

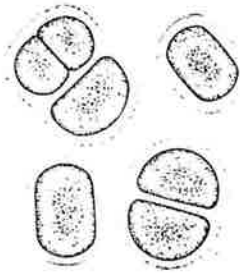
Süßwasserbiocoenenosen - Algen und Makrophyten

Das vorliegende Skriptum beinhaltet die häufigsten Süßwasseralgen und Makrophyten, die im Rahmen des Kurses vorgestellt werden. Die Abbildungen entstammen aus folgenden Bestimmungswerken:

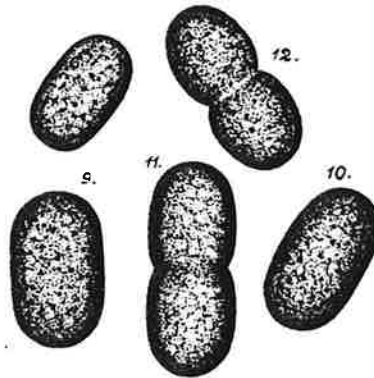
- Bourrelly, P. 1968-1972. Les algues d'eau douce, Tome 1 - 3. Ed. N. Boubée & Cie, Paris.
- Ettl, H., Gerloff, J., Heynig, H. Mollenhauer, D. (Eds.) 1974 - 1997. Süßwasserflora von Mitteleuropas, G. Fischer, Stuttgart - New York.
- Geitler, L. 1925. Cyanophyceae. In: Pascher, A. (Ed.): Süßwasserflora Deutschlands, Österreichs und der Schweiz, Heft 12, 481pp., G. Fischer, Jena.
- Hustedt, F. 1930. Bacillariophyta (Diatomeae). In: Pascher, A. (Ed.): Süßwasserflora Deutschlands, Österreichs und der Schweiz, Heft 10, 466pp., G. Fischer, Jena.
- Kann, E. 1978. Systematik und Ökologie der Algen österreichischer Bergbäche. Arch. Hydrobiol. Suppl. 53 (4): 405-643.
- Komarek, J. & Fott, B. 1983. Chlorophyceae (Grünalgen) Ordnung: Chlorococcales. In: Huber-Pestalozzi, G. (Ed.): Das Phytoplankton des Süßwassers, 7. Teil, 1 Hälfte, 1044pp., Schwetzerbart'sche Verlagsbuchhandlung, Stuttgart.
- Lenzenweger, R. 1996. Desmidiaceenflora von Österreich, Teil 1. Bibliotheca Phycologica 101, 162pp, J. Cramer Verlag, Berlin - Stuttgart.
- Rothmaler, W. 1987. Exkursionsflora für die Gebiete der DDR und der BRD, Band 3, Atlas der Gefäßpflanzen, 752pp. Volk und Wissen, Volkseigener Verlag, Berlin.
- Skuja, H. 1946. Taxonomie des Phytoplanktons einiger Seen in Uppland, Schweden. Symbolae bot. Uppsaliensis 9(3), 399pp + Tafeln.
- Skuja, H. 1956. Taxonomische und biologische Studien über das Phytoplankton schwedischer Binnengewässer. Nova Acta Reg. Soc. Sci. Upsaliensis Ser. IV. Vol 16(3), 404pp + Tafeln.
- Skuja, H. 1964. Grundzüge der Algenflora und Algenvegetation der Fjeldgegenden um Abisko in Schwedisch-Lappland. Nova Acta Reg. Soc. Sci. Upsaliensis Ser. IV. Vol 18(3), 465pp + Tafeln.
- Streble H. & Krauter, D. 1985. Das Leben im Wassertropfen. 367pp., Kosmos - Franckh'sche Verlagsbuchhandlung, Stuttgart.
- West, W. & West, G.S. 1904 - 1923. A monograph of the british Desmidiaceae, Vol. 1 - 5, Ray Society, London.

Klasse: Cyanophyceae (Blaualgen)

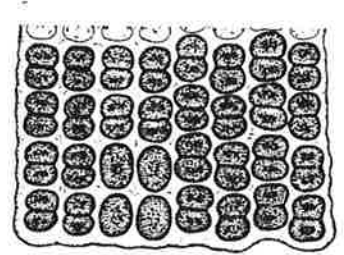
Merkmale: blaugrün gefärbt, keine Geißeln, Zellinhalt erscheint homogen (keine Plastiden, Zellkerne!!!),



Chroococcus turgidus



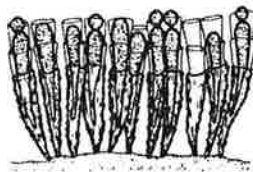
Synechococcus aeruginosus



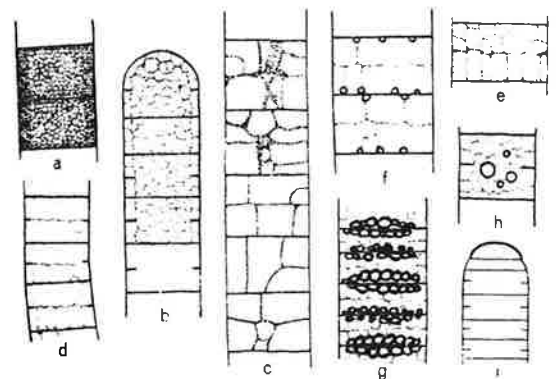
Merismopedia sp.



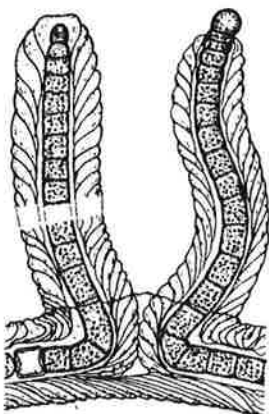
Aphanothece sp.



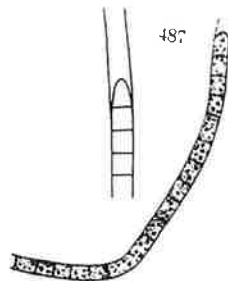
Chamaesiphon geitleri



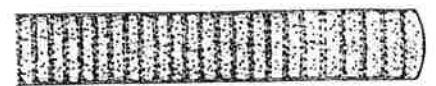
Oscillatoria borneti



Scytonema myochrous



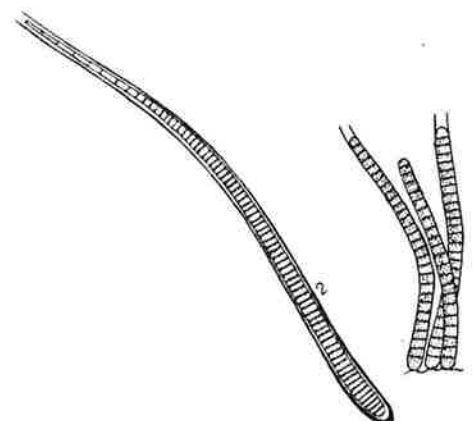
Phormidium corium



Oscillatoria limosa

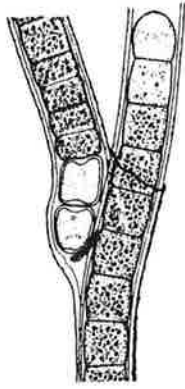


Spirulina sp.

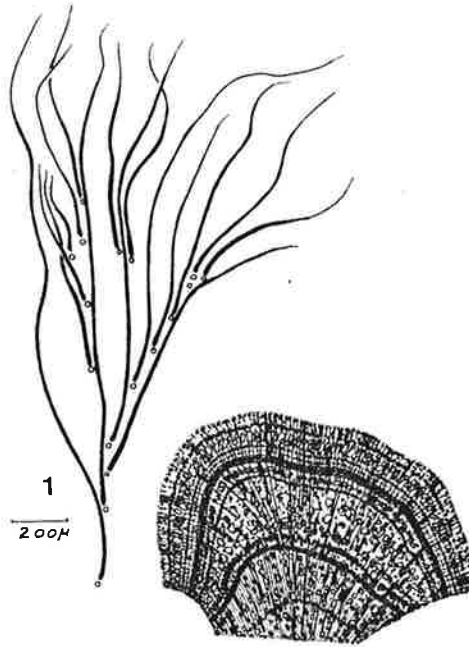


Homoeothrix varians

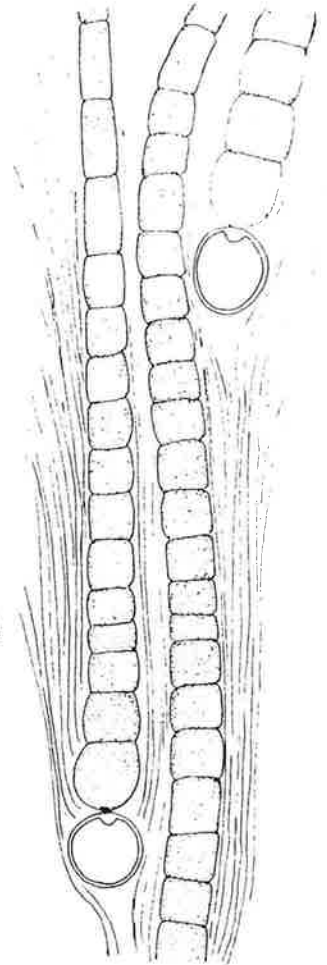
Fortsetzung: Cyanophyceae



Tolypothrix lanata

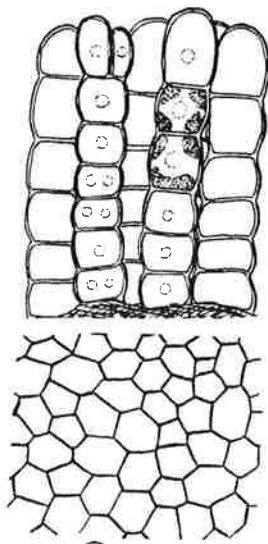


Rivularia haematites

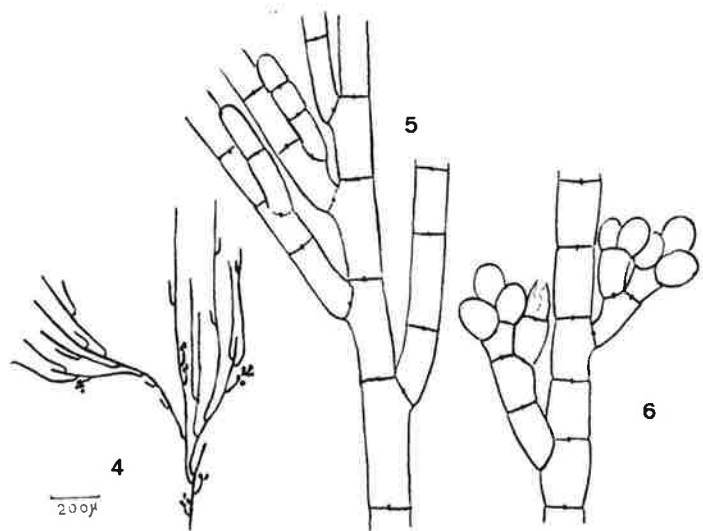


Stamm: Rhodophyta (Rotalgen)

Merkmale: olivgrün bis rötlich gefärbte Thalli (flächig bis parenchymatisch), keine gekeimten Stadien, im Süßwasser selten vertreten.



