



Erasmus Mundus in Evolutionary Biology at RUG



university of
groningen

faculty of mathematics
and natural sciences



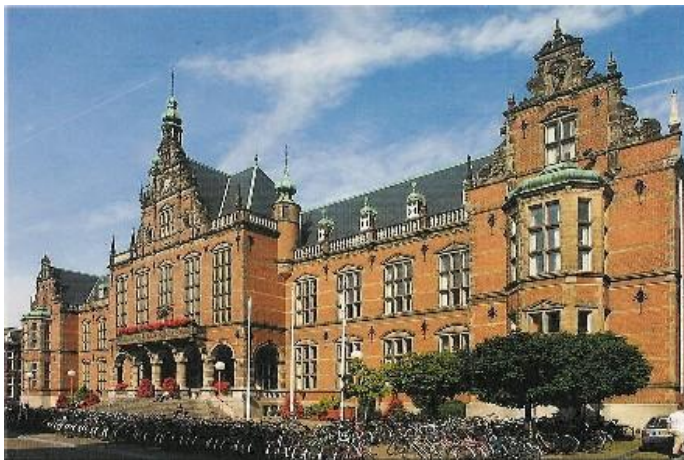




“Bicycle capital of Europe”



University of Groningen



- 50,000 students (of 200,000)
- 55% of all PhD students from abroad

The Centre for Life Sciences



Advanced Courses (30 ECTS)

- "Evolutionary Ecology Research" (10 ECTS)
Han Olf, Theunis Piersma & Theo Elzenga
- "Phylogenetics and Genomics in Ecology" (10 ECTS)
Jeanine Olsen & Leo Beukeboom
- "Selection Theory" (10 ECTS)
Franjo Weissing

NB: these courses have to be followed by all GroMEME students...

Many additional options

- (post)graduate **courses** [all in English...]
- **conferences** or student meetings [travel grants...]
- organization of **CEES lectures**:
 - Simon Levin, Stephen Hubbell, Steve Stearns, Geoff Parker
 - Brian Enquist, John Werren, Phil Hedrick, Ben Sheldon
 - Agnar Helgason, Chris Klausmeyer, Mark Kirkpatrick
 - Freeman Dyson, Laurent Keller, Martin Nowak, Stu West
 - Koos Boomsma, Peter Morin, David Queller, Russ Lande
 - Allen Baker, Wolfgang Stephan, Bill Rice, Sergey Gavrilets
 - Rosemarie Grant, Deborah Charlesworth, Troy Day
 - Eörs Szathmary, Peter Taylor, Richard Frankham
 - Ilkka Hanski, Bert Hölldobler, Sally Otto, ...

Centre for Ecological and Evolutionary Studies

- **Animal Ecology** (Theunis Piersma)



- **Community & Conservation Ecology** (Han Olff)



- **Plant Ecophysiology** (Theo Elzenga)



- **Microbial Ecology** (Dick van Elsas)

- **Evolutionary Genetics** (Leo Beukeboom)



- **Theoretical Biology** (Franjo Weissing)

- **Marine Benthic Ecology & Evolution** (Jeanine Olsen)

- **Ocean Ecosystems** (Hein de Baar)



(Animal Behaviour, Animal Physiology,...)



Animal Ecology



Grazing and biodiversity

African savannas

Community & Conservation Ecology

Termites

Schiermonnikoog

Nature restoration

Evolutionary Genetics

Nasonia wasp collection

Reproductive systems of mosses

Drosophila cultures

Inbreeding depression

sex allocation

pine martin populations

DNA fingerprinting

housefly

parasitoid wasp

fruitfly

$$\frac{(n-1)(2n-1)}{n(4n-1)}$$

Mortality (Corrected)

Stage	Mortality (Corrected)
3rd instar larvae	~0.05
Pupae	~0.65
Ecdysed Males	~0.55
Males 3 days old	0%

TSP of I10

TSP of I4

Leo de Zukeboom

Louis vd Zande

Kuke Bijlma

Marine Benthic Ecology & Evolution

Fucus coast

DNA fingerprinting

kelp forest

coral reef

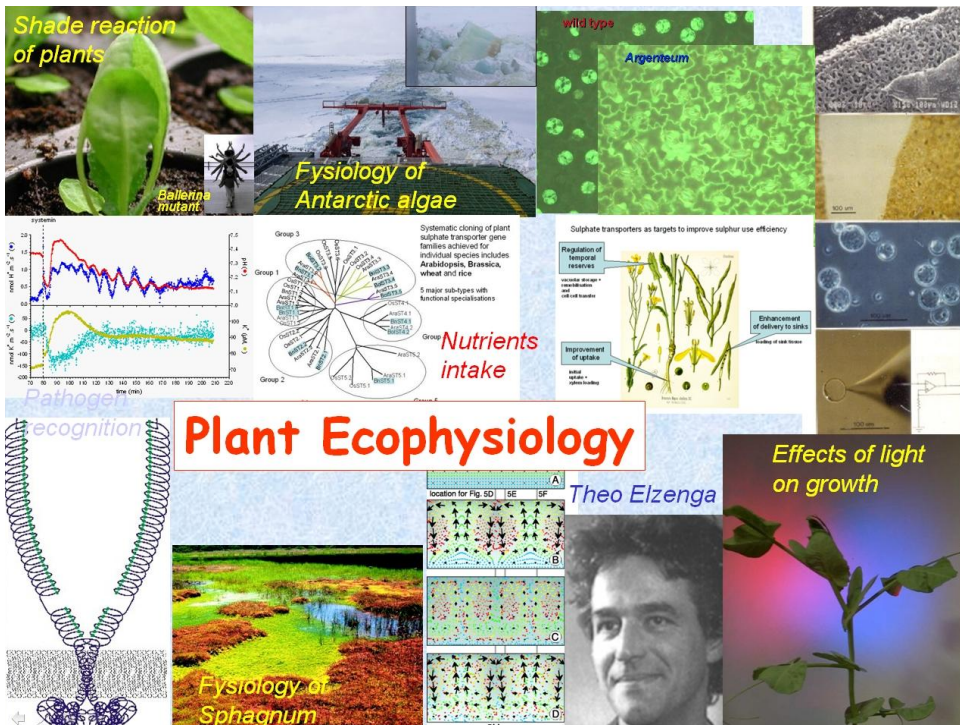
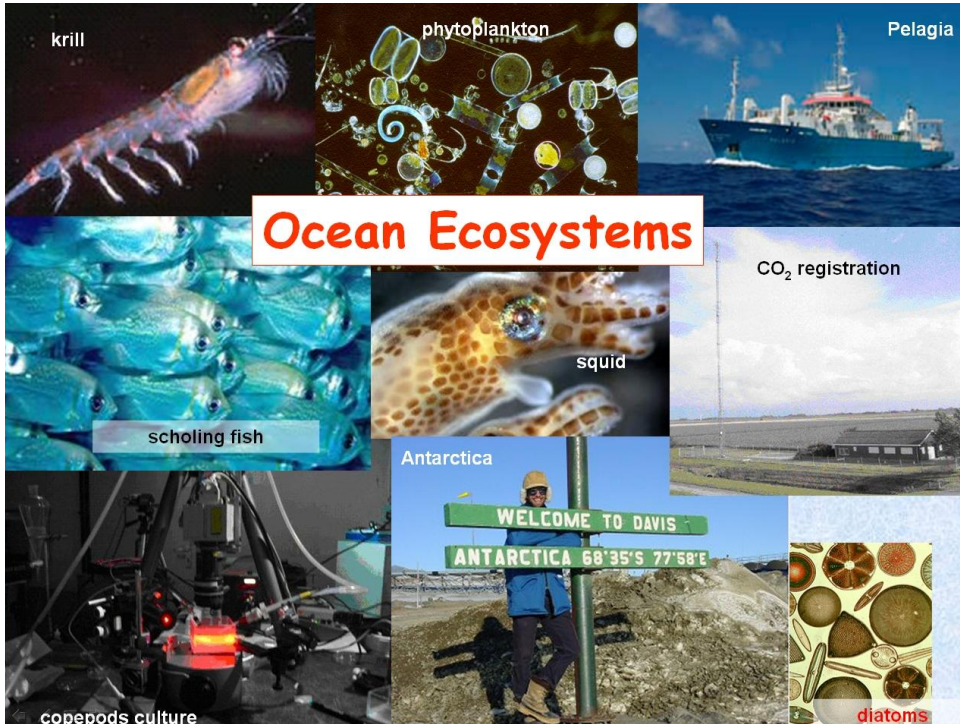
plaice

shell coast

ray

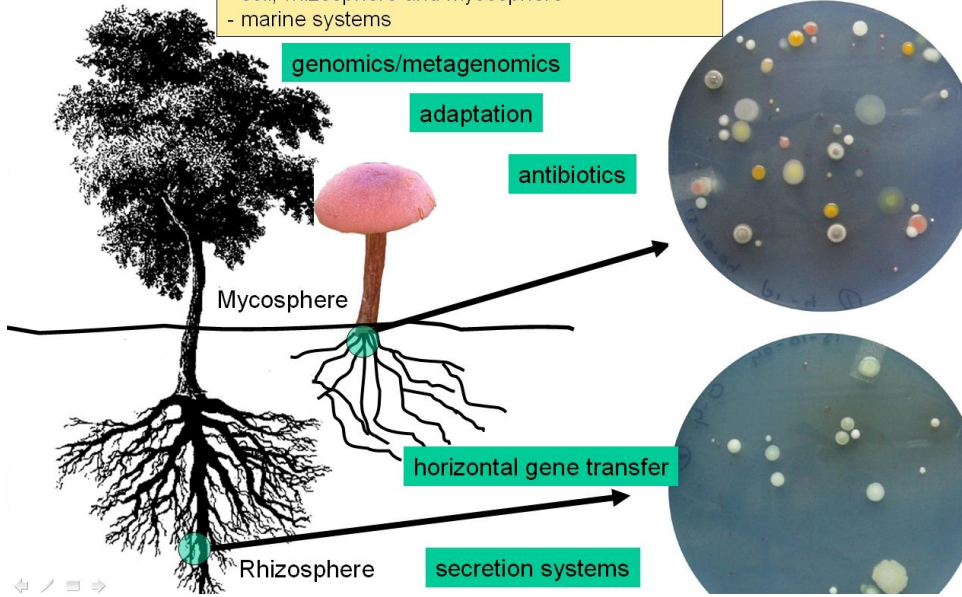
marine genomics

sea grasses



Microbial Ecology

Selective forces shaping bacterial communities in:
 - soil, rhizosphere and mycosphere
 - marine systems



Theoretical Biology

Speciation

$$\epsilon_{n+1} = M T (z_n) \epsilon_n$$

Social behaviour

Sexual selection

$$\frac{dp_i}{d\tau} = \frac{1}{2} \frac{\partial \ln(1-c_f)}{\partial p_i} + \mu_A w_A \frac{\partial \ln(R_A)}{\partial p_i}$$

Adaptive dynamics

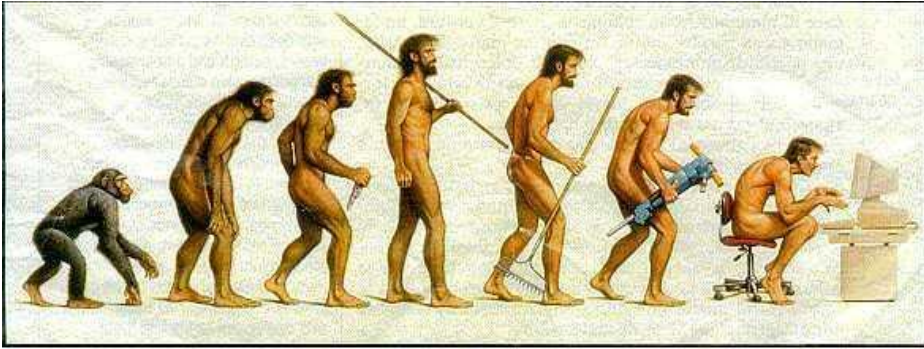
$$\frac{dp_i}{d\tau} = \mu_B \frac{\partial \ln(R_B)}{\partial p_i}$$

Co-evolution

Mating systems

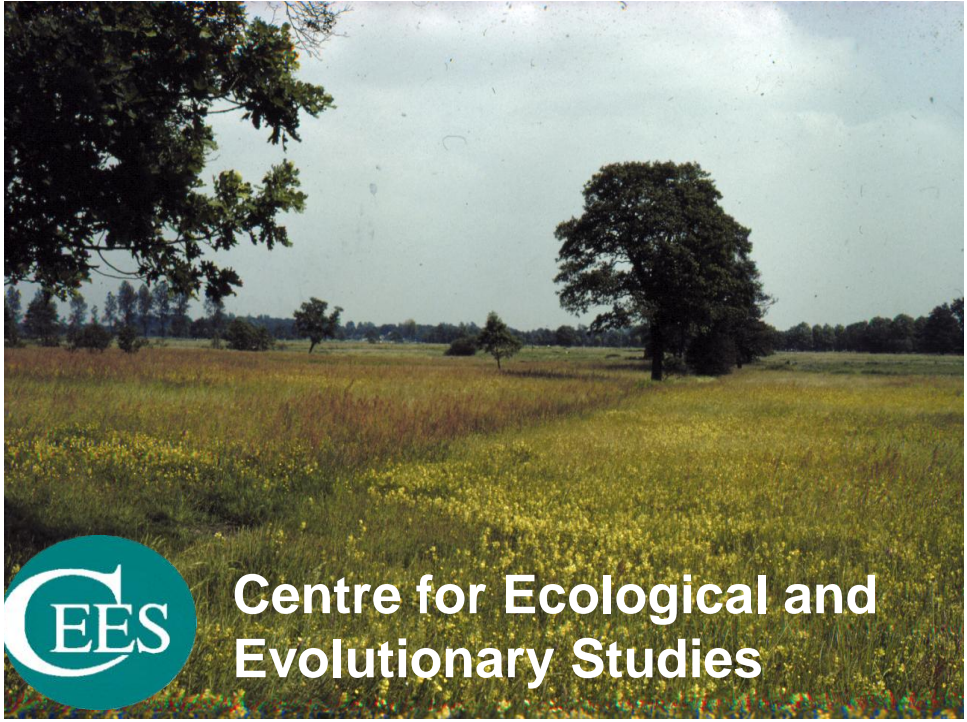
Selforganization

The collage includes images of a bear, ants, birds, a fly, and fish. It also features a graph of birth rate vs. male trait, a circuit board, and various mathematical symbols and equations related to population dynamics and evolution.



Somewhere, something went terribly wrong





**Centre for Ecological and
Evolutionary Studies**