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Notes on Live Night Parrot Sightings in North-western Queensland

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The last authenticated record of a Night Parrot *Geopsittacus occidentalis* was a corpse recovered from a roadside at Boulia in north-western Queensland in 1990 (Boles *et al.* 1991). Before then, by most common definitions of conservation status, the pattern of reports authenticated by specimens indicated that the species was extinct (Garnett 1992; Solow 1993). However, there have been unauthenticated reports of Night Parrots from all states of mainland Australia and the Northern Territory in every decade of the past half-century. Among these have been several reports from people driving late at night from south of Cloncurry, about 150 km north of the area where the corpse was recovered (L. Cresswell pers. comm.; I.A.W. McAllan pers. comm.). The drivers reported a small green parrot that sat on the road and was reluctant to move out of their headlights.

This note reports the circumstances of seven such sightings in the same area over an 18-month period from early 1992 to mid-1993. All sites were visited by the first two authors between 24-29 June 1993. At six of the seven sites the general habitat was described and all plants within 5 m of the place where the birds were

seen sitting were identified and their abundance estimated (Table 1).

Sighting 1

Observers: Nigel Baker and Patrick Doherty. Both observers are familiar with all other birds that occur in the region and might conceivably be confused with a Night Parrot, including Spotted Nightjar *Eurostopodus guttatus*, Australian Owllet-nightjar *Aegotheles cristatus* and Budgerigar *Melopsittacus undulatus*, and have spent hundreds of hours spotlighting for pigs in this and other areas in north-western Queensland.

Date and time: March 1992, 0300 hrs.

Circumstances: a single small fat green parrot seen sitting in the middle of a track by the light of a spotlight shining from the roof of a slowly moving vehicle. The plumage, though undoubtedly green, appeared greyish under the glare of the spotlight. The parrot flushed soon after being seen and flew up steeply into the air, showing yellow on the belly. Weather warm, sky clear.

Habitat: open grassland with scattered Gidgee *Acacia cambagei* on reddish-brown soil with scattered gravel. Grass about 20% cover (per cent foliage cover). Spinifex *Triodia* sp. 300 m away, a watercourse, which would have contained water at the time, 50 m away and a bore 200 m away. Evidence of grazing by cattle.

Table 1 Cover abundance of vegetation at sites of Night Parrot observations using the Braun-Blanquet abundance scale: + = less than 1%; 1 = 1-5%; 2 = 6-25%; 3 = 26-50% (Kent & Coker 1992).

Species	Site							Species	Site						
	1	2	3	4	5	7	1		2	3	4	5	7		
TREES (3-4 m)															
<i>Acacia cambagei</i>	+						+	<i>Rostellularia adscendens</i>						+	
<i>Eremophila</i> sp.		+						<i>Salsola kali</i>			+			+	
<i>Eucalyptus leucophloia</i>						+		<i>Scaevola ovalifolia</i>						+	
<i>Eucalyptus camaldulensis</i>		+						<i>Sclerolaena cornishiana</i>		+					
<i>Eucalyptus coolibah</i>					2			<i>Senna notabilis</i>						+	
<i>Eucalyptus terminalis</i>		+			2			<i>Sida corrugata</i>	+		+	+	+	+	
								<i>Sida</i> sp.						+	
								<i>Solanum ellipticum</i>			+			+	
								<i>Solanum esuriale</i>		+					
								<i>Trichodesma zeylanicum</i>						+	
TALL SHRUBS (1-2 m)															
<i>Acacia farnesiana</i>						1		GRASSES							
<i>Acacia</i> sp.					+			<i>Aristida contorta</i>		+	2				
<i>Atalaya hemiglauca</i>					+			<i>Aristida</i> sp. 1				1			
<i>Carissa lanceolata</i>					+	+		<i>Aristida</i> sp. 2						2	
<i>Senna artemisioides</i>								<i>Bothriochloa ewartiana</i>	+					1	
var. <i>oligophylla</i>				+		1		<i>Brachyachne convergens</i>	2						
var. <i>sturtii</i>				+				<i>Cenchrus setigerus</i>						+	
<i>Senna planitiicola</i>						+		<i>Chloris pectinata</i>		+					
<i>Pterocaulon serrulatum</i>						+		<i>Chrysopogon fallax</i>						1	
LOW SHRUBS AND HERBS (0-0.6m)															
<i>Acacia victoriae</i>						+		<i>Enneapogon aperatus</i>			1				
<i>Achyranthes aspera</i>				+				<i>Enneapogon cylindricus</i>						+	
<i>Alternanthera nana</i>				+				<i>Enneapogon oblongus</i>						+	
<i>Cleome viscosa</i>		+						<i>Enneapogon purpurascens</i>	+		1	2		2	
<i>Evolvulus alsinoides</i>								<i>Eragrostis</i> sp. 1			1	+			
var. <i>villosicalyx</i>					+			<i>Eragrostis</i> sp. 2						2	
<i>Gossypium australe</i>					+			<i>Panicum effusum</i>					+		
<i>Heliotropium</i> sp.				+	+	+		<i>Panicum whitei</i>						+	
<i>Indigophera linnae</i>		+						<i>Paraneurachne muelleri</i>					+		
<i>Malvastrum americanum</i>	1			+		+		<i>Sporobolus australasicus</i>		+			2		
<i>Melhantha oblongifolia</i>				+				<i>Sporobolus caroli</i>	+						
<i>Portulaca</i> sp.			+			+		<i>Triodia molesta</i>			+	+		3	
<i>Portulaca pilosa</i>				+				CREEPERS							
<i>Portulaca</i> sp. aff. <i>oleraceaeus</i>						+		<i>Capparis lasiantha</i>						+	
<i>Psoralea patens</i>				+				<i>Einadia nutans</i>						+	
<i>Pterocaulon sphacelatum</i>						+		<i>Mukia maderaspatana</i>						+	

