THE DISCOVERY OF THE CARPENTARIAN GRASSWREN — THE ORIGINAL LOCATION

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The Carpentarian Grasswren *Amytornis dorotheae* is recognised as a rare and endangered species by the Royal Australasian Ornithologists Union (Brouwer & Garnett 1990). It is confined to the dissected sandstone formations of the Gulf Fall in the hinterland of the Gulf of Carpentaria. The first observations of this shy grasswren were made by Gerald Freer Hill in 1912 but the precise locality of these sightings has remained unknown. At present, this species is known from only six

sites (McKean & Martin 1989) and any additional information about other populations can make a valuable contribution to its conservation.

Hill saw the grasswren in February, 1912, but was unable to collect a specimen. In his published account he called the bird the White-throated Grasswren *Amytornis woodwardi* and said it was "fairly numerous amongst the porcupine-grass and rocks in the ranges near Borroloola" (Hill 1913). However, Hill travelled widely during the seven months spent in the Borroloola region so the exact location of his sighting of the grasswren was not known (McKean & Martin 1989).

In 1913, the noted collector H. G. Barnard went to the region where he collected both specimens and eggs (Barnard 1914). The grasswren was first described from these specimens as a sub-species of the White-throated Grasswren (Mathews 1914) but later elevated to a full species (Mathews 1917). The White-throated Grasswren is confined to the sandstone of the Arnhemland Plateau, Northern Territory.

G. F. Hill was a member of the third Barclay-Macpherson expedition to the Northern Territory and made extensive plant and fauna collections. In the course of research into the life of H. V. Barclay (Strong 1989), the detailed diaries and journals kept by Hill were located. From these we were able to determine his location when he discovered the bird that subsequently became the Carpentarian Grasswren. His journal entry for 14 February 1912 reads:

> "I left Borroloola at 8.45 am for the Ranges beyond Western Creek. Arrived Goose Lagoon 11.10 am and continued at 12.25 pm. The track from the lagoon was generally S.S.W.-S.W. to within half a mile of Okey Ck. where the track turns westward to Okey Ck. The creek has many sharp bends in this locality but runs generally in an East direction. The banks are high (possibly 80ft.) on the west side and show a deep red soil to that depth. Okey Creek crossing at 1.10 PM — Track bears generally S.W. for about a mile then south for about four & half miles to Frog Swamp arriving at 3 PM. Passed MacArthur [sic] Tailing Yard at 3.15 PM. Track S.W. The sandstone country commences here. Arrived at Western Creek at 3.30 PM and camped (E side). Followed Western Creek down about two miles — collected a pair of wrens I took to be Maluris dulcis and noted a pair of birds I took to be Amatornis [sic] striatus (Striated grass wren). After a good deal of trouble I was able to get near the bird — and was unable to identify it with any described species."

