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Differentiating Sloth Bears from Asiatic Black Bears in Camera-Trap Photos

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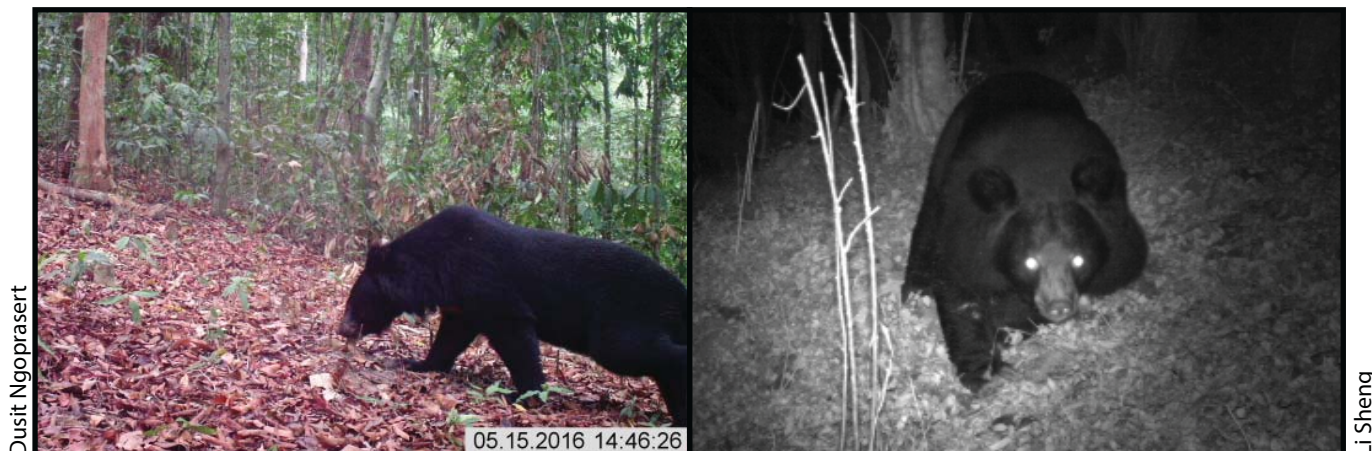
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Camera traps are increasingly used to assess the distribution of wildlife, including bears, throughout the Indian subcontinent and Southeast Asia. Accordingly, researchers must be able to determine with near certainty the species—and in our case the specific species of bear—that has been photographed. This can be difficult in areas occupied by sympatric, similar-looking bears, especially when some photographs are unclear, at a bad angle, or of poor quality (McLellan 2012, Ngoprasert and Steinmetz 2012). Asiatic black bears and sun bears may be similar-looking in photographs because the size of the animal is difficult to ascertain; since these 2 species overlap on a fine scale across Southeast Asia (Steinmetz 2011), this can lead to



(left) Camera-trap photo of a sloth bear, recognizable by the general dome shape, debris stuck in the fur, and whitish snout.
(right) Camera-trap photo of a sloth bear, identifiable from length of its back claws.



(left) Camera-trap photo of an Asiatic black bear, recognizable by the smooth, clean-looking coat as well as a short, dark snout. Note that the ruff on the neck is common in both Asiatic black bears and sloth bears. The large ears are not visible in this photo due to the bear's posture. (right) Camera-trap photo of an Asiatic black bear, readily distinguishable by the large ears.

confusion in species identification.

More at issue, though, is the case of Asiatic black bears and sloth bears because these 2 species are even more alike: they are of similar size, nearly-always black with a crescent white chest marking and a ruff of longer hair around the neck. Also, because their zone of overlap is narrow, typically 1 of the 2 species is locally far more common, so a few mistaken identifications could yield an incorrect perception of the status of the rarer one. Perhaps the most notorious example of this occurred in Bangladesh, where the widespread presence of Asiatic black bears masked the complete extirpation of sloth bears (Islam et al. 2013). Likewise, the historical and present distribution of sloth bears in Bhutan has been uncertain due to the presence of the far more common Asiatic black bear (Garshelis et. al. 2015). In recent surveys in northern and eastern India, species-specific population trends could not be discerned because these 2 bears were not identified to species (Jhala et al. 2011).

Here we present several helpful criteria for distinguishing sloth bears and Asiatic black bears in camera-trap photographs, based on our examination of hundreds of such photos. The characteristics used for telling these 2 species apart involve 4 body parts: the coat, ears, snout, and claws. Sloth bear coats appear very shaggy relative to Asiatic black bears, often giving the sloth bear's body a dome-shaped look or the appearance of 2 humps. Also, due to the shaggy coat, sloth bears in the wild—and in captivity for that matter—often have debris such as leaves, seeds, and dirt stuck in the fur. This debris is often very noticeable in camera-trap photographs, and if present, is a definitive characteristic of this species.

Due to the sloth bear's shaggy coat, the ears often appear quite small and can be lost in the upright fur around the head. In stark contrast, the ears of an Asiatic black bear are typically prominent on the head and appear large and round (like that of "Mickey Mouse") in many photographs. The sloth bear's snout tends to be creamy white and longer than that of an Asiatic black bear, whose snout is usually dark brown or black. Finally, the sloth bear's claws are whiter and larger than those of an Asiatic black bear.

Distinguishing characteristics of sloth bears and Asiatic black bears

Trait

Sloth Bear

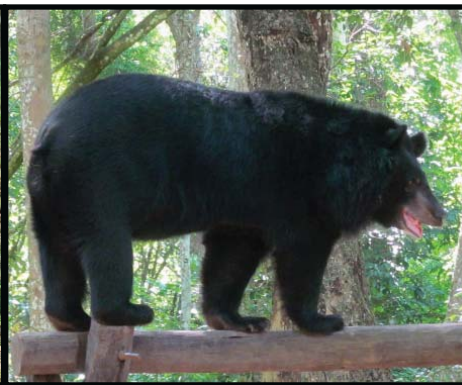
Asiatic Black Bear

Coat



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1. Shaggy, unkempt appearance
2. Dome or humped shape
3. Debris in fur



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1. Glossy, groomed appearance
2. Not dome shaped
3. Generally clean fur

Ears



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Appear small: lost in the shagginess around the head.



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Typically prominent, large and round.

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Snout



Long and whitish.



Short and usually dark.

Claws



Long and whitish.



Relatively short and dark.

Invariably, some camera-trap photographs of these 2 species will remain difficult to distinguish. We recommend working through each of the characteristics, and then consulting with others if identification is not certain. We have done this among ourselves, highlighting our interpretations and the rationale behind them. We have come across a number of mistaken identities in photos sent to us by others, which is what motivated us to provide these guidelines. Notably, these guidelines can be useful not only for camera-trap photos, but also for distinguishing sightings or hand-held photos of these 2 look-alike species.

Literature Cited

- Garshelis, D.L., N.A. Dhariaya, T.R. Sharp, R. Steinmetz, Y. Wangdi and S. Wangchuk. 2015. Sloth bears at the northern edge of their range: status of the transboundary population linking northeastern India to Bhutan. Final Report to International Association for Bear Research and Management.
- Islam, M.A., M. Uddin, M.A. Aziz, S.B. Muzaffar, S. Chakma, S.U. Chowdhury, G.W. Chowdhury, M.A. Rashid, S. Mohsanin, I. Jahan, S. Saif, M.B. Hossain, D. Chakma, M. Kamruzzaman, and R. Akter. 2013. Status of bears in Bangladesh: going, going, gone? *Ursus* 24:83–90.
- Jhala, Y.V., Q. Qureshi, R. Gopal and P.R. Sinha (editors). 2011. Status of the tigers, co-predators, and prey in India, 2010. National Tiger Conservation Authority, Government of India, New Delhi, and Wildlife Institute of India, Dehradun. TR 2011/003 pp-302.
- McLellan, B. 2012. Photos can be misleading, but they are still worth 1,000 words. *International Bear News* 21(3):16–17.
- Ngoprasert, D., and R. Steinmetz. 2012. Differentiating Asiatic black bears and sun bears from camera-trap photographs. *International Bear News* 21 (3): 18–19.
- Steinmetz, R. 2011. Ecology and distribution of sympatric Asiatic black bears and sun bears in the tropical dry forest ecosystem of Southeast Asia. Pages 249–273 in W. McShea, S. Davies, and N. Bhumpakphan, editors. *Dry forests of Asia: conservation and ecology*. Smithsonian Institution Press, Washington, D.C.

