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About the Institute
The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

L 330
W center 10.5
W pole 10

P. striolatiforme W. & W.
= Proposirostratiforme f. trachyspora

Striae extend to tip.
Not punctate at ends.
Striae very little twisted.

X-104
N. Australia

June 24/56

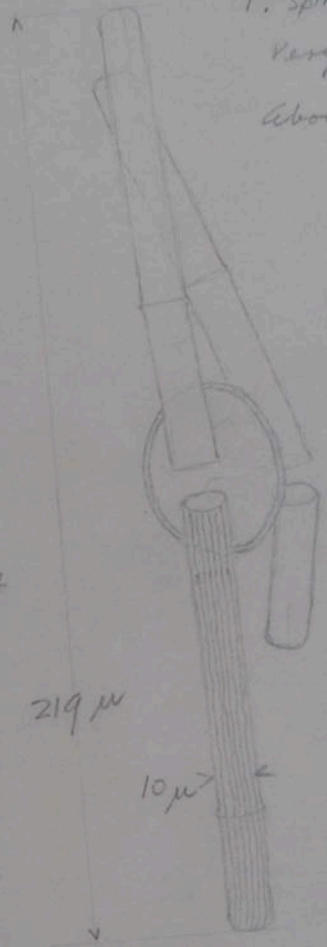
P. spirostriolatum Barker

Very slender

About 7 striae visible

21.7X

= P. spirostriolatiform f. nedospirum



10x44

219 μ

10 μ

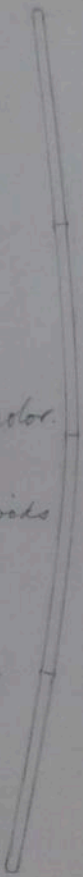
Zygospore 36x44 μ

Unawalerké

Sept 12/53

L 493
W center 8
W pole 7.5 61/61

Closterium bidaratum Boerges.
fa. australiense fa nov.
see Arnhem Land paper



Wall very pale straw color.
Smooth apparently.
About 40-45 pyrenoids
in whole length
Slight ridge at
sutures.
Chloroplast partly
disintegrated
No crystals
distinguishable.

20 x 10

N. Australia
X-104

Aug 9/54

L 26
W center 10
W pole 6

Cl. infractum

20×44

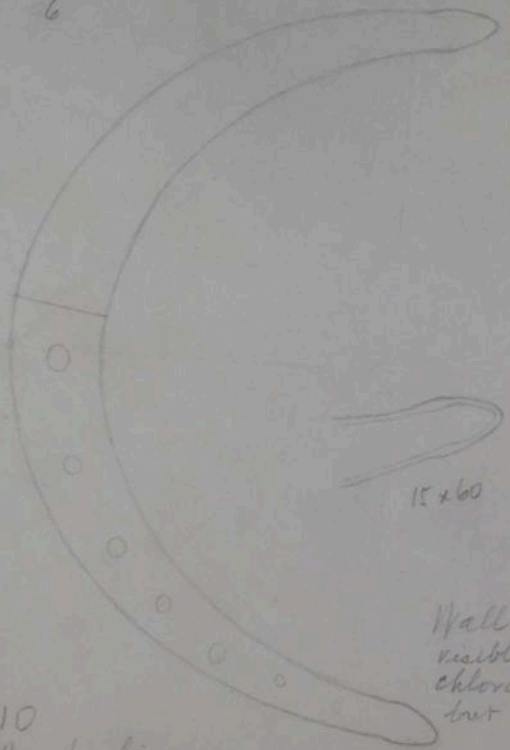
X-110
N Australia

Feb 24/57

L 120
W center 15
W pole 6

Cl. nematodes Joshi (var nov?)

Cl nematodes forma



1 seen

7 (or 6?) pyrenoids in each semicell.

Older semicells very faintly brownish.

or colate

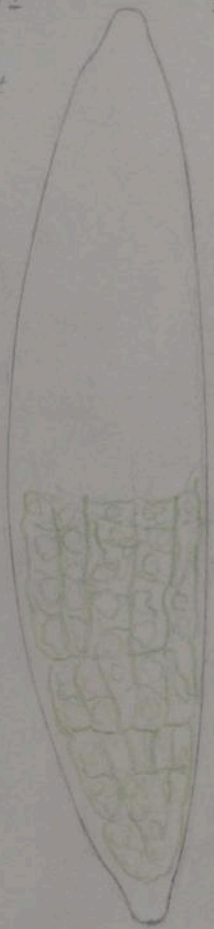
Wall faintly striate, 4 striae visible at ends which were free of chloroplast. Not countable at center but I guess there may be about 8 there

X-110
N Australia

Mch 10/57

L 530±
W max 114
W polo 18±

= Cl lunula var intermedia fa



Cf. Indonesia
Menggala #1

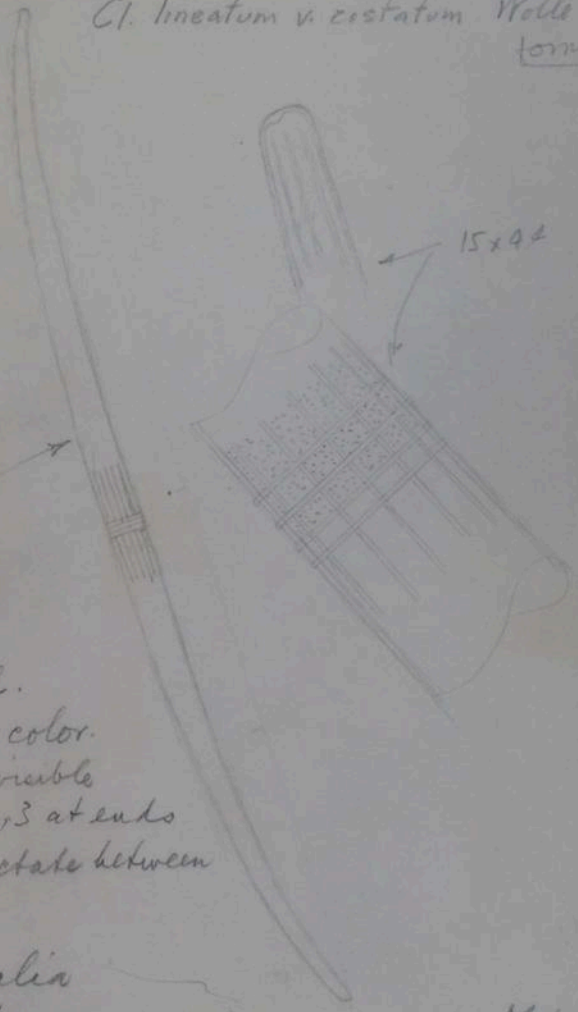
Wall features not
visible
Obscured by debris

20×10

N. Australia 3.
Lagoons 2 m N of Bamboo Creek Oct 15/53

L 793
W 30
W pole 9

Cl. lineatum v. costatum Wolle
forma



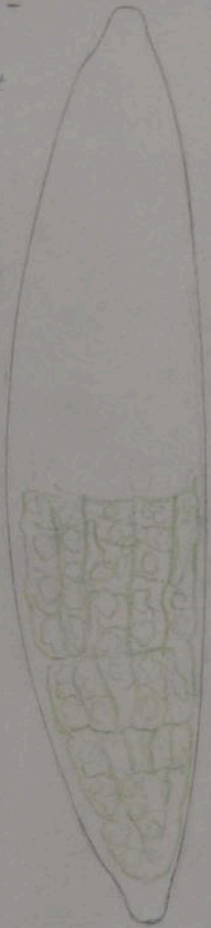
Empty cell.
Wall straw color.
Five costae visible
at center, 3 at ends
Finely punctate between
costae

N. Australia
X-108

Mch 10/55

L 530±
W max 114
W pole 18±

= Cl lunula var intermedia fa



Cf. Indonesia
Menggala #1

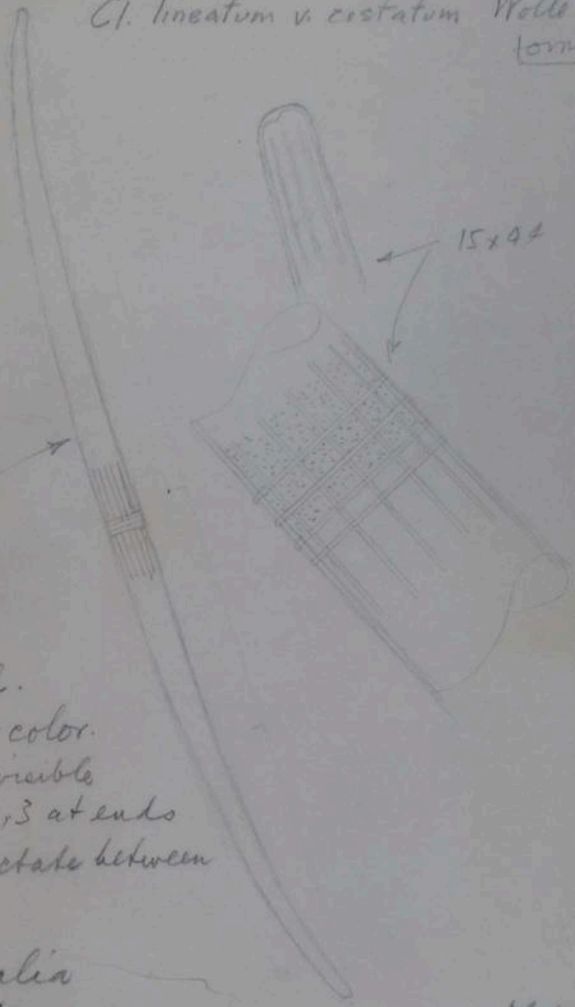
Wall features not
visible
Obscured by debris

20×10

N. Australia 3.
Lagoons 2 m N of Bamboo Creek Oct 15/53

L 793
W 30
W pole 9

Cl. lineatum v. costatum Wolle
forma



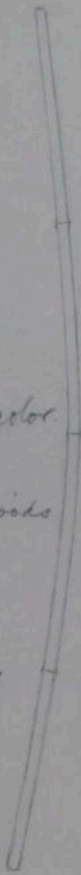
Empty cell.
Wall straw color.
Five costae visible
at center, 3 at ends
Finely punctate between
costae

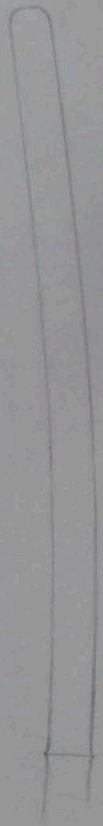
N. Australia
X-108

Mch 10/55

L 493
W center 8
W pole 7.5 6/64

Closterium bidavatum Boerges.
fa australiense fa nov.
see Arnhem Land paper





Wall very pale straw color.
Smooth apparently.
About 40-45 pyrenoids in whole length
Slight ridge at sutures.
Chloroplast partly disintegrated
No crystals distinguishable.

20 x 10

N. Australia
X-104

Aug 9/54

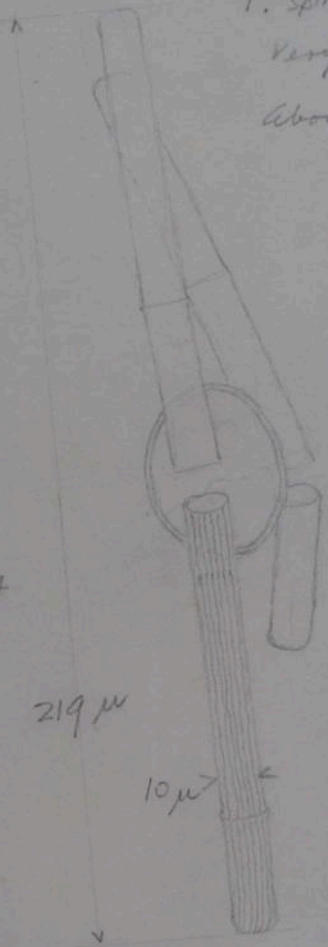
P. spirostriolatum Barker

Very slender

About 7 striae visible

21.7X

= P. sparostriolaliform f. nudispirum



10x44

219 μ

10 μ

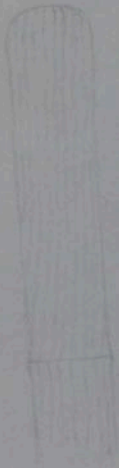
Zygospore 36x44 μ

Unavalerké

Sept 12/53

L 330
W center 10.5
W pole 10

P. striolatiforme W. & W.
= P. spirostriolatiforme f. rectispira



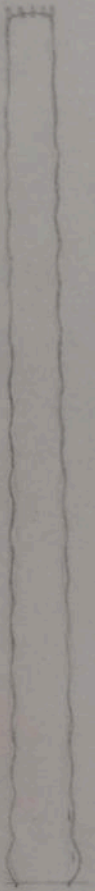
Striae extend to tip.
Not punctate at ends.
Striae very little twisted.

X-104
N. Australia

June 24/56

L semicell ssp 902 !!!

W base 64
W pole 48
I 48
L spines 13



10 x 44
x 875

Undulations are somewhat exaggerated

Diameter of pores about 2 μ

= Pl. burmense v. longissimum

ocular 10 x 10 objective
x 190 ±

N. Australia 510

Oct 18/53

L 543
W base 39
W pole 35
I 35

20 x 10

Cf P. simplicissimum - Gbld forma

15 x 44

12 granules visible at one pole
10 " " " other "

Chloroplast 6 parallel parietal bands

Slough
Ocupelli

July 26/58

Upper semicell

L 145
W base 14
W pole 9

Lower semicell

L 85
W max 17
W base 15
W pole 10

Dichotypical specimen combining the specific form of Docidium baculum with var. inflatum Scott.& Prescott.

Usually the lower semicell would be considered an abnormality of a type that occurs not infrequently in Pl. trabecula. But in trabecula the inflations are of varying shapes and sizes in different specimens; frequently the inflation will occupy only part of a semicell, the remainder having subparallel sides.

This Unawalerke collections contains both the specific form of D. baculum and a good many perfect specimens of var. inflatum, with both semicells uniformly and symmetrically inflated.

I think therefore that var. inflatum must be regarded as valid, and that this specimen (the only one seen so far) must be regarded as dichotypical.

Unawalerké

Sept 12/53

L 243
W max 44
W pole 17
[17

Plevrotaenium nodosum (Bail.) Lund.
fa.
var borgei

15 x 44

7½ x 44

N. Australia
X-104

Aug 9/54

L 321
W max ssp 54
csp 72

Wpde
ssp 33
csp 49

I 33

m 1

5x44

Pleurotaenium Kayei (Arch) Rab

Note only 4 whorls of paired spines, instead of the usual 5.

N. Australia 3

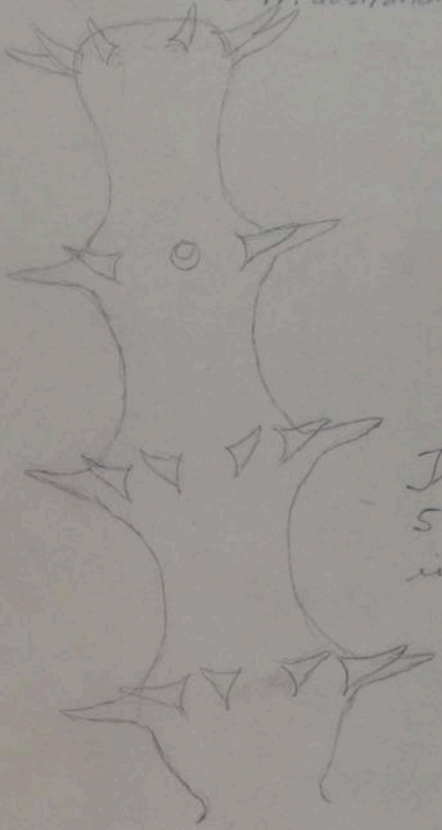
Oct 17/53

L semicell 180
W max csp 87±
W pole csp 66
I 27

Pl. australianum (Borge) Scott A
= Docidium australianum Borge
= Tr. australianum (Borge) Krieg

Some

forma



This ought to have 5 whorls of spines instead of 4.

10x44

Una waterké

Oct 10/53

L upper sencills csp 201

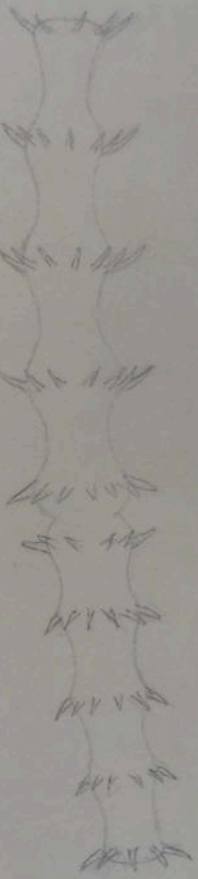
W base ssp 37
csp 64

W apex ssp 25
csp 52

I 24

forma-?

= Pl. australianum f.



X-108

N. Australia

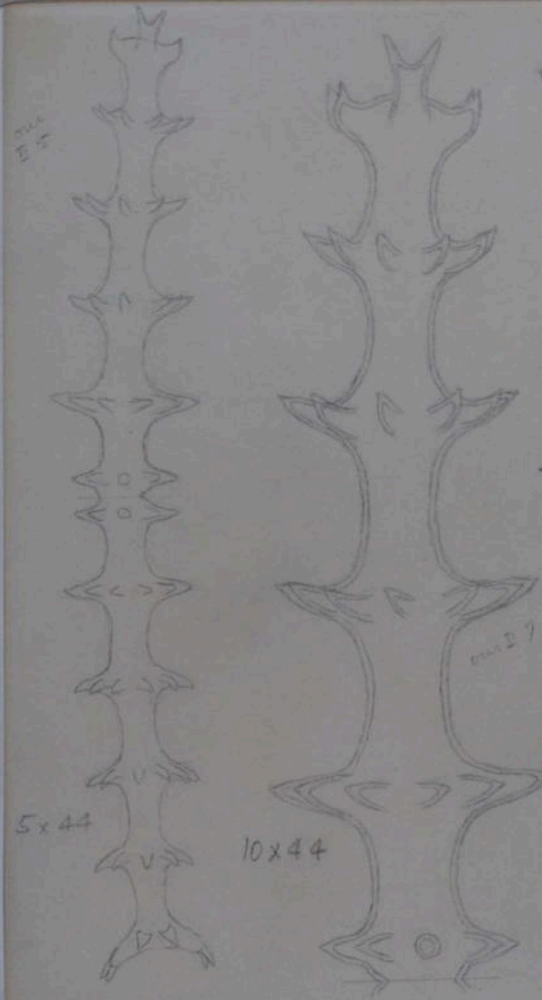
Mch 9/57

L semicell 195 Tr gracile var elegans, fa not fa
W max epr 69
W pole 52
I 20±

10x44

Unawalerké

Oct 10/53



Slightly tilted

L 438
Wmax csp 69
I 23

Triploceras gracile
var elegans (Borge) Krieg.

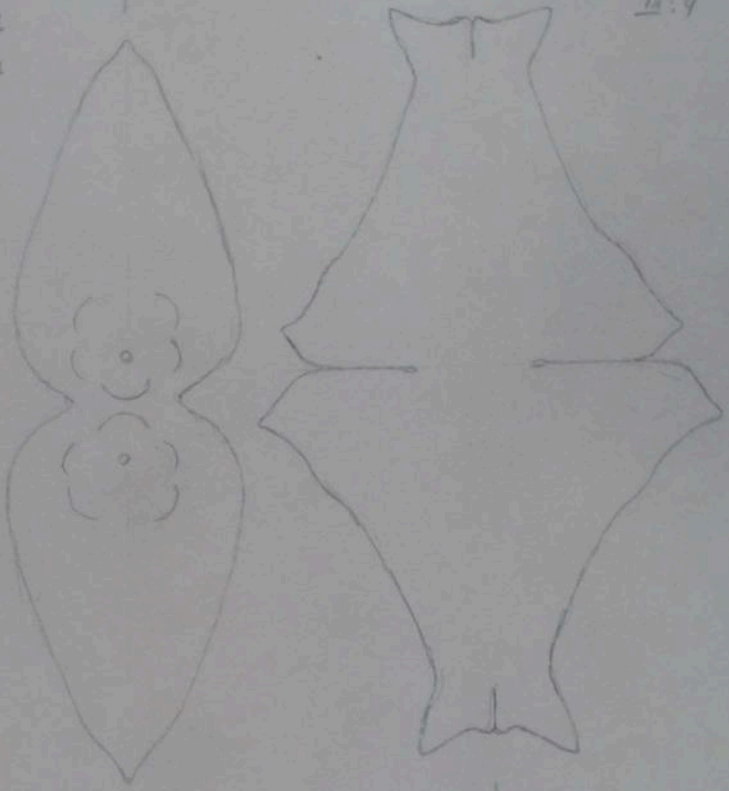
Unawalerké

Sept 6/53

L 174 W polar lobe 37
W 108 W neck 27

T 54
I 24

= E. latipediforme
Sp. nov. Th: 4



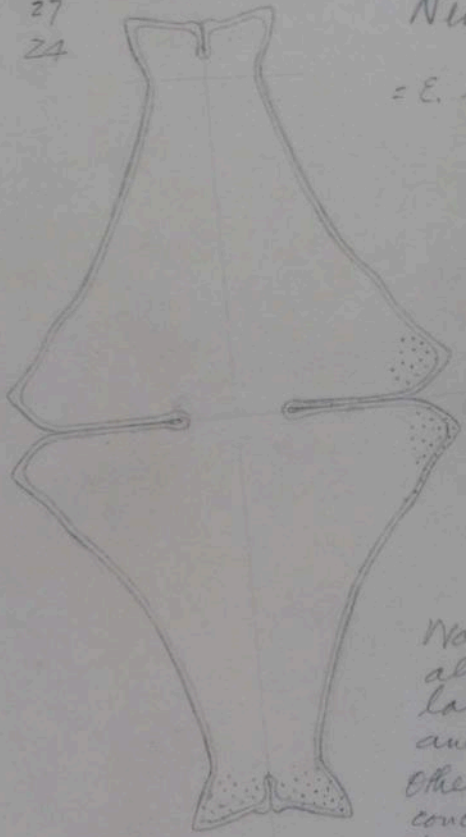
Details not visible

Unawalerke

Sept 7/53

L 192 ! Euastrum ~~latipes, Nordst,~~
W base 91 ~~var majus Vanhoff~~ not latiper
W pole 36
W neck 27
I 24

New species
= E. latipediforme n sp



10 x 44

Wall scrobiculate all over, pits larger on basal angles + polar lobes. Other features, if any concealed by chloroplast 1st one seen

Una walerké, Oenpelli

Sept 4/53

L 196
W 118
I 21
T 61

= E. latipediforme n.sp
abnormal III:7

See front view on next sheet

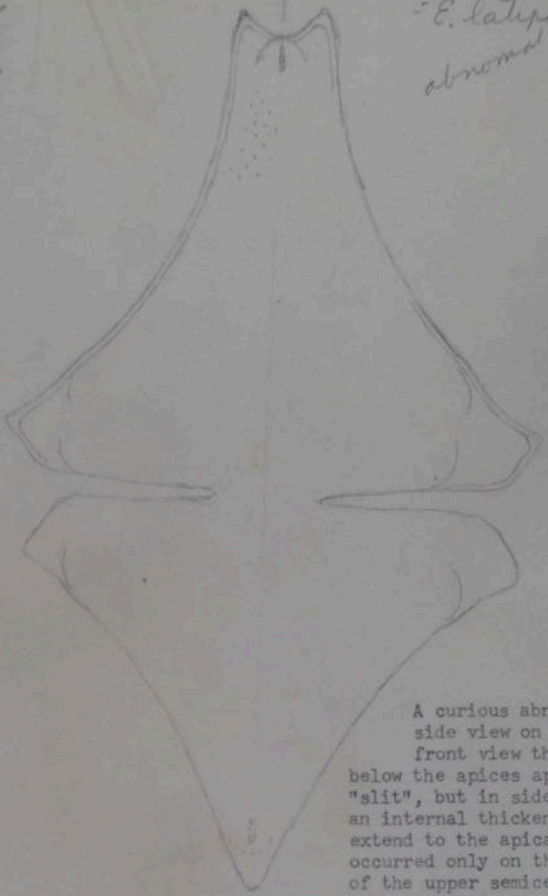
Unawalerké

Nov 27/54

L 196
W 118
I 21
T 61

= E. latipediformis abnormal n.sp

III 17

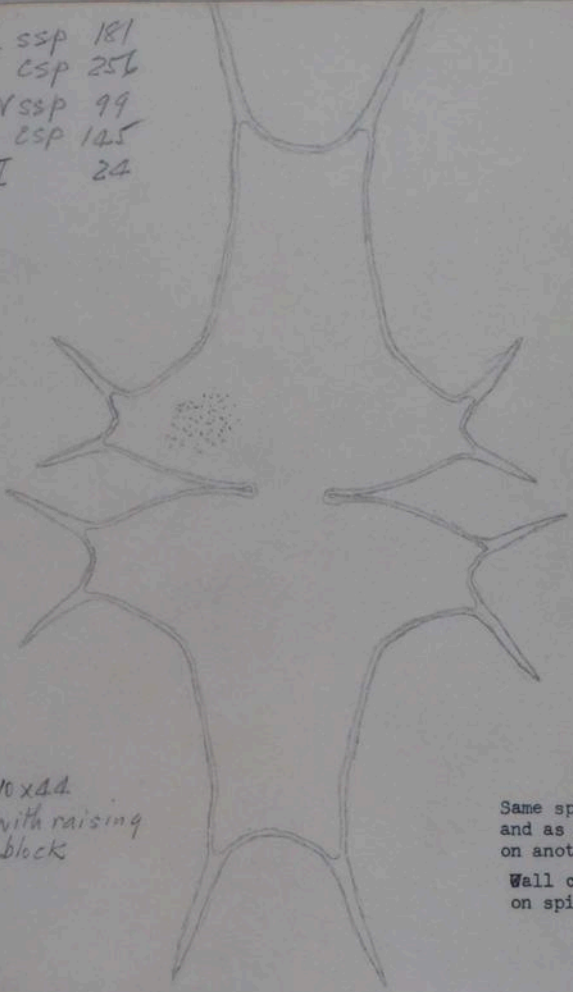


A curious abnormality (see also side view on next sheet). In front view the vertical mark just below the apices appeared to be a "slit", but in side view seemed to be an internal thickening. It did not extend to the apical surface, and occurred only on the uppermost surface of the upper semicell, and on the under side of the lower semicell, corresponding to the "humps" seen in side view. Wall punctate all over.

N. Australia X100

Nov 27/54

L ssp 181
csp 256
W ssp 99
csp 125
I 24



10 x 44
with raising
block

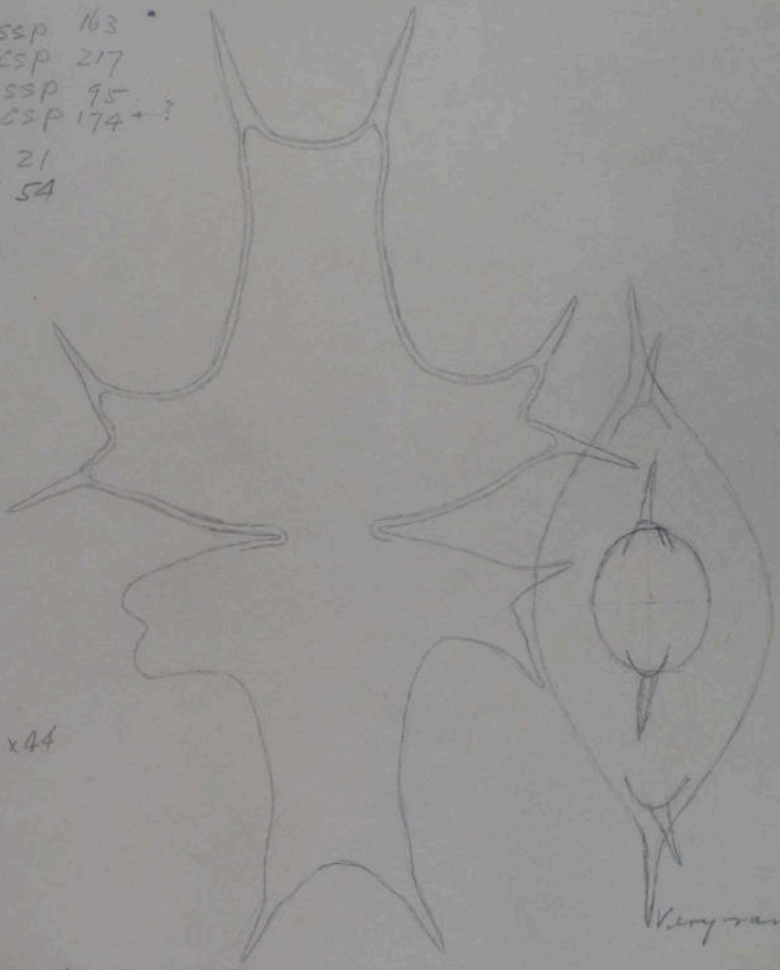
Same specimen as photographed and as drawn to smaller scale on another sheet.

Wall closely punctate except on spines.

