

## V REPTILES AND FROGS OF MARCHAGEE NATURE RESERVE

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Reptiles and frogs were collected opportunistically on Marchagee Nature Reserve (for location and details see Dell, Introduction this report). Collections were made during the dates mentioned by Dell (*ibid.*). In addition T.M.S. Hanlon and S. Wilson made additional collections on 21 August 1977. Specimens are in the Western Australian Museum and are registered R54479-85, R57775-57864 (May), R51137-54 (July), R57349-54 (August), and R57744-72 (September).

In the annotated list we present data on numbers collected, habitat, breeding condition and diet. Snout-vent length (SVL) is given in millimetres and vegetation location numbers and soils are from Muir (this report).

### ANNOTATED LIST

#### LEPTODACTYLIDAE

##### *Heleioporus albopunctatus*

Three collected in May, 1 in September. Margins of saltlakes; loc. 2.1, 7.1, and 7.3 in May, loc. 7.8 in September. Males with pigmented spine in May and September. Collected at night.

##### *Heleioporus eyrei*

Seven collected in May, 1 in October. Margins of saltlakes; loc. 2.1 and 7.3 in May, loc. 7.8 in September. Collected at night.

##### *Limnodynastes dorsalis*

Five collected in May, 1 in July, 2 in September. Margins of saltlakes and in shrubland; loc. 2.1 and 7.3 in May, loc. 7.2 in July, loc. 2.2 and 3.14 in September. July specimen was under hollow log among samphires, others were collected at night.

##### *Neobatrachus centralis*

Ten collected in May from margins of saltlakes.

##### *Neobatrachus pelobatoides*

Nine collected in May and 2 in July from margins of saltlakes.

##### *Neobatrachus sutor*

Two collected in July among *Triodia scariosa* and *Plectrachne danthonioides* in loc. 4.8, and 1 collected in September in *Banksia* shrubland in loc. 3.8.

*Pseudophryne guentheri*

Six collected in May, 1 in July and 2 in September. May animals were active at night on fringes of saltlakes. September specimens were from loc. 3.14 and 7.8.

GEKKONIDAE

*Crenadactylus ocellatus*

Five collected in May, 3 in July and 2 in August. Under *Triodia scariosa* and *Plectrachne danthonioides* in loc. 4.8.

*Diplodactylus alboguttatus*

Two collected in September. Headtorching at night in heath on pink clayey sand adjacent to loc. 2.2. One was a juvenile (SVL 32), the other a male (SVL 48) with large pearly testes 6.5 mm.

*Diplodactylus granariensis*

One collected in May on pinkish grey sandy loam in loc. 2.2.

*Diplodactylus michaelsoni*

Five collected in May. Two were among *Ecdeiocolea monostachya* sedges on reddish yellow fine sandy loam in loc. 4.6, 1 under dead sedge on pinkish grey sandy loam in loc. 2.2, and 1 burnt out of *Triodia scariosa* on yellow sandy loam in loc. 4.8.

*Diplodactylus ornatus*

Four collected in May, 1 in July and 1 in September. May animals were collected at night while headtorching in loc. 2.2 on pinkish grey sandy loam and in loc. 3.14 on fine sandy loam. September specimen was under old railway sleeper on pink clayey sand in loc. 4.7. Two May females (SVL 44,46) had small ovarian follicles <1.5 mm long and large deposits of abdominal fat. A September female (SVL 48) had a yolky follicle 3 mm long in each ovary. A juvenile (SVL 31) was caught in May.

*Gehyra variegata*

Three collected in May, 4 in July, 3 in September. Five were under bark of dead *Casuarina obesa* on margins of saltlakes, 2 under bark of mallee stump near saltlakes, and 2 under bark of dead *Banksia prionotes*. Juveniles were collected in July (SVL 28) and September (SVL 29.5,31). May males (SVL 46,48) had testes 2.5-4 mm compared to a September male (SVL 47) with testes 6 mm.

PYGOPODIDAE

*Aprasia repens*

Two collected in May. Near margins of saltlakes under dead sedges on yellow fine sandy loam.

*Delma grayii*

One collected in May, and 1 in August. One under dead sedge on yellow fine sandy loam in loc. 2.1, and 1 under *Triodia scariosa* on yellow sandy loam in loc. 4.8. August male (SVL 85) had enlarged testes 10 mm long.

*Lialis burtonis*

Two collected under spinifex (*Plectrachne danthonioides*/*Triodia scariosa*) in July.

*Pygopus lepidopodus*

One collected in September on track in loc. 3.14.

*Pygopus nigriceps*

One collected in May; dug from mound of soil near loc. 7.5.

AGAMIDAE

*Amphibolurus a. adelaidensis*

Two collected in September. In pit traps among *Jacksonia* shrubs on yellow sandy loam in loc. 3.12. Males (SVL 40,43) with enlarged pearly testes 5 mm long.

*Amphibolurus maculatus griseus*

Four collected in May and 6 in September. Widespread throughout Reserve on sandy soils; in loc. 2.1 and 3.14 in May, and loc. 2.2, 3.12, 4.6, and 7.6 in September. Numerous others seen in September. May females (SVL 47,49) had flat convoluted oviducts indicating they had previously bred. They also had large deposits of abdominal fat. A May male (SVL 42) had testes 4.5 mm long. Two September females were gravid: 1 (SVL 50) had 2 eggs *ca* 9 mm long in each oviduct, another (SVL 51) had large eggs in each oviduct but were damaged. Four September males (SVL 46-50) had large pearly testes 5.5-6.5 mm long. One May specimen (SVL 34) was juvenile.

All undamaged September specimens were showing evidence of breeding. Storr (1965) concluded that *A. m. maculatus* breeds once after reaching sexual maturity and that maximum age is about 18 months (there is an overlapping of generations from December to May). Our data from *A. m. griseus* are inconclusive. The mean of 3 May adults is 46 mm compared to the mean of 7 September adults which is 46.7 mm. However, it would be surprising if adult May females with such large amounts of fat were nearing the end of their life span.

The possibility that *A. m. griseus* breeds more than once cannot be ignored. Furthermore, we believe that the specific status of *A. m. griseus* and *A. m. maculatus* has not definitely been resolved. Dell & Chapman (1977) have commented on the close proximity of *A. m. griseus* at Marchagee to the nominate

subspecies at Cockleshell Gully Reserve. Further collecting needs to be done between these localities.

*Amphibolurus salinarum*

Two collected in May and 1 in September. Salt-affected heath and samphire flats. Collected in loc. 7.1 and 7.6 in May and loc. 7.6 in September. A September female (SVL 56) was gravid with eggs >10 mm long in both oviducts; the specimen was damaged and no count was possible.

*Moloch horridus*

One collected in September. It was active among *Jacksonia* shrubs on yellow sandy loam in loc. 3.12.

SCINCIDAE

*Cryptoblepharus plagiocephalus*

Four collected in May, 1 in August and 2 in September. On standing trees and shrubs particularly dead *Casuarina obesa* on edge of saltlakes. No indication of breeding. May adults (SVL 37-40) were same size as in September (SVL 37-39). A May male had testes 4 mm compared to 1 with 5 mm testes in September. A juvenile (SVL 24) was collected from an old mallee stump in August (compare this with the smallest specimen (SVL 16) in WAM collections); it was probably hatched during the previous breeding season, 9 months previously.

*Ctenotus fallens*

One collected under *Triodia scariosa* in loc. 4.8 in September.

*Ctenotus schomburgkii*

One collected in salt-complex loc. 7.8 in May.

*Lerista elegans*

One collected in May under mallee stump embedded in soil on edge of saltlake near loc. 7.5 and 1 collected under *Banksia* log in July.

*Lerista praepedita*

One collected in August under old mallee stump near loc. 7.3.

*Menetia greyii*

Three collected in May, 2 in July and 1 in August. Under *Triodia scariosa* and *Plectrachne danthonioides* in loc. 4.8. A juvenile (SVL 17) was collected in May.

*Morethia obscura*

One collected in September in *Banksia prionotes* shrubland in loc. 3.8. It was a female (SVL 47) with 2 eggs ca 9.5 mm long in each oviduct.

*Tiliqua occipitalis*

One collected in May from under *Triodia scariosa*/*Plectrachne danthonioides* in loc. 4.8.

*Tiliqua rugosa*

One collected in September in breakback trap among *Jacksonia* shrubs in loc. 3.12.

TYPHLOPIDAE

*Typhlina bituberculata*

Eight collected in May. Four were in abandoned *Iridomyrmex detectus* ant nests near edge of saltlakes and 4 were under mallee stumps embedded in soil in loc. 2.1 near edge of saltlake.

ELAPIDAE

*Denisonia gouldii*

One collected in May under bulldozer spoil on edge of saltpan in loc. 2.1.

*Vermicella bimaculata*

Two collected in May under decaying mallee stumps on edge of saltlakes.

DISCUSSION

Seven species of frogs and 27 reptiles were collected on Marchagee Nature Reserve. This is considerably less than the 7 frogs and 40 reptiles on Cockleshell Gully Reserve 80 km to the west (Dell & Chapman 1977). This is not surprising because Marchagee Reserve has no woodland, no heavy soils (except saltlakes) and no rocky outcrops.

The herpetofauna at Marchagee is particularly interesting as it includes some eremaeian species among a basically southwestern assemblage. Furthermore, it has a mixture of typical wheatbelt and coastal taxa. Coastal representatives include *Diplodactylus alboguttatus*, *D. ornatus*, *Delma grayii*, *Amphibolurus a. adelaidensis*, *Ctenotus fallens*, and *Lerista elegans*; typical wheatbelt taxa include *Diplodactylus granariensis* and *Amphibolurus maculatus griseus*. Eremaeian species are *Diplodactylus michaelsoni* and *Pygopus nigriceps*.

*Pygopus nigriceps* is the most southwesterly known. Kluge (1974) considers it to be mainly found on sandy soils particularly in areas of porcupine grass (*Triodia*). Marchagee Reserve has areas of *Triodia scariosa* and *Plectrachne danthonioides*

which provided habitat for many reptiles including *Diplodactylus michaelsoni* (near its southern limit), *Crenadactylus ocellatus*, *Ctenotus fallens*, *Menetia greyii*, and *Tiliqua occipitalis*.

Several species were commencing to breed in September. Males of *Diplodactylus alboguttatus*, *Gehyra variegata*, *Delma grayii* and *Amphibolurus a. adalaidensis* had enlarged testes. Females of *Amphibolurus maculatus griseus*, *A. salinarum*, and *Morethia obscura* had oviducal eggs, and *Diplodactylus ornatus* had yolky ovarian follicles. This is the first time that we have reported breeding in September on wheatbelt reserves.

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