

A probable Australian White Ibis *Threskiornis moluccus* × Straw-necked Ibis *T. spinicollis* hybrid

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Abstract. We observed a probable juvenile Australian White Ibis *Threskiornis moluccus* × Straw-necked Ibis *T. spinicollis* hybrid on the Lachlan River catchment, New South Wales, in November 2016. Photographs, combined with observations, demonstrate phenotypic characteristics of both these ibis species. The bird had a pattern on the wing similar to the Australian White Ibis but coloration on the body similar to the Straw-necked Ibis. To our knowledge, this is only the second report of a probable hybrid between these two species in the wild, and the first report documented with photographs.

Introduction

The Australian White Ibis *Threskiornis moluccus* and Straw-necked Ibis *T. spinicollis* are common breeding waterbirds, distributed throughout Australia, with extensive overlap of breeding range, often breeding in the same colony (Kingsford 1991). Despite this, hybridisation (i.e. interbreeding) has rarely been documented, with only one probable report in the wild, by Disher (1983), although hybridisation has been reported in captivity (IZY 1966, 1972, 1973). Disher (1983, p. 77) reported an observation of a possible Australian White Ibis × Straw-necked Ibis hybrid in northern Victoria with “wing coverts and all plumage forward, both above and below, were white. From flight feathers above and below was black, including the tail”. We feel that the black tail described by Disher (1983), not present in either of the potential parent species, might point to the possibility of abnormal pigmentation, as opposed to hybridisation. Yet, without photographs, it is difficult to assess further. Here, we describe what we conclude was a probable hybrid Australian White Ibis × Straw-necked Ibis.

Methods

On 4 November 2016, we were assessing reproductive success of an ibis breeding colony north of Booligal, New

South Wales (33°45'S, 144°54'E), on the Lachlan River floodplain, on the distributary Merrimajeel Creek. Three species of ibis—Straw-necked (~15 000 nests), Australian White (~75 nests), and Glossy *Plegadis falcinellus* (~2 nests)—were nesting in lignum *Duma florulenta*.

Among a section of the colony that had predominantly juveniles capable of flight, we flushed an unusual ibis with phenotypic markings consistent with both Australian White and Straw-necked Ibis. We observed the bird for c. 5 minutes, watching it fly on three separate occasions. Observations were made from a kayak, using Zeiss Victory FL 8 × 42 binoculars, from distances of ~15–70 m. A point-and-shoot camera (Olympus Stylus TG-2) was used to obtain photographs (Figures 1–2).

Observations

The bird had a dark glossy blue-black back (Figure 1), consistent with Straw-necked Ibis, but had predominantly white wings with dark wing-tips, consistent with Australian White Ibis (Figures 1–2). The colour on the dark wing-tips was more extensive (Figure 2) than commonly seen in Australian White Ibis. From below, the bird appeared completely white (aside from the dark wing-tips), similar to Australian White Ibis, lacking the dark patterning on the secondaries and primaries of the Straw-necked Ibis. The tail was pure white, consistent with both Australian White



Figure 1. Probable hybrid Australian White Ibis × Straw-necked Ibis (on the right, photographed with Straw-necked Ibis) seen near Booligal, New South Wales, 4 November 2016. Note the extensive dark wing-tips, dark back, feathered head and neck, and white underparts. Photo: Sharon Ryall



Figure 2. Probable hybrid Australian White Ibis × Straw-necked Ibis seen near Booligal, New South Wales, 4 November 2016. Note the pattern on the wing, consistent with Australian White Ibis, but with more extensive dark wing-tips. Photo: Sharon Ryall

and Straw-necked Ibis. Further, the bill was short and the head and neck were feathered, indicating that the bird was a juvenile, hatched that year. Given that the bird was capable of flight, it was estimated to be 6–8 weeks old.

Discussion

We concluded that the ibis that we observed near Booligal was a probable hybrid Australian White Ibis × Straw-necked Ibis. This, and a report by Disher (1983), represent the only such reports of possible hybridisation in the wild, although Disher also considered the possibility of aberrant plumage not involving hybridisation. Plumage of the present bird was consistent with the two possible parent species, and the clear coloration (i.e. absence of speckling) in the feathers indicated that it was unlikely that the bird suffered from deficiency of melanin or carotenoid (van Grouw 2006). Generally, aberrant plumage is indicated by a speckled or muddled colour pattern (see e.g. <http://bioacoustics.cse.unsw.edu.au/archives/html/canberrabirds/2014-12/msg00328.html>), either on the entire bird, or on parts of it (Guay *et al.* 2012). This contrasts with the ibis in our study, which had clearly demarcated plumage coloration and no speckling (Figures 1–2). Without DNA analysis, however, we cannot conclusively say that the bird in question was a hybrid, but this is the most probable explanation.

Aliabadian & Nijman (2007) showed that in the wild 26% of Ciconiiformes (storks) species can hybridise. Among ibis, hybridisation rates vary significantly (McCarthy 2006). For instance, White-faced Ibis *Plegadis chihi* and Glossy Ibis have produced numerous probable hybrids, as have American White Ibis *Eudocimus albus* and Scarlet Ibis *E. ruber*. The Straw-necked Ibis has hybridised in captivity with the American White Ibis, Black-headed Ibis *Threskiornis melanocephalus*, and African Sacred Ibis *T. aethiopicus*. The Australian White Ibis has been documented hybridising with African Sacred Ibis in captivity (McCarthy 2006).

The apparent paucity of reported hybridisation between the Australian White Ibis and Straw-necked Ibis is

surprising, given the ability of these species to hybridise in captivity, their breeding range overlap, and the fact that they are both common conspicuous species often breeding near each other in the same colony. However, the vast range, expansive floodplain conditions, and remote locations where the Straw-necked Ibis commonly breeds could contribute to the rarity of observations. Given the rare occurrence of hybridisation between these congeners, we see no reason to believe there are any evolutionary or conservation implications (Grant & Grant 1992) of this observation.

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