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Notes on Grasswren Eggs in Len Harvey's Collection, Museum Victoria

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Summary

Examination of Sydney Leonard (Len) Harvey's collection of grasswren (*Amytornis*) eggs and explanatory notebooks in Museum Victoria has revealed that he made observations of grasswrens in the mid to late 20th century near Mullewa (Western Australia), Tibooburra (New South Wales) and Kulgera (Northern Territory) that extend the historical information on western *Amytornis textilis textilis* and eastern *A.t. modestus* Thick-billed Grasswrens. His collection contains eggs from Glenormiston Station, western Queensland, that suggest either the presence there of a previously undescribed but predicted population with an affinity to the *textilis–modestus* group, or represent the first record of the nest and eggs of the Eyrean Grasswren *A. goyderi*. He also provided a description of nesting of the Black Grasswren *A. housei*, 23 years ahead of its first formal report. Our investigation amends the year of the last known Thick-billed Grasswren record in New South Wales to 1936 (previously reported as 1956).

Introduction

During an ongoing examination of the grasswren (*Amytornis*: Maluridae) eggs in Australian museum collections, we looked through the egg collection bequeathed to Museum Victoria (MV) by Sydney Leonard (Len) Harvey in 1990. Amongst them were seven clutches or part-clutches attributed to grasswrens. Harvey (1909–1990) was an amateur Victorian birdwatcher based west of Melbourne. He contributed to the *Bird Observers Club Bird Notes* from the late 1950s. During his lifetime he assembled an egg collection of 400 species, many of which were inherited through his uncle, Norman D'Angri. Len travelled widely through eastern Australia's arid regions and made two extended trips in the 1960s, to Norseman and Geraldton, WA, in 1966 and to Pine Creek and Alice Springs, NT, in 1967 (Hewish *et al.* 2006; Ian Mason pers. comm.). He was familiar with grasswrens (see Discussion) and, by all accounts, his observational powers were keen and his records reliable.

His egg collection is supplemented by three sets of notebooks that are kept in the Ornithology Section, MV. The first set, probably begun around 1967 but containing entries as late as 1978, briefly lists all clutches in the collection. Another notebook entitled 'No. 1 Collection details' summarises and expands information from the earlier set, and was evidently written in about 1980. The final set of books expands further on the earlier notes and provides additional observations, perhaps from discarded data cards as well as from his recollections. This last set contains general observations about bird behaviour, habitat and related matters as well as background details surrounding the acquisition of individual eggs or clutches. He took his first recorded clutch from near Ballarat in 1919 and his last in south-eastern Queensland in 1983 (Ian Mason pers. comm.).

Although the grasswren egg component is only small, many of Harvey's

observations are important contributions to our understanding of this interesting group; for this reason we believe that they warrant more formal dissemination.

Harvey's grasswren clutches

Seven clutches in the collection are said to be from grasswrens, each from a different species and numbered following the 1926 checklist (RAOU 1926). We here list each of these clutches in turn, provide the related information contained in Harvey's notebooks (third set unless indicated), make our own brief observations such as measurements (in millimetres) and, finally, comment on the identity and significance of each. For a full explanation of the subspecific names and their distributions, see Schodde & Mason (1999).

Notwithstanding the questionable identity of two of the clutches discussed—the Black Grasswren *Amytornis housei* and the Eyrean Grasswren *A. goyderi*—Harvey's collection and particularly his notes on grasswrens are remarkable, and there are five separate records that make contributions to our historical knowledge of this group.

Black Grasswren *Amytornis housei*

> [BE.7782] labelled 'Black Grass Wren'
> Amytornis housei Black Grass Wren 518
> Beverley Springs Station, approx 200 miles northeastish of Derby, N. West Kimberleys April 1958. C/2. Nest made of grass, in a spinifex bush, bird flew from its nest as a black boy walked past. Habitat rocky hilly, small low flat topped hills, stunted few trees, much Spinifex [*Triodia*] and tumbled rocks. My informant [nephew, Ken Brumby] had seen, on different occasions, these big black coloured grass wrens up around the rocks and spinifex only (not as rare as it is supposed to be), but nowhere else in that area.

Measurements: 23.4 × 17.1, 23.1 × 17.1 mm. The eggs have a pale-pink base colour and are dotted reddish brown, particularly at the larger end (Plate 24a).

The nest and eggs of the Black Grasswren were first reported in 1981 and fully described in 1998 (Johnstone & Smith 1981; Johnstone & Kolichis 1999), yet Harvey's second-hand account was from many years earlier. Regrettably, we believe that the eggs in Harvey's collection are not those of the Black Grasswren because of their pinkish base colour and moderately heavy markings, rather than the slightly lustrous pearl-white and more sparsely marked eggs now known for this species (Johnstone & Kolichis 1999). The eggs are larger but otherwise more like some other grasswren eggs such as the Dusky Grasswren *A. purnelli* or Thick-billed Grasswren *A. textilis*, or even those of the similar-sized Rufous Songlark *Cincloramphus mathewsi* (Ron Johnstone pers. comm. to ABB), but we are unable to determine their actual identity or provide an explanation for this possible mislabelling. On the other hand, the description provided by Harvey of the nest-site and habitat of the area leaves little room for doubt that the nest and eggs of the Black Grasswren were observed at the time.

Striated Grasswren *Amytornis striatus*

> [BE.7789] labelled 'Striated Grass Wren'
> Amytornis striatus Striated Grass Wren 513
> Gypsum, old railway siding, approx 20 miles south of Ouyen NW Vic. 7th Sept 1958 C/2.

[BE.7810] labelled 'Rusty Grass Wren'
Amytornis whitei Rufous Grass Wren 514.
Carnarvon area, Western Australia as per data card. 30th July 1907. C/2 incubation – 3. J Alloway. Probably a set obtained by uncle, for exchange from P.T. Sandland.

Western Australian friends tell me Rufous Grasswrens not rare in Wittenoom Gorge and other areas of spinifex country, inland from Exmouth Gulf.

Measurements: BE.7789 22.0 × 16.0, 21.0 × 15.8 mm. The eggs have a white base colour and are slightly glossy, dotted reddish brown and with a distinct 'wreath' at the larger end (Plate 24b).
BE. 7810 20.1 × 16.0, 21.6 × 16.7 mm. The eggs have an off-white base colour and are slightly glossy, dotted reddish brown with a distinct 'wreath' (Plate 24c).

These two clutches of the Striated Grasswren are from well-documented localities and appear typical of eggs of the species. Vocal mimicry by this species is detailed in Harvey's field notes (see p. 138). The early clutch of the Rufous Grasswren (BE.7810) was said to have been taken in the Carnarvon area, presumably from an inland locality in the Pilbara (21–25°S, 115–120°E).

Dusky Grasswren *Amytornis purnelli*

[BE.7796] labelled 'Dusky Grass Wren'
Amytornis purnelli Dusky Grass Wren Sth NT 511
Jay Creek area, 47 miles or so west of Alice Springs, rocky spinifex hill. 9th Sept 1967, 1 egg & 1 young bird in the nest… Nest among the side spines of a spinifex bush… The red sandy soil… showed many feet marks of probably these pair of nesting grasswrens feeding chick… at least 3 pairs noted about this area in about 1 1/2 mile prowl. Later C/2 Sept 1969 end blown, Jay Creek, Alice Springs same area as above… friends of mine found & eggs end blown for me…

Measurements: 21.2 × 14.1, 21.5 × 14.8 mm. The eggs have a pale-pink base colour and are dotted and spotted reddish brown, more heavily at the larger end (Plate 24d). These eggs of the Dusky Grasswren are from a well-documented locality and seem typical of eggs of the species.

