



Ecological responses of Arctic flies to recent climate change in Zackenberg, Greenland

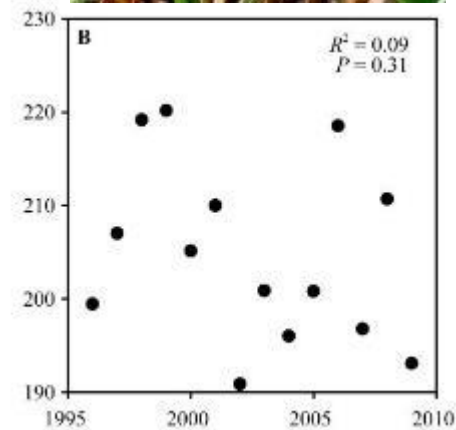
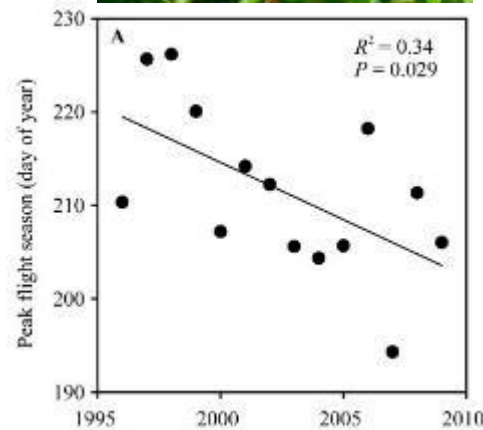
By Sarah Loboda, Toke Høye, Jade Savage and Chris Buddle

