

# Understanding Asian Bears to Secure Their Future

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# Chapter 5

## The Status and Conservation of Bears in Myanmar

Htun Saw

Myanmar Program, Wildlife Conservation Society

Two bear species, Asiatic black bear (*Ursus thibetanus*) and the Malayan sun bear (*Ursus malayanus*), occur in Myanmar. Ecology and threats to both bear species are little known due to limited research and surveys in Myanmar. Gaps in knowledge on bear ecology, threats and population trends are the main variables determining effective bear conservation (Servheen 1999). This report will fill some of these gaps and identify priorities for future research and surveys. This report integrated literature reviews, analyses of field data, field reports, personal field notes and personal communications. The available information is also extracted from (1) tiger camera trap surveys at 17 sites across the country during 1998 and 2002, (2) additional tiger camera trap surveys and other biological and socioeconomic surveys in Hukaung Tiger Reserve between 2002 to 2004, (3) biological and socioeconomic surveys in the Naungmung area in 2003, (4) biological and socioeconomic surveys in Hkakaborazi National Park in 2004, and (5) biological and socioeconomic surveys in Hponkanrazi Wildlife Sanctuary in 2005.

### Status

#### Present distribution

The approximate distribution of both bear species as indicated by camera trap surveys is shown in Fig.5.1. The map should be treated with caution because most camera trap surveys were intended to identify tiger presence (i.e., they may have limited applications to illustrating geographic distributions of bears), and because the frequency and intensity of camera trap surveys were concentrated in northern Myanmar (Hukaung Tiger Reserve, Hponkanrazi Wildlife Sanctuary, Hkakaborazi National Park and the Naungmung area), so other parts of Myanmar may have been under-sampled. In addition, the camera trap surveys covered only a small portion of eastern Myanmar; lack of data there does not discount the presence of either bear species in eastern regions. However, occurrence records from camera trap surveys (Fig.5.1) provide, baseline information on the distribution of both bear species, overlap with protected areas, and overlap with each other.

Camera-trap data suggests that Asiatic black bears are concentrated in forested hills and mountains below alpine elevations, whereas Malayan sun bears are found at lower elevations. The very scant information on elevational distribution available from camera trapping is that Asiatic black bears were documented at 2,041-2,566 m ( $n = 3$ ) and Malayan sun bears at 951 and 2,131 m ( $n = 2$ ).

#### Population estimation

It is difficult to estimate the population of either bear species, even in surveyed areas. However, indices such as relative abundance from each survey site can provide

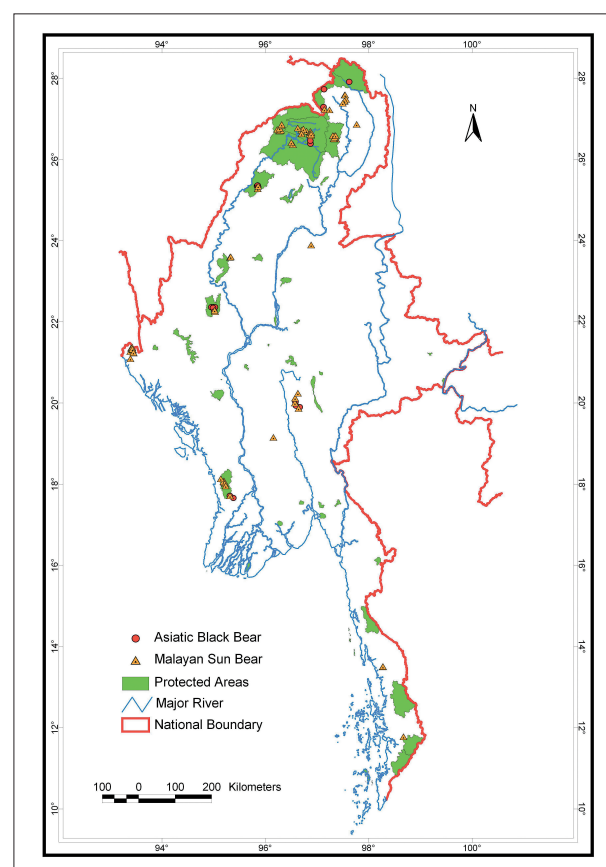


Fig.5.1: Distribution of Asiatic black bear and Malayan sun bear in Myanmar (Based on results of camera trap surveys from 1998 to 2005).

some information on relative status. Fig.5.2 shows the relative abundance of species captured in camera trap surveys in Hponkanrazi Wildlife Sanctuary in 2005 (Wildlife Conservation Society (Myanmar Program) 2005).

