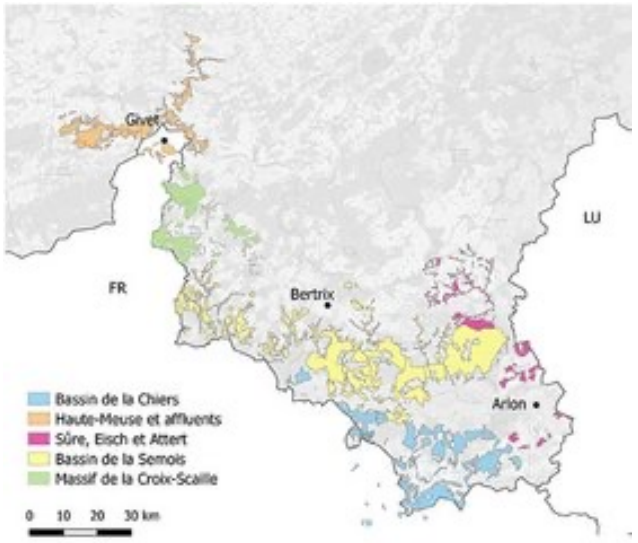
Notes on the habitat preferences of *Tropidia fasciata* Meigen, 1822 and *Eumerus ruficornis* Meigen, 1822 in Belgium

Opdekamp Wout , Tamsyn Ward & Van de Meutter Frank

Fieldwork



→ **2021-2023:**

- LIFE Connexions (LIFE19 NAT/BE/000093)
- Floristic inventories (Braun-Blanquet cover estimates)
- High Nature Value (HNV) Grasslands (>2000ha visited)
  - 6120: Xeric sand calcareous grasslands
  - 6210: Semi-natural dry grasslands and scrubland facies on calcareous substrates
  - 6230: Species-rich *Nardus* grasslands
  - 6410: *Molinia* meadows
  - 6430: Hydrophilous tall herb fringe communities
  - 6510: Lowland hay meadows (Arrhenaterion)

→ **2024-2025:**

- LIFE B4B (LIFE21-IPN-BE-B4B-LIFE/101069526)
  - Targeted visits, mostly Molinions (6410)

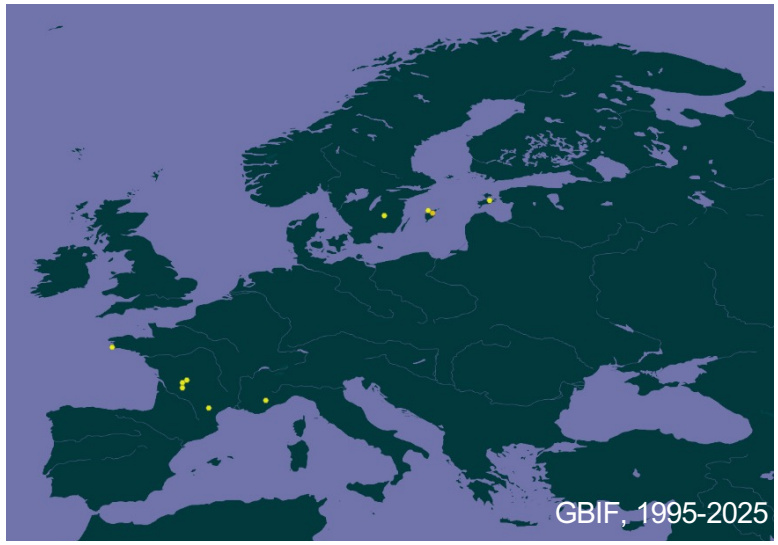


Species presentation



→ ***Eumerus ruficornis* Meigen, 1822**

- *EU RL*: Endangered (B2ab(iii))
- *Hostplant*: *Scorzonera humilis (Johansson 2011)*, *Scorzonera* sp? (Sommagio 2017)
- *EU endemic*: No
- *Range*: southern Sweden and Finland south to the Mediterranean and Northern Africa, east through the Baltic states and Poland into European parts of Russia and in southern Europe from Spain to the former Yugoslavia (Speight 2024)
- *Recent observations*: few
- *Belgium*: Newly discovered in 2022

