

**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 2019**

**Call for applications for 12 scholarships**

**Opening and closing date of the applications: 15/05/19 till 01/08/19**

**Training: from November 18 until November 29 2019**

**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. RMCA is also the leading institute in the JRS Biodiversity Foundation project PINDIP ("Pollinator Information Network for sub-Saharan two-winged insects"). See: <http://jrdbiodiversity.org/grants/royal-museum-central-africa/> for more information on the project. Both RMCA and SUA have considerable expertise in the organization of training courses in entomology.

## 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/Nov 18)

Arrival, introduction, practicalities, programme

Day 2 (Tue/Nov 19)

Trapping methodologies

Insect preservation and dissection

General morphology of Diptera

Taxonomy, systematics, and phylogeny of Afrotropical Diptera

Day 3 (Wed/Nov 20)

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/Nov 21)

Identification of Afrotropical dipteran families

Day 5 (Fri/Nov 22)

Identification of Afrotropical dipteran families

Day 6 (Mon/Nov 25)

Diptera collection management

Day 7 (Tue/Nov 26)

Diptera collection management

Day 8 (Wed/Nov 27)

Taxonomy and Identification of the family Syrphidae

Practical in identification Afrotropical Syrphidae

Day 9 (Thu/Nov 28)

Taxonomy and Identification of the families Calliphoridae, Rhiniidae, Bombyliidae and Nemestrinidae

Practical in identification Afrotropical Calliphoridae, Rhiniidae, Bombyliidae and Nemestrinidae

Day 10 (Fri/Nov 29)

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).

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.

Candidates must be citizens of one of the following countries: Benin, Burundi, Burkina Faso, Cameroon Democratic Republic of Congo, Ethiopia, Gambia, Guinea, Kenya, Madagascar, Mali, Mozambique, Niger, Rwanda, Senegal, South Africa, Tanzania, Uganda and Zimbabwe.

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](http://www.africamuseum.be) (in the cooperation section from the research institute). 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),
- what would be the benefits of your training to your home 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,
- the perspectives of a continued collaboration between yourself, your institution of origin, SUA and the RMCA

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 01/08/2019 (deadline: 31/07/2019 – midnight CET) :**

**E-mail : [callpollinatingflies@africamuseum.be](mailto: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 15 August 2019.

**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 (staged 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
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**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.