

HISTORICAL AND PRESENT STATUS OF THE ASIATIC BLACK BEAR IN NORTHEAST CHINA

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Abstract: I review the past and present status of the Asiatic black bear (*Selenarctos thibetanus*) in Northeast China, their change in number and geographical distribution, and the cause of those changes. This paper also introduces the practice of breeding bears in captivity in northeast China.

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There are 3 species of bears in China; the brown bear (*Ursus arctos*), the Panda (*Ailuropoda melanoleuca*), and the Asiatic black bear. Four subspecies of the Asiatic black bear occur in China: the Tibet subspecies (*Selenarctos thibetanus thibetanus*), the Si Chuan subspecies (*Selenarctos thibetanus mupinensis*), the Taiwan subspecies (*Selenarctos thibetanus formosanus*), and the north-east subspecies (*Selenarctos thibetanus ussuricus*) which is the only subspecies of bear in northeastern China. This subspecies occurred from the mouth of the Usuri River to the Dongling in He Bei Province of China, although it may now be extirpated from He Bei.

We have often found fossils of bears among the ruins of the Stone Age that attest to a close relationship between bears and humans. The bear was hunted by early man. *The Book of Mencius* (Mencius 1988) from the beginning of "The Spring and Autumn Period" (770–475 B.C.) says "Fish is my favorite food, so is bear's paw. If I don't get both of them, I lose the fish and take the bear's paw." The bear's paw was a good and famous food even at that early period.

There are modern studies and records of the Asiatic black bear (Sowerby 1923, Loukashkin 1936, Institute of Animal Academy of China 1958, Yiqing 1981). Information about hibernation, food, and the behavior of bears has previously been published (Wu Jayan 1983, Xu Li 1992, Hu Jinchu 1990). This paper describes the past and present distribution, number, and status of the Asiatic black bear and the cause of demographic changes.

HISTORICAL STATUS OF THE ASIATIC BLACK BEAR

Bear Fossils

Bears in China have been hunted by humans since the Stone Age. Fossils of bears were found in the ancient Men' Ruins in northeast China. Even though these fossils are not all of black bears, they reflect relationships

between bears and humans, and may suggest that man is part of the cause of a reduction in bear numbers.

Hunting Bears

Due to demand for bear gall bladders for medicine and paws for eating, the bear has been hunted since the beginning of ancient times. In more recent history, records document about 295 bears killed from 1932 to 1939 in northeast China.

Distribution

Fossils of brown bear were found in An Tu county of Ji Lin province, fossils of Asiatic black bears were found in Xio Gushan of Hai Cheng in Liao Ning province, and fossils of bear (*Ursus* sp.) were found in Gu Xian Tun of Harbin, Gulong Shan of Da Lian, and in Hailar of Nei Mongol province (Fig. 1).

From the records of annals, Asiatic black bears are found in the following counties: Jin Xian, Guang Niang, Gai Ping, Kai Yuan, Liao Yang, Fen Huang Cheng, Tie Lling, Jin Zhou, Chang Chu, An Tu, Hui Nan, Fusong, Ji An, Ning An, Yin Shou, Bin Xian, Fang Zheng, Shuang Cheng, Mu Lan, Tang Yuan, Luo Bei, Ai Hun, Hu Ma Hua Chuan, Ba Yan, Bao Qing, and Yi Lang (Fig. 2). From this information, we know that the northern boundary of the historical distribution of the Asiatic black bear is Hu Ma County at about 53°N and the southern boundary was at the Gulongshan of Da Llin at about 39°41' N.

PRESENT STATUS

Distribution

Today the Asiatic black bear is mainly distributed in the conifer forest in the cold and temperate zones of northeast China. The main areas are the Chang Bai, Zhang Guangcai, Lao Ye, and Lesser Xingan Mountains. According to this survey, only 5 counties have Asiatic black bears in Laioning province: Xin Bin, Huan Ren, Ben Xi,

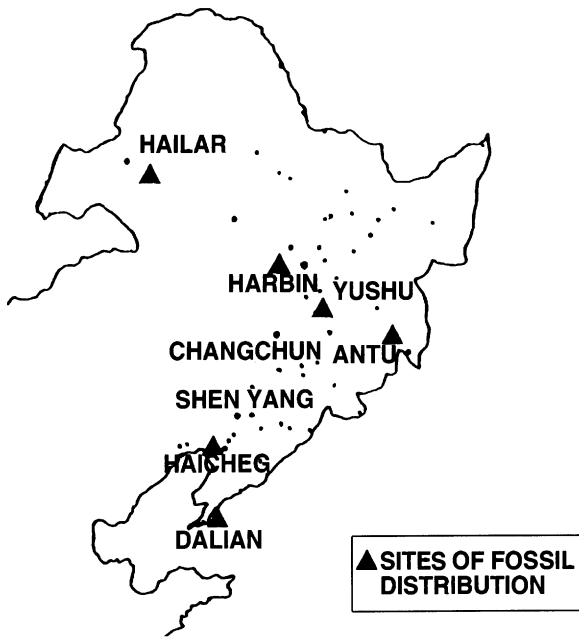


Fig. 1. Bear's fossil distribution for China in late Pleistocene.