Thick-billed Grasswren *Amytornis textilis*

[BE.7802] labelled 'Western Grass Wren'
Amytornis textilis Western Grass Wren 510
North of Leigh Creek, South Australia. 3rd Sept 1983 1/1…. Habitat open flat country growing saltbush [*Atriplex*] bluebush [*Maireana*] and other low growing types of bushes typical of this area. …only one egg in the nest, and as finder was moving out of the area, and not returning the single egg was taken for me… it was known Western grasswrens have always lived and nested in this particular area.

[BE.7803] labelled 'Thick-billed Grass Wren'
Amytornis modesta Thick-billed Grass Wren 512
Tibooburra, many miles north, towards the Queensland border 17 8 36 C/2, incubation started…

Measurements: BE.7802 21.6 × 14.7 mm. This egg has an off-white base colour and is dotted and spotted reddish brown with a distinct 'wreath' at the larger end (Plate 25a).
BE.7803 20.3 × 15.1, 20.8 × 14.9 mm. The eggs have an off-white base colour and are dotted and spotted reddish brown with a distinct 'wreath' at the larger end (Plate 25b).

McAllan (2000) described the record for BE.7803 (NSW, in 1936) fully, though

mistakenly citing the year as 1956, and concluded that the clutch was likely to have been taken 'on the Wompah Gate road possibly in the Mount Wood Hills, an easterly spur of the Grey Range'. He also pointed out that this record of the Thick-billed Grasswren (BE.7803) north-east of Tibooburra (at ~29°26′S, 142°01′E) provided only the second record of this species in the north-west of New South Wales; it is also that State's most recent and most northerly record. McAllan investigated the first record, made by MacGillivray in October 1912 (specimens held in the American Museum of Natural History), and determined that its likely locality was on South Blackwell (Paddock) within present-day Mount Arrowsmith Station, in hills forming the southernmost spurs of the Grey Range. One of us (ABB) investigated this locality on 11 April 2004 but, in a walk of 3 km over the hills in South Blackwell Paddock (~30°14′S, 141°40–41′E), only occasional chenopod shrubs were seen. The owner of Mount Arrowsmith, Annie O'Connor (pers. comm.), believed that there was 'no good bluebush' in the area. Whether there is sufficient habitat suitable for grasswrens to the north where Harvey obtained his clutch of eggs, or elsewhere in that part of New South Wales, is still an open question.

The single egg (BE.7802) from north of Leigh Creek (~30°30′S, 138°25′E), is from a well-known grasswren population, and it and the clutch BE.7803 are all typical of eggs of the Thick-billed Grasswren *A.t. modestus*.

Harvey did not find the nest or eggs of *A.t. textilis* in Western Australia, but he made the following observations in his third notebook-set:

> Amytornis textilis Western Grass Wren 510.
> Sept 1966 approx 50 miles? northwest of Mullewa WA, we visited an area of various terrain, various trees, some mulga, rocky low hill, watercourses, down to claypans, bordered with samphire etc., on flats' margins, + scrubby various bush growth on low sand dunes, an area where our friend told us grasswrens inhabited. In answer to my callings brief sightings were obtained by us of these, more or less plain, dark coloured birds, only calls heard by us were quick squeaky twitter. I suspected these birds, 3 in all, had a youngster with them, as season good, & general breeding then. Our friend had not found them nesting, nor did we.

Under the same heading Harvey made another note:

> Sept 1967 camped at a tank, & water troughs, out east of Kulgera NT, near S Australian border. I feel grasswrens seen there were this western race.

Eyrean Grasswren *Amytornis goyderi*

> [BE.7809] labelled 'Eyrean Grass Wren'
> Amytornis goyderi Eyrean Grass Wren SW Qld 515
> August 1968, C/2 Glenormiston area of Nth Territory/Qld border, far western Qld. Nest small roundish ball of grass, near the ground in a small bush [little canegrass bush – No. 1 Collection details]. Stockman's horse it seems, placing its hoof near nest site caused sitting bird to fly off its nest, and as it did so uttered a little tweek [twitter call – No. 1] as it half flew and run [*sic*] along the ground into a larger bush. Dismounting the stockman found the nest, containing two eggs… bird, nest and eggs of a kind he had not seen before. He took the eggs and end blew them, so they would not get broken in a tin and cotton wool he carried in a saddle bag.
>
> The Station Manager got his men to collect any good or unusual eggs for him; he in turn passed them on further.
>
> 1973. My old friend Jack Dwyer and his wife stayed in this area for some time, while there saw 6 pairs Eyrean Grasswrens and found them nesting. Passing his information on, a couple of bird experts later visited the area and confirmed definitely, that Eyrean Grasswrens in the area… Area seems out of bounds from what I have read of these

