	Bamburgh, Northumberland	40, 41, 61, 67
1703	Ashton P. Wirr.	54
1705	West Kirby	53, 54
1706	West Kirby	53, 54
1707	West Kirby Sands	54
1708	West Kirby	53, 395
1717	Loch Watton, Caithness	59, 60, 61, 62, 63, 85, 87
1718	S'ley	96
1719	Sing. (Singiliowsky)	97, 99
1720	Seng.	98
1721	Seng.	98
1726	Camphill Pool, Nuneaton	70
1728	Cynlais (Cerrig), Anglesey	63, 64
1729	Cerrig Beach	63
1735	Llangoed	396
1739	Tremadog	406
1742	L. Mabon	397
1746		100
1748	Skye	101
1771	L.S.W.	73
1772	G.M. Tail	73
1773	Kidd Park	71, 73
1793	Beckett Pond	72
1796	Riversley Park, Nuneaton	72
1797		71
1798	Holcombe Beach, Norfolk	76, 79
1799	Abraham's Bosom, Wells-next-the-Sea, Norfolk	75, 76, 437
1800	Blakeney	75, 77, 85, 89, 90
1802	Charlwood, Surrey	77
1807	Kirkadey Bay	343
1807	Boat	78
1809	Quanterness, Skerry, Orkney	75, 76, 77, 78, 79, 91, 343, 399, 400
1815	Ynys	379
1817	Afon Banwy	406
1818	Ynys	380
1820	River Usk	403
1843		94
1845	Toome Bridge	232
1846	Bay Strand	93
1851	Sandown	95
1853		94
1854	Westcliffe	95
1857	L.na.M	91, 92
1858	L.na.M	93
1859	Bodmin Moor	92, 93
1862	L. Tav.	369(2)
1866	Kyle of Tongue, Sutherland	369(2), 370, 397

Slide/Sample	Location	Plate
1877	Kyle of Tongue, Sutherland	369(2)
1878	Kyle of Tongue	432
1879		237
1882	Kerra Sound	344
1892	Quanterness, Skerry, Orkney	162, 163, 170, 171, 174, 181, 281, 364, 367, 397, 398, 407
1895	Rhosneigr	400
1897	Quanterness, Skerry, Orkney	405, 406
1898	Quanterness, Skerry, Orkney	405, 435
1905	Fleet	369(2)
1908		244
1909	Afon Lynfnant	401
1935	Holcombe Sands	427, 439
1942	Ardnamurchan Shore	466
1953	Kyle of Tongue	466
1957	Aberfran, Anglesey	405
1959	Aberfran, Anglesey	406
1962	Col. Bay	400
1986	Rhosneigr, Anglesey	402
1987	Newborough Warren, Anglesey	378
1988	Isle of Wight	200A
1991	Yinstay Head, Orkney	191, 193, 275, 373
1992	Yinstay Head, Orkney	407, 428
1994	Yinstay Head, Orkney	269, 270, 407
1999	Sandside Bay, Deerness, Orkney	344
2003	Kirkwall, Orkney	194, 195
2004	Kirkwall	392
2005	Quanterness, Skerry, Orkney	194
2005	Stye Farm, Deerness	280, 407
2007	Quanterness, Skerry, Orkney	193, 194, 280, 428
2008	Quanterness, Skerry, Orkney	200A, 279, 391, 392
2009	Quanterness, Skerry, Orkney	197, 198, 199, 344, 345, 345, 346, 391
2010	Quanterness, Skerry, Orkney	197
2013	Quanterness, Skerry, Orkney	200, 202, 203, 346, 346
2014	Quanterness, Skerry, Orkney	279
2015	Quanterness, Skerry, Orkney	191, 193, 194, 195, 196, 197, 199, 280, 428
2016	Kirkwall Harbour, Orkney	193
2017	Copinsay, Orkney	392
2050	Stromness	395, 407
2050	Kyle of Durness, Sutherland	356
2051	Stromness	366
2061	Blelham Tarn	395
2061	Rub. Law.	395
2063	Llan M.	244
2064	Llyn Cororion, Gwynedd, Wales	244
2077	Ardtoe Bog	399, 400
2080	Padstow, Cornwall	213, 235
2080	Strom, Shetland	356
2083	Buster Ponds	373
2091	Moshela	400, 447
2094	Graven, Shetland	279, 280, 391
2101	Co. Down	395
2103	Cliff, Watwick Bay	265