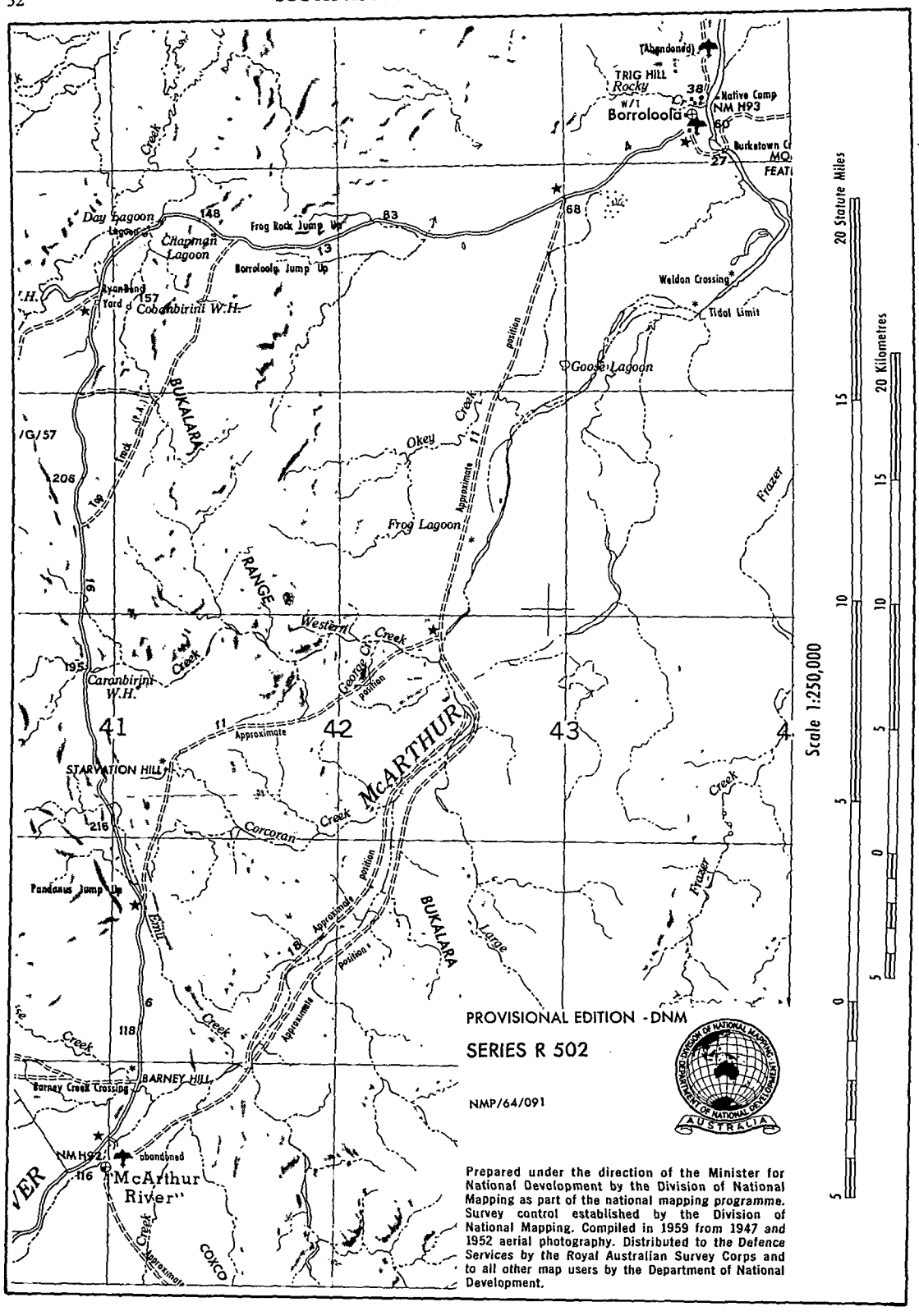
Hill camped overnight on Western Creek before returning to Borroloola via Okey Creek and Goose Lagoon the following day.

The original version of the "Bauhinia Downs" 1:250,000 topographic mapsheet, which was compiled in 1959, from 1949 aerial photographs, allowed us to locate all of the features mentioned by Hill on a track that ran south from Borroloola along the McArthur River to the old site of McArthur River Station homestead (see Figure 1). This places the location of Hill's observations at 16° 15′S, 136° 10′E where Western Creek cuts through the sandstone escarpment.

Further confirmation of this locality comes from specimens still in existence in the Museum of Victoria. The pair of Variegated Fairy-wrens *Malurus lamberti* that Hill mentions collecting appear in the list of bird specimens for the Barclay Expedition (Campbell & Kershaw 1913) with the location given as "Sandstone ranges, 10 miles south of Borroloola". This distance is roughly the distance to Okey Creek crossing on the floodplain of the McArthur River, but is some five miles short of Western Creek. Okey Creek is unsuitable habitat for both species of bird seen by Hill and must be an error made by Campbell and Kershaw. The number on Hill's field label is not distinct and could also be read as "15" or "18" (B. Gillies, pers comm.). This would put the locality at Western Creek, which is the nearest point the sandstone escarpment comes to Borroloola in the south (see Figure 1).

This location for Hill's original sighting may also clarify the mystery surrounding the locality of one specimen from the type-series collected by Barnard. Five of Barnard's birds were collected at the junction of the Glyde and McArthur Rivers with the remaining one simply given as "Borroloola. McArthur River. N.T." (McKean & Martin 1989). The similarity of this description to that used by Hill (1913), and the fact that Barnard would have used the track across Western Creek to get to the Glyde Junction, provides circumstantial evidence that it may have come from the same locality.

Recently, a survey of the Gulf Fall was carried out by Martin & McKean (1989) to establish the status of the species. The Gulf Fall is the escarpment between the Barkly Tableland and the coastal plain of the Gulf of Carpentaria. It stretches from the Roper River, N.T., in the west to Lawn Hill, Queensland, in the east. Their survey extended the known range of the species in the west to the catchment of the Limmen Bight River and in the east to Hells Gate in Queensland. They also recorded the bird at all previous sites,



Prepared under the direction of the Minister for National Development by the Division of National Mapping as part of the national mapping programme. Survey control established by the Division of National Mapping. Compiled in 1959 from 1947 and 1952 aerial photography. Distributed to the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Development.

bringing the number of populations recorded for this species to six.