### Threats to bear populations

In northern Myanmar, bear hunting is one of the main threats to both species. Prior to the 1990s, local ethnic people practiced subsistence hunting to meet their basic needs. However, it is now difficult to distinguish between subsistence and commercial hunting in most areas. Many local people think of hunting as one of their major income sources because they can easily sell products from hunted animals to outsiders. Additionally, increased accessibility to the Chinese market has accelerated hunting. Fig.5.3 illustrates wildlife trade routes from northern Myanmar to China. Fig.5.4 generated from survey data in Hkakaborazi National Park in 2004, provides median prices of wild animals in local

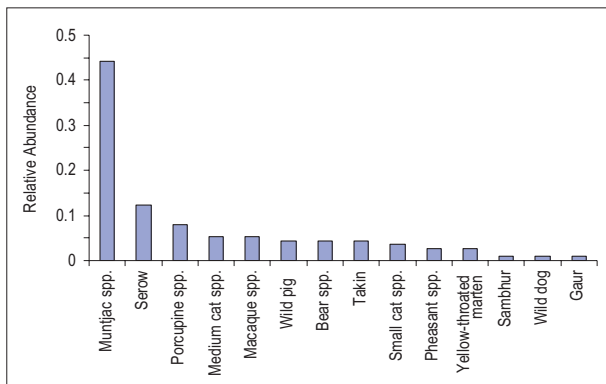


Fig.5.2: Relative abundance of species in camera trap surveys in Hponkanrazi Wildlife Sanctuary.

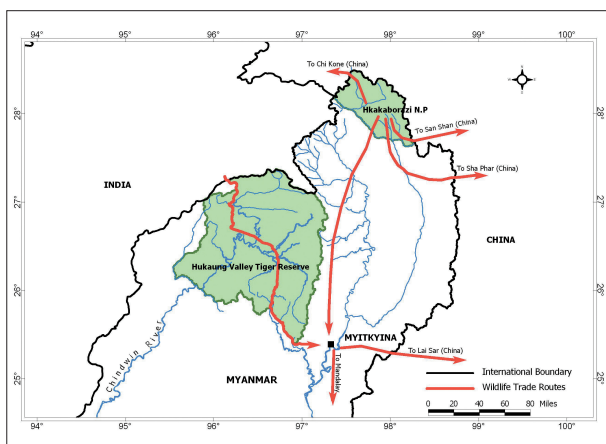


Fig.5.3: Wildlife trade routes from Northern Myanmar to China.

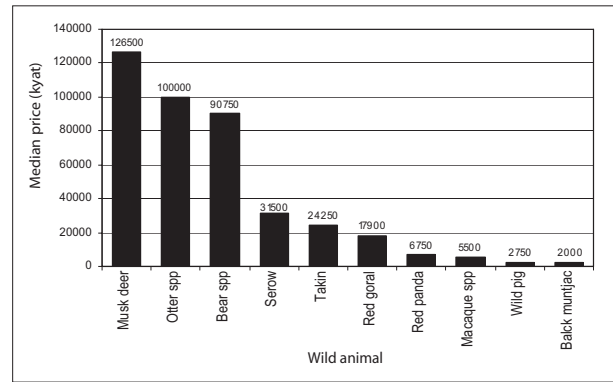


Fig.5.4: Market median prices of wild animal recorded in surveys in Hkakaborazi National Park (1US\$=900kyat).

markets. The hierarchy of market prices of different wildlife indicate the degree of vulnerability to hunting. Information received from interviewing village residents on socioeconomic issues also supports these calculations, suggesting that musk deer (*Moschus* spp.) and otters (*Lutra* spp.) have become very rare in Hkakaborazi area. Following this trend, the bear species are increasingly targeted by commercial hunters in the northern parts of Myanmar.

