

ABSTRACT

The yellow perch (Perca flavescens) fishery in the Les Cheneaux Islands, which supports the tourism-based economy of the area, was reputed by local residents to have declined. Complaints about the fishery prompted this study. The purpose was to estimate catch, mortality, exploitation, and growth statistics from a creel census and tagging study. These estimates were compared to estimates from previous years and were applied in a fishery simulation model to predict changes in the fishery produced by 7- to 8-inch minimum size limits (MSL). From the creel census, the best estimate for yellow perch catch in 1986 was approximately 438,000 fish. For an estimated 142,000 trips, anglers fished slightly over 400,000 total hours. The summer fishery accounted for 89% of the total perch catch. Counts of boats made from an airplane were on average 2.5 times greater than counts made from the ground, and were used to construct best estimates of catch and effort. Estimates of growth, age structure, and mortality rate for perch were constant over time, indicating that the population has remained stable since sampling began in 1969. In addition, creel census estimates provided little indication of trends in perch catch. Simulation of the perch fishery predicted that yields (in weight) would only increase slightly (2-3%) under 7- and 8-inch MSL's relative to the 1986 fishery.

Number of older perch (age 5+) was predicted to increase substantially (7-54%). Commercial fishing in 1986 accounted for only a small proportion of the predicted total catch in numbers (4%) and yield (6%). Relative importance of the commercial fishery was predicted to increase with increasing MSL, but catch in numbers and yield would still comprise less than 10% of the total.