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ARTICLES

VARIATION IN HEMIPENES OF DIFFERENT COLOUR PHASES OF *PSEUDASPIS CANA* (LINNEAUS) WARRANTS RE-EVALUATION OF THE SPECIES

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Hemipenal extrusion of a road-killed *Pseudaspis cana* (SMR1065/JV8632) of the smaller northern brown phase of this species from 5 km south of Omaruru (2115BD), Namibia with a total length of 1225 mm, disclosed hemipenes that were much shorter than those of the southern larger black phase of the Western and Northern Cape (South Africa). To exclude the possibility of congenital defect for this observed shortness, material (SMR9886, 11031, 10032 from Katima Mulilo; SMR7079, 5 km south of Windhoek; SMR9390 from between Kalkrand and Omaseb) from the National Museum of Namibia was probed (N = 6, with total lengths of 805 mm (truncated) – 1148 mm, mean 1041 mm) and confirmed the small size of the hemipenes in the brown phase (Fig. 1).



Fig. 1: The extruded hemipene of a northern brown-phase *Pseudaspis cana* from 5 km south of Omaruru, Namibia. (Photo: John Visser).

The much longer hemipenes of the black phase are illustrated in Brain (1959) and Broadley (1983). The hemipenes of the brown phase which I examined lacked whorls, having just a slight twist in their length whereas in the black phase there are eight or nine whorls. In the brown phase specimens that I examined the hemipenes extend to subcaudals 6 – 10 (mean = 8) and, as deduced from photographs by Brain (1959) and Broadley (1983), in the black phase to subcaudals 18 or 25. I suspected that the hemipenes shown in Broadley (1983) may have been slightly decomposed as the whorls show more separation than that seen in freshly killed or living specimens. This separation would account for the higher subcaudal scale count termination in that specimen. The lower subcaudal scale termination shown in the Brain (1959) photograph of the left hemipenis illustrates the tighter whorls as seen in the hemipenes of living snakes.

Laurent (1956) proposed that the average lower midbody and subcaudal scale counts justified subspecific recognition for the northern brown phase as *P. c. anchietae*. Broadley (1983) concluded that these variations from the nominate race were clinal. The magnitude of the above differences in hemipenal characters between the two colour phases show a deeper level of subspecific separation than that based on the earlier but limited and currently disputed significance of scale counts. The reinstatement *P. c. anchietae* based on hemipenal differences may be called for. As the literature of the past four decades has not discriminated between the colour phases, a physical re-examination of the cited material is required to justify a final decision and is in progress.

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