Hildenbrandia rivularis

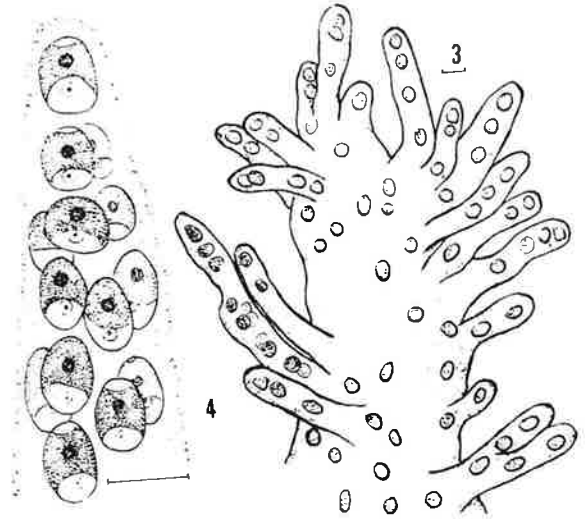
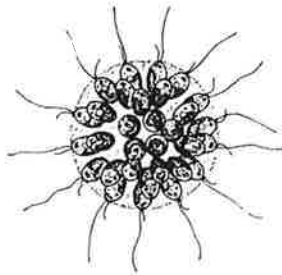


Audouinella violacea

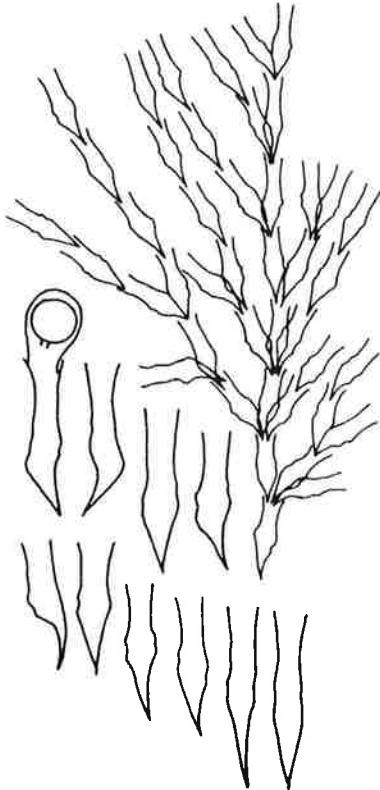
Klasse: Chrysophyceae (Goldalgen)

Merkmale: goldbraun oder gelblich gefärbt, häufig Flagellaten mit heterokonter Begeißelung (=verschiedenlange G.), Zellen manchmal mit Kieselschüppchen bedeckt (nach Ausglühen sichtbar)

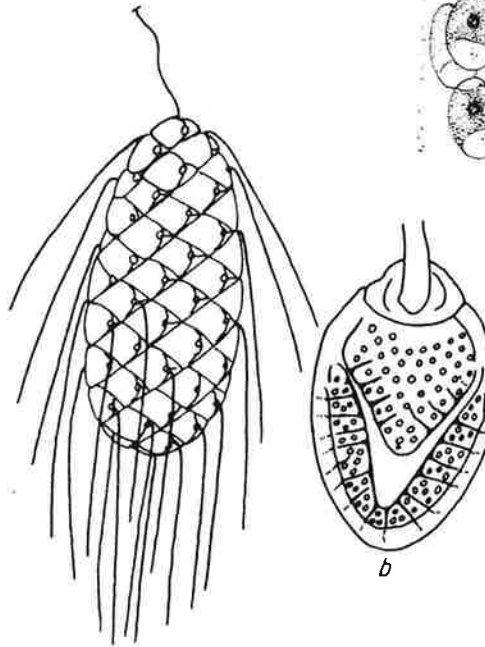
Uroglena americana



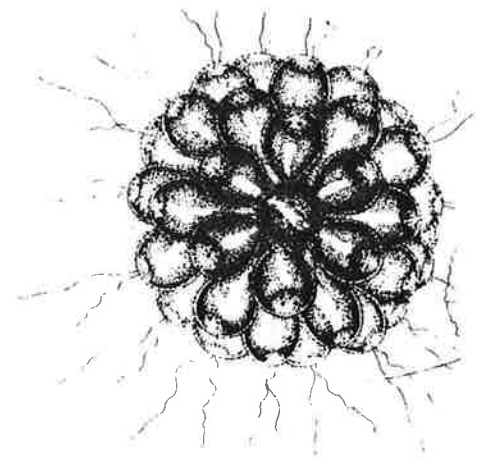
Hydrurus foetidus



Dinobryon divergens



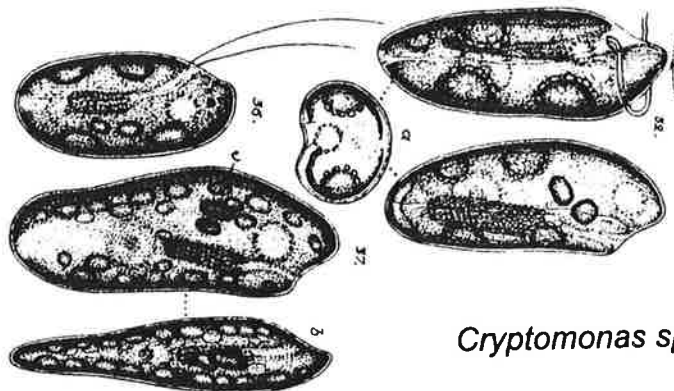
Mallomonas acaroides



Synura sp.

Stamm: Cryptophyta

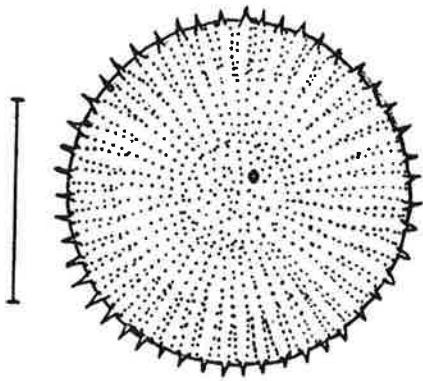
Merkmale: braun, oder blaugrün gefärbt, begeißelt, asymmetrischer Bau der Flagellaten.



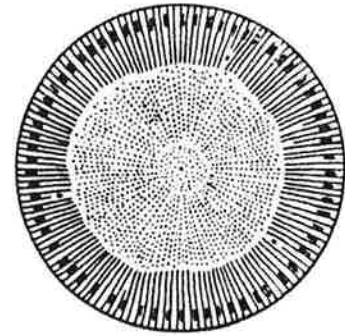
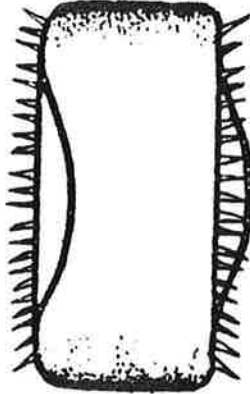
Cryptomonas sp.

Klasse: Bacillariophyceae (Kieselalgen)

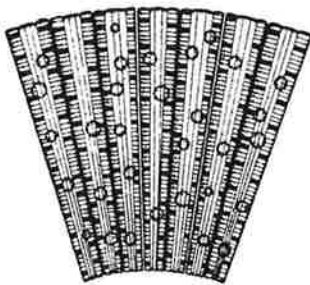
Merkmale: braun gefärbt, keine Geißeln, verkieselte Zellwand (bleibt beim Ausglühen bestehen), einzeln oder in ketten-, sternförmigen Aggregaten, Zelle schachtelförmig gebaut; schiffchenförmig (Ord.: Pennales) oder trommelförmig bis zylindrisch (Ord.: Centrales)



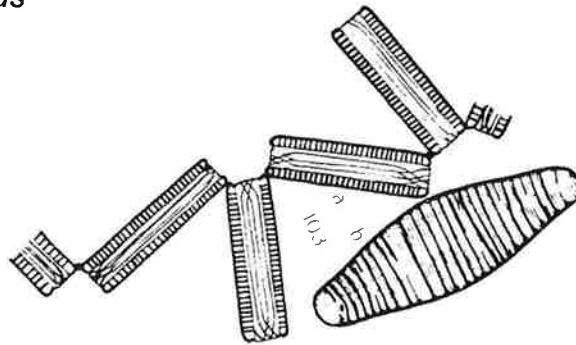
Stephanodiscus alpinus



Cyclotella sp.

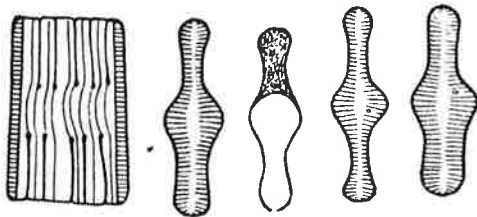


Meridion circulare

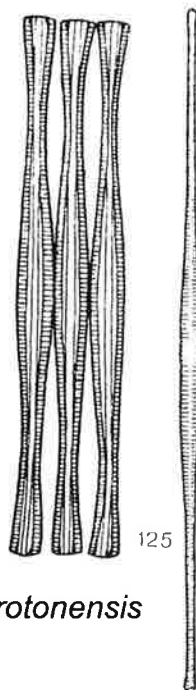


Diatoma vulgare

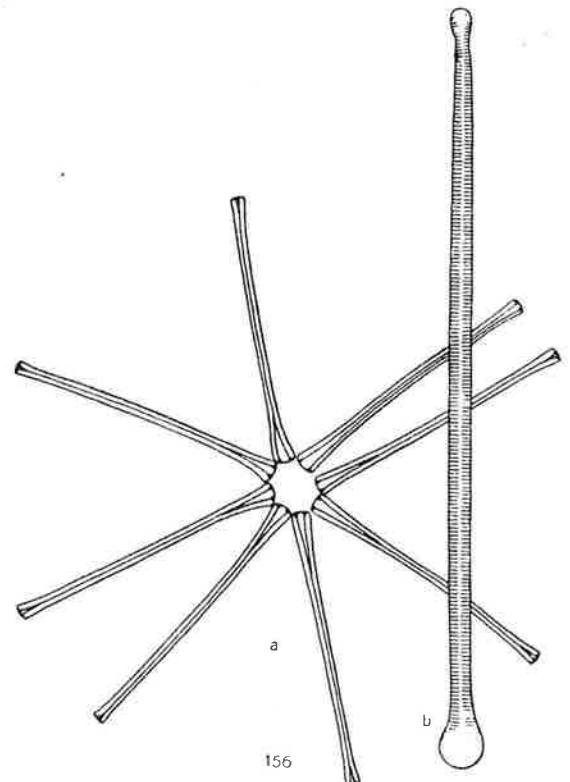
Fragilaria ulna



Tabellaria flocculosa

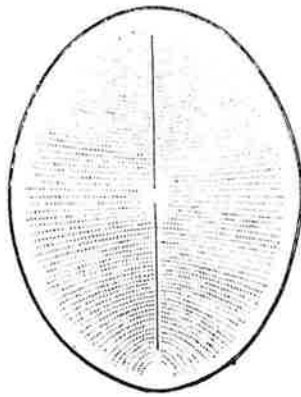


Fragilaria crotonensis



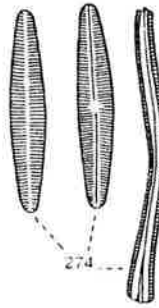
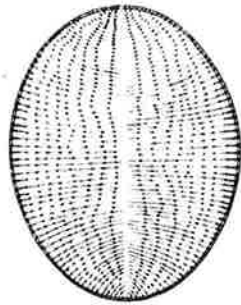
Asterionella formosa

Fortsetzung Bacillariophyceae



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Cocconeis pediculus

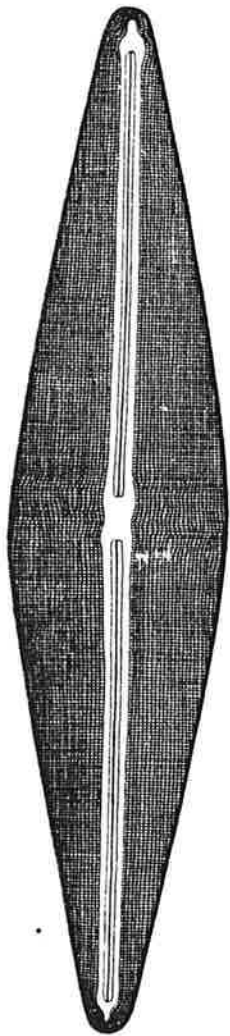


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Achnanthes minutissima



Eunotia sp.



