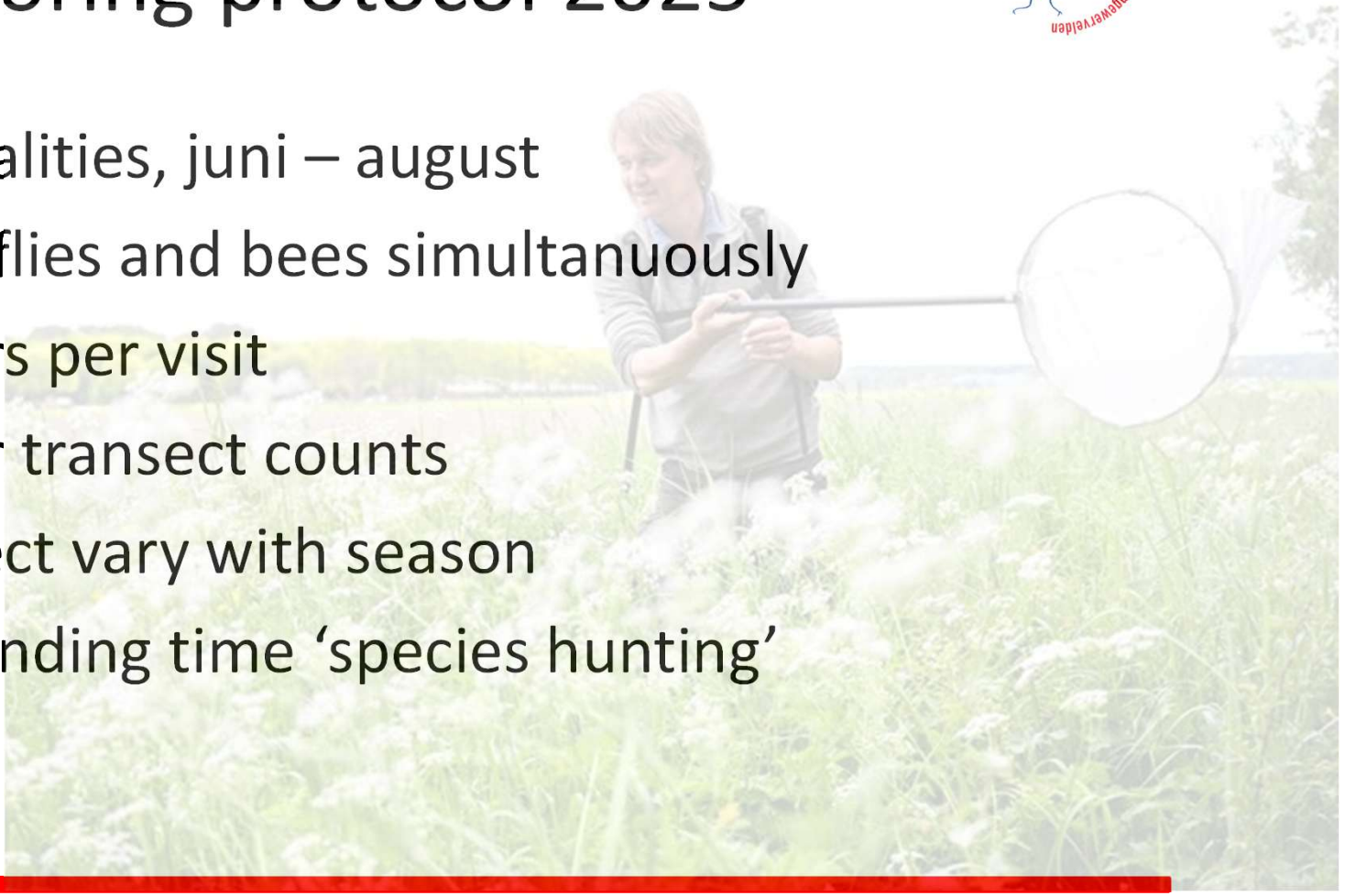
Dutch experience with monitoring hoverflies (and bees) in 2025

Theo Zeegers, John Smit, Wouter van Steenis & Menno van Zuijen

EIS Kenniscentrum Insecten

Monitoring protocol 2025



- 78 localities, juni – august
- Hoverflies and bees simultanuously
- 2 hours per visit
- 1 hour transect counts
- Transect vary with season
- Remainding time ‘species hunting’

Type of localities

LUCAS – stratified random

- 70 % agriculture
- 15 % nature
- 15 % urban

Type of localities

LUCAS – stratified random

- 70 % agriculture
- 15 % nature
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Type of localities

LUCAS – stratified random (34)

- 70 % agriculture
- 15 % nature
- 15 % urban

Nature – own pick (20)