Martin and McKean (1989) showed that populations of the Carpentarian Grasswren only occupy a small area of the available habitat, but that they also show a strong fidelity and persistance to a site. By establishing the location of Hill's sighting we now know of a seventh site where the species may still be found. The Western Creek site is 13 km east of the "Bukalara Range (North)" population and 21 km north of the "Glyde River" population and shows again the importance of the Bukalara Ranges for the conservation of this species. Further field work is urgently required to establish if the bird still persists at Western Creek.

ACKNOWLEDGMENTS

We thank W. H. Hill for the details from his father's diaries and journals. The map in Figure 1 was reproduced with the permission of the Surveyor General, Australian Land Information Group, Canberra.

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Figure 1: Portion of the Bauhinia Downs 1:250,000 topographic mapsheet (SE 53-3) showing features mentioned in the journal of G. F. Hill.

FIELD OBSERVATIONS OF GLOSSY BLACK COCKATOOS. At 18.00 on 19 November 1988 I noticed that a mature Wedge-tailed Eagle *Aquila audax* had flushed a flock of Glossy Black Cockatoos *Calyptorhynchus lathami* from the trees in Waterfall Gully, Western River Conservation Park, Kangaroo Island, South Australia.

The Eagle was ascending through the flock with its wings half closed, as if coming out of a stoop. The cockatoos flew out of the gully and formed a huge boomerang-shaped formation overhead that was *ca* 30 metres across. I counted 47 birds in this flock and 10 others that were about 15 metres behind. They were very vocal as they headed east, with the *ca* 40 knot westerly gale that was blowing, and appeared to go down into a pine plantation 1.5 km away.

About 20 minutes later they flew back to Waterfall Gully, appearing to have little trouble flying into the strong wind. This time 50 birds were counted in the main boomerang formation, and 10 others again trailing the flock were suspected to be juveniles. The birds called continuously as they descended into the gully and disappeared from view.

At 18.45 I walked down to the top of the waterfall, to a position that looks directly down into the gully, to locate where the cockatoos had gone to roost before darkness fell. They were soon found with the aid of a 20× telescope. Twenty-seven were feeding in a stand of Drooping Sheoak *Allocasuarina verticillata* 350 metres away, across the gully. As the wind was gusting to 30 knots in the gully, it was difficult to see any markings on the birds, except for a female with an almost completely yellow head, making her visible without the use of the telescope.

After 15 minutes the cockatoos started to fly up the gully, in groups of three to five, and land in the eucalypts all around me. The first to arrive were females and noticeably different birds that had a cinnamon-coloured wash on their heads and barred orange tail-patches. These birds seemed to be juveniles, and they continuously flew from the eucalypts, circled me, and flew back again. Some alighted to within 10 metres of me for short periods. Three pairs were involved in mutual-preening. Each consisted of a female with yellow head markings and a cinnamon-headed bird. Six cinnamon-headed juveniles were producing a call not unlike that of a juvenile Silver Gull *Larus novaehollandiae,* although not as drawn out.

As the cockatoos flew back in two loose flocks to their original location, I noticed that seven adult males and seven females had some secondary wing and central tail feathers missing. They were last seen that evening at 19.45.

The following morning at 05.50 two Glossy Black Cockatoos flew into Waterfall Gully from the south. While I was climbing down into the gully to locate the flock, before the birds dispersed into many smaller gullies, a Wedge-tailed Eagle dived amongst the sheoaks and put them to flight. The Eagle made only one pass, and the cockatoos flew a short distance to settle in trees on the northern slope. I proceeded towards them through the dense trees and heard the birds long before they were sighted, the juvenile squeaks being very distinct. Finally, I moved to where they were feeding on under-developed seeds of the sheoaks. Fourteen were also perched in a huge eucalypt. Most were preening, and quite a few were mutually-preening: males preening females and females preening juveniles. Further up the gully were eight juveniles perched together in a eucalypt. They were also mutually-preening each other and calling at intervals.

At 08.15 about 40 birds flew up from further down the gully to join those I was observing. A group of 14 juveniles settled in one section of a large eucalypt and two others settled with females close by. The rest of the cockatoos perched singly, except for three male and female pairs and two female and juvenile pairs.

Two Funereal Cockatoos *Calyptorhynchus funereus* and seven Galahs *Cacatua roseicapilla* were observed flying with the flock and remained with it till I left.

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