

PhD Position within the OPUS (2024/53/B/NZ8/03731) project on Ecogeographical Rules in Mammalian Evolution

We are seeking a highly motivated and creative candidate with good communication skills and a strong research capacity for a PhD position at the Institute of Nature Conservation, Polish Academy of Sciences (INC PAS), Kraków, Poland. This full-time position is funded by National Science Centre (NCN) Poland and INC PAS, for 48 months, beginning in July 2025, as part of the OPUS project titled "Global wind regimes in ecogeographical rules of evolution".

Study field: evolutionary ecology, biogeography, phylogenetics, mammalogy

Location: Institute of Nature Conservation Polish Academy of Sciences (INC PAS), Krakow, Poland

Project leader and supervisor: Dr. Arkadiusz Fröhlich

Scholarship: The monthly scholarship is around 5000 gross PLN, 3700 net PLN (first two years) and around 6200 gross PLN, 4700 net PLN (last two years), tax-free but subject to social security deductions. This amount ensures a relatively good quality of living in Poland. Additional benefits include financial support for travel to project meetings, conferences, and workshops, as well as opportunities for publication bonuses and applications for individual research grants. The costs associated with the PhD courses and PhD defence will be covered by the Doctoral School and INC PAS.

Career Development Opportunities: The Doctoral School provides comprehensive career support, including specialized training in scientific writing, grant applications, and public engagement. PhD students will have access to career counseling services, mentorship programs, and opportunities to participate in international exchange programs and networking events.

Recruitment process: Recruitment to the project will be combined with the recruitment to the Doctoral School of Natural and Agricultural Sciences and NCN rules, so it is required to submit a list of documents specified in Appendix No. 2 to the Rules for Admission (<https://www.botany.pl/index.php/en/teaching-en/doctoral-school-en/admissions-en>; see also below). Candidates will be assessed based on motivation and fit to the project, scientific achievements, experience, awards, internships, and skills. An interview with pre-selected candidates will be a part of the selection of candidates. The successful candidate will be admitted to the Doctoral School and obliged to carry out the duties of a doctoral student arising from the rules of the Doctoral School and the program of study (for Terms and Conditions of the Doctoral School and Program of Study see the webpage <https://www.botany.pl/index.php/en/teaching-en/doctoral-school-en/about-the-doctoral-school-en>)

Candidates should submit the required documents in a single PDF file to sekretariat@iop.krakow.pl (Cc to frohlich@iop.krakow.pl) with the subject line "OPUS 27 PhD Application" by 29 May 2025. Pre-selected candidates will be invited to an interview in early June 2025. Additional questions should be directed to frohlich@iop.krakow.pl

Short description of the research project:

In the face of accelerating climate change, uncovering the evolutionary forces that shape biodiversity is more urgent than ever. While significant progress has been made in evolutionary biology, the role of specific climatic factors—particularly wind—remains underexplored. This project breaks new ground by examining wind regimes as an overlooked yet powerful driver of mammalian phenotypic evolution, within the framework of ecogeographical rules such as Bergmann's and Allen's rules. Focusing on body size and appendage length (e.g., tails and limbs), the project aims to fill a critical gap in our understanding of climatic selection pressures. Its core objectives are to:

- Test the hypothesis that higher wind speeds within mammalian geographic ranges are associated with larger body sizes and shorter appendages (e.g., tails and limbs) to enhance thermoregulation in colder climates.
- Investigate how the interaction between wind speed and temperature drives the evolution of mammal phenotypes across diverse thermal environments.
- Employ phylogenetic comparative methods, including Brownian Motion (BM) and Ornstein-Uhlenbeck (OU) frameworks, to evaluate these hypotheses.
- Explore whether body size and appendage length evolve independently or interactively in response to selective pressures.

The project involves collaboration with renowned international researchers from Poland, Spain, and Australia and integrates global datasets on mammal phenotypes, climatic conditions, and phylogenies.

Tasks for doctoral student: The doctoral student will lead the mammal-focused part of the project, with responsibilities including: (1) Conducting a literature review of the role of wind in animal thermoregulation and evolution. (2) Collecting and analyzing global data on body size, tail length, limb length, and geographic ranges in relation to wind speed and temperature. (3) Performing statistical analyses using phylogenetic comparative approaches in R. (4) Preparing manuscripts for publication on the evolutionary impacts of wind regimes on mammalian phenotypes. (5) Participating in international workshops, conferences, and collaborative research visits. (6) Contributing to the broader dissemination of research findings through scientific publications and presentations.

These tasks will involve data analysis, model development, and active collaboration with the project team. The doctoral student will also fulfill their obligations under the Doctoral School program.

Requirements for candidates:

- MSc degree in biology, ecology or related field.
- Foundation in theriology, evolutionary biology, or biogeography.
- Familiarity with statistical and geographic analysis and R programming.
- Good spoken and written English skills (minimum B2 level).

Additional advantages include a strong motivation to contribute to high-impact evolutionary research, experience with animal studies, scientific publications, international research exposure.

APPLICATION FOR THE PhD POSITION

For details and templates of required documents for admission to Doctoral School in academic year 2024/2025 (please see the [link](#))

- 1) Application for admission to the Doctoral School along with reasons therefor, i.e., a letter of interest, detailing the qualifications of the candidate for the position, his/her research experience, and how this position will help to fulfil personal career goals (see Doctoral School webpage for the template attached as Appendix No. 6 to the Rules for Admission);
- 2) Consent to the processing of personal data for the purposes of the admission procedure in accordance with the template thereof attached as Appendix No. 7 to the Rules for Admissions;
- 3) CV specifying a list of scientific achievements, employment record and participation in scientific projects, conferences, workshops, training and internships, together with list of publications;
- 4) Contact information to two academic referees or people with whom a candidate have worked;
- 5) Personal data form (see the [link](#));
- 6) 2 photos + one photo in electronic form (passport-sized format); these can be submitted later, only by a selected candidate;
- 7) Diploma certifying completion of Master studies or a document confirming the fulfilment of the conditions set out in § 2 sec. 6-8 of Recruitment Rules; in the case of a diploma of study abroad, it should be endorsed with an apostille clause;
- 8) Certificate or diploma certifying completion of studies, confirming English language competencies at no less than B2 level; the list of certificates is specified in Appendix No. 8 to these Rules for Admissions;
- 9) Photocopy of the student's record book/diploma supplement containing the relevant entries;
- 10) Statement concerning previously commenced doctoral studies or doctoral program, or education at another doctoral school;
- 11) Information on the doctoral scholarship received at the doctoral school and the period for which it has been paid;
- 12) A copy of the abstract of the Master's thesis in Polish or English;
- 13) A statement of no health-related contraindications to carry out the tasks provided for under the research theme concerned;
- 14) A statement to the effect that the person can use electronic equipment in order to attend classes held with the use of distance learning methods and techniques;
- 15) Declaration of disability.

Documents should be combined into a single pdf and sent by email to the address sekretariat@iop.krakow.pl (and Cc to frohlich@iop.krakow.pl) until 29 May 2025.