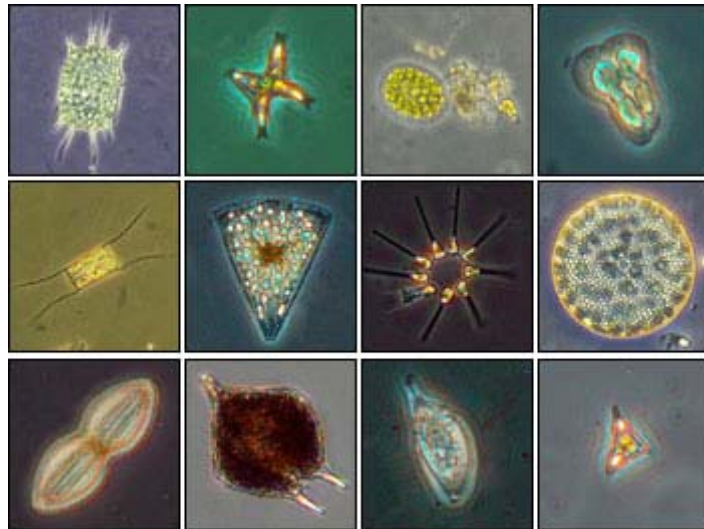


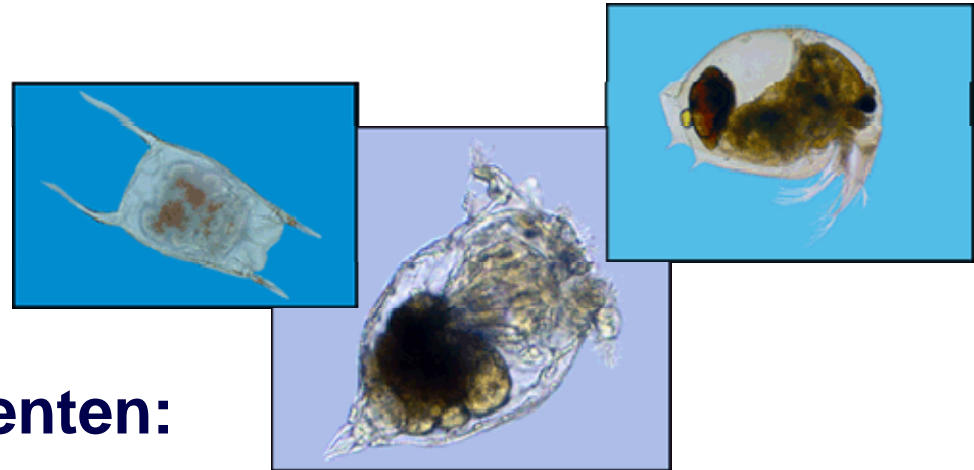


HET ZWEVENDE LEVEN IN DE SCHELDE

HET ZWEVENDE LEVEN IN HET WATER

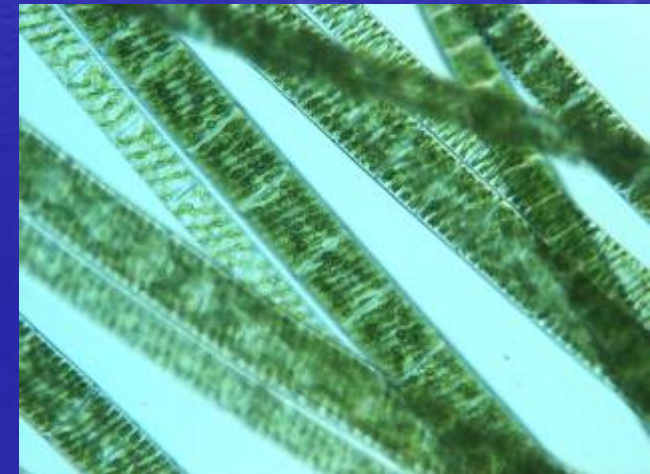
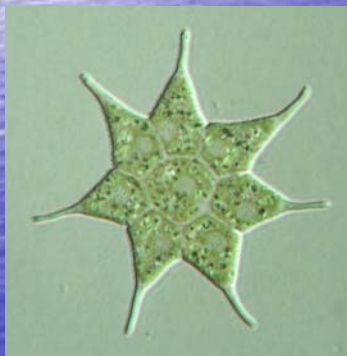
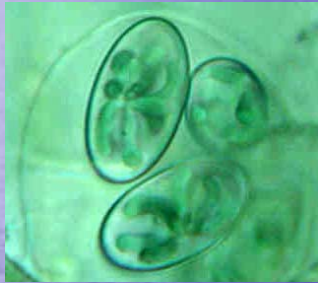
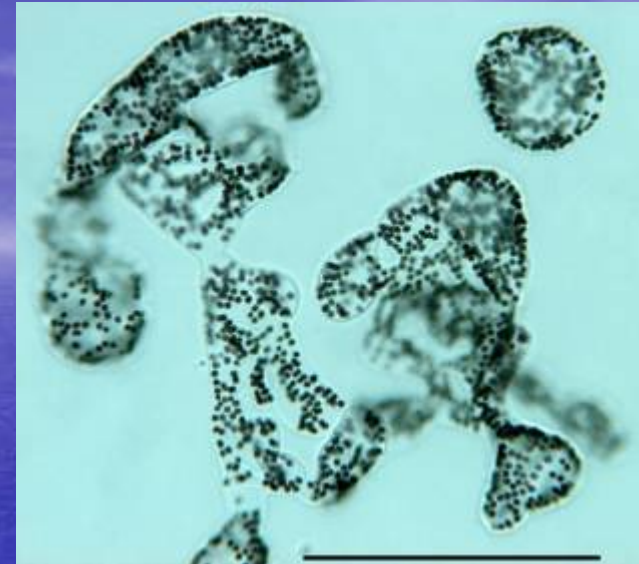
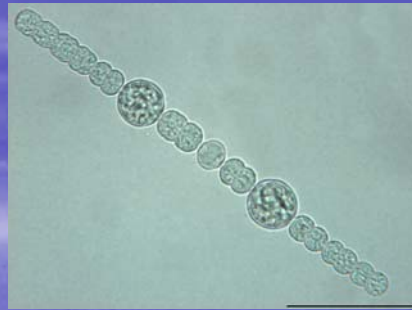
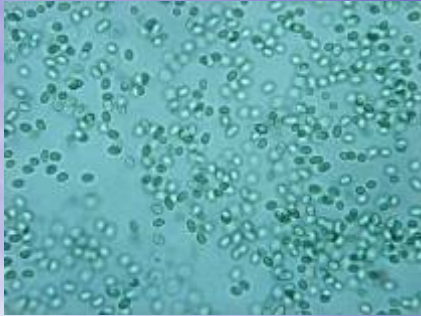


1. De primaire producenten: het fytoplankton

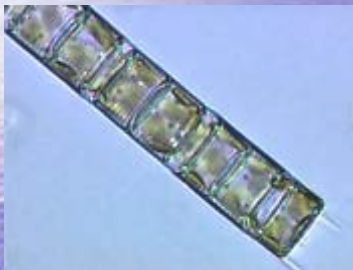
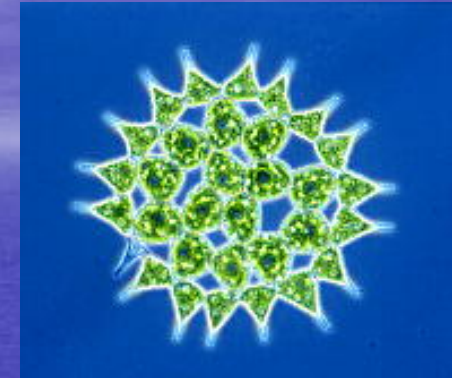


