**The Use of Great Lakes Islands by Migrating Bats**

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Flight gives bats the potential to travel long distances, but relatively little is known about this phenomenon and few data are available on point-to-point movements. Three North American bat species appear to make large seasonal migrations and seven of the eight species of bats occurring in Ontario may show some type of migratory behaviour. It is thought that bats migrating across the Great Lakes select routes to minimise the distance travelled over open water, and Long Point (Lake Erie) is known to have high migratory activity of bats. I am testing this idea by examining activity of migratory bats at two islands in the Great Lakes, Amherst in Lake Ontario and Pelee in Lake Erie, which represent alternative crossing routes.   
I deployed 11 detectors across the islands in 2013, to monitor bat presence and activity by recording their echolocation calls. This produced more than 700gb of audio data that I am currently analysing this data to test for the presence of migratory bats. In 2014 I am expanding data collection by adding bat detectors at mainland sites, to compare activity at sites that are not linked to the short crossing distance. This design also allows me to compare between islands to examine whether the characteristics of the two islands are relevant. Data are analysed using automated detection to identify calls, and a discriminant function analysis to distinguish different species. Identifying important migratory sites for bats is valuable for their conservation, particularly given identified conflicts between migratory bats and wind-power development.