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Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

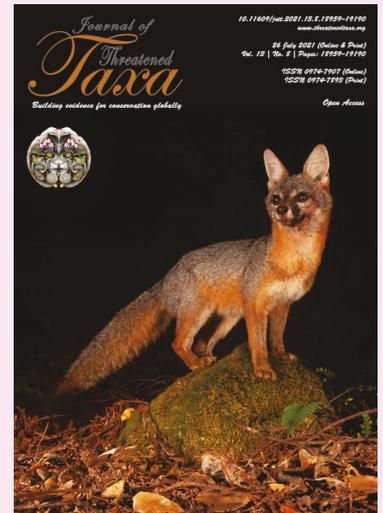
NOTE

UTILISATION OF HONEY TRAP METHOD TO ENSNARE A DISPERSING SUB-ADULT BENGAL TIGER *PANTHERA TIGRIS TIGRIS* L. IN A HUMAN DOMINATED LANDSCAPE

Gobind Sagar Bhardwaj, Balaji Kari & Arvind Mathur

26 July 2021 | Vol. 13 | No. 8 | Pages: 19153–19155

DOI: 10.11609/jott.6476.13.8.19153-19155



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Utilisation of honey trap method to ensnare a dispersing sub-adult Bengal Tiger *Panthera tigris tigris* L. in a human dominated landscape

Gobind Sagar Bhardwaj¹ , Balaji Kari²  & Arvind Mathur³ 

¹Rajasthan State Pollution Control Board, Institutional Area, Jhalana dungri, Jaipur, Rajasthan 302004, India.

²Udaipur North, Gulabh Bagh, Udaipur, Rajasthan 313001, India.

³Zoo, Ramniwas Bagh, Jaipur, Rajasthan 302004, India.

¹gobindsagarbhardwaj@gmail.com (corresponding author), ²balaji.kari1@gmail.com, ³drarvindmathur69@gmail.com

Young tigers, as in all felids, typically disperse from their natal territory to find new areas to settle (Karanth 2001; Goodrich et al. 2010). In doing so they may encounter settlements and villages where the potential for cattle lifting exists. Here we present a case study of a sub-adult tiger in Sariska who had dispersed out of his natal territory into a human dominated landscape, and a novel technique was used to lure and trap him and release him back into a different site in Sariska where he settled down and fathered cubs.

Sariska Tiger Reserve (STR) is located in the Aravalli hill range and lies in the semi-arid biogeographic zone of Rajasthan (Rodgers & Panwar 1988). Covering an area of 1,213 km², the terrain of the landscape is undulating to hilly with large to narrow valleys, two large plateaus called Kiraska and Kankwari with large lakes, Silised, Mansarovar, & Somasagar are located in the reserve. The maximum altitude of Sariska is 777m. The vegetation of STR is tropical dry deciduous forests (Champion & Seth 1968). Earlier the local people had killed all the tigers in Sariska. Therefore this reserve is a dangerous place for tigers, due to adversarial attitudes of the local population.

For localizing the straying tiger, urine and feces of a

tigress was collected from Nahargarh Zoological Park, Jaipur, for 10 days in the middle of June 2017. The 11-year old tigress had been observed to be in estrous, frequently vocalizing, growling, scent marking and other signs that she was ready to mate. For the collection of urine, a small layer of sterilized absorbent cotton ball embankment (2 inches) was made across the slope in the shelter where she rested. The urine was squeezed into a sterile 500 ml bottle and with the help of sterile syringes. This exercise was repeated for 10 days resulting in the collection of approximately 1 liter of urine. It was diluted to five litres by adding normal saline solution. Feces of the same tigress was mixed in the urine.

A track, observed to be continuously used by livestock, villagers, and by the male subadult tiger named ST13 was selected. A dummy trail was made by spraying a mixture of urine and feces using a spray pump at prominent points like large boulders lying along the track or at the trunks of large trees leading to an open area where ST13 could be darted. The immobilization team with Dan-inject syringe projector and necessary equipment was kept in a sheltered area. Within 30 hours of creating the dummy trail, ST13 came out into the open and was immobilized with 3.2–3.5 of ml of mixture

Editor: Priya Davidar, Sigur Nature Trust, Nilgiris, India.

Date of publication: 26 July 2021 (online & print)

Citation: Bhardwaj, G.S., B. Kari & A. Mathur (2021). Utilisation of honey trap method to ensnare a dispersing sub-adult Bengal Tiger *Panthera tigris tigris* L. in a human dominated landscape. *Journal of Threatened Taxa* 13(8): 19153–19155. <https://doi.org/10.11609/jott.6476.13.8.19153-19155>

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Funding: Government of India and Government of Rajasthan.

Competing interests: The authors declare no competing interests.

Acknowledgements: We thank Rajasthan Forest Department, State Government Rajasthan and Wildlife Institute of India for continuous help and support. We thank Dr. G.V. Reddy for his continuous guidance, Dr. P.K. Malik for his inputs and frontline staff of Sariska administration for continuous monitoring of tigers.

