

**REPORT ON AN EXPEDITION TO THE WESTERN DESERT AND EAST PILBARA
AREAS TO SEARCH FOR NIGHT PARROTS (*Pezoporus occidentalis*),
NOVEMBER 12-29 1996**

John Blyth, Allan Burbidge, Peter Kendrick and Walter Boles

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Introduction

The Interim Recovery Plan (IRP) for the Critically Endangered Night Parrot was endorsed by CALM's Director for Nature Conservation on 21st March 1996. One of the primary objectives of the IRP is "to decrease the probability of extinction of the Night Parrot by finding one or more populations of the species that can be studied and monitored, and learning how best to locate the birds in the wild".

Considerable activity relevant to this objective has taken place in the last 12 months. Since the release by CALM in mid-1995 of a leaflet seeking reports of sightings of Night Parrots from members of the public, about 30 reports have been received. On the basis of these, and in an opportunistic fashion, field searches have been carried out in apparently suitable habitats at five locations in the southern goldfields and eastern wheatbelt in approximately the last 12 months. Despite about 70 vehicle hours of spotlighting and a similar amount of daylight searching, these trips have been unsuccessful in finding Night Parrots.

In terms of the more remote inland, historically more associated with the distribution of Night Parrots, most of the responses to CALM's publicity campaign have been reports of sightings ten or more years ago. Adding these reports to historical ones in the literature or in CALM's files suggested that two areas stood out as meriting field survey. One of these was the eastern Pilbara, in the wedge of land between Nullagine/Newman to the west and the Rudall River National Park boundary to the east. The second area was a stretch of the Canning Stock Route, less than 200 km long, east of the Rudall River National Park, from which three of the most convincing of the historical reports (in 1966, 1967 and 1973) have come. This area was given even more significance by the most current, and rather convincing, report from near Well 33 on the Canning Stock route, dated June 8th 1996, which was almost in the middle of the cluster of three historical reports.

An expedition to investigate these areas was therefore organised and conducted between the 12th and 29th of November 1996. Personnel involved were John Blyth (CALM, WATSCU); Allan Burbidge and Jim Rolfe (CALM, SID); Peter Kendrick and volunteer Allen Savage (CALM, Pilbara Region); and Walter Boles (Australian Museum, Sydney).

The total cost of the expedition was \$18 200, of which CALM provided \$15 000, and the 'Dick Smith Night Parrot Fund' managed by the Australian Museum provided \$3 200, for the hire and running expenses of a third 4WD vehicle. That fund also provided travel and field costs for Walter Boles.

Aims of the Expedition

1. To find one or more Night Parrots, confirm the probable location of a population, and learn the best ways to find them.
2. To take detailed observations of habitat factors where the species was present and compare these with places where it was not seen.
3. To record the call of the Night Parrot.
4. To capture one or more birds and take detailed descriptions, including standard measures of length and weight, photographs, and samples of feathers and crop material; these data would be used for sexing, ageing, genetic studies, and identification of food items.

5. To band any Night Parrots which were captured and fit radio transmitters on up to five birds.
6. To track, birds fitted with radio transmitters and gather information as to roosting and feeding areas, distances travelled between these two, and distances between roosting and feeding areas and water : If possible to observe birds at night and try to establish the foods eaten and methods of feeding.
7. To gather enough field information to make a first estimate of the possible density of Night Parrots in any population found.
8. To record species (and where possible and appropriate) an estimate of numbers of all other birds observed in the study area and any extra observations of such things as breeding or behaviour.
9. To record the presence and numbers of any introduced animals, and observations as to any impacts on the environment.

Methods

1. Selection of Sites. The trip was designed on the assumption that Night Parrots would visit waterholes during hot weather, and we concentrated on mist-netting, listening and spotlighting around isolated waterholes, close to previous sightings. Sites were selected, in relation to sites from which observations of Night Parrots had been reported, using the 1:250 000 Geological series of maps for all sites, aerial photos (borrowed from Agriculture WA and DOLA) for the Balfour Downs area, and commercial strip maps for the Canning Stock Route. Further information was gathered from discussion with members of the Aboriginal community at Punmu, and direct searching was conducted to find waterholes, dense spinifex, and potential feeding areas.

Sites at which detailed field observation and night surveillance were conducted were as follows:

Kunawarratji settlement/Well 33/airstrip on/around Canning Stock Route (5 days);
Well 34, Canning Stock Route;
Desert Queens Bath Waterhole in Rudall River National Park (four days);
Duck Pool Water hole on Coolbro Creek near Telfer Road (2 days);
Pools on Gregory Creek (Wandanya Station, north of Balfour Downs, 2 days);
Carrowina Pool on Carrowina Creek (Balfour Downs, 1 day).

2. Field activities. These were concentrated at night, especially the first four hours after sundown, and one or more tape recorders were run for at least this period at each place of surveillance. Several hours spotlighting was conducted at appropriate places. The following table shows the extent of the various activities conducted at each major location.