N. Australia 510

May 17/54

L ssp 163
csp 217
W ssp 95
csp 174+?
I 21
T 54



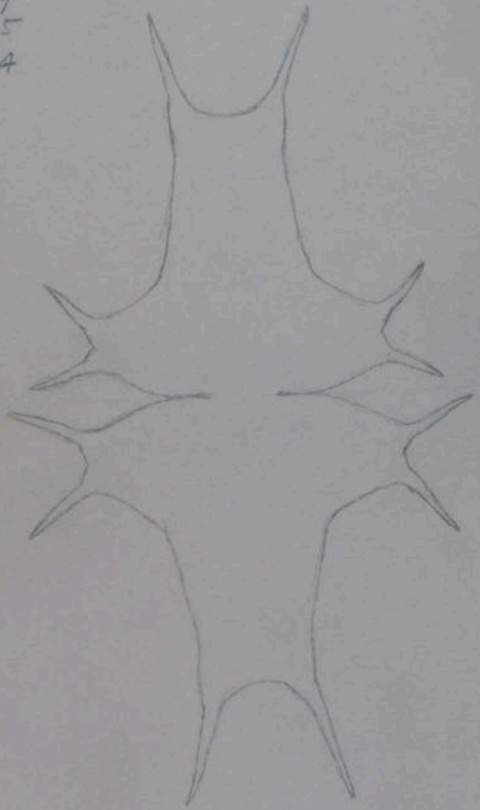
10 x 44

Very rare

N. Australia 10

Oct 19/53

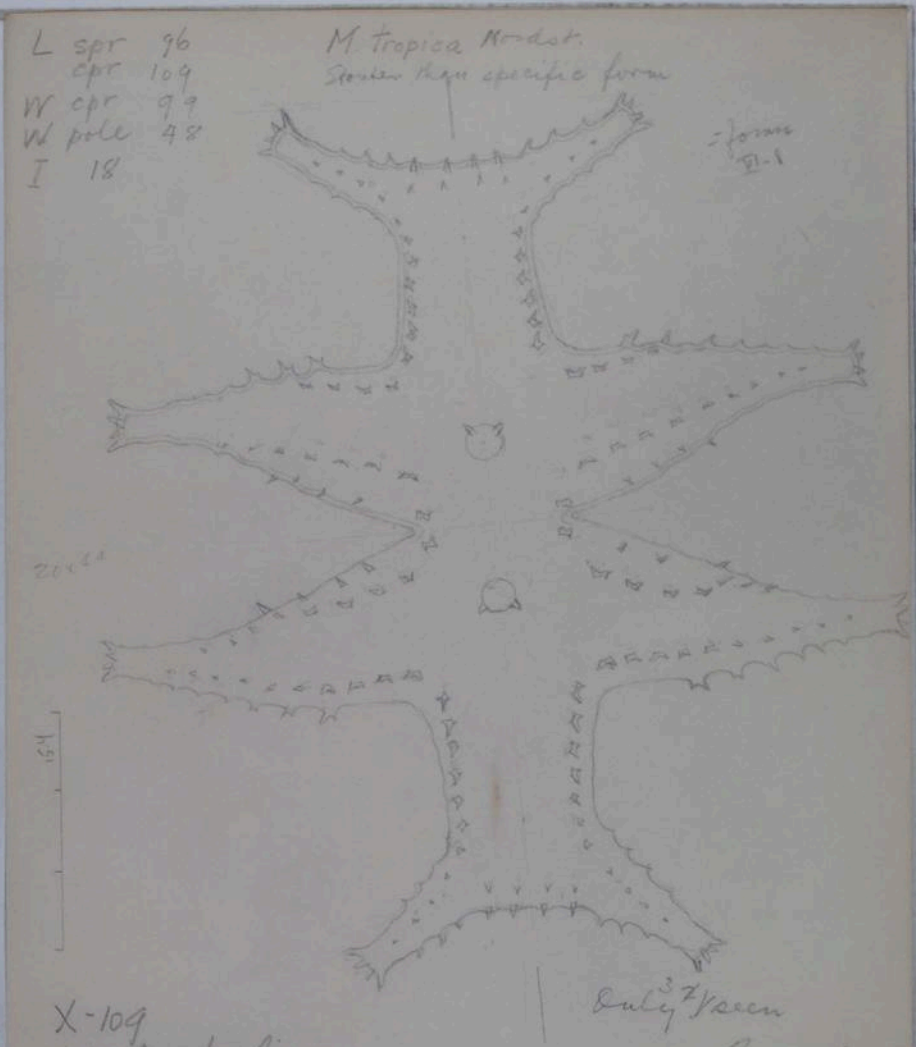
L ssp 181
csp 256
W ssp 99
csp 145
I 24

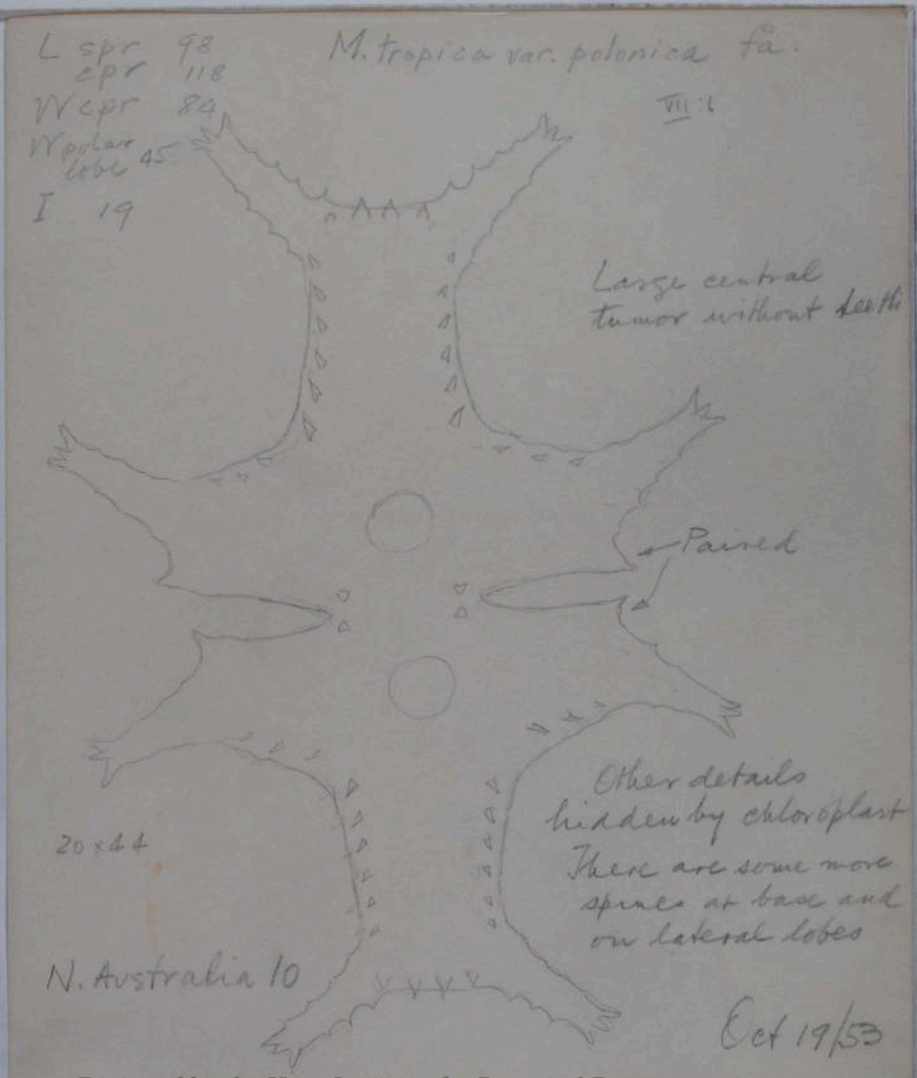


7½ x 44 Same spec. as photos

R.F.R.R

N. Australia 510 - May 17/54

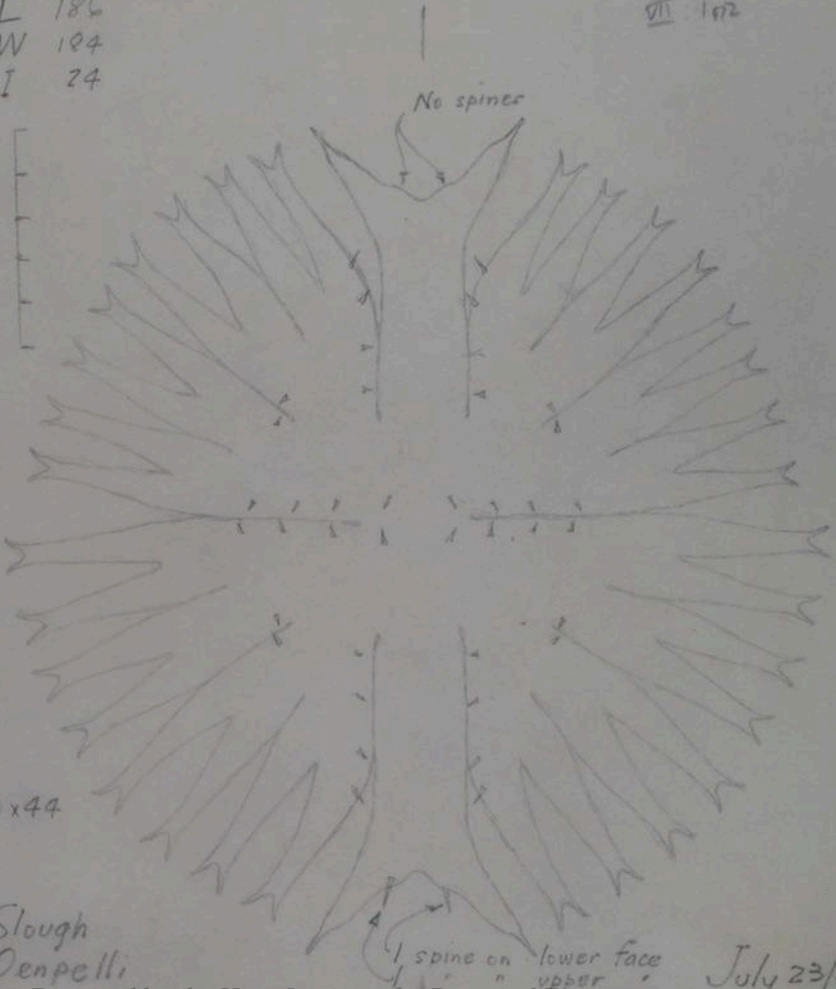




M. lux var. spinosa var. nov.

L 186
W 184
I 24

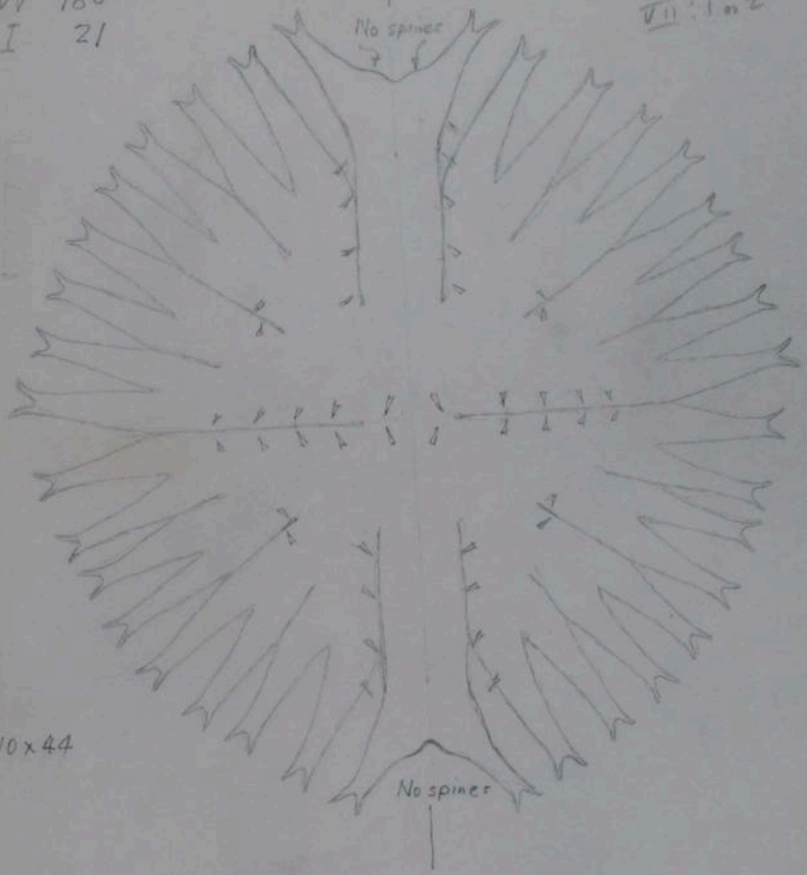
VII : 1172



L 180
W 180
I 21

M. lux var. spinosa var. nov.

VII : 1 to 2



10 x 44

N. Australia

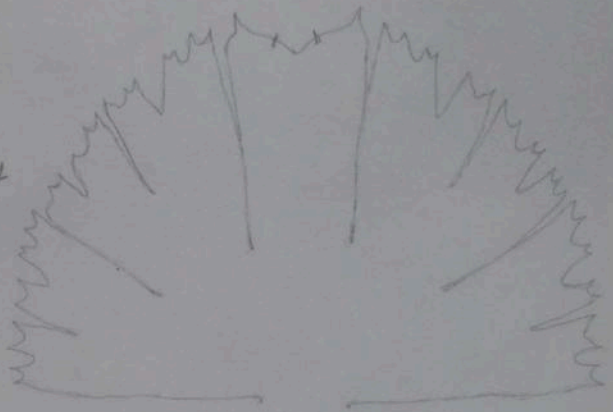
X - 104

Aug 13/54

L semicell 126 ×2 = 252 (1½×)
W 189
I 31

= M. notata forma
VII : 41

7½ x 44



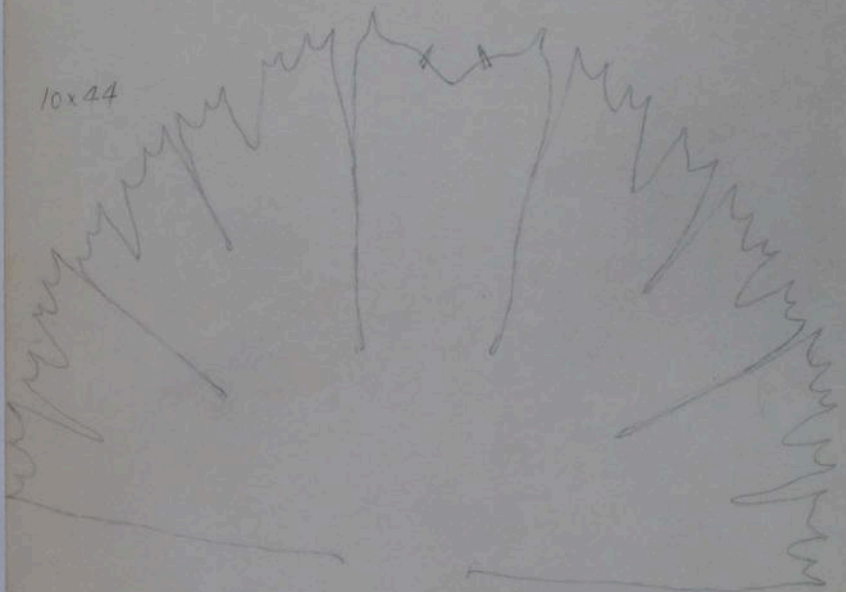
Oenpelli X-110
N Australia

Feb 10/56

L. semicell 126
W 189
I 31

= M. notata forma
VII : 4

10 x 44



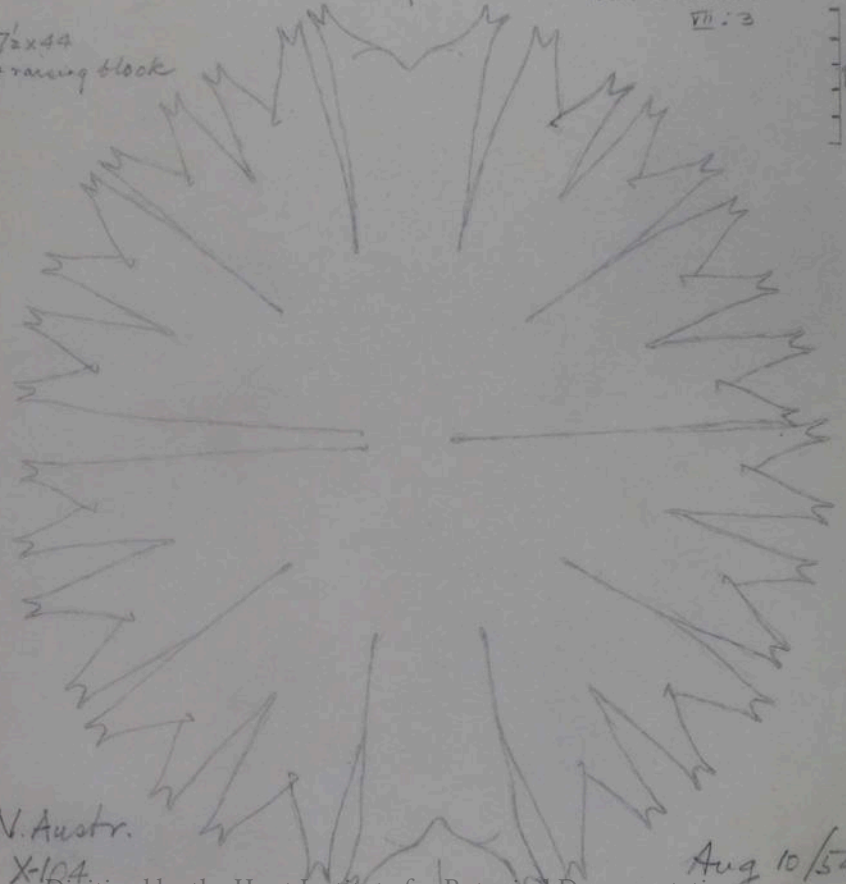
Oenpelli X-110
N. Australia

Feb 10/56

L 329
W 297
I 30

M. Torreyi var. Crameri (Bern.) Krieg
fa. australiensis fa. nov.
= M. hieronymusii
var Crameri
VII : 3

7½x44
+ tracing block



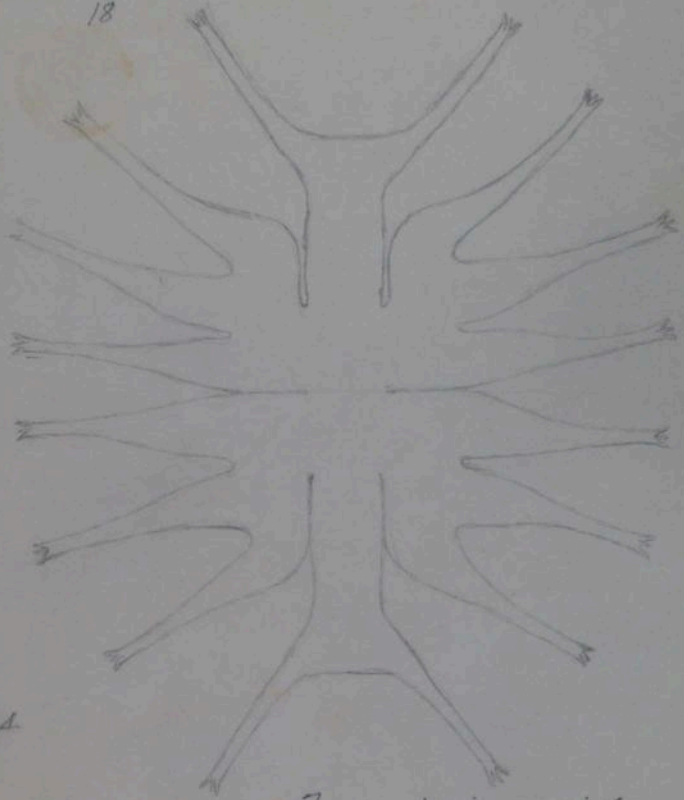
N. Austr.
X-104

Aug 10/54

L spr 121
L epr 174
W max 150
I 18

M. alata Wall.

not drawn



50

10 x 44

For comparison with var. parallela from same collection

N. Australia

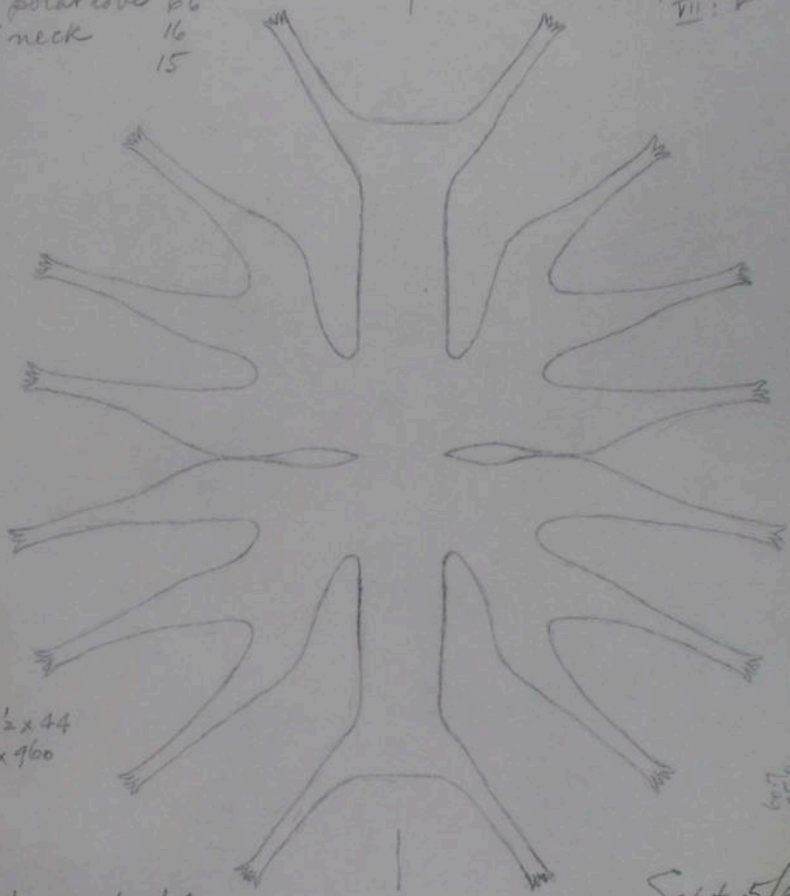
X-104

Aug 16/54

L spr 135
cpr 177
W cpr 157
W polar lobe 66
W neck 16
I 15

M. alata ~~var unawalerkensis var nov~~
fa minor fa nov

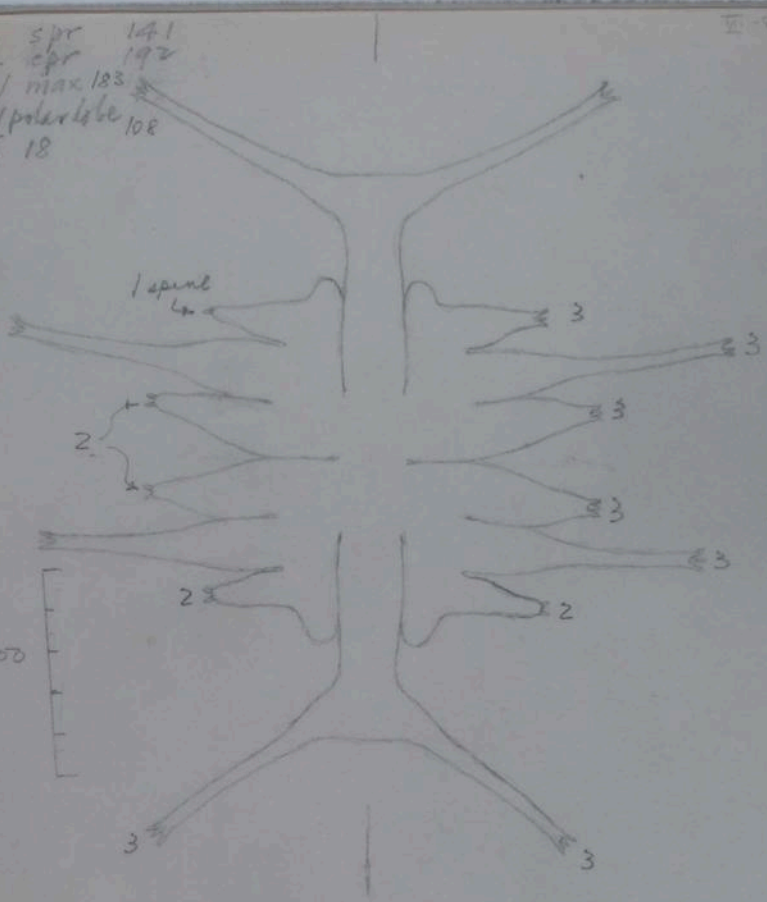
= forma VII : 8



12½ x 44
x 960

Unawalerké

Sept 5/53



N. Australia

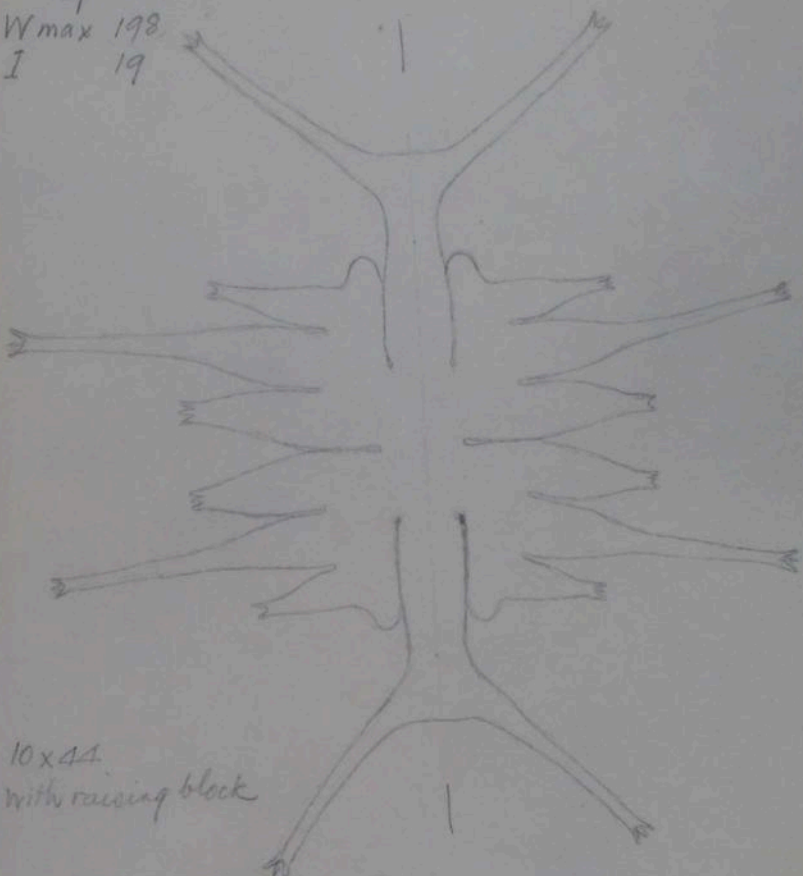
X-104

Aug 12/52

L spr 147
cpr 210
W max 198
I 19

M. alata var. parallela var. nov.

VII +1



10 x 44
With raising block

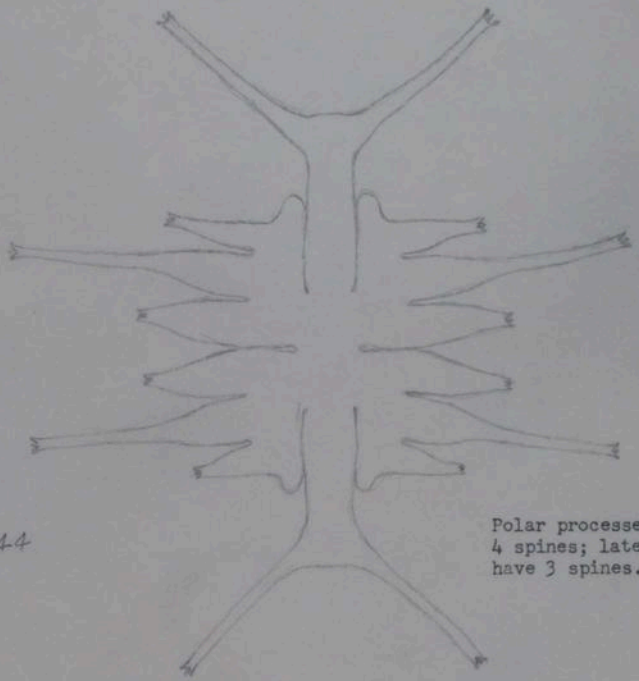
Same specimen as drawn to smaller scale on another sheet.

Slough, Oenpelli

July 29/54

L spr 147
cpr 210
W max 198
I 19

Micrasterias alata var. parallela var. nov.



7½ x44

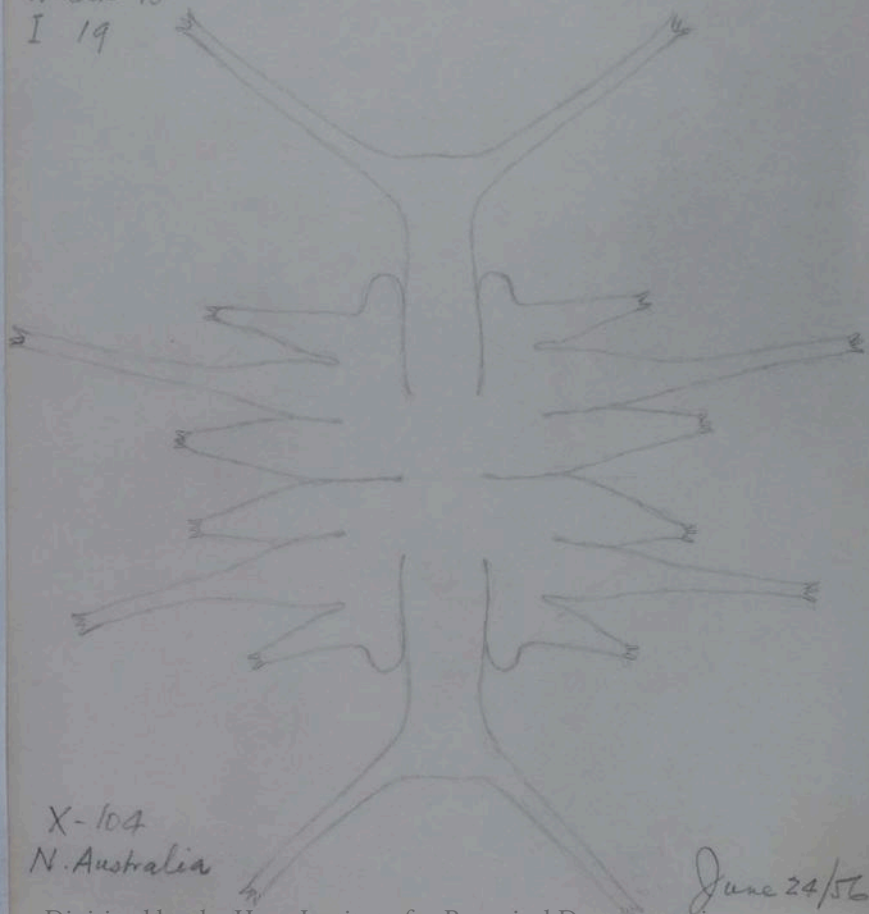
Polar processes have 4 spines; lateral lobules have 3 spines.

At first sight this gave an impression of abnormality, which is belied by the exact vertical and bilateral symmetry. The first one seen. Same specimen drawn to larger scale on another sheet.

Slough, Oenpelli
Coll. Gregson

July 29/54

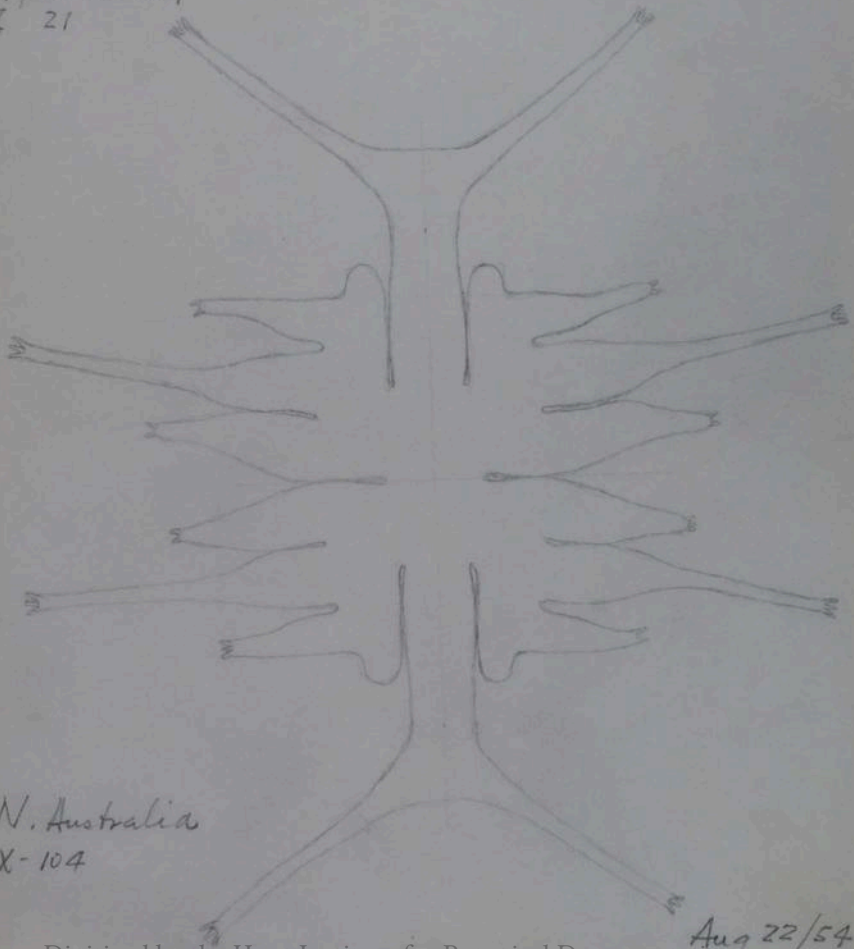
L spr 140
cpr 202
W cpr 192
W polar lobe 114
W neck 13
I 19



X-104
N. Australia

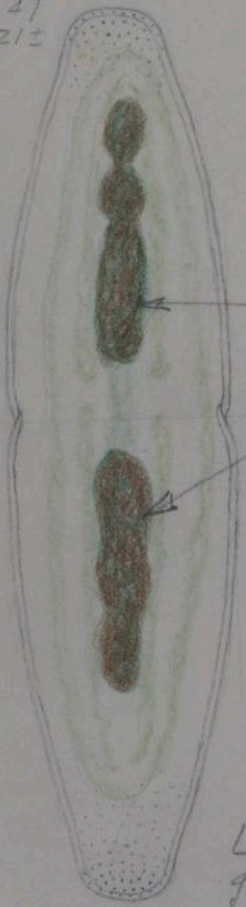
June 24/56

L spr 147
cpr 210
W max 191
W polar lobe 109
I 21



N. Australia
X-104

Aug 22/54



L 181 !
W max 47
pole 21±
I 43

Cosmarium?

Not Netrium
Not Penium
Not Tetmemorus

Cf Cosmarium blevei
= Actinot. elongatum forma
VIII : 3

Stained brown with iodine, probably too much iodine.

