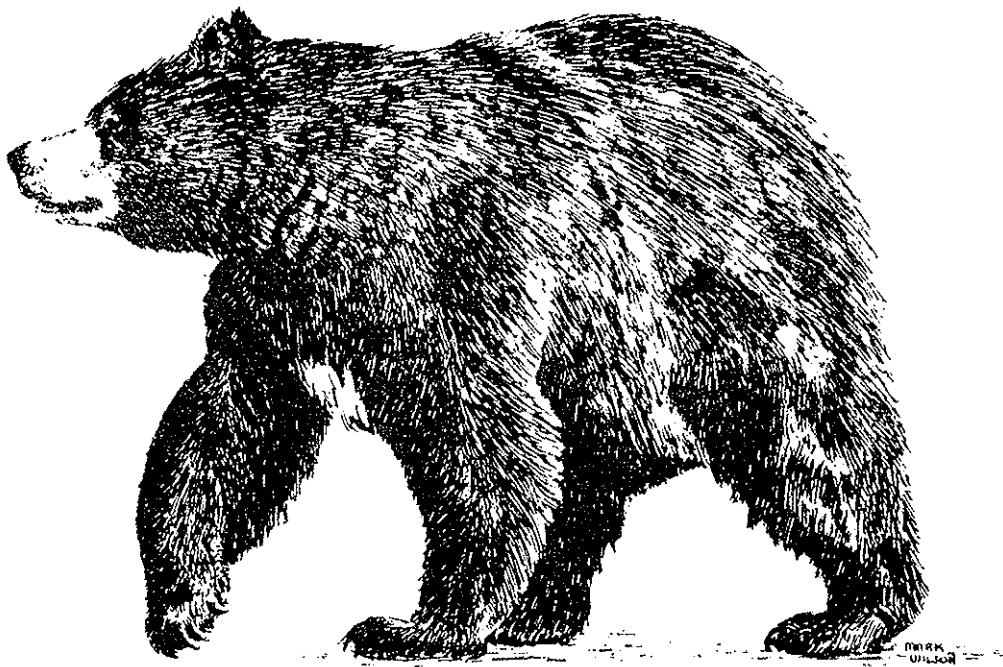


*3<sup>rd</sup> Western*

*BLACK BEAR  
WORKSHOP*

*2-3 April, 1985*



*Sheraton Hotel, Missoula, Montana*

SCHEDULE OF EVENTS

Tuesday, April 2

- 8:00 - 9:00 a.m. Registration (\$10.00)
- 9:00 - 9:45 a.m. Opening Comments: Harry Carriles, Chairman  
Mike Pelton, IBA  
Charles Jonkel, IUCN Bear Specialist Group
- 9:45 - 10:00 a.m. Coffee
- 10:00 - Noon Workshop: Population Modeling  
Chairman - Lee Metzgar, Wildlife Biology Program  
University of Montana, Missoula  
Bob Klaver, Bureau of Indian Affairs,  
Flathead Agency, Pablo, Montana  
Jon Swenson, Montana Department of Fish,  
Wildlife and Parks, Livingston.  
Rich Harris, Montana Cooperative Wildlife  
Research Unit, University of Montana, Missoula
- Noon - 1 p.m. Lunch
- 1:00 - 3:00 p.m. Workshop: The Media  
Chairman - Mike Aderhold, Montana Department of Fish,  
Wildlife and Parks, Kalispell  
Cheryl Mollohan, Arizona Game and Fish  
Department, Phoenix  
Gerry Brown, Montana Department of Fish,  
Wildlife and Parks, Libby  
Wayne Kasworm, Montana Department of Fish,  
Wildlife and Parks, Libby
- 3:00 - 3:15 p.m. Coffee
- 3:15 - 5:15 p.m. Workshop: Management  
Chairman - John Beecham, Idaho Fish and Game, Boise  
Jon Swenson, Montana Department of Fish,  
Wildlife and Parks, Livingston  
Al LeCount, Arizona Game and Fish Department,  
Phoenix
- \*7:00 - 10:00 p.m. Hands-on Computer Workshop: Investigate Population Dynamics  
Lee Metzgar, Bob Klaver, Mark Haroldson, Randy Matchett
- 6:00 - University of Montana Wildlife Club - Wild Game Feast,  
Orchard Homes Country Life Club (\$4.50)



Abstracts of Formal Presentations

1:00 p.m. BLACK BEAR RESEARCH AND MANAGEMENT RELATIVE TO "OTHER BEARS"

JONKEL, Charles, Chairman, IUCN Bear Specialist Group, 1196 Gland,  
Switzerland

Abstract:

In total numbers and the quality of their range, American black bears rank as the most secure of the 8 bear species of the world. An intense management and research focus has been maintained as a result of their combined game species and nuisance status, and the availability of funds and trained staffs. The giant panda, restricted to only 3 small, isolated ranges, is likely the most threatened bear. The spectacled bear of South America continues to be under intense pressure from agricultural and forestry practices. The Malayan sun bear, and to a lesser extent the sloth bear, face rapidly increasing habitat losses. The Asiatic black bear and the brown bears of the world are relatively secure in terms of numbers and range, but both face losses in habitat quality and local ranges. The polar bear seems stable, but its total range is restricted and has declined slightly in the past century. In all cases, expanding human populations cause the declining bear populations, ranges, and habitat quality. Sustained development may be the single option open to long-term population maintenance. Although local black bear population and range problems require attention, management and research problems and needs are far more intense for the other 7 bear species. Black bear management agencies should consider aiding research and management efforts for the other bear species within their black bear programs.

1:20 p.m. AGE STRUCTURE AND HARVEST OF BLACK BEAR IN NORTHWEST MONTANA

KASWORM, Wayne, Montana Department of Fish, Wildlife and Parks,  
Rt. 1, Box 1455, Libby, Montana 59923  
BROWN, Gerald, Montana Department of Fish, Wildlife and Parks,  
Rt. 2, Box 438, Libby, Montana 59923

Abstract:

Black bear age-sex information from harvest and live capture samples was collected in 1983-1984 and the data compared between two areas in Northwestern Montana with dissimilar hunting seasons. Previous age-sex data (1976-1982) from harvest samples were analyzed to determine changes in mean age and subadult/adult ratios through several years. Black bear density and population estimates for the study area were derived from observations of marked and unmarked bears during September (1983 and 1984) helicopter surveys of upper-elevation shrub fields. Observed densities ranged from one bear/800 acres to one bear/1,563 acres and a density of one bear/260 acres was calculated from a Lincoln-Peterson population estimate of 768 bears over the 200,000 acre study area. Allowable harvest was calculated for each hunting district based on estimated densities and a 10 percent harvest rate.

1:40 p.m. BLACK BEAR/GRIZZLY (BROWN) BEAR HABITAT AND RANGE RELATIONSHIPS  
AND CONSIDERATIONS

JONKEL, Charles, University of Montana Border Grizzly Project,  
Missoula, Montana 59812  
CARRILES, Harry, University of Montana Border Grizzly Project,  
Missoula, Montana 59812

Abstract:

Where black bear and grizzly bear ranges coincide, food habits, habitat use, and behaviors overlap, but to unknown degrees and probably in yet unknown ways. Under certain circumstances, inter-specific competition for as yet unmeasured and identified habitat and food resources appear to result in segregation of the two species, and strife or mutual exclusion, or both, may result. An established high density of each species may result in inhibitions to the survival of young, population recovery, or immigration of the other species. The implications to grizzly recovery and management show possible serious problems which must be addressed. Research needs require simultaneous grizzly and black bear research.

2:00 p.m. IMPORTANCE OF TALL FORBS FOR FOOD AND HABITAT OF THE JAPANESE  
BLACK BEAR

MIZUNO, Akinori, Hakusan Nature Conservation Center, Kinameri,  
Yoshinodani, Ishikawa 920-23, Japan

Abstract:

High densities of the Japanese black bear are seen in the region of Mount Hakusan. It is located on the Japan Sea side of Honshu Island, and is a heavy snow area. The main food items of the bears in this area are the shoots of tall forbs or the flowers of beech trees (*Fagus crenata*) in spring, and the seeds of beech or oak (*Quercus* spp.) in autumn. Though the bears take many kinds of food in summer, tall herbs are very important in Hakusan. Fibers and thick stems of the succulent herbs are frequently found in the feces of the bears in this season. Included are *Angelica pubescens* (Umbelliferae), *Symplocarpus renifolius* (Araceae), *Cardiocrinum cordatum* (Liliaceae) and others. On the steep mountains in snowy areas, tall herbs are widely spread, but they cannot be found on the Pacific Ocean side of Japan where the snow is shallow and the ground is dry in winter.

Black bears strip the bark from acerose trees, especially from planted cedar trees on the Pacific Ocean side of central Japan. This is a considerable disturbance to forestry in those areas. Bear control actions are prevalent because of the tree damage; as a result, bear populations are decreasing or becoming extinct in some areas. The stripping of bark is not common in snowy areas such as Hakusan Mountain and there the bear populations are stable. The difference in bark stripping rates between snowy and non-snowy areas may relate to differences in the biomass of edible herbs during spring and summer. Bears strip the planted cedar trees mainly in early summer when the bears are at their thinnest, but it also may be that the cambium layer is most succulent then.

