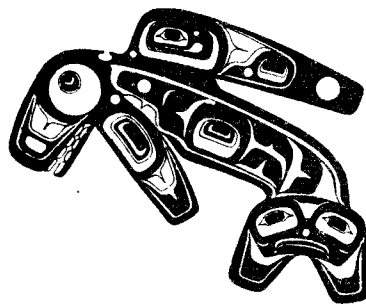


RINGED SEALS IN THE ALASKAN BEAUFORT SEA: FEEDING PATTERNS, TROPHIC RELATIONSHIPS AND POSSIBLE EFFECTS OF OFFSHORE PETROLEUM DEVELOPMENT. Kathryn J. Frost\*, Lloyd F. Lowry and John J. Burns, Alaska Department of Fish and Game, Fairbanks, Alaska 99701

Feeding of ringed seals (Phoca hispida) from the Beaufort Sea was investigated, based on 203 animals, mainly from near Pt. Barrow and Prudhoe Bay. Feeding of bearded seals (Erignathus barbatus) and bowhead whales (Baleana mysticetus) was investigated less intensively. Ringed seals fed mainly on arctic cod (Boreogadus saida) from November to March, and on nektonic crustaceans (euphausiids, hyperiid amphipods and mysids) in summer. Distribution of prey appeared to be patchy in both winter and summer. The bowhead whales examined fed on copepods, euphausiids and amphipods. Bearded seals had eaten a variety of benthic organisms (mostly crabs and shrimps) and arctic cod. The ringed seals compete with other seals, bowhead whales, seabirds and fishes for food. They are fed on by polar bears (Ursus maritimus), arctic foxes (Alopex lagopus) and people. Information on natural history and hydrocarbon sensitivity of key seal foods is inadequate to predict the possible trophic effects of petroleum spills. Probable adverse impacts of accidents which might occur during proposed OCS development are discussed.

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