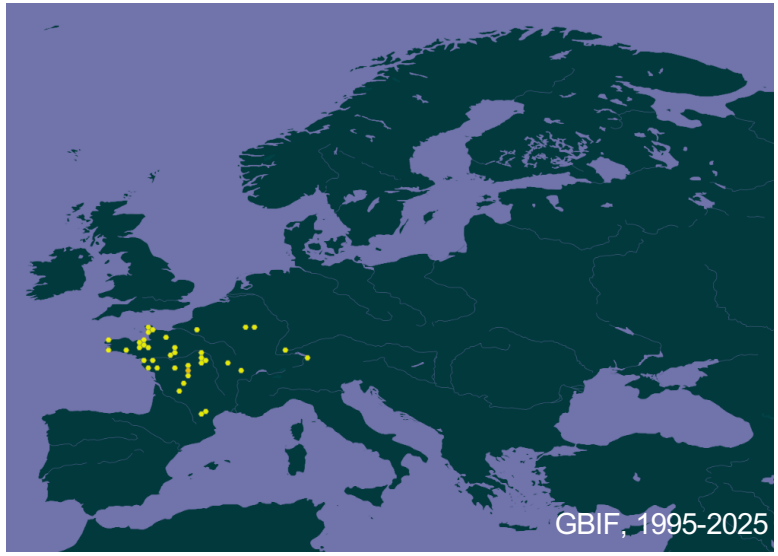


Species presentation



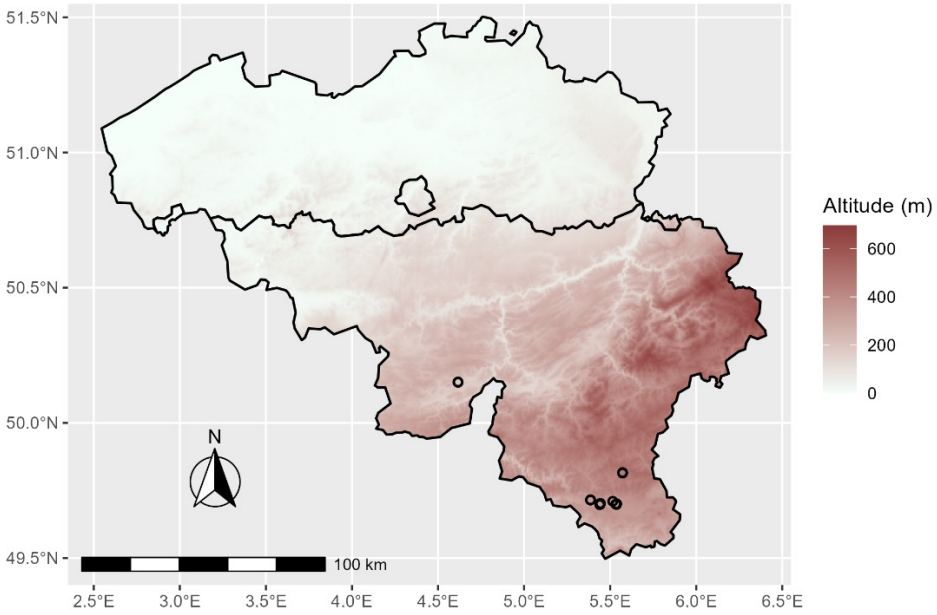
→ ***Tropidia fasciata* Meigen, 1822**

- *EU RL*: Least Concern
- *Hostplant*: ?
- *EU endemic*: ?
- *Range*: Finland (now extinct) south to the Pyrenees and east to Poland, Czech Republic to Slovakia, Austria and Hungary (Speight 2024). Unlike stated by Speight (2024), the presence of *T. fasciata* in the territory of Russia is doubtful (Barkalov and Mutin 2019).
- *Recent observations*: mostly France
- *Belgium*:
  - 1m 1895, 1m 1929
  - Rediscovered 1999
  - Yearly since 2017

