

Illegal Mass Killing of Indian Pangolin (*Manis crassicaudata*) in Potohar Region, Pakistan

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Abstract.- Massive and ruthless killing of Indian pangolin (*Manis crassicaudata*) was recorded in Potohar region of Pakistan. From January 2011 to May 2012; 118 individuals were killed brutally including from districts

* Corresponding author: tariqjanjua75@uaar.edu.pk. Chakwal (n=60), Attock (n=25), Jhelum (n=19) and Rawalpindi (n=14). Nomads and local hunters have been found directly involved in the illegal trade of the animal with a selling price of Rs.10,000-15,000/- per animal (US\$ 108 to 163) depending upon its size. The captured live pangolin is boiled in water tank to remove its scales, the rest of the scale-less dead body being thrown away. It is suspected that its scales have a high demand in the illegal local as well international markets; to be used in manufacturing bullet-proof jackets and in traditional Chinese medicines.

Key words: Pangolin, Potohar, arid environment, illegal hunting, trade.

Pangolins are inimitable mammals having rigid keratinized protective scales around their body. There are eight extant species of pangolins, restrained to Asia and Africa (Lekagul and McNeely, 1977). The sole species that occurs in Pakistan is the Indian pangolin (*Manis crassicaudata*). Its populations are reported from few localities of the country, including the Potohar Plateau. This species is adapted to desert regions, locally distributed in Pakistan and prefers more barren hilly districts (Roberts, 1997). This mammal species is under massive hunting pressure due to its demand in the market (Broad *et al.*, 1988). Its scales

are believed to have traditionally medicinal importance, magical powers (Israel *et al.*, 1987) and ornamental uses (Prater, 1980). Its flesh and fats are also used in medicines (Indian Wildlife Club Ezine, 2004), and skin to manufacture clothes and shoes (Broad *et al.*, 1988). The animal species and its products are also traded internationally to various countries (Broad *et al.*, 1988; Nowak, 1999).

Killing of pangolin species were reported from Sumatra, Indonesia (Sopyan, 2009) and in Peninsular Malaysia (Chin and Pantel, 2009). Data obtained from the press and enforcement authorities have shown that about 30,000 pangolins were apprehended in Southeast Asia, between the years 2000 and 2007 (Chin and Pantel, 2009) and at least about 700 skins of Indian Pangolin were exported to the USA in 1983 and 5023 skins during the 1980-1982 period (TRAFFIC, 2000). In Pakistan, traditional local ethno-medical practitioners (hakims) believe that pangolin is a valuable source of traditional medicines (Roberts, 1997).

Indian pangolin is a protected species and placed in Category three of the “Third Schedule” of Punjab Wildlife Acts and Rules (1975). It is also listed in Appendix-II of Convention on International Trade in Endangered Species (CITES, 2000). But in spite of its protected status it is being illegally captured, brutally killed and traded for its precious scales throughout the Potohar Plateau, which is a semi-arid zone in the country and it lies in the north part of the Punjab province. The Plateau comprises of four districts *viz.*, Jhelum, Chakwal, Rawalpindi and Attock. The total area of the Plateau including all districts is approximately 25,000 km².

Methodology

The authors collected data regarding illegal capture, killing and trade of this animal species in the study region through field visits and interviews with the local people. Interviewees belonged to different backgrounds including shop keepers, farmers, nomads, business men and students.

Results and discussion

The information generated revealed that two major groups were involved in hunting and killing of the animal species; nomads and trained local hunters. There was low number of respondents

among nomads probably due to the fear that they would be reported to the authorities pertaining to the wild animals. Only seven out of twenty interviewees (7/20) admitted to hunt Indian pangolin. The others did not accept hunting but it was suspected that all respondents were actually involved in hunting as their kids were even aware of the trade and provided information about it. However, some of the local hunters in the study area were also found involved in subsistence hunting of Indian pangolin.

Results showed a total of n=118 individuals of Indian pangolin (*Manis crassicaudata*) which were recovered in the form of dead bodies, skeletons, scale jackets, live captured or reportedly killed and or traded in the Potohar Plateau during the 17 months (from January 2011 to May 2012) of the current study period (Fig.1). A total of 118 individuals of Indian pangolin have been confirmed to be captured, killed. The maximum numbers of kills have occurred in district Chakwal (n=60) at ten different sites (Table I). The most miserable incident was the recovery of n= 45 scale-less decaying dead bodies of this animal species (in March 2012) which were found dumped (in jute sacks) inside an un-used railway tunnel near Chakwal city (Fig. 2 A and B). It appeared from the gross examination of the dead bodies that all those were thrown away after removing their body scales. The dead bodies also included eight (n=8) juveniles.

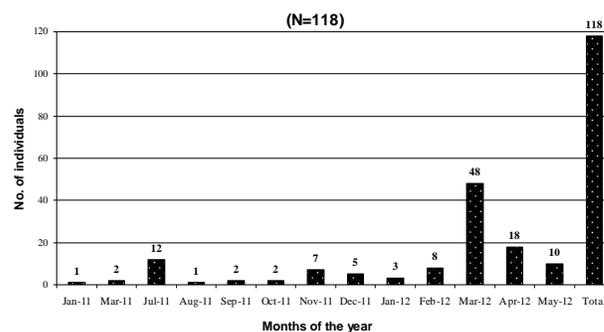


Fig. 1. Numbers of individuals (n=118) of Indian pangolin (*Manis crassicaudata*) which were recovered in the form of dead bodies, skeletons, scale jackets, live captured or reportedly killed during the current study period.

Another alarming incident was the transport of about 24 kg scales of Indian pangolin from Chakwal to Islamabad during February 2012 (the local grain mill owner reported where the sellers weighed the scales and handed them over to the buyers). Both the events seem to be correlated and the massive quantity of scales that were transported out of city were most probably removed from the same 45 dead bodies which were recovered from the railway tunnel in March 2012. There are published reports that Indian pangolin is mainly hunted for its scales (Nowak, 1991), which on average extracted by an adult pangolin weigh about 1 kg (Indian Wildlife Club Ezine, 2004). The wildlife office of district Chakwal was informed about the situation and few people have been arrested and being trialed in the court.

The brutal killing of Indian pangolin in Potohar region was inadvertently stumble upon in November 2011, when skeletons of six individuals along with a scale-less dead body of Indian pangolin were recovered around the huts of nomads in the

Table I.- Illegal capture and killing record of Indian pangolin (*Manis crassicaudata*) in Potohar Plateau of Pakistan from January 2011 to May 2012.

| District | Place /Site | No. of dead bodies recovered(n) | No. of skeletons | No. of Scale jackets/Scales | Reported live captures(n) | Reported killings (n) |
|----------------|--------------|---------------------------------|------------------|-----------------------------|---------------------------|-----------------------|
| Chakwal (n=60) | Mureed | 01 (male) | - | - | - | - |
| | Chumbi Surla | 01 (male) | - | 01 kg scales | - | - |
| | Thoha Mehram | 02 | - | - | - | - |
| | Tala gang | - | - | - | - | - |
| | Jubairpur | 05 | - | - | - | - |

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|--------------------------|----------------------------|-----------------------------|--------------|---------------------|--------------------------------|-----------|
| | Sardhi, Kallar Kahar | 02 | - | - | - | - |
| | Ratta Sharif, Kallar Kahar | 02 | - | - | - | - |
| | Thai, Kallar Kahar | - | - | - | - | - |
| | Talagang city | 02 | - | - | - | - |
| | Chakwal city | - | - | 24 kg scales | - | - |
| | Railway tunnel, Chakwal | 45 (scale-less dead bodies) | - | - | - | - |
| Rawalpindi (n=14) | Kanyat Ladhu (Gujar Khan) | 01 | - | - | - | - |
| | Chakri village (motorway) | 01 | 05 skeletons | 01 jacket of scales | 01(baby pangolin) + 01(female) | 01 |
| Jhelum (n=19) | Banni gala (Islamabad) | - | - | - | 03 | - |
| | PD khan | - | - | - | 02 | 10 |
| | Diljaba Domeli | - | - | 01 jacket of scales | - | - |
| | Farash Pamal (Sohawa) | 01 | - | - | - | - |
| | PD Khan | 02 | - | 01 jacket | 02 | - |
| Attock (n=25) | Dhoke Hafizabad (Jand) | - | - | - | 02 | - |
| | Chakki (Pindi Gheb) | - | - | - | 01 Juvenile | - |
| | Mera sharif (Pindi Gheb) | 02 | - | - | - | - |
| | Haddowali (Jand) | - | - | - | 10 | - |
| | Mithial (Jand) | - | - | - | 10 | - |
| Total (n=118) | | 67 | 05 | 03 Jackets | 32 | 11 |

surroundings of village Chakri near Motorway (M-2). All animals seemed to have been killed for their scales while the dead bodies were thrown in the open which were decaying (Table I; Fig.2 C and D). Similarly, 19 individuals of this species from Jhelum and 25 individuals from Attock have been reported to be killed, and or live captured during the study period for trade purpose of its scales.

In April 2012, important information was received from China on a seizure that occurred in China where the suspect had apparently sourced the pangolin scales from Pakistan. A Chinese passenger "Zhou" was found to carry 12 bags of Pangolin scales, weighting 25.4 kg. Zhou confessed to getting the pangolin scales when he worked in Pakistan and

planning to sell them in China (<http://www.customs.gov.cn/publish/portal0/tab39267/info365276.htm>). The case has been transferred to the anti-smuggling department of Shenzhen Bay Customs for further investigation. These recovered scales apparently seem to be the same that were collected from the Chakwal district of the study region in February 2012, where they were transported to Islamabad. This fact shows that trade in the Indian pangolin scales have become trans-national from Pakistan.

The question is why the animal species is being captured from wild and massively killed in the



Fig. 2. **A.** Shows a railway tunnel around Chakwal city where 45 scale-less dead bodies of Indian pangolin (*Manis crassicaudata*) were recovered which were dumped in sacs. **B.** Dead bodies of the animals uncovered from the sacs. **C.** Skeletons of six dead specimens recovered from around the huts of nomads at Chakri site (near motorway M-2) of district Rawalpindi. **D.** A dead body recovered from around the nomad's huts at same Chakri site, note that all body scales had been removed.

region? There are few possibilities; one of the strongest reasons is its scales. It has also been revealed from local reliable sources that scales of Indian pangolin are transported to two main cities in the country viz., Islamabad and Lahore and it is suspected that these are being used in manufacturing bullet-proof jackets. This seems probable in the scenario of terrorism in the country for the past 10 years where the demand of such jackets must have increased many folds. Besides, its scales are also being used by local practitioners for making traditional medicines, since these are believed to be aphrodisiac. The scales of Indian pangolin are used either as whole, or in powdered form to prepare traditional medicines (CITES, 2000). In Bangladesh, the species is regularly collected in hill forest areas

for its scales and possibly has disappeared in many parts mainly due to hunting (Khan, 1985; CITES, 2000). There is limited evidence of trade, either legal or illegal, in *Manis crassicaudata*, but very little is known about its status across its range, or how well it adapts to human threats (CITES, 2000). There is evidence that the species is being severely impacted by hunting in India and at the same time its status in Bangladesh, Pakistan, and Sri Lanka appears to be decreasing. Given the level of trade that appears to be occurring in other Asian pangolin species (especially *Manis javanica* and *Manis pentadactyla*), it is reasonable to assume that as these two species become rarer and more difficult to obtain, that more trade could shift to *Manis crassicaudata* (CITES, 2000).

In Pakistan, this species is protected under the Islamabad Wildlife (Protection, Preservation, Conservation, and Management) Ordinance, 1979 and the North-West Frontier Province Wildlife (Protection, Preservation, Conservation, and Management) Act, 1975 (Molur, 2008). Despite the regulations, in all the four districts of the Plateau, nomads living in the open surrounding areas of the cities and villages, and also trained hunter groups have been found to be involved in capturing and killing of Indian pangolins. They dig out the animal from its burrow, capture it and then put it in the boiling water tank/bath to remove its scales which are sold at high price. Sometimes, the live animal is sold at a rate of Rs.10,000 to 15,000 per animal (US\$ 108 to 163 per animal). The local people who cooperate with these nomads are also paid per animal.

Recommendations

The matter of illegal capture and ruthless killing of Indian pangolins in the Potohar Plateau demands immediate conservation measures, failing which the animal species may very soon be vanished from the study region. The results of the current study also suggest to some extent, reviewing the IUCN status of this animal species to change it from the category “Near Threatened (because it is likely to become endangered in the near future)” to the category “Endangered (having high risk of extinction in the wild)” (IUCN, 2012) and inclusion of this species from Appendix-II to Appendix-I of the CITES, although it requires further data from other parts of the country as well other countries.

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References

- Broad, S., Lusmoore, R. and Jenkins, M., 1988. Significant trade in wildlife: a review of selected species in CITES appendix II. Mammals. IUCN, Switzerland 1: 51-183.
- Chin, S.Y. and Pantel, S., 2009. Pangolin capture and trade in Malaysia. In: *Proceedings of the Workshop on Trade and Conservation of Pangolins Native to South and Southeast Asia, 30 June-2 July 2008, Singapore Zoo, Singapore* (eds. S. Pantel and S.Y. Chin).. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia, pp. 138-157.

- CITES, 2000. Proposal 11.13: Transfer of *Manis crassicaudata*, *M. pentadactyla*, *M. javanica* from Appendix II to Appendix I.
- Indian Wildlife Club Ezine, 2004. *Pangolin or scaly anteater* (*Manis crassicaudata*). Wildbites IWC's monthly newsletter. March, 2004.
- IUCN, 2012. IUCN Red List Categories and Criteria version 3.1. <http://www.iucnredlist.org/technical-documents/categories-and-criteria/2001-categories-criteria>, Accessed on 27 August 2010.
- Israel, S., Sinclair, T., Grewal, B. and Hofer, H.J., 1987. Indian Wildlife. APA Productions (HK) Ltd. Hong Kong, 363 pp.
- Khan, M.A.R., 1985. *Mammals of Bangladesh*. Nazma Reza, Dhaka.
- Lekagul, B. and McNeely, J.A., 1977. *Mammals of Thailand*. Association for the Conservation of Wildlife, Bangkok. 758pp.
- Molur, S., 2008. *Manis crassicaudata*. In: IUCN 2012. *IUCN Red list of threatened species*. Version 2012.1. <www.iucnredlist.org>. Downloaded on 27 August 2012
- Nowak, R.M., 1999. *Walker's Mammals of the World*, 6th ed. Johns Hopkins University Press, Baltimore, pp. 642-643.
- Prater, S.H., 1980. *The Book of Indian Animals*, 3rd edition. Bombay Natural History Society, Bombay, pp. 428.
- Roberts, T.J., 1997. *Mammals of Pakistan*, Oxford Univ. Press, Karachi, Pakistan, pp. 525.
- Sopyan, E., 2009. Malayan Pangolin *Manis javanica* Trade in Sumatra, Indonesia. In *Proceedings of the Workshop on Trade and Conservation of Pangolins Native to South and Southeast Asia, 30 June-2 July 2008, Singapore Zoo, Singapore* (eds. S. Pantel and S.Y. Chin), 30 June-2 July 2008, Singapore Zoo, Singapore.
- Traffic, 2000. Pangolin distribution and trade in East and Northeast India. *Dispatches* 14: 4-5.

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