Frustulia rhomboides



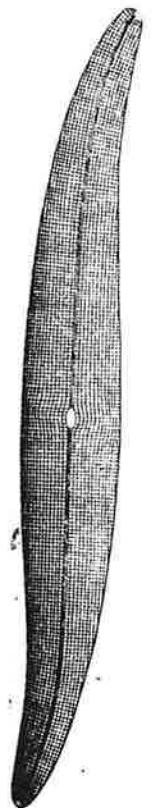
Epithemia sp.



Cymbella sp.



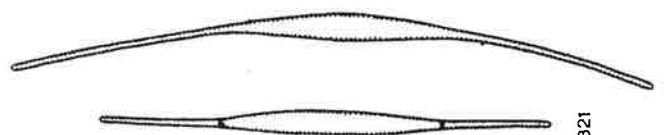
Navicula sp.



Gyrosigma sp.



Gomphonema sp.
(re: *G. angustatum*)

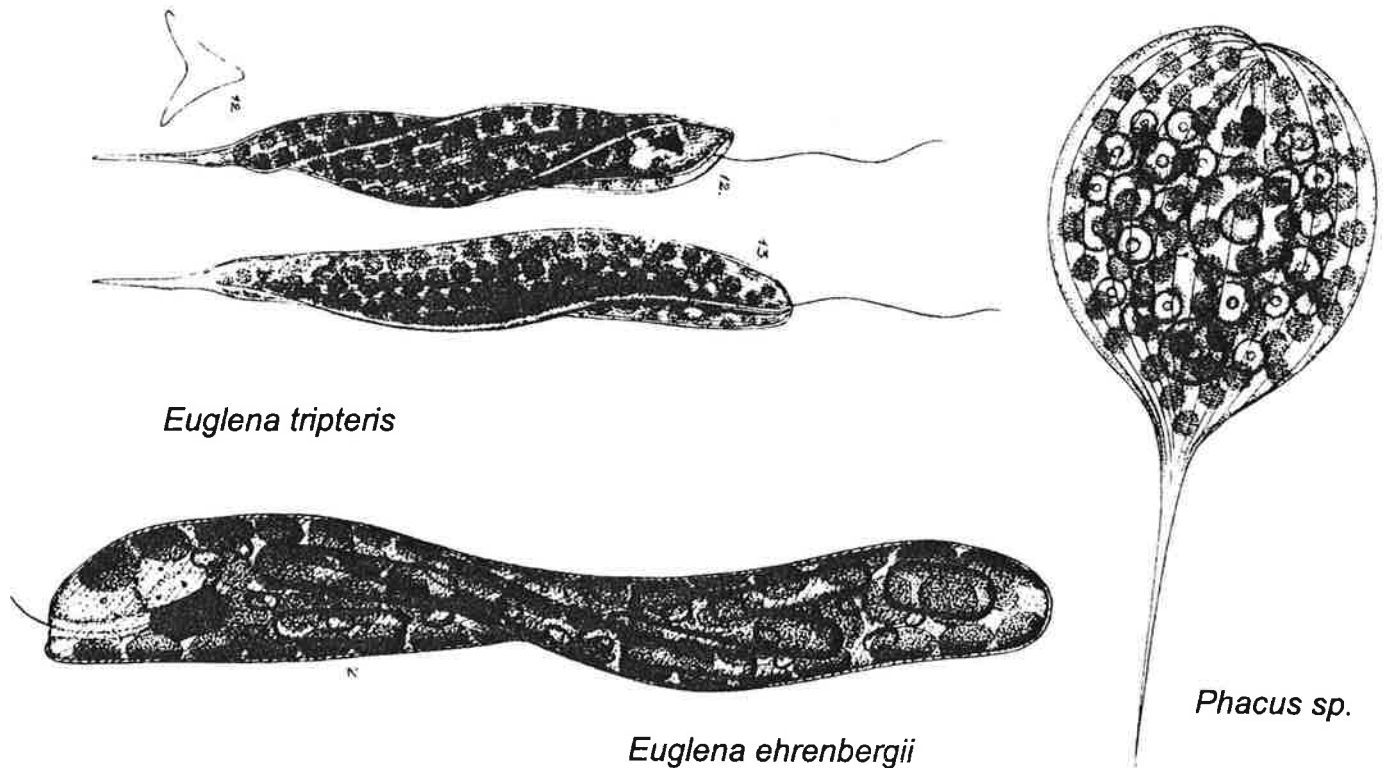


821

Nitzschia acicularis

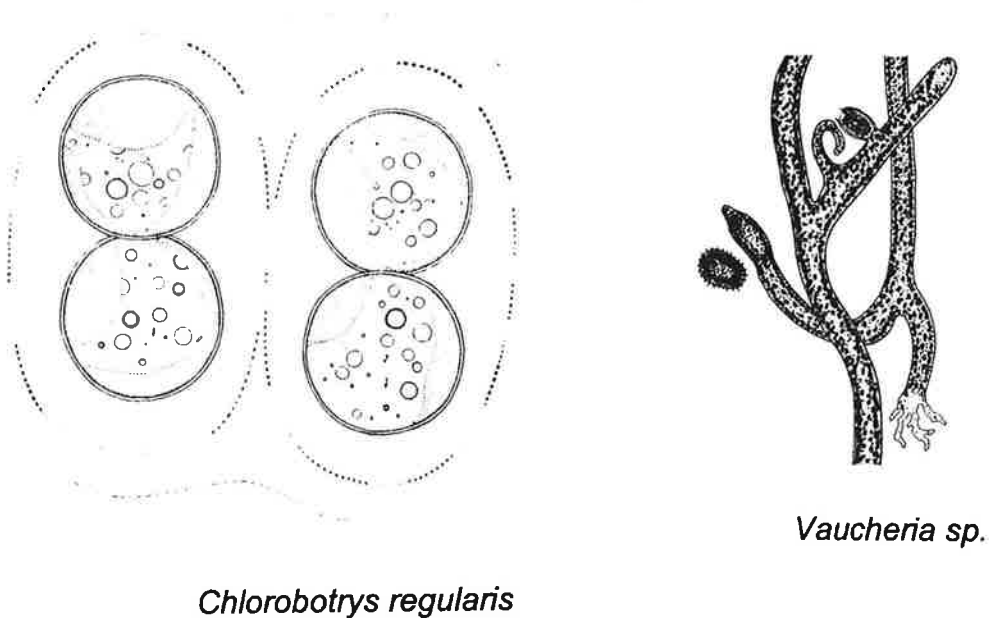
Stamm: Euglenophyta (Augentierchen)

Merkmale: grün gefärbte Flagellaten, teilweise metabol, charakteristisch sind Paramylonkörnchen (hyalines Speicherprodukt) und Augenflecken (Stigmata)



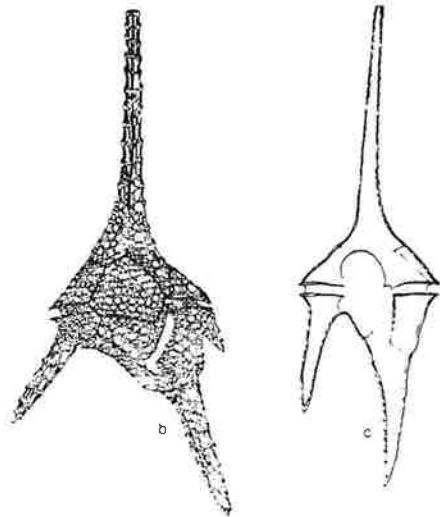
Stamm: Xanthophyceae und Eustigmatophyceae (Gelbgrünalgen)

Merkmale: hellgrün (maigrün) gefärbte Zellen. Keine Stärke nachweisbar.

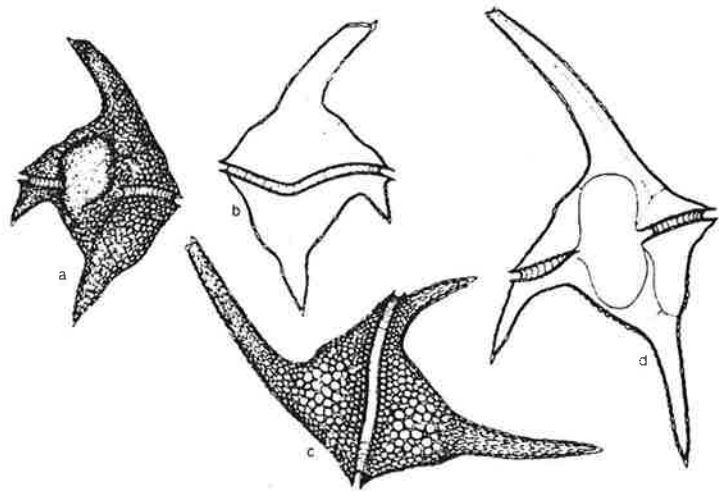


Stamm: Dinophyta (Panzerflagellaten)

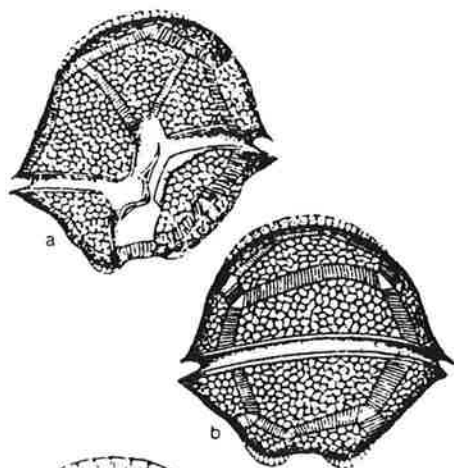
Merkmale: zumeist braun gefärbt, charakteristische getäfelte Zellwand aus Zelluloseplatten, überwiegend Flagellaten.



