

# Research Institute for Nature and Forest (INBO)

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Species Diversity Group  
UA – Evolutionary Ecology



# Effects of light on foraging bats

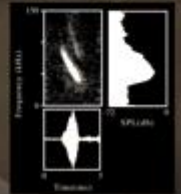
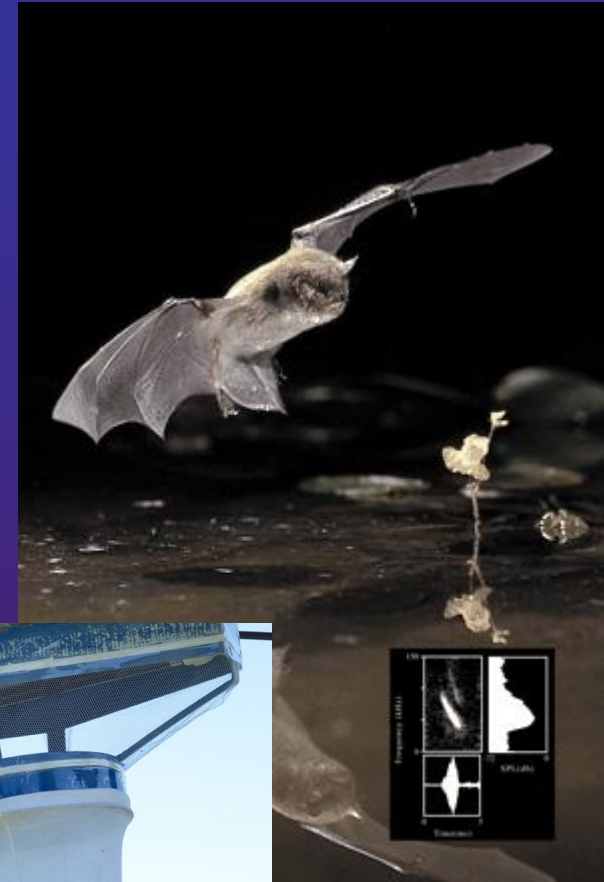




# Effects of light on foraging bats

## Tasks

- Different experimental light treatments
- Fieldwork April-September
  - o Automatic bat detectors (full night)
  - o Insect traps

