

The Warnell Continuing Education Program

Daniel B. Warnell School of Forestry and Natural Resources

Spatial Capture-Recapture Modeling

March 12-14, 2018

Instructors: Drs. Richard Chandler, Andy Royle, and Angela Fuller
Banff Center for Arts and Creativity, Banff, Canada



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SCHOOL OF FORESTRY AND NATURAL RESOURCES
THE UNIVERSITY OF GEORGIA

Overview

This course will introduce key models used in the analysis of spatially-explicit capture-recapture data, following closely material from the book “Spatial Capture-Recapture” (Elsevier, 2014). Participants will learn how to estimate population parameters and model spatial and temporal variation in density and vital rates using a variety of data types, including data from camera traps, hair snares, live traps, and mist-nets. Models to be covered include closed and open population models, models of landscape resistance, mark-resight models, and integrated population models. Software coverage will include the R package “oSCR” as well as JAGS and WinBUGS.

Who Will Benefit?

Research biologists interested in the analysis of capture-recapture data

Instructors

Richard Chandler (University of Georgia), Andy Royle (USGS Patuxent Wildlife Research Center), and Angela Fuller (USGS and Cornell University) have offered numerous spatial-capture recapture workshops and have published extensively in this field.

Computing

Participants must bring their own laptops with a recent version of R, WinBUGS and JAGS installed and functional .

Course requirements

This is an intermediate-level workshop with topical lectures followed by work sessions where we analyze data and solve exercises. Participants should have (1) good working knowledge of modern regression methods (regression, ANOVA, generalized linear models, random effects); (2) experience analyzing data in R; (3) familiarity with using WinBUGS or JAGS; and (4) knowledge of basic capture-recapture concepts and methods.

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Day	Session
Monday March 12	AM - Workshop introduction. Fitting non-spatial capture-recapture models with JAGS using the 'R2jags' and 'rjags' R packages.
	PM - General formulation of SCR models: basic models and their analysis in JAGS. Poisson and Bernoulli models for trapping arrays (camera traps, hair snares, etc.), multinomial encounter models.
Tuesday March 13	AM - Unmarked animals and mark-resight models.
	PM - Open population models and integrated population models
Wednesday March 14	AM - Likelihood analysis concepts. Using the 'oSCR' R package. Spatial modeling of density.
	PM - Modelling landscape connectivity and resource selection.

Hotel Accommodations

We have negotiated a reasonable hotel rate at the Banff Center (<https://www.banffcentre.ca/>).

Parking and Directions

The Banff Center is located at 107 Tunnel Mountain Dr, Banff, AB T1L 1H5, Canada. Please see their website for additional information: <https://www.banffcentre.ca/>.

Cancellations

In the event that you need to cancel, in order to receive a refund you must contact Ingvar Elle (706-583-0566 or ingvar@uga.edu) by March 1, 2018.

Special Needs

If you require special services or dietary considerations, contact Ingvar Elle at 706-583-0566 or e-mail him at ingvar@uga.edu prior to February 1, 2018.

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Registration Fee

USD\$600 (normal rate), USD\$450 (student rate), which includes breakfast, lunch, and refreshment breaks. The deadline for registration is Jan 31, 2018.

Register and Pay Online

<http://conted.warnell.uga.edu/courses/cap-recap2018>

Hard Copy Registration

We accept personal or company checks for payment if registering using the hard copy form below, in which case a check must accompany the form to guarantee your place in the course.

Registration Form

Name - please print

Preferred name for badge

Business mailing address or Home address (please check one)

City State Zip County, if Georgia

Home phone Work phone Fax

Email address Please send me e-mails about other Warnell Continuing Education programs.

Position Organization/employer

By registering for this event I agree to comply with all event and lodging cancellation policies.

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Normal Rate.....\$600.00 (USD)

Student Rate.....\$450.00 (USD)

Enclosed is a check # ____

(payable to Warnell School of Forestry and Natural Resources)

Your registration will not be processed until payment is received.

Mail Payment to: Attn: Ingvar Elle
Warnell School of Forestry & Natural Resources
The University of Georgia
Athens, Georgia 30602