

# **Aquatic Hyphomycetes**

**Descals et. al.**

**from: BMS Workshop  
Sheffield Nov. 1989**

PRELIMINARY KEY TO THE BRITISH "INGOLDIAN AQUATIC HYPHOMYCETES"

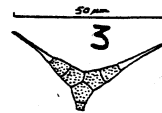
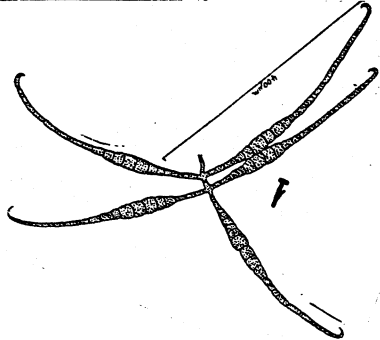
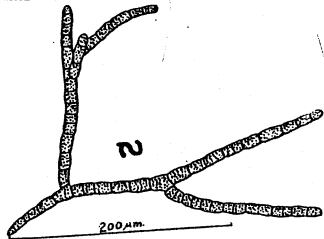
(based on conidial morphology)

A-COMPOUND CONIDIA (with more than one element or apex)

CONIDIA DARK

{ apices hooked, branching verticillate  
conidia V- or Y-shaped  
conidial branching alternate, dendroid

CASAREZIA SPHAGNORUM (1)  
DIPLOCLADIELLA SCALARGIDES (3)  
ANAVIRGA DENDROMORPHA (2)

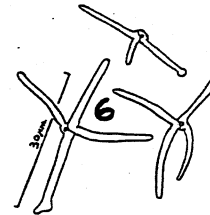
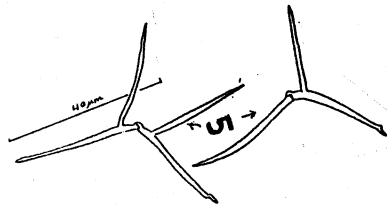
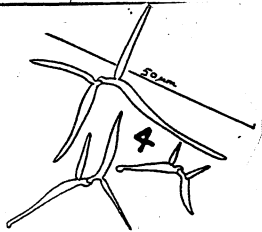


CONIDIA WITH CLAMP CONNECTIONS ON AXIS

{ clamp between two laterals  
conidia cruciate, one lateral on clamp

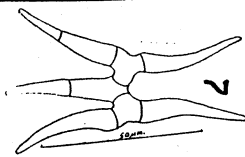
TAENIOSPORA GRACILIS (4,5)

TAENIOSPORA DESCALSII (6)



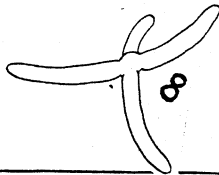
CONIDIA WITH TWO OR MORE SETS OF DICHOTOMIES

DWAYAANGAM CORNUTA (7)



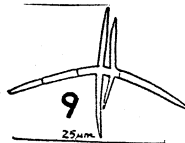
CONIDIA CRUCIATE, ELEMENTS GENTLY CURVED

LEMONNIERA CORNUTA (8)



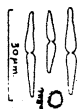
CONIDIA "PINNATE"

ENANTIOPTERA TETRA-ALATA (9)



ELEMENTS SERIATE

ISTHMOLOGISPOA MINIMA (10)



OUTLINE TRIANGULAR (with short axis and three laterals LATERIRAMULOSA

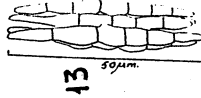
- { With 3 laterals bilobed
- { With 2 laterals bilobed

- L. minitriangularia (11)
- L. uni-inflata (12)



ALL ELEMENTS PARALLEL TO EACH OTHER, ADPRESSED, ANTRORSE OR RETRORSE

AMALLOSPORA DACRYDION (13)



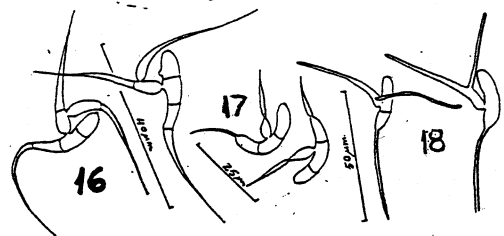
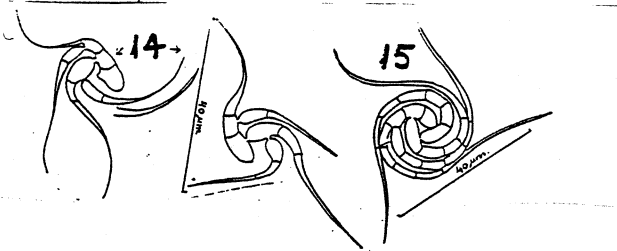
BRANCHING VENTRAL

branching homotropous

GYOERFFYELLA

- 1- two primary laterals and one secondary
  - { all laterals with strongly constricted insertion
  - { second primary lateral with insertion unconstricted
- 2- one primary lateral and one secondary
  - { with filiform elements
  - { without filiform elements
- 3- only one primary lateral

- G. ROTULA (14)
- G. SPECIOSA (15)
- G. GEMELLIPARA (16)
- G. TRICAPILLATA (18)
- G. GEMELLIPARA (16)
- G. ENTOMOBRYOIDES (17)

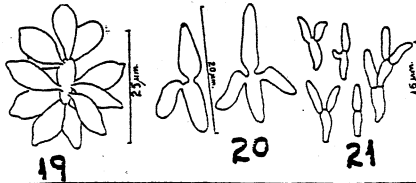


ELEMENTS BUDDING OUT

- { branches swollen
- { branches not swollen
- { branches retrorse
- { branch antrorse

TRICELLULA

- T. botryosa (19)
- T. ornithomorpha (20)
- T. aquatica (21)



CONIDIA WITH A MAIN BODY AND FILIFORM BRANCHES

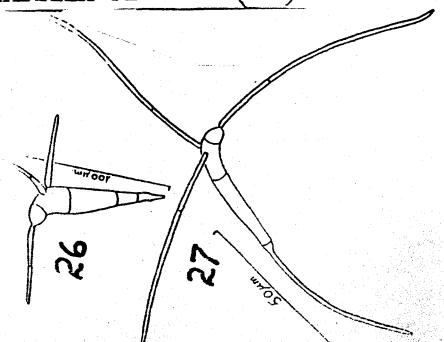
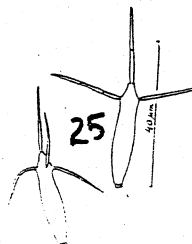
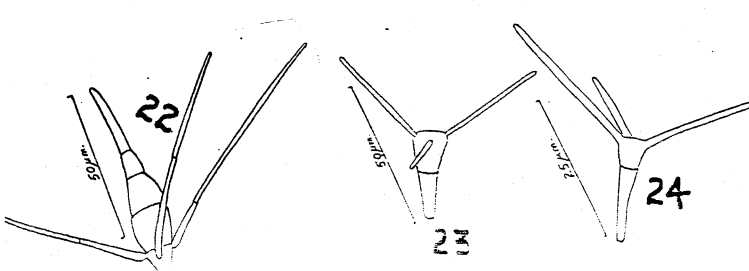
- { branches verticillate, parbasal
- { branches coronate
  - { conidia over 50 μm in span
  - { conidia less than 50 μm in span
- branches apical and lateral
  - main body curved apically
  - main body straight, scar broad,
    - { apical element integrated
    - { apical element discrete

LARIDOSPORA APPENDICULATA (22)

- CLAVARIOPSIS AQUATICA (23)
- CLAVATOSPORA LONGIBRACHIATA (24)

- conidia mosquito-like CULICIDOSPORA AQUATICA (27)
- CONIDIA PENGUIN-LIKE CULICIDOSPORA GRAVIDA (26)

- JACULISPORA SUBMERSA
- NAIADELLA FLUITANS (25)



CONIDIA PROTUBERATE

conidia isodiametric, with 4 or more outgrowths evenly distributed

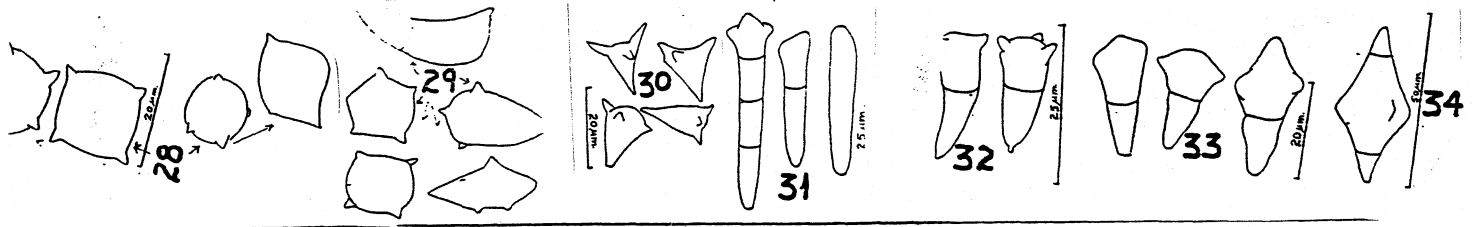
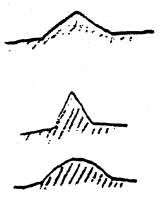
GONIOPILO MONTICOLA (28)  
MARGARITISPORA AQUATICA (29)

outgrowths coronate { conidia stellate  
conidia clove-shaped  
main body campanulate to clavate

HELISCILLA STELLATA (30)  
HELISCUS LUGDUNENSIS (31)  
HELISCINA CAMPANULATA (32)

- main body with one cell swollen and mostly bearing outgrowths  
{ distal cell swollen  
central cell swollen

TUMULARIA TUBERCULATA (33)  
TUMULARIA AQUATICA (34)



CONIDIA BIPARTITE (axis recurved), ASYMMETRIC

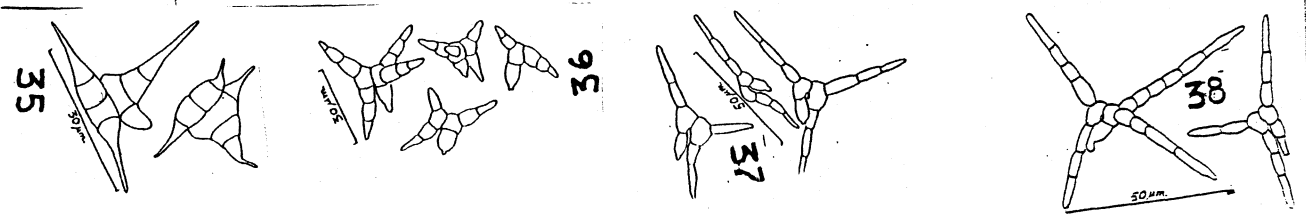
apices prolata to acuminate

CAMPYLOSPORA PARVULA (35)

apices not so, elements subulate

{ typically with 5 ends, { conidia not exceeding 40µm  
conidia larger  
TYPICALLY WITH 4 ENDS

TRIOSPERMUM MYRTI (36)  
TRIOSPERMUM PROLONGATUM (38)  
TRIOSPERMUM CAMELOPARDUS (37)



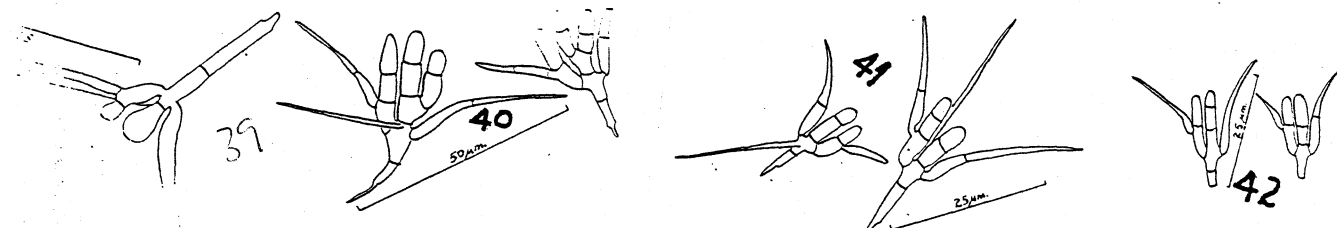
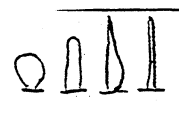
ELEMENTS OF TWO OR MORE SHAPES

with 2 (sometimes 1) globose elements  
with 3 (sometimes 2) digitiform elements  
with 2 central digitiform elements, axis mostly with basal extension,  
filiform elements often present, span over 20 µm  
axis base blunt (basal extension absent), filiform elements typically  
absent, span usually under 30 µm

TETRACLADIUM  
T. MARCHALIANUM (39)  
T. SETIGERUM (40)  
T. FURCATUM (41)  
T. MAXILLIFORME (42)

see  
Myc Res.  
93 (4)  
482-465  
1989

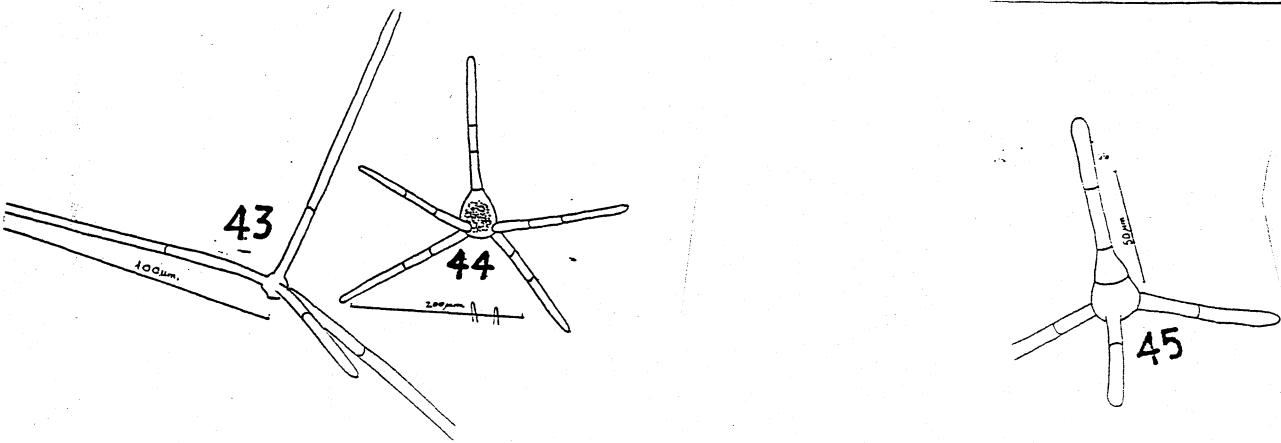
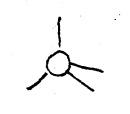
see to  
cell  
Tetracledium



CONIDIA MULTIRADIATE WITH DISTINCT CENTRAL BODY

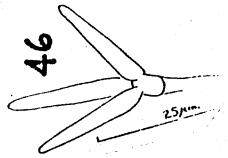
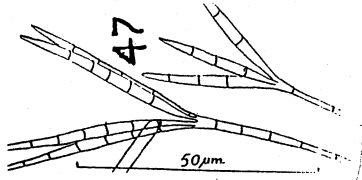
conidia under 300 µm in span, main body spherical  
{ central body globose, conidial span { under 300 µm  
{ over 300 µm  
{ (branches 4-8)  
central body obovate, 1-septate

LEMONNIERA CENTROSPHAERA (43)  
ACTINOSPORA MEGALOSPORA (44)  
POROCLADIUM AQUATICUM (45)

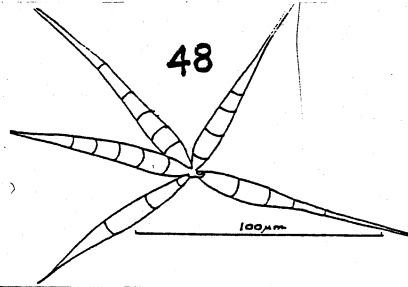


BRANCHES CORONATE, ON A THINNER STALK  
 { branch insertion abruptly constricted  
 { branch insertion pedunculate

TRIDENTARIA SP. (46)  
 ISTHMOTRICLADIA BRITANNICA (47)



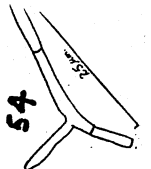
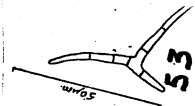
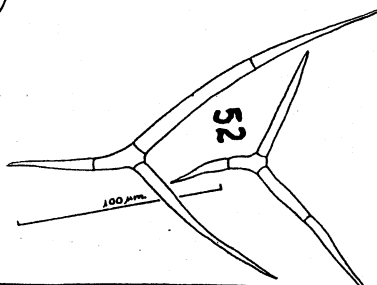
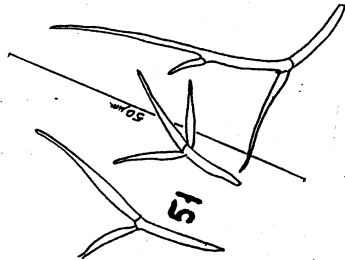
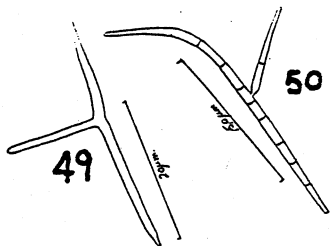
CONIDIA MULTIRADIATE, BRANCHES LONG-NAVICULAR, CENTRAL BODY MINUTE AND PEDI-CELLATE  
 FLABELLOSPORA ACUMINATA (48)



CONIDIA WITH AXIS AND ONE LATERAL BRANCH

{ branch perpendicular to axis, { ends acute  
 { rounded  
 { branch sub-pendulous  
 { branch antrorse  
 { axis curved apically, branch straight  
 { axis curved near the base or sigmoid  
 { branch pendulous  
 { branch ascending

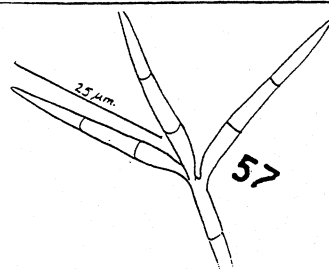
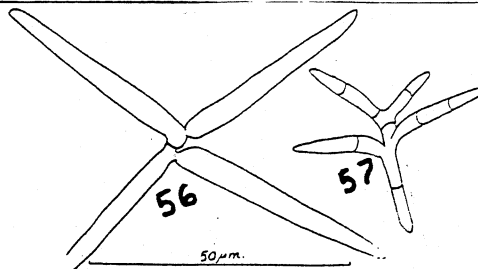
ALATOSPORA ACUMINATA (49)  
 TRICLADIUM CURVISPORUM (54)  
 TRICLADIUM VARIUM (53)  
 TRICLADIOPSIS FLAGELLIFORMIS  
 VOLUCRISPORA GRAMINEA (51)  
 LAMBDA SPORIUM VIRIDENSE (52)



CONIDIA WITH AXIS AND TWO ADNATE BRANCHES

branch insertion unconstricted  
 branch insertion abruptly constricted  
 branch insertion pedunculate or smoothly constricted

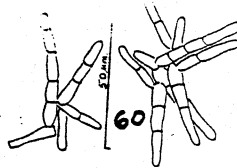
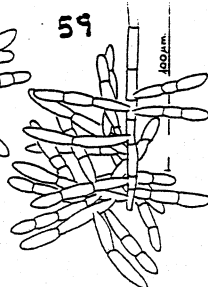
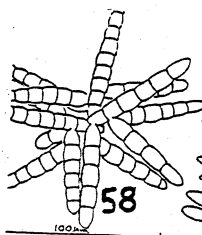
TRICLADIUM VARIUM (55)  
 FONTANOSPORA SP. (56)  
 SYMPODIOCLADIUM FRONDOSUM (57)



CONIDIA WITH NUMEROUS BRANCHES PERPENDICULAR TO EACH OTHER: DENDROSPORA

{ cells doliiform  
 { cells slightly swollen { conidial span over 100 µm  
 { conidial span under 100 µm

D. TORULOSA (58)  
 D. JUNCICOLA (59)  
 D. NANA (60)

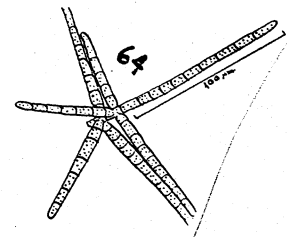
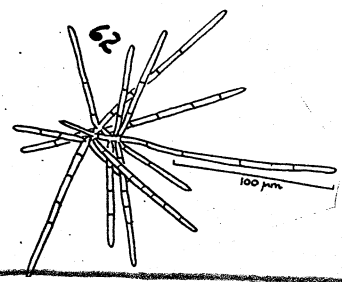
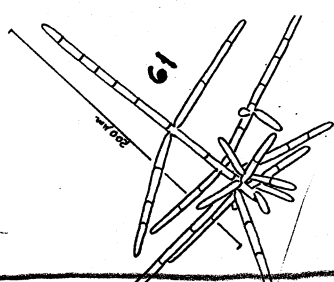


1- typically with secondary branching *O. erecta* (61)

*D. TENELLA* (62)

2- with only primary branches, cells subhyaline

*D. FUSCA* (64)



BRANCHING BASI-VERTICILLATE

elements broad, scar truncate  
elements subulate, inserted immediately above scar  
CONIDIA under 100 um in span  
    { lower cell of axis swollen  
    { axis evenly subulate  
septa constricted, with one pair of branches

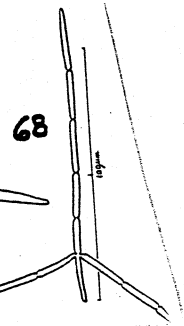
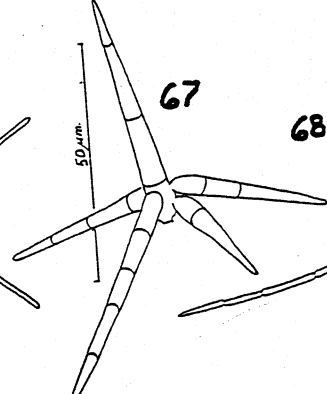
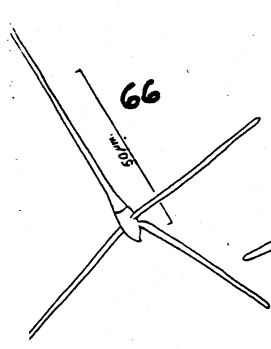
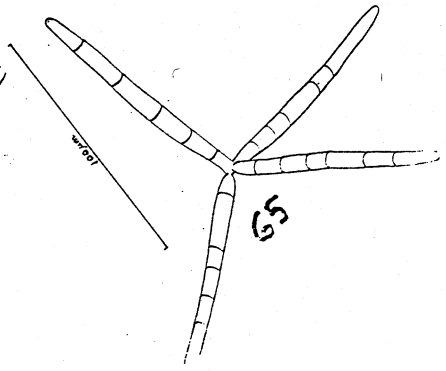
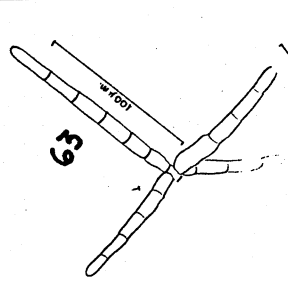
*D. FASTUOSA* (63)

*LEMONNIERA FILIFORMIS* (65)

*TRISCELOPHORUS MONOSPORUS* (66)

*TRISCELOPHORUS ACUMINATUS* (67)

*TRISULCOSPORIUM ACERINUM* (68)



BRANCHING ONE-SIDED, TYPICALLY IN TWO ORDERS

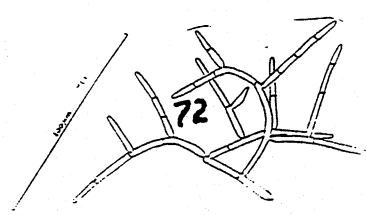
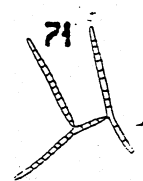
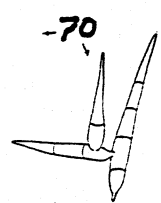
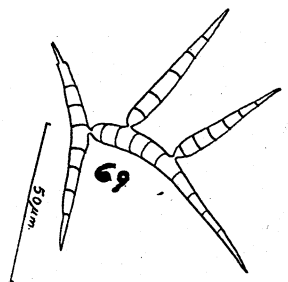
{ branches subulate, { apices acuminate, septa close  
                          { apices not acuminate, septa distant  
BRANCHES cylindric or nearly so, apices rounded

*PLEUROPEDIUM VIRESCENS* (69)

*PLEUROPEDIUM TRICLADIODES* (70)

*TRICLADIUM TERRESTRE* (71)

*VARICOSPORIUM ELODEAE* (72)



CONIDIA LARGE, DENDROID (BRANCHING ALTERNATE)

{ branches straight

{ apices often swollen, branches 3 or more

{ Apices acute, branches 3 or more

{ branches seldom more than 2

{ branches gently arcuate, septa often slightly constricted, apices rounded

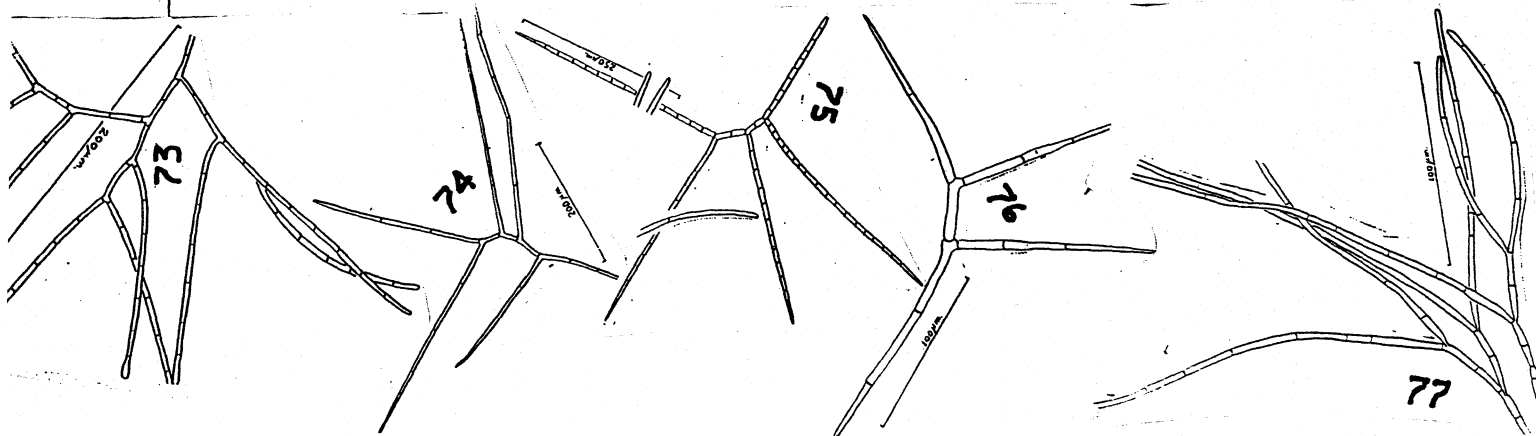
VARICOSPORIUM GIGANTEUM (73)

