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public confidence that people could safely share this habitat with bears; keeping a bear with such a history could impede conservation efforts not only in Italy but for other small populations in Europe, as it would prompt distrust in management agencies."

Additionally, the BSG recommended that hikers carry bear spray, which has proven to be very effective at preventing unwanted consequences in close encounters with bears in North America. However, this product is still forbidden in Italy and in several other European countries.

The attacks led to a significant loss of public support that had been hard-won over the past 20 years. Poaching was already on the increase, so with growing discontent over conflicts with bears, the removal of this single bear was deemed a necessary action demonstrating that conservation is not a trade-off with public safety. We have to keep in mind that possibly the most important aspect of any bear management program is to nurture public support.

We will continue to emphasize modifications of human behaviors to help avoid such conflicts with bears. We will also employ aversive conditioning, including bear dogs, to modify bear behaviors. But as a last choice, we may someday again have to remove a bear that is viewed by the public as threatening their safety.

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Himalayan Black Bear Discovered in Babai Valley of Bardia National Park, Nepal, Co-occurring with Sloth Bears

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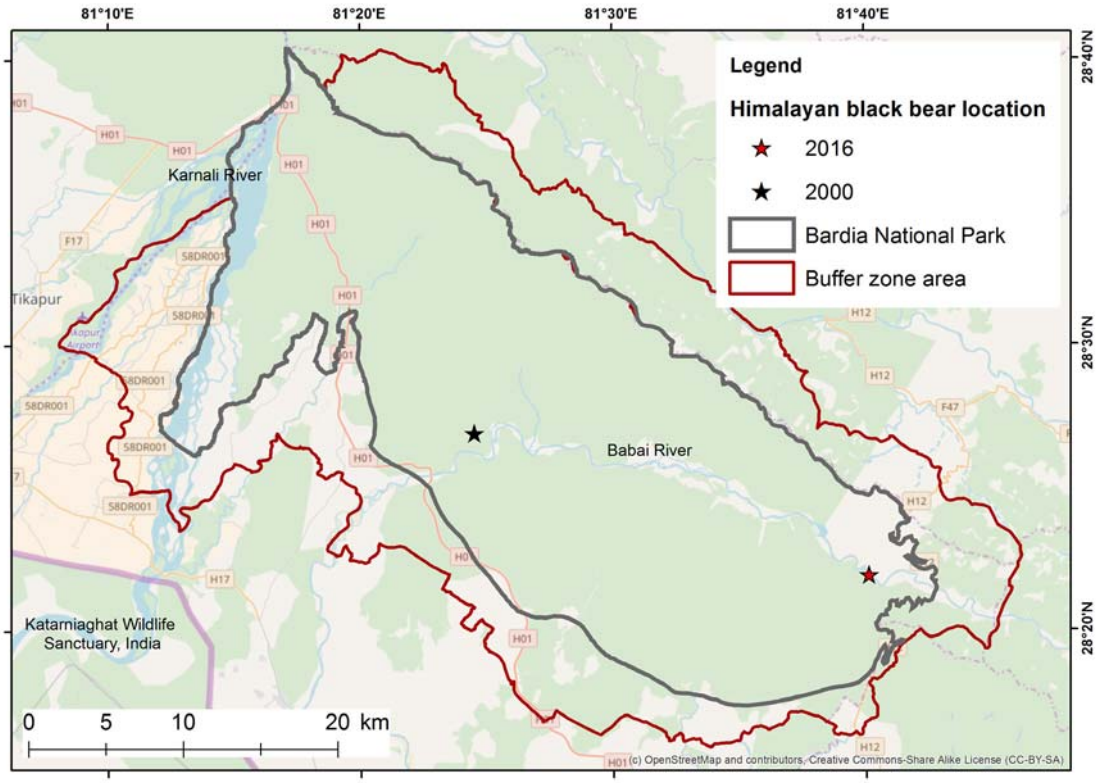
In Nepal, the Asiatic black bear (*Ursus thibetanus*; normally called Himalayan black bear in Nepal) occurs across the Middle Hills and has also been detected within all of the Mountain Protected Areas (National Parks: Makalu-Barun, Sagarmatha, Langtang, Shivapuri Nagarjun, Shey-Phoksundo, Rara and Khaptad; Conservation Areas: Kanchenjunga, Annapurna and Manaslu; and Dhorpatan Hunting Reserve). It has also been recorded from the districts of Dhading, Surkhet, Dailekh, Dadeldhura, Doti, Bajura, Rukum and Myagdi (Jnawali et al. 2011). It is considered to occur at elevations of 1,400 - 4,000 m (Jnawali et al. 2011), but not in the lowland Terai of Nepal, which is occupied by the sloth bear (*Melursus ursinus*). A single record exists, from a camera trapping survey in 1999 - 2000, of a Himalayan black bear in the Babai Valley (along the Babai River) of Bardia National Park (Jnawali et al. 2011). This park is within the Terai in southwestern Nepal (28.7193 to 29.0515°N; 80.0609 to 80.4120°E). However, since then there has been no further evidence of the presence of this species on the Terai of Nepal despite continuous and extensive camera trap surveys and other ecological research in last decade. Here we present photographic evidence of another Himalayan black bear captured in a camera trap in Bardia (BNP), after a 16-year absence.



