Seals of NYC: Challenges to Communication and Survivorship

Authors: Wendy Ochoa[1,3], Catherine Payne[1,3], Kristy L. Biolsi[1,3], Kevin L. Woo[2,3]

[1]Department of Psychology, St. Francis College, 180 Remsen St., Brooklyn, NY 11201
[2]Metropolitan Center, SUNY Empire State College, 325 Hudson St., New York, NY 10013-1005
[3]Center for the Study of Pinniped Ecology & Cognition, St. Francis College, 180 Remsen St., Brooklyn, NY 11201

Additional Contact Details:
Wendy Ochoa: w.ochoa@aol.com
Catherine Payne: catiewithac333@gmail.com
Kristy Biolsi (Faculty Mentor): kbiolsi@sfc.edu; 718-489-5415
Kevin Woo (Faculty Mentor): Kevin.Woo@esc.edu; 646.230.1262

Presentation Type: Oral presentation

Abstract:

Anthropogenic activities transformed the urban environment and species that wish to live in these areas must adapt to local challenges. We aim to examine the annual changes in wintering populations of seals (Phocidae), and to consider the impacts of anthropogenic activities, particularly the production of environmental noise, on their behavior and their willingness to use NYC as a stable location. First, we established a self-report survey in which people were asked about their knowledge of local fauna, particularly marine mammals, which may be found in NYC. Consequently, we conducted naturalistic observations of seals over the last five years in select NYC locations to record demographic information, identification, conspecific interactions, and responses to anthropogenic activity. In addition to in situ observation, we conducted experiments in the laboratory to test a comparative pinniped's cognition and sensory perception. Psychophysical tests allow us to ask our subjects about how they perceive the sensory world in their ability to respond by discriminating between sensory stimuli. Here, we can mimic the conditions of the natural environment, and selectively isolate important signals for communication against elements of noise. By pairing both naturalistic observations and controlled laboratory tests, we are able to build a more complete picture of how seals may actually negotiate the challenges of a noisy habitat, particularly an urban environment. Moreover, this is important for understanding the overall health of our local ecosystem.