Environment

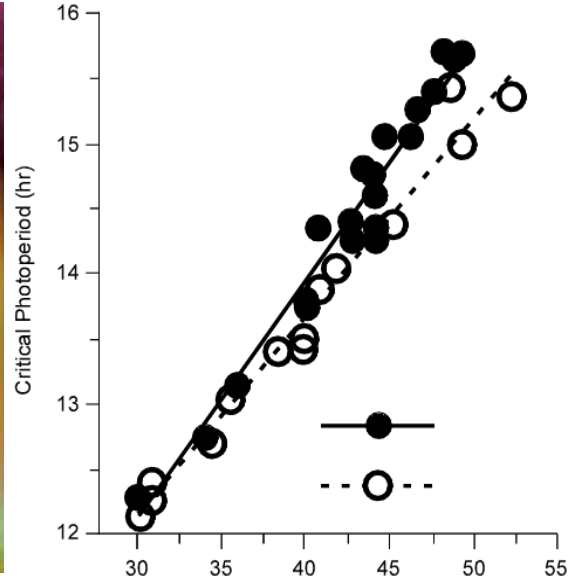
Ecological responses

Communities

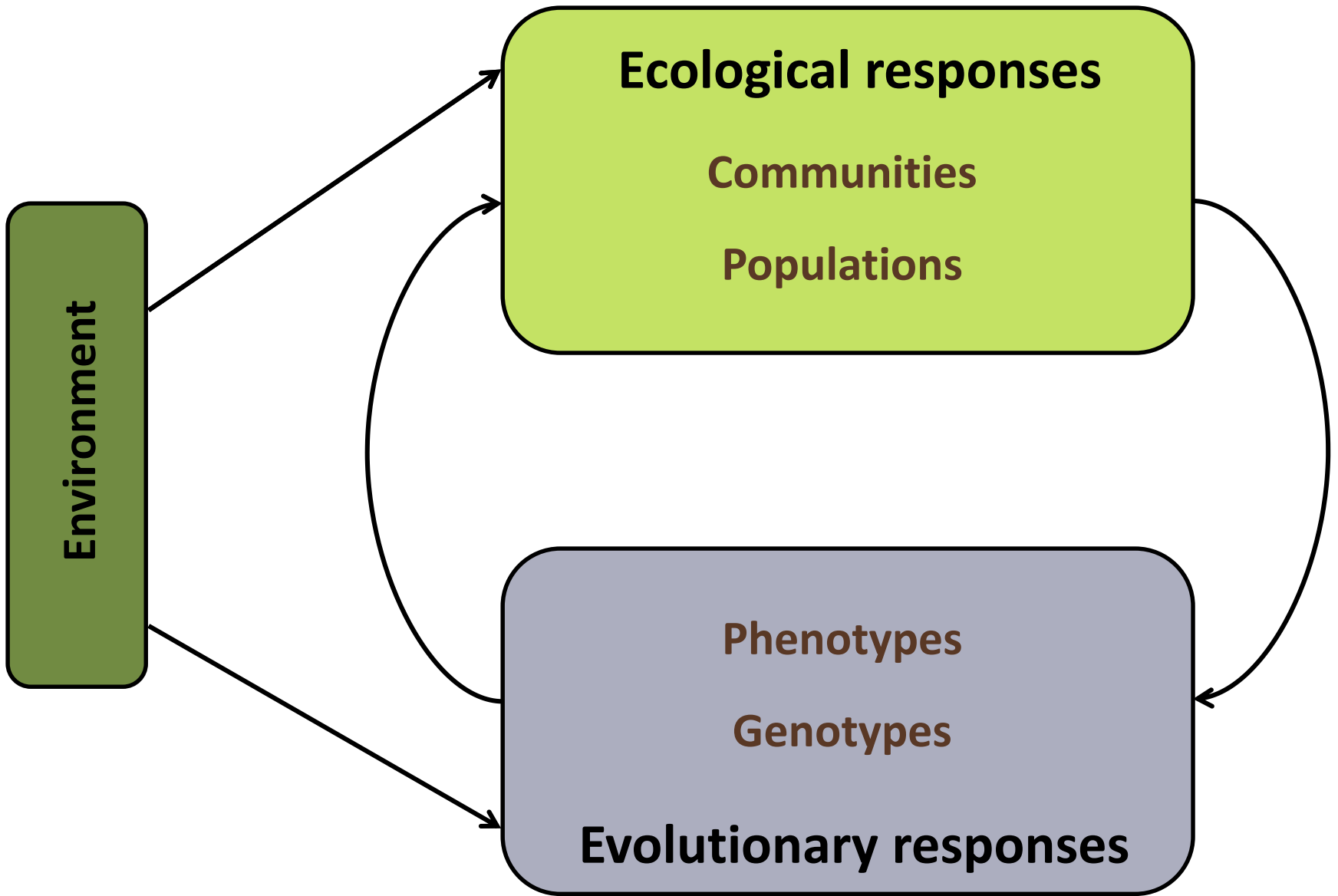
Populations

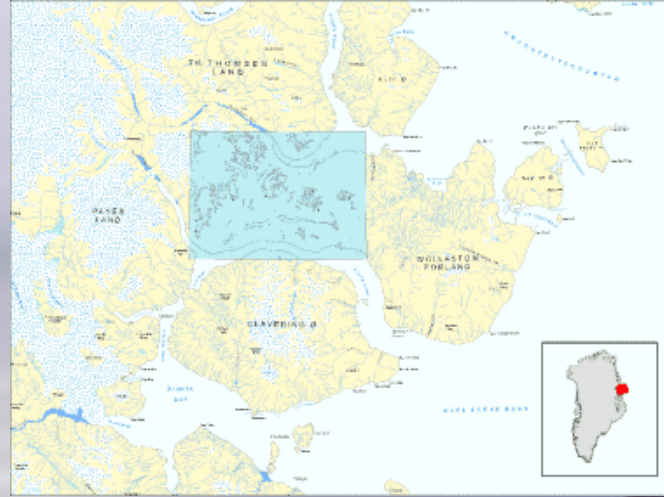


