

Population Ecology of Animals

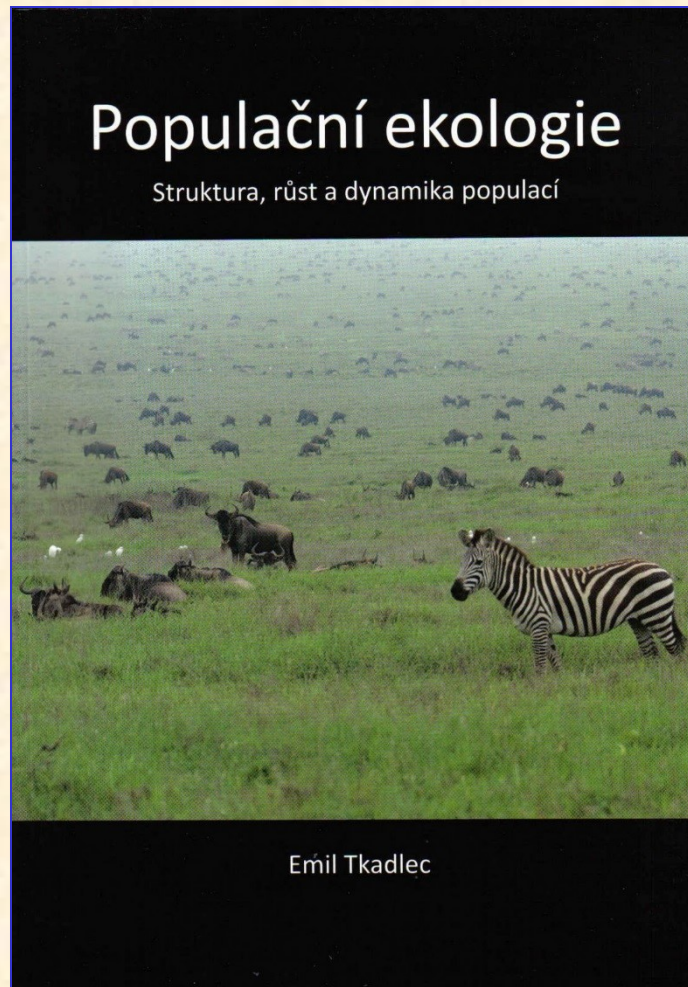
“Populační ekologie živočichů“

Stano Pekár

Content

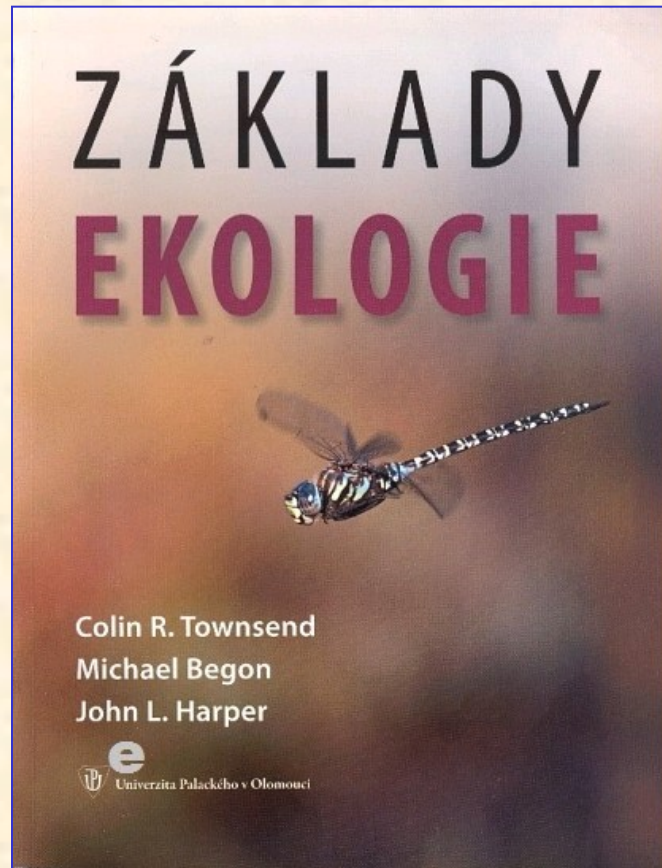
- Population ecology (Resources, Conditions, Models)
- Population growth (Population censuses)
- Population structure (Stage/Age life-tables, k-factor analysis)
- Temperature models (Degree-days)
- Intraspecific competition (Harvesting, Allee effect)
- Spatial ecology (Distribution, Dispersal, Metapopulations)
- Interspecific competition (Mutualism)
- Predation (Functional and numerical responses)
- Predation models (Host-pathogen/parasite, Prey-predator, Host-parasitoid, Plant-herbivore)

Literature



Tkadlec E. 2009. **Populační ekologie. Struktura, růst a dynamika populací.** Univerzita Palackého.

Literature



Townsend R.T., Begon M., Harper J.L. 2010. **Základy ekologie**. Univerzita Palackého.



