



WE ARE HIRING

A Full time position at University of Mons (50 % Post-doctoral Researcher) and Royal Museum for Central Africa (Belgium) (50 % SW2 – work leader) (f/m/x)

Evolutionary relationships and interactions between insects of policy concern and plants in Sub-Saharan Africa

The Laboratory of Zoology, Faculty of Sciences, Department of Biology at the University of Mons (UMONS; Mons, Belgium) and the Invertebrates Section of the Royal Museum for Central Africa (RMCA) in Tervuren (Belgium) jointly offer a full time position (Pfr-2019-42 - Evolutionary relationships and interactions between insects of policy concern and plants in Sub-Saharan Africa) (each with an appointment of 50 %) in the context of the BELSPO FED-tWIN research programme (Programme of sustainable research cooperation between the Belgian federal scientific institutes and universities). The 50 % appointment at UMONS is a post-doc position. The 50% appointment at the Royal Museum for Central Africa is a contract of indefinite duration as a work leader (salary scale SW2).

We seek candidates with a research record at the intersection of taxonomy and evolution of plant-pollinator interactions.

o UMONS

UMONS is comprised of more than 700 researchers in 80 Research Units across its 10 faculties and schools. There are currently 10 autonomous Research Institutes in which the university is organised. Each Institute brings together the expertise of many researchers from all the faculties and schools of UMONS. Together, they focus their efforts on unifying themes, responding to societal needs. The new structure facilitates also UMONS' effective involvement in the local economic and training development. The institution is the largest higher education and research community in the province of Hainaut. UMONS is also strongly implicated in international opening. It is involved in scientific collaborations across the globe, and hosts foreign students and researchers as well as supporting the mobility of its students and its researchers, particularly in European programmes such as ERASMUS. Through its research and close links with industry, UMONS is also actively involved in regional development. The University is involved in numerous research programmes, both fundamental and applied, at a regional level but also at European and international levels. The Laboratory of Zoology of the University of Mons is co-led by Denis Michez and Pierre Rasmont. Denis Michez is developing research to understand the global diversity of wild bees and their conservation. He is currently leading projects exploring how bee diversity evolved at population and upper taxonomic levels (species, families): these projects consider fossils, molecular phylogenies, phylogeography and bee-plant chemical interactions. He also recently developed research in conservation biology. He led the publication of the first ever IUCN Red List of European bees. Based on these results, the laboratory is currently exploring the impact of different emerging threats [e.g., climate change; diet shift] on the fitness

<https://web.umons.ac.be/fr/travailler-a-lumons/>



and the distribution of wild bees. Denis Michez supervised or is currently supervising 16 Ph-D and postdoc (2010-2018).

https://sharepoint1.umons.ac.be/fr/universite/facultes/fs/services/institut_bio/zoologie/pages/default.aspx

o Royal Museum for Central Africa (RMCA)

Within the Department of Biology, the Invertebrates Section is specialised in the study of the taxonomy and biodiversity of Afrotropical invertebrate groups. The museum holds one of the world's largest collection of African insects and collection-based research is a strong hold of the section. The entomology unit is worldwide at the forefront of the study of African Diptera (two-winged insects of the families Syrphidae and Tephritidae). Mainly through the use of morphometrics, ecological and molecular techniques, the scientists try to get an insight into the diversity of, amongst others, African pollinating and harmful Diptera, their taxonomy and systematics, ecology and evolutionary history. They are also involved in conservation issues. The unit also has a strong experience in training emerging African entomologists. Furthermore, the unit is involved in the supervision of several MSc and PhD research programmes. It has a large network of African scientists. More information is available at :

<https://www.africamuseum.be/en/research/discover/biology/invertebrates> and <https://www.pindip.org/>

Duties

Research

You develop a research program at an international level that integrates the fields of taxonomy, plant-pollinator ecology, biogeography and agriculture using Sub-Saharan wild Apoidea (Hymenoptera) as model organisms and by applying an integrative approach combining morphology, ecology, behaviour and genomics. The research program is conducted within the framework of a FED-tWIN collaboration between UMons and the Royal Museum for Central Africa (Profile HYMPOL: Evolutionary relationships and interactions between insects of policy concern and plants in Sub-Saharan Africa).

Despite the formulation of an African Pollinator Initiative in the late 1990's there are still important gaps in the study of plant-pollinator networks in the Afrotropical Region. Especially the relative contribution of non-honeybee insect species remains unknown even though wild bees and true flies are known to pollinate many wild plant species and commercial crop species.

The Invertebrates Unit of the Royal Museum for Central Africa is currently focussing of the contribution of true flies (Diptera) in plant-pollinator networks in the Afrotropical Region while the Laboratory of Zoology of the University of Mons has a strong expertise in the study of global diversity of wild bees and their conservation. The focus of this research profile is to further strengthen the complementary research of the



RMCA and UMONS through establishing a research profile with a focus on the study of Sub-Saharan African wild bees (Hymenoptera) as a model group for research in the following three fields: 1) taxonomy and phylogeny, 2) pollination ecology and insect-plant interactions, and 3) biogeography and conservation biology.

In the first years, the research must tie in with the ongoing research programme that focusses to taxonomy and identification of Sub-Saharan wild bees taking advantages of the large collection of specimens available from the area, at both the RMCA and entomological collections at collaborating museums, the development of a reference DNA biobank linked to phenotypic collections, the construction of automated identification systems and the recording of distribution data. On the mid and long term, you are expected to publish monographies including descriptions of new taxa, identification keys, and systematic and evolutionary hypotheses and to develop research avenues on plant-pollinator networks in the Sub-Saharan Region, while strengthening existing and establishing new lines of collaboration, especially with African partners. This will be extended to the development of policy briefs and guidelines in collaboration with our NGO partners, agricultural research centers and end-user associations via brochures/leaflets, short video clips focusing on the ecology and conservation of wild bee pollinators, and regular posts on social media that will popularize the most recent advances in our field of research, and how they translate into practical solutions to promote wild bees as crop pollinators.