POLYCLADIUM EQUISETI (74)

VARIOCLADIUM RANGIFERINUM (75)

VARIOCLADIUM GIGANTEUM (76)

VARICOSPORIUM DELICATUM (77)



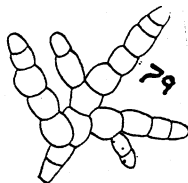
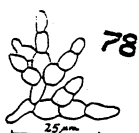
CONIDIA DENDROID, CELLS SWOLLEN

{ CONIDIAL SPAN ca. 30 μm

{ CONIDIAL SPAN ca. 70 μm

ARBUSCULINA IRREGULARIS (78)

ARBUSCULINA MONILIFORMIS (79)



CONIDIA "TETRARADIATE" (arms roughly of same length)

{ arms cylindrical, (of same length or one slightly longer; all arms straight

{ one typically shorter

{ arms subulate or nearly so, apices rounded

{ one or more arms gently curved, apices acute

{ all arms cylindrical, apices rounded

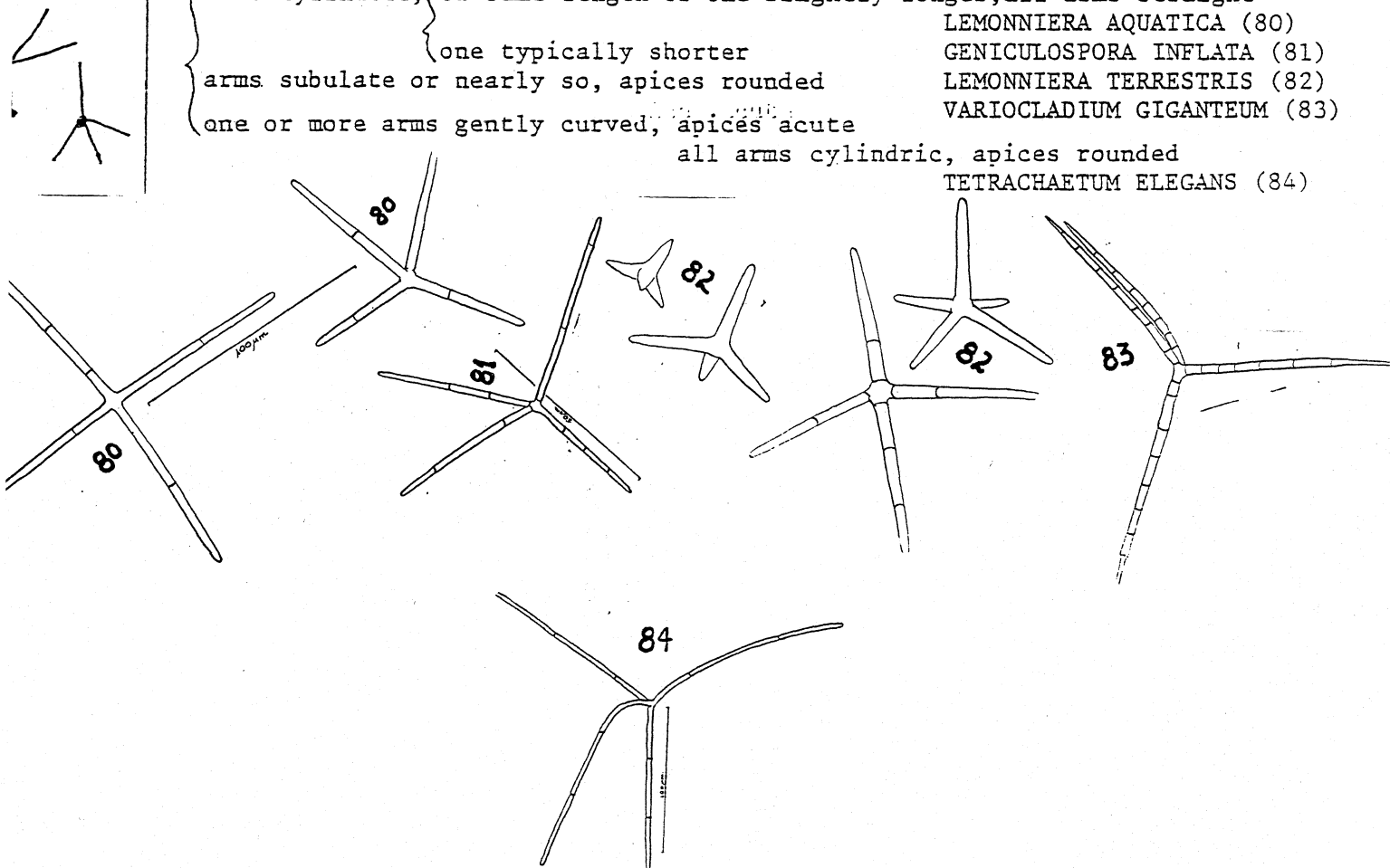
TETRACHAETUM ELEGANS (84)

LEMONNIERA AQUATICA (80)

GENICULOSPORA INFLATA (81)

LEMONNIERA TERRESTRIS (82)

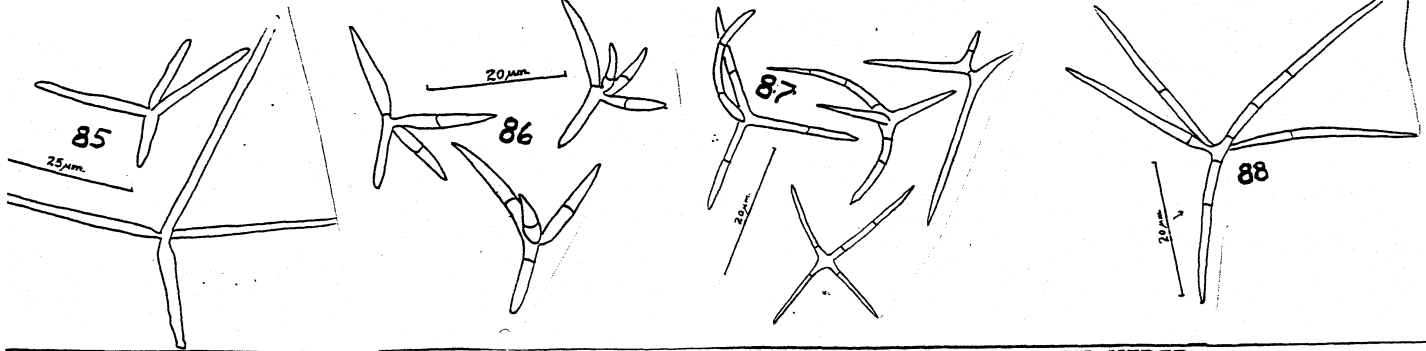
VARIOCLADIUM GIGANTEUM (83)



BRANCHES LATERAL, PAIRED (often one arm missing, or three may be present)  
 conidia small, elements straight, axis bent at branch insertion  
 or medium-sized

STENOCLADIELLA NEGLECTA (85)  
 laterals and distal part of axis pendulous, insertion of laterals constricted  
 ALATOSPORA PULCHELLA (86)  
 axis gently arcuate, branch insertion unconstricted, conidia often spiny in appearance  
 ALATOSPORA ACUMINATA s.s. (87c)  
 axis gently arcuate, branch insertion constricted  
 ALATOSPORA ACUMINATA s.l. (87)  
 ALATOSPORA CONSTRICTA\* (88)

\* :not recorded for the UK; practically indistinguishable from *A. acuminata*

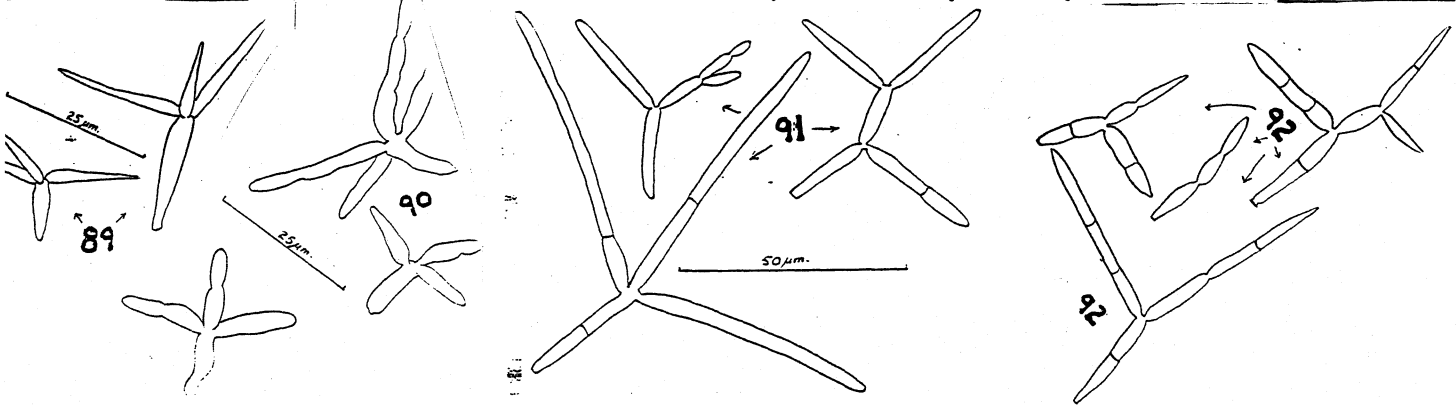


BRANCHES CORONATE, ALL OF SIMILAR WIDTH OR STALK SLIGHTLY WIDER,

ARTICULOSPORA

- 1-branches subulate, one of them often perpendicular to the stalk, conidia small, apices acute  
 ARTICULOSPORA ANTIPODEA (89)
- 2-branches fatter, apices rounded; conidia also small; germination precocious or elements proliferate apically  
 ARTICULOSPORA ATRA (90)
- 3-branches three and coronate (one of them often with swollen basal cell) or branches paired, one of them again forking apically, apices rounded  
 ARTICULOSPORA TETRACLADIA

\*: some isolates produce smaller conidia, mostly with 3 or 5 elements, with apices acute (fig. 92) and which may eventually be separated from *tetracladia*.





BRANCHES ALTERNATE, (AXIS RECOGNIZABLE), IN ONE (OR TWO) ORDERS

1 - base of branches obconic

mostly with first-order branching, conidia normally less than 150  $\mu\text{m}$  in span; axis mostly straight, scar truncate **TRICLADIUM CASTANEICOLA** (93)

Typically with second-order branching, conidia normally over 200  $\mu\text{m}$  in span; axis typically curved, scar truncate **TRICLADIUM TERRESTRE** (94)

2 - branch insertion abruptly constricted or unconstricted

1 - axis gently arcuate (not geniculate), elements subulate

apices acute { axis often slightly sinuous and irregular in outline  
**TRICLADIUM ATTENUATUM** (95)

{ axis gently arcuate, branches on adjacent cells  
**TRICLADIUM BIAPPENDICULATUM** (96)

apices rounded { laterals narrow-subulate (one often missing), base truncate  
**TRICLADIOPSIS FLAGELLIFORMIS** (97)

{ elements much broader (apices may be acute or even acuminate)  
**TRICLADIUM SPLENDENS** (98)

{ axis constricted in area of branch insertion  
**TRICLADIOPSIS FOLIOSA** (99)

2 - axis typically geniculate

elements almost cylindric, branches subpendulous, insertion broad or slightly constricted  
**TRICLADIUM CASTANEICOLA** (100)  
**TRICLADIUM GRACILE** (100)

\*T. chaetocladium tends to be larger and the twist on the axis is stronger than in T. gracile; both species are very similar, also in conidiogenesis and cultural characters, and may become one species; T. gracile has no type.

branches subulate, pendulous, apices rounded, insertion constricted  
**TRICLADIUM PATULUM** (101)

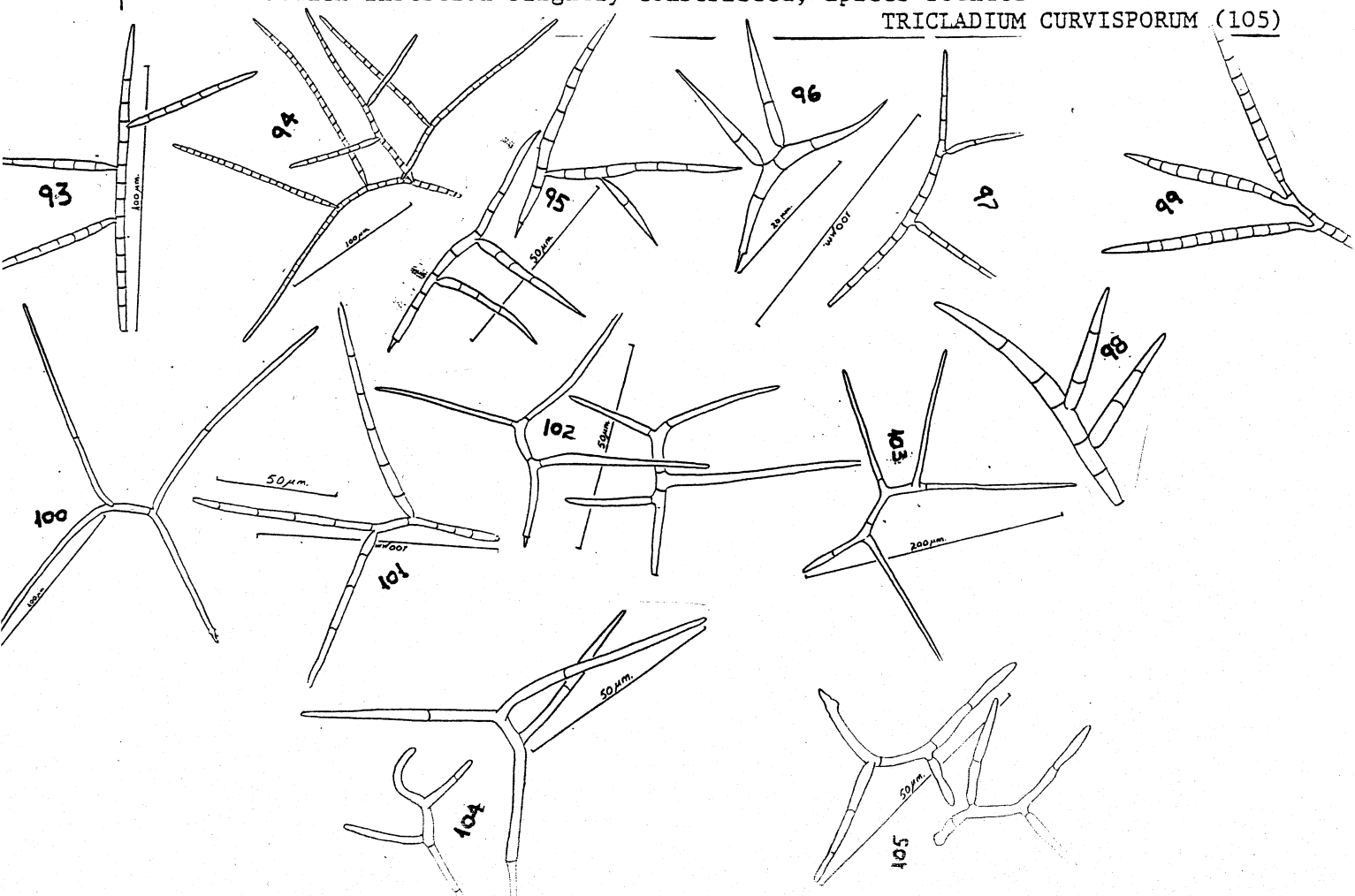
branch insertion broad, branches straight or ascending slightly, typically with two laterals  
**TRICLADIUM ANGULATUM** (102)

conidia similar but much larger (over 200  $\mu\text{m}$  in span), often with 3 laterals  
**TRICLADIUM ANOMALUM** (103)

axis often deliquescent (unrecognizable in its distal part from the upper branch)  
**SCORIOSPORIUM MINUTUM** (104)

3 - axis mostly curved strongly in its lower half, base abruptly swollen, branch insertion slightly constricted; apices rounded  
**TRICLADIUM CURVISPORUM** (105)

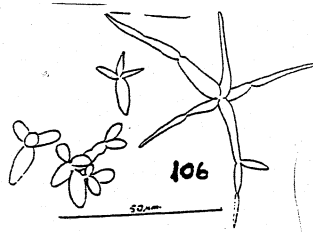
*T. chaetocladium*



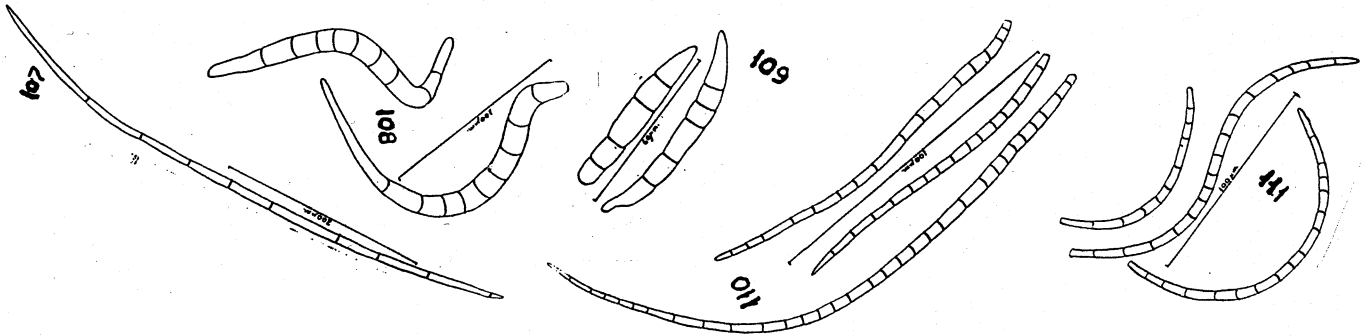
PSEUDOMYCELIUM OF BUDDING CELLS (BASIDIOMYCETOUS YEAST)

(found in pith of Equisetum internodes in highland lakes; when suspended in water the cells appear greatly elongated with acute apices)

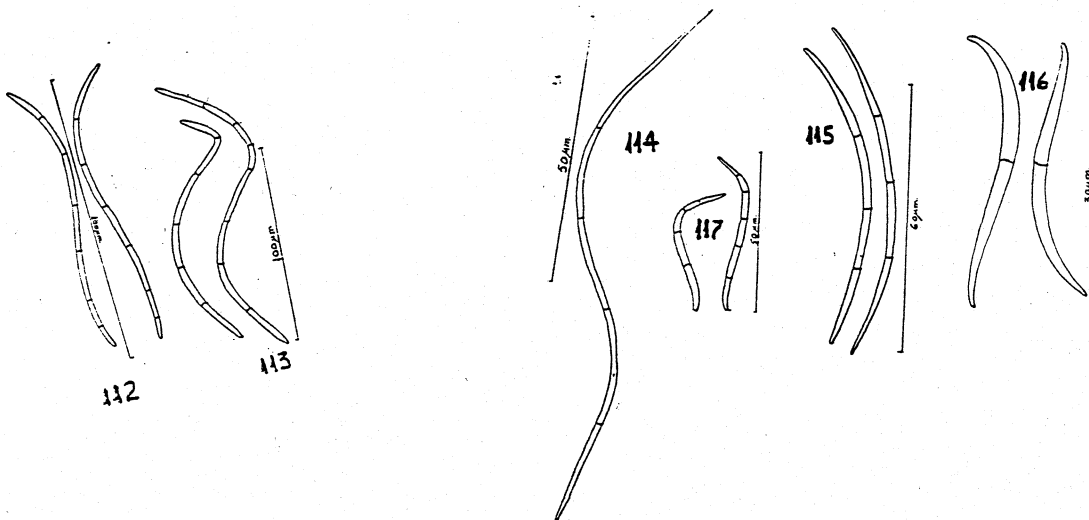
VANRIJA AQUATICA (106)



- β-SIMPLE CONIDIA (arcuate or sigmoid or straight or sinuous; there may be a basal extension, which is percurrent or excentric)
- conidia 600 to over 1000 μm long, subulate, gently arcuate or almost straight, basal extension short, percurrent if present SPORIDESMIUM ENSIFORME (107)  
(in the species list, under Anguillospora ensiforme)
  - conidia very broad, scar rounded off ANGUILLOSPORA CRASSA (108)
  - conidia also broad but much shorter, basal extension, if present, excentric MYCOCENTROSPORA CLAVATA (109)
  - conidia long, tapering apically, base truncate, multiseptate PSEUDOANGUILLOSPORA STRICTA (110)
  - conidia typically strongly arcuate (often horse-shoe shaped), cylindrical or nearly so ANGUILLOSPORA ROSEA (111)



- Conidia gently arcuate, cylindrical, ends rounded, few-septate, ca. 100 μm long PSEUDOANGUILLOSPORA PROLIFERA (112)
- Similar to the above but conidia longer ANGUILLOSPORA CURVULA (113)
- conidia long-fusoid, { 100 μm long or longer FLAGELLOSPORA CURVULA (114)  
ca. 60 μm long FLAGELLOSPORA FUSARIOIDES (115)  
ca. 30 μm long, 1-septate
- conidia long-fusoid but with base truncate, ca. 50 μm long FLAGELLOSPORA PENICILLIOIDES (116)  
SIGMOIDEA AURANTIACA (117)



conidia with excentric basal extensions

-conidia strongly curved, basal extension very long

MYCOCENTROSPORA ANGULATA (118)

-conidia much broader, scar thick, distal part of conidium prolate, basal extension may be wanting

MYCOCENTROSPORA ACERINA (119)

-Conidia similar but much smaller

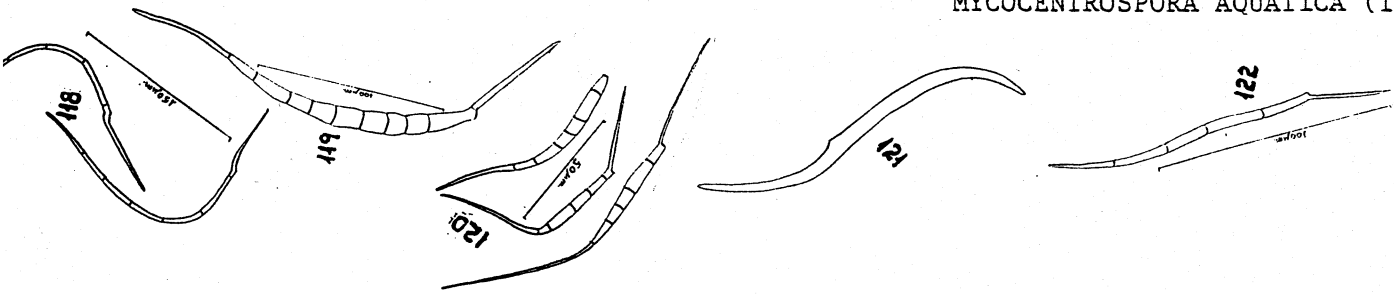
MYCOCENTROSPORA SP. INED. (120)

-excentric basal extension almost integrated with the main body, scar appearing as a conoid shoulder about one third from the base; conidia typically aseptate (seen mostly in the summer)

LUNULOSPOORA CURVULA (121)

-conidia almost straight or gently arcuate, few-septate, scar broad, excentric basal extension, if present, long, straight and subulate

MYCOCENTROSPORA AQUATICA (122)



-basal extension percurrent, growing through a delicate frill (best seen under phase contrast), which is the remains of the separating cell

ANGUILLOSPORA LONGISSIMA (123)

- conidia fusoid, base truncate or with short percurrent extension, conidia sometimes bifusoid or outline irregular

ANGUILLOSPORA FURTIVA (124)

- conidia fusoid, apex acute, basal extension short percurrent if present

FILOSPORELLA SP. (125)

- conidial outline highly irregular, cells often swollen; conidia almost straight

ANGUILLOSPORA FUSTIFORMIS (126)