12½ x 44

First one seen

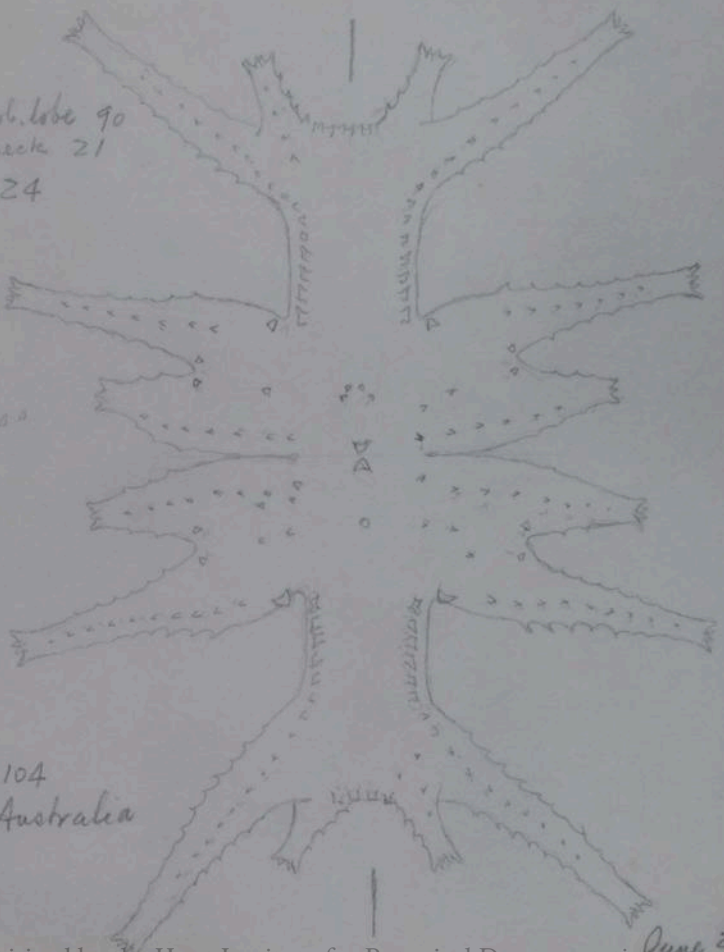
Large pores at poles, which gradually change to minute punctae.

Unawalerké

Sept 8/53

L spr 111
cpr 153
W cpr 114

M. mahaleleuwaense v. reducta fo



W pol. lobe 90
W neck 21
I 24

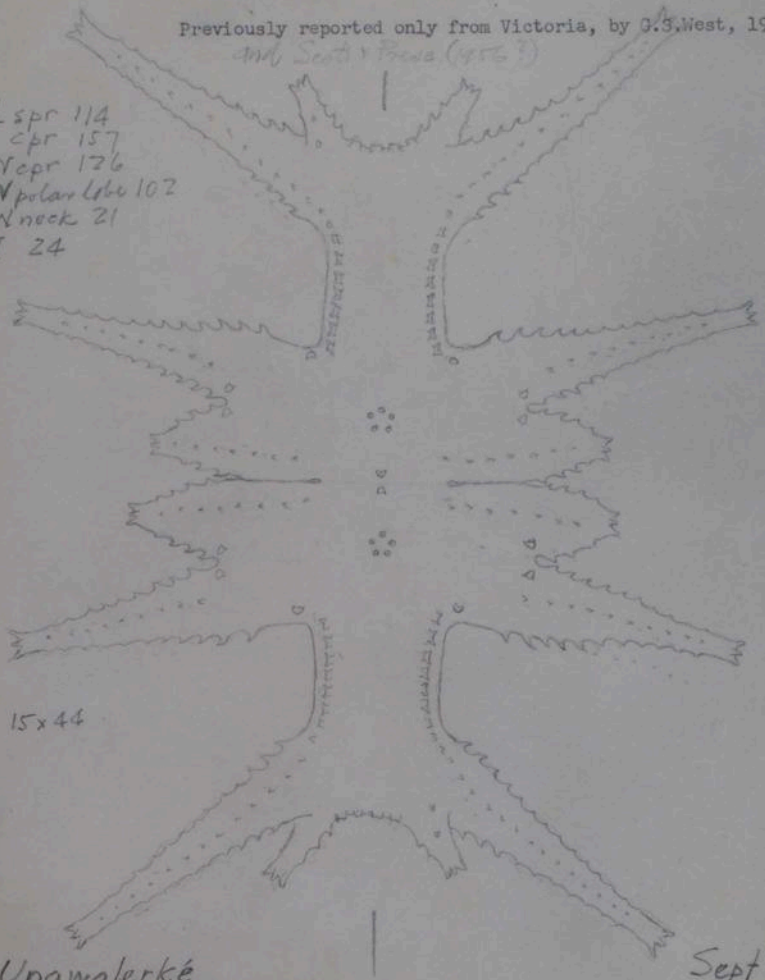
X-104
N. Australia

June 24/56

M. mahabuleshwarensis var. reducta, fa

Previously reported only from Victoria, by G.S.West, 1905.
and Scott & Prowse (1956?)

Lspr 114
cpr 157
Wepr 176
Wpolar Lobe 102
Wneck 21
I 24



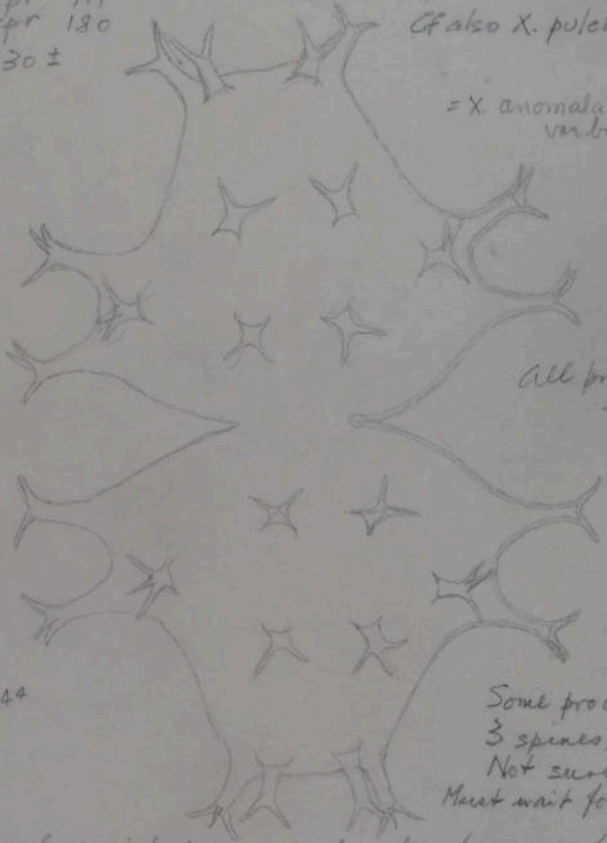
15 x 44

Unawalerké

Sept 5/53

L spr 225
cpr 264
W spr 117
cpr 180
I 30±

Xanthidium bifurcatum Borge, fa.
Cf. Scott & Prescott, N. Austr. Pl 10, fig. 2.
Cf also X. pulcherrimum
(1907) Playf.
= X. anomala
var bifurcata fa
VIII :5



All processes are hollow

7½×44

Some processes have
3 spines, others 2.
Not sure which.
Must wait for better specimen

Somewhat distorted, and badly obscured by adherent mucus & debris.

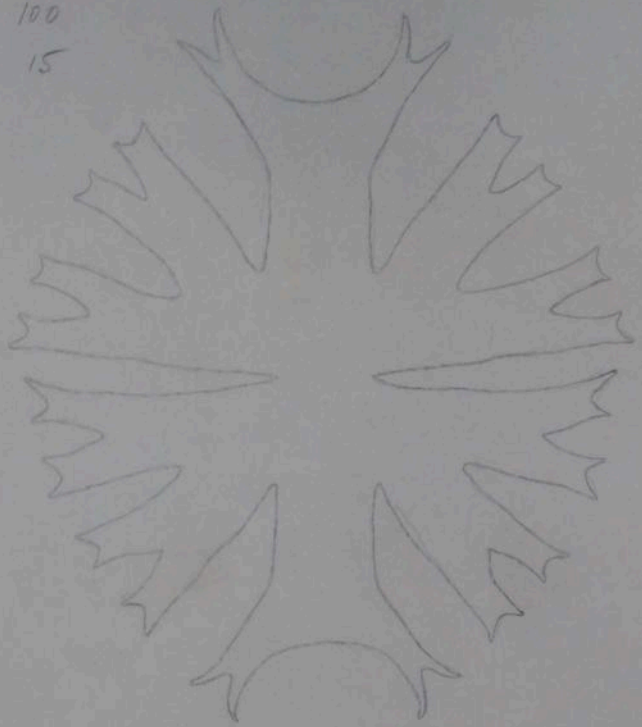
Slough, Oenpelli

July 29/54

L 114
W 100
I 15

M. radians Turn fa

not fa
VIII :6



N. Australia 3

Oct 17/53

L 26
W center 10
W pole 6

Cl. infractum

20×44

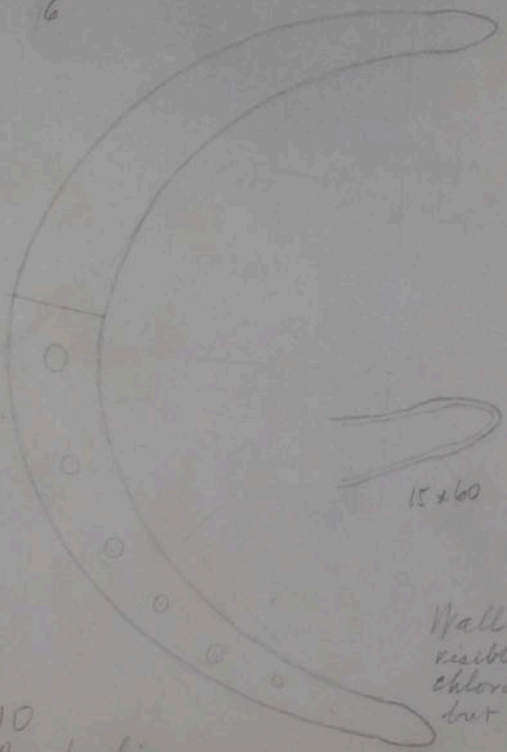
X-110
N Australia

Feb 24/57

L 120
W center 15
W pole 16

Cl. nematodes Joshi (var nov?)

= Cl. nematodes forma



15 x 44

53.7
90.5

15 x 60

1 seen

7 (or 6?) pyrenoids in each semicell.

Older semicells very faintly brownish.

or costate

Wall faintly striate, 4 striae visible at ends which were free of chloroplast. Not countable at center but I guess there may be about 8 there

X-110
N Australia

Mch 10/57

L semicell 84
W max 18
W pole 10±
W base 15
I 12-13

Doc baculum var inflata

20x44

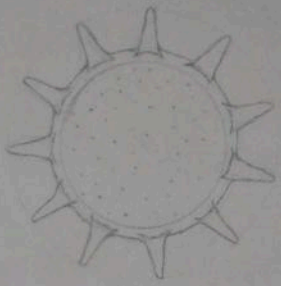
An undersized specimen, drawn to show basal granules which are hard to see on filled cells.

Unawalerké

Sept 9/53

W pole ssp 37
csp 54

Pleurotaenium Kayei



Apical view of a
dwarf specimen.
Apical spines much
shorter than in full-grown plants

N. Australia 11

Oct 17/53

L ssp 75
csp 87
W base 13
W pole 16
W across spines 19
I 10
T max 12

Ichthyocercus longispinus var. or fa. nov.
See Playfair also Bourrelly forma

Much wider than the Indonesian form and with shorter spines.

Chloroplast decayed. Structure not evident

Somewhat tilted →

N. Australia 11

Oct 16/53

T. laevis

Zygospore smooth
68 x 52

Only 2 semicells attached, other 2 missing

10 x 44

Oenpelli
X-110

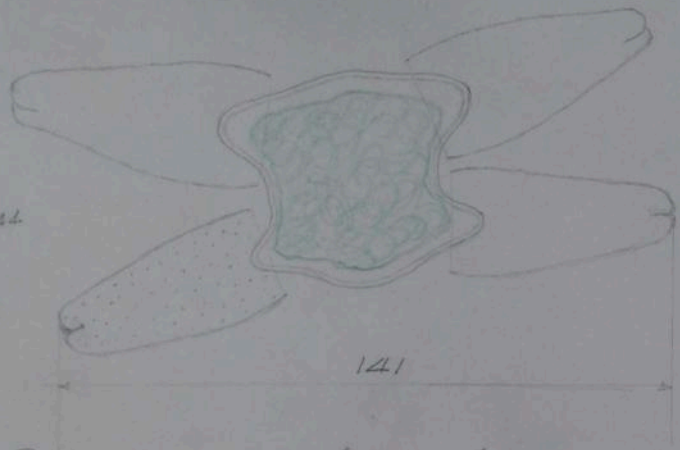
Feb 13/56

L cell 102 ±
W max 27 ±

Zygospore 57×51

T. laevis (Kütz) Ralfs

Not var. tropicus because wall of zygospore is smooth.



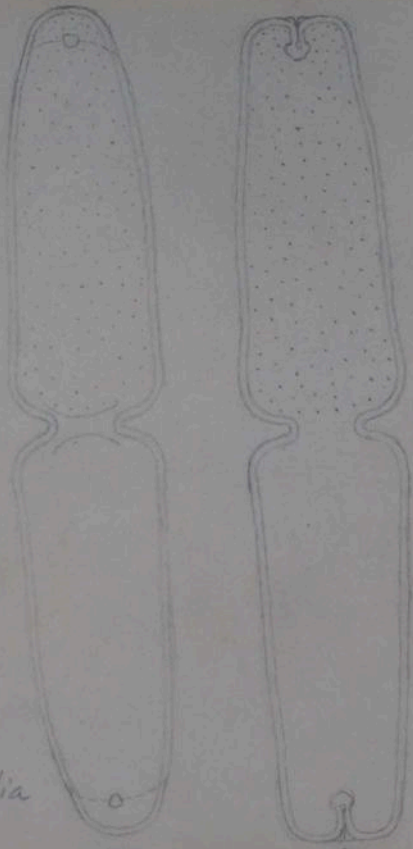
Zygospore apparently not fully developed, see another sketch

Oenpelli
X-110

Feb 13/56

L 132
W base 27
pole 21
I 13
T 25

Tet quastroides fa



N. Australia
#11

Kilu-Impini Creek
Melville Island

Oct 25/53

L 110
W 40
I 15

Dec Gronblad, Sudan

= E. ansatum forma I
III'.10

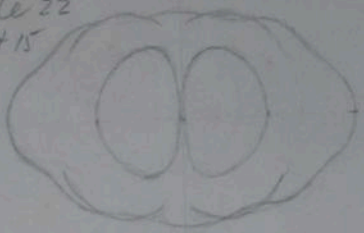
15 x 44

Facial swellings not visible
X-101
N. Australia

June 26/56

L semicell 54
W base 43
W pole 22
I about 15
T 29

= E. ansatum form 2
3:12



20 × 44

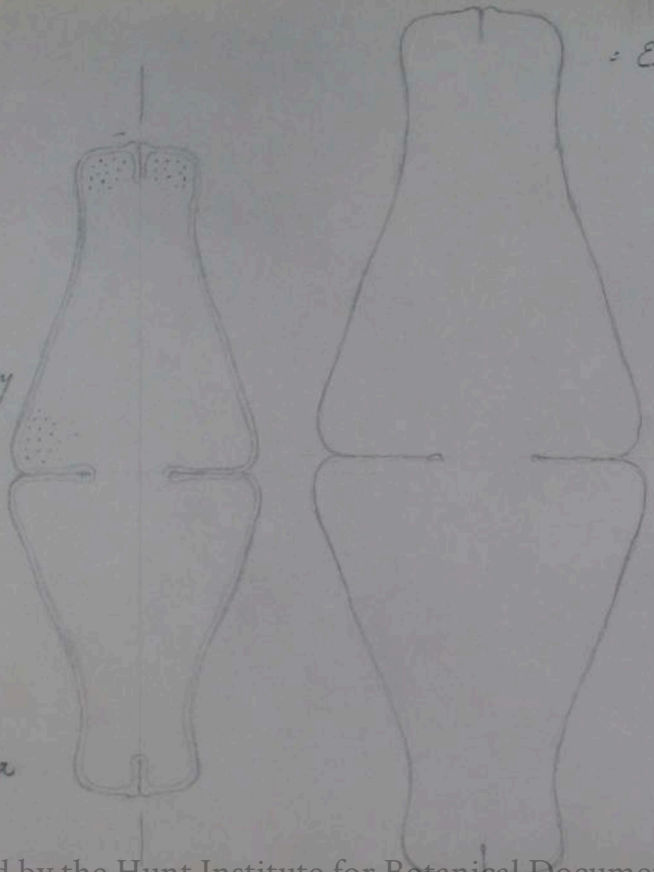
Swellings not visible
in front view, even
in completely empty semicell

X-104
N [illegible]

Feb 24/57

L 105
W 41
I 13

= E. ansatum
form 2
Pl. 11



Markings concealed by chloroplast

20×44

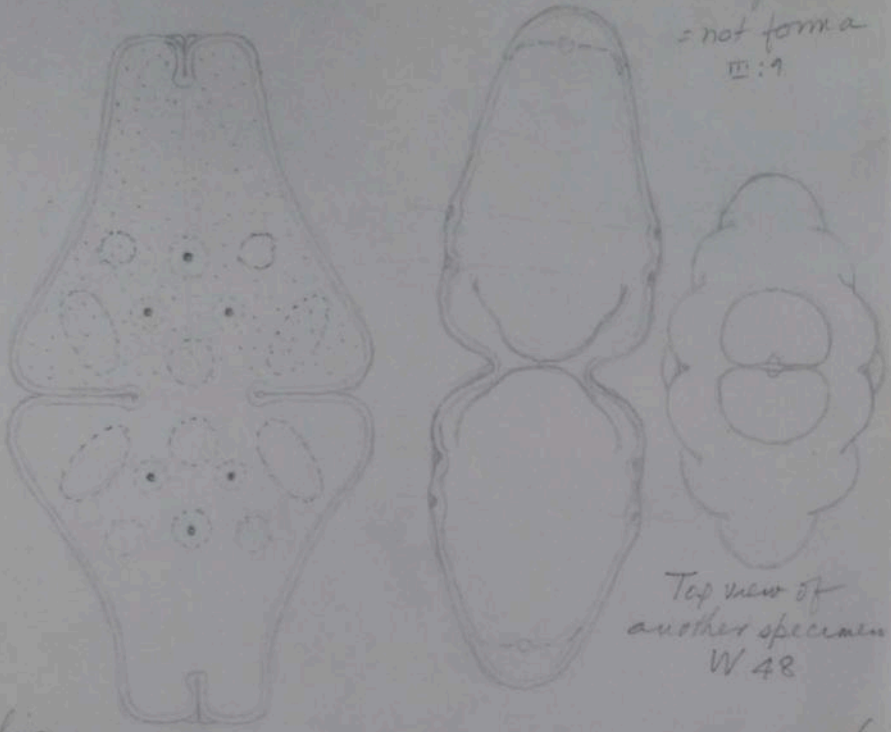
15×44

N. Australia
X-104

Sept 4/54

L 84
W 46
I 15
T 29

E. ansatum var. triporum (Wolosz.) Krieg. fa
= not forma
□ : 9



Top view of another specimen
W 48

N. Australia
X 100

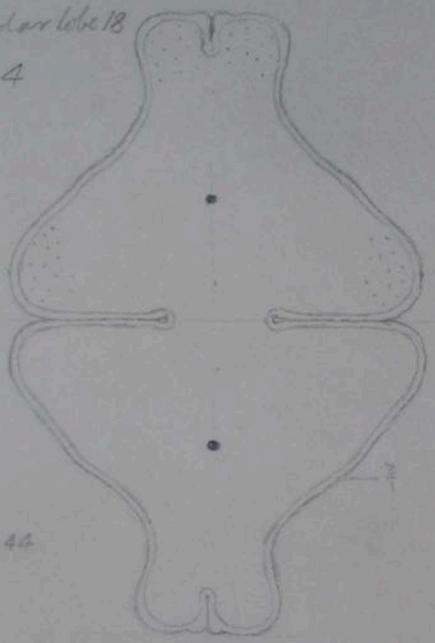
The markings shown in front view are visible as refractive spots in the empty cell.

Aug 10/52

L 76
W 51
W p dor lobe 18
I 14

E. didelta? var latum var nov.

= E. ansatum var didiltiforme
I 10 : 2 forma

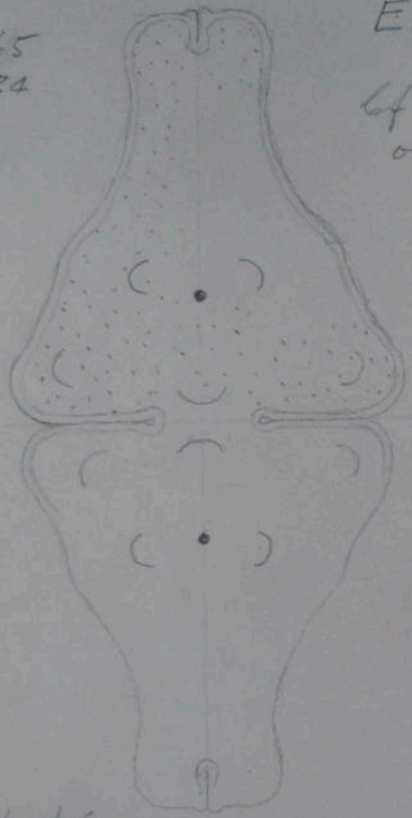


20×44

Unawalerké

Sept 11/53

L 132
W base 65
W pole 24
I 18
T 39±



E. didelta fa

Cf var. bengalicum, but only one mucus pore

: E. didelta v. bengalicum form

II:1

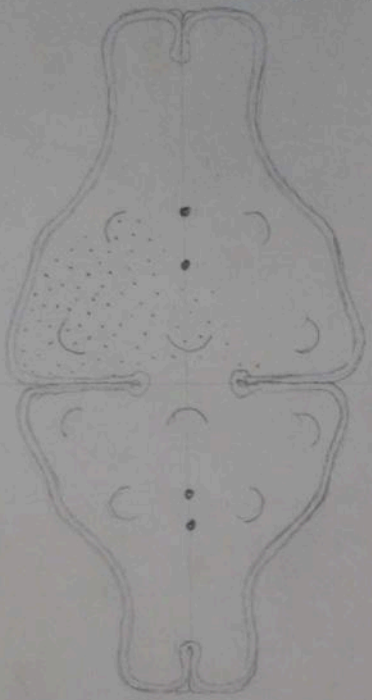
Upawalerké

Sept 11/53

L 83
W 45
I 13

E. ansatum var javanicum (Gutw) Krieg

OK
II'.3

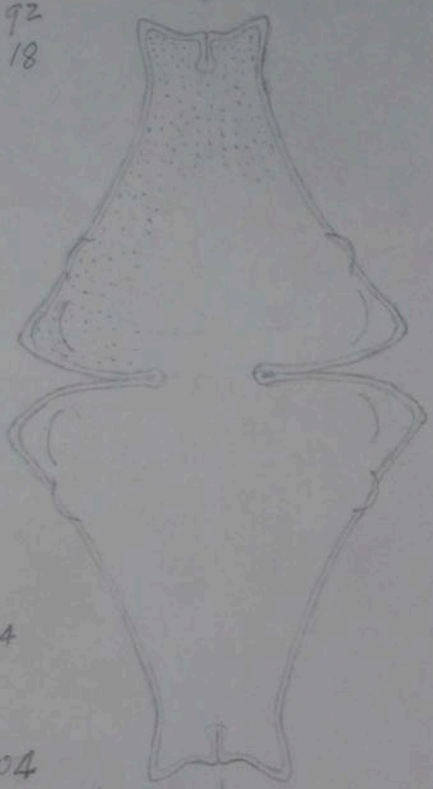


Unawalerké

Sept 10/53

L 170
W 92
I 18

= E. latipediforme n. sp.
III:5



10 x 44

X 104
N. Australia

Aug 6/54
III:5

W 105
T 58
N pole 30

= E. calypsiformis n. sp
III. 6

10x44

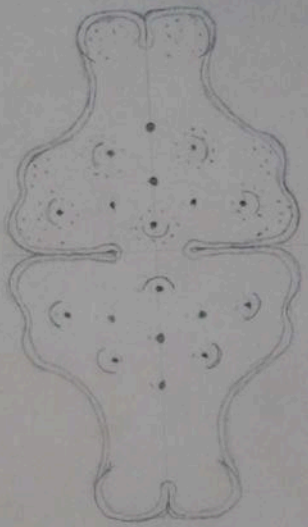
Unnavalerkė

Nov 3/53

L 64
W 33
I 12

E. sinuosum var.

= var subjeanneri
II 8



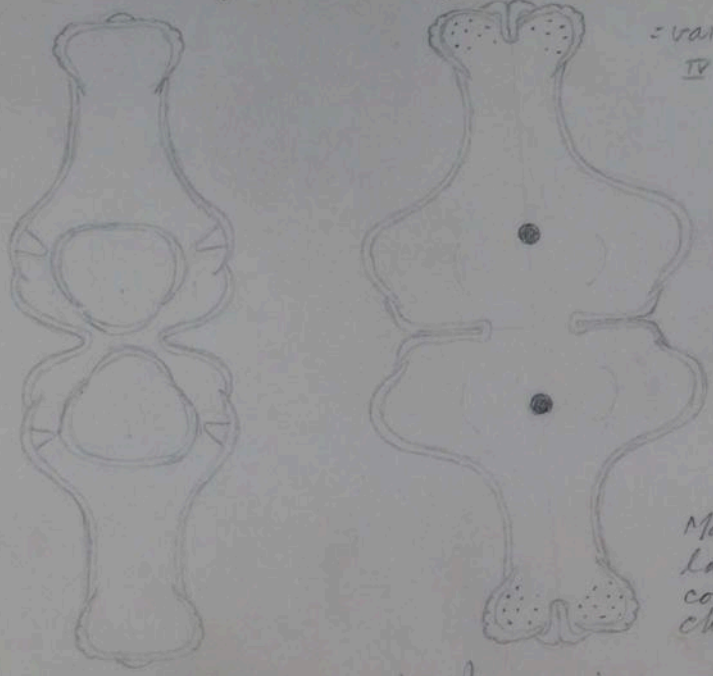
Umba Kumba
Groote Eylandt

Sept 19/53

L 81
W
I
T 28

E. longicolle var. magnaporum var. nov

= var capitatum (W+W) IV. 1



20x44

More pits on lateral lobes, concealed by chloroplast

Also occurs in Indonesia & Unawaterké collection

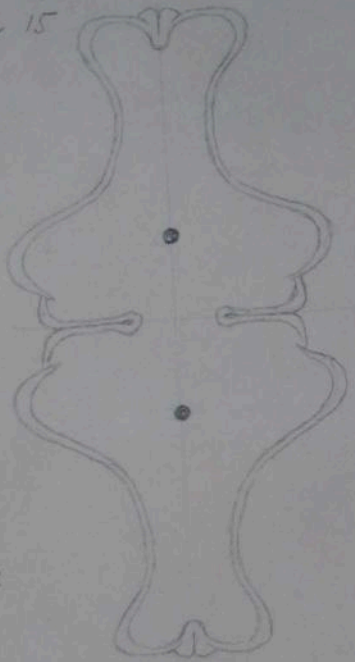
N. Australia

X-10-4

Aug 20/54

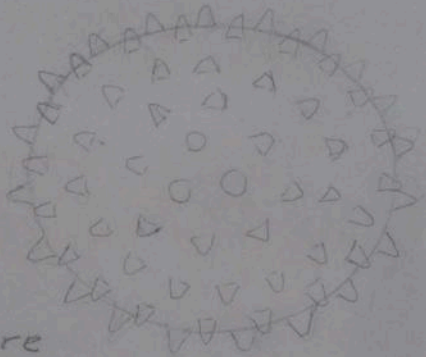
L 81
W 42
W polar lobe 20
W neck 15
I 13

= E. longicolle var capitatum West
IV : 1



20x44

Wall of zygospore golden brown; the blunt, solid spines hyaline and colorless.



