Project title: Museums, morphology, and molecules: new ways of evolution education

Coordinator

University of Helsinki

Peter Poczai, peter.poczai@helsinki.fi

Partners

National University of Cordoba, Argentina

Federal University of Maranhão, Brazil

Yuriy Fedkovych Chernivtsi National University (CheUni), Ukraine

The MOMENT project focuses on establishing collaboration in education between Finland, Argentina, Brazil and Ukraine to promote international mobility, online and in person participation of university students and staff for the study of global biodiversity. Plants, fungi and microalgae are crucial to human survival since they are used in the production of food, medicine, and building materials. In order to protect our biodiversity, we need to first know it. It is consequently essential that species are correctly identified using multiple sources of evidence, but sadly this is often difficult.

Biological identification techniques applying multiple skills and evidence are a fundamental first step in describing our environments in face of a changing world. This project tackles this problem by creating an innovative course through an educational collaboration between Argentina, Brazil, Ukraine and Finland. By teaching students, the core abilities of a competent biologists and by employing basic scientific methodologies to lead investigations into the natural world, our program aims to acquaint graduate and doctorate level students as well staff members with the novel skills using natural history collections. The project covers a wide range of topics through field courses and hands on laboratory training within ecology and evolution such as the study of size and shape of organisms (morphology), the practice of categorization and classification (taxonomy), using large scale genetic data and digital tools to reconstruct evolutionary relationship (phylogenomics), and lastly obtaining ancient and historical DNA from specimens in museum collections (museomics). Submerging the new generations of biologists into the intersection of these available state-of-the-art tools brings a set of possibilities to address a wide range of biological questions. Beyond the core topics of biology, we will delve into analyses of conservation, biological resilience, and environmental concerns as they pertain to humankind's place in the natural world. This project aims to establish long-term practices, teaching material via biliteral short-term and long-term mobility in order to develop a research-based course in global biodiversity. The project is designed to encourage students to view the world through the context of climate and environment changes and sustainable use of biological resources.

The MOMENT project aims at establishing a solid platform for biological identification to strengthen the collaboration and engagement of education of biodiversity research between Finland, Latin America and Ukraine with a clear objective to educate the future professionals of biological domains.