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ON THE STATUS OF *SCELOTES BOURQUINI* BROADLEY AND *SCELOTES GUENTHERI* BOULENGER (SAURIA: SCINCIDAE) FROM KWAZULU-NATAL, SOUTH AFRICA

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On the Status of *Scelotes bourquini* Broadley and *Scelotes guentheri* Boulenger (Sauria: Scincidae) from Kwazulu-Natal, South Africa

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Abstract

The relationship between *S. bourquini* Broadley 1994 and the presumed extinct species *Scelotes guentheri* Boulenger 1887 from KwaZulu-Natal, South Africa is re-examined using data from the holotypes of both species as well as additional material of *S. bourquini*. Historical records provide a suggestion that the type locality of *S. guentheri* may be incorrect. The evidence presented indicates that *S. guentheri* is actually still extant and that *S. bourquini* is conspecific and a **junior synonym**.

Key Words

Extinct, *Scelotes*, Scincidae, South Africa, junior synonym.

Introduction

In his comprehensive review of the genus *Scelotes* Fitzinger in Mozambique, Swaziland (now Eswatini) and Natal (now KwaZulu-Natal) Broadley (1994) described a new species *S. bourquini* differing mainly from *S. guentheri* Boulenger, 1887, in the absence of a small postnasal shield, a character in which the holotype of *S. guentheri* is the only specimen from that circumscribed area known to have a postnasal, although this character is present in related species in Madagascar and the Western Cape Region. *Scelotes bourquini* inhabits 'ngongoni grassland in the KwaZulu-Natal Midlands above 300m a.s.l. This is similar habitat to the Qudeni area, north of the Tukela Valley, occupied by the isolated species *S. farquharsoni* Raw, 2020.

Previously, Raw (1973) had suggested that DMSA 187, from the population later described as *S. bourquini*, was conspecific with *S. guentheri*. Raw suggested that the postnasal in *S. guentheri* was an aberrant scale, similar to examples of aberrant additional head shields that he had detected in single examples of *Tropidosaura montana* (Gray, 1831) and *Dendroaspis angusticeps* (Smith, 1849). These two examples have been illustrated in Raw (2021, figs. 11 & 12) along with other examples of aberrant scales. Bourquin (1988) subsequently followed this interpretation of *S. guentheri*.

Materials and Methods

The holotype of *S. guentheri* (BMNH 58.4.11.9) was examined and photographed in the Natural History Museum in London, UK. Two specimens of *S. bourquini* (LR 1089 from Fort Nottingham and LR 2578 from Merrivale) were also examined. These specimens were examined under a stereomicroscope, photographed with a digital camera and measured with a flexible metric tape measure. Ventral and subcaudal counts were made on magnified digital images of the underside of the specimens. These two specimens, as well as the previously examined DMSA 197 from Karkloof, were additional to those examined by Broadley for his 1994 paper.

Additional comparative data were obtained from Broadley's original data sheets used for Broadley's 1994 paper, (Shiela Broadley, pers. comm.).

These data were from the following specimens of *S. bourquini*:

AJL: 2854 Nottingham Road; 2725 Umgeni river, 5 km E of Midmar Dam.

DMSA 889 Hermannsburg.

NMSA: 528 Impendhle.

NMZB-UM: 8284 Dargle, Natal, coll. O. Bourquin, 19 April 1964 (Holotype of *S. bourquini*).

TMSA: 53326-7, 53426 Happy Valley Farm, Lions River District; 62959 Howick; 52366 Inhluzani Mount, Impendhle; 62835, 62958, 66719-20 Midmar Dam.

Museum and collection acronyms used are:

AJL – Angelo J Lambiris collection (now in DMSA).

BMNH = Natural History Museum, reptile section, London, England, United Kingdom.

DMSA = Durban Natural History Museum, Durban, KwaZulu-Natal, South Africa.

LR = Lynn Raw Collection, Grenaa, Denmark.

NMSA = KwaZulu-Natal Museum, Pietermaritzburg, KwaZulu-Natal, South Africa.

NMZB-UM = National Museums of Zimbabwe, Umtali (now Mutare) Museum, Bulawayo, Zimbabwe.

TMSA = Transvaal Museum (now Ditsong National Museum of Natural History), Pretoria, Gauteng, South Africa.

Results

The following table compares relevant characters of *S. bourquini* with those of *S. guentheri*.

Character	<i>Scelotes bourquini</i>	<i>Scelotes guentheri</i>
midbody scale rows	20	20
ventrals	109-119*	119
supraoculars	4	4
supraciliaries	6	6
postnasal	absent	present (aberrant?)
supralabials before subocular	3	3
lower eyelid	scaly	scaly
ear opening	absent	absent
hind limb	clawless bud (< 1 mm)	clawless bud (< 1 mm)
enlarged preanal scales	present or absent	absent
snout – vent length	46-108mm	100mm

* 109 in DMSA 197; 119 in LR 1089

Discussion

Some doubts about whether the holotype of *Scelotes guentheri* Boulenger, 1887 is aberrant have long existed.