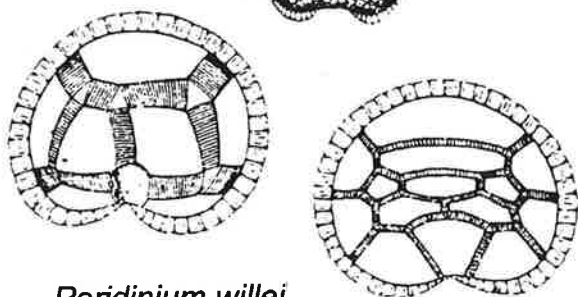
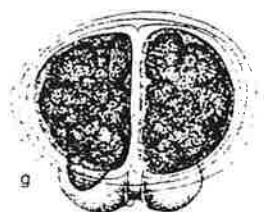
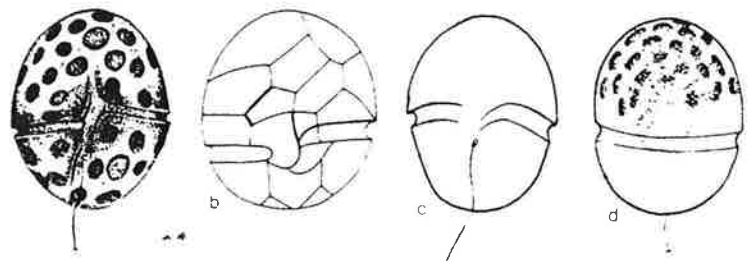
Ceratium hirundinella



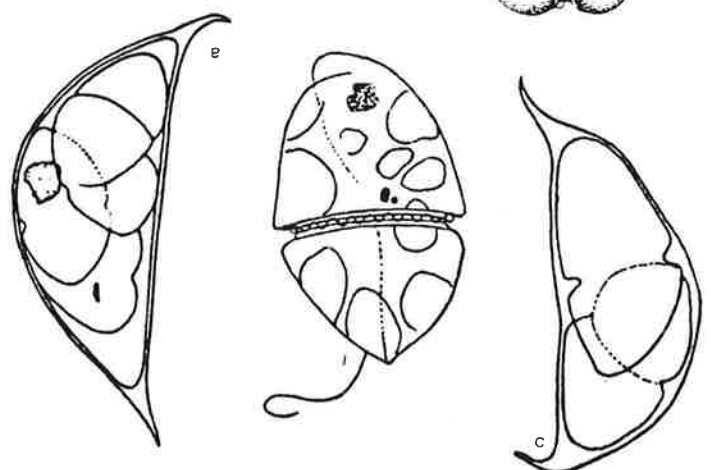
Ceratium cornutum



Glenodiniopsis steinii (=Gloeodinium montanum)



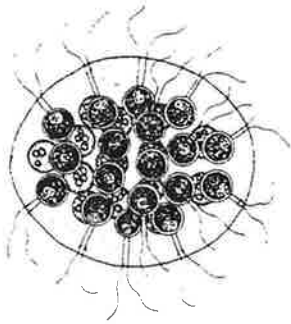
Peridinium willei



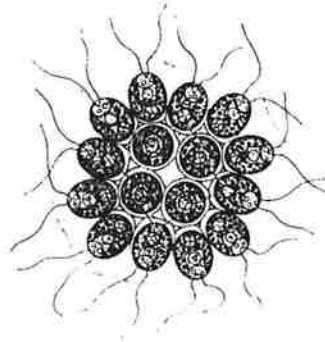
Gymnodinium fuscum

Stamm: Chlorophyta (Grünalgen)

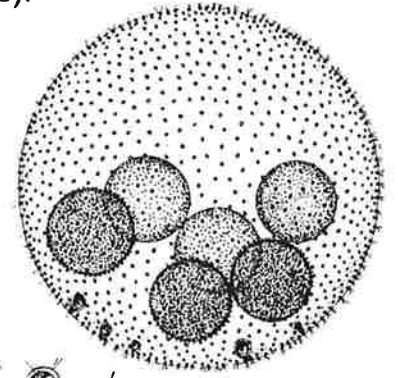
Merkmale: grün gefärbt, sehr umfangreiche Gruppe, bei Flagellaten isokonte Begeißelung; kokkale Formen sind häufig im Plankton zu finden. Auch Fadenbildung kommt in mannigfaltiger Weise vor. Stärke kann mit Jod nachgewiesen werden. Innerhalb dieses Stammes befinden sich auch die Zieralgen (Ord.: Desmidiaceae und Zygnematales) und die Armleuchteralgen (Kl: Charophyceae).



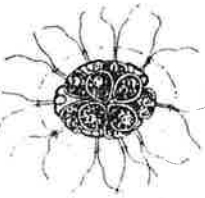
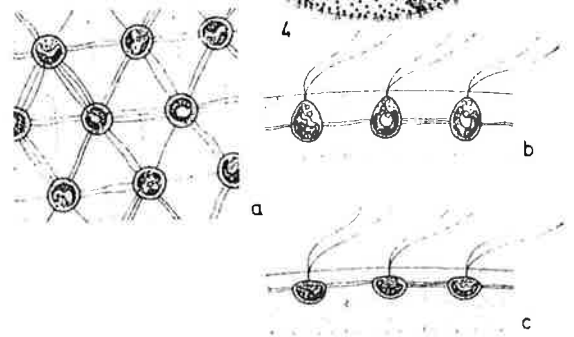
Eudorina elegans



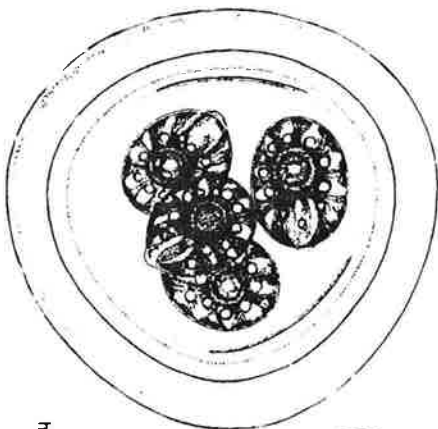
Gonium pectorale



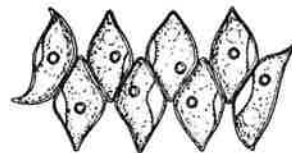
Volvox aureus



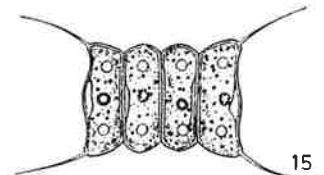
Pandorina morum



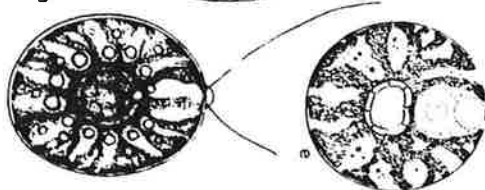
Asterococcus superbus



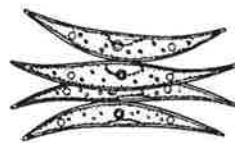
Scenedesmus obliquus



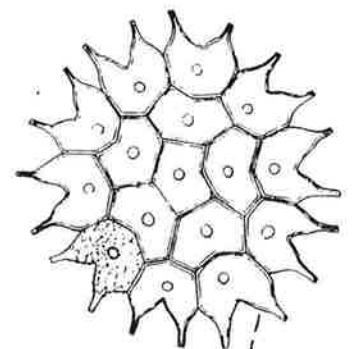
Scenedesmus quadricauda



Oocystis sp.

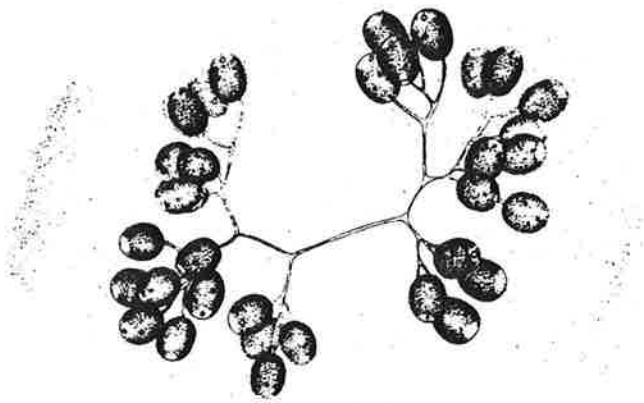


Scenedesmus acuminatus

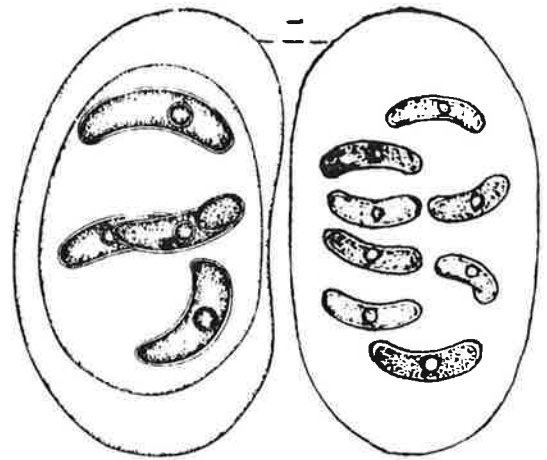


Pediatrum boryanum

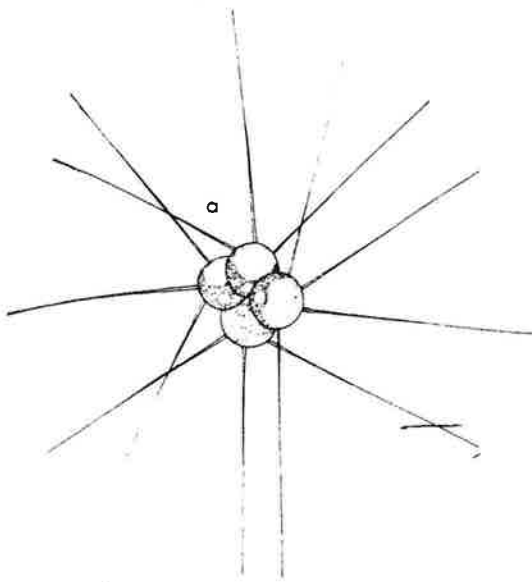
Fortsetzung: Chlorophyta



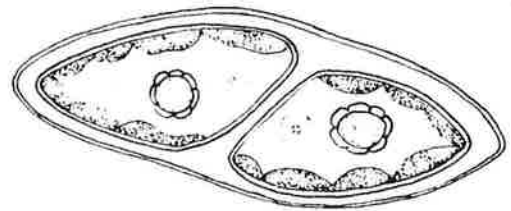
Dictyosphaerium sp.



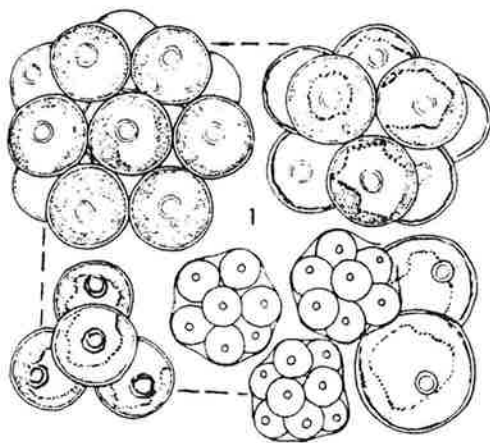
Nephrocytium agardhianum



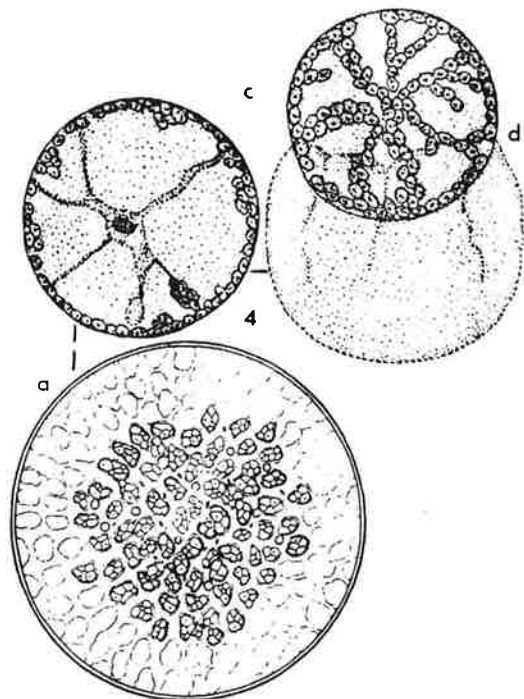
Micractinium sp.



Ankistrodesmus viridis



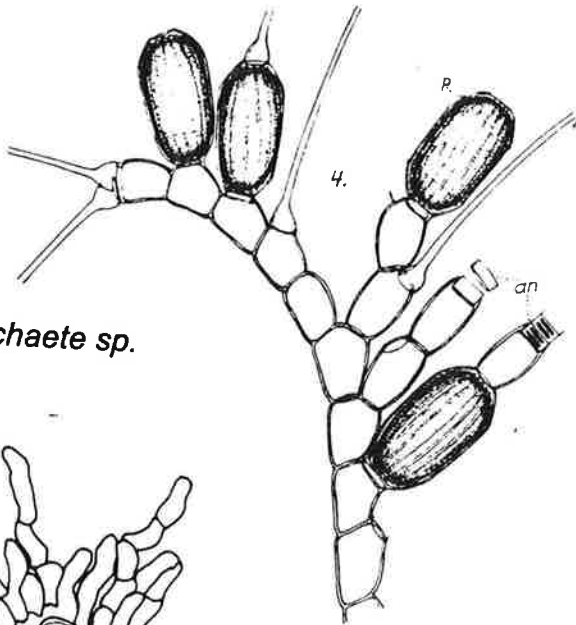
Coelastrum microporum



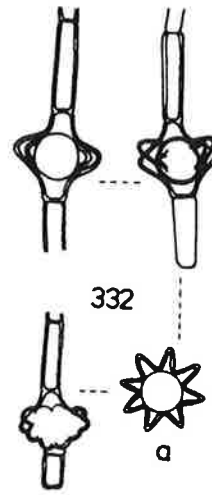
Eremosphaera viridis

Fortsetzung: Chlorophyta

Bulbochaete sp.