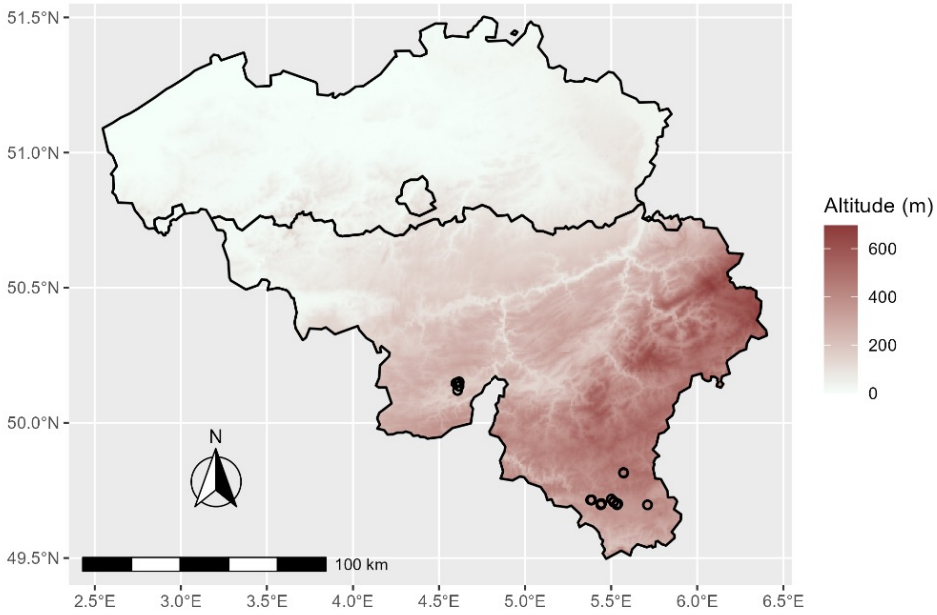


Distribution

Eumerus ruficornis



Tropidia fasciata

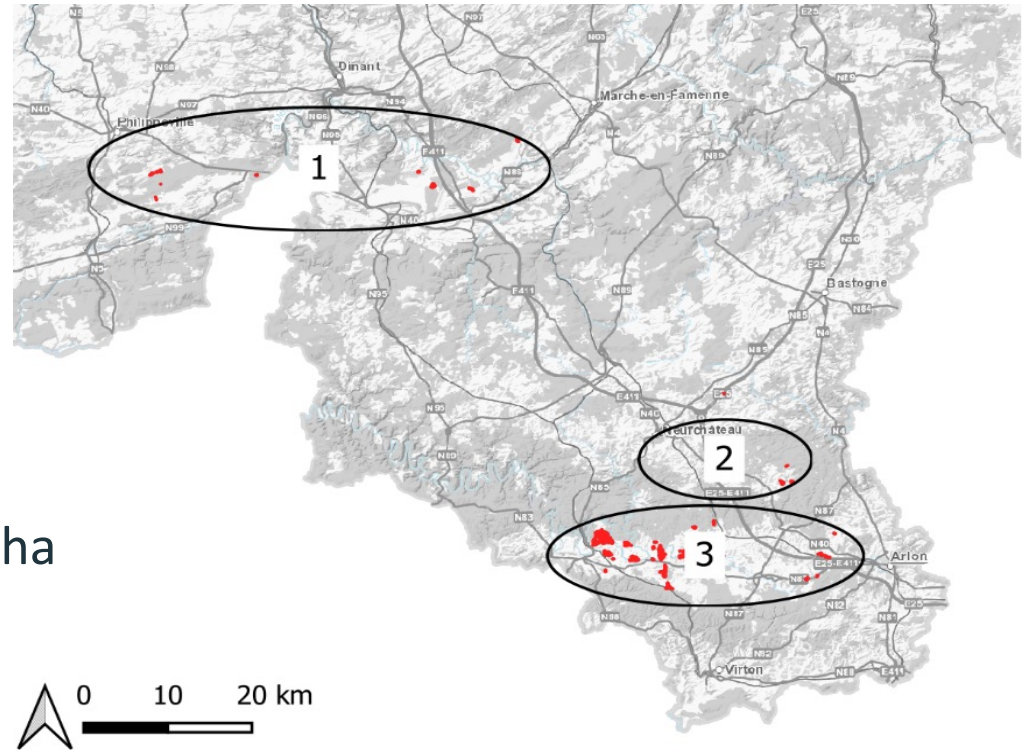


→ 6 clusters
- 13 parcels

