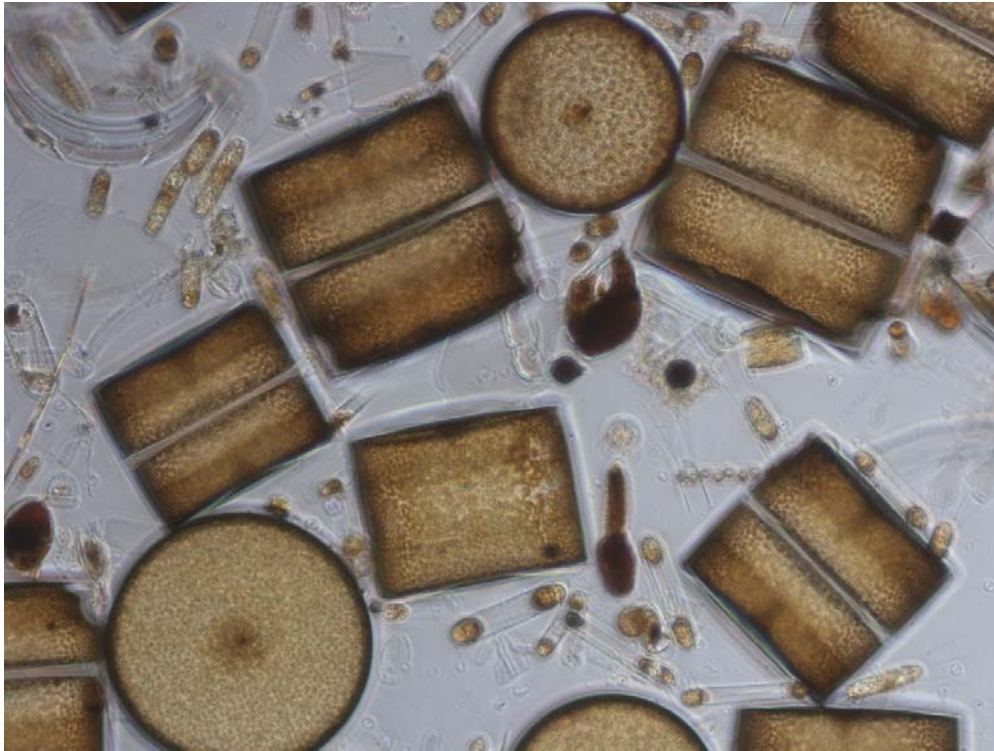


Phytoplankton in the Namibian Upwelling System

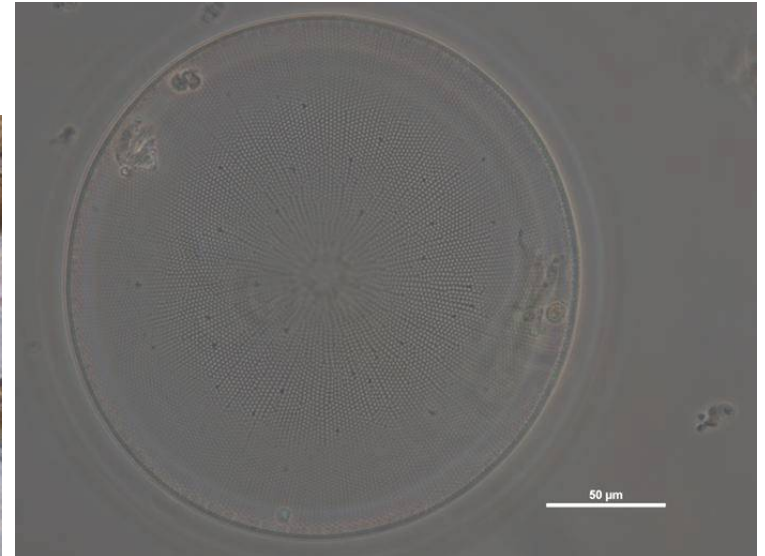
Anja Hansen
Deon Louw
Dr. Norbert Wasmund



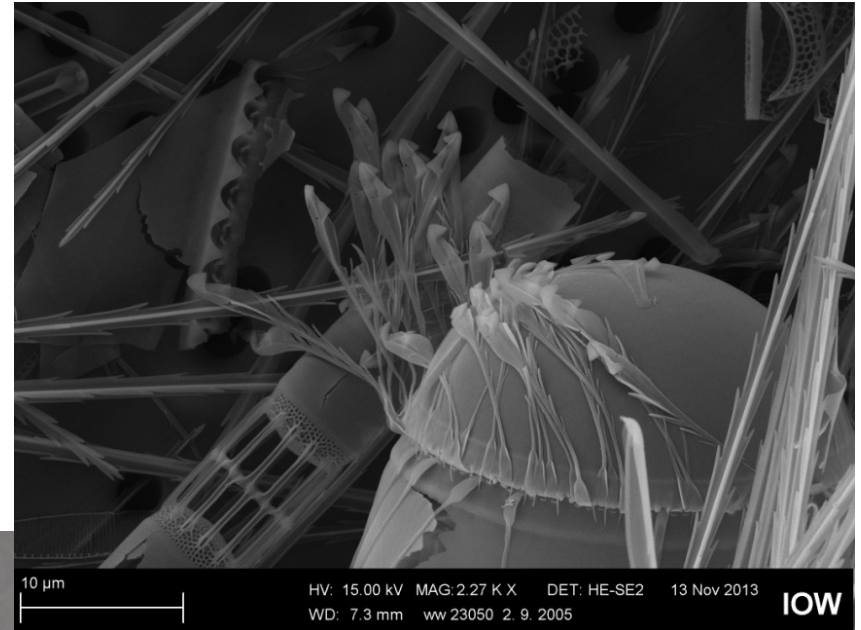
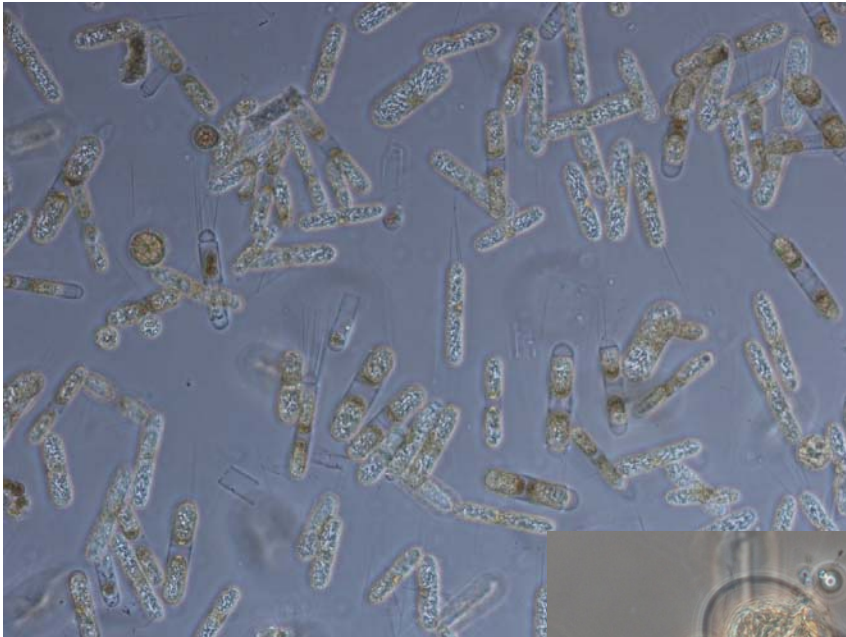
Diatoms



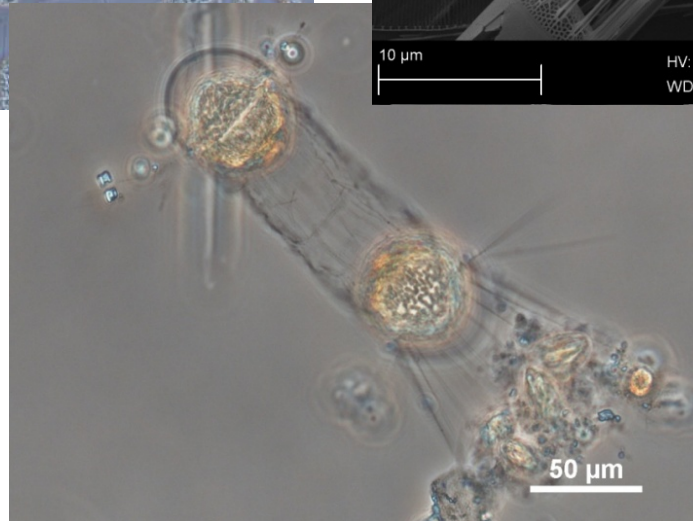
Coscinodiscus wailesii Gran & Angst



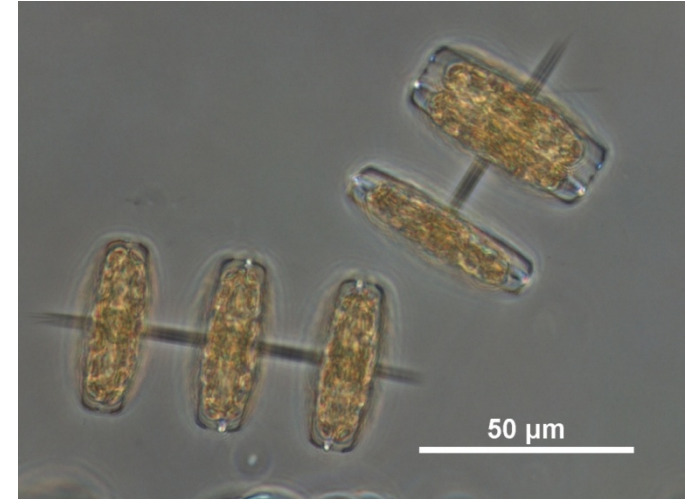
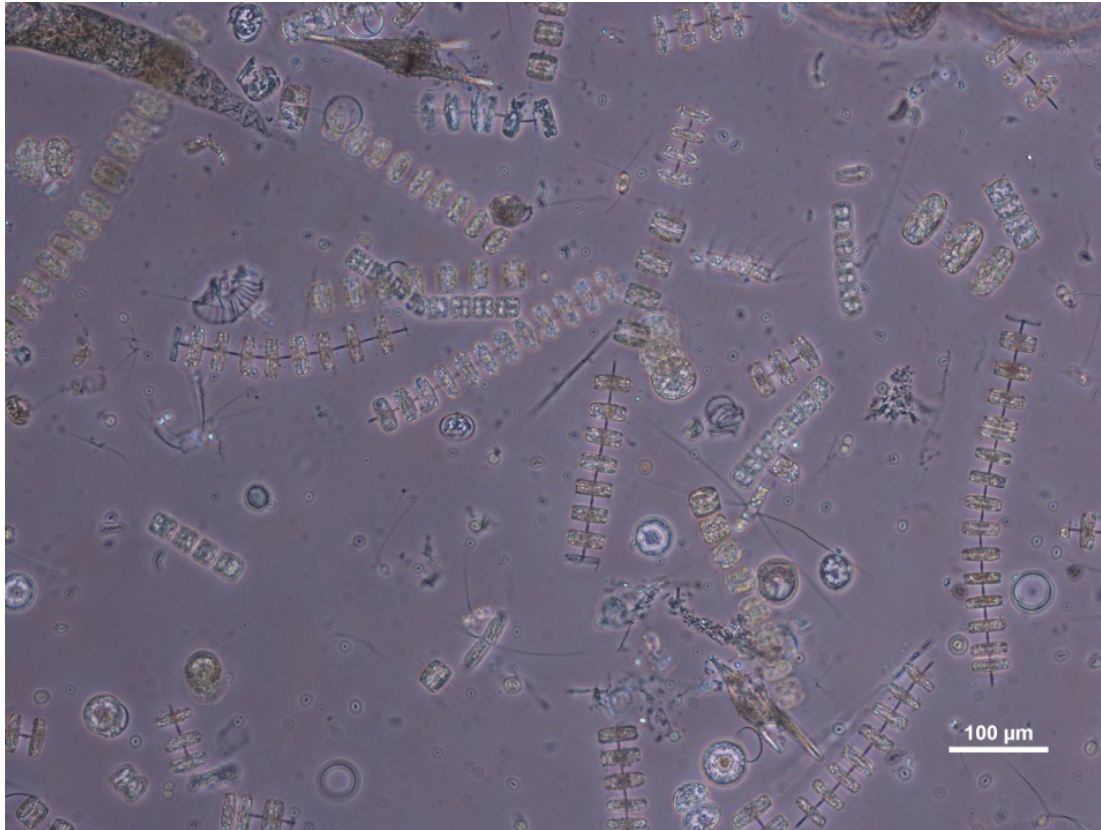
Diatoms



Corethron hystrix Hensen



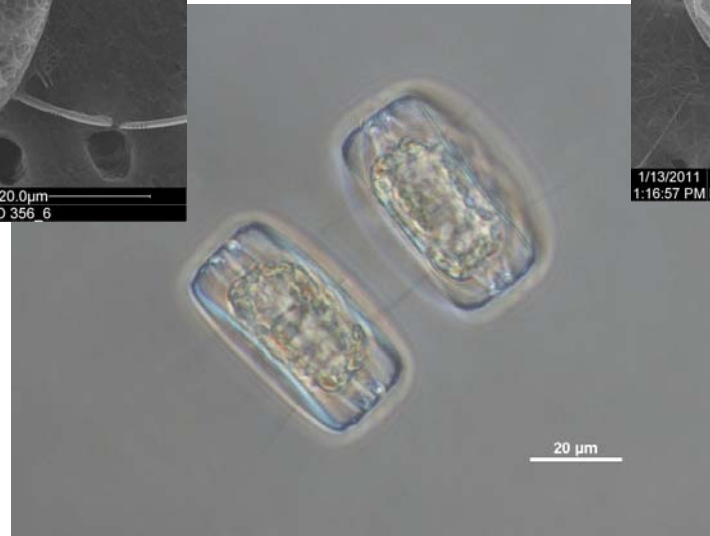
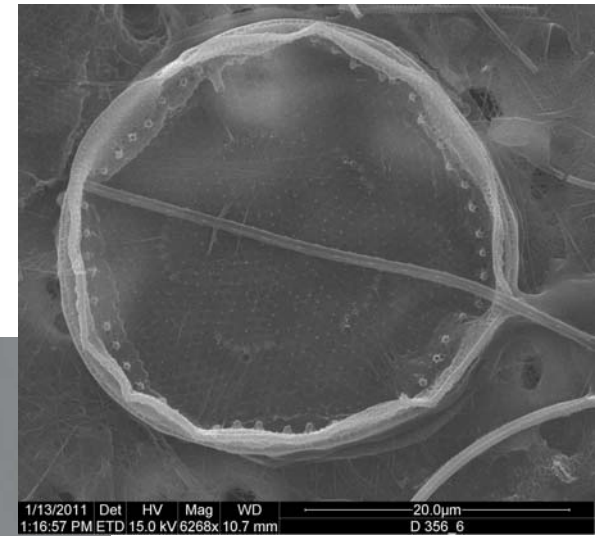
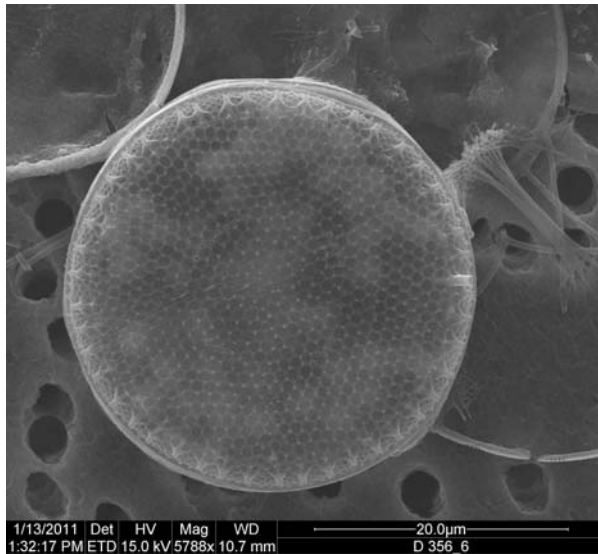
Diatoms



Thalassiosira rotula Meunier



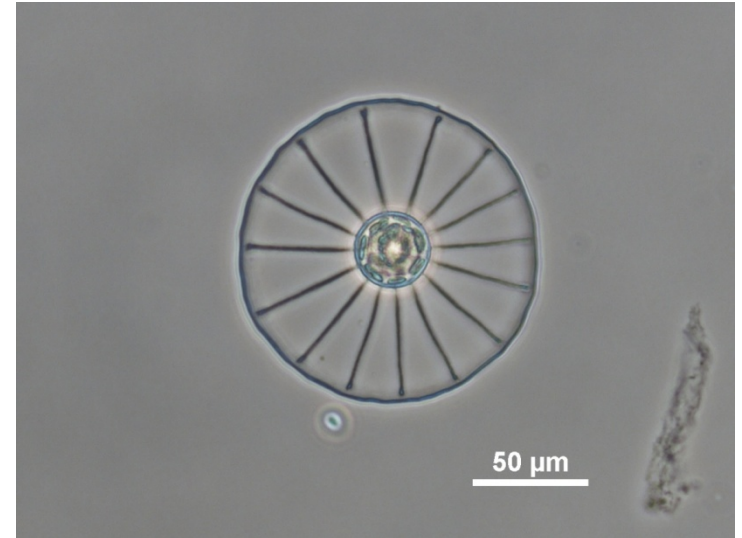
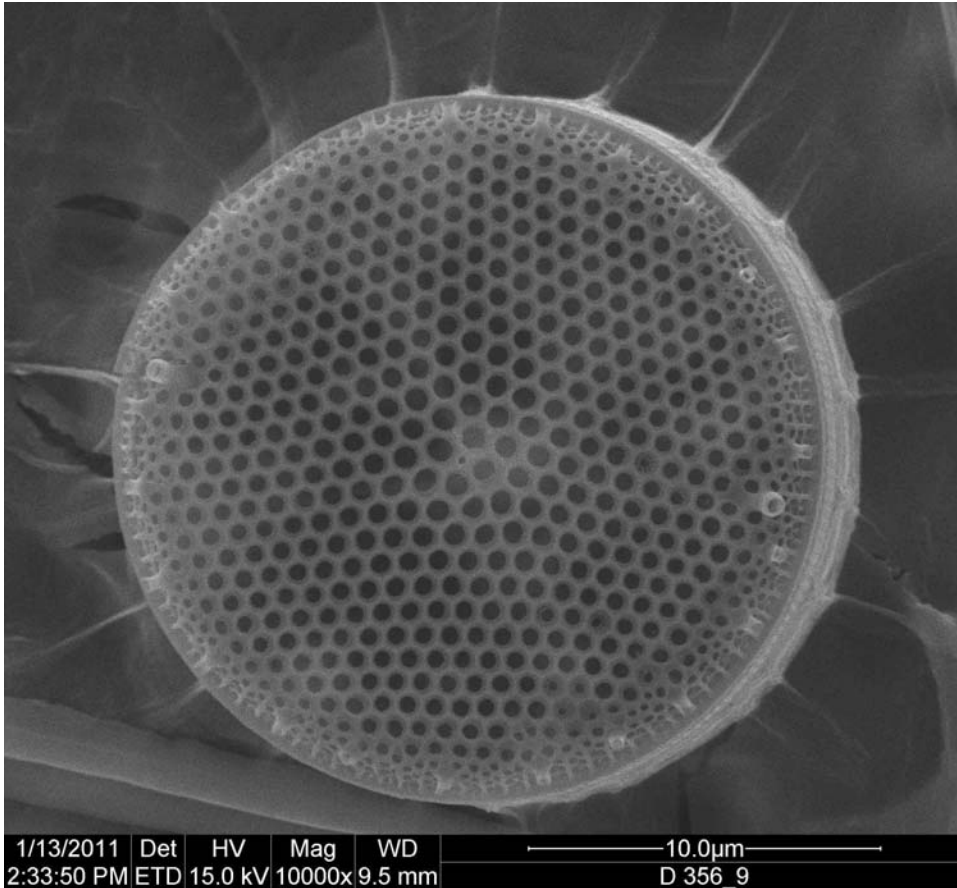
Diatoms



Thalassiosira anguste-lineata
(A. Schmidt) G. Fryxell & Hasle



Diatoms



GENUS

Planktoniella sol (Wallich) Schütt 1892

Diatoms



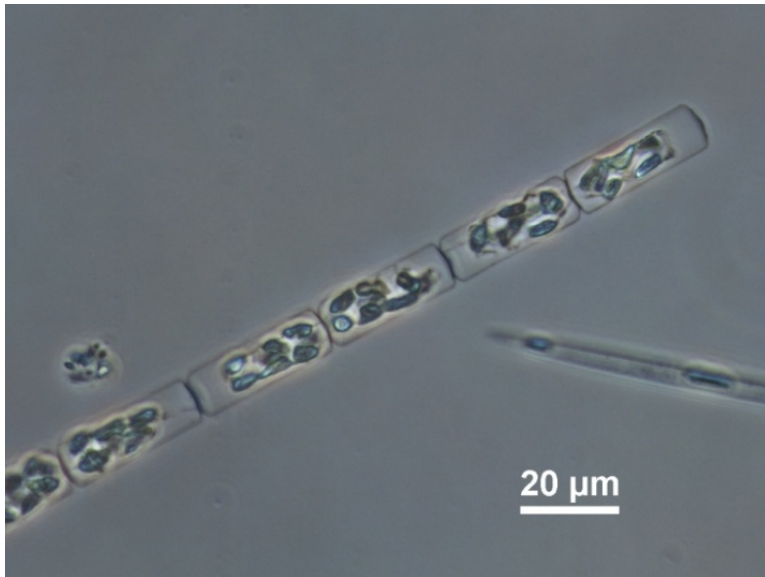
Meuneria membranacea (Cleve) P.C. Silva comb. nov.

