# 2023 Master internship at University of Gdańsk

## TITLE: Behavioural similarity of the partners and coordination of parental care in birds

## LAB & PEOPLE

- Name of the hosting lab: Polar Ecology Group/Department of Vertebrate Ecology and Zoology
- General activities of the lab: Polar Ecology Group is a group of ecologists working on various aspects of ecology of polar ecosystems and ecology of polar seabirds. The latter is related to response of seabirds to the ongoing climate changes and various aspects of seabirds behaviour (acoustic and visual communication, parental care and parental investment, etc)
- Website: https://polarecologygroup.wordpress.com/
- Number of staff / PhD: 7 employees / 3 PhD students
- Supervisor name and contact: Katarzyna Wojczulanis-Jakubas (email: katarzyna.wojczulanis-jakubas@ug.edu.pl) and Dariusz Jakubas (email: dariusz.jakubas@ug.edu.pl)

## TOPIC OF THE INTERNSHIP

- Scientific context of the internship (max 20 lines)

  Growing number of studies indicate that avian parents coordinate their parental care, and this coordination is particularly important in species living in harsh environments, like seabirds. The level and pattern of parental coordination in seabirds is largely unknown. Thus, in this project parental coordination will be examined in the little auk – a small Arctic seabird. Previous findings have indicated that little auk parents do coordinate chick provisioning, and a great inter-pair variation is observed in the level of coordination (Wojczulanis-Jakubas et al 2018). The internship is to explore one of possible drivers of this variation, namely behavioural similarity of the breeding partners in response to a novel objects. It has been already shown in correlational study that little auk partners mate assortatively in respect to some morphological and behavioural traits (Wojczulanis-Jakubas et al. 2018) and here the question will be examined with an experimental approach. The material on the parents behaviour (coordination and stress response) has been already collected in the field, and is available in the form of video recordings. This material is to be processed during the internship. Data collected based on the material will be then processed in R software, and relevant analyses will be performed.

**Keywords :** seabirds, parental care, coordination

**Bibliography:**

Wojczulanis-Jakubas, K.; Araya-Salas, M.; Jakubas, D. Seabird Parents Provision Their Chick in a Coordinated Manner. *PLoS One* **2018**, *13*, e0189969, doi:10.1371/journal.pone.0189969.

Wojczulanis-Jakubas, K.; Drobniak, S.M.; Jakubas, D.; Kulpińska-Chamera, M.; Chastel, O. Assortative Mating Patterns of Multiple Phenotypic Traits in a Long-Lived Seabird. *Ibis (Lond. 1859).* **2018**, *160*, 464–469, doi:10.1111/ibi.12568.

**Tasks and duties entrusted to the student:**

Processing of the video recordings, participation in regular scientific seminars (one presentation from the student will be requested – about a scientific paper related with the topic or obtained results during the internship), data handling and analyses (depending on the student's programming skills).

**Skills to be acquired or developed:**

programming in R, data handling and analyses in R (linear models, randomization), processing video recordings in different software, critical thinking, scientific writing; much depends on skills already developed by the students, if they are minimal then basics of the listed skills will be offered. If the student had already some analytical background, more advanced programming and analytical issues will be offered.

## PROFILE OF THE DESIRED STUDENT

- Minimum level of study required: Bachelor

- Field(s) of study: Behavioural ecology

- Scientific skills: Basic skills of programming in R, and experience in processing video materials are welcome but not essential; Critical thinking; Some knowledge of statistical concepts and analyses (the level of involvement into the analytical part of the project will depend on the students scientific skills).

- Language skills required: fluent in English (to communicate with supervisor and group members, reading protocols and scientific literature, and report the results)

## THE INTERNSHIP ASSIGNMENT:

Desired duration of the internship (in months): 5-6 months

Desired Starting date of the mission: October 2023-January 2024

Indicative weekly schedule: *35h / week*

Remuneration:

*Erasmus grant*: could be asked to your own university

Internship agreement: *an internship agreement will be signed.*

*To SEA-EU students:*

*If you're interested please send your CV and letter of motivation to the scientist in charge, katarzyna.wojczulanis-jakubas@ug.edu.pl before the 15/September/2023*