

Subject card

Subject name and code	Phylogeography, PG_00117657						
Field of study	Biology						
Date of commencement of studies	October 2023	Academic year of realisation of subject				2024/2025	
Education level	postgraduate studies	Subject group				Obligatory subject group in the field of study Optional subject group	
Mode of study	full-time studies	Mode of delivery				at the university	
Year of study	2	Language of instruction				Polish	
Semester of study	3	ECTS credits				1.0	
Learning profile	academic	Assessment form					
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Anna Wysocka				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		3.0		7.0	25
Subject objectives	Knowledge of the basic patterns (models) of the geographical distribution of genetic variation, principles and factors to which processes are subject affecting gene variability in time and space. Understanding the role of demographic processes and geographical distribution of populations in speciation models. Understanding the relationship between genealogies and geography.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[BIOLMU2_W05] the graduate understands the dynamic development of the biological sciences and is familiar with new research directions and disciplines		characterizes the relationship between phylogeny and demography; understands the relationship between phylogeography and speciation processes			[SW4] test/exam - oral or written	
	BIOLMU2_W01		defines the concept of phylogeography and explains its place among others disciplines; explains intraspecific phylogeographic patterns			[SW4] test/exam - oral or written	
	BIOLMU2_U01		proposes methods for analysing the spatial distribution of genetic variation; analyzes the relationship between genealogy and geography			[SU4] test/exam - oral or written	
	[BIOLMU2_K05] use recognised sources of scientific and popular information in the field of biological sciences to improve their knowledge		remains open to the issues of biodiversity, both its level and its distribution and conservation			[SK8] observation of student's independent or team work	

Subject contents	Basis of phylogeography, definition, place among related disciplines. Relationships between phylogeny and demography. Intra-population maternal lines. Spatial structure of the population. Genealogies of nuclear genes. Intraspecific phylogeographical patterns (distributions of genetic variation): human and other species. Aspects of genealogical correspondence in phylogeographical inference: gene level, species, group of co-occurring species, biogeographical regions. Phylogeography and speciation processes.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final test	51.0%	100.0%
Recommended reading	Basic literature	<p>Avise J.C., 2000, Phylogeography, Harvard University Press, Cambridge.</p> <p>Avise J.C. 2004 Molecular markers, Natural History and Evolution. Sinauer Associates, Sunderland, MA, USA</p>	
	Supplementary literature	<p>Wysocka A., Grabowski M., Sworobowicz L., Mamos T., Burzyński A., Sell J. 2014. Origin of the Lake Ohrid gammarid species flock: ancient local phylogenetic lineage diversification. Journal of Biogeography, 41(9): 1758-1768; DOI:10.1111/jbi.12335</p> <p>Sworobowicz L., Grabowski M., Mamos T., Burzyński A., Kilikowska A., Sell J., Wysocka A. 2015. Revisiting COI phylogeography of <i>Asellus aquaticus</i> in Europe: insight into cryptic diversity and spatiotemporal diversification. Freshwater Biology, 60 (9): 1824-1840; DOI: doi: 10.1111/fwb.12613</p> <p>Sworobowicz Lidia , Mamos Tomasz, Grabowski Michał, Wysocka Anna: Lasting through the ice age: the role of the proglacial refugia in the maintenance of genetic diversity, population growth, and high dispersal rate in a widespread freshwater crustacean, w: Freshwater Biology, nr online first, 2020, ss. 1-1, DOI:10.1111/fwb.13487</p> <p>Wattier Remi , Mamos Tomasz, CopilașCiocianu Denis [i in.] : Continental-scale patterns of hyper-cryptic diversity within the freshwater model taxon <i>Gammarus fossarum</i> (Crustacea, Amphipoda), w: Scientific Reports, vol. 10, 2020, ss. 1-16, Numer artykułu:16536, DOI:10.1038/s41598-020 73739-0</p>	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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