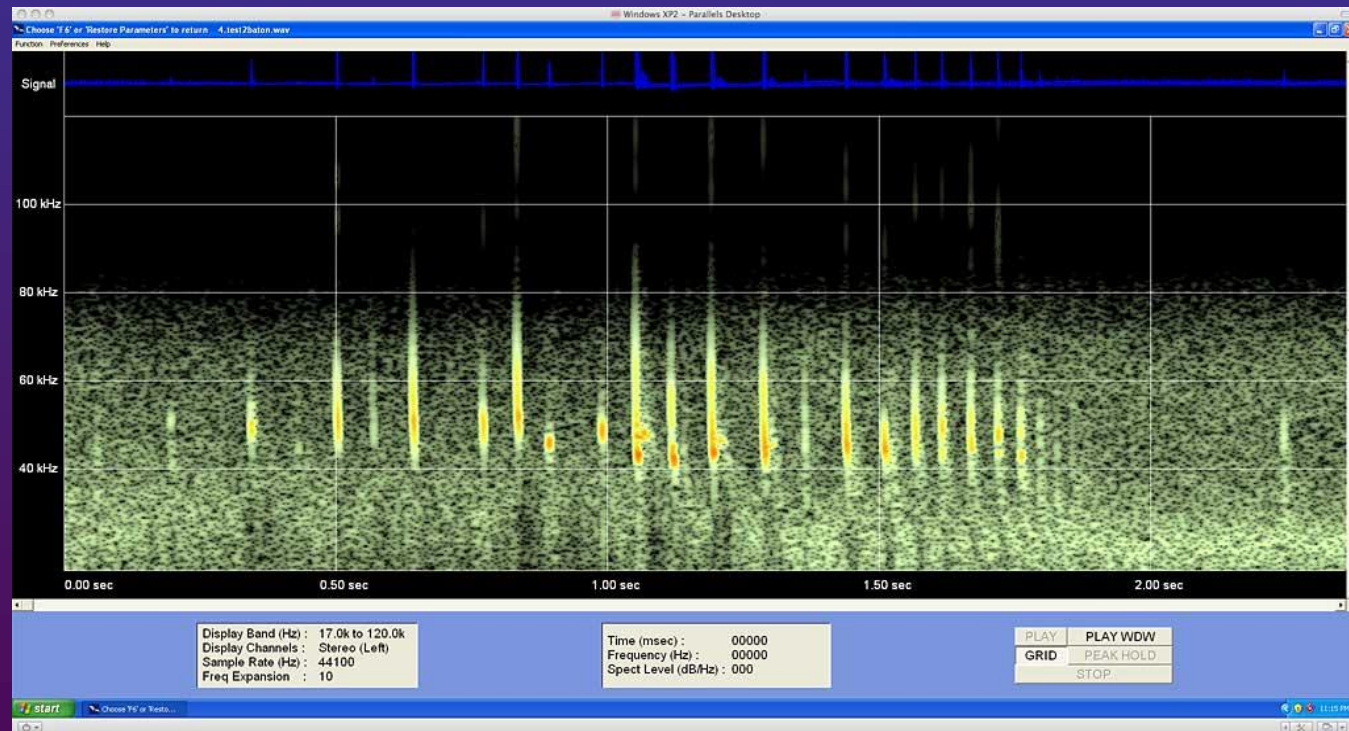


# Effects of light on foraging bats



## Tasks

- Lab
  - Analyses of sonograms
  - Insect identification
  - Computer assisted photo analysis





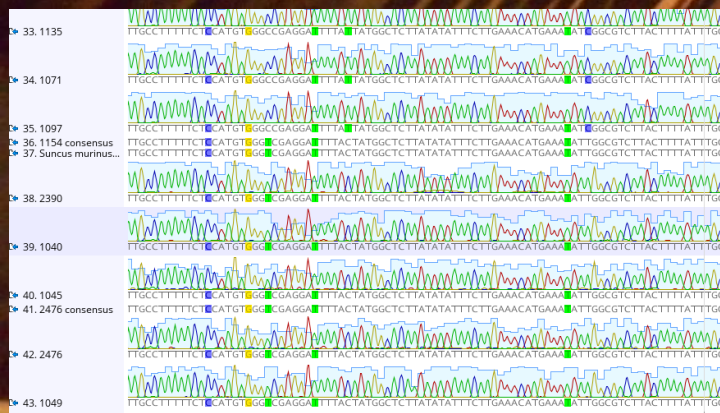
# Bats and viruses

## Field

- Summer (June – September)
- 3 weekly collection of bat droppings
- in (church) attics
- Trapping bats during swarming

## Lab

- Molecular analysis of the samples



Promotors: Prof. Sophie Gryseels





# Meadow birds



Curlew  
*Numenius arquata*  
Wulp



Black-tailed godwit  
*Limosa limosa*  
Grutto

# Is there still enough food for our meadow birds?



Worms  
Leatherjackets larvae



Arthropods



# Is there still enough food for our meadow birds?

## Fieldwork: collect worms and leatherjackets (April)





# Is there still enough food for our meadow birds?

## Fieldwork: collect insects (May)





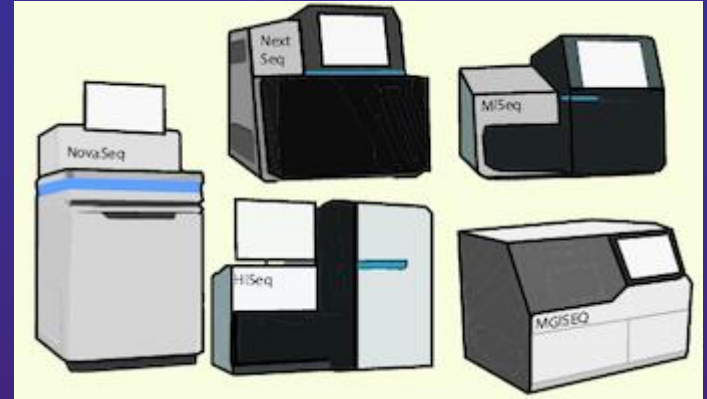
# Is there still enough food for our meadow birds?