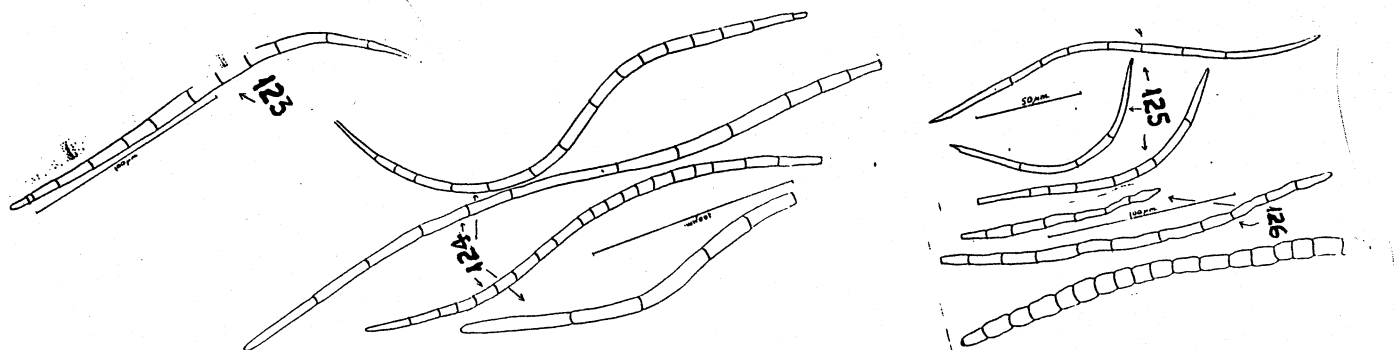
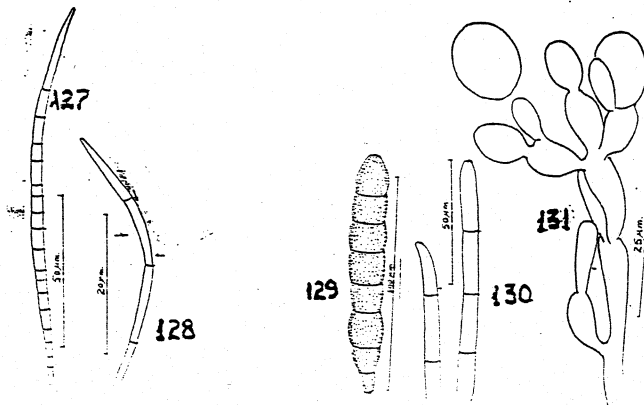
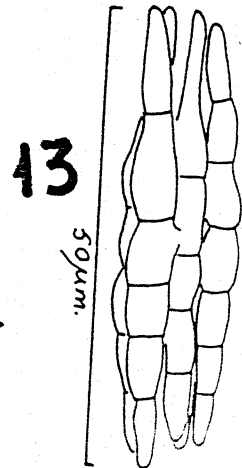
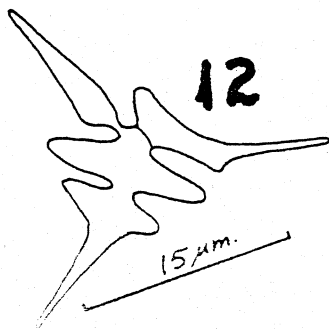
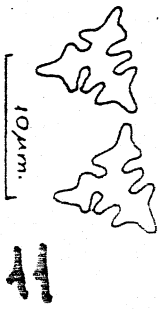
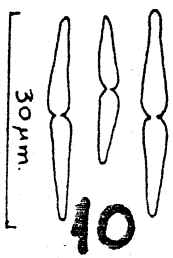
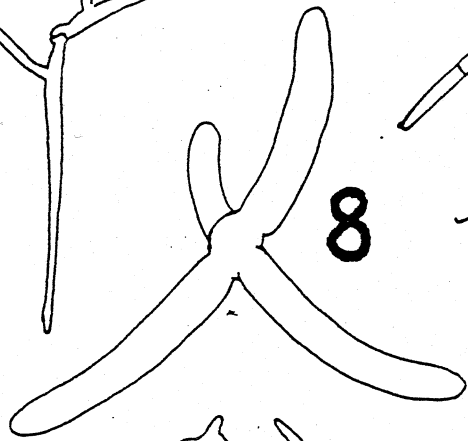
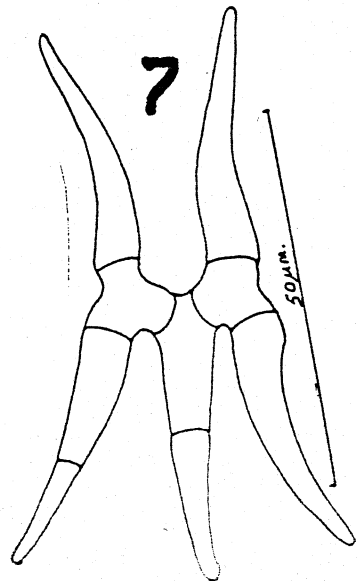
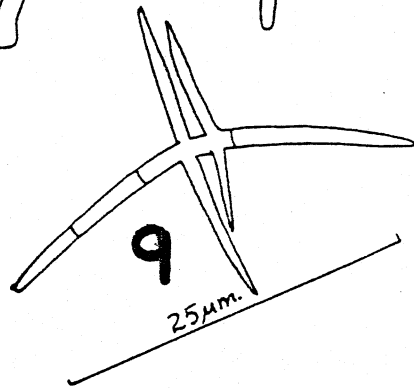
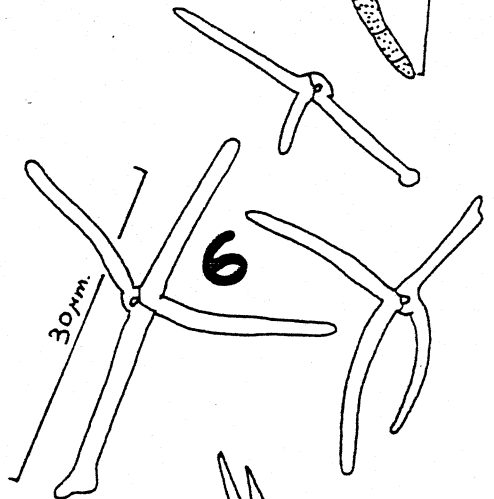
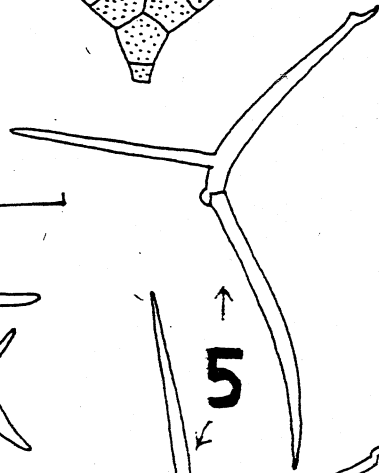
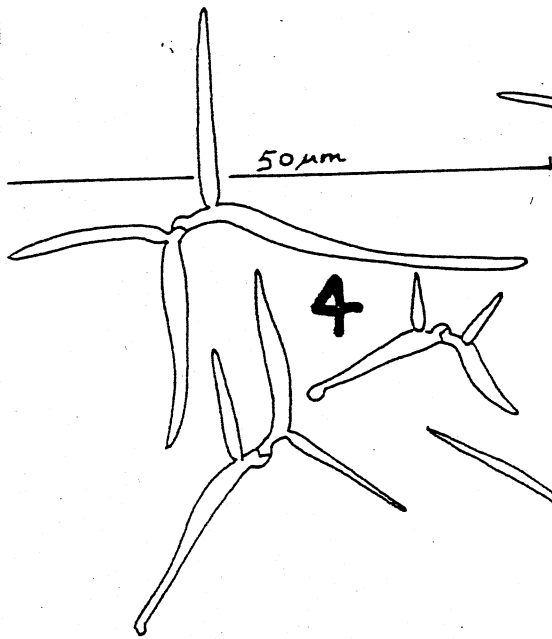
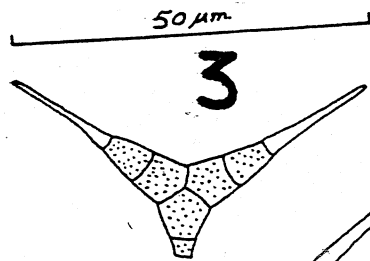
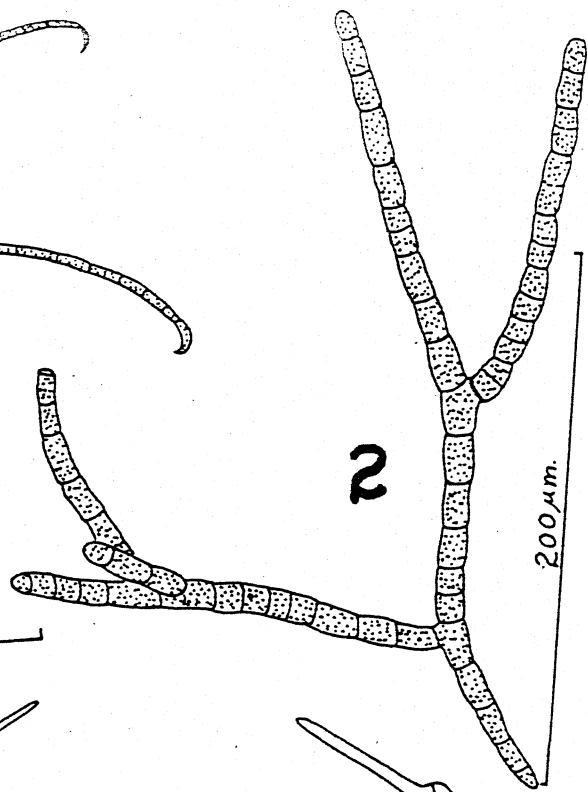
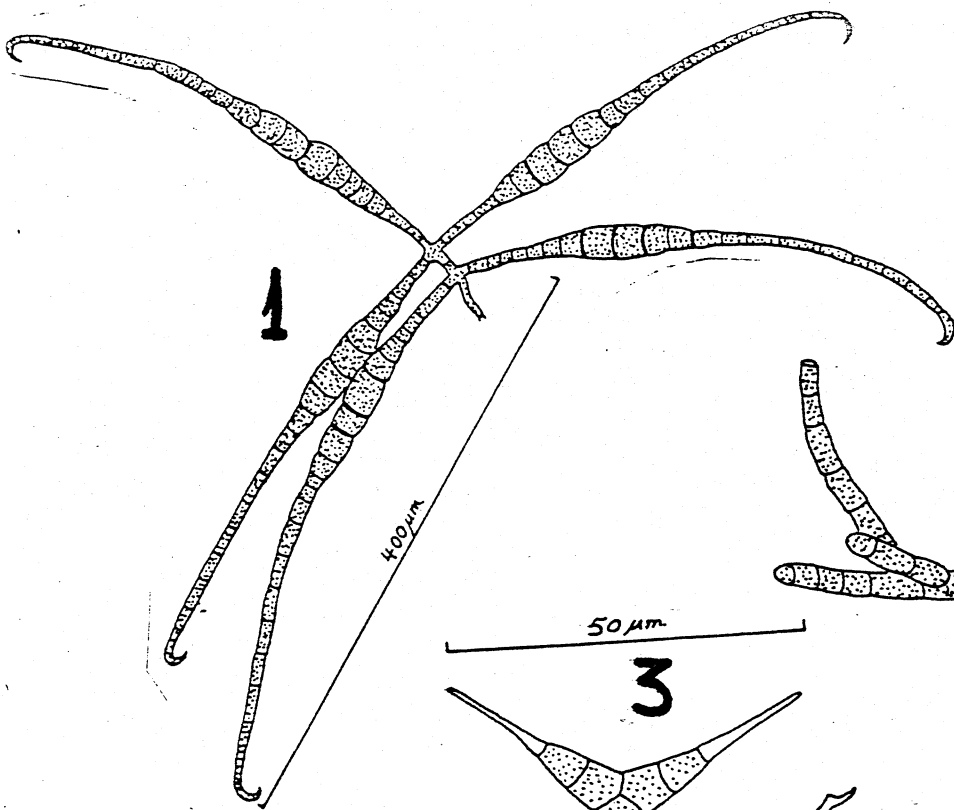
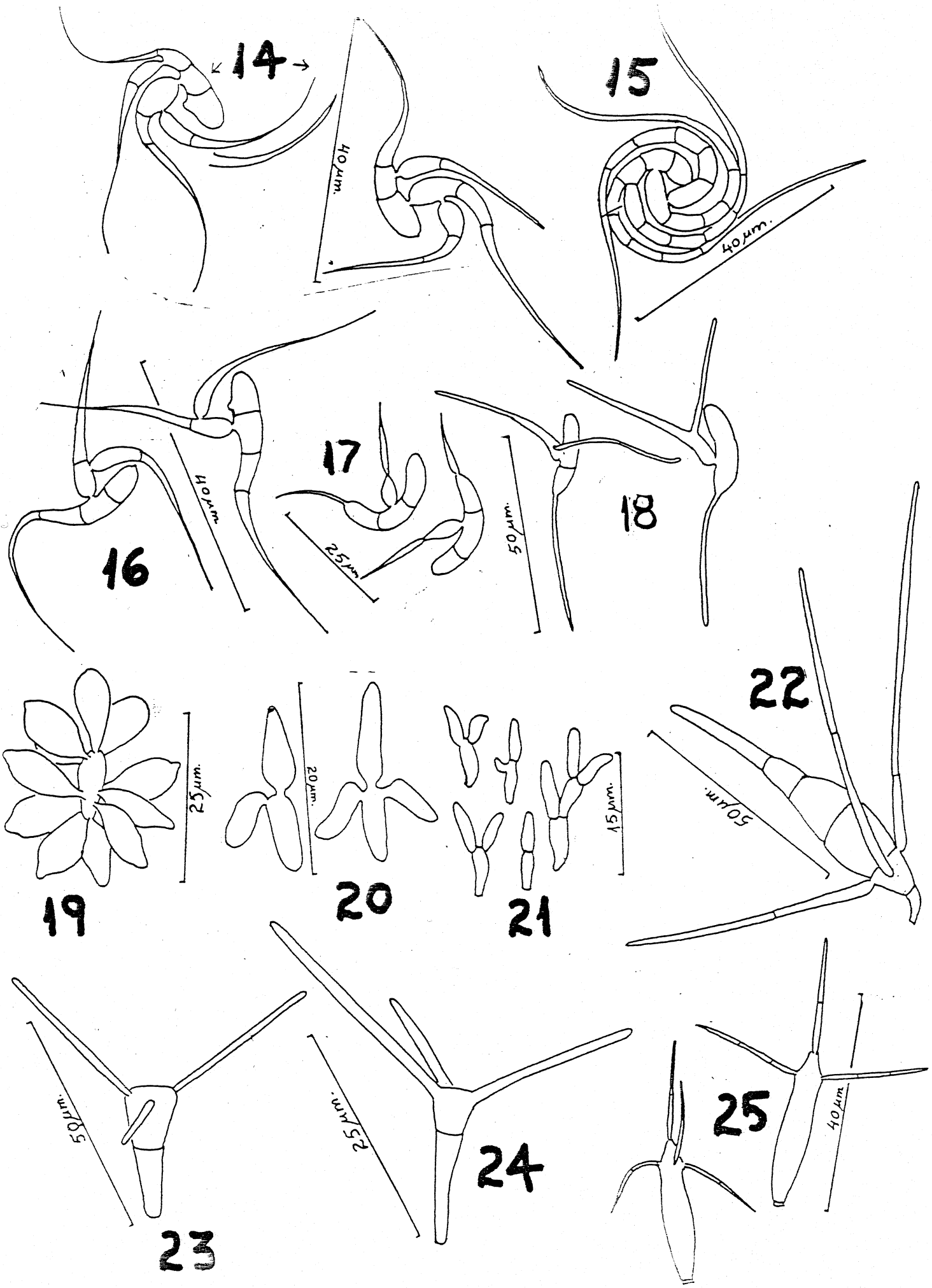


Fig. 127: unbranched conidium of  
 Fig. 128: unbranched conidium of  
 Fig. 129: conidium of probably  
 Fig. 130: conidia of  
 Fig. 131: conidial development in

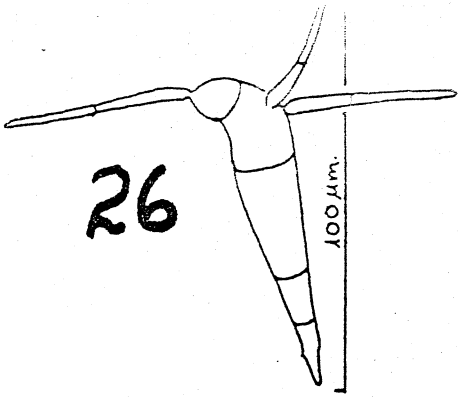
TRICLADIOPSIS FLAGELLIFORMIS (127)  
 ALATOSPOORA ACUMINATA s.s.  
 VARGAMYCES AQUATICA  
 CYLINDROCARPON AQUATICUM  
 DIMORPHOSPOORA FOLIICOLA



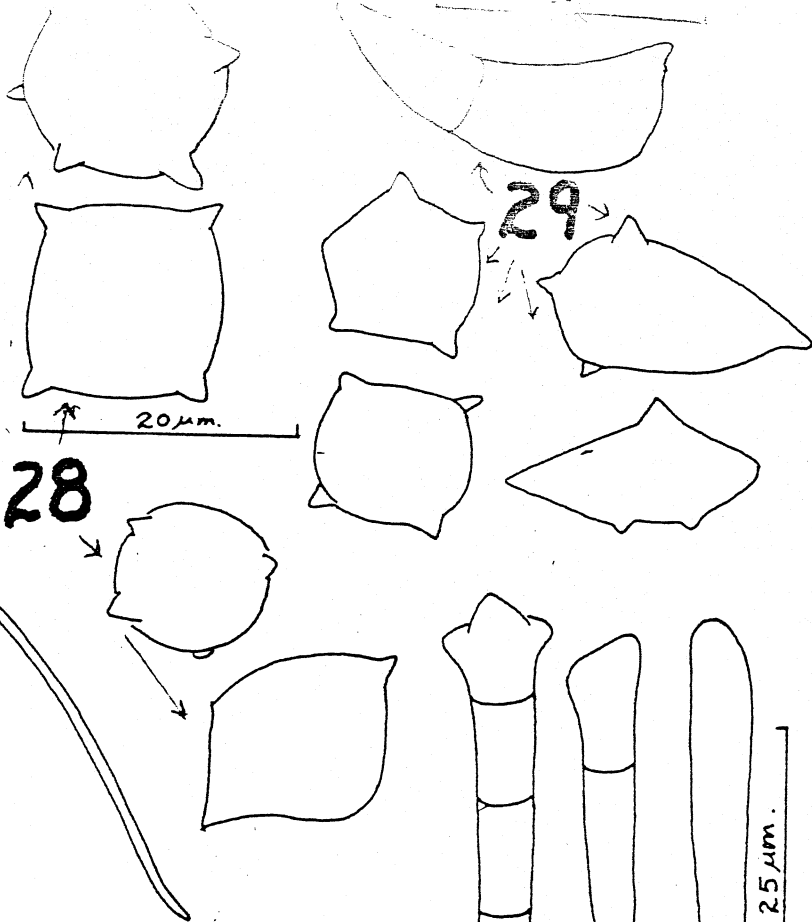




26

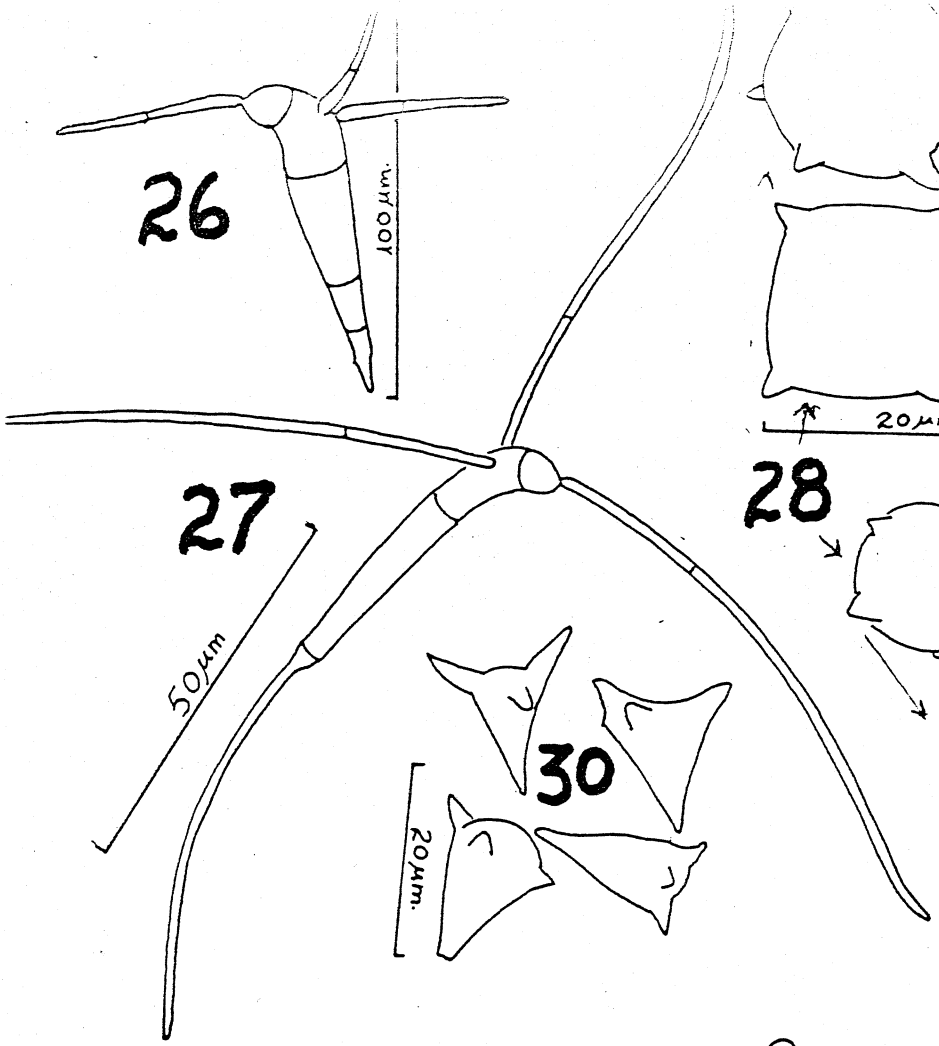


28

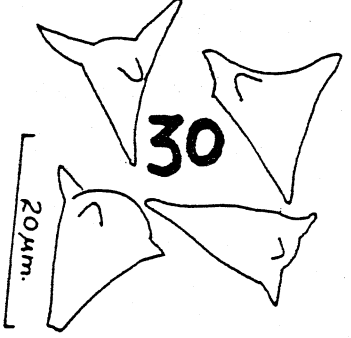


29

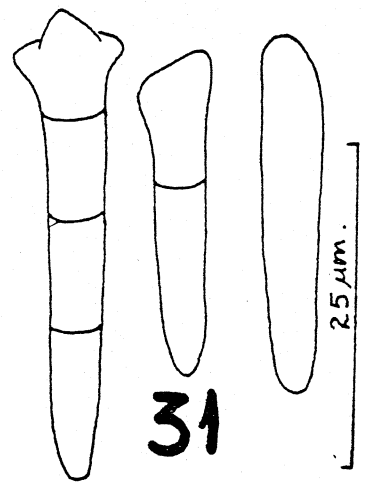
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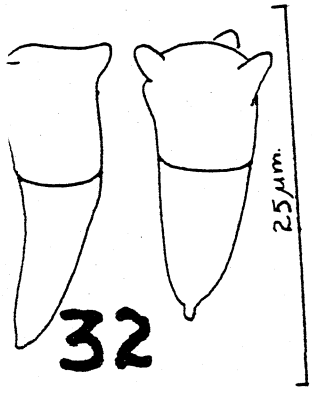
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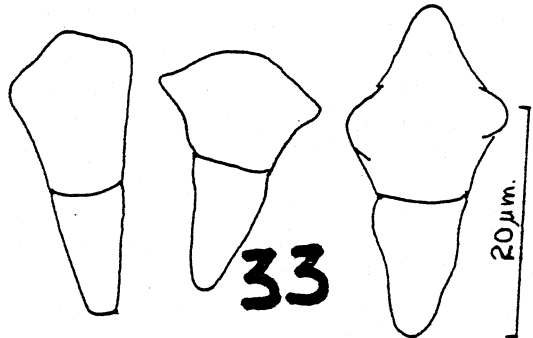
31



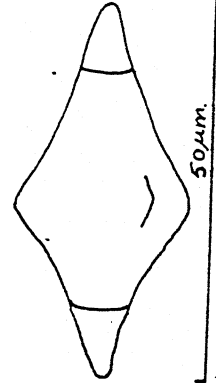
32



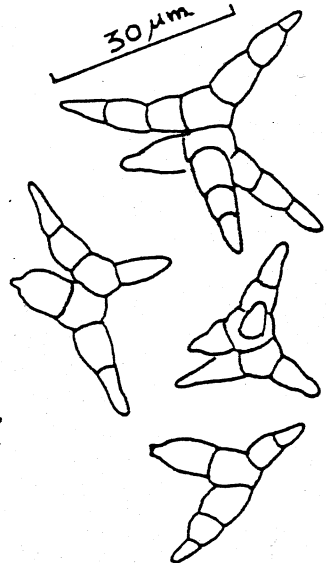
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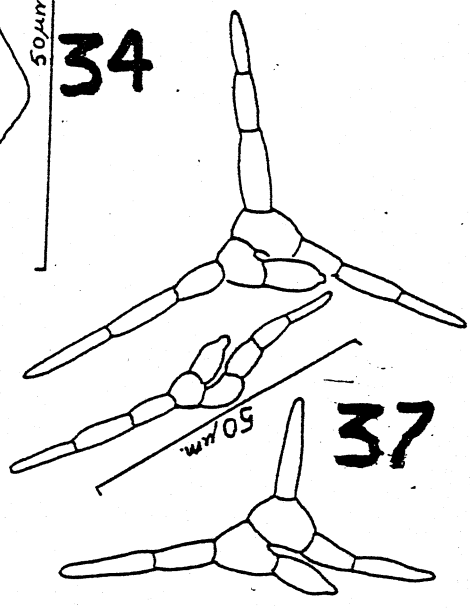
34



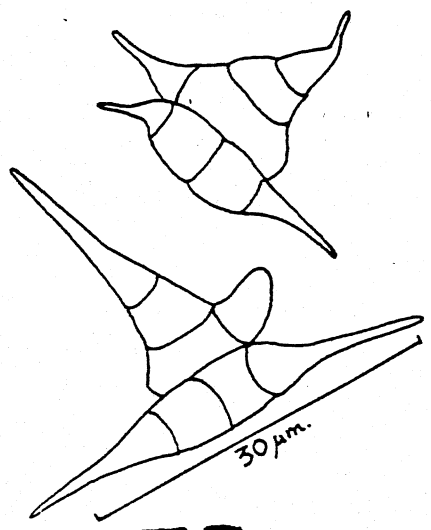
30 μm



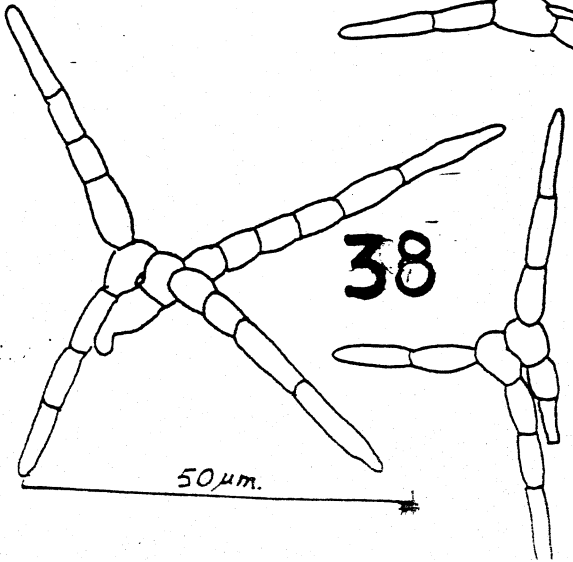
37



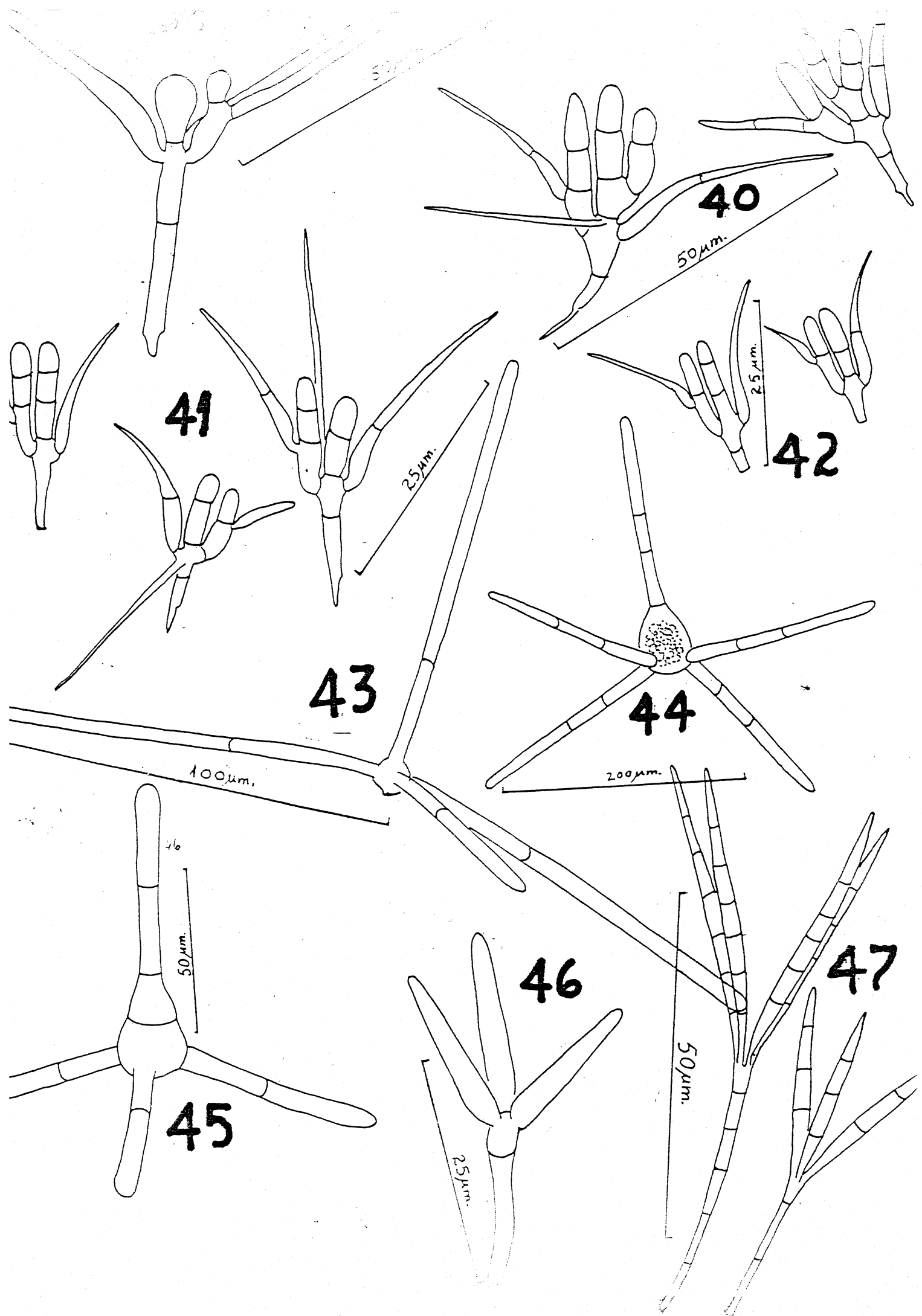
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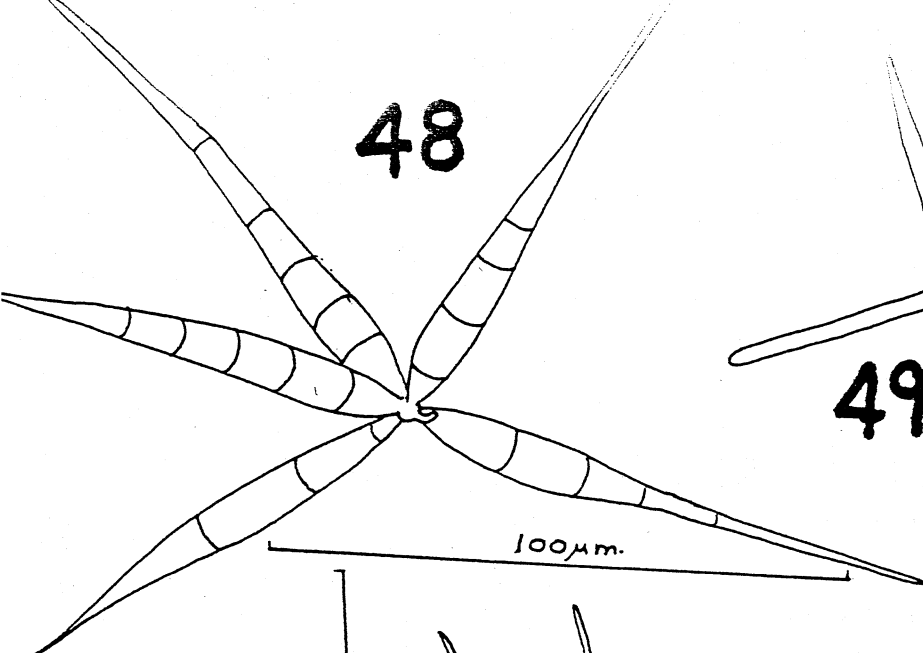
36



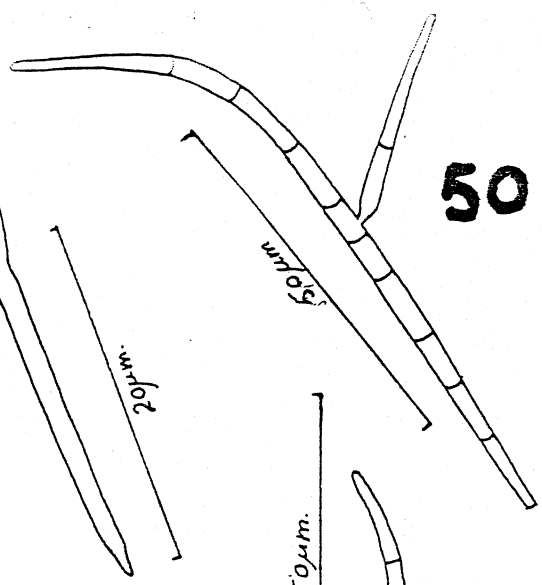
38



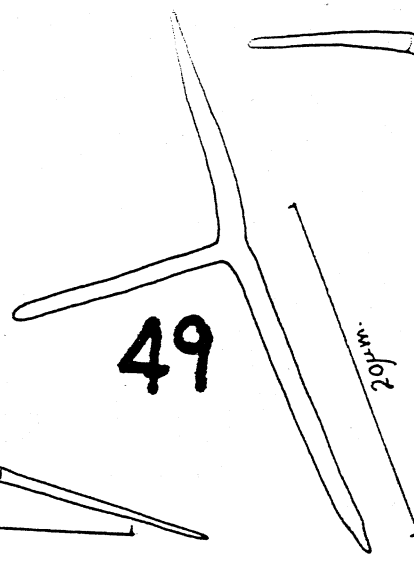
48



50



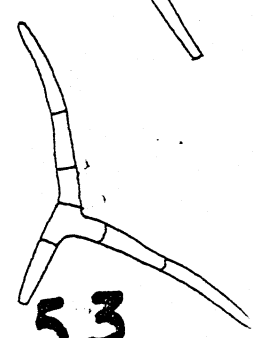
49



100 μm.

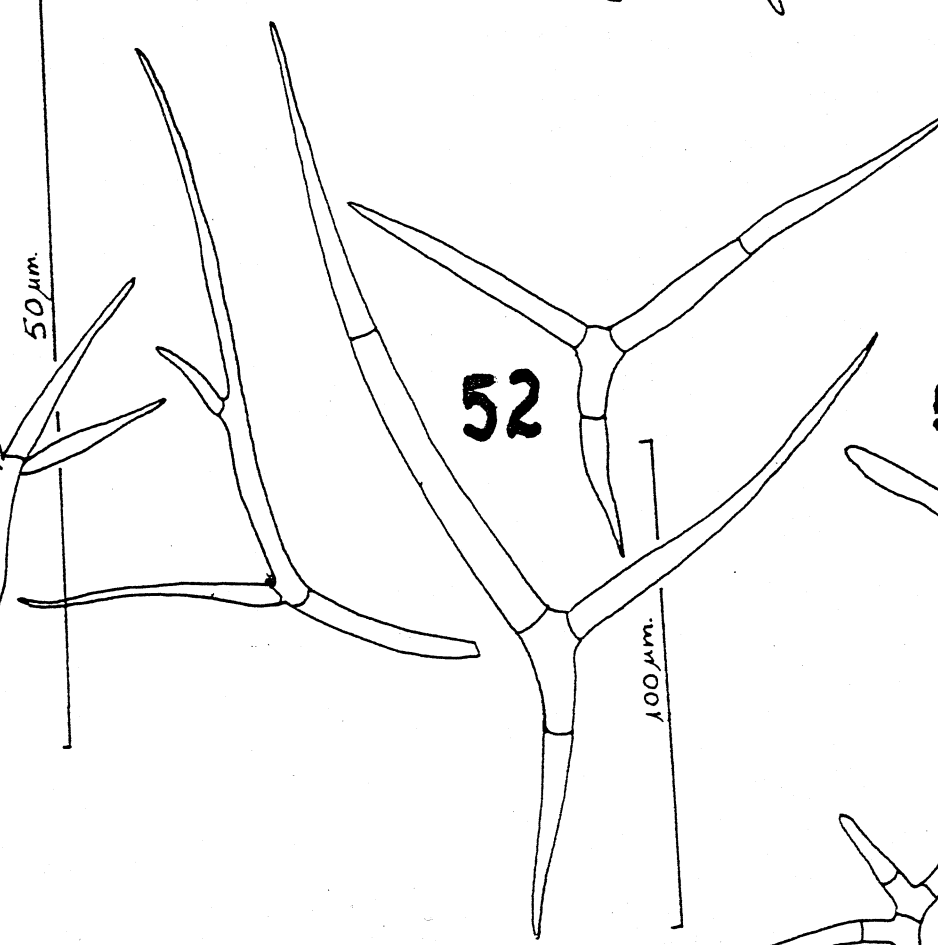
50 μm.

53

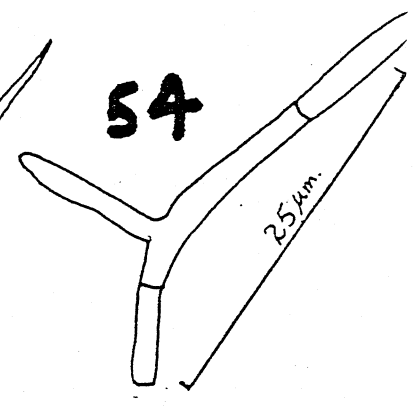


50 μm.

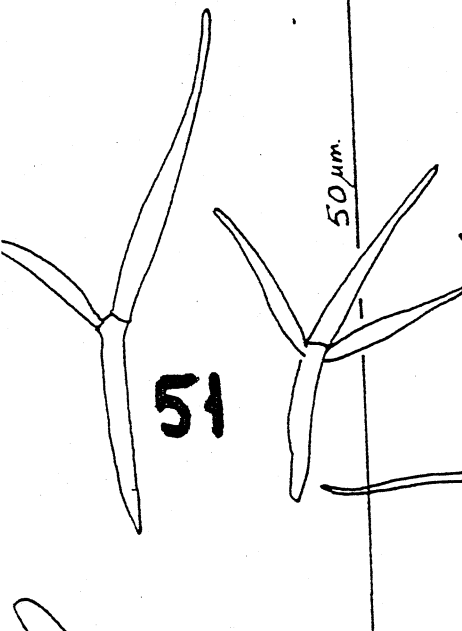
52



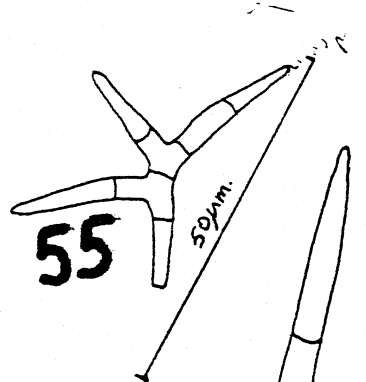
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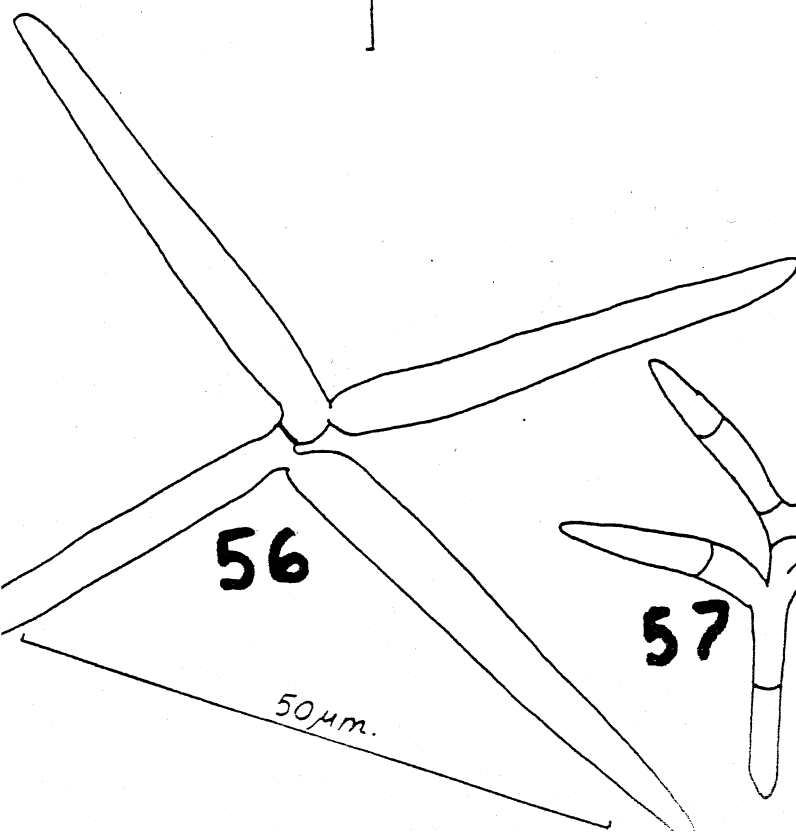
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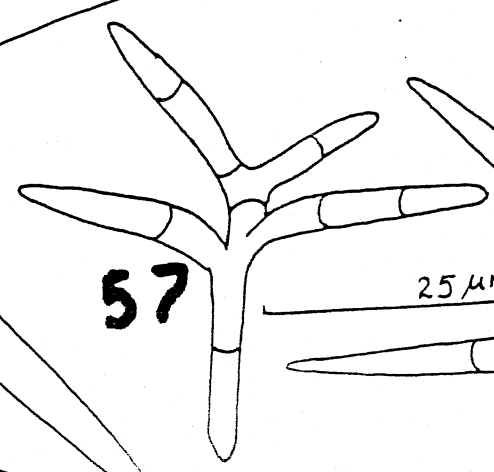
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56



57

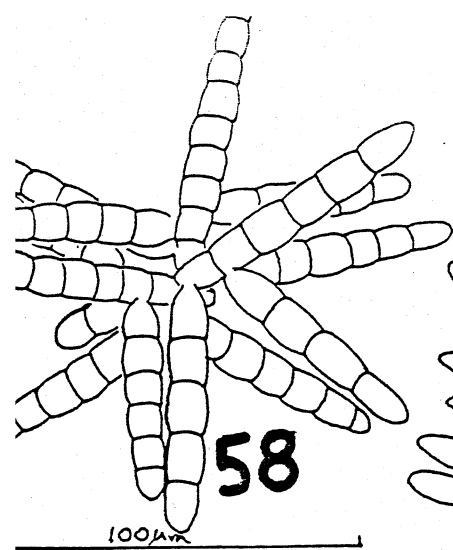


57

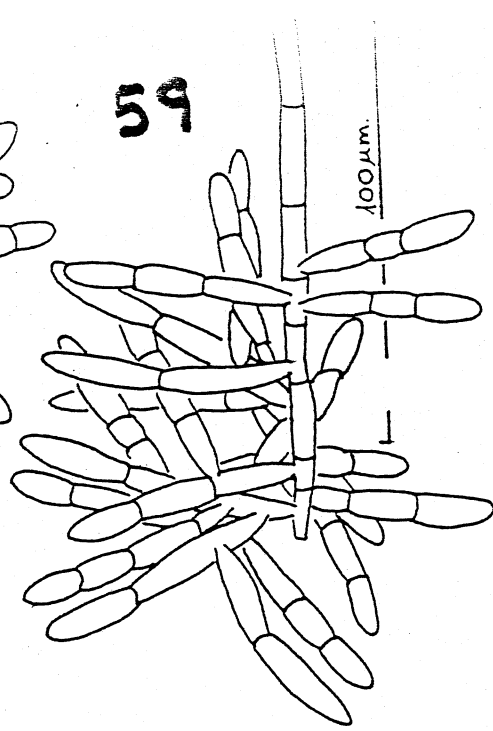
25 μm.

50 μm.

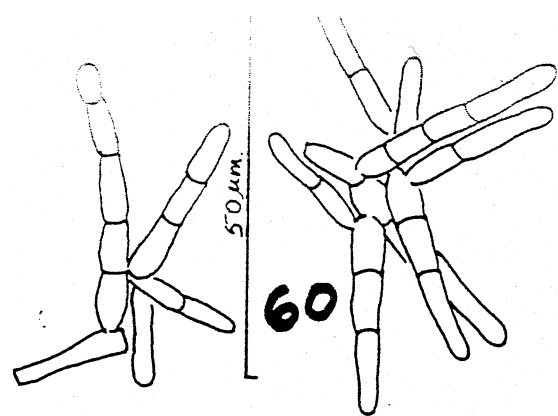




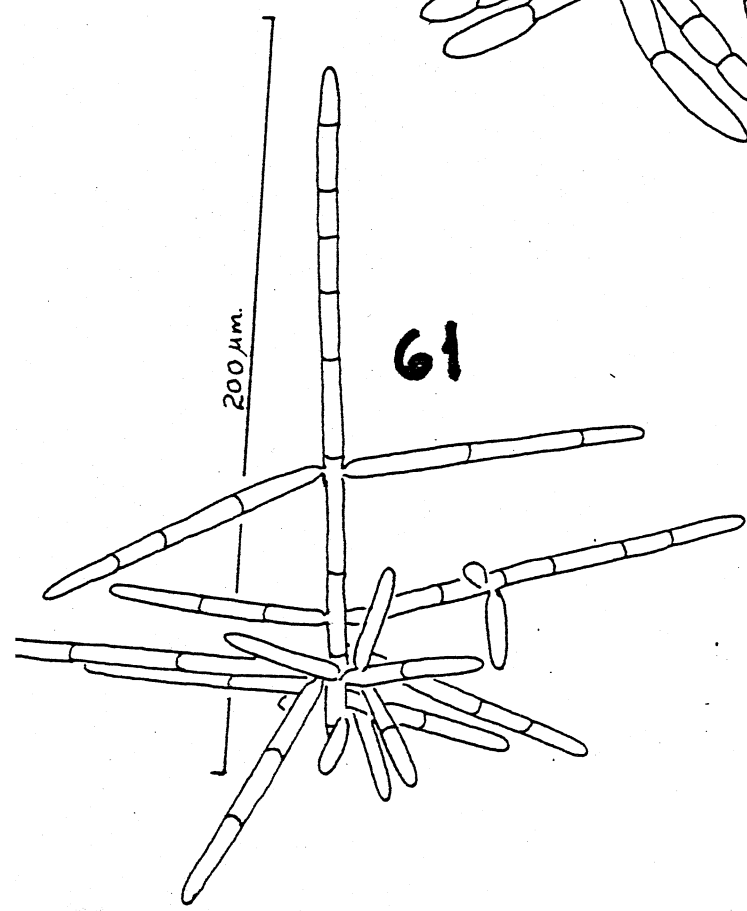
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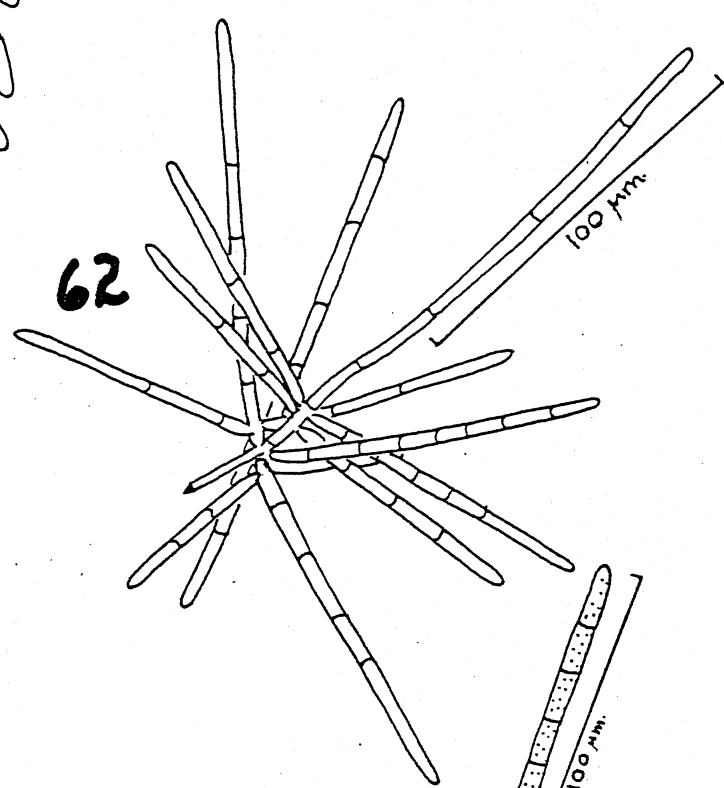
59