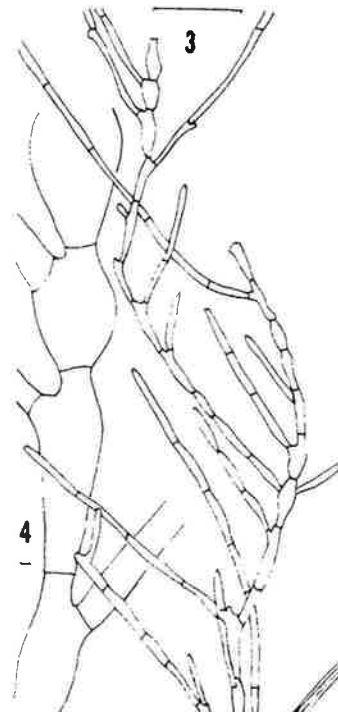
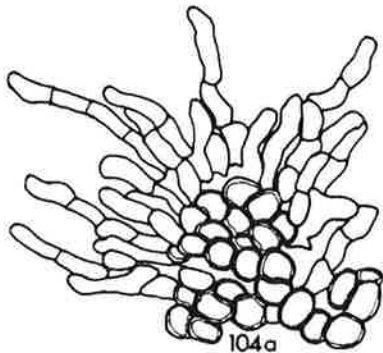


Oedogonium itzigsohnii

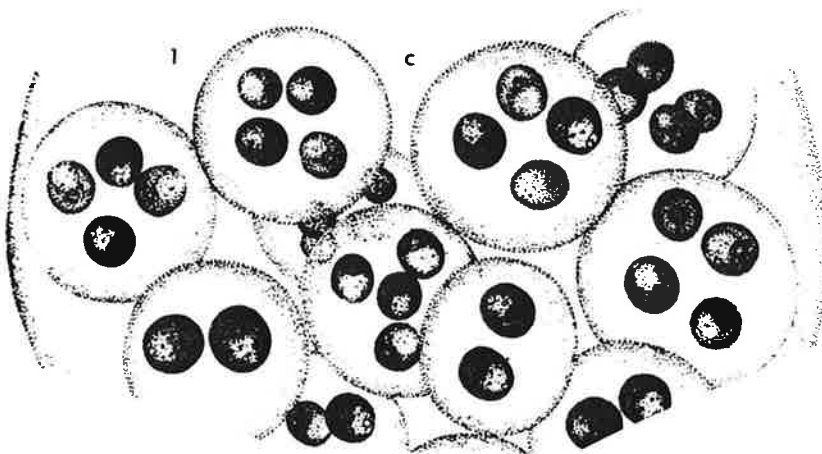
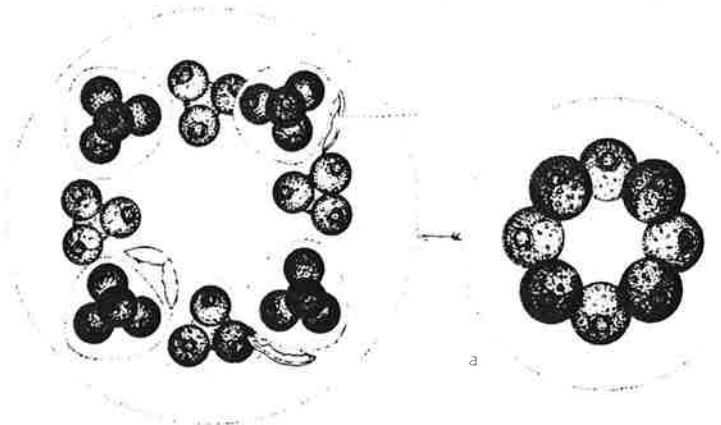


Oedogonium sp.