2. De secundaire producenten: het zoöplankton

I. De primaire producenten: het fytoplankton



Fytoplankton in het Schelde-estuarium

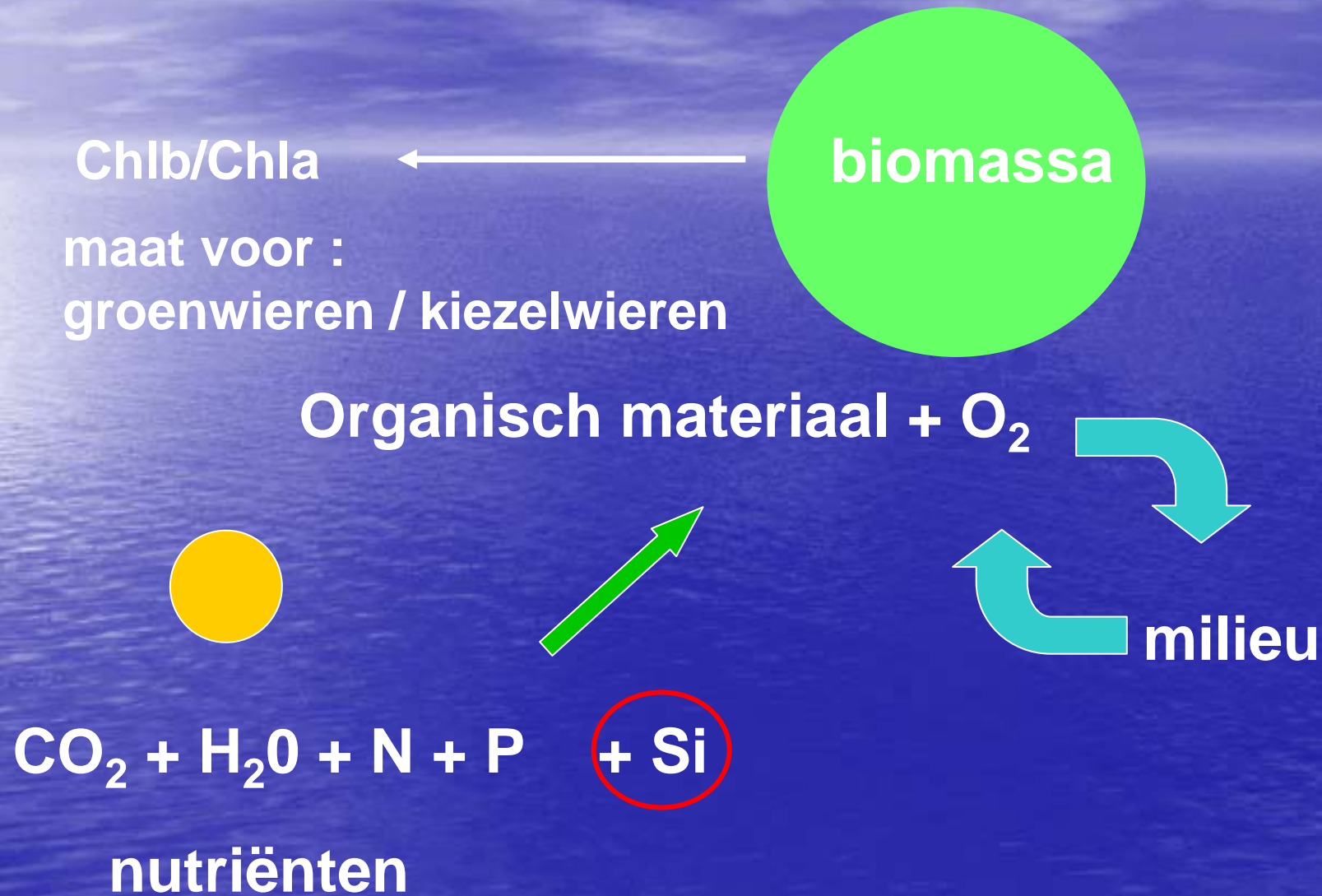


**Kiezelwieren
(diatomeeën)**
Si skelet
geen Chl b

**Groenwieren
(chlorofyten)**
Chl a en b



Primaire productiviteit in de waterkolom



Europese Kaderrichtlijn Water

2015: 'goede' ecologische toestand voor grond – en oppervlaktewater

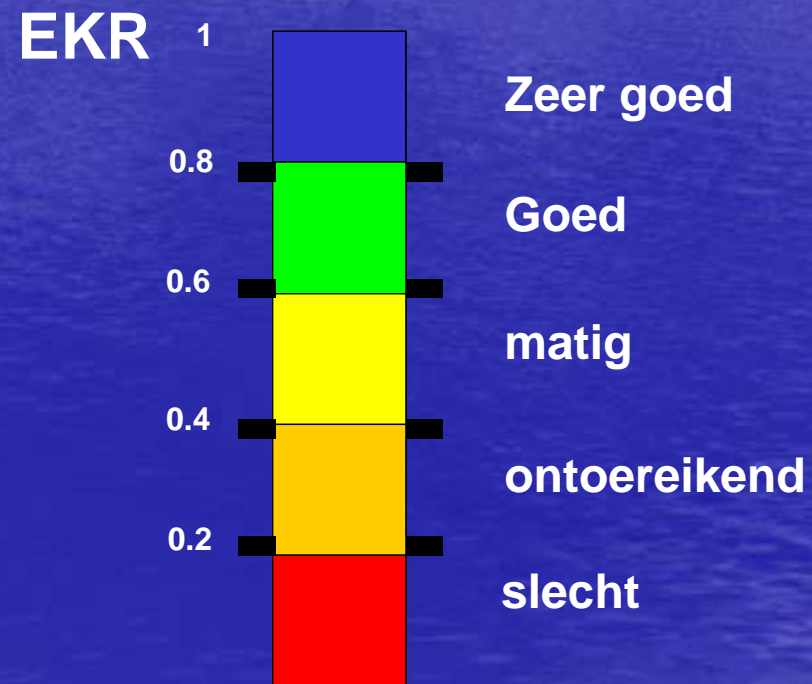
• fysisch – chemische kwaliteit

• biologische kwaliteitselementen

1. **Fytoplankton**
2. Waterplanten
3. Macro-invertebraten
4. Vis



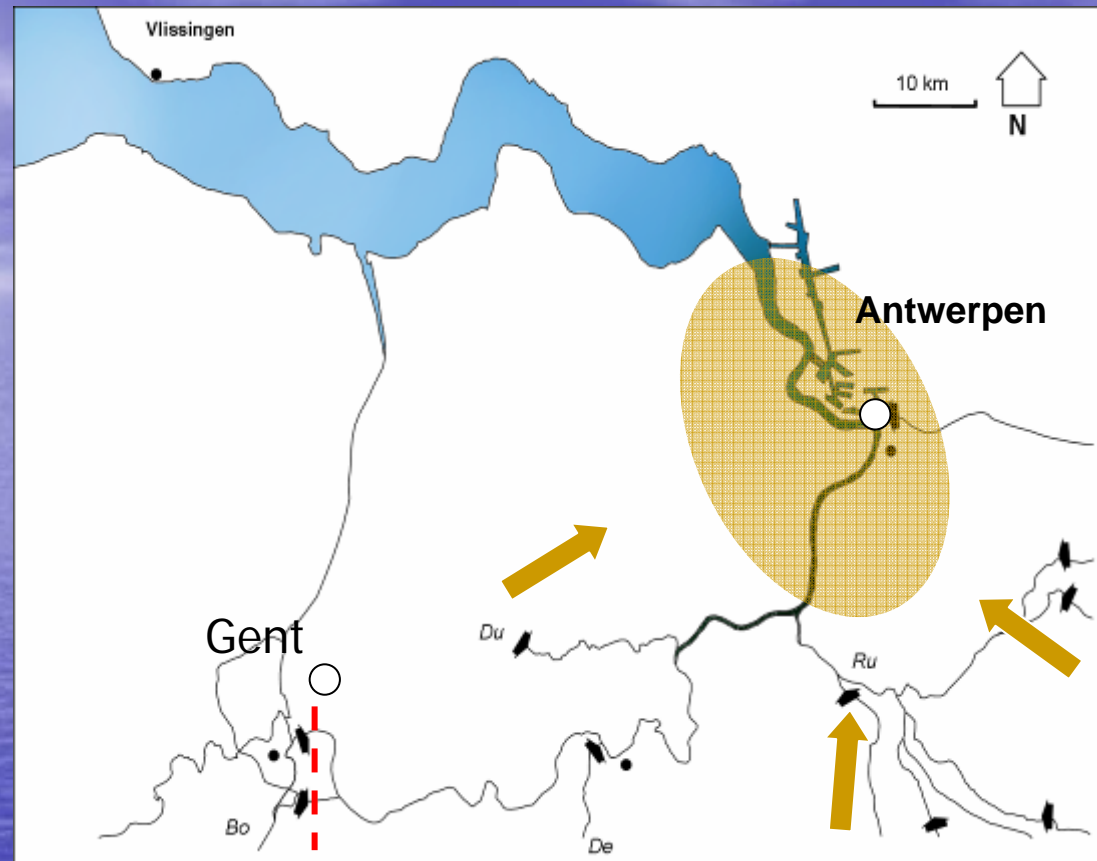
Ecologische toestand



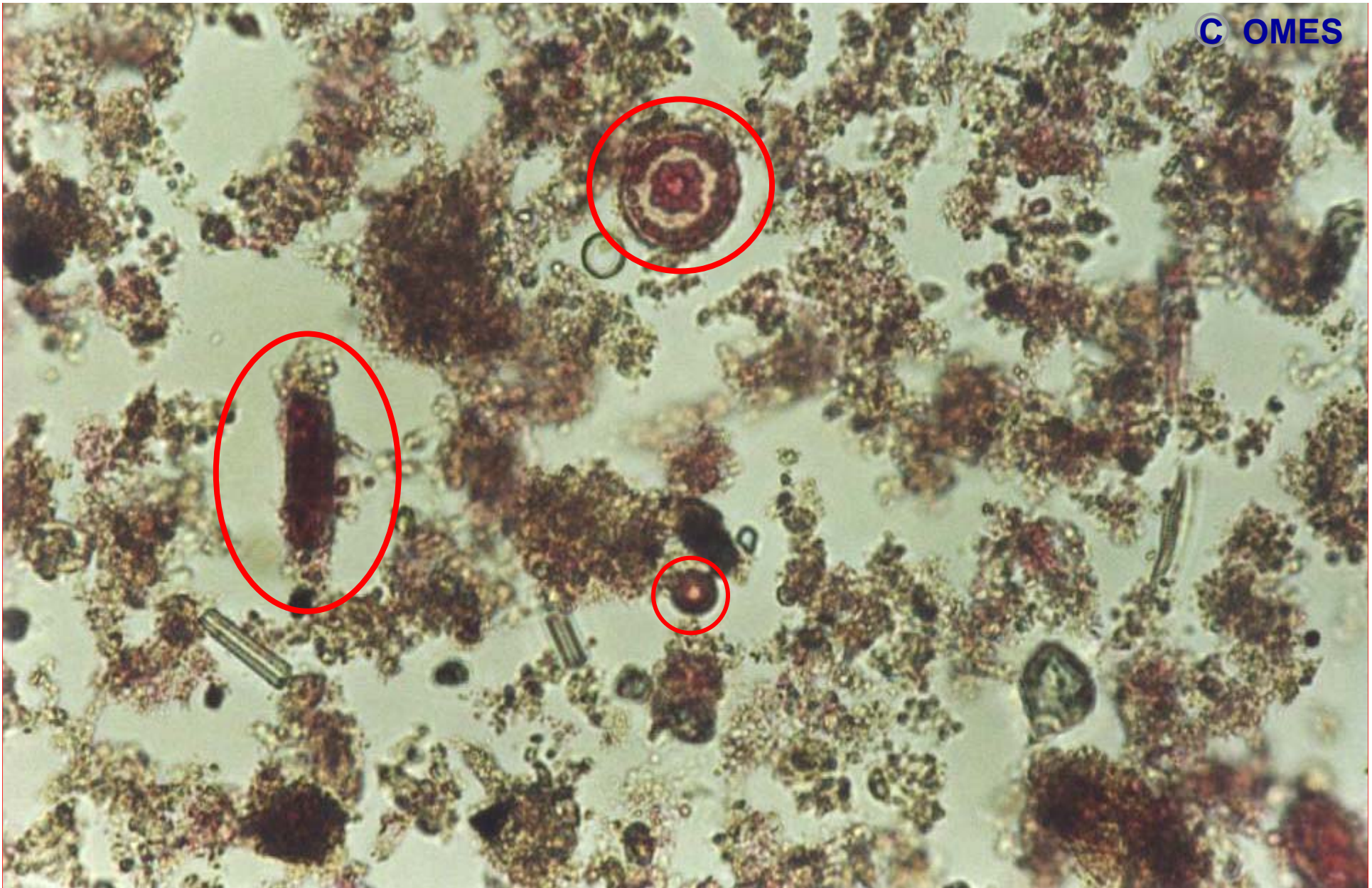
hoeveelheid en diversiteit
van organismen







belasting vanuit het bekken

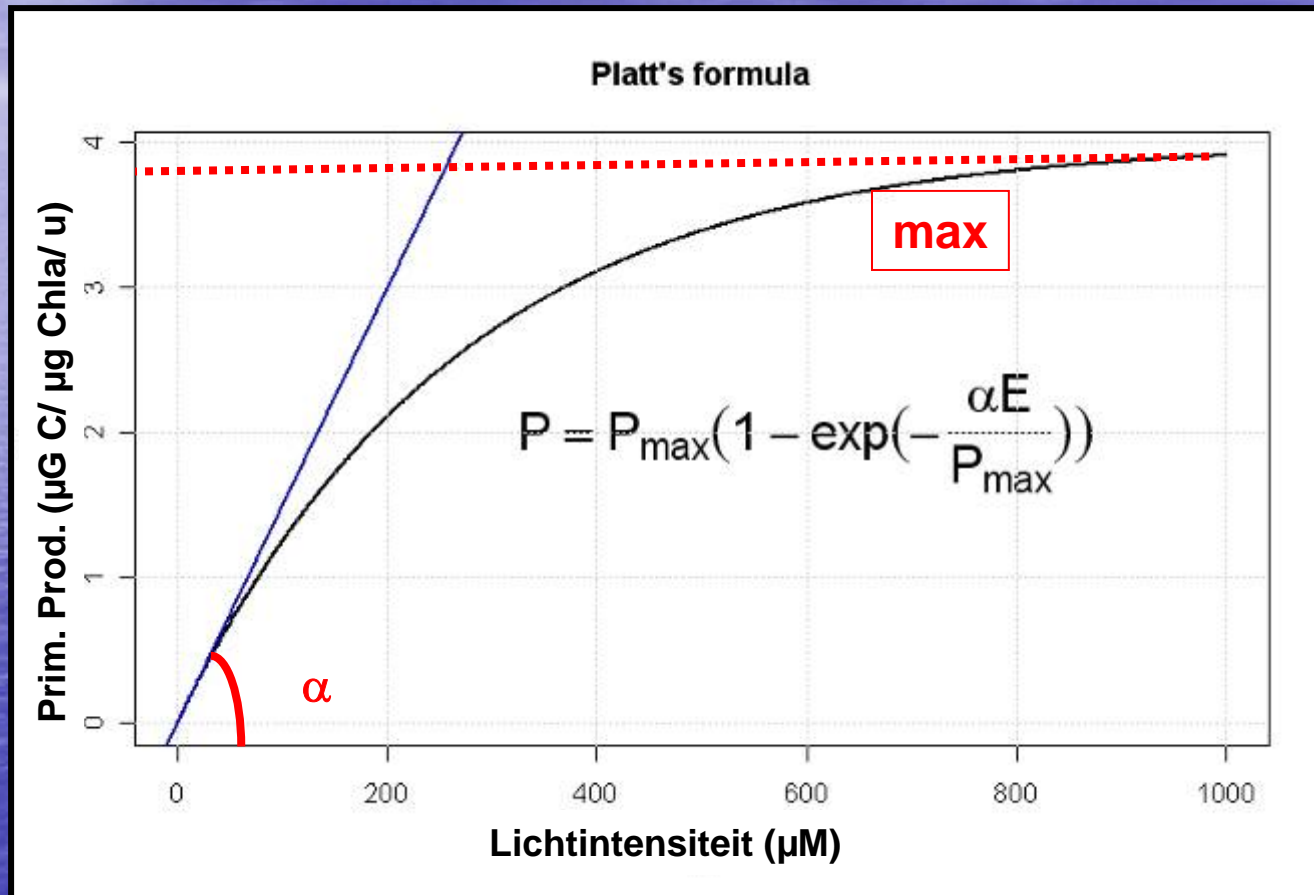


hoge concentratie aan detritus



Factoren die de primaire productie beïnvloeden

1. lichtintensiteit



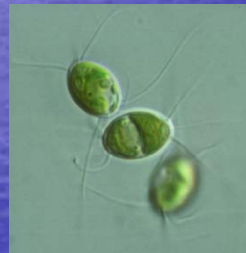
Factoren die de primaire productie beïnvloeden

1. lichtintensiteit

2. plankton: passief transport



verblijftijd (uitspoeltijd),
dus debiet van belang

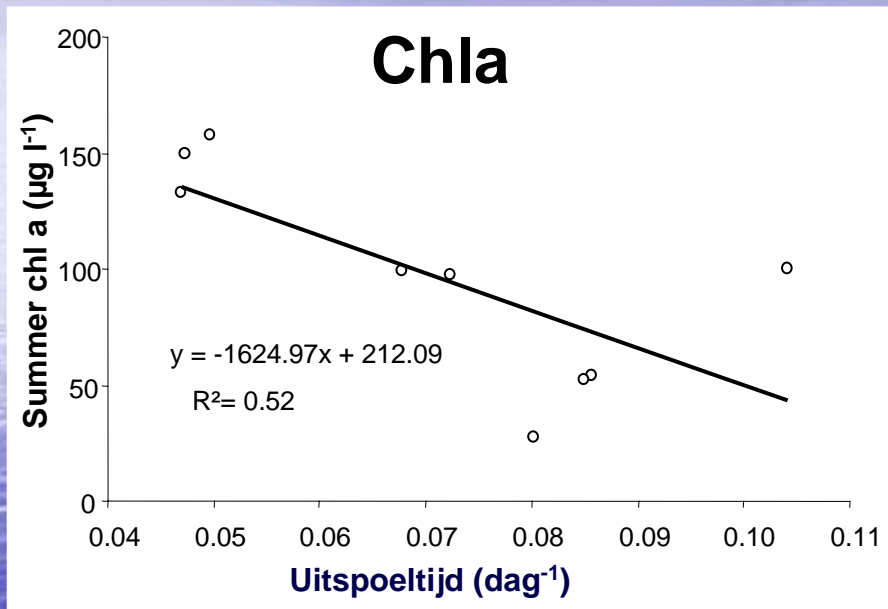
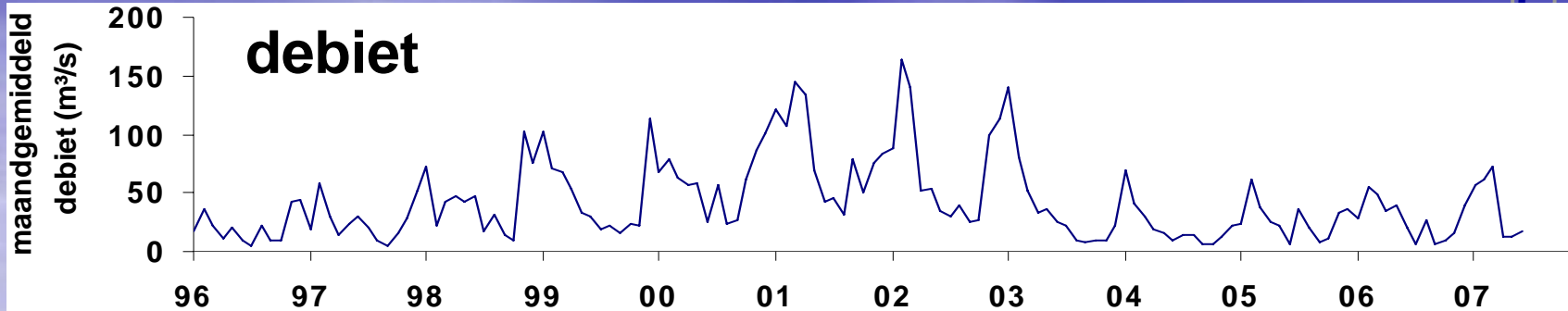


Groenwieren:

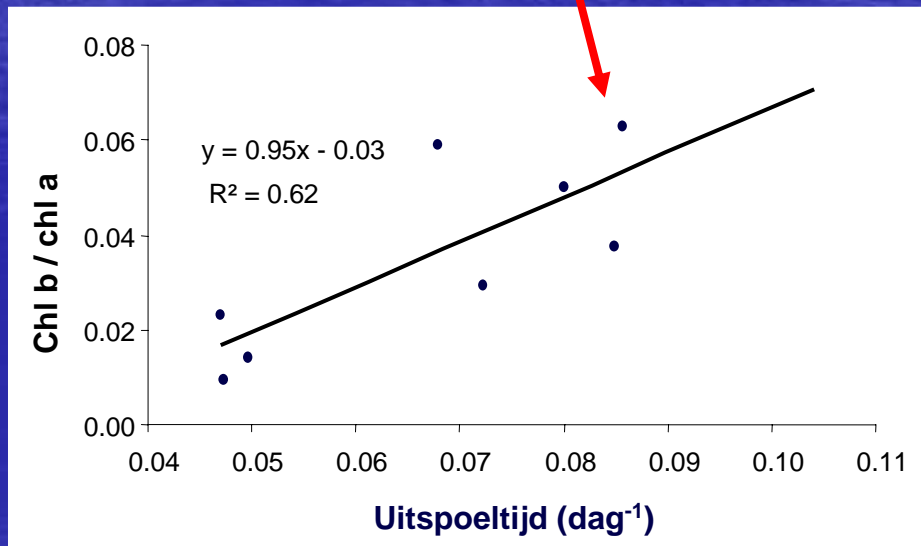
snellere levenscyclus dan



kiezelwieren



meer groenwieren



Factoren die de primaire productie beïnvloeden

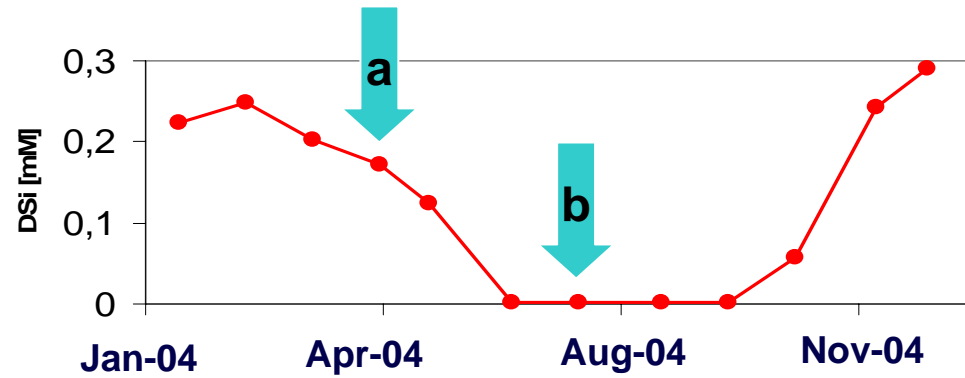
1. lichtintensiteit

2. debiet

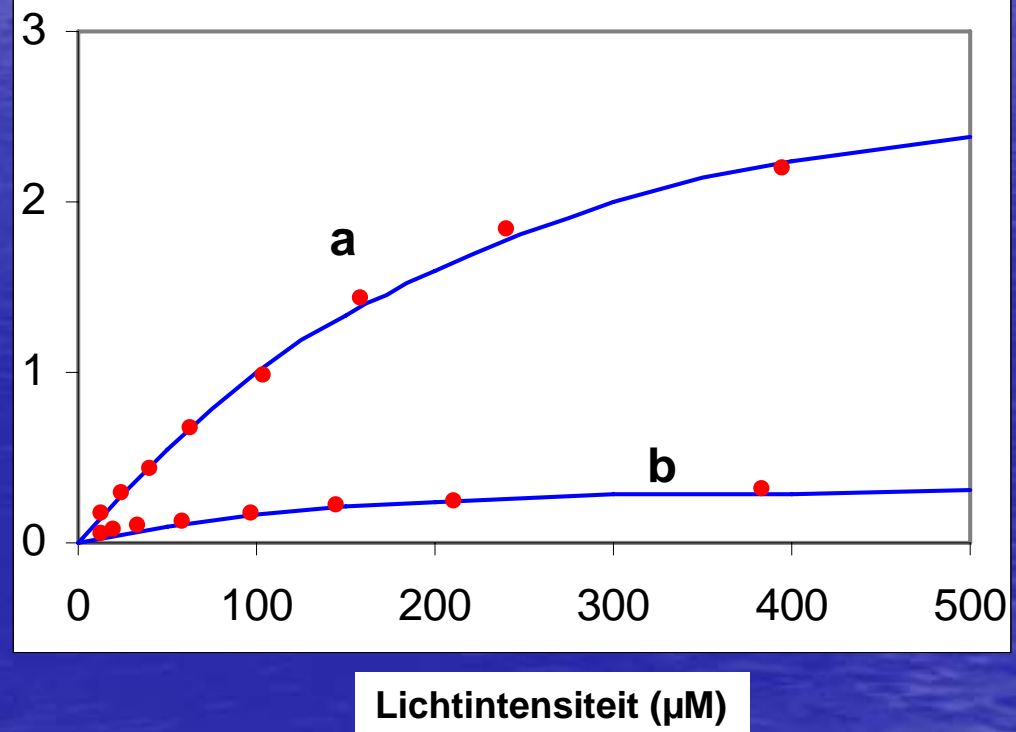
3. nutriënten:

hoeveelheid
verhouding N/P
Si

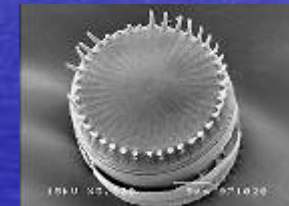
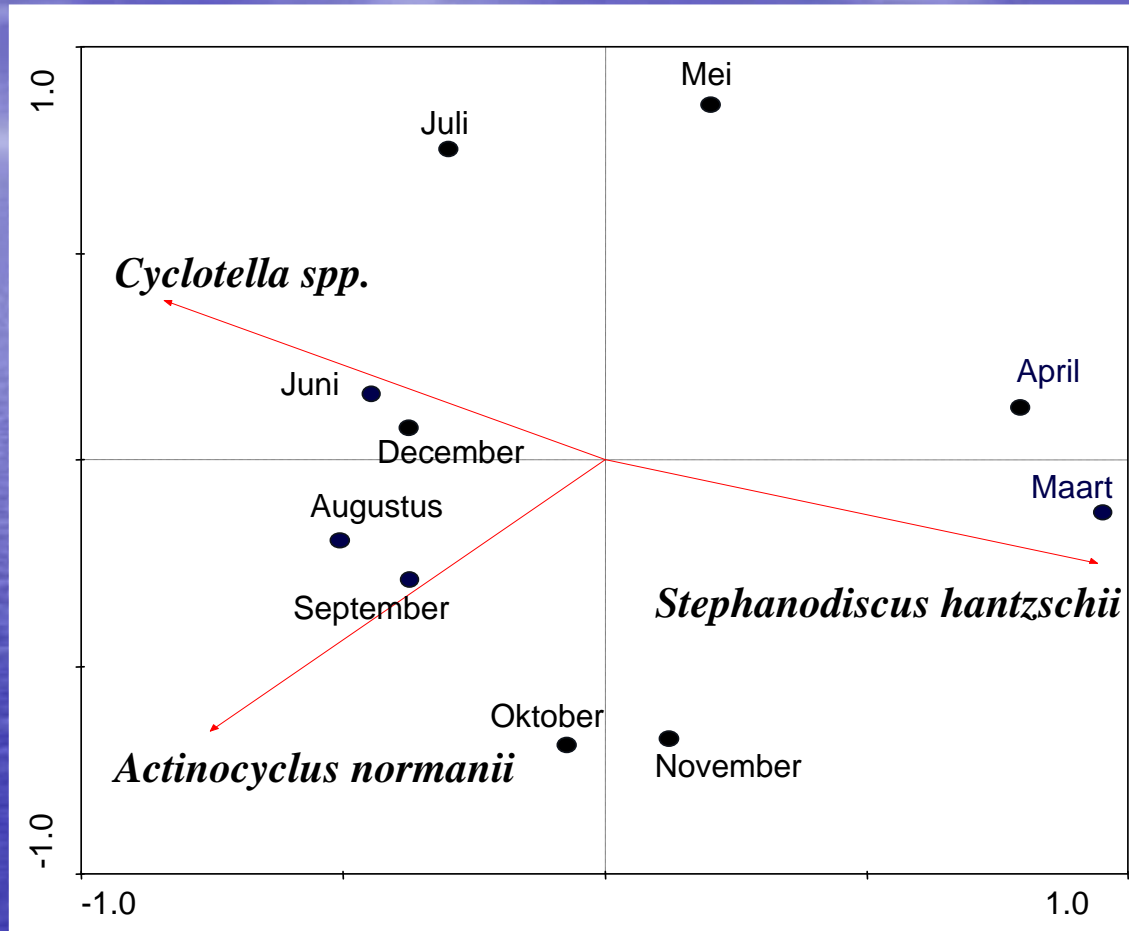
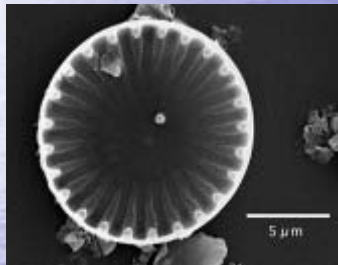
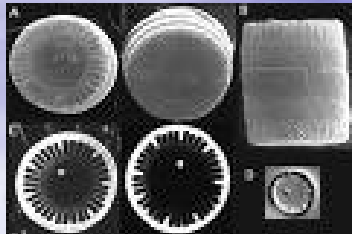
concentratie opgelost Si



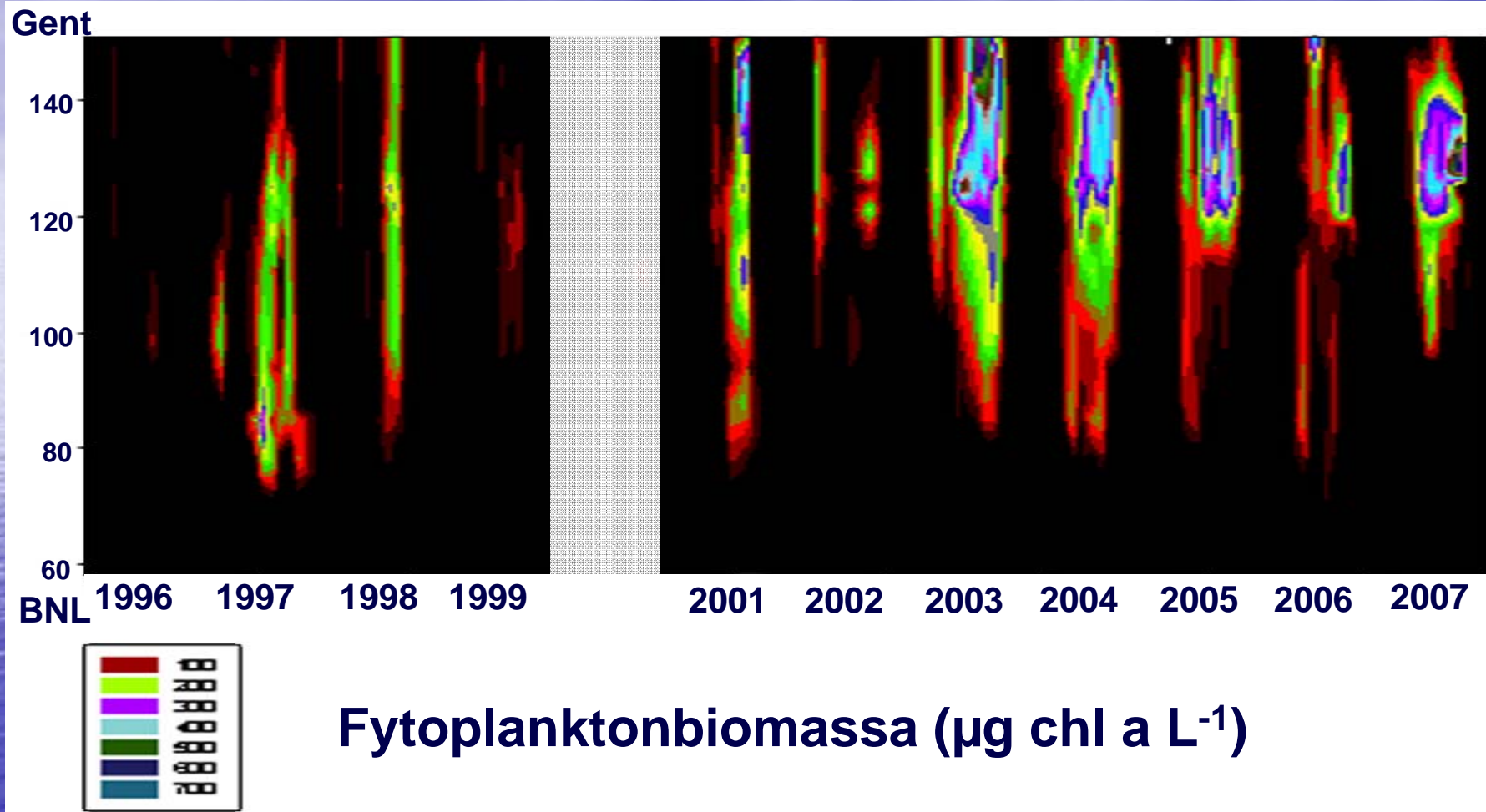
Prim. Prod. ($\mu\text{g C/}\mu\text{g Chla/ u}$)