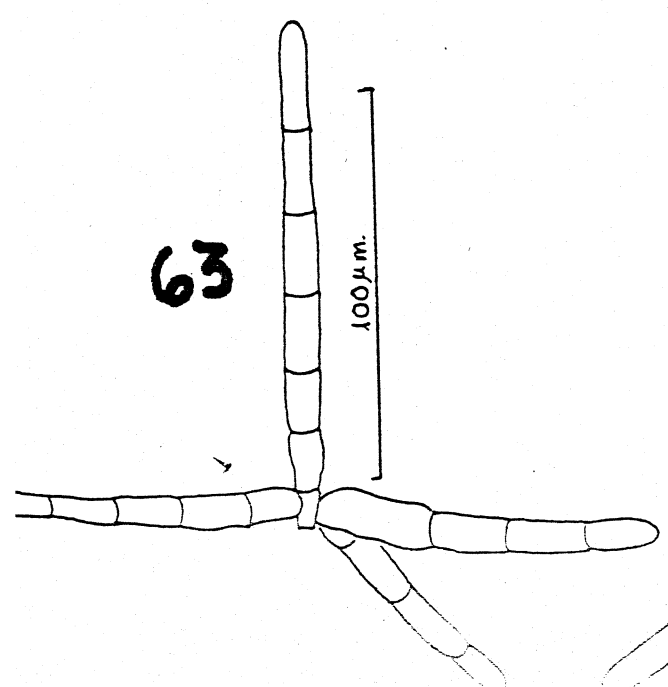
60



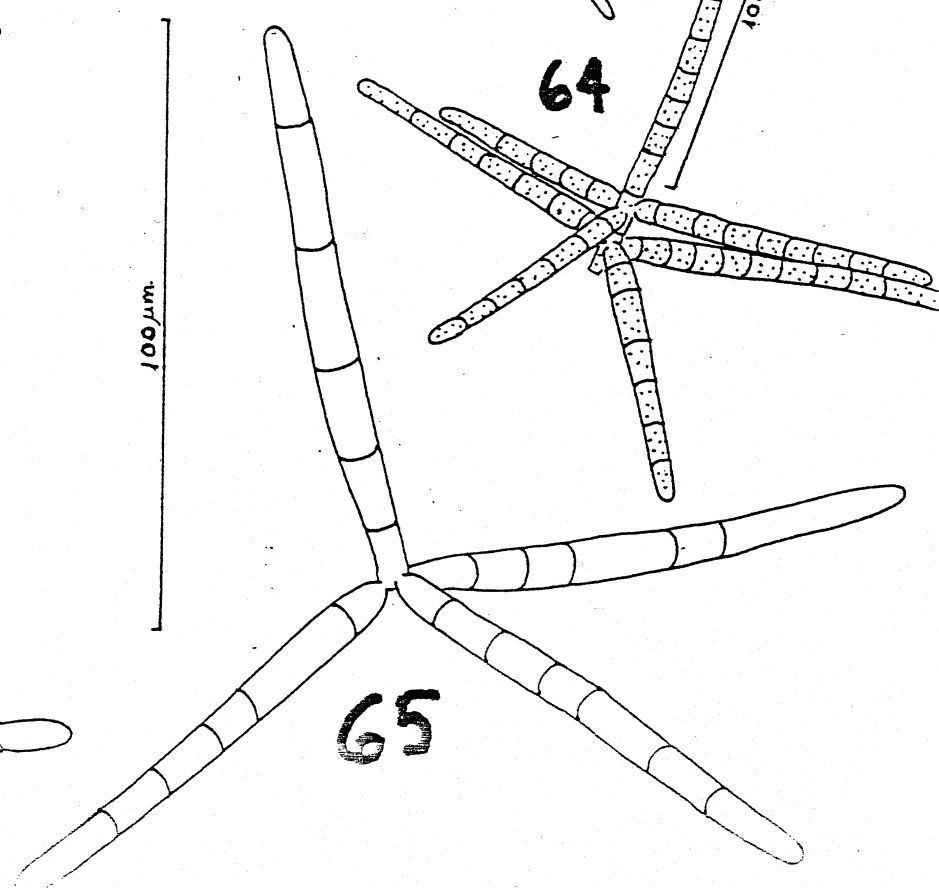
61



62



63



64

65

66

50 μm

67

50 μm

68

100 μm

69

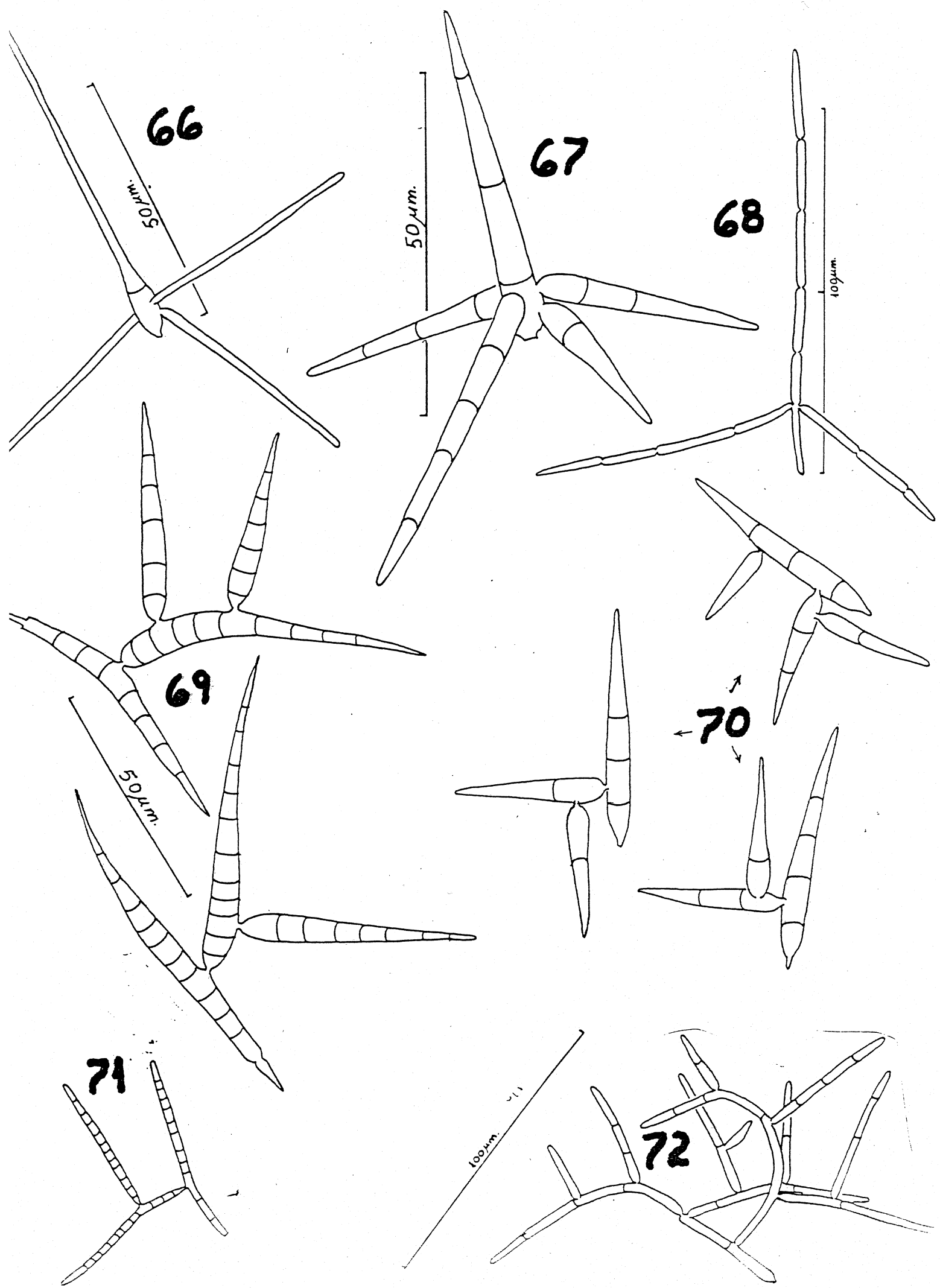
50 μm

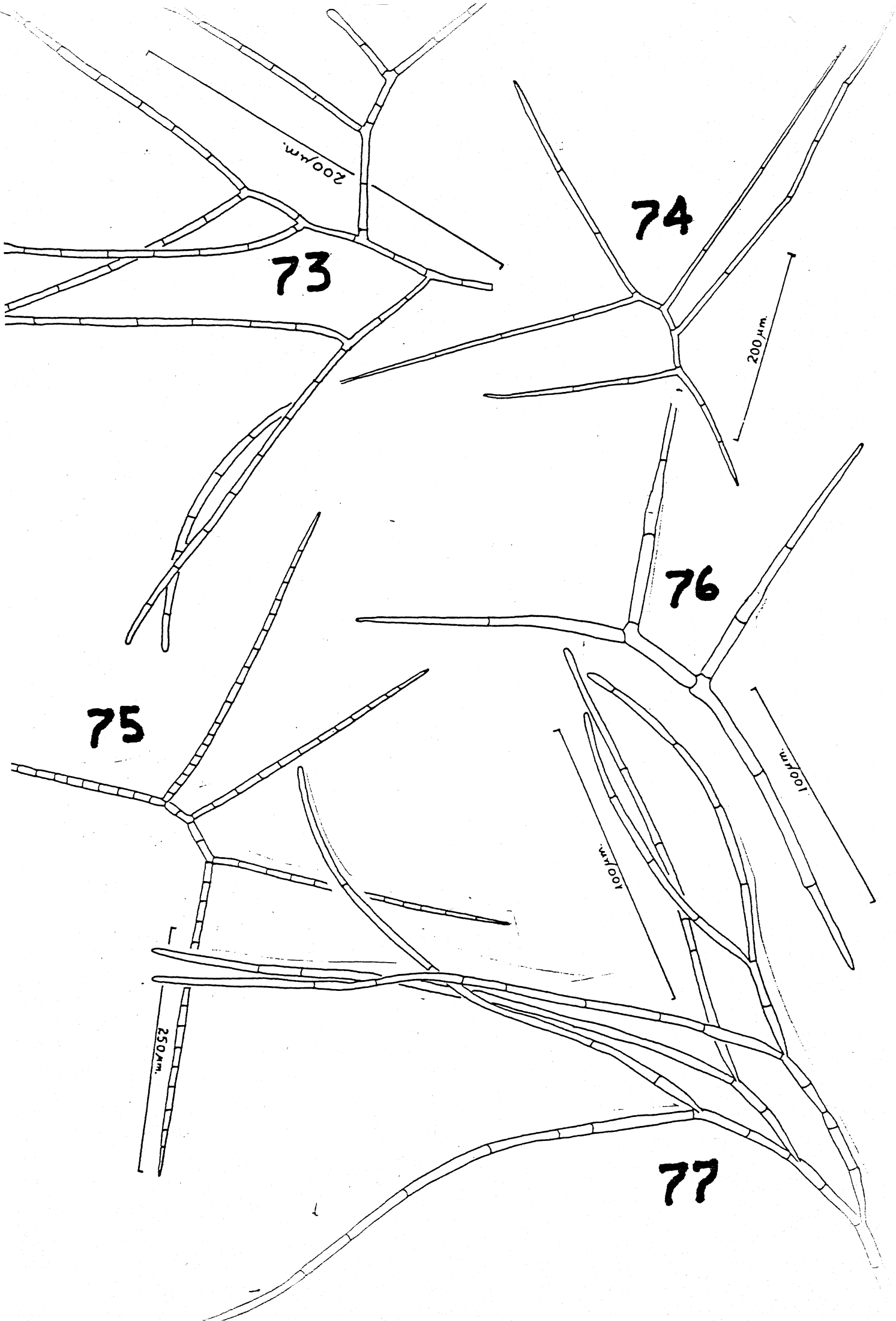
70

71

72

100 μm





73

74

76

75

77

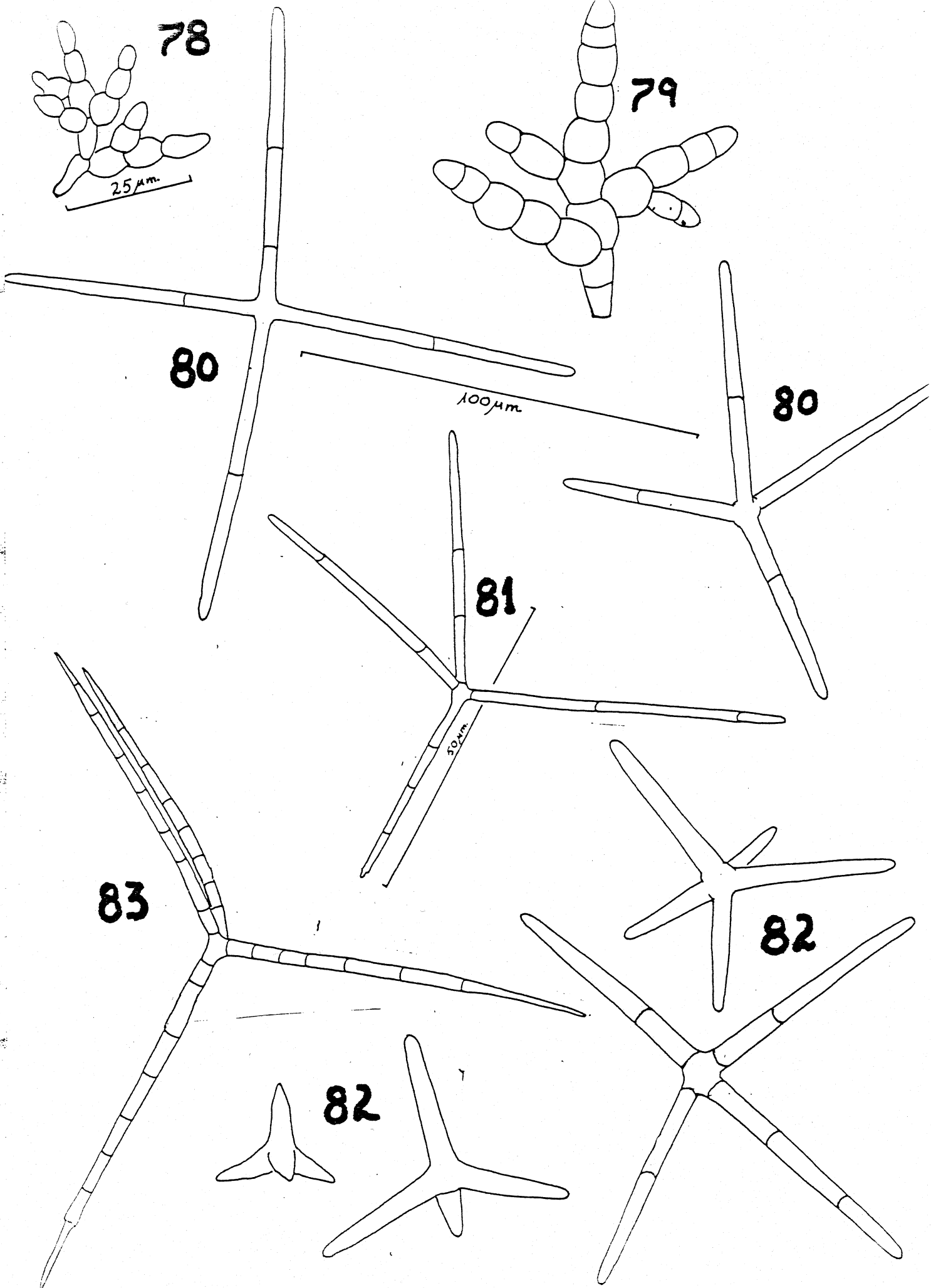
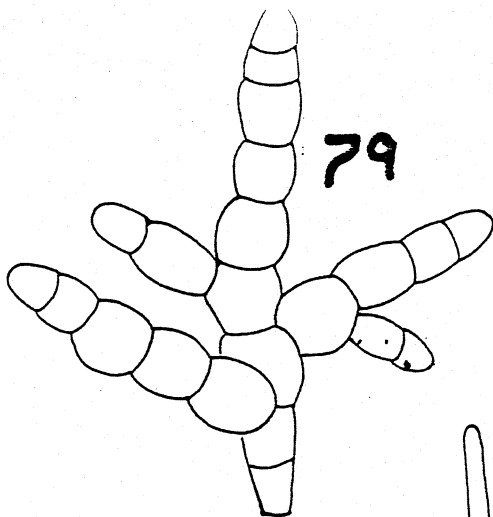
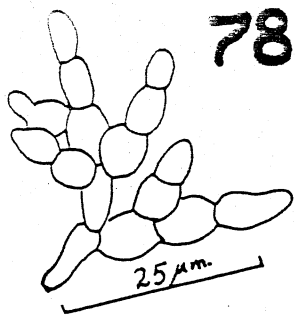
200 μm

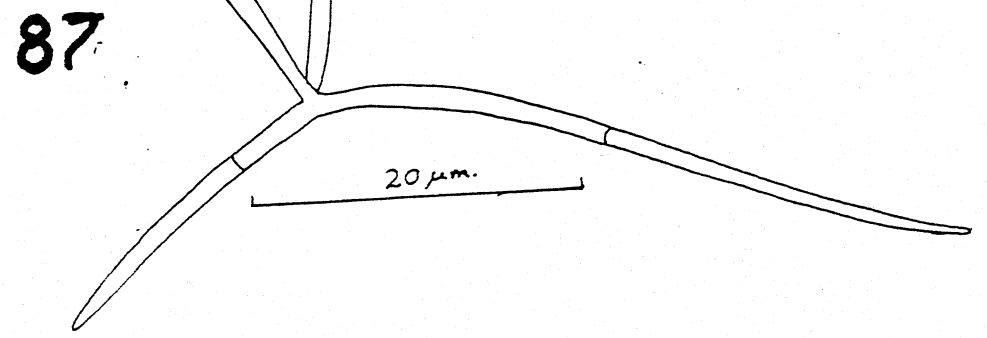
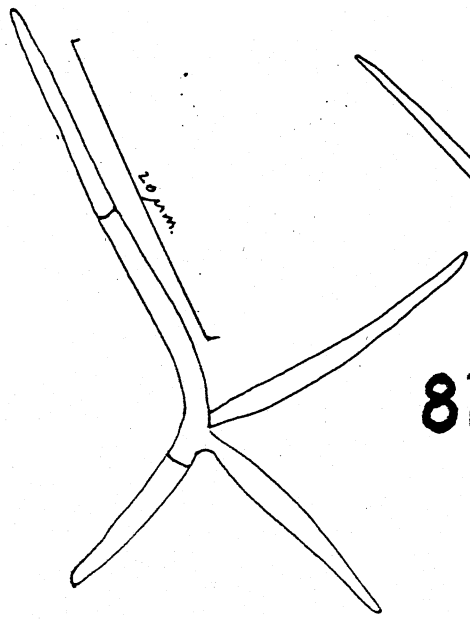
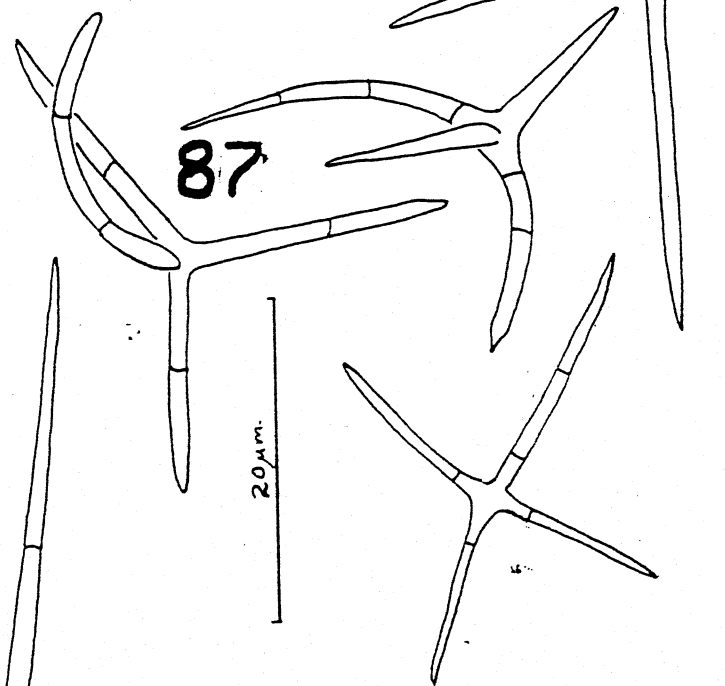
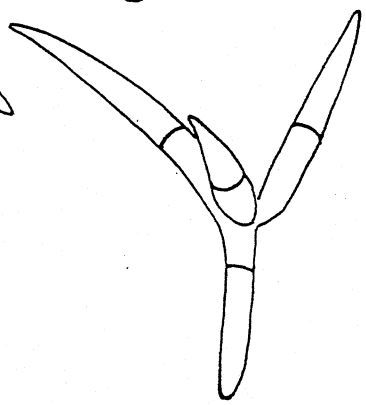
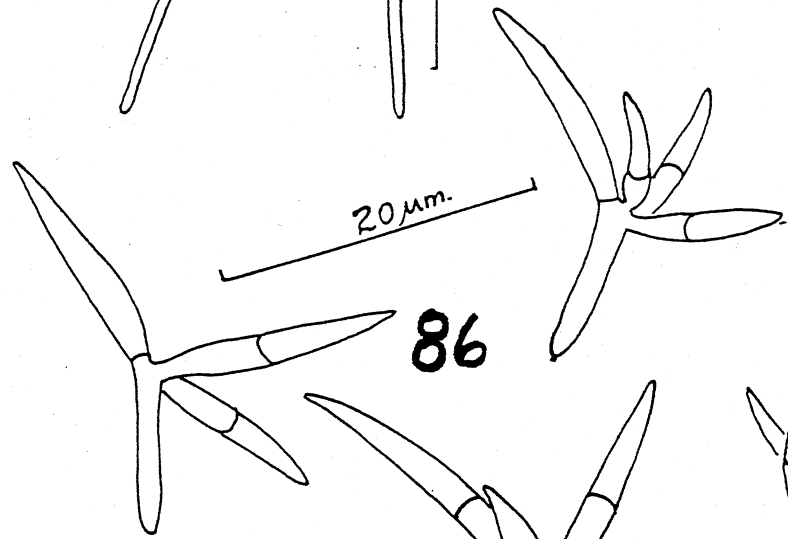
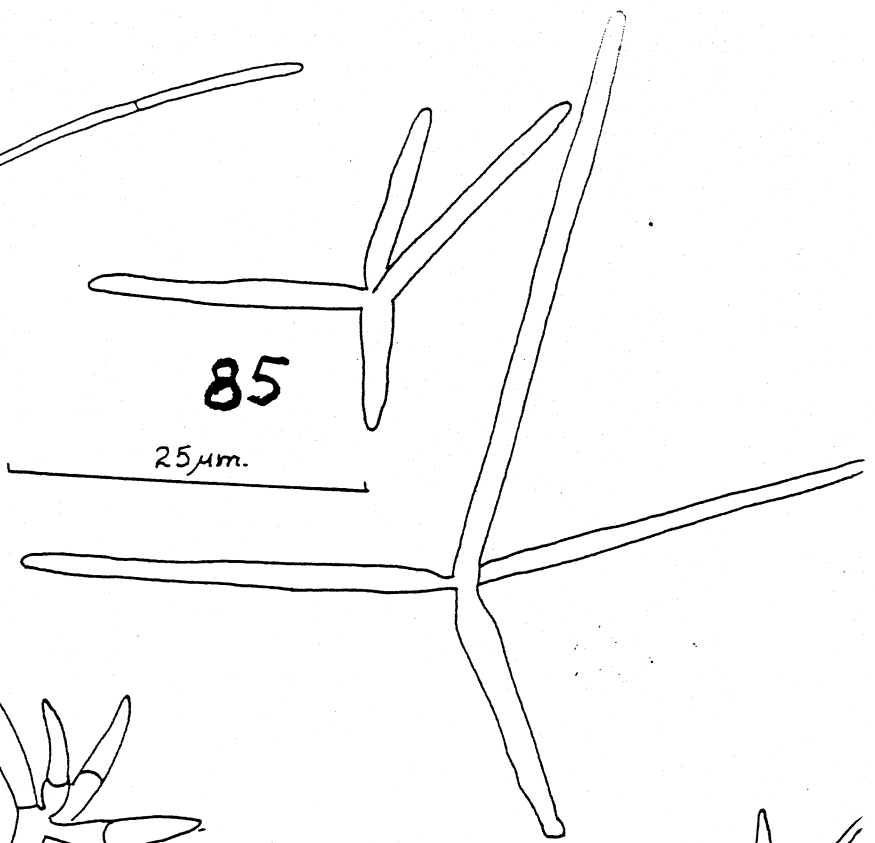
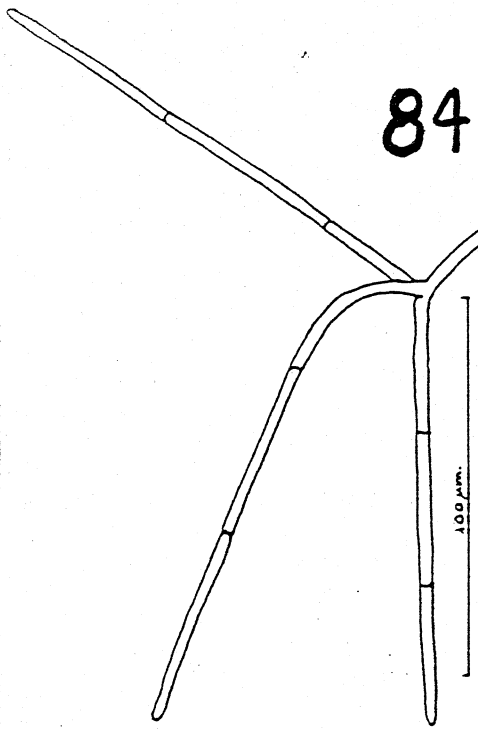
200 μm

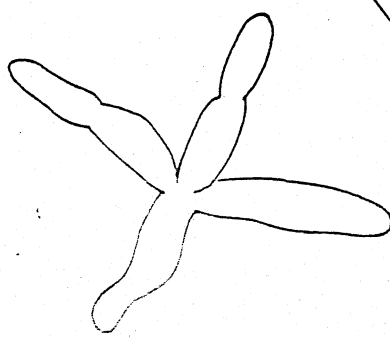
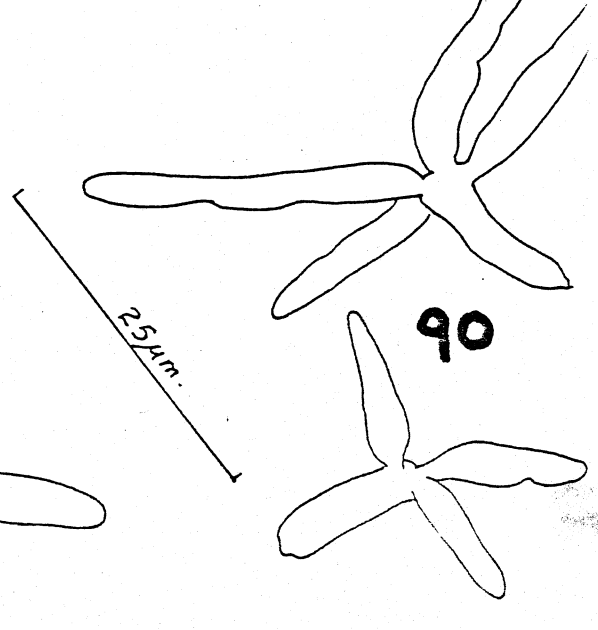
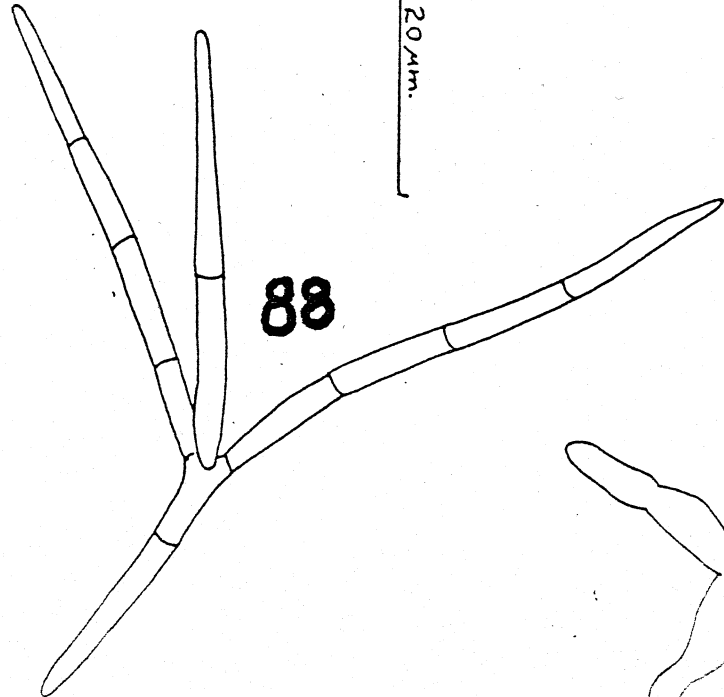
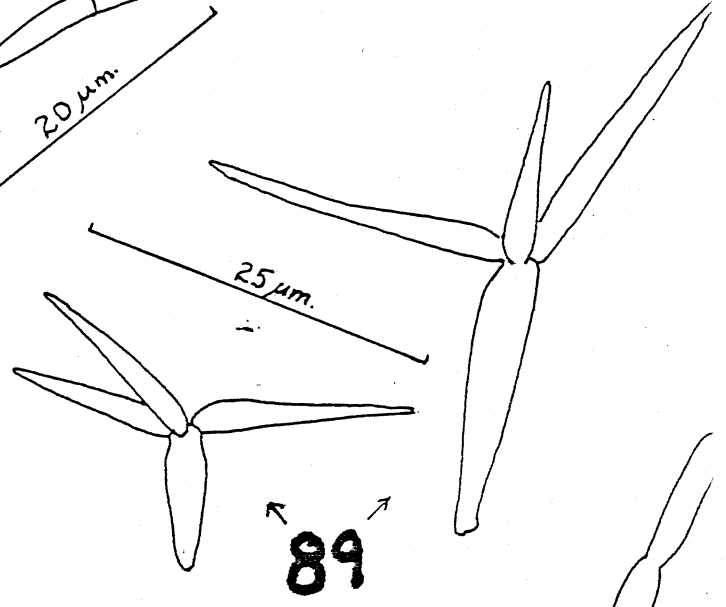
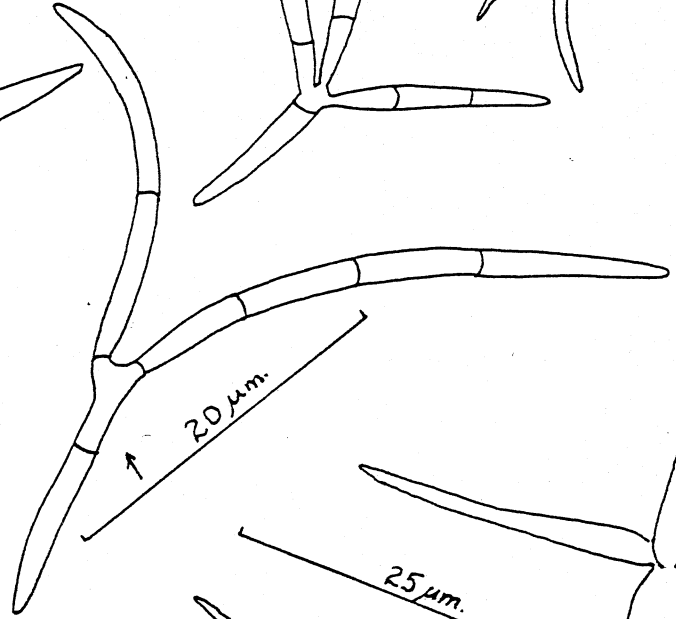
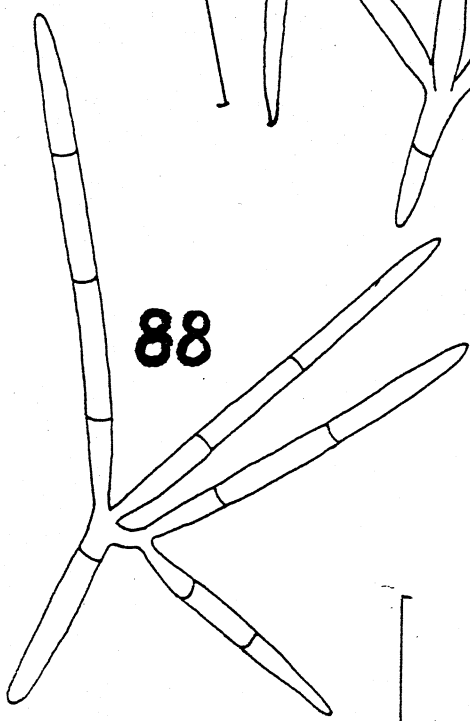
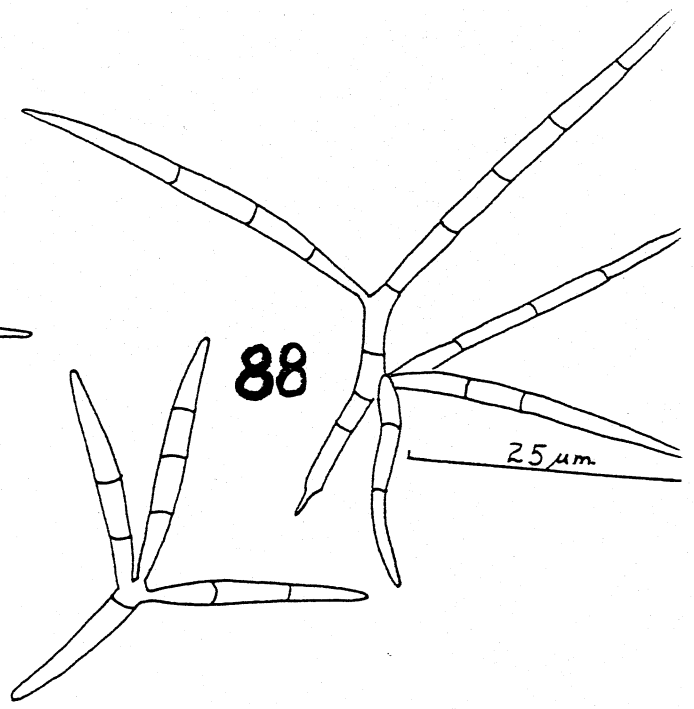
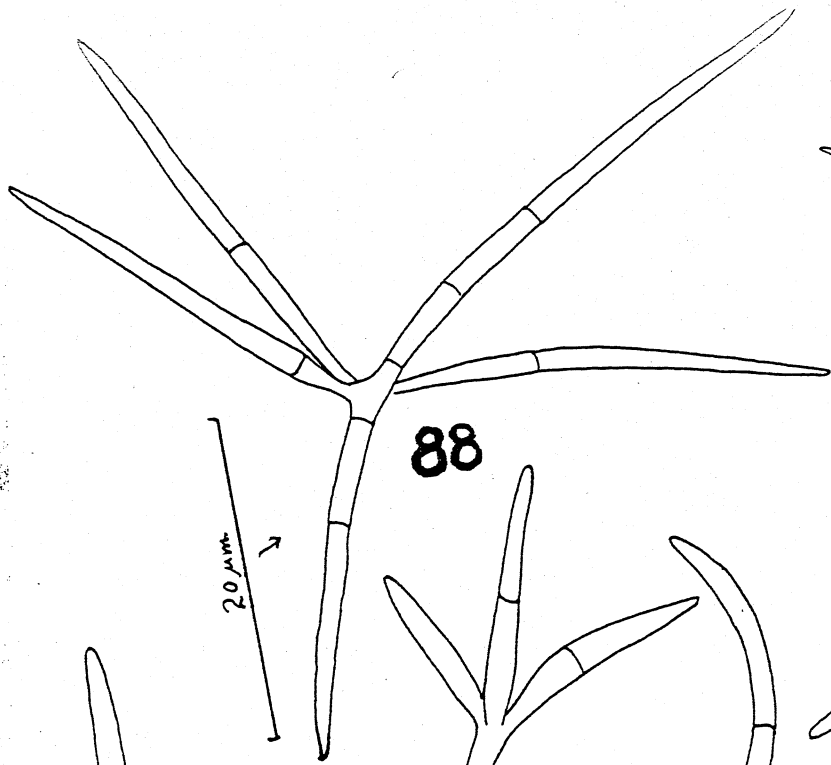
100 μm