### Characteristics of habitat

Both bear species have been documented in the following ecoregions defined by WWF (Wikramanayake et al. 2002): (1) Northern triangle temperate forest, (2) Northern sub-tropical forest, (3) Mizoram-Manipur Kachin rain forest, (4) Irrawaddy moist deciduous forest, (5) Myanmar coastal rain forest, (6) Kayah-Kayin montane rain forest, and (7) Tenasserim - south Thailand semi-evergreen forest.

Within Northern triangle temperate and Northern sub-tropical forests, both bear species have been documented in habitat types: (1) sub-alpine conifer forest, (2) rhododendron forest, (3) montane wet temperate forest, and (4) subtropical lowland forest in northern Myanmar. Whereas Asiatic black bears have been documented most often in sub-alpine conifer, rhododendron, and montane wet temperate forests, Malayan sun bears were documented most often in subtropical lowland forest.

### Habitat threats

Habitat threats for both bear species differ by location. In Myanmar, the deforestation rate (percent of total land area) was more than 0.6 % in 1990 (FAO 1995) and 1.39 % in 2000 (World Bank 2004). Most bear habitats have been converted into permanent agricultural lands. Particularly, significant habitat conversion can be



observed where development is accelerated due to population growth and economic growth. Another habitat threat is fragmentation. Some areas are heavily fragmented due to contiguous permanent agricultural lands, human settlements and road construction. The remaining, small fragments of habitat can no longer support viable populations of either bear species.

## Human-bear relationships

### *Local names of bears*

In the Myanmar language, Asiatic black bears are called Myin-wun, meaning “horse bear” indicating it as the relatively bigger and stronger species, whereas Malayan sun bears are named Khway-wun meaning “dog bear” for the smaller species. Whereas Rawang and Lisu are the predominant ethnic groups in Hkakaborazi National Park and Hponkanrazi Wildlife Sanctuary, Kachin, Naga and Lisu groups are the majority in the Hukaung Tiger Reserve. Because most ethnic groups use different dialects, there are a wide variety of names in use within Myanmar. In one of the Rawang dialects, Sha-wee is used for both bear species. More specifically, the Rawang use Sa-rot-khot (meaning “ant eater”) for Malayan sun bears, Hton-phu for the solitary big male Asiatic black bear, and Hton-ma for the female Asiatic black bear. One of the Naga ethnic dialects refers to Asiatic black bears as Sabe-ah-yone (meaning “big bear”) and Malayan sun bears as Sabe-ah-deik (meaning “small bear”). In one of Lisu dialects, Wopha is collective name for both bear species, while Asiatic black bears are called Wo-bi-li and Malayan sun bears are called Hto-kwee. Asiatic black bears are named Sat-sat-ru (meaning “big bear” ) and Malayan sun bears are called Sat (meaning “small bear”) in one of Kachin ethnic dialects.

### *Ethnology of bears*

Most tribes seem to believe that bears are the symbol of strength. Most ethnic groups tell a series of bear stories. Hunting in relation to traditional beliefs or subsistence on either bear species was not reported. Additionally, based on results of surveys conducted in northern Myanmar, local traditional medicine rarely uses bear parts. However, non-traditional hunting for trading was frequently reported in the surveys.

### *Conflicts with humans*

Human-bear conflicts have been rarely reported in northern Myanmar. There can be several possible reasons. First, human population density in that area is relatively lower than the remainder of Myanmar, and consequently, the encounter rate between humans and

bears may be low. Human population density in Hkakaborazi National Park, which is in the farthest northern part, was estimated as 2.5 people per km<sup>2</sup> (Wildlife Conservation Society (Myanmar Program) 2004). Wikramanayake et al.(2002) also estimated human population density of northern Myanmar as ranging from <5 to 5-10 people per km<sup>2</sup>. The second possible reason for low human-bear conflict is that the magnitude of habitat conversion, fragmentation and degradation are quite low compared to the rest of Myanmar, because this region has large, contiguous habitat and more sustainable land-use practices. No reports of bear attacks on humans were received during the research survey period (2004-2005) in Hkakaborazi National Park and Hponkanrazi Wildlife Sanctuary. However, crop raiding by both bear species was occasionally reported in interview surveys. The national Forest Department has no compensation system.

