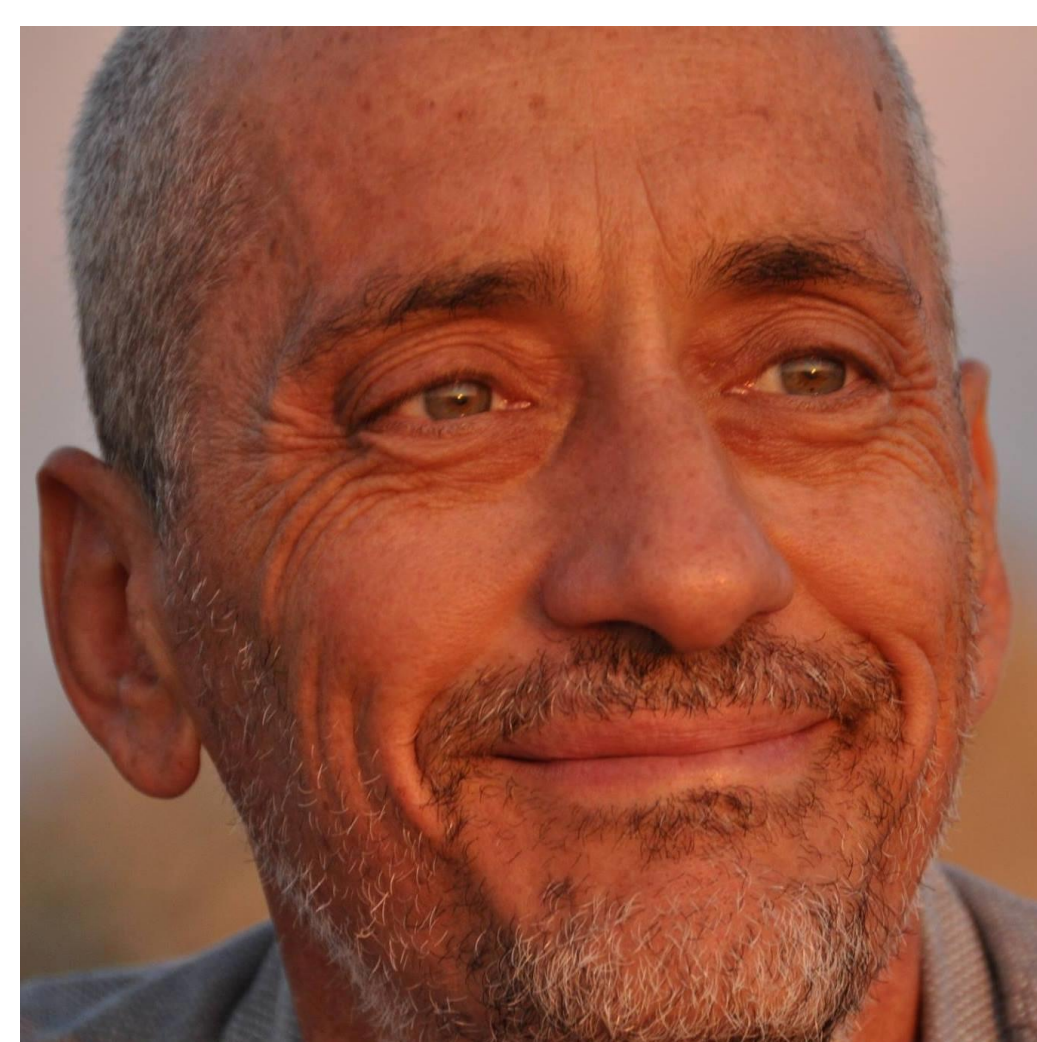


JEMU Joint Experimental Molecular Unit



Contact person: Massimiliano Virgilio

The Joint Experimental Molecular Unit (JEMU) is an integrated research infrastructure funded by the Belgian Science Policy and supported by the Royal Museum for Central Africa (RMCA) and by the Royal Belgian Institute of Natural Sciences (RBINS) and represented by a team of two post-doctoral researchers and two research assistants.