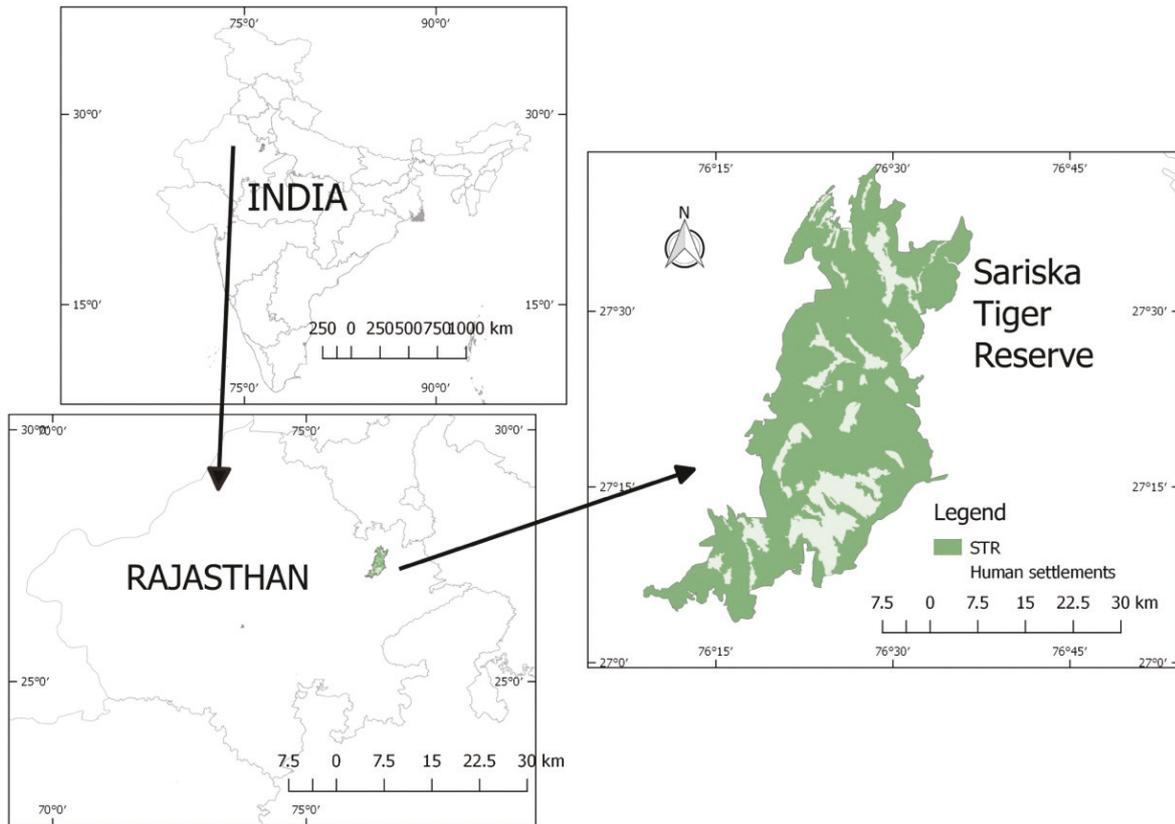


Figure 1. Map showing location of study area, Sariska Tiger Reserve.

Table 1. Table showing the area of occupancy (MCP) of ST13 during (pre-MI) and post-MI period.

Months	Area of occupancy (MCP) during pre-MI in km ²	Months	Area of occupancy (MCP) during post-MI in km ²
Aug 16	4.71*	Jul 17	174.09
Sep 16	5.23*	Aug 17	63.41
Oct 16	87.53	Sep 17	44.79
Nov 16	687.58	Oct 17	39.55
Dec 16	556.34	Nov 17	35.53
Jan 17	52.27	Dec 17	32.89
Feb 17	9.49	Jan 18	77.79
Mar 17	3.6	Feb 18	26.12
Apr 17	87.99	Mar 18	81.31
May 17	120.96	Apr 18	67.86
Jun 17	51.18**	May 18	121.73
		Jun 18	78.08
		Jul 18	73.11
		Aug 18	57.96
Mean	166.2		69.6
SE	5.7		1.2

MCP—minimum convex polygon | pre-MI—pre-managerial intervention | post-MI—post managerial intervention | *—the time period when ST13 is in its natal area | **—the month of managerial intervention.

of Xylazine and Ketamine (500 mg + 400 mg, HBM). The transportation cage weighing 250 kg with dimensions (length 1.8m, breadth 1m and height 1.2m) fabricated with non-slip wooden planks at the bottom and angle iron frames on sides and top (Shankar et al. 2010) was used to transport him. ST13 was relocated on June 26, 2017 to an enclosure located in his natal area to follow a soft-release protocol. The translocated tiger (now radio-collared) was kept in a soft enclosure in Karnakawas beat for 24 hours. He was subsequently released in the same area by opening the gate of the enclosure on June 28, 2017. He was then monitored by a team of two persons until the end of 2018.

