Comparative analysis of sampling methods to develop habitat-use models of fish productivity in the littoral zone of reservoirs. \*N.A. Satre, G. Bourque and D. Boisclair, Université de Montréal, Département de sciences biologiques (nathan.satre@umontreal.ca; presentation).

Presently, government and industry are seeking clear definitions and effective means of measuring and predicting production metrics of fish habitat. In response, a portion of this project aims to develop habitat-use models of fish productivity that will identify what sampling method or combination of methods may be best to estimate/predict metrics of production. With this charge, a project was developed on the Lac du Bonnet reservoir situated in southeastern Manitoba. In our first sampling season, forty-three sampling locations were established and sampled with seine, gillnets, and boat electrofishing in order to obtain a representative sample of the littoral fish community. In addition, a survey describing local habitat variables was conducted in all sampling locations. Simultaneous with fish sampling, environmental conditions were recorded as these variables, along with those associated with habitat may hold some degree of explanatory value. As a result of the collected data, preliminary results indicate that seining yields the greatest average of species richness per site and greatest average CPUE in abundance. In addition, this method also yields the greatest average CPUE in biomass when sampling methods are expressed in the same units. Preliminary analyses of local habitat data suggest two major habitat types across the system, which may interestingly correlate with fetch. These initial findings seem to suggest that seining is most representative of the littoral fish community and may be best suited for model development. These results will be used to effectively focus our sampling effort during the 2013 field season, which is expected to be conducted during hours of darkness.