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THE TAXONOMIC STATUS OF *HEMIDACTYLUS NIGRIVENTRIS* (REPTILIA: SAURIA: GEKKONIDAE)

by

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Hemidactylus nigriventris Van Lidth de Jeude, 1905, known only from the holotype from Sintang, Borneo, is shown to be conspecific with *H. frenatus* Duméril & Bibron, 1836.

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In 1905 Van Lidth de Jeude described *Hemidactylus nigriventris* on the basis of a single specimen from Sintang, western Central-Borneo (Lidth de Jeude, 1905). The specimen was deposited in the Rijksmuseum van Natuurlijke Historie in Leiden and was registered under RMNH 4457. To this day, the holotype of *H. nigriventris* remains the sole known representative of the species.

Van Lidth de Jeude stated that *H. nigriventris* was allied to *H. frenatus* Duméril & Bibron, 1836, but differed from the latter species in the lepidosis of the tail and the presence of a skin fold along the sides of the belly. At first sight the type of *H. nigriventris* indeed seems to be a specimen of *H. frenatus*. Because of this resemblance I decided to study the specimen more closely, thereby basically using the same procedure as in the case of *H. vandermeer-mohri* Brongersma, 1928 (Bastinck, 1984).

Upon examining the specimen I got the distinct impression that its tail was a regenerated one. The X-ray photograph I had consequently made of the specimen clearly shows that its tail is indeed largely a regenerated one (fig. 1). Evidently, Van Lidth de Jeude was in error when describing the tail of *H. nigriventris* as being unregenerated (when De Rooij studied the specimen in the course of her survey of the Indo-Australian reptiles, she also failed to recogni-

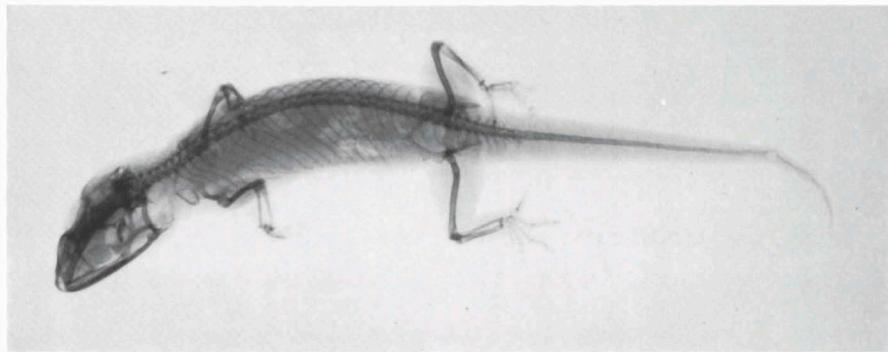


Fig. 1. X-ray photograph of the holotype of *H. nigriventris*. The greater part of the tail consists of an undifferentiated, unsegmented rod, whereas the base of the tail contains fully developed vertebrae. This clearly demonstrates that the tail is largely a regenerated one.

ze the true nature of the tail of RMNH 4457 (Rooij, 1915)). He was also mistaken in stating that the entire tail was devoid of tubercles: the unregenerated tail base does show a few scattered tubercles.

The exact nature of the tail being ascertained, RMNH 4457 was compared with the syntypes (two specimens) and a series of twenty-five specimens of the geographically widespread *H. frenatus* from various localities, mainly Indo-Australian ones (in this study two of the twenty-five specimens used by me before (Bastinck, 1984), namely ZMA 15650 and 15654, have been replaced by ZMA 10939 and 10940 respectively, this without causing changes in the corresponding table). These comparisons have yielded the following results.

1. The lepidosis of the regenerated tail of RMNH 4457 is of the same kind as that of regenerated tails of *H. frenatus* (table 1).

2. Scattered tubercles on the base of the tail, as shown by RMNH 4457, are always present in *H. frenatus* (table 1). The number of these tubercles may be very small, as is the case in one of the syntypes of *H. frenatus*, which has only two of them. Thus, the small number of these tubercles in RMNH 4457 cannot be considered as differentiating this specimen from *H. frenatus*.

3. According to Van Lidth de Jeude one of the characters distinguishing *H. nigriventris* from *H. frenatus* is the presence of a distinct skin fold along the sides of the belly. A weakly developed skin fold may be present or absent in *H. frenatus* (table 1). However, among the specimens of *H. frenatus* examined by me there was not one specimen with a skin fold as distinctly developed as the one in RMNH 4457. Still, this small difference hardly warrants specific distinction of RMNH 4457.

