

15 marzo 2013



**Paola Del Negro**

**Sezione di Oceanografia**

Sano come un pesce:  
espressione idiomatica o rappresentazione ecologica?



15 marzo 2013

*Sano come un pesce* = essere in perfetta salute

Il detto popolare "sano come un pesce" ha radici nell'antichità, un tempo in cui i pesci erano visti come esseri viventi che *non si ammalavano mai*: difficilmente in natura era possibile osservare un pesce gravemente malato.



# PIÙ SANI DI COSÌ... SI MUORE!

IO...  
HO IL MORBO  
DELLA MUCCA PAZZA!



IO...  
HO L'INFLUENZA  
SUINA!



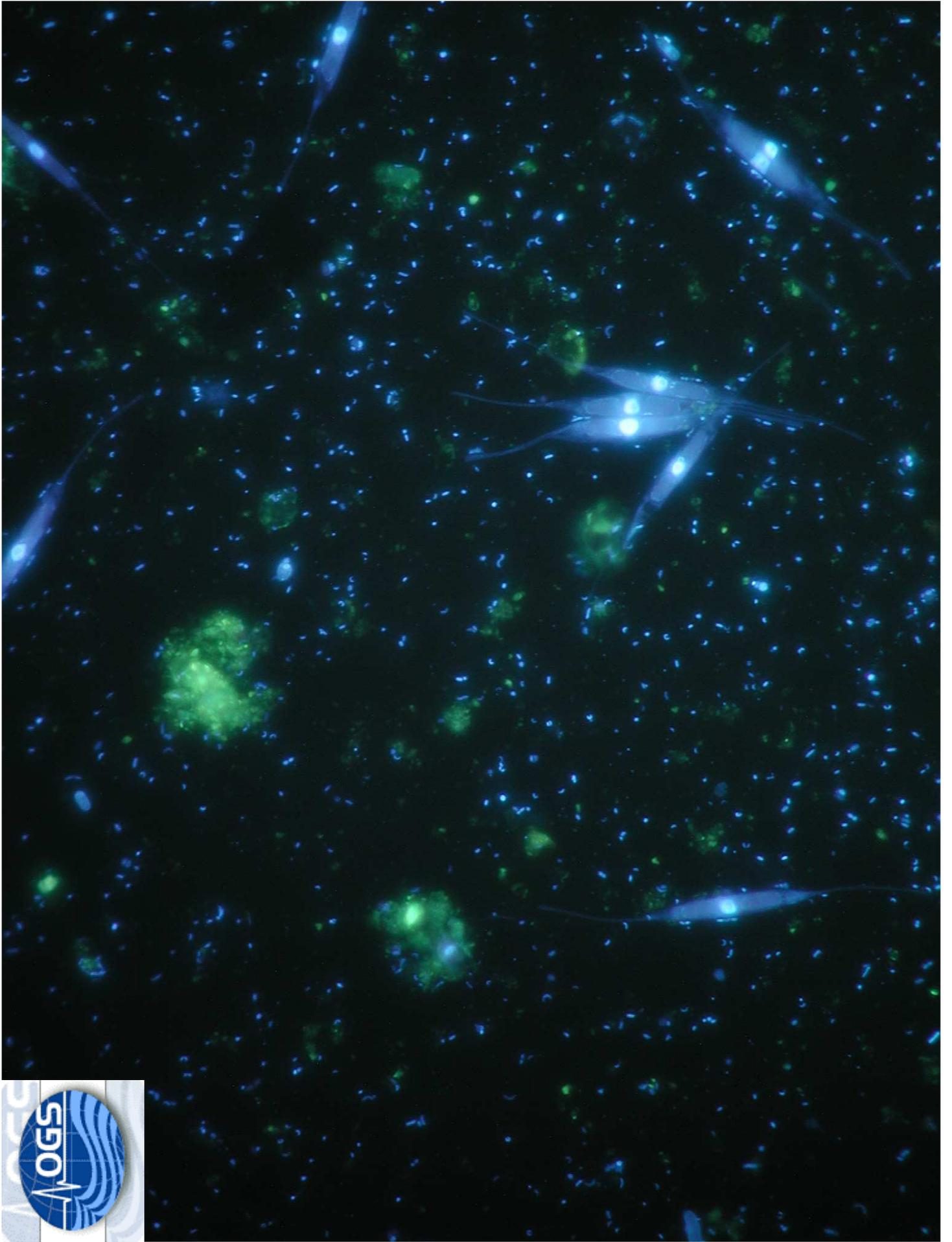
IO...  
HO L'AVIARIA

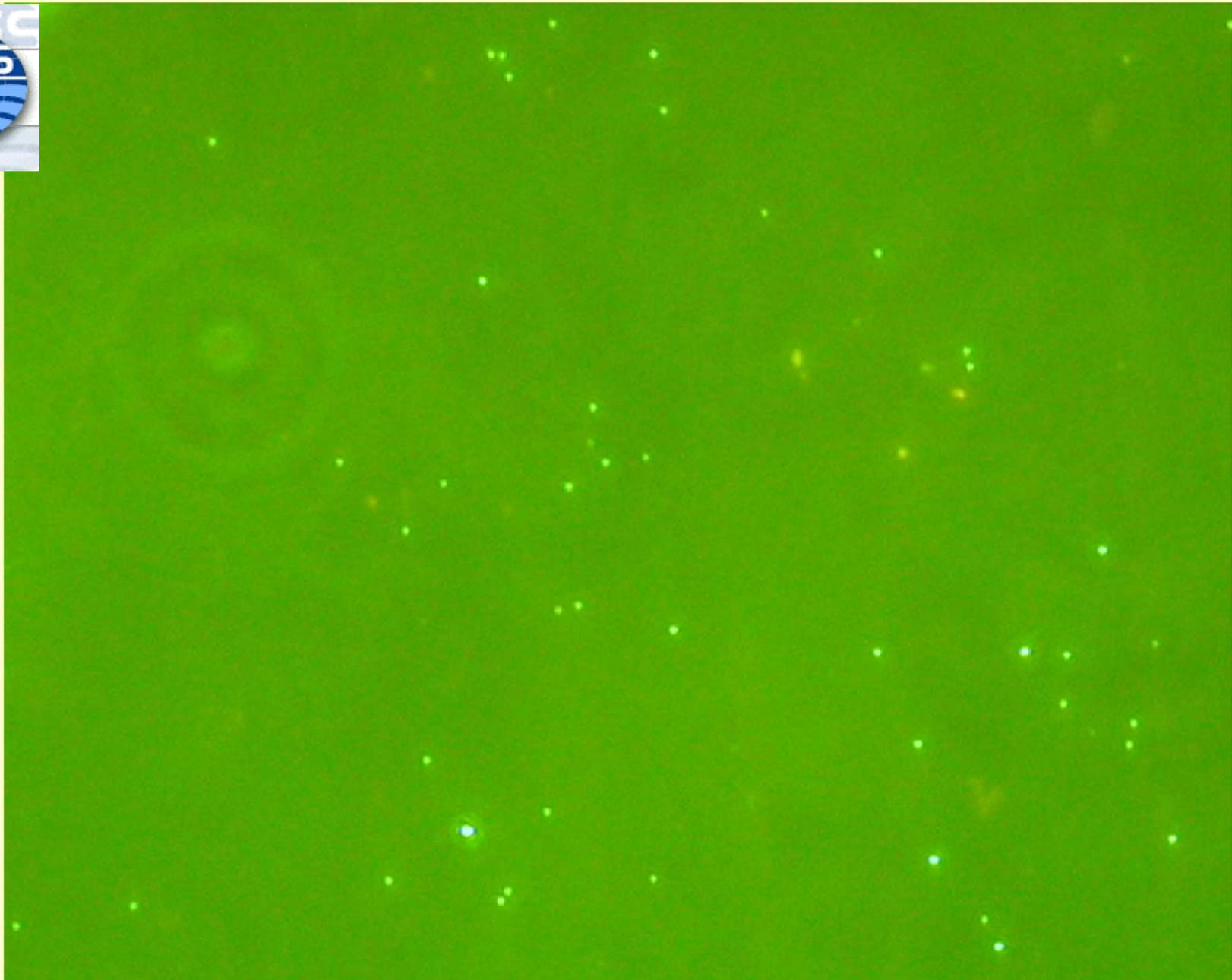


IO...  
DOVREI ESSERE...  
SANO COME UN PESCE!

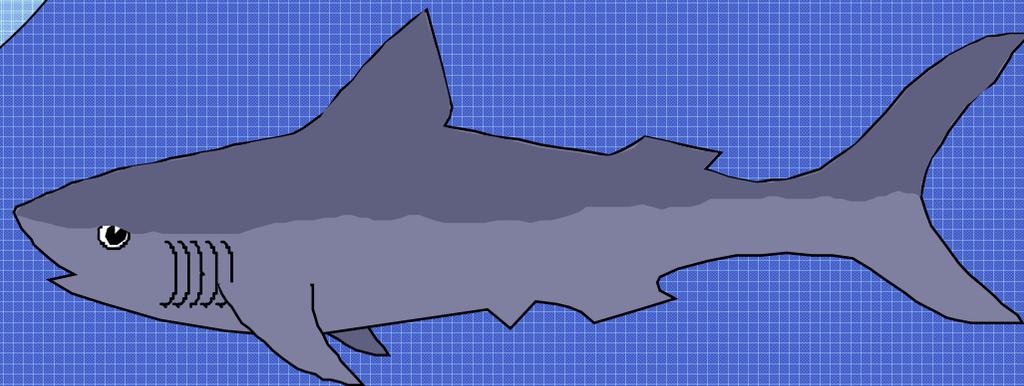


maximus



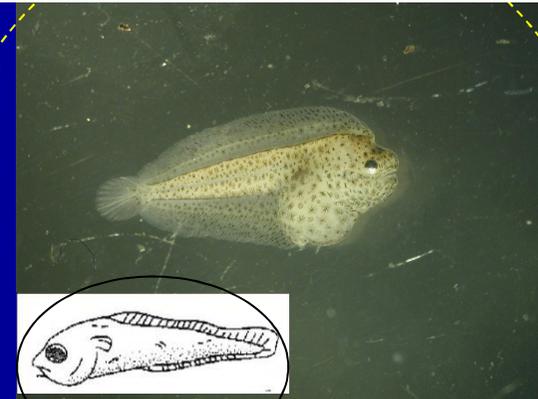


Che ci faccio qui?



# La classica rete trofica del pascolo

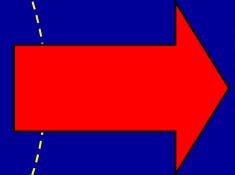
Sole



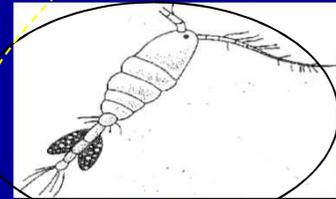
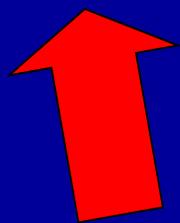
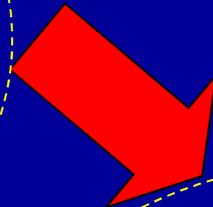
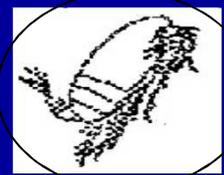
Predatori più grandi



