Arctic waters are difficult to study because they are remote, covered by sea ice for part of the year, and have little or no daylight during the winter months. These difficulties are pronounced for studies of habitat selection for marine mammals, such as ice-associated seals, that spend significant amounts of time under sea ice. Although satellite-linked transmitters are an effective tool for documenting seal movements and dive patterns, understanding habitat selection also requires knowledge of the ocean environment. Oceanographic moorings collect data year-round, but only near the mooring site. Ship-based oceanographic surveys cover larger areas, but are expensive, may not overlap with seal movements, and are typically limited to summer. A potential solution to the limitations of moored and ship-based sampling platforms is to have seals sample their oceanographic environment. In 2016, Conductivity-Temperature-Depth (CTD) tags made by the Sea Mammal Research Unit of St. Andrews, Scotland, were deployed on two ringed (*Pusa hispida*), three bearded (*Erignathus barbatus*), and nine spotted seals (*Phoca largha*) at six locations in Alaska. Seals were tagged by local seal hunters trained in seal capture, handling, and tagging. Tagged seals remained within the Bering, Chukchi, and Beaufort seas mostly in waters less than 200 m deep. Profiles from the CTD tags identified water masses and oceanographic properties at places and times of year where few data have been collected. With these data we can begin to understand if seals target particular water masses, fronts, or stratified layers which may help aggregate prey. By combining CTD data from several seal tracks within the same region during the same time of year we can also map water masses over large areas. Examples of seal-sampled areas include 1) Chukchi Sea shelf break north of Wrangel Island, 2) Barrow Canyon, 3) Bering Strait, and 4) Bering Sea shelf (under ice).

// 2017: A Marine Mammal Odyssey, Eh!

ABSTRACT BOOK

Main Conference // October 22-27, 2017
Workshops // October 28-29, 2017

World Trade and Convention Centre
Halifax, Nova Scotia, Canada

The Society for Marine Mammalogy's
22nd Biennial Conference on the
Biology of Marine Mammals

Photo: © Damian Lidgard