

Distribution Update

First photographic evidence of a dhole pair in the Pohara-Malkhed Reserved Forest, Amravati, Maharashtra, India

Swapnil D Sonone¹, Rudra A Shrivastava^{*1,2}, Pankaj N Bandabuche¹, Neelu Soni¹, Shantanu P Patil¹

¹ Youth for Nature Conservation Organisation, Amravati, Maharashtra, India. Email: rudrashrivastava07.25@gmail.com

² Wildlife Institute of India, Chandrabani, Dehradun, Uttarakhand, India.

* Correspondence author

Keywords: camera trap, *Cuon alpinus*, sighting record

Abstract

The dhole *Cuon alpinus*, one of the world's least studied large carnivores, is known for its elusive nature. Their elusive nature and the challenges of capturing or radio-tagging them make it difficult to track their movements and observe their behaviour in the wild. This study reports the photo-encounter of a pair of dholes in the Pohara-Malkhed Reserved Forest, part of the Amravati Forest Division in Maharashtra, India. The sighting, captured by a camera trap, adds to the growing evidence of the rich biodiversity within this fragmented and biotically pressured forest. The presence of other species, including leopards, tigers, spotted deer, wild boar, sambar, and nilgai further highlights the ecological importance of this region. These findings underscore the urgent need for continued conservation efforts to protect the diverse wildlife inhabiting this vulnerable area.

Introduction

The Asiatic wild dog, commonly known as the dhole (*Cuon alpinus*), is a top predator in the forests of Asia, known for its complex social structure and pack-living behaviour. Unlike other canids in Asia, dholes primarily inhabit dense forests and thick scrub jungles, making them particularly elusive and challenging to document. Historically, dholes ranged widely across Asia, but their populations have suffered a significant decline due to habitat loss, human persecution, and the negative perception of their hunting behaviour, where they chase down prey and begin feeding while it is still alive. This behaviour, coupled with their classification as vermin, led to extensive persecution, drastically reducing their numbers (Mivart 1871, Karanth & Sunquist 2000, Grassman et al. 2005, Kamler and Macdonald et al. 2012).

Despite their critical ecological role, dholes remain one of the least studied large carnivores in the world, even though they are listed as Endangered on the IUCN Red List (Kamler et al. 2015). In India, the dhole has been extirpated from 60% of its historical range over the last century (Karanth et al. 2010). The primary factors influencing their habitat include prey abundance, availability of water, and the interspersed forests with grassy openings (Johnsingh 1985). Their affinity for water is well-documented, often seen resting or playing in shallow streams or waterholes.

This report presents photographic evidence of a pair of dholes in the Pohara-Malkhed Reserved Forest, part of the Amravati Forest Division in Maharashtra, India. Captured by camera trap, this sighting contributes to the limited scientific documentation of dholes in the Pohara-Malkhed Reserved Forest. The presence of dholes in this fragmented and biotically pressured forest underscores the importance of continued conservation efforts to protect this endangered species and the broader biodiversity of the area.

Methods

The study was conducted in the Pohara-Malkhed Reserved Forest of Amravati Territorial Division, Maharashtra, which is located between the cities of Amravati and Chandur Railway in India. This fragmented forest region spans an area of approximately 80km² with several small villages located within the vicinity of this forest. Human-wildlife conflicts are occasionally reported in these villages and nearby urban areas, often involving livestock predation by wild animals. The reserve contains numerous water bodies, which provide a year-round water source for the local wildlife. The study area lies at a relatively low elevation of 455m. It experiences an average annual rainfall ranging from 1,000-1,200mm. The temperature varies between a minimum of 10°C in winter to a maximum of 45°C in summer. The forest is predominantly of the dry deciduous type, featuring a mix of scrub and grassland patches, along with areas of mixed forest.

To monitor wildlife diversity and activity within the Pohara-Malkhed Reserved Forest, a systematic network of 39 motion-activated camera traps was strategically deployed across key locations based on a preliminary sign survey. The camera trap monitoring began in August 2024 and is currently ongoing. Due to high biotic pressure and theft risk, some camera trap locations were later adjusted. The primary objective was to document the presence and behaviour of different species, particularly elusive and understudied carnivores. The camera traps, equipped with infrared sensors for day and night functionality, were positioned at critical points such as waterholes, animal trails, and dense vegetation areas, where wildlife activity was anticipated to be highest. The traps operated continuously, and data was retrieved periodically to ensure consistent monitoring.

The following is the established format for referencing this article:

Sonone, S.D., Shrivastava, R.A., Bandabuche, P.N., Soni, N. and Patil, S.P. 2025. First photographic evidence of a dhole pair in the Pohara-Malkhed Reserved Forest, Amravati, Maharashtra, India. *Canid Biology & Conservation* 28(5): 19-21. URL: [http://www.canids.org/CBC/28/Dhole pair PoharaMalkhed.pdf](http://www.canids.org/CBC/28/Dhole%20pair%20PoharaMalkhed.pdf)



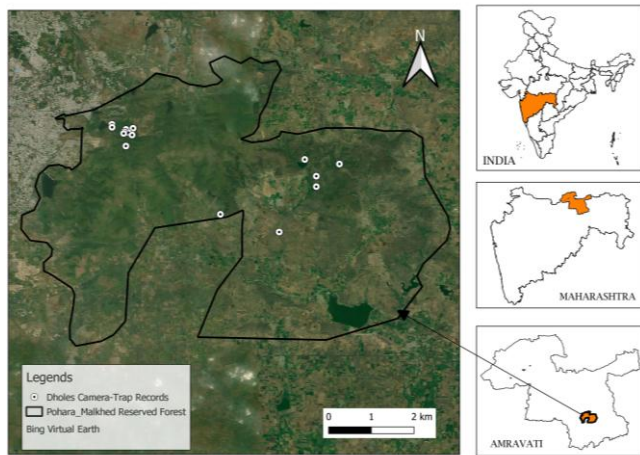


Figure 1. Map showing the presence locations of the dholes in the study area of Amravati, Maharashtra, India. Detail of locations indicated in Table 1.

The success of camera-trapping depends on the selection of ideal locations to deploy the camera traps to maximise the number of captures. Prior to camera placement, a sign survey was conducted along the forest paths, animal trails, dirt-trackers, dried stream bed to record carnivore presence through indirect signs (pug marks, tracks, scat, scraps, rake marks, scent deposits, and kills). Potential locations for camera trap stations were identified, and cameras were placed. The cameras were active 24h period that accounted for one sampling occasion. Over the period of four months, the camera traps collected data, capturing images and videos that were meticulously reviewed for species identification, recording the time, date, and any notable behaviours observed. Camera trap surveys proved effective in documenting rare species in challenging environments like the Pohara-Malkhed Reserved Forest.

Results & Discussion

The camera trap network deployed in the Pohara-Malkhed Reserved Forest captured 159 images of dholes across nine locations, providing evidence of the presence of this elusive species within the Amravati Forest Division. Over a total of 4,758 trap nights, this resulted in a dhole detection rate of 0.016. This sighting is particularly noteworthy given the fragmented nature

of the region and the ongoing biotic pressures it faces, suggesting that the forest continues to serve as a critical refuge for diverse wildlife.

In addition to the dhole, the camera traps documented the presence of other key species, including leopard *Panthera pardus fusca*, tiger *Panthera tigris tigris*, spotted deer *Axis axis*, wild boar *Sus scrofa*, sambar *Rusa unicolor*, and nilgai *Boselaphus tragocamelus*. The co-occurrence of these large carnivores and herbivores indicates that, despite significant challenges such as habitat fragmentation and human-induced pressures, the Pohara-Malkhed Reserved Forest maintains a level of ecological integrity necessary to support a wide range of species.

While Aryal et al. (2015) reported that dholes in the Himalayas tend to inhabit areas with low human disturbance and abundant prey, their occurrence in the heavily fragmented and human-dominated Pohara-Malkhed Reserved Forest in Central India prompts important questions about their ecological resilience and the underlying factors that support their survival in such altered environments. This also prompts the question: is this forest suitable for the establishment of stable dhole packs? It is possible that young dholes are venturing into this region in search of new territories, similar to the behaviour observed in tigers here, but have yet to establish a permanent presence here.