## Commercialization of bears

### *Bear utilization on commercial basis*

In northern Myanmar, bear fat, gall bladder, meat, paws and bones are traded to Chinese traders for use as traditional medicine and for consumption in restaurants. Evidence of trading for paws of both bear species was recorded in the surveys of Hkakaborazi National Park in 2004, as shown in Photo 5.1.

### *The number of import and export*

Import and export of bear parts is illegal in Myanmar, which makes assessing the trade volume difficult. An educated guess would be that ten to twenty of each bear species may be traded annually from northern Myanmar to China.

### *Breeding bears in zoos and bear farm*

There are two public zoos in Myanmar: Yangon Zoo and Mandalay Yadanabon Zoo. There are likely a total of 20-30 bears (including both species) in zoos within Myanmar. Bear farms are illegal in Myanmar, but they may exist near the Myanmar-China border. It is unknown how many live bears have been traded from Myanmar to China, so this would be a valuable topic for future surveys.

## Present management system

### *Systems of conservation and management*

In Myanmar, protected areas are managed by the Nature and Wildlife Conservation Division, which is a division under the umbrella of Forest Department,





Photo by Saw Htun (WCS)

**Photo 5.1: Paws of the Asiatic black bear (upper) and the Malayan sun bear (lower) recorded in Hkakaborazi National Park.**

Ministry of Forestry. Other reserved forests and public forests are managed directly by the Forest Department. The Nature and Wildlife Conservation Division takes responsibility for all wildlife conservation and management of protected areas, in accordance with the following policy, laws, regulations and notifications: Myanmar Forest Policy (1995), Forest Law (1992), Forest Rules (1995), The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law (1994), Rules Relating to the Protection of Wildlife and Wild Plants and Conservation of Natural Areas (2002), and List of Endangered Species of Myanmar (1994).

Forty protected areas (totaling > 30,000 km<sup>2</sup>) have been established and represent 7% of Myanmar's total land area. According to the law, the Malayan sun bear is protected at the highest level, the Asiatic black bear protected at a lower level. Based on the legal level of protection for the species, violators can receive different levels of penalties and punishments.

### *Scientists, and NGOs conserving bears*

There are very few conservation NGOs in Myanmar. Most surveys, research and conservation efforts empha-

size species other than bears. Although national universities, scientists and NGOs occasionally cooperate and coordinate, bears need more effective conservation.

### *Public education*

Limited public education programs are focused on bear conservation. Well-designed and targeted public education is needed.

## Recommendations

Staff and institutional capacity is low in most protected areas. There have been very limited research and surveys on either bear species. Consequently, effective conservation efforts are difficult to develop strategically. Effective patrolling and law enforcement are also weak in most protected areas. I provide the following recommendations:

(1) More research on ecology, biology, population, distribution, and habitat preference of both bear species is urgently needed.

(2) Effective bear conservation will be difficult to achieve without commitment and support of decision makers. It is extremely important to garner political support and to maintain awareness among policy makers.

(3) More effective patrol systems and law enforcement in protected areas are necessary to reduce commercial hunting and wildlife trade, including bear parts. Banning access to areas of critical bear habitat should be integrated in park management.

(4) Boundary agreements with China are urgently needed to combat wildlife trade along the border. In addition, sharing information among law enforcement in both countries is necessary to reduce wildlife trade within each country and across their boundary.

(5) Public understanding and support are also important factors for effective bear conservation. Highly targeted education and outreach program can increase the effect of bear conservation. It is also important to identify and implement methods to educate Chinese consumers of bear products.

(6) Conservation of bears in protected areas has much more potential than in non-protected areas. Therefore, strengthening institutional capacity of protected areas containing bears via technical and financial assistance will be beneficial.

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