Environment



Phenotypes
Genotypes
Evolutionary responses





Practical and profitable



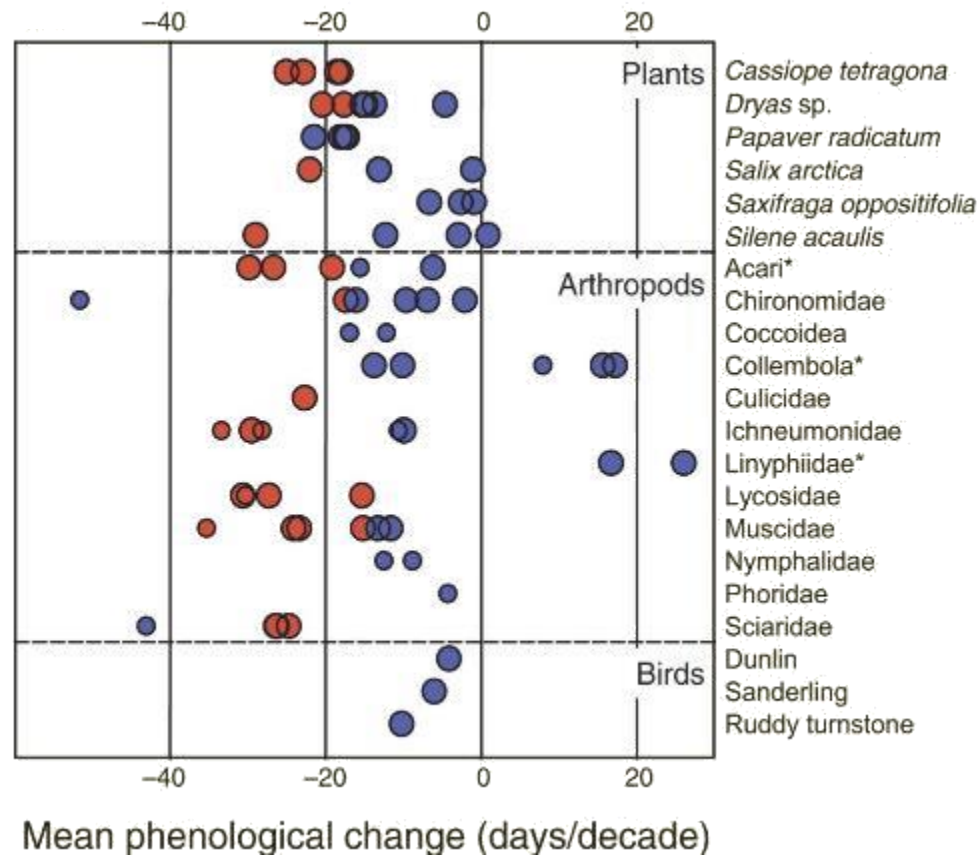
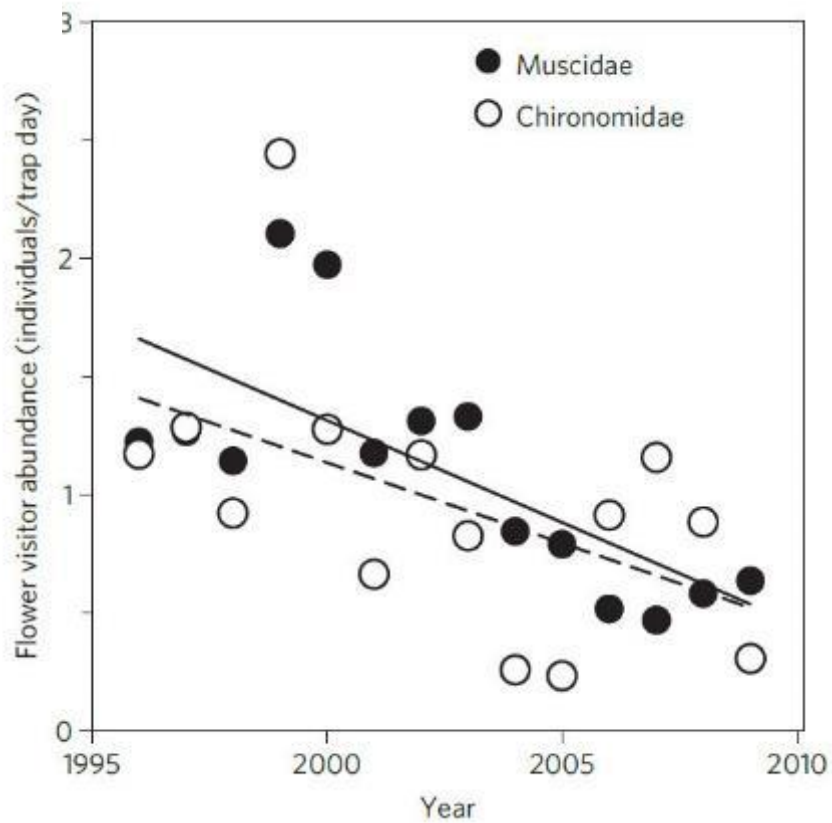
Environment