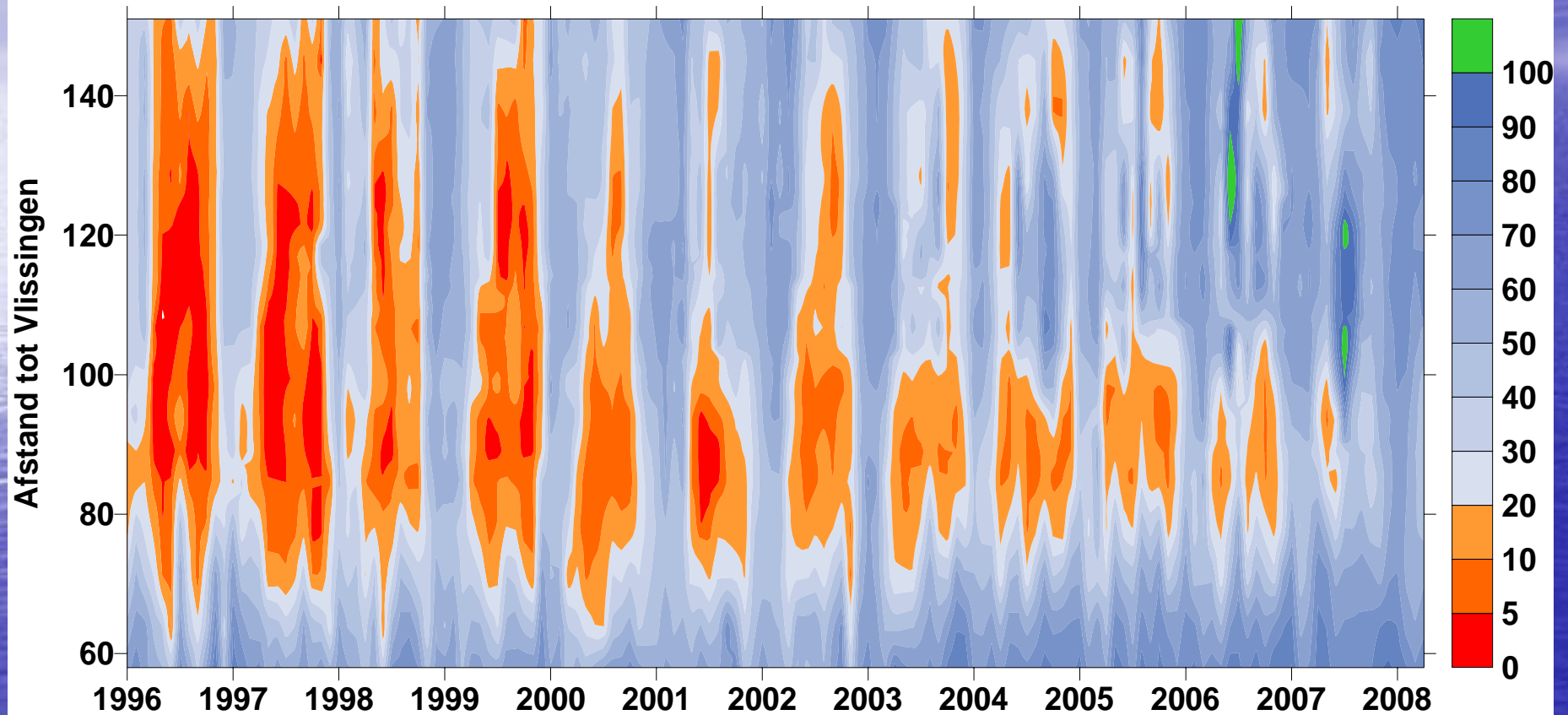
Successie van diatomeeën soorten

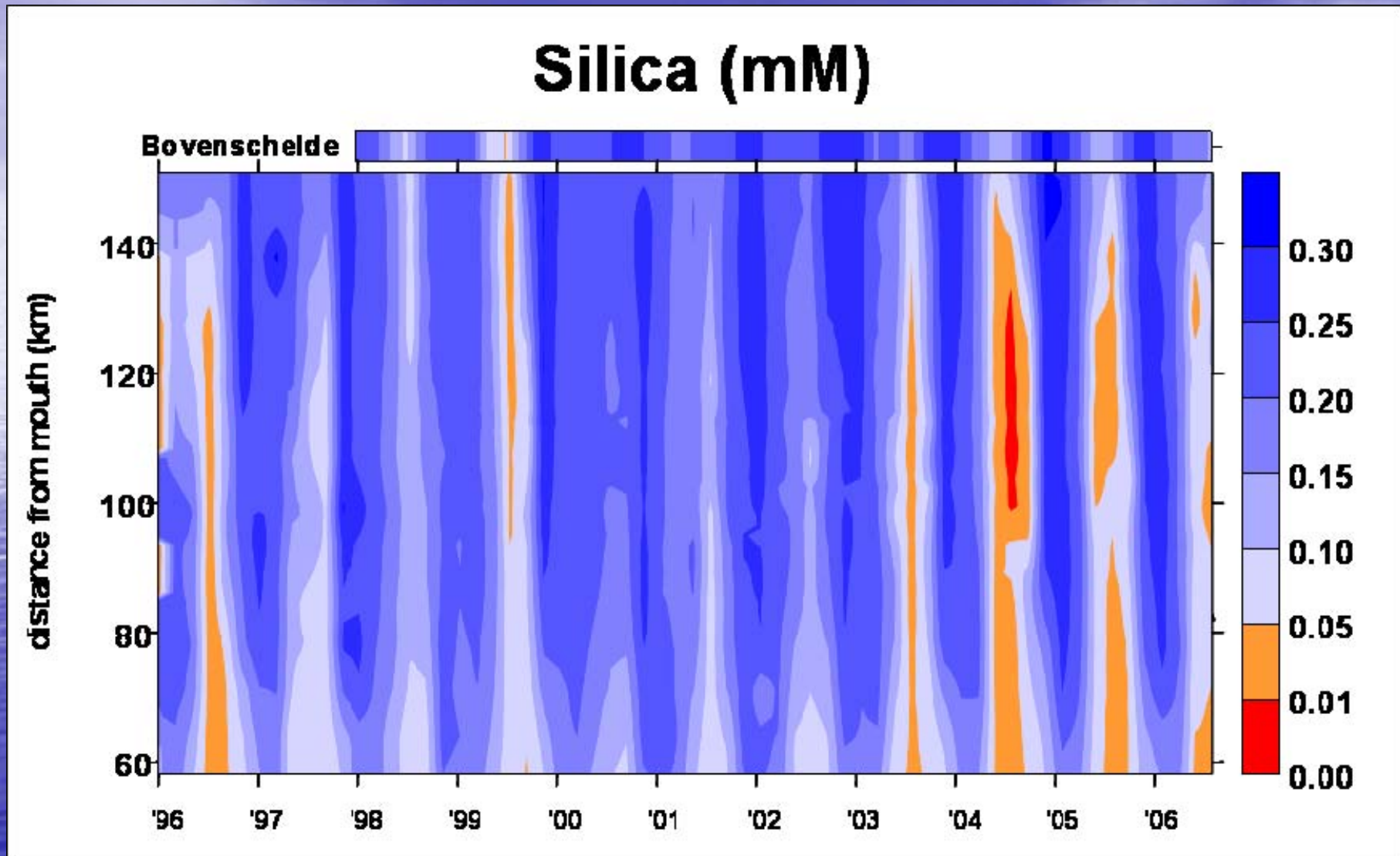


Evolutie sinds 1996



Zuurstof (% verzadiging)





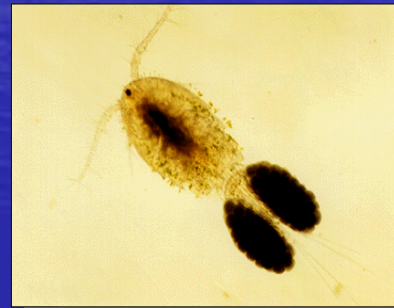
II. De secundaire producenten: het zoöplankton

mesozoöplankton

branchiopoda
(cladoceren)



