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MORPHOMETRIC AND REPRODUCTIVE NOTES ON THE RARE WET TROPICS SKINK, *GLAPHYROMORPHUS MJOBERGI*. *Memoirs of the Queensland Museum* 48(1): 146. 2002.- *Glaphyromorphus mjobergi* (Lönnberg & Andersson, 1915) is a rare skink (Cogger et al. 1993), confined to rainforest above 650m in Queensland's Wet Tropical Coast Biogeographical Region. Thirty-six individuals are held in the Australian, Queensland and Field Museums.

The major part of the known range of *G. mjobergi* is on the Atherton and Evelyn Tablelands (Covacevich & McDonald, 1993) where rainforests have been fragmented by >100 years of clearing (Winter et al., 1987). Between November 1995 and January 2000, 8 surveys were undertaken in these fragments and 8 continuous forest sites were searched to assess the effect of rainforest fragmentation on reptiles. Animals were hand-caught, measured, sexed and released at point of capture (Sumner et al., 1999).

Forty-seven *Glaphyromorphus mjobergi* were captured at 6 sites, 3 in continuous forest and 3 in rainforest fragments. All were found in rotting logs on the rainforest floor. Field identifications were based on extremely short limbs relative to body length and orange flush over the forelimbs (Cogger, 2000). Greatest numbers were captured at a continuous forest site at Massey Creek (Table 1); 22 individuals were captured over 7 surveys. The 3 rainforest fragments in which *G. mjobergi* was captured were very small; Maalan Road is ~2.5 hectares, and the Woolward property fragments are both <1 hectare.

SVL was 36-97mm (av. 70) (Table 1). Total length (TL) was 42-248mm (av. 168). Twelve of 39 individuals caught possessed their original tails, regenerated tails being easily recognized by colour and pattern changes below the abscission point. For individuals with original tails TL was 91-231mm (av. 176). Individuals weighed 6.4-17g (av. 12.4).

Of the 3 gravid females captured 2 had at least 4 eggs visible in the abdomen, and SVLs of 80, 85 and 97mm and TLs of 228, 200 and 197mm, respectively (only the first individual retained its original tail). Eversion of hemipenes identifies male reptiles, however this proved difficult due to the hard, slippery nature of the scales in this species. Two individuals verified as male using this method had SVLs of 80 and 69mm and TLs of 165 and 182mm, respectively. Neither

retained its original tail.

Of 13 sites surveyed at which *G. mjobergi* was absent, all but one was to the northeast of the sites where *G. mjobergi* was present. This pattern suggests very specific habitat requirements, perhaps related to rainfall. The fact that half the sites at which *G. mjobergi* were recorded are rainforest fragments suggests that this species is reasonably robust to the effects of anthropogenic fragmentation. Fewer individuals were captured on average in fragments (X = 5) compared to continuous forest sites (X = 10.7), however differences in site size and search effort confound any comparison. Designation of this species as 'rare' is appropriate due to its restricted distribution. However, it appears more common than has been estimated from museum records (Cogger et al. 1993).

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Literature Cited

- COGGER, H.G. 2000. Reptiles and amphibians of Australia. (Reed: Sydney).
- COGGER, H.G., CAMERON, E.E., SADLER, R.A., EGGLE, P. 1993. The action plan for Australian reptiles. (Australian Nature Conservation Agency).
- COVACEVICH, J.A. & McDONALD, K.R. 1993. Distribution and conservation of frogs and reptiles of Queensland rainforests. *Memoirs of the Queensland Museum* 34(1): 189-199.
- FRANKEL, O.H. & SOULE, M.E. 1981. Conservation and Evolution. (Cambridge University Press: Cambridge).
- SUMNER, J., MORITZ, C., & SHINE, R. 1999. Shrinking forest shrinks skink: morphological change in response to rainforest fragmentation in the prickly forest skink (*Gnypetoscincus queenslandiae*). *Biological Conservation* 91: 159-167.
- WINTER, J.W., BELL, F.C., PAHL, L.I., & ATHERTON, G.G. 1987. Rainforest clearfelling in northeastern Australia. *Proceedings of the Royal Society of Queensland* 98: 41-57.
- J. Sumner, Department of Zoology and Entomology, University of Queensland and Rainforest CRC, St Lucia, Qld. 4072, Australia (josumner@hotmail.com); received 25 March 2002.

TABLE 1. Locality (Longitude: Long. and Latitude: Lat.), number of individuals (No. caught) and morphological measurements of *Glaphyromorphus mjobergi* caught at each site. Morphological measurements included snout to vent length (SVL), total length (Total L) interlimb length (Interlimb L), weight, head length (Head L) and head width (Head W). Measurements for individuals at 'Reynolds' were available for only one individual.

Site	Long.	Lat.	No caught		SVL	Total L	Interlimb L	Weight	Head L	Head W
Maalan Road	145° 34'	17° 44'	13	Min	36	65	21	8.1	4.9	4.7
				Max	88	228	53	14	15.9	8.9
				Mean	61.5	154.3	37.4	10.8	7.7	6.8
Massey Creek	145° 34'	17° 37'	22	Min	37	42	21	6.4	4.8	5.4
				Max	97	248	61	17	13.1	10.1
				Mean	72.8	168.0	44.5	12.6	8.0	7.7
Millaa Millaa Lookout	145° 34'	17° 31'	4	Min	59	144	35	11	7	7
				Max	92	195	59	16	15	10
				Mean	73.0	168.7	51.0	13.0	10.2	8.1
Reynolds	145° 34'	17° 33'	6		90	225	60	14	14.8	7.5
Woolward 1	145° 36'	17° 37'	1		84	231	48	15.7	8.7	9
Woolward 2	145° 36'	17° 37'	1		78	220	47	13.8	7.3	8.4
				Total mean	70.41	167.9	43.51	12.38	8.29	7.5
				Total min	36	42	21	6.4	4.8	4.7
				Total max	97	248	61	17	15.9	10.1