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STATUS AND FOOD PREFERENCES OF BEARS IN SUB ALPINE SCRUB FORESTS, AJK

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ABSTRACT

Bears belong to the family Ursidae, under the order Carnivora with eight extant species (Grzimek, 2003). Roberts (1997) cite the presence of Himalayan brown bear, Himalayan black bear and Balochistan black bear in Pakistan. Dhirkot National Park (2008), Banjosa Nature Reserve (2009), Tolipir National Park (2008), Pir Chanasi National Park (2010) and Pir Lasura National Park (2009) were surveyed. A broad-spectrum investigation was conducted where the number of bears observed directly; pictures from surveillance cameras (Arc View GIS 3.3, 1992-2002) and at the same time indirect indicators such as bear scats, walking trails, paw prints and fur samples were noted for presence of bears. Only two types of bears, the Asiatic black bear and brown bear were reported from the study area. the Asiatic black bear was observed in four of the five study areas (Banjosa Nature Reserve, Dhirkot National Park, Tolipir National Park and Pir Chanasi National Park). Pir Chanasi had the highest numbers of bears observed while only four bears were reported from Dhirkot National Park. From the whole study site, seven brown bears were sighted only in Pir Chanasi National Park.

Keywords: Asiatic black bear, brown bear, carnivore, omnivore, forest

INTRODUCTION

Bears belong to the family Ursidae, under the order Carnivora with eight extant species (Grzimek, 2003). These include the giant panda, Malayan sun bear, Asiatic black bear, American black bear, brown bear, spectacled bear (*Tremarcto ornatus*), sloth bear (*Melursus ursinus*) and polar bear (American Bear Association, n.d.). Roberts (1997) cite the presence of Himalayan brown bear, Himalayan black bear and Balochistan black bear in Pakistan. The IUCN redlist (2018) places the *Helarctos malayanus*, *Melursus ursinus*, *Tremarcto ornatus*, *Ursus maritimus* and *Ursus thibetanus* in the vulnerable category with a decreasing trend of population except for polar bears. Due to the extreme geographic location that this species inhabits, only limited data is available regarding their population. The brown bear is

categorized under the least concern category and with a stable population. The American black bear is also categorized under least concern but with an increasing trend in population.

The habitat preferences of these species are very diverse. Polar bears prefer the cold arctic tundra whereas pandas inhabit Chinese bamboo forests. Sloth bears (*Melursus ursinus*) prefer grassy lowlands. Brown bears inhabit a variety of biomes such as the tundra, forests and grasslands.

Bears are predominantly nocturnal but have also been observed catching prey in daylight. Most bears remain active all year round. Polar bears and the Asiatic black bear do not hibernate but their sleeping patterns change and become longer in colder weather. Their body temperature lowers during this time. According to Grzimek (2003) Ursids

are omnivores and select their diet based on location and availability.

For a long time, this family has been hunted mainly as a show of power but also for their fur and meat. Their body parts have been exploited for their medicinal value. Their wild community has also been affected by their capture for entertainment in zoos or by gypsies that train bears for dancing. This study was conducted to report the number of bears present in the study area and their feeding preferences using physical observation and previously published literature.

MATERIALS AND METHOD

Dhirkot National Park (2008), Banjosa Nature Reserve (2009), Tolipir National Park (2008), Pir Chanasi National Park (2010) and Pir Lasura National Park (2009) were surveyed. A broad-spectrum investigation was conducted where the number of bears observed directly; pictures from surveillance cameras (Arc View GIS 3.3, 1992-2002) and at the same time indirect indicators such as bear scats, walking trails, paw prints and fur samples were noted for presence of bears. Data was also collected by interviewing locals and forest rangers for information along with review of literature to determine possible locations the bears may be found.