Massimiliano Virgilio - RMCA



Carl Vangestel - RBINS



Gontran Sonet - RBINS



Lore Esselens - InsectMOoD



The JEMU encourages and promotes genomic research in collaboration with scientists of both RBINS and RMCA.

The support provided ranges from purely technical assistance (e.g. aiming at optimising specific lab pipelines) to full-fledged research partnerships (e.g. developed in the framework of BELSPO-funded projects). Internal funds are also made available through periodical calls.

Hitherto JEMU supported ca. 40 research projects that were initiated by research teams from both RMCA and/or RBINS in collaboration with other Belgian and/or foreign partners.

ONGOING RESEARCH COLLABORATIONS (with focus on RMCA)

- **Mitogenomics** of tropical wolf spiders (JEMU co-financing)
 - Collaborator: Arnaud Herard
- **Phylogenomics** of Afrotropical Syrphidae (InsectMOoD co-financing)
- **Pollen metagenomics** in Syrphidae (ISeBAF co-financing)
 - Collaborator: Kurt Jordaens
- **Phylogenomics** of Afrotropical Tephritidae (InsectMOoD co-financing)
 - Collaborator: Marc De Meyer
- **Phylogenomics** of Afrotropical bees (ISeBAF co-financing)
 - Collaborator: Achik Dorchin

RESEARCH PROJECTS

InsectMOoD – BRAIN-be 2.0 (see dedicated poster)
SYNTHESYS+ JRA2: Collections on Demand