Jarošík V. 2005. **Růst a regulace populací**. Academia.

Literature

- Akcakaya H.R., Burgman M.A. & Ginzburg L.R. 1999. **Applied Population Ecology. Principles and Computer Exercises using RAMAS EcoLab.** Sinauer.
- Alstad D. 2001. **Basic POPULUS Models of Ecology.** Prentice Hall.
- Begon M., Mortimer M. & Thompson D.J. 1996. **Population Ecology: A unified study of animals and plants.** Blackwell.
- Bernstein R. 2003. **Population Ecology. An Introduction o Computer Simulations.** Wiley.
- Gotelli N.J. 2001. **A Primer of Ecology.** Sinauer.
- Hastings A. 1997. **Population Biology. Concepts and models.** Springer.
- Neal D. 2006. **Introduction to Population Biology.** Cambridge University Press.
- Ranta E., Lundberg P. & Kaitala V. 2006. **Ecology of Populations.** Cambridge.
- Shultz S.M., Dunham A.E., Root K.V., Soucy S.L., Carroll S.D. & Ginzburg L.R. 1999. **Conservation Biology with RAMAS EcoLab.** Sinauer.
- Stevens M.H.H. 2009. **A Primer of Ecology with R.** Springer.
- Vandermeer J.H. & Goldberg D.E. 2003. **Population Ecology: First principles.** Princeton.

Presentations

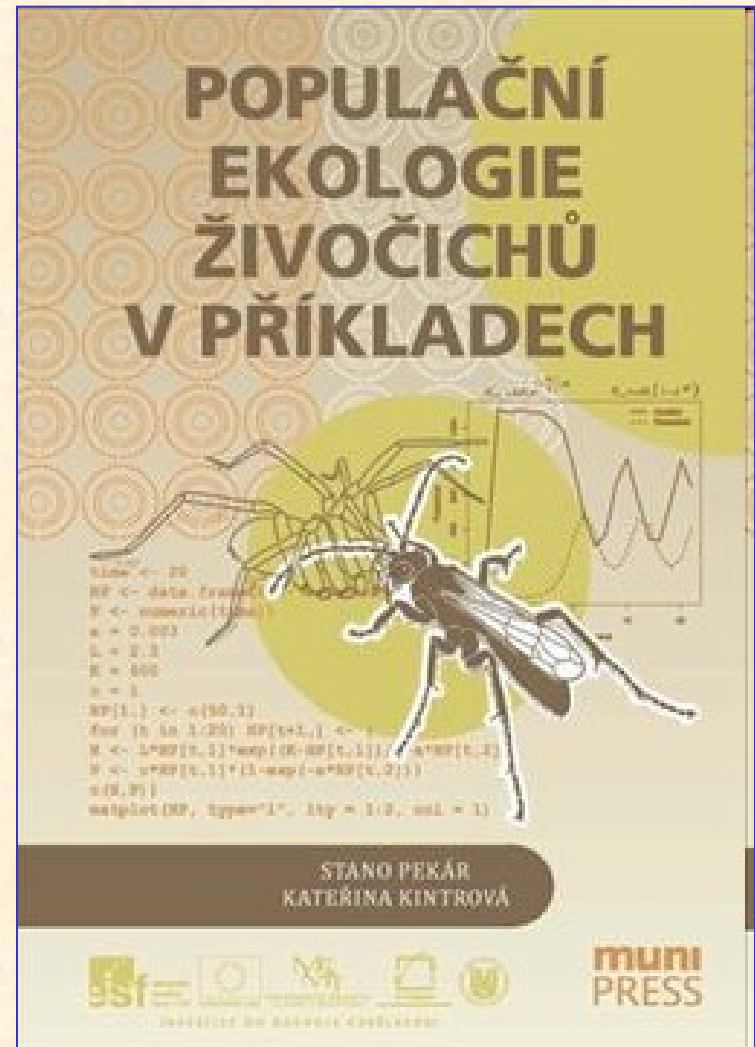
No.	Topics	Date
1.	Abundance and cycles	12.10.
2.	Geographic variability (temperature, physiological time)	19.10.
3.	Intraspecific competition, Cooperation, Allee effect	26.10.
4.	Management of endangered species, Regulation of pests	2.11.
5.	Dispersal, movement, dormancy, navigation, and migration	9.11.
6.	Interspecific competition, competitive exclusion principle, apparent competition	16.11.
7.	Niche and coexistence (storage effect, heteromyopy, resource partitioning)	23.11.
8.	Amensalism, comensalism, mutualism	30.11.
9.	Defence against predators (crypsis, mimicry)	7.12.
10.	True predators, parasitoids, and host manipulation	14.12.
11.	Herbivores, Parasites and pathogens	21.12.

Projects

1. Funkční odpověď
2. Vývoj v závislosti na teplotě
3. Populační dynamika

Homework

Study chapters 1 & 2 and the description of a selected project



Pekár S. & Kintrová K. 2013. **Populační ekologie živočichů v příkladech**. MU Brno.