Table 1: Approximate number of person-hours spent on each main activity at each location.
(CSR = Canning Stock Route)

Location	Mist-netting	Recording	Spotlighting	General search
Well 33, CSR	0	22 (2 recorders)	8	16
Well 34, CSR	0	2 (1 recorder)	0	4
Desert Queens Bath	36 (7 nets)	36 (4 recorders)	0	16
Coolbro Creek	16 (6 nets)	24 (3 recorders)	0	10
Gregory Creek	26 (10 nets)	28 (6 recorders)	0	10
Carrowina Pool	0	8 (3 recorders)	0	6

At the airstrip near Well 33, where a recent observation of Night Parrots had been reported, pre-dawn listening was conducted, samples of all plant species present over approximately one ha area were collected for identification, density of spinifex clumps was estimated from a

15x15 m quadrat, measurements were made of the size of randomly selected *Tridodia* clumps, and the percentage cover of *Tridodia*, bare ground and other plants was estimated from a step-point count (Cunningham 1975; Wilson *et al.* 1987) on two transects, each approximately 100 m in length.

Throughout the trip daytime searching was also carried out to detect potential hiding places for Night Parrots, for feathers around the edges of water and waterholes and in the nests of other birds, and for feathers and other remains around the roosts of birds of prey.

General observations, including breeding records, were made of birds at all sites, with all species seen or heard being recorded. Opportunistic sightings at other places were also recorded if they appeared to provide information of interest about specific species. Any records of interest for which any confusion was possible were verified by at least two ornithologists.

Bats were observed and collected opportunistically.

Equipment taken on the trip included six spotlights, two night scopes, eight tape recorders, at least 18 mist nets; five radio transmitters of the size used for Ground Parrots (*Pezoporus wallicus*); four radio tracking devices, measuring equipment, such as rulers and calipers, leg bands, and associated equipment appropriate to Ground Parrots, recording sheets to note measurements and descriptions for each bird, cameras, a range of lenses and film, and various small items such as plastic bag, maps, stakes/markers to delimit areas where birds were observed and so on. Much of this equipment was intended for use in the event of Night Parrots being located and captured.

Results

No Night Parrots were seen or heard, no feathers likely to be from Night Parrots were found and no unidentified calls which could have been made by Night Parrots were heard or recorded. Thus, aims 1 to 7 above were not achieved, although detailed observations of habitat factors (aim 2) were taken at the airstrip near Well 33, from where a recent report of Night Parrots had come.

At this site, which was a gravelly slope, there were 202 clumps of *Tridodia* in a 15 m x 15 m quadrat, giving a density of 8978 plants/ha. Only one other grass species occurred in the quadrat, and this was represented by 36 individuals. The mean diameter of 40 *Tridodia* clumps north of the airstrip was 41.3 cm + 15.9 SD and for 40 south of the airstrip it was 54.2 cm + 34.3 SD. Combining these data gave a value of 47.7 cm + 27.3 SD. Cover estimates (Table 2) were similar north and south of the airstrip, with total plant cover in both areas being about 25%.

Table 2: Estimates of plant cover (as determined by step-point counts) near the airstrip at Well 33.

Item	Cover (%)	
	N of airstrip	S of airstrip
Bare ground	77	76
<i>Tridodia</i>	21	16
dead <i>Tridodia</i>	0	4
other grasses	2	2
dead sticks	0	2

All plant species seen in this area were collected, but have not yet been identified.

No detailed comparison of these data with the same habitat factors at other places has been conducted. However, it was our general impression that conditions as to size and ground

coverage of clumps of spinifex and the proportion of areas of bare ground were similar at this airstrip site to other similar stony hills throughout the area traversed by our expedition.

Useful information in relation to aims 8 and 9 was gathered, and the experience of searching for Night Parrots in the arid zone has helped to generate more ideas about future searches.

A total of 19 species of birds was recorded at Kunawarratji/Well 33 (five days), seven species at Well 34 (one night), 29 species around Desert Queens Bath in Rudall River National Park (four days), 54 species around the water hole on Coolbro Creek (two days), 41 species around Gregory Creek (Wandanya, two days) and 29 species around Carrowina Pool (Balfour Downs, one day). A full list of bird species recorded throughout the trip between Newman and the Canning Stock Route is at Appendix 1, an annotated list of records of special interest at Appendix 2 and an annotated list of birds in Rudall River National Park, seen during this trip and from other sources, at Appendix 3. Appendix 4 is a note in press (*Western Australian Bird Notes*) concerning one record of special interest.

In general, the sites with apparently permanent natural water (the four stream pool sites above) had more species and greater overall numbers of birds than the Kunawarratji/Well 33 area. Of particular interest from the point of view of the possible occurrence of Night Parrots was the abundance of seed eating birds, especially Spinifex Pigeons, Diamond Doves, Zebra Finches and Painted Firetails, at most of the pool sites.

At the Rudall River National Park site, attempts were made to sample crop contents of the two species of pigeon, but crops were usually almost empty and no useful data were gathered.

Only at the Gregory Creek site on Wandanya) was there any sign of recent rain and recent growth of spinifex, with indications that some flowering and seeding of spinifex is likely in the near future. At all other sites the spinifex clumps were almost entirely dormant and seed heads empty, although there were many signs that there had been abundant seeding several months ago. There were occasional collections of windblown seed on the ground, usually hidden under the spinifex clumps, but in general spinifex seed seemed to be a scarce resource.

In relation to aim no. 9, camels were the only introduced animal seen in significant numbers, and either the animals themselves or abundant signs of their presence were seen at all six locations. In a distance of about 60 km through the western half of the Rudall River National Park, over 150 camels were counted, and in this area their browsing appeared to be having a significant effect upon the form and condition of larger shrubs and small trees. The ground layer of grasses, upon which Night Parrots are presumably more dependent, did not appear to be noticeably affected.

However, with the partial exception of some of the more upstream rock holes at Desert Queens Bath, all waterholes visited showed very clear signs of disturbance of edges by camels and enrichment of the water by their faeces and urine. The impact of mobs of twenty or more camels, of which we saw several, upon smaller gnamma-holes would probably be much more significant, with the possibility of all water being exhausted by a single visit. The effects upon Night Parrots of reduction and/or fouling of water by camels is unknown, but given the apparent dependence of Night Parrots upon fresh surface water, it could be expected to be significant.

At least five species of bats were captured and provisionally identified (Appendix 5). Little previous work has been done on bats in these areas and one or more specimens of each species were collected.

Discussion

The failure to find Night Parrots was disappointing but not unexpected. Our inability to find the species may have been because:

- (i) it is totally extinct;

- (ii) it has never occurred in the areas we looked in;
- (iii) it used to occur in those areas but environmental changes have now made them unsuitable;
- (iv) it was present in the general areas we looked but is extremely rare and secretive, and/or we were using inappropriate methods;
- (v) it was currently absent from the areas we visited because of natural seasonal movements or nomadic pursuit of resources temporally unavailable in those areas.

With regard to the first two points above there have been a number of reports (over ten from the general area we visited), during the last thirty years which cannot be lightly dismissed, and two reports this century are absolutely definite inasmuch as they were accompanied by a confirmed specimen. (These were a dead specimen found in Queensland in 1990 and a bird collected in the Gascoyne in WA in 1912.) We do not know of any ornithologists who believe that the Night Parrot is totally extinct. Thus it is the last three points above which need to be addressed in designing further attempts to find and recover the Night Parrot.

We believe that the concept of birds being concentrated around waterholes during hot weather remains a valid one because of the many early reports based on the species being seen and heard coming to water, always in larger numbers than opportunistic sightings based upon birds being flushed from their hiding places. There are, however, two other major approaches that are likely to improve the chances of finding Night Parrots. First, the maintenance of a capacity for responding quickly, and relatively cheaply, to promising reports such as that from Well 33 in June this year, and secondly identifying and searching areas in the arid zone where spinifex is seeding abundantly. This latter approach is based upon several suggestions in the literature that spinifex seeds are a primary resource and that the species may move nomadically in pursuit of good supplies of such seed. It is also notable that despite a quite convincing reported sighting in June this year, when spinifex was presumably in seed around Well 33, we found no sign of Night Parrots despite considerable searching in this area five months later.

Too little is known of the ecology of Night Parrots to get any closer to predicting where they might be at particular times of the year. Almost all reports from the arid zone have been in winter or early spring, but this probably has more to do with the visitation rate by people than with the movements of the birds. Information in a letter written by F. W. Andrews (who collected sixteen of the twenty three Night Parrots known to be in collections around the world), indicates that the birds came to the Gawler Ranges in South Australia in November. The Gawler Ranges are towards the south of the assumed range of the Night Parrot, and one could speculate that the birds might move southwards in summer, therefore finding abundant seed and milder weather conditions. However, the cluster of reported sightings in the southern goldfields and wheatbelt of Western Australia give no indication of being mainly in summer.

At this stage we do not suggest that large scale expeditions to the arid zone should be planned based upon the identification of areas of abundant seeding spinifex. However the identification of such areas around any places that current reports of sightings come from should be used as part of the assessment of the reliability of that sighting and the desirability of a quick response.

The rapid response we are suggesting would require the availability of at least one experienced field worker from the region or district and at least one experienced ornithologist and their capacity to reach the area within a very few weeks of the reported sighting. Discussions with Pilbara staff suggest that such flexible response would often be possible and that such small projects could often be used to achieve other objectives in remote, rarely visited, areas.

Recommendations

1. That CALM continue to solicit public input regarding possible sightings of Night Parrots, and to assess their reliability, as prescribed in the IRP.

2. That CALM allocate about \$5 000 per year as a contingency fund to allow a rapid response to promising sightings.

3. That in the event of two or more experienced ornithologists accepting a recently reported sighting as convincing, quick appraisal (involving at least three days at the site) be conducted by at least one experienced field worker from the appropriate CALM region or district and at least one experienced ornithologist.

4. That, if rapid appraisal confirms the presence of Night Parrots, a follow-up expedition be conducted within a very few weeks, with the same aims as listed in this report.

References:

Cunningham, G. M. (1975). Modified step-pointing - a rapid method of assessing vegetative cover. *Soil Conservation Journal* **31**, 256-265.

Wilson, A. D., Abraham, N. A., Barratt, R., Choate, J., Green, D. R., Harland, R. J., Oxley, R. E. and Stanley, R. J. (1987) Evaluation of methods of assessing vegetation change in the semi-arid rangelands of southern Australia. *Australian Rangeland Journal* **9**, 5-13.

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APPENDIX 1: BIRDS SEEN AT SAMPLING SITES DURING THE NOVEMBER 1996 EXPEDITION TO SEARCH FOR NIGHT PARROTS.

Common Name	Well 33	Well 34	Carrowina Pool	Coolbro Pool	Desert Queens Bath	Gregory Creek	Opportunistic
Emu			*				
Pacific Black Duck				*	*	*	
Grey Teal				*		*	
Australasian Grebe				*	*		
Little Pied Cormorant					*		
White-faced Heron					*		
White-necked Heron				*		*	
Black-shouldered Kite				*			
Black-breasted Buzzard				*			
Whistling Kite			*				
Spotted Harrier			*	*		*	
Collared Sparrowhawk			*	*	*		
Wedge-tailed Eagle						*	
Little Eagle				*	*	*	
Brown Falcon	*			*		*	
Australian Hobby				*			
Grey Falcon			*				
Peregrine Falcon				*	*		
Nankeen Kestrel				*	*	*	
Black-tailed Native-hen						*	
Australian Bustard	*			*		*	
Wood Sandpiper				*			
Common Sandpiper				*			
Bush Stone-curlew		*	*	*			
Oriental Plover							Gary Junction

Black-fronted Dotterel				*		*	
Red-kneed Dotterel				*			
Common Bronzewing				*	*		
Crested Pigeon	*	*	*	*			
Spinifex Pigeon			*	*	*	*	
Diamond Dove	*		*	*	*	*	
Galah	*		*	*	*	*	
Australian Ringneck			*	*	*	*	
Budgerigar				*			Cun Cun Bore
Pallid Cuckoo						*	
Horsfield's Bronze-Cuckoo				*		*	
Southern Boobook					*		
Barn Owl	* (bones in cave)						
Spotted Nightjar	*			*	*	*	
Australian Owlet-nightjar			*		*	*	
Fork-tailed Swift	*						
Red-backed Kingfisher				*			
Sacred Kingfisher			*	*			
Rainbow Bee-eater			*	*			
Variegated Fairy-wren	*						
White-winged Fairy-wren	*	*	*	*			
Striated Grasswren			*				
Spiny-cheeked Honeyeater			*				
Yellow-throated Miner			*	*	*	*	
Singing Honeyeater	*	*		*		*	
Grey-headed Honeyeater	*	*	*	*	*	*	
White-plumed Honeyeater			*	*	*	*	
Brown Honeyeater				*		*	
Black Honeyeater				*		*	

Pied Honeyeater	*			*		*	
Crimson Chat	*			*		*	
Red-capped Robin		*					
Hooded Robin						*	
Grey-crowned Babbler			*				
Chiming Wedgebill							Well 31
Crested Bellbird						*	
Grey Shrike-thrush					*		
Magpie-lark			*	*	*	*	
Willie Wagtail			*	*	*	*	
Black-faced Cuckoo-shrike			*	*	*	*	
White-winged Triller				*			
Masked Woodswallow	*			*			
Black-faced Woodswallow	*					*	
Little Woodswallow				*	*		
Pied Butcherbird				*	*	*	
Little Crow	*			*			
Torresian Crow			*	*	*	*	
Richard's Pipit	*						
Zebra Finch	*	*	*	*	*	*	
Painted Finch			*	*	*	*	
Mistletoebird				*	*	*	
White-backed Swallow				*		*	
Barn Swallow	*						
Tree Martin	*		*				
Fairy Martin	*		*	*		*	
Rufous Songlark						*	

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APPENDIX 2: ANNOTATED LIST OF BIRDS OF PARTICULAR INTEREST

Australasian Grebe (<i>Tachybaptus novaehollandiae</i>)	One or several on at least three pools at DQB; twelve at Cool. Storr (1981) lists as scarce in Northeastern Interior, previously recorded only at Gregory Lake and Rudall River.
Black-breasted Buzzard (<i>Hamirostra melanosternon</i>)	One over Cool. Consistent with Storr's (1981) view as scarce with widespread sightings of single birds.
Grey Falcon (<i>Falco hypoleucos</i>)	One at Carro. Storr (1981) lists as scarce visitor to Northeastern Interior, recorded mainly from coastal plains.
Peregrine Falcon (<i>Falco peregrinus</i>)	Pair at DQB. Roosting (nesting?) site in cave with many remains of Galah, Budgerigar and Ringneck, as well as those of Cockatiel, Common Bronzewing, Pacific Black Duck and an unidentified medium-sized passerine. Also one bird seen at Cool. Storr (1981) referred to the status of Peregrine Falcon in the Northeastern Interior as uncertain with only three single records.
Australian Bustard (<i>Ardeotis australis</i>)	Several at Gregory; tracks at Well 33 airstrip. Signs at several other places of birds having been killed. Not uncommon in either the Pilbara or the Northeastern Interior Regions according to Storr (1981, 1984).
Wood Sandpiper (<i>Tringa glareola</i>)	One at Cool. Well south of a single record from Northeastern Interior at Gregory Lake (Storr 1981).
Common Sandpiper (<i>Actitis hypoleucos</i>)	Two at Cool. Well south of the only other record from the Northeastern Interior of three birds at Sturt Creek (Storr 1981).
Bush Stone-curlew (<i>Burhinus grallarius</i>)	Heard at night at Well 34, Coolbro and Carro. Storr refers to only one record from Northeastern Interior, from Rudall River in December 1970.
Oriental Plover (<i>Charadrius veredus</i>)	Ten or twelve in savannah woodland with much bare ground at Gary Junction. Storr (1981) refers only to possible regular summer visits to the Gregory Lake area and to a single bird recorded at Well 31 in 1930.
Red-kneed Dotterel (<i>Erythronus cinctus</i>)	One immature at Cool. Storr (1981) refers only to two records from the far northeast of the Northeastern Interior.
Fork-tailed Swift (<i>Apus pacificus</i>)	One seen near Well 33. There are very few records from desert areas. Storr (1981) refers to only two records from the Northeastern Interior of WA.
Sacred Kingfisher (<i>Todiramphus sanctus</i>)	Although Storr (1984) lists it as common in the Pilbara Region, our sighting is well north of the southwestern watercourses referred to by Storr (1981) as the only places of occurrence in the Northeastern Interior.
Striated Grasswren (<i>Amytornis striatus</i>)	At Carrowina Pool only; several birds seen over about a square km. On the eastern extremity of the range given by Storr (1984) for the Pilbara sub-species.
Barn Swallow (<i>Hirundo rustica</i>)	One bird at Kunawarratji. Apparently not recorded in desert areas before (eg. Storr 1981). See Appendix 4 for details.
Tree Martin (<i>Hirundo nigricans</i>)	At least six birds at water at Kunawarratji, surrounded by sandy desert. Rare in desert areas. Storr (1981) refers to it being confined to the well-watered and well-wooded southwest of the Northeastern Interior.