Organismi vegetali



Organismi erbivori



Piccoli predatori



Nutrienti inorganici



# Organismi fitoplanctonici



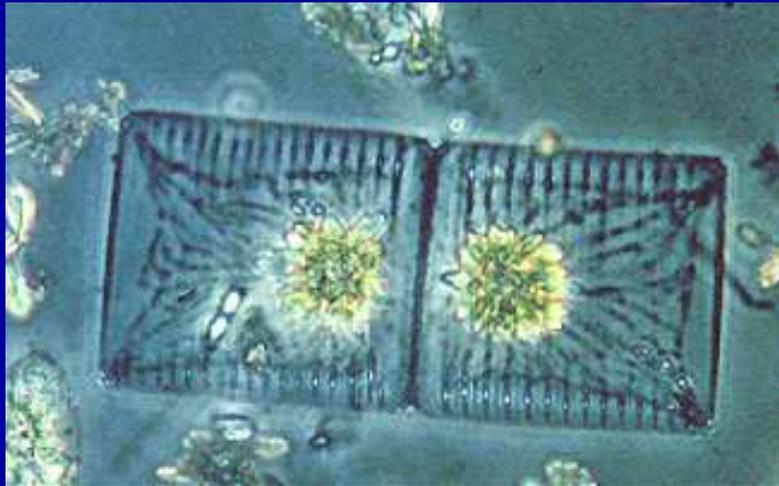
← **Oblea**

**Gyrodinium**

**Navicula**



# Organismi fitoplanctonici



← **Striatella**

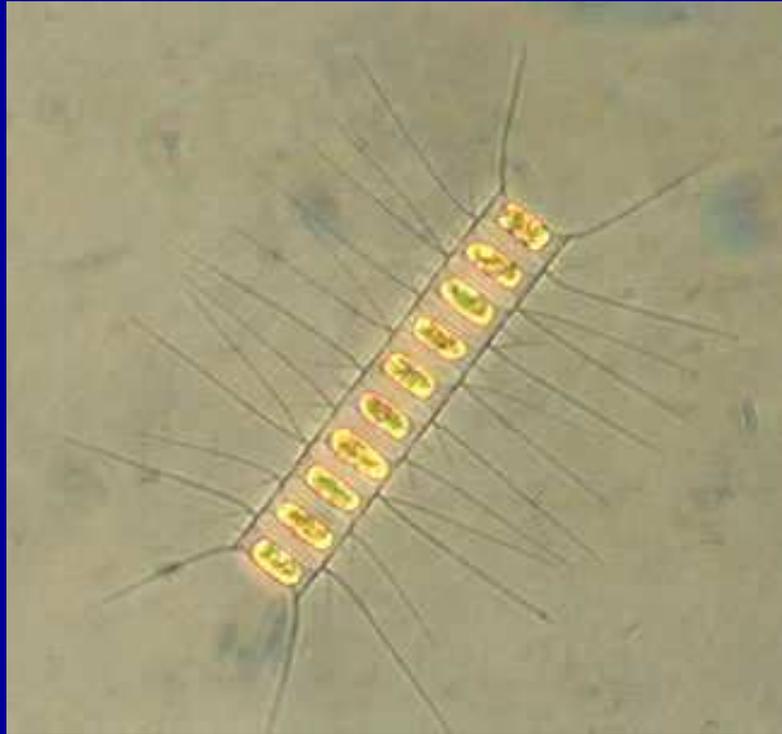
**Rhizosolenia**



**Phaeocystis**

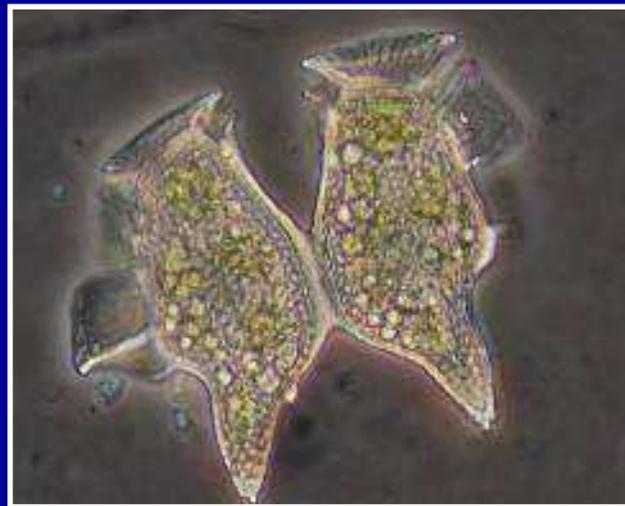


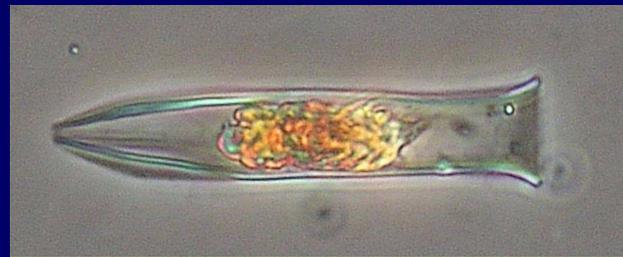
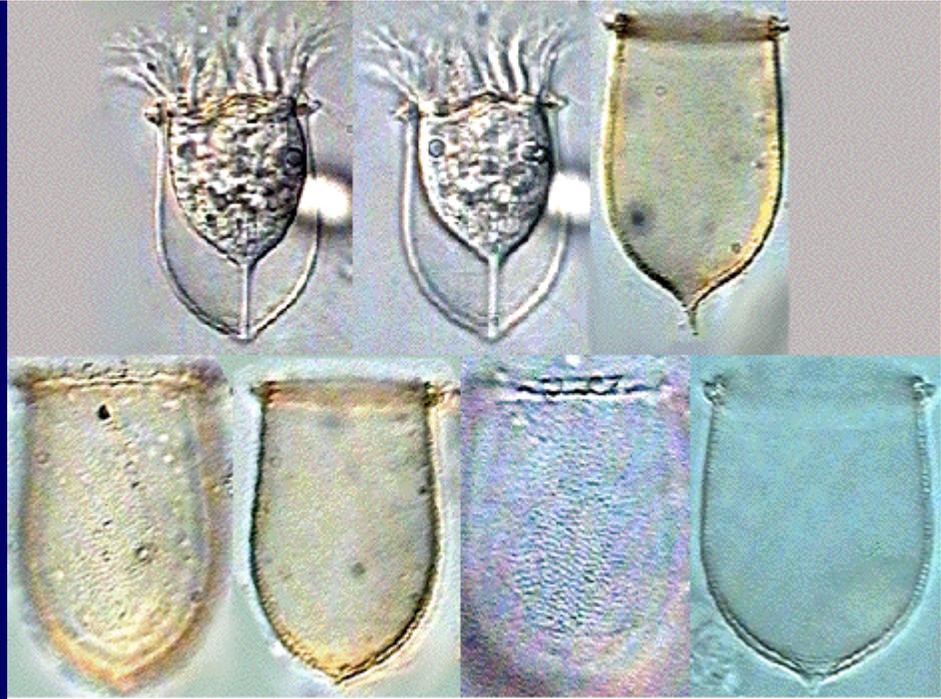
# Organismi fitoplanctonici