## Lab: identification

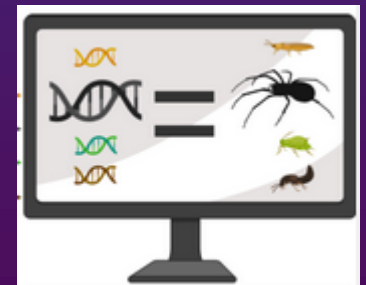
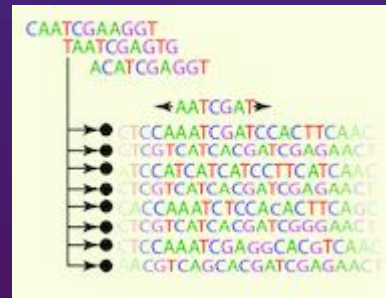




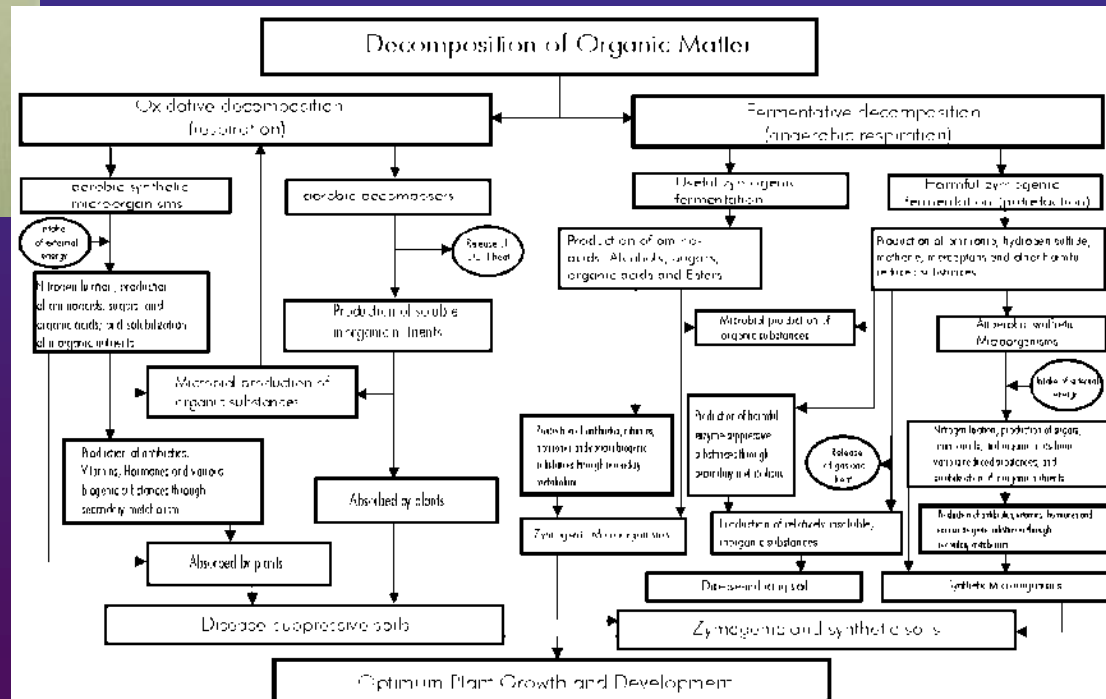
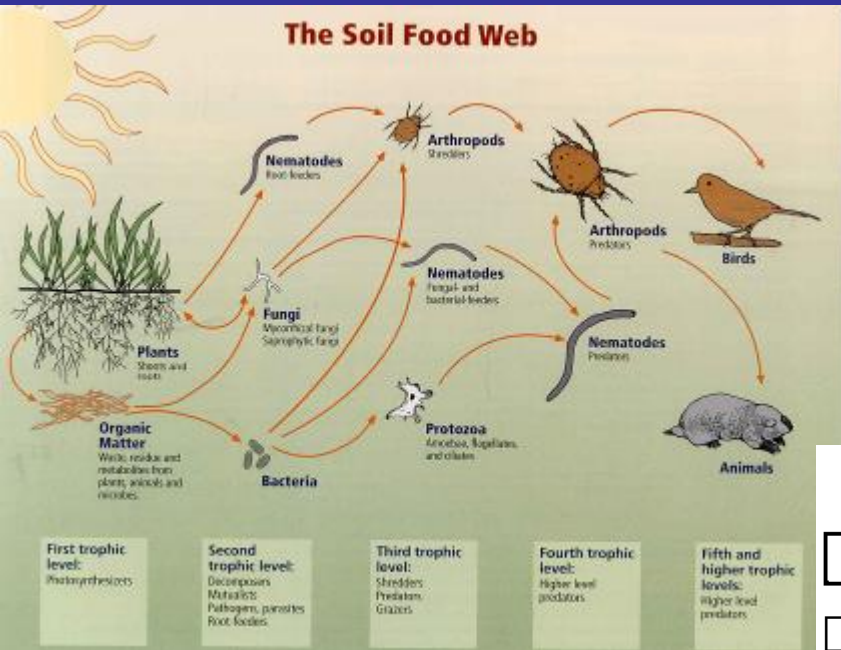
# Is there still enough food for our meadow birds?