4. A remarkable feature of the type of *H. nigriventris* is the black colour of

Character	<i>H. nigriventris</i> holotype n = 1	<i>H. frenatus</i> syntypes n = 2	<i>H. frenatus</i> n = 25
dorsolateral tubercles	+	+	+
non tubercular	subimbricate	juxtaposed-	juxtaposed
dorsolateral scales		subimbricate	subimbricate
keels on tubercles	—	—	—
keels on dorsolateral scales	—	—	—
ventral body scales	imbricate	imbricate-	imbricate
		subimbricate	subimbricate
lateral body fold	fairly strongly developed	absent, weakly developed	absent-weakly developed
dermal folds on limbs	—	—	—
tubercles on tail base	+	+	+
dorsal lepidosis of regenerated tail	imbricate scales	imbricate scales	imbricate scales
ventral lepidosis of regenerated tail	transversely dilated plates	transversely dilated plates	transversely dilated plates
median rostral cleft	+	+	+
1st supralabial separated from nostril	+	—	—, +
number of nasals	4	3	3
number of supralabials	11 + 12	12–13	9–13
number of infralabials	10 + 11	9, 10	8–11
comparative size of digits 1	small	small	small-very small
number of divided scansors on 4th toe	8,9	6,8	5–9
number of pairs of chin shields	2	2	2–3

Table 1. Comparison of characters of *H. nigriventris* and *H. frenatus*.

the ventral side of the body. This colouration appears to be perfectly natural and is certainly not due to putrefaction, as I first thought. However, peculiar as this type of colouration may be, it is not confined to *H. nigriventris*: among the specimens of *H. frenatus* examined in the course of this study there is one specimen from Sumatra (ZMA 15644) with a similar black colour on the ven-

tral side of the body. This specimen appears to be a normal representative of *H. frenatus* in all other respects.

5. The type of *H. nigriventris* is characterized by having the nostril surrounded by the rostral and four nasals, the first supralabial being separated from this aperture. In *H. frenatus* the nostril is almost always surrounded by the rostral, the first supralabial and three nasals. Among the twenty-five specimens of *H. frenatus* examined by me there were three specimens having the nostril surrounded by the rostral and three nasals (table 1); in none of these three cases however, the separation of the first supralabial from the nostril was as obvious as in the case of the type of *H. nigriventris*. In order to obtain more information concerning the configurations of scales surrounding the nostril in *H. frenatus* I examined, in addition to the twenty-five specimens already mentioned, a large number of *H. frenatus* from various localities. Among these specimens I noted the following configurations of scales surrounding the nostril (in addition to the generally present configuration rostral + first supralabial + three nasals): rostral + first supralabial + four nasals, rostral + two nasals, rostral + three nasals, rostral + four nasals, the latter configuration (the situation in RMNH 4457) being exemplified by a specimen from Gunung Sahilan, Sumatra (ZMA 15734). Again, RMNH 4457 comes within the range of variability of *H. frenatus*.

6. As to the remainder of the characters used in comparing RMNH 4457 with *H. frenatus*: no differences could be found (table 1).

In conclusion, it seems certain that the type of *H. nigriventris* is nothing more than a rather atypical specimen of *H. frenatus*. I therefore regard *Hemidactylus nigriventris* Van Lidth de Jeude, 1905 as a junior synonym of *H. frenatus* Duméril & Bibron, 1836.

MATERIAL EXAMINED

A. Specimens used for overall comparisons (table 1):

Indonesia: Sumatra, Deli: ZMA 15578, 15643; Sumatra, Gunung Leuser Reserve: ZMA 15589; Sumatra, Medan: ZMA 15642; Sumatra, Polonia: 2 ex., ZMA 15644, 15645; Simalur, Sinabang: 2 ex., ZMA 15652; Nias: 2 ex., ZMA 15641; Pulu Berhala: ZMA 10939, 10940; Java: 2 ex., MNHNP 5135 (syntypes of *H. frenatus*); Krakatoa: ZMA 15654; Noord-Wachter: ZMA 15649; Borneo, Sintang: RMNH 4457 (type of *H. nigriventris*); Bali, Obud: ZMA 15593; Sumba: ZMA 14756; Flores, Himandiri: 2 ex., ZMA 15647; Lomblen, Lowetoki: 2 ex., ZMA 15646; New Guinea, Manokwari: ZMA 15648.

Philippines: Tablas: 2 ex., ZMA 15651.

Solomon Islands: Guadalcanal, Homara: 2 ex., ZMA 11766.

B. Specimens (from both the ZMA and RMNH collections) used for determining configurations of scales surrounding nostril:

Indonesia: Sumatra: 33 ex. (including ZMA 15734); Nias: 13 ex.; Java: 9 ex.; Verlaten Eiland:

1 ex.; Borneo: 3 ex.; Celebes: 5 ex.; Sumba: 12 ex.; Flores: 14 ex.; Saleijer: 2 ex.; Lomblen: 2 ex.; Buru: 5 ex.; Ambon: 1 ex.; Misool: 1 ex.; Waigeu: 9 ex.; New Guinea: 8 ex.; Numfoor: 7 ex.; Biak: 1 ex.
Thailand: Bangkok: 1 ex.
Vietnam: Hanoi: 2 ex.

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