

Trends and distribution of *Harmonia axyridis* in Flanders

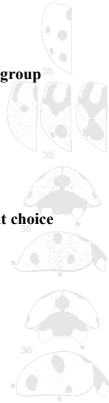


Workshop "Ladybirds and biological control in Belgium, with special focus on *Harmonia axyridis*"
 Belgian Biodiversity platform, Institute for Nature Conservation, Coccinula Working Group
 Brussels, november 27th 2003

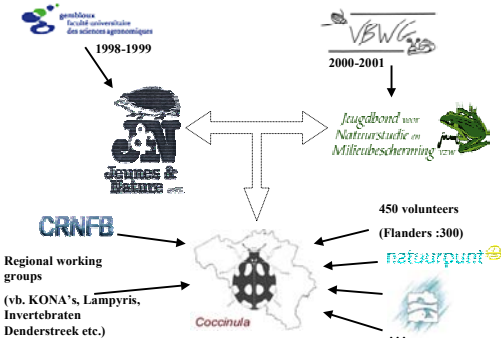


Contents

- Ladybird survey in Belgium by *Coccinula* working group
history, aims, methods
- Discovery of the "Halloween beetle"
- Distribution and trend in Flanders & Belgium
- Data on overwintering aggregations
- Preliminary data on ecology, life history and habitat choice in Flanders
habitat choice, plant choice, phenology
- Conclusions
- The future ?

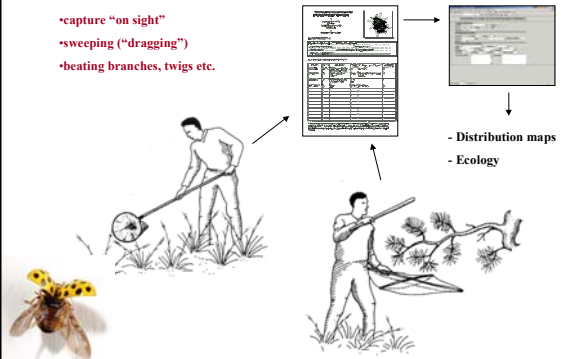


1. Who are we : History



Methods

- capture "on sight"
- sweeping ("dragging")
- beating branches, twigs etc.



2. Discovery of *H. axyridis*

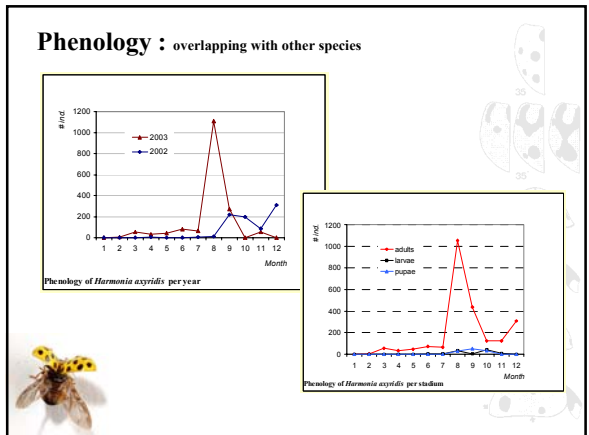
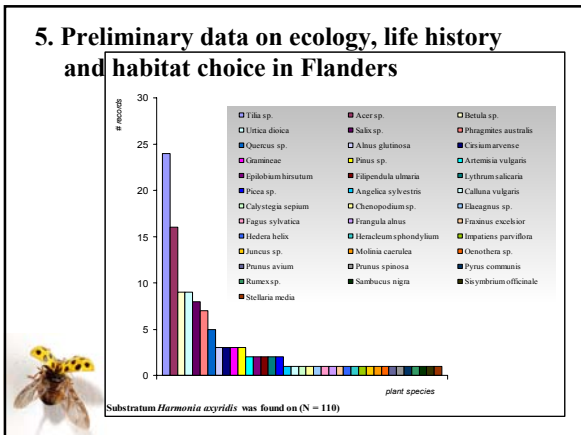
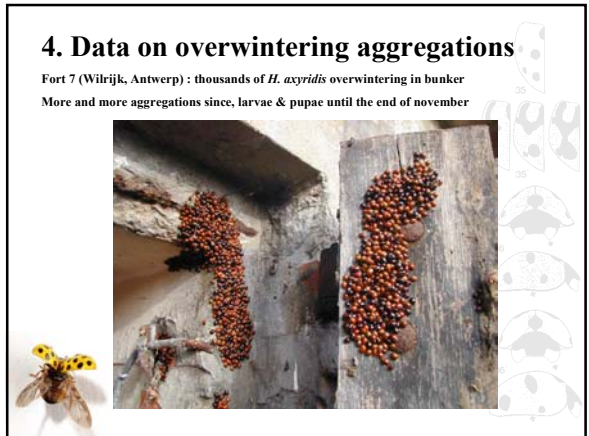
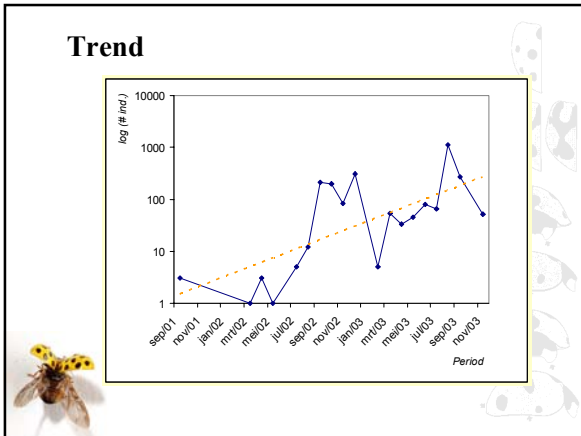
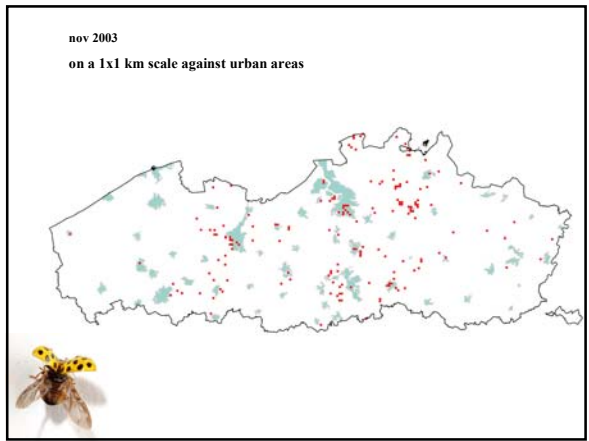
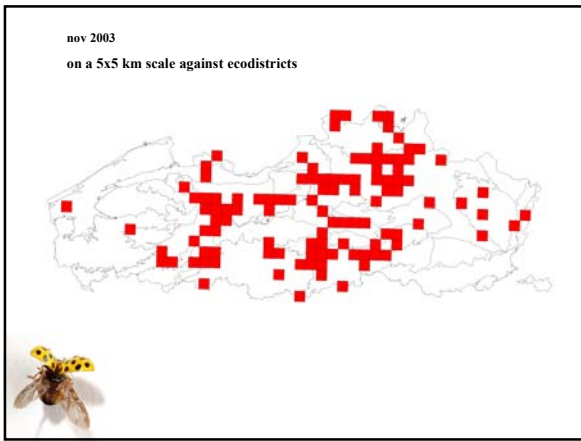
- Discovered in Ghent, Groene Vallei (september 2001)
- Currently 329 records for HARAXY in the database
- Over 2460 individuals
(cf. *Adalia bipunctata*, most common species : 2775)
- Some populations with dizzying numbers ("millions") eg Zelzate



