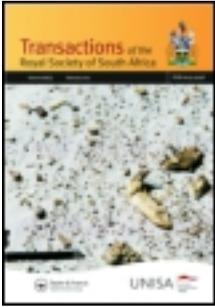


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John Hewitt B.A. & Paul A. Methuen F.Z.S.

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DESCRIPTIONS OF SOME NEW BATRACHIA AND  
LACERTILIA FROM SOUTH AFRICA.

By JOHN HEWITT, B.A., and PAUL A. METHUEN, F.Z.S.

(Read July 17, 1912.)

(With Plate VII.)

BATRACHIA.

NATALOBATRACHUS BONEBERGI, gen. et sp. nov.

Mr. Hewitt has recently received from the Rev. Father Boneberg, of Mariannahill, several specimens of a frog which represents a genus new to South Africa, and seems to have been undescribed. It belongs to the Family Ranidæ, and is generically related to *Phrynobatrachus*, *Staurois*, and *Oreobatrachus*: it is distinguishable from the two former by the possession of T-shaped terminal phalanges, and from *Oreobatrachus* in that the tongue is deeply incised behind and there is no continuous dermal fold between the choanæ. The frog may be described as follows:—

NATALOBATRACHUS, gen. nov.

Pupil horizontal. Tongue free and bifurcated behind. No vomerine teeth. Fingers free, their terminal phalanges T-shaped, and without any supernumerary phalanx between the two distal phalanges; toes webbed; outer metatarsals distinctly separated by web distally, but proximally united. Ziphisternum and omosternum each with a long and slender bony style.

NATALOBATRACHUS BONEBERGI, sp. nov.

Figs.

Snout triangular, somewhat pointed and projecting in front; nostril nearer to tip of snout than to the eye. Tympanum distinct, a trifle more than half the size of the eye. No median papilla on the tongue. No indication of external vocal pouches in the male. Dorsal surfaces without

folds, with a tendency to become roughened or granulated; belly smooth; thighs somewhat granulated behind. Fingers free, their tips dilated into triangular discs, which are not as big as the tympanum; the two inner fingers small, the first one shorter than the second, the third and fourth considerably bigger, the former being the longest. Toes about half-webbed or very slightly less, their tips distinctly dilated, but not so much as the fingers; a small inner metatarsal tubercle; a slight skin flap at the heel. Tibio-tarsal joint of adpressed hind-limb reaching to the nostril.

Upper surfaces brownish, sometimes with small rusty-red spots; limbs with darker cross-bars, which are pale margined on the thighs; ventral surfaces pale in the female, the throat, breast, and to a less extent the lower surfaces of the limbs fuscous in the male; a pale whitish band with ill-defined border passes from the nostril below the eye and tympanum to the base of the fore-limb. Size: From snout to vent, 37 mm.

Locality: Mariannhill, Natal.

Father Boneberg found this species among the stones in the sandy shallows of a small rivulet which was concealed under a thick growth of creepers and thorns in the bushland near Mariannhill. In the same place he also found clusters of spawn, which was either attached to rock not covered by water, or to the slender branches overhanging the water at a height of several feet above its surface.

Description drawn up from four specimens; types in the Albany Museum and Mariannhill Museum.

*BUFO FENOULHETI*, nov. sp.

Crown without bony ridges; head broader than long; snout triangular and slightly protecting beyond the mouth, with fairly distinct canthus; interorbital space flat; eustachian tubes present; tympanum distinct, about half the size of the eye, or slightly more. First finger only very slightly longer than the second or subequal thereto; the subarticular tubercles of the fingers mostly double. Toes about  $\frac{1}{3}$  webbed; sub-articular tubercles under fourth toe double, and there may be doubled tubercles under the fourth and fifth toes. The lower surface of the tarsus and foot is beset with a number of tubercles, the two metatarsal tubercles being scarcely or not at all larger than those on the tarsus; no tarsal fold. The tarso-metatarsal articulation of the adpressed hind-limb reaches the posterior border of the eye. Upper surfaces of the body covered with numerous, closely set, small, rounded, and somewhat blister-like warts, each carrying one or many minute spines. Throat in female quite smooth, in the male very finely granular. Lower surfaces of body almost smooth, with a reticulated, but not granular, surface. Parotoid glands depressed and broad, kidney-shaped. Dorsal surfaces with darker brown patches

more or less symmetrically arranged on a lighter brown or greyish ground colour; a dark bar between the eyes, anterior and posterior to which is a pale area; the dark patches on the body ill-defined. Female, from snout to vent, 38 mm.; male, from snout to vent, 33 mm.

Description drawn up from three specimens, which seem to be sexually mature. Localities: Newington, N.E. Transvaal (Dr. J. P. Fenoulhet), March, 1912, 1 ♂; the Woodbush (Miss A. Eastwood), December, 1911, 1 ♂ and 1 ♀.

Types: The Newington example in the Albany Museum (No. 1520) and the Woodbush examples in the Transvaal Museum (Nos. 508 and 509).

This toad seems to be distinct from *Bufo regularis* in the absence of granulations on the belly and in the double subarticular tubercles of the digits; from *vertebralis* it is distinguished through the better developed parotoids and the stronger development of asperities on the dorsal surface; *gariensis* (*granti*) and *angusticeps* are easily distinguished by their distinct tarsal fold.

It is of interest to note that, according to Mr. Boulenger (P.Z.S., 1907, p. 479), the colour pattern of some examples of *Bufo regularis* from the Woodbush is very unusual, and "they might be well thought to indicate a distinct species were they not connected with the more typical form by every possible gradation." He also mentions some specimens from Beira, in which the parotoids are exceptionally so flat as to be hardly distinguishable. As Mr. Boulenger adds nothing with regard to the various other characters utilisable for specific distinction, we may perhaps infer that the Woodbush specimens were essentially the same as *regularis* in those respects. But if it shall eventually prove that the characters just described in *fenoulheti* grade completely into those of *regularis* it will be no longer possible to maintain the specific identity of *vertebralis*, as this new form is quite as near to *vertebralis* as to *regularis*.

## LACERTILIA.

### TETRADACTYLUS EASTWOODÆ, n. sp.

Serpentiform; limbs very short. The anterior limb with three very small digits, each with a claw, the middle digit longest; posterior limb with two digits, both clawed, the inner one minute. Dorsal shields striated and strongly keeled in 12 longitudinal and 67 transverse rows; ventrals in 6 longitudinal series. The head shields similar to those of *T. africanus*, but the interparietal is more elongated, separating the frontoparietals and forming a suture with the frontal. Femoral pores 3.

Uniformly brown above, except for some small black spots on the head; pale ventrally.

Total length, 190 mm. (a portion of the tail has been reproduced); from snout to vent, 64 mm.; length of fore-limb 5 mm., of hind-limb 6.5 mm.

The type and only known specimen was taken in the Woodbush (Zoutpansberg District) by Miss A. Eastwood, who presented it to the Transvaal Museum in April, 1912.

This new species is closely related to *T. breyeri* Roux, but is easily distinguished therefrom by the limb characters.

Type in the Transvaal Museum (No. 1496).

#### ZONURUS CERULEOPUNCTATUS, n. sp.

Head much depressed, much longer than broad, the head shields almost smooth; no supranasals; nasals of moderate size, not swollen, only just in contact in the mid-line; frontonasal broader than long; prefrontals forming a median suture; interparietal enclosed between two pairs of parietals, of which the posterior is the larger; temporals smooth and without spines; the fifth upper labial is suborbital and not much contracted below; lower eyelid opaque. Scales of the back small, strongly keeled and arranged in transverse rows, about 20 scales in each row, and about 40 distinct rows, not including a number of minute scales which occur immediately posterior to the parietals, the occipitals being absent. In the middle of the back the scales of the 2 median rows are larger than those more laterally situated. Ventral scales in transverse rows, 10 in each row, the 2 most laterally situated, on each side, keeled; from the vent to the region of the rudimentary collar about 34 rows of scales. Lateral scales keeled, smaller than the dorsals, separated from each other by granular intervals and merging gradually into the dorsals. An ill-developed collar indicated on each side of the neck. Caudal scales keeled above and below, a little spinose near the base of the tail laterally; at least 55 whorls of scales in the tail (tip lost). Femoral pores 15 in a single row on each side.

The pale-brown ground colour of the dorsal surface of the body almost obscured by a number of blackish stripes arranged more or less longitudinally, fairly distinct anteriorly but broken up and fusing behind; on the sides of the head and body a few scattered bright blue flecks; the throat region orange; head, tail, and upper surfaces of limbs almost blackish.

Total length, 150 mm.; length of head, 19 mm.; greatest breadth of head, 13 mm.; length of tail, 85 mm. (tip lost). Though immature, the specimen no doubt represents a very distinct species, which may at once

be recognised by the small scales of the post-parietal region ; in this respect it resembles *Pseudocordylus microlepidotus*. The sutures in the neighbourhood of the nostril are not sufficiently defined to enable us to say if this new form agrees with *Zonurus* rather than *Pseudocordylus* in the nasal character. However, its nearest relatives seem to be *Zonurus warreni* and *Z. capensis*.

The only known specimen was taken in March, 1912, by Mr. Methuen at Buffels Nek, between Knysna and Avontuur, about 10 miles from Knysna ; it was living amongst the rocks on a mountain devoid of forest, within the area of Cape Flora vegetation.

In all probability the species will prove to be very limited in its range, as seems to be the case with *Z. capensis*, which has never been recorded since the time when it was taken on the Hottentot Holland mountain, over 60 years ago.

Type in the Transvaal Museum (No. 1920).

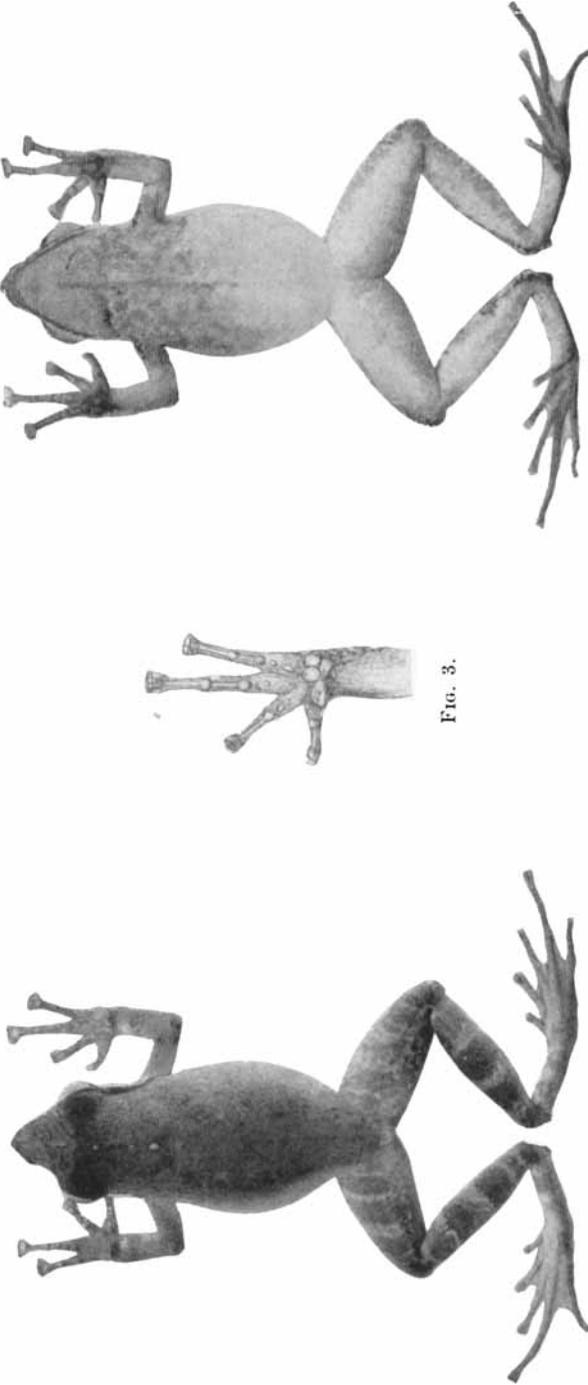


FIG. 1.

FIG. 2.



FIG. 3.



FIG. 4.

NATