Katie Guttenplan (Resume)
WHOI-Duke Fellowship Program
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This past summer, I had the opportunity to work on bioacoustics research with Dr. Laela Sayigh through the WHOI-Duke Fellowship program that will contribute towards my Master's research. For my Masters, I am investigating the potential masking of sounds that are biologically relevant to cetaceans by shipping noise. This summer I collected and analyzed data utilizing DMON devices in Wellfleet Harbor (see figure 1 for study site). I will determine the percentage of time that ships are present in the harbor and the parameters of shipping noise to better understand the potential impacts on cetacean species (see figure 2 for example of analysis).

In addition to my Master's research, I assisted Dr. Sayigh with the creation of an early detection system for Wellfleet Harbor that is intended to help understand and prevent mass strandings of dolphins that are common in the harbor. I analyzed various dolphin whistles collected by NMFS in Stellwagon Bank to inform the programming of the DMON devices to be used in the early detection system. Dr. Sayigh will also be utilizing any relevant shipping noise data from my Master's project to determine if the presence of shipping noise could interfere with the success of the early detection system.

I gained useful skills working with both Raven and Adobe Audition software, not to mention the invaluable experience of working closely with Dr. Sayigh. I was given many opportunities to enhance my problem solving skills and pursue interesting lines of inquiry. I thoroughly enjoyed the atmosphere at WHOI and the chance to interact with so many skilled scientists. I especially appreciated the various weekly seminars hosted by WHOI and the Marine Mammal Center interest group meeting.

I am thankful for the wonderful opportunity to work at this world-renowned institution with such well-respected individuals and would highly recommend the WHOI-Duke Fellowship to MEMs. In particular, I think those involved in the CEM program should consider program.

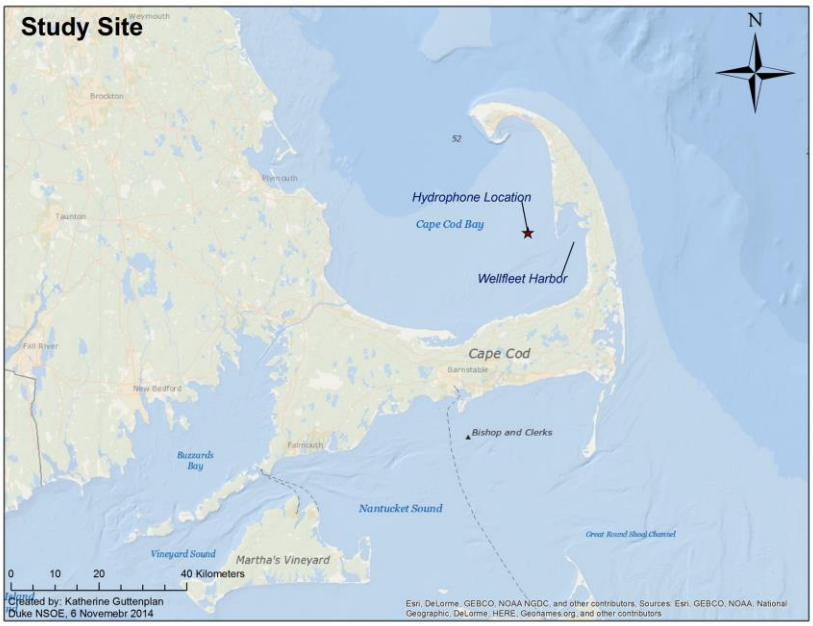

Figure 1: Study Site at Wellfleet Harbor, MA. Hydrophone location indicates the place where the DMON device was placed for passive acoustic monitoring of harbor. Acoustic data collected by the device is currently being analyzed for shipping noise presence and parameters.

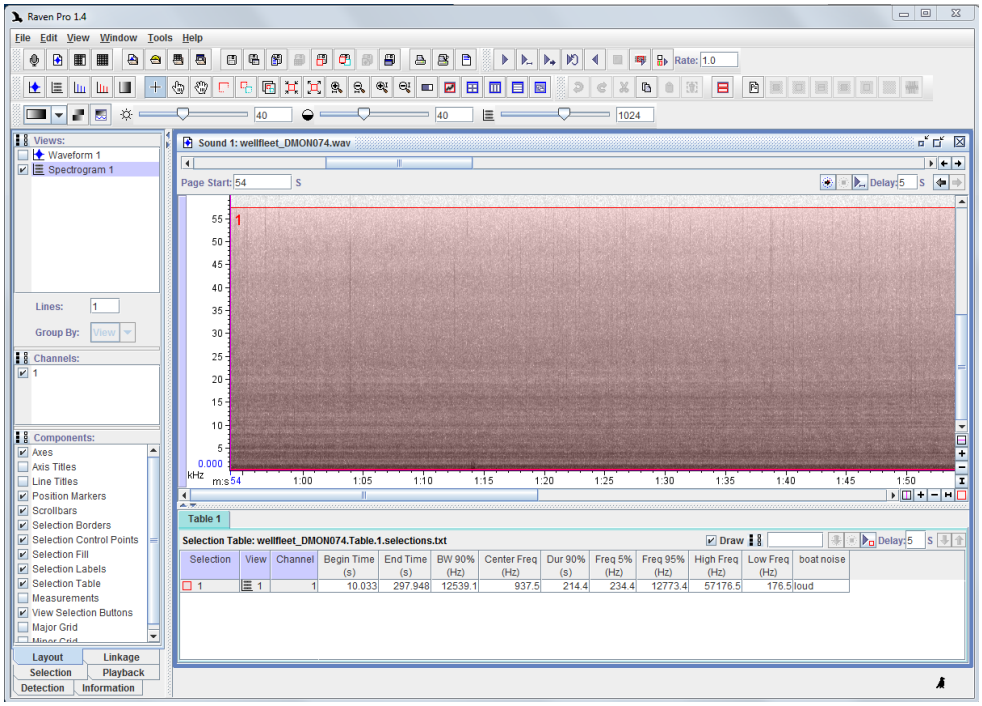

Figure 2: Example of analysis of shipping noise in Raven software © Cornell Lab of Ornithology. An example of shipping noise has been selected and the desired parameters for the selection are depicted in the table. This particular ship was detected later in the summer.