First results: number of species

			on red list	
# species	LUCAS	Nature	LUCAS	Nature
localities	34	20		
bees	97	116	16	30
hoverflies	97	88	16	9

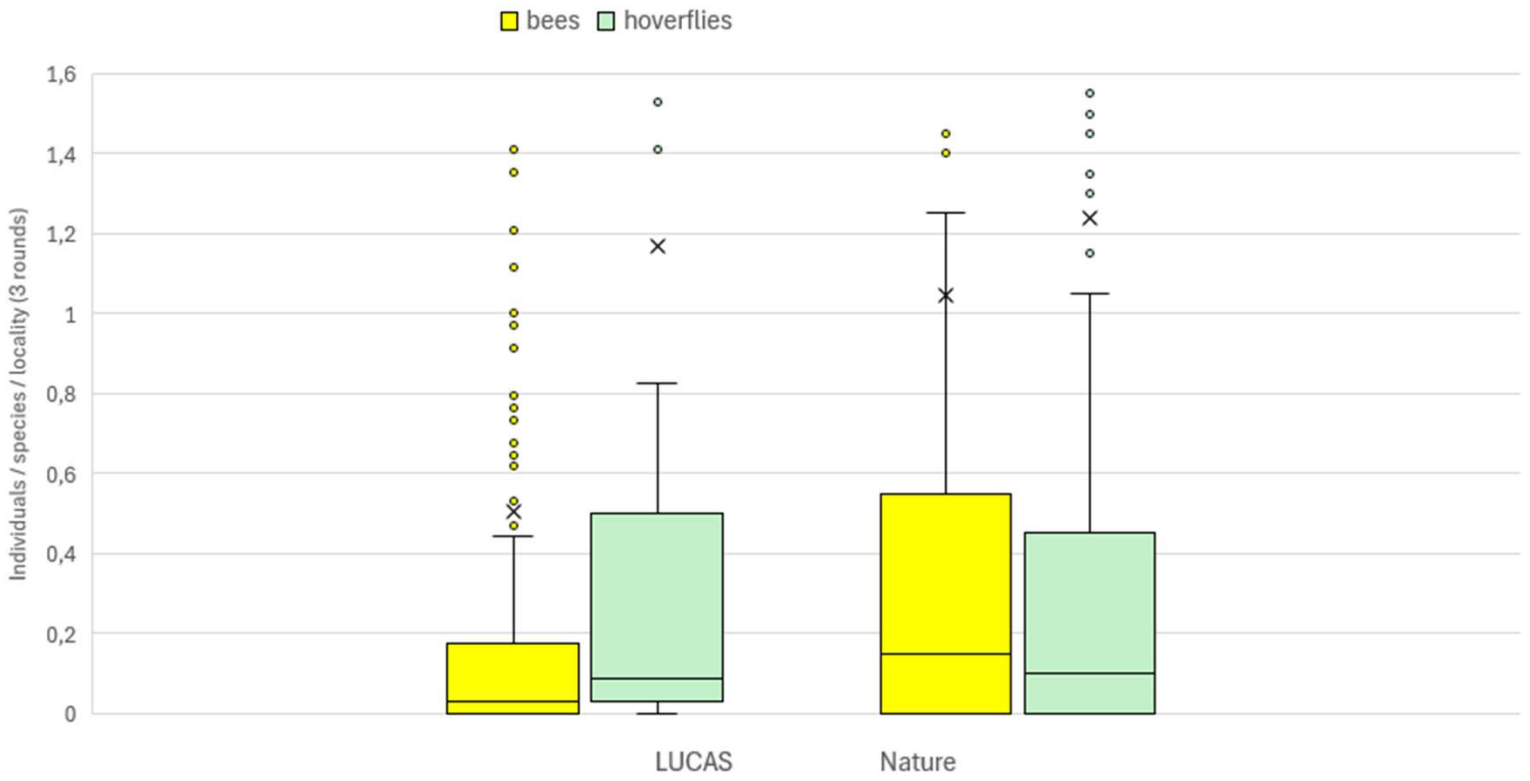




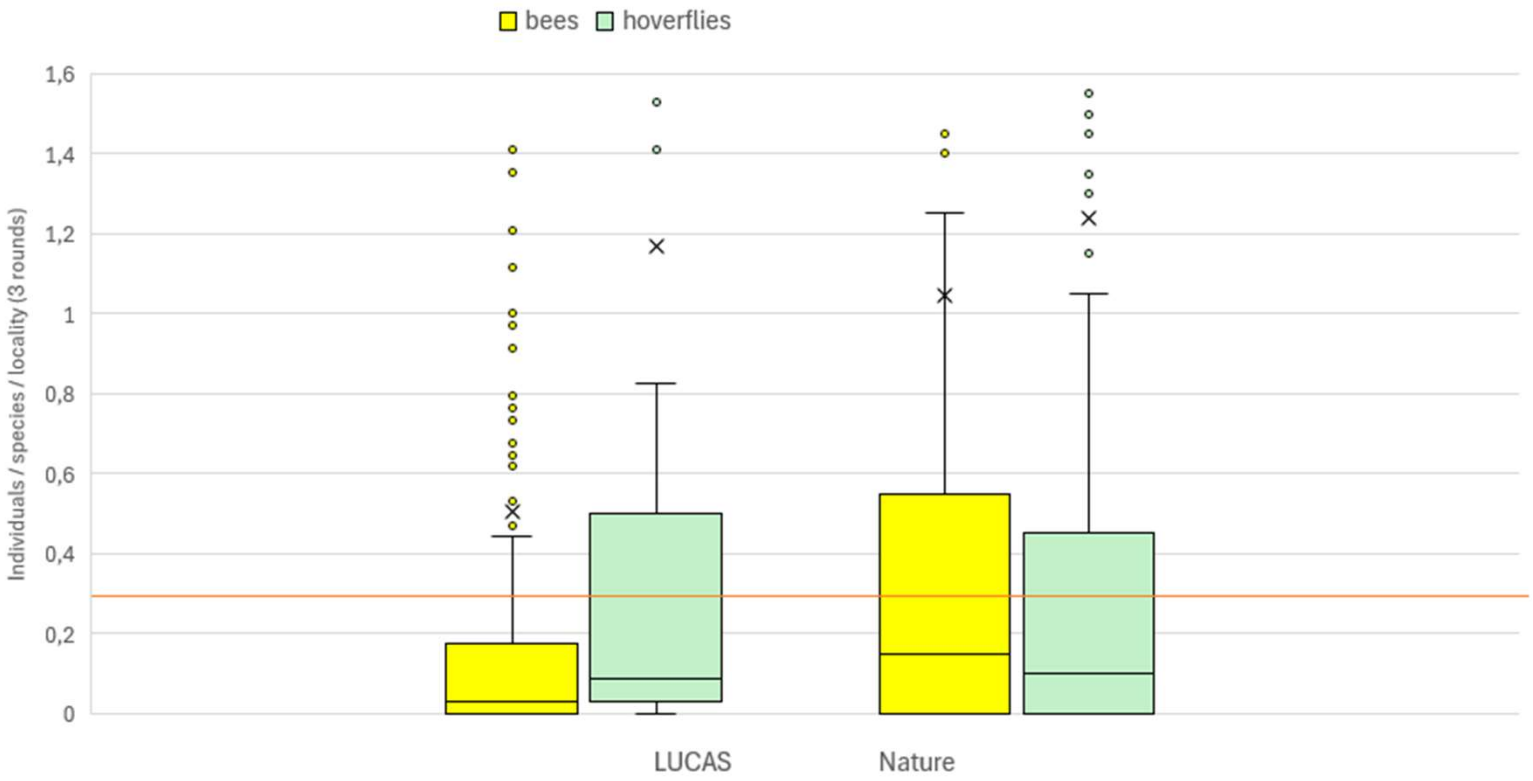




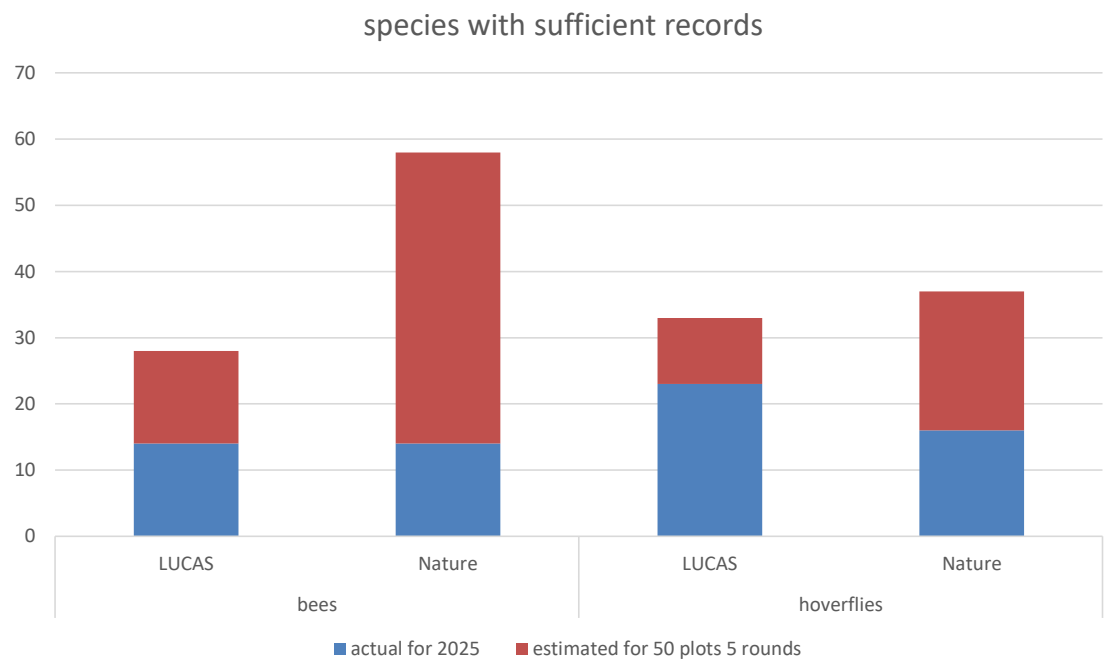
First results: number of individuals per species