GENUS

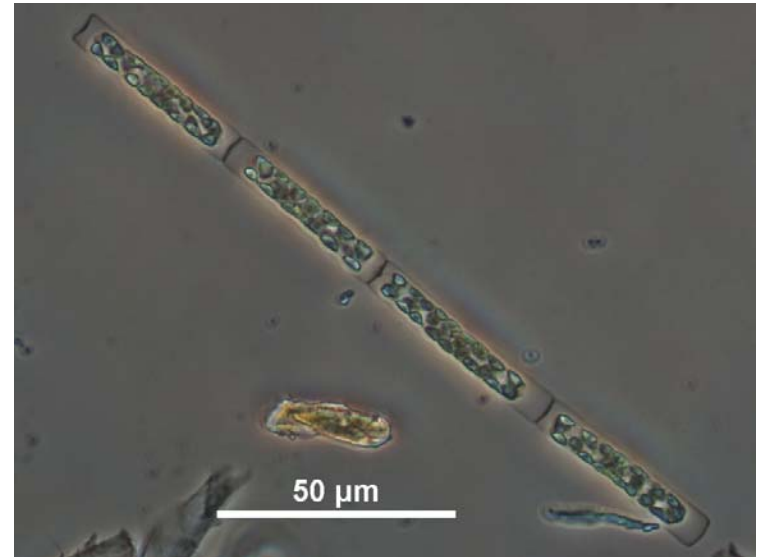


The word "GENUS" is written in a bold, black, sans-serif font. A blue, curved arrow starts from the right side of the word and points back to the left, forming a partial circle around the text.

Diatoms



Leptocylindrus danicus Cleve

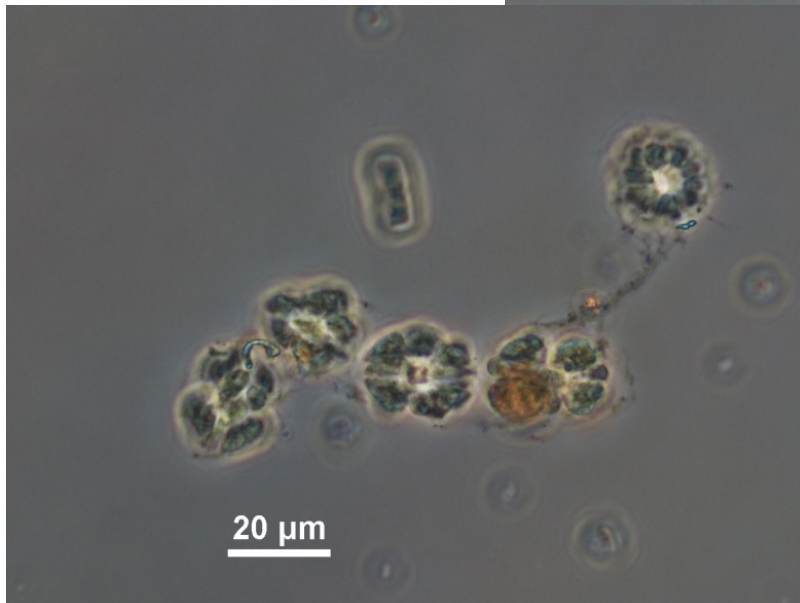
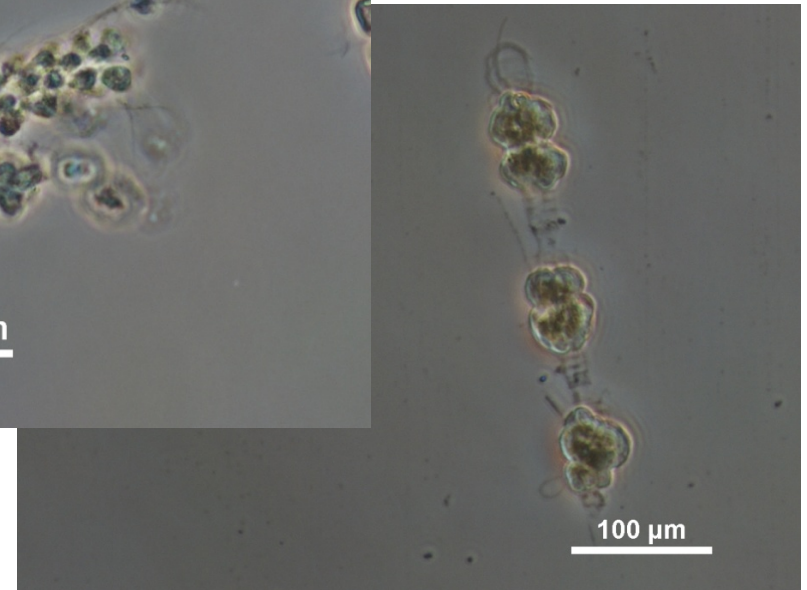
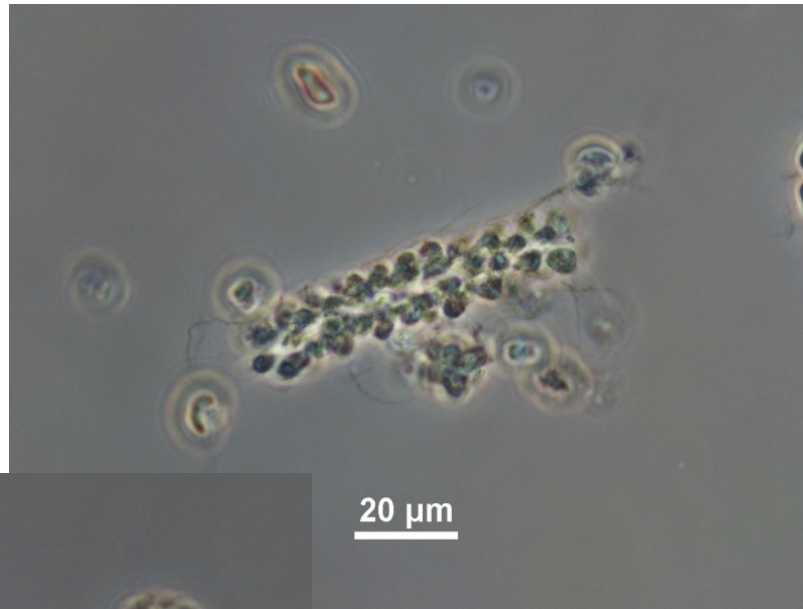


Leptocylindrus minimus Gran

GENUS



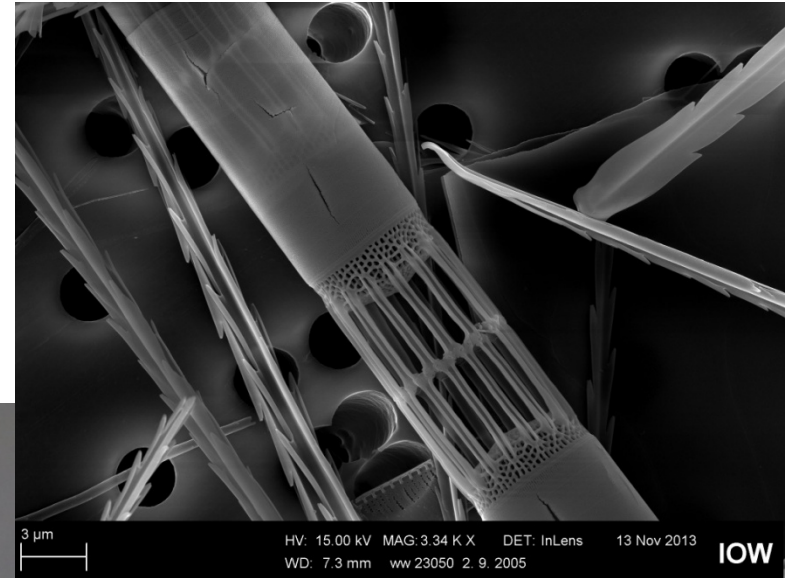
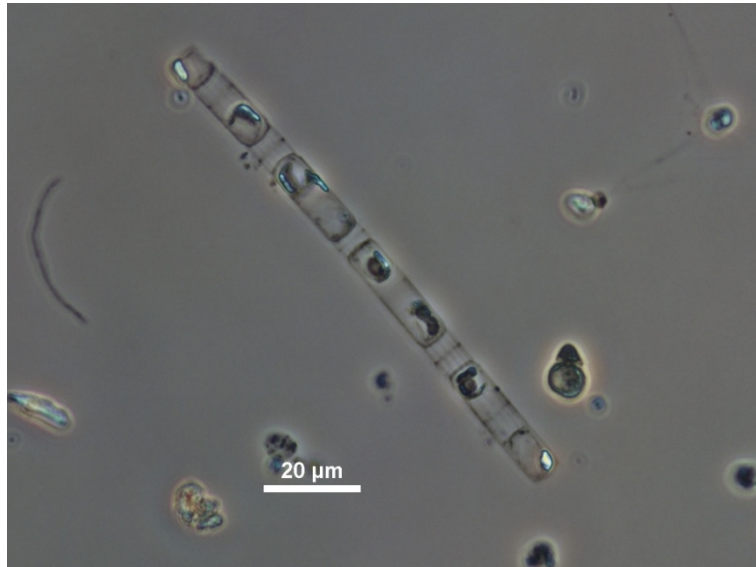
Diatoms



GENUS

Leptocylindrus mediterraneus (H. Peragallo) Hasle

Diatoms



Diatoms



Dactyliosolen phuketensis (Sundström) Hasle comb. nov.

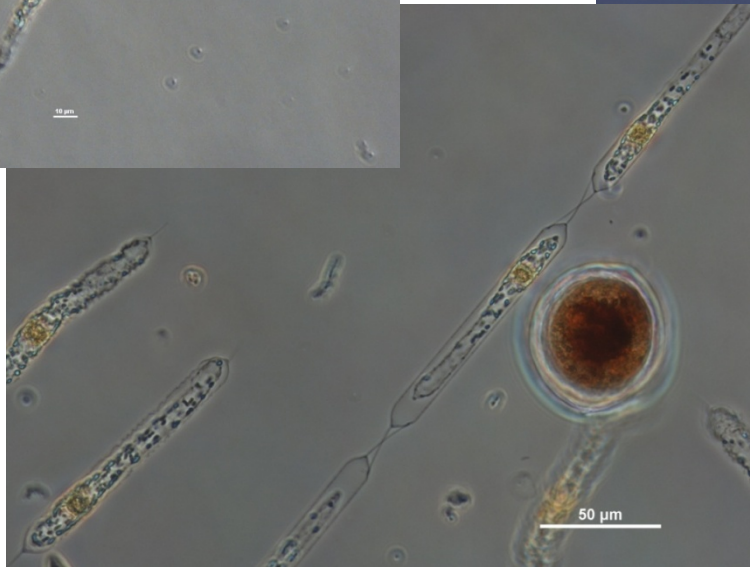
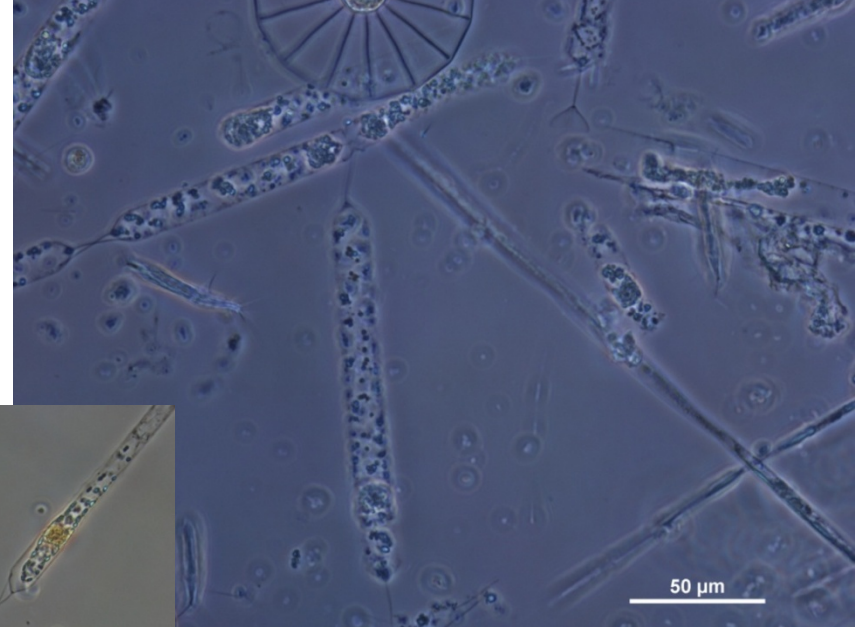
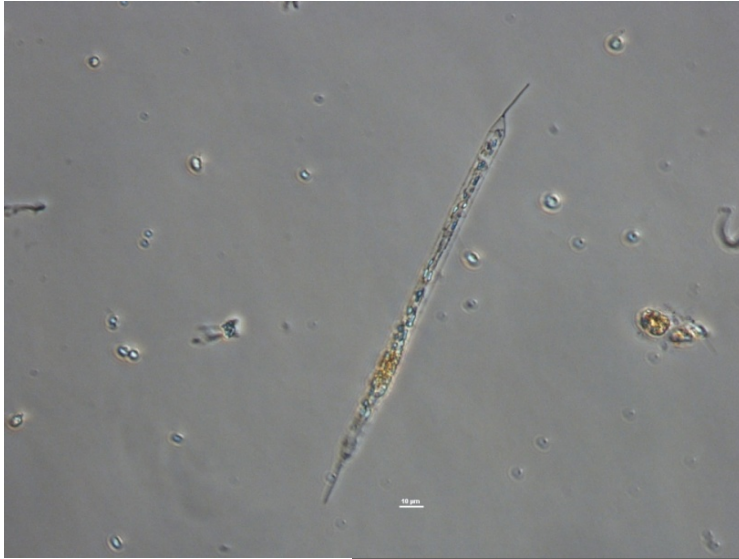


Dactyliosolen fragillissimus
(Bergon) Hasle comb. nov.

GENUS



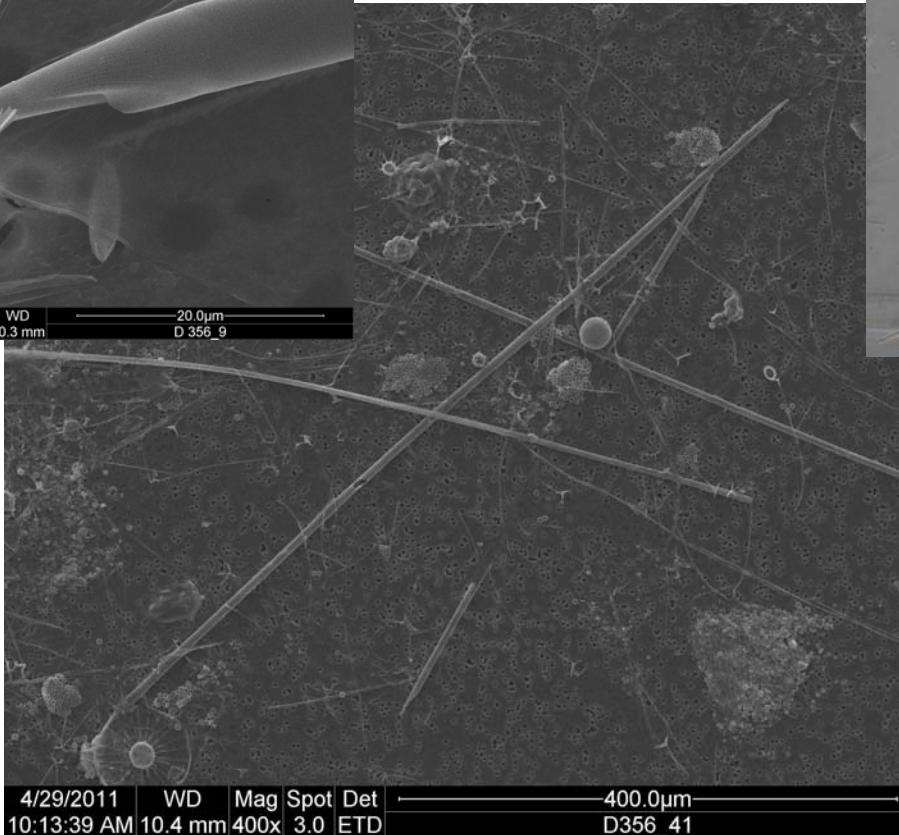
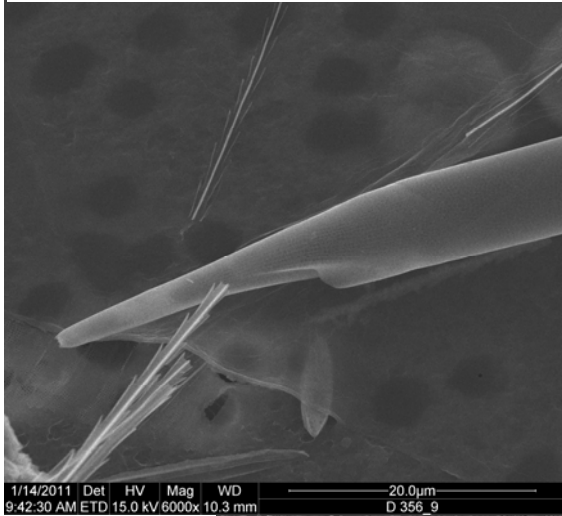
Diatoms



GENUS

Rhizosolenia cylindrus (Cleve) Hasle comb. nov.