Hewitt (1921: 5) suggested that it was an aberrant specimen when he stated “*Another quite distinct species is known to me from Natal and Zululand. Although the head scaling thereof, as I have previously pointed out, differs in important respects (absence of post-nasals, temporals elongated) from the description of Scelotes guentheri, Blgr., it should probably be referred to that species, and two such specimens from the junction of the Umfolosi Rivers, Zululand, now in the Natal*

Museum, were thus identified by Boulenger himself: the type is apparently an aberrant specimen”.

The two specimens mentioned in the last sentence were probably *S. mossambicus* on the basis of the more favourable drier thornveld habitat at this location compared with the moister ‘ngongoni grassland of the Midlands where the species does not occur.

Raw (1973: 11) had also independently suggested that the type was aberrant. The type specimen in the Natural History Museum has faded but otherwise agrees well in colour pattern and overall morphology with *S. bourquini* (Fig. 1). The only significant difference noted was the presence of a postnasal in *S. guentheri* (Fig. 2).



Figure 1. Holotype of *S. guentheri* - dorsal (left) and ventral (right) views.



Figure 2. Head of holotype of *S. guentheri* showing aberrant postnasal.

Broadley (1994: 251-252) commented on *S. guentheri* as follows: “Known only from the type, which may have been collected in a restricted habitat within the present Durban city limits. This habitat could have been destroyed by urban development and this species is therefore probably extinct.”

As a long-term resident of Durban, I find this difficult to believe, considering that two other *Scelotes* species, *S. inornatus* (Smith, 1849) and *S. mossambicus* (Peters, 1882), still occur in the same coastal sands habitat adjacent to the original site occupied by Port Natal (Durban) (Map 1) in 1861 close to the period when the holotype of *S. guentheri* would have been collected by the Reverend Calloway before sending his shipment to the Natural History Museum in London. I have to question why only one out of three similar species living in this location would become extinct while the remaining two species continue to survive. It is more likely that *S. guentheri* never occurred there.



Map 1. Map of Durban in 1861. The red area north of the bay is the settlement. Both *S. mossambicus* and *S. inornatus* remain fairly common in undeveloped coastal sand areas between Durban Bay and the Umgeni River as well as further north and south with *S. mossambicus* also occurring further inland (Alexander, 1990).

The shipment sent by the Reverend Calloway from Port Natal with the *S. guentheri* holotype included several other specimens. Among them were one of the paratypes of *Philothamnus occidentalis* Broadley, 1966, *Afrotyphlops bibronii* (Smith, 1846), *Psammophylax rhombeatus* (Linnaeus, 1758) and *Bitis arietans* (Merrem, 1820). These four species do not occur on the coastal flats where the settlement of Port Natal (Durban) was established at the time (Alexander, 1990). They do, however, occur in the KwaZulu-Natal Midlands around Pietermaritzburg where the Rev. Calloway was based before moving permanently to Spring Vale in June 1858 (Benham, 1896).

Calloway only spent a few days in Durban after his arrival on 5th December 1854, leaving for Pietermaritzburg after Christmas. He remained in Pietermaritzburg until early 1858 when he explored the land southwest of Pietermaritzburg in search of suitable land for a mission station before eventually being granted 3000 acres south of the Mkhomasi River at a place he named Spring Vale (Springvale Mission between Richmond and Highflats). His specimens would have taken at least three months to ship to London, so most likely were obtained in the Pietermaritzburg area rather than in Durban or Springvale. The presumed museum accession date was 11 April 1858 based on the numbering system (specimens in the series BMNH 58.4.11.1-14) in use at the time, so he must have despatched the collection around January 1858 before leaving in search of land for the grant.

Conclusions

Broadley (1994: 243) separated *S. guentheri* from *S. bourquini* using the following couplet in his key:

“*Small postnasal separates supranasal from first supralabial; 119 ventrals [Durban]*
 *guentheri Boulenger*
Postnasal absent, supranasal in contact with first supralabial; 111-118 ventrals
[Natal midlands]..... bourquini sp. n.”

As indicated above, it seems likely that the postnasals of the holotype of *S. guentheri* are aberrant. Although not seen by Broadley, specimen LR 1089, a specimen of *S. bourquini* from near Fort Nottingham has 119 ventrals, so the slight difference in ventral counts is shown to be no longer valid.

It therefore appears that all three distinguishing features used in Broadley’s key, i.e. presence of a postnasal (aberrant), 119 ventrals and location (Durban) have no substance in the light of the evidence presented here.

Considering the above, we can conclude that the holotype of *S. guentheri* was originally collected in the KwaZulu-Natal Midlands and that the species never occurred in Durban. It is also considered that the postnasal in the holotype is an aberration and that the ventral range in *S. bourquini* (109-119) overlaps the number in *S. guentheri*. In consequence, *S. bourquini* cannot be separated from *S. guentheri* and should therefore be regarded as a **junior synonym** of the latter name.

This also means that the species *S. guentheri* Boulenger, 1887 should be removed from any list of extinct reptiles.

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