
JING DING, Acadia University

Population Assessments by Using Age-at-harvest Data and Catch Effort

Age-at-harvest data and catch effort are readily available quantities in wildlife management. They provide essential information for modelling populations so as to reveal the situation of animals under exploitation. Three practicable methods are introduced. Downing (1980)'s reconstruction is a commonly used technique which uses backward addition through cohorts to reconstruct populations over time. A linear regression model incorporating catch effort, developed by Paloheimo (1980), is another applicable method. Stochastic catch effort method (Dupont, 1983) is the most advanced method since it requires weaker assumptions about the birth-death-capture process. Hazard models are assumed, and ordinary least-squares can be used for parameter estimation.