Key W33; Well 33 and Kunawarratji; DQB=Desert Queens Bath (Rudall River NP); Cool=Coolbro Creek; Greg=Gregory Creek; Carro=Carrowina Pool.

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APPENDIX 3: ANNOTATED LIST OF BIRDS OF RUDALL RIVER NATIONAL PARK

Compiled by Allan H. Burbidge
January 1997.

Names and order follow Christidis and Boles (1994). Sources include Fletcher (1971), Storr (1981), Muir (1982), Start and Fuller (1983), Buchanan and Buchanan (1986), Martinick (1989), Hart *et al.* (1990) and personal observations of Allan Burbidge, John Blyth, Walter Boles and Peter Kendrick in November 1996. As the area has not often been visited by ornithologists, many of the annotations in the following list are subjective and indicate the need for further work.

- Emu (*Dromaius novaehollandiae*) uncommon; possibly only present south of the Rudall.
Australian Wood Duck (*Chenonetta jubata*) small numbers on the Rudall
Pacific Black Duck (*Anas superciliosa*) small numbers on river and rock pools; has been recorded breeding on Coondegoon Pool
Grey Teal (*Anas gracilis*) small flocks on river and rock pools
Pink-eared Duck (*Malacorhynchus membranaceus*) two records (Coondegoon Pool; Rudall River)
Hardhead (*Aythya australis*) one record (Rudall River, 1989) (Martinick and Associates 1989)
Australasian Grebe (*Tachybaptus novaehollandiae*) small numbers on river and rock pools; breeding has been reported on the Rudall
Hoary-headed Grebe (*Poliocephalus poliocephalus*) a few records from pools on the Rudall
Little Pied Cormorant (*Phalacrocorax melanoleucos*) occasional birds seen on pools
White-faced Heron (*Egretta novaehollandiae*) occasional birds seen on pools
White-necked Heron (*Ardea pacifica*) rarely recorded from pools on the Rudall
Black Kite (*Milvus migrans*) one record (Fletcher 1971; near the Rudall River)
Whistling Kite (*Haliastur sphenurus*) one record from the Rudall (Hart *et al.* 1990)
Spotted Harrier (*Circus assimilis*) occasionally seen
Brown Goshawk (*Accipiter fasciatus*) two records
Collared Sparrowhawk (*Accipiter cirrhocephalus*) one at Desert Queens Bath, November 1996
Wedge-tailed Eagle (*Aquila audax*) rare (Hart *et al.* 1990; R. Hart pers. comm.)
Little Eagle (*Hieraaetus morphnoides*) occasional single birds
Brown Falcon (*Falco berigora*) occasional
Australian Hobby (*Falco longipennis*) one record (Fletcher 1971; Rudall River)
Peregrine Falcon (*Falco peregrinus*) one record, a pair (Desert Queens Bath, November 1996)
Nankeen Kestrel (*Falco cenchroides*) widespread in small numbers; probable breeding has been reported
Black-tailed Native-hen (*Gallinula ventralis*) two records both from the Rudall (Start and Fuller 1983; Hart *et al.* 1990)
Australian Bustard (*Ardeotis australis*) locally and seasonally common
Little Button-quail (*Turnix velox*) only recorded by Fletcher, but probably occur regularly in good years
Common Sandpiper (*Actitis hypoleucos*) one record from a pool on the Rudall (Fletcher 1971)
Bush Stone-curlew (*Burhinus grallarius*) one record - Fletcher (1971) heard them calling each night in early December (Rudall River)
Inland Dotterel (*Charadrius australis*) one record (Fletcher 1971)
Black-fronted Dotterel (*Euseyonis melanops*) small numbers on pools; has been recorded breeding at Coondegoon Pool
[Silver Gull (*Larus novaehollandiae*) recorded from the Kintyre area (now no longer in the park) by Hart *et al.* (1990)]
Common Bronzewing (*Phaps chalcoptera*) small numbers near water
Crested Pigeon (*Ocyphaps lophotes*) small numbers on the Rudall
Spinifex Pigeon (*Geophaps plumifera*) locally common near water in rocky areas (up to 100+ coming to drink at a waterhole)
Diamond Dove (*Geopelia cuneata*) common near water
Peaceful Dove (*Geopelia striata*) locally common in riverine vegetation on the Rudall
Galah (*Cacatua roseicapilla*) locally common along wooded watercourses
Little Corella (*Cacatua sanguinea*) one record - recorded by Calaby on the Rudall in 1970 (Storr 1981)
Cockatiel (*Nymphicus hollandicus*) locally and seasonally on the Rudall
Australian Ringneck (*Barnardius zonarius*) small numbers along wooded watercourses

