

SAVE THE NATURE



SURVEY REPORT

**BALUCHISTAN BLACK BEARIN PAB HILL, DISTRICT
KHUZDARBALUCHISTAN**

[November2013]



Save the Nature ®
Nature conservation for future development

Daphne *Daphne mucronata* and base of the peaks are covered with *Dwroph* palm *Nannorrhops ritchieanna*, it is one of the important habitats of Balochistan Black Bear *Ursus thibetanus gedrosianus* and believed to be a last strong hold of This species, which was once found from Iranian Balochistan to Balochistan Province of Pakistan, survives in some isolated pockets in Iran and Pakistan. In Pakistan no systematic population surveys have been conducted yet to assess the population of the species. Preliminary surveys conducted by Himalayan Wildlife Project and WWF Pakistan in 1994 and 1996 indicate that the bear is still found in the Phab Range. The bears in the Phab Range may represent the last viable population of the species.



KEY ACTIVITIES AND OUTPUTS/OBJECTIVES

- Collect data from the field on species occurrence, abundance and diversity in the study area.
- Collect and review secondary data of Balochistan black bear and associated species of the study sites, using the available literature and local inhabitants.
- Identify threats to bear and other wildlife in Phab hills and recommend measures to improve the situation.
- Study the behavior of bear in early hibernation/denning period and human and bear relationship and diet in the study sites.
- Assessment of impacts from environmental changes and human population pressure on bear population and their critical habitat and to suggest associated mitigation steps.
- Provide photographs, where possible, of Black bear and its habitat.
- Compile a report to addressing all the above-mentioned issues.

APPROACH OF THE STUDY

The major part of information for this study is based on visible signs like tracks, traces and scats of black bear in different areas and microhabitats of Sari, Dehar, Pishi, Andar, Pishi lop, Koh-e-zindo, Bohir-dasht and Goani-wadh area. Most of the results are interpreted from the data and facts and figures collected in the field as a result of field studies during the month of December, 2007. The data, however, has been supplemented with the previous studies done in the area and the information available in the report.

METHODOLOGY AND MATERIALS

Preliminary Survey

Before conducting field inventories of bears, it is therefore a preliminary survey/visit have been carried out in June. Conducted meetings with communities and notables of project area. Organized personal interviews villagers to obtain required knowledge and local information, secondary data and previous survey reports reviewed.

Personnel

It is essential that qualified and experienced personnel are present during field surveys. Local knowledge and experience is very useful for field survey. During this bear survey initially meetings with some key notables in Khuzdar to select the experienced persons as for field guide, Mr. Lal Jan Nazim of Moolah tehsil, Noorulhaq Nib Nazim of Wad tehsil, Gul Jan Raisani, Haji Qudoos Mengal, in the result of this discussion we sort out local experienced guides for this survey.



Figure 1 Local guides taking part in survey activity

Mr. Mohammad Alim Hamalzai, Mr. Ramzan Mengal, Ghulam Mustafa, Haji Shabir, Mohamad Alam Mengal, Haji Qudoos has taken responsibility for contacting the field personnel and arranging the survey.

Time of Year

Summer and fall summer is active foraging season of black bear, alternative they use berry (*Zizyphus jujuba*), Olive (*Olea ferruginea*), as well as starchy rhizome and Dwarf palm (*Nannorrhops ritchieana*) fruit. Fruit of these plants grown from

June to October alternately. this is very perfect time for bear survey. Bear is very shy animal they avoid to open walk and it is nocturnal animal and dose not appear in day time. Rutting probably takes place in October. Therefore this is very active period of bear, and have a chance of direct sighting of animal. When collecting inventory data at seasonal aggregations, a number of replicate surveys are necessary each year to maintain consistency between years.

