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ACOUSTIC HYDROPHONE (*ICLISTEN*) DEPLOYED ON AN ATLANTIC STURGEON (*ACIPENSER OXYRINCHUS OXYRINCHUS*) TO MEASURE HABITAT SPECIFIC NOISE IN THE MINAS BASIN, NOVA SCOTIA

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Electronic tags attached to marine mammals and fish have been developed to sample temperature, pressure (depth), and provide location information. Currently, no tag contains a built-in broadband acoustic hydrophone. In this project, as a proof of concept, a full-size high frequency acoustic hydrophone (*icListen*) was attached to an Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) to measure ambient noise from the Minas Basin, Nova Scotia. The front end of the *icListen* hydrophone was secured to the Atlantic sturgeon through use of a Velcro strap that went around its abdomen, behind the pectoral fins. A line of dissolving suture thread, which passed through a dorsal scute, secured the back end of the *icListen* to the fish. Approximately eight hours of acoustic data was collected by the *icListen* hydrophone during its deployment. Ambient noise was recorded, including boat engine noise, shrimp snapping, wave noise, harbour porpoise clicks and signals from acoustic tags implanted in other fish. Harbour porpoise (*Phocoena phocoena*) clicks were recorded by the *icListen* during two separate interactions, both indicating a possible attempt at communication with an acoustic tag. A VR100 active tracking unit, used to follow the Atlantic sturgeon bioprobe, also identified the IDs of ten uniquely coded acoustic tags in the area of the boat search. Five were from Atlantic sturgeon tagged between 2010 and 2012, and the five others were from striped bass (*Morone saxatilis*) tagged in 2012. The VR100 also provided a time and location for detections and recorded pressure (depth) readings from some tags. An estimated 445 untagged Atlantic sturgeon may have been present in the area of the boat search, off Kingsport, Nova Scotia.



Laura Logan-Chesney graduated from Bishop's College School in Sherbrooke, Quebec in 2008. She is currently completing her Honours thesis in her fourth year of Biology at Acadia. In her first two years at Acadia, she was a member of the Acadia Varsity Swim Team and received the distinction of Academic All-Canadian in both years. In her last two years she played for the Acadia Women's Field Hockey Team. She was the recipient of an Acadia Entrance Scholarship, the Constance I. McFarlane Book Prize in Marine Biology and the Wanda Langley Award. Working in the field on Atlantic sturgeon with the Coastal Ecology Lab was a highlight of her university experience. Laura hopes to remain at Acadia for a Masters degree to study another large pelagic fish, the Atlantic bluefin tuna (*Thunnus thynnus*).