Kuan Dian, and Fen Cheng with a total population of only about 100 animals. Asiatic black bears are also distributed in Jin Lin province, mainly in the counties of Hu Chu, Dun Hua, Wan Qing, An Tu, Chang Bai, Fu Song, Jiao He, Hua Dian, Pan Shi, and Shu Lan. In Heilongjiang province, Asiatic black bears are found in the following

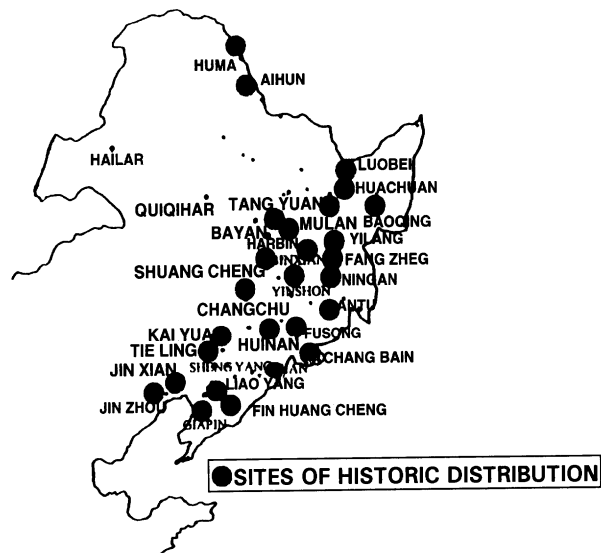


Fig. 2. Historic Asiatic black bear distribution by counties' annals in China before 1936.

counties: Ning An, Ba Yan, Wu Chag, Tong He, Bao Qing, Fu Yaun, Yin Chun, Tao Shan, Lan Xiang Tie Li, Sun Wu, Ai Hui, De Du, Bei An, and Nen Jiang (Fig. 3). The northern boundary of the population is at about 50° N and the southern boundary in Feng Cheng is about 40°30" N.

The largest areas of bear range are in the Song Hua Jiang and Yi Chung areas in Heilongjiang Province. Bear fur purchases from Heilongjiang from 1971 to 1980 suggest distribution trends (Table 1). The most productive year was 1974 at 16%, then 1975 at 14.1% and 1978 at 11.8%. From 1971 to 1974 the percent of fur from Heilongjiang increased, and then decreased from 1975 to 1980. While there is fluctuation, the overall trend is towards decreasing numbers.

We also analyzed bear hunting from the above data. The highest percentage of bears were taken from the Shong Huajiang area (36.7%); the Yi Chung area was second with 28.4% and the Mudan Jiang area was next (15.8%, Table 2).

Captive Breeding

The great demand for bear gall bladder in Chinese medicine has led to captive bear breeding farms. From an incomplete survey, I estimated there were between 3,000 and 7,000 bears in bear farms in China in 1990. About 100 breeding farms in northeastern China had ap-

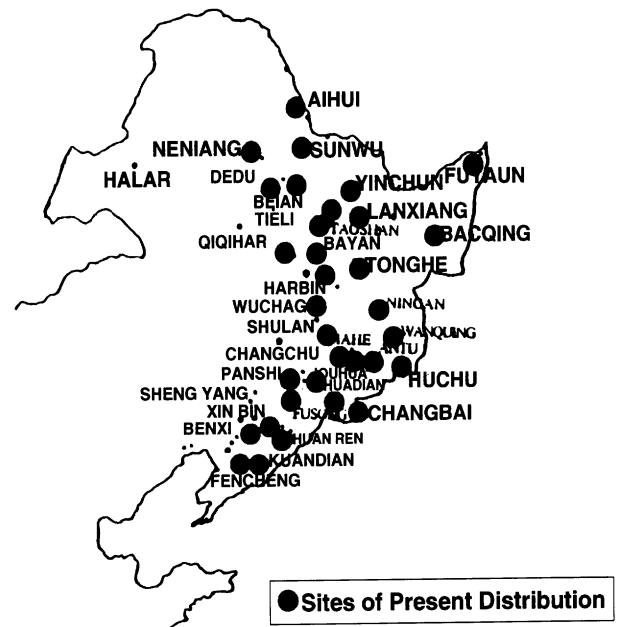


Fig. 3. Present distribution of the Asiatic black bear in China, 1992.