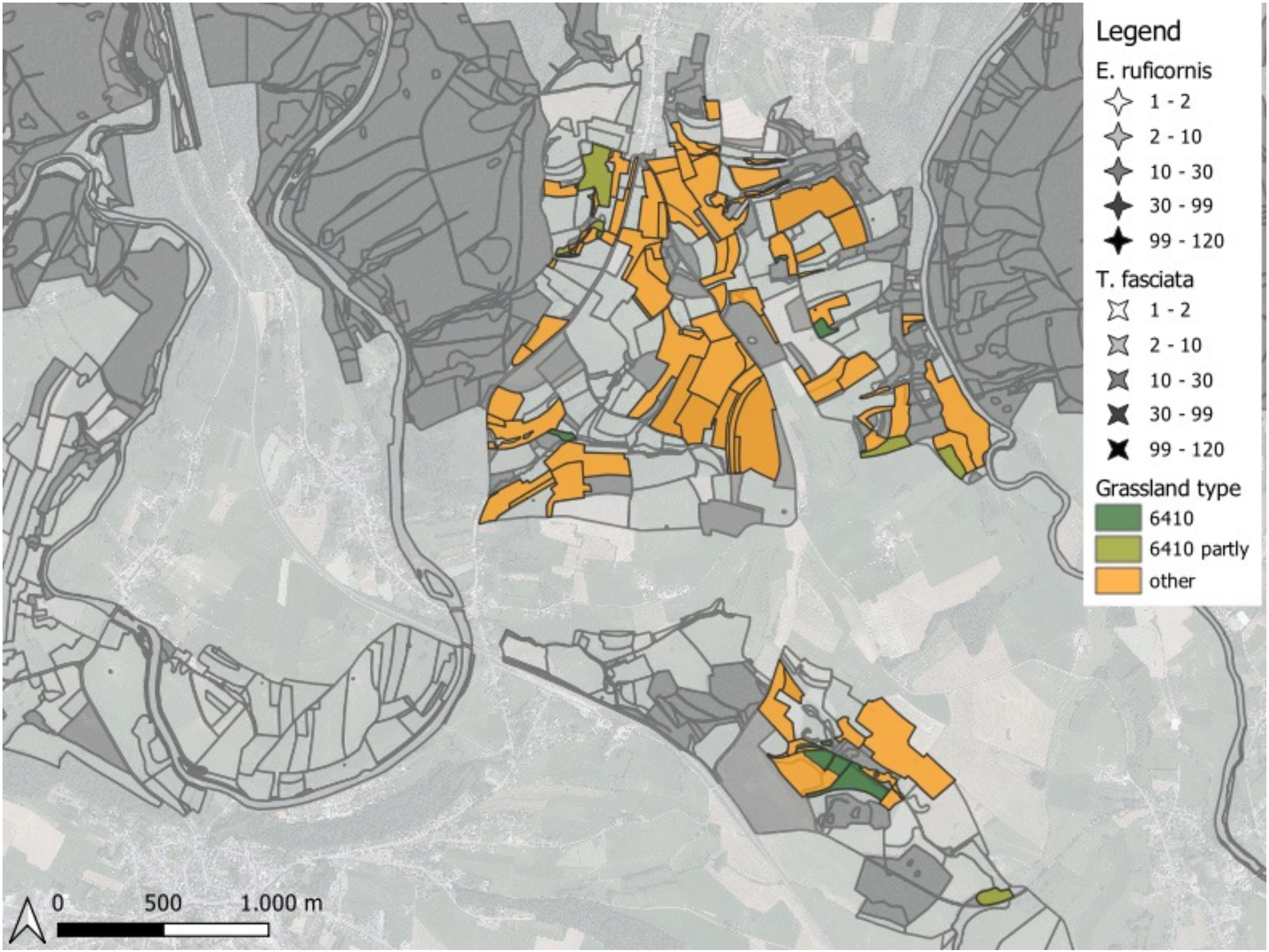
→ 10 clusters
- 27 parcels

Analysis habitat preferences

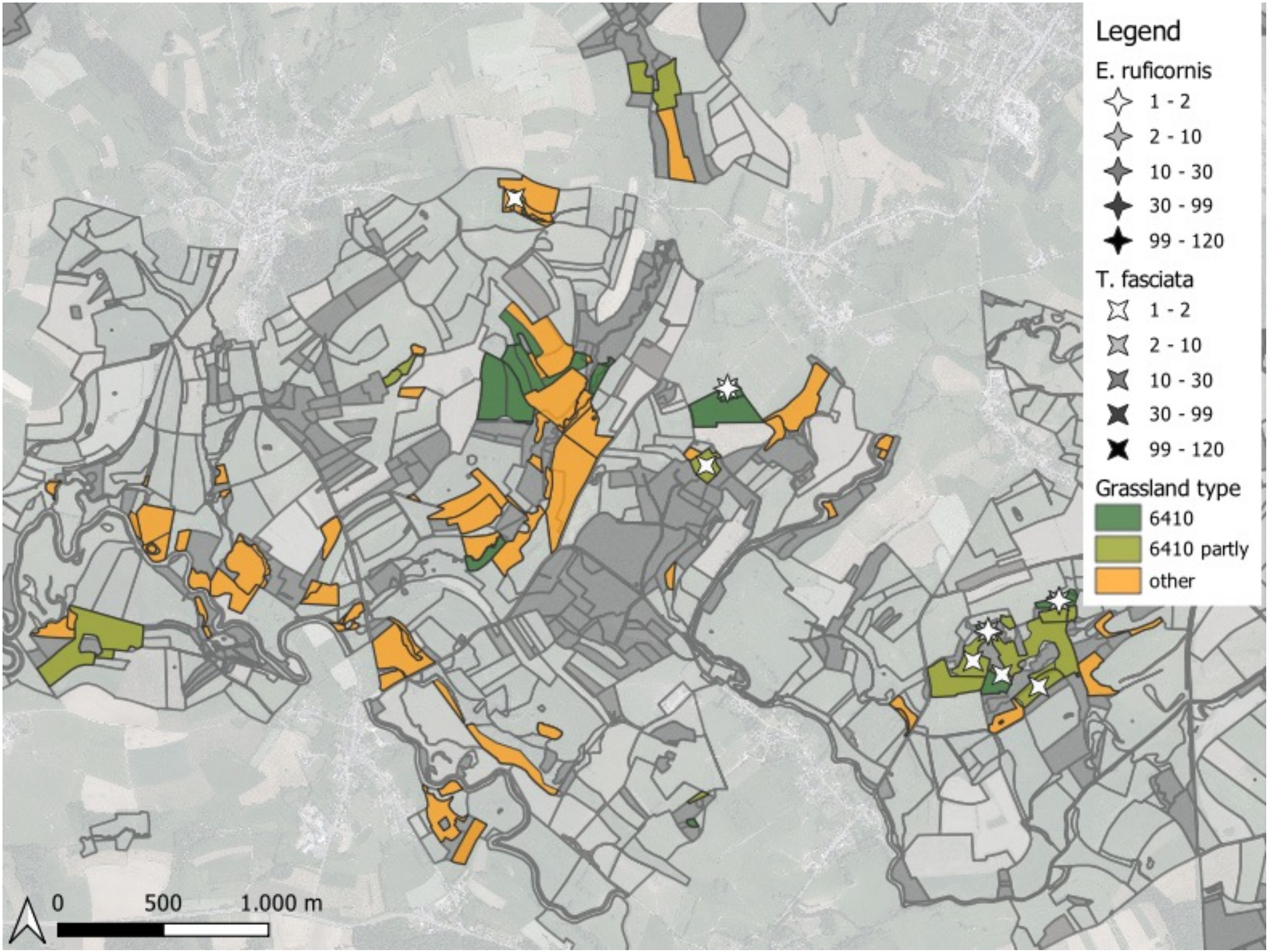
- **461ha withheld**
  - Visited May-June
  - Good weather conditions
- **Three clusters**
  - Fagne-Famenne: 39ha
  - Southern Ardennes: 17ha
  - Gaume (Belgian Lorraine): 405ha




