

HOSTING OFFER – MSCA POSTDOCTORAL FELLOWSHIP 2021 CALL

Offer title

Behaviour, life history and response of animals to rapid environmental changes

Name of the supervisor

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EU Research Framework Programme

Horizon Europe/Marie Skłodowska-Curie Action Postdoctoral Fellowship – [2021 call](#)

Research Group

Habitat loss and degradation are considered the most important direct threats to biodiversity. Most organisms do not tolerate well environmental changes, yet a few seem to perceive them as ecological opportunities. Unfortunately, we still do not understand well why species vary in their response to environmental changes. Our research seeks to understand how animals respond to changes, with particular focus on behavioural and life history responses to novel environments, and what are the consequences for the current loss of biodiversity. Research in the lab touches a variety of questions: How is it possible that invasive species are able to invade environments to which they have not had time to adapt and even become more abundant than native species? Why some animals have developed enhanced intelligence despite the energetic and developmental costs of affording large brains? Why do some lineages diversify at faster rates than others? To address these questions, we combine theoretical models, natural history, field and lab experiments, and meta-analyses, using birds as main study model. Although our focus is on fundamental science, our research has applied implications in risk assessment of biological invasions, mitigation of biodiversity loss

associated with human-induced rapid environmental changes and design of better practices in conservation of endangered species.

The host lab is led by Dr. Daniel Sol (CSIC Senior Research Scientist), and currently includes two postdocs, three PhD students and three MSc students. Research in the lab has contributed 1) to reformulate and verify empirically the cognitive buffer hypothesis for the evolution of intelligence, 2) to develop a more integrative life history theory to understand the response of organisms to environmental changes, 3) to provide a solution for the invasion paradox in birds, and 4) to quantify the loss of phylogenetic and functional diversity associated with human-induced environmental changes. The lab has published > 70 papers and book chapters in the last 10 years (including research papers in Science, PNAS, Nat Comm, Nat Ecol Evol and Ecol Lett), and it has ample experience in supervising predoctoral and postdoctoral fellows. The lab maintains a broad network of international collaborators from Canada, UK, USA, France and Chile. For additional information, please visit Sol lab webpage: <http://dsolrueda.wixsite.com/sol-group>.

Hosting Description *

The candidate will join Sol lab at the Department of Biodiversity, CREAM. The theme of the proposal will be agreed according to the common interests of the fellow and the host group, based on the potential for knowledge transfer from the host group to the researcher and vice-versa. Thus, the elaboration of the proposal and its implementation (in case of being granted) will be a collaborative work, and it will as well benefit from the established network of collaborators. During the course of the fellowship, the applicant will receive training in leadership, student supervision, analytical approaches, communication skills, and preparation of grant proposals to pave the way to become an independent researcher.

Previous supervised MSCA fellow

H2020-MSCA-IF-2020: ENVIRON_CHANGE, Lisieux F. Fuzessy & Daniel Sol

The EU-funded [ENVIRON_CHANGE](#) project will investigate the impact of environmental changes on ecosystem functions and evolutionary history over time through an interdisciplinary approach. By applying long-term monitoring and surveying, niche analysis, GIS tools, phylogenetic comparative analyses and ecological modelling, the research fellow will better understand why certain species are more able to cope with habitat alteration than others. This will provide insights into the long-term consequences of urbanisation and agriculture on the biodiversity of avian communities. The project will allow for a more detailed picture of the impact of land use change on biodiversity, which can better inform management decisions and assess the extent to which functional and phylogenetic diversities are more protected in species-rich assemblages.

Organization

CREAF: <http://www.creaf.cat/msca-postdoctoral-fellowship-creaf>

Through excellence in science we aim to be a Mediterranean and world-class research institution that pushes the frontiers of knowledge while addressing some of the biggest and more complex environmental challenges society faces this century.

Founded in 1987, CREAF is a public research and innovation centre in ecology, territorial analysis and environmental impact. We aim to create new knowledge and innovative solutions

on ecology management and land-atmosphere interaction that helps society to mitigate Global Change effects, creating adaptation plans and boosting the resilience of nature.

CREAF's expertise includes among other topics conservation ecology, land use policy, forest biomass and production measurements, powerful GIS technologies, remote sensing, fire ecology, and modelling ecosystem processes. It contributes to the development of methodological and conceptual tools designed to facilitate decision-making and improve environmental management.

Location

Cerdanyola del Vallès, near Barcelona, Spain

Offer Deadline

11th July 2021

Eligibility criteria

The applicant can be of any nationality. By the time of the 2021 MSCA-PF application deadline, applicants must:

- hold a doctoral degree in animal ecology or related topic.
- do not have more than 8 years of full-time equivalent in research.
- not have spent more than 12 months in Spain in the three years immediately prior to the call deadline.
- have broad interests in animal ecology.

How to apply

Researchers willing to apply should check that they fulfil the eligibility criteria. Please send to Daniel Sol (d.sol@creaf.uab.cat) and msca@creaf.uab.cat asap and at the latest by 11th July 2021:

- your CV
 - a covering letter explaining why you wish to apply for an MSCA-PF at CREAM
- The selected applicant will be informed by the end of July.

Please include "MSCA PF 2021_Daniel Sol" in the subject line of your email.