Slide/Sample	Location	Plate
2112	Ynys Las	397
2117	Bexhill, Sussex	258
2120		260
2123	Ostrand, I.O.W.	267
2123	Shanklin	266
2124	Cynlais (Beach), Llangoed, Anglesey	264, 267
2125	Bexhill Sands	429
2134	Dale	265, 266
2137	Dale Mud	265
2139	Tid. L. Dale	265
2142	R. Fal.	273
2144	Norfolk	275, 276
2146	Traeth Bach, Anglesey	378, 379, 380, 397
2152	Walberswick, Suffolk	287
2157		278
2158	Houlma Loch, Shetland	285
2161	Loch of Cliff, Shetland	286
2169	Bryher, Isles of Scilly	289, 291
2170	Bryher, Isles of Scilly	290
2171	Trevone, Padstow, Cornwall	367
2176	N. Cornwall	360
2178	N. Cornwall	360
2181	N. Cornwall	360
2184	N. Cornwall	362
2188	Cornwall	287
2189	Swithland Quarry	431
2225		299
2229	R. Ae.	299
2235	Clonfill Lough	366, 373, 393
2236	Narborough Bog, Leicestershire	300
2237	River Stour, Essex	301
2251	S. Ambersham	384
2252	Isle of Mull	384
2261	Narborough Bog, Leicestershire	337, 339, 434, 440
2262	Narborough Bog, Leicestershire	339
2262	Narborough Bog, Leicestershire	337, 338, 339
2263	Narborough Bog, (Ox Bow) Leicestershire	337, 338, 390(2)
2264	Kyle of Durness, Sutherland	340, 355
2265	Kyle of Durness, Sutherland	340
2268	Southport lagoon	392
2270	Trevone, Padstow, Cornwall	348
2274	Windermere	351, 352, 355, 363
2279		351
2280		404
2280	Barr.	363
2280	Gough	354
2291	Sheen	353
2292	L. Durh	353
2293	L. Long	353, 354
2295	Nor. Bay.	362
2296	Horston Grange Moat, Nuneaton	385
2296	Llanndanwg	354
2298	W.O.T.	355
2304	Ballyscullis	357
2305	Windermere	357, 358, 363
2307	Largy	358