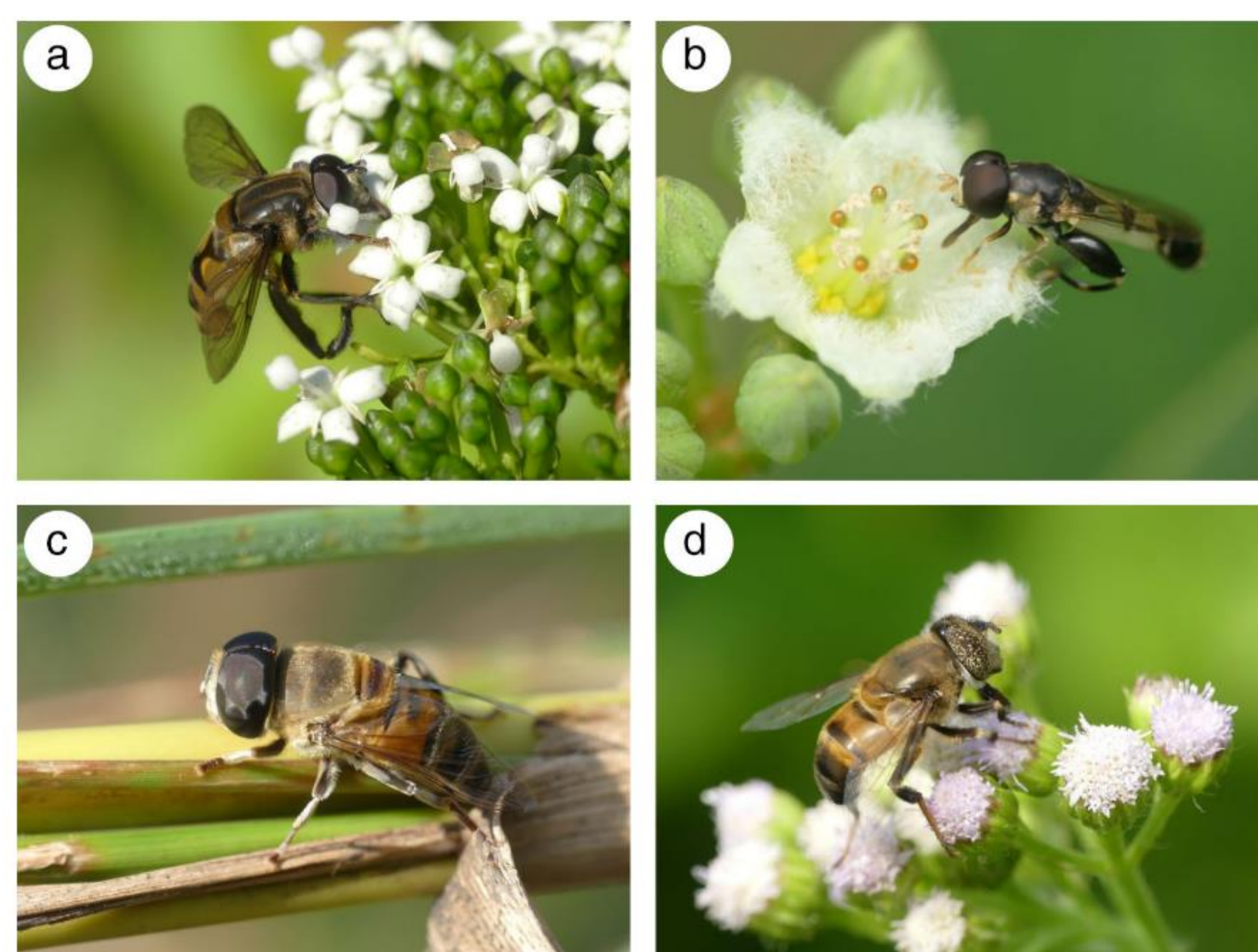


Fig. 1: phylogenomics of Afrotropical Syrphidae (from Mullens et al. 2022)