Diatoms

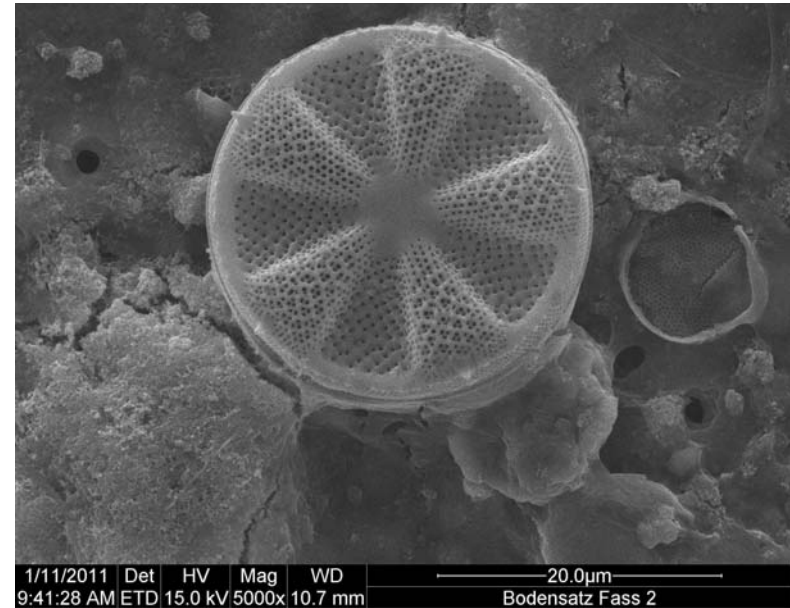
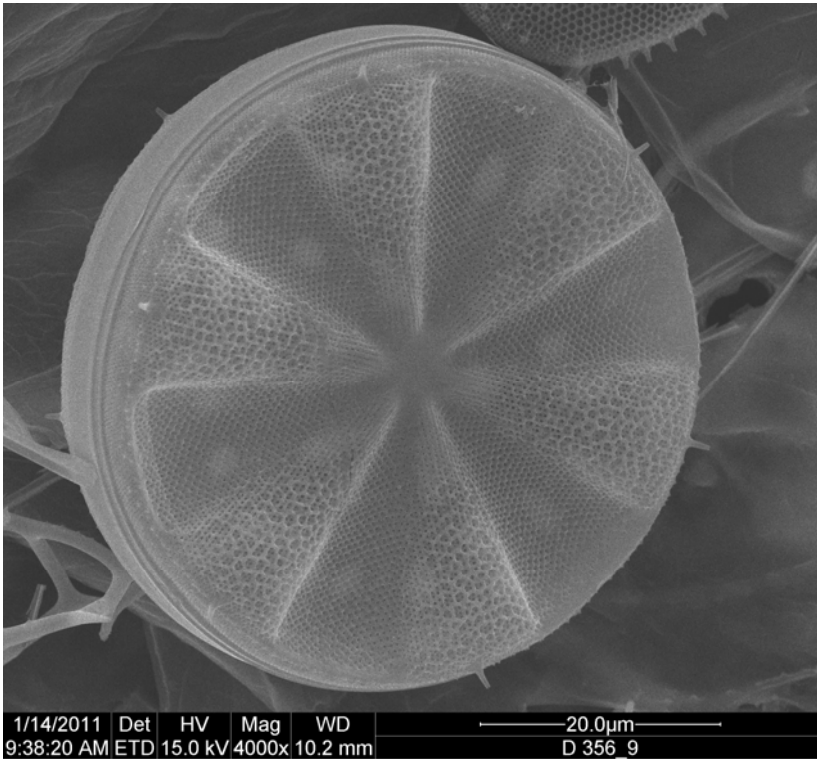


Lioloma sp. (Cupp) Hasle
comb. nov.



Proboscia alata (Brightwell) Sundström
und *Lioloma* sp.

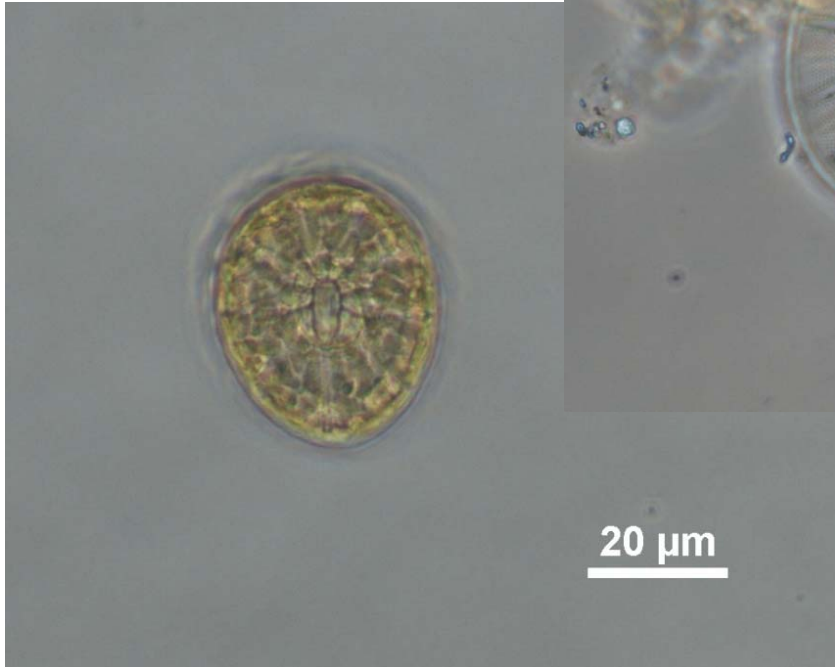
Diatoms



Actinoptychus sp. (Ehrenberg) Ehrenberg



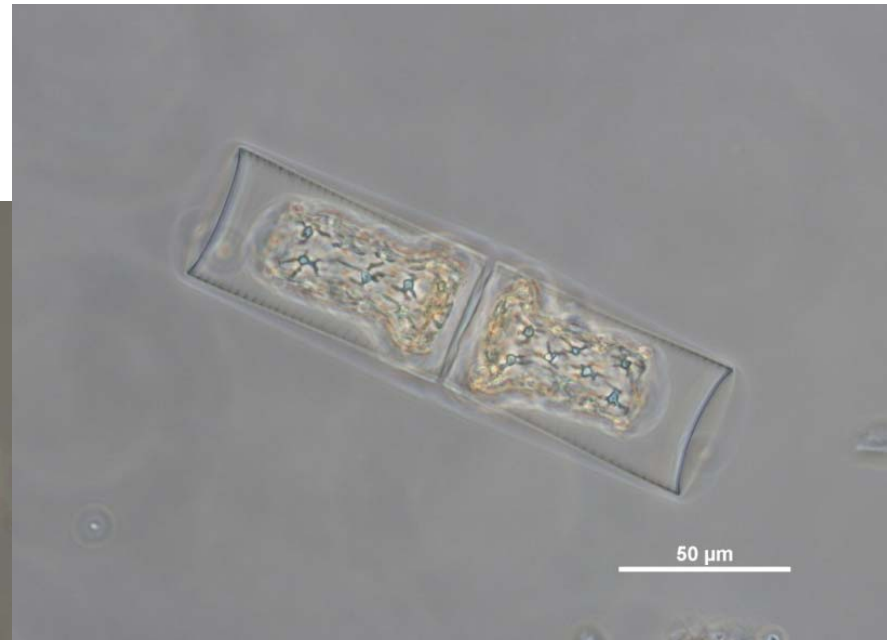
Diatoms



Asteromphalus Ehrenberg



Diatoms



Guinardia flaccida (Castracanae) H. Peragallo

GENUS



Diatoms



GENUS

Biddulphia alternans (Bailey) Van Heurck 1885

Diatoms



Ditylum brightwellii (West) Grunow

GENUS



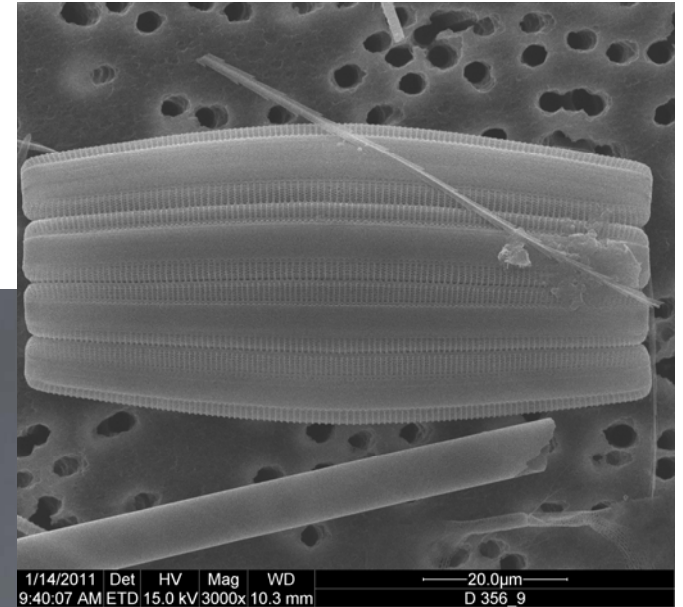
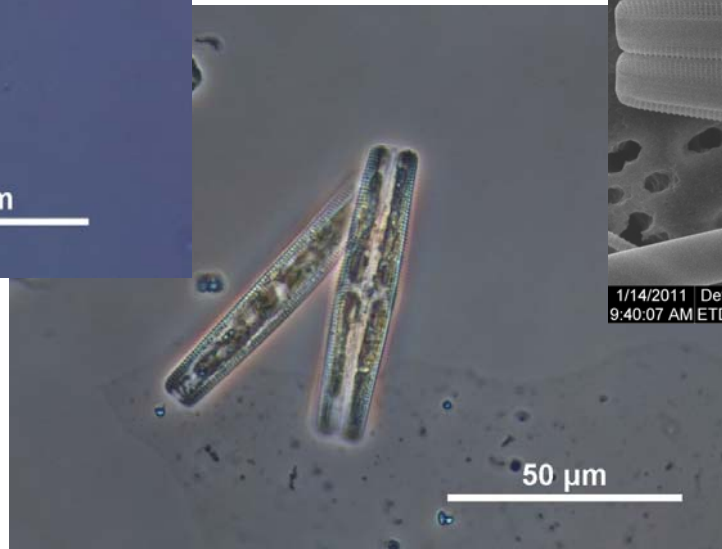
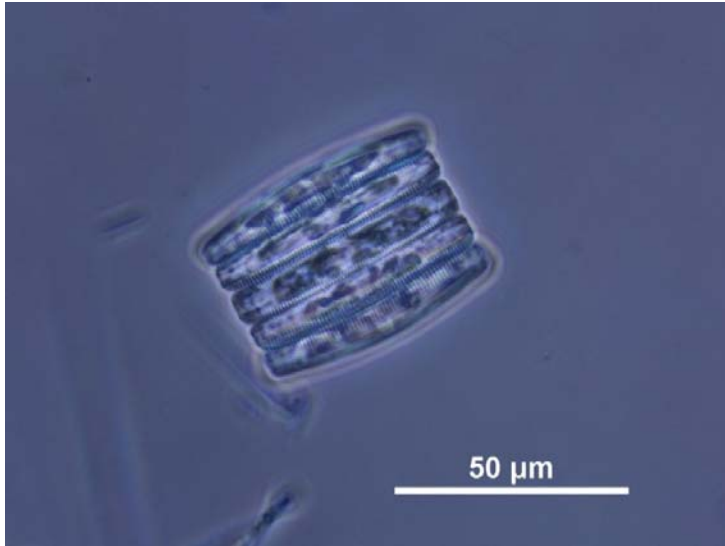
Diatoms



Pseudonitzschia seriata GRP
H. Peragallo in H. u. M. Peragallo



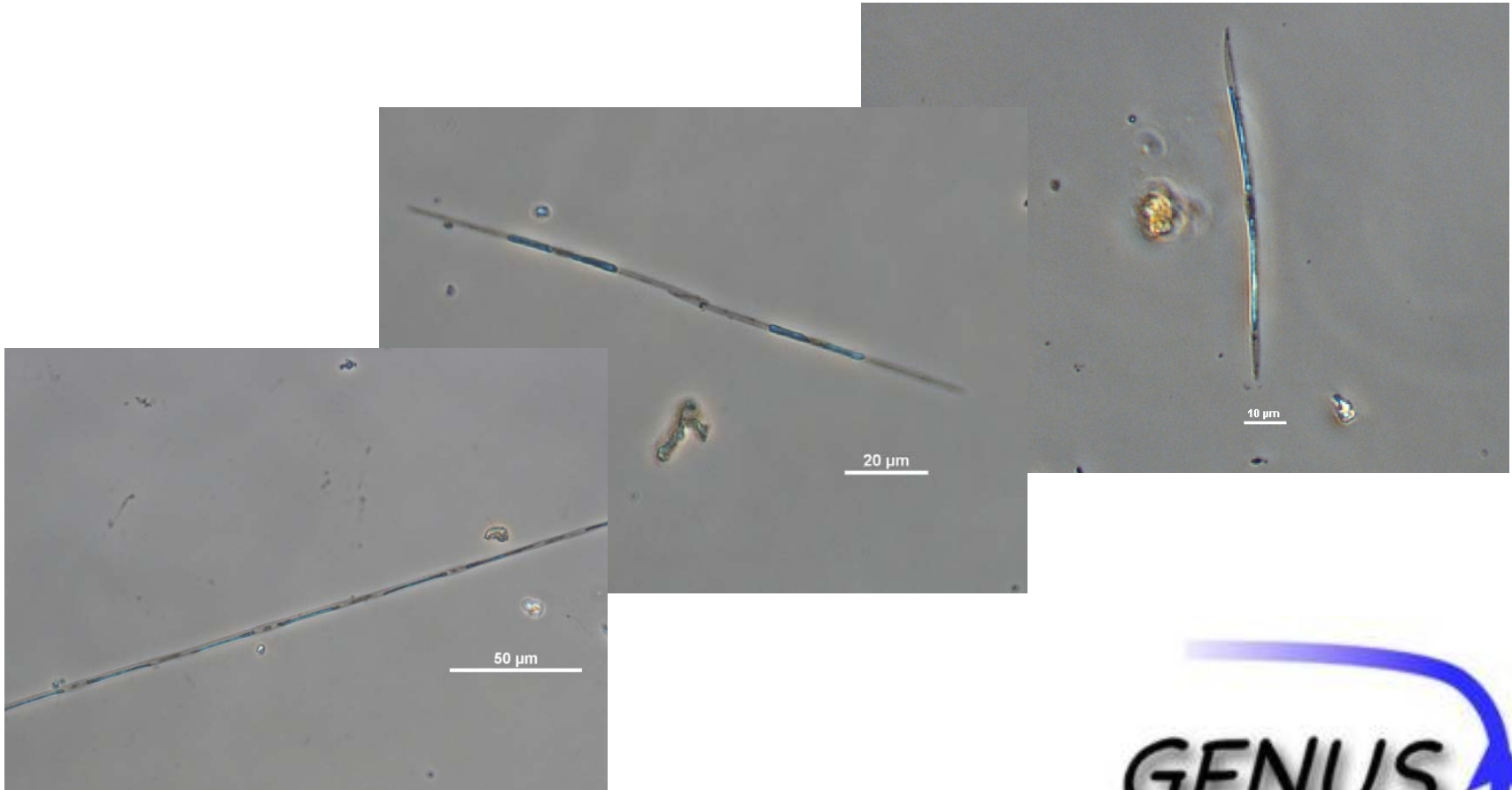
Diatoms



Fragilariopsis doliolus (Wallich) Medlin & Sims 1993



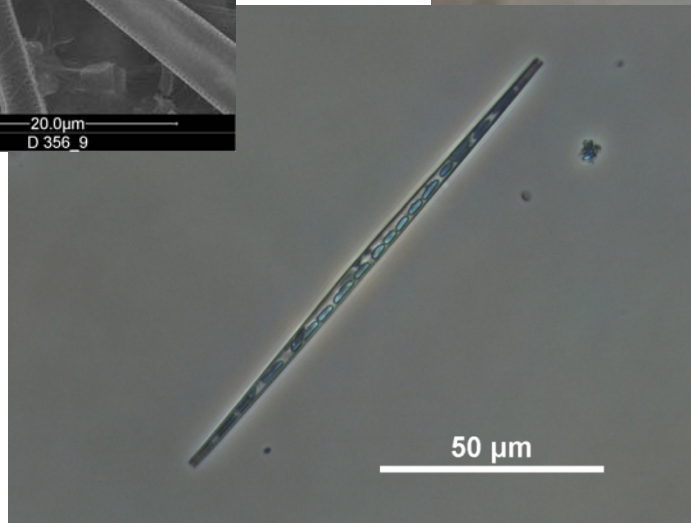
Diatoms



Pseudonitzschia delicatissima GRP



Diatoms



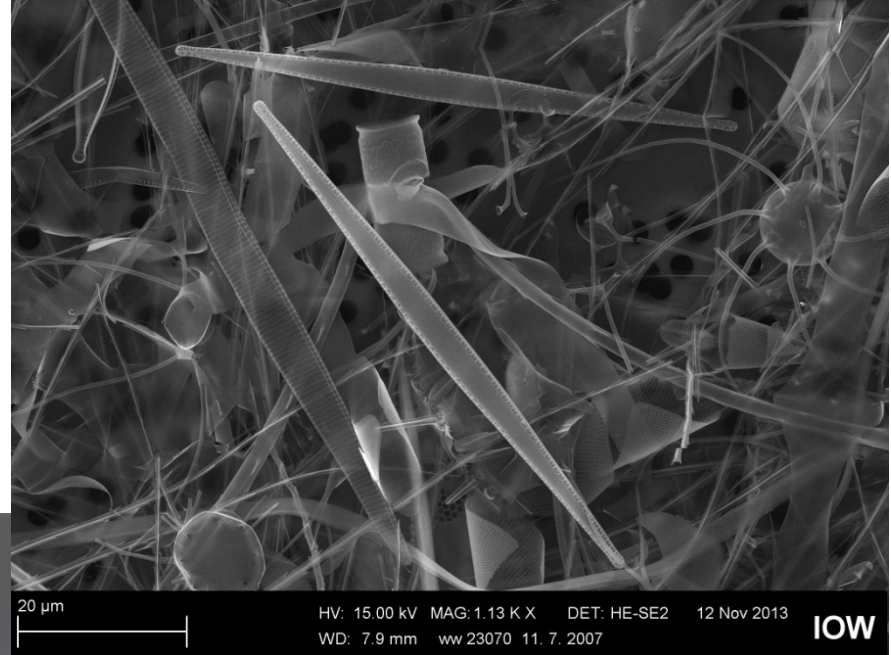
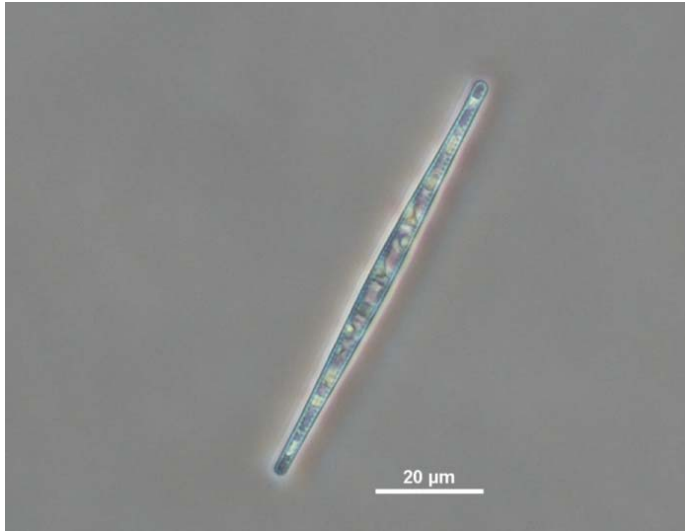
GENUS



The word "GENUS" is written in a bold, black, sans-serif font. To the right of the text is a blue, stylized graphic element consisting of a curved line that starts above the 'S', loops around it, and ends with an arrowhead pointing towards the 'S'.