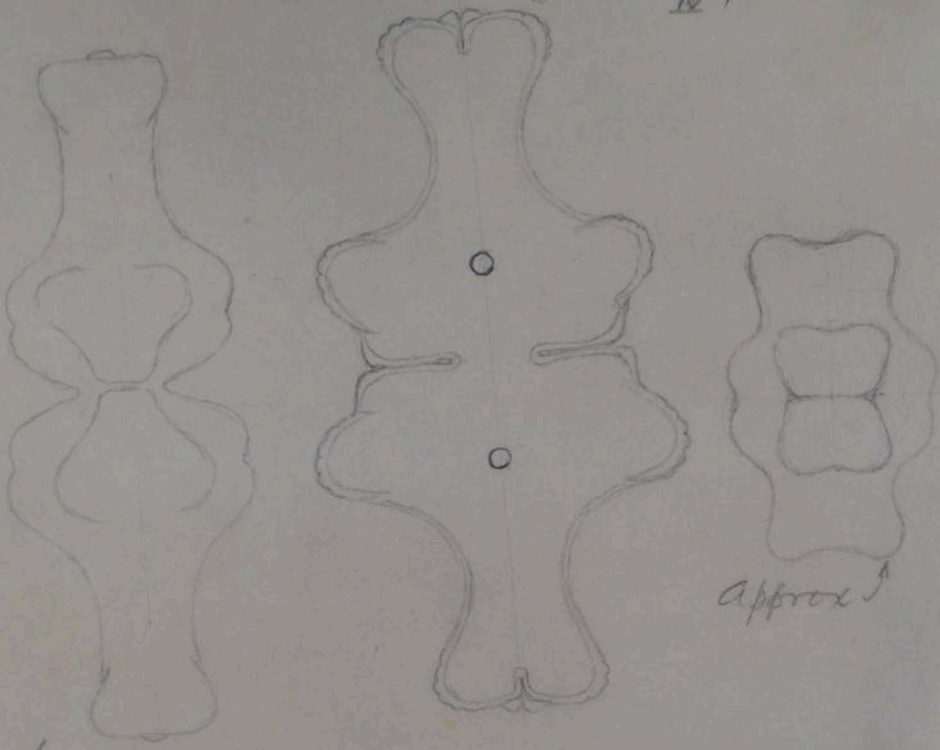
Zygospore
45x50μ

Unavalerké

Sept 6/53

L 84
W 44
I 12
T 31

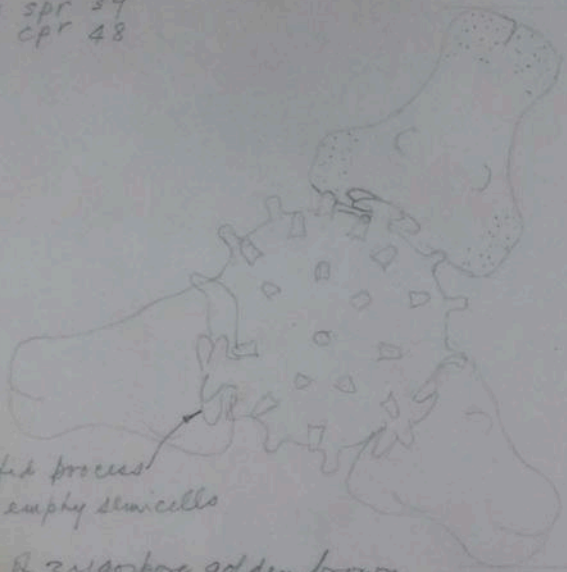
= E. longicolle var capitatum Wats
IV 1



Slough
Coll. Gregson
May 9/54

E. longicolle var
= v. capitatum W+G
f. reducta
IV:3

Zygospore
Diam spr 39
cpr 48



15x44
x1200

95μ

Quadrifid process
inside empty semicells

Body of zygospore golden brown
Processes hyaline, solid, colorless

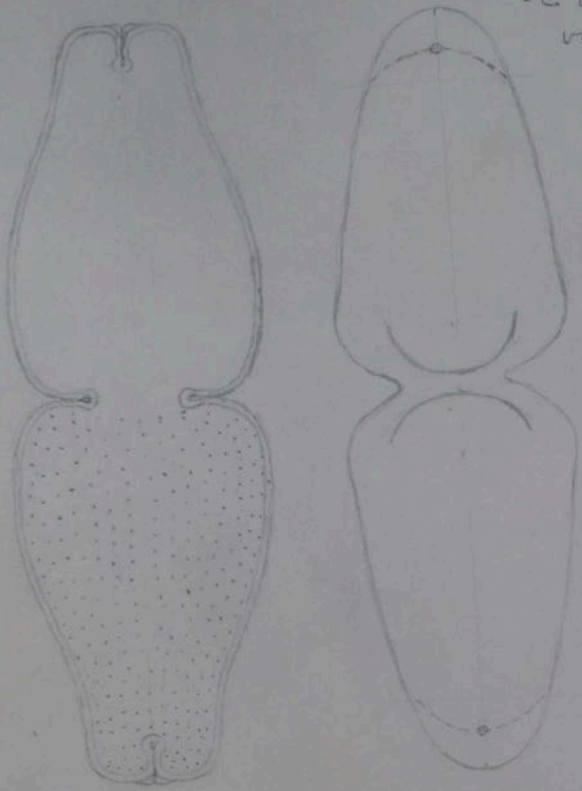
Oenpelli
X-110

Feb 10/56

L 123
W 42
I 16
T 36

= E. obesum var. tetramorioides

IV:4



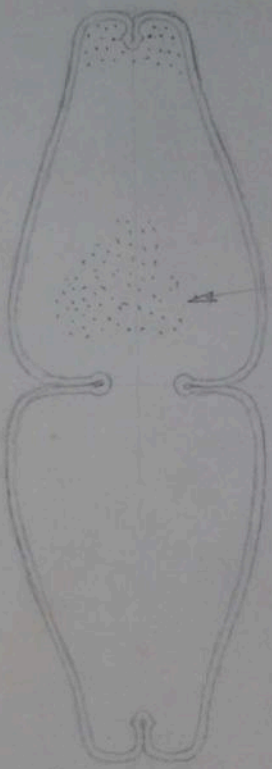
15x44

N. Australia
X-104

Erich 12/57

L 120
W 42
W pole 20
I 15

= E obesum var tetramerioides



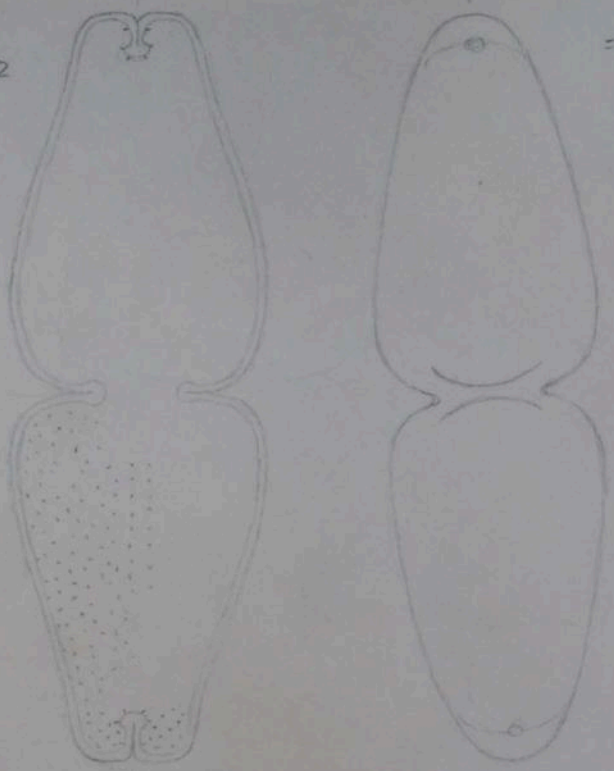
15 x 24

Sparsely
~~Closely~~ punctate - scrobiculate all over.
Punctae may be arranged in vertical lines in central part
Could not get other views

Slough, X-104

July 31/54

L 121
W 42
W pole 22
I 15
T 36



= E. obesum
var. lebmannianum

IV.5

Gf. Krieg
Desm. Eur. p. 13
Fig 4 V.
Pores at pole of
Tetm. granulatus

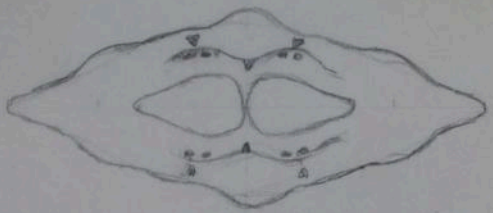
Wall sparsely
scrobiculate-
punctate

N. Australia X 104
Staurastrum Pachyderme

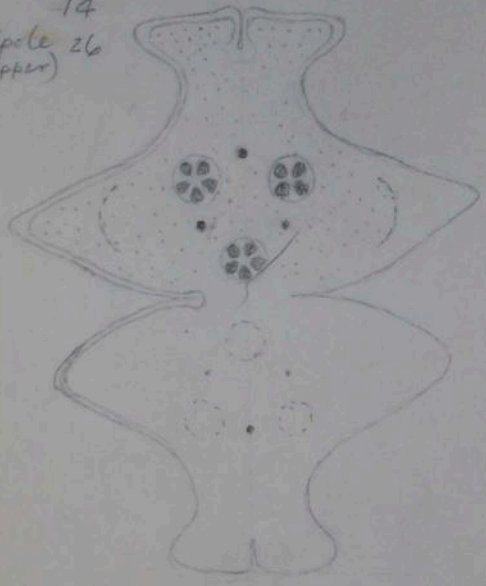
Aug 2/54

L 69
W 57
I 74
W pole 26
(upper)

= E. minimum var speciosum Cleve!



Very rough approximation of top view



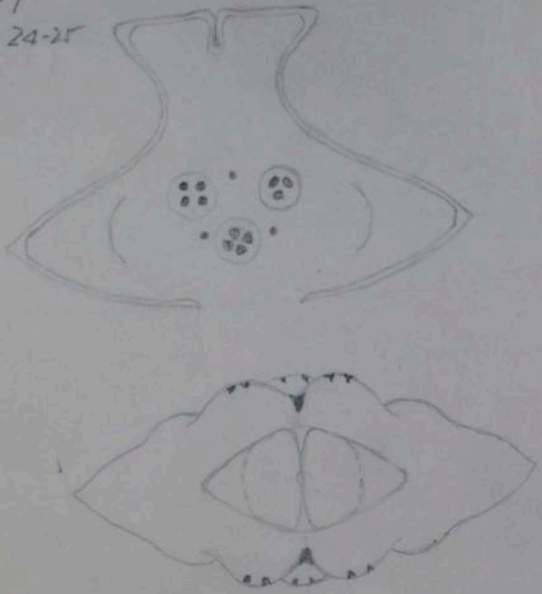
The first one seen. I worked for two hours and tried all the tricks in my repertoire on the little so-and-so, but could not balance him for the other views. Partly empty cell, but central part obscured by remains of chloroplast.

N. Austr.
X 104. Penpelli

Aug 5/54

L sericell 73.6
W 58
I
T 27
Vrpole 24-25

= E intermedium var speciosum

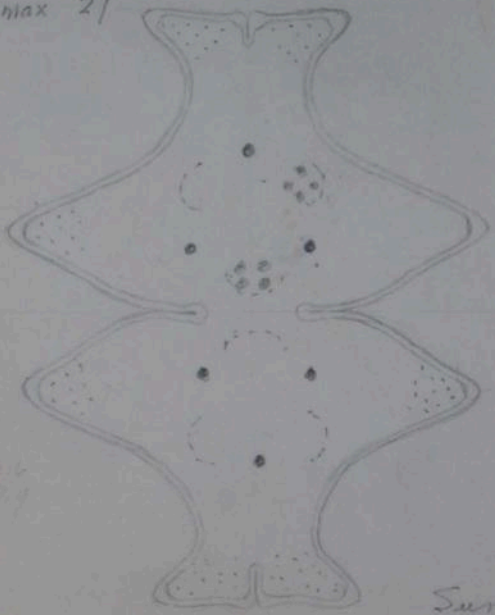


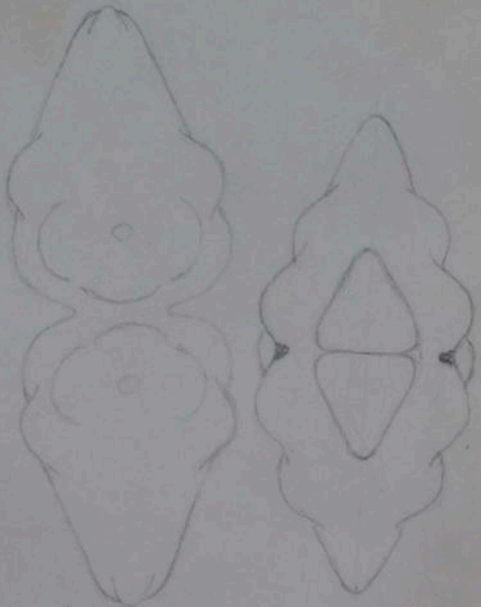
North Australia
X-104

Sept 14/54

L 74
W 60
Wpole 25
I 12
Tmax 27

= E. intermedium var speciosum





Surface features concealed by chloroplast. Wall scrobiculate with large pits or swellings

N. Australia

Aug 16/54

L 57 60
W 45 45
I 11 11
T 24

E. intermedium var periferum Scott & Prisc
Arnhem Land, PL 3 figs 1, 2.
= forme IV.6

Wall markings concealed by chloroplast.
2nd one seen

N. Austr.
X 1084

Aug 7/54

L 57
W max 44
W pole 21
I 10

E. intermedium var. *periferum* Scott & Prescott
= forma D:6

1st one seen

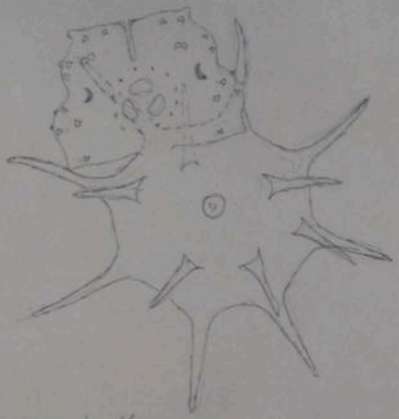
N. Australia X-104
Slough. Ompelli

July 21/54

L semicell 17
W 24
I 6±

= E. dubium Näg v. curvatum Messik forma
E:3

Zygospore
D esp 25
csp 51



3 other empty semicells
omitted for clarity

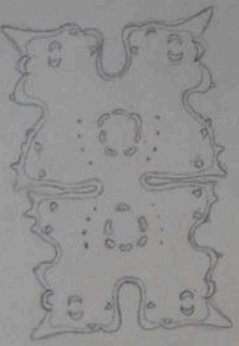
Unawalerké

Cex 10/53

L 40
W 27
I 7.5
T 20

= E. pulcherrimum W&W forma
V:4

See Indonesia

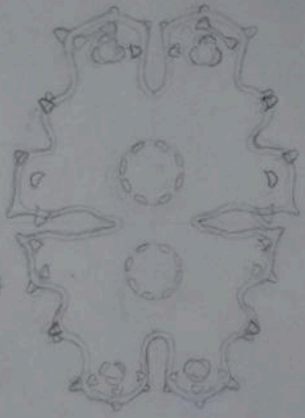


Unawalerké

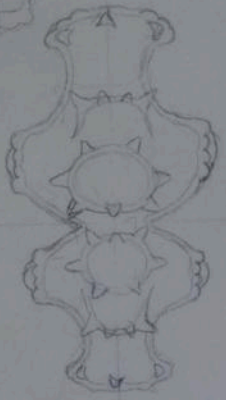
Sept 9/53

L 50 s
W 37
I 10
T 27

E. pulcherrimum WW 1902
var. v. nov.
= var. menggalense



20×44



Chloroplast with 4 lobes corresponding to shape of semicell, + with 1 central pyrenoid.

Type of chloroplast not discernible in top view.

1st Aspn

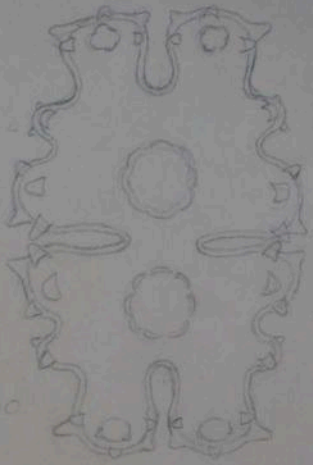
N. Australia X-104

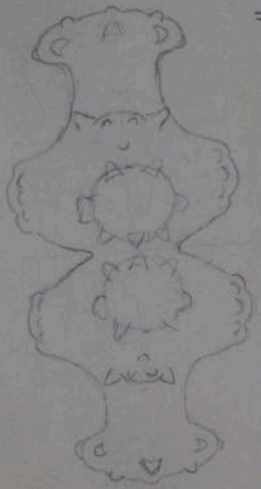
Dec 2/57

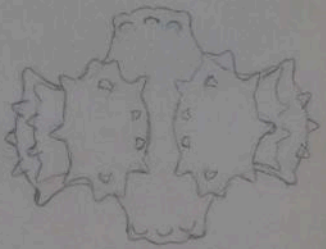
L 54
W 36
I 11
T 28

Evastrum Gregsonii sp. nov.

Seems closest to E. pulcherrimum Wow
v. australianum v. nov
= var menggalense fo-







15 y 60

2 seen

1st one seen

Details somewhat obscured by chloroplast

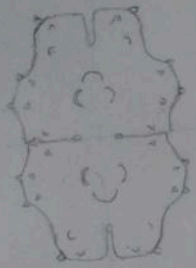
See drawing from Menggala Sumatra

Slough, Penpelli

July 28/54

L 29
W 20
I 6
T 16

= E. pulchellum Bull fom



15x60

Details not clearly seen
o/c chloroplast

X-108
N. Australia

Mch 10/57

L ssp 30
ssp 33
W 24
I 6
T 18±

4. E. acanthopherum

I:6

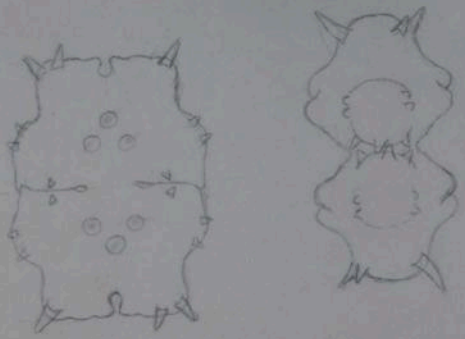
15x60

X-104
N. Australia

June 26/56

L ssp 31
L csp 34
W 24
I 7
T 18

= E. acanthophorum Turn
f. asymmetricum Sou Brnc
V-9



Details obscured by chloroplast

N. Australia
X-104

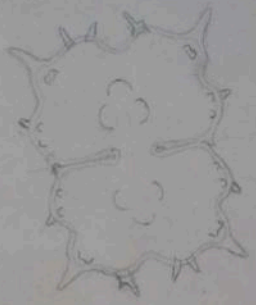
Sept 12/54

L ssp 30
csp 33
W csp 28
I 9
T 19

Sp. nov.?

Seems closest to
E. acanthophorum Turn
Krieg Mon. 579 ℞77: 25-27
= f. latius n f
V: 10

20×44



Approx

Apical spines
asymmetrical

Details somewhat obscured by cell contents.
Facial protuberance + 3 granules very prominent

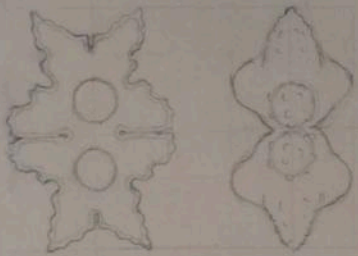
N Australia
X-104

Feb 24/57

L 27
W 20
I 6±
T 13

~~Sp. nov.~~

Cf Equadrilobum Scott & Grault
Fla 251
Cf E. Turneri W. West v. australiense Sc. & Presc
Arnhem Land Pl 20:7
= f extremum n.f.
V:11



15x60
x170

Approx

Approx

2 seen

Central swelling seems to be smooth, remainder of surface is granulate, but number & arrangement of granules not visible.

X-110

N Australia

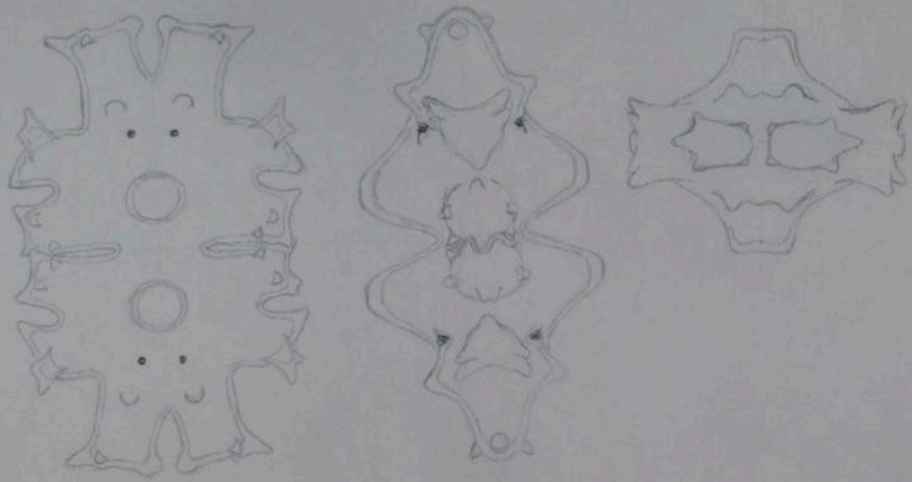
May 30/57

L 57
W 36
I 9
T 29

Euastrum praemorsum var.nov. = forma

Pf Nordstedt, New Zealand

V:1



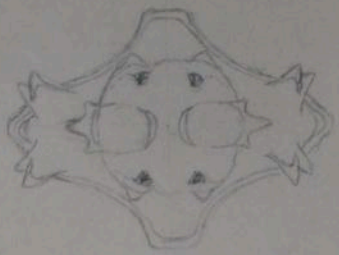
Proportionately wider and thicker than the specific form; processes on upper lateral lobes much more developed; central swelling larger and more truncate in vertical view.

Slough, Oenpelli

July 30/54

W 39
T 29

Euastrum praemorsum var oenpelliense var nov
= forma
v:1



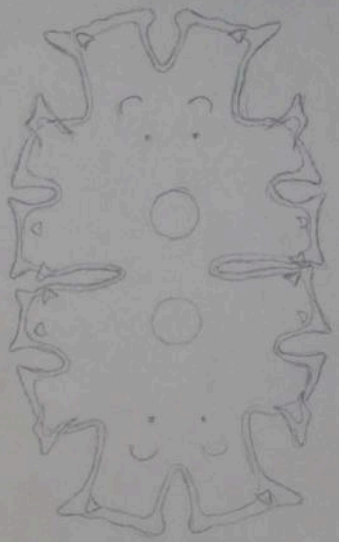
Gregson
Slough, Oenpelli

May 11/54

L 66
W 39
I 9

E. praemorsum var. nov.
= forma
v:1

T max 28



Slightly tilted

Slough, Dempelli

July 25/54

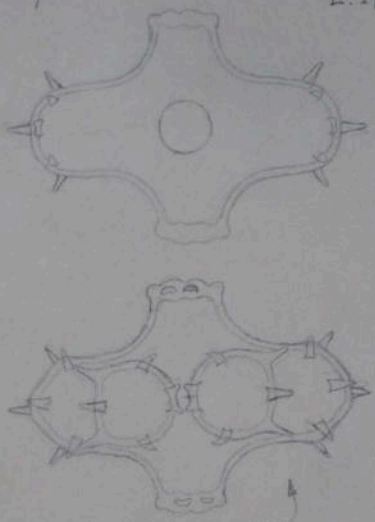
Evastrum ~~Blythii~~ sp. nov.

Sachlanii Prescott, Indonesia

W ssp 39
csp 47
I 7
T 29

See W+W Ceylon
E. spicatum which is different

L ssp 45
csp 48
W ssp
csp
I
T 27±



Empty semicell

Details not clearly seen

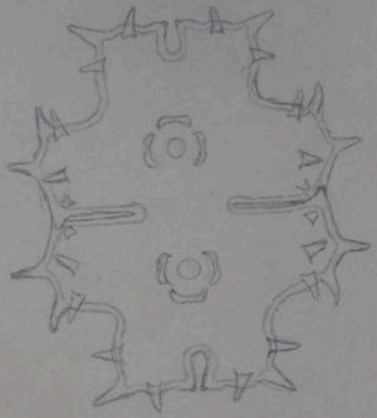
This collection was made by Jim Blyth, Oenpelli Mission.

Unawalerké

Sept 7/53

L ssp 46
csp 48
W ssp 37
csp 45
I 9
T 27±

Euastrum Blythii sp. nov.
Sachlanii Prescott
v. 2 Indonesia



Unnavalerké

Sept 6/53

L ssp 30
csp 36
W 22
I 6
Tmax 19

= E. exile Josh
X-1011

approx

Incomplete.
Surface markings
concealed by
chloroplast

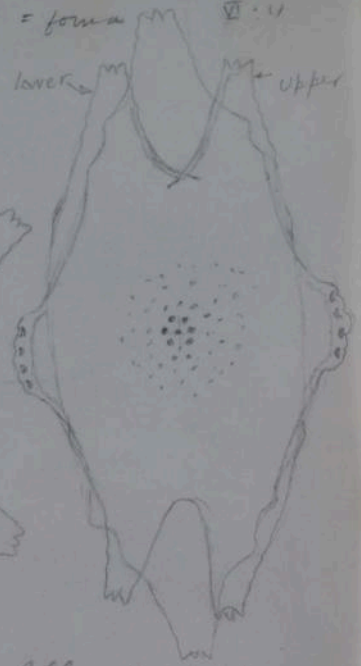
Details added from
another empty cell Feb 24/57

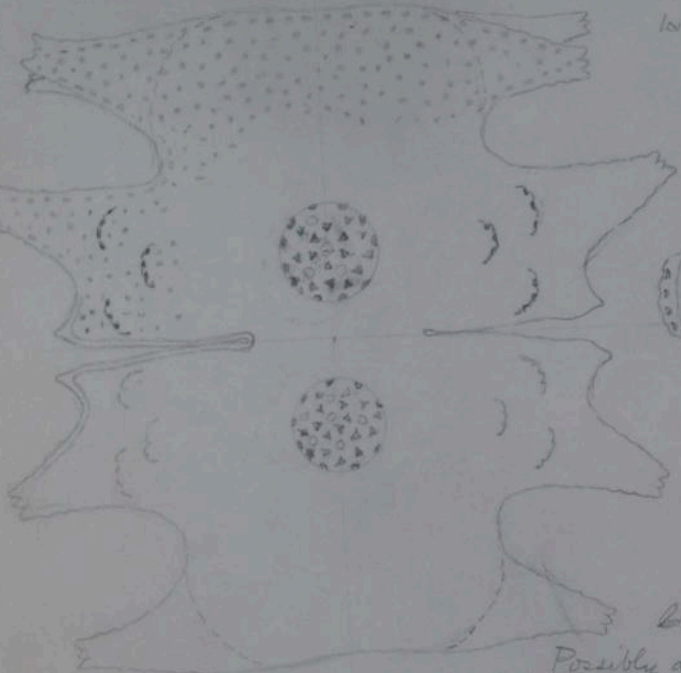
North Australia
X-104

Aug 19/57

L 109
W 114
I 28
T 57

E moebii V. insolita Scr Preuss. Fa. = forma VI · 11





15x44

Chloroplast tetracentric.

Possibly a cross connection between the 4 quadrants at the center

N. Australia X-104

Dec 3/57

L semicell 49
W 80
I 28
T 54

15x44

Markings not clear

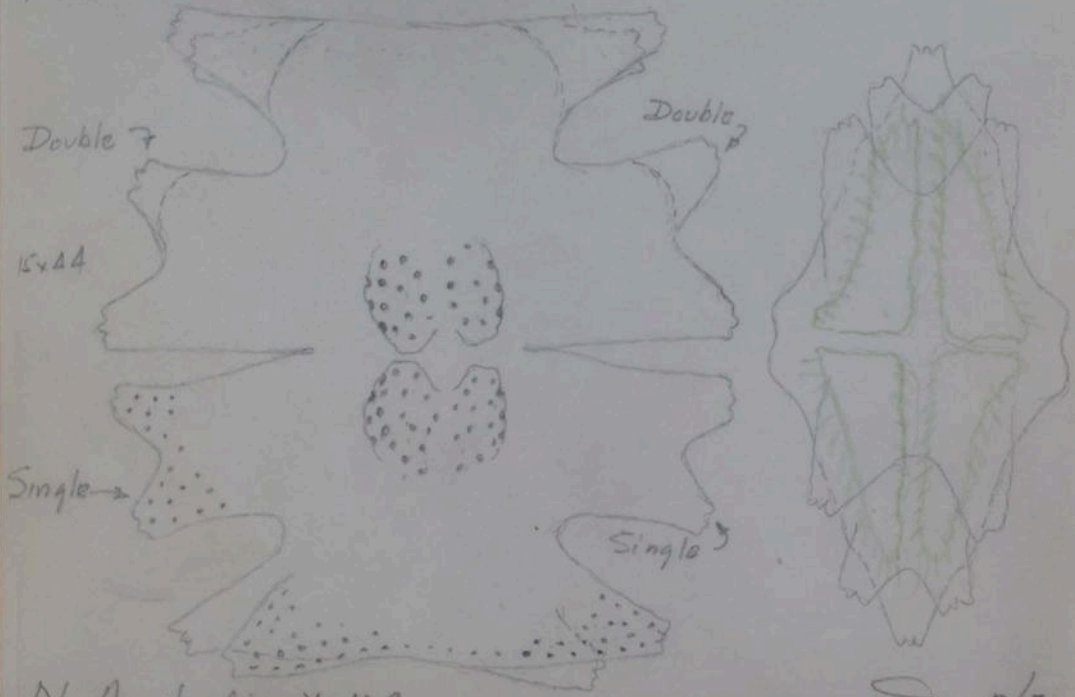
Abnormal semicell

N. Australia X-100

May 8/60

L 108
W 108
I 36
T 50

Central part of face porose, large pits visible only on tumor and on lobes

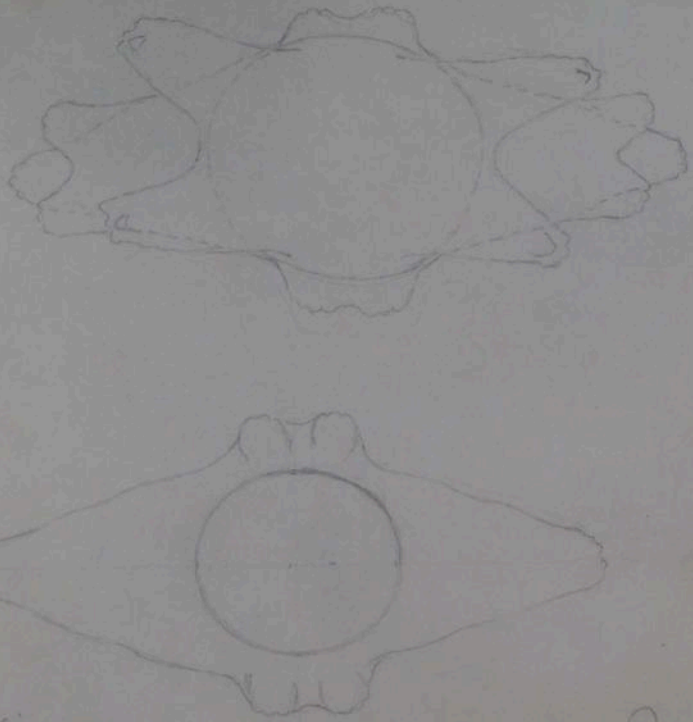


N. Australia X-104

Dec 2/57

L semicell 60±
W max 109
W pole 79
I 33±
T 53

15x44



X-104
N. Australia

June 13/56

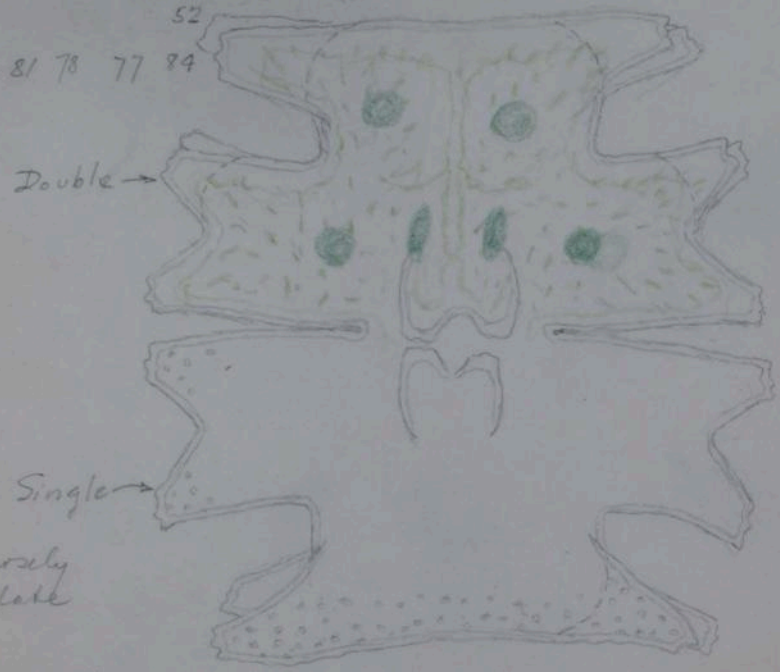
E. moebii v. diploconthylum v. nov.

N. Australia X-104

Dec 4/57

L	105	101	105	104
W	108 ±	100	102	102
I	33	33	33	32
T	57			52
Polar lobe	81	78	77	84

Euastrum moebii v. diplocanthylum v. nov.