It was observed that after a small period of wandering in different areas, ST13 finally settled in the Talvriksh Range of the reserve. Table 1 shows the area occupancy of ST13 during post managerial intervention (post-MI). The tiger settled in the northern portion of CTH in Talvriksh Range of Sariska. The overlapping of its home range with those of female tigresses ST12 and ST10 resulted in siring of six cubs from ST12 in two subsequent litters of three each in 2018 and 2020; and one cub from ST10 in 2020, a net increase of seven tigers in STR. This is a case study of using a ‘honey trap’ to

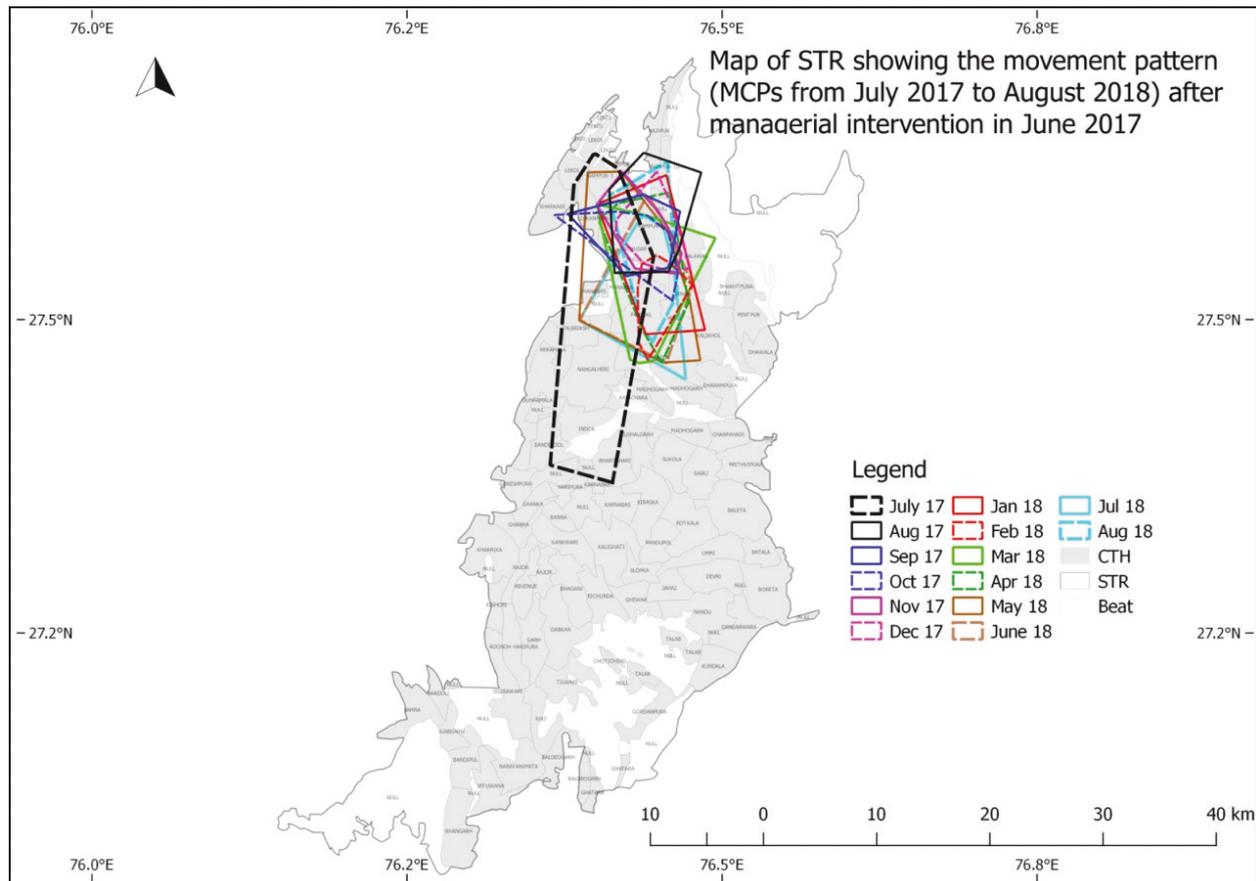


Figure 2. Map of Sariska Tiger Reserve showing the movement pattern of tiger ST13 (MCPs from July 2017 to June 2018).

successfully relocate a dispersing sub-adult tiger from a human dominated area to a section of the reserve.

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ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

July 2021 | Vol. 13 | No. 8 | Pages: 18959–19190

Date of Publication: 26 July 2021 (Online & Print)

DOI: 10.11609/jott.2021.13.8.18959-19190

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