Slide/Sample	Location	Plate
2310	Toome Bridge	403, 404, 428
2312	Trevone, Padstow, Cornwall	362
2314	Kyle of Durness, Sutherland	361, 362
2315	Kyle of Durness, Sutherland	364, 366
2318	App. Brack	372
2325	Skegness	372
2326	Glantora, Eire	370, 371, 372
2327	Premnay Peat (Aberdeenshire)	373
2328	Premnay Peat (Aberdeenshire)	376, 377
2329	Gaerloch Beach Bog	431
2336	Steepholm	381
2337	Steepholm	381, 382
2346	E. Suffolk	382
2346	Llandwyn, Anglesey	426
2349	Borth y Gest	449
2350	Borth y Gest	448, 450, 451
2360	Walberswick	426
2363	Mull	391
2364	Dervaig, Isle of Mull	391, 426
2368	Walberswick, Suffolk	408
2369	Loch Sunart, Scotland	391, 408
2370	Caolisport, Argyllshire, Scotland	391, 426
2386	Horeston Grange, Nuneaton	386
2395	Llan Dolwyn	385
2397	Ambersham Common, West Sussex	390
2398	Ambersham Common, West Sussex	386, 390, 390(2)
2399	Ambersham Common, West Sussex	385, 386
2400	Ambersham Common, West Sussex	395, 396
2410	Inch na Damph, Assynt, Sutherland, Scotland	282, 286
2439		395
2440	South Bay	392
2453	Blelham Tarn	395, 466
2455	Gannel Estuary	396
2466	Silverdale Wood, Well	403
2467	Burton-in-Kendal, Cumbria	404
2476	"Three Pipes", River Anker, Nuneaton	409
2477	Roman Road, Wensleydale	409
2489	Barra Forest, Ireland	417
2499	Barra Forest, Ireland	416, 417
2502	Aber Artro	432
2506	Elm Bank Close	21
2509	Gatehouse, Fleet	426
2513	Bexhill	427
2514	Ambersham Common	428
2515	River Anker, Nuneaton	428
2516	Hartshill, Nuneaton	429
2517	Bexhill, Normans Bay	429
2518	Bexhill, Normans Bay	429
2518	Glynde Gap, Bexhill	429
2520	Caldecote Lane, Nuneaton (Railway Bridge)	429, 431
2522	Pagham	429
2523		430
2524	River Ouse	430
2525	Bexhill	430
2526	Harsthill, Nuneaton	430, 431
2539	Caldecote Lane, Nuneaton	431

Slide/Sample	Location	Plate
2541	Minsmere	431
2545	Oaston Road, Flood Channel	432
2546	Oaston Road, Flood Channel	432
2549	Llandwyn Sands	453
2554		432
2557	River Yare	433, 450
2579		433
2581		455, 456
2586	Cuckmere	463
2590	Durness Loch	436
2600	Coniston Water	438
2603	Fanagmor, Sutherland	447
2608		447, 448
2612	Piets Well, Burghead	447
2615	Alv.	448
2626	Glen Trool	21
2627	Durn	449
2631	Rutland Water	449
2643	USSR	454, 455
2654	Aber Porth	454
2659	Borth y Gest	451
2660	Borth y Gest	451, 452, 453
2661	Borth y Gest	452
2663	Loch Eil	453
2664	Loch Eil	453
2667	Borth y Gest	454
2670	Borth y Gest	454, 455, 456
2684	Wells	457
2694	Loch Cuithir	459
2695		460
2708	Loch Cuithir	465
2709		464
2716	Dev. Hole	303, 309
3003	L'Assynt	355
3016		21
3022	Co. Clare	393
3094	Rowan Tree Ditch	21
3124	Slapestone Sike (Syke)	46, 48
3124	Carter Collection	46
3124	Fort William	47
3159	Loch na Cuilc, Lewis	87, 88
3248	Arkingarthdale	71
3261	Branston Pit Bing Pool	86
3446	Ale Water	448
3459		174
3461		174
3485	Loch Duick	174
3541	Nenthead, Cumbria	248
3547	R. Teviot	244A
3555		256
3558	Blelham Tarn, Ambleside	259, 260
3566	Sunbiggin Tarn	429
3571	N. Warr.	48
3580	Strontian, Lochaber, Scotland	265, 266, 273
3590	Durness Loch	436
3596	L. Crannaig	262