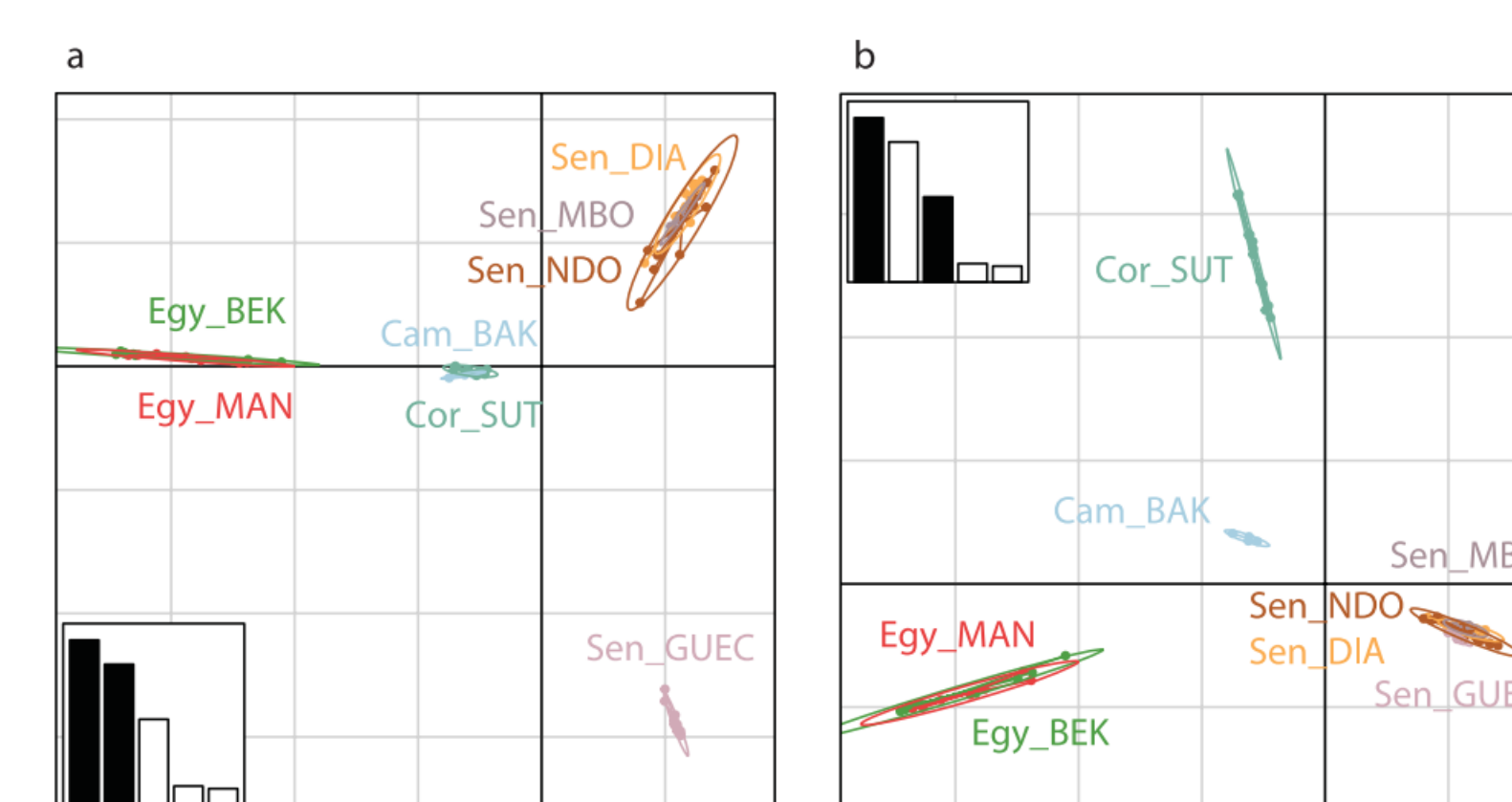
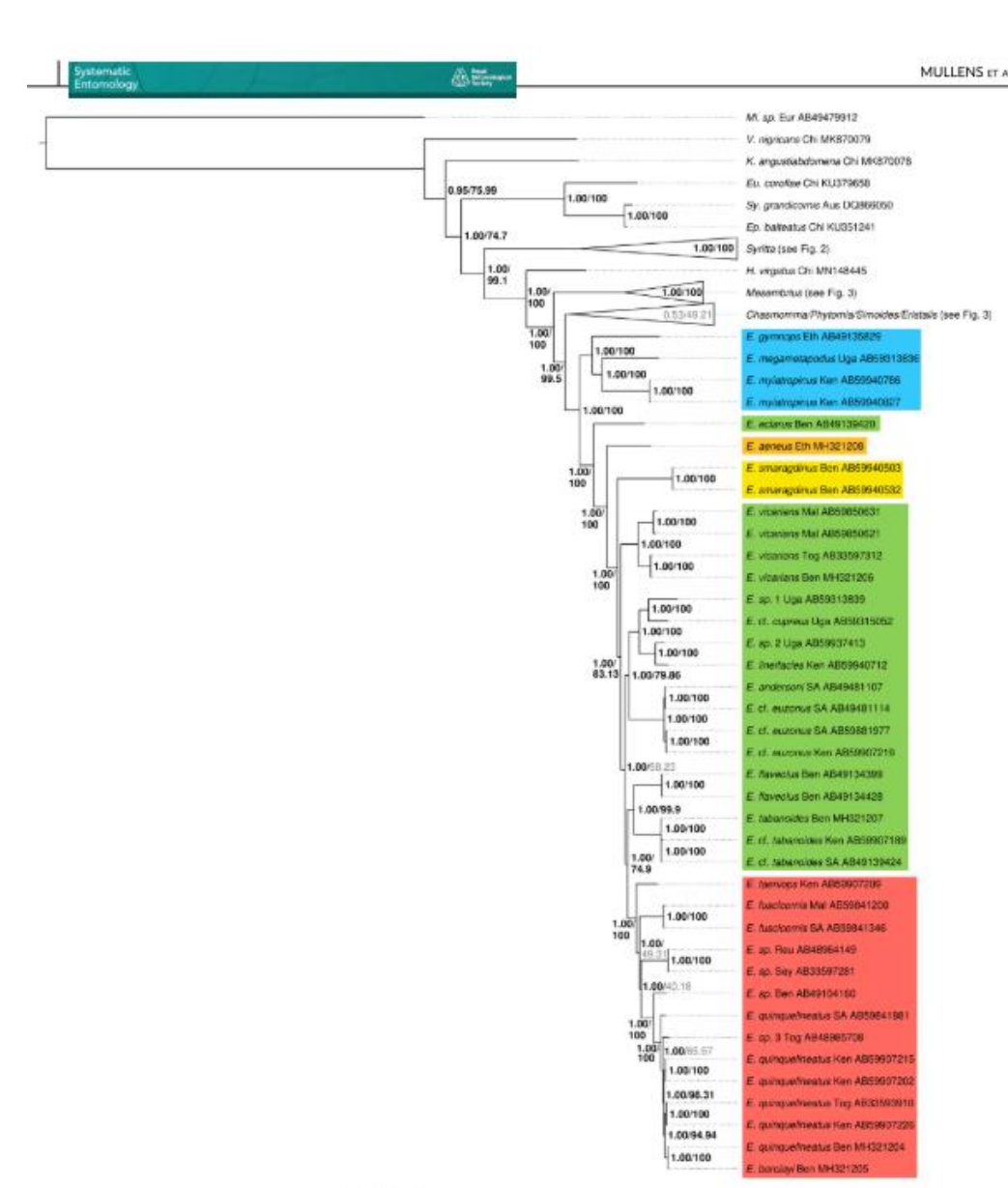


