Bering Sea & Aleutian Islands – Marine Mammals

Movements and Foraging Behavior of Northern Fur Seal Pups (*Callorhinus Ursinus*) From the Commander Islands during Their First Winter at Sea

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High mortality rates of pups during their first winter at sea may be contributing to the decline of northern fur seals on the Pribilof Islands, but due to their highly dispersed migratory nature, little is known about individuals during this life stage. In contrast, the northern fur seal population on the Commander Islands has been stable over the last decade. Dive behavior and movements were hypothesized to be similar for pups from both populations, but differences could explain whether Commander Island pups increase their survival by using different foraging tactics or exhibiting different habitat preferences. Satellite-linked stomach temperature telemetry was used to track 35 pups from Bering Island, Russia beginning 30 October 2007. A total of 17 males and 18 females were instrumented with Mk10-AL satellite tags and stomach temperature pills to determine movements, and diving and foraging behavior. Habitat associations were determined using GIS data of bathymetry, geostrophic currents, sea surface temperature and sea surface height anomalies, and chlorophyll a concentrations. Individuals began to leave Bering Island by 2 November, and by 22 November only one pup remained on the island. Most individuals traveled south, although one traveled north, five traveled east, and six traveled west towards the Kamchatka Peninsula before heading south, where they encountered a cyclonic, cold-core eddy along the coast. The mean dive depth and dive duration was 3.4 m and 20 seconds, respectively, with the deepest and longest dives occurring between 16:00 - 10:00 local time, suggesting that most searching behavior occurred during the dark hours. Ingestion events also occurred most frequently during the night at a mean depth of 4 m. The dive behavior and wide ranging movements were similar to pups from the Pribilof Islands during the first three weeks at sea, but differences may occur as winter progresses and pups increase their foraging skills. Behavioral differences may subsequently affect pup survival rates and partially explain the divergent population trends.

Student Presentation