copepoden



_____ 1mm

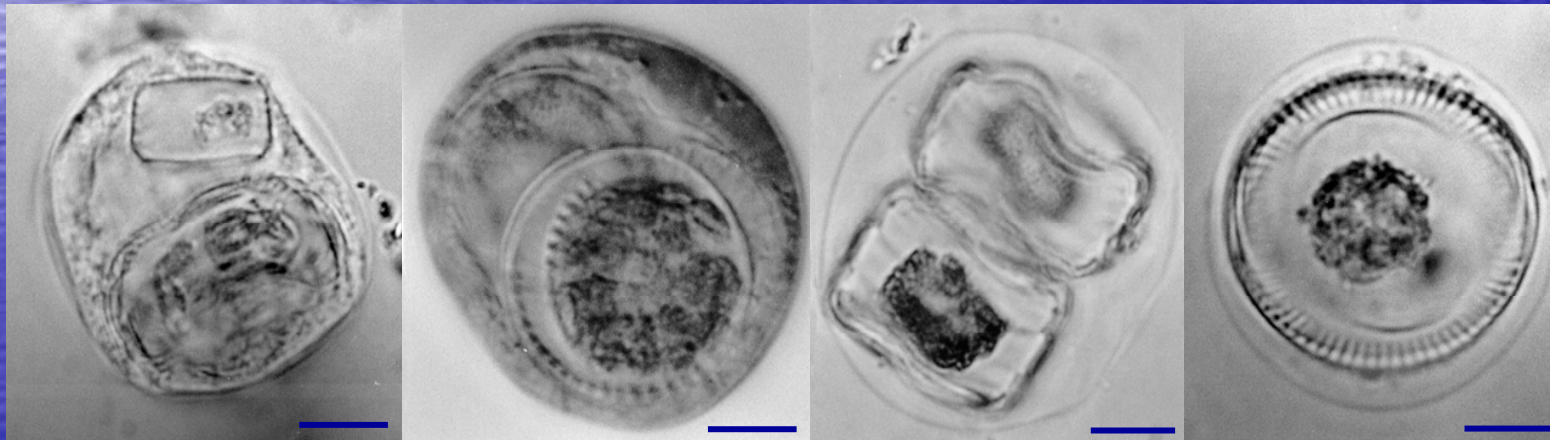
microzoöplankton

rotiferen



— 100 μm

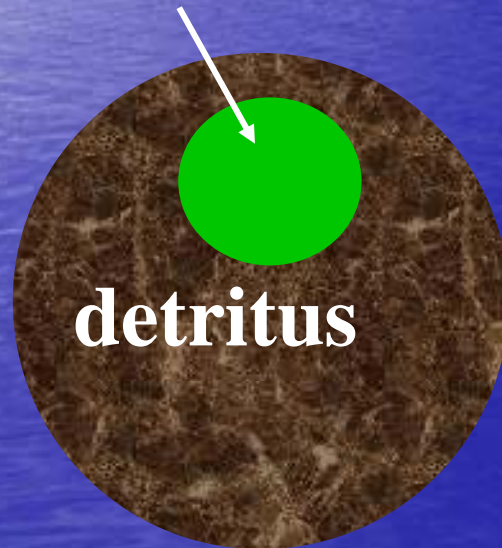
amoeben



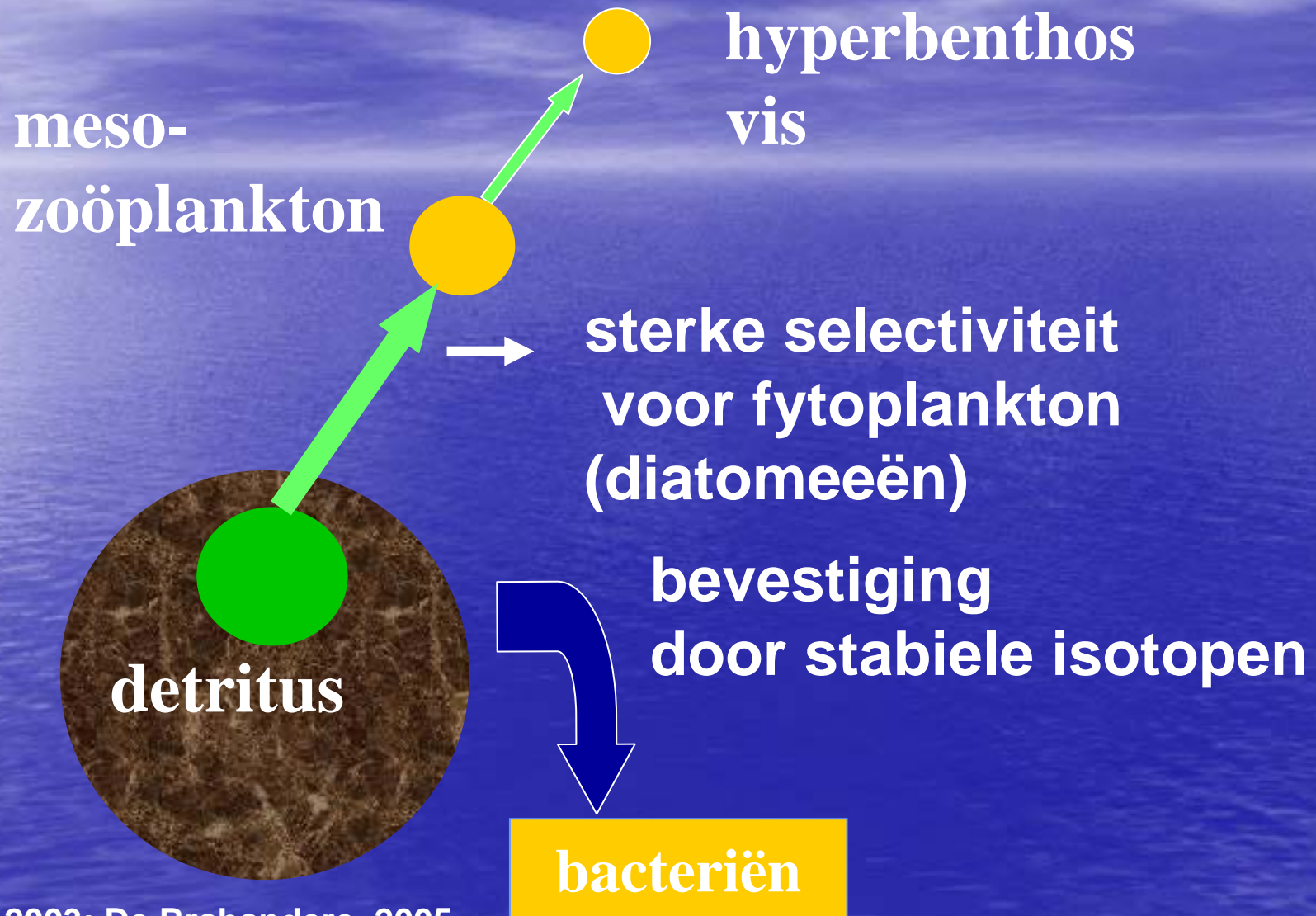
— 10 μm

Rol in de voedselketen

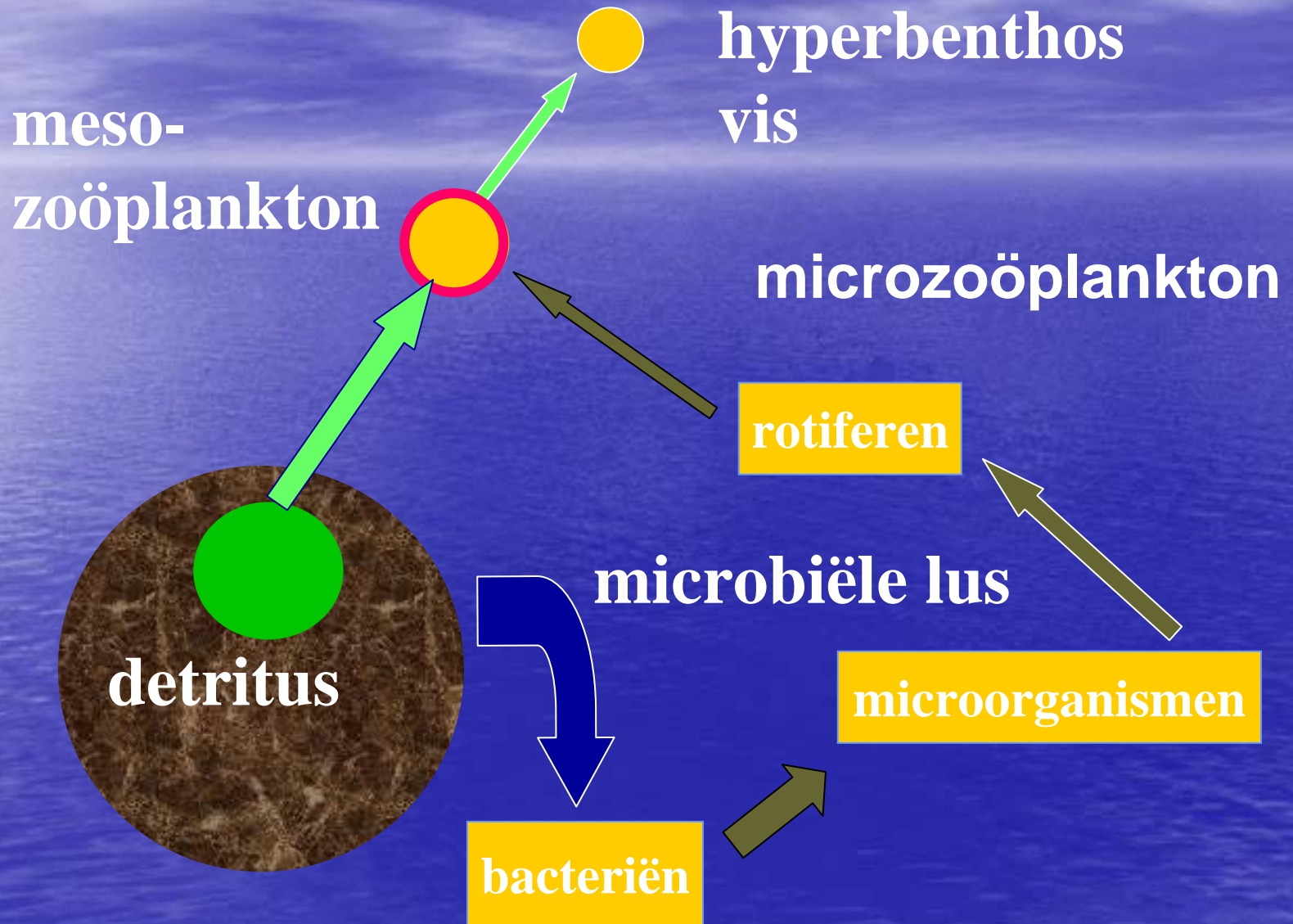
fytoplankton

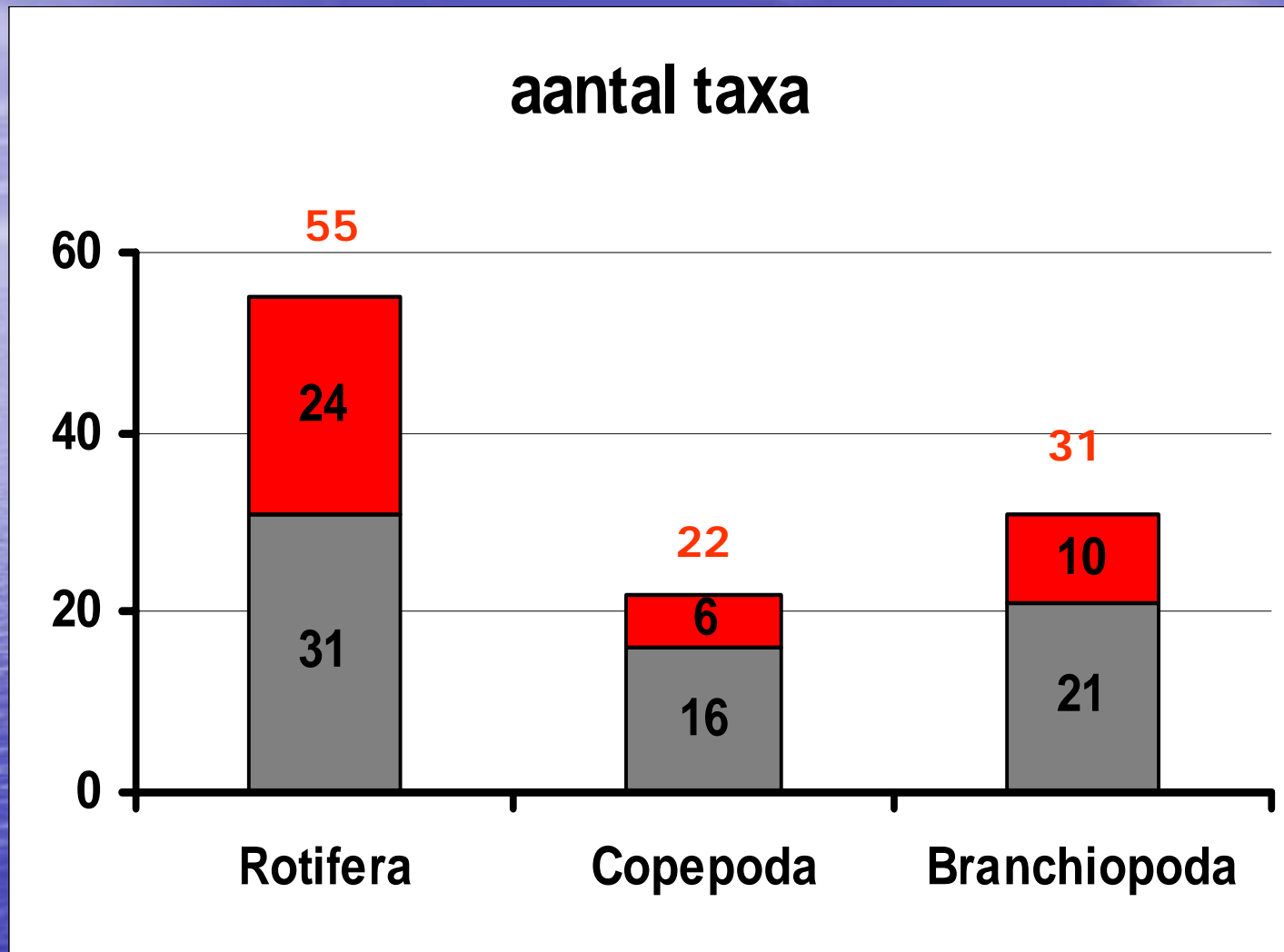


detritus



Tackx et al., 2003; De Brabandere, 2005





totaal:108



40 nieuw voor de Schelde

Taxonomische kennis (90 % op soortsniveau) © OMES

Rotifera

Monogononta

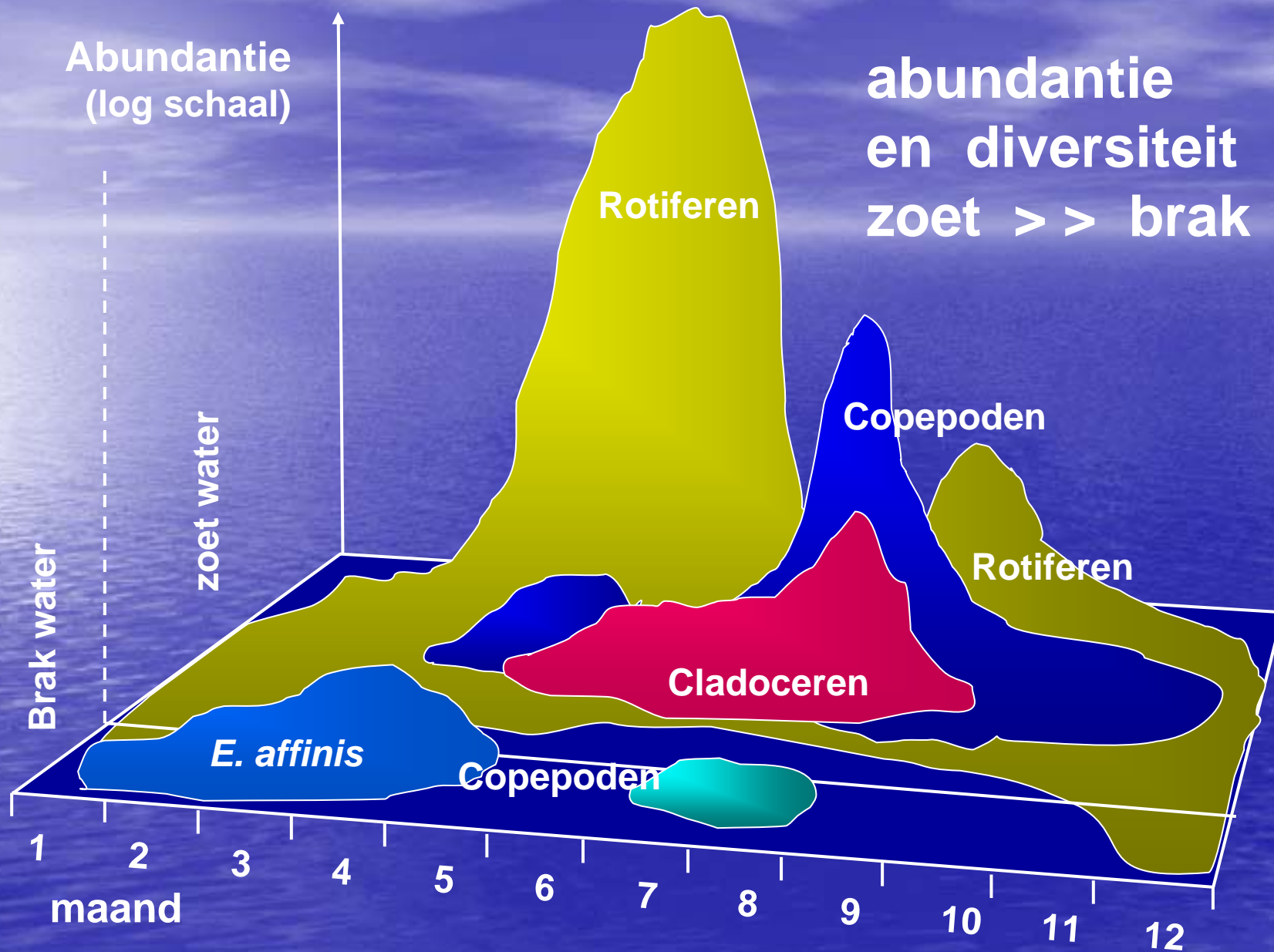
- | | |
|---|---|
| * <i>Anuraeopsis sp.</i> | <i>Keratella valga</i> (Ehrenberg, 1834) |
| <i>Asplanchna brightwelli</i> (Gosse, 1850) | * <i>Lecane closterocerca</i> (Schmarda, 1853) |
| <i>Asplanchna priodonta</i> Gosse 1850 | * <i>Lecane decipiens</i> (Murray, 1913) |
| <i>Brachionus angularis</i> Gosse, 1851 | * <i>Lecane bulla</i> (Gosse, 1851) |
| * <i>Brachionus bidentatus</i> Anderson, 1889 | <i>Lecane flexilis</i> (Gosse, 1886) |
| <i>Brachionus calyciflorus</i> Pallas, 1766 | * <i>Lecane hamata</i> (Stokes, 1896) |
| * <i>Brachionus diversicornis</i> (Daday, 1883) | * <i>Lecane luna</i> (O. F. Müller, 1776) |
| * <i>Brachionus leydigi</i> (Rousselet, 1889) | <i>Lecane sp.</i> |
| <i>Brachionus quadridentatus</i> Hermann 1783 | <i>Lepadella ovalis</i> (O. F. Muller, 1786) |
| <i>Brachionus rubens</i> Ehrb. 1838 | <i>Notholca acuminata</i> (Ehrb. 1832) |
| <i>Brachionus urceolaris</i> O. F. Muller, 1773 | <i>Notholca squamula</i> (O. F. Muller, 1786) |
| <i>Brachionus variabilis</i> Hempel, 1896 | * <i>Ploesoma sp.</i> |
| <i>Cephalodella sp.</i> | * <i>Ploesoma hudsoni</i> (Imhof, 1891) |
| <i>Colurella sp.</i> | * <i>Ploesoma truncatum</i> (Levander, 1894) |
| <i>Epiphanes sp.</i> | * <i>Platylabus quadricornis</i> (Ehrb. 1832) |
| <i>Euchlanis dilatata</i> Ehrenberg, 1832 | <i>Polyarthra sp.</i> |
| <i>Filinia brachiata</i> (Rousselet, 1901) | * <i>Pompholyx sulcata</i> Hudson, 1855 |
| <i>Filinia longiseta</i> (Ehrb. 1834) | * <i>Rhinoglena frontalis</i> Ehrb. 1853 |
| * <i>Gastropus hyptopus</i> (Ehrb. 1838) | <i>Synchaeta sp.</i> |
| <i>Herxarthra sp.</i> | * <i>Synchaeta bicornis</i> Smith, 1904 |
| * <i>Kellicottia longispina</i> (Kellocott, 1879) | * <i>Testudinella elliptica</i> (Ehrenberg, 1834) |
| <i>Keratella cochlearis</i> (Gosse, 1851) | * <i>Testudinella patina</i> (Hermann, 1783) |
| * <i>Keratella cruciformis</i> (Thompson, 1892) | <i>Trichocerca pusilla</i> (Lauterborn, 1898) |
| <i>Keratella quadrata</i> (Müller, 1786) | * <i>Trichocerca rattus</i> (O. F. Muller, 1776) |
| * <i>Keratella testudo</i> (Ehrb. 1832) | <i>Trichocerca similis</i> (Wiersejski, 1886) |
| <i>Keratella tropica</i> (Apstein, 1907) | * <i>Trichotria tetractis</i> (Ehrenberg, 1830) |

Bdelloidea

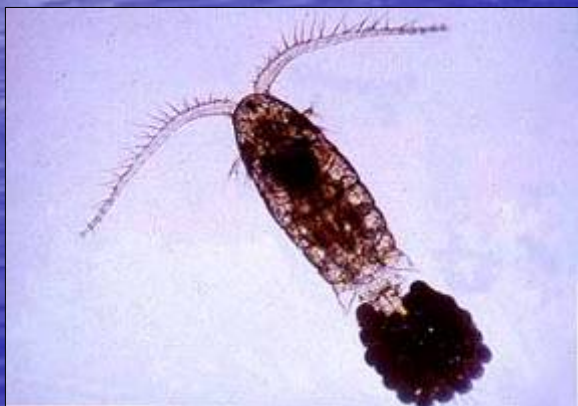
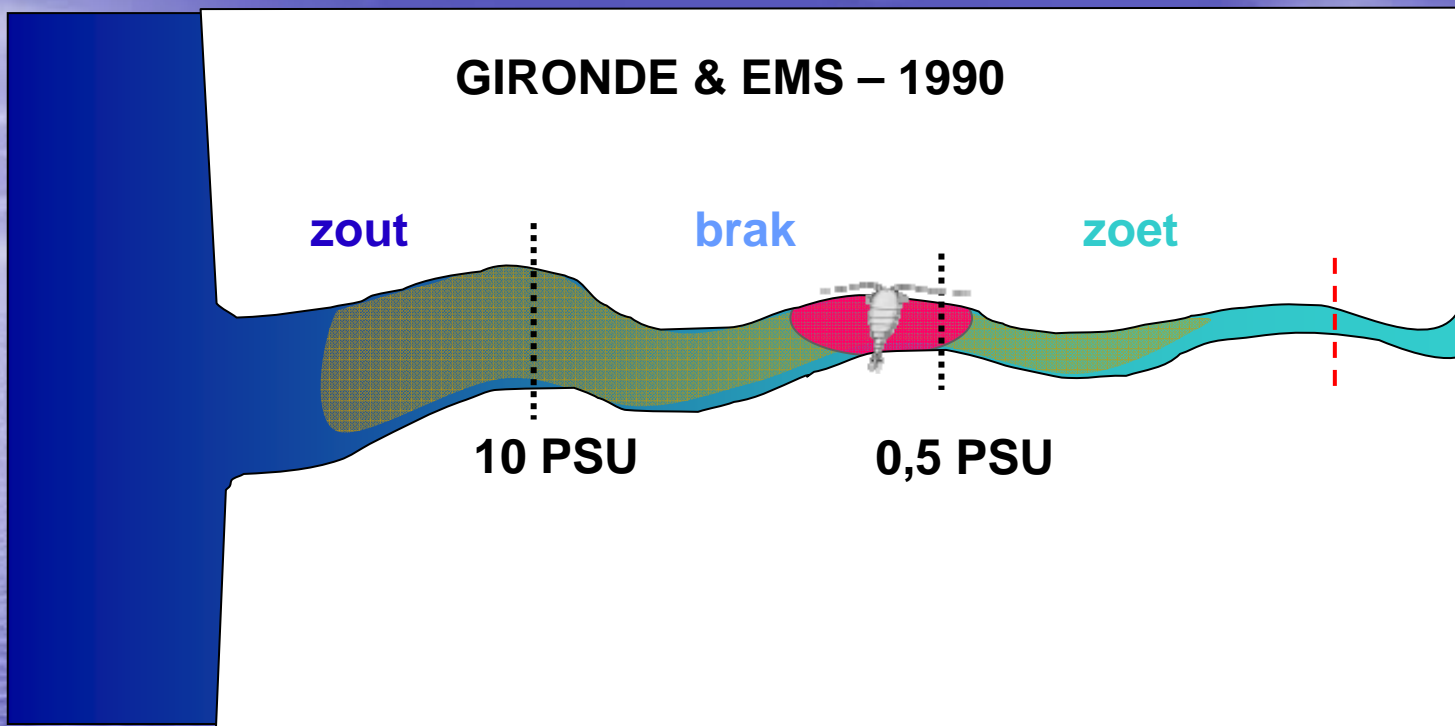
- | | |
|--------------------------|---|
| * <i>Dissotrocha sp.</i> | <i>Rotaria neptunia</i> (Ehrenberg, 1832) |
| Undetermined Bdelloids | <i>Rotaria sp.</i> |