← **Chaetoceros**

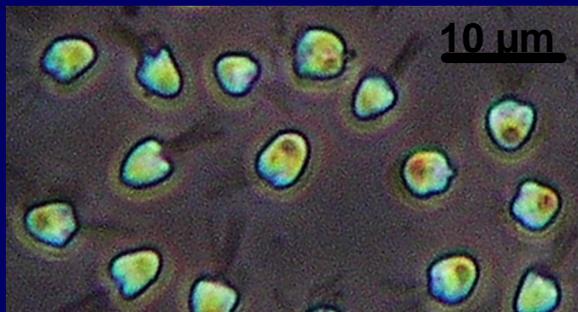
**Dinophysis**



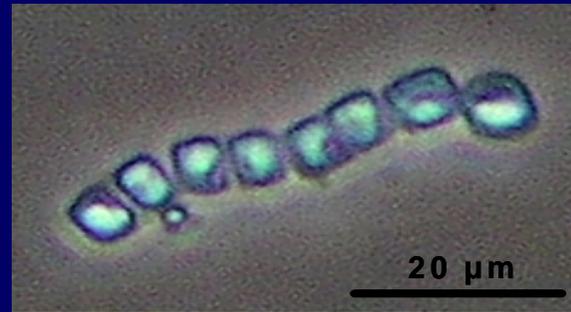


M.Monti  
OGS - OCE

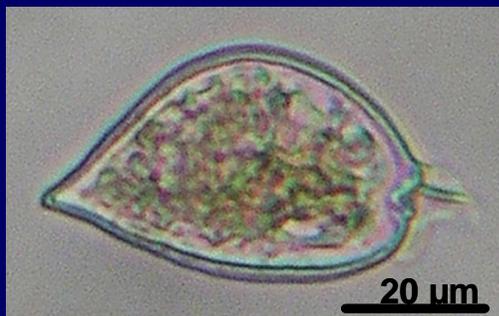




*Pyramimonas* sp.



*Cyclotella* sp.