Camera trap locations where a Himalayan (Asiatic) black bear was photographed in Bardia National Park, Nepal, in 2000 and 2016.

Methods

A camera trapping survey aimed at tigers was conducted across the entire BNP (968 km^2) from January 18 to March 28, 2016. A total of 269 grid cells of 2 x 2 km were superimposed and surveyed successively in 4 large blocks. The camera trap location within each grid cell was selected following an extensive survey of tiger signs. In each sampling point a pair of motion-sensitive camera traps (Cuddeback Color Model C1, Cuddeback Attack, Reconyx 500 or Reconyx 550) was installed at 45 - 60 cm above ground on either side of a game trail, forest road or stream bed, maximizing the probability of tiger (*Panthera tigris*) capture. Camera traps were checked every day. Cameras were active for at least 15 days in each grid cell. Camera trap photos were given unique identification names and sorted by species.

DNPWC/NTNC

(left) Camera trap photographs of Himalayan (Asiatic) black bear in Babai Valley of Bardia National Park, Nepal during 2016 tiger survey and (right) during 1999/2000 survey. The old photograph was found in the photo archive of the National Trust for Nature Conservation.

Results and Discussion

A total of 4,035 camera-trap nights from 257 sampling locations yielded 489,764 photographs of 28 species. We recorded 3 photos of a solitary Himalayan black bear from a single location along the riverbed at Dhanuse area in Babai Valley on March 5. We compared the photos with Asiatic black bear photos on the IUCN redlist webpage (Garshelis and Steinmetz 2016) and national redlist of mammals of Nepal (Jnawali et al. 2011) to confirm the identification. The bear capture location was in the eastern part of BNP, 27 km east of the camera trap photo of a black bear in 2000, and approx. 3 km from the border of Banke NP. Other large mammalian species detected at this site included tiger (*Panthera tigris*), sambar (*Rusa unicolor*), wild boar (*Sus scrofa*), chital (*Axis axis*) and red muntjac (*Muntiacus muntjac*). Scat and tracks of a bear were also recorded at multiple locations beyond the camera trap location.

Details of the camera trap locations where an Asiatic black bear was photographed in Bardia National Park, Nepal, in 2000 and 2016.

Particulars	2000	2016
GPS location	28.44891°N 81.40853°E	28.36562°N 81.66896°E
Elevation (meters)	237	327
No. of photos	1	3
No. of individuals	1	1
Duration of camera trapping at this site	25 Mar–9 Apr 2000	23 Feb–9 Mar 2016
Photo date and time	1 Apr 2000 21:44	5 March 2016 15:22
Terrain	Hilly	Hilly
Habitat type	Mixed forest	Mixed forest
Distance to nearest village (km)	8	4
Distance to nearest sloth bear photo location (km)	1.4	1.6

Himalayan black bears have been reported from low elevations (< 1,000 m) along the Terai Arc in India, overlapping the range of sloth bears in Corbett Tiger Reserve and Rajaji National Parks, Uttarakhand (Bargali 2012). However, Garshelis et al. (1999) reported little or no overlap of sloth bear and black bear ranges in Nepal. The reason for this separation in Nepal, but overlap in India, remains a mystery. Sloth bears have been recorded in Bardia regularly, including the Babai valley (Garshelis et al. 1999, Jnawali et al. 2011, Dhariya et al. 2016). Although the evidence for presence of black bears in this valley is sporadic, these records suggest a marginal overlap with sloth bears in Nepal. A targeted study to better understand this dynamic would be very useful.

Acknowledgements

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