

## Perils of an Endangered underdog: dholes in north-east India

By Priya Singh, Arjun Srivathsa and David Macdonald, 30th October 2019

Besides being a pack-living, forest-dependent predator, the dhole or Asiatic wild dog is also a hypercarnivore, a term used to describe animals whose diet consists primarily (> 70%) of meat. A significant proportion of the species' diet is composed of mid- and large-sized ungulates. The forested and alpine habitats of South and South-east Asia, where dholes mostly occur, are also home to large human populations and their livestock. When wild prey species become scarce, either from being hunted by humans or for other reasons, dholes take to killing livestock. This leads to negative interactions with humans, including persecution and retaliatory killing of the canids. Habitat loss, unexplained disease cycles and competition from other predators add further challenges for dholes. The most recent IUCN Red List assessment (2015) categorizes the dhole as an Endangered species. In fact, with fewer than 2,500 mature individuals remaining in the wild, the dhole is no less threatened than the tiger.



India supports the world's largest dhole population, with much of it restricted to protected areas in central and southern India. Photo: Sandesh Kadur

Globally, dholes have disappeared from nearly 80% of their historical range. India currently supports the species' largest extant population, most of which is restricted to the southern and central parts of the country. With a large expanse of forests and contiguous with Myanmar and the forests of South-east Asia, India's north-eastern region has until now been scarcely surveyed for mammalian diversity. This is mainly because of logistical constraints and difficult socio-political conditions in the region. Within this poorly studied landscape, the Eastern Himalayan belt north of the Brahmaputra River receives most attention from researchers carrying out ecological studies, whereas our knowledge of the remaining area is still very limited.

Dampa Tiger Reserve in Mizoram state is the only protected area designated as a Tiger Reserve in the southern cluster of north-eastern hill states, reflecting its importance as a key habitat for rare biodiversity and an area of conservation focus. However, the area has struggled to maintain an ecologically viable population of the iconic felid. The reserve also supports a population of the dhole, which is recognized as a tiger competitor and sometimes incorrectly stigmatized for the near-absence of the large cat.



The tightly folded Lushai Hills in Dampa make working in the area a challenge. Photo: Priya Singh

Between December 2014 and March 2015, in a collaborative effort between Ecosystem-India, Guwahati, and WildCRU, University of Oxford, we conducted an ecological study in Dampa. It was designed to estimate populations of the clouded leopard in this landscape as part of a [range-wide study on the ecology of this](#) species. During the study, a diverse range of mammals were captured by our camera traps. These not only included a fascinating guild of [wild felids](#), but also two species of wild canids, the dhole and golden jackal. Recognizing a lack of information on dholes from the area, we decided to analyse the photo-capture data obtained from Dampa for dhole records. Inspired by Dampa's dholes, we also collated and presented updated information on the species'

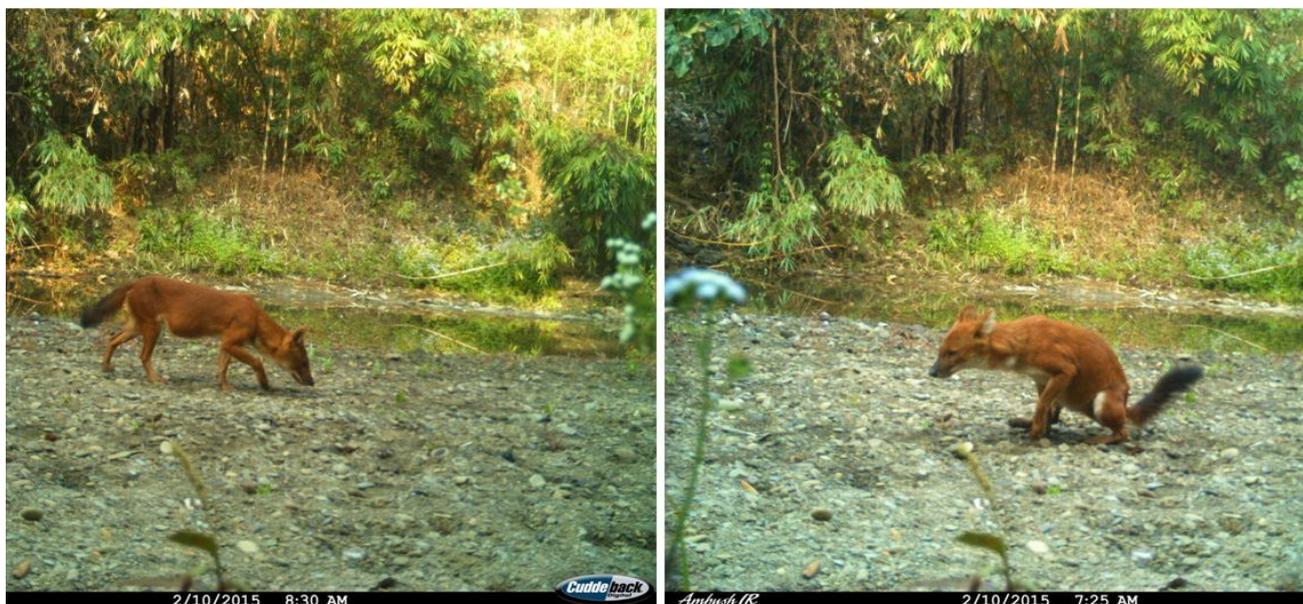
presence from 2010 onward across north-east India.

Our [study](#) led to some interesting findings. At a landscape level, dholes may have a wider distribution in north-east India than previously believed. Simultaneously, our fine-scale analysis of dhole records in Dampa showed a positive association with sambar, which is an important prey species. In addition, site use by dholes was positively associated with presence of forest guards, indicating effective protection efforts. Increased distance from the park boundary also had a positive effect on dhole presence, suggesting the species prefers low levels of human-induced disturbance.



Dampa supports a high diversity of important prey species for large predators such as dholes. These include, from left to right: sambar, barking deer, red serow, wild pigs and gaur. Photos: Ecosystem-India and WildCRU

Our work demonstrates that with its undisturbed forests, high diversity and presence of medium- and large-sized ungulate prey, and contiguous forests, Dampa is an important refuge for dholes in north-east India. Systematic surveys across select states of north-east India that our study identified as potential dhole habitat may allow us to gain crucial insights on dholes and formulate an integrated pan-north-east India conservation plan for the species.



Left: Dholes are voracious feeders, filling their bellies to the limit as seen in this camera trap photo from Dampa. Right: Defecating also serves the purpose of marking territories; this one decides to do so right before a camera

trap. Photos: Ecosystem-India and WildCRU

The article [Conservation status of the dhole \*Cuon alpinus\* in north-east India](#), with a focus on Dampa Tiger Reserve, Mizoram is available in *Oryx*.



### Priya Singh, Arjun Srivathsa and David Macdonald

Priya Singh (left) is an independent wildlife researcher with an interest in carnivore biology and conservation. Her current work focuses on determining influences of changing land-use patterns on distributions of carnivores in a part of north-eastern India. She is also a member the Wild Canids-India Project.

Arjun Srivathsa is a PhD student at the University of Gainesville, Florida, and associated with the Wildlife Conservation Society, India. He is interested in canid ecology, specifically dholes, and is a member of the IUCN Canid Specialist Group, and the Dhole Working Group. He is also a member of the Wild Canids—India Project.

David Macdonald (right) is the Director of Wildlife Conservation Research Unit (WildCRU) at the University of Oxford, and is Oxford University's first Professor of Wildlife Conservation.