*Prorocentrum micans*



*Prorocentrum minimum*



# Organismi zooplanctonici

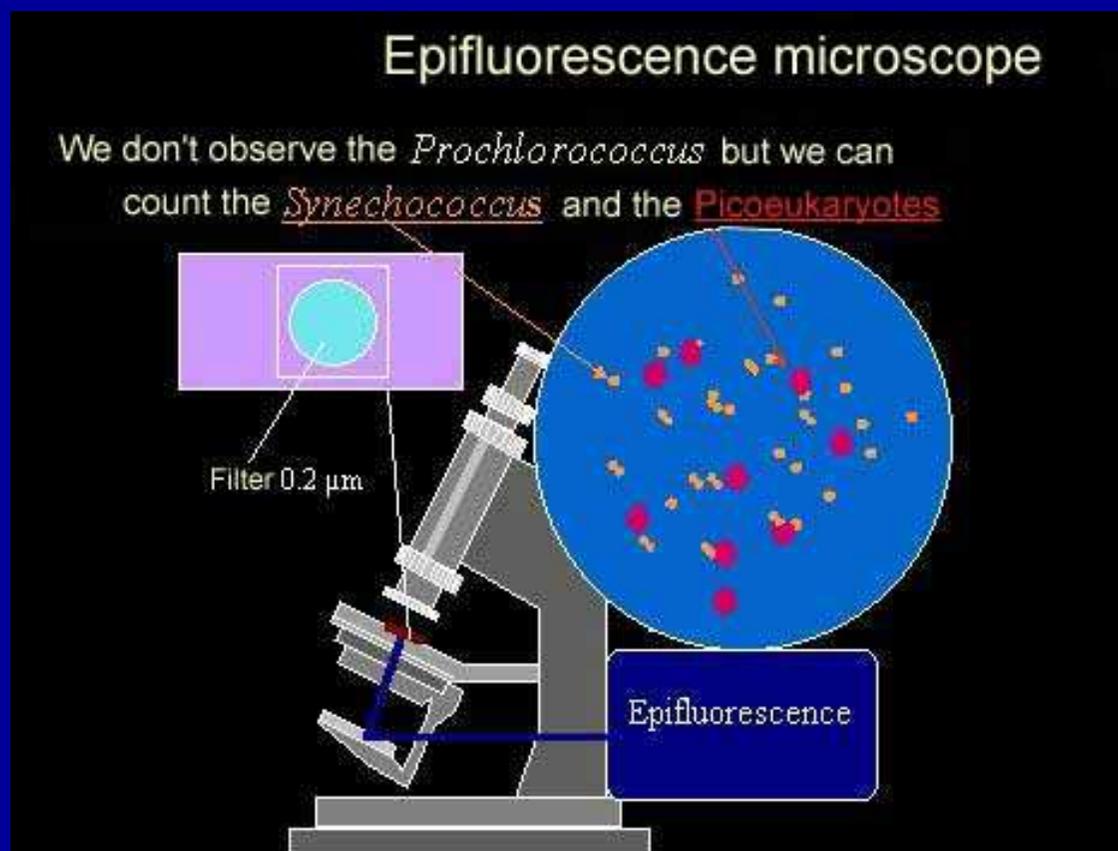


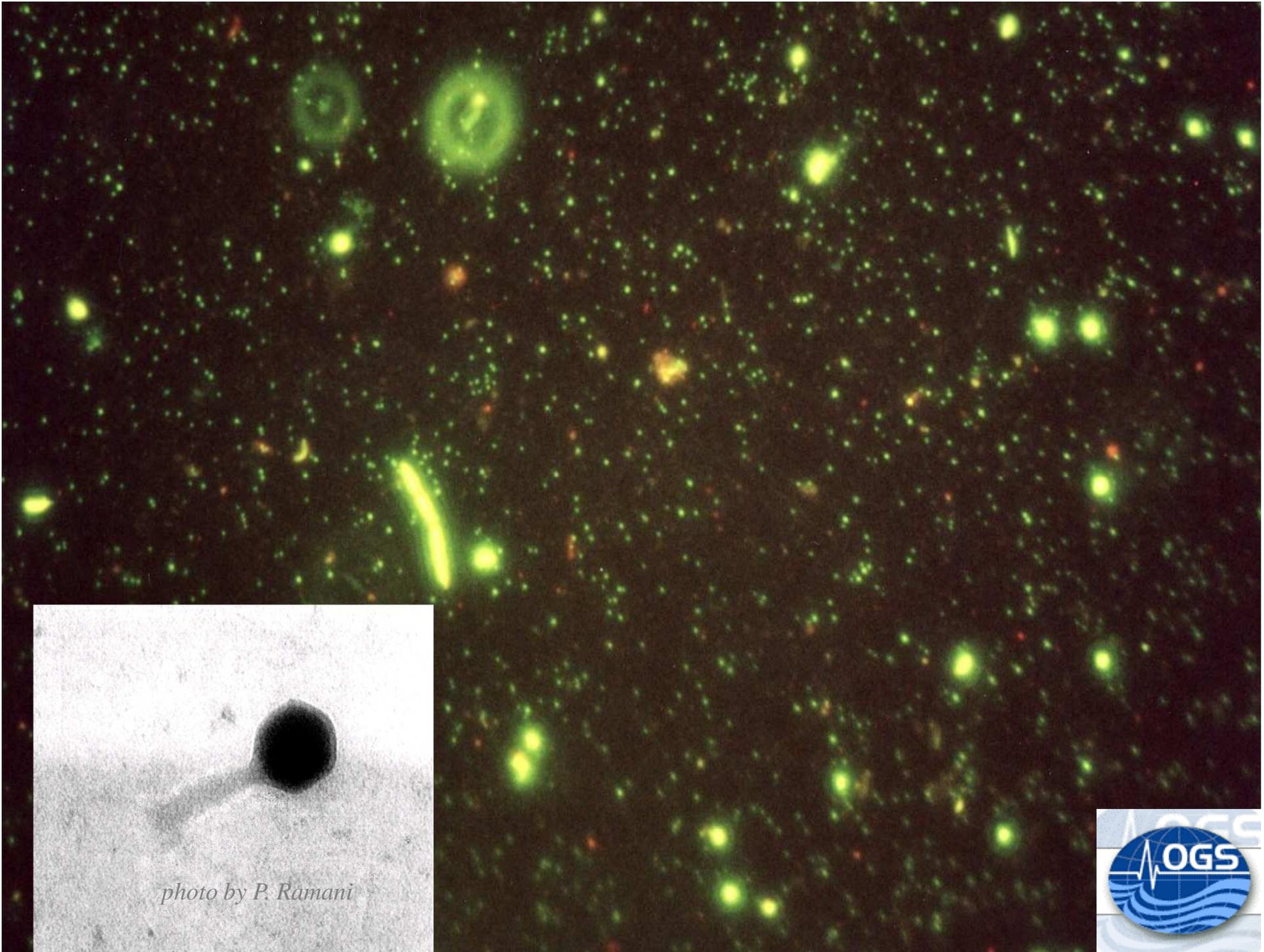
Crostaceo  
gammaride

Acartia clausi



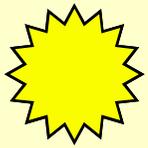
Ma con l'avvento della microscopia ad epifluorescenza .....





*photo by P. Ramani*