Legend
E. ruficornis
1 - 2
2 - 10
10 - 30
30 - 99
99 - 120
T. fasciata
1 - 2
2 - 10
10 - 30
30 - 99
99 - 120
Grassland type
6410
6410 partly
other
0
500
1.000 m


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Grassland type
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0
500
1.000 m

Host plant

→ **Viper's grass (*Scorzonera humilis*)**

- RL: EN in both FL as WL

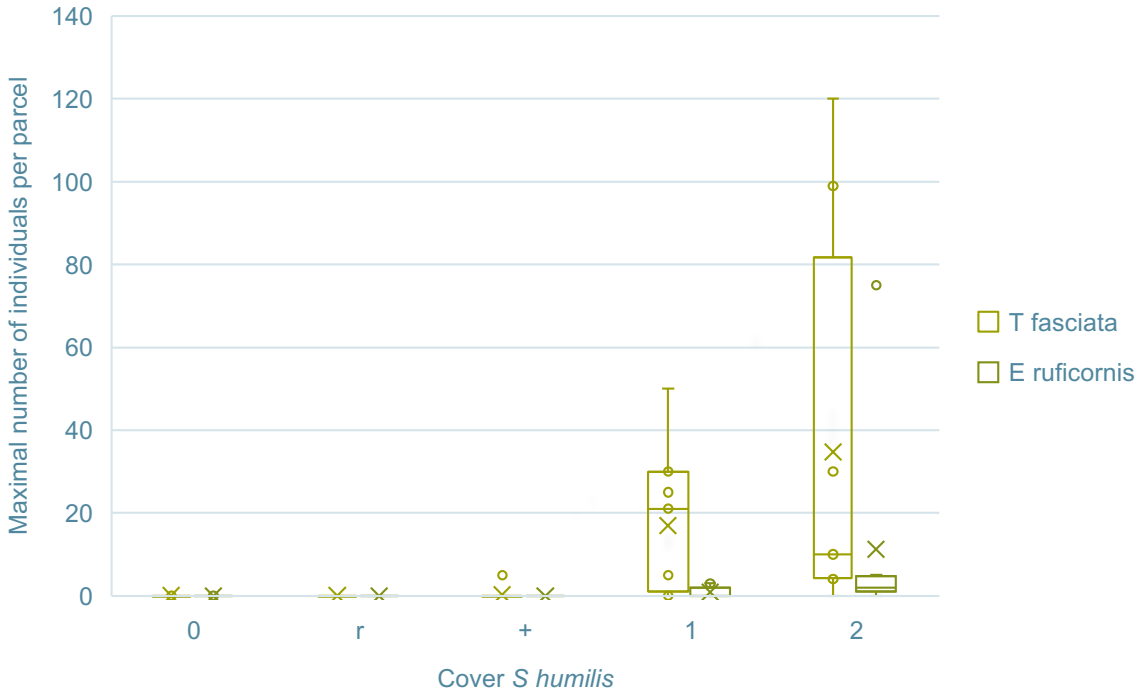




Colling et al 2011



After Hultén 1971 in Johansson 2011



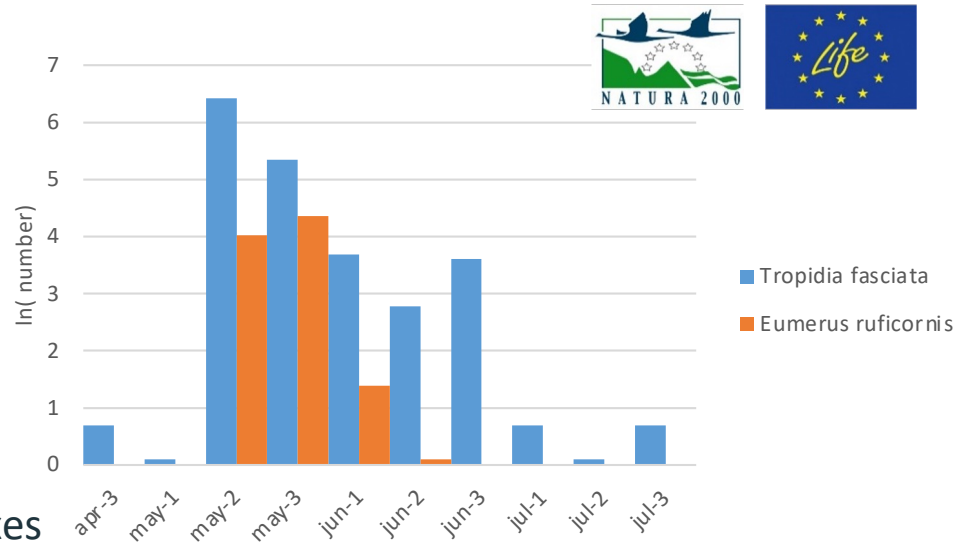
Viper's grass (*Scorzonera humilis*)

- → Indicator species Molinion meadows (6410, EU RL: EN)
- → Walloon region:
  - → app. 3,27km^2 of which 2,5-2,6 in Natura2000
