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**Tag Recovery Studies of Southern Bluefin Tuna**

Southern bluefin tuna (SBT) are a large, highly migratory fish species that inhabits the temperate oceanic waters of the southern hemisphere. Tagging studies of SBT have been run intermittently since the 1960s and tens of thousands of juveniles have been tagged in the years since. Under approximately experimental conditions, mark-recapture models such as the Cormack-Jolly-Seber, can be used to estimate certain population parameters that are of interest to fisheries managers from recaptures of tagged fish. However, the vast majority of recaptured SBT are sourced from commercial fishers that harvest them at the time of first recapture, thus preventing multiple recaptures of individual fish. In this case, for basic mark-recapture designs, the biological parameters are completely confounded by unknown recapture probabilities. Another problem is that tagged fish sometimes shed their tags so that a proportion of recaptured fish are unobserved. The two most recent studies of SBT incorporated a "Brownie" design that aims to address this parameter confounding issue allowing estimation of survival rates. All tagged fish were 'double tagged' which provides information that potentially allows tag shedding to be estimated. I will provide some background information on southern bluefin tuna and the fisheries that harvest the species. I will then describe the elegant Brownie tag recovery model. Finally I will briefly describe some of my own work fitting parametric and semiparametric Bayesian models to the double tag recoveries to model tag shedding.