Grasswren clutches in Museum Victoria: (a) alleged Black Grasswren (misidentified or substituted clutch of another species); (b) Striated Grasswren (Vic.); (c) Striated Grasswren (WA); (d) Dusky Grasswren.

Plate 24 Photos: Wayne Longmore

> Eyrean Grasswrens? Not having seen them, know nothing of them. I got the above end blown C/2 much later. Whether above eggs authentic not accurately know [*sic*], but was told similar to authentic eggs collected.

Measurements: 19.5 × 15.4, 18.3 × 14.9 mm. The eggs have an off-white base colour and are slightly glossy, evenly and heavily dotted and spotted with dark purplish-brown markings (Plate 25c).

Harvey questioned the authenticity of the clutch collected in 1968 from Glenormiston Station (western Qld, ~23°S, 139°E), obtained second- or third-hand, and he doubted the locality as suitable for this species. At the time these eggs were collected, the Eyrean Grasswren was still poorly known, and it was not until after specimens were taken in the eastern Simpson Desert by Ian May in August 1976 (May 1977; Parker *et al.* 1978) that its status and distribution became well established. One can only speculate on the identity of the 'couple of bird experts' who are said to have visited after Harvey's 'old friend, Jack Dwyer' made further observations of these grasswrens in 1973. There is no record in the Queensland Museum of a grasswren from the area of Glenormiston Station (Heather Janetzki pers. comm. to ABB). Jack's brother, James Dwyer, was the manager of Glenormiston at the time, hence the preparedness of his stockmen

Grasswren clutches in Museum Victoria: (a) Thick-billed Grasswren (eastern subspecies *modestus*, SA); (b) Thick-billed Grasswren (eastern subspecies *modestus*, NSW); (c) alleged Eyrean Grasswren (Qld; misidentified or substituted clutch of another species, perhaps Thick-billed Grasswren).

Plate 25 Photos: Wayne Longmore

to 'collect any good or unusual eggs'. The Glenormiston eggs are off-white and heavily and darkly spotted, quite unlike Eyrean Grasswren eggs which are glossy, have a white base colour and are very sparingly marked (Beruldsen 2003; ABB pers. obs.). They look more like Dusky or Thick-billed Grasswren (subspecies *textilis* or *modestus*) eggs, which are very much alike, though showing much individual variation within each taxon. Although low stony hills with spinifex are present on parts of Glenormiston Station (Steve van Dyck pers. comm. to ABB), the wording used by Harvey of a 'small' and a 'larger bush' is not a description of the spinifex habitat of the Dusky Grasswren (or of the Kalkadoon Grasswren *Amytornis ballarae*). The single note of a 'little canegrass bush' (see p. 135) is certainly consistent with habitat of the Eyrean Grasswren, but the eggs are not of that species. This leaves the Thick-billed Grasswren *textilis–modestus* group as a potential source of the eggs in question.

Writing at around the time of the Glenormiston collection, Parker (1972) remarked that he and the late Julian Ford [perhaps the 'couple of bird experts'] had noticed in January 1972 [presumably just before, not 'after' Jack Dwyer's visit] the presence of 'extensive tracts of saltbush on Roxborough Downs, Glenormiston and Herbert Downs Stations that looked promising for [*modestus*]'. Parker then suggested that 'a thorough search of this remote area may be rewarding'. The

Glenormiston eggs are consistent with, but not typical of, *A.t. modestus* and might be another example of a misidentified or misplaced clutch in Harvey's collection, yet once again his descriptive notes strongly suggest the presence of grasswrens in a bushy habitat in precisely the locality predicted by Parker. If such a population of grasswrens existed on Glenormiston Station 40–50 years ago, it might belong to an undescribed population within the Thick-billed *textilis–modestus* complex of chenopod-dependent grasswrens and, if still extant, would be an extremely isolated one, the nearest records being from the Northern Territory–South Australian border (26°S, ~135°E), about 500 km to the south-west.

