

Current Status of the Indian Pangolin in Chiplun taluka of Ratnagiri district, Maharashtra, India

Duration of the survey: February 2016 to July 2016

Acknowledgements

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Introduction

Manis crassicaudata, commonly known as the Indian Pangolin (Figure 1) has recently been included in the list of the Endangered Species by IUCN. Since the Indian Pangolin is a small, nocturnal, solitary and shy mammal with a secretive behavior, studying it in wild is an extremely difficult task. Hence, till date there is no study documenting its population levels and ascertaining its present status.



Figure 1: Wild shot of Indian Pangolin

Indian Pangolin, the only scale bearing mammal is under dire threat due to secret killing and illicit hunting. It is known to be the most trafficked mammal in the illegal wildlife trade. Its scales are believed to contain some active ingredients which act as aphrodisiac and hence they are widely used in some traditional Indian and Chinese medicines. However, there is no scientific study highlighting this aspect. The scales are also used for making bullet-proof jackets and in boot manufacturing at some places. Its meat is served as delicacy in Vietnamese and Chinese restaurants.

Many initiatives have globally commenced for the protection and conservation of the Indian Pangolin. IUCN has listed the Pangolins under the ‘Endangered’ Category. They are in a process to be listed under the ‘Appendix I’ of Convention on International Trade in Endangered Species of Wild Fauna and Flora, imparting them highest legislative protection. They are included under the ‘Schedule I’ of the Wildlife (Protection) Act, 1972 which means capturing, killing and poaching of this species is a serious criminal offence which attracts a severe penalty.

Pangolins are insectivorous mammals feeding on the eggs, larvae and adults of ants and termites, thus acting as biological pest controlling agents. They are inactive and hide in their burrows during day-time. They roll their body to form a ball like structure in-case they sense presence of predators in their vicinity. This behavior of rolling their body makes it easier for the poachers to catch hold and cruelly kill them.

The Indian Pangolin is known to occur in the entire country except the North and North-Eastern States of India. There were no known evidences of its occurrence in the Konkan region. Its presence came into picture very recently, when 20 kg and 12 kg of the Pangolin scales was seized in different consignments. These incidences triggered SNM to initiate conservation efforts for the Indian Pangolin in the Konkan region. Hence, an orientation-cum-awareness workshop was organized by SNM in collaboration with the Maharashtra State Forest Department and the State Police Department at Chiplun on 20th February 2016 to celebrate ‘International Pangolin Day’. More than 200 participants across 100 villages from the Konkan region enthusiastically participated in this workshop (Figure 2). Members from the *Katkari* tribal community were also present. (*Katkaris* are skilled in locating Pangolin burrows and catching them). A strategy for the conservation of the Indian Pangolin through community efforts in the Konkan region was devised at the end of this workshop. To begin with conservation efforts, Chiplun taluka was selected unanimously.



Figure 2: Snapshots of the ‘International Pangolin Day’ celebrated on 20th February 2016

Project Location:

Chiplun taluka is amongst the nine talukas of the Ratnagiri district. The Arabian Sea is located on the west while the Sahyadri ranges of the Western Ghats are situated to its east.

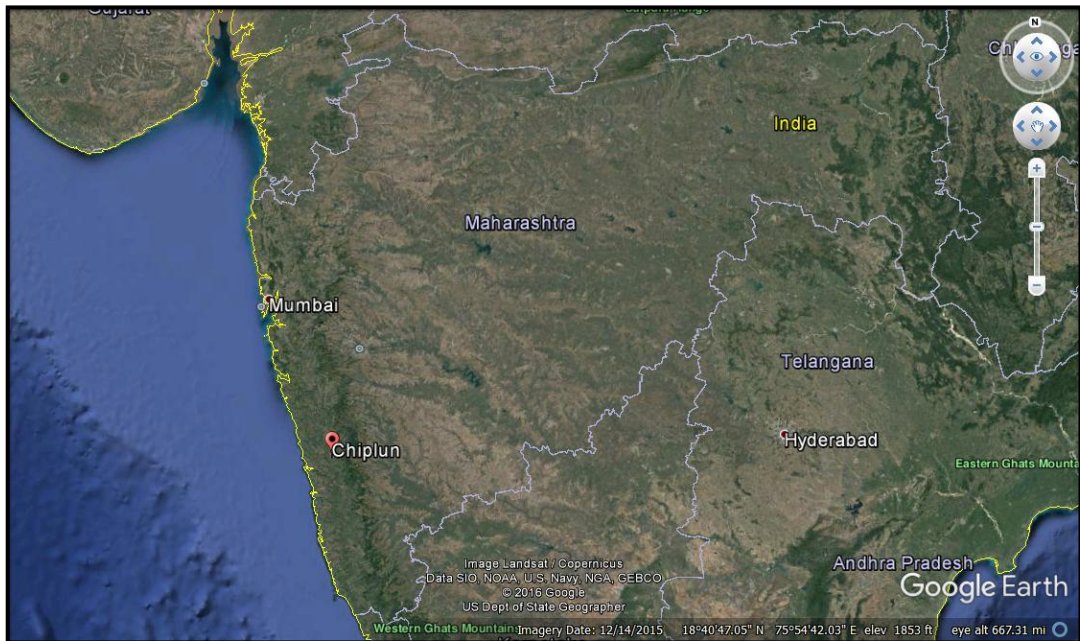


Figure 3: Location of Chiplun in Maharashtra

Chiplun town caters as the taluka headquarters. Chiplun taluka occupies an area of about 10,331 sq.km. As per Census 2011, 164 villages and 2 towns in this taluka accommodate 2,79,122 people. Majority are dependent on agriculture for their livelihood.

Objectives

The following objectives were set in the workshop:

- To ascertain the present status of the Indian Pangolin in the Konkan region
- To sensitize the general public about the protection and conservation of the Indian Pangolin
- To conduct mass awareness activities for the protection of the Indian Pangolin
- To keep a check on the illegal and secret trade of the Indian Pangolin
- To stop the illicit trade of the Indian Pangolin in the project region
- To generate new livelihood avenues for *Katkari* tribe to facilitate protection and conservation of the Indian Pangolin

Methodology

An intensive village level survey was undertaken in the Chiplun taluka. A total of 164 villages were surveyed in a time-span of 5 months viz. February 2016 to July 2016. The following methodology was adopted for the survey:

- Meeting and interviewing at least 5 to 6 people from each village

- Meeting and interviewing knowledgeable persons like farmers and tribals from each village
- Actual visit to observe the burrows and understand the habitat used by the Indian Pangolin
- Conducting foot surveys at probable locations during night
- Monitoring selected locations through camera-trapping technique
- Awareness through distribution of pamphlets
- Display of panels at prime locations for generating awareness
- Attracting people through awareness workshops
- Gathering information from secondary sources

Observations and Survey results:

→ Personal and Group Interviews

In all, 803 interviews were conducted across 164 villages. The statistics can be summed up in the table 1 below:

Table 1: Primary statistics for the personal interviews

Total number of villages surveyed	164
Interviews conducted per village	5 - 6
Total interviews conducted	803
No. of persons aware about the Indian Pangolin	296
No. of persons completely unaware about the Indian Pangolin	507
People who have actually seen the Indian Pangolin	56
No. of people who agreed to share information about the Indian Pangolin and location of its burrows	63



Figure 4: A quick glance of the interviews conducted

The survey revealed that Pangolins are present only in 90 villages. The locals cited the absence of Pangolin in 74 villages. Based on this survey, a village-level occurrence map of the Indian Pangolin was plotted using Arc GIS 10.1. (Figure 5)

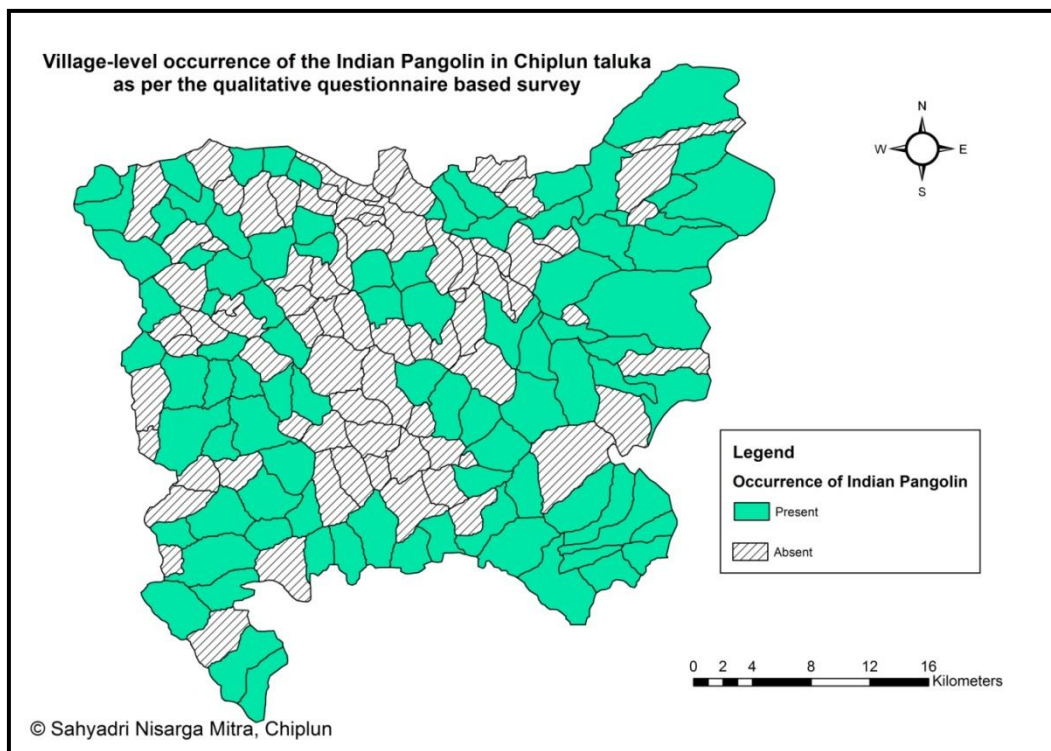


Figure 5: Village map showing presence and absence of the Indian Pangolin in Chiplun taluka

The survey also shows that people are hardly aware about the Indian Pangolin in their vicinity. Only 36.86% of people know about the Indian Pangolin. The percentage of people having knowledge about the habitat and nesting behavior is still lesser than this viz. 7.85%.

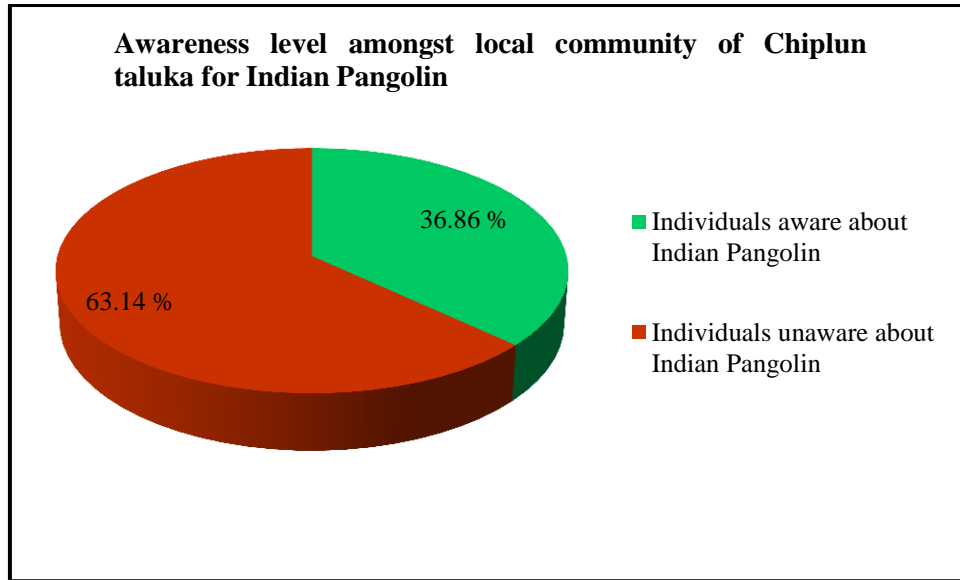


Figure 6: Pie-diagram showing awareness levels in the local community

→ **Actual field visits and nocturnal field surveys**

Based on the interviews, and the secondary information obtained through various sources, field visits were planned.



Figure 7: Glimpses of the field surveys

The details of the field visits have been provided in table 2

Table 2: Details of the Pangolin survey

Sr. No.	Survey Start Date	Start time	Survey End Date	End Time	Duration of the survey (hours)	Start point	End Point
1	14/01/2016	18:30	14/01/2016	20:30	2	Tambdi Dam	Vaiji Road
2	18/01/2016	17:00	18/01/2016	22:00	5	Kalwande	Kapsal
3	26/01/2016	18:00	26/01/2016	22:30	4.5	Vaiji-Bhom	Vetmal
4	13/02/2016	15:30	13/02/2016	19:00	3.5	Omli	Tamhanmala
5	13/02/2016	22:00	14/02/2016	02:00	4	Kalwande	Kalwande
6	21/02/2016	19:00	22/02/2016	01:30	4.5	Omli	Tamhanmala
7	23/02/2016	19:00	24/02/2016	00:00	5	Vaiji-Kumbharwadi	Bhom
8	25/02/2016	18:00	25/02/2016	22:00	4	Bhom Road	Bhom Road
9	26/02/2016	17:30	26/02/2016	22:30	5	Bhom Road	Bhom Road
10	27/02/2016	19:00	27/02/2016	23:00	4	Bhom Road	Gawaliwada
11	28/02/2016	19:00	29/02/2016	00:30	5.5	Vaiji-Bhom	Katroli
12	05/03/2016	19:00	05/03/2016	22:30	3.5	Pachad	Bhom
13	06/03/2016	19:00	06/03/2016	23:00	4	Vaiji	Vaiji
14	07/03/2016	09:00	07/03/2016	14:30	5.5	Vaiji	Tamhanmala
15	12/03/2016	10:00	12/03/2016	14:30	4.5	Vaiji	Pachad
16	15/03/2016	15:00	15/03/2016	20:30	5.5	Morwadi Road	Rampur
17	10/04/2016	22:30	11/04/2016	07:00	8.5	Dabhol	Chirani
18	15/04/2016	17:00	15/04/2016	18:30	1.5	Vaiji Forest	Vaiji
19	16/04/2016	23:00	17/04/2016	01:00	2	Vaiji Forest	Vaiji
20	17/04/2016	15:30	17/04/2016	19:00	3.5	Vaiji Forest	Omli
21	24/04/2016	18:00	25/04/2016	06:00	12	Talsarmalai	Talsarmalai
22	01/05/2016	18:30	01/05/2016	23:00	4.5	Vaiji	Kalwande
23	02/05/2016	18:30	02/05/2016	23:00	4.5	Vaiji	Kalwande
24	03/05/2016	18:30	03/05/2016	23:00	4.5	Vaiji	Kalwande
25	04/05/2016	18:30	04/05/2016	23:00	4.5	Vaiji	Kalwande
26	05/05/2016	18:30	05/05/2016	23:00	4.5	Vaiji	Kalwande
					Total duration of the survey:120 hours		

However, no Pangolin activity was recorded at these locations.



Figure 8: Pangolin burrows seen during the survey

→ **Camera trap**

Camera trap is one of the widely used techniques for monitoring and filming wild animals remotely where minimum human interference is absolutely essential. This technique can also be used to understand the use of habitat by a particular species. Since, Indian Pangolin is a very shy animal; cameras were installed to document its presence. Its activity was recorded just once in the wild at Talsar he table shows trap cameras installed at various locations in the wild.



Figure 9: Action on field to capture action in wild – setting up of camera traps

Table 3: Locations of the camera traps set and their duration

Sr. No.	Start Date	End Date	Camera No.	Duration (In days)	Location
1	11/04/2016	17/04/2016	1 & 2	7	Talsar
2	18/04/2016	22/04/2016	1, 2 & 3	7	Talsar
3	24/04/2016	25/04/2016	1	0.5	Mundhe
4	25/04/2016	02/05/2016	1, 2 & 3	8	Mundhe
5	03/05/2016	07/05/2016	1, 2 & 3	5	Talsar
6	04/07/2016	06/07/2016	1 & 2	4	Bamnoli
7	07/07/2016	18/07/2016	1 & 2	12	Bamnoli
8	09/07/2016	18/07/2016	3	10	Bamnoli

→ Awareness generation through various media

It was observed that more than 60% people were unaware about the very existence of the Indian Pangolin in their vicinity. Hence various media were used to sensitize the people. Special pamphlets highlighting the urgency of protecting the Indian Pangolin were designed in Marathi and distributed to the people (Figure 10). SNM staff and volunteers also urged the locals to share any kind of information pertaining to the Indian Pangolin on a dedicated hotline number.



Figure 10: Marathi pamphlets designed for creating awareness about the Indian Pangolin

Also, panels were displayed at prime locations in 27 villages. These activities have helped to create a preliminary awareness about the Indian Pangolin which can eventually help in safeguarding the Indian Pangolin and its habitat.



Figure 11: A panel put up for display in one of the target villages

Awareness workshop for the mass public was also conducted at Ketaki village. The workshop participants belonged to *Katkari* tribe and have given a nod to enthusiastically participate in the Indian Pangolin conservation activities.



Figure 12: Awareness generation meet held at Ketaki on 11 Jun 2016

Also, SNM made all necessary arrangements to reach out a wider audience across the entire Konkan region through popular articles in the leading local newspapers.



Figure 13: Publications in local newspapers

Inference

Indian Pangolin is nocturnal, shy and solitary animal. It is so rare that it can't be sighted so easily and hence, not much information has been gathered about its presence on field. Hence, there is need to put in more rigorous efforts on the ground. Moreover, the interview session revealed that just a handful of people are aware about the Indian Pangolin. This fact highlights the need of conducting awareness activities for protection and conservation of the Indian Pangolin.