Michael R. Easterling, Stephen P. Ellner, and Philip M. Dixon. 2000. Size-specific sensitivity: applying a new structured population model. *Ecology* **81:694-708.**

Supplement

Source code for the integral projection model, sample data, and documentation.
Ecological Archives **E081-007-S1.**

[**Author**](#)
[**File list**](#)
[**Description**](#)

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File List

[matlabarchive.zip](#) -- archival version of Matlab source code, plus sample data.
[matlab.zip](#) -- matlab code for the integral projection model, plus sample data.
[rands.zip](#) -- S-Plus/R code for the integral projection model, plus sample data.

Description

The supplementary material consists of three WinZip archives containing source code for the integral projection model, sample data, and documentation.

1. [MatlabArchive.zip](#) contains an "archival" version of the Matlab code used to do the data analyses in the published paper. It is not intended for, or recommended for, use by anyone but the authors. Also please note that the code was developed incrementally in the process of writing the paper, and was modified as bugs were identified and new analyses needed to be done. The code here is a "snapshot" of our working code towards the later stages of the analysis.

2. [Matlab.zip](#) contains an "public" version of Matlab source code for the Integral

Projection model, with documentation and some sample data. It uses the same numerical methods as in the published paper, but has more flexibility in specifying the model and an attempt making the code user-friendly. This code requires the Matlab Spline toolbox if you want to use the option of fitting the model using splines.

3. `RandS.zip` contains a "public" version of S-Plus/R code for the Integral Projection model, with documentation and some sample data.

The Matlab code implements a numerically efficient method with Gauss-Legendre quadrature. The S-Plus/R code implements the numerically inefficient "big matrix" trick in which a fictitious matrix projection model is constructed such that conventional analysis of this projection model gives approximate numerical solutions to the integral model.

None of the code is compiled; you need Matlab to run the Matlab code, and R or S-Plus to run the S-Plus/R code. The advantage of R is that it is available for free, for UNIX and Windows platforms. The most reliable source is Statlib in the R archive, or use a Web search engine to locate a CRAN site near you (CRAN=Comprehensive R Archive Network). To run the code under R you will also need to install the R splines library.

All codes operate on data sets in a specific format, that is described in the Matlab code manual in `Matlab.zip`. `Testdata.txt` is a sample simulated data file in the proper format, and `monkdata` is a subset of the Monkshood data analyzed by Easterling et al (2000); both of these are in `Matlab.zip`.

This material was produced in December 1999. If that was a long time ago, you should probably see if there is a better version available by contacting one of the authors. For now you can reach us at:

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