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PARAPATRIC EXISTENCE OF TWO SPECIES OF PEDIOPLANIS IN THE CENTRAL NAMIB

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ABSTRACTS

* = lecture presented by

TAIL LOSS FREQUENCY AND SIGNIFICANCE IN THE CAPE THICK-TOED GECKO, PACHYDACTYLUS CAPENSIS CAPENSIS

M. F. BATES (Department of Herpetology, National Museum, P. O. Box 266, Bloemfontein 9300).

The tails of Cape thick-toed geckos in three samples from widely separated areas in southern Africa (i.e., Orange Free State, Pretoria, and the northern Transvaal/Botswana) were examined to determine tail break frequencies, tail size and the extent of caudal autotomy. Tail break frequencies in all samples were relatively high (51.5%, 52.9% and 68.8%, respectively) when compared to other African gekkonids and suggests the effectiveness of caudal autotomy for There were no broken tails in the smaller predator escape. specimens of each sample, after which tail break frequency increased with increasing snout-vent length. As SVL increased, the proportion of tail autotomized increased, suggesting a high occurrence of multiple tail breaks. There were no apparent differences in tail break frequencies between geckos from two microhabitat types in the Orange Free State. Growth in length of the original tail relative to SVL was symmetric, whereas growth in width of the original tail relative to SVL suggested a partial trend towards allometric growth. In a sample of geckos from the OFS, 64.1% of specimens with regenerated or regenerating tails had autotomized 81-100% of the tail length, suggesting that whole-tail autotomy occurs most frequently in nature. Economy of autotomy can occur but may be less effective for predator escape.

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A new species of the Pedioplanis undata group was found to exist parapatrically with its sibling species in the lower Khan and Swakop river area. Its maximum size is greater than that of P. undata from adjoining area. It seems to be slightly more rupiculous and shows a more pronounced tendency towards cannibalism than neighbouring P. undata although both species do eat hatchlings of their own and other species. Three morphological and three electrophoretic features are diagnostic between the two taxa. Hybridisation is reduced to a few isolated cases (no primary hybrid amongst 94 specimens from the contact zone; only traces of past hybridisation were recognised) indicating a strong interbreeding barrier. The distribution area of the new species is extremely small for a mainland lizard and fascinating in that along the rivers Swakop and Khan, it reaches inland (50km along the Khan) into the distribution area of P. undata. In all cases, the actual zone of coexistence is less than 1 km. Present studies indicate that the Pedioplanis undata group is more diverse than previously assumed and that similar situations occur at least in Pedioplanis "undata" rubens and P. "undata" gaerdesi.

SOME PATHOLOGY OF CAPTIVE GABOON ADDERS

T. BODBIJL (FitzSimons Snake Park, P.O. Box 10457, Marine Parade, Durban 4056).

Gaboon adders, *Bitis g. gabonica* from South Africa have earned themselves the reputation amongst local herpetologists of being somewhat difficult to keep successfully in captivity. The subject of this paper is the various pathological environmental hazards which were experienced in a collection of captive gaboon adders. Some cases presented easily recognisable symptoms and effective treatment could be applied, whereas in others the behavioural patterns were misinterpreted and only by chance was the correct diagnosis made. The selected cases here refer to data collected in 11 years of observation of captive gaboon adders.

OBSERVATIONS ON THE CAPTIVE PROPAGATION AND MAINTENANCE OF TWO DENDROASPIS SPECIES

R. C. BOYCOTT*, D. R. MORGAN and R. W. PATTERSON (Transvaal Snake Park, P.O. Box 97, Halfway House 1685)

Captive breeding groups of *Dendroaspis polylepis* and *Dendroaspis augusticeps* are maintained at the Transvaal Snake Park. Housing facilities, general husbandry and incubation techniques are described. Observations on reproductive activity and biometric data on eggs and hatchling are presented.

SPECIES DISCOVERY AND PHYLOGENY IN THE GENUS HYPEROLIUS (ANURA: HYPEROLIIDAE)

A. CHANNING (Department of Biochemistry, University of the Western Cape, Private Bag X17, Bellville 7530)

African reedfrogs of the genus *Hyperolius* are extremely polymorphic for colour pattern, yet relatively uniform morphologically. The taxonomy of reedfrogs is confused by delimitation of species and subspecies on the basis of colour pattern. Various taxonomic schemes have been proposed for the *Huperolius viridiflavus* group; these are reviewed.

I examine the described calls of *Hyperolius*, and use the sonagrams to discover real species, based on the species-specific advertisement calls of male frogs. Many populations within the group have been incorrectly elevated to specific status, and many cryptic species have been overlooked.

A cladistic analysis, using characters of calls, colour pattern and morphology, is used to infer a hypothesis of phylogeny. *Afrixalus* served as the outgroup to determine the polarities of the transformation series. It was not possible to fully resolve the species