Diet analysis from droppings



# Soil (functional) biodiversity





# Agriculture and biodiversity

Intensification agriculture,  
artificial fertilizers,  
pesticides, ...

-> biodiversity loss

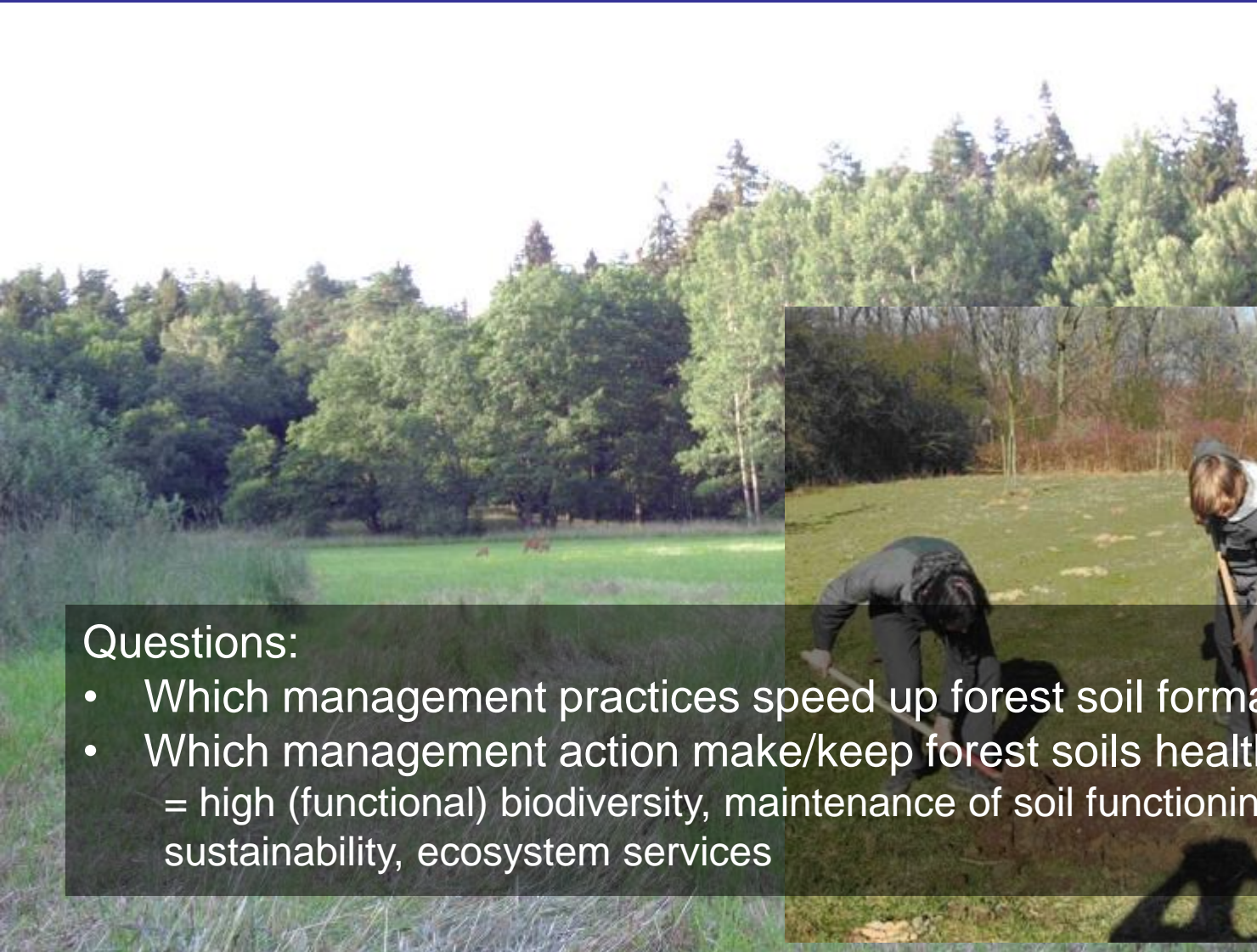


What can we do about it?

(Europe's New Green Deal)



# Afforestation, management and forest soil (functional) biodiversity



## Questions:

- Which management practices speed up forest soil formation?
- Which management action make/keep forest soils healthy?