Budgerigar (*Melopsittacus undulatus*) seasonally common; have been recorded breeding in tree hollows along the Rudall

Pallid Cuckoo (*Cuculus pallidus*) present, probably common, along the Rudall

Horsfield's Bronze-Cuckoo (*Chrysococcyx basalus*) one record (Rudall River) (Start and Fuller 1983)

Southern Boobook (*Ninox novaeseelandiae*) probably resident in small numbers in wooded areas near watercourses

Barn Owl (*Tyto alba*) one record (Rudall River; Storr 1981)

Spotted Nightjar (*Eurostopodus argus*) probably widespread in rocky areas

Australian Owlet-nightjar (*Aegotheles cristatus*) probably widespread in wooded areas

Red-backed Kingfisher (*Todiramphus pyrrhopygia*) small numbers, Rudall River and sometimes other streamlines

Sacred Kingfisher (*Todiramphus sanctus*) small numbers restricted to watercourses

Rainbow Bee-eater (*Merops ornatus*) locally common in wooded areas near watercourses

Variegated Fairy-wren (*Malurus lamberti*) recorded from near the Rudall and in its upper catchment

White-winged Fairy-wren (*Malurus leucopterus*) probably common

Red-browed Pardalote (*Pardalotus rubricatus*) two records (Buchanan and Buchanan 1986; Hart *et al.* 1990)

Striated Pardalote (*Pardalotus striatus*) autumn-winter visitor in small numbers

Weebill (*Smicrornis brevirostris*) recorded at one site in the upper catchment of the Rudall by Martinick and Associates (1989) and on the Rudall by Hart *et al.* (1990)

Western Gerygone (*Gerygone fusca*) one record - a specimen collected at Curran Curran Rockhole by W.H. Butler (Muir 1982)

Inland Thornbill (*Acanthiza apicalis*) recorded at Hanging Rock near the western boundary of the park (Storr 1981)

Chestnut-rumped Thornbill (*Acanthiza uropygialis*) recorded at two sites in the southern part of the park by Martinick and Associates (1989); this is at the northern limit of known distribution for this species (Storr 1981)

Spiny-cheeked Honeyeater (*Acanthagenys rufogularis*) recorded from the Rudall (Muir 1982)

Yellow-throated Miner (*Manorina flavigula*) moderately common in wooded areas near watercourses

Singing Honeyeater (*Lichenostomus virescens*) widespread in small numbers

Grey-headed Honeyeater (*Lichenostomus keartlandi*) locally common near some watercourses

White-plumed Honeyeater (*Lichenostomus penicillatus*) common in eucalypts along watercourses

Brown Honeyeater (*Lichmera indistincta*) scarce (Rudall River)

White-fronted Honeyeater (*Phylidonyris albifrons*) reported only by Muir (1982)

Black Honeyeater (*Certhionyx niger*) scarce (Rudall River)

Crimson Chat (*Epthianura tricolor*) seasonally common and widespread

Red-capped Robin (*Petroica goodenovii*) two records (one on the Rudall River and the other near the southern boundary of the park)

Hooded Robin (*Melanodryas cucullata*) present in small numbers

White-browed Babbler (*Pomatostomus superciliosus*) recorded by Martinick and Associates (1989) from the upper catchment of the Rudall

Chestnut-breasted Quail-thrush (*Cinclosoma castaneothorax*) one record - from the upper catchment of the Rudall in May 1989 (Martinick and Associates 1989); this is at the northern limit of known distribution for this species

Crested Bellbird (*Oreoica gutturalis*) in small numbers

Rufous Whistler (*Pachycephala rufiventris*) recorded from the Rudall and its tributaries

Grey Shrike-thrush (*Colluricincla harmonica*) locally common in wooded areas (eucalypts or mulga) along or near watercourses

Magpie-lark (*Grallina cyanoleuca*) commonly seen near water

Willie Wagtail (*Rhipidura leucophrys*) widespread in small numbers, but mostly in the vicinity of watercourses

Black-faced Cuckoo-shrike (*Coracina novaehollandiae*) small numbers, mostly in the vicinity of watercourses

Masked Woodswallow (*Artamus personatus*) common

Black-faced Woodswallow (*Artamus cinereus*) common

Little Woodswallow (*Artamus minor*) small numbers in rocky areas

Pied Butcherbird (*Cracticus nigrogularis*) moderately common, usually near watercourses or rocky ridges

