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A Recent Specimen of the Night Parrot *Geopsittacus occidentalis*

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Summary: Until October 1990, the Night Parrot of Australia was known from only 22 specimens, all but one from last century. Despite regular reports, there was no supporting evidence. We found a road-killed specimen near the edge of the species' known distribution. This bird, an adult, possibly male, confirms the continued existence of this species.

The Night Parrot *Geopsittacus occidentalis* (Psittaciformes: Psittacidae) is one of Australia's mystery birds. Since its discovery by Europeans in 1845, only 22 specimens are known to have been taken (Forshaw *et al.* 1976). The last specimen, and the only one of this century, was taken in 1912 (Wilson 1937). Since 1912, there have been more than 70 reports from all mainland states and the Northern Territory (I. McAllan pers. comm.), a number of which appear reliable but cannot be verified (Blakers *et al.* 1984; Forshaw 1981; Schodde & Mason 1980). Despite the absence of specimens or confirmed sightings since 1912, the Night Parrot has rarely been considered to be extinct. It is placed on Schedule I of the CITES convention, and is listed as 'Indeterminate' by the Red Data Book (ICBP 1981) and as 'Insufficiently Known' by the RAOU and Australian National Parks and Wildlife Service (Garnett 1992). Schodde & Mason (1980) suggested that it 'may not even be really rare'. Its scattered distribution through areas of sparse human settlement, nocturnal habits and apparent nomadic behaviour render the probability of encounters with this bird small. Nonetheless, it most likely has suffered a decrease in numbers because of feral animals and European agricultural and livestock management practices (Schodde & Mason 1980; Garnett 1992). It is probably extirpated from parts of its former range (Forshaw 1981).

We report here the finding of a specimen of the Night Parrot from western Queensland that confirms the continuing survival of the species. A popular account of the find is given in Boles *et al.* (1991). This record comes from near the periphery of the known range for the species. Storr (1984) cited three second-hand reports of sightings from western Queensland. None of the known specimens is from Queensland; however, one specimen taken in 1845 was from the adjacent part of South Australia, where there was a reliable report in 1979 (Forshaw 1981).

An account of the rediscovery of the specimen reported herein was given by Boles *et al.* (1991 p. 692): 'The Australian Museum had planned an extensive trip through northern Australia ... from Sydney to Broome, Western Australia, through the Kimberley, and into the Top End of the Northern Territory. After six weeks, we started our return through western Queensland. Rather than taking a direct route back, we headed south from Mt. Isa along the Diamantina Developmental Road (Highway 83). On 17 October 1990, 36 kilometres north of Boulia [Fig. 1], we stopped at the side of the road to look at some Australian Pratincoles (*Stiltia isabella*). When the birds flew and landed down the road behind the vehicles, Max turned one vehicle around to follow them for a better look. Wayne and Walter remained parked on the side of the road in the other vehicle so as to reduce the disturbance to the birds. After obtaining a suitable look, Max returned, pulling up and parking behind the first vehicle. Walter got out and walked back to speak to Max through the vehicle door. After speaking, he turned away from the vehicle and happened to look down. There, next to his foot on the roadside, was the carcass of a Night Parrot.'

The specimen is now housed in the ornithological collection of Queensland Museum, under registration number O.29055. Its identification as a Night Parrot is based on its combination of green, yellow and black plumage, swollen cere, short claws, short tail feathers and absence of orange forehead.

The carcass was not fresh. There was very little muscle remaining other than some small amounts along the vertebrae and pelvis, and that was desiccated. Ants had removed most of the internal soft tissue in the thoracic and upper abdominal cavity. The specimen was