  - → Overal conservation status: U2 (Bad)

	Cover BB S humilis					
Grassland Habitat type	absent	r	+	1	2	Total (ha)
uniform 6410	15	7	7	11	6	47
partly 6410	15	22	25	8	4	74
other types	322	9	9			340
Total (ha)	352	38	41	19	10	461



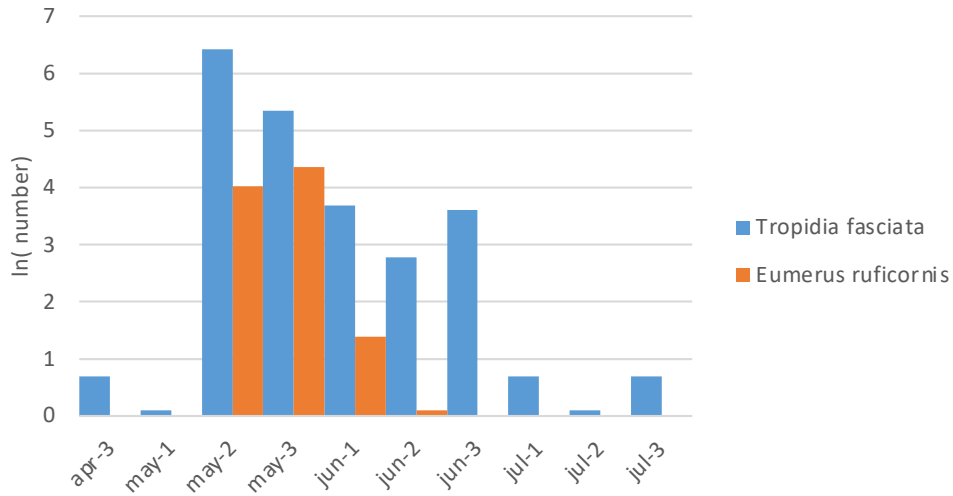
Observations



→ ***T. fasciata***

- High detectability
  - Typical buzz, produced by both sexes
  - Also active during mediocre weather
  - Long flight period
- Almost always observed in clear proximity of *S. humilis*
- Males:
  - Patrolling vegetation, flying from patch to patch
  - Guarding patches of *S. humilis*, chasing other insects
- Females:
  - Regularly observed walking with extended ovipositor near base of rozettes or on leaves of *S. humilis*