Harvey's field notes

There is an introductory section to '*Amytornis* species' in Harvey's third set of notebooks, in which he wrote about observing grasswrens and their behaviour (here verbatim):

> Casually, not easy birds to observe, their usual habitats dense spinifex [and], in many areas, low scrubby trees and bush growth add to the difficulty of observing these quick moving birds that prefer to run from cover to cover. They are weak fliers [*sic*] and do so only when I have worked them into some position where it is necessary for them to fly across some short open space to more cover. Their flight is slow and labouring, wings moving fast and they appear tail heavy. I have also seen grasswrens in lignum and cane grass tangles. Rains in their usual dry habitats seem to control their nesting periods and, if normal, it is usually late winter and early spring. One then has the best chance of observing these birds, especially if they have nestlings, as I find that, in answer to my distress calling, they will run about near me like quickly moving mice, continually calling a harsh sounding Zit Zit and peep peep, often coming close to me, wings shimmering, beak open and pause. Should I move [in] the hope of seeing a diversary [*sic*] or distress act, they would run swiftly to cover. The Striated Grasswren male (I presume) in the breeding season mornings and evenings on occasions sings a clear and pleasant twee twee twitter sort of call. At Gypsum at 9am 7th Oct 1958 on a clear sunny day I thought I heard a Red-tailed [Inland] Thornbill [*Acanthiza apicalis*], singing and mimicking other bird calls (viz. Gilbert ['s] Whistler [*Pachycephala inornata*], White-browed Babbler [*Pomatostomus superciliosus*] etc.) [but], sitting on a twig of a fallen and dead murray pine tree was a Striated Grasswren doing the mimicry, quite distinctly uttered and a surprise to me.

Discussion

Harvey also referred to mimicry of other birds by Striated Grasswrens, and obliquely to mimicry by the White-throated Grasswren *Amytornis woodwardi*. Harvey's observations above are important in demonstrating his knowledge of the group as a whole as well as his specific reference to mimicry by the Striated Grasswren, of which there are very few reports (Schodde & Weatherly 1982; Higgins *et al.* 2001). His reference to grasswrens in Lignum *Muehlenbeckia florulenta* and canegrass, perhaps *Eragrostis australasica*, raises the question of the species involved, perhaps most likely the Grey Grasswren *A. barbatus*, unlisted by RAOU (1926), and possibly observed by Harvey before it was formally described as a species by Favaloro & McEvey (1968). The description of Black Grasswrens and their habitat is convincing even though the clutch appears to have been substituted.

Harvey's notes on his observations of grasswrens in the country near Mullewa (WA: 28°30′S, 115°30′E) are remarkable. It is generally accepted that the western Thick-billed Grasswren is extinct in Western Australia except for the Shark Bay region (Higgins *et al.* 2001), and that this has been the case since around 1908 to

1910 (Brooker 2000). Inland northern records of this taxon came from observations supported by specimens in the Western Australian Museum and H.L. White collection, MV, from Yalgoo and Mount Magnet as well as farther inland near Lake Austin (Cue), Day Dawn and Lake Way (Wiluna) (Whitlock 1910). Yalgoo is ~120 km west of Mount Magnet and Mullewa about the same distance west of Yalgoo, 100 km inland from Geraldton and 300 km south of the extant Shark Bay population. This is therefore the first observation of 'western grasswrens' from the vicinity of Mullewa but, more significantly, a record nearly 60 years after they had last been known through other sources from inland Western Australia. It is unfortunate that Harvey's notes are imprecise about the exact locality, his questionmark ambiguously referring either to distance (~50 miles = ~80 km) or to direction (north-west). On the other hand, they do encourage further searches for grasswrens in the general area if suitable habitat still exists, before fully accepting its local extinction another 40 years on.

