

# Sexual dimorphism in Black Baza

## *Aviceda leuphotes*

S. SIVAKUMAR and VIBHU PRAKASH

The Black Baza *Aviceda leuphotes* occurs very locally from Uttaranchal to south peninsular India and Sri Lanka, through to Bangladesh and South-East Asia. It is rare and local in much of its range in the Indian subcontinent (Ali and Ripley 1987, Grimmett *et al.* 1998, Kazmierczak 2000). The species has black upperparts with conspicuous white and chestnut blotching on the scapulars and flight feathers. The foreneck and upper breast are black, with a broad white gorget below it. The lower breast is whitish, boldly barred with chestnut, and the centre of the belly, vent and undertail-coverts are black. Sexual dimorphism in the Black Baza has not been recognised by previous authors, except del Hoyo *et al.* (1994), who described the female as similar to the male, but lacking white in the secondaries.

We observed Black Bazas during a three-year study (1998–2001) on birds in Buxa Tiger Reserve (26°30'–26°55'N 89°20'–89°55'E; 60–1,850 m), West Bengal, India. The reserve covers an area of 750 km<sup>2</sup> of sal *Shorea robusta*-dominated tropical moist deciduous forest, evergreen forest, riverine forest, scrub, grassland, and plantations of sal, teak *Tectona grandis*, and jarul *Lagerstroemia reginae*. Six Black Baza nests were found during the study period (five in plantation areas and one in sal-dominated forest). Other records of the species will be presented elsewhere.

Sexual differences were noticed in the number of chestnut bars on the lower breast, which continue up to the belly, and in the size of white patches on the flight feathers. Some birds (n=12) were observed with seven chestnut bars, of which upper four bars were complete, and the remaining three were broken at centre by the black central belly-patch. These birds consistently had small white patches formed by the distal parts of the secondaries. Other birds observed (n=10) had only three chestnut bars below, which were complete and were only on the upper belly. These bars were comparatively thinner than the bars of birds that had seven bars. These birds also had larger white secondary patches. During copulation (n=8 pairs) it was observed that birds with seven chestnut bars below and smaller white secondary patches were female, and those with three bars below and larger white secondary patches were male.

The Bombay Natural History Society museum collection has five specimens of Black Baza. Two (from Tamil Nadu and Madhya Pradesh) have three chestnut bars; three specimens (one from Nepal and two from West Bengal) have seven bars. Only the Nepal specimen is sexed, and this is a female. Most have broken secondaries, so it is difficult to ascertain the extent of white patches. Male specimens (at the Natural History Museum, Tring, U.K.) show more black mixed in with the upper chestnut bars than do females, males have more chestnut-edged remiges on the dorsal surface (5–6 vs. 2–3 in females), and males have the ventral surface of the secondaries blacker than females (N. J. Schmitt *in litt.* 2003).

Our field observations and these preliminary comparisons of skins hint that there may be clear-cut sexual plumage differences in the Black Baza, although further work, including study of racial variation, is required.

### ACKNOWLEDGEMENTS

We would like to express our sincere thanks to: the U.S. Fish and Wildlife Service for financial support, the Forest Department of West Bengal for permission and co-operation throughout the study period, Dr Ranjit Manakadan, N. Sivakumaran, BNHS for their invaluable suggestions, Dr S. Unnithan and Vithoba Hegde for help in the BNHS museum, N. John Schmitt (BMNH) for help in providing useful information, Elbert Sangma, Raja Sen and Dillip Roy for their help with fieldwork, and an anonymous referee for comments that immensely improved the manuscript.

### REFERENCES

- Ali, S. and Ripley, S. D. (1987) *Compact handbook of the birds of India and Pakistan*. New Delhi: Oxford University Press.  
 Grimmett, R., Inskipp, C. and Inskipp, T. (1998) *Birds of the Indian subcontinent*. Delhi: Oxford University Press.  
 del Hoyo, J. A., Elliott, A. and Sargatal, J., eds. (1994) *Handbook of the birds of the world*. Vol 2. Barcelona: Lynx Edicions.  
 Kazmierczak, K. (2000) *A field guide to the birds of the Indian subcontinent*. Mountfield, Sussex, U.K.: Pica Press.

S. Sivakumar and Vibhu Prakash, Bombay Natural History Society, Hornbill House, S. B. Singh Road, Mumbai-400 023, India. Email: sivaprema3sep@yahoo.com