Nutrients



Phytoplankton

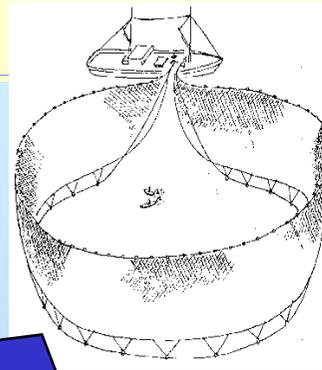
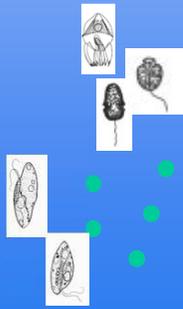


Mesozooplankton

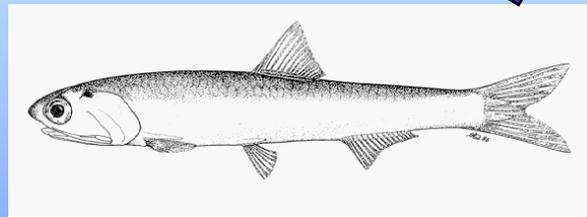
Microzooplankton



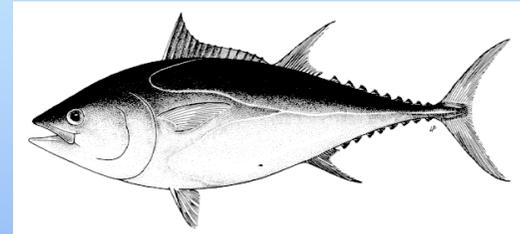
nano e pico



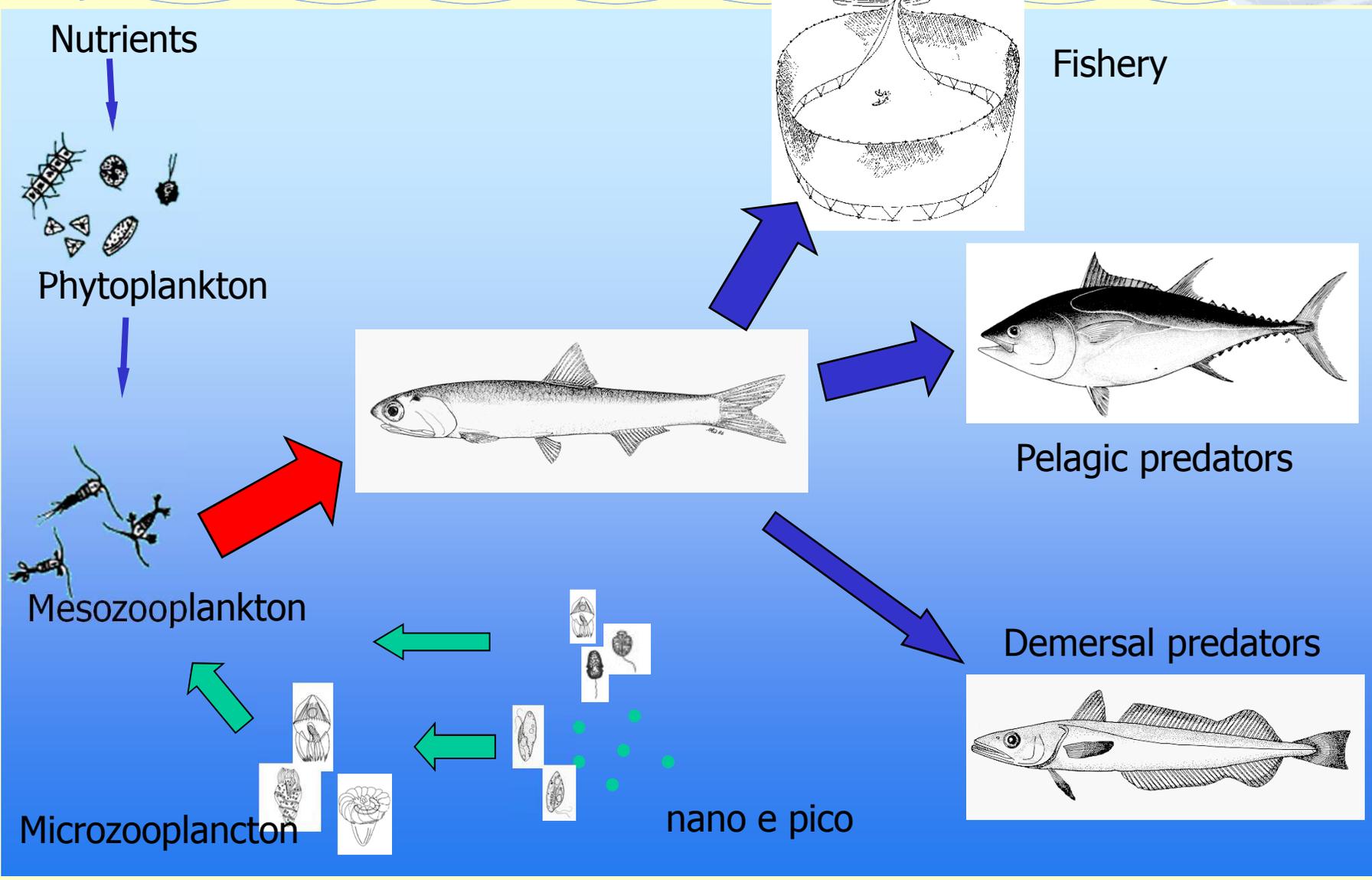
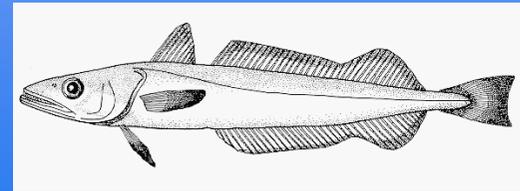
Fishery



