BIRDS TO WATCH

Head colour and sex-size dimorphism in *Pseudibis papillosa* and *P. davisoni*

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For many years what Matheu & del Hoyo (1992) and Dickinson (2003) call Indian Black Ibis *Pseudibis papillosa* and White-shouldered Ibis *P. davisoni* were considered one species; indeed, under the name Black Ibis *P. papillosa*, this is how they are to be found treated in OBC's own checklist (Inskipp *et al.* 1996), where it is pointed out that the union of the two taxa was proposed by Holyoak (1970). Holyoak, who was followed among others by Hancock *et al.* (1992), recognised that the key difference between the two taxa lies in crown and upper neck: "*P. papillosa* has a patch of red tubercules on the back of the crown which is missing in *P. davisoni*, which has a pale band (white or pale blue) lower on the nape". This was presumably garnered from technical descriptions in the nineteenth-century literature, whose dryness may have understated the evidence (not helped by the fact that the respective colours fade almost entirely in museum skins). At any rate, Holyoak concluded that "the differences between them seem small enough for it to be best, in view of their allopatry, to treat them as forms of one species."

However, as the illustration (if not the text) in Matheu & del Hoyo (1992) suggested, and as increasing numbers of photographs from the wild reveal, the differences are not so small in life. Both possess unfeathered blackish heads as far as a line from the upper throat to the upper hindneck, but while the adult *Pseudibis papillosa* possesses a narrow, bright red mid-crown becoming broader on hindcrown and nape (Plates 1–3), the adult *P. davisoni* possesses a (variable) pale blue bare middle hindcrown and nape down to the top of the upper hindneck, spreading round and becoming bold white under the ear-coverts to the upper throat, forming a complete collar on the upper neck, broadest at the back, narrowest at the front (Plates 4–8). These differences are well illustrated in Robson (2000), who elected (helpfully, in our view) to call *P. papillosa* "Red-naped Ibis".

The illustration in Matheu & del Hoyo (1992) indicates more of a dull bluish collar for *P. davisoni*, and this may have been influenced by Holyoak's description and by reports of such coloration in some members of the population of the species in Borneo, where subsequently Sözer & van der Heijden (1997) found a striking variety of crown

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Plate 1. Black (or Red-naped) Ibis *Pseudibis papillosa*, Gujarat, December 1998.

Plate 2. Black (or Red-naped) Ibis *Pseudibis papillosa*, Gujarat, December 1998.

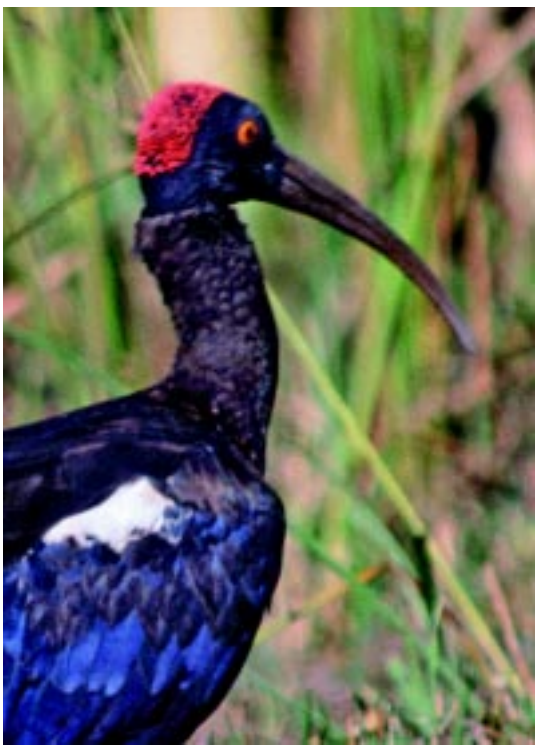

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Plate 3. Black (or Red-naped) Ibis *Pseudibis papillosa*, Gujarat, December 1998.

Plate 4. White-shouldered Ibis *Pseudibis davisoni*, Trapeang Boeung, Stung Treng province, Cambodia, 4 November 2006. The age and sex of this individual are unknown. The sky-blue colour of the hindcrown and nape is visible but is muted at this season (and more so in bright direct sunlight).

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patterns and colours in the island's remnant populations along the Mahakkam and Ratah rivers. Variations there included birds with (a) a cobalt-blue crown and nape (these comprised a large proportion, particularly along one river), (b) an all bluish-white head apart from a dark mask, (c) a broad white nape-patch, (d) a broad white patch from mid-crown to nape, and (e) a crown as in the now more familiar Indochinese birds, and there is also a suggestion that there is a variably intense facial mask in these types (see Plate 9). This intriguing circumstance deserves investigation, particularly the blue-crowned birds, in which the head pattern mirrors that of *papillosa*. No such birds were reported by Sutrisno & Imanuddin (2002), who considered white-collared birds to be adults, birds with patchy black spots on their collars to be juveniles, and birds with "white and pale blue" on their bare heads to be subadult. As the photographs from Cambodia show, there is a pale bluish tinge to

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Plate 5. White-shouldered Ibis *Pseudibis davisoni*, back of head of same individual in Plate 4, same place and date.

Plate 6. White-shouldered Ibis *Pseudibis davisoni*, same individual, place and date as in Plates 4 & 5.

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Plate 7. White-shouldered Ibises *Pseudibis davisoni*, Trapeang Chroung Tauch, Stung Treng province, Cambodia, 11 February 2008. Male (behind, left) and female immediately after copulation; note the larger body size and bill length of the male.