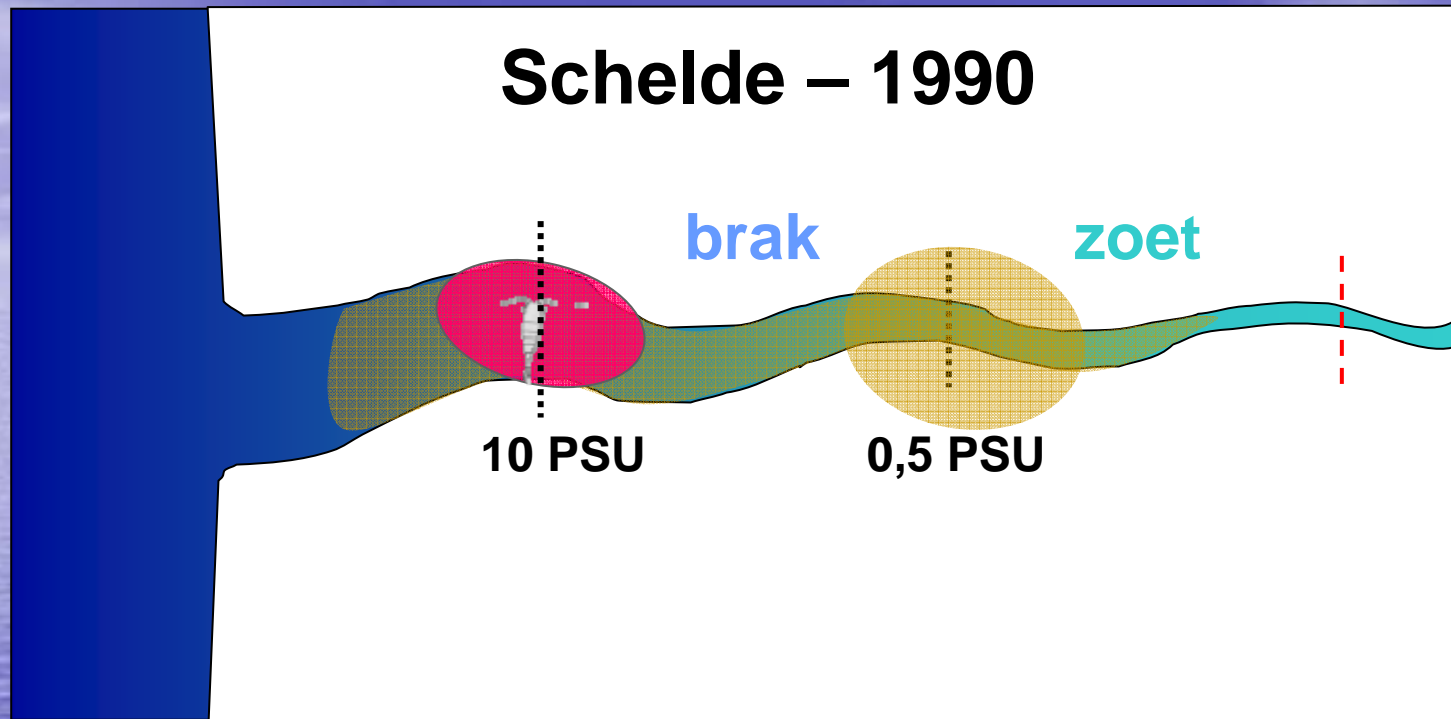
Toepassing in
Seine - aval

Verdeling in tijd en ruimte



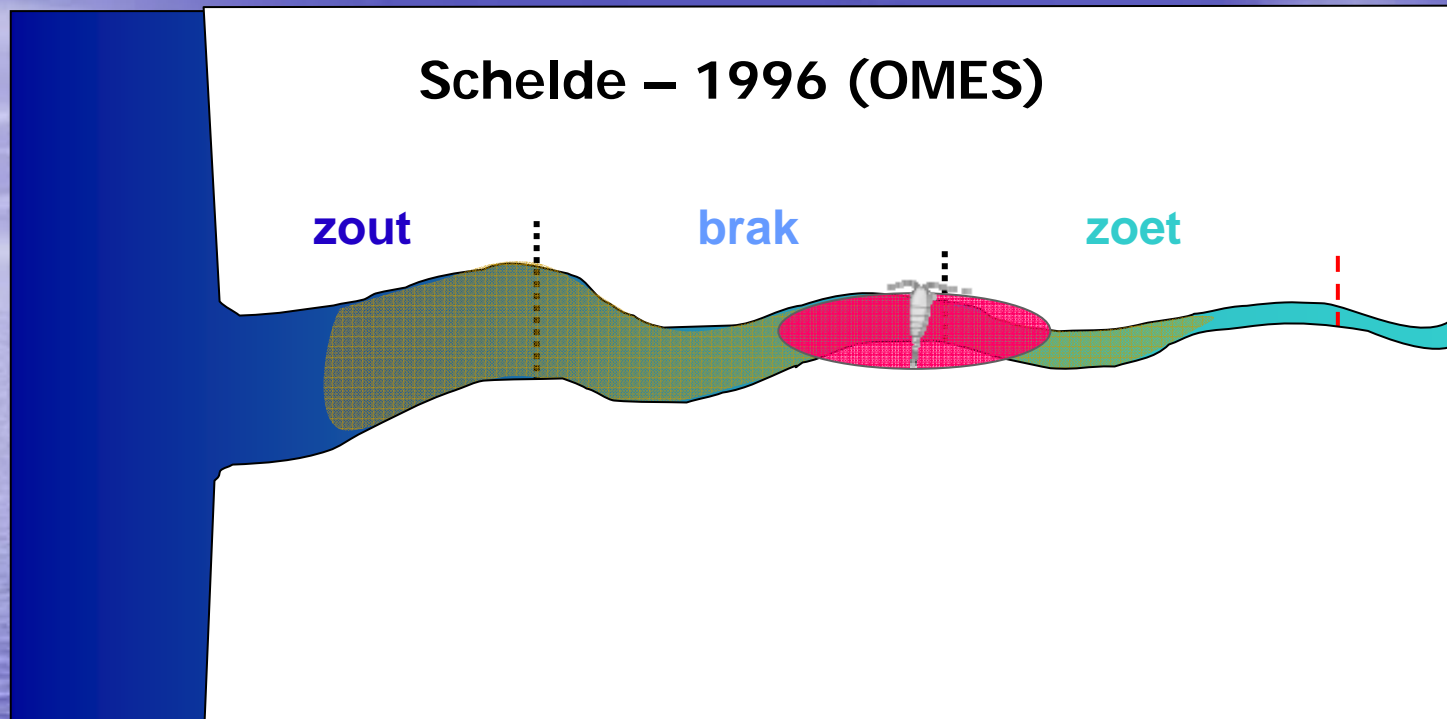
Eurytemora affinis





slechte waterkwaliteit

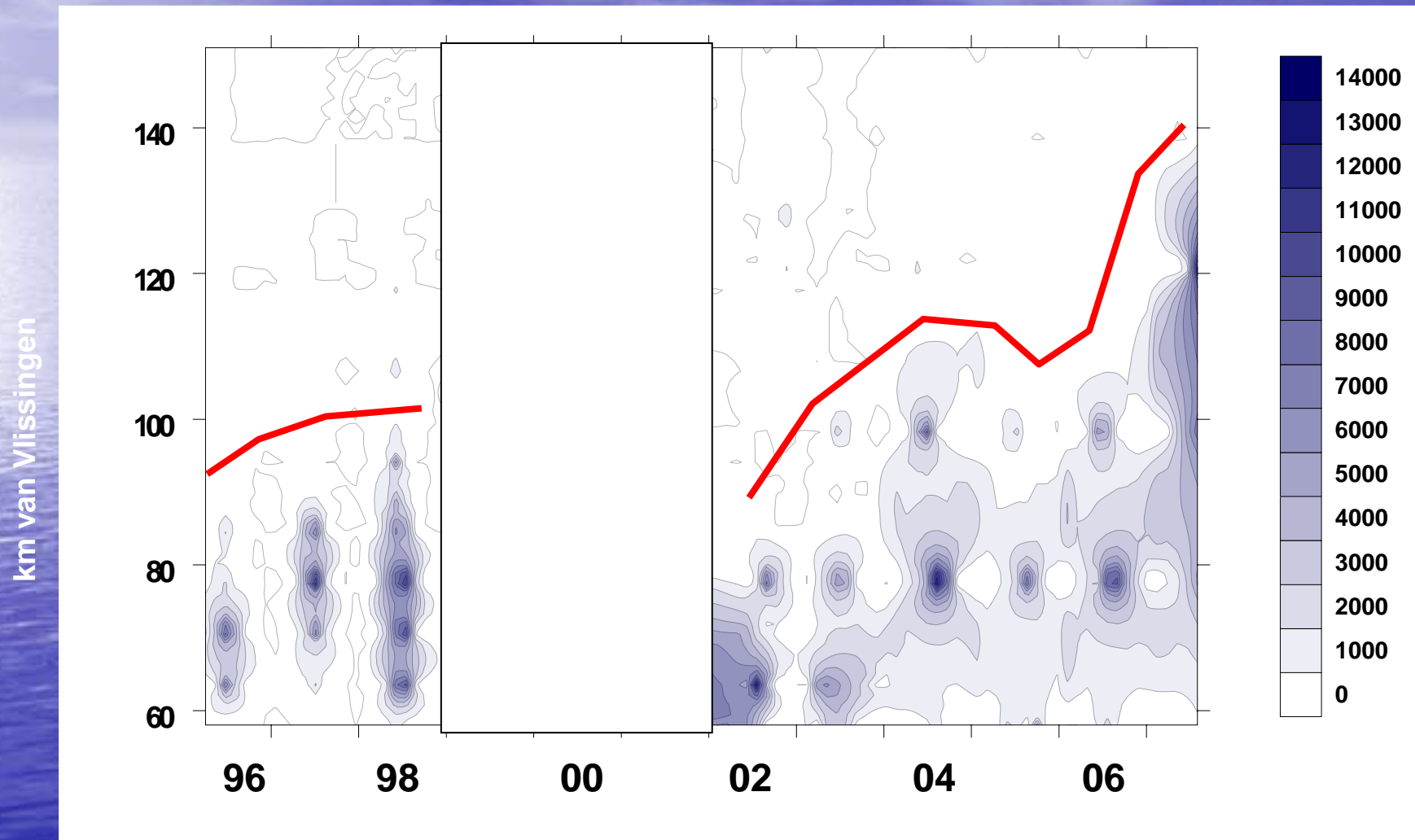
Soetaert & van Rijswijk 1993; Sautour & Castel 1995