Pelagic predators

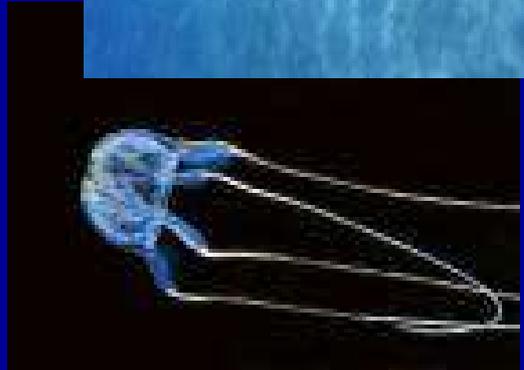


Demersal predators





<b>PLANCTON</b>	<b>DIMENSIONI</b>	<b>ORGANISMI</b>
FEMPTON	0.02 – 0.2 $\mu\text{m}$	Virus
PICO	0.2 – 2 $\mu\text{m}$	Batteri (autotrofi ed eterotrofi)
NANO	2 – 20 $\mu\text{m}$	Protozoi flagellati, Ciliati, Diatomee, Dinoficee
MICRO	20 – 200 $\mu\text{m}$	Diatomee, Dinoficee, Tintinnidi, Radiolari, Ciliati, Foraminiferi
MESO	0.2 – 20 mm	Copepodi, Eufasiacei, Cladoceri
MACRO	20 – 200 mm	Meduse
MEGA	200 – 2000 mm	Meduse, Colonie di tunicati



# OCCHIO ALLA MEDUSA

www.ciesm.org



● URTICANTE

**Se vedete queste specie mandate la vostra segnalazione a : [boero@unisalento.it](mailto:boero@unisalento.it)**

A CIESM CROSS-MEDITERRANEAN INITIATIVE



Dr. Alberto Bernini  
Coordinatore: Fabio Turchi  
Contatti: [boero@unisalento.it](mailto:boero@unisalento.it)

MANDATE UN MESSAGGIO (PREFERIBILMENTE CON FOTO DIGITALE) CON QUESTE INFORMAZIONI:

**NOME DELLA SPECIE**

**LOCALITÀ:** (nome e/o coordinate geografiche) acque costiere, al largo, spiagolate

**ABBONDANZA:** meno di 10, 10-100, 100-500, 500-1000, più di 1000

**NUMERO DI INDIVIDUI PER METRO QUADRATO:** meno di 10, 10-100, 100-500, più di 500

**DISTANZA TRA GLI INDIVIDUI:** 10 cm, meno di 1 m, 1-5m, 5-10m, 10-20m, più di 20m

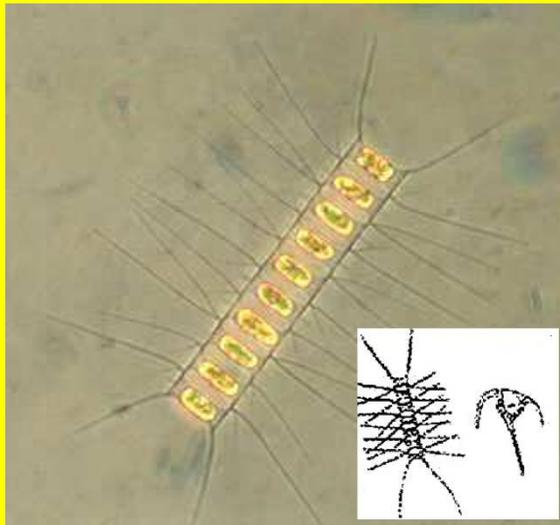
**OSSERVAZIONE FATTA DURANTE:** pesca, navigazione, immersione, nuoto, cammina lungo costa





