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Seminar: The role of Diptera in plant- pollination in the Afrotropical Region

Presenter: Dr. Kurt Jordaens, Head, Entomology Section Royal Museum for Central Africa (RMCA, Belgium)

Date: 18th December 2018

Time: 14:00-15:00 hours

Venue: BOT/ZOO Lecture Theatre, Department of Zoology, Entomology and Fisheries Sciences, College of Natural Sciences, Makerere University

Short profile of the presenter:

Dr. Kurt Jordaens began his career as a malacologist in 1993 at the University of Antwerp (Belgium). In 2012 he became the work leader in the Entomology Section of the Royal Museum for Central Africa (RMCA, Belgium). Kurt's research interests are systematics, taxonomy, phylogeny and ecology of the dipteran family Syrphidae (hover flies or flowerflies) of the Afrotropical Region. He thereby combines morphological (external and genital morphology, stacking photography) and molecular techniques (DNA barcoding and sequencing, whole mitochondrial DNA sequencing). Ultimately, one of his major aims is to improve identification keys for the family, and for the genera, of the Afrotropical Region and to make the keys publically available. This will allow an easier and more accurate identification of the hover flies of the Afrotropical Region and will allow to study the ecology of the various species, of which many are significant pollinators of a large number of fruits and vegetables. Kurt has extensive field experience in Africa and organizes training courses in entomology for young and emerging African entomologists.

Abstract

An emerging field in the management and conservation of biodiversity is the study of plant-pollinator networks. Moreover, pollination is a key ecosystem service which sustains significant food production. Understanding plant-pollinator interactions is thus critical, especially in the face of climate change. Surprisingly, most of the efforts to

understand plant-pollinator networks has been dedicated to well-known insect groups, such as Hymenoptera (bees and wasps), Lepidoptera (butterflies) and Coleoptera (beetles), whereas the role of Diptera in these networks is strongly most neglected especially in the Afrotropical Region. As a result, there is no baseline to describe the current status of the role of Diptera in plant-pollinator networks. One of the major reasons for a lack of data of Diptera in plant-pollinator networks is a poor taxonomy of the families involved. In this talk, I will use the family Syrphidae (hover flies or flowerflies) as an example to highlight the shortcomings in the taxonomy of Afrotropical Diptera and how networking, training and increased efforts in joint taxonomic research with African partners may overcome these caveats and may lead to a better appreciation in the role of Diptera in plant-pollinator networks.

Highlights of current collaboration between Makerere University, and RMCA

Dr. Jordaens Kurt has initiated a partnership with Dr. Egonyu James Peter, a Lecturer in the Department of Zoology, Entomology and Fisheries Sciences, College of Natural Sciences, Makerere University. To this end, they are implementing a research project from 2018-2019 which will among others generate the following key results:

- A first reference collection of the Syrphidae (and other dipteran families) of Uganda at MU.
- A checklist of the Syrphidae of Uganda, to be published in a peer-reviewed scientific journal.
- A number of high resolution photographs of the Syrphidae of Uganda that will be made publically available.
- Basic data on the distribution and diversity of Syrphidae in several national parks of Western Uganda that may be used to improve conservation efforts for the parks and surrounding areas.
- Raising awareness on significance of true flies in plant-pollinator networks e.g., through holding a seminar at MU.

Partnership with the Entomological Association of Uganda (EAU)

The Entomological Association of Uganda is a legal association of entomology professionals with a vision of networking Ugandan entomologists to efficiently harness and manage insects and associated organisms for the wellbeing of society. EAU has considered it important to partner with MU and RMCA in sensitizing Ugandans about the importance of flies as pollinators. This seminar will therefore take the place of EAU's monthly seminar for December 2018.