  - = high (functional) biodiversity, maintenance of soil functioning, sustainability, ecosystem services



# Farmland agreements

## Farmland agreements

- Flower strips
- Controlled mowing

## Organic farming

- Organic fertilizers
- Biological pest control
- Crop diversity



What are the effects on soil biodiversity?

Co-promotor: Rik Delhem

# Soil (functional) biodiversity - Collembola

## Fieldwork

- Soil & litter samples

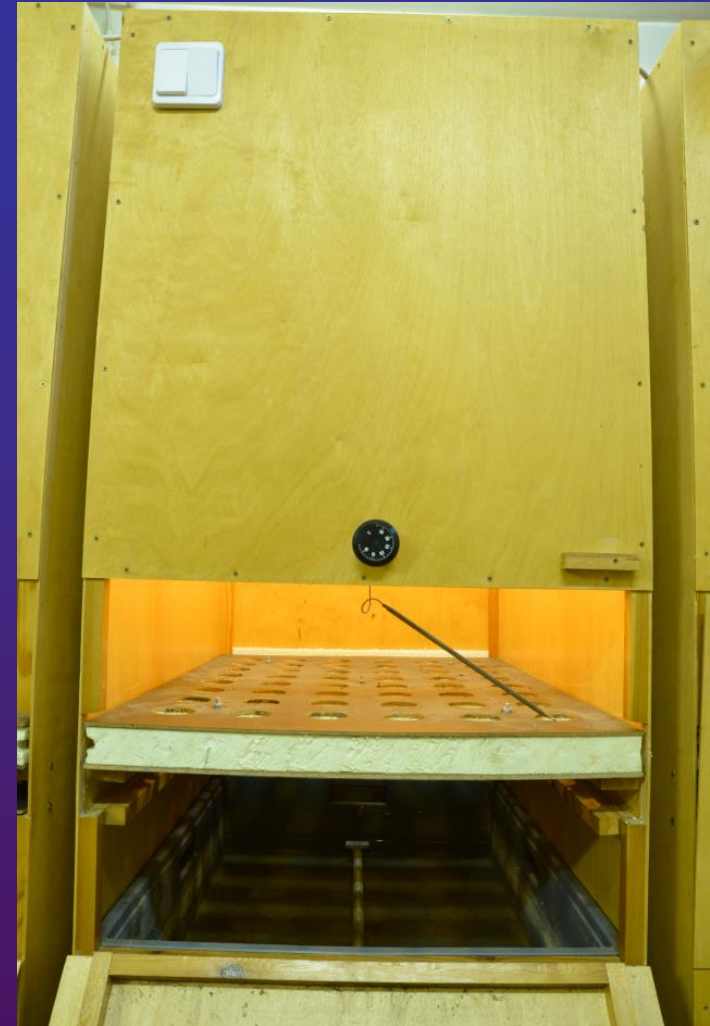
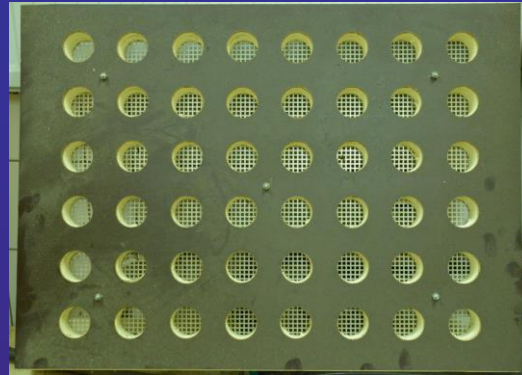