Habitat Data Stander

Blochistan black bear inhabited tough rocky terrene, the average altitude between 1500 to 2400 meters. For shelter and dinning they select high slops and caves with food abidance. The hot spot of bear in Pub range is tough terrene and rich with vegetation of wild olive and foot hills with Zizyphus app. During the field survey we concentrated in these areas for effective result. Dehar Sari, Guani, Hor and Koh-e-zindo are the potential sites for foraging and dening of bear.



Figure 2 Dening sites near Dehir village

Active Search

An effective way to survey black bear is by active searching, particularly dawn and dusk time. Other then trapping or capturing of animal, this method is equally applicable for both nocturnal and diurnal species. The study area was actively searched by foot in their rocky terrenes, old and famous caves, Olea spp thick cover and water points. There are five narrow parallel starches respectively called Malhir lat, Jhojamas lat, Niam lat, Sahro lat and Koh-e-zindo, walking early Dawn searching in side the caves, observing pub marks in water points and ages of cave and browsing



Figure 3 an active den in Pheeshi area

walking early Dawn searching in side the caves, observing pub marks in water points and ages of cave and browsing

marks on the top of Olea trees was the efforts of active search. During the field survey Nocturnal search was also done by torch lights to observed bear activity.

Office Procedures

- Review the introductory manual, *Species Inventory Fundamentals, survey reports, T J Robirt(Mmmals of Pakistan)*
- Select hotspots to be surveyed.
- Consultation with biologists and field experienced personals
- Obtain relevant maps for the project area.
- Develop a list of people to include in the preliminary survey. Include previously experienced biologists, local guides and other supporting personnel

DESCRIPTION OF BLOCHISTAN BLACK BEAR

Bear is regarded as a threatened species in Pakistan . Bears belong to the family Ursidae. Two species of bears are distributed in Pakistan . they are Brown Bear *Ursus arctos* and Asiatic Black Bear *Ursus (Selenarctos) thibetanus*. There are two sub species of Black bear distributed in the country viz. Asiatic Black Bear *U.r. laniger* and Balochistan Black Bear *U.t.gedrosianus*. According to the 2000 IUCN Red list of Threatene3d Species, the Asiatic Black Bear is vulnerable while the Balochistan Black Bear is critically threatened.

The Balochistan Black Bear is now confined to the hills south of Khuzdar is including hills of the Pab range. This subspecies is comparatively smaller in size and its colour is not purely black rather reddish brown. It used to occur in Kirthar range in Sindh also, till 1920s where it is no more found. The Black Bear has been ruthlessly killed in the past and one of the reasons being that it destroys crops and thus the villagers wanted to get rid of them. The hunters and shepherds have also persecuted this animal which resulted in decline in its population and ultimately lead into its near extinction. Still the poachers are said to trap the cubs.

The Black Bear usually goes into hibernation in winter. However, sometime they come out for forage. Mating is believed to take place in October and cub is born in February while the female is still in hibernation.

The preferred habitat for this species is the arid sub tropical forest. The exact surviving population of the Balochistan Black Bear is not known. Although there have been some surveys in the recent years, yet no concrete figure could be mentioned. Therefore, a survey was organized by Save the Nature (STN) the

main purpose of the survey was to confirm the presence of the species in the area and to estimate the surviving population.

THREATS BLOCHISTAN BLACK BEAR

The main threat to the Black Bear Population in the area is that persecution by the people of the area. Bears are usually killed when they are found preying on goats and sheep. Generally no bear parts are used but a few people keep some of it's for relieving rheumatic pains.

The main factor leading to depletion of the species is lack of awareness in the communities about the importance of the species. The major reason for killing of the species is its predation on livestock, particularly goats. The increased availability of modern guns has further exacerbated the situation.

Another major draw back is a lack of scientific information on the ecology of the species. This is essential to the conservation of the species. The habitat was seriously disturbed during the civil unrest of mind 1970s and Sind Ibex, reportedly present in large numbers earlier, was completely extirpated, Leopard was also found the area but was exterminated by using poisoned baits.

