

SEXUAL DICHROMATISM OF *AGAMA BOULENGERI* OBSERVED IN SOUTHERN MAURITANIA

MICHAEL R.K. LAMBERT* and WIM C. MULLIÉ**

**Environmental Sciences Department, Natural Resources Institute,
University of Greenwich, Central Avenue, Chatham Maritime,
Kent ME4 4TB, England*

***FAO Project Locustox, B.P. 3300, Dakar, Sénégal*

During a mission to southern Mauritania (Lambert, 1996) in the late rainy season (9-21 September 1996), *Agama boulengeri* Lataste, 1886 was observed to be abundant in rocky habitats. Both sexes were recorded at Aïn El Ghairé (17°11.70'N, 12°14.92'W), Assaba (19.ix.1996); near Louths (17°14.40'N, 12°6.04'W), Assaba (20 and 21.ix.1996) on the Tagant Plateau in three sites at 16-25 per man-hour of searching, and at Achram (17°21.01'N, 12°23.98'W), Brakna (21.ix.1996).

Males characteristically bear a mid-dorsal crest from the nape of the neck to the end of the tail (Joger, 1979). This, and their larger size, differentiates them from females.

The most striking difference between the sexes, however, was in the nuptial coloration of the females. The males were drab, with near uniform purple-grey coloured scales dorsally. The females had a brilliant yellow mid-dorsal band with three approximately bar-shaped transverse bands on a bright orange background. The bands increased in size from behind the neck to end in a patch towards the rear of the back. Their heads were bright blue-green or turquoise. The dichromatism was so striking that one could be excused for mistaking the sexes for different species, especially since in the females, only the neck supported a crest, which was reduced or nil on the back and tail.

The family Agamidae, comprising 300 species in 53 genera, is distributed throughout Africa to Australia, including the Middle East, and Central and south-east Asia in between. The genus *Agama* is primarily Palaearctic, but has representatives throughout Africa. Colour polymorphism and sexual dichromatism are the norm in most species (Branch, 1988). In *Agama impalearis*, there is both colour polymorphism and sexual dichromatism within its North African range. Males in SW Morocco have a vivid deep rust-red head, with upper sides of metallic greenish-blue and blue, and violet flanks, while the females have a blue head, and red transverse bars on a yellow background (Schleich et al., 1996). *Agama impalearis* extends southwards to Mauritania, but gives way to *A. boulengeri* in the south of the country.

To date, *Agama boulengeri* in Mauritania has only previously been recorded in the Adrar range (Dekeyser & Villiers, 1956; Ineich, 1996). It has also been recorded in Mali at Médine (type locality), Galougo and the Chutes de Félou (Joger, 1979), where it is very localised, and aggregates (Joger & Lambert, 1996). Observations on *A. boulengeri* made here were at localities between those of earlier records, and therefore represent an in-filling of the previous known range.

Full nuptial colouring in female *A. boulengeri* has not previously been described.



Plate 1: *Agama boulengeri* (Aïn El Ghaire, Assaba, Mauritania; 19.ix.1996), hand held for scale, a male with uniform purple-grey colouration, and dorsal crest on neck and along length of the tail (a species character).



Plate 2: *Agama boulengeri* (Aïn El Ghaire, Assaba, Mauritania; 19.ix.1996), hand held for scale, a female in nuptial colouring, dorsal crest on neck (a species character)

ACKNOWLEDGEMENTS

Observations were made during a mission to Mauritania assessing the potential of lizards as bioindicators on behalf of FAO Project GCP/SEN/041/NET (Locustox), Dakar, Sénégal. Thanks are due to Dr U. Joger (Hessisches Landemuseum Darmstadt, Germany) for comments on the manuscript.

REFERENCES

- Branch, B. (1988). *Bill Branch's field guide to the snakes and other reptiles of Southern Africa*. Cape Town: Struik Publishers. 326 pp.
- Dekeyser, P.L. & Villiers, A. (1956). Notations écologiques et biogéographiques sur la faune de l'Adrar. *Mémoires de l'Institut français d'Afrique noire* 44: 1-222.
- Ineich, I. (1996). *Les amphibiens et les reptiles*. Rapport CIRAD--EMVT No. 012, unpublished. 73 pp.
- Joger, U. (1979). Zur Ökologie und Verbreitung wenig bekannter Agamen Westafrikas. *Salamandra* 15: 31-52.
- Joger, U. & Lambert, M.R.K. (1996). Analysis of the herpetofauna of the Republic of Mali, I. Annotated inventory, with description of a new *Uromastyx* (Sauria: Agamidae). *Journal of African Zoology* 150(1): 21-51.
- Lambert, M.R.K. (1996). *Assessing the potential of lizards as bioindicators to monitor the environmental impact of pesticides in Mauritania and Sénégal (10 September to 7 October 1996)*. Unpublished report to FAO Project GCP/SEN/041/NET (Locustox), Dakar, Sénégal. 71 pp.
- Schleich, H.H., Kästle, W. & Kabisch, K. (1996). *Amphibians and reptiles of North Africa*. Koenigstein: Koeltz Scientific Publishers. 630 pp.