# Soil (functional) biodiversity - Collembola

Animal extraction

- McFadyen apparatus



# Soil (functional) biodiversity



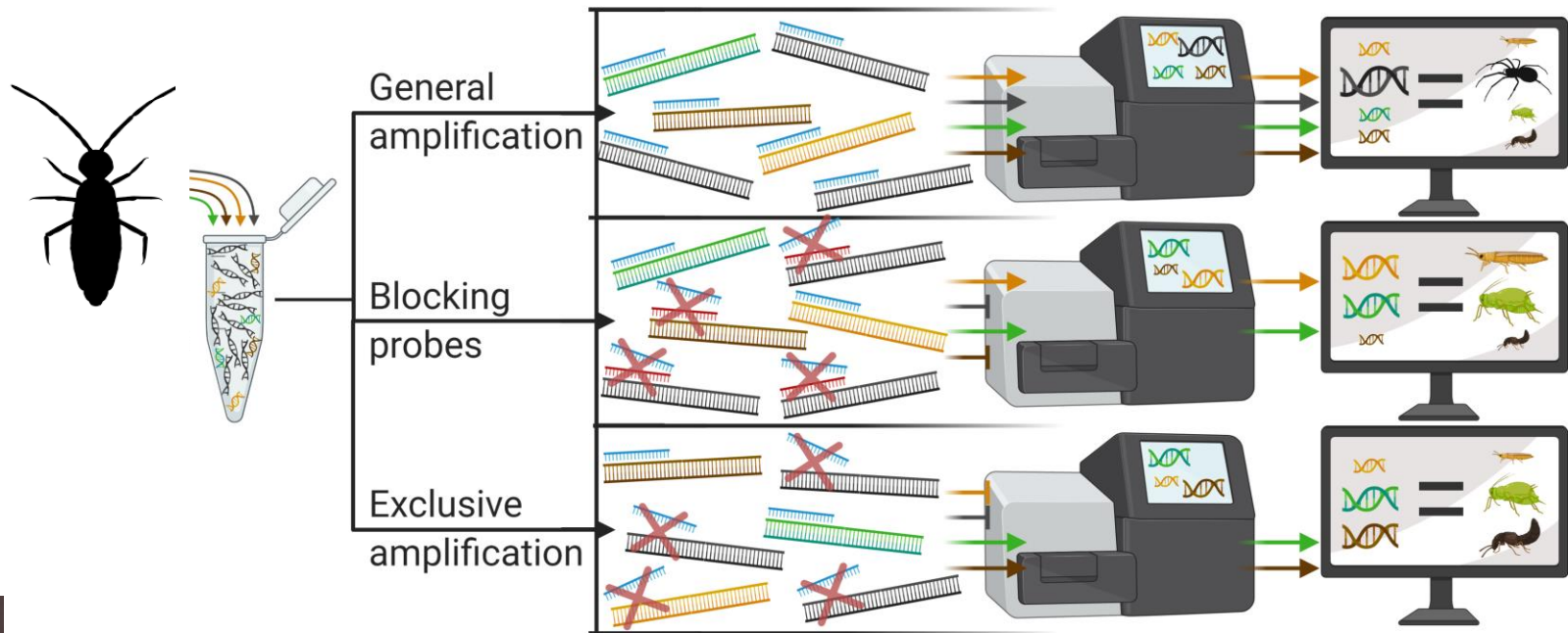
## Lab work

- Arthropods – Collembola
  - Identification
  - Functional grouping
- Soil chemical composition
- Vegetation changes

Co-promotor: Rik Delhem



# Collembola diet



(Co-)promotor: Erik Verbruggen (UA)

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