The Royal Museum for Central Africa - Belgium
The Entomology Section

Sokoine University of Agriculture - Tanzania

Training course in taxonomy and systematics of African pollinating flies

Organized at the Sokoine Pest Management Centre, Sokoine University of Agriculture (SUA)

Session 2023

Call for applications for 12 scholarships

Opening and closing date of the applications: 15/05/23 till 14/07/23 (midnight)

Training: 16–27 October 2023

1. Context

Agroecology aims at strongly reducing the impact of control methods on the ecosystem while having a positive effect on beneficial organisms such as pollinators. Plant-pollinator networks describe the complex interactions between pollinators and flowering plant, and among plants and pollinators. Several fly families (Diptera) belong to the most important pollinators of a variety of plant species, including agricultural crops; and thus are an important aspect of plant-pollinator networks. Their significance may even be increasing due to a worldwide decline in other pollinator groups such as bees and butterflies.
However, the identification of these dipteran groups is not easy and requires a specific training. In addition, some ground level knowledge on how to assemble data of use for studying basic ecological aspects of agroecology and plant-pollinator networks, is a prerequisite in any applied program.
By means of this basic training, local specialists will be less dependent on exterior expertise in this respect and will be able to carry out independent research.

This training is organized by two institutions: the Invertebrates Section of the Royal Museum for Central Africa in Belgium, and the Sokoine Pest Management Centre, Sokoine University of Agriculture (SUA) in Tanzania. Teachers are Dr Ashley H. Kirk-Spriggs (Natural History Museum, London, UK), Dr John M. Midgley (Kwa-Zulu Natal Museum, Pietermaritzburg, South Africa) and Dr Kurt Jordaens (Royal Museum for Central Africa, Tervuren, Belgium).

The Royal Museum for Central Africa has an internationally renowned expertise related to the taxonomy and systematics of African Diptera. The Invertebrates Section has vast documentation and sample collections at its disposal. The organization of this training benefits from the financial support of the Directorate-General for Development Cooperation and Humanitarian Aid (DGD).

The RMCA has a research partnership AGROVEG ("Agroecological methodology in VEGetable crops") with SUA and the Eduardo Mondlane University (Mozambique) through the RMCA-DGD program. Both RMCA and SUA have considerable expertise in the organization of training courses in entomology. Find out more on the project at: https://www.pindip.org/agroveg.

2. Training programme

The objective of this group training is to provide a basic training on the identification and ecology of African Diptera that have a significant role in plant-pollinator networks. The target families are Bombyliidae, Calliphoridae, Nemestrinidae, Rhiniidae, Syrphidae, and pangonine Tabanidae). The training is organized for African scientists and African professionals confronted with the identification and ecology of African Diptera.

The course will take place over 10 working days and be taught in English. It shall consist of ex-cathedra courses on morphology, classification, identification, identification methods, collection methods, and conservation methods of Diptera, with a special focus on the target families listed above. Practical exercises will be used to comment on and test the topics presented in the courses. Participants shall be asked to bring material they collected so it can be identified during practical work sessions. Likewise, should they have large datasets at their disposal, these may also be analysed.

Provisional programme

Day 1 (Mon/Oct 16)
Arrival, introduction, practicalities, programme

Day 2 (Tue/Oct 17)
Trapping methodologies
Insect preservation and dissection
General morphology of Diptera
Taxonomy, systematics, and phylogeny of Afrotropical Diptera

Day 3 (Wed/Oct 18)
Practical: setting up traps in the field – general fieldwork
Identification keys for Afrotropical Diptera
Practical in morphological terminology and identification of Afrotropical dipteran families

Day 4 (Thu/Oct 19)
Identification of Afrotropical dipteran families

Day 5 (Fri/Oct 20)
Identification of Afrotropical dipteran families

[free weekend: Sat/Oct 21 and Sun/Oct 22]
Day 6 (Mon/Oct 23)
Diptera collection management

Day 7 (Tue/Oct 24)
Diptera collection management

Day 8 (Wed/Oct 25)
Taxonomy and Identification of the family Syrphidae
Practical in identification Afrotropical Syrphidae

Day 9 (Thu/Oct 27)
Taxonomy and Identification of the families Calliphoridae, Rhiniidae, Bombyliidae and Nemestrinidae
Practical in identification Afrotropical Calliphoridae, Rhiniidae, Bombyliidae and Nemestrinidae

Day 10 (Fri/Oct 27)
Identification of own material
Networking & Future collaborations
Evaluation and Conclusion
Handing out of certificates
Departure of participants

After having followed this training, the selected candidates will be able to discover the possibly beneficial pollinator Diptera of the target families and to proceed to an unambiguous identification. They will have general knowledge on the basic ecology of plant-pollinator networks and the role of Diptera in these.

