



UCLouvain_Insect Learning for Rapid Adaptation to changing habitats

Postdoc position in Evolutionary Ecology

We are looking for highly motivated candidates to apply for a 2 to 4-year postdoctoral position, funded through UCLouvain university ("Action de recherche concertée"), in the laboratory of Prof Caroline Nieberding (<https://nieberdinglab.be/>, UCLouvain, Belgium).

Insects were long thought not to learn. Over the years research has, however, revealed that most animals do learn to some extent. This paradigm shift has led to the hypothesis that learning is a form of behavioural plasticity that participates to rapid adaptation of natural populations in nature, in response to human induced habitat degradations. Yet, the adaptive value of learning remains rarely quantified so far. This project will quantify the adaptive value of learning in the field in a number of butterfly species facing increasing reduction and fragmentation of suitable habitats. Butterflies are flagship and bioindicator species of the quality of European natural habitats, and we have occurrence data spanning several decades. This project aims at providing one of the first field-based estimates of the selective value of learning for a key behavioural trait, oviposition site selection ("OSS" hereafter). OSS is key to colonisation of suitable habitats in butterflies, the larvae of which have only a low mobility. As learning is costly, we expect that increased learning and memory skills are correlated to reduced survival and/or egg production and we will quantify potential trade-offs associated with learning and memory.

The postdoctoral research will include experiments in the field in Belgium and ecologically-relevant experiments in the laboratory, where field-caught animals can be monitored. The ideal candidate for this position will have a strong background in behavioural ecology, statistical analyses, expertise in butterfly ecology and a capacity for creative and critical thinking. The candidate will have opportunities to learn some of the specific skills required for the project by our network of national and international collaborators. Applicants should hold a PhD diploma. The deadline for applications is December 15th, or until the application is filled.

The salary will be around 2000 euro netto per month plus benefits (health insurance,...) which are included in the Belgian system. Our University is an Equal Opportunity/Affirmative Action Employer, and is in a French-speaking region of Belgium, but the language for meetings and scientific interactions is English. For background information about our university, see <https://uclouvain.be/en/index.html>.

Applications should be sent to Prof. C. Nieberding (caroline.nieberding@uclouvain.be). Applications will include: 1) a motivation letter including a statement of interests; 2) full CV including list of publications; 3) Contact details of at least 2 referees. Informal inquiries are welcome. More info on the duration of the project can be obtained by contacting C. Nieberding directly. We will start reviewing applications as they arrive until the appropriate candidate is selected, and the project will be starting in Spring 2021.