15 x 44

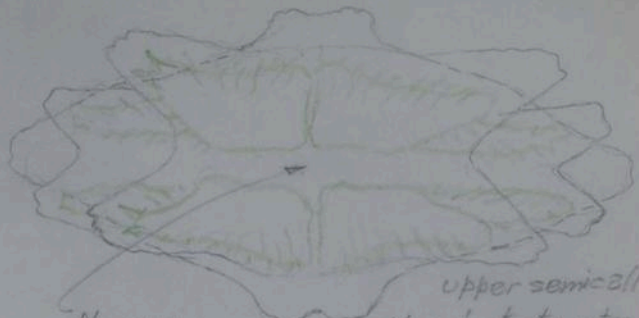
Wall coarsely verrucolate

N. Australia

X-104

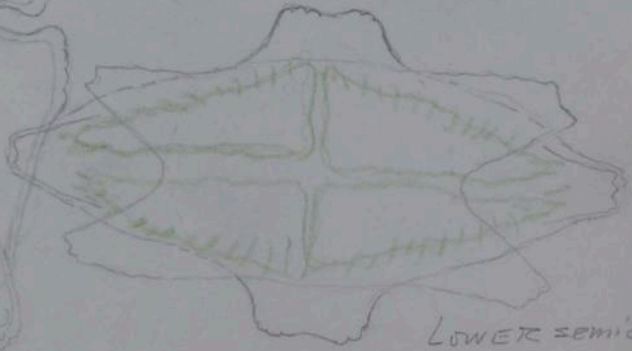
Fee 1/57

L 105
W about 102 (lobes crushed)
I 33
T 57
Polar lobe
81



upper semicell

No cross connection of chloroplast at center
Pyrenoids & nucleus not visible



Lower semicell

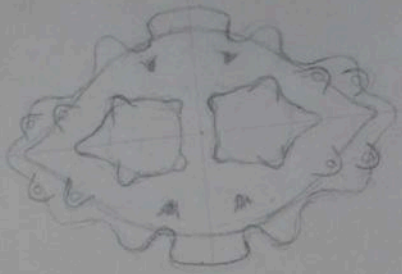
N. Australia

Nov 30/57

W 51
T 33

E. asperum Borss

OK ∇ :1



20x44

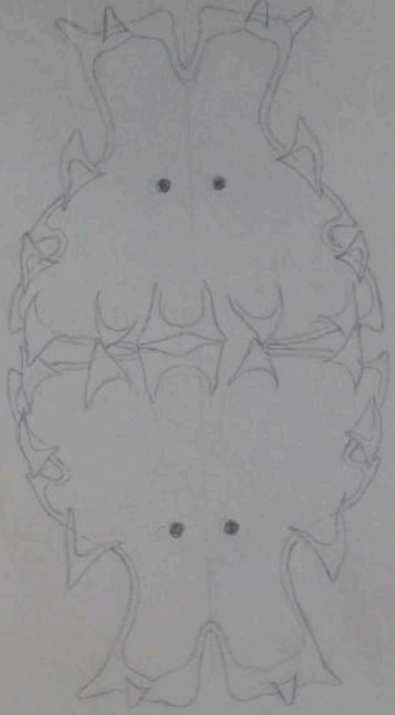
X-104
North Australia

Feb 16/57

E. asperum Borge

L 87
W 47
I 12-15

ca ▽ : 1

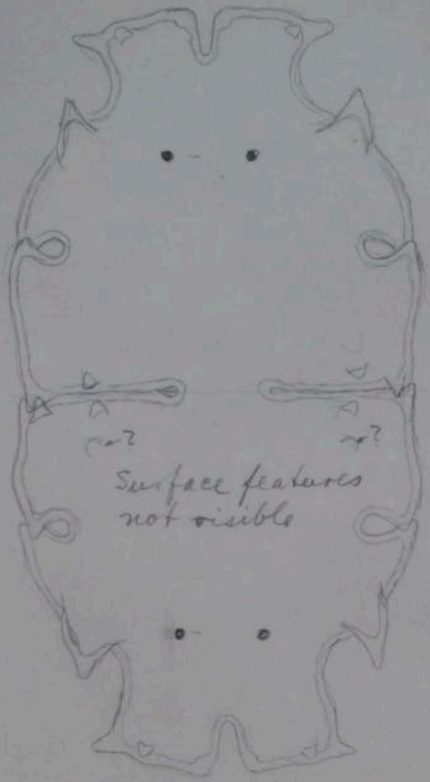


X-104
N. Australia

June 19/56

L 91
W 52
I 15
T 39

= asperum f



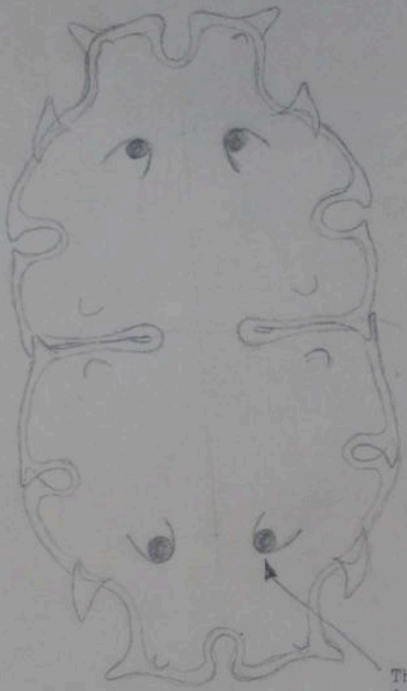
20x14

N. Australia X104
Dunbellia

Aug 5/52

L 82
W 46
I 12
T 37

E. ~~asperum~~ var. nov.
praemorsum



= asperum
forma
VI : 2

20x44

These very large and deep pits were seen only indistinctly, because of chloroplast.

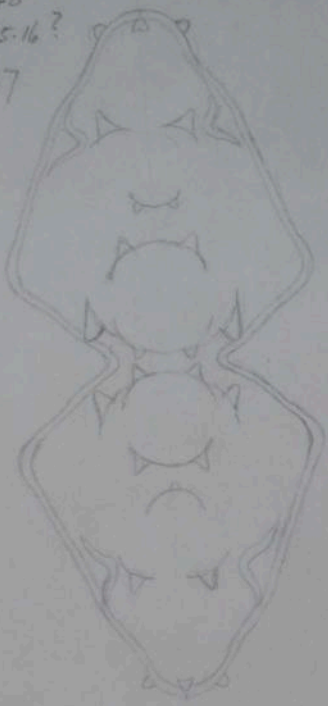
Unawalerké also X-104

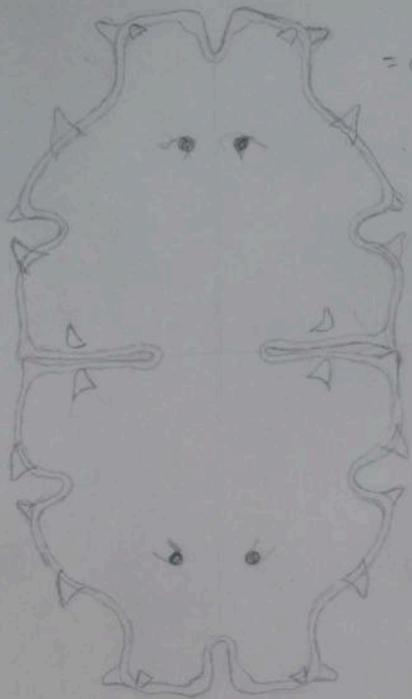
Sept 5/53

L 84
W 48
I 15.16?
T 37

E. praemorsum var. nov.

= asperum f.





X-104
North Australia

11/29/52

L 91
W 52
I 15
T 39

= asperum form

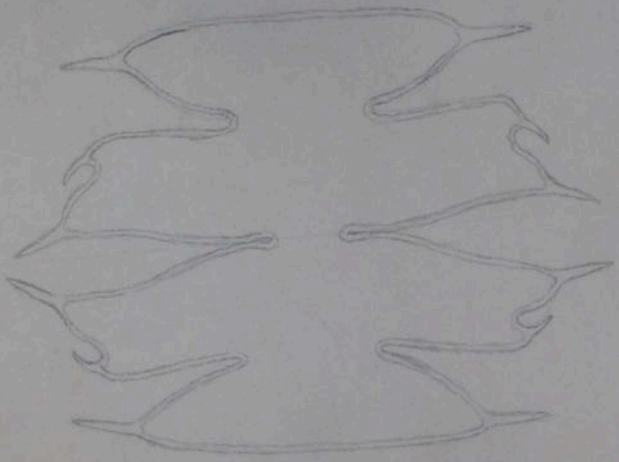
X 104
N Australia

Aug 5/57

L 54
W ssp 63
csp 76
I 10

M ? *zeylanica* Fritsch, fa. 1

VI : 5

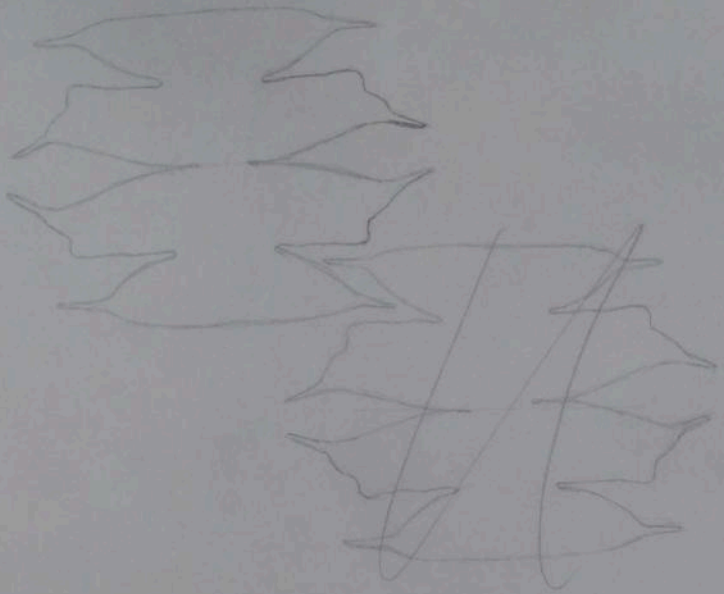


Gregson
N. Australia

May 20/54

L 51
W 70
W polar lobe 55
I 10

M. zeylanica = fa. 2
of Indonesian forms VI. 6



15x44

X-104
N. Australia

June 21/56

W 99
I 16±
T 35

Basal view of M. tropica

= form a
II 8

15x44

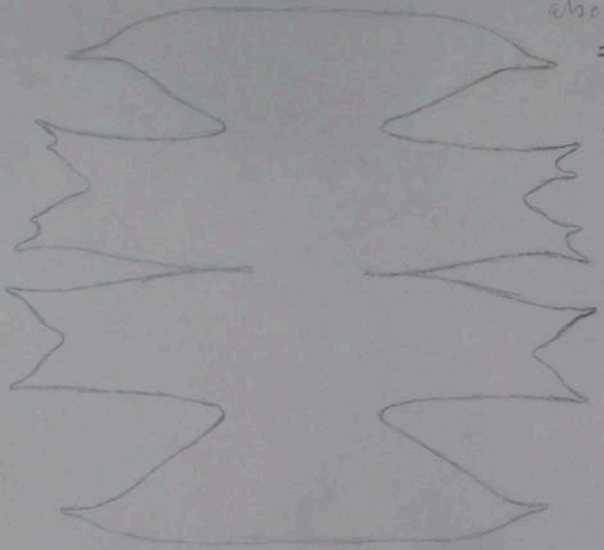
N. Australia
X 108

Jaw 20/55

L 87
W 97
I 16

M. laticeps var.

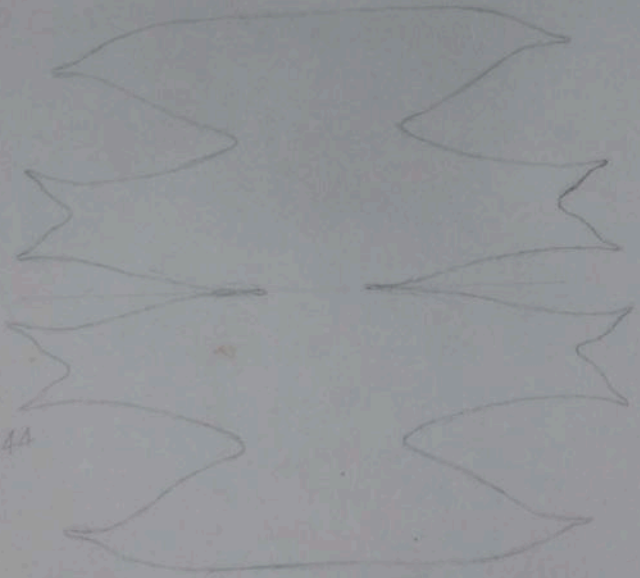
See Playfair, Polymorphism
also Schmidle
= M decemdentata
v. intermedia
VI : 4



15 x 22

65 1
72 2 N. Australia
X-104

Aug 12/54



= M. decemdentata
var. intermedia
VI : 9

15 x 11

L 90
W 103
W pol lobe 86
I 17

X-104
N. Australia

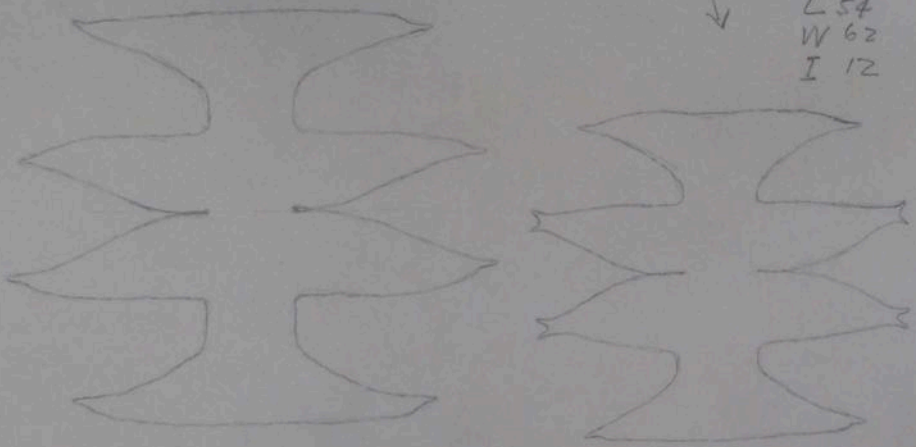
RPR

June 25/56

L 67
W 81
I 12

M. pinnatifida fa
= morpha 1
↙ + morpha-2

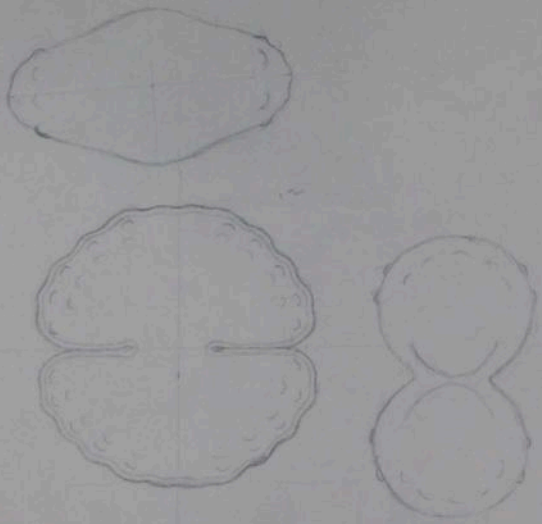
↓
L 54
W 62
I 12



N. Australia 3

Oct 18/53

L 33
W 33
I 9
T 18 I



15x60

Incomplete
Details concealed
by chloroplast

2 mm

X-109

Mch 10/57

L seminell 121
W 240
I 27±

M. Torreyi var arnhemensis var nov.

Needs conformation (=forma)

VII:4

7½x44

Old seminell, partly crushed and distorted

N. Australia X-104
Dampelli

Aug 5/52

L semicell 126
W 234
I 30 ±

M. Torreyi ? var

= M hieronymusii Sahn
v. Glenneri
VII : 3

7½ x 44

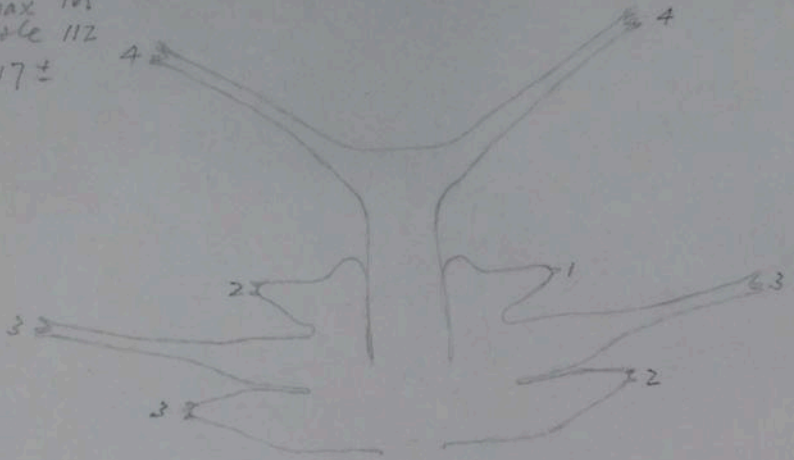
Old empty semicell
in not too good condition
No spines.

X-108
N. Australia

Mch 9/57

L. almicelli spr 68
cpr 97

W max 165
W pole 112
I 17±



58.7
91.5

N. Australia
X-104

Aug 19/54

L simicell spr 72
cpr 99

W max 168
I 18

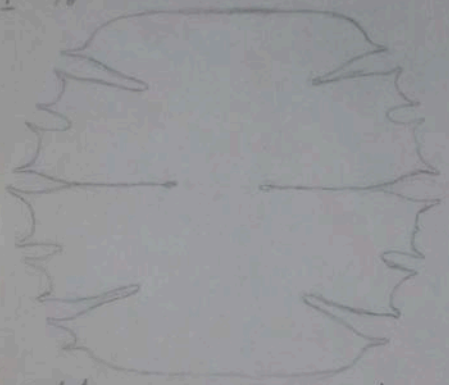
10×44

N. Australia X·104

Aug 8/54

L 61
W 73
W pol lobe 57
I 15

= M. decem dentata
VII : 11



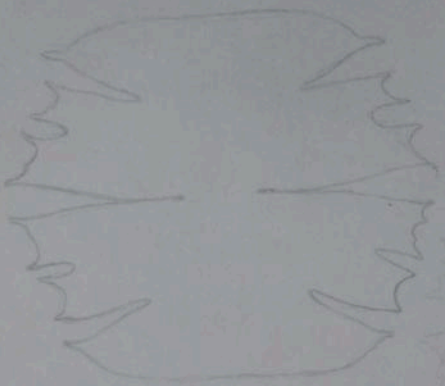
15x44

X-104
N. Australia

June 21/56

L 60
W 70
I 12

= M. decemdentata



15×44

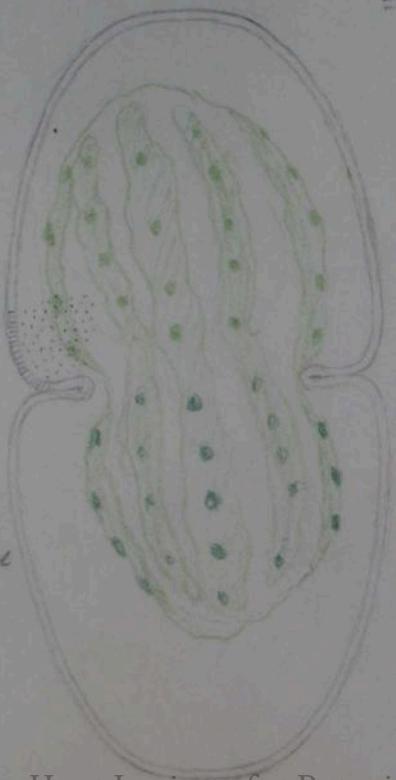
57.9
89.6

X-104
N. Australia

June 18/56

L 171 ← 162
W 84 87
I 52 54

= Cosm. javanicum forma VIII : 8



apices somewhat flattened

Conspicuously punctate all over.

2 layers of wall easily seen.

10 x 44

Chloroplast decayed. Structure unrecognizable

Chloroplast added from another specimen L 162 W 87 I 54
Parietal bands should be parallel with vertical axis.

Slough Oenpelli

July 30/54

L 71
W 39
I 36

C. turgidum ?

= Acanthosaena capax
var minor

Wall closely punctate, but pattern not visible.

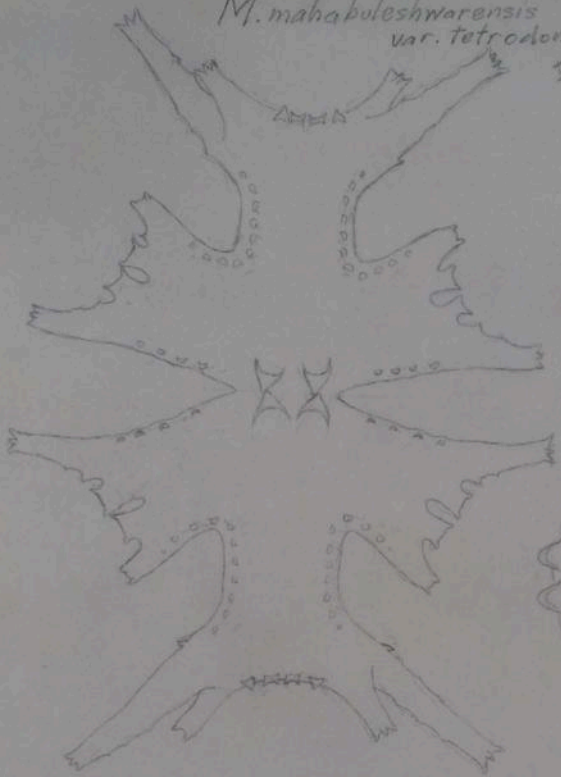
N. Australia 508

Mch 1/57

L spr 93
cpr 120
W cpr 91
W poster lobe 72
W neck 18
I 16
T 33

M. mahabuleshwarensis
var. tetrodonta var. nov.
VIII : 41

Approximate basal
view of another specimen



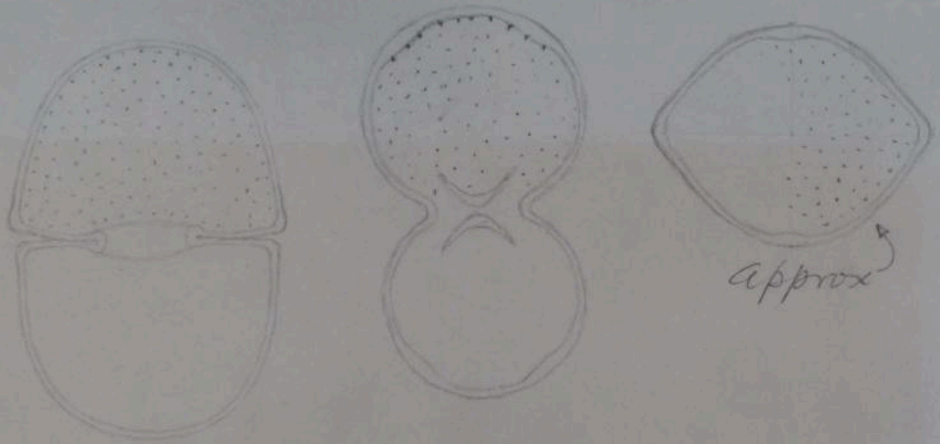
15 x 44

Unawalerké

Sept 15/53

L 49
W 35
I 12
T 27

Pleurotaeniopsis bigibbosa Schum
but much shorter = C. pseudopyramidata forma
See Plantae

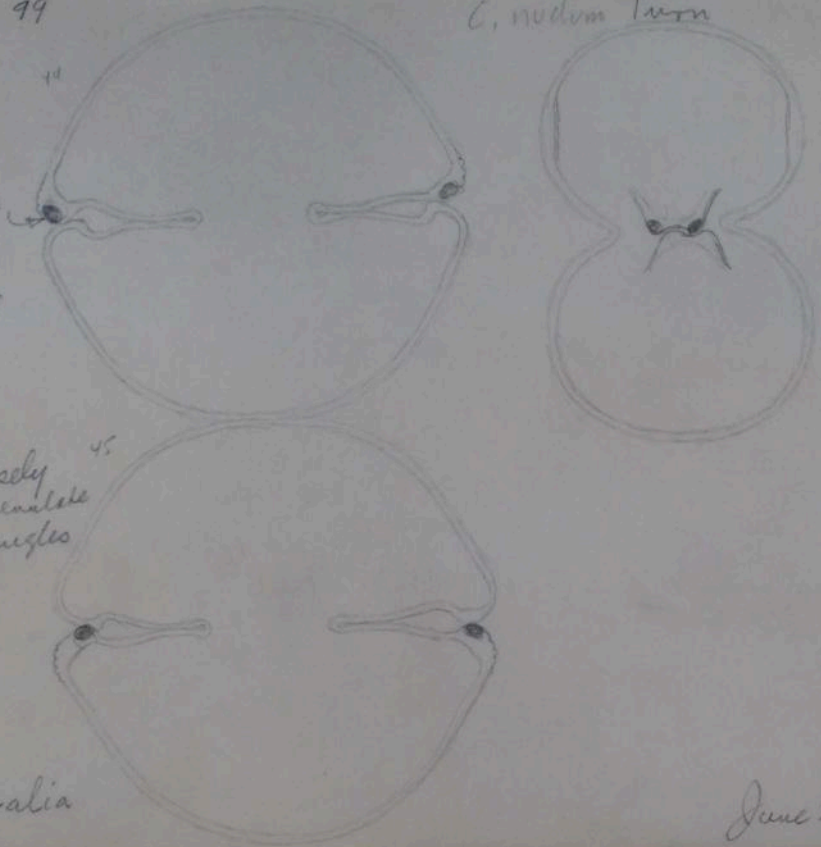


N. Australia
X-104

Aug 12/54

L 2 cells 99
W 57
I 16
T 33

C. medium Turn



Brown

2 pyrenoids per semicell

20×68

Wall coarsely porose, crenulate at broad angles

X-104
N. Australia

June 24/57

L 39
W base 12
W max 18
I 6
T 14±

= C. pyriforme f. reductum
IX:3 f. nov

Of C. pyriforme Nordst Brazil
Of Sudan
Of C. divergentiforme Hirano 1950, which is twice as large

Slight depression

15x60

approx

Wall sparsely punctate
Markings very hard to see

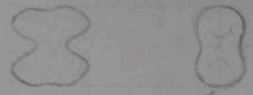
1 seen

N. Australia 400
Kilo Impini Creek

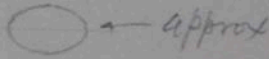
M.L. 3/57

L 7
W 6.5
I 3.5
T about 4 - 4.5

C truncatellum Panty?
= C. subcapitatum f. minus Taylor
TX: 4



20 x 65
x 2200



Too small to see any details, if there are any.

N Australia 3

Oct 17/53

L semicell 21
W 36
I c.15

C. Burkillii var depressum Scr Prsc
= forma
See Bohlin, C. Burkillii v. latum
See also Indonesian drawing

IX 3

15x600

Empty semicell in poor condition.
Probably more faint granules + pores

N. Australia 3/.503

Oct 17/53

L upper semicell 21
W 34
I 13
T 21±

Move ringment up slightly

L semicell 23 W 39
I 15
T 23

Basal view of another

20x44

Central markings not visible

Approx. tilted

=C pseudoarmata forma

Several seen
Not too rare

X-108
N. Australia

Feb 25/57

L 18
W 16
I 6

= C. blytii var quadrinigranulata

n.v.

IX: 8,9

15x60

20x60

approx

Unawalerké

Sept 6/53

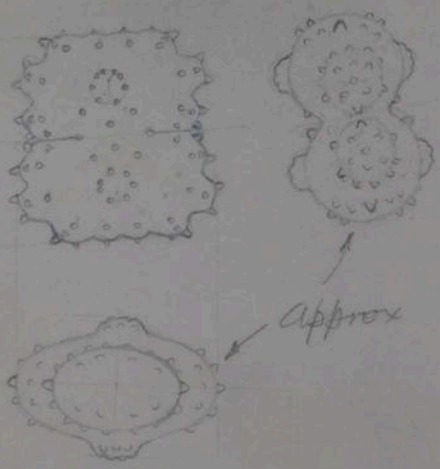
L 19
W 18
I 5.5
T 13

= C. blythii forma

of C. Seelyanum Wolle
1884 Pl 18 figs 33-35

Bailey, Queensland 1895
Pl 10 fig 22

20 x 60
x 2700



1 seen

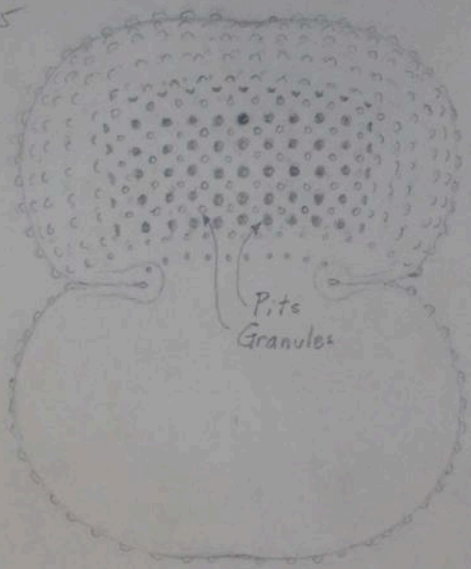
Unusually elaborate decoration
for such a small form.

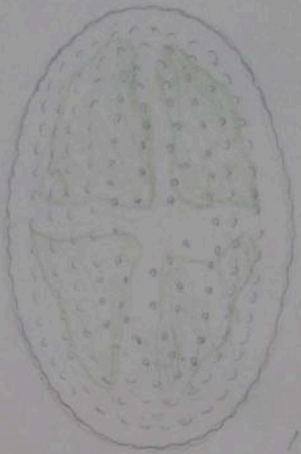
X-108
N. Australia

Mch 10/57

L 64
W 54
I 22
T 35

=C. Conspersum var Scotii
IX : II n.v





The nature of wall ornamentation was difficult to make out because of the dense chloroplast. I am practically certain, however, that it is the same as in C. scrobiculosum, i.e., pits and granules alternating, with a raised granule at the center of each square of four pits.

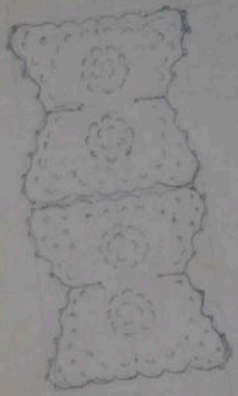
X-109
N. Australia

Mch 10/57

L 2 cells 42
W 21
I 7
T 14

= C. Seelyanum form
of C. Seelyanum Wolle
v. elegans Playf.
Richmond Rivers 1914

IX 12



15×60

Cf. Evastrum elegans Wall
in Turn 1893 t. IX fig 51
which is a Cosmarium.

Sketches probably not exact.
Must get empty skimicell.

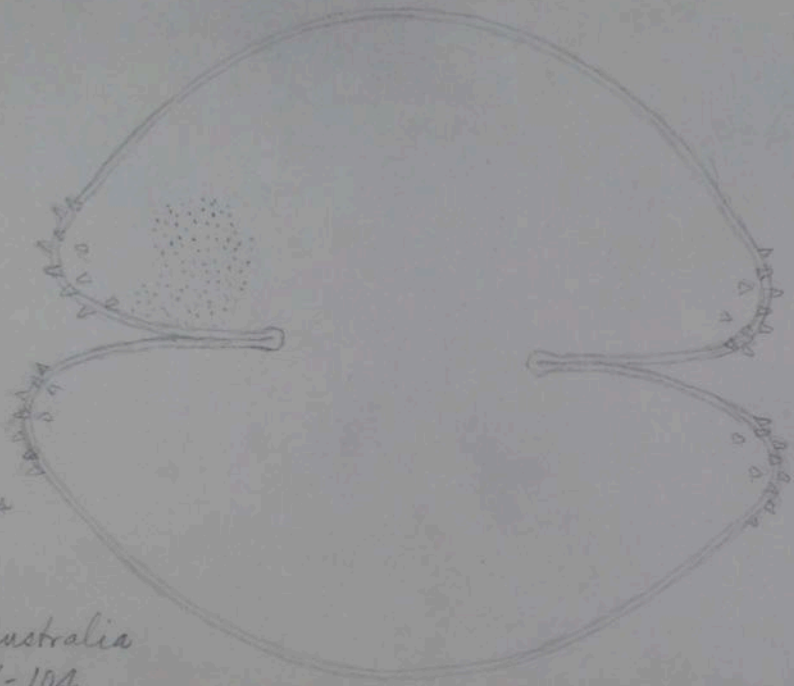
First specimen seen.
Ornament unusually elaborate for such a small cell.

N. Australia
X-109

Mch 12/55

L	150	138
W ssp	174	150
csp	180	156
I	57	57

Cosmarium Askenasyi var. latum Scott & Prese
= f.



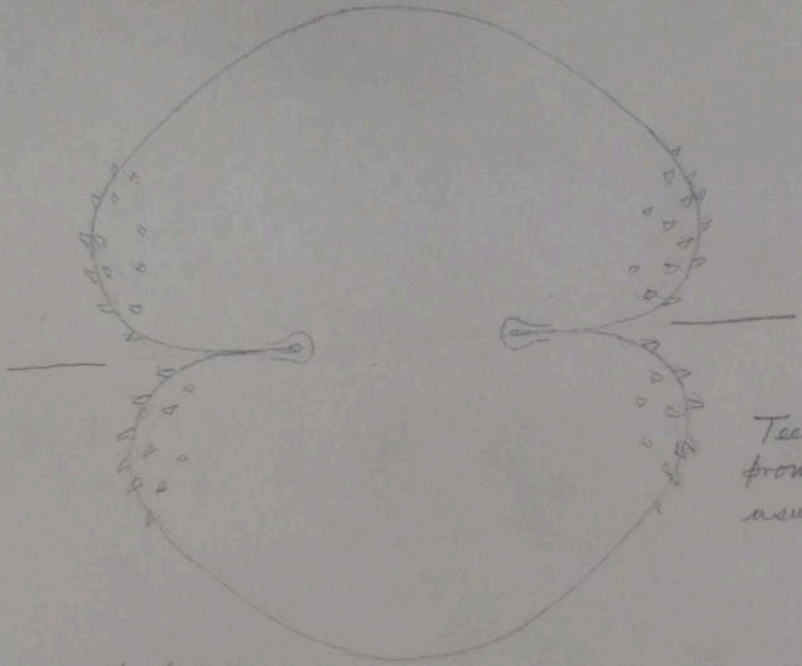
10x44

N. Australia
X-104

Aug. 14/52

L 147
W csp 144
I 18

C. Askenasyi var latum Sc & Prese.
b. "

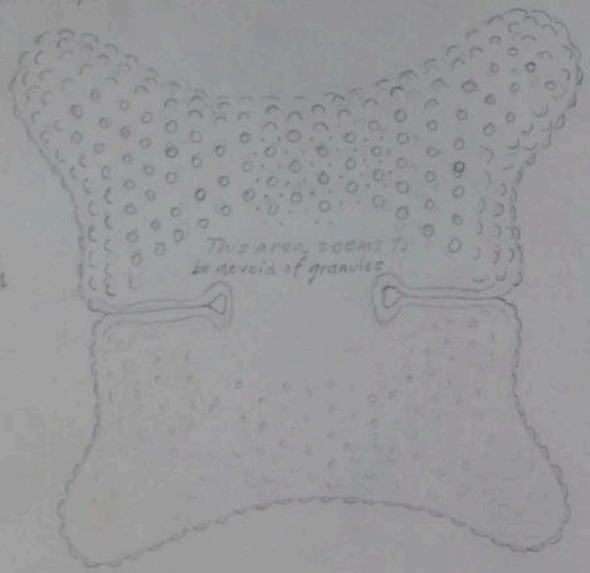


Teeth more prominent than usual

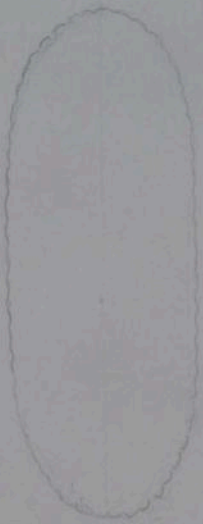
Unawalerké also X-104

Oct 10/53

L to depressed apex 66 C. perrectum Nordst forma
L max 86 X:7
W base 75
W max 96
I 25
T 35



15×44



Obscured by chloroplast

This is similar to a form found near Chiefland Fla, but a good deal wider. See my USA drawings 1269-70. Cf. Johnson, p. 243, Pl 233:30.

