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Polar Bear Predation on Ice Inhabiting Pinniped Populations of Alaska

At sea, polar bears, *Ursus maritimus*, feed primarily on ice inhabiting pinnipeds, particularly ringed seals, *Phoca hispida*, but polar bear food chain relationships are relatively unknown. In March 1976, the Alaska Department of Fish and Game, in collaboration with the Fish and Wildlife Service, began intensive studies of polar bear predation as part of continuing research on the natural history and ecology of ice inhabiting seals. Preliminary findings are presented.

During spring 1976, field studies were conducted at Cape Lisburne and Barrow, Alaska, where polar bears were tracked for approximately 4,000 bear miles. The diet of polar bears in the spring consisted of 92% ringed seal and 5% bearded seal (*Erignathus barbatus*). Carrion, cannibalism, arctic fox (*Alopex lagopus*) and walrus (*Odobenus rosmarus*) comprised the remainder of the diet.

Primarily male ringed seals are taken. The amount of prey consumed is dependent upon the number and size of bears and the age of prey. Most prey are taken at breathing holes in the ice. Polar bear movements and population size appear directly dependent on ringed seal populations. The sex and age composition of ringed seals taken by bears are compared to the take by Eskimo subsistence hunters.

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