Thalassionema sp. (Grunow) Mereschkowski

Diatoms



Thalassionema sp. (Grunow) Mereschkowski

Diatoms

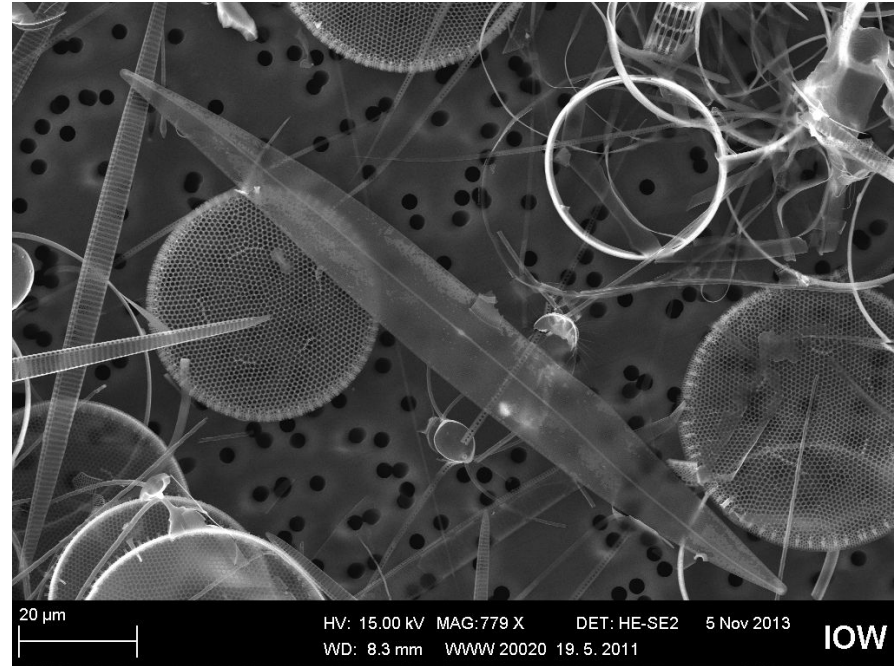
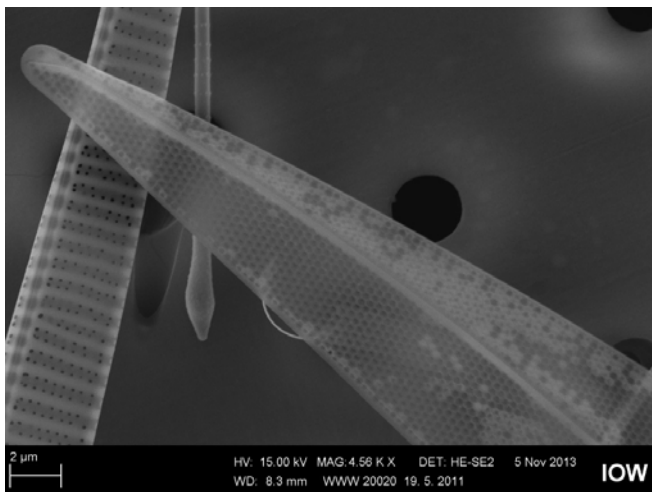
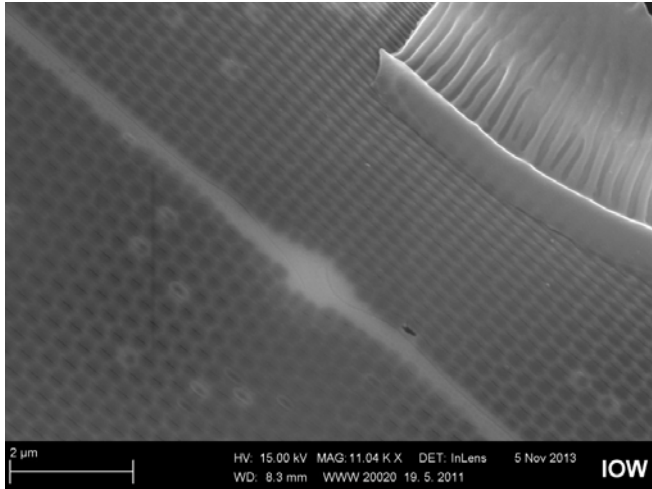


Meuneria membranacea (Cleve) P.C. Silva comb. nov.

GENUS

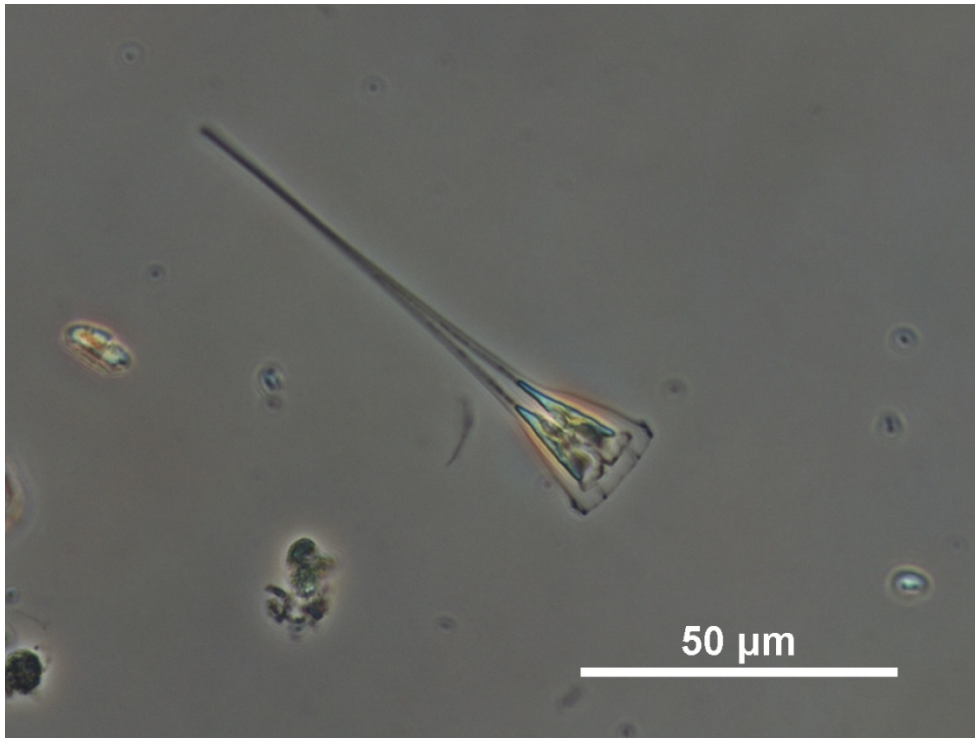


Diatoms



Pleurosigma sp. Ralfs in Pritchard

Diatoms

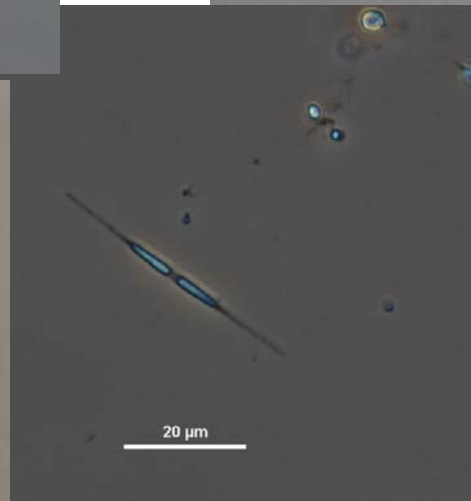
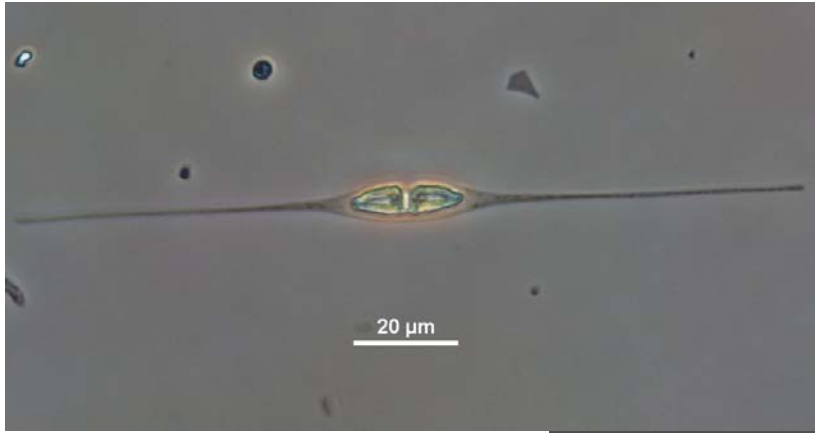


Asterionellopsis glacialis (Castracane) Round in
Round et al. 1990

GENUS

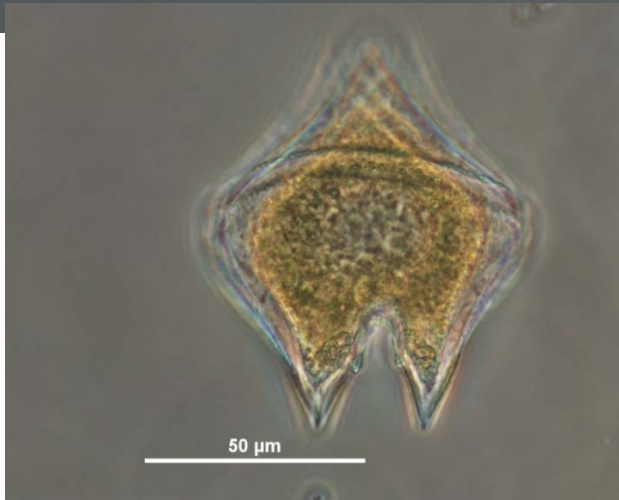
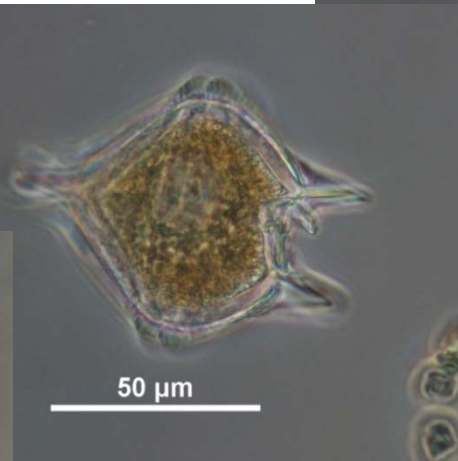
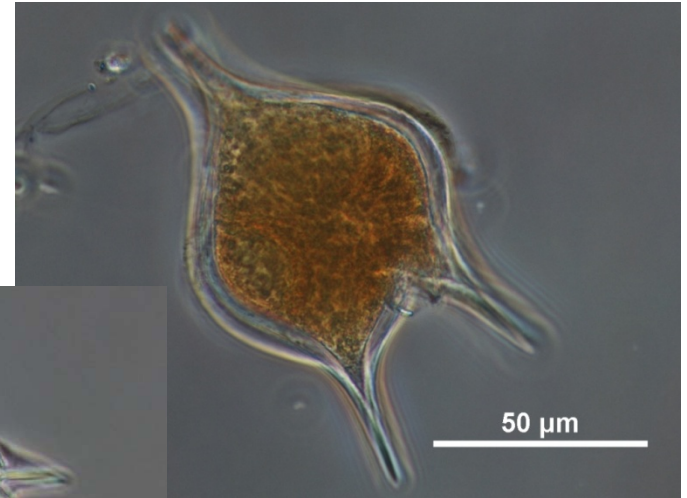


Diatoms



Cylindrotheca closterium (Ehrenberg) Lewin & Reimann

Dinoflagellates

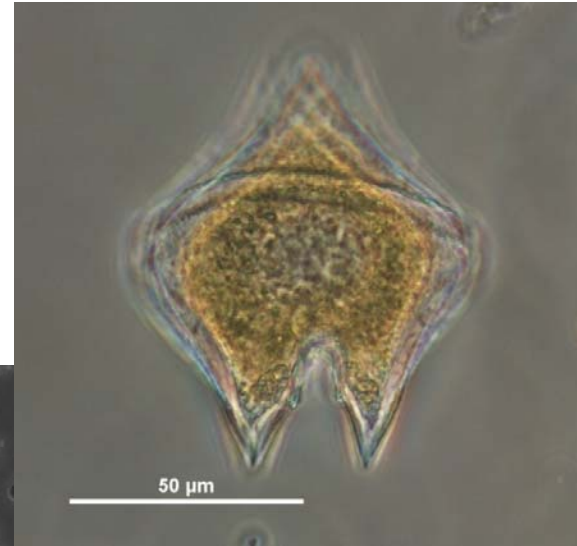
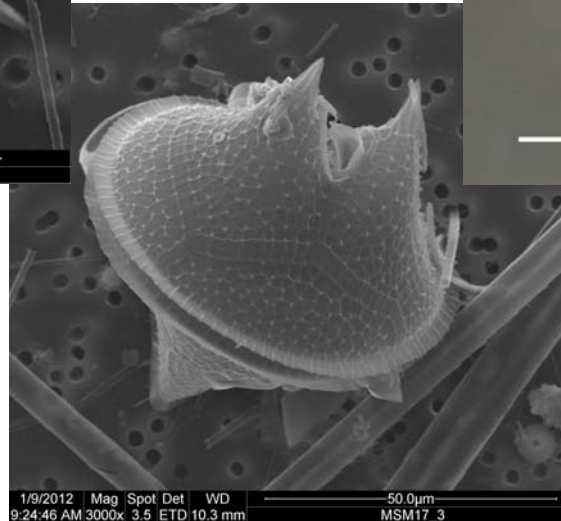
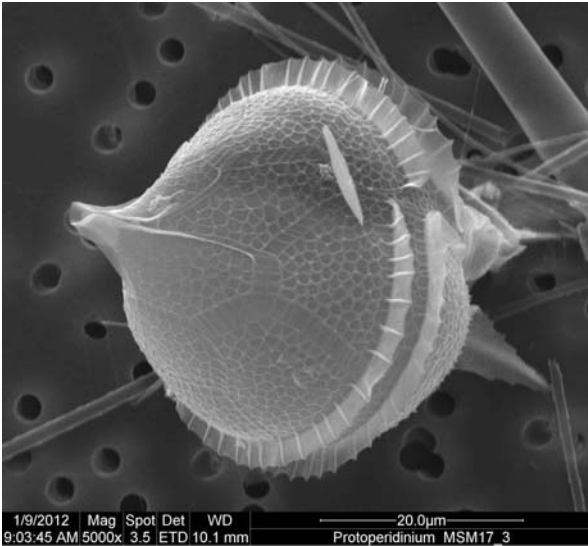


GENUS



Protoperidinium spp.

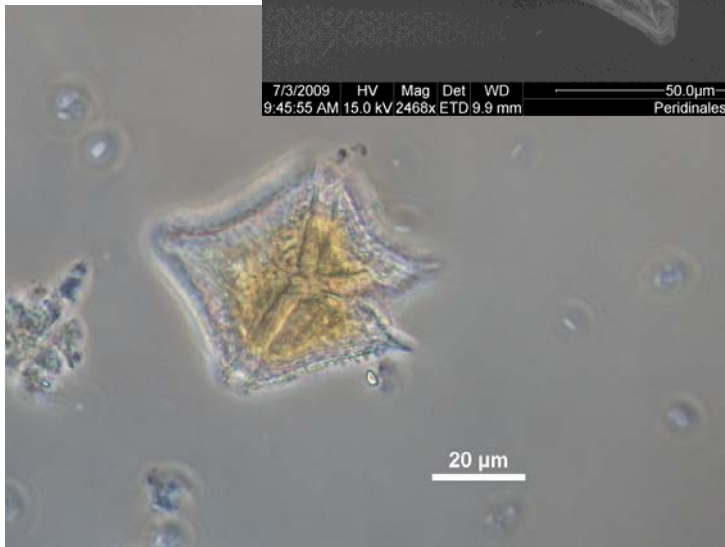
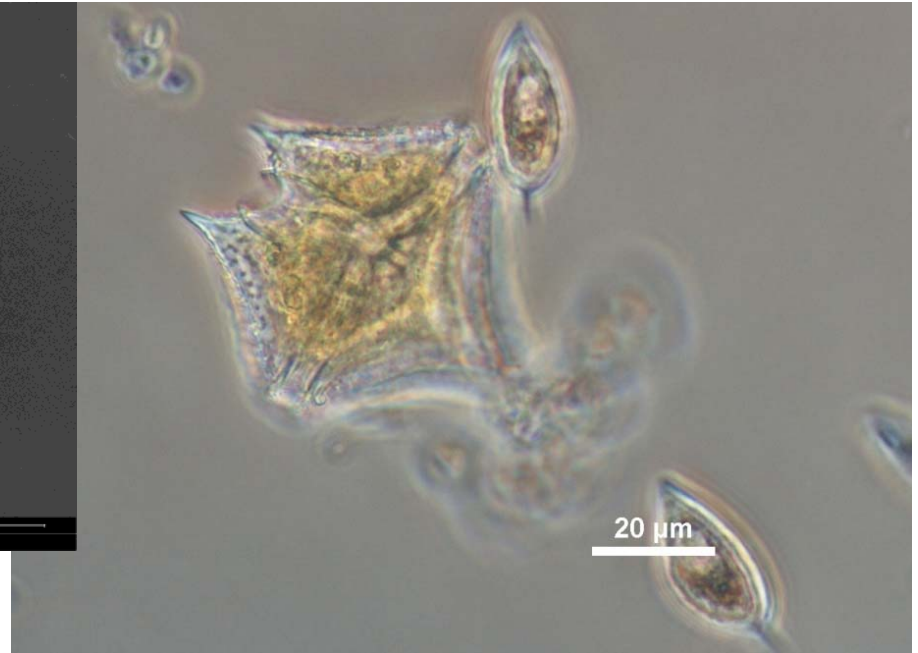
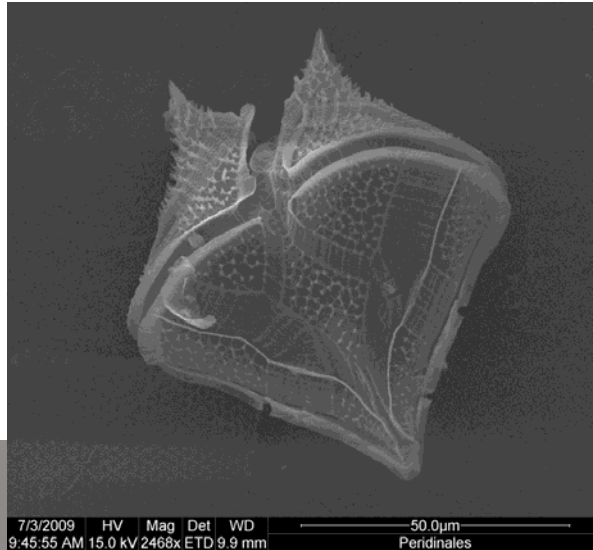
Dinoflagellates



Protoperidinium divergens (Ehrenberg) Balech 1974



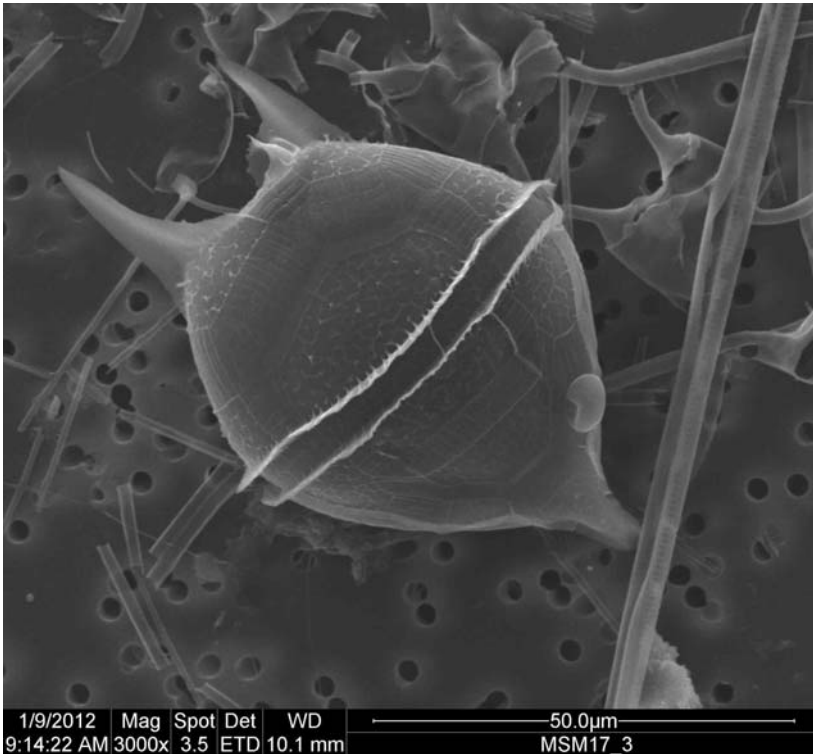
Dinoflagellates



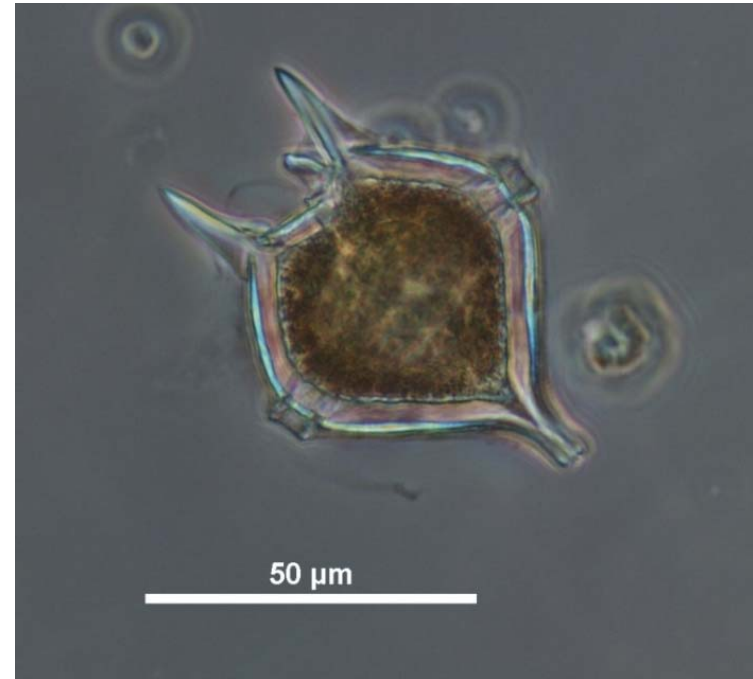
GENUS

Protoperidinium curtipes (Jørgensen) Balech

Dinoflagellates

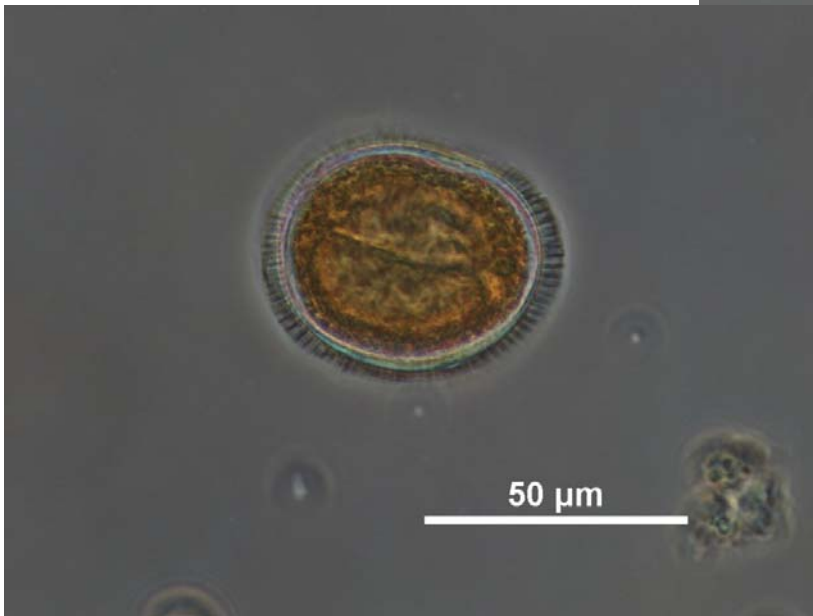


Prorocentrum diabolium (Cleve) Balech

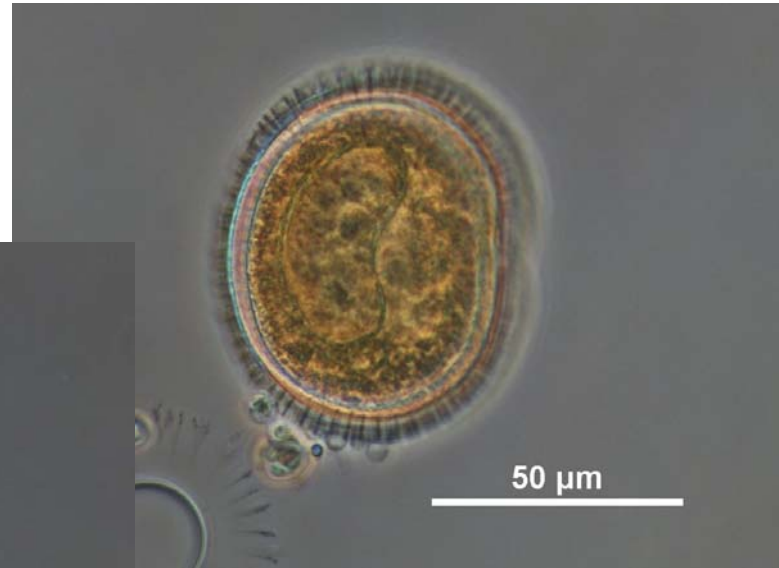


GENUS

Dinoflagellates



Diplopsalis Bergh



GENUS



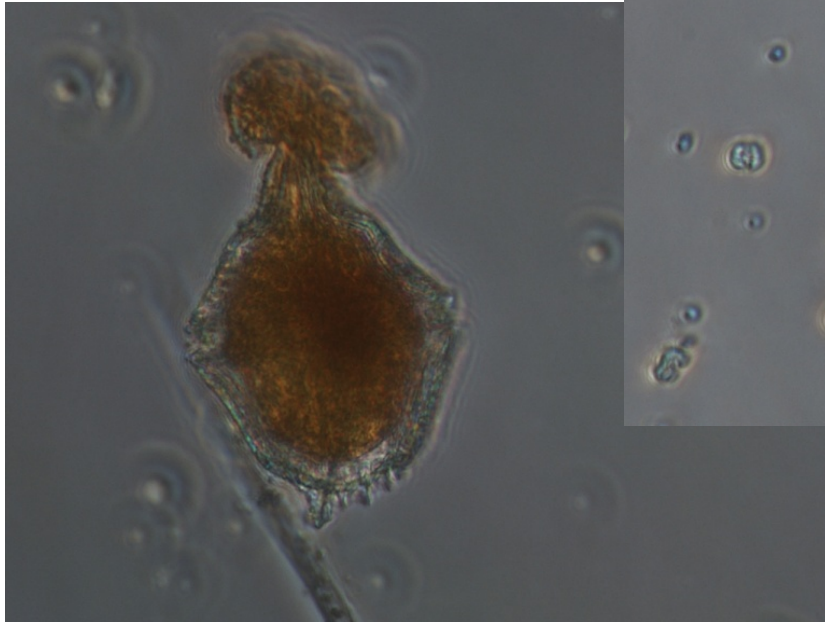
Dinoflagellates



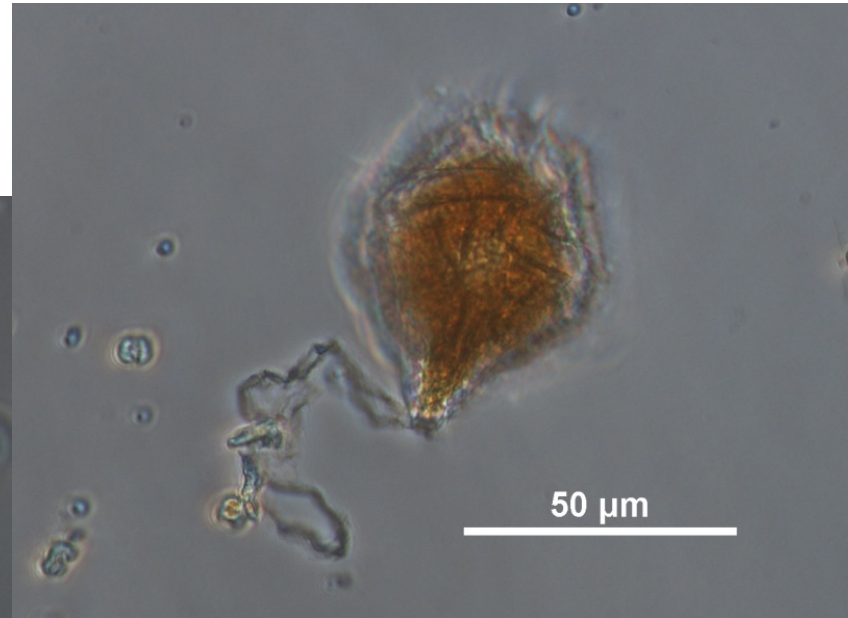
Podolampas palmipes Stein 1883

GENUS

Dinoflagellates

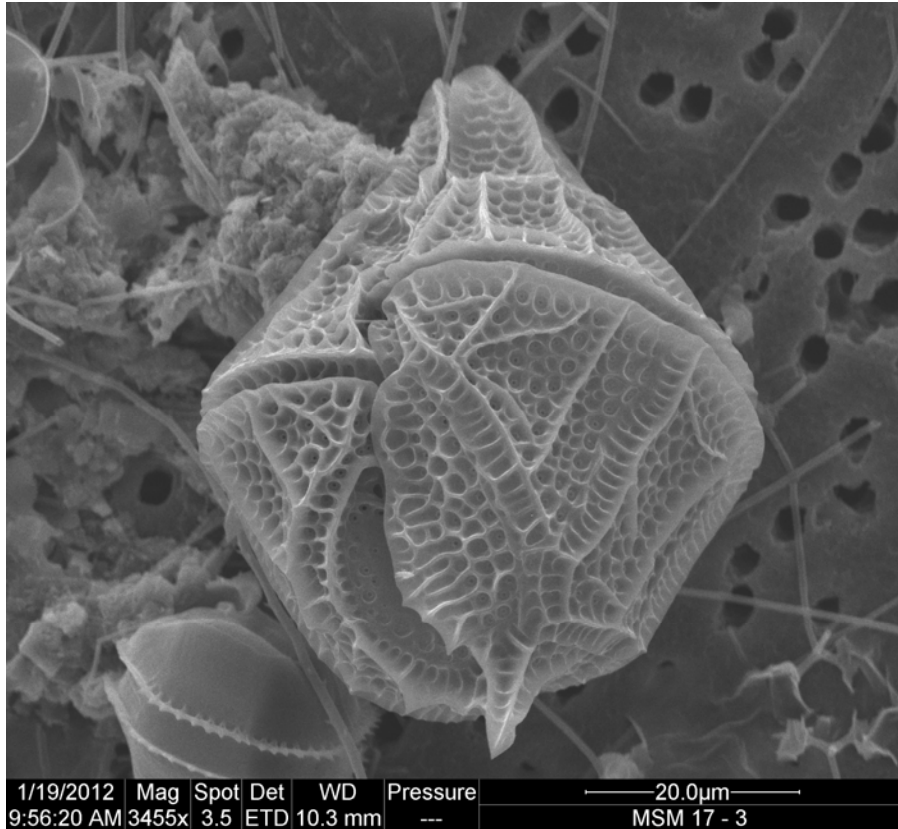


Gonyaulax Stein 1883



GENUS

Dinoflagellates

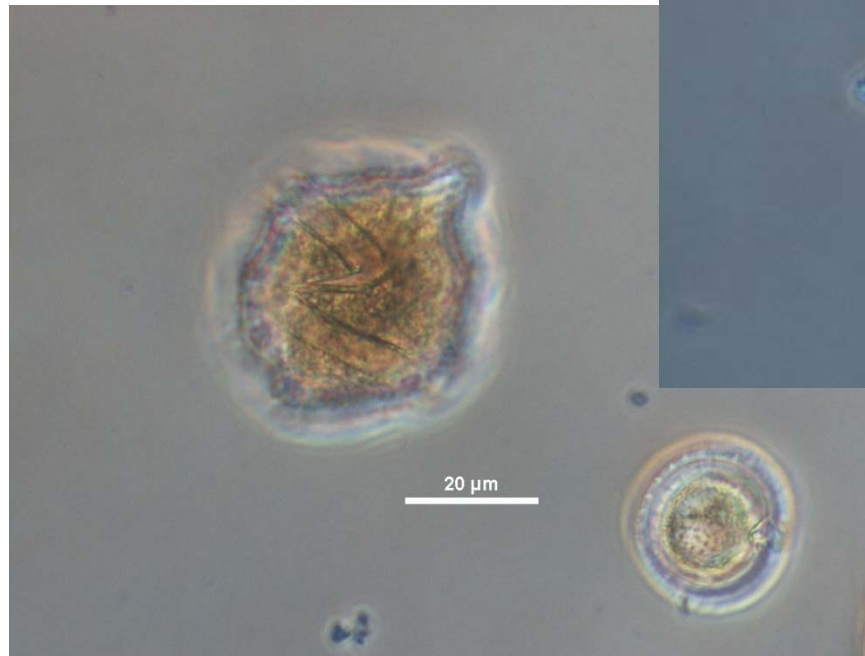


Gonyaulax polygramma Stein 1883



GENUS

Dinoflagellates



Gonyaulax scrippsae Kofoid

GENUS



The word "GENUS" is written in a bold, black, sans-serif font. To its right is a blue graphic element consisting of a thick, curved line that starts above the word, curves around it, and ends with an arrowhead pointing towards the right.

Dinoflagellates

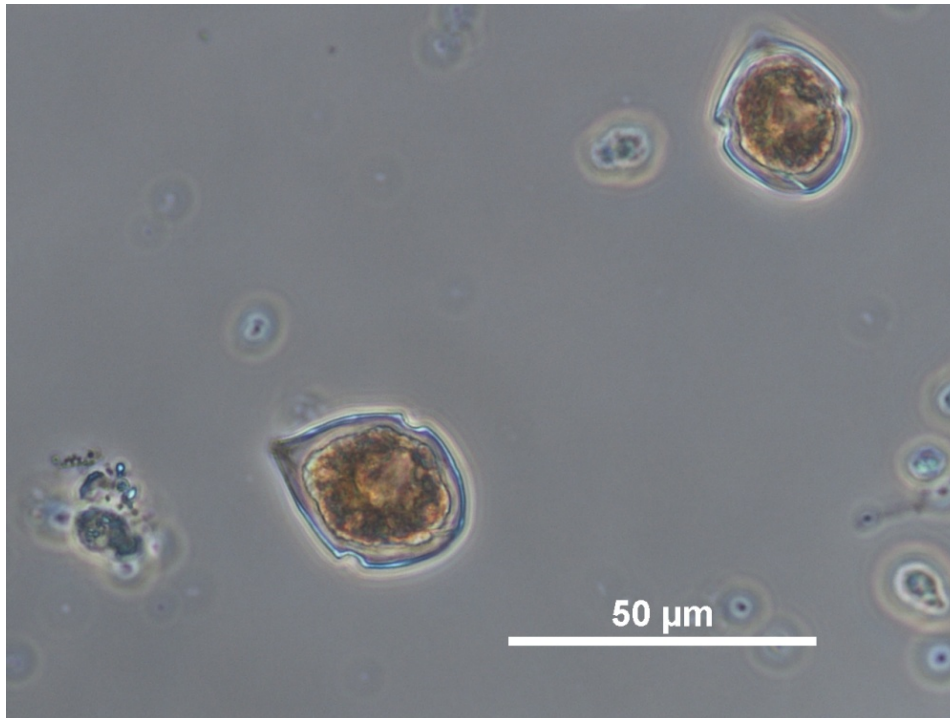


Pyrophacus horologicum Stein 1883

GENUS



Dinoflagellates

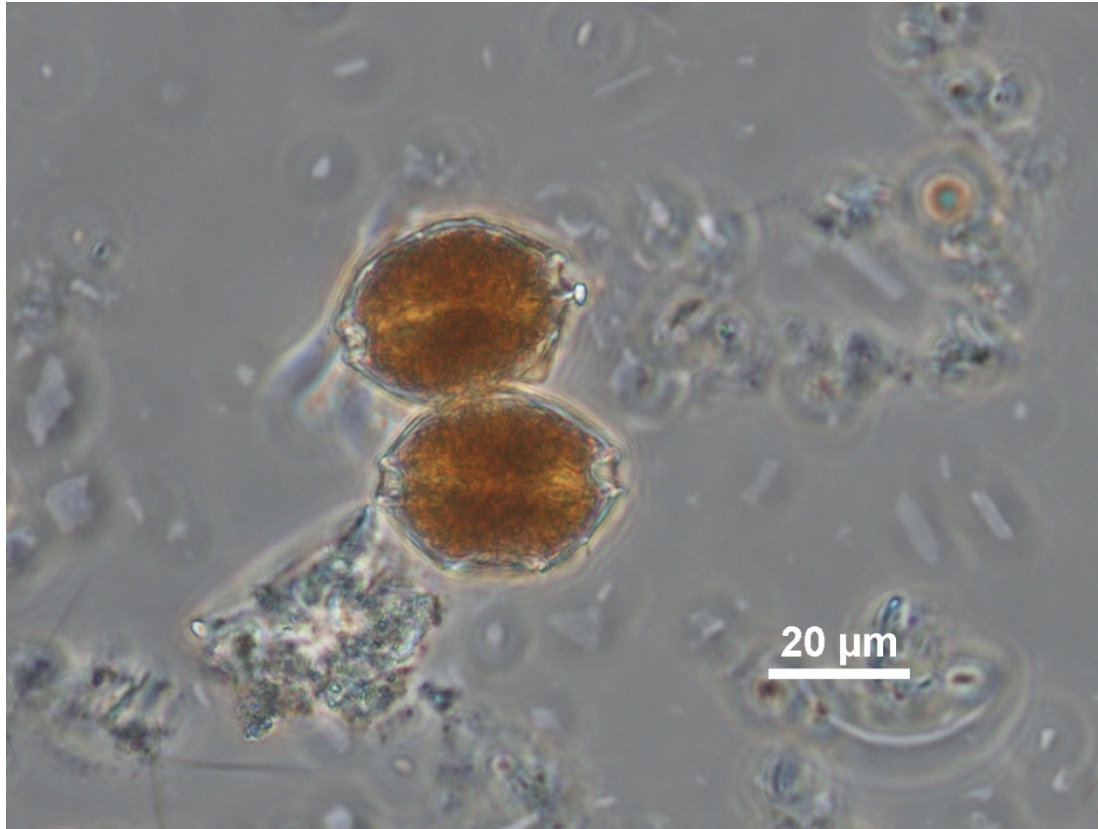


Scrippsiella trochoidea (Stein) Loeblich III 1976

GENUS



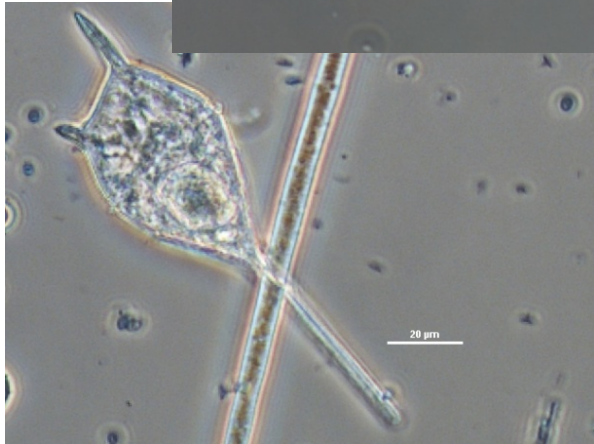
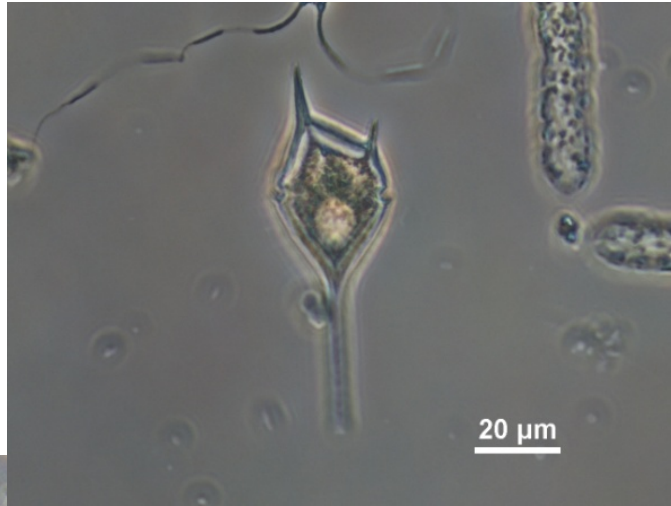
Dinoflagellates