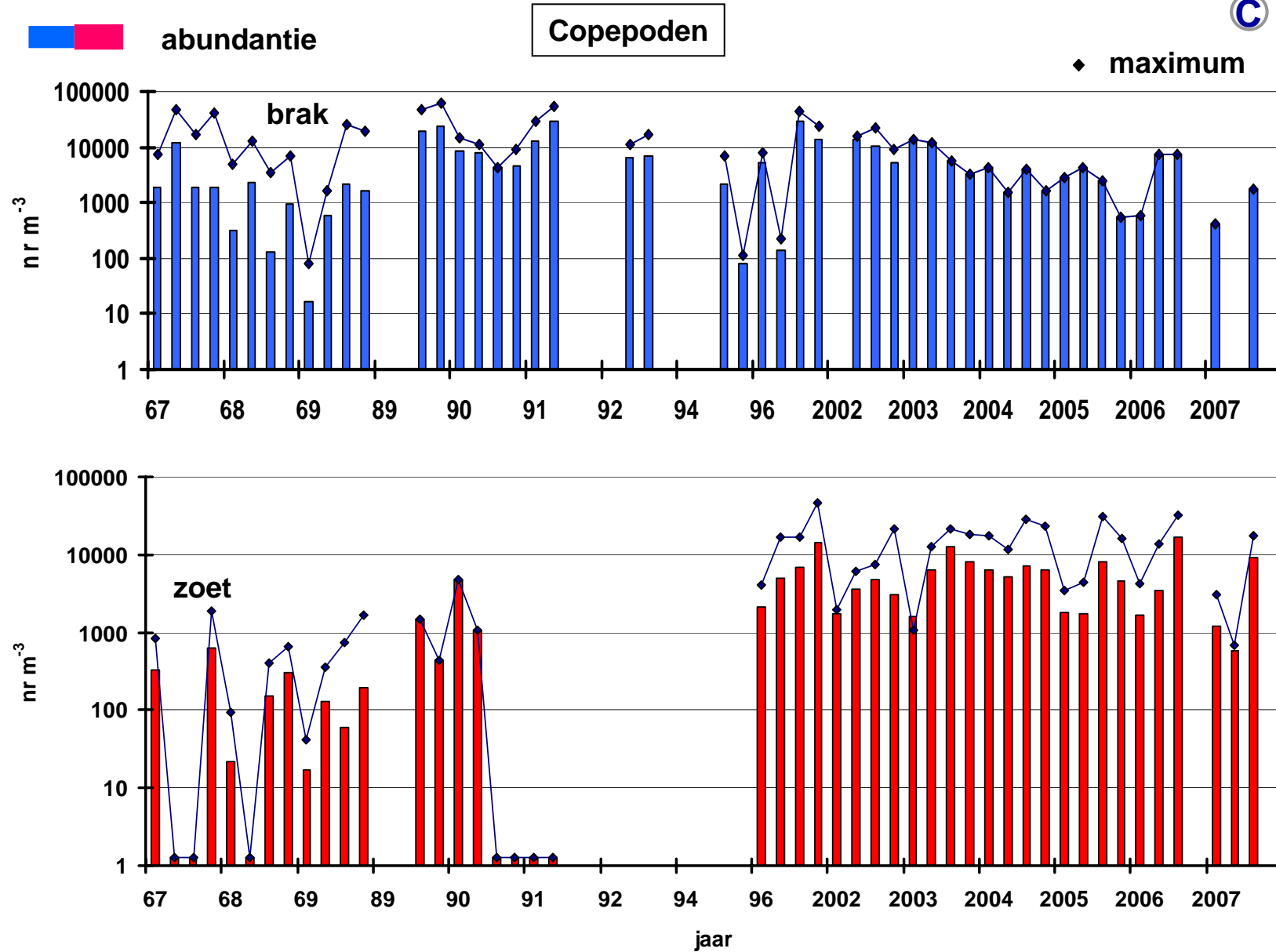


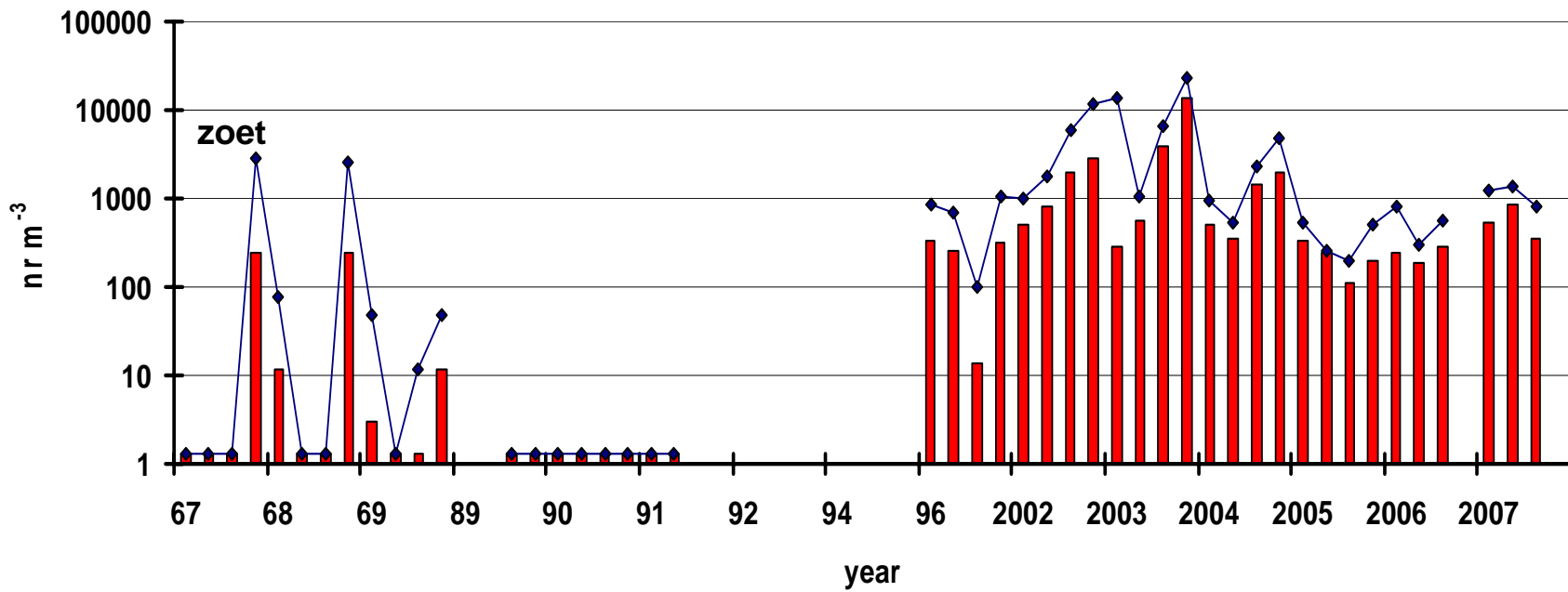
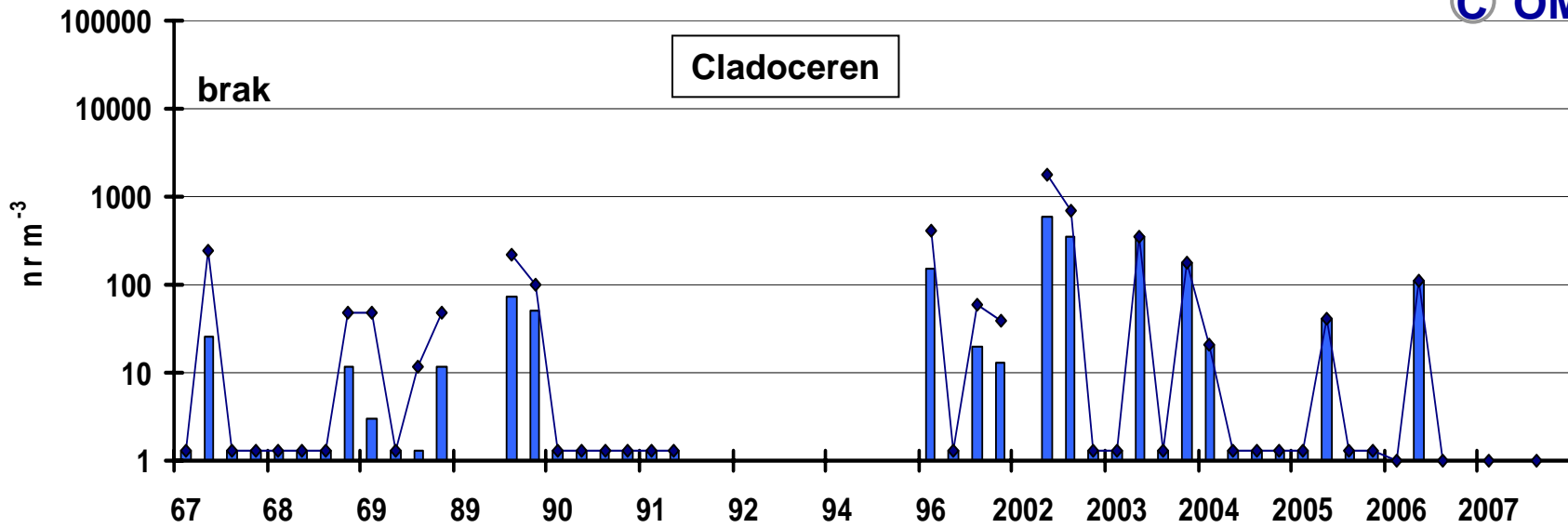
reactie op verbeterende waterkwaliteit ?

evolutie 1996 -

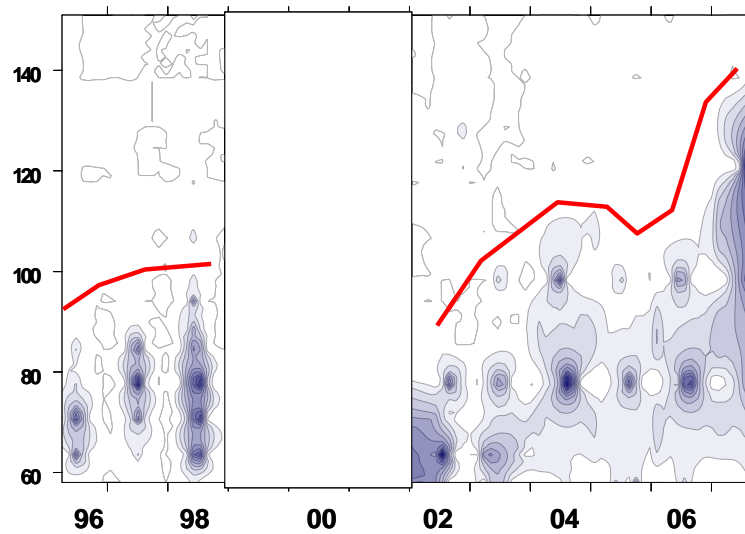
Eurytemora affinis (ind.m⁻³)



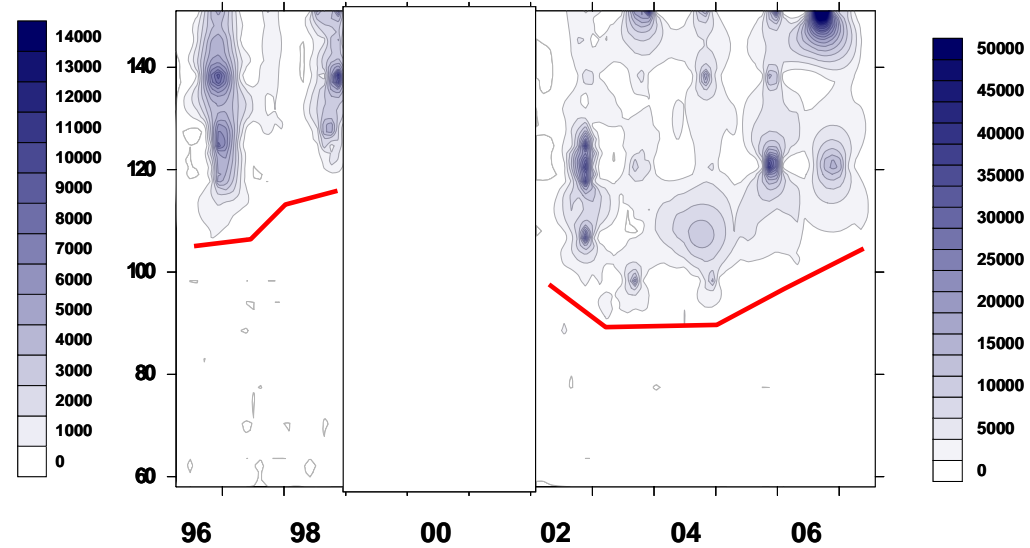




E. affinis (Nr m⁻³)



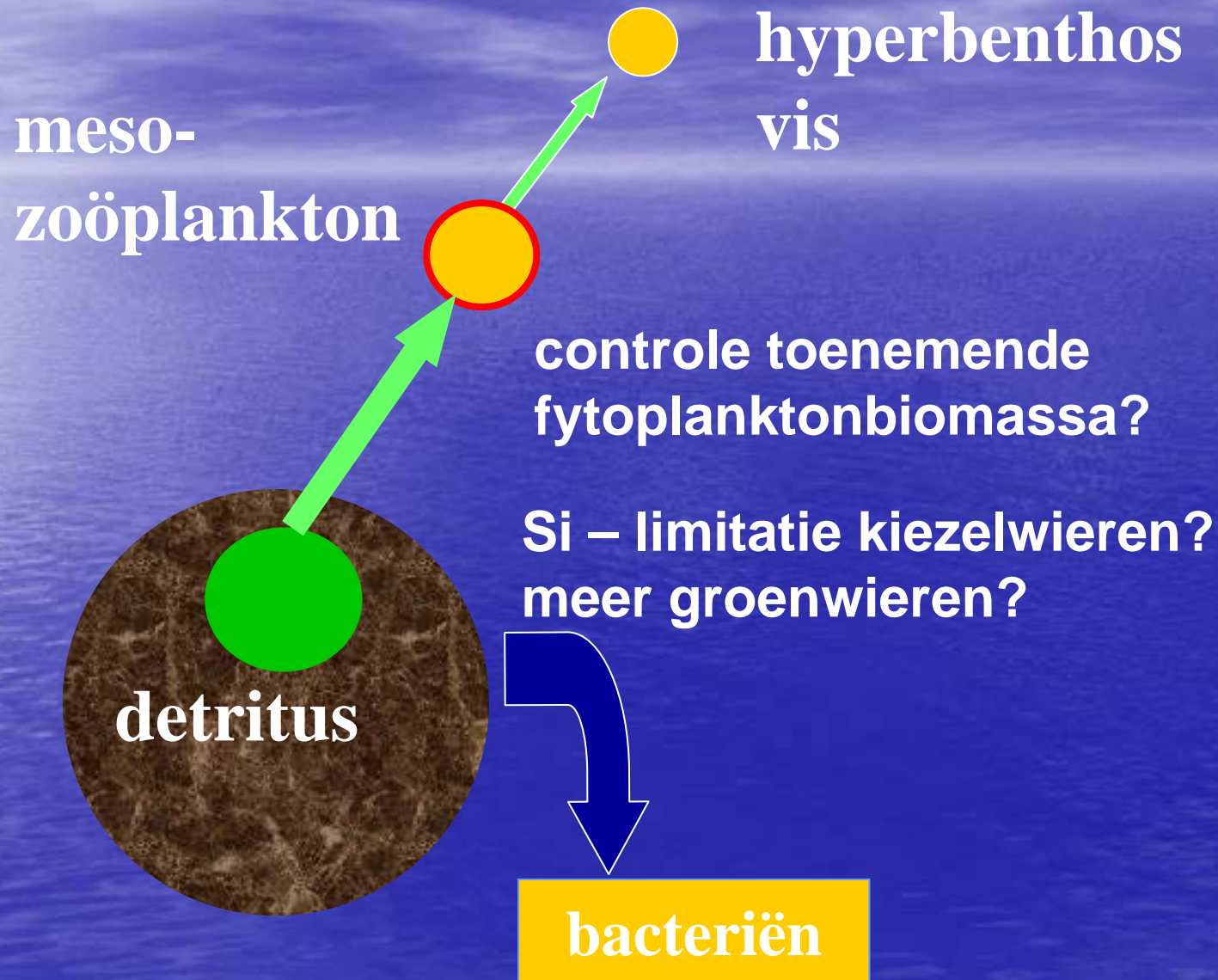
Cladoceren (Nr m⁻³)

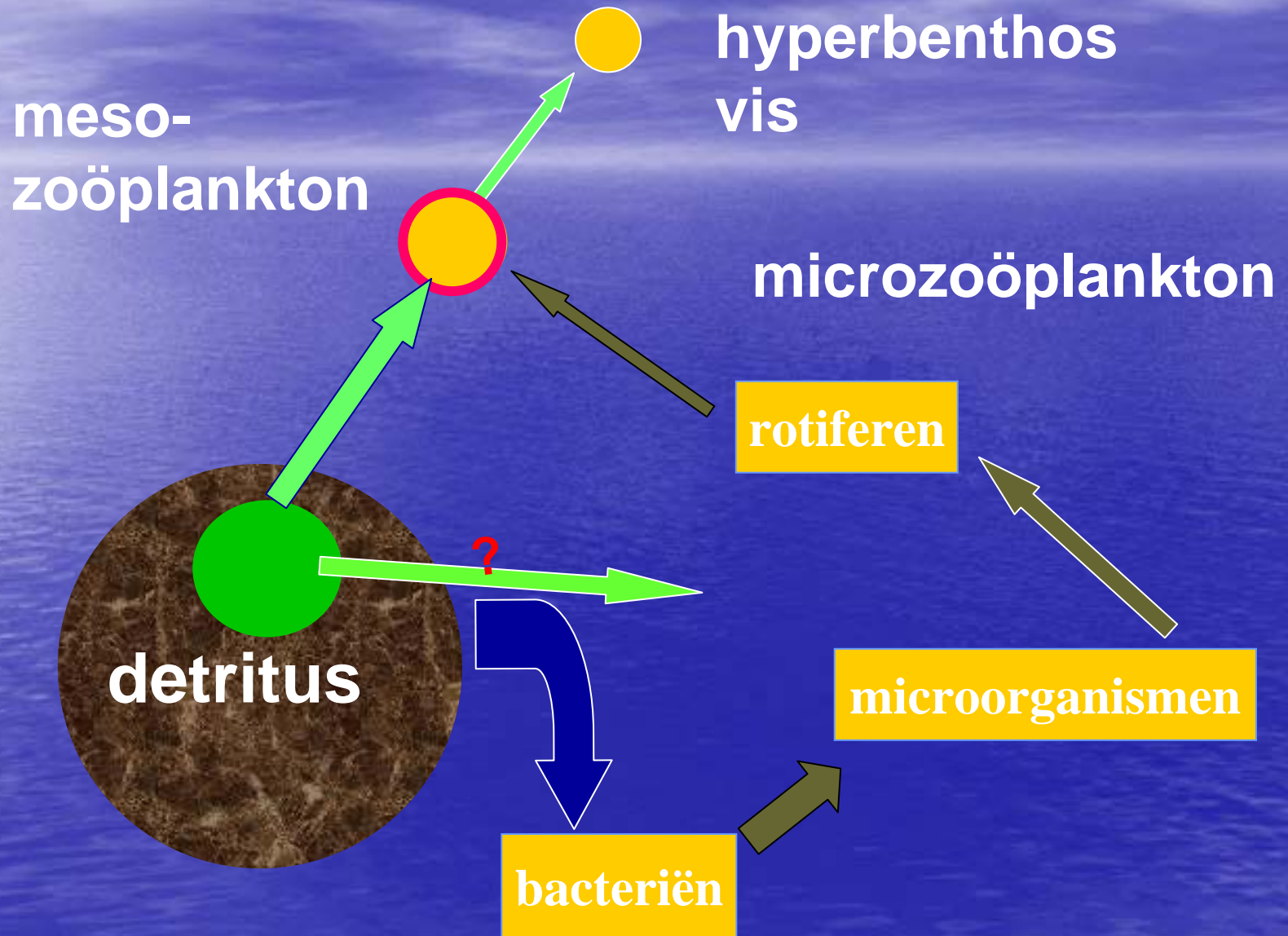


mesozooplankton:

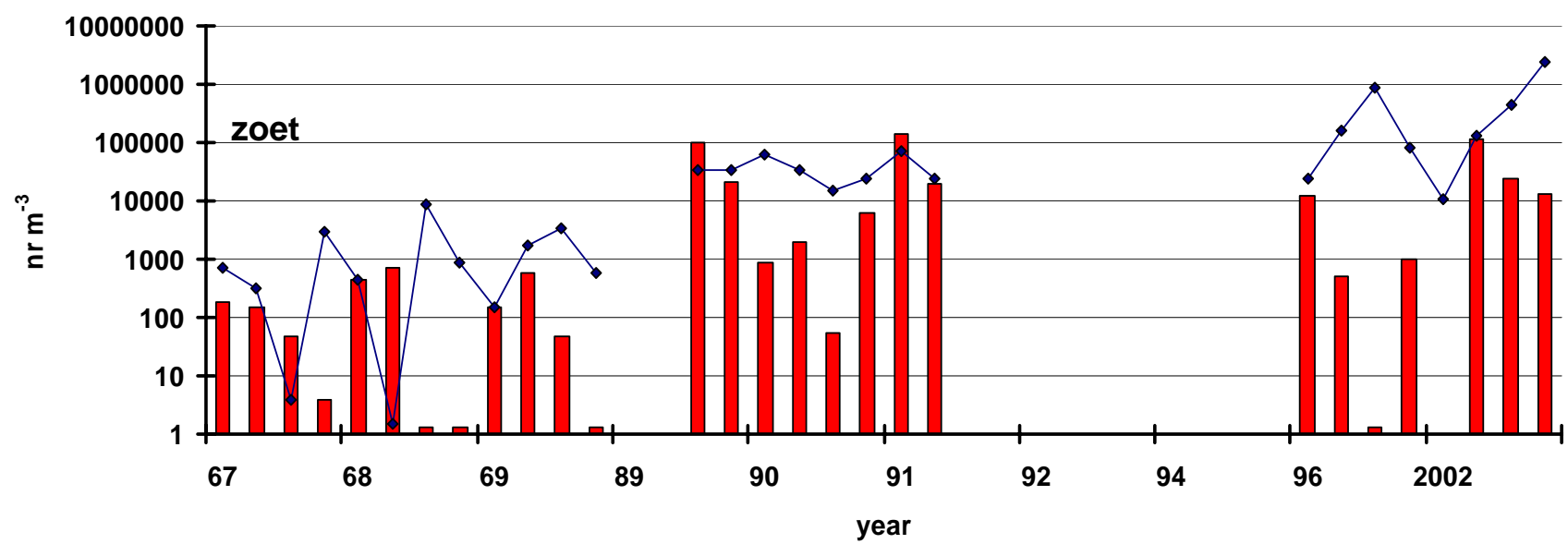
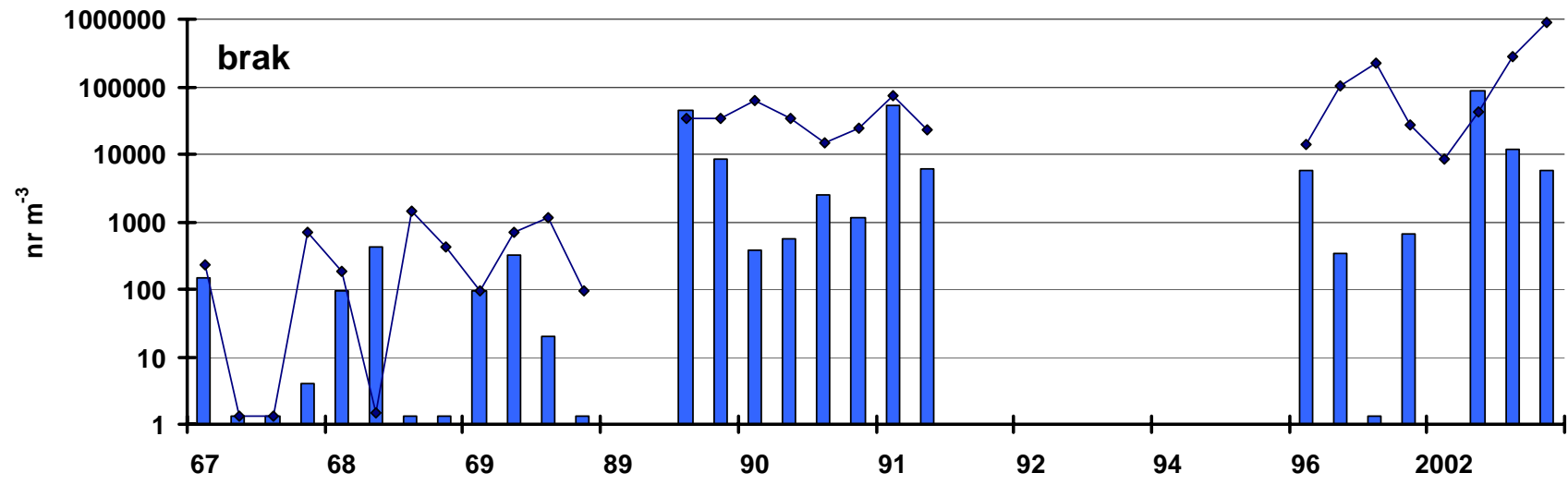
middenzone : the place to be !

grenzen aan toename? competitie ?

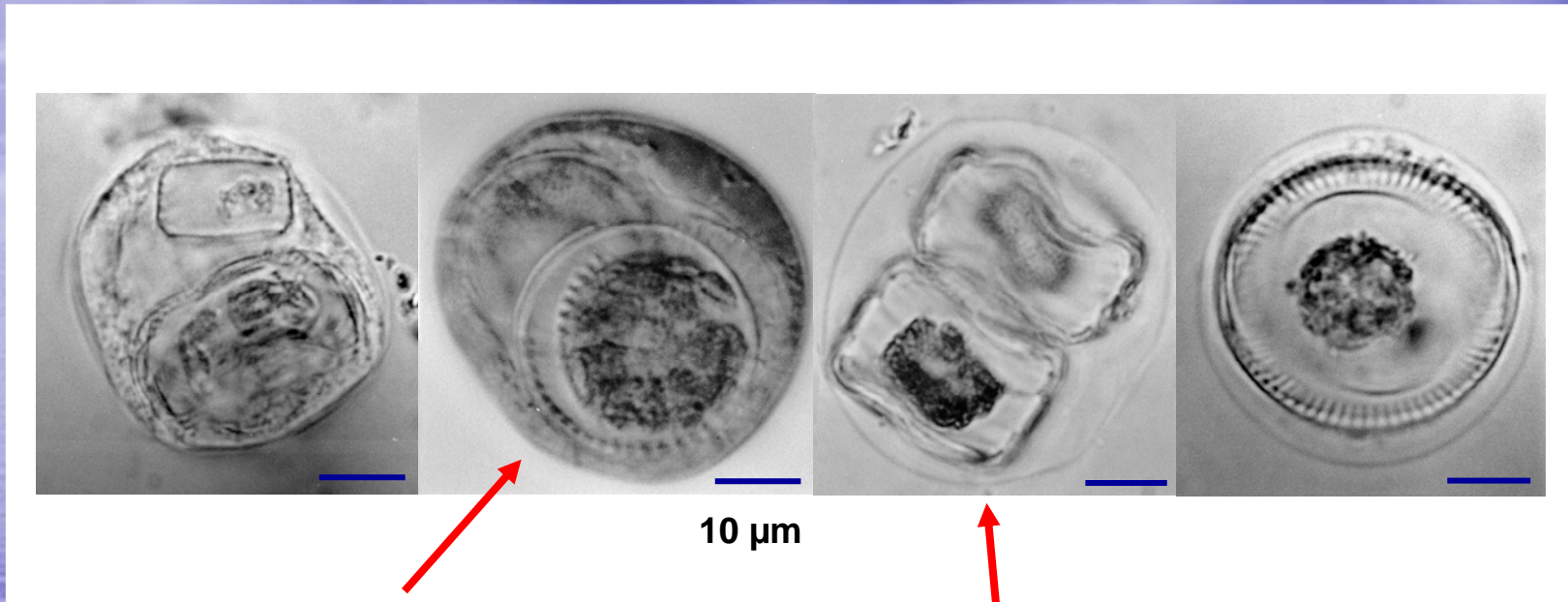




Rotiferen



Graasactiviteit amoeben



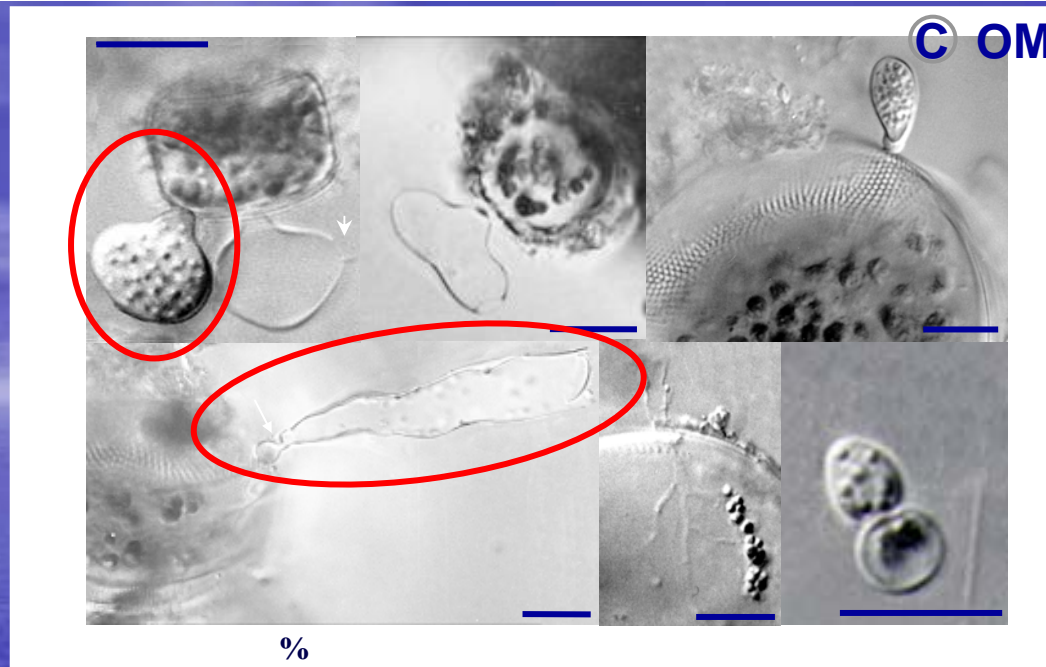
Asterocaelum algophilum

- 25 % van diatomeeënpopulatie in amoebe voedingscysten
- selectiviteit voor grotere diatomeeën

Van Wichelen *et al.* 2006

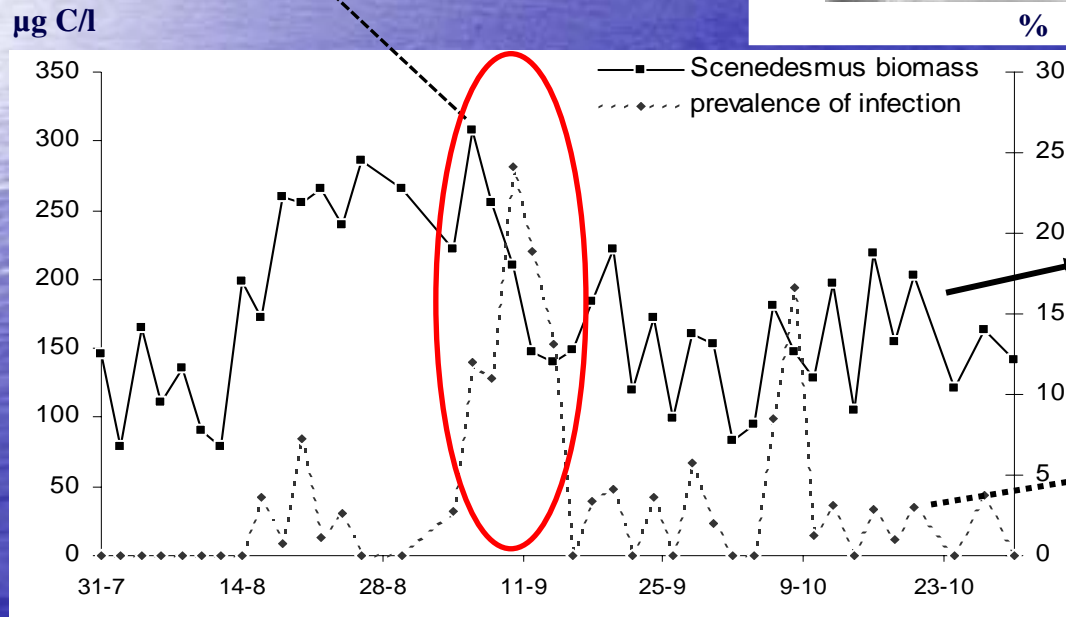
Parasieten: schimmels

Rhizophydium scenedesmi



© OMES

Podochytrium spp.

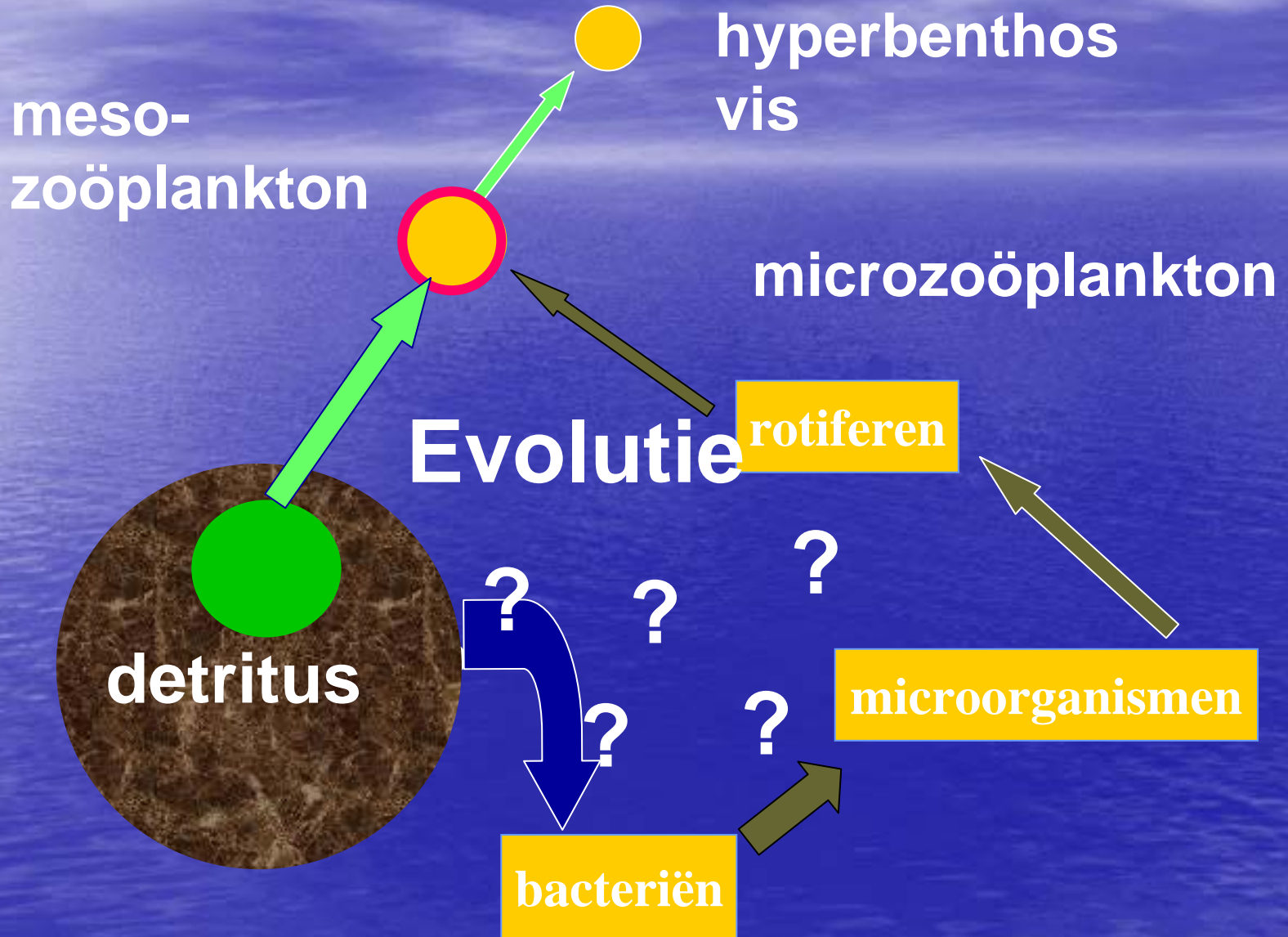


biomassa *Scenedesmus*

percentage infectie

Van Wichelen et al. 2006

Conclusie



Dank u