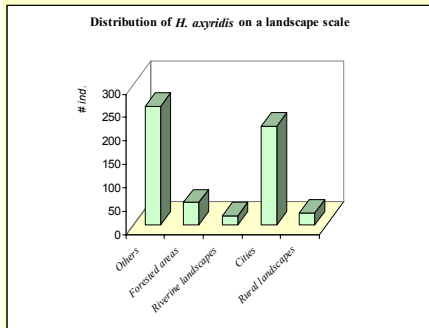
3. Distribution and trend

nov 2002



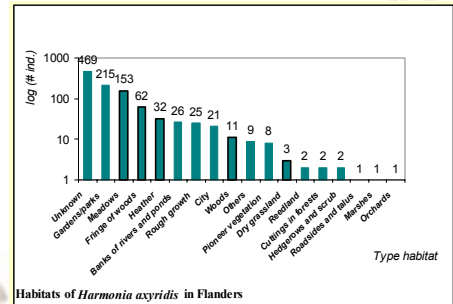


Habitat use on a landscape scale



Invasion of semi-natural ecosystems

(often nature reserves)



6. Conclusions

- *H. axyridis* clearly behaves as an “invasive alien species”
 - Ongoing exponential increase in the number of breeding populations since discovery, strong dispersal capacities
 - Species has invaded (semi)-natural ecosystems
- *H. axyridis* is a potential stressor of native aphidophagous guilds
 - Wide niche, overlapping with that of native species
 - Voracity and intraguild predation capacities are known from literature
 - Species has invaded rare (semi)-natural ecosystems (wetlands, meadows, heather reserves, forests,...)
- Pest situation (cf north-America) is not unlikely
 - Large overwintering aggregations are becoming normal



7. The future ?

- Actions undertaken : Flemish High Council for Nature Conservation
- International approach towards ecological risk assessment procedures
- Safety principle
- Further research on impact of the species on indigenous fauna



A little something extra...

Literature regarding aspects of invasion of *Harmonia axyridis* in Belgium

✓Adriaens, T., Branquart, E. & Maes, D. (2003). The Multicoloured Asian Ladybird *Harmonia axyridis* Pallas (Coleoptera : Coccinellidae), a threat for native aphid predators in Belgium ? *Belgian Journal of Zoology* 133 (2) : 195-196.

✓Adriaens, T. & Gysels, J. (2002). Veelkleurig Aziatisch lieveheersbeestje, van biologische bestrijder tot pestsoort ? *Natuur.focus* 1 (4) : 148-152.

Reprints available at this workshop