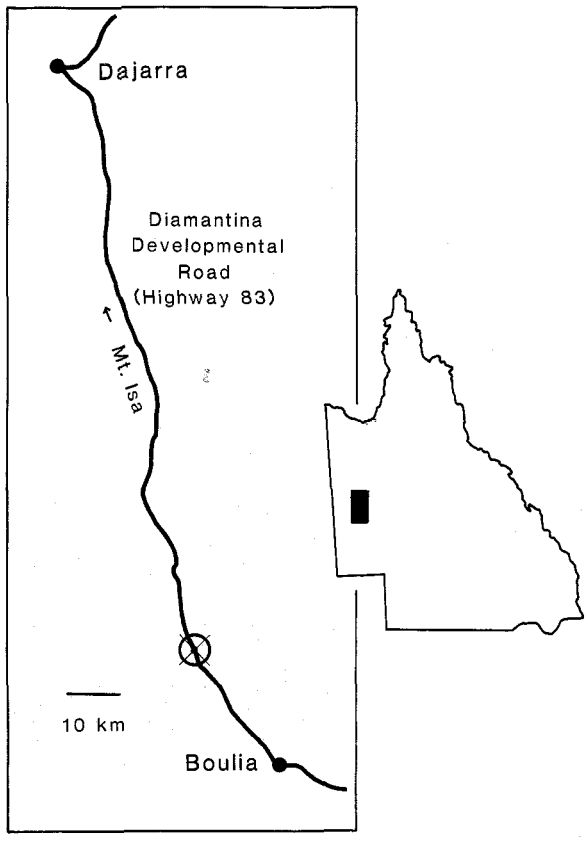

Figure 1 Location of the 1990 discovery of a Night Parrot carcass.

laterally flattened, but mostly complete; the head was detached from the body. Feathers and skin were missing from the back, exposing the vertebrae, ribs and some of the synsacrum; some feathers had been disturbed surrounding this area. The only tail feathers remaining were 4-6 on the right side. The lesser coverts on the left wing were damaged; the right wing was in good condition. The rest of the plumage and the legs appeared intact. The skeleton appeared intact except for a few missing ribs on the left side. Colour photographs of the carcass *in situ* on the roadside and under studio conditions are given in Boles *et al.* (1991); other photographs appear in Inder (1991), Anon. (1991) and Crome & Shields (1992).

The plumage is pale and faded when compared to specimens in the Australian Museum. It is probable that fading occurred as the carcass lay in the sun on the roadside; there is a noticeable difference between the exposed (right) and unexposed (left) sides. On the faded, exposed side, sections of feathers that were concealed under overlying feathers are similar to those on the unexposed side. The underside was concealed from exposure by the position of the wings. The plumage here is a quite vivid yellow and shows no indication of fading. Most of the plumage appears fresh. Despite the fading, there is very little wear on any of the body or flight feathers, and the pale fringes of the body feathers are not abraded. The only old plumage is on the nape and head, where the feathers are pale and abraded. There are scattered new feathers emerging on the throat, chin and crown, which are much greener and brighter than the older feathers. There is no active moult of the wings or tail.

Soft part colours of the specimen are bill, dark brown with whitish tip; cere, dark brown; legs, toes and soles, light pinkish brown; claws, grey with white borders. Bourgoin (cited in Wilson 1937) described the bill, legs and toes as blue-grey. Gould's (1865) description noted the colour of the bill as horn and of the feet as 'fleshy'. Schodde & Mason (1980) stated that the cere was 'slate, possibly paler and browner in females'.

Measurements are chord of flattened folded (right) wing 147 mm; culmen (from cere) 10.6 mm (tip appears slightly damaged); bill width (at base) 7.1 mm; total head 38.3 mm; tarsus 21.9 mm. Schodde & Mason (1980) give wing lengths of males and females as 147.8 ± 4.3 mm and 141.7 ± 3.8 mm respectively. Wing length values given by Forshaw (1981) are (males) 142-150 mm, mean 147 mm, and (females) 136-145 mm, mean 137.3 mm. The wing measurement of the carcass falls within the published values for males.

The sexes are not known to differ in plumage (Forshaw 1981; Schodde & Mason 1980). The only sexual dimorphism cited by Schodde & Mason (1980) is that females have finer and narrower bills, are slightly smaller and have 'possibly disproportionately shorter tails'. A comparison of the carcass with other specimens shows that its bill agrees in size with that of a male and is somewhat larger than those of two females. Unfortunately tail length cannot be determined on this specimen because of the missing feathers. While it is not possible to determine the sex of the specimen with confidence (i.e. by internal examination), based on the above measurements it seems likely to be male.

