

APPENDIX C

GENERAL READING LIST

The material below presents some guidelines helpful to biologists in getting into the literature. Because the levels of mathematics differ, we have coded the references, to help the reader. The codes are found to the left of each reference, and the code meanings are as follows.

| Code | Meaning |
|------|--|
| C | Conceptual or review paper |
| S | Specific methodology reported in paper |
| D | Difficult mathematics (relatively) |
| L | Little mathematics (relatively) |
| V | Various levels of mathematics |
| * | Good initial reading |

References to many specific methods derived under the closure assumption are contained in *Otis et al. (1978)*. At this time, no major synthesis has been published for the open-population models; therefore, we provide a number of state-of-the-art references for these models.

General Reviews

There is very little overlap of intent among the three references.

- CV Cormack, R. M., 1968, The statistics of capture-recapture methods, *Oceanogr. Mar. Biol. Annu. Rev.* 6, pp. 455-506. The first major synthesis and review of existing capture-recapture and removal methods. Several related methods are covered briefly. A readable introduction and critique of the literature that is still useful. Recommended reading.
- CV* Cormack, R. M., 1979, Models for capture-recapture studies, in R. M. Cormack, G. P. Patil, and D. S. Robson, eds., *Statistical ecology*, Vol. 5, Sampling biological populations, pp. 217-255, International Co-operative Publishing House, Fairland, Maryland. A somewhat more technical review of classes of models and approaches to capture-recapture problems. This is a different type of review from Cormack's 1968 paper, aimed at a slightly more sophisticated audience. Recommended reading.
- CV* Seber, G. A. F., 1982, *Estimation of animal abundance and related parameters* (2nd ed.), Griffin, London (in press). An in-depth summary of nearly all the literature on capture-recapture and removal methods is found in Chapters 3, 4, 5, 6, and 7 of this edition. Examples of many of the methods are given. Seber's book is certainly recommended reading.

Estimation Methods for Closed Populations

- SV* Otis, D. L., K. P. Burnham, G. C. White, and D. R. Anderson, 1978, *Statistical inference from capture data on closed animal populations*, *Wildl. Monogr.* 62, 135 pp.

Estimation Methods for Open Populations

- CL* Cormack, R. M., 1972, The logic of capture-recapture estimates, *Biometrics* 28(2), pp. 337-343.
- CL* Cormack, R. M., 1973, Commonsense estimates from capture-recapture studies, *in* M. S. Bartlett and R. W. Hiorns, eds, *The mathematical theory of the dynamics of biological populations*, Academic Press, London, pp. 225-234.
- SD Jolly, G. M., 1965, Explicit estimates from capture-recapture data with both death and immigration—stochastic model, *Biometrika* 52(1/2), pp. 225-247.
- SD Jolly, G. M., 1979, A unified approach to mark-recapture stochastic models, exemplified by a constant survival rate model, *in* R. M. Cormack, G. P. Patil, and D. S. Robson, eds., *Statistical ecology*, Vol. 5, *Sampling biological populations*, International Co-operative Publishing House, Fairland, Maryland, pp. 277 and 282.
- SL Manly, B. F. J., and M. J. Parr, 1968, A new method of estimating population size, survivorship, and birth rate from capture-recapture data, *Trans. Soc. Brit. Ent.* 18, pp. 81-89.
- SD Pollock, K. H., 1975, A K-sample tag-recapture model allowing for unequal survival and catchability: *Biometrika*, 62(4), pp. 577-584.
- CV* Pollock, K. H., 1978, Building models of capture-recapture experiments. *The Statistician* 25(4), pp. 253-259.

General Computer Program Packages

- SL Arnason, A. N., and L. Baniuk, 1978, POPAN-2: A data maintenance and analysis system for mark-recapture data, Charles Babbage Res. Cent., St. Pierre, Manitoba, Canada, 269 pp.
- SL White, G. C., K. P. Burnham, D. L. Otis, and D. R. Anderson, 1978, User's manual for program CAPTURE, Utah State University Press, 40 pp.

Related Reading

- SV Brownie, C., D. R. Anderson, K. P. Burnham, and D. S. Robson, 1978, Statistical inference from band recovery data, A handbook, U. S. Fish and Wildlife Service Resource Publication 131, 212 pp.
- SV Paulik, G. J., and D. S. Robson, 1969, Statistical calculations for change-in-ratio estimators of population parameters, *J. Wildl. Manage.* 33(1), pp. 1-27.
- SL Robson, D. S., and D. G. Chapman, 1961, Catch curves and mortality rates, *Trans. Am. Fish. Soc.* 90, pp. 181-189.
- SV Ricker, W. E., 1975, Computation and interpretation of biological statistics of fish populations, *Can. Fish. Mar. Serv. Bull.* 191, 382 pp.