liver follows a hyperbolic decay function in ringed and bearded seals, while no significant relationship was established for spotted seals. In bearded seals, %MeHg decreases to a minimum and remains constant with increasing age. In ringed seals, %MeHg increases at approximately the same age fish becomes a dominant prey item. This relationship is overshadowed in piscivore spotted seals and implies that tissue %MeHg is strongly dependent on fish consumption. Results indicate that Cd concentrations are associated with invertebrate prey. Renal Cd concentration shows a peak followed by decreasing concentrations with increasing age for ringed and bearded seals. Dietary change from invertebrates to fish in older ringed seals could account for the decreasing trend, however, no dietary change was noted in bearded seals that would explain the observed pattern. Cd in spotted seals accumulates to constant levels with age but only young animals were available Thus, this relationship could be age related as the bias is toward young animals, but could also be associated to the low importance of invertebrates in their diet.

## Age and Diet Related Distribution of Heavy Metals in Renal and Hepatic Tissue of Ringed, Bearded and Spotted Seals Harvested in Alaska

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Ringed (*Phoca hispida*), bearded (*Erignathus barbatus*) and spotted (*Phoca largha*) seals were sampled during native subsistence harvests in northern Alaska. Liver and kidney were analyzed for Cd, Ag, Cu, Zn, total Hg (THg) and monomethyl Hg (MeHg). Age and diet were determined by cementum annuli in teeth and from stomach contents, respectively. Crustaceans, octopus and echiurids were identified from more than 60% of bearded seal stomachs. Ringed seal diet was dominated by krill in younger animals (5.3 years average), while cod becomes more important with age (8.2 years average). Spotted seals prey mainly on herring and cod. Age was correlated to Cd in liver and kidney and THg in liver in all three seals species. MeHg expressed as a percentage of THg (%MeHg) with age in

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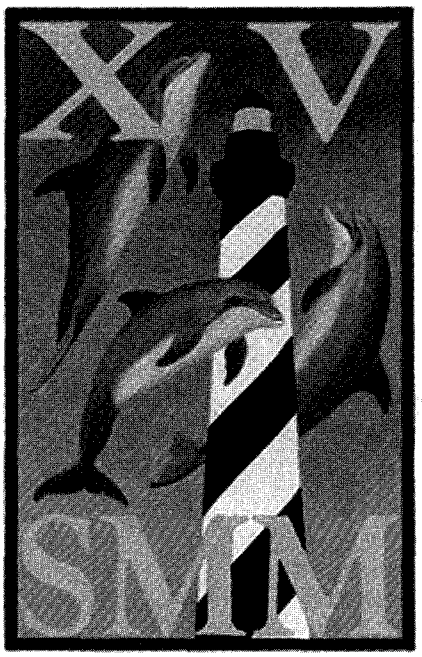


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