X-109
N Australia Side view on next sheet Feb 25/57

L to dip. apex 66
L max 88
W base 75
M max 96
I 25
T 35

C. porrectum Nov sp

Note rectangular basal angles.
This feature was especially distinct

Side view
Other details not visible

X-109
N Australia

Feb 25/57

L spr 75
dpr 93

W spr 58
dpr 80

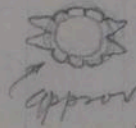
T max csp 55

I 24 ±

X. armatum var. nov

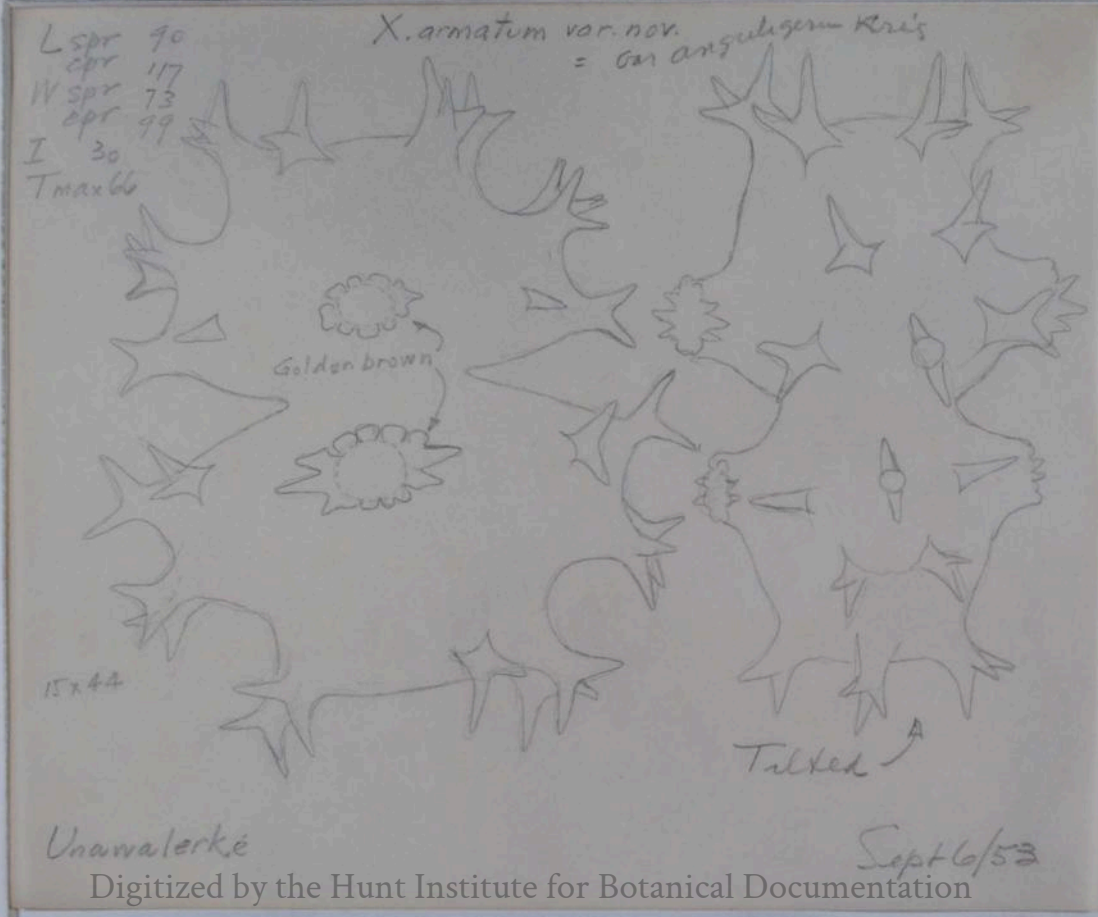
= var angulegerum Krieg

15 x 44



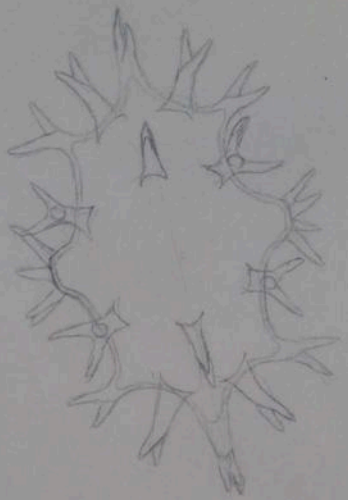
Unawalerké

Sept 6/53



L spr 72
cpr 94
W spr 63
cpr 84
I 23
T max 54

X armata var angoligerum Kuiz



15x44

Daly Isaac

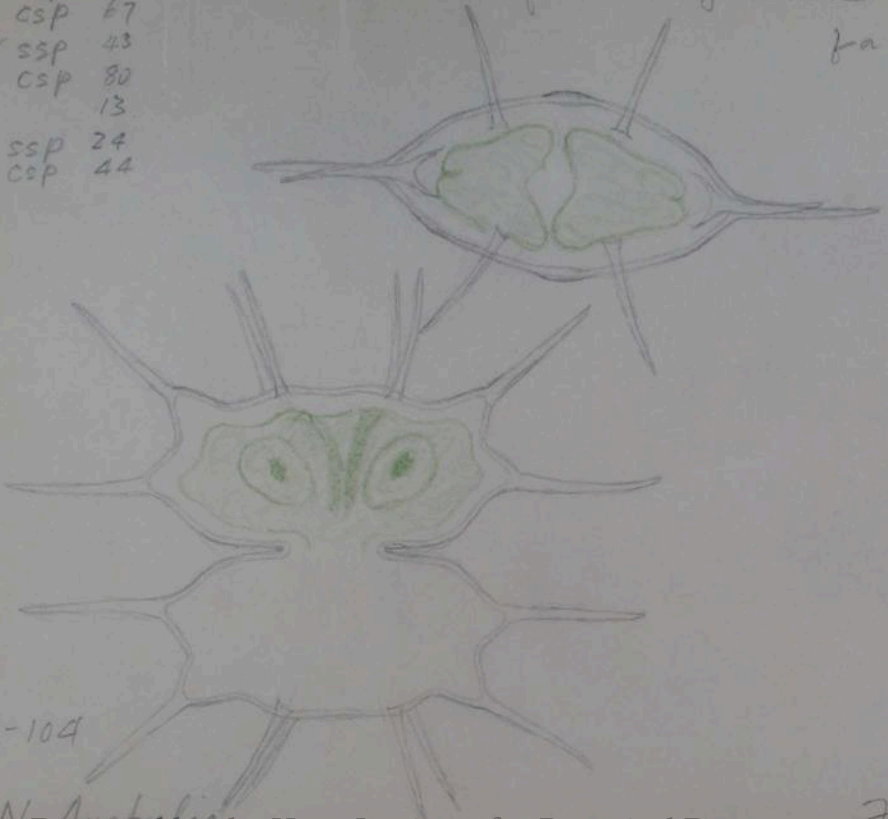
X-110

Feb 24/57

L ssp 42
csp 67
W ssp 43
csp 80
I 13
T ssp 24
csp 44

= X hastiferum var javanicum

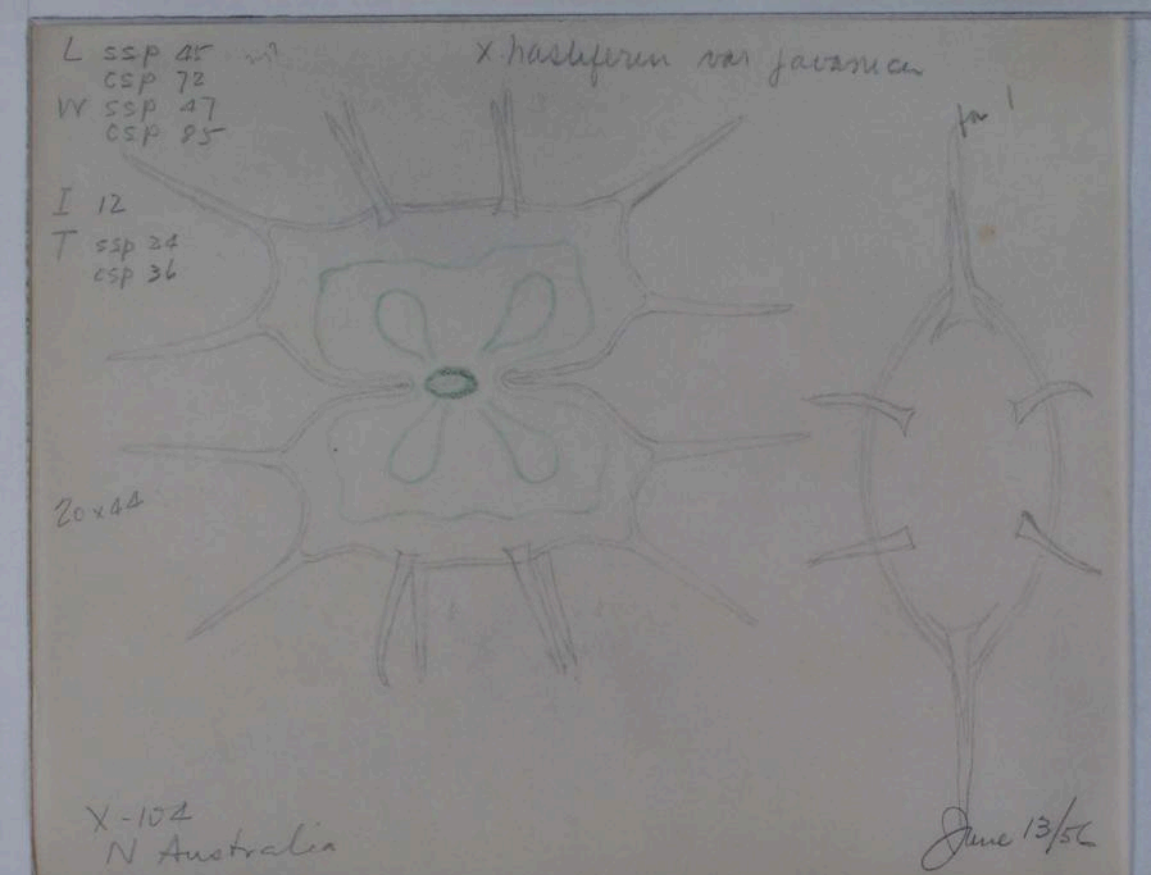
fa-1



X-104

N. Australia

Feb 24/57

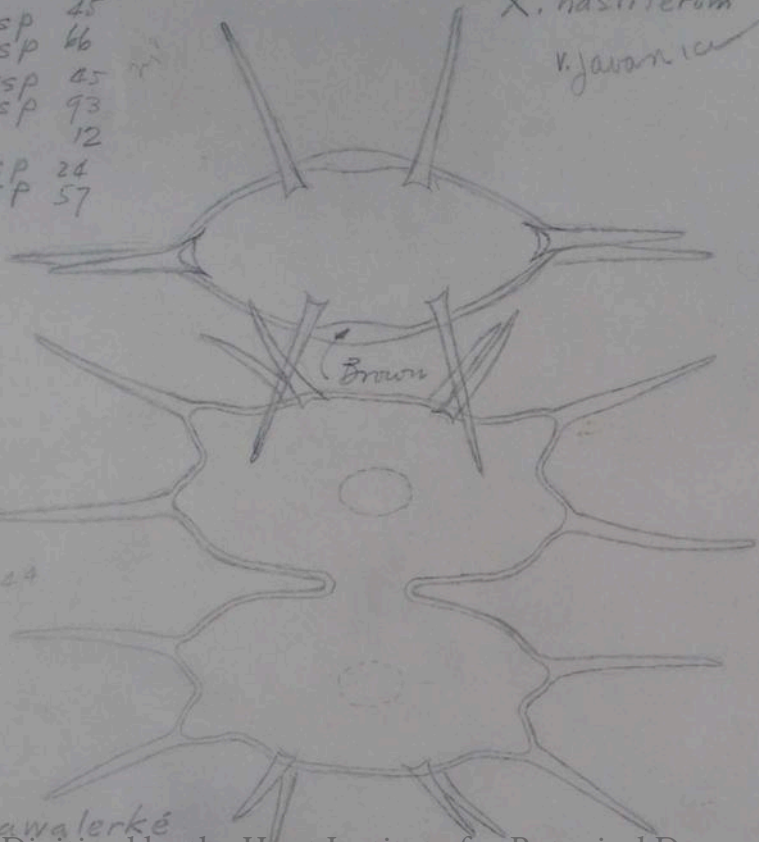


X hastiferum var javanica

for 1

L ssp 45
csp 66
W ssp 45
csp 93
I 12
T ssp 24
csp 57

X. hastiferum fa. 2
v. javanica



20×4

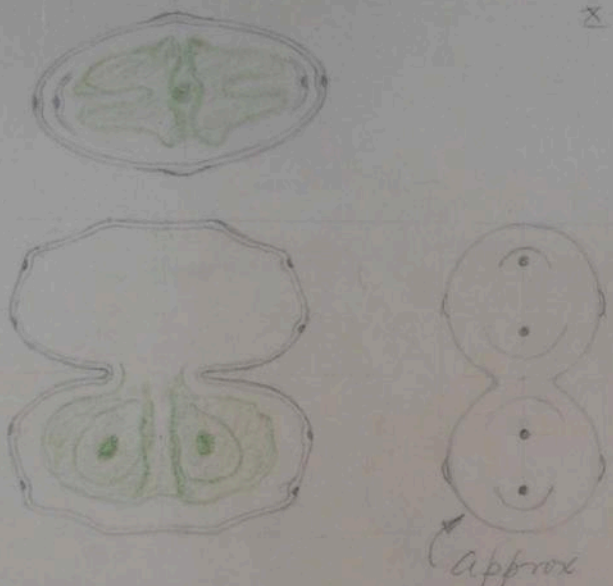
Unawalerké

Sept 10/52

L 34
W 39
I 12
T 20

X hastiferum v. hastif. forma

X:6



Only one seen. Don't know what it is, but it kinda gives me the impression of a spineless X. hastiferum; see attached sketch of the latter which was closely adjacent on the slide. But even if the spines are absent there ought not to be pits in their place. Instead you would expect to see a short stub or slight swelling at the place where the spines normally occur.

X-104

N. Australia

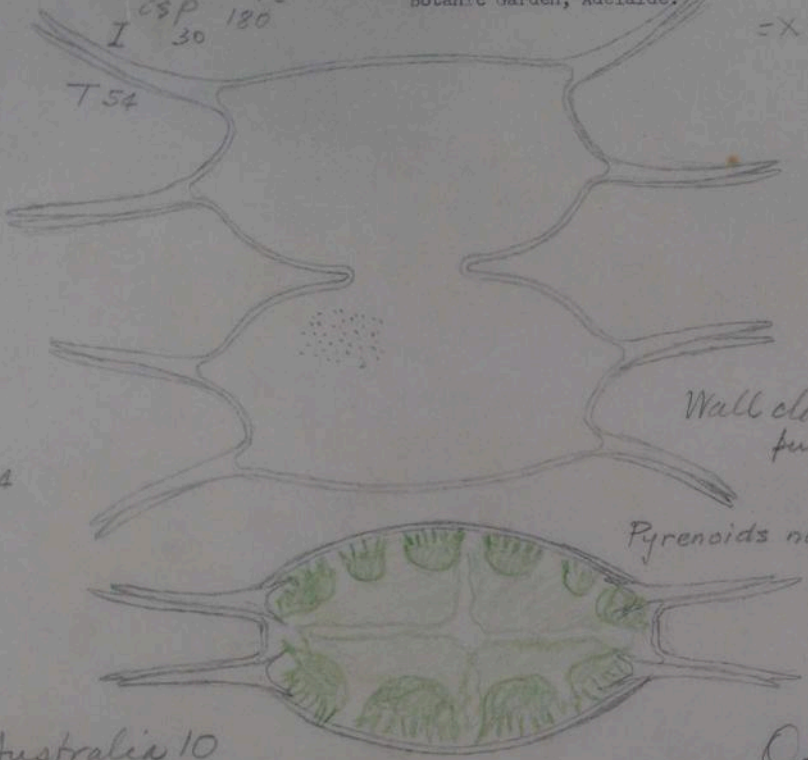
Feb 24 57

L. s=p 99
C s p 115–
W s=p 117±
C s p 180
I 30

If this is a new species, as I suspect, I would like to name it X. Caulfieldii, after the collector, Mr. Caulfield (initials unknown yet) of the Botanic Garden, Adelaide.

=X Caulfieldii

T 54



Wall closely punctate

10 x 44

Pyrenoids not visible

N. Australia 10

Oct 18/53

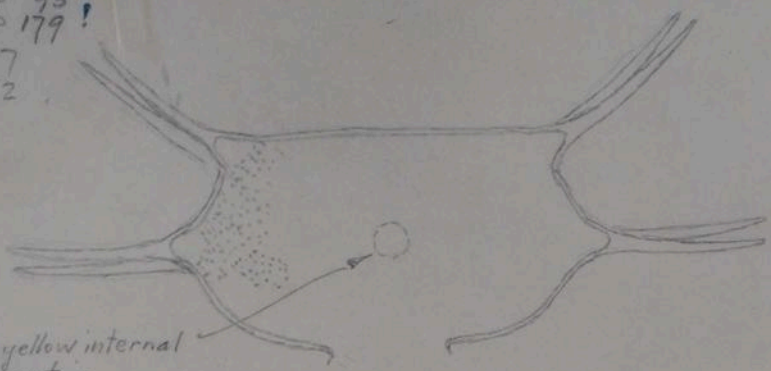
L semicall ssp 48
csp 72

= x caulfieldii

W ssp 93
csp 179 !

I 27

T 52



Small yellow internal incrassation

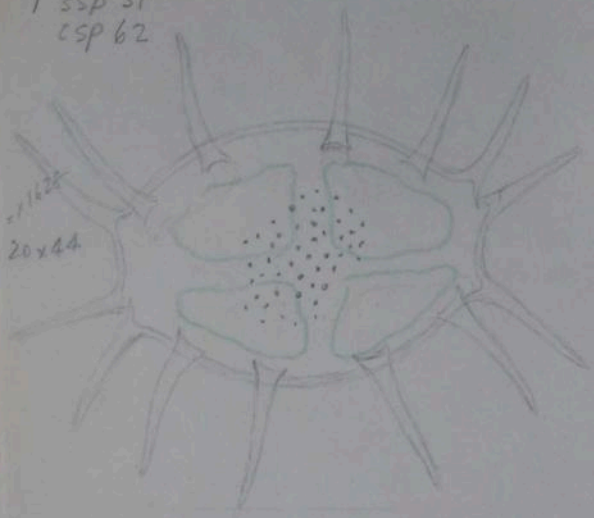
Wall closely scrobiculate except on inflated bases of spines

10 x 44

N. Australia 510

May 16/54

T ssp 31
c sp 62

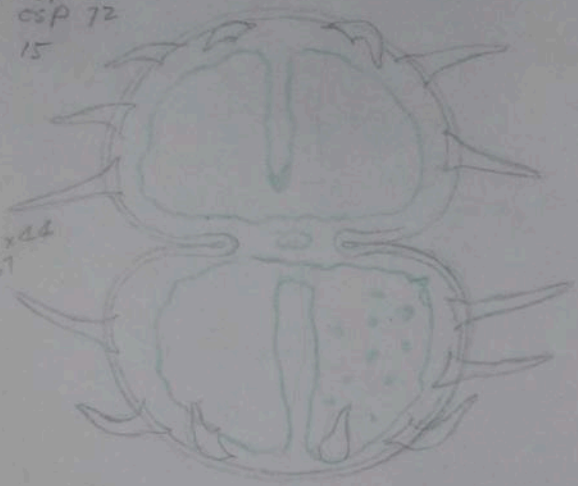


20x44

L 59
W ssp 45
osp 72
I 15

= X multicorne

XI : 5



70x44
x1567

Wall coarsely scrobiculate

X-104
N. Australia

June 19/56

L ssp 43

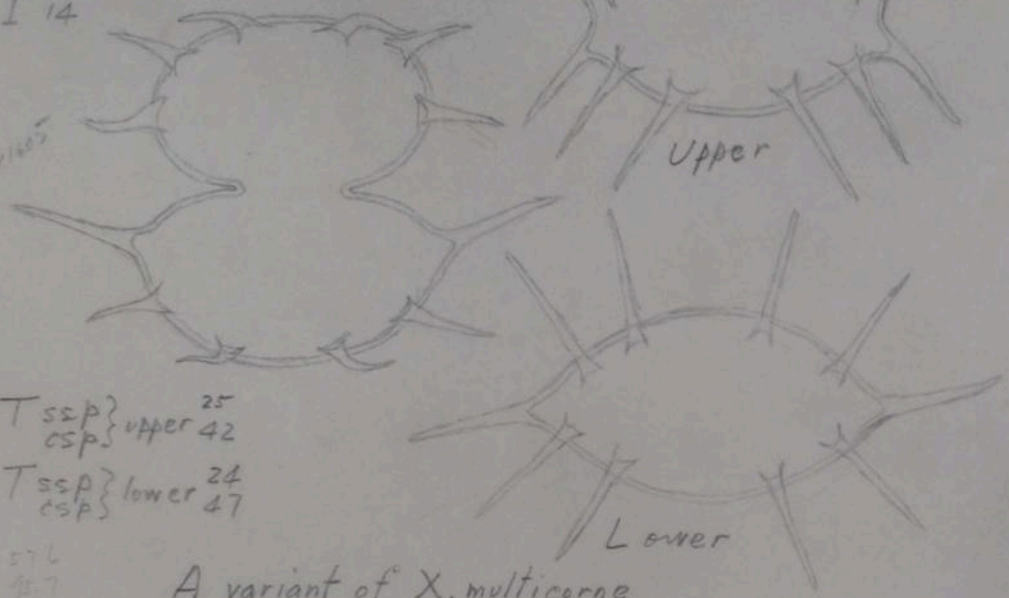
W ssp } upper semicell 35
csp } 59

W ssp } lower 39
csp } 69

I 14

T ssp } upper 25
csp } 42

T ssp } lower 24
csp } 47



A variant of X. multicorne

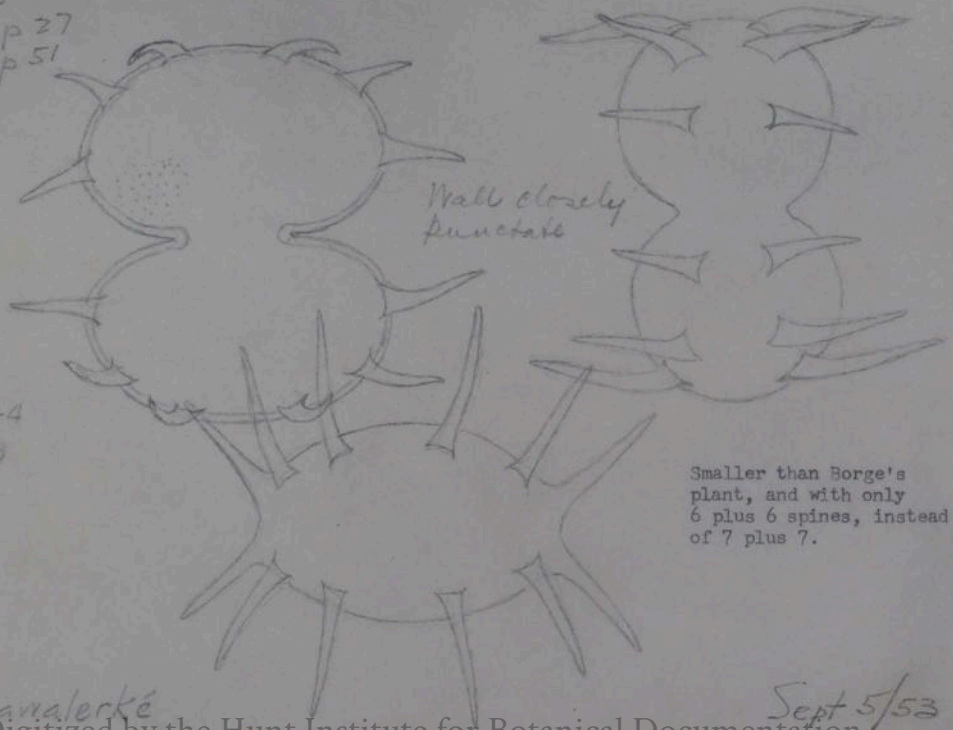
= f. 2

N Australia X-100

May 18/52

L 45
W ssp 37
csp 60
I 15
T ssp 27
csp 51

Xanthidium multicorne Borge. 1896. p17
#2 fig 25
= fa-1



20x44
1553

Smaller than Borge's plant, and with only 6 plus 6 spines, instead of 7 plus 7.

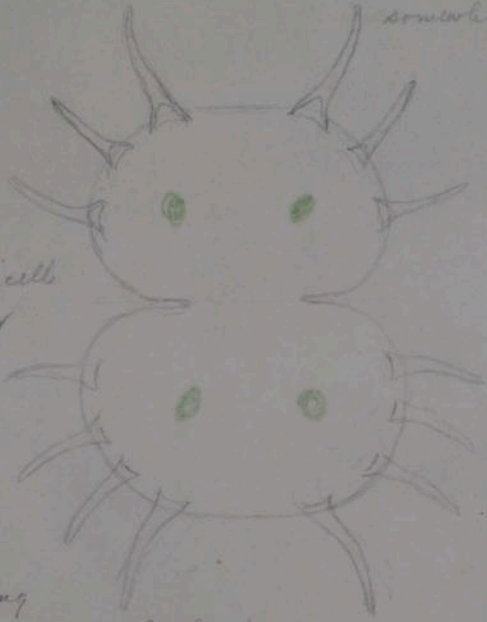
Unamalerké

Sept 5/53

L csp 68
csp 99
W csp ~~54~~
csp 72
I 18
T 32

T36

15x44



6 spines on upper semicell
8 on lower

Only 1 seen

Sketches not exact
Spines were crushed by turning on edge for side view

N. Australia 503

cf X. octonarium Nordst Uk map
N.Z. 42 Pl 4: 22 which is somewhat larger

JTB 28/57

L ssp 68
csp 94
W ssp 54
csp 72
I 18
T 38

= X. octonarium
mapk

Wall features not visible

Same specimen as shown crushed on next sheet. After standing for several hours the spines came back to their original position

Feb 28/57

L semicell ssp 21
csp 33

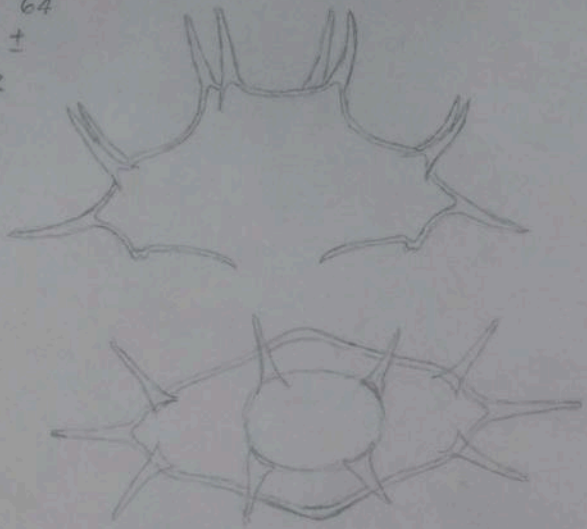
X. trilobum var. inornatum Skuja fa.
sub

XI : 7

W ssp 45
csp 64

I 12 ±

T 22



Central swelling less prominent than in Indonesian + Burmese forms, and polar lobe less elevated.

N. Australia
X-104

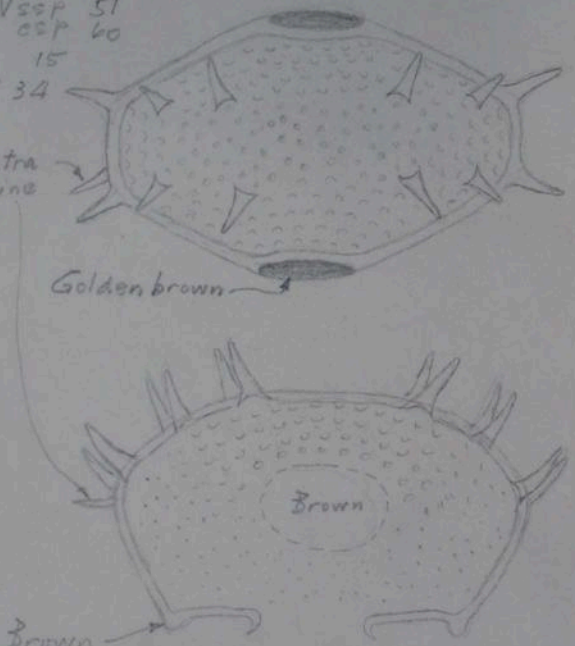
Sept 14/52

L semicell ssp 30
csp 36

Xanthidium scottii sp. nov.

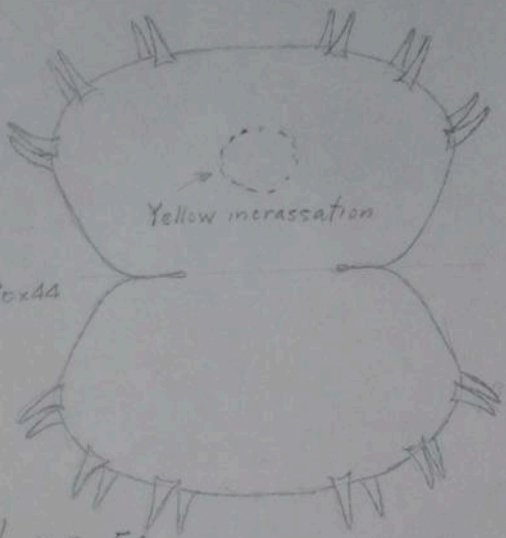
forma XI:V

W ssp 51
csp 60
I 15
T 34



Xanthidium scottii n.sp sp.nov.

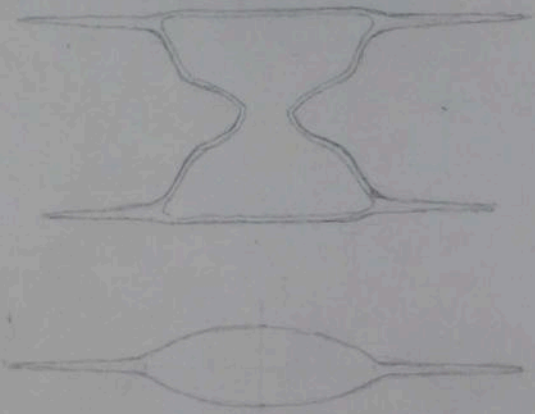
× 3



L ssp 54
csp 64
W ssp 50
csp 61
I 18

L 24
Wssp 27
csp 63
I 7
T 9

A. incus group
= Std. indentatus
XII : 1



approx

X-104 N Austr.