During earlier monitoring phases conducted between 2018 and 2023, dholes were occasionally recorded at various locations within the Pohara-Malkhed Reserved Forest, suggesting sporadic exploratory visits by one or more individuals. These sightings may represent dispersing individuals originating from nearby protected areas such as Melghat Tiger Reserve (approximately 100km northwest) or Bor Tiger Reserve (about 120km southeast), both recognised as strongholds for dhole populations. Such movements highlight the potential existence of ecological connectivity or dispersal corridors linking these fragmented forest landscapes. However, the recent observation of a pair (a male and a female) marks the first documented evidence of potential pair establishment in this forest, a pivotal development highlighted in this report. Since a pair has been observed, it is important to keep monitoring the area to learn more about how these animals use the space and interact, and to see if their numbers or group structure change over time.

The presence of dholes, known for their complex social structures and wide-ranging hunting behaviour, underscores the ecological value of this forested area. Dholes typically require large, continuous habitats to thrive, and their detection in Pohara-Malkhed highlights the forest's role as a vital habitat for sustaining biodiversity. This finding emphasises the need for continued and enhanced conservation efforts to protect and preserve this critical ecosystem, ensuring the survival of both the dhole and other species that depend on it.



Figure 2. Left: male and female from the dhole pair on their daily patrol. Right: lone male from the pair defecating.

Table 1. List of locations where dholes were photo-captured in Pohara-Malkhed Reserved Forest, Amravati, Maharashtra, India.

Camera trap ID	GPS coordinates
CT-7	20°55'16.5"N, 77°48'06.8"E
CT-8	20°55'11.7"N, 77°48'06.9"E
CT-A9	20°55'02.6"N, 77°48'25.8"E
CT-B9	20°55'05.3"N, 77°48'26.3"E
CT-C9	20°55'08.6"N, 77°48'29.2"E
CT-D9	20°55'04.4"N, 77°48'37.0"E
CT-E9	20°55'10.5"N, 77°48'40.9"E
CT-F9	20°55'00.0"N, 77°48'39.0"E
CT-G9	20°54'42.6"N, 77°48'28.3"E
CT-13	20°54'22.8"N, 77°53'19.2"E
CT-14	20°54'15.6"N, 77°54'15.8"E
CT-A23	20°53'57.6"N, 77°53'38.0"E
CT-B23	20°53'41.9"N, 77°53'37.6"E
CT-C23	20°53'41.4"N, 77°53'37.4"E
CT-31	20°53'00.2"N, 77°51'02.6"E
CT-32	20°52'32.9"N, 77°52'37.6"E

The camera trap study in the Pohara-Malkhed Reserved Forest reveals the presence of dholes and other key species, such as leopards and tigers, underscoring the area's ecological significance within the Amravati Forest Division. Despite challenges like habitat fragmentation and human-induced pressures, this forest remains a vital refuge for diverse wildlife.

The discovery of dholes in such a disturbed environment challenges existing notions of their habitat preferences, suggesting potential adaptability and raising questions about the forest's ability to support stable dhole populations. This emphasises the need for strengthened conservation efforts to safeguard the ecological integrity of the forest and ensure the survival of both dholes and the broader wildlife community.

In summary, these findings highlight the critical importance of targeted conservation strategies to protect this essential habitat and preserve its role in supporting biodiversity.

Acknowledgements

The camera trap survey was a collaborative effort by the Youth for Nature Conservation Organization (YNCO) Amravati and Maharashtra Forest Department (MFD). We would like to acknowledge the hard work of members of YNCO, field staff of Pohara-Malkhed Reserved Forest and RFOs in the field for installing camera traps.

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Biographical sketch

Swapnil Sonone is a member of the IUCN Sloth bear specialist group, working on human-leopard and -sloth bear conflict, developing mitigation measures in human-dominated landscapes.

Rudra Shrivastava is a master's student at the Wildlife Institute of India studying large mammal ecology and human-wildlife interactions.

Pankaj Bandabuche is a mechanical engineer, focusing on large carnivores in Central India, training forest staff in wildlife rescue and promoting coexistence through awareness and technical innovation.

Neelu Soni is a research scholar at Amravati University studying sloth bear genetic connectivity in western Maharashtra through population genetic using microsatellites

Shantanu Patil is a wildlife conservationist and passionate about big cats. He leads awareness programs and inspires future wildlife enthusiasts while exploring their elusive lives.