Ecological responses

Communities

Populations

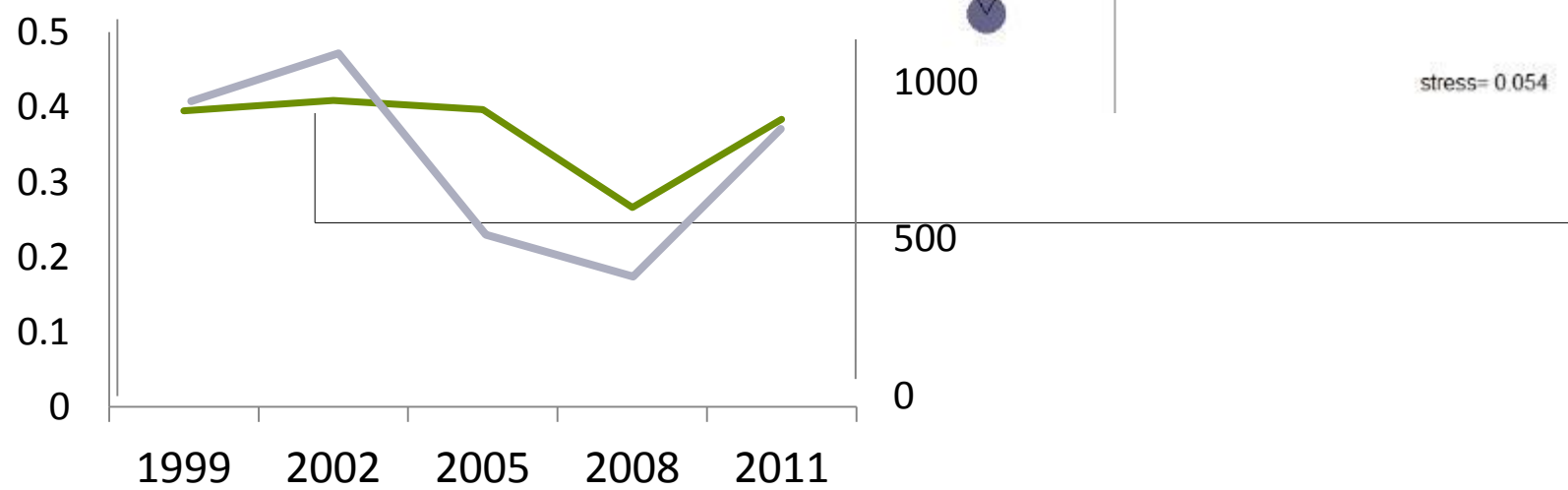
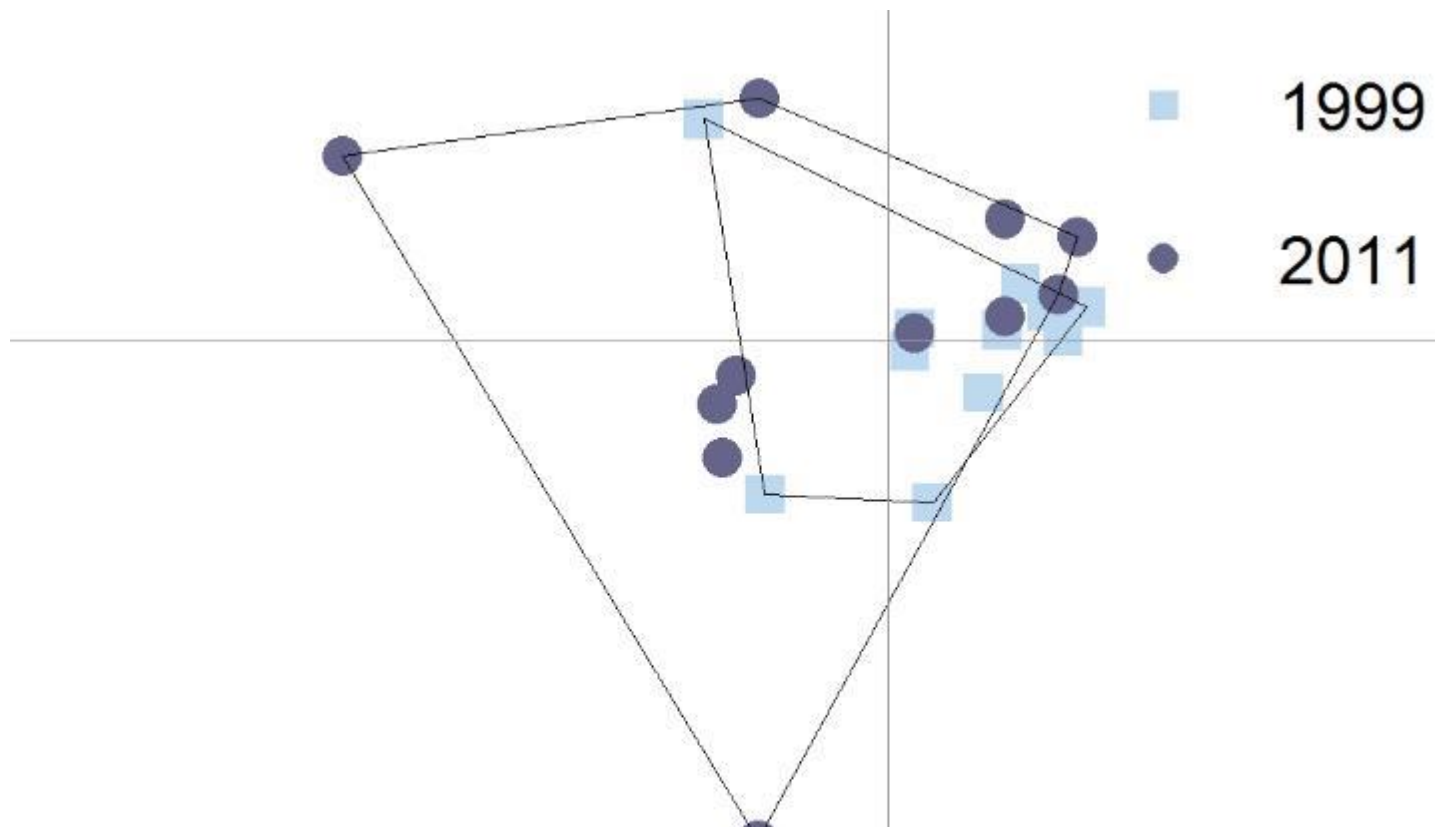