Alexandrium catenella (Whedon & Kofoid) Balech



Dinoflagellates

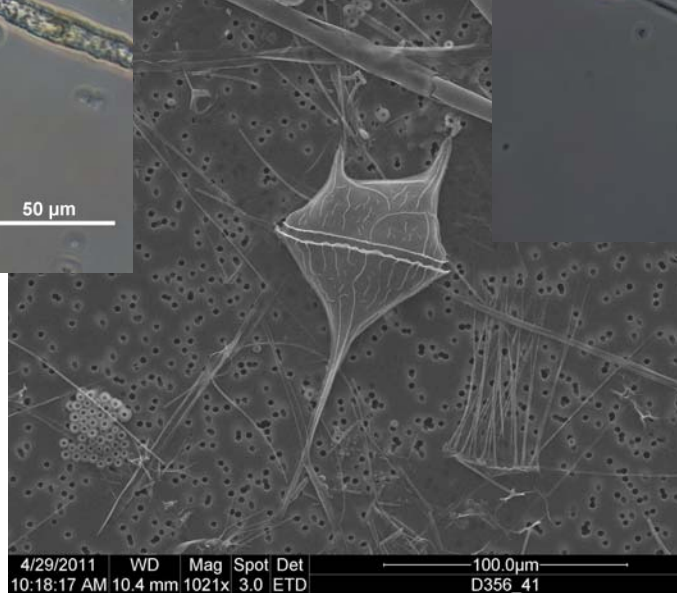
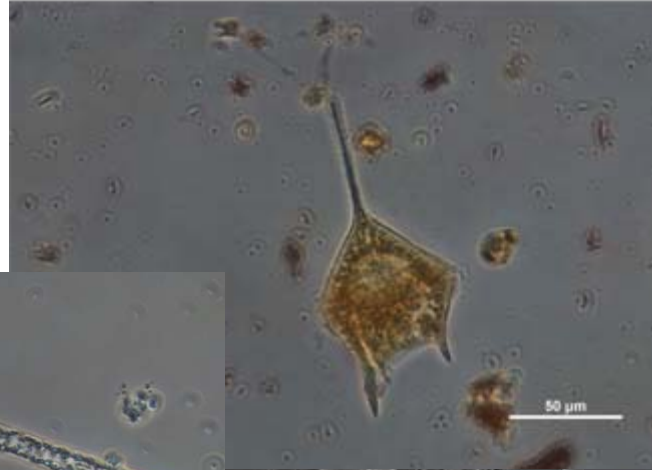


Ceratium teres
Kofoid 1907

Ceratium lineatum
(Ehrenberg) Cleve 1899



Dinoflagellates

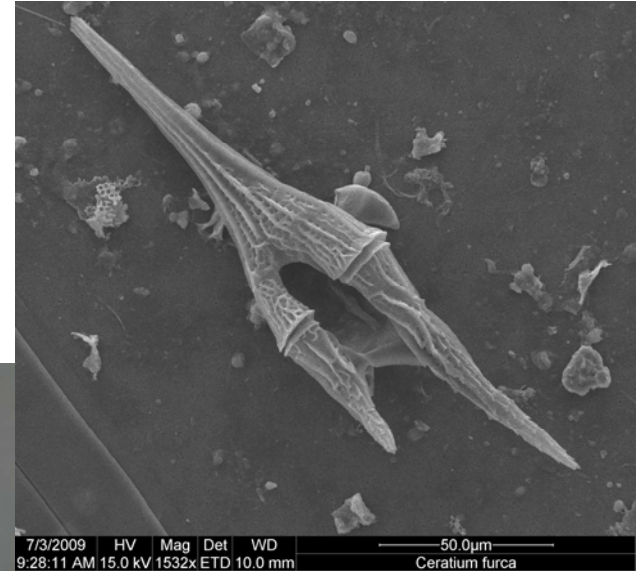


Ceratium pentagonum

Gourret 1883



Dinoflagellates



GENUS



Ceratium furca Claparède & Lachmann 1859

Dinoflagellates



Ceratium horridum
(Cleve) Gran 1902



GENUS

The word "GENUS" is written in a bold, black, sans-serif font. To its right is a blue graphic element consisting of a thick, curved line that starts above the text, loops around it, and ends with an arrowhead pointing towards the right.

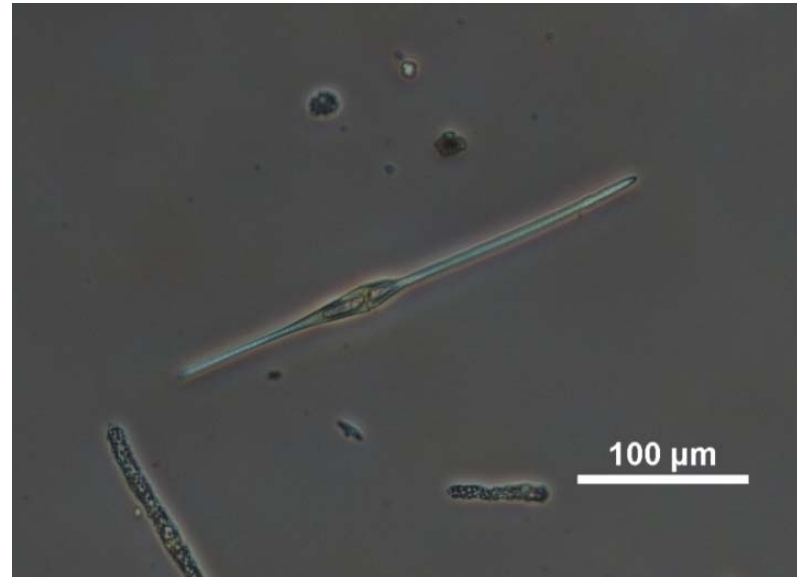
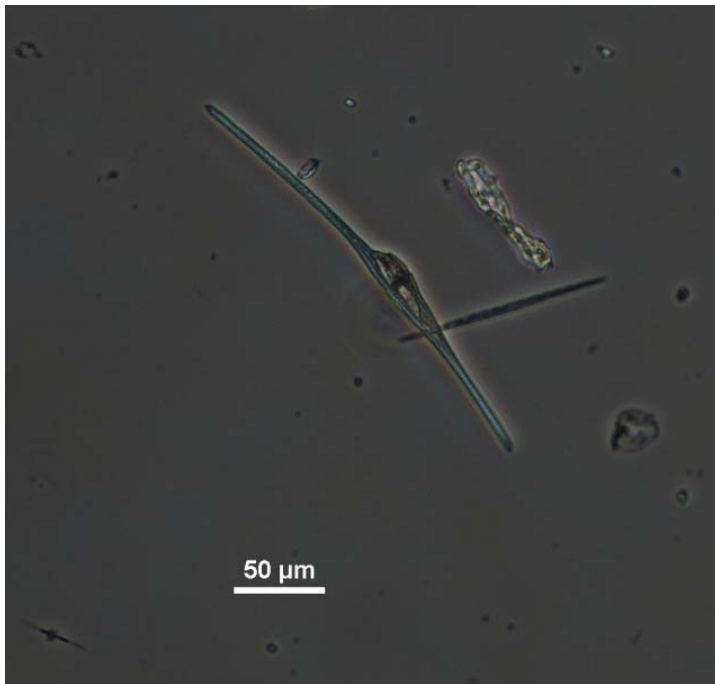
Dinoflagellates



Ceratium macroceros (Ehrenberg) Vanhöffen 1897



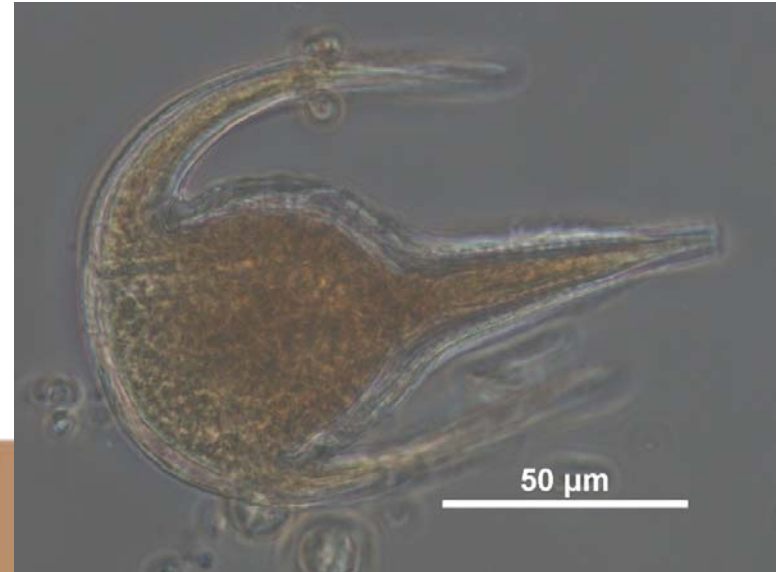
GENUS



Ceratium fusus (Ehrenberg) Dujardin 1841



Dinoflagellates

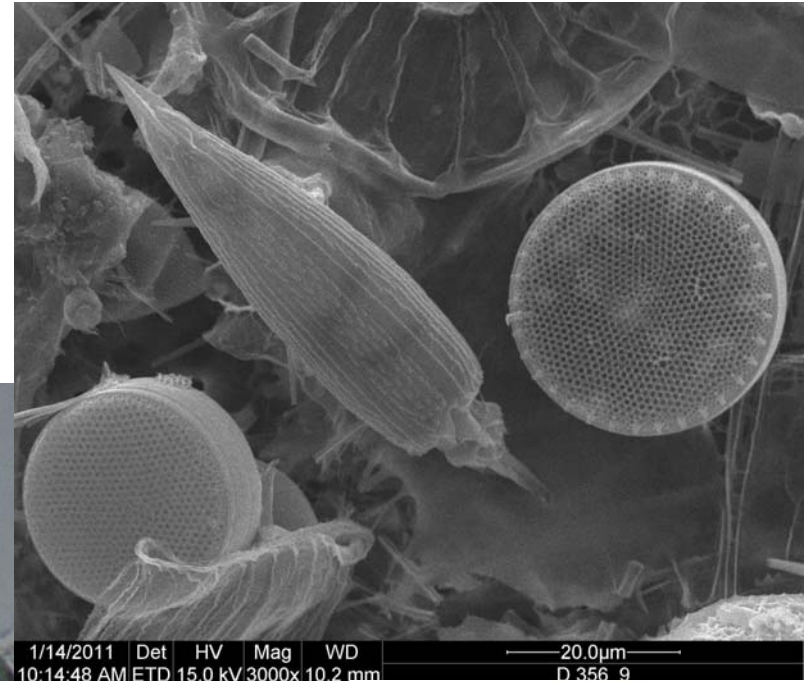
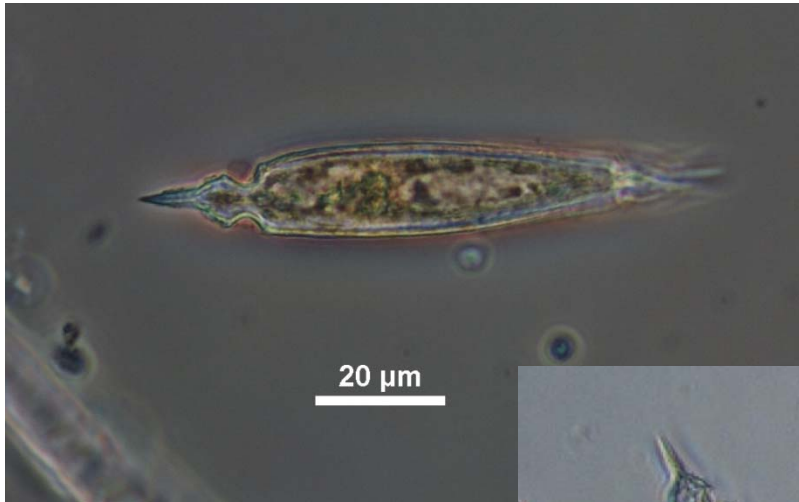


GENUS



Ceratium azoricum Cleve 1900

Dinoflagellates

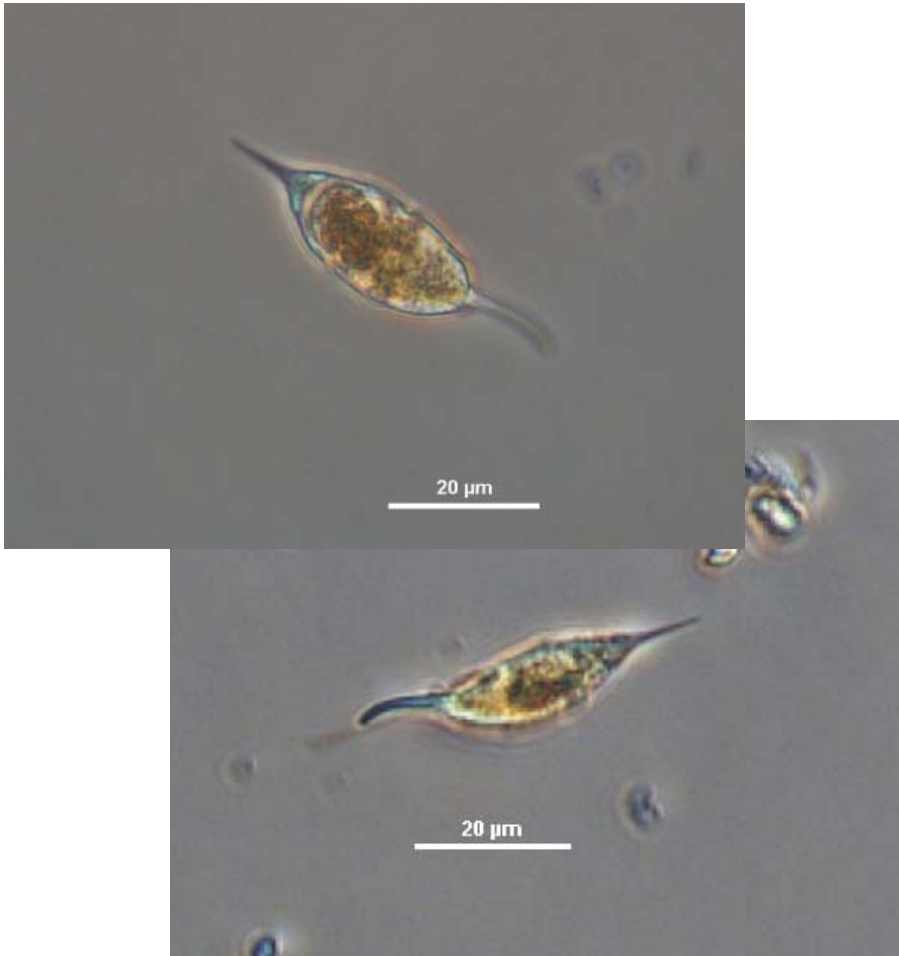


Oxytoxum scolopax Stein 1883

GENUS



Dinoflagellates



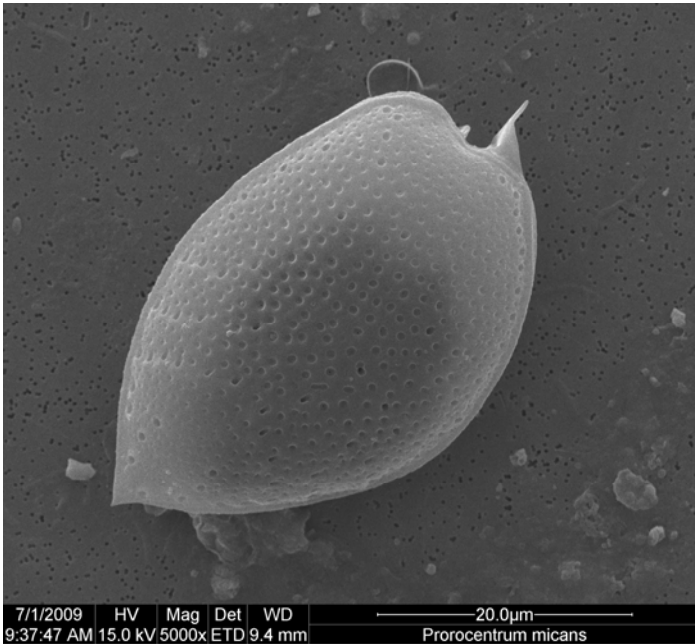
Pronoctiluca pelagica Fabre- Domergue



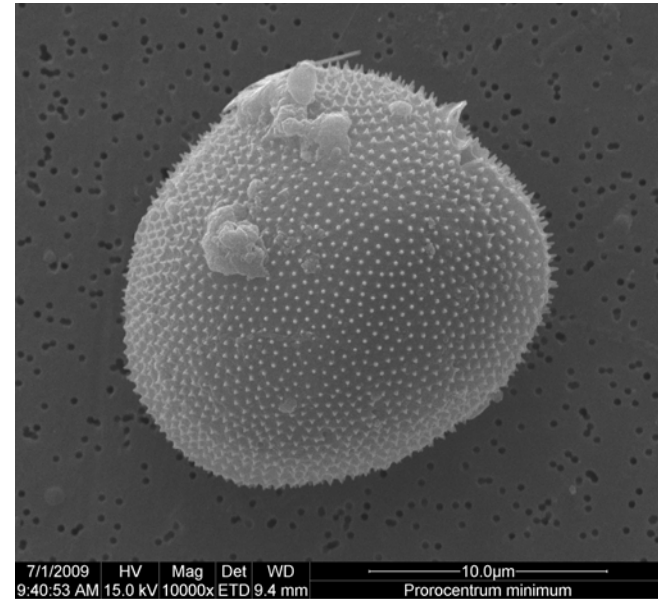
Noctiluca scintillans
(Macartney) Kofoid & Swezy

GENUS

Dinoflagellates



Prorocentrum micans Ehrenberg 1833



Prorocentrum minimum (Pavillard) Schiller 1933

GENUS

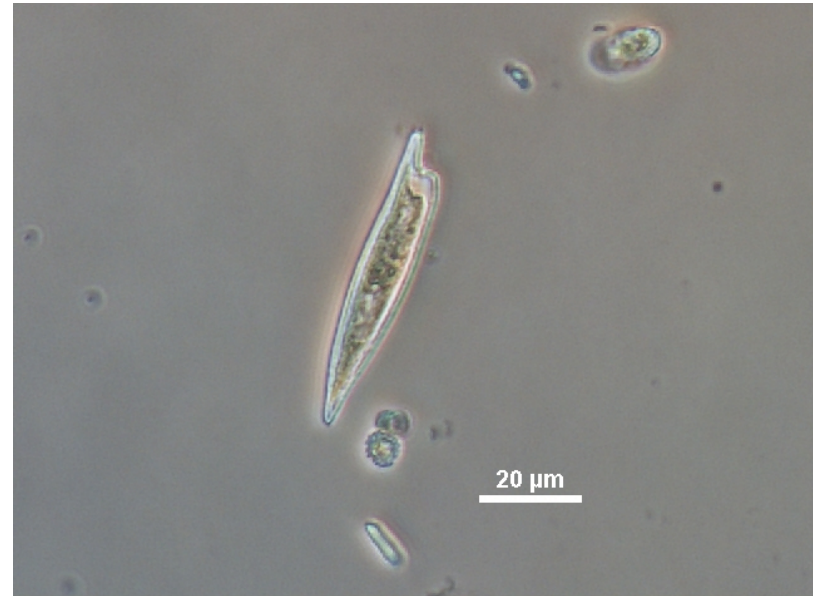


The word "GENUS" is written in a bold, black, sans-serif font. A blue, curved arrow starts from the right side of the word and points back to the left, forming a partial circle around the text.