Fig. 2: population structuring of *Bulinus truncatus* (from Maes et al. 2022)

TECHNICAL SUPPORT 2022 (with focus on RMCA)

POLBEN: pollen metabarcoding in insect pollination ecology.
Collaborators: Kurt Jordaens, Achik Dorchin (ISeBAF co-financing)

TRISS: metagenomics of *Schistosoma* transmission in Senegal.
Collaborators: Tine Huyse, Ruben Schols, Cyril Hammoud (JEMU co-financing)

PUBLICATIONS 2022

- Maes, De Corte, Vangestel, Virgilio, Smits, Teukeng, ... Huyse, (2022). Large - scale and small - scale population genetic structure of the medically important gastropod species *Bulinus truncatus*. *Parasites & Vectors* (IF = 3.035).
- Goffette, Suarez Gonzalez, Vanmechelen, Verheyen, Sonet (2022) Tracking the origin of worked elephant ivory of a medieval chess piece from Belgium through analysis of ancient DNA. *International Journal of Osteoarchaeology* (IF = 1.311).
- Hendrickx, De Corte, Sonet, Van Belleghem, Köstlbacher, Vangestel (2022). A masculinizing supergene underlies an exaggerated male reproductive morph in a spider. *Nature Ecology & Evolution* (IF = 15.46).
- Mullens, Sonet, Virgilio, Goergen, Janssens, De Meyer, Jordaens (2022) Systematics of Afrotropical Eristalinae (Diptera: Syrphidae) using mitochondrial phylogenomics. *Systematic Entomology* (IF = 3.844).
- Geraerts, Vangestel, Artois, Manuel de Fernandes, Jorissen, Chocha Manda, Danadu Mizani, Smeets, Snoeks, Sonet, Tingbao, Van Steenberge, Vreven, Lunkaylak Wamuini, Vanhove, Huyse (2022) Population genomics of introduced Nile tilapia *Oreochromis niloticus* (Linnaeus, 1758) in the Democratic Republic of the Congo: Repeated introductions since colonial times with multiple sources. *Molecular Ecology* (IF = 6.622).