After the training, collaboration can be considered between the candidate, the institute of origin, SUA and the RMCA.

3. Profile of the participants

The training can receive 12 participants, among whom researchers and employees who are confronted with pollinating flies on a professional level.
They may be employees from agricultural institutes, professors of agricultural faculties, researchers from national institutions, PhD students, post docs, etc.
Participants must have a minimum level of knowledge in basic Diptera ecology (to be detailed in the motivation letter). We also encourage candidates with a from the private sector which show a clear link to entomology in their professional work.
The candidates' maximum age at the moment of the training should not exceed 45 years.
Special attention is given to the participation of women.

4. Admission requirements

Only applications from people with residence in Sub-Saharan Africa (see countries below) and working for an institution, NGO, ministry, research institute or university can be taken into consideration. Applications from consultants or individuals cannot be accepted, except for candidates from the

private sector with a background that shows a clear link to entomology in their professional work.
Candidates must be citizens of one of the following countries: Benin, Burkina Faso, Burundi, Cameroon, Democratic Republic of Congo, Ethiopia, Guinea, Kenya, Madagascar, Mali, Mozambique, Niger, Rwanda, Senegal, South Africa, Tanzania, Uganda and Zimbabwe. If citizen from another African country, please contact us before submitting your application.

Scientists with a diploma other than MSc or PhD should demonstrate a record of substantial work related to the subject that is presented (Diptera of the target families; plant-pollinator networks, etc.).

All applications will be subject to an evaluation by internal experts.
The training staff may formulate specific conditions for sharing existing data with successful applicants.

Mastering of languages

As the training and the complete documentation (identification keys, scientific articles) are in English, the candidate is to master this language well.

Equality of opportunities
Special attention is given to the participation of women in this programme.

5. Instructions for application

A complete application file consists of :

1. the application form, which can be downloaded from the RMCA internet site at the following address: www.africamuseum.be (in the cooperation section from the research institute) or from the PINDIP website (https://www.pindip.org/tanzania-2023). This application form has to be completed, dated and signed by the applicant.

2. a separate motivation letter outlining
   - why you consider yourself a good candidate for this training,
   - what is your experience and your knowledge of the subject of the training,
   - which are the immediate perspectives offered by the training in the progress of your professional activities (direct or indirect benefits of the training for you in future research/work) and what would be the benefits of your training to your home institute, i.e. how will the training results will be used to accomplish biodiversity conservation and / or agroecological objectives in society by the participant and/or your institute
   - which are your projects as to the use of the knowledge gained during the training and your intentions as to sharing the knowledge gained during the training, including how you consider the training as a way of strengthening your research network and

ongoing or future collaborations with similar institutions, and, more specifically, the perspectives of a continued collaboration between yourself, your institution of origin, SUA and the RMCA

- specify the activities and results foreseen in the distribution of the knowledge gained during training and indicate for which specific target audience and the estimated number of people that could benefit from these retrocession activities (scientific/ colleagues of the institute/ students/ school teachers/ children/ community) Describe which information channels will be used ((e.g., website (specify on which website information will be distributed), blog, presentations, education, video,…etc).

3. a letter from your employer (research institution, ministry, university,…) authorizing your participation in the requested training, confirming the direct benefits to the institution, confirming your current position within the institution and indicating a commitment to make good use of the newly acquired expertise. This letter must be dated and signed (+ stamp of the institution). The name, position and address of the author of the letter must be clearly mentioned.

4. a letter of recommendation indicating, amongst others, why you are particularly well placed or suited for this training. This letter must be dated and signed with clear mention of the name, position and address of the person.

5. copies of relevant diplomas,

6. 1 copy of your passport (only personal data sheet).

Only complete application files will be taken into consideration. No additional information communicated afterwards will be accepted, unless upon specific request from the RMCA.

The complete application file should reach the following email address before 15/07/2023 (deadline: 14/07/2023 – midnight CET) :
E-mail : callpollinatingflies@africamuseum.be

Reception of application files will only be acknowledged by e-mail to the e-mail address to be mentioned in the application form. This acknowledgement will be done shortly after the application form is received.

All applicants will be personally informed of the results of the selection process by 10 August 2023.
NB: the persons **selected for the training** will be asked to bring along the samples of flies of the target families well preserved in alcohol or prepared (stagged or pinned) and clearly labeled, in view of the training. There is no financial participation possible for the eventual costs linked to the preparation or transport of the samples.

6. Scholarship conditions

Duration:

10 days' training session

Travel expenses:

One round-trip ticket (economy class) will be provided
Some expenses related to obtaining the visa (if necessary) will be reimbursed.

Allowances:

- Daily allowance covering board, individual transport, and personal expenses of the selected applicant.
- Accommodation provided.

The training course is financially supported by: