

JOB OFFER:

Postdoctoral researcher in spatial and movement ecology

**Spanish National Research Council
Instituto de Investigación en Recursos Cinegéticos (IREC-CSIC, Ciudad Real)
& Museo Nacional de Ciencias Naturales (MNCN-CSIC, Madrid)**

The Game Resources and Wildlife Management (IREC-CSIC) and Museo Nacional de Ciencias Naturales (MNCN-CSIC) are looking to recruit a postdoc who is skilled in statistical modelling, spatial ecology and/or movement ecology. The successful applicant will be contracted full-time for 18-months to map and identify hotspots and key areas (breeding, non-breeding areas, movement corridors) for steppe bird conservation. The outputs will be published in high-impact journals and provide scientific-based evidence for a strategic planning of renewable energy developments in Spain that is compatible with steppe-bird conservation.

Starting date: from February-March 2023

Background

IREC-CSIC and MNCN-CSIC offer an interdisciplinary and international workplace, and the possibility to interact with researchers of different nationalities, with strong ties to a world-wide network of research institutions engaged in ecological research.

Recently our project ELECTROSTEPPE (Evidence-based solutions for an ecological transition compatible with the conservation of steppe birds) was funded by the MINCINN as part of the last call: “Convocatoria 2021 - «Proyectos de Transición Ecológica y Transición Digital»”. In this project we propose a multispecies, spatially-explicit approach to assess the challenges and provide potential solutions that allow the transition to a low-carbon, renewable energy-based economy compatible with safeguarding the conservation of the last remaining steppe bird communities in Europe. The project builds upon national censuses of steppe-birds and a large data set of GPS tagged birds, and will be used to generate the best ecological data on steppe bird distribution, abundance, and movement ecology. The postdoc will apply a range of modelling techniques to provide evidence-based solutions that inform the ecological transition in Spain in concert with the conservation of the country’s natural heritage.

The main tasks of the project are:

- (i) Community level: identify hotspot areas for steppe-birds based on taxonomic, functional and phylogenetic diversity.
- (ii) Species level: determine important areas for target species based on current and future climate change scenarios that are not protected and at risk from renewable energy development. Target species include the little

- bustard, pin-tailed and black bellied sandgrouse, lesser kestrel and Montagu's harrier.
- (iii) Population level: use GPS tracking data to test how renewable energy infrastructures locally affect the space use, habitat selection and movement of target species.

The postdoc will be based primarily at IREC-CSIC (Ciudad Real) under the supervision of [Dr. François Mougeot](#) (IREC-CSIC) and will also work at MNCN-CSIC (Madrid) in close collaboration with [Dr. Ana Benítez-López](#) (MNCN-CSIC). The research team is formed by a group of scientists with long-term expertise on Iberian steppe and farmland birds (UAM, UCM, CTFC, CiBio), who have been studying their distribution, population trends, ecological requirements and conservation needs for decades. The Spanish Ornithological Society (SEO/BirdLife) is also part of the team.

TASKS AND RESPONSIBILITIES

- Breeding Atlas data curation and formatting, hotspot analysis based on several facets of biodiversity, and spatial prioritization of steppe bird hotspots based on the Environmental Zoning tool for renewables, and the protected area coverage.
- GPS tracking data curation and analyses to build ecological niche models that cover both the breeding and non-breeding periods of the focal species
- GPS data analyses to assess how individual steppe-birds respond to existing renewable infrastructures (wind and photovoltaic farms, power stations)
- Write and submit papers for high-impact scientific journals,
- Assist with preparing material for a cartographic viewer with the results of the project (knowledge transfer)

QUALIFICATIONS AND EXPERIENCE

- PhD or equivalent experience in computer science, engineering, environmental science, or ecology with experience in using statistical or machine learning methods
- Fluent in at least one scientific coding language (R, Python, C++)
- Experience in parallel computing, collaborative coding and version control (e.g., Git) advantageous
- Advanced skills in processing and analyzing large data sets
- Good understanding of current applied ecology and conservation research are desirable but not essential
- Excellent organizational skills, pro-active and results-oriented, and the capacity to deliver on allocated tasks and respond in a timely manner to deadlines
- Ability to work as part of a multidisciplinary team distributed across different institutions.
- A track record of publishing high-quality scientific research (commensurate to career stage)
- Excellent communication skills (both written and oral) in English

TERMS OF EMPLOYMENT

The selected candidate should be available to take up the position by mid-2023 at the latest, ideally from February-March, 2023. We offer a fixed-term, 18-months, full-time (40 hours per week) employment contract (M3 level, gross salary of ca. 40.000 euros / year).

HOW TO APPLY

Candidates need to apply using the “[Bolsa de Trabajo CSIC](#)” to be eligible for the post. Candidates are encouraged to send their CV and to contact us for further information about the application process.

For further questions about the post, you can contact us at:

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