

*POSTER Session: Steller Sea Lion: Factors Affecting the Population
Diseases, Parasites and Contaminants*

Population Survey of Organochlorine Contaminant Exposure in Steller Sea Lions

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Scats (feces) from Steller sea lions (*Eumetopias jubatus*) were collected on 21 rookeries over 4 years (1998-2001) to assess exposure of selected organochlorine (OC) contaminants (e.g., dioxin-like PCBs, DDTs) in the thriving eastern stock in Southeast Alaska/British Columbia (SE) as compared to the depleted western stock in Gulf of Alaska (GOA) and eastern Aleutian Islands (EAI). Concentrations of OCs in scats were used as a semi-quantitative indicator of recent exposure. Levels of OCs in scat reflect excretion of PCBs congeners in addition to recent dietary intake and thus were not used to estimate individual congeners in body depot stores. We found that OCs are present in the food web used by Steller sea lions in Alaska, as far west as the EAI. The rank order of mean OC concentrations in SSL scats was EAI > SE > GOA. The levels of OCs in scats from SE, which is the population that has increased in recent years, was intermediate in concentration compared to the two populations from the western stock. On the other hand, the relatively high PCB levels for the EAI, in comparison to the nearby GOA, are of interest as populations in both areas have decline by >80%. These data suggest that exposure to the OCs is elevated in portions of the range of the declining western stock of Steller sea lions. These findings also show that scat can be used a non-invasive indicator of contaminant exposure. Additional work is needed to determine the degree to which levels of OCs in scat can be used to estimate body burdens/tissue concentrations of OCs.

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