Another of Harvey's records of 'western [= Thick-billed] grasswrens' cited here was from east of Kulgera (NT: ~25°50′S, 133°18′E) in September 1967. Until Julian Reid made several observations of grasswrens on the Finke River floodout (25°57′S, 134°59′E) near the South Australian border in April 1994 (Brandle & Reid 1998; Black & Baxter 2003; Eldridge & Pascoe 2004), there had been no report of the Thick-billed Grasswren in the Northern Territory since a clutch of eggs was taken from near Hermannsburg (~23°57′S, 132°47′E) in August 1936 (Parker 1972). The locality of Reid's and subsequent sightings (Eldridge & Pascoe 2004) is >150 km east of Kulgera and therefore likely to be some distance from Harvey's report, although his reference is again disappointingly imprecise. Harvey felt that these grasswrens belonged to the 'western race', but he also attributed the part-clutch from north of Leigh Creek to the 'Western Grasswren', only the Tibooburra clutch being regarded as from the Thick-billed. He did provide a brief note under 'Western Grasswren' on birds from the 'Spencer Gulf area west of Port Augusta' where, he was informed, they were 'reasonable [*sic*] plentiful and nest in cane grass tangles'. The muddled nomenclature used in some of his writing on grasswrens of the *textilis–modestus* group is hardly surprising, since so much of his collecting was done before the clarification provided by Parker's (1972) landmark paper on this subject.

Andrew and Margaret Black visited Glenormiston, Roxborough Downs and Herbert Downs Stations, west of Boulia (Qld) on 5–6 June 2008, and searched in areas of chenopod shrublands identified in the Queensland Herbarium Vegetation Survey map (Neldner 1991), chiefly in Queensland Bluebush *Chenopodium auricomum* communities associated with the Georgina River and Pituri Creek. No grasswrens were seen and the *Chenopodium* shrublands appeared unsuitable for Thick-billed Grasswrens, the shrub's foliage evidently being grazed preferentially, with the plants almost reduced to multiple non-woody stems arising from its root-stock. Even ungrazed, this shrub (with which we had had no previous experience) seemed unlikely to provide satisfactory grasswren habitat, which must contain shrubs that are densely structured at their base (Black *et al.* 2009; Black, Carpenter & Pedler unpubl. data). On the other hand, the one area of Old Man Saltbush *Atriplex nummularia* shrubland observed and examined close to Glenormiston homestead could provide potentially suitable grasswren habitat and, interestingly, appeared almost ungrazed, in stark contrast with *Chenopodium* shrubs nearby. However, this vegetation community is of very limited occurrence in the area, according to Stephen Bryce, the Manager of Glenormiston Station (pers. comm.).

We were unable, therefore, to confirm Parker's and Ford's January 1972 observations, which were made during a presumably more favourable season than those that have prevailed recently. We suspect that the grasswren records from Glenormiston Station were likely, after all, to have been of the Eyrean Grasswren which, though well beyond its then understood range, is now known from localities near the property's southern boundary on the margins of the Simpson Desert. If this is the case, the evident muddling of the eggs is most regrettable since the Eyrean Grasswren was rediscovered only in September 1972, and specimen skins and eggs were first officially collected in August and September 1976 (May 1977; Parker *et al.* 1978).

Egg collections are not always well documented, nor is the identity of each egg so readily confirmed as it is with a skin specimen. Many collectors exchange clutches and have limited opportunity to obtain independent confirmation of the validity of each. We find it likely that two of Harvey's grasswren clutches had been exchanged or otherwise substituted at some time after their collection, and it is only his notes about them that provide evidence of the records. The value of his collection is certainly enhanced by the accompanying notebooks that provide documentation of his own and other collectors' observations of grasswrens and their breeding.

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