Aimee Boucher
WHOI-Duke Fellowship
Summer 2013

This summer I was privileged to work under Dr. Aran Mooney and Dr. Laela Sayigh, analyzing acoustic data for the Cape Wind Project, a proposed wind farm in Nantucket Sound. Through this fellowship I was able to learn about the research utilizing passive acoustic monitoring (PAM) and how to analyze the data once it is collected from the field. The data was collected using DSG recorders (i.e. hydrophones) which collected all the sounds in the vicinity of the recorders. Once collected, I examined the data to get a better understanding of both the biological and anthropogenic sounds in Nantucket Sound. In particular, I focused my efforts to identify possible seasonal and diel vocalizations of cusk eels, which is one of the most predominant biological sounds in the area. *Figure 1* depicts the seasonal variation of cusk eels that were processed and examined through an acoustical program, XBAT.

This was truly a great experience, introducing me to the world of marine bioacoustics while providing me the opportunity to work in a world-class institutional research setting. It was inspiring to be around the most talented scientists in the world! Through the summer, I learned a lot more than beyond the activities which my internship entailed. The fellowship also helped me to develop an idea of what I want to do and where I want to be in the future.

WHOI provided a great atmosphere where a young researcher can develop their own project while assisting with the ongoing experiments that flourish throughout the Institution. It was incredibly enriching to be able to learn about many aspects of the lab and work with different people who were carrying out projects different from mine. In the course of the summer, I gained a variety of skills – from bioacoustics to animal husbandry, as well as interpersonal office skills – by working in both independent and dependent settings. I was challenged to develop my problem-solving skills, and strengthened my confidence in myself. Overall, this fellowship was both enriching and challenging and I believe I am a better person for it!

I greatly appreciate the guidance, patience and confidence of both Dr. Mooney and Dr. Sayigh and would strongly recommend the WHOI-Duke Fellowship to anyone at the Duke MEM program!

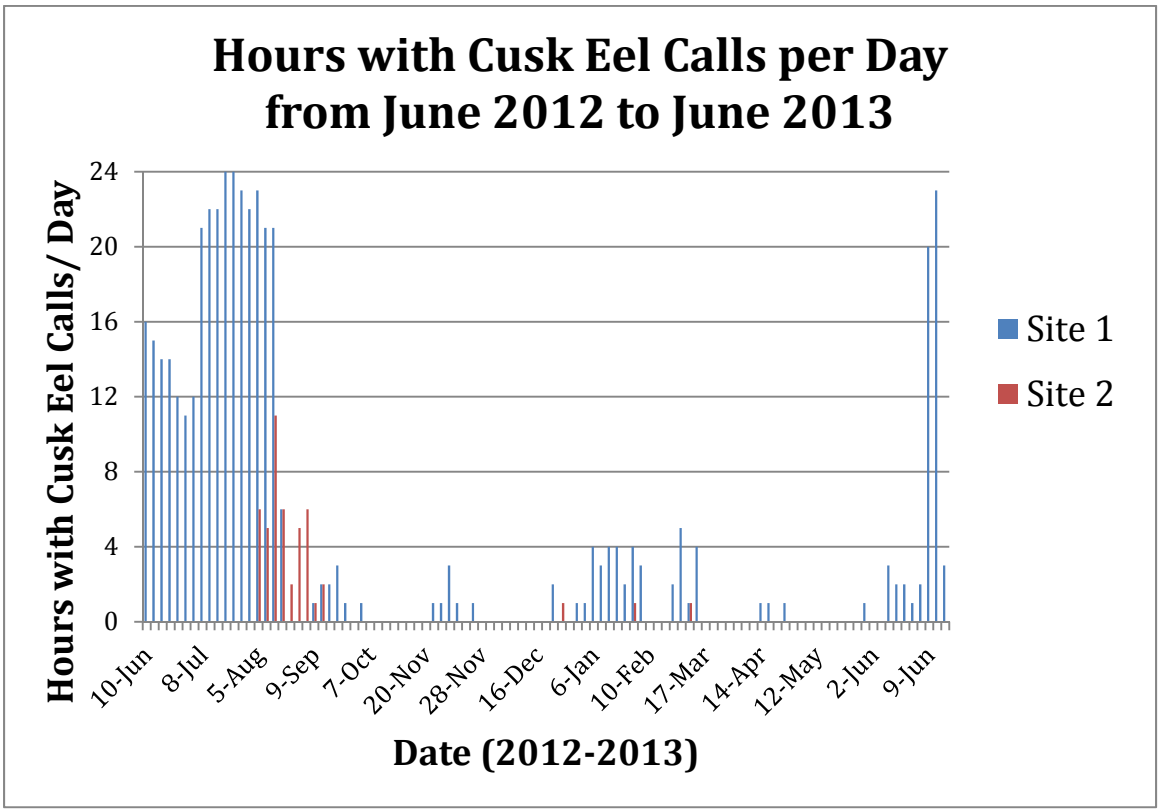

Figure 1, this shows how many hours during a 24-hour period during which Cusk-eel calls were registered from June 10, 2012 to June 11, 2013 for Site 1, and from August 5, 2012 to February 16, 2013 for Site 2. Site 1 is located in proximity of the proposed wind farm in Horseshoe Shoal, Nantucket Sound, MA. Site 2 is a control located near Monomoy, MA. (n = 101 days for Site 1, n = 47 days for Site 2).