copepods 1/1

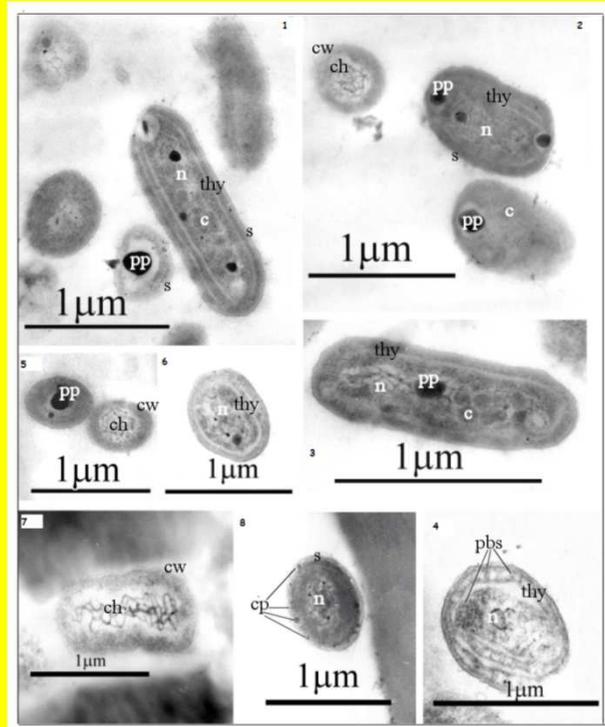
**...ma quanti sono???**



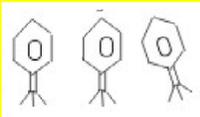
microphyto 10\*6/1



cyanobacteria 10\*8/1



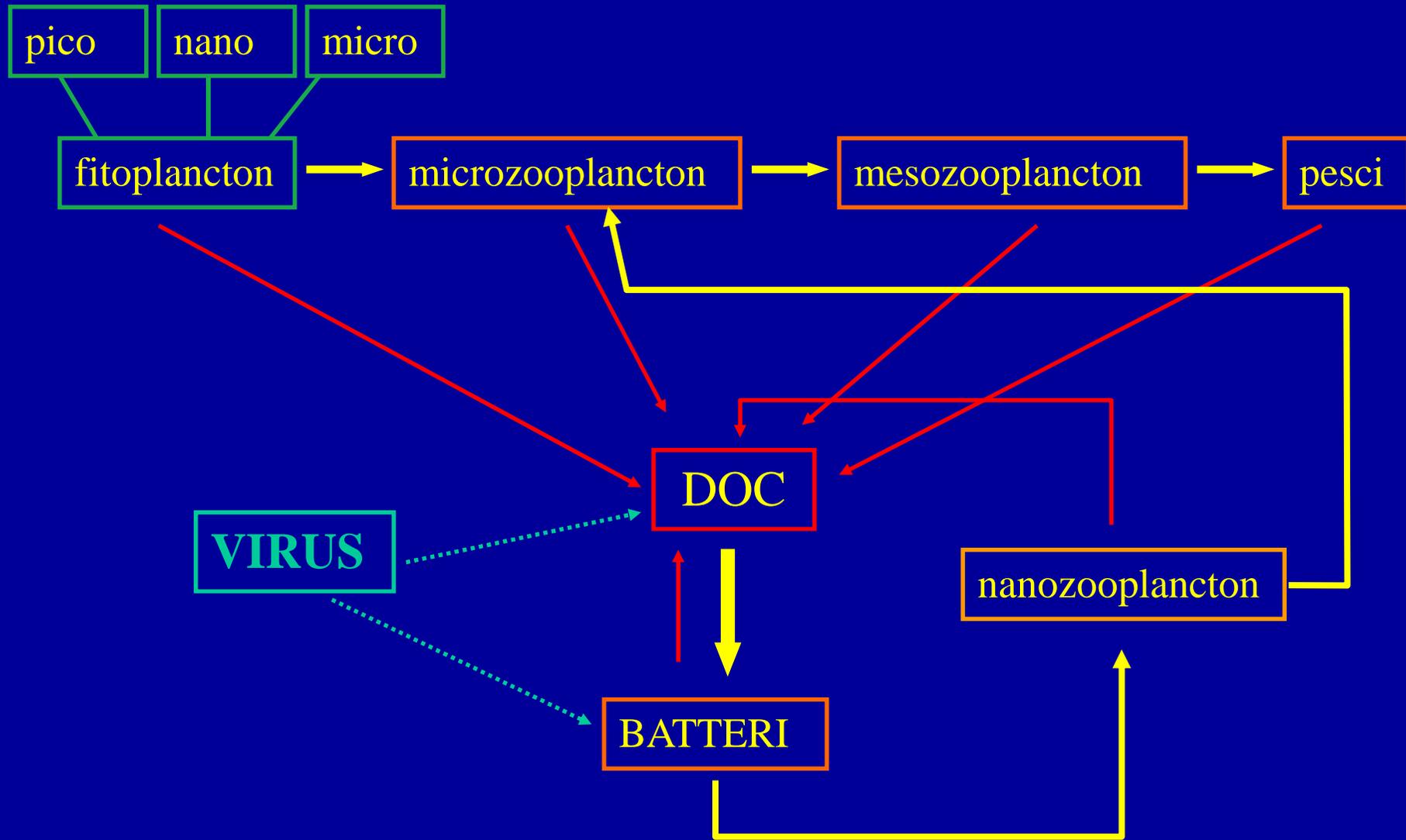