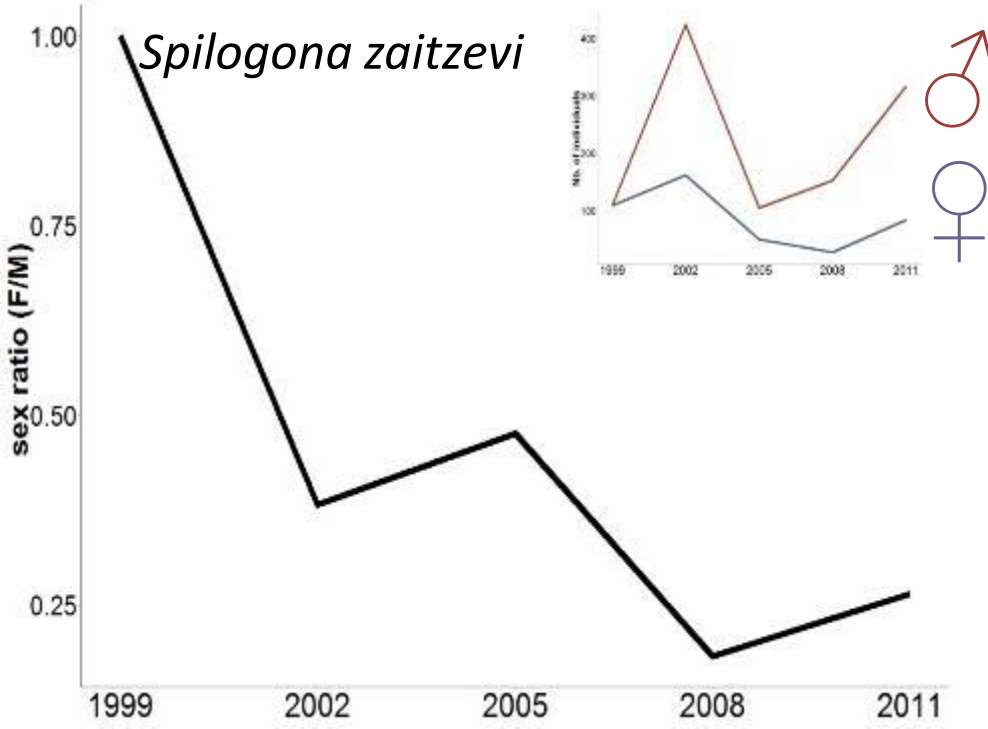
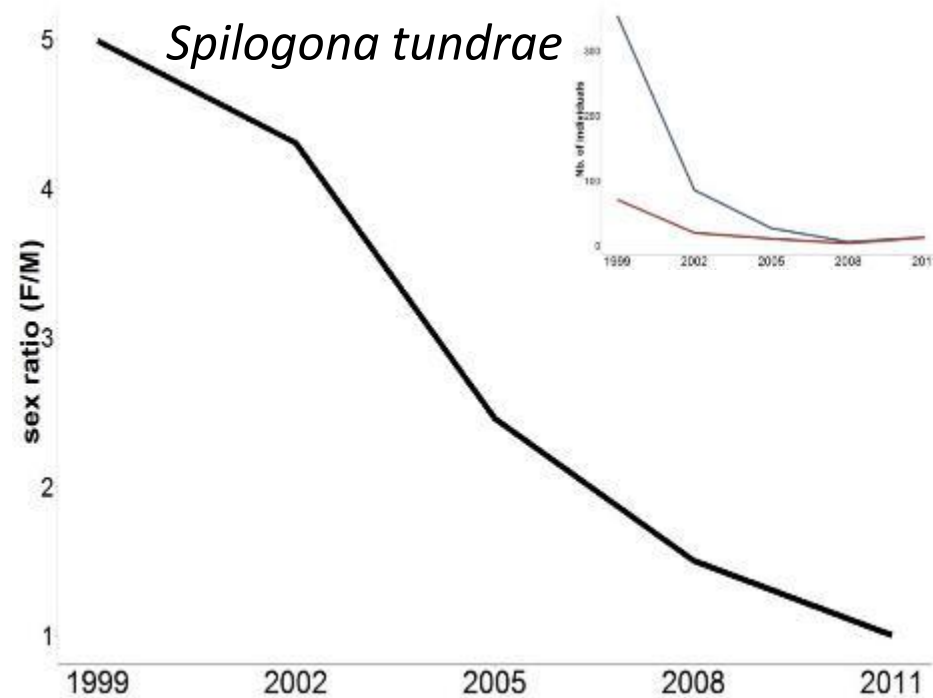
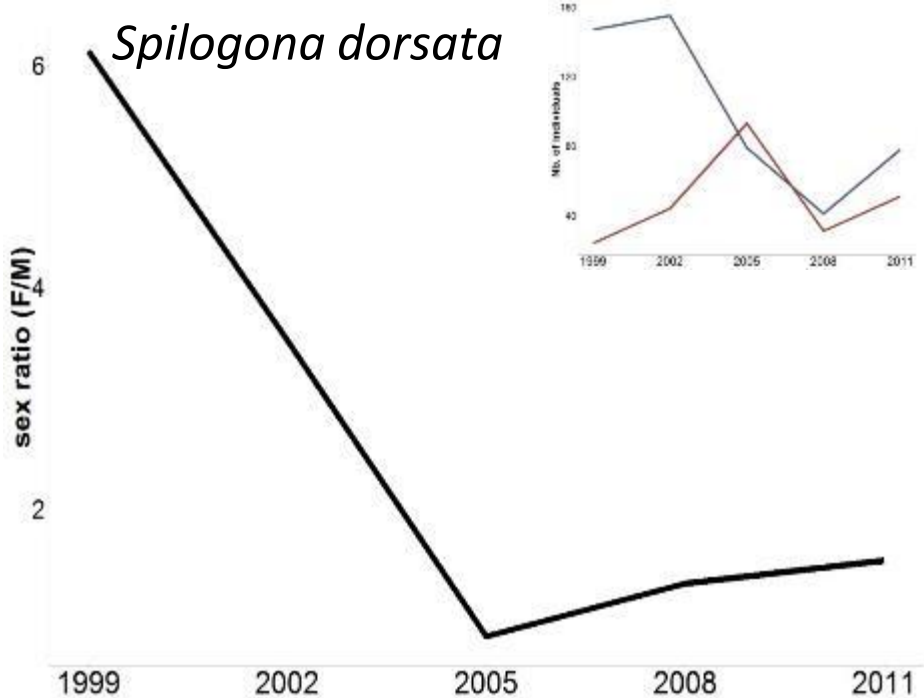


