The following supplement accompanies the article

Effects of marine reserves in the context of spatial and temporal variation: an analysis using Bayesian zero-inflated mixed models

Adam N. H. Smith[1,*], Marti J. Anderson[2], Russell B. Millar[3], Trevor J. Willis[4]

[1]Institute for Natural and Mathematical Sciences, Massey University Albany, Private Bag 102904, Auckland 0745, New Zealand
[2]New Zealand Institute for Advanced Study, Massey University Albany, Private Bag 102904, Auckland 0745, New Zealand
[3]Department of Statistics, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand
[4]Institute of Marine Sciences, School of Biological Sciences, University of Portsmouth, Ferry Road, Eastney, Portsmouth P04 9LY, UK

*Corresponding author: anhsmith@gmail.com

Marine Ecology Progress Series 499: 203–216 (2014)

Supplement. R and OpenBUGS code and datasets for fitting Bayesian zero-inflated mixed models to counts of sublegal- and legal-sized snapper from a marine reserve monitoring programme

File list

Snapper data.R
Initial values legal.R
Initial values sublegal.R
R script for legal snapper.R
R script for sublegal snapper.R

Description

This Supplement provides code and data for applying Bayesian zero-inflated negative binomial mixed models to counts of sublegal- and legal-sized snapper. Both the analysis and data are provided as R (R Development Core Team 2013) code. The R package R2OpenBUGS (Sturtz et al. 2005) and the OpenBUGS software (Lunn et al. 2009) must be installed for this code to work.

The key files here are the 2 R scripts, as they run the models by calling R2OpenBUGS from within R. The other 3 files contain data that are read by the R scripts.

LITERATURE CITED

Lunn D, Spiegelhalter D, Thomas A, Best N (2009) The BUGS project: evolution, critique and future directions. Stat Med 28:3049–3067 doi:10.1002/sim.3680

R Development Core Team (2013) R: a language and environment for statistical computing. R Foundation for Statistical Computing, Vienna

Sturtz S, Ligges U, Gelman A (2005) R2WinBUGS: a package for running WinBUGS from R. J Stat Softw 12:1–16