Observations

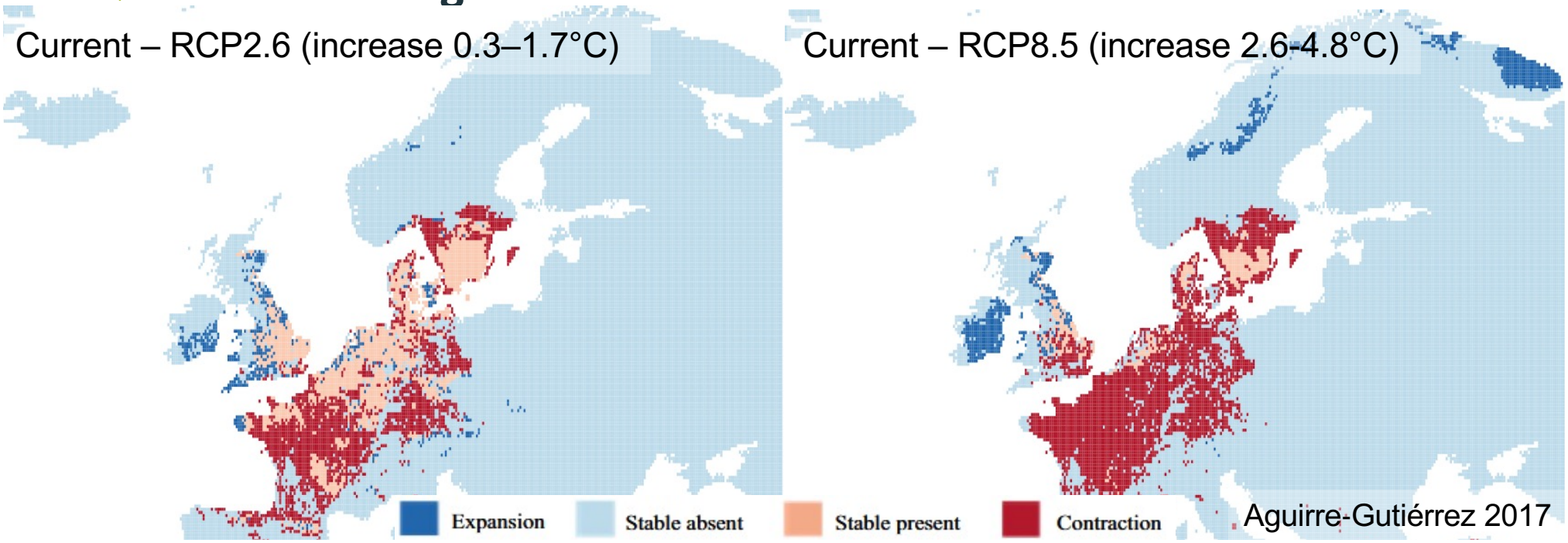


→ ***E. ruficornis***

- Low detectability
  - No buzz
  - Shorter flight period
  - Flying low and swiftly through vegetation
  - Only active during optimal weather conditons
- Always observed in clear proximity of *S. humilis*
  - Niche segregation with *E. funeralis*, unless *E. ruficornis* is absent

Threats

- **Agricultural intensification**
  - Conversion to cropland, fertilisation, permanent grazing, …
- **Hydrological modifications**
  - Drainage, groundwater abstraction
- **Climate change**



Aguirre-Gutiérrez 2017

Conservation & Restoration

- **Management**
  - Natura2000: Unité de gestion
    - Rights and obligations
    - Late mowing (>15/6 or 15/7) and grazing of the aftermath
  - Outside Natura2000: lower protection
- **Restoration**
  - LIFE:
    - Prairie bocagères (8ha), Herbages (24 ha), Connexions (31ha), Anthropofens (15ha)
    - After 2028?
    - Public consultation on stress test Habitats and Bird directive (10 aug)
  - CAP:
    - intervention 355
  - LIFE B4B:
    - draft of action plan for Habitat 6410 in Walloon region

Conclusions

- **Both species show clear link with *S. humilis***
- **Both are habitat-typical species of *Molinia* meadows (6410)**
- **Southern Belgium: possible stronghold in future climate**
- **Harmonize RL-status of both species**
- **Future restorations?**


Thanks for your attention !
Q&R
Photo credits:
Hubert Baltus, Xavier Janssens, Lieven Decrick
Life
NATURA 2000