The age can be more reliably determined. Platycercine parrots (Platycercinae) characteristically acquire the adult body plumage at the post-juvenal moult (Forshaw 1982). In these parrots, juvenile and adult plumages do not differ in the texture of the feathers (as

in passerines), but juvenile plumages are usually duller in colour. Bourgoin (cited in Wilson 1937) said that immatures (in actuality probably juvenals) were dull and very plain, with some yellow on the throat and neck. By this plumage criterion, the recent specimen is an adult.

Other than a few individual bones, there are no preserved skeletal remains of the Night Parrot (Wood & Jenkinson 1984). X-rays have been made of the carcass (Fig. 2; Boles *et al.* 1991 p. 694) for osteological comparisons with other parrots and to confirm an anatomical description of one of the specimens from the past century (*cf.* Murie 1868). Samples of the residual muscle have been taken for molecular studies. No feather parasites were found on the carcass.

The habitats with which this species is normally associated are 'spinifex (*Triodia*) hummock grassland on stony ridges and rocky breakaways ... [and] ... chenopodiaceous [Chenopodiaceae] ("saltbush" [*Atriplex*] – "bluebush" [*Maireana*] – bassia [*Bassia, Sclerolaena*]) low shrub steppe and samphire around dry salt pans' (Schodde & Mason 1980). 'Chenopod-dominated flats associated with lake systems appear to be the most important habitat for the Night Parrot during dry seasons' (I. McAllan pers. comm.). This species has also been reported entering dense lignum (*Muehlenbeckia*; Polygonaceae) when flushed (S.A. Parker pers. comm.). A review of published and unpublished records suggests that the latter is the more typical, except when *Triodia* is seeding (Garnett 1992).

The carcass was found in an area of low, sparse Mitchell grass *Astrebla*, burr-daisy *Calotis* and chenopodids, with some areas of bare gibber (see habitat photograph in Boles *et al.* 1991 or Inder 1991). Seeds removed from the feathers belonged to two species of *Sclerolaena* (S. Jacob pers. comm.). *Triodia* was not apparent in the immediate vicinity. There were no trees in the vicinity except along a watercourse that was several kilometres away. There was little standing water for some distance in either direction along the road, except possibly for bores and dams (which were seen but not investigated).

October 1990 and the four previous months (June–September) had been very dry, with only 13 mm of rain recorded at Boulia Post Office in the five month period, and no precipitation at all in June–July (Bureau of Meteorology data). In contrast, the rainfall for November 1989 through May 1990 was 188 mm (1989: Nov. 17 mm, Dec. 22 mm; 1990: Jan. 50 mm, Feb. 3 mm, Mar. 4 mm, Apr. 32 mm, May 60 mm). Although the vegetation at the time of the discovery was very sparse and certainly unsuitable for Night Parrots, conditions would have been very different in late 1989–early 1990. Vegetation and cover would have been much denser and more extensive and the habitat presumably more favourable.

Figure 2 X-ray of Night Parrot carcass (QM O.29055).

The dried state of the carcass makes it difficult to determine when death occurred; its discovery has been estimated to have been greater than three months after death (P. Canfield pers. comm.). There was no blood, and ants had removed most of the soft tissue. The hot, dry weather at and preceding the time of the discovery

would have promoted desiccation of the specimen. The marked differential fading of the plumage indicates prolonged exposure to the sun, suggesting that the carcass had lain at the spot for an extended period.

The Night Parrot found was almost certainly killed by a motor vehicle. What cannot be ascertained is whether it was killed at the location where it was found or transported in the radiator grille of the vehicle for some undetermined distance before falling by the roadside. The Queensland Museum has a prior, relatively recent anecdotal report of another such carcass found in this vicinity (and subsequently lost) (G.J. Ingram pers. comm.).

This specimen is evidence of the continuing survival of the Night Parrot. Even if further Night Parrots are found in this area, we doubt that there is much conservation value in setting it (or other areas) aside as a reserve for this species. Evidence on the natural history of this species suggests that it is nomadic (Schodde & Mason 1980) or occupies a very large home range (Brouwer & Garnett 1990). The meagre information available shows that it eats seeds. Therefore, like other parrots, it would have to drink often. The availability of water and seeds through this and other parts of this species' range is frequently erratic and unpredictable, which would force the birds to move to wherever resources could be found.

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