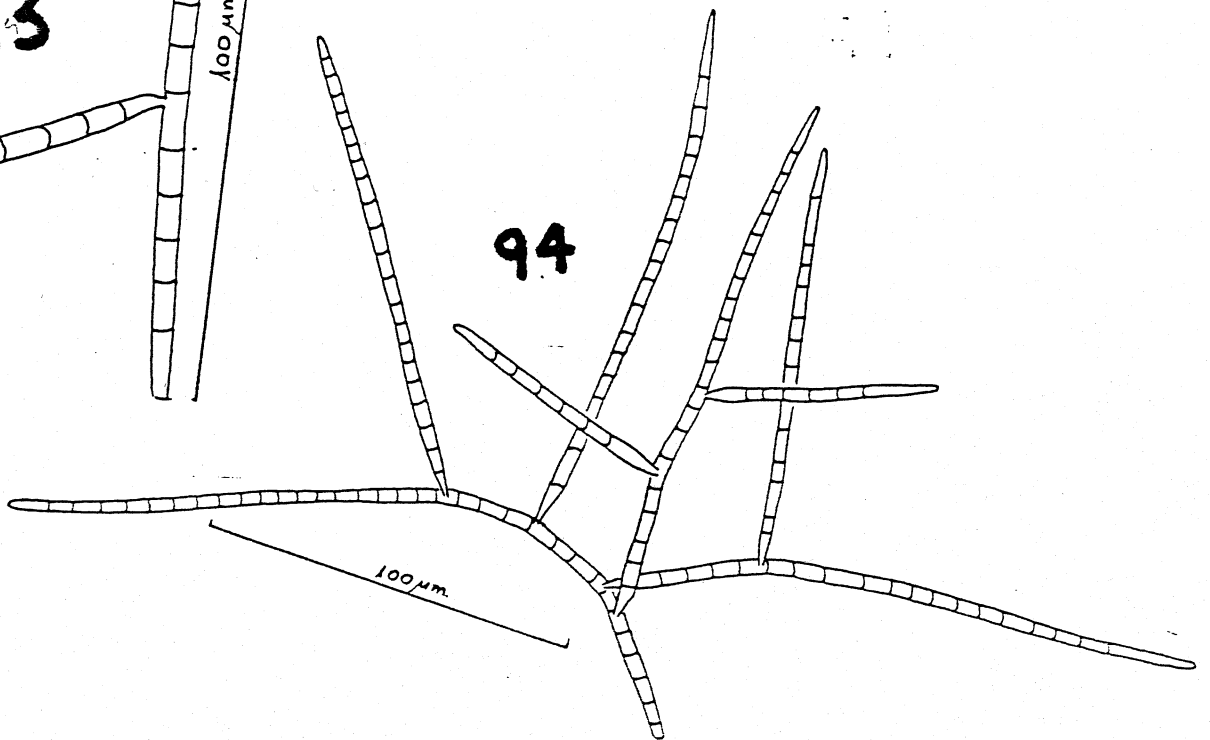
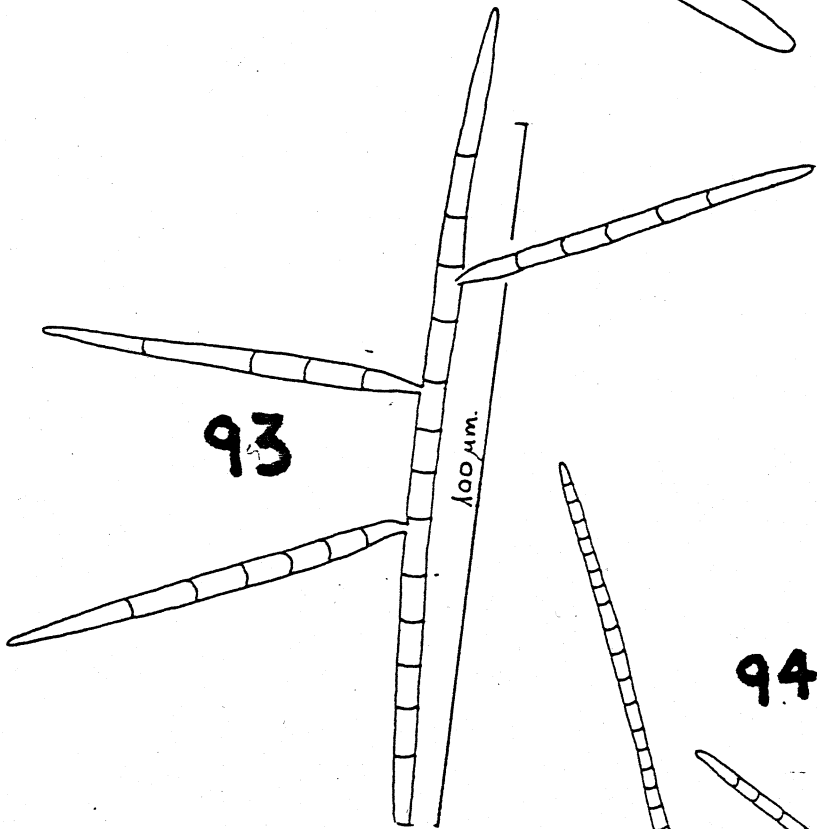
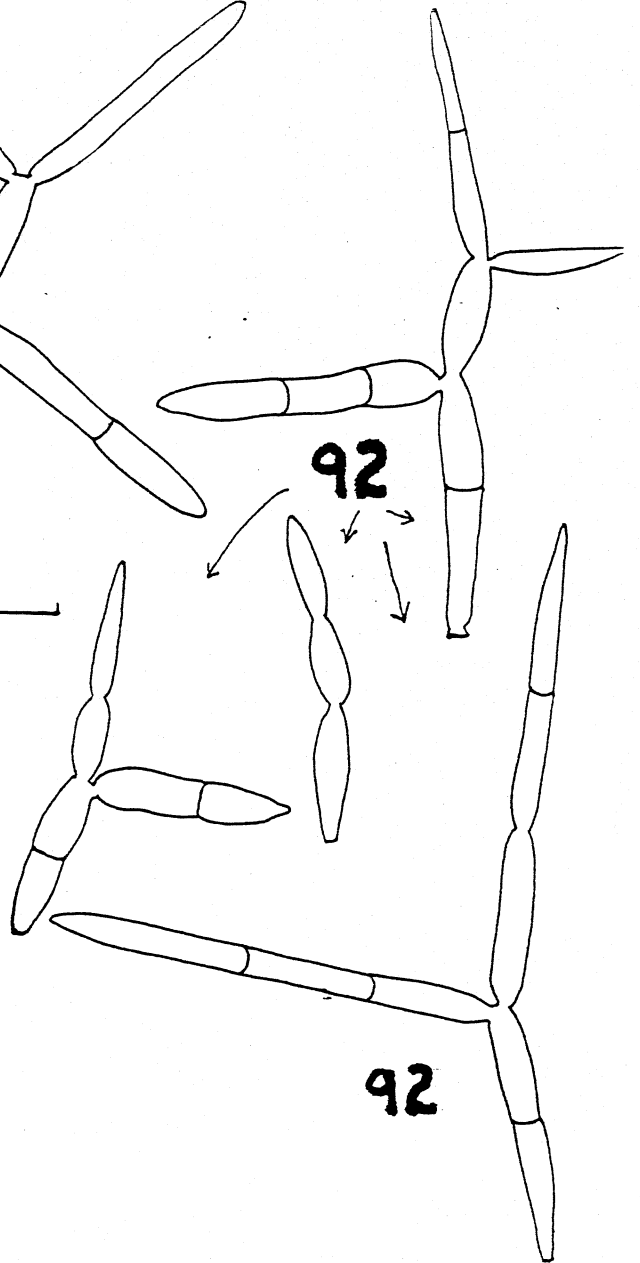
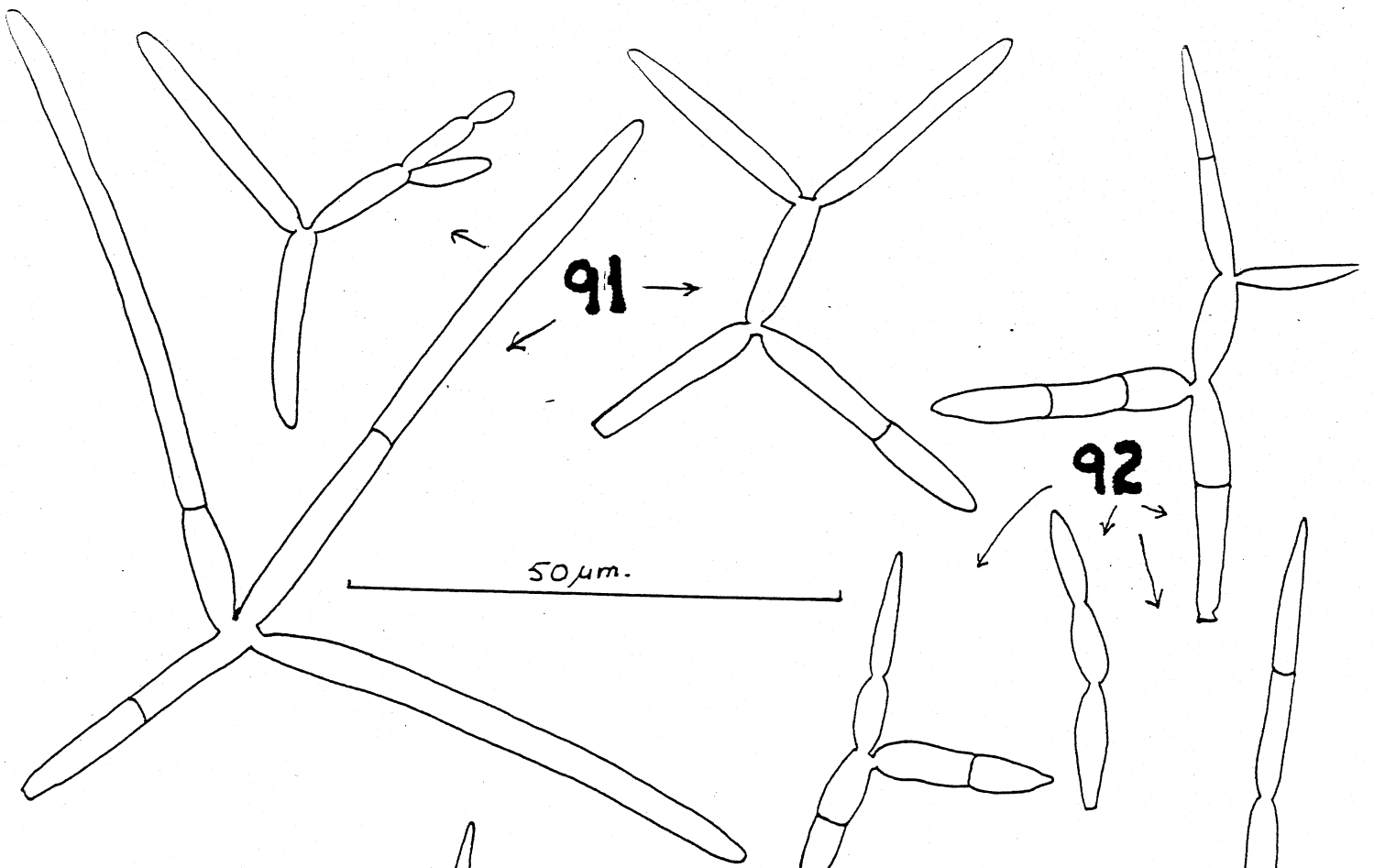
100 μm

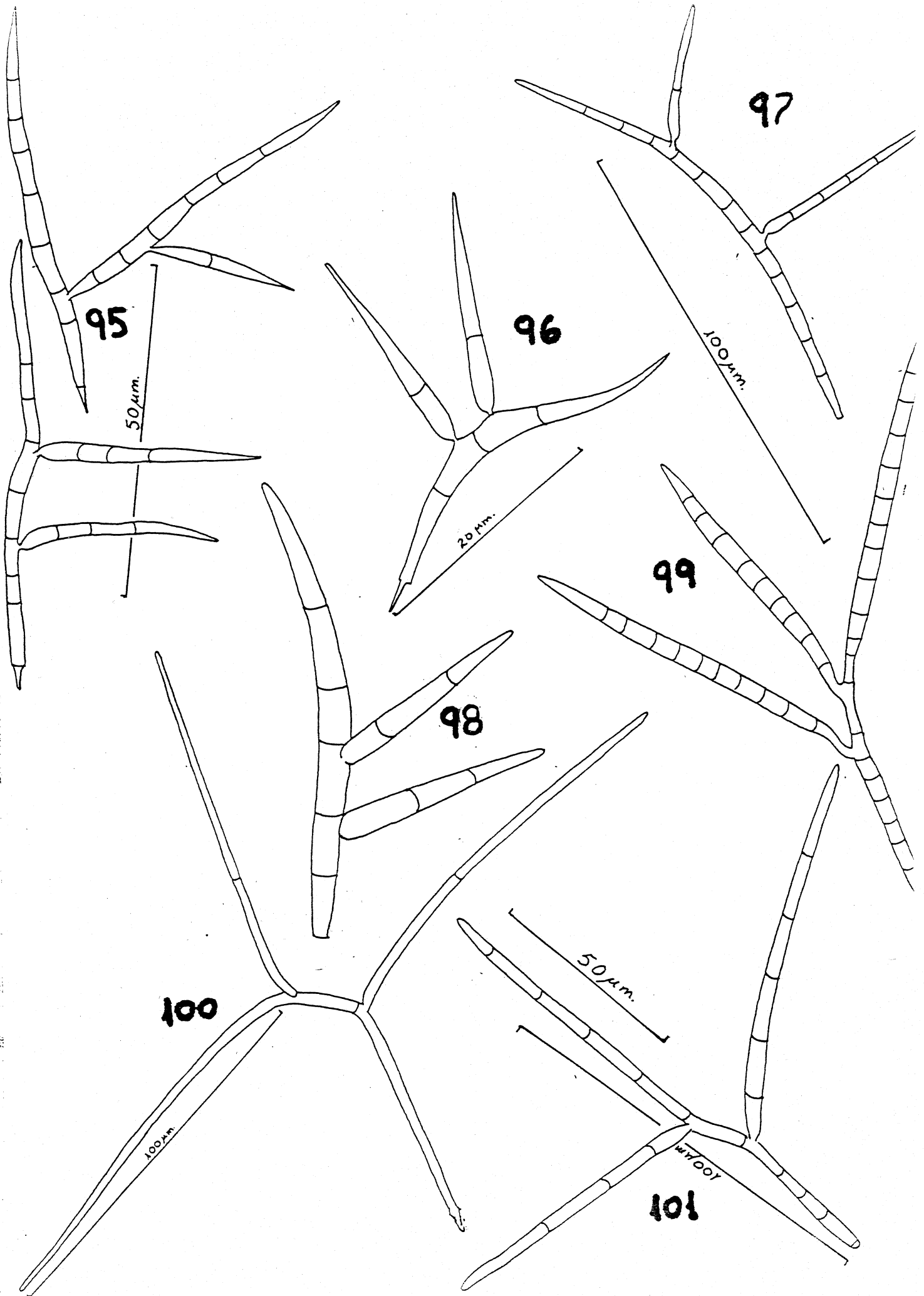
250 μm



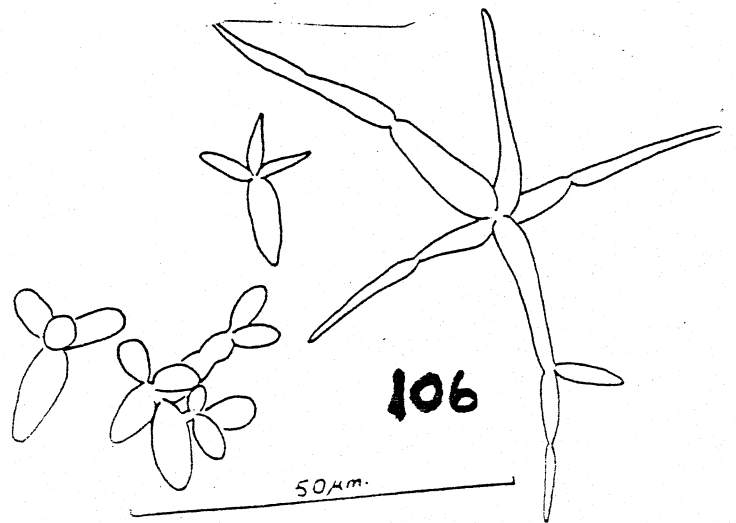
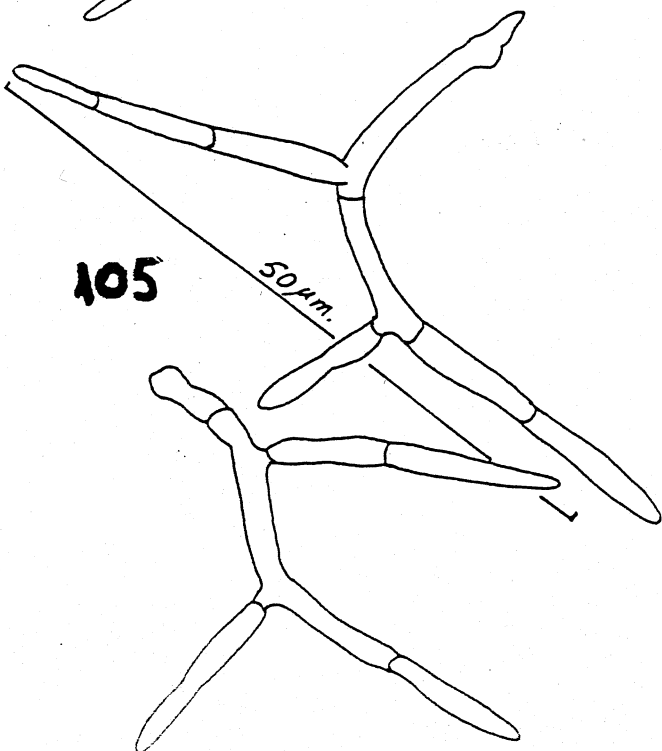
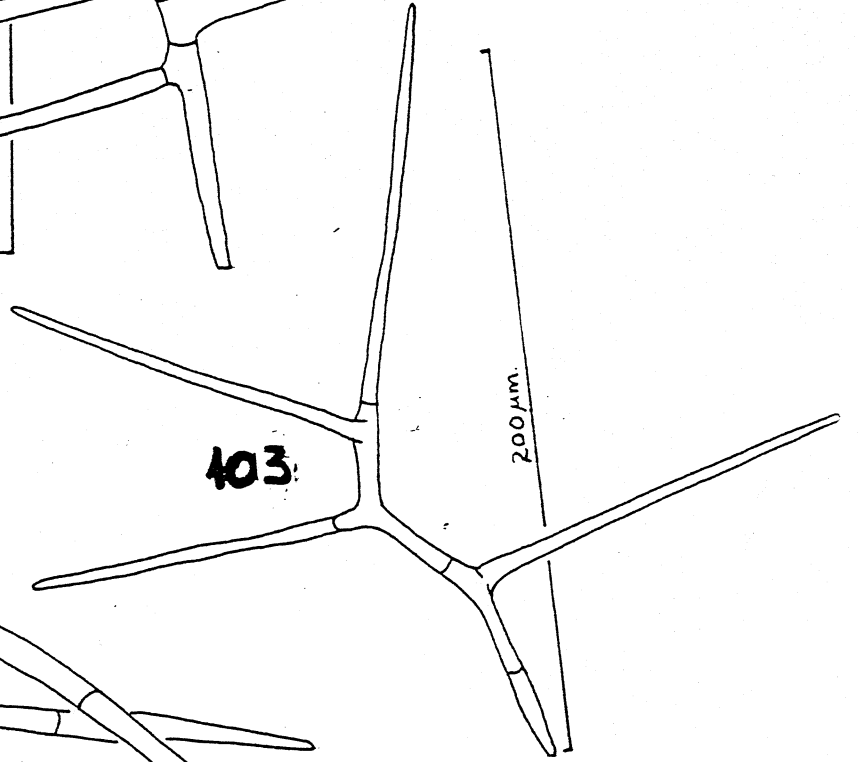
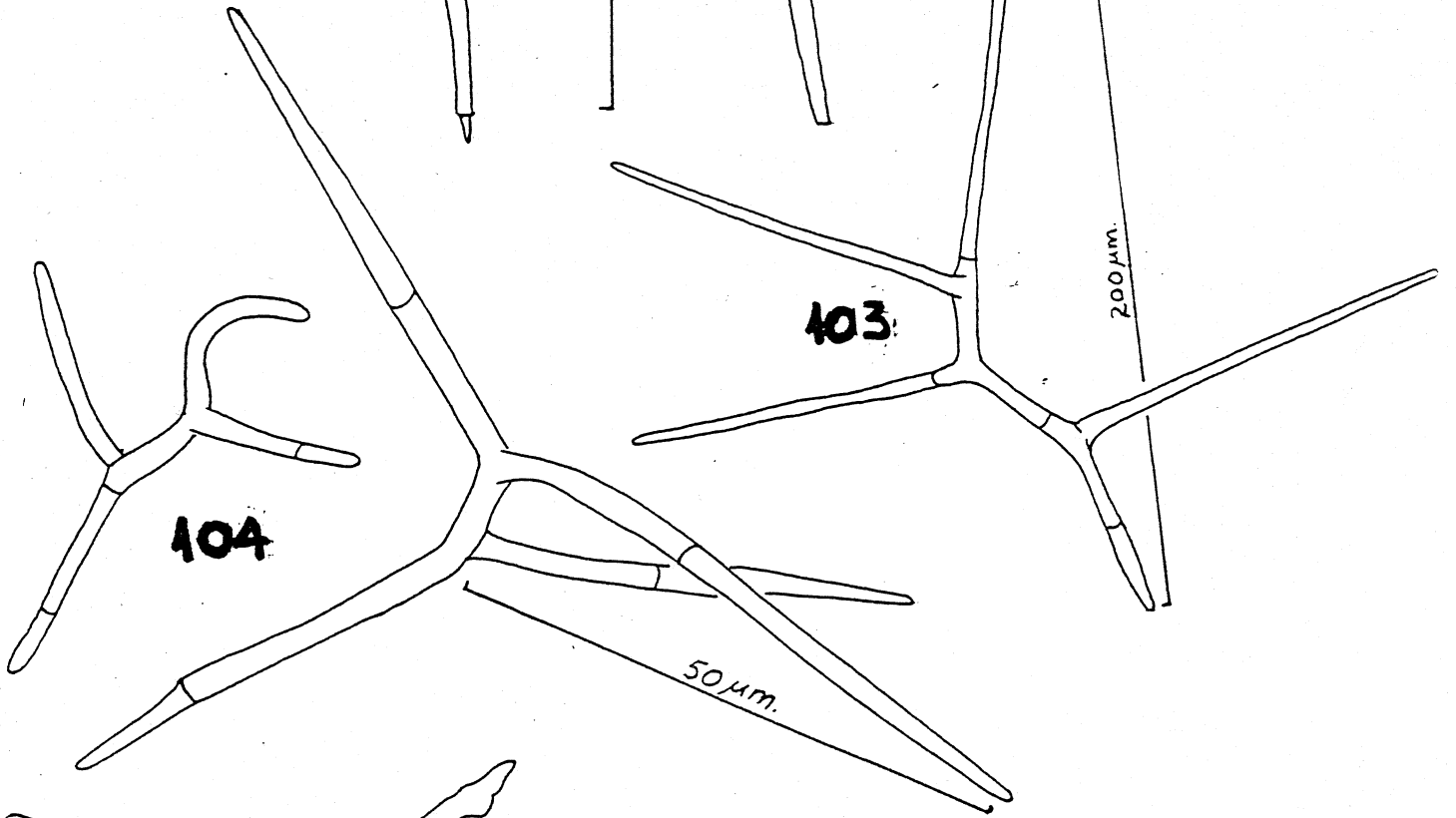
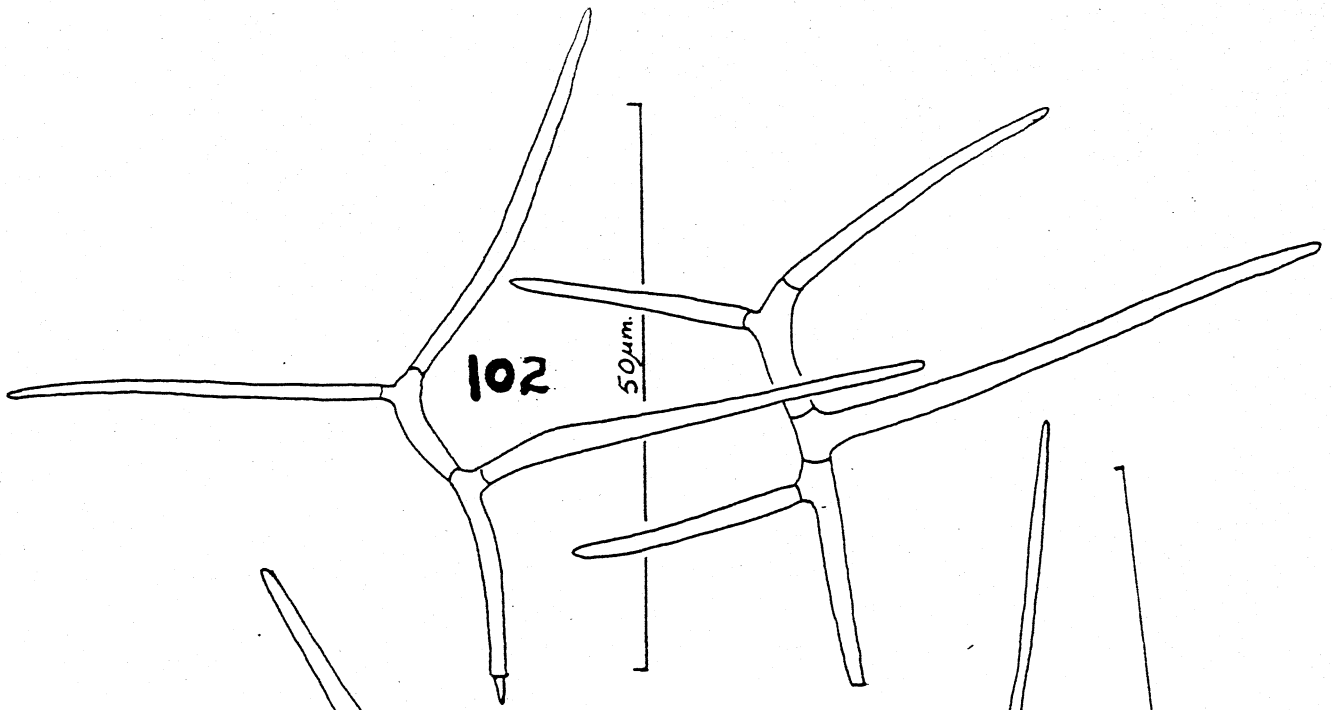