Plate 8. White-shouldered Ibises *Pseudibis davisoni*, same birds as in Plate 7 a few seconds earlier. Note how the intense sky-blue of the hind crown and nape is demarcated from the white of the side of the neck.

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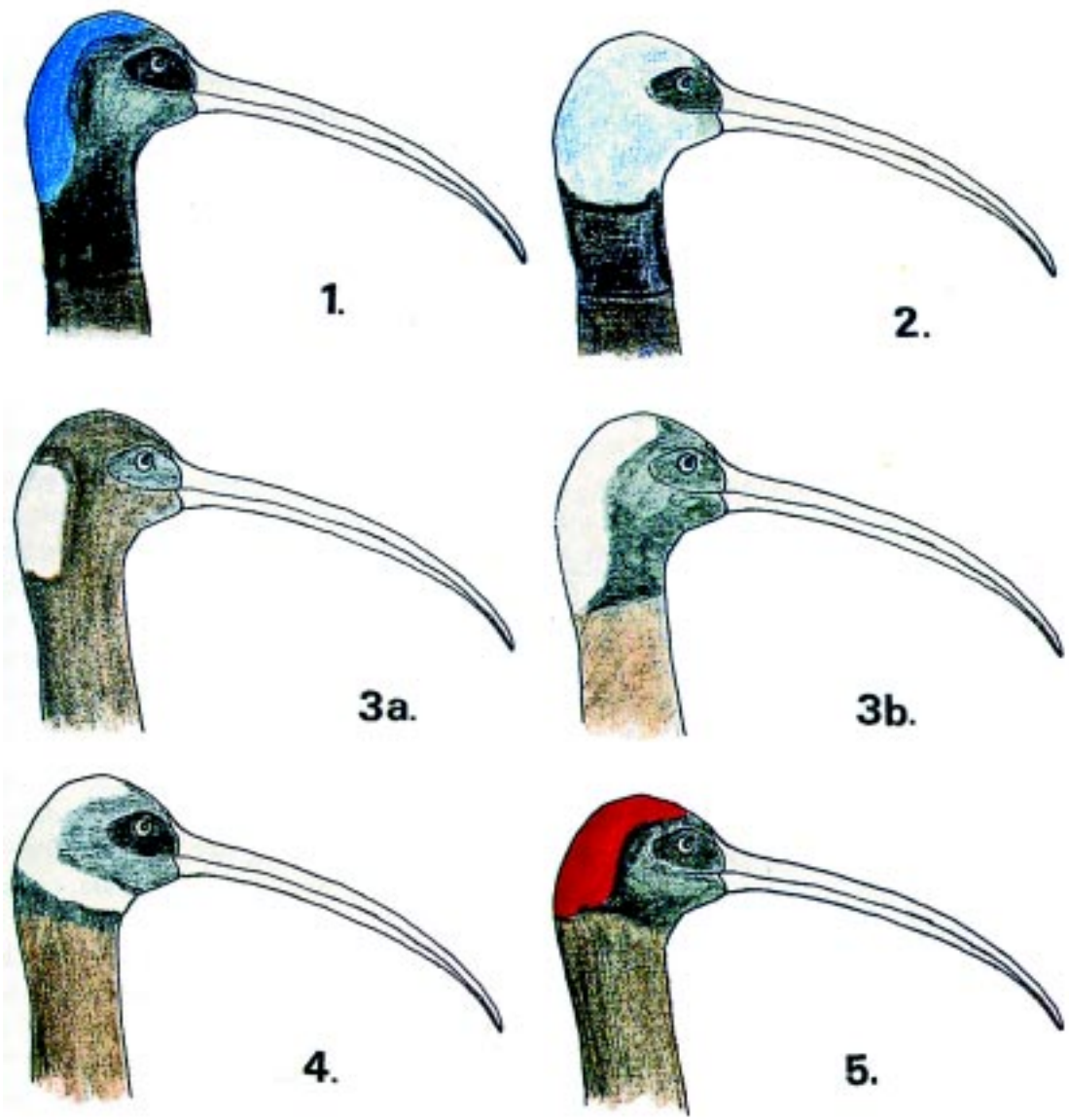
the hindcrown and nape in birds photographed in November, outside the breeding season (Plates 4–6), whereas in February, during the breeding season, birds appear to show a more intense sky-blue hindcrown and nape (Plates 7–8). Whether this is true on Borneo requires further study at different times of the year; perhaps the great variability there reflects mutation within a small gene pool.

Whatever the outcome of investigations on Borneo, the photographs assembled here give further emphasis to the view that the differences between *P. papillosa* and *P. davisoni* are of sufficient strength to mark them out as full species. It is also worth noting that, as Plates 7–8 indicate, there is a discernible difference in size between the sexes in *P. davisoni*, with the male being generally larger and with a longer bill. This evidence, which may prove useful in studies of nest attendance and behaviour, is currently being assembled for other species of ibis as well; the same

Plate 9. Heads of White-shouldered Ibises *Pseudibis davisoni* from the Mahakkam river system, Borneo. Plate reproduced with permission from Sözer & van der Heijden (1997), where the caption indicates: (1) blackish, bold head with cobalt-blue cap and nape; (2) almost entire head pale blue; (3a) rounded, clear white nape-patch on dark brown feathered head; (3b) clear white cap and nape-patch on bold, blackish head; (4) almost entire head and collar white; (5) *P. papillosa*: bright red cap and nape-patch.



difference appears to be present in what we would prefer to call Red-naped Ibis *P. papillosa* (Collar & Spottiswoode in prep.).

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