Intermediate-level workshop (in person only)
Bayesian occupancy, N-mixture and population modelling using NIMBLE and JAGS

Instructors: Marc Kéry, Michael Schaub

Date: 22 – 26 June 2026

Venue: University of Debrecen, Debrecen, Hungary

Computers: Bring your own laptop with latest R, NIMBLE and JAGS

Registration: Reduced fees for master and PhD-students and for Central/Eastern European countries

Central/Eastern Europe: Student € 75; Regular € 150

Elsewhere: Student € 150; Regular € 300

We cover key models in the analysis of distribution, abundance and animal demography, as well as their spatial and temporal patterns, in a Bayesian analysis framework, following the book *"Bayesian population analysis using WinBUGS"* (Academic Press, 2012) in concept. We introduce Bayesian statistical inference and computation, and use the programs NIMBLE and JAGS, from R, to fit and understand some of the most widely used models for the analysis of animal and plant populations. Models and topics include:

- GLMs and generalized linear mixed models
- Site-occupancy models
- N-mixture models
- State-space models
- Cormack-Jolly-Seber models
- Multistate capture-recapture models
- Advanced use of NIMBLE (e.g. use of nimble functions, MCMC configuration)
- The joy of data simulation
- General integrated and integrated population models (IPMs)

In this intermediate-level workshop about 90% of the time is spent on lecturing and 10% on solving exercises. No previous experience with program NIMBLE or JAGS, or Bayesian statistics, is assumed. However, **a good working knowledge of modern regression methods (i.e. generalised linear models and some mixed modeling) and of program R** is required.

Please send your application to Michael Schaub (michael.schaub@vogelwarte.ch), with cc to Zoltán Németh (nemethzoltan@science.unideb.hu), describing your background and knowledge in statistical modelling, R and NIMBLE/JAGS, by **25 February 2026 at the latest**. Workshop invitations with practical information will be sent out immediately afterwards.