Cuz 7/54

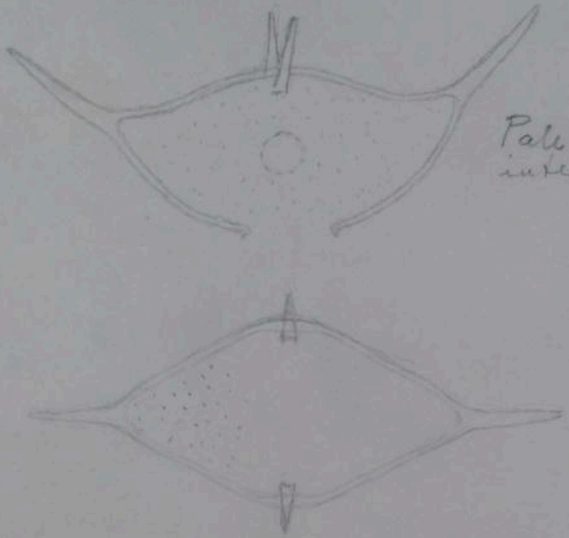
L semicell ssp 21
csp 27

W ssp 42
csp 66

I 12±

T 24

A. arcuatus var.
Scott & Prasc. N Austr
= var octospinatus



Pale yellow
internal incrassation

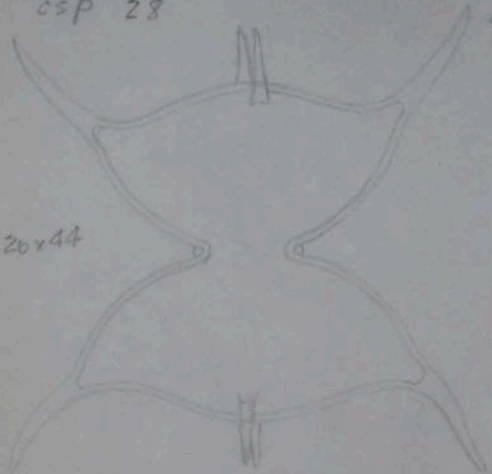
N Austr
Y-104

Aug. 10/52

L ssp 39
csp 58
W ssp 42±
csp 60
I 12
T ssp 24
csp 28

= Stl. arcuatus v. octospinatus.

20x44



Wall coarsely porose

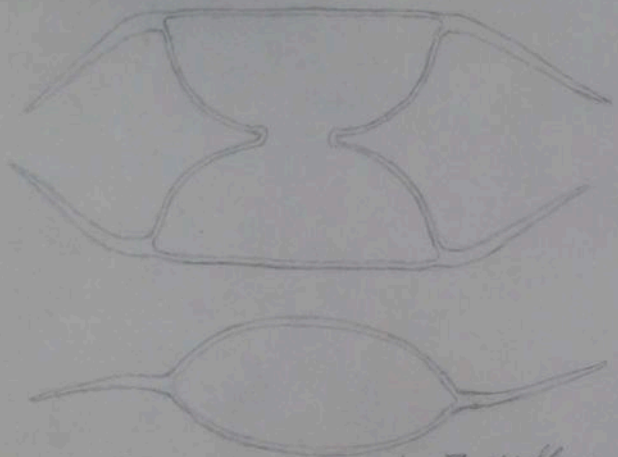
X-104
N. Australia

RRR
June 26/56

L 33
W ssp 35
csp 72
I 10
T 17

= Std curvatus var borgei fa.

XII : 3



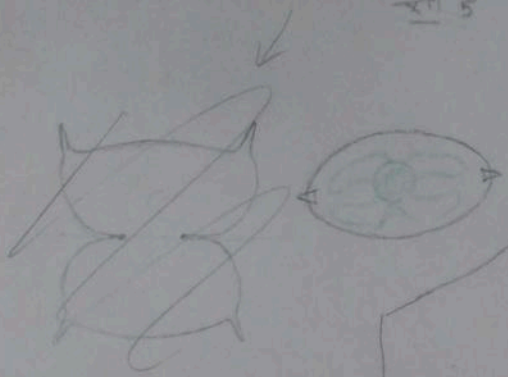
Cf Borge 1928 Süsswasseralgen, in Zellpflanzen Ostafrikas
Pl 2, fig 27, which he says is a straightbacked form of
A. curvatus !!!

N. Australia X-104

Aug 11/54

L ssp 24
csp 28
W 23
I 7
T 15

x mchoatum f reductu
x̄ 5



20x44

= Xanth apiculatus fo

L 35
W 35
I 10

A. apiculatus for comparison
N Australia
X-108

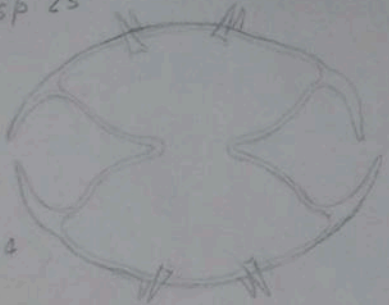
Cenpelli
X-110

Feb 13/56

Feb 13/56

L ssp 33
csp 36
W ssp 33±
csp 45
I 10
T ssp 21
csp 23

= Std gibberula v. mucronata f. mucronata



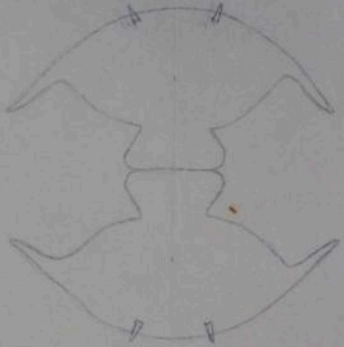
20×44

X-104
N. Australia

June 19/56

L semicell 15
W ssp 27
csp 40
I 8

= Std gibberulus v. mucronatus f. bimucronal



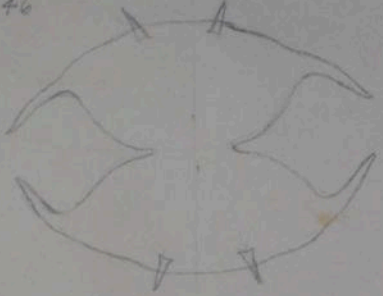
N. Australia 3/503

Oct 17/53

= Std gibberulus v. mucronatus f. bimucronatus

See Scott & Prese N Austr.

L SSP 31
CSP 35
W SSP 30
CSP 46
I 9



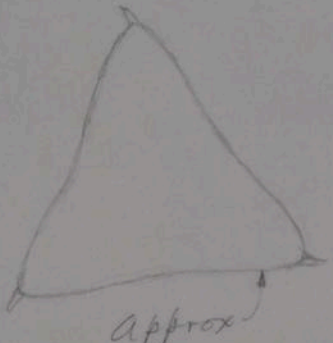
Spines out of position.

N. Australia
X-104

Aug 22/54

L 32
Wasp 38
I 9

= Std duckeri v. circularis forma
XII : F



Slough. Ocupelli

July 26/54

L ssp 45
esp
W ssp 38
I 15

= Std sp.
XII : 9

20x44

N Australia X-100

RRR
May 18/54

L ssp 23
esp 30
W esp 36
I 8

St. contectum ?
= quadraspulum var?

XI 10 on 11

20x44

Unawalerké

Sept 12/52

L csp 21
csp 27
W csp 37
I 8

S. quadrangulare v. Contectum
XII 10 in 11

15 x 60

60.7
95.8

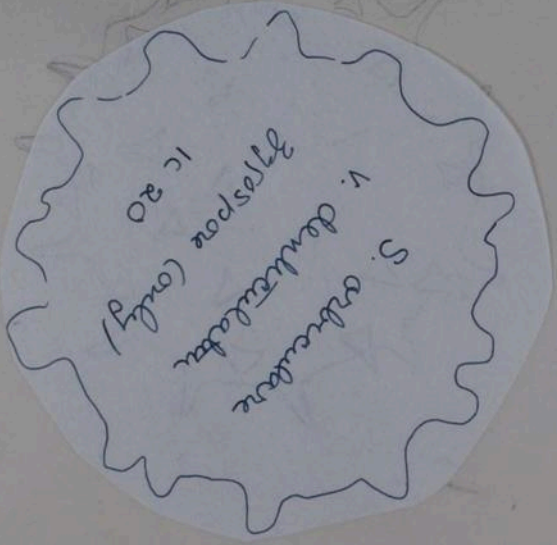
X-104
N Australia

June 17/56

Zygospore St. orbiculare v. denticulatum

Diam ssp 48
csp 58

OK
XIII : 1



N. Australia
X-108

Mch 11/55

L semicell ssp 27
csp 36

W csp 68

I 15±

= S. sinuatum Borge forma
13·2

Note hollow spines

15×44

Only this one semicell seen.
The structural arrangement
is the same as St. sexangulare.

X-108

N. Australia

Feb 26/57

L ssp 21
csp 33
W ssp 24
csp 33
I 9

= S. botaneuse Blayf
13:3

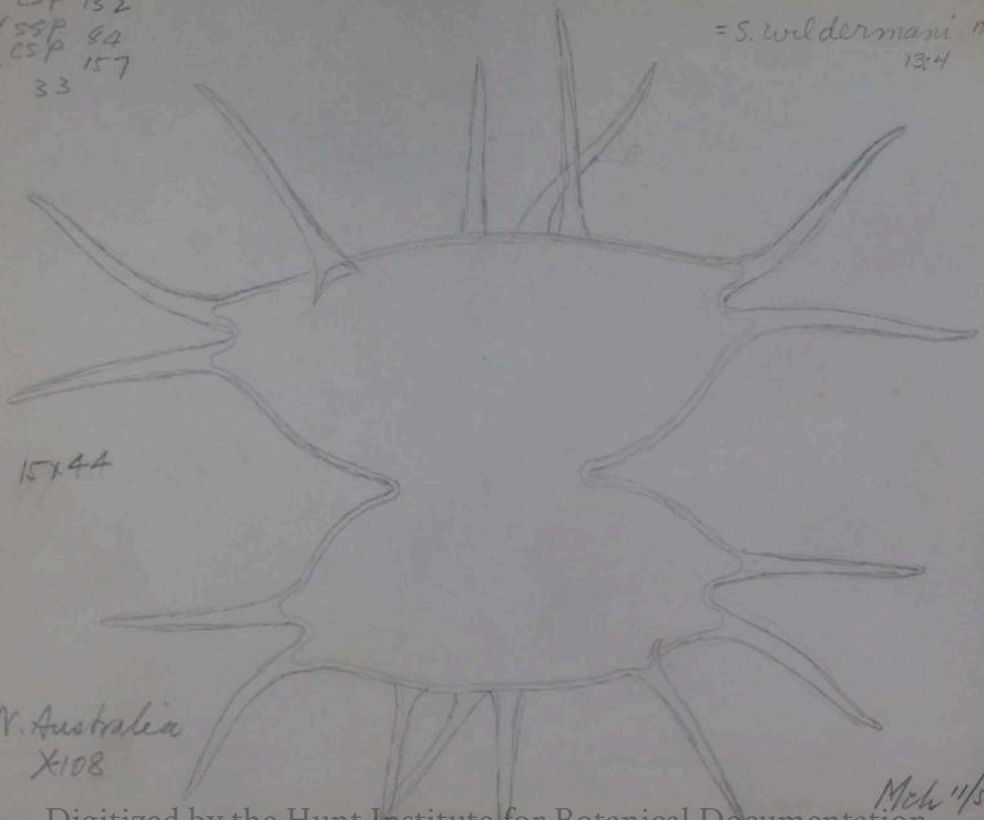
Unawalerké

Sept 6/52

L ssp 69
csp 132
W ssp 94
csp 157
I 33

St. Wildemani v. asymmetrispinum v. nov.

= S. wildermani morpha 13:4



15x44

N. Australia
X-108

Mch 11/55

L spr 18
L cpr 21
W cpr 20
I 7

St. laeve Ralfs fa

ork 135:5

15x60

Top view seems different from the usual form

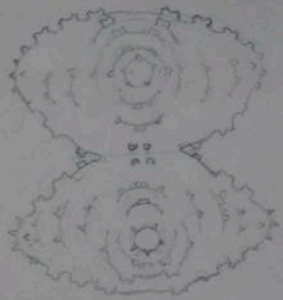
N. Australia
X-109

Feb 14/56

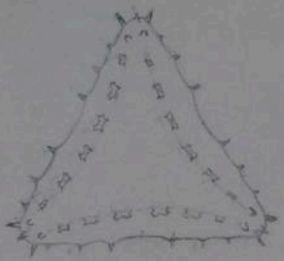
L 34
W 32
I 10

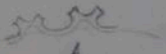
Cf. St. scabrum Brch

OK
13:6



15x60





1 seen

True shape of apical
Verrucae seen in oblique view

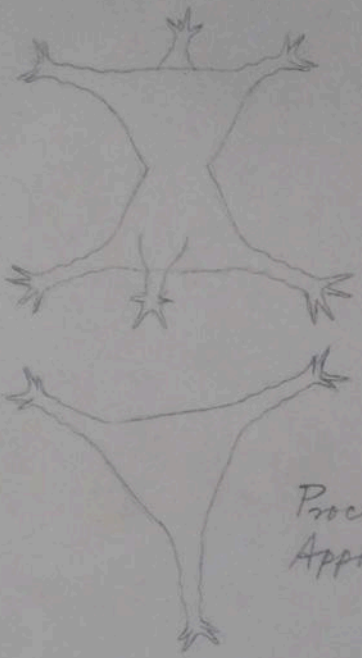
X-108
N. Australia

Mch 9/57

L spr 24
cpr 40
W cpr 42
I 8

= St gracile form
13:7

20x44



Processes alternating.
Apparently no other markings

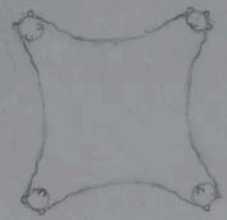
Unnavalerké

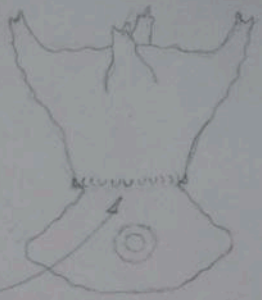
Sept 10/53

Upper semicell 15

L spr 15
cpr 21
W base 15µ
W apr 31
I 10

= S. zonatum f. verrucinctum
Sc ex Cron n.f
12: 8,9





15×60

No teeth on lower semicell

Upper semicell 4-radiate
Lower " 5- "

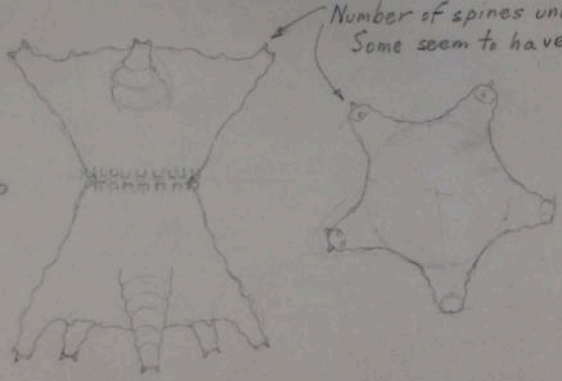
Details hidden by dense chloroplast

N. Australia X-100

May 7/60

L spr 33
cpr 37
IV spr 14 at base
cpr 30
I 10

= S. zonatum f. verrucarctum
Scott ex Croard. f. nov
138.9



Details not visible

Also occurs in 4-radiate form

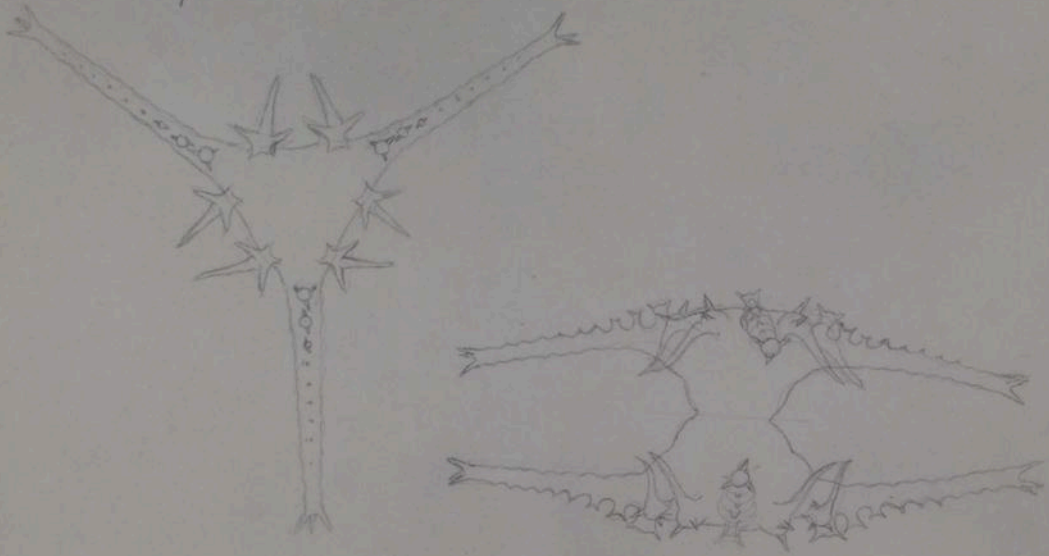
1st one seen

N. Australia X-100

May 17/54

L 28
W cpr 71
I 9

St. spinipendens Sc & Price
Indonesia, Sumatra 101.108



N. Australia
X-104

Compare sketch from
Lebak Dawan, Sumatra

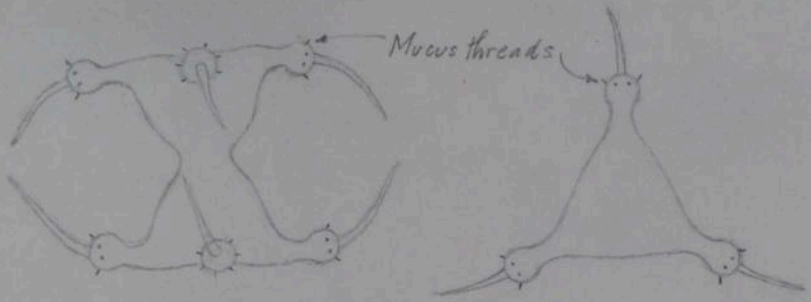
Aug 19/54

L 27
W ssp 30
csp 45
I 6

St. unicorne Turn

= *Std. unicornis* (Turn) Thomas v. *granulis* (Iyengar & Vimala Rau) Teil.

XIV 3



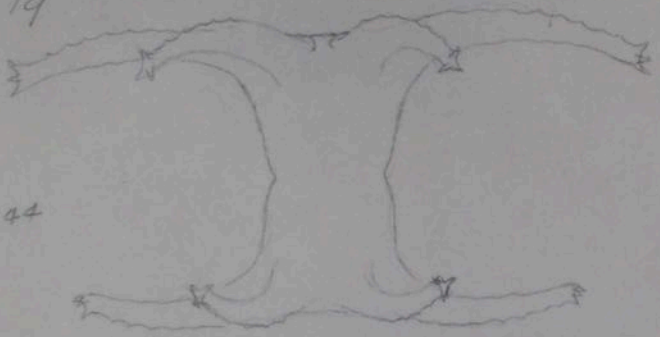
N. Australia X-104

Slough, Deapelli

Aug 8/52

L spr 43
cpr 51
W body above isthmus 21
W cpr 106
I 19

St. sagittarium var. nov.
= S. sagittarium forma



15x44

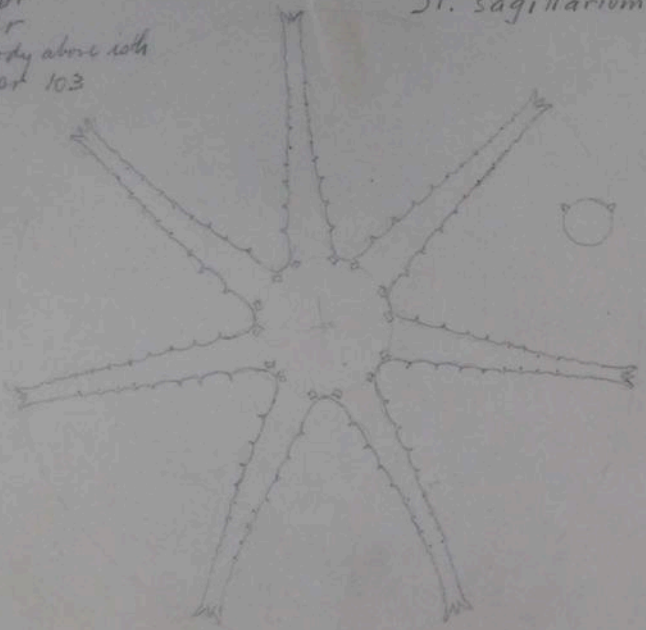
Also in X-104

N. Australia 501

May 16/54

L spr
cpr
VV body above 10th
W cpr 103
I

St. sagittarium var
forma

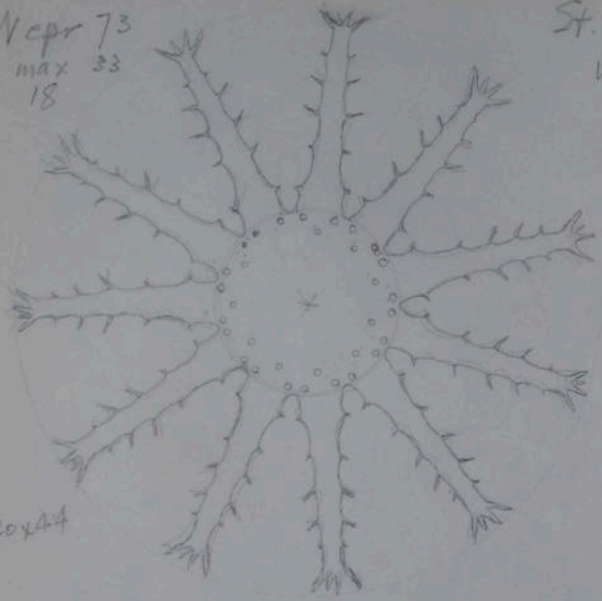


Slough, Kenpelli
Gregson

RRR
May 20/52

Wcpr 73
L max 33
I 18

St. sagittarium
V. longispinum v. nov
OK 14.4



20x44

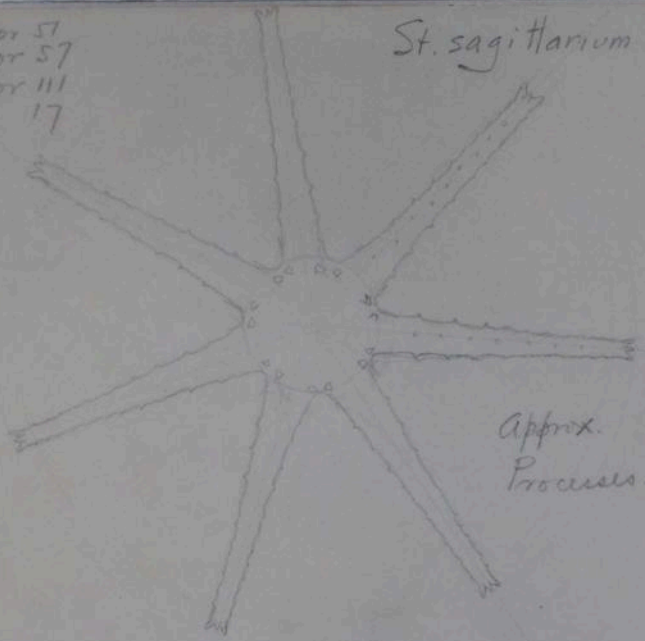
N. Australia X-102
Billabong, Umbakumba

Dec 29/57

L spr 51
cpr 57
IV cpr 111
I 17

St. sagittarium var nov

= var scottii Crow. n.v



Approx.
Processes bent out of shape

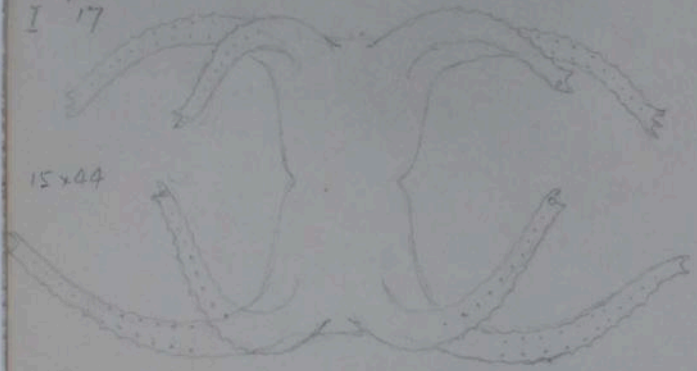
Also in 6-radiate form
Both rrr.

X- 102
N. Australia

June 18/56

L to depressed apex 5l
L spr 57
W spr 111
I 17

St. sagittarium v. nov.
= var scottii Croom n.v



15 x 44

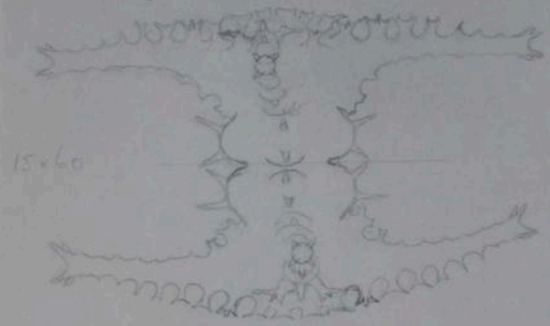
X-104
N. Australia

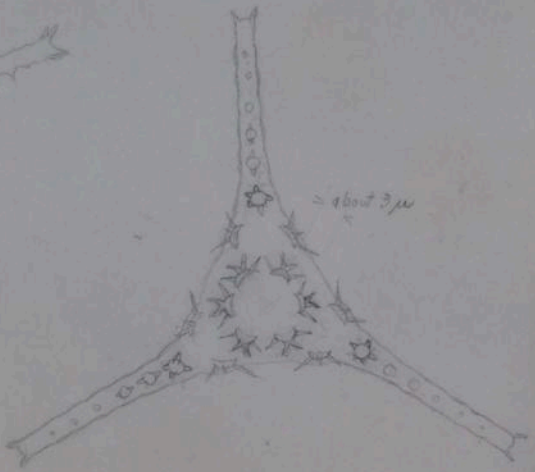
June 18/56

L 36
W epr 57
I 9

S. cyclacanthum W & W f. 1

XV : 1





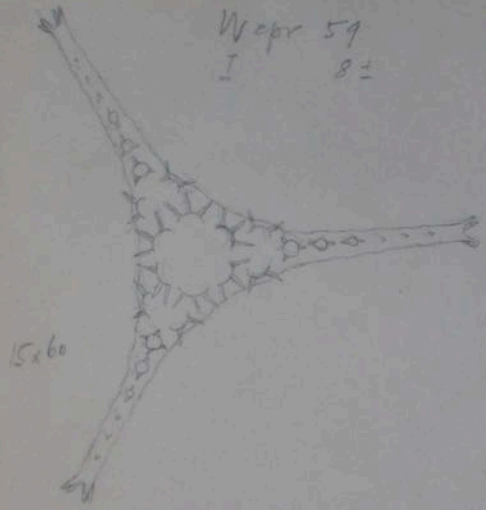
X 102

N. Australia

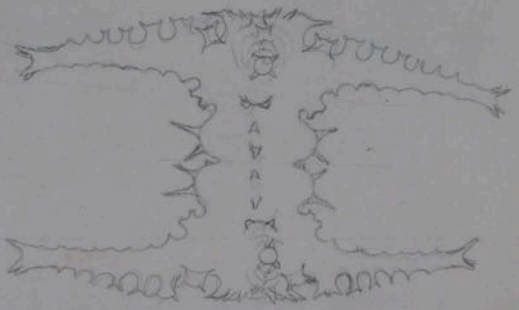
June 17/56

L 36
Wepr 59
I 8±

= S. cyclacanthum fa 1



15x60



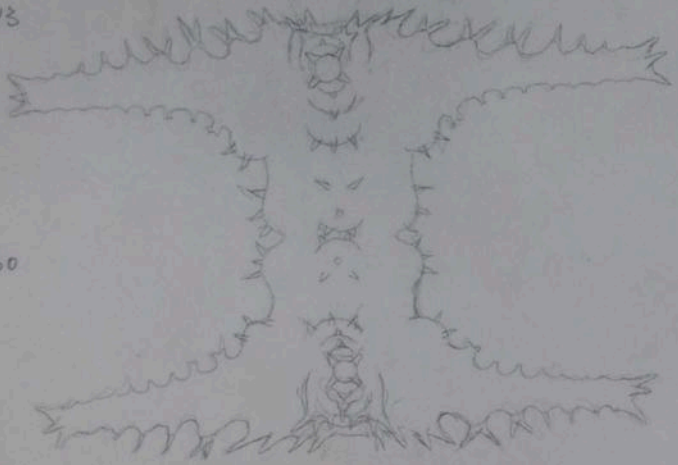
N. Australia
X-104

Mch 7/57

L osp 54
W opr 75
I 13

: S cyclacantha fam 2

XV : 3

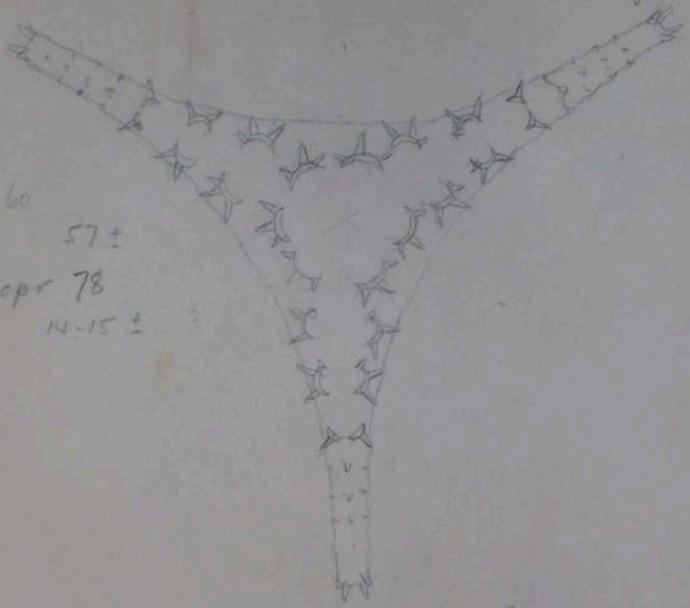


15 x 60

X-104
N. Australia

June 27/56

= S. cyclacanth form 2
XV : 3



15 x 60
L 57 ±
Wopr 78
I N-15 ±

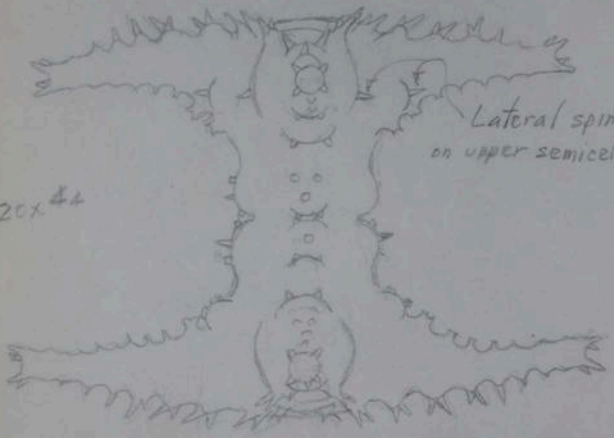
Front view obscured by debris

X-104
N. Australia

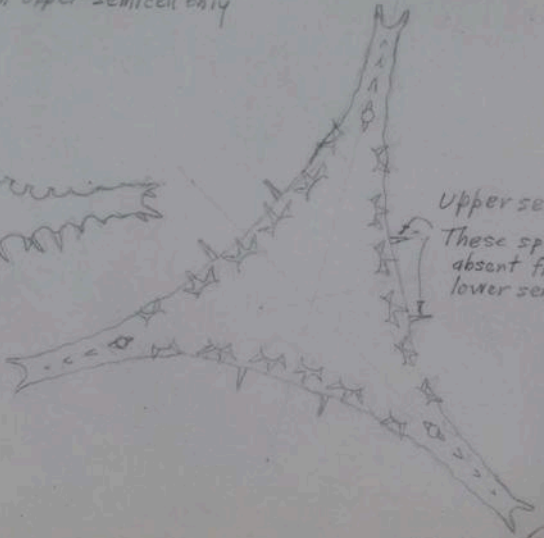
June 25/56

L 56
Wcpr 76
I 12-13?

