

Master Projects - Behavioural Ecology - Parrots/Tenerife

Incubation behavior and selective maternal investment in psittacines

Collaborative project between the Loro Parque Fundación and the Max-Planck-Institute for Ornithology

Project Objectives

The aim of this project is 1) to gain knowledge about the natural incubation parameters and patterns of psittacines using cameras and egg-loggers and 2) to pilot an investigation of the potential relationship between egg size, laying order (degree of hatching asynchrony), offspring quality (and sex) and selective maternal investment during incubation (in terms of egg rotation frequency and temperature) in different parrot species in an experimentally well-controlled and standardized setting. It provides basic data on the incubation patterns and parental behaviour of those species that are significant for aviculture, breeding biology and conservation, as well as fundamental research on the evolutionary processes shaping parental care and egg laying patterns in altricial birds.

The Master project serves as first pilot with potential to be expanded into a PhD.

Background:

The world's largest gene reserve and parrot collection in the world of the Loro Parque Fundación (LPF) on Tenerife, Spain, offers unique possibilities for comparative research in evolutionary biology using the parrot order (Psittaciformes) as a new model system. The LPF has recently started a formal collaboration with the Max-Planck-Institute of Ornithology, Seewiesen, with the aim of fostering basic research into behavioural ecology, comparative cognition and neurobiology and other fields of comparative evolutionary biology. The Department of Biological Sciences of San Jose State University developed a novel 2-axes rotation logger technology and supports the project with materials and assistance during the data analysis.

Work Description:

- Measuring basic incubation parameters via egg loggers (measuring temperature, rotation) placed in camera-equipped parrot nests
- Determining egg size variation and hatching success within and across parrot species (morphometric measures and egg photography) working with clutches both in natural nests and under artificial incubation
- Administering cameras and video-recorded data.
- Behavioural observations and video analysis
- Data bank management and data analysis

Project Dates:

Project 1: February – July (Cockatoo and Amazon species) and Project 2: May- October 2016 (Eclectus and Macaw species)

Duration: (4-)6 months

Requirements/qualifications:

- Bachelor in Biology
- Current enrolment at a European University for a Master degree in Biology/Zoology
- High level of motivation and reliability; ability to work independently; scientific ambition to develop the research project; good time management and organisational skills.
- Experience with *MatLab* and good skills in statistics are favourable
- Good spoken and written English is compulsory, basic Spanish skills are helpful
- Previous research experience in Behavioural Ecology desirable

Benefits:

- Free accommodation and payment of the airfare are offered by the Loro Parque Fundación

To Apply:

Please apply by February 15/April 1st and send your CV and a motivation letter to Dr. Auguste von Bayern (avbayern@orn.mpg.de). Additional information upon request.

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