First results: number of individuals per species



How many species will reach 25 specimens counted ?



Fixed transects can also be highly impractical





Differences between protocols

Ours (2025)

- Fixed time
- Bees and hoverflies simultaneously
- No ‘Dionne Warwick’

Formal EU

- Fixed length
- Bees and hoverflies in two visits
- ‘Dionne Warwick’ protocol

Do you walk on by (really ?) ?



What about weather ?



Malaise trap
running 2010 – today
Full time begin spring - autumn
Nearly 500 samples taken
Many Diptera and Aculeata
identified to species and counted

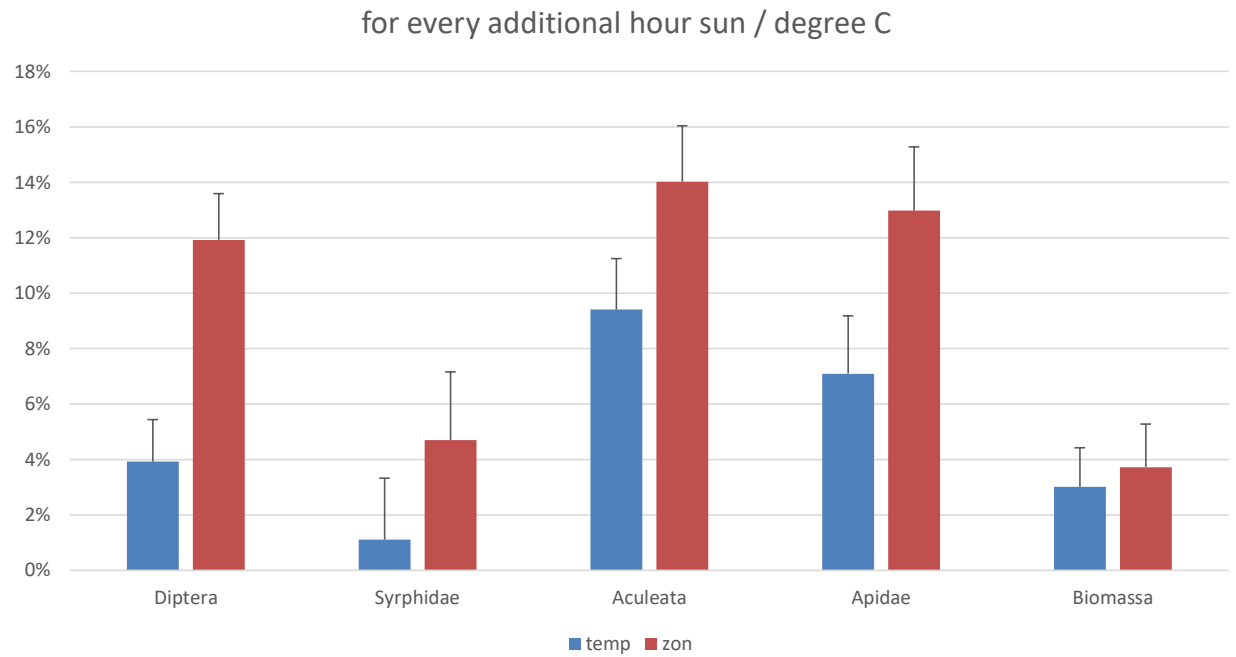
Analysis: pseudolinear model

Variables investigated

- Year
- Day in year
- Temperature (relative !)
- Sun (in hours)

- Done for Diptera, Syrphidae, Aculeata, bees and biomass

Results


for every additional hour sun / degree C
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Diptera
Syrphidae
Aculeata
Apidae
Biomassa
temp
zon

Reconsider me

- Current protocol has low effectiviness and even lower efficiency
- Due to administrative rather than ecological exactness
- Also, we are not correcting for major factors (weather)
- As a consequence, the results are expected to be both expensive and disappointing