Torresian Crow (*Corvus orru*) small numbers near watercourses

Singing Bushlark (*Mirafra javanica*) common near the Rudall

Richard's Pipit (*Anthus novaeseelandiae*) common on grassy plains

Zebra Finch (*Taeniopygia guttata*) common and widespread near water

Painted Finch (*Emblema pictum*) common near water in rocky areas
 Mistletoebird (*Dicaeum hirundinaceum*) widespread in small numbers in wooded areas
 White-backed Swallow (*Cheramoeca leucosternus*) present on the Rudall
 Tree Martin (*Hirundo nigricans*) frequent along watercourses
 Fairy Martin (*Hirundo ariel*) old nests have been recorded in rocky areas near water
 Spinifexbird (*Eremiornis carteri*) rarely recorded (Buchanan and Buchanan 1986, R. Hart, pers. comm.) but
 may be common where suitable habitat exists
 [Rufous Songlark (*Cincloramphus mathewsi*) recorded in the Kintyre area (now no longer in the park) by Hart
 et al. (1990)]
 Brown Songlark (*Cincloramphus cruralis*) on grassy plains, numerous in good seasons

References:

- Buchanan, A. and Buchanan, B. (1986) Rudall River National Park. *Western Australian Bird Notes* 39: 6-7.
 Christidis, L. and Boles, W. (1994). The Taxonomy and Species of Birds of Australia and its Territories. *RAOU Monograph* No. 2.
 Fletcher, T. (1971) Birds of the Rudall River, Western Australia. *The Bird Observer* 470: 4-5.
 Hart, Simpson and Associates Pty Ltd (1990) Rudall Project: Environmental studies March/April 1990.
 Unpublished report to CRA Exploration Pty Limited.
 Martinick, W.G. and Associates Pty Ltd (1989) Rudall Project: ecological appraisal of seven sites, May 1989.
 Unpublished report to CRA Exploration Pty Limited.
 Muir, B.G. (1982) Rudall River National Park. Resource Inventory and Recommendations for Management.
 Unpublished report to the National Parks Authority of Western Australia.
 Start, A.N. and Fuller, P.J. (1983) Birds. Pp. 94-108 in *Wildlife of the Great Sandy Desert, Western Australia*.
 Eds A.A. Burbidge and N.L. McKenzie. Dept of Fisheries and Wildlife, Wildlife Research Bulletin
 No. 12.
 Storr, G.M. (1981) Birds of the Northeastern Interior of Western Australia. *Records of the Western Australian Museum* 9: 65-99.

Report on an expedition to the western desert and east Pilbara areas to search for Night Parrots (*Pezoporus occidentalis*), November 12-29, 1996

APPENDIX 4: Article in press in *Western Australian Bird Notes*.

BARN SWALLOW NEAR CANNING STOCK ROUTE

At Kunawarratji (an Aboriginal settlement about 5 km from Well 33 in the Great Sandy Desert), at about 9.00 am on 16 November 1996, we watched a swallow and at least six Tree Martins flying through and near a spray of water from a leaking pipe.

The swallow was noticeably dark-throated and overall more contrasting in its markings than a Welcome Swallow. It had a glossy blue-black back, a deep rufous throat enclosed with a black line, white belly (unlike the Welcome Swallow, in which the belly is greyish-white), long forked tail perhaps slightly longer than in a Welcome Swallow, tail spots bright white and more prominent than in a Welcome Swallow, and the underwing coverts dull white making the underwing appear noticeably two-toned. We did not notice rufous on the forehead, despite looking for it.

The swallow appeared appreciably larger than the accompanying Tree Martins. We watched it in bright sunlight for about 10 minutes. It was swooping through and hovering rather awkwardly in the spray of water. It re-appeared about 20 minutes later, for about five minutes. Shortly after, two or three Fairy Martins were also seen. The bird was seen again briefly at the same place on each of the next two days. Maximum daily temperatures were in excess of 40° C throughout this period.

We concluded that the swallow was a Barn Swallow (*Hirundo rustica*). This appears to be the first record of this species for inland Western Australia. Apart from a few records at Kununurra, which is on a major river system and less than 100 km from the coast, the only other record we are aware of for inland Australia is a report of about six birds seen by Roger Jaensch in early 1995 at a stock dam south-east of Elliot, on the Barkly Tableland, Northern Territory. This record is about 360 km from the nearest coast (Gulf of Carpentaria) and about 600 km from Kununurra. Our record is nearly 600 km further south and is about 500 km from the nearest coast at Eighty Mile Beach near Broome. All three observers have seen Barn Swallows previously and are familiar with Welcome Swallows.

Thanks to the Kunawarratji people for allowing us access to the community.

Allan Burbidge, John Blyth and Walter Boles

Report on an expedition to the western desert and east Pilbara areas to search for Night Parrots (*Pezoporus occidentalis*), November 12-29, 1996

APPENDIX 5: BAT SPECIES RECORDED IN RUDALL RIVER NATIONAL PARK

Identifications are necessarily provisional, and still need final confirmation from the Western Australian Museum or Norm McKenzie. Field identifications were by P. Kendrick unless otherwise specified. Ultrasonic recordings were not successful, due to failure of equipment.

Animals collected.

1. Mist netted from cave above the 'second pool' at Desert Queens Baths, Rudall River National Park, 2-300 metres upstream from the camping area / parking area Cave opening is about 10 meters above the pool. Net was placed over the entrance and bats were flushed into the net from within. Estimated between 100-200 *Taphozous* inside, with young.