Dinoflagellates



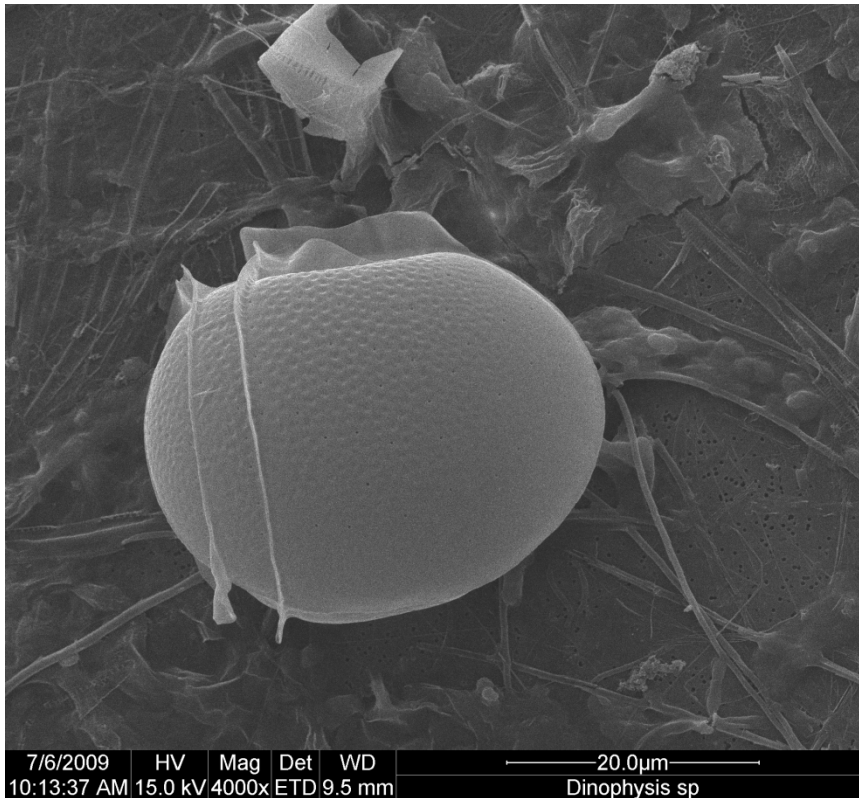
Prorocentrum redfieldii Bursa 1959
Synonym: *Prorocentrum triestinum* Schiller 1918



Prorocentrum rostratum Stein

GENUS

Dinoflagellates



Phalacroma rotundatum
(Claparède & Lachmann) Kofoid & Michener 1911
Synonym: *Dinophysis rotundata* Claparède & Lachmann

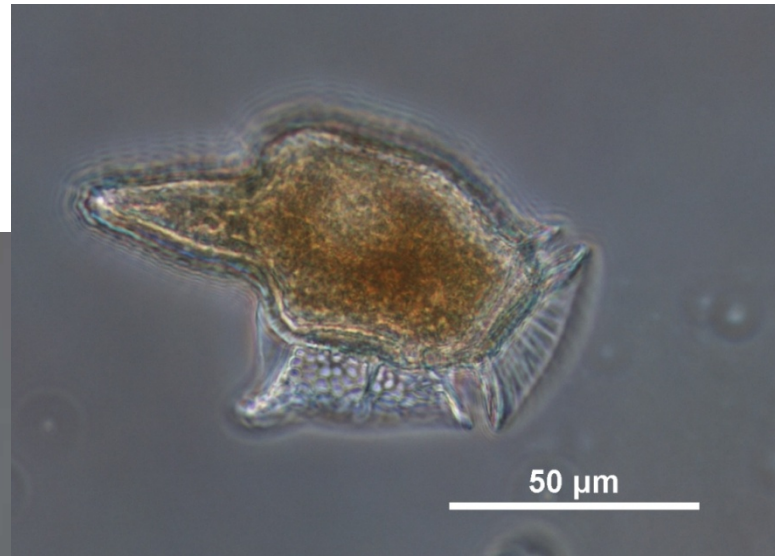


GENUS

Dinoflagellates



Dinophysis odiosa (Pavillard) Tai & Skogsberg



Dinophysis caudata Saville-Kent 1881

GENUS



The word "GENUS" is written in a bold, black, sans-serif font. To its right is a blue graphic element consisting of a thick, curved line that starts above the word, loops around it, and ends with an arrowhead pointing towards the right.

Dinoflagellates



Cochlodinium helix (Pouchet) Lemmermann

GENUS



Dinoflagellates



Torodinium toredo
(Pouchet) Kofoid & Swezy 1921



Torodinium robustum
Kofoid & Swezy 1921

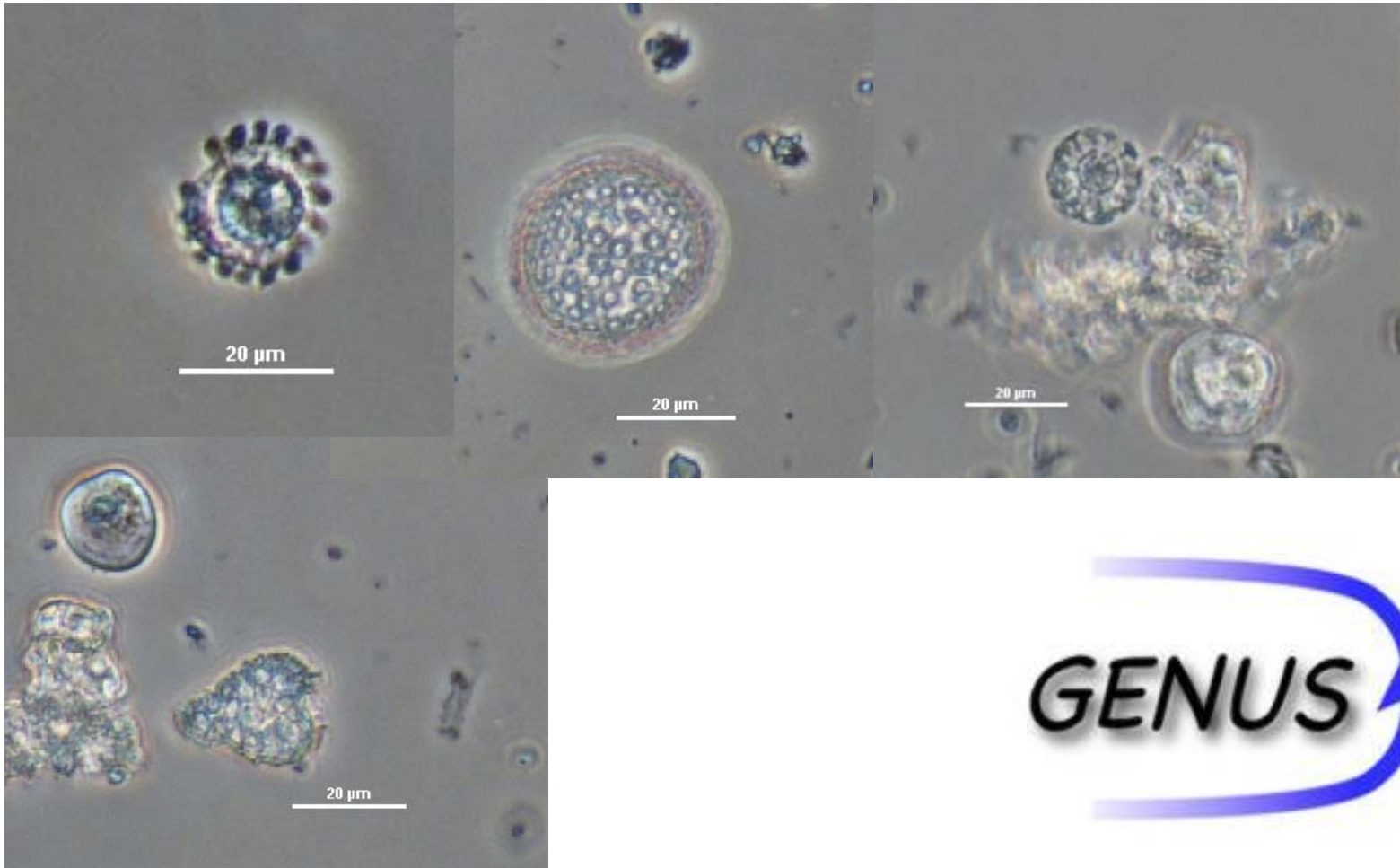
GENUS



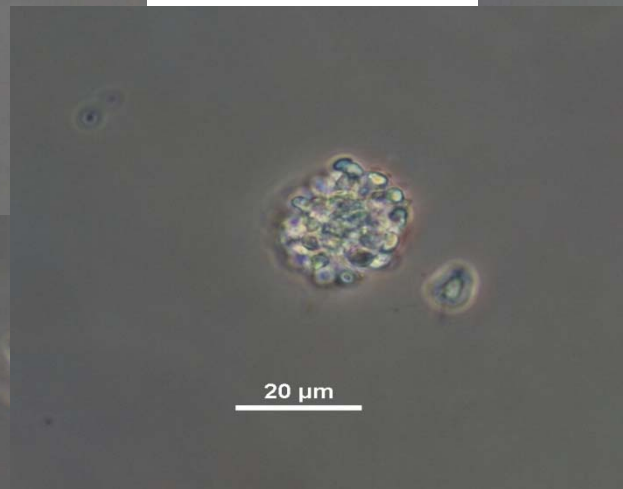
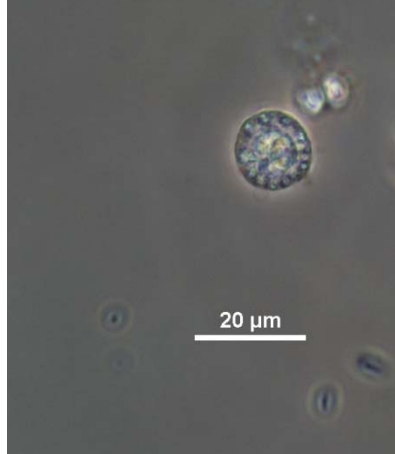
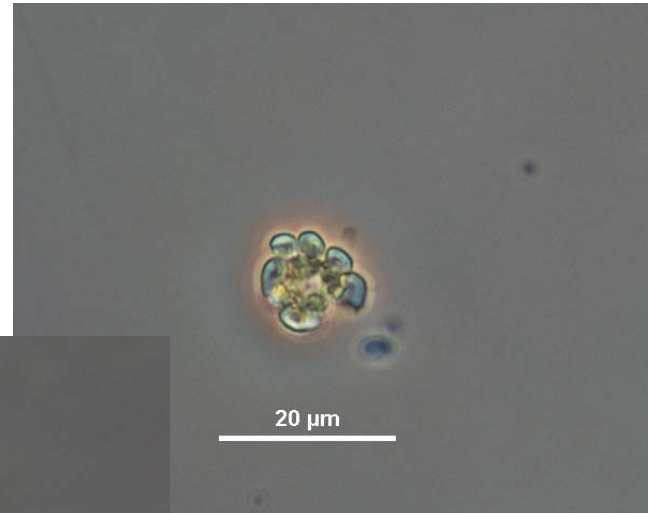
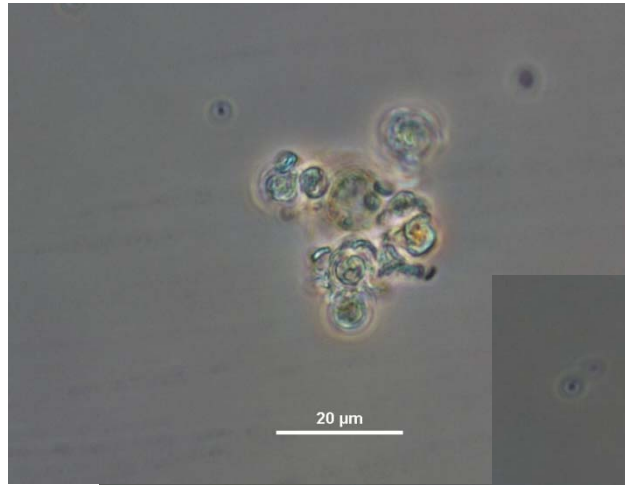
The word "GENUS" is written in a bold, black, sans-serif font. A blue, curved arrow starts from the right side of the word and points back to the left, forming a partial circle around the text.



Coccosphaerales



Coccosphaerales

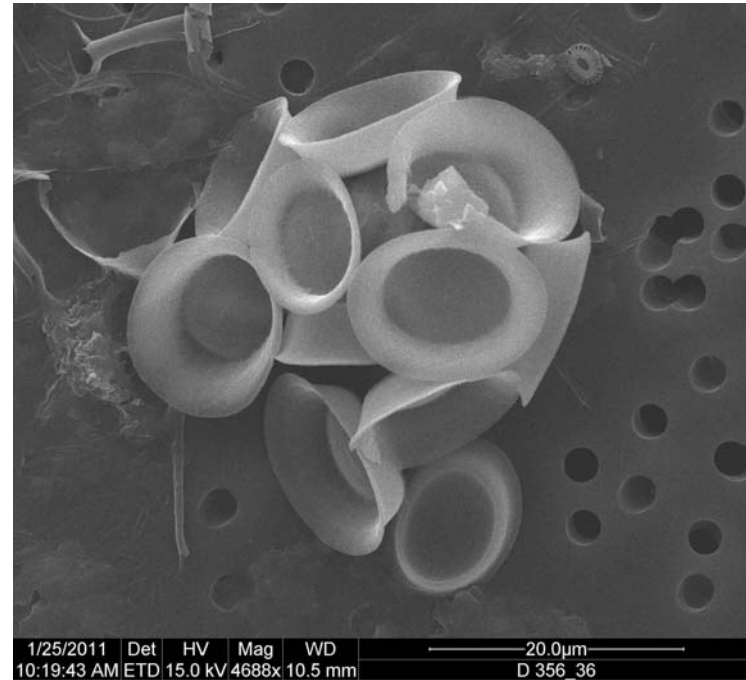
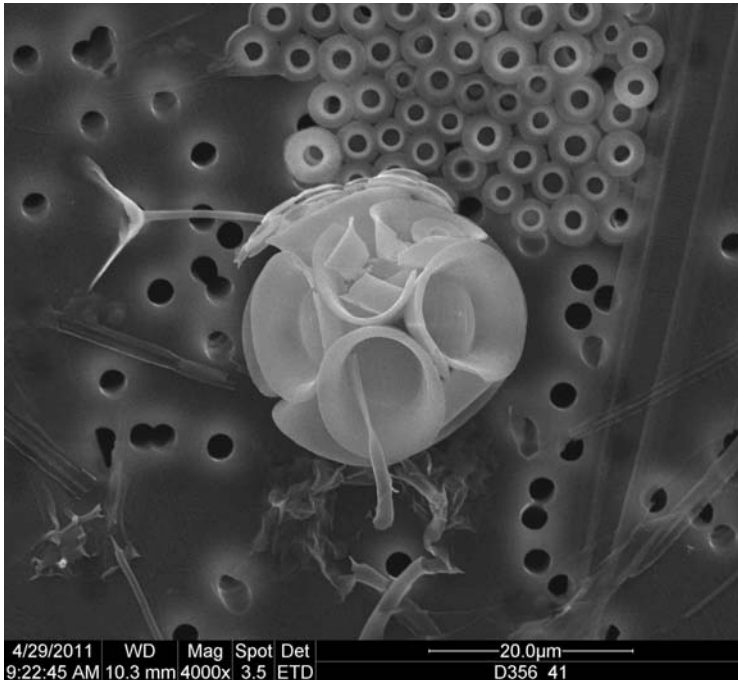


GENUS





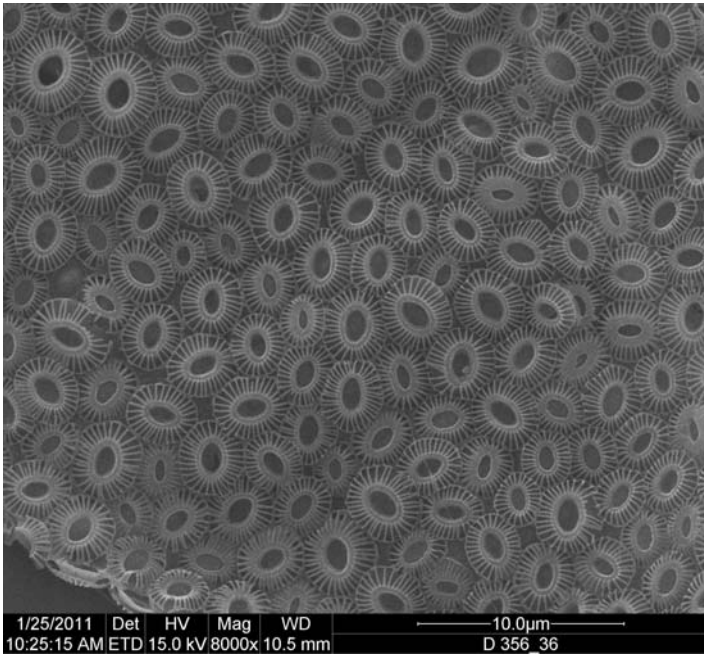
Coccosphaerales



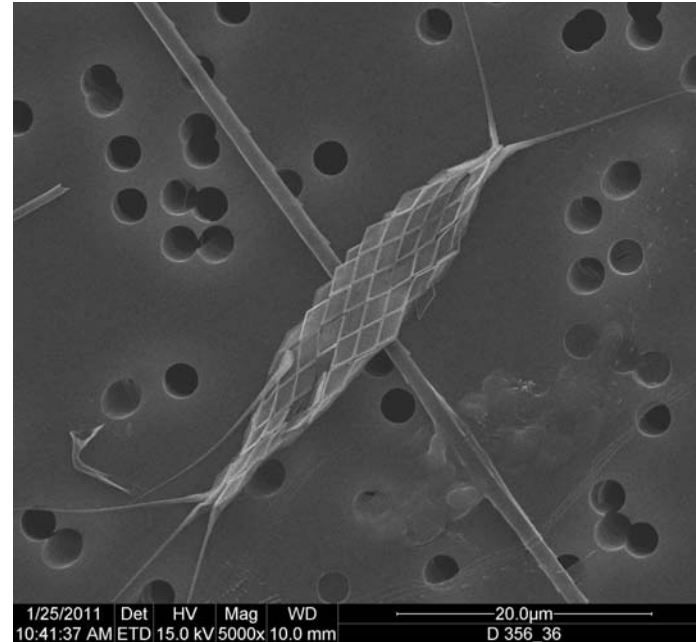
Pontosphaera syracusana Lohmann 1902



Coccosphaerales



Coccolithen von *Emiliana huxleyi*

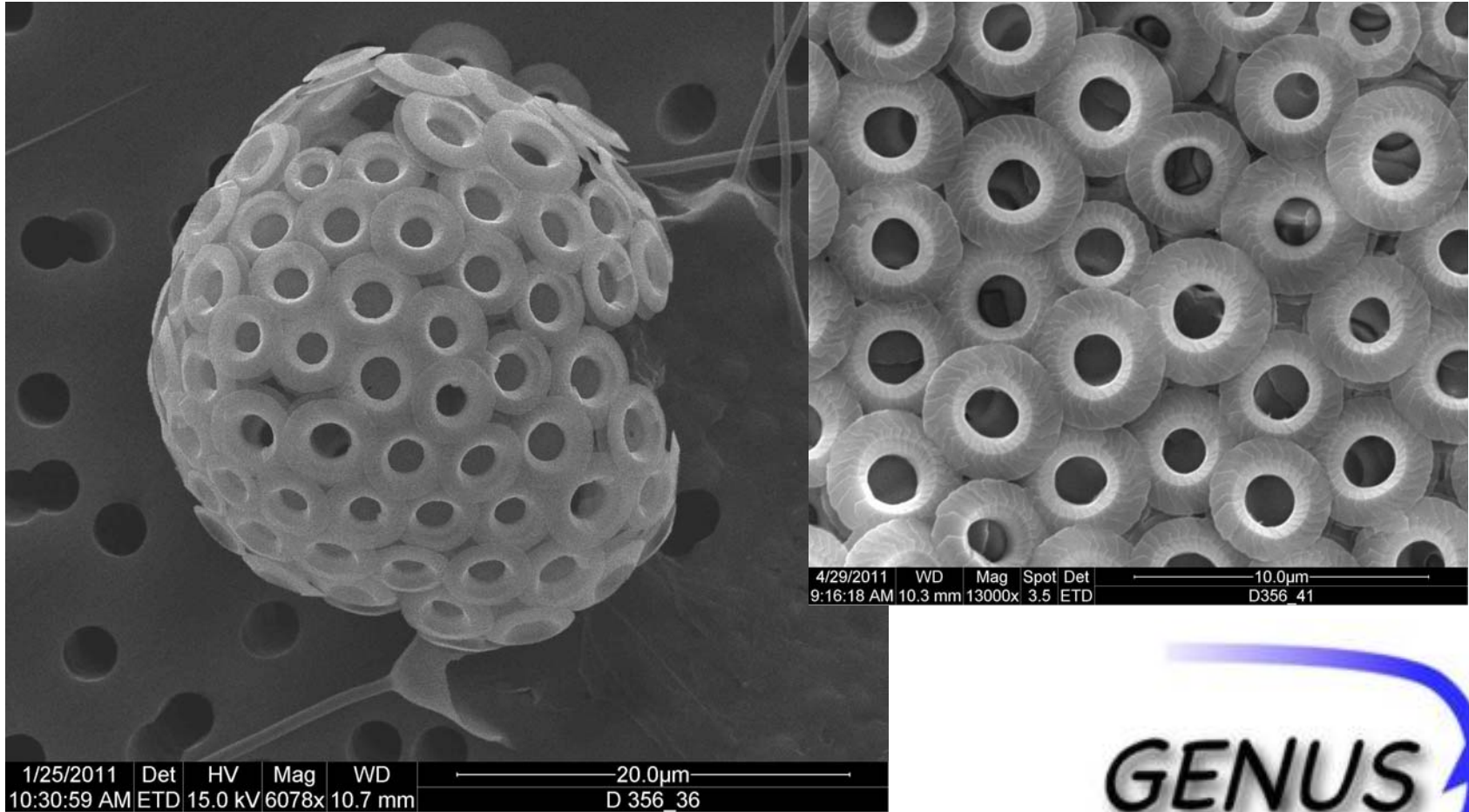


Calciosolenia murrayi Gran 1912

GENUS



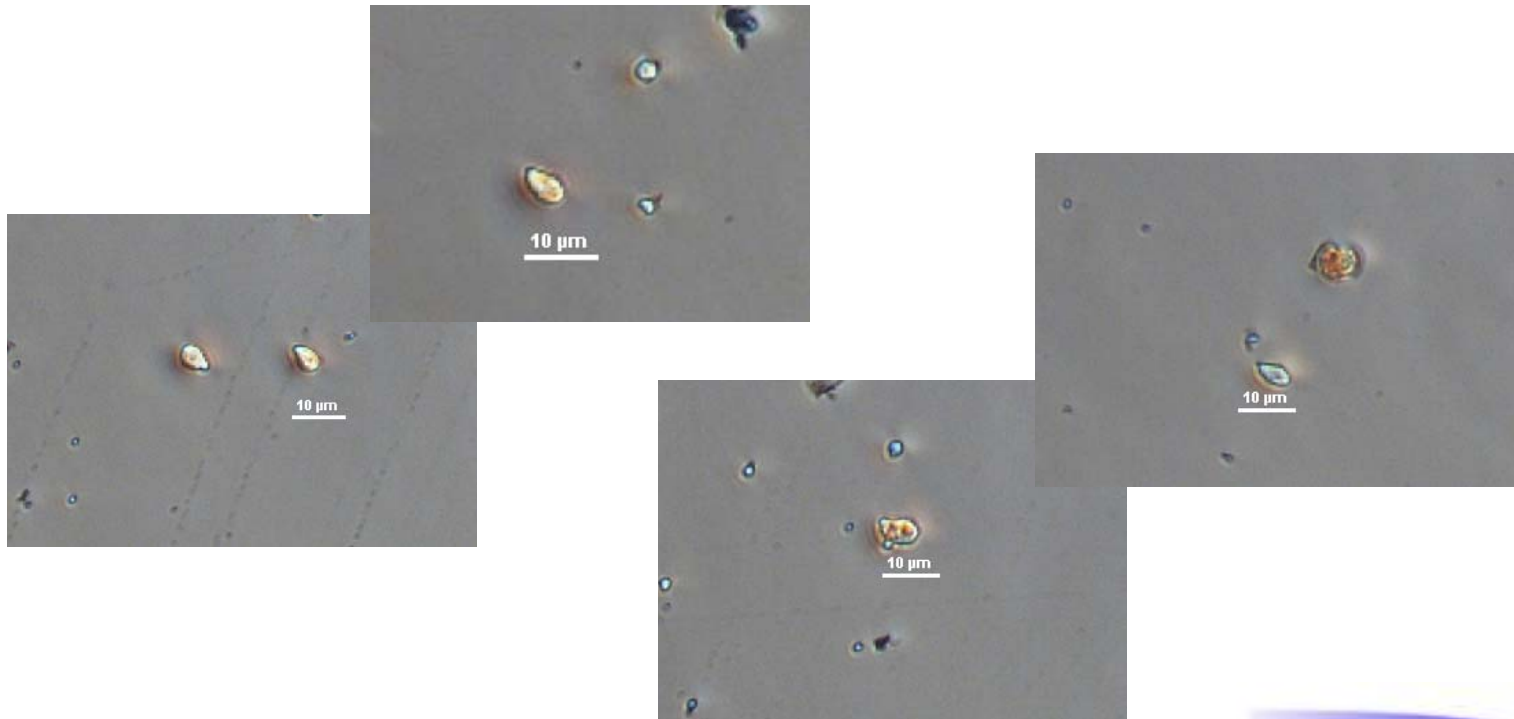
Coccosphaerales



Umbilicosphaera sibogae
(Weber-Van Bosse) Gaarder 1970



Flagellates

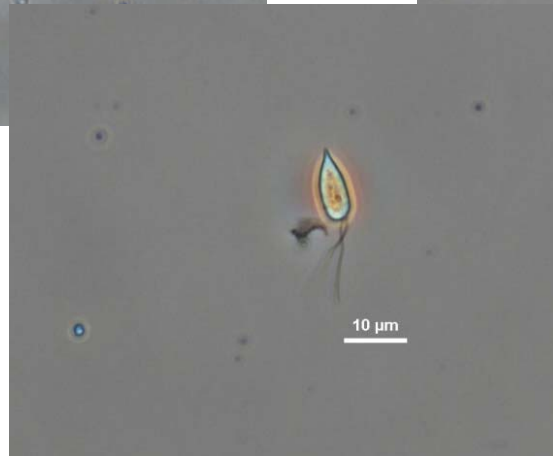


Class: Cryptophyceae Fritsch 1927

members: *Hemiselmis*, *Rhodomonas*, *Teleaulax*

GENUS

Flagellates

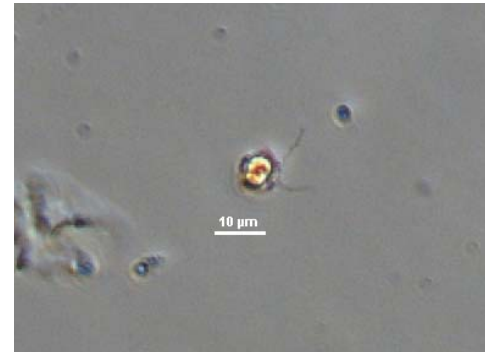
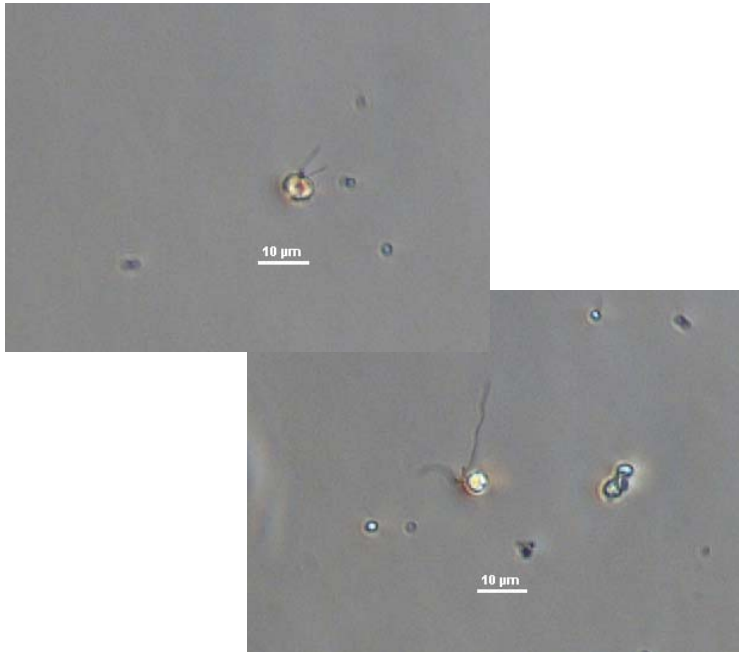


Leucocryptos marina (Braarud) Butcher

GENUS



Flagellates



Phaeocystis sp.

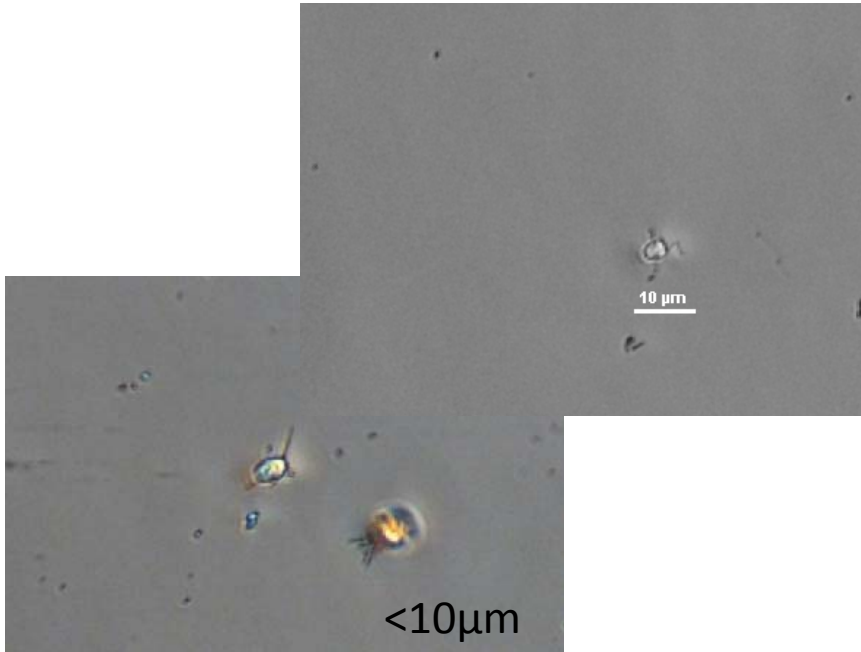
Family: Prymnesiaceae Conrad 1926

members: *Pseudopedinella*, *Phaeocystis*, *Chrysochromulina*

GENUS



Flagellates

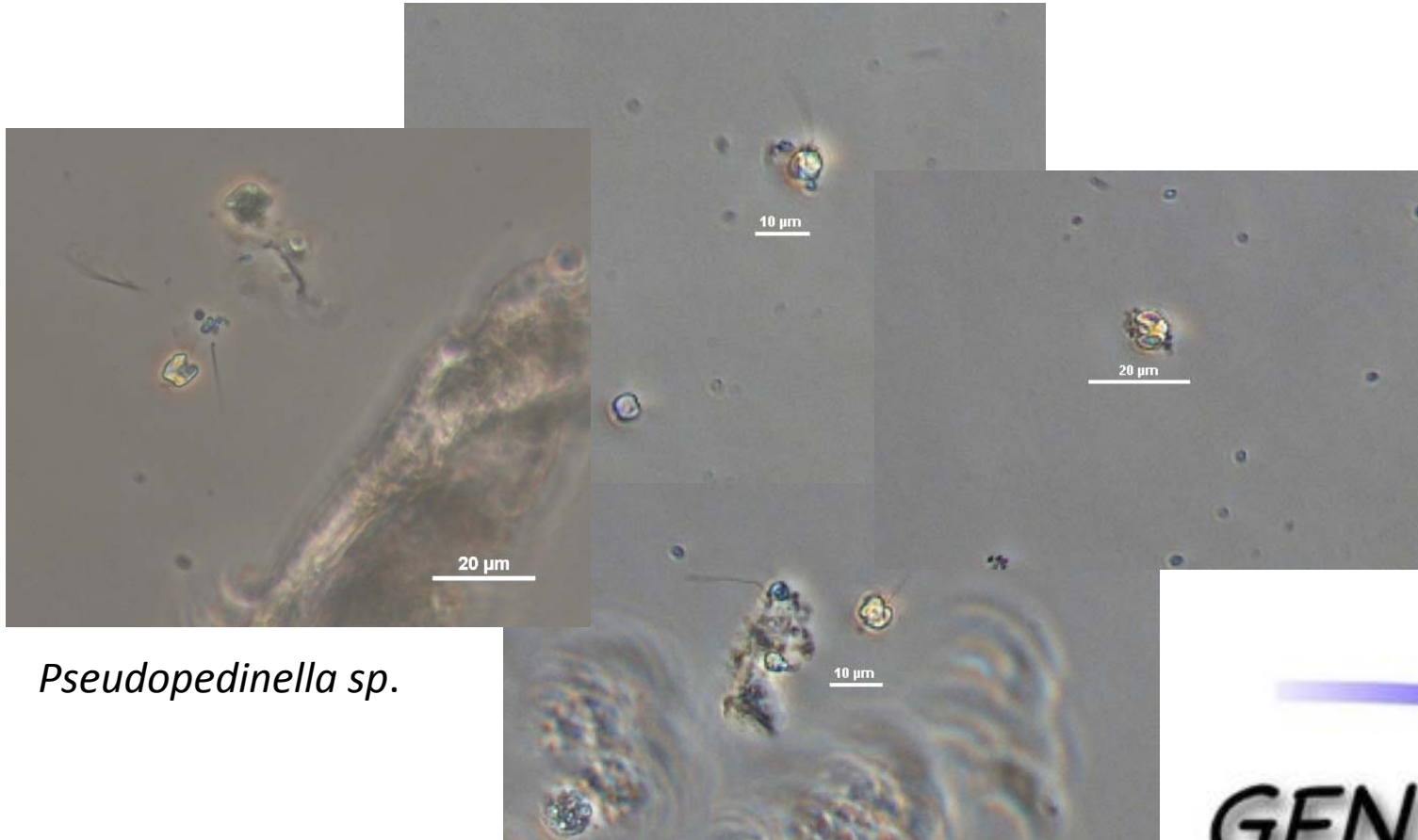


Pyramimonas sp.

Class: Prasinophyceae Moestrup & Throndsen 1988
members: *Pyramimonas*, *Tetraselmis*

GENUS

Flagellates

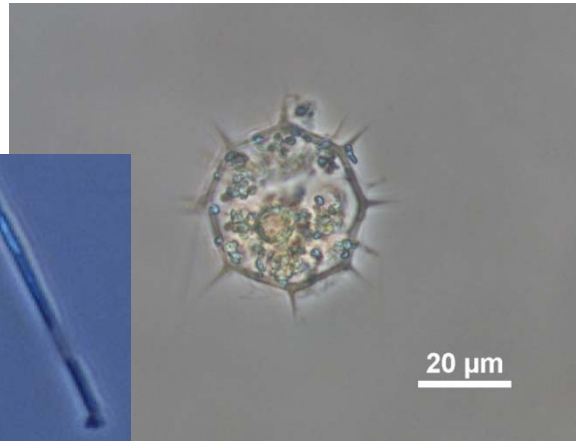


Pseudopedinella sp.

Class: Chrysophyceae sensu Christensen 1962
members: *Pseudobobo*, *Cafeteria*, *Pseudopedinella*



Flagellates



Dictyocha speculum Ehrenberg 1839

Octactis octonaria (Ehrenberg) Hovasse 1946

Class: Dictyochophyceae (Silva, 1980)

members: *Actimonas*, *Meringosphaera*, *Dictyocha*

GENUS



The word "GENUS" is written in a bold, black, sans-serif font. A blue, curved arrow starts from the right side of the word and points back to the left, forming a partial circle around the text.

Bestimmungsliteratur

Marine phytoplankton: selected microphytoplankton species from the North Sea around Helgoland and Sylt
Mona Hoppenrath; Malte Elbrächetr & Gerhard Drebes. – Stuttgart: Schweizerbart, 2009

Phytoplankton of Norwegian coastal waters
Jahn Thronson; Grethe R. Hasle & Karl Tangen. – Oslo: Almater Forl., 2007

A guide to extant coccolithophore taxonomy
Jeremy R. Young. – [Utrecht], 2003

A taxonomic guide to some common marine phytoplankton
Rita a. Horner. – Bristol: Biopress, 2002

Guide d'identification du phytoplancton marin de l'estuaire et du golfe du Saint-Laurent
Lyse Bérard-Therriault; Michel Poulin & Luci Bossé. – Ottawa: Les Presses Scientifiques du CNRC, 1999

Identifying marine phytoplankton
Camelo R. Tomas. – San Diego [u.a.]: Academic Press, [1999], c1997

Coccolithophores
Amos Winter. – Cambridge [u.a.]: Cambridge Univ. Press, 1994