Sighting 2

Observers: as for sighting 1.

Date and time: August 1992, 2100 h.

Circumstances: one bird sitting on road, not feeding. It stayed on the road while the observers climbed out of the car and attempted to catch it, only flushing at the last moment. Consequently very good views were obtained of it. Weather clear, frosty.

Habitat: flat open grassland with scattered bloodwood *Eucalyptus terminalis* on red soils with red gravel over much of surface. Grass about 30% pfc, principally *Aristida*

contorta. Spinifex *Triodia* sp. present 100 m from site; a creekline 200 m away and a bore 3 km away. Evidence of grazing by cattle.

Sighting 3

Observers: as for sighting 1.

Date and time: March 1993, 2300 h.

Circumstances: one bird walking around, apparently feeding, 20 m from the side of a track. Flew away shortly after being sighted. Weather warm, cloudy.

Habitat: sparse open grassland with scattered spinifex

Triodia molesta and a few low shrubs of *Senna artemisioides* var. *oligophylla*. Soil a grey earth on limestone. Terrain a gentle slope. Dense, large spinifex 50 m away, a creek 200 m and a bore 300 m. Evidence of cattle, rabbits and camels.

Sighting 4

Observers: as for sighting 1.

Date and time: April 1993, 0300 h.

Circumstances: two birds seen feeding together on the ground 5 m from side of track. Both fluttered out of sight when disturbed. Weather warm with some cloud.

Habitat: open hummock grassland that had been burnt in July 1992. Soil red and sandy on shale. Terrain a drainage line within low rocky hills. Tall dense spinifex *Triodia molesta* 20 m away, a creek, which would have contained water, 30 m and a bore 4 km. Evidence of cattle grazing.

Sighting 5

Observers: as for sighting 1.

Date and time: May 1993, 0500 h.

Circumstances: pair feeding on the ground 20 m from a track, flew up and out of sight when disturbed. Weather cool and cloudy with a light breeze.

Habitat: flat open woodland of bloodwood *Eucalyptus terminalis* and coolibah *E. microtheca* with an understorey of perennial grasses. Grey soil with limestone gravel. No spinifex in sight, a creek 200 m away, a bore 3 km. Evidence of grazing by cattle. Numerous feral pigs nearby at the time.

Sighting 6

Observer: Brian Abrahams. The observer is a gem collector with an interest in birds but with no previous knowledge of the Night Parrot.

Date and time: early May 1993, about 1730 h, shortly before sundown.

Circumstances: Two 'fat budgies', green with black markings, were seen sitting low in a bush adjacent to the road. The observer and his companion had slowed down to look for gemstones when they became aware of the birds sitting about 3 m away from them. They did not stop, but looked carefully at the birds because they did not recognise them. A day later they considered their sighting in more detail and some days after that discussed it with Ray Duncan. On looking through a bird book they immediately identified their birds as Night Parrots.

Habitat: Not accurately located. Described as flat with low shrubs and with spinifex not far away.

Sighting 7

Observer: Ray Duncan. The observer is a keen birdwatcher with three years' experience.

Date and time: 15 June 1993, about 1830 h, at last light.

Circumstances: Two small dark green parrots with black markings on their feathers were seen sitting on the ground in the light of car headlights 40 m from a road. The parrots remained briefly where they had been sitting then ran into a gap between nearby spinifex bushes. The birds were found while the observer was looking for the site of sighting 6.

Habitat: Hummock grassland consisting of tall and broad plants of spinifex *Triodia molesta* with scattered Snappy Gum *Eucalyptus brevifolia*. Soil grey brown with 40-50% cover of gravel. Terrain flat among low hills. Nearest creekline 400 m away, nearest bore 3 km. Evidence of cattle, rabbits and dingoes. Spinifexbirds *Eremiornis carteri* and Rufous-crowned Emu-wrens *Stipiturus ruficeps* were also present at the site.