These disturbances may have contributed to decline in the bear population. The ecological niche filled by the Balochistan Black Bear and its food preferences are still not clear and need further in depth studies

GEOGRAPHY OF THE PAB RANGE AREA

The Pab Hills are located in Wadh Sub division of Khuzdar district from Saman, 15 miles from Khuzdar, to Shah Noorani in Lasbella district, extending over an area of 80 km long and 25 – 30 km broad. Limestone predominates the hill range and sandy limestone , shells and sandstone also occur throughout the range. Underground water is usually brackish. The valleys have sandy soils. There are boulders hanging over at some places and crevices along the hills and said to be the areas where bears would be living. The maximum elevation of the range is 2500 m.



Figure 4 Habitat of Bear in Koh-e-Zindo

SURVEY AREA

Pab is local Brahvi word it derives from Phhabh means (Mega) mountains. The maximum altitude is 2500m. Survey was undertaken from Sari Dasht to Kuhi Zindo Dasht in Pab range particularly in the following areas:

Daher band, Esa lop, Batagh lop, Andar, Phishi sarap, Phishi lop, Kutam, Doli Thaso in Koh-e-zindo, Malaiki, and Bohir.

The area has dense bushes of wild olive (*Olea caspidata*), Muzri or Phish (*Nannorrhops ritchieana*), Ber (*Zizyphus jujube*) and Kuhi Anjir (*Ficus carica*).

OBSERVATION/DISCUSSION

Heading to Dansar from Wadh town it has observed that range land of Wadh is rich with floral diversity like *Phoenix dactylifera*, *Zizyphus jujube*, *Nannorrhops ritchieana*, *Salvadora oleoides*, *Zizyphus spinachristic*, *Mach Phoenix dactylifera*, Kaler *Cappharis aphylla*, Phish *Nannorrhops ritchieana*.

Next day was planned during the stay at Dansat village. At dawn headed to ward Saridasht and Dehar, passing through Jhojamas lat, Sareidasht up to Sarilop is purely cultivated range land, one of Mohammad Sharif villager reported that two month before one Sheep was hunted by Black bear near Sari lop area. Near Dehar village at 27 15, 222 N- 66 35, 932 E observed an lode cave nosigns were observed, after some distance an other cave explored, scats of bear also observed in side the cave. Daher village is situated Niam lat and Sehro lat, in this village Mr. Mohammad Ramzan reported that a Hyna was attacked on his Oxes when he was ploghing in his field. One of sheepherder reported that few months ago in Esakumb area bear hunted three sheep from his herd. After passing from Easakumb in Batagh lop browsing signs of Bear on Olive observed and scats also found on the ground, broken branches indicate their staying on the top of tree, after a kilometer pub marks and fecal materials found near water point, this area is dense with *Olea cuspidate* and *Daphne mucronata*, *Nannorrhops*



Figure 5 Foot print recorded from Dolly hill



Figure 6 Feeding remains found in Pheeshi area

ritchiana is found in down hill nals, there is permanent water point in Phishi-ghar, this area is clustered with Dwarf palm *Nannorrhops ritchiana* plants. Approaching in Phishi-sarap an old pub marks observed around dead carcass of cow, might be the bear was entertained with flesh of this cattle when it was fresh. Heading toward Phishi lop in cover of Olive trees scats observed on narrow starchy, it was observed that during the roaming, bear keep tracks of sheep or men footpath. It is Koh-e-zindo means (live mountain), once it was hub of wildlife including Balochistan black bear, Common leopard, Asiatic Hyena, Wolf and Ungulate. The area is also covered with *Olea cuspidate* and *Daphne mucronata*, *Nannorrhops ritchiana* trees. Three days ago bear was sighted near Doli at 27 10, 212 N- 66 36,506 E, in Koh-e-zindo, fresh footprints and scats observed in the mouth of caves in Maliaki 27 09, 686N- 66 36, 680E, these were the typical denning sites, browsing and branching marks were sighted in Thasoo, Thasoo lop 27 09 733 N- 66 36, 624 E. it has concluded that that Koh-e-zindo is hotspot of Balochistan black bear, because of indicator plant species, network of caves/dens occur their. Once Balochistan black bear population was sufficient in this area, the ancient people constructed grain storages on the rock top resin for protecting them from bear destruction, these signs were observed in Bohir Dasht and Koh-e-zindo.