heterobacteria 10\*9/1

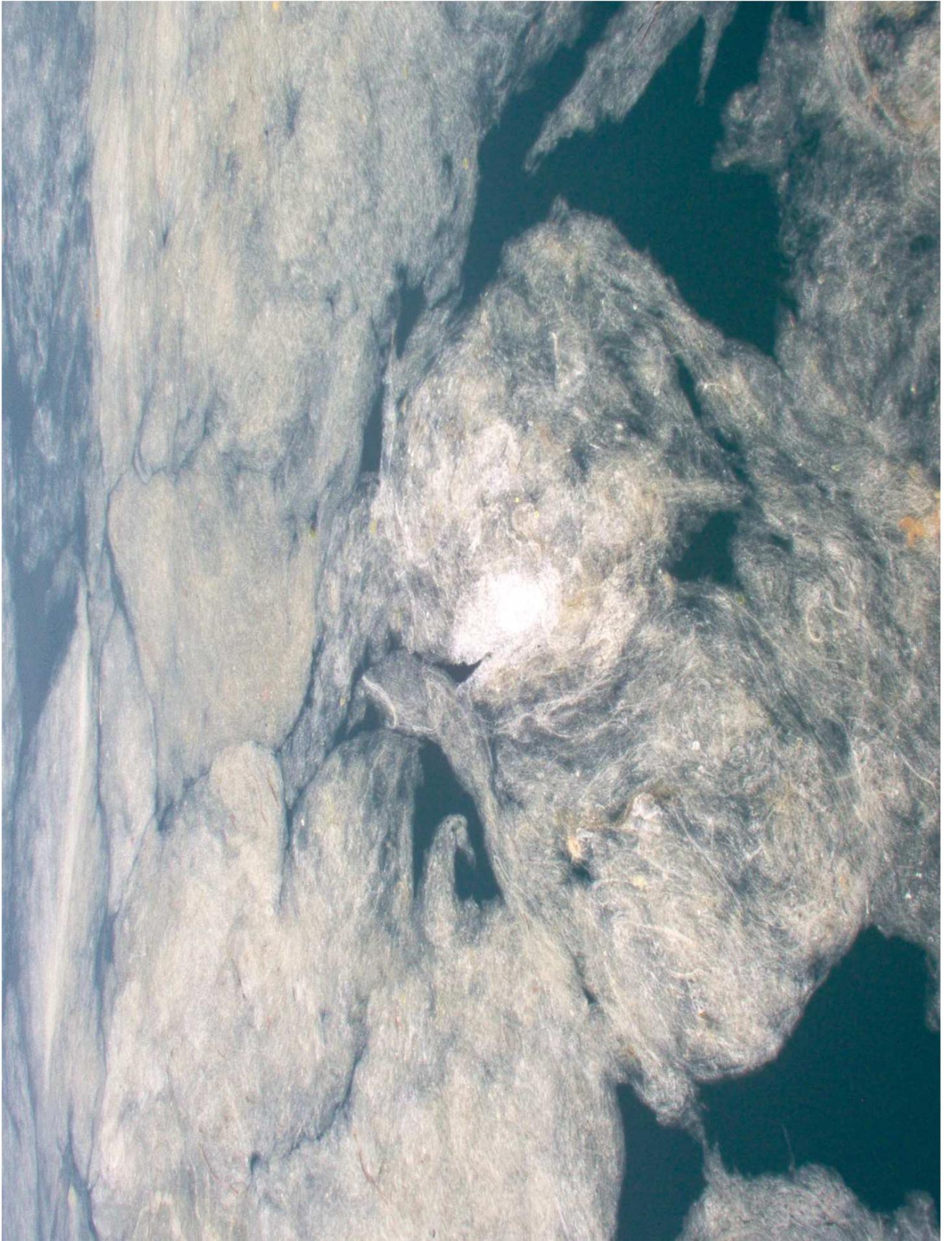


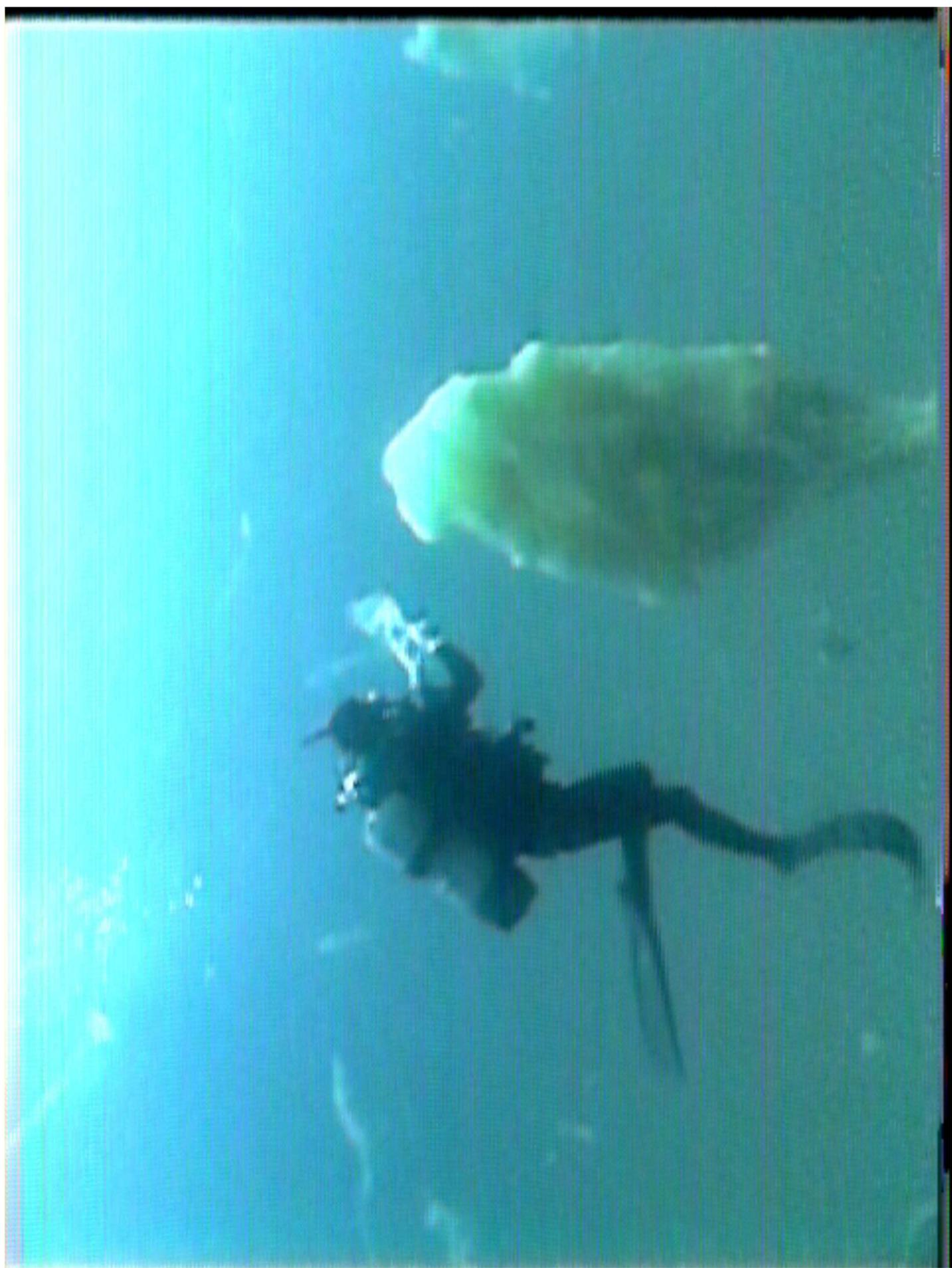
viruses 10\*9/1



# RETI TROFICHE PLANCTONICHE







# Caravane per la Vosra antichità



Ma allora, il pesce è sempre sano?