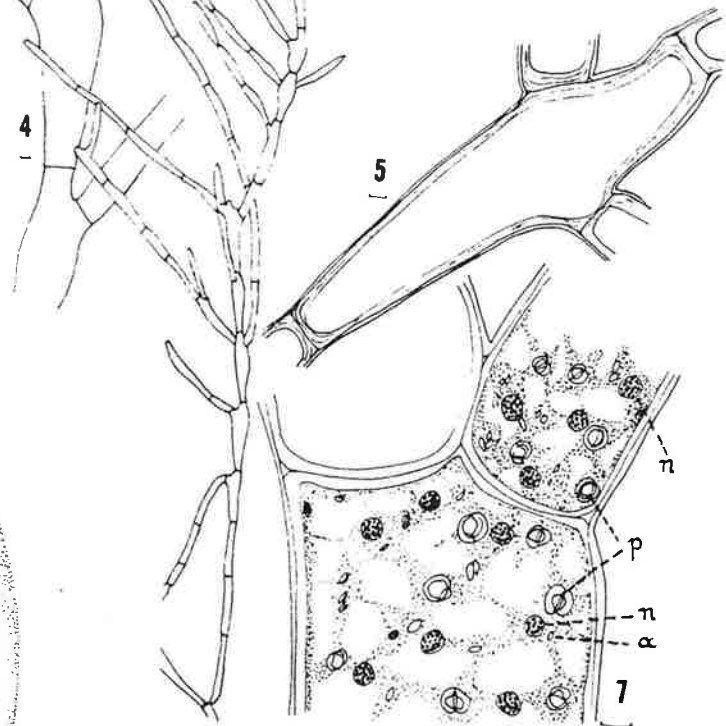
Gongrosira incrustans



Chlamydocapsa planctonica

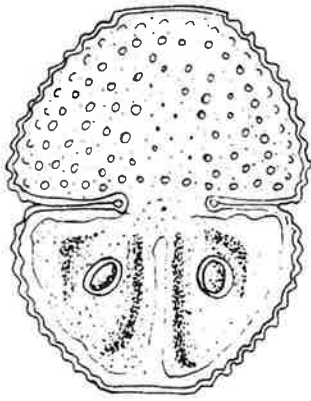


Sphaerocystis schroeteri

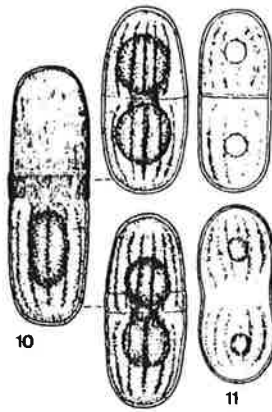


Cladophora glomerata

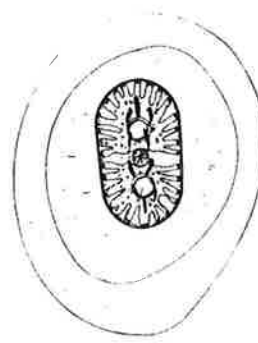
Fortsetzung: Chlorophyta



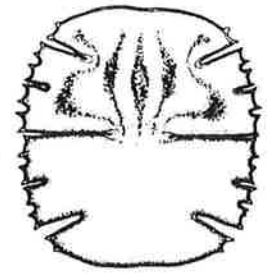
Cosmarium botrytis



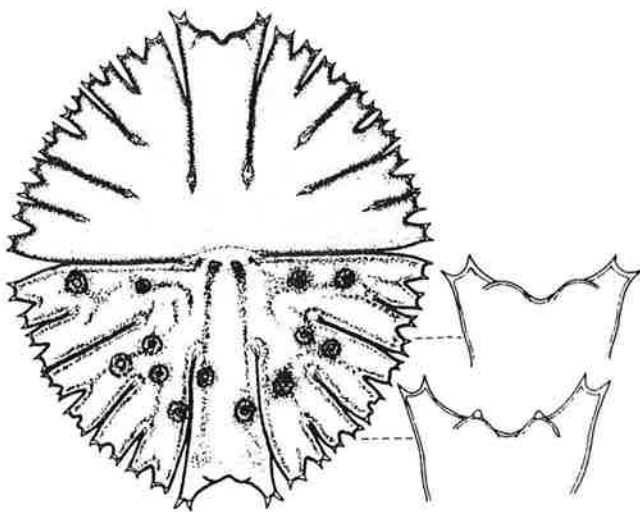
Penium polymorphum



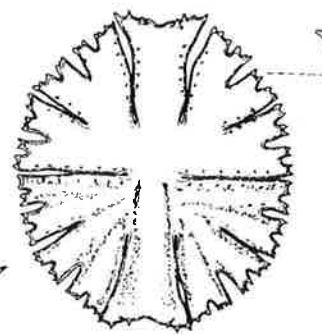
Cylindrocystis



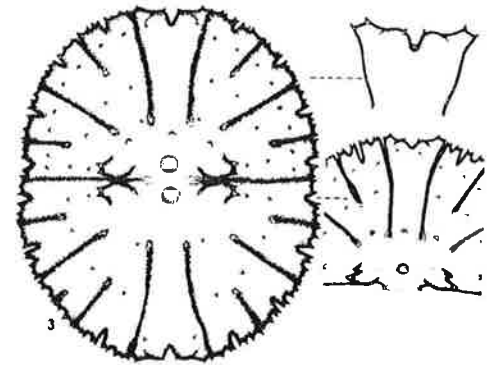
Micrasterias truncata



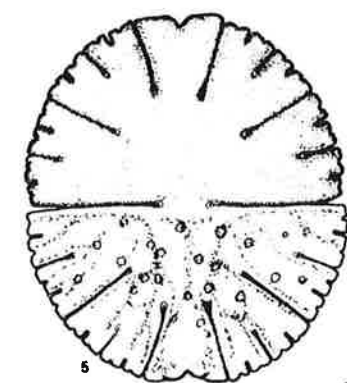
Micrasterias rotata



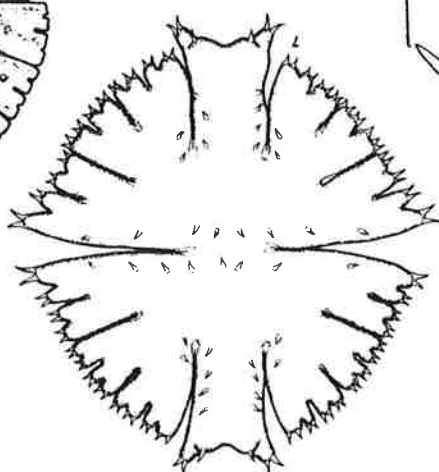
Micrasterias papillifera



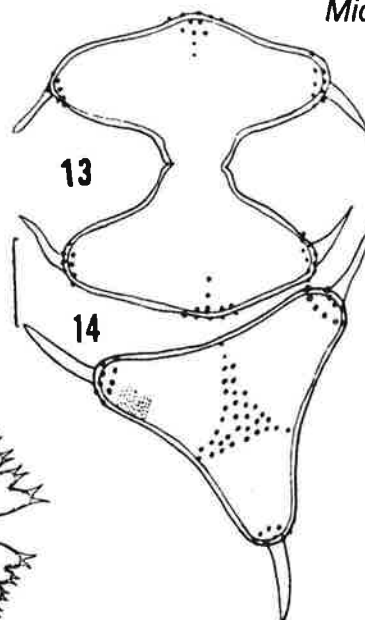
Micrasterias thomasi



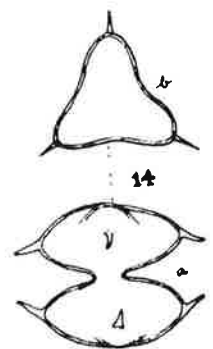
Micrasterias denticulata



Micrasterias fimbriata

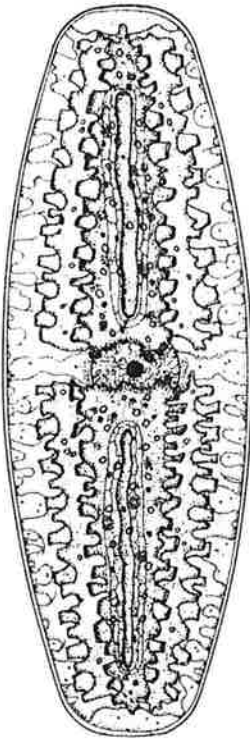


Staurodesmus cuspidatus

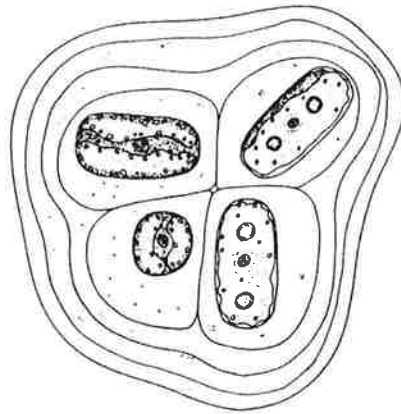


Staurodesmus dickiei

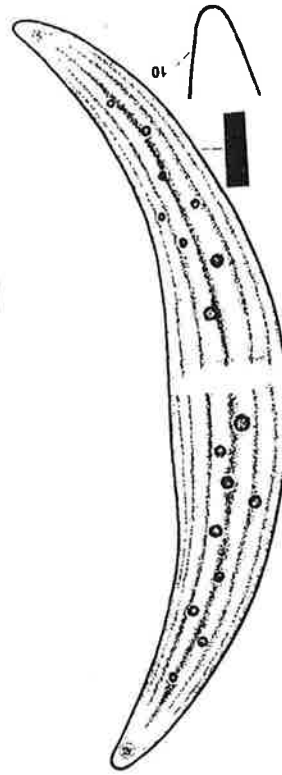
Fortsetzung: Chlorophyta



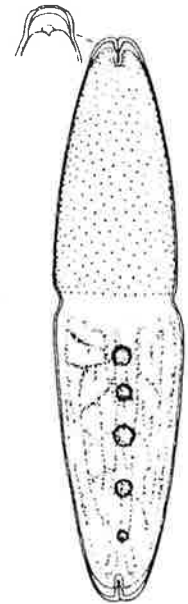
Netrium digitus



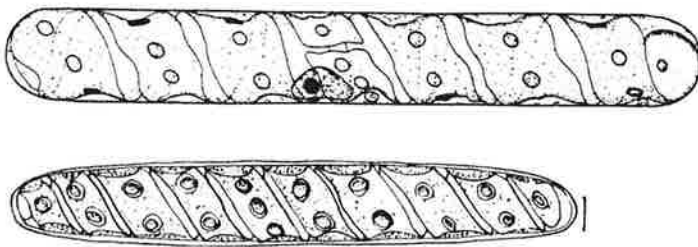
Mesotaenium sp.



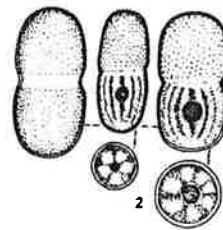
Closterium ehrenbergii



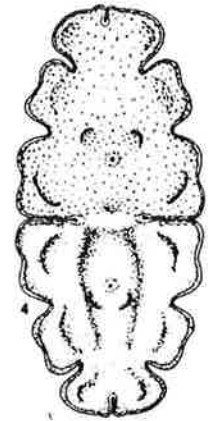
Tetmemorus granulatus



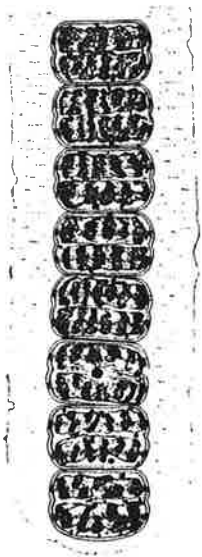
Spirotaenia condensata



Actinotaenium cucurbita



Euastrum



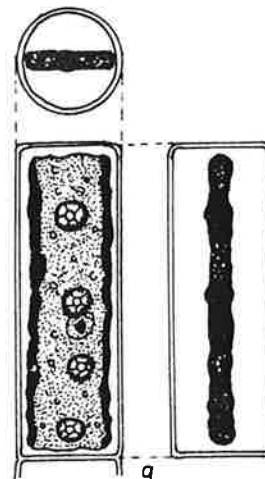
Hyalotheca dissiliens



Desmidium swartzii



Zygnema sp.

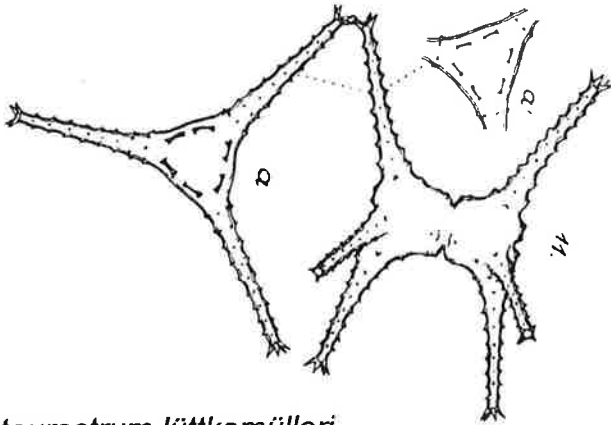


Mougeotia sp.

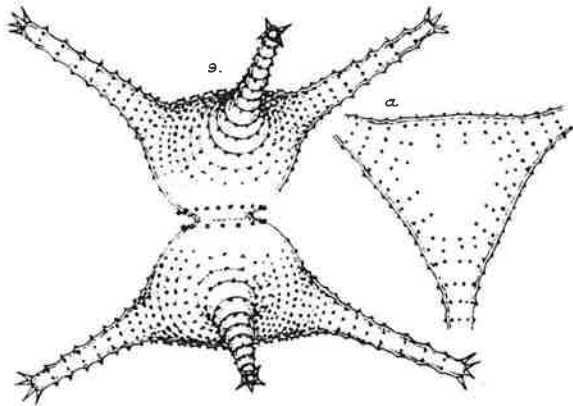


Spirogyra sp.