Discussion

As with several other taxa that have been thought extinct, authentication of sightings of the Night Parrot requires a level of proof far greater than for other species. Such an unusual and well publicised species will undoubtedly be the subject of misidentification but several factors make this explanation of the sightings untenable. First, none of the observers were aware of the reports from before 1992 and, except for Ray Duncan knowing of Abraham's sighting, were unaware of each other's sightings. For these reasons it is assumed that these records are true and accurate reports of Night Parrots. Certainly, acceptance of only those records that have been authenticated by photographs or specimens is doing little towards our understanding of the Night Parrot or assisting in its conservation. We feel the observations described here contribute to our knowledge of food, habitat and conservation management of the species.

As the birds were seen to peck the ground, it is assumed that they were feeding on small seeds. Although no seeds were present in the immediate vicinity of Site 7 when it was visited only two days after the parrots were seen, seeds of *Enneapogon purpurascens* were abundant nearby. This species bears a seed of a size similar to that taken by the closely related Ground Parrots *Pezoporus wallicus* (McFarland 1991). The Night Parrot is usually thought to rely on the seeds of spinifex *Triodia* spp. (Forshaw 1982) but at Site 7 no *Triodia* seed was available either on the stems or the ground. Similarly chenopods, which are also thought to contribute to the diet (Forshaw 1982), were absent except for one small plant of *Einadia nutans*.

These observations confirm that the species is active at night, as has always been assumed (Forshaw 1982),

but the mechanisms by which Night Parrots detect their food are unknown. Unlike nocturnal owls, which have exceptionally large eyes, hunt primarily by hearing and are confined to familiar territories (Martin 1990), the Night Parrot does not appear to possess any features that would enable it to find food at night. Indeed, morphologically it is very similar to the Ground Parrot, which is diurnal and crepuscular (McFarland 1991).

The parrots were seen during the late wet season and early dry season of two successive years within a relatively small area, the greatest distance between two sightings being about 40 km. That pairs were recorded in April, May and June, a time when many seed-eating birds breed in tropical Queensland (Lavery 1986), suggests that this may be the time when breeding occurs. It may be that the Night Parrots were present as a result of dry conditions further south. However, given the number of earlier observations, it seems more likely that they occur regularly in the region. Like the Plains-wanderer *Pedionomus torquatus* (Baker-Gabb *et al.* 1990), the Night Parrot may even be sedentary while conditions remain suitable.

The habitat in which the parrots were recorded represents a broad cross-section of those available in northern arid Australia. Either Night Parrots are present in many other sites or habitat alteration has rendered other potentially suitable sites unfavourable. Whatever the reason, no other locality has been the subject of so many independent reports, and the observers who made observations 1-5 commented that they saw no Night Parrots at any other of the many places they have spotlighted in north-western Queensland.

All sightings were within the Mt Isa uplands, on land systems ranging from black soil plains to gravel-encrusted slopes. No single plant species characterised the sightings, which were in grassland to low open woodland, with or without spinifex *Triodia molesta*. The habitat also differed in species composition from those in the vicinity of the site at which the Night Parrot was recovered in 1990 (Boles *et al.* 1991). These sightings do not fit the model of seasonal movement of Night Parrots between spinifex grassland and chenopod shrublands determined by spinifex seed availability (Forshaw 1981).

Several features of the land management used in the area may have contributed to its suitability for Night Parrots. Small areas of the properties on which the sightings were made are burnt each year early in the dry season to create firebreaks and provide green pick for cattle. Areas burnt are rarely greater than a few hectares

in extent and have prevented wildfire burning the entire area for at least the last twenty years. The presence in the area of Rufous-crowned Emu-wren and Spinifex-bird, both of which prefer spinifex that has remained unburnt for long periods, suggests that mosaic burning of the properties has allowed the movement of birds from unburnt patches as spinifex matures. This may also have been the case with Night Parrots. Other features which may have contributed to the site's favourability are stocking rates low enough to enable cattle to maintain condition through droughts. Moderate stocking rates are also suggested by the presence of *Enneapogon purpurascens*, a species readily grazed out by cattle (Foran *et al.* 1985; Andrew 1986), at four of the six sites at which the vegetation was sampled. The incidence of rabbits and, possibly as a consequence, of foxes and cats, also appeared to be low. The properties do not keep cats as pets and those encountered are usually shot.

Conclusions

Several independent reports of Night Parrots in an area of c. 200 km² near Cloncurry suggest that the birds may indeed be nocturnal, relying principally on seed. They also suggest that sensitive land management, with patch burning of spinifex, moderate stocking densities and low levels of predation by introduced animals, has contributed to the survival of Night Parrots in the area. Further studies of the population are warranted, with detailed biological studies being required to determine the birds' requirements and to assist in the identification of similar suitable habitat within arid Australia.

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