



## PhD Position within the OPUS (2025/57/B/NZ8/01241) project

We invite applications for a PhD position within the project “**Invasion success through genomic lens: insights from whole-genome diversity of invasive *Hemiptera* pests**”, funded by the Polish National Science Centre (NCN) OPUS grant nr 2025/57/B/NZ8/01241.

### ABOUT THE PROJECT:

The number of emerging alien species is growing worldwide, causing damage to natural ecosystems. A major focus in invasion ecology is to identify traits that contribute to invasion success. Genomic studies can be used to track the invasion process, reveal genomic regions involved in adaptation in the novel range and identify genome characteristics potentially facilitating invasions. In this project, we use two Hemipteran invasive insect species, *Cinara curvipes* and *Leptoglossus occidentalis*, as invasion models to unravel the genetic mechanisms behind invasion success. We will use whole genome data to get insight into population genomic differentiation of single nucleotide polymorphism (SNP), structural variants (SV) that can have strong and immediate phenotypic effects and are often related to traits that support range expansion. We will also identify evolutionary events, such as gene family expansions or transposable element (TE) activity, that can modulate invasion success.

### ABOUT THE POSITION:

The position is funded for 48 months.

Scholarship: approx. 5000 PLN monthly gross gross (~3790 PLN/month net) before mid-term evaluation and 6500 PLN monthly gross gross (~4930 PLN/month net) after mid-term evaluation (tax-free, but Social Security contributions and health insurance will be deducted). The project will cover costs of business trips (e.g., travel and accommodation during project meetings and scientific conferences).

The successful candidate will be involved in de novo sequencing, assembly and annotation of *C. curvipes* genome. Further, the genomes of both species will be analysed in terms of structural variation, TE content and expansions of gene families potentially related to survival outside the native range. The presence of facultative bacterial endosymbionts of both species in their native and invasive populations will also be analysed as a potential driver of invasiveness. The research will involve wet-lab work, but will be more skewed towards population genomic analyses. The PhD student will be supervised by Dr Aleksandra Biedrzycka, an evolutionary, conservation and invasion geneticist, at the Institute of Nature Conservation, Polish Academy of Sciences in Kraków. The candidate will work in collaboration with Dr Pierre Nouhaud, evolutionary geneticist of invasive pest arthropod populations, at INRAE – CBGP Marseilles, France.

## **REQUIREMENTS:**

The successful candidate must hold a M.Sc. degree. We seek applicants with:

- a strong interest in evolutionary and population genomics.
- experience or interest in bioinformatic analyses
- good English language, communication and organizational skills.

## **APPLICATION PROCESS:**

To apply, please submit a cover letter explaining your background, skills, and motivation for this position; a CV; and the contact details of at least one academic reference willing to provide a recommendation. Please also review the list of documents required by the Doctoral School.

Informal inquiries should be sent to Aleksandra Biedrzycka ([biedrzycka@iop.krakow.pl](mailto:biedrzycka@iop.krakow.pl)).

## **DEADLINE AND SELECTION PROCESS:**

Recruitment process: Admission to the project will be carried out jointly with the recruitment to the Doctoral School of Natural and Agricultural Sciences and in accordance with NCN rules. Applications should be submitted to the Doctoral School.

More detailed information about the Doctoral School, including the list of required documents and a comprehensive description of the application procedure, will be made available on the Doctoral School's website in June 2026. Link to the Doctoral School website:

<https://botany.pl/en/doctoral-school-en/admissions-en>

Should you be interested in substantive details or wish to obtain more in-depth information about the project, we encourage you to contact the project leader and prospective supervisor, Dr hab. Aleksandra Biedrzycka ([biedrzycka@iop.krakow.pl](mailto:biedrzycka@iop.krakow.pl)).

**The application deadline is 7 August 2026. The PhD position will commence on 1 October 2026.**

We look forward to receiving your application!