Slide/Sample	Location	Plate
3606	R. Moidart	267
3660	Applecross	286
3719	R. Goonhilly	299
3799	Snizort, Skye	355
3943	Hawick Park	428
3949	Hartshill, Nuneaton	429, 430
3962		431
4038		449
4074		450
4670	Aber Ogwen, Bangor, Gwynedd (Caernarvonshire)	84
11029		276
12212	Loch Mabon	61
12213	Loch Mabon	61
12393	Dallow Ghyl	365
12651	Lancing (in ditch)	288
13035		368
13201	Kilnsey Crag, Yorkshire	44, 45
13202	Slapestone	45
13211		51
13213	Loch Mabon	52, 53
13226	Grassington, Yorkshire	56
13249		73
13261	Branston Pit - Bing Pool	90
13430	Loch Cranaig	170, 211, 211A
13435	Sanna, Scotland	171
13439	River Teviot	365
13449	Carter Collection	46
13515	Surrey	236, 237
13520	Nenthead, Cumbria	237
13520	Surrey	237
13588	Inverkirkaig, Assynt, Sutherland, Scotland	264
13596	Cranaig	262, 263, 264
13655	Scourie	365
13665	Ardis	289
13733	Loch-na-Orden	301
13786	Loch Mabon	347
13818	Applecross Bay, N.W. Scotland	354, 355, 361
13878	Morwellan Copper Mine	390, 390(2)
14018	Fanagmoor	440
14084		449
14087	Malham	453
14107	Loch Eil	453
14139	Loch Kinnord, Bogangoe	464
38433	Hawick Park	428
BCH/6	Quanterness, Skerry, Shetland	185
BCH/C	Quanterness, Skerry, Shetland	184, 185, 186, 187
BCH/C	Yinstay Head, Orkney	183, 184, 187, 187, 188, 189, 190
The following Bernard Hartley samples have been augmented by the description of the sample from the Hartley Index. This appears in blue.		
BH117	Howroyd Clough Howroyd Clough. Squeezing from algae in the spring water	392

Slide/Sample	Location	Plate
	discharge from the water supply which feeds the waterman's bungalow. 5 th Aril 1970. Passed to R.I. Firth for cleaning.	
BH206	Wells, Norfolk Not BH206	206
BH270	Kentmere Kentmere, near Kendal. (R.I. Firth says ex. D. Thomas) Bulk earth as processed by Case Asbestos. A lump of dark brown fibrous clay 'puddle' from the workings, now under water.	200, 203
BH280	Clent Clent, Worcestershire National Grid Reference SO-933-797 Collected 16 th May 1971 <i>S. capronii</i> , <i>C. solea</i> , etc. From uppermost private lake.	261
BH456	Salhouse, Norfolk Salhouse, Norfolk 6 th September 1972 Scum on ditch further into the saltmarshes.	54
BH492/3	Wells next the Sea 492 - Ditch near beach at Holkham, Norfolk 5 th May 1973 At head of Lady Anne's drive (<i>Naviculae</i> in tubes) Part in CuNi acetate. 493 - Floating algae including diatoms in tubes at Abraham's Bosom (Lake) at Wells-next-the-Sea, Norfolk. 5 th May 1973 Also in CuNi acetate.	437
BH502	Waddington Fell, Lancashire Wallop Well, Waddington Fells, Yorkshire 14 th June 1973 Also in CuNi acetate (very green)	88, 93, 94
BH594	Toome Bridge Toomebridge TB.6. Good but very small	404
BH627	Southwold Harbour Southwold Harbour, Suffolk From pools on the bank at the upper end of the harbour. Collected by H.H. Gleave Received 18 th November 1974	207
BH659	Wash Mud from a drain into the Wash, Lincolnshire October 1927	254, 255, 256, 271, 272
BH711	Traeth Bach, Anglesey Scum on saltmarsh pool at Traeth Bach, West of Ynys, Gwynedd, N. Wales	256, 274, 378, 393
BH711L	North West of Traeth Bach Scum on saltmarsh pool at Traeth Bach, West of Ynys, Gwynedd, N. Wales	272
BH714	On marine seaweed, Orkney Slide from A.G. Greenfield	254
BH725	<i>Nitzschia linearis</i> W.Sm. Near Kingsswear from sample loaned by W. Marshall	278
BH729	Carlova Carlova, Russia From a sample loaned by W. Marshall	271, 273
BH745	Saltmarsh Pool, Traeth Bach Not BH745	274
BH748	Holme-next-the-Sea, Norfolk Holme-next-the-Sea, N. Norfolk	268, 269, 360

