Send correspondence to:

Victor G. Barnes, Jr.
Alaska Science Center
U.S. National Biological Survey
1390 Buskin River Road
Kodiak, Alaska 99615
Phone: 907-487-2600
Fax: 907-487-2144

BROWN BEAR ABUNDANCE AND POPULATION TREND MONITORING ON KODIAK ISLAND, ALASKA

Victor G. Barnes, Jr., U.S. National Biological Survey, 1390 Buskin River Road, Kodiak, Alaska 99615

Roger B. Smith, Alaska Department of Fish and Game, 211 Mission Road, Kodiak, Alaska 99615

Abstract: During the period 1987-1994 we used capture-mark-resight (CMR) methodology and intensive aerial survey (IAS) to estimate population size and composition of brown bears (Ursus arctos middendorffi) on Kodiak Island and to acquire baseline data for measuring population trend. CMR density estimates were obtained on 3 study areas; density ranged from 216-234/1000 km^2 for independent bears and 292-342/1000 km^2 for all animals (including offspring). Rates that bears were observed during IAS (1.5-2.1 min/km^2) were determined for the 3 CMR areas and 3 areas where marked bears were not present. Mean observation rate of independent bears ranged from 3.0-4.6/hr and 7.5-12.0/100 km^2 on CMR areas and from 1.6-5.4/hr and 5.1-18.0/100 km^2 on other study sites. Bear densities on various geographic units of Kodiak Island were determined by extrapolation from CMR and IAS data. Population estimates for independent and total bears on Kodiak Island were 1739 and 2451. These estimates have been utilized in habitat protection planning and to determine sport harvest rates. The CMR and IAS procedures offer alternative means, depending on management objective and available resources, of measuring population trend of brown bears on Kodiak Island.

ABSTRACTS

Tenth International Conference on Bear Research and Management

© Joan Skidmore

Fairbanks, Alaska
July 16-20, 1995