University of Gdańsk

Subject card

Subject name and code	Identification of invertebrates II, PG_00198091						
Field of study	Natural Resources Conservation						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Bachelor's studies		Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study			
Mode of study	full-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	Polish			
Semester of study	2		ECTS credits	3.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Katedra Zoologii Bezkręgowców i Parazytologii -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Paulina Kozina				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30
	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	30		8.0	37.0	75	
Subject objectives	1. To know the faunal diversity of invertebrate animals of the region. 2. Knowing the characteristics of invertebrate animals to identify taxa, knowing the names of faunal species. 3. To acquire the ability to work with the key to identify species of invertebrate animals. 4. Ability to select and apply appropriate methods for quantitative assessment of organisms in the field and to develop the collected material.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_W03] The graduate understands the physiological processes and their relationship to the organism's adaptation to changing environmental conditions	Understands the course of basic physiological processes and their relationship between occurrence of invertebrate animals with their adaptation to changing environmental conditions	[SW1] oral statement/ conversation/discussion
[OZPL3_K07] The graduate is prepared to demonstrate responsibility for the equipment/ materials entrusted and respects the work of others	Is responsible for the equipment/ materials entrusted to him and his own work, and respects the work of others	[SK8] observation of student's independent or team work
[OZPL3_W04] The graduate possesses advanced knowledge and understanding of the characteristics, systematics, and evolution of selected groups of organisms, as well as the basic concepts and mechanisms of evolution	Presents the characteristics, evolution and identifies invertebrate animals	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[OZPL3_K04] The graduate is ready to understand the need for honesty and integrity in scientific and professional work, and consciously applies the principles of bioethics	Consciously applies the principles of bioethics, respecting the regulations on the protection of wild invertebrate animals	[SK8] observation of student's independent or team work
[OZPL3_U06] The graduate is able to make observations and perform basic physical, biological and chemical measurements in the field or laboratory	Performs observations and basic biological measurements in the field (collection and preparation including invertebrate animals)	[SU1] oral statement/conversation/ discussion [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[OZPL3_U01] The graduate is able to use basic apparatus and research tools and maintains the correct sequence of operations in laboratory and field work	Uses the correct research tools and maintains the correct sequence of operations in field work (knows how to properly collect, preserve, conserve and tentatively identify invertebrate animals)	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task [SU8] observation of student's independent or team work
[OZPL3_U04] The graduate is able to plan and carry out simple research tasks in the biological sciences under the guidance of a supervisor	Under the guidance of a mentor, plans and performs simple research tasks (zoological preparation with identification) in the field of zoology of invertebrate animals	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work

Subject contents

- Practical identification of invertebrate animal species in the field based on their characteristics.
- Construction and use of a key for determining invertebrate animals.
- Observation of invertebrate animals, techniques of collection, preservation and preparation of material.
- Learning about selected elements of biology of observed species at different stages of the life cycle.
- Diversity of animals in selected ecosystems of Pomerania (forest, meadow, river, lake, dune, beach and littoral of the Baltic Sea); protected, indicator, rare species and species of economic importance.

Prerequisites and co-requisites

- Formal requirements: None
- Prerequisites: Ability to label basic groups of invertebrate animals.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>collection of specimens of invertebrate fauna evaluated on the basis of compliance with the requirements (correctness of marking, aesthetics of execution)</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>class attendance</td><td>85.0%</td><td>0.0%</td></tr>
<tr><td>Oral answer evaluated according to the percentage index of the UG Academic Regulations.</td><td>51.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>used during classes:

1. Kołodziejczyk A., Koperski P. 2000. Klucz do oznaczania makrofauny bezkręgowej występującej w wodach śródlądowych Polski. Narodowa
2. Fundacja Ochrony Środowiska, Warszawa.
3. Krzysztofiak A., Krzysztofiak L., Pawlikowski T. 2004. Trzmiele Polski - przewodnik terenowy. Stowarzyszenie Człowiek i Przyroda, Suwałki. pp. 48.
4. Pławilszczikow N. 1972. Klucz do oznaczania owadów. PWRiL, Warszawa.
5. Urbański J. 1951. Poznaj krajowe ślimaki i małże. Ilustrowany klucz do oznaczania 100 gatunków pospolitych ślimaków i małżów krajowych. PZWS, Warszawa.
6. series Klucze do oznaczania owadów Polski Polskiego Towarzystwa Entomologicznego.

studied independently by the student:

1. Bogdanowicz W., Chudzicka E., Pilipiuk I., Skibińska E. [red.] 2004, 2007, 2008. Fauna Polski charakterystyka i wykaz gatunków. T I-III. Muzeum i Instytut Zoologii PAN, Warszawa.
2. Zalewska A., Komosiński K., Krupa R., Kołodziej P., Szydłowska J. 2013. Metody wykonywania waloryzacji przyrodniczych. Podręcznik metodyczny i przewodnik do zajęć terenowych. Uniwersytet Warmińsko-Mazurski w Olsztynie, Olsztyn.</td></tr>
<tr><td>Supplementary literature</td><td>Supplementary literature

1. Bellmann H. 2009. Przewodnik entomologa. Szarańczaki. Multico Oficyna Wydawnicza, Warszawa. pp. 344.
2. Bellmann H. 2010. Przewodnik entomologa. Ważki. Multico Oficyna Wydawnicza, Warszawa. pp. 280.
3. Bellmann H. 2011. Przewodnik entomologa. Błonkówki. Multico Oficyna Wydawnicza, Warszawa. pp. 344.
4. Boroń A., Szlachciak J. 2013. Różnorodność i taksonomia zwierząt Tom 2. Przewodnik terenowy do rozpoznawania wybranych krajowych taksonów zwierząt. Uniwersytet Warmińsko-Mazurski w Olsztynie, Olsztyn.
5. Kozina P. 2015. Nowe stanowisko Mantis religiosa (L.) (Mantodea: Mantidae) na terenie rezerwatu Wzgórza Sobkowskie (Wyżyna Małopolska, Pogórze Szydłowskie). Wiadomości Entomologiczne 34: 67.
6. Rybak J. I. 2001. Przewodnik do rozpoznawania niektórych bezkręgowych zwierząt słodkowodnych, PWN, Warszawa.
7. Senn P. 2015. Motyle Dzienne Gdyni atlas rozmieszczenia. Studio FM, Gdynia. pp. 205.
8. Wiktor A. 2004 Ślimaki lądowe Polski. Olsztyn: Mantis. pp. 302.

Additionally:

1. Rozporządzenie Ministra Środowiska z dnia 6 października 2014 r. w sprawie ochrony gatunkowej zwierząt (Dz.U. 2014 poz. 1348).
2. Dyrektywa 92/43/EWG w sprawie ochrony siedlisk przyrodniczych oraz dzikiej fauny i flory (Dz.U. L 206 z 22.7.1992, str. 7).
3. Konwencja o ochronie gatunków dzikiej flory i fauny europejskiej oraz ich siedlisk, sporządzona w Bernie dnia 19 września 1979 r. (Dz.U. 1996 nr 58 poz. 263)</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2"></td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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