Slide/Sample	Location	Plate
	Dry sand taken on Betty's advice from troughs in sand ripples on beach. V.G. flora and range of species inc. <i>Surirella strigosum</i>	
BH752	Windermere Core from Windermere Taken by the Liverpool University team under Rodger Padgham (upper recent) ex Ron Darby	347
BH775	Walberswick Walberswick, Suffolk Stagnant pool on saltmarsh near harbour Per H.H. Gleave January 1976	268
BH777	Charlwood, Surrey Not BH777	333
BH797	Charlwood, Surrey Westlands Farm, Charlwood, Surrey Bottom of a pond 18" deep. Mud/Algae squeeze. Eutrophic. March 1976 ex A.G. Greenfield	347
BH887	Black Moss, Dinnet Black Moss, Dinnet, Aberdeenshire Fossil F/W dark brown diatomite Per R.I. Firth April 1977 Between Ballater and Arboyne	340, 341
BH901	Llandanwg Patch of diatoms on sandy surface of Llandanwg beach at high water mark. 25 th April 1977 <i>Pinnularia stauntonii</i> (Grun) Cleve, pure.	333
BH906	Yeovil Mixture of upper and lower ponds at Nine-Springs woodland, Yeovil, Somerset 23 rd May 1977	341
BH908	The Lagoon, Southport The Lagoon, Southport, Lancs Collected by R.I. Firth in the 1950s. <i>Biddulphia aurita</i> var. <i>obtusa</i> (Kütz.) Hust. See also further sample 908A which is as 908 but without contamination. Note: 908 was contaminated by an unknown freshwater sample.	340, 341
BH917	Thorpe Bay, Thames Estuary, Essex River Thames estuary, Thorpe Bay, East of Southend on Sea, Essex Collected 15 th April 1976 by R. Hare of 15 Lime Avenue, Upminster, Essex	346
BH956	Sartil, Skye Sartil, Digg, Isle of Skye Uncleaned sample collected by Klaus Kemp.	390(2)
BH968	Exmouth Exmouth Beach, Devon. Yellow brown thick film of jelly on percolating ground water on the seaward face of red Devonian sandstone rock face – rarely if ever in seawater.	384
BH1001	Buddleigh Salterton Buddleigh Salterton, Devon Sample of macro algae collected by K-D. Kemp 23 rd August 1970	385
BH1030	Llanfihangel y Traethau Llanfihangel y Traeth, near Harlech National Grid Reference SH(23) 655-377 25 th October 1978 Sent to A.G. Greenfield 28 th October 1978 and returned 7 th February 1979	392, 393

