

Fishing cat mortality outside protected areas in West Bengal, India, 2019–2020

Effective awareness programmes in the last decade have led to increased visibility of fishing cat *Prionailurus viverrinus* rescue and mortality reports in both print and social media platforms as compared to a decade back. Using mortality data (n=11) from The Fishing Cat Project Facebook page between January 2019 and February 2020 I identified current causes of the felid's mortality. Death by vehicular collision was the most frequently reported cause of death followed by electrocution (due to wires deployed to kill feral pigs) and ritualistic tribal hunts. Possible conservation interventions in the landscape include deployment of speed breakers, controlling feral pig populations and continuing awareness programmes to educate locals about the fishing cat.

The fishing cat is distributed broadly yet patchily from Pakistan in the west to Cambodia in the east (Mukherjee et al. 2016). Further, only 51 to 60% of the felid's popu-

lation occurs within protected areas while the rest occurs outside protected areas (Mukherjee et al. 2016). Throughout its entire range the fishing cat is threatened by

industrialisation, urbanisation, agriculture and aquaculture farms, hunting and pollution (Mukherjee et al. 2016). The felid is categorised as Vulnerable in the IUCN Red List and under Schedule I of the Wildlife Protection Act (1972) in India.

Between 2010 and 2011, 27 cases of fishing cat mortality were reported from Howrah and Hooghly districts of West Bengal, India, with retaliatory killing being the primary cause of death (Adhya et al. 2011). Following awareness and conservation programs, retaliatory killings have decreased significantly in both districts and calls for rescuing trapped cats have risen. Following the coverage of fishing cat conservation stories in the print media, a surge in the number of reports of fishing cat rescues and mortality was seen in both print and social media, in West Bengal, in recent years. Hence, in this study, I used such media platforms to investigate the number



Fig. 1. An adult fishing cat roadkill in Doperia, Khardah, North 24 Parganas, 22 January 2020.

of deaths of fishing cats from all districts of West Bengal and identify the major causes of death.

Materials and Methods

Study Area: My study area comprises the State of West Bengal in India. Here, the climate is hot and humid with annual rainfall being 100–250 cm/year and annual temperature 26°–40° in summer and 10°–19° in winter.

Data Collection and Analysis: I collected data on fishing cat mortality between January 2019 and February 2020 from The Fishing Cat Project Facebook page repository (newspaper reports shared and from other posts on the page based on information from the Forest Department), following a surge in reports of fishing cat deaths. The data was organized in the form of a table (Table 1) with the following columns: 'Source', 'Location', 'Month Year', and 'Cause of Death'. The

newspaper name was mentioned as source of the report wherever applicable (Table 1).

Results

I recorded 11 instances of fishing cat mortality during the study period of 14 months. Fishing cat mortality cases were reported from 5 districts: Howrah (5 reports), Hooghly (2 reports), South 24 Parganas (2 reports), North 24 Parganas (1 report) and Barddhaman (1 report). Three reports each are from January and February, two from November and December, and one from June, respectively. The most reported cause of fishing cat mortality outside protected areas in West Bengal is death by vehicular collision (8 instances; e.g. Fig. 1), out of which seven were road accidents and one a rail accident. This is followed by death by electrocution (2 instances; e.g. Fig. 3) and ritualistic tribal hunt (1 instance).

Discussions

The current primary cause of fishing cat mortality is found to be death by vehicular collision, as against killing in retaliation as was found during 2010–2011 (Adhya et al. 2011). However, while direct retaliation did not lead to the death of fishing cats within the study period, the felid still fell victim to wires laid down to control feral pigs which reportedly cause huge crop loss. In one instance, the death of a fishing cat occurred during ritualistic hunting practices by scheduled tribes. As defined in Article 366 of The Constitution of India (1950) scheduled tribes refer to "such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this constitution".

The reported explosion of feral pig population poses an indirect threat to fishing cat populations. To prevent crop loss, farmers keep uninsulated electric wires surrounding their croplands to trap, electrocute and kill pigs. However, these wire snares also trap wildlife in the area and in two instances, fishing cats were electrocuted. The deployment of electric wire snares must be stopped and government supported effective alternative strategies to counteract the feral pig problem are needed.

Ritualistic tribal hunts are recognized as a major threat to wildlife outside protected areas and was recently included as a priority issue in India's National Wildlife Action Plan (MoEFCC 2017). During 2010–2011 two instances of fishing cat death due to tribal hunts were reported (Adhya et al. 2011). In 2015, better enforcement of laws led to the arrest of 5 tribal hunters in Howrah district (<https://timesofindia.indiatimes.com/city/kolkata/gritty-woman-who-pushed-boundaries-to-put-the-elusive-fishing-cat-on-bengals-conservation-map/article-show/68769579.cms>). Further, a directive was issued by the Calcutta High Court to the Forest Department along with administrative, railways and police department to work in unison to stop ritualistic hunting of wild animals (<https://www.livemint.com/Leisure/7B2VpDCYN1IS77wZ6MN81H/Out-in-the-Wild--A-case-of-man-versus-the-wild.html>). However, the record of killing of one fishing cat by tribals stresses on the importance of more vigilance. Apart from this, members of the local community were previously reported to trap, kill and consume fishing cat meat (Adhya et al. 2011). A simi-