=S. cyclacanthum forma 2
XV:2



20x44



N. Australia
X-104

5/57

L 39
W epr 54
I 12

= S peristephes Sc & Ph
XV:4

Approximate
Moved while drawing.

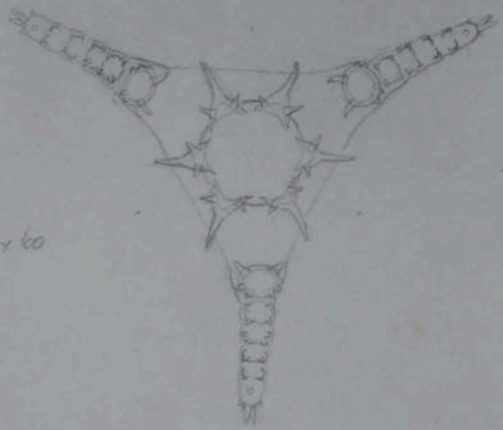
X-104
N. Australia

also Indonesia

June 23/56

L
Wapr 39
I 54
12

= S perastephes Sc & Pr
XV .4



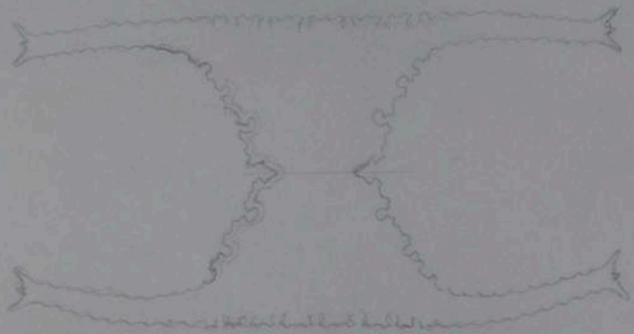
15 x 60

N. Australia
X-104

June 23/56

L 39
W cpr 76
W base above roth 18
I 10
T 17

= S. longbrachiatum (Börge) Gut forma
XU 5



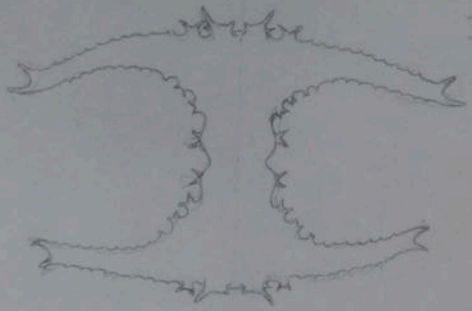
20 xaa

Cf. St. bicorne Hauptfl. v. longebrachiatum Borge 1896 L 33-34, W cpr 74-85, I 9
St. pseudosebaldi subsp tonsum Nordst 1888 L 36-56 W cpr 52-88, I 11-14

X-104
N Australia

L csp 36
W cpr 56
I 7.5
T 14

St. subsaltans var australianum v. nov.
= S. indentatum w.e.w forma
XV : 6



T 14

Approx

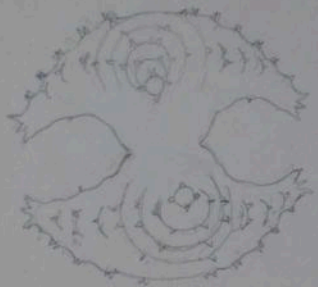
Tilted, showing true shape of verrucae ?

N. Australia X-102

Dec 29/57

L 32
W cpr 36
I 9

= S reboldi var gracile Wessel. forma XV :7



15×60

Probably not typical.
Specimens with longer processes
are common

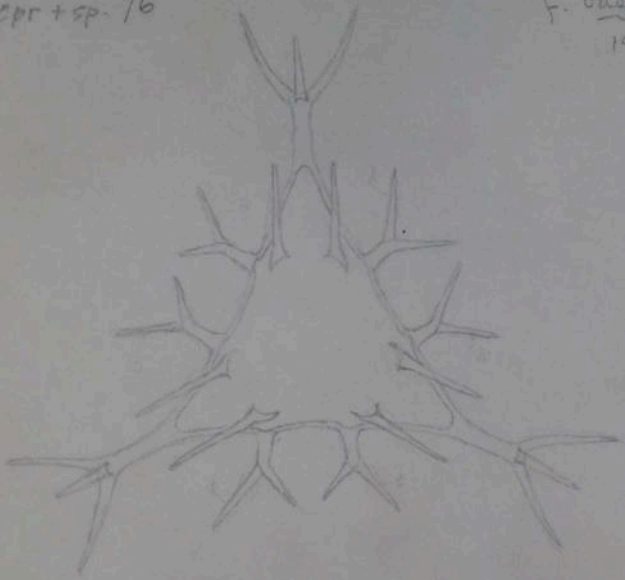
N. Australia
X-101

Mch 3/57

W cpr + sp. 76

Staur. fremartii v. evolutum Sc+Pe
f. trapezoidatum Sc+Pe f. nov
1958a (Indonesian Alps III
p51, fig 6.

already published
as fig 6
in Pe+Sc 1958 - Indonesian III



An unusually fine specimen

N. Australia
X-104

Sept 13/54

L spr 11
cpr 22
W spr 32
I 6

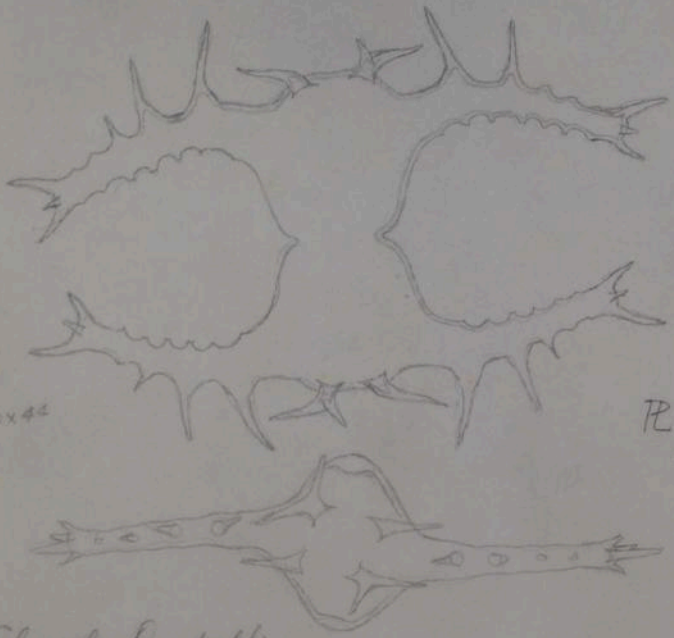
St. sublaevispinum
check size

20x44

X-110
N. Australia

Feb 24/57

L ssp 39
csp 54
W csp 81
I 10
T 24



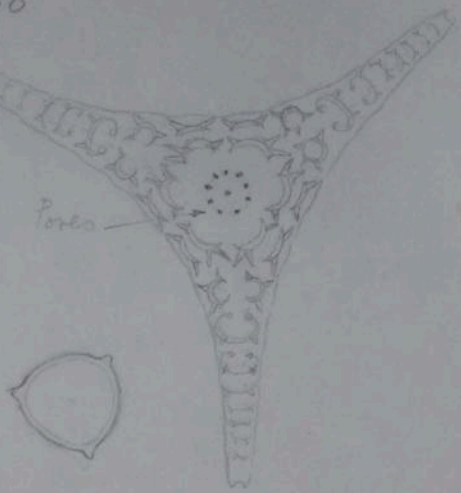
20x44

Pl 3 Fig 3.
= 1958 (Indonesia) fig 18
as S. saltans v. polycharax

Slough, Penpelli
Colombia

July 29/54

Wcpr 58
I 12 ±



15 x 60

of Sumatra

= 5 curvistes v. Coronatum Kl.
f. inflatum Sc v P2

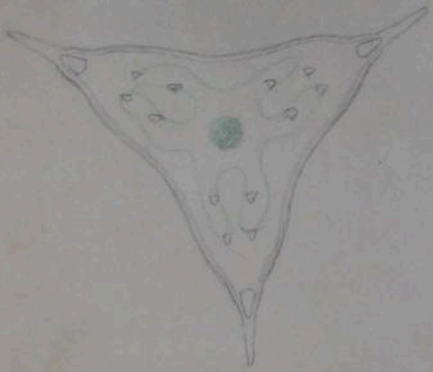
XVI : 1

N. Australia
X - 104

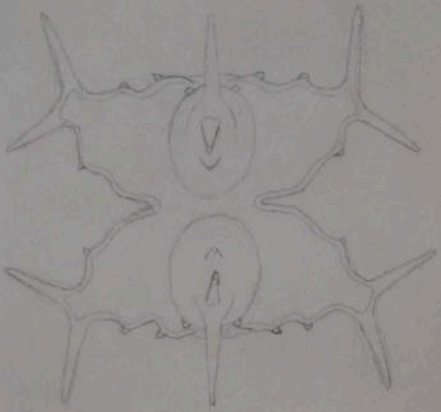
June 23/56

L ssp 30
csp 42
W ssp 36
csp 47
I 13

St. magnifurcatum Scott & Grönbl. fa
Fig. 41
St. Gutwinskii fa reductum f nov
OK 16:2



15 x 60



N. Australia
X-109

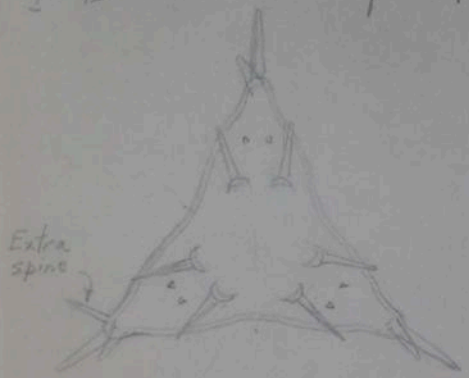
RZR

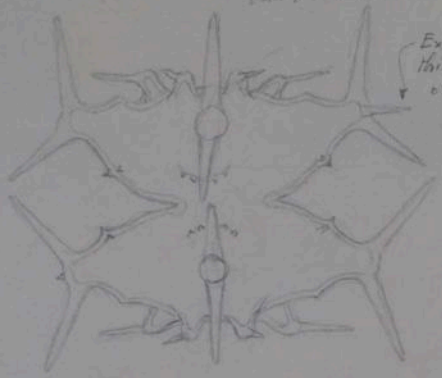
Feb 14/56

L s=p 30
c=p 45
W s=p 39
c=p 51
I 13

St. Gutwinskii Z = morpha 16:3

Cf St. patens v. planctonicum GS West
Yan Yean p68.





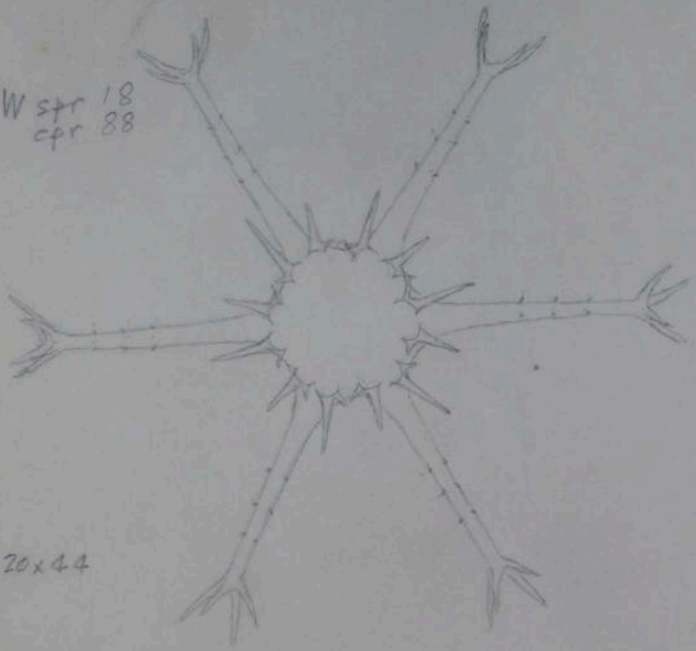
See Sumatra 130
for similar plant,
fairly common

Only 1 seen

X 109
N Australia

Feb 25/57

=S boergesenii Rac v. graculus Sc ♂ ♀



W str 18
cpr 88

20x44

This resembles St. Boergesenii Racib., but differs in the possession of 3 pairs of minute sharp spines on the dorsal surface of the main processes; in the possession of 12 instead of 6 apical bifid processes, which also are situated closer to the margin in top view; and four terminal spines instead of two. Of the pair of bifid apical processes at the base of each of the main processes, the right hand one is either shorter than the left, or is seen at a different angle and therefore more foreshortened.

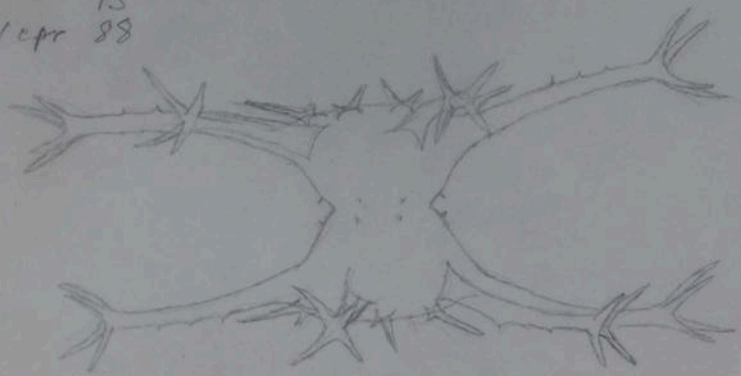
Only 1 seen

X 100
N. Australia

Aug 6/52

L spr 29
cpr 45
I 13
W cpr 88

= S borgesenii v. gracilus Sc ex G



X 104
N. Australia

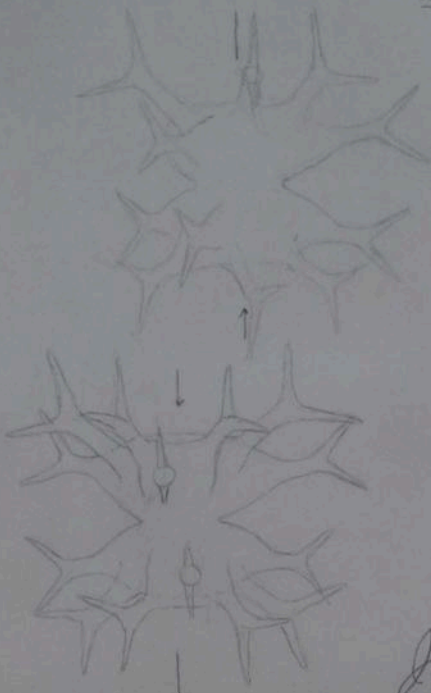
Aug 6/52

L spr 22
cpr 39
W cpr+sp. 40
I 10

= St tohopekaligense f. minus
(Tum.) Sc 6 Pl.
XVII : 5

15x60

All processes and spines are hollow, with walls so extremely thin and delicate that they are hard to see.

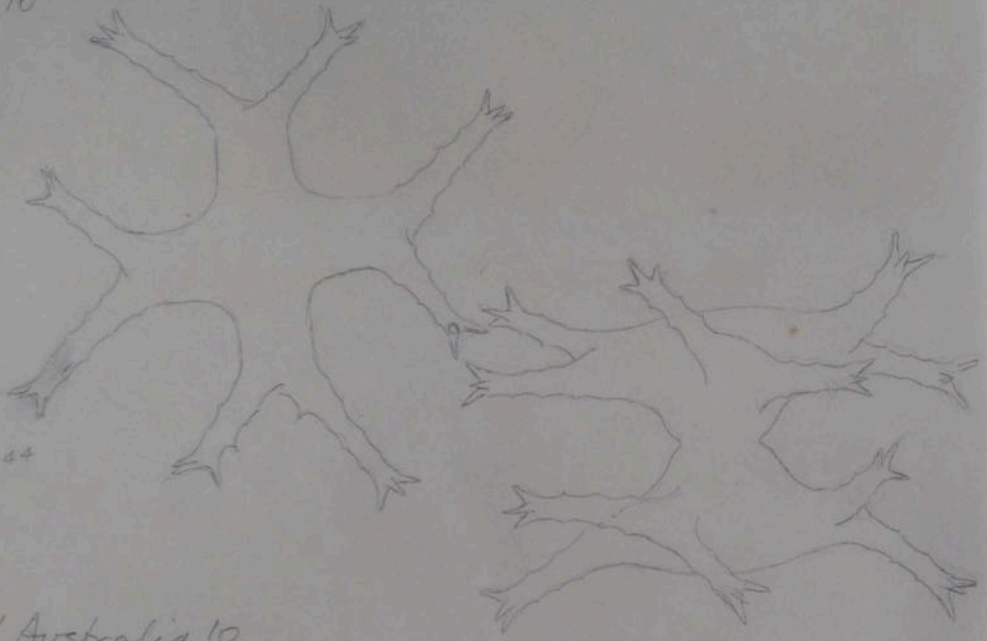


X-104
N. Australia

RRR
June 26/56

L spr 32
cpr 47
W cpr 70
I 10

= Ssorangulare forma



20x44

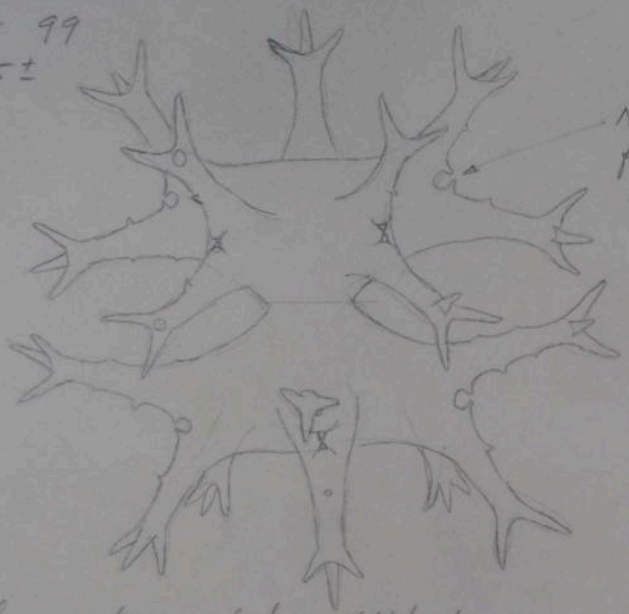
N Australia 10

Oct 20/53

L spr 45
opr 40± (to 97-)
W opr 99
I 15±

= S. Rectangulare v. asperum fom

17:1



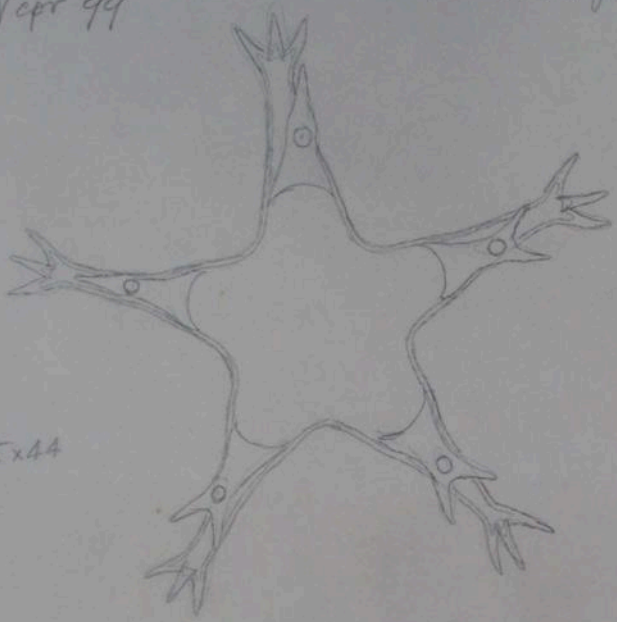
Isthmus obscured by epiphytes

Unawalerké

Sept 9/53

Wcpr 99

= S. hexangulare v. asperum form
17:1



15x44

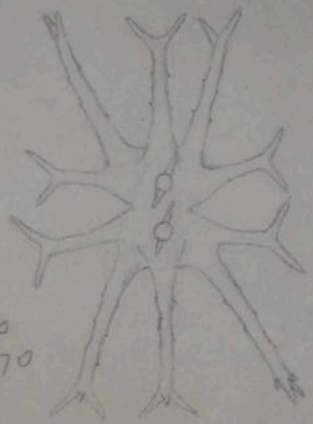
Unawalerké

Sept 9/53

L spr 15
cpr 48
W spr 13
cpr 36
I 8

St. Rosei var elongatum var. nov. OR
or sp. nov. ?
Ends of processes are different from Rosei

Not spinulo



15x60
x1670

Margins of vertical processes have barely perceptible cusps.
Horizontal processes are smooth

Slough, Oenpelli.
Kelly Harrison

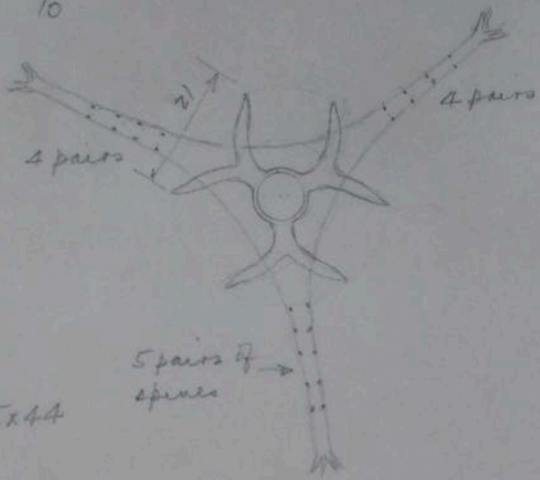
May 9/54

W cpr 81
I 10

S. taupherum WTW. very small

61-

17.7



15x44

Group of 10 large pores in center of apical surface

N. Australia

Y-184

Aug 13/82

L 8 cells 93 = 11.5 average

W 17

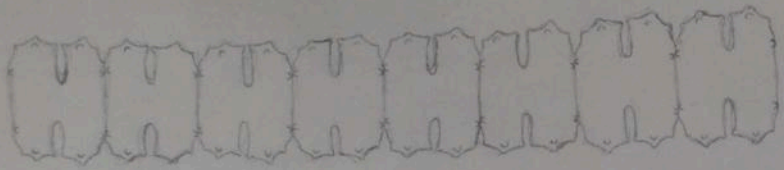
I 6

T 7

Sphaerozosma

= " quadrispinatum Scott

f. evoluta " morph



1 filament of 35 cells seen

X-104

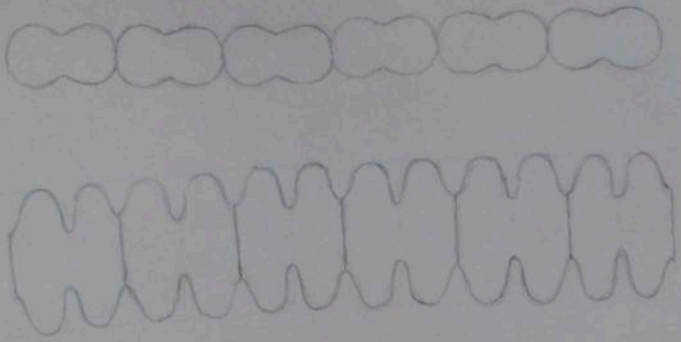
N. Australia

Feb 16/57

L 6 cells 81μ = 13.5 average
W 18-19
I 7
T 9
W apex 9

Spondylosium nitens fa. minor Turn
FW Alg. E. Ind. p. 44. Pl 18. fig 6.

OK



N. Australia X-104

Aug 9/54

L semicell 9±

W 30

I 21±

D. Sirbatzii fa

D. aptosom f. quinquangulum

20 x 44

x 1500

The quadrangular form is common in this sample

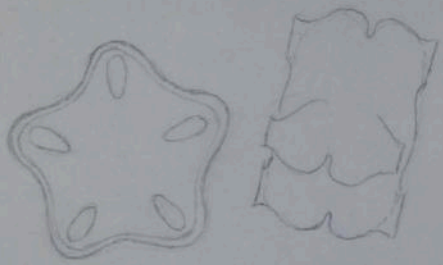
N. Australia

X-108

Mch 17/56

L 18
W 28
I

D. aptogonum fa quinquangulare fa. nov.
ok



N. Australia
X 108

Jan 20/55

L 30 Zygospore 40x29

Wmax 35

Wmin 28

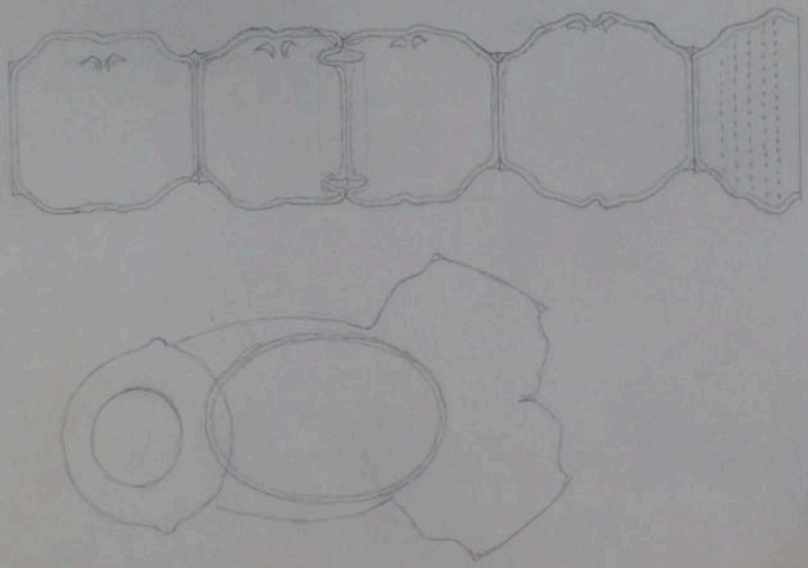
I 28

P/e 19

= D. coarctatum v. cambricum W.West forma

XVII 6

15x44



N Australia

X 108

Feb 14/56

L 6 cells 210 μ = 35 average

W 20

I 19 ±

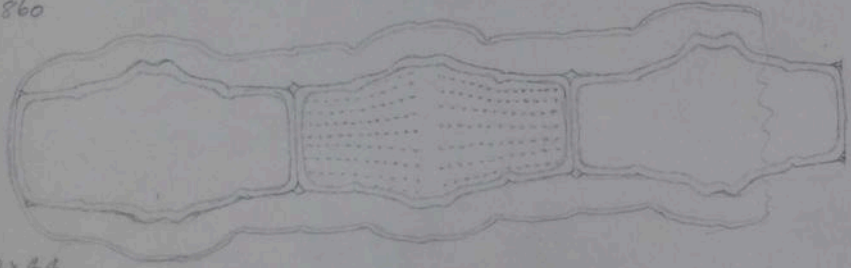
Pole 14

Sheath max. diam. 28

Bambusina Borreri
= B. hebenstreitii

I do not recall having seen Bambusina with a sheath before. In this sample the plant is abundant, but so far I have seen only this short filament of 6 cells with a sheath. The sheath is peculiar in that it showed a distinct skin or wall, of approximately one-half the thickness of the cell-wall. There was a faint indication of fibrillar structure, which would also be indicated by the rows of

10 x 44
x 860



20 x 44
x 1600

longitudinal pores, which were distinctly seen, in contrast with the usual longitudinal striae which frequently can be distinguished only with great difficulty.

Oenpelli
X-110

Feb 11/56

L 4 cells 190 : 48 average
W max 18
W pole 14
W min (at neck) 10
I none

Bambusina Bebrassonii f. constricta

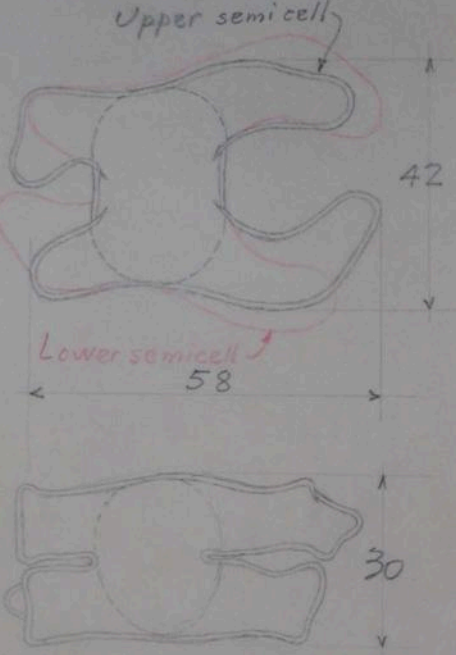
VII : V

12½ x 44

N. Australia II.
Kilv. Impini Creek
Melville Island

Oct 16/53

Phymatodocis irregularis Schm



OK

15x44

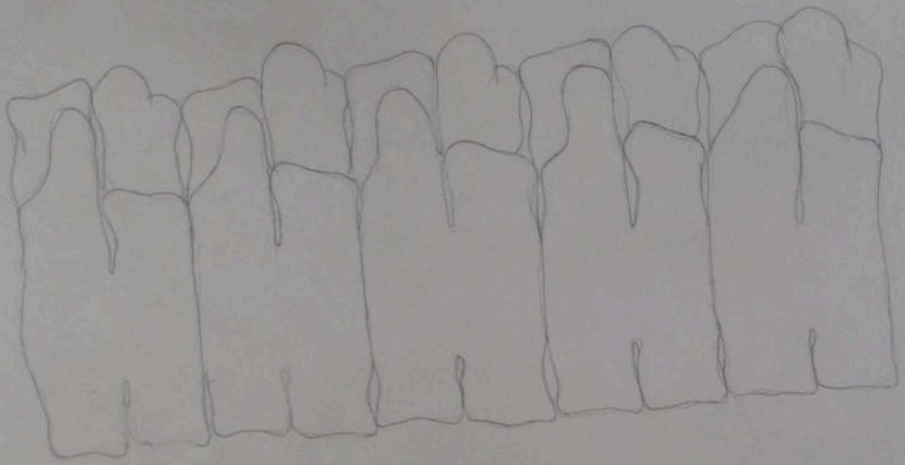
Lower (older) semicell pale brown

Unawalerké

Sept 5/53

L 5cells 138 = 28 average
W max 62
I 30±

Phymatodocis irregularis Schm. ok

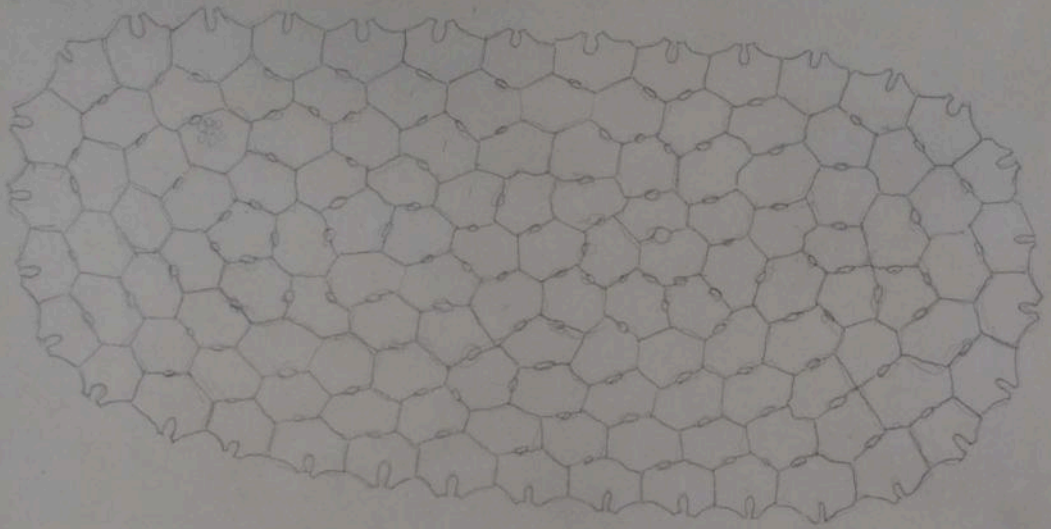


15x44

Unawalerké

Oct 10/53

Coenobe 166 x 78
Average cell about 9x15
128 cells



Unawalerké

Sept 12/53