**Expected Improvements in Precision when Integrating Opportunistic Close-Kin Mark-Recapture Data into Fisheries Stock Assessments**

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Abstract

Introduction

Here I simply show what one should expect in terms of improvements in model performance if close-kin mark-recapture (CKMR) data is collected and integrated within the stock assessment

The precision of then normal CKMR estimator is reasonably standard, however the information it provides to fisheries assessment is a little more complicated given all of the different data sources.

We know it will depend on N.

Methods

I do not distinguish “juveniles” and “adults” as I am modeling an age structured population with proportional maturity at age. Thus any individual whose age difference with another (backdated to year of birth) places them in a potentially mature age (at the year of birth of younger individual) has the potential to be a parent of the individual.

Simulator

Here show how the data were simulated

Estimator

Here the CKMR equations in the assessment model.

Acknowledgements

References