As abundant forbs are not a climax vegetation in the Japanese temperate zone, seral stands, or semi-natural areas, form the best bear habitat. Because tall forbs are very important in bear diets, vegetation diversity should be maintained in bear habitat.

2:20 p.m. Coffee

2:40 p.m. THE NEUROBIOLOGY AND PHARMACOLOGY OF SERNYLAN, A REVIEW

POND, Daniel B., Montana Cooperative Wildlife Research Unit,  
University of Montana, Missoula

Abstract:

In light of recent assertions that Sernylan (PCP, phencyclidine) may cause recurrent toxic episodes in bears, the neurobiological and pharmacological effects of this drug are discussed. Literature on the effects of Sernylan in bears is lacking, however, numerous studies have found the actions of Sernylan to be complex and the effects dependent upon the species and dose. No indications of behavior analogous to psychotic aggression in humans were seen in the animal models.

3:00 p.m. BLACK BEAR RESEARCH AND MANAGEMENT IN MEXICO

DOAN Mtz., Diana L. University of Montana Border Grizzly Project,  
Missoula 59812  
TREVINO, Ing. José, Secretaría de Desarrollo Urbano y Ecología,  
Chihuahua, Chihuahua, México  
CASTRO A., Ing. Gildardo, Secretaría de Desarrollo Urbano y Ecología,  
Monterrey, Nuevo León, México

Abstract:

Both public and government agency attitudes towards black bears in Mexico indicate a general low interest. This situation has been persistent, and both black bear research and management have lagged as a consequence. Preliminary studies recently conducted by Fauna Silvestre in Nuevo Leon in 1983 were inconclusive, but combined with earlier preliminary work in Chihuahua provide a data base on which future studies can be designed. Bear sign and sightings from the Nuevo Leon study did conclude that the population may be declining. Scat analysis showed that vegetation was the primary food. Data on actual numbers and on habitat trends are not available. A continued low level of funding because of devaluation, and the few trained personnel available, also contribute to the problem. Because of such limitations within Mexico, outside help may be needed, along with the cooperation of various private Mexican conservation organizations. This paper shows that the continued existence of the black bear in Mexico may be dependent upon combined efforts in research, improved management, educational programs on bears, and perhaps even political influence. Better management will not follow from research data bases alone. Research proposed includes new studies in the Sierra del Nido, and a continuation of the Nuevo Leon work.

3:20 p.m.

EFFECTS OF HUNTING ON BLACK BEARS IN SOUTHWESTERN MONTANA

SWENSON, Jon E., Montana Department of Fish, Wildlife and Parks,  
1001 Ridgeway Drive, Livingston, Montana 59047

Abstract:

Harvest statistics for black bears (*Ursus americanus*) from the statewide hunter survey for 1971-80 were analyzed for two adjacent areas of southwestern Montana. Black bears appeared to have been over-exploited in the Yellowstone area but not in the northern area. Analysis of the ages of hunter-killed bears supported the conclusion of over-harvest in the Yellowstone area. Hunter-killed black bears were significantly younger in the Yellowstone area than in the northern area ( $P = 0.05$ ). The mean age declined 2.1 years ( $P < 0.05$ ) from 1976-81 to 1982-84 in the Yellowstone area, but only 0.1 year ( $P > 0.90$ ) in the northern area. Females occurred in the harvest more frequently in August-20 October (49%) than in April-July (29%,  $P < 0.025$ ) or 21 October-November (9%,  $P < 0.005$ ). Results of live-trapping black bears in Mill Creek, in the Yellowstone area, also suggested over-exploitation, because 53% of the trapped bears ( $N = 15$ ) were  $\leq 3$  years old and the annual exploitation rate was estimated at 19%. Marked black bears were very visible to the public in Mill Creek. This study shows that hunter survey data are adequate to identify areas where black bears are being over-exploited and that a hunting season from 1 April to 25 November is inadequate to prevent over-exploitation of black bears in some areas of southwestern Montana, even with no baiting, no hunting with dogs, and protection provided to cubs and sows with cubs. A new season has been initiated in the Yellowstone area (15 April-15 June, ca. 20 October-25 November) which should reduce the total bear harvest by about 48%, should reduce the female harvest by about 66%, and should change the proportion of females in the harvest from 30% to 19%.