Figure 7 Feeding marks on Olive tree

It has concluded that Balochistan black bear still existed in Pub range and other wildlife like Common leopard, Asiatic wolf; Striped Hyena and other Carnivores may occurred here, ungulates also reported in this area.

POPULATION ESTIMATION:

Because they are mainly nocturnal, they are difficult to census. Only detailed study lasting several years and using biotelemetry within a relatively small area is likely to yield an accurate estimate of population size.

Since direct counting of animal was impossible so sign transect surveys was undertaken counting the footprints of the animal in the transect. Although this is not the accurate method yet it provides the indication of relative abundance. Care was taken to note the footprints belonging to same bear by noticing steps, size and structure of prints. through this technique, it is estimated that there is a population of 8--10 Balochistan Black Bear in recent survey area, but this is only

30% or 40% of Pob Range area. The population is rather small and isolated. WWF – Pakistan’s Survey in 1996 concluded that one to four animals survive in the whole area.

TBBLE OF SIGNS/MARKS OF BLACK BEAR OBSERVED IN SURVEY AREA

S #	Aria	location	Altitude	Observation	Habitat
1	Dehar band	27 15, 222 66 35, 932	1577m	Den & Scants	Stony & caves
2	Dehar	27 15, 096 66 35, 840	1580m	Pugmark	Foot hill
3	Batagh lop	27 12, 705 66 36, 175	1540m	Browsing on Olive tree	Olive dense vegetation
4	Andar	27 12, 276 66 36, 168	1594m	Scants near water point	Olive dense vegetation
5	Birrung	27 11, 750 66 36, 154	1642m	Scants	On the track
6	Phhishi-sarap	27 10, 183 66 36, 263	1456m	Pugmarks	Foot hill near water point
7	Phhishi lop	27 10, 138 66 35, 948	1600m	Scants	Permanent water point
8	Doli,	27 10, 301 66 36, 453	1712m	Direct sighting	Water point
9	Thasoo	27 09, 931 66 36, 475	1787m	Browsing on Olive tree	Olive cover
10	Thasoo-batagh	27 09, 528 66 36, 405	1856m	Scants	Olive cover
11	Thasoo-keragh	27 09, 887 66 36 458	1826m	Browsing on olive tree	Olive cover
12	Malaiki	27 09, 686 66 36, 680	1809m	Pub marks	In the den
13	Malaiki	27 10, 212 66 36, 506	1716m	Pugmarks, Scants	In the den
14	Bohir dasht	27 11, 838 66 36, 393	1845m	Pugmarks	Hill-top

CONCLUSION

The present survey confirmed that the Balochistan Black Bear still survives in the area but the population is small and isolated. The indirect count through signs indicates that the local status is satisfactorily. STN aims to conserve this population along with the biodiversity of the area and raise the awareness of the communities about the importance of the species and involve them in its conservation through strongly linked development activities.

The main threat to Balochistan black bear in Phab Range is its conflict with the pastoralist communities living in the area. Political and tribal unrest is another threat to black bear and its habitat degradation.

There is need to manage this population involving local communities. It has been revealed that due to interventions of local tribal chief in recent years, protection to this animal has been given to a large extent.

MITIGATION STEPS

- Regular surveys need to be conducted in order to study the change in population of Balochistan Black Bear.
- There is need to construct camping sites for the survey teams near the study area.
- It is necessary to have necessary equipment such as night vision binoculars and movie cameras, camera traps and DSLR camera with powerful lenses for field studies.
- It is advisable to plantation date palm trees in the area to serve as alternate food for the bears in case of shortage of its proper food in certain seasons.
- An awareness programme on this critically endangered species for the local communities, hunters and shepherds may be initiated.
- The area may be declared as protected and strict vigilance is made to stop hunters and poachers. The local influential persons and community elders may be involved in implementing protection measures.
- A detailed wildlife survey of the area needs to be done and population of important mammalian species is undertaken.
- Feasibility study for captive breeding of this animal may be initiated. If successful, the animal can be released into wild after captive breeding.

LIST OF FLORA OBSERVED IN PAB HILLS

1. Khabar	Salvadora oleaoides
2. Phish	
3. Khat	Olea Cuspidata
4. Gawanir	Monothecha busijolia
5. Pissi, Kunar	Zizyphus jujube
6. Kherroo	
7. Maghember	
8. Wild anjer	Ficus Carica
9. Mach	Phoenix datylifera
10. Rambo	Erigeron alpinus
11. Liwar	Cordia rothii
12. Kasila	Rhus mysorensis
13. Kasir	Pistacia cabulica
14. Kaler	Capparis spinosa
15. Jatare	Abutilon muticum
16. Kharnal	
17. Bharwari	
18. Mirchbeat	
19. Pazho Gwangir	Convolvulus microphyllus
20. Togha	Celtis australi
21. Koh Tor	Lycium barbarun
22. Hum	Periploca aphylla
23. Peepal	Daphne oleoides
24. Shenello	Astragalus stocksianus
25. Dheloon Koor	Convolvulus spinosus
26. Shampushtir	Sophora mallis
27. Aawishk	Clematis ramunelac
28. Parmoz	
29. Jharokh	
30. Gorkawa	Elionurus hirsutus
31. Hadan	Stipa capillata
32. Kashum	Saccharum ciliare
33. Kolmur	Inula grantioides
34. Matali	Cyperus niveus
35. Sarghasae	Saccharum munja
36. Mateto	Solvia cabulica
37. Karkawa	Fogonia Arabica
38. Dhedar	Euphorbica caducifolia
39. Dharura	Datura fatuosa
40. Jug	Dalbergia sisso
41. Mar	Prosopis spigera
42. Babur	Acacia Arabica
43. Akh	Calatropis procera
44. Larwanj	Saccarum ciliare

45. Rambo	Erigrion alpinus
46. Kandra	Alhagi camelorum
47. Zambur	Cocculus pendulus
48. Jungli Anar	Punica grantum
49. Shenello	Astragalus sp.
50. Booh	Aerua javanica
51. Nal	Arundo donax
52. Khor	Acacia Senegal
53. Toot	Morus alba
54. Tali	Dalbergia sisso
55. Babur/ Keekar	Acacia arabiaca
56. Kunchit	Sesanum inicum
57. Wheat	

FLORA USED AS FOOD BY BLACK BEAR

1. Khanjur	Phoenix dactylifera
2. Pissi, Kunar	Zizyphus jujube
3. Khat	Olea cuspidate
4. Gawanjir	Monthea bucijolia
5. Phish	Nannorrhops ritcheanna
6. Wheat	Triticum ukogre
7. Gawan	Pistacia khinjuk
8. Kherroo	
9. Khaber	Salvadora oleoides
10. Wild fig	Ficus carica
11. Tolapisi	Zizyphus spinachristic
12. Mach	Phoenix dactylifera
13. Kasila	Rhus mysorensis
14. Liwar	Cardia rothii
15. Rambo	Erigrion alpinus
16. Kasir	Pistacia cubilica
17. Kaler	Cappharis aphylla
18. Pazho gawanjir	Convolulus microphyllus
19. Tatare	Abutilon muticum
20. Khurram	Glossonema varians
21. Togha	Celtis australi
22. Wheat	