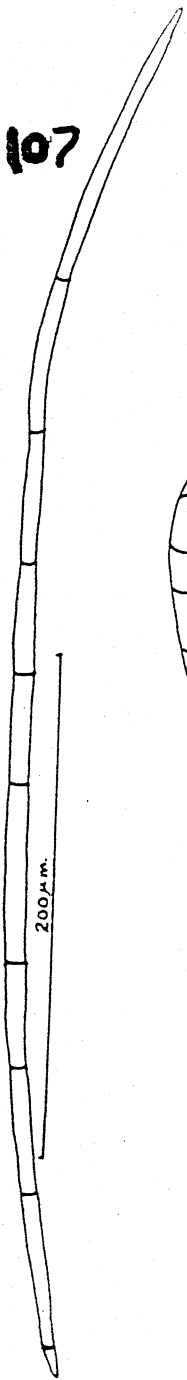




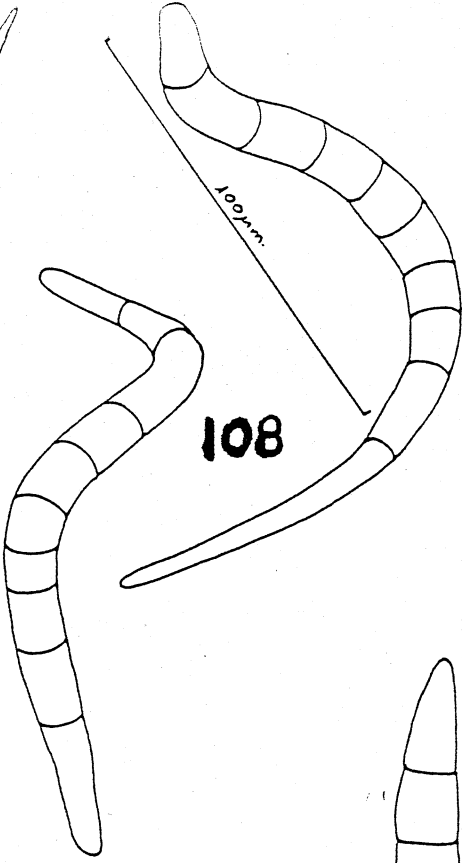




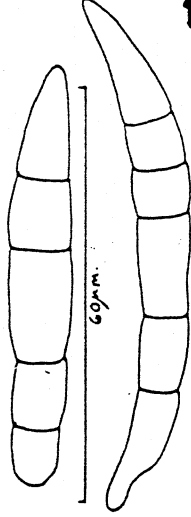
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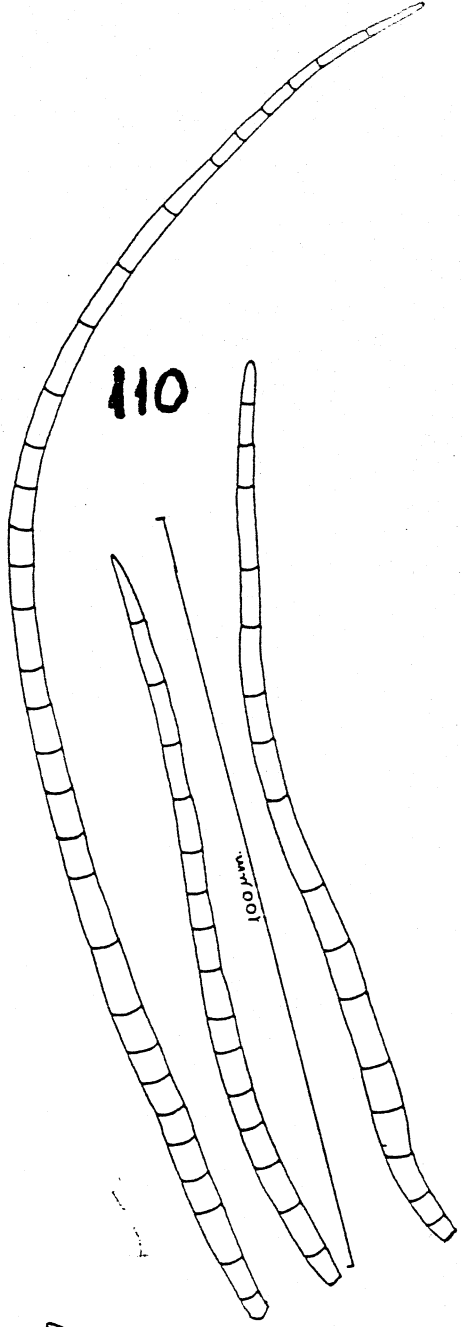
108



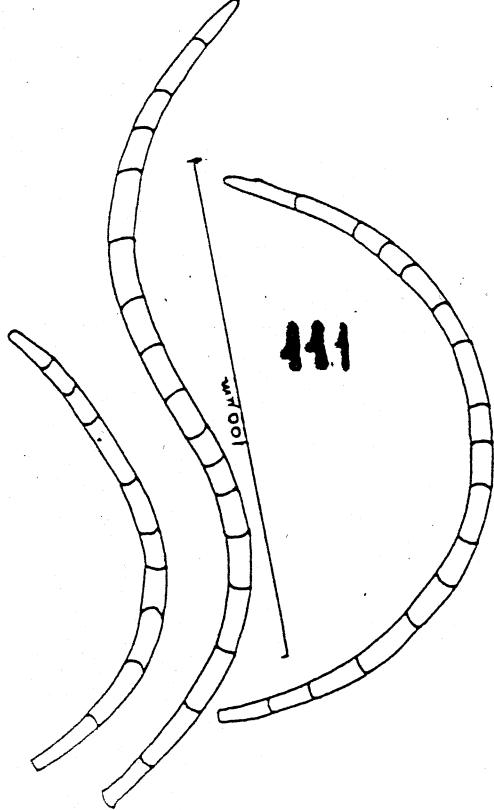
109



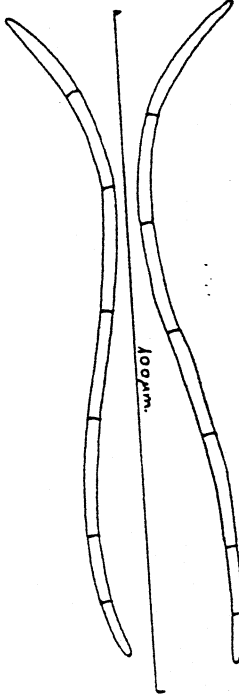
110



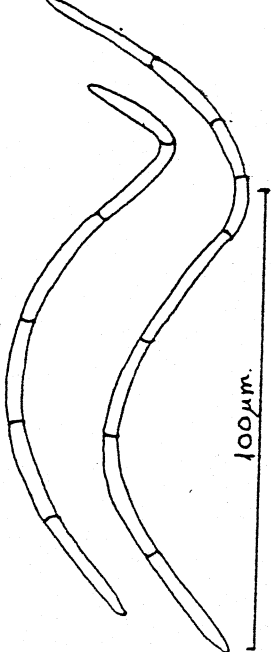
111

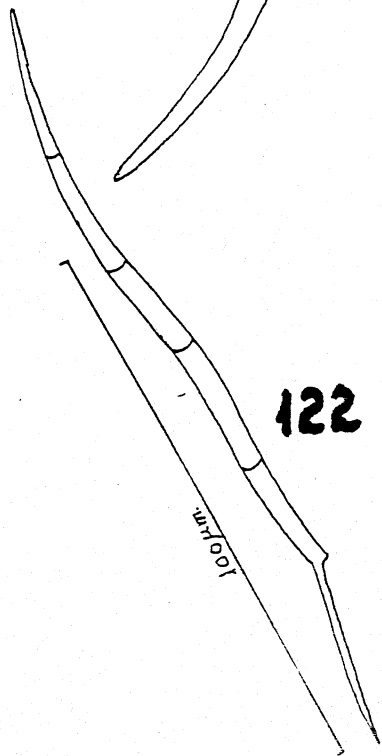
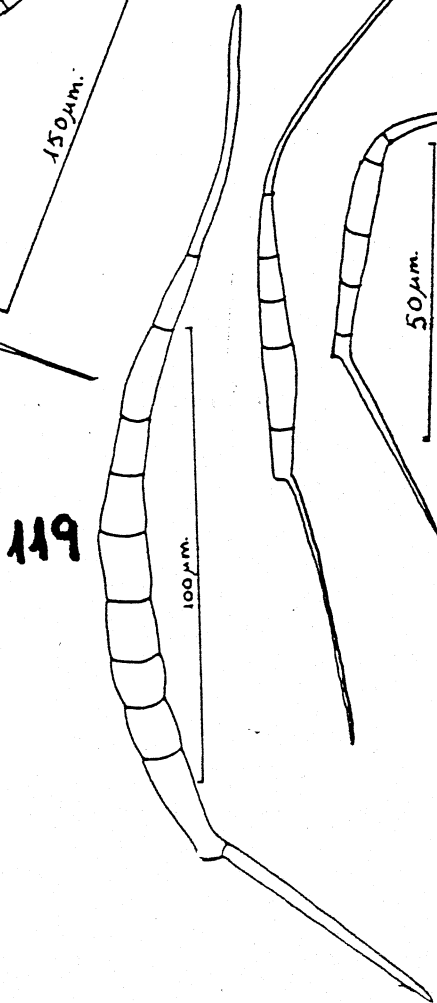
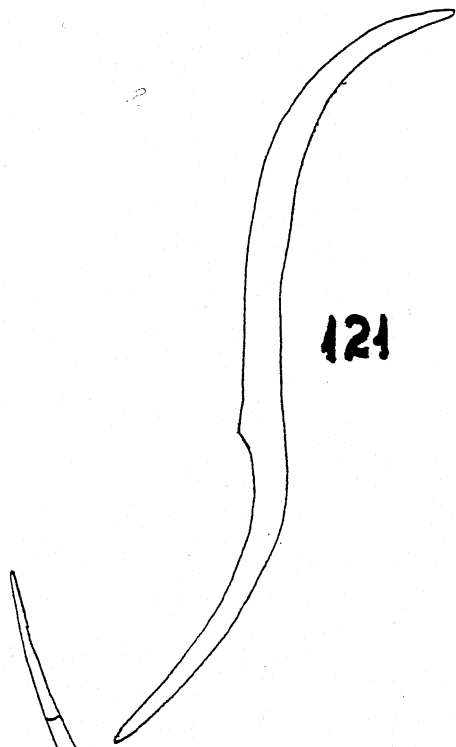
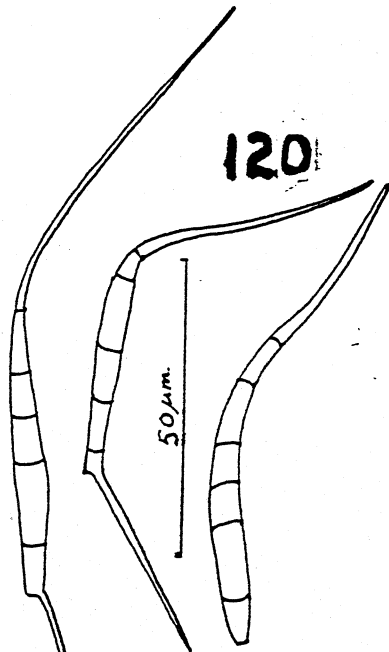
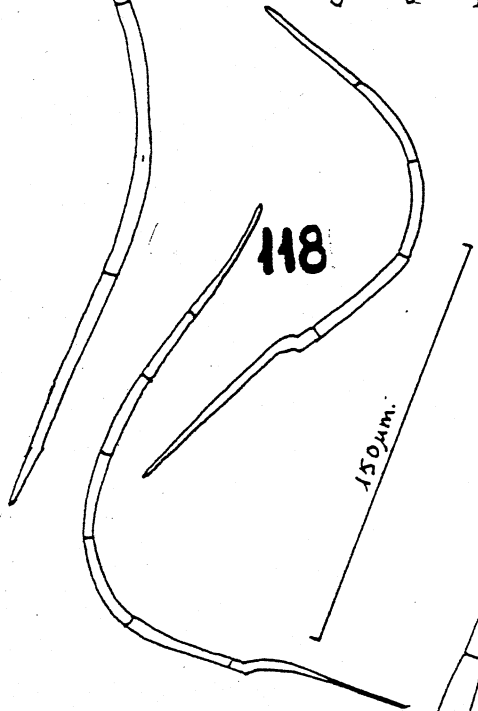
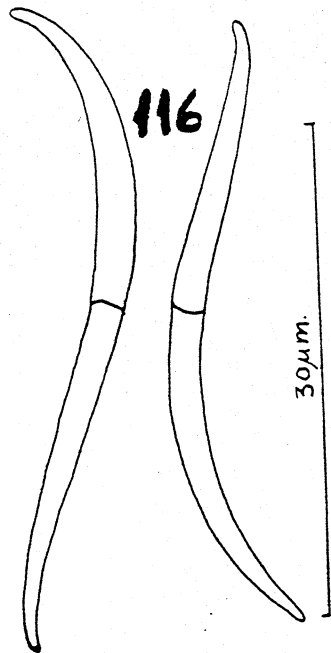
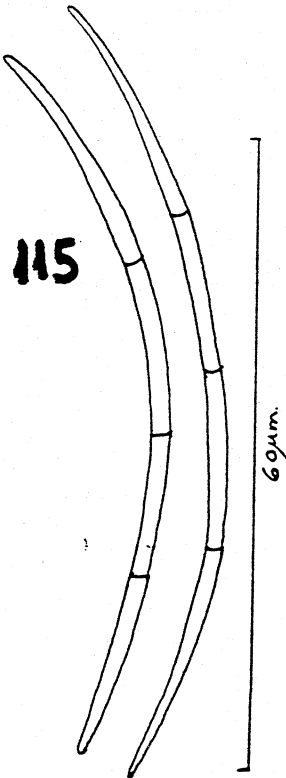
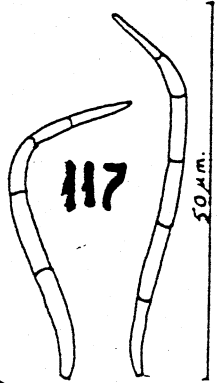
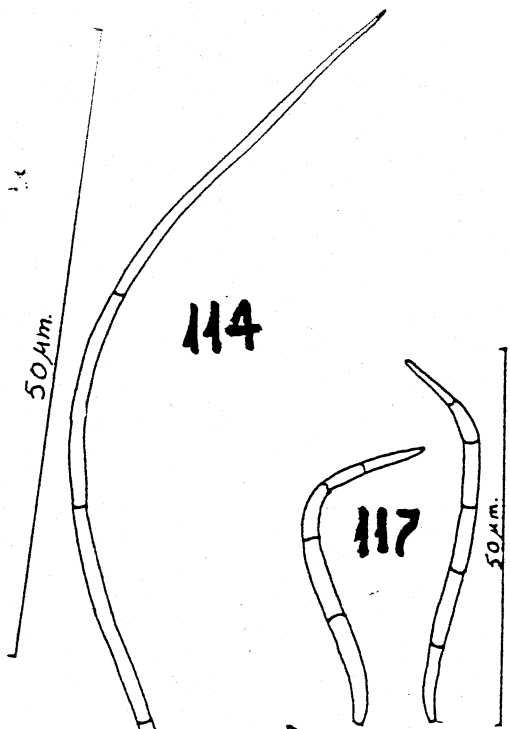


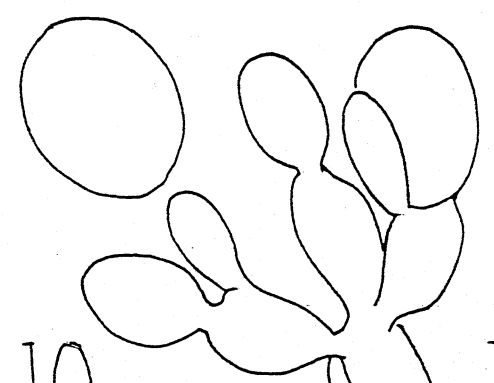
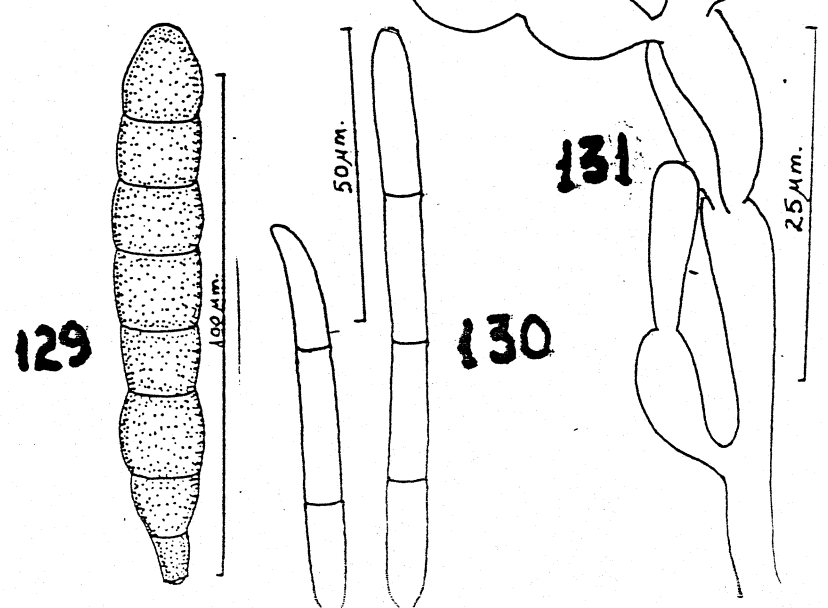
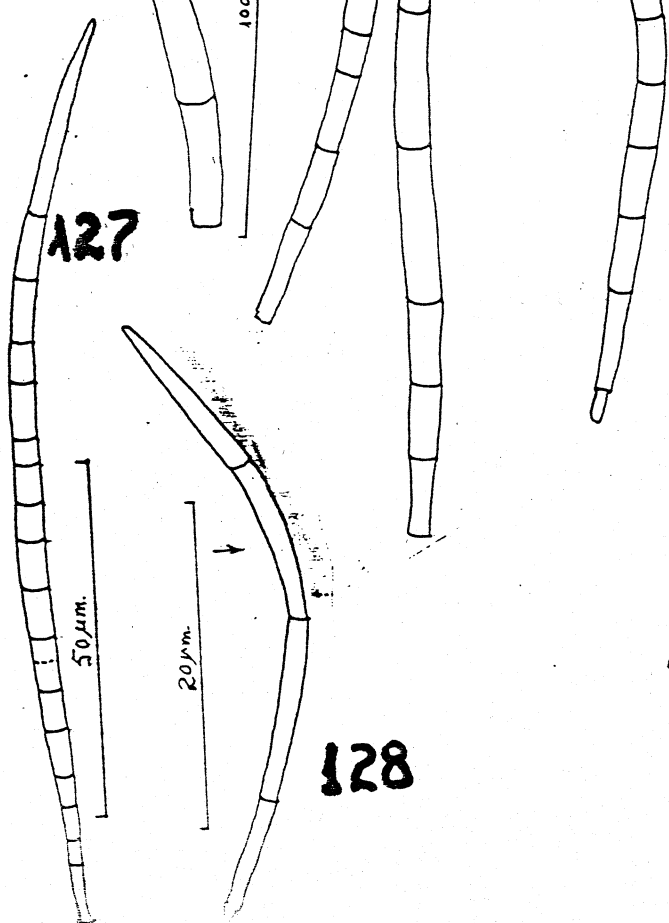
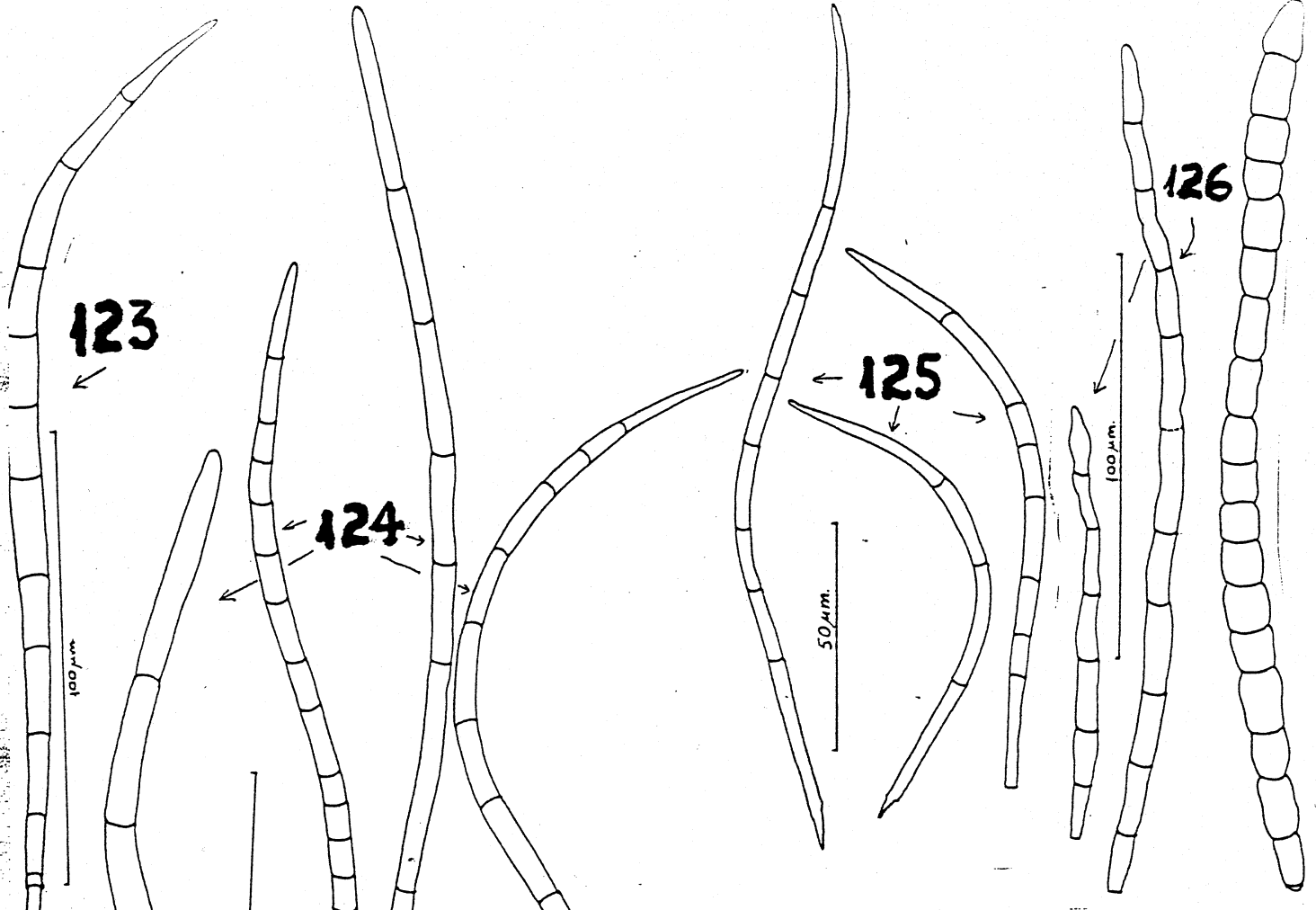
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LIST OF "AQUATIC HYPHOMYCETES" AND MAIN REFERENCES

●: species present in the UK

(type species are the first listed for each genus)