- How composition of muscid flies has changed over the past 18 years at Zackenberg?
- How sex-specific phenology has varied since 1996 at Zackenberg ?



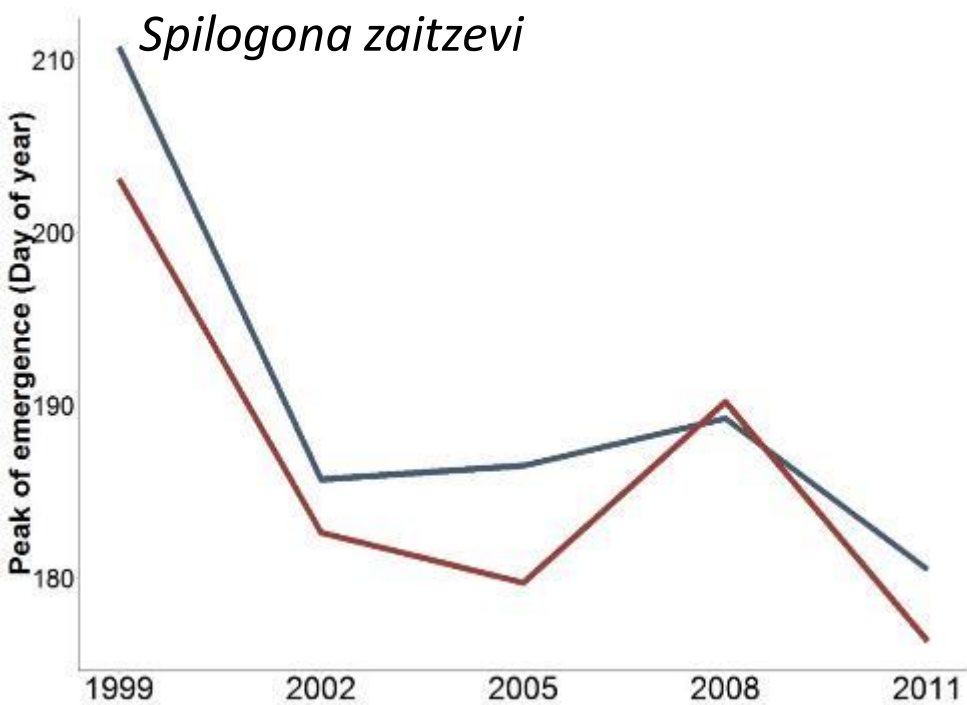
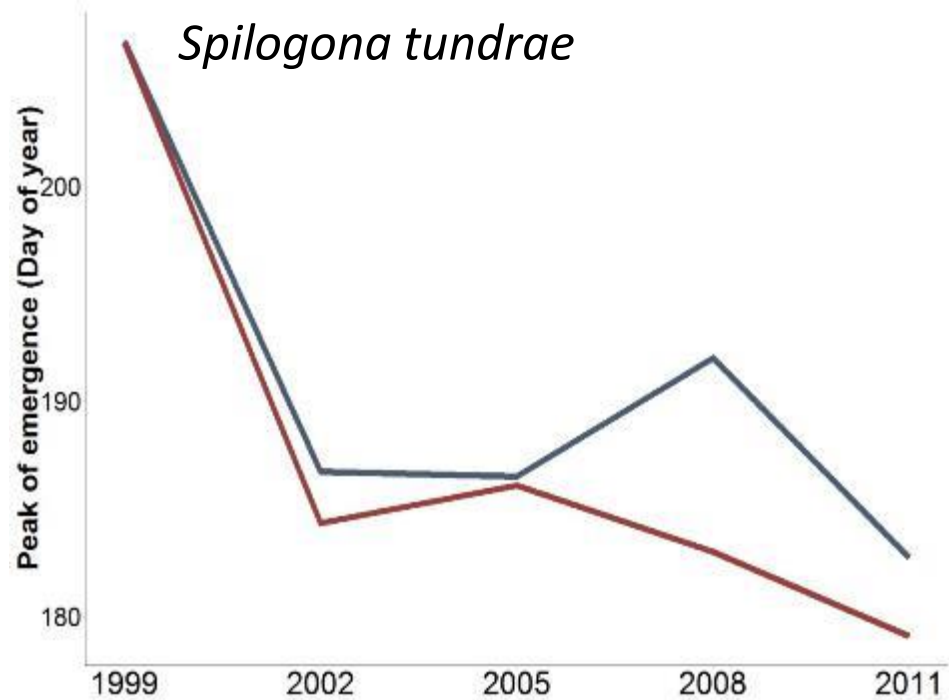
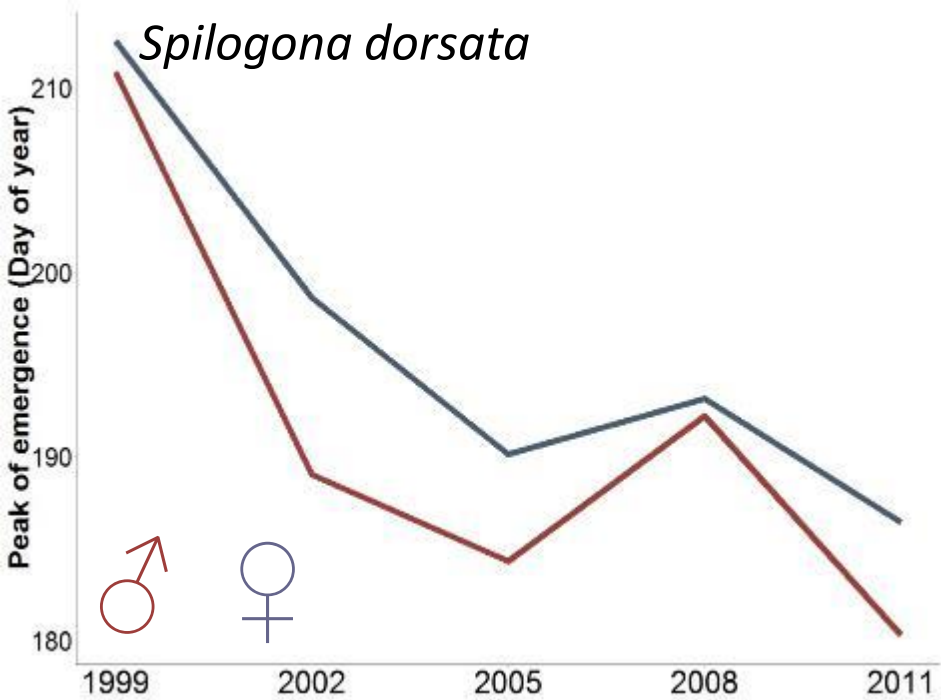






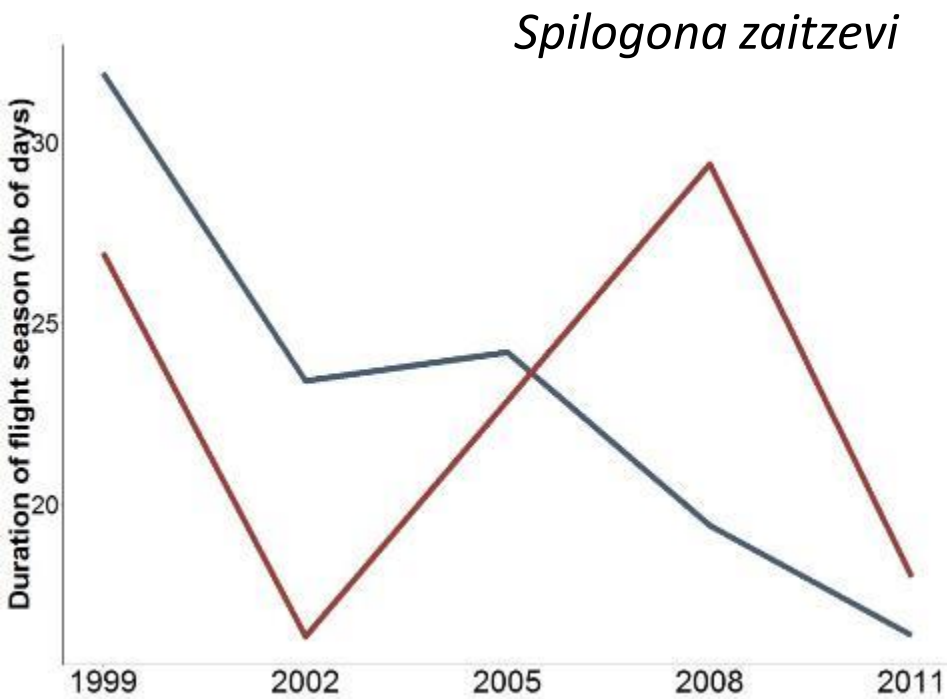
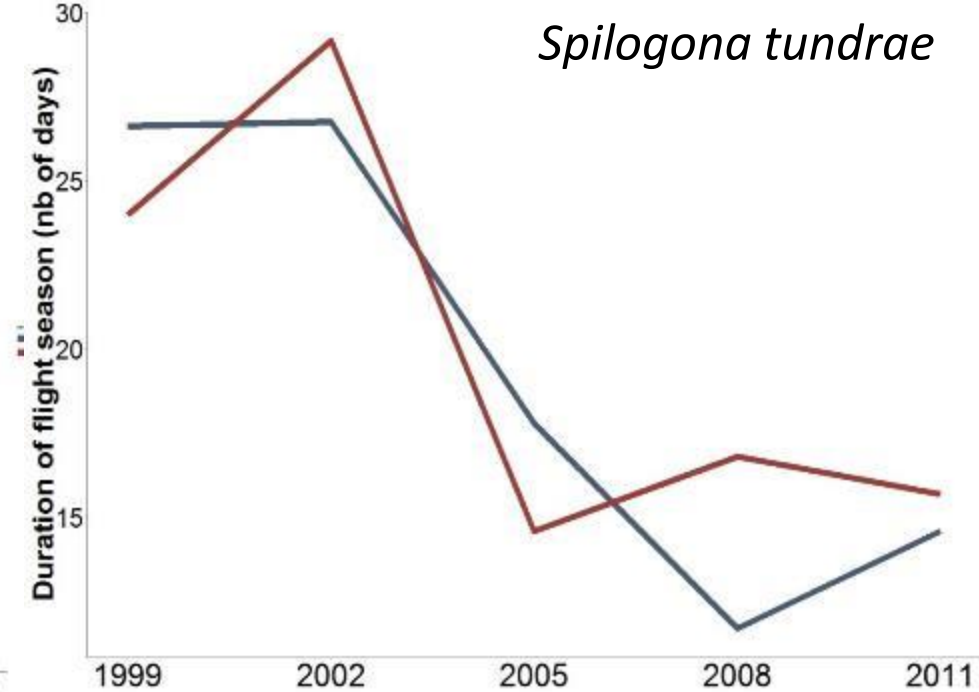
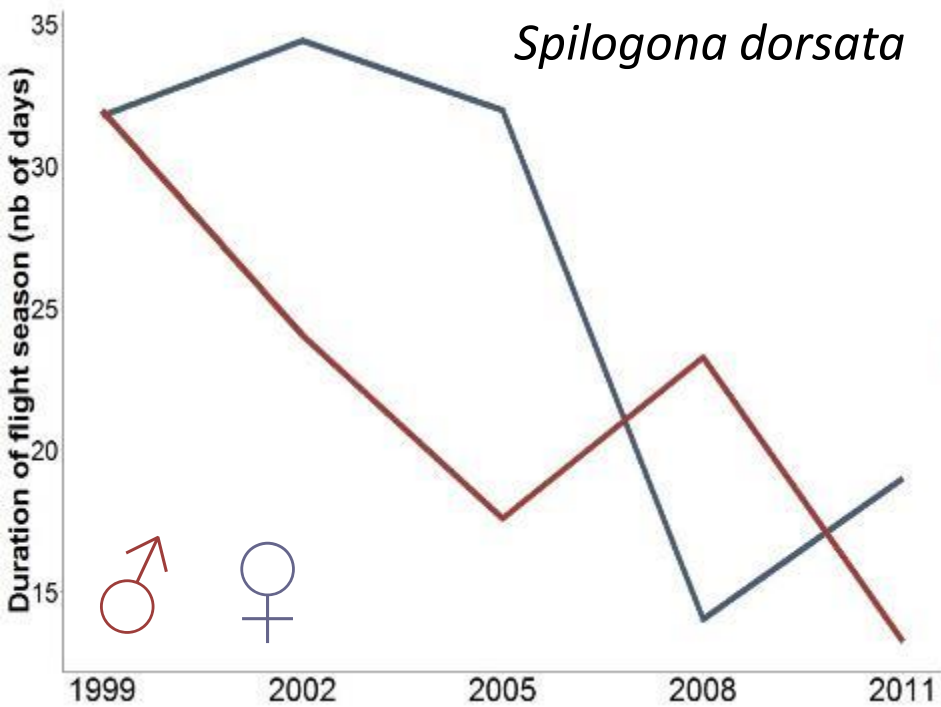
- 9 species / 2 genera
- wet habitat

- No general pattern of abundance variation at the species level



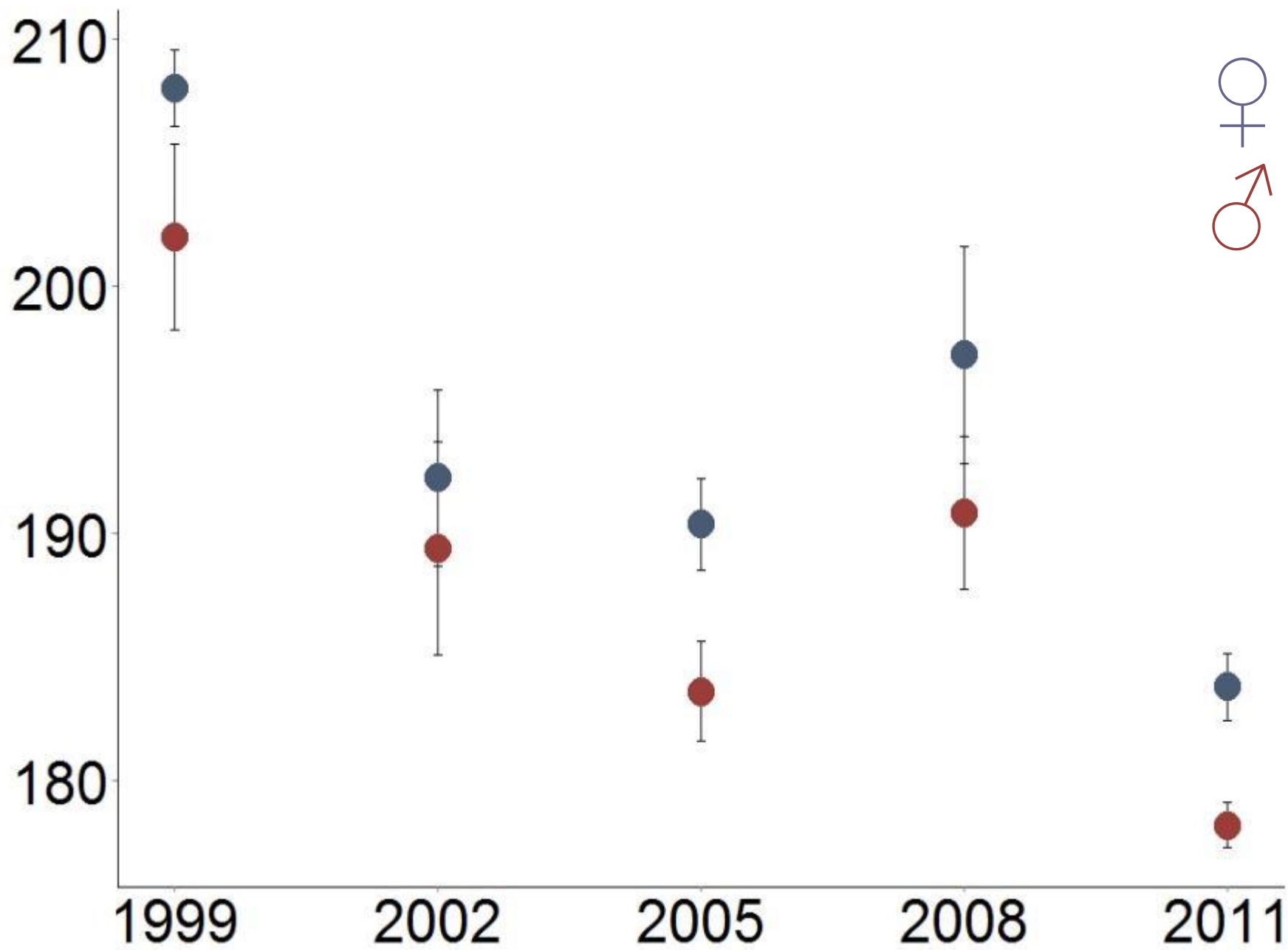
- Male emerge first = protandry

- All species emerge earlier in the season



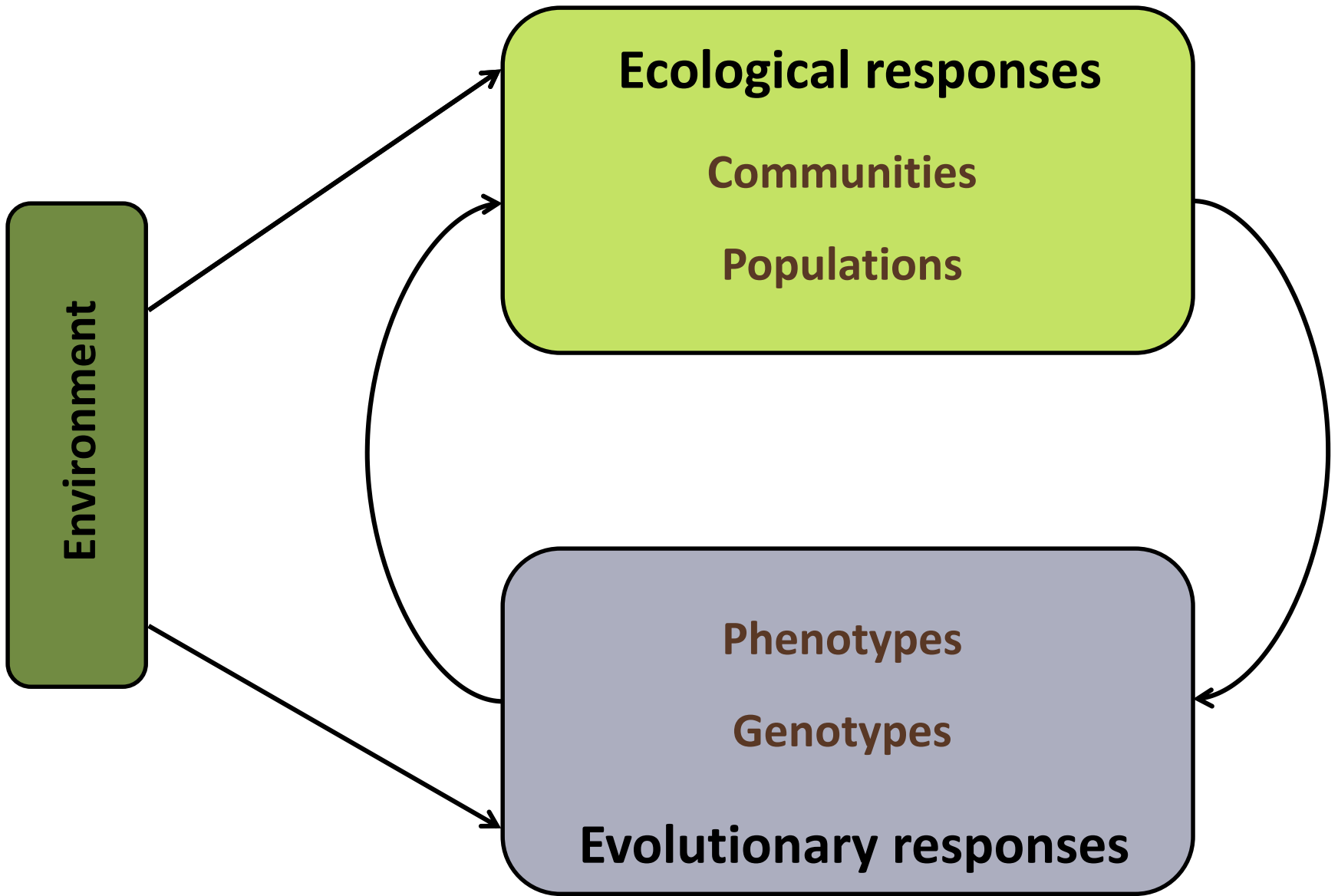
- Duration of flight season tends to decrease





- No major change in composition between 1999 and 2011
- Variation of species abundance affects sex ratio
- Seasonal emergence pattern has changed since 1999





Acknowledgments



Fonds de recherche
sur la nature
et les technologies

Québec 

ZERO 

 Société
d'Entomologie
du Québec



AARHUS UNIVERSITY



UNIVERSITÉ
BISHOP'S
UNIVERSITY



McGill