Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Izbrana poglavja iz predatorskega vedenja
Course title:	Selected Topics in Predatory Behaviour

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski študij Ekološke znanosti, 3. stopnja		**1. ali 2.; 1st or 2nd**	**1.- 4.; 1st-4th**
Doctoral Study Ecological Sciences, 3rd cycle			

Vrsta predmeta / Course type	
Univerzitetna koda predmeta / University course code:	

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. Vaje Laboratory work	Teren. vaje Fieldwork	Samost. delo Individ. work	ECTS
15	**5**		**10**		**150**	**6**

Nosilec predmeta / Lecturer:	Vesna KLOKOČOVNIK

Jeziki / Languages:	**Predavanja / Lectures:**	**slovenščina / Slovene**
	Vaje / Tutorial:	**slovenščina / Slovene**

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Poznavanje fiziologije in vedenjske ekologije na ravni univerzitetnega programa ter eksperimentalnih metod v fiziologiji na ravni drugostopenjskega programa.	Knowledge of physiology and behavioural ecology at graduate level, and Knowledge of experimental methods in physiology at master level.

Vsebina:

Obravnavana so izbrana poglavja iz naslednjih sklopov.
- Zaznavanje plena in njegovo prepoznavanje
- Teorija optimalnega iskanja hrane
- Predator in učinkovitost iskanja hrane
- Vpliv predatorjev in kompetitorjev na optimalno iskanje hrane
- Lov plena; socialnost in lov večjega plena
- Prilagoditve plena na predatorje: zmanjšanje možnosti zaznavanja; zmanjšanje možnosti napada; zmanjšanje možnosti ulova; zmanjšanje možnosti konzumiranja

Content (Syllabus outline):

- Detecting prey and its recognition
- Theory of optimal foraging
- Predator and foraging efficiency
- Role of predators and competitors in optimal foraging
- Capturing prey; Sociality and the capture of large prey
- Coping with predators adaptively: Making detection less likely. Making an attack less likely. Making capture less likely. Making consumption less likely.

Temeljni literatura in viri / Readings:

Temeljni viri:
Davies, N. B., Krebs, J. R., & West, S. A. (2012). An introduction to behavioural ecology (4th ed., str. XII, 506). Wiley-Blackwell.
Kappeler, P. M. (2021). Animal behaviour: an evolutionary perspective (str. IX, 410). Springer. doi:10.1007/978-3-030-82879-0
Rubenstein, D. R. (2023). Animal behavior (International 12th ed., str. 1 zv. (loč. pag.)). Sinauer Associates, [an imprint of] Oxford University Press.

Priporočeni viri:
The Cambridge handbook of group interaction analysis (str. XXVI, 668). (2018). Cambridge University Press.
Foelix, R. F. (2010). Biology of Spiders. Oxford University Press USA - OSO.
Herberstein. (2011). Spider behaviour: flexibility and versatility. Cambridge University Press.
Klokočovnik, V., Devetak, D. (2022). Efficiency of antlion trap design and larval behavior in capture success. *Behavioral ecology*, 33 (1), 184-189. https://doi.org/10.1093/beheco/arab124

Cilji in kompetence:

Znanje in razumevanje:
Študenti:
- razumejo in znajo pojasniti povezavo med predatorskim vedenjem in evolucijo
- podrobno spoznajo in na primerih razložijo kompleksnost predatorskega vedenja
- Podrobno razumejo živčne osnove vedenja
- razložijo adaptivno vlogo plastičnosti predatorskega vedenja

Prenesljive/ključne spretnosti in drugi atributi:
- Sposobnost načrtovati in izvesti kompleksne eksperimente za testiranje odzivov živali na

Objectives and competences:

Knowledge and understanding:
Students:
- Understand and explain advanced connection between predatory bahaviour and evolution
- Become advanced knowledge of the complexity of predatory behaviour and explain the complexity on a
- Understand in detail the neural basis of behaviour
- explain in detail the adaptive role of plasticity of predat

Transferable/Key Skills and other attributes:
- Ability to arrange complex experiments testing

kontrolirane spremembe v njenem okolju - Sposobnost ovrednotiti rezultate kompleksnega etološkega poskusa	behavioural responses of an animal to controlled change - Ability to evaluate results of a complex behavioural exp

Predvideni študijski rezultati:	**Intended learning outcomes:**
Po opravljeni učni enoti naj bi bili študentje zmožni: - predstaviti metode študija vedenja - na primerih razložijo teorijo optimalnega plenjenja - razložijo evolucijsko spreminjanje predatorskega vedenja - prepoznajo vlogo predatorjev za evolucijo/ selekcijo plena - navedejo primere strategij obrambe plena pred plenilci	Students: - present advanced methods used in behavioural studies - explain optimal foraging theory - explaindetail evolutionary trends in predatory behaviour - recognize the role of predators in prey evolution/selection - give examples of antipredator strategies of prey

Metode poučevanja in učenja:	**Learning and teaching methods:**
- Predavanja - Seminar - Laboratorijske vaje – individualno eksperimentalno delo	- Lectures - Seminar - Laboratory excersises – individual experimental practice

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
- Pisni izpit - Laboratorijsko delo - Seminarska naloga	**40 %** **30 %** **30 %**	- Written exam - Laboratory work - Seminar paper

Reference nosilca / Lecturer's references:

Klokočovnik, V., Lampreht, J. B., & Scharf, I. (**2025**). The Herculean task of sedentary predators in disturbed habitats: the response of antlion larvae. *Animal Behaviour*, 222, 123123. https://doi.org/10.1016/j.anbehav.2025.123123

Klokočovnik, V., Bantan, T., & Devetak, D. (**2023**). From individuals to populations: How homo-and heterospecific interactions influence habitat selection in a sit-and-wait predator. *Ethology*, 129(10), 507-514. https://doi.org/10.1111/eth.13387

Klokočovnik, V., & Devetak, D. (**2022**). Efficiency of antlion trap design and larval behavior in capture success. *Behavioral Ecology*, *33*(1), 184-189. https://doi.org/10.1093/beheco/arab124