Table 1. Percent Asiatic black bear furs purchased in Heilongang Province, China, from 1971 to 1980.

Year	%
1971	5.8
1972	6.6
1973	8.0
1974	16.0
1975	14.1
1976	10.8
1977	8.7
1978	11.8
1979	9.4
1980	8.8

Table 2. Percent of bear fur purchases taken by hunting, 1971–80.

Region	Number of furs purchased	%
Mudan Jiang	872	15.8
He Jiang	568	10.3
Yi Chung	1,567	28.4
Da Xing Anling	178	3.2
Shong Huajang	2,025	36.7
Hei He	302	5.5
Total	5,512	

proximately 1,600 bears. According to this survey, there were 13 farms in Ji Lin Province breeding 263 bears.

Bears in bear farms are usually held in metal cages, 1.5 x 2.0 x 1.5 m, made of iron bars 1.5–2.0 cm diameter. The cage is used for controlling the bear and drawing bile very easily. Due to limited space, this cage allows for little movement and leads to increased disease, poor development, deformity, and reproduction is negatively affected.

The captive bear breeding program for drawing bile is experimental, and I believe its success will greatly reduce the killing of wild bears. However, this program requires that the bears pay some costs and make sacrifices. I think we will welcome this work for medicine in the future. The Chinese captive bear breeding program is currently increasing.

SUMMARY

The Asiatic black bear is a big animal which has been hunted by people since the Stone Age. Many bears were eliminated through hunting. Furthermore, the great forests were cut and the bears' environment changed in such a way that elimination from a given area was accelerated.

Bears were killed by people. Some hunters killed >30 bears a year in the 1930s. In the 1970s and 1980s about 500 bears were killed in Heilongjiang Province; 600 bears were killed in one year in northeast China. The great forests were cut and the bear lost its natural habitat leaving the bear no choice but to change its habit of living in the forest. For example, we found 10 bears in a marsh in May 1984. These family groups were living in the Hong He Natural Reserve. This change in habitat use was important for the bears. Even though they are able to survive in the new environment, they need to be surveyed in these areas.

The captive bear breeding farms appear to bring about a new lease on life for bear reproduction. If we are able to successfully produce many more bears through captive breeding, the bears' numbers in captivity would increase rapidly. We are currently studying breeding management, reproduction and disease prevention. This is the most efficient means for raising the number of captive bears.

The geographical distribution of wild bears has greatly decreased due to changes in the environment and the high numbers of bears killed. The distribution of the bear at the northern boundary has decreased from 53°N to 50°N. The southern boundary of bear distribution has decreased from 0.5°N to 1°N.

I recommend the following: 1) protect bears by law, 2) establish a bear reserve, and 3) study Asiatic black bears to continue promoting high reproduction in captive breeding programs to reduce the useless death of wild bears.

LITERATURE CITED

- INSTITUTE OF ANIMAL ACADEMY OF CHINA. 1958. Pages 40–41 in *A report on the mammals of northeast China*. Science Press, China. (In Chinese.)
- JAYAN, W. 1983. Tentative surveying of black bear's foods in Qinling Mountain. *Chinese J. Zool.* 4:8. (In Chinese.)
- JINCHU, H. 1990. Ecologic study on black bear's look for food in Tangjach Reserve. *J. Sichuan Normal College.* 11:1. (In Chinese.)
- LI, X. 1992. Preliminary study on dens of bears in southern Lesser Xinganlin Mountain. *Chinese Wildl.* 3:26–28. (In Chinese.)
- LOUKASHKIN, A.S. 1936. The fauna of wild mammals in Manchuria. *Inst. Econ. Surv. North Manchuria.* 51–63.
- MENCIUS. 1988. *The book of Mencius*. Shang Hai Ancient Book Press, Shang Hai, China. 89pp. (In Chinese.)
- SOWERBY, A.D. 1923. *The naturalist in Manchuria, Vol. II, mammals*. Tientsin Press, Tientsin, China. 191pp.
- YIQING, M. 1981. Bear distribution in China. *Acta Theriologica Sinica.* 1(2):137–144. (In Chinese with English summary.)