RESULTS

Table 1. List of mammalian species of family Ursidae recorded from AJK

| S. # | Names | Food | Remarks | Local sightings (%) |
|------|--|--|--|--|
| 1. | <i>Ursus thibetanus</i> Asiatic Black Bear | Acorns, mulberries, apricots, Rosehips, carrion, goat, sheep, small crustaceans, Fungus or forest mushrooms, maize, grass, ber (<i>Ziziphus nummularia</i>), Russian olive (<i>Eleagnus hortensis</i>), lizards, orthopterous insects including locusts, rhizomatous stems, sorghum (<i>Sorghum suanense</i>) and ripe dates (<i>Phoenix dactylifera</i>). | Widely distributed mammal, occupying wide variety of habitat, and not nocturnal, acute sense of smell. Breeds from March-April Liters size: 1-2 | (12- BNR) (4- DNP) (22-TNP) (24-PCNP) |
| 2. | <i>Ursus arctos</i> (Brown Bear or Snow Bear) | vegetable matter with rodent bones (Omnivorous, feed on alpine bulbs and insects crustaceans etc) | There is continuous threat to its survival in Pakistan due to increasing demand by gypsy tribes. Breeds from March-April Liters size: 1-2 | (7-PCNP) |



a



b

Figure 1. (a) Asiatic Black bear (*Ursus thibetanus*) (b) Brown bear (*Ursus arctos*)

DISCUSSION

Only two types of bears, the Asiatic black bear and brown bear were reported from the study area.

The Asian Black Bear *Ursus thibetanus* is native to Asia (the Indian subcontinent, Korean peninsula, China, Russia, Taiwan and Japan) (Heptner and Naumov, 1992; Montgomery, 2002). Since these bears prefer to inhabit moist forests, it is important to conserve the woods to protect their habitat and as a result their population. *Ursus thibetanus* was observed in four of the five study areas (Banjosa Nature Reserve, Dhirkot National Park, Tolipir National Park and Pir Chanasi National Park). Pir Chanasi had the highest numbers of bears observed while only four bears were reported from Dhirkot National Park.

According to Abbas et al. (2015) *U thibetanus* may be found in the highlands ranging from 1,500 m to 4,000 m above sea level. However, they note a possible decrease in their numbers during the 1900s. Sheikh and Molur (2005) report the status of Asiatic black bears to be vulnerable in Pakistan. Ali et al. (2017) suggest reduced food availability as one of the reasons which influences bears to attack crops and livestock reared for food by humans, which would result in a competition for food.

Bears belonging to this species have a wide-ranging diet. From berries and wild mushrooms to crustaceans and small animals, the diet of *U thibetanus* varies with changing seasons. This finding is concurrent with the research by Ali et al. (2017) where they found remnants of 21 different food items in diets of bears in their study site.

Nawaz (2007) report that the number of Brown bears were on a fast decline, to the point where they have completely vanished from some parts of Pakistan. A similar result was observed in the current study, where the population of brown bears was only sighted in Pir Chanasi National Park and the number of brown bears seen there was also only seven. To protect these bears, efforts need to be expended to conserve their numbers. A good example of such measures is Deosai National Park where Nawaz et al. (2008) conducted a study on brown bears and reported a five percent annual increase in their population. Qureshi et al. (2011) conducted a study in Khunjerab National Park and observed the presence of Brown bears. Some of the factors that may affect the population of brown bears in Khunjerab National Park included trophy hunting and carcass poisoning. There is no confirmed evidence that this is also true for the current study site, but may be a possible reason for the decline in brown bear population.

According to McLellan et al. (2017) near Bhimbar, Kotli and Peshawar the population of brown bears have become extinct.

CONCLUSION

Only two types of bears, the Asiatic black bear and brown bear were reported from the study area. *Ursus thibetanus* was observed in four of the five study areas (Banjosa Nature Reserve, Dhirkot National Park, Tolipir National Park and Pir Chanasi National Park). Pir Chanasi had the highest numbers of bears observed while only four bears were reported from Dhirkot National Park. From berries and wild mushrooms to crustaceans and small animals, the diet of *U thibetanus* varies with changing seasons. The population of brown bears was only sighted in Pir Chanasi National Park.

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