- *Actinosporella megalospora* (Ingold) Descals et Marvanová comb. ined. TBMS 35:66 (1952)
- *Alatospora acuminata* Ingold TBMS 25:384 (1942)
- *A. constricta* Dyko TBMS 70: 409 (1978)
- *A. flagellata* (Gönczöl) Marvanová (1980) TBMS 75:227 (*Clavatospora*)
- *A. pulchella* Marvanová (1977) Arch. Protistenk. 119: 71
- *Amallospora dacrydion* Penzig (1897) Malpighia 11:461
- *Anavirga dendromorpha* Descals et Sutton (1976) TBMS 67: 269
- *Anguillospora longissima* (Sacc. et Syd.) Ingold (1942) TBMS 25: 389(*Fusarium*)
- *Anguillospora crassa* Ingold (1958) TBMS 41: 365
- *A. fustiformis* Marvanová et Descals sp. ined.
- *A. ensiformis* (Descals) Descals et Marvanová (comb. ined.)(TBMS 78: 427)(*Sporidesmium*)
- *A. furtiva* Descals et Marvanová sp. ined. (Webster & Descals 1979)
- *A. gigantea* Ranzoni (1953) Farlowia 4: 363
- *A. filiformis* Greathead (1961) J. So. African Bot. 27: 202
- *A. halophila* Roldán sp. ined.
- *A. rosea* Descals et Marvanová sp. ined. (Webster & Descals 1979)
- *Anguillospora* st. of *Loramyces juncicola* Weston : Digby & Goos (1987) Mycologia 79: 821
- *A. curvula* Iqbal (1972) TBMS 59: 301
- *Angulospora aquatica* S. Nilsson (1962) Svensk bot. Tidskr. 56: 354
- *Arborispora palma* Ando in Ando & Kawamoto (1986) Trans. mycol. Soc. Japan. 27: 120
- *A. dolichovirga* Ando in Ando & Kawamoto (1986) Trans. mycol. Soc. Japan. 27: 125
- *A. multisurcularis* Ando in Ando & Kawamoto (1986) Trans. mycol. Soc. Japan. 27: 122
- *A. paupera* Marvanová et Bärlocher (1989) Mycotaxon 35: 90
- *Arbusculina irregularis* (Petersen) Marvanová et Descals (1987) TBMS 89: 499(*Speiropsis*)
- *Arbusculina* sp. Roldán sp. ined.
- *A. moniliformis* (Descals) Marvanová et Descals (1987) TBMS 89: 499(*Dendrospora*)
- *A. fragmentans* Marvanová (1988) TBMS 90: 607
- *Articulospora tetracladia* Ingold (1942) TBMS 25: 376
- *A. antipodea* Roldán sp. ined.
- *A. atra* Descals in Descals & Webster (1982) TBMS 78: 405
- ? ● *A. moniliformis* Ranzoni (1953) Farlowia 4: 365
- *A. ozeensis* Matsushima (1975) Icones
- *Brachiosphaera tropicalis* Nawawi (1976) TBMS 67: 213
- *B. jamaicensis* (Crane et Dumont) Nawawi in Descals et al. (1976) TBMS 67: 216
- *Calcarispora hiemalis* Marvanová et Marvan (1963) Acta Mus. Silesiae (Opava) Ser. A., 12: 109
- *Campylospora chaetocladia* Ranzoni (1953) Farlowia 4: 373

- C. filicladia Nawawi (1974) TBMS 63: 604
- C. parvula Kuzuha (1973) J. Jap. Bot. 48: 220
- Casaresia sphagnorum G. Fragoso (1920) Bol. Real Soc. Esp. Hist. Nat. 20: 112 (see also TBMS 43: 557)
- Cladoconidium articulatum Bandoni et Tubaki (1985) Trans. mycol. Soc. Japan 26: 426
- Clavariana aquatica Nawawi in Descals et al. (1976) TBMS 67: 218
- Clavariopsis aquatica De Wild. (1895) Annls. Soc. belge Microsc. 19: 197 (see also Ingold (1942) and Webster & Descals (1979).
- C. azlanii Nawawi (1987) TBMS 88: 431
- C. brachycladia Tubaki (1957) Bull. Natnl. Sci. Mus. Tokyo 41: 254
- Clavatospora longibrachiata (Ingold) Marvanová et S. Nilsson (1971) TBMS 57: 531 (Heliscus)
- Colispora elongata Marvanová (1988) TBMS 90: 614
- Colispora curvata Nawawi et Kuthubutheen (1989) Mycotaxon 34: 497
- Condylospora spumigena Nawawi (1976) TBMS 66: 363
- C. flexuosa Nawawi et Kuthubutheen (1988) Mycotaxon 33: 329
- C. gigantea Nawawi et Kuthubutheen (1988) Mycotaxon 33: 334
- Crucella subtilis Marvanová sp. ined.
- Culicidospora aquatica R.H. Petersen (1960) Bull. Torrey bot. Club 87: 342
- Culicidospora gravida R.H. Petersen (1963) Mycologia 55: 24
- Curucispora ponapensis Matsushima (1971)
- C. ombrogena Ando et Tubaki (1984)
- Cylindrocarpon aquaticum (S. Nilsson) Marvanová et Descals (1987) TBMS 89: 501 (Bacillispora)
- Cylindrocarpon inflatum comb. ined. (Iqbal et Bhatti (1980) Trans. mycol. Soc. Japan 21: 71) (Bacillispora)
- Cylindrotrichum helisciforme Marvanová (1979) TBMS 73: 368
- Dactylella microaquatica Tubaki (1957) Bull. Natnl. Sci. Mus. Tokyo 3: 256
- Dactylella submersa (Ingold) S. Nilsson (1962) Bot. Notiser 115: 78 (Pyricularia)
- Dendrospora erecta Ingold (1943) TBMS 26: 107
- D. fastuosa Descals et Webster (1980) TBMS 74: 138
- D. fusca Descals et Webster (1980) TBMS 74: 142
- D. juncicola Iqbal (1972) TBMS 59: 303
- D. nana Descals et Webster (1974) TBMS 74: 145
- D. polymorpha Roldán et Descals in Roldán et al. (1987) Mycotaxon 29: 21
- D. tenella Descals et Webster (1980) TBMS 74: 148
- D. torulosa Descals et Webster (1980) TBMS 74: 151
- Dendrosporomyces prolifer Nawawi, Webster et Davey (1977) TBMS 68: 59
- D. splendens (Nawawi) Nawawi in Nawawi & Webster (1982) TBMS 78: 291 (Varicosporium)
- Descalsia cruciata Roldán et Honrubia (1989) Mycol. Res. 92: 494
- Dimorphospora foliicola Tubaki (1958) J. Hattori bot. Lab. 20: 156
- Dimorphospora ovalis comb. ined. (Aimer 1989) (Lunulospora)
- Diplocladiella scalaroides Arnaud ex M.B. Ellis (1976) More Demat. Hyphomycetes, p. 229
- D. appendiculata Nawawi (1987) Mycotaxon 28: 298
- D. tricladioides Nawawi (1985) Mycotaxon 24: 217

- *Dwayaangam cornuta* Descals in Descals et Webster (1982) TBMS 78: 408
- D. dichotoma* Nawawi (1985) Mycotaxon 24: 219
- D. yakuensis* (Matsushima) Matsushima (1981) Matsushima Mycol. Mem. 2: 9 (Triposporina)
- *Enantioptera tetra-alata* Descals in Descals & Webster (1983) TBMS 80: 70
- ? ● *Fibulotaeniella canadensis* Marvanová et Bärlocher (1988) Mycotaxon 32: 340
- Filosporella aquatica* Nawawi (1976) TBMS 67:175
- ? ●? *F. annelidica* (Shearer et Crane) Crane et Shearer (1977) Mycotaxon 6: 28 (Rogersia)
- F. pseudolongissima* (Ranzoni) Marvanová et Descals comb. ined. (Farlowia 4: 361) (Anguillospora)
- Filosporella* sp. Aimer (1989) sp. ined.
- Flabellocladia gigantea* Nawawi (1985) TBMS 85: 174
- F. tetracladia* (Nawawi) Nawawi (1985) TBMS 85: 175 (Flabellospora)
- Flabellospora crassa* Alasoadura (1968) Nova Hedwigia 15: 416
- *F. acuminata* Descals in Descals et Webster (1982) TBMS 78: 411
- F. amphibia* (Price et Talbot) Descals in Descals & Webster (1982) TBMS 78: 414 (Tetracrium)
- F. multiradiata* Nawawi (1976) TBMS 66: 543
- F. octacladia* Saikia et Sarbhoy (1980) Indian Phytopath. 33: 459
- F. verticillata* Alasoadura (1968) Nova Hedwigia 15: 419
- *Flagellospora curvula* Ingold (1942) TBMS 25: 404
- *F. fusarioides* Iqbal (1974) Biologia (Lahore) 20: 3
- F. leucorhynchos* Marvanová (1986) TBMS 87: 620
- ? *F. minuta* Iqbal et Bhatti (1980) Trans. mycol. Soc. Japan 21: 73
- *F. penicillioides* Ingold (1944) TBMS 27: 44
- F. saccata* Marvanová et Bärlocher (1989) Mycotaxon 35: 94
- F. stricta* S. Nilsson (1962) Bot. Notiser 115: 82
- ? ● *Fontanospora eccentrica* (R. H. Petersen) Dyko (1978) TBMS 70: 412. (Mycologia 54: 137) (Tricladium)
- F. alternibrachiata* Dyko (1978) TBMS 70: 412
- Geniculospora grandis* (Greathead) S. Nilsson ex Nolan (1972) Mycologia 64: 1173 (Articulospora)
- *G. inflata* (Ingold) S. Nilsson ex Marvanová et Nilsson (1971) TBMS 57: 532 (Articulospora)
- *Goniopila monticola* (Dyko) Marvanová et Descals (1985) Bot. J. Linn. Soc. 91: 16 (see also TBMS 700: 413) (Margaritispora)
- Gorgomyces hungaricus* Gönczöl et Révay (1985) Nova Hedwigia 41: 454
- Gorgomyces honrubiae* Roldán (1989) Mycotaxon 34: 381
- *Gyoerffyella rotula* (Höhnelt) Marvanová (1967) Persoonia 5: 41 (Titaea)
- *G. entomobryoides* (Boerema et v. Arx) Marvanová (1964) Nova Hedwigia 8: 298 (Ingoldia)
- *G. gemellipara* Marvanová (1975) TBMS 65: 562
- G. oxalidis* Vanev (1976) Fitologiya, Sofia 4: 46
- *G. speciosa* (Miura) Dudka (1974) Vodni Gifom. Ukr., Kyev, p. 126 (Ingoldia)
- *G. tricapillata* (Ingold) Marvanová (1967) Persoonia 5: 42 (Ingoldia)
- *Heliscella stellata* (Ingold et Cox) Marvanová et Nilsson (1971) TBMS 57: 531 (Heliscus).

- *H. stellatacula* (P. W. Kirk ex Marvanová et Nilsson) Marvanová (1980) TBMS 75: 224(Clavatospora)
- *Heliscina campanulata* Marvanová (1980) TBMS 75: 227
- H. antennata* Marvanová (1980) TBMS 75: 228
- *Heliscus lugdunensis* Sacc. et Thérry (1880) *Michelia* 2: 132
- H. submersus* H. J. Hudson (1961) TBMS 44: 91
- H. tentaculus* Umphlett (1959) *Virg. J. Sci.* 10: 27 (nom. inval.)
- H. versailleensis* Arnaud (1952) *Bull. trimest. Soc. mycol. Fr.* 68: 212 (nom. inval.)
- Hydrometrospora symmetrica* Gönczöl et Révay (1984) *Nova Hedwigia* 40: 199
- Ingoldiella hamata* Shaw (1972) TBMS 59: 258
- I. fibulata* Nawawi (1973) TBMS 61: 525
- I. nutans* Bandoni et Marvanová (1989) *Mycologia* 81: 42
- Isthmolongispora ampulliformis* (Tubaki) de Hoog et Hennebert (1983) *Proc. Konink. Ned. Akad. Wetensch. Ser. C*, 86: 346(Diplorhinostrichum)
- I. asymmetrica* Arambarri et Cabello in Arambarri et al. (1987) *Mycotaxon* 29: 30
- I. basitruncata* Matsushima (1975) *Icones Fung. a Matsushima Lect.*, Kobe, p. 89
- I. geniculata* Nawawi et Kuthubutheen (1988) *Mycotaxon* 31: 340
- I. intermedia* Matsushima (1971)
- I. lanceata* de Hoog et Hennebert (1983) *Proc. Konink. Ned. Akad. Wetensch. Ser. C*, 86: 343
- *I. minima* Matsushima (1971) *Microf. Solomon Isl.* Kobe, p. 32
- I. quadricellularia* Matsushima (1980)
- I. rotundata* Matsushima (1987) *Matsushima mycol. Mem.* 5: 17
- I. variabilis* Matsushima (1975)
- Isthmotricladia laeensis* Matsushima (1971) *Microf. Solomon Isl.*, Kobe, p. 33
- *I. britannica* Descals in Descals et Webster (1982) TBMS 78: 417
- I. foliicola* (Matsushima) Marvanová et Descals comb. ined.
- I. gombakiensis* Nawawi (1975) TBMS 64: 243
- Jaculispora submersa* H. J. Hudson et Ingold (1960) TBMS 43: 475
- Lambdasporium wauense* Matsushima in Kobayasi (1971) *Bull. Natnl. Sci. Mus.*, Tokyo 14: 467
- *L. gramineum* (Ingold et al.) Descals et Marvanová comb. ined. (Volucrispora)
- L. minimum* (Matsushima) Descals et Marvanová comb. ined. (Tricladium)
- L. spirophaeroides* Marvanová sp. ined.
- *L. viridense* Nawawi (1985) *Mycotaxon* 24: 221
- *Laridospora appendiculata* (Anastasiou) Nawawi (1976) TBMS 66: 344
- *Lateriramulosa uni-inflata* Matsushima (1971) *Microf. Solomon Isl.*, Kobe, p. 35
- L. ainflata* Matsushima (1975) *Icones Microfung. a Matsushima Lect.*, Kobe, p. 92
- L. biinflata* Matsushima (1975) *Icones Microfung. a Matsushima Lect.*, Kobe, p. 92
- *L. minitriangularia* Matsushima (1975) *Icones Microfung. a Matsushima Lect.*, Kobe, p. 93



- L. quadriradiata* Miura et Okano (1979) *J. Jap. Bot.* 54: 209
- *Lemonniera aquatica* De Wild. (1894) *Annls. Soc. belge Microsc.*, Bruxelles 18: 135
- L. alabamensis* Sinclair et Morgan-Jones (1979) *Mycotaxon* 9: 469
- *L. centrosphaera* Marvanová (1968) *TBMS* 51: 613
- *L. cornuta* Ranzoni (1953) *Farlowia* 4: 379
- *L. filiformis* R. H. Petersen ex Marvanová et Descals nom. ined. (*Mycologia* 55: 574)
- L. pseudofloscula* Dyko (1977) *TBMS* 69: 106
- *L. terrestris* Tubaki (1958) *J. Hattori Bot. Lab.* 20: 165 (*TBMS* 41: 365)
- *Lunulospora curvula* Ingold (1942) *TBMS* 25: 404
- L. cymbiformis* Miura (1972) *J. Jap. Bot.* 47: 68
- ! ● *Magdalaenaea monogramma* Arnaud (1952) *Bull. trimest. Soc. mycol. Fr.* 68: 209
- *Margaritispora aquatica* Ingold (1942) *TBMS* 25: 352
- Miniancora allisoniensis* Marvanová (1989) *Mycotaxon* 35: 86
- Mirandina acicularis* Marvanová et Descals sp. ined.
- *Mycocentrospora acerina* (Hartig) Deighton (1972) var. *Taxon* 21: 716 (see also *TBMS* 32: 345)
- M. acerina* var. *castelnaudariensis* H. T. Tribe et J. C. Cayrol (1982) *TBMS* 78: 370 (from soil)
- *M. angulata* R. H. Petersen (1962) *Mycologia* 54: 129
- *M. aquatica* Iqbal (1971) *TBMS* 56: 351
- *M. clavata* Iqbal (1984) *Biologia (Lahore)* 20: 2
- M. lumbricina* Marvanová sp. ined.
- M. varians* Sinclair et Morgan-Jones (1979) *Mycotaxon* 9: 472
- *Mycocentrospora* sp. Park sp. ined.
- ! ● *Naiadella fluitans* Marvanová et Bandoni (1987) *Mycologia* 79: 579
- Nawawia filiformis* (Nawawi) Marvanová (1980) *TBMS* 75: 227 (*Clavatospora*)
- Obelispora basispira* Nawawi et Kuthubutheen sp. ined.
- Pachycladina mutabilis* Marvanová (1986) *TBMS* 87: 617
- P. hispanica* Roldán et Marvanová (1989) *Mycol. Res.* sp. ined.
- Phalangispora constricta* Nawawi et Webster (1982) *TBMS* 79: 65
- Phalangispora nawawii* Kuthubutheen (1987) *TBMS* 89: 419
- *Pleuropedium tricladioides* Marvanová et Iqbal (1973) *Antonie van Leeuwenhoek* 36: 401
- *P. viridescens* Marvanová et Descals sp. ined.
- *Polycladium equiseti* Ingold (1959) *TBMS* 42: 112
- *Porocladium aquaticum* Descals (1976) *TBMS* 67: 211
- *Pseudoanguillospora stricta* Iqbal (1974) *Biologia (Lahore)* 20: 11
- P. fusiformis* Marvanová sp. ined.
- P. gracilis* Sinclair et Morgan-Jones (1979) *Mycotaxon* 9: 474
- *P. prolifera* Iqbal (1974) *Biologia (Lahore)* 20: 13
- Pseudozyma prolifica* Bandoni (1985) *Bot. J. Linn. Soc.* 91: 38.
- Pyramidospora casuarinae* S. Nilsson (1962) *Svensk bot. Tidskr.* 56: 360
- P. constricta* N. Singh (1972) *TBMS* 59: 336
- P. densa* Alasoadura (1968) *TBMS* 51: 537
- P. fluminea* Miura et Kudo (1971) *J. Jap. Bot.* 46: 39
- P. herculiformis* N. Singh (1976) *TBMS* 66: 347
- P. ramificata* Miura in Miura & Kudo (1971) *J. Jap. Bot.* 46: 41
- P. stellata* Sinclair et Morgan-Jones (1979) *Mycotaxon* 9: 477

- Quadricladium aquaticum* Nawawi et Kuthubutheen (1989) Mycotaxon 34: 490  
 ● *Scorpiosporium minutum* Iqbal (1974) Biologia (Lahore) 20: 17  
*Setosynnema isthmosporum* Shaw et Sutton (1985) Bot. J. Linn. Soc. 91: 34  
*Sigmoidea prolifera* (R.H. Petersen) Crane (1968) Am. J. Bot. 55: 998  
 ● *S. aurantiaca* Descals in Descals & Webster (1982) TBMS 78: 425  
*S. praelonga* Marvanová (1986) TBMS 87: 621  
 ● *Stenocладиella neglecta* (Marvanová et Descals) Marvanová et Descals (1987) TBMS 89: 507 (see also Bot. J. Linn. Soc. 91: 13)  
 ● *Sympodiocladium frondosum* Descals in Descals & Webster (1982) TBMS 78: 429  
 ● *Taeniospora gracilis* Marvanová var. *gracilis* (1986) TBMS 89: 490  
 ● *T. gracilis* Marvanová var. *enecta* Marvanová et Stalpers (1986) TBMS 89: 492  
 ● *T. descalsii* Marvanová et Stalpers (1986) TBMS 89: 494  
*T. nasifera* Marvanová et Bärlocher (1988) Mycotaxon 32: 344  
 \**Tetrabrachium elegans* Nawawi et Kuthubutheen (1987) Mycotaxon 29: 291  
*Tetrabrunneospora ellisii* Dyko (1978) TBMS 70: 414  
 ● *Tetrachaetum elegans* Ingold (1942) TBMS 25: 380  
 ● *Tetracladium marchalianum* De Wild. (1893) Annl. Soc. belge Microsc. Bruxelles 17: 39  
*T. apiense* Sinclair et Eicker (1981) TBMS 76: 515  
*T. breve* Roldán sp. nov. ined., in Roldán et al. (1989) Mycol. Res.  
 ● *T. furcatum* Descals in Descals & Webster (1983) TBMS 80: 70  
 ● *T. maxilliforme* (Rostrup) Ingold (1942) TBMS 25: 371  
*T. palmatum* Roldán sp. nov. ined., in Roldán et al. (1989) Mycol. Res.  
 ● *T. setigerum* (Grove) Ingold (1942) TBMS 25: 369 (Tridentaria)  
*Tricellula inaequalis* v. Beverwijk (1954) Antonie v. Leeuwenhoek 20: 15  
 ● *T. aquatica* Webster (1959) TBMS 42: 416  
*T. aurantiaca* (Haskins) v. Arx (1974) (see Can. J. Microbiol. 4: 274) (*Volucrispora*)  
 ● *T. botryosa* Descals in Descals & Webster (1982) TBMS 78: 435  
*T. curvata* Haskins (1958) Can. J. Microbiol. 4: 279  
*T. lobulata* Descals sp. ined.  
 ● *T. ornithomorpha* comb. ined. (see Can. J. Microbiol. 4: 279)  
*T. taiwanensis* Matsushima (1987) Matsushima Mycol. Mem. 5: 31  
*Tricellula* st. of *Spermospora lolii* (McGarvie & O'Rourke, J. Agr. Res. 8: 151, 1969)  
*Trichocladium angelicum* Roldán (1989) Mycotaxon 35: 353  
*Tricладиella pluvialis* Ando et Tubaki (1984) Trans. mycol. Soc. Japan 25: 41  
*Tricладиomyces geniculatus* Nawawi et Kuthubutheen (1988) TBMS 90: 670  
*T. malaysianus* (Nawawi) Nawawi (1985) Bot. J. Linn. Soc. 91: 58 (*Tricladium*)  
 ● *Tricладиopsis foliosa* Descals in Descals & Webster (1982) TBMS 78: 418  
 ● *T. flagelliformis* Descals in Descals & Webster (1982) TBMS 78: 418

- Tricladiospora brunnea* (Nawawi) Nawawi et Kuthubutheen (1988) TBMS 90: 487 (TBMS 63: 267)  
*T. longissima* Nawawi et Kuthubutheen (1988) TBMS 90: 487  
*T. stricta* Nawawi et Kuthubutheen (1988) TBMS 90: 486  
 ● *Tricladium splendens* Ingold (1942) TBMS 25: 385  
*T. aciculum* Nawawi (1985) TBMS 85: 177  
 ● *T. angulatum* Ingold (1942) TBMS 25: 393  
*T. angustum* Ando in Ando & Kawamoto (1985) Trans. mycol. Soc. Japan 26: 475  
 ● *T. anomalum* Ingold (1943) TBMS 26: 113  
 ● *T. attenuatum* Iqbal (1971) TBMS 56: 349  
 ● *T. biappendiculatum* (G. R. W. Arnold) Marvanová et Descals (1987) TBMS 89: 504 (see also TBMS 63: 492)(*Ingoldia*)  
 ● *T. castaneicola* Sutton (1975) TBMS 64: 422  
*T. caudatum* Kuzuha (1973) J. Jap. Bot. 48: 222  
 ● *T. chaetocladium* Ingold (1974) TBMS 63: 624  
 ● *T. curvisporum* Descals in Descals & Webster (1983) TBMS 80: 71  
*T. fallax* Marvanová (1984) Mycotaxon 19: 93  
*T. fuscum* Nawawi (1985) TBMS 85: 180  
*T. gracile* Ingold (1944) var. *gracile* TBMS 27: 39  
*T. gracile* Ingold var. *oxyphilum* Nimura et Suzuki J. Jap. Bot. 37: 32  
*T. marylandicum* Crane (1968) Am. J. Bot. 55: 999  
 ● *T. patulum* Marvanová et Marvan (1963) Acta Mus. Siles. (Opava), Ser. A, 12: 113  
*T. procerum* Marvanová (1988) TBMS 90: 612  
*T. rectisporum* Marvanová nom. prov.  
*T. robustum* Marvanová (1984) Mycotaxon 19: 96  
 ● *T. terrestre* Park (1974) TBMS 63: 179  
 ● *T. varium* Jones et Stewart (1972) TBMS 59: 163  
*Trifurcospora irregularis* (Matsushima) Ando et Tubaki (1987) Trans. mycol. Soc. Japan, 28: 471 (see also Matsushima Myc. Mem. 2: 9)(*Flabellospora*)  
*Triglyphium alabamense* Matsushima (1981) Matsushima Myc. Mem. 2: 18  
*Triglyphium luteum* Marvanová sp. ined.  
 ● *Tripospermum camelopardus* Ingold, Dann et McDougall TBMS 51: 51  
 ● *T. myrti* (Lind) S.J. Hughes (1951) Mycol. Pap. C.M.I. 46: 18 (*Tripospermium*)  
 ● *T. prolongatum* Sinclair et Morgan-Jones (1979) Mycotaxon 9: 479  
 ● *Triscelophorus monosporus* Ingold (1943) TBMS 26: 148  
 ● *T. acuminatus* Nawawi (1975) TBMS 64: 346  
*T. konajensis* Sridhar et Kaveriappa (1987) Indian Phytopath. 40: 102  
*T. magnificus* R.H. Petersen (1962) Mycologia 54: 132  
*T. ponapensis* Matsushima (1981) Matsushima Mycol. Mem. 2: 19  
*T. septatus* Wolfe (1976) Proc. Symp. on Distribut. Hist. Biota S. Appalachians, P. IV (Algae and Fungi), Va. Polytech. Inst. & St. Univ. and Assoc. Southeast. Biol., Blacksburg, Va., 1975: 251  
*Triscelosporium verrucosum* Nawawi et Kuthubutheen (1987) Mycotaxon 29: 285  
 ● *Trisulcosporium acerinum* Hudson et Sutton (1964) TBMS 47: 200  
 ● *Tumularia tuberculata* (Gönczöl) Descals et Marvanová in Marvanová & Descals (1987) TBMS 89: 506 (see also Nova Hedwigia 27: 495) (*Monofolperella*)  
 ● *T. aquatica* (Ingold) Descals et Marvanová in Marvanová & Descals

(1987) TBMS 89: 506 (see also TBMS 26: 107; Farlowia 4: 359)(*Pyrenularia*)  
*Tumularia balearica* Descals nom. prov.

● *Vargamyces aquatica* (Dudka) Tóth (1979) Acta Bot. Acad. Scient. Hungar. 25: 403 (*Campasporium*)

● *Varicosporium elodeae* Kegel (1906) Ber. Deut. bot. Ges. 24: 213

● *V. delicatum* Iqbal (1971) TBMS 56: 343

● *V. giganteum* Crane (1968) Am. J. Bot. 55: 999

*V. helicosporum* Nawawi (1974) TBMS 63: 27

*V. macrosporum* Nawawi (1974) TBMS 63: 29

*V. scoparium* Roldán et Honrubia (1989) Mycotaxon 34: 375

*V. trimosum* Wolfe (1976) Proc. Symp. on Distribut. Hist. Biota S. Appalachians, Part IV (Algae and Fungi), Va. Polytech. Inst. & St. Univ. and Assoc. Southeast. Biol., Blacksburg, Va., 1975: 254

*Varicosporium* st. of *Hymenoscyphus varicosporoides* Tubaki (1966) TBMS 49: 345

● *Variocladium giganteum* (Iqbal) Descals et Marvanová comb. ined., TBMS 56: 347 (*Tricladium*)

● *V. rangiferinum* (Descals) Descals et Marvanová comb. ined., TBMS 78: 422 (*Scorpiosporium*)