**Ecomorphological Diversification of Neotropical Cichlids**

**Viviana Astudillo-Clavijo, Hernan Lopez-Fernandez** UofT

Neotropical (South and Central America) rivers harbor some of the most diverse families of freshwater fishes in the world. Of these, the Neotropical cichlids (Cichlidae) are the third most diverse family, with over 600 described species. What are the evolutionary processes responsible for generating such diversity? Cichlidae represents an ancient continent wide adaptive radiation in which the diversification of habitat use and associated phenotypes may have been important dimensions of diversification. We measured postcranial morphological traits with known implications for swimming performance (i.e. locomotor traits) and habitat variables for various Cichlidae species. We used multivariate ordination techniques and models of phenotypic evolution to investigate geophagine ecomorphological diversity and to test whether patterns of diversification conform to those of an adaptive radiation. Results show that the evolution of locomotor traits has indeed been an important dimension of phenotypic divergence during the geophagine adaptive radiation and that this is liekly related to habitat divergence patterns.