M45003. *Taphozous georgianus*; male, 22 g, upper canine width 4.0 mm, forearm 68.5 mm. Tissues removed and frozen.

M45004. *Taphozous georgianus*; male, 20 g, upper canine width 4.0 mm, forearm 68.0 mm. Tissues removed and frozen.

M45005.; *Taphozous georgianus* female, 35 g, upper canine width 4.3 mm, forearm 70.0 mm. Tissues removed and frozen.

Taphozous georgianus female, 31.5 g, upper canine width 4.1 mm, forearm 67.2 mm. Released.

Taphozous georgianus male, 12.5 g, juvenile, forearm 57.5 mm. Released.

Taphozous georgianus female, 23.5 g, upper canine width 4.2 mm, forearm 67.0 mm. Released.

Taphozous georgianus female, 28.5 g, upper canine width 4.1 mm, forearm 66.0 mm; one 41 mm (crown - rump) babe suckling, plus one foetus aborted while the bat was in the net. Released.

Taphozous georgianus female, 21.5 g, upper canine width 4.0 mm, forearm 68.0 mm; carrying two young, (both 11.0 g weight, forearm 53.0 and 56.0 mm). Released.

20 Nov 1996. Mist netted over pools in the creek at Desert Queens Baths, Rudall River National Park, between 1900 - 2200h. Data from first and second pools combined.

M45006. *Vespadalus finlaysoni*. Male, 4.5 g. Tissues frozen.

Vespadalus finlaysoni. Female, 5.0 g. Released.

M45007. *Scotorepens balstoni* (?). Male, 7.5 g, Forearm 33 mm. Tissues taken.

M45008. *Scotorepens balstoni* (?). Male, 6.5 g, Forearm 31 mm. Tissues taken.

M45009. *Scotorepens balstoni* (?). Male, 6.5 g, Forearm 32 mm. Tissues taken.

Scotorepens balstoni (?). Male, 5.5 g. Released.

Scotorepens balstoni (?). Female, 7.0 g. Released.

Scotorepens balstoni (?). Female, 6.5 g. Released.

Scotorepens balstoni (?). Male, 6.0 g. Released.

Scotorepens balstoni (?). Male, 6.5 g. Released.

Scotorepens balstoni (?). Female, 6.5 g. Released.

Scotorepens balstoni (?). Male, 7.5 g. Released.

Scotorepens balstoni (?). Female, 10.0 g. Released (pregnant).

M45010. *Vespadalus finlaysoni*. Female, 4.0 g, F'arm 32 mm. Tissues taken.

M45011. *Chalinolobus gouldii*. Male, 9.0 g, Forearm 39 mm. Tissues taken.

M45012. *Chalinolobus gouldii*. Male, 8.5 g, Forearm 41 mm. Tissues taken.

Chalinolobus gouldii. Female, 9.5 g. Released.

Chalinolobus gouldii. Female, 10.0 g. Released.

Chalinolobus gouldii. Female, 9.5 g. Released.

Chalinolobus gouldii. Male, 9.5 g. Released.

Chalinolobus gouldii. Male, 8.0 g. Released.

Chalinolobus gouldii. Male, 7.5 g. Released.

Jim Rolfe and Allan Burbidge also saw a ghost bat (*Macroderma gigas*) on several occasions, flying over the first pool.

2.21 Nov 1996. Mist netted over pools in the creek at Desert Queens Baths, Rudall River National Park, between 1900 - 2200h. Data from first and second pools separated.

First pool.

Chalinolobus gouldii. Male, 10.0 g, forearm 41 mm. Released.

Chalinolobus gouldii. Female, 8.5 g, forearm 37 mm. Released.

Chalinolobus gouldii. Male, 7.5 g, forearm 38 mm. Released.
Chalinolobus gouldii. Male, 8.5 g, forearm 40 mm. Released.
Chalinolobus gouldii. Male, 7.5 g, forearm 37 mm. Released.
Chalinolobus gouldii. Female, 9.0 g, forearm 41 mm. Released.
Chalinolobus gouldii. Male, 9.0 g, forearm 40 mm. Released.
Chalinolobus gouldii. Male, 9.0 g, forearm 41 mm. Released.
Chalinolobus gouldii. Male, 8.3 g, forearm 41 mm. Released.
Scotorepens balstoni (?). Released at site, no data.

Second pool.

M45013. *Vespadalus finlaysoni*. Female, 4.5 g. Tissues frozen.

M45014. *Mormopterus beccarii*. Female, 16.0 g, forearm 39 mm, pregnant. Tissues frozen.

Chalinolobus gouldii. Female, 9.5g, forearm 40 mm. Released.
Chalinolobus gouldii. Male, 8.5g, forearm 39 mm. Released.
Scotorepens balstoni (?). Female, 8.0g, forearm 33 mm. Released
Scotorepens balstoni (?). Female, 7.5g, forearm 34 mm. Released

3.22 Nov 1996. Mist netted over pools in the creek at Desert Queens Baths, Rudall River National Park, between 1900 - 2200h. Data from first and second pools separated.

First pool.

Chalinolobus gouldii. Male, 9.5 g. Released.

Scotorepens balstoni (?). Male, 8.0 g. Released.

Second pool.

Scotorepens balstoni (?). Female, 7.5 g. Released.

Scotorepens balstoni (?). Male, 8.0 g. Released.