Slide/Sample	Location	Plate
BH1127	Ambersham Common, West Sussex Ambersham Common, West Sussex Collected by L.V. Martin on 17 th May 1979 – R.I. Firth No. 567 1127a cleaned by A.G. Greenfield and sieved and finished by B. Hartley 1127b cleaned by B. Hartley and sieved and finished by B. Hartley	401
BH1130	Wallop Well Wallop Wall, Waddington Fells, near Clitheroe 1 st June 1979	402, 403
BH1141	Maenporth, Cornwall Maenporth, Cornwall Brackish pool, behind the sea bank Collected by K-D. Kemp 18 th July 1979	401
BH1144	Cernais Bay (Cemaes Bay) Cernais Bay, Anglesey 6 th May 1979 Sand scraped from several places on the beach. (No obvious signs of diatoms)	406
BH1160	West Bay, Dorset West Bay, Dorset 12 th September 1979 Scraped from steel and wooden piles in the harbour.	417
BH1220	Poole Poole Harbour, Dorset R.I. Firth sample 614 > and < 600 mesh ex N.I. Hendey Badly contaminated with hairs.	422
BH1299	Chichester Harbour Chichester Harbour R.I. Firth ref. 642 December 1980 One strewn slide and small sample	433A, 434
BH1310	Cuckmere Haven, Sussex Cuckmere Haven, Sussex Collected by A.G. Greenfield January 1981 <i>Rhopalodia musculus</i> and <i>Mastogloia pumila</i>	433A
BH1346	Slapton Ley Slapton Ley, Devon 12 th May 1981 (My [Bernard Hartley's] birthday!) Mats of <i>Cymbella</i> in tubes on the stone paving at the Torcross outlet of the lake. Fast flowing water some 12 inches deep and fifteen feet wide all covered with the diatom 'jelly'.	441
BH1432	Pevensay Brackish stream by road between Pevensay and Norman's Bay, Sussex Slide ex H.H. Gleave Collected 31 st August 1981	452
BHC/C	Yinstay Head, Orkney	187
BM		405
BM	Loch Frisa, Mull	183
BM	Mull	410
C/3151	Billingham Peat Ditch	55
EGW315	Eaton Park, Chester BH 1377 - Serpentine Lake, Chester at Eaton Park 22 nd March 1972 Slide by E.G. Williams	14
Re380/B	Red Wharf Bay, Anglesey	15, 20
RIF		449
RIF1659/B	Landport, Portsmouth	9, 10

Horace George Barber's Miscellaneous Diatom Plates

Once again we are indebted to Alan George Barber for his permission to reproduce his father's work.



Alan George and Judith Ann Barber

The Compilers



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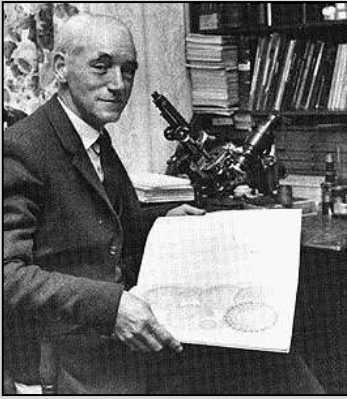
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Horace George Barber b. 1st September 1908 d. 1982
(from the obituary by H.H. Gleave)

Born in Crewe, he joined the staff of the old London and Midland Railway in 1922 and remained with them until his retirement in 1966 having held various positions in their Control Office. In his younger days he was a keen long-distance cyclist and mountaineer and he retained his interest and activity in cycling until the day of his death when he was out riding in the morning. In 1930 he became a microscopist largely because of his interest in the local natural history society. Very quickly his work crystallized round the study of diatoms. He joined the Quekett Microscopical Club in 1946.



John Ripley Carter b. 1908 d. 1993
(from the obituary by J. Eric Marson)

John Carter was born and educated in Bradford, Yorkshire, where he studied botany and zoology at the technical college evening classes. The famous diatomist Rev. Dingley P. Fuge lived locally, and under his influence and encouragement he soon became interested in diatoms.

Shortly after the war, he and his wife Marjorie moved to Denholm in Scotland and remained there all their lives.

His main interest was the freshwater diatom species, and he collected over a wide area of Scotland and the outer islands.

He was a gifted artist and developed the ability to draw diatoms with all their intricate detail to perfection.



Bernard Hartley b. 12th May 1917 d. 22nd April 2007
(from the obituary by Dr. B. Bracegirdle)

Bernard Hartley was born in Burnley and was educated at Burnley Grammar School and Burnley Municipal College.

It was a fascination with pond life which first led him into microscopy, and it was a chance meeting with R. I. Firth in 1860 which introduced him to algae and above all diatoms. Over the next twenty years they worked together on collecting, preparing and identifying British diatoms.

After Horace Barber's death, John Carter, Barry Paddock and Klaus Kemp discussed with Bernard what might best be done with all the drawings by Horace, and Bernard agreed to assemble this resource, with John Carter filling in some gaps. The outcome was the large work 'Atlas of British Diatoms' which remains of the greatest importance to diatomists.