You develop a research plan within the strategy outlined in the FED-tWIN research profile and in synergy with research groups at UMONS and the RMCA. This FED-tWIN research profile specifically aims at developing a strong scientific collaboration between UMONS and RMCA.

You publish at the highest level in the domain, you are able to obtain competitive financing, you develop international cooperation and you supervise MSc and PhD students at an international level.

Teaching

You provide high-quality education in the domain of Biological Sciences within the master program at UMONS, with a clear commitment to the quality of the programme as a whole.

Services

Service provision is an important aspect of this FED-tWIN profile. This includes science management, science outreach, accommodating interns and visiting scientists, organising and/or contributing to training programmes, and answering questions from the general public. Specifically, for the RMCA it also comprises the supervision of students of partner institutes in Africa, scientific advice for the set-up of permanent and temporary exhibitions, the further development of the rich Hymenoptera and tissue collections, and contributing to the management of the associated databases.



Profile

You have a PhD in agricultural Sciences or Biological Sciences (with a background in systematics, ecology, conservation or (bio-)geography, combined with experience in biodiversity analysis and inference), obtained at the earliest 12 years before the submission date of the job application. The 12-year period is extended by one year for each maternity, parental and adoption leave, and for each long-term sick leave of yourself or your immediate family.

Required skills and competences:

- You have experience in the taxonomy and systematics of insects.
- You have good skills in the statistical analysis of morphometrical data
- You have a strong expertise in the statistical analysis of genomic data, especially in the fields of population genetics, phylogeny and phylogeography.
- You have a strong interest in the ecology of plant-pollinator networks and conservation biology.
- You have shown to synthesise research results in peer-reviewed articles in leading international journals in the field.
- You have experience with field work and collection-based research, preferably on Sub-Saharan African wild bees, and be prepared to organize and conduct field work in Africa
- You are proficient in English and have excellent scientific writing and presenting skills.
- You enjoy interacting with other researchers and achieving common goals; you practise teamwork, but are also able to work independently.
- You have demonstrable qualities for academic education; educational experience is a plus.
- Expertise in the study of the Sub-Saharan African wild bees is an asset.

Proficiency in English is required. The administrative language at UMONS is French. If you do not speak French (or do not speak it fluently) at the start of your employment, UMONS will provide language training to enable you to take part in administrative meetings.

Before taking on teaching in French or English, you will be given the opportunity to learn French, or English, up to the required standard.

Offer

Within the FED-tWIN framework, UMONS offers a 50 % appointment as a Post-doctoral researcher in combination with an appointment as a 50 % contractual researcher (work leader salary scale SW2) (indefinite duration) at the Royal Museum for Central Africa.

UMONS is a research-intensive, internationally oriented university that carries out both fundamental and applied scientific research. She has a strong inter- and multidisciplinary focus and strives for international



excellence. UMONS actively cooperates with its research partners in Belgium and abroad. She offers her students an academic education based on high-quality scientific research.

The Royal Museum for Central Africa in Tervuren is a multidisciplinary federal scientific institute and a world centre in research and knowledge dissemination on past and present societies and natural environments of Africa, and in particular Central Africa. Its core activities consist of acquiring and managing collections, conducting scientific research, disseminating knowledge and organising exhibitions.

In principle, the applicant is appointed as Postdoctoral Researcher for a period of 5 years; after this period and a positive evaluation, they are appointed 5 more years as postdoc.

Place of employment: UMONS, Department of Biology, Laboratory of Zoology, Mons.

Royal Museum for Central Africa, Leuvensesteenweg 13, 3080 Tervuren.

The candidate will be required to work 50 % at each institute according to the regulations of each institute.

Interested ?

For further information you can contact, preferably by mail

- Dr. Kurt Jordaens, Section Invertebrates, Department of Biology, Royal Museum for Central Africa, tel.: +32 2 769 53 73, e-mail: kurt.jordaens@africamuseum.be
- Prof. Denis Michez, Laboratory of Zoology, Department of Biology, UMONS, tel.: +32(0) 65 37 34 38, e-mail: denis.michez@umons.ac.be

You can apply for this vacancy no later than 30 days via denis.michez@umons.ac.be (and Cc candidatures@umons.ac.be):

Please add to your application the following documents:

- a bio sketch in which you demonstrate your added value as an academic and museum researcher for the core tasks of research, education and services in your career and for your future activities (max. 2 pages);
- a document listing your five most important publications or realizations with a discussion on why you consider these as your most valuable contributions (max. 2 pages);
- an extensive CV (including a complete publication list);
- a research plan in line with and commenting upon the research profile developed for the FED-tWIN position (Prf-2019-042; document available upon request from the promoters, see email addresses above) with an eye for collaboration with colleagues within UMONS and the RMCA (max. 4 pages);
- your vision on academic education and its organization (max. 2 pages);
- your contribution to service activities in both institutes (contributions to society through education, research, development of collections, outreach and science communication) (max. 1 page);



UMons and the RMCA seek to foster an environment where all talents can flourish, regardless of gender, age, cultural background, nationality or impairments. If you have any questions relating to accessibility or support, please contact candidatures@umons.ac.be or HR-RH@africamuseum.be