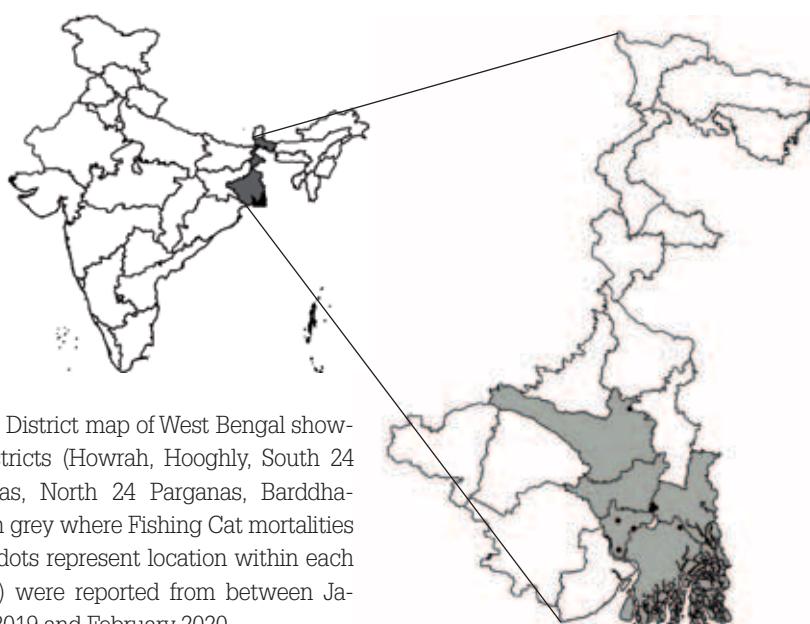


Fig. 2. District map of West Bengal showing districts (Howrah, Hooghly, South 24 Parganas, North 24 Parganas, Barddhaman) in grey where Fishing Cat mortalities (black dots represent location within each district) were reported from January 2019 and February 2020.

lar incident was reported from the Howrah district in February 2020, where an electrocuted fishing cat was skinned and its meat consumed by members of the local community.

However, while direct persecution by people can still be curbed with awareness rising and law enforcement, vehicular collisions pose a much bigger risk and is more challenging to mitigate. It requires government interventions and can be controlled through identification of vulnerable stretches and construction of speed breakers. Additionally, reflective sign boards should be put up along the roads that cut through fishing cat habitat.

Finally, awareness programs should continue to dispel myths and misperceptions regarding the fishing cat. Not a single report of retaliatory killing was reported within the study period and this could be attributed to increased levels of awareness as well as better enforcement of existing laws, especially in two districts (Howrah and Hooghly), where conservation programs have been regularly conducted since 2010. However, more sustained programs and upscaling of conservation activities are needed. This is especially relevant in the light of a few incidents recently where sightings of fishing cat caused a fear psychosis amongst locals with low awareness of the species, for example in Konnagar in Hooghly and Phuliya in Nadia, West Bengal, the fishing cat was mistaken for a tiger or a leopard, which could easily trigger the killing of the species.

Acknowledgement

I would like to thank The Fishing Cat Project (<https://www.facebook.com/fishingcatindia/>) for providing information on fishing cat mortality and for sharing information on the species' current threats in West Bengal. I would also like to thank the anonymous reviewer for providing inputs that helped improve the manuscript.

References

Adhya T., Dey P., Das U. & Hazra P. 2011. Status survey of fishing cats (*Prionailurus viverrinus*) in Howrah and Hooghly, W. Bengal. Intermediate Report, WWF India. 38 pp.

Ministry of Environment, Forests and Climate Change (MoEFCC). 2017. India's National Wildlife Action Plan (2017-31). https://wii.gov.in/images/images/documents/national_wildlife_action_plan/NWAP_Report_1o_Res_2017_31.pdf. Downloaded on 16 April 2020.

Table 1. Showing reported fishing cat mortality cases in West Bengal between January 2019 and February 2020. FB = Facebook page.

Source	Location	Month Year	Cause of Death
Fishing Cat Project FB	Baikunthapur village, Shyampur II, Howrah	February 2020	electrocution
Eisamay	Katwa, Purba Bardhaman	February 2020	ritualistic tribal hunt
Fishing Cat Project FB	Amta I, Howrah	February 2020	road accident
Eisamay	Rishra, Hooghly	January 2020	road accident
Bangla Bharat	Khardaha, North 24 Parganas	January 2020	road accident
Fishing Cat Project FB	Amta I, Howrah	December 2019	electrocution
Fishing Cat Project FB	Hind Motor railway station, Hooghly	December 2019	rail accident
The Times Of India	Bhangar, South 24 Parganas	November 2019	road accident
Eisamay	Bhangar, South 24 Parganas	November 2019	road accident
Fishing Cat Project FB	Amta, Howrah	June 2019	road accident
Fishing Cat Project FB	Bauria, Howrah	January 2019	road accident

Mukherjee S., Appel A., Duckworth J. W., Sanderson J., Dahal S., Willcox D. H. A. ... & Rahman H. 2016. *Prionailurus viverrinus*. The IUCN Red List of Threatened Species 2016: e.T18150A50662615. <https://dx.doi.org/10.2305/IUCN.UK.2016-2.RLTS.T18150A50662615.en>. Downloaded on 06 March 2020.

The Constitution of India. 1950. Art 366. https://www.india.gov.in/sites/upload_files/npi/files/coi_part_full.pdf. Downloaded on 16 April 2020.

The Wildlife (Protection) Act. 1972. http://legislative.gov.in/sites/default/files/A1972-53_0.pdf. Downloaded on 16 April 2020.

¹ Department of Zoology, Maulana Azad College, Calcutta University, 8, Rafi Ahmed Kidwai Rd, Taltala, Kolkata, West Bengal 700013
<ganguly.divyajyoti@gmail.com>



Fig. 3. A fishing cat that got electrocuted, was subsequently skinned and its meat consumed by locals in Shyampur block, Howrah (Photo S. Santra).