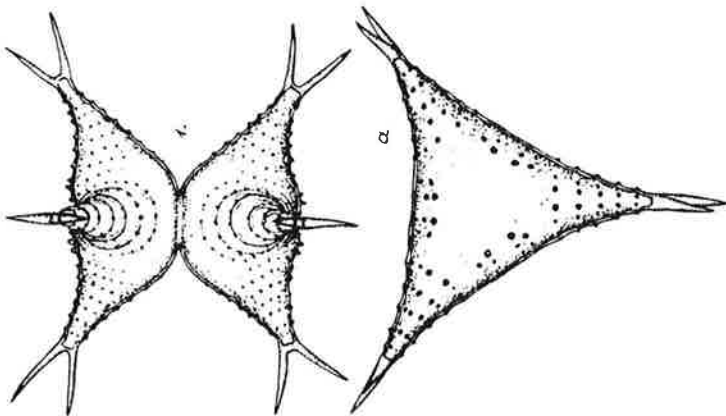
Fortsetzung: Chlorophyta



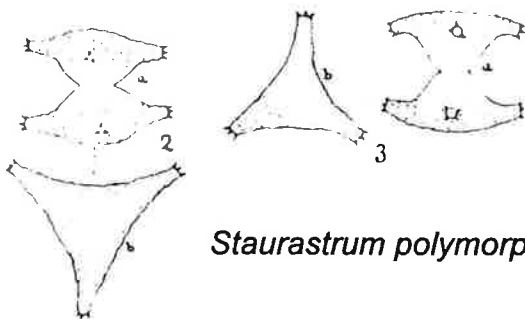
Staurastrum lüttkemülleri



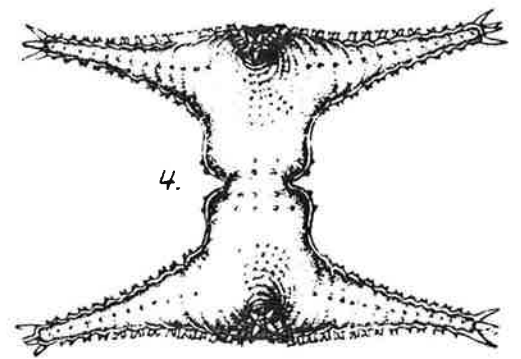
Staurastrum cingulum



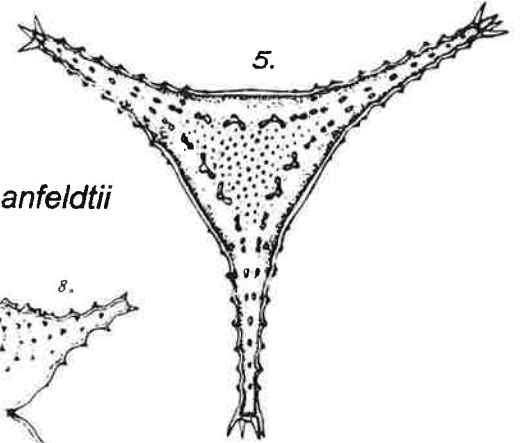
Staurastrum pseudopelagicum



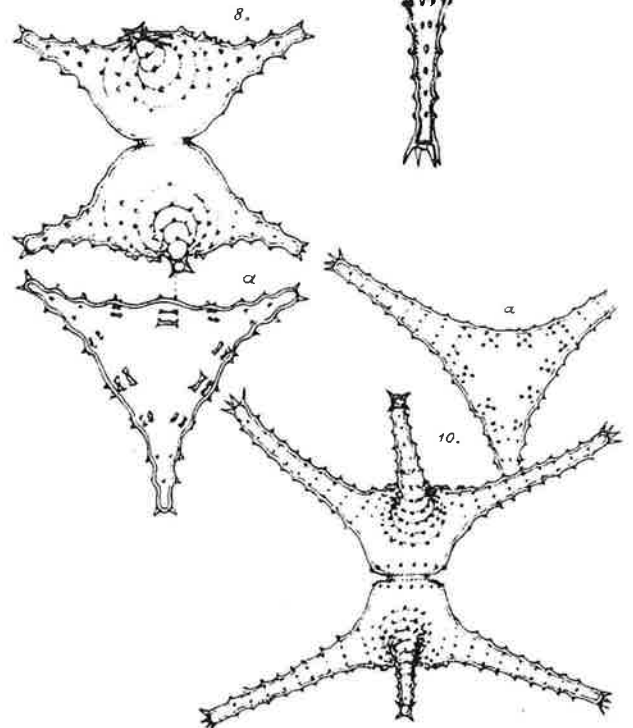
Staurastrum polymorphum



Staurastrum manfeldtii

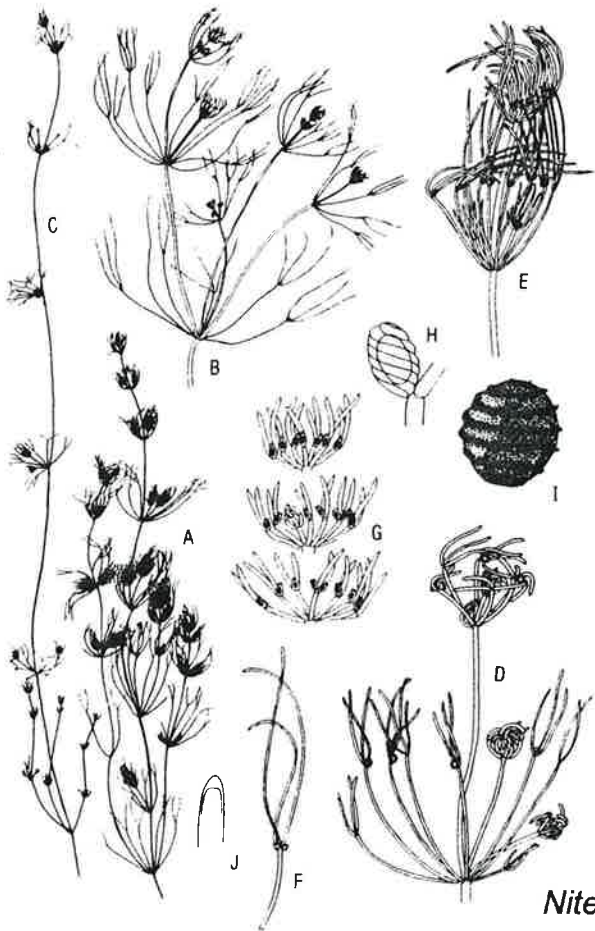


Staurastrum gracile

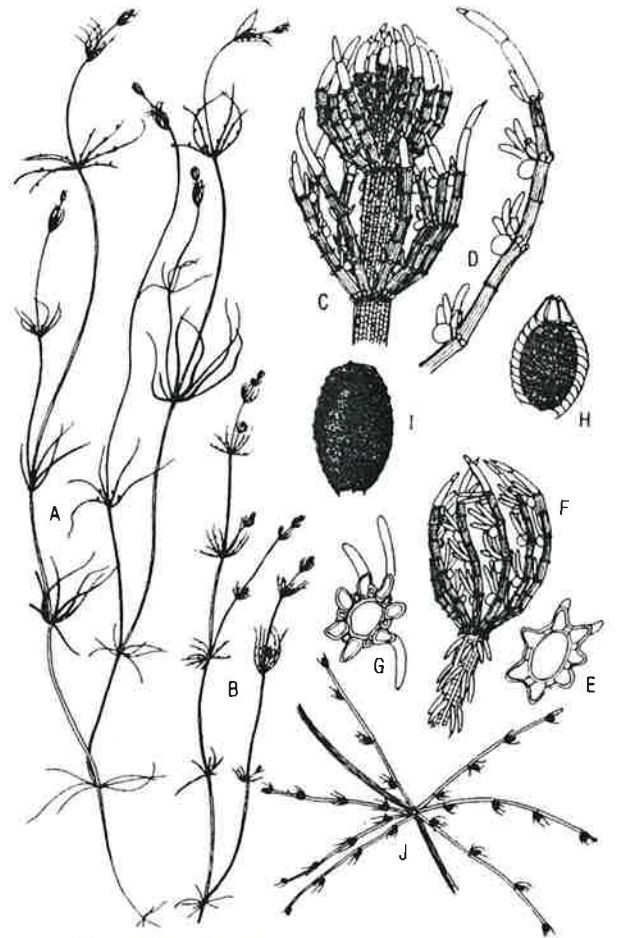


Staurastrum furcigerum

Fortsetzung: Chlorophyta

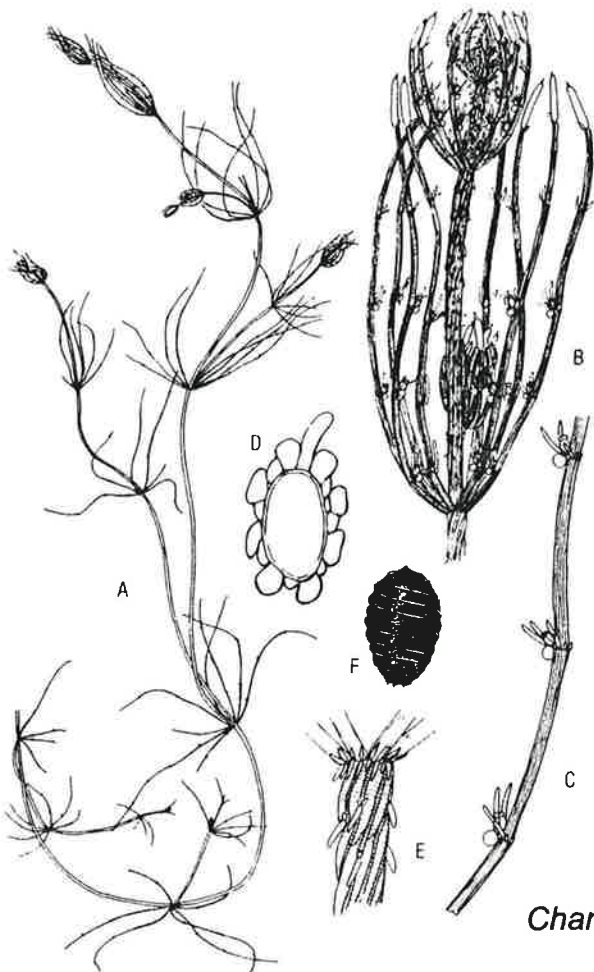


Nitella opaca



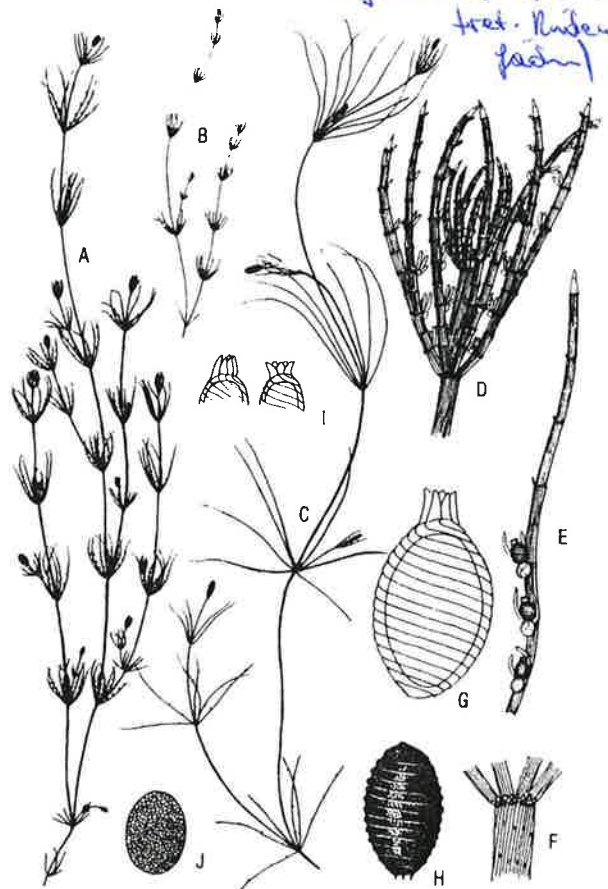
diplousisch, hetero-
isousisch

Chara contraria
tylokanth (auf Wasser-
tritt. Ruten-
faden)



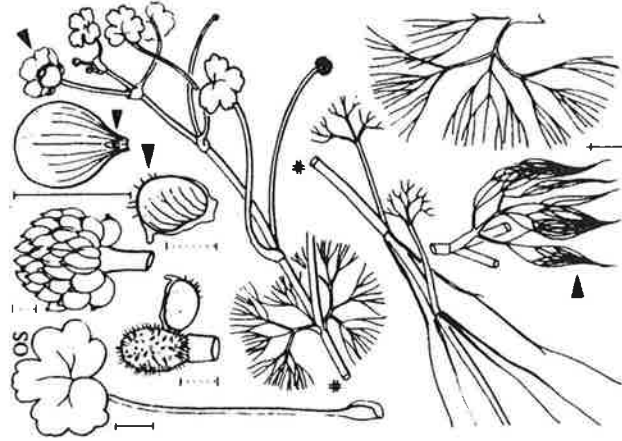
Chara rudis

diplousisch - heterousisch (oudacanth)

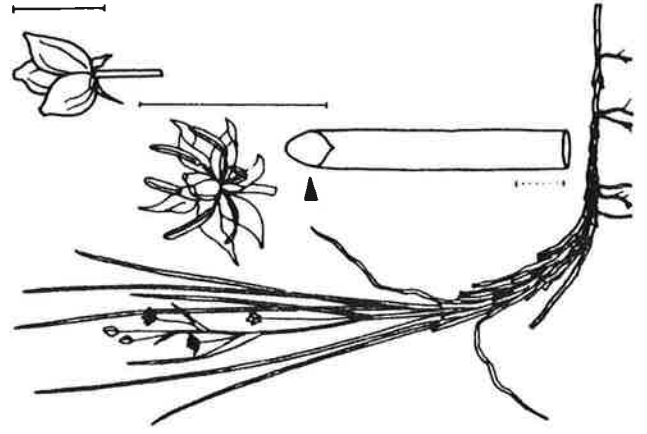


Chara globularis (= *C. fragilis*)

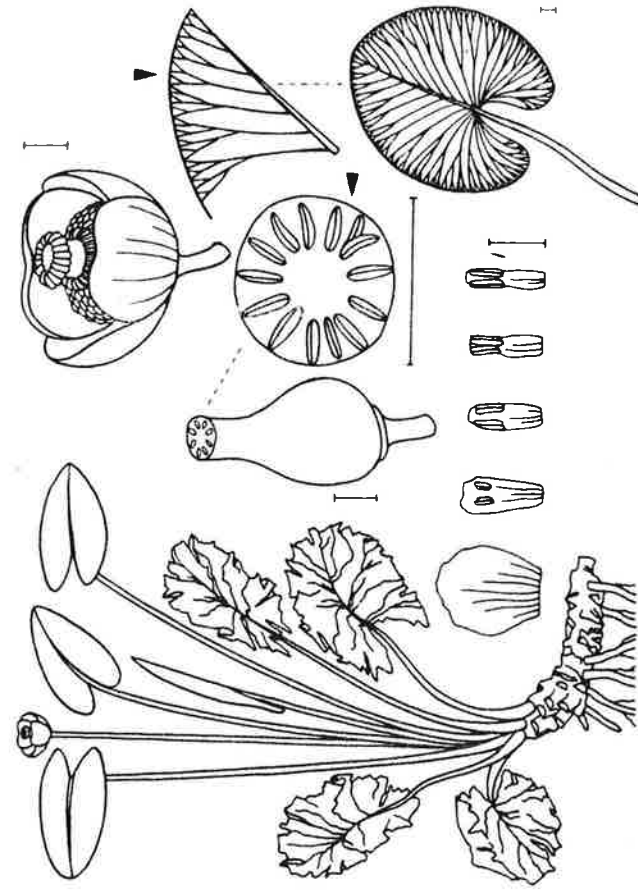
Makrophyten



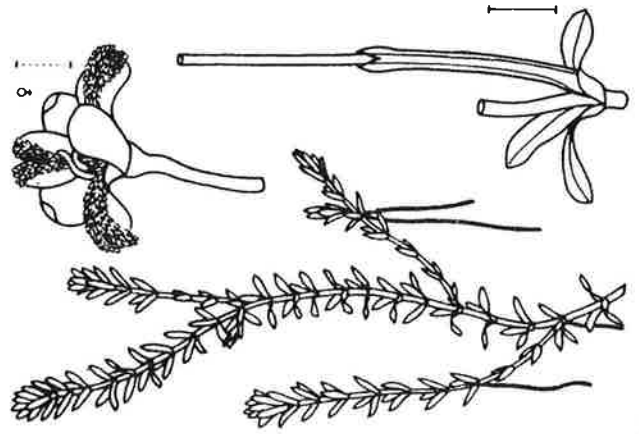
Gemeiner W. – *R. aquatilis
0,10–2,00 ♂ 2l 4–9
(weiß, am Grund gelb)



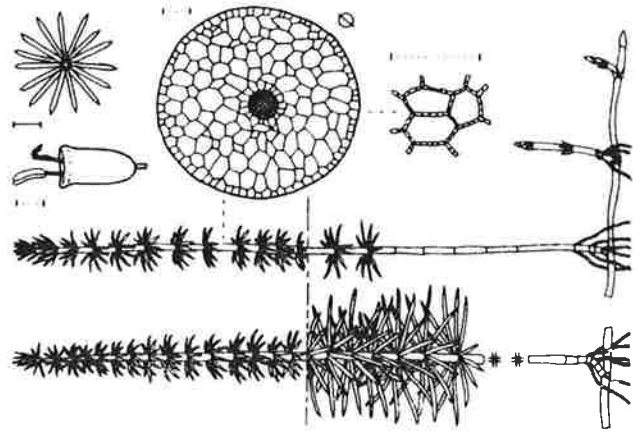
Blasenbinse – *Scheuchzeria palustris* 0,10–0,20 2l 5–6



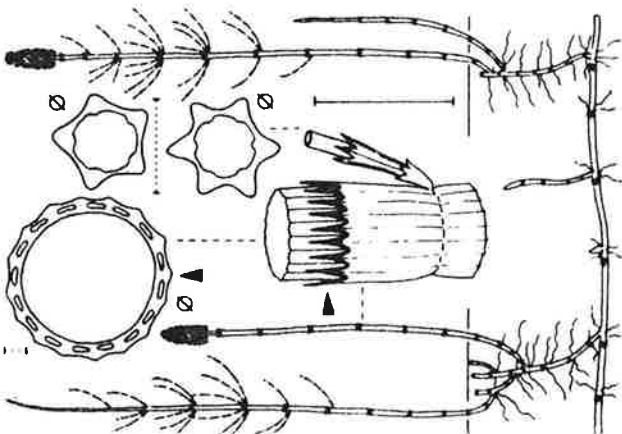
Große Teichrose – *Nuphar lutea* 0,50–2,50 2l 6–8 ▽ (gelb)



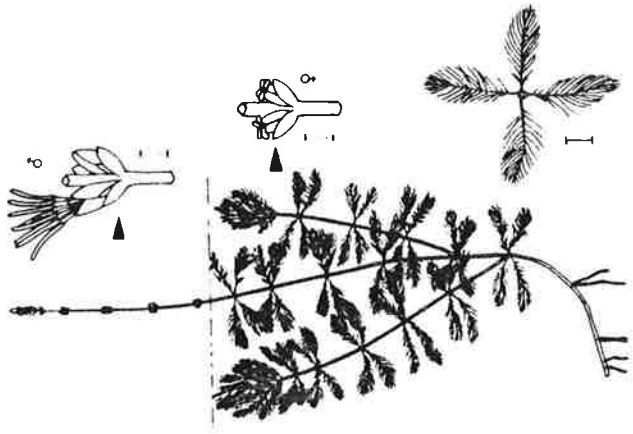
Kanadische W. – *E. canadensis*
0,30–0,60 2l 5–8



Tannenwedel – *Hippuris vulgaris*
0,10–0,50 2l 5–8
(StgØ vgl. Quirl-Tännel S. 139)

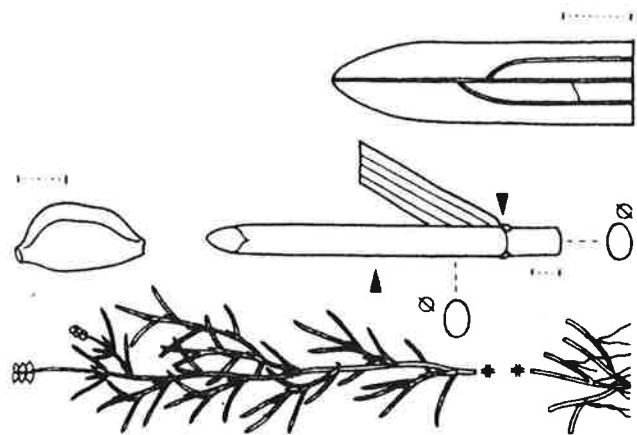


Teich-Sch. – *E. fluviatile*
0,50–1,50 2l 5–6

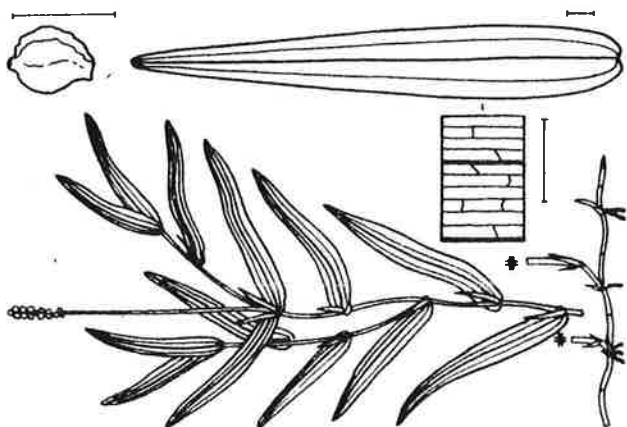


Ähren-T. – *M. spicatum*
0,30–2,00 2l 7–8

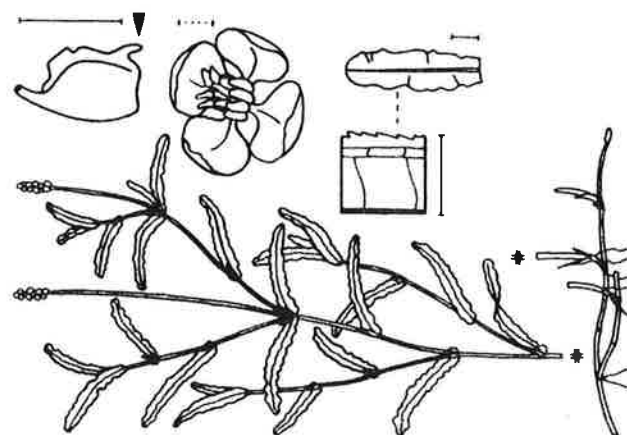
Makrophyten



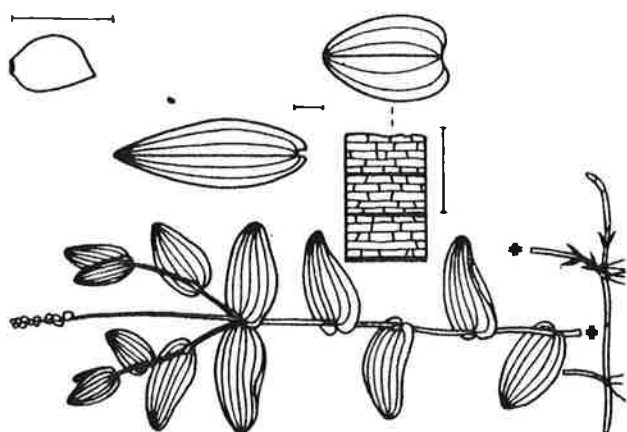
Palermo-L. – *P. panormitanus*
0,20–1,00 2l 6–9



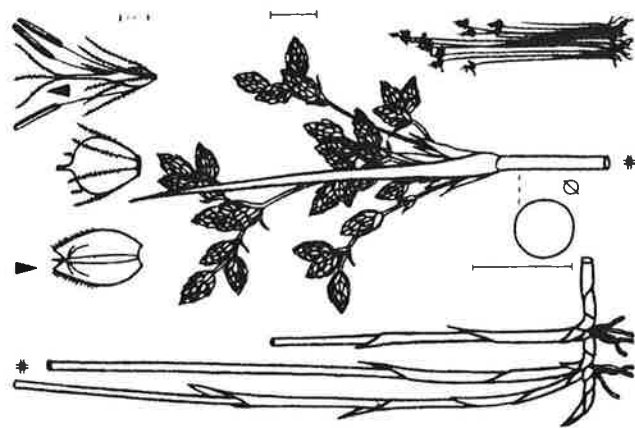
Gestrecktes L. – *P. praelongus*
0,80–3,00 2l 6–7



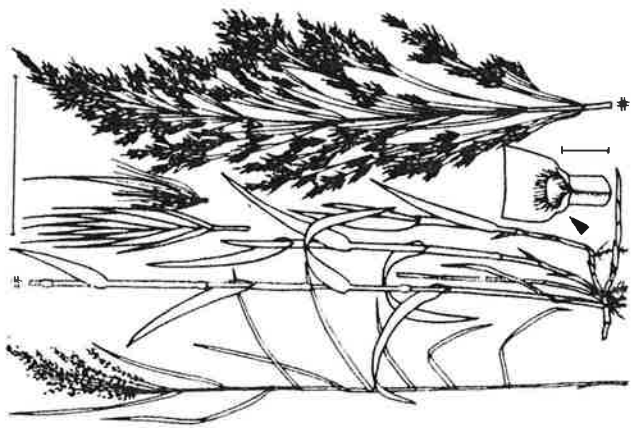
Krauses Laichkraut –
Potamogeton crispus
0,30–2,00 2l 5–9 (Bl oft rötlich)



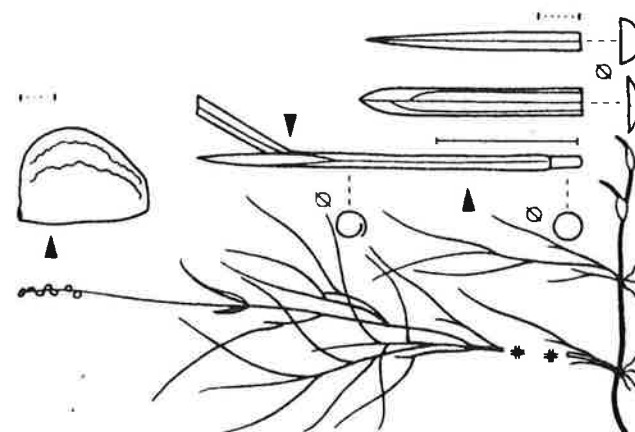
Durchwachsenes L. –
P. perfoliatus
0,30–1,00 2l 6–8



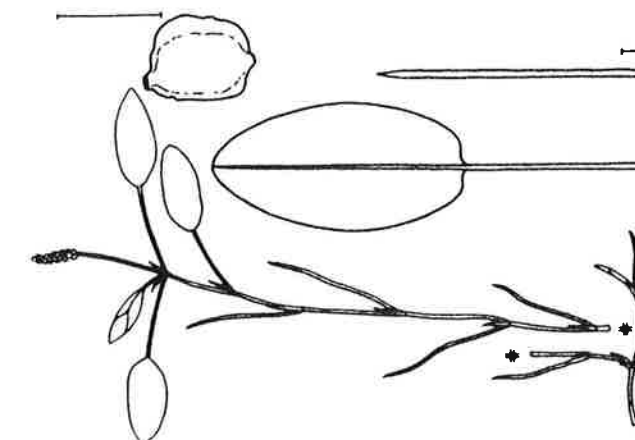
Gemeine T. – *S. lacustris*
1,00–4,00 2l 5–7 (Sp rotbraun.
Pfl grün)



**Schilf – *Phragmites australis*
1,00–4,00 2l 7–9
(Bl graugrün)



Kamm-Laichkraut –
Potamogeton pectinatus
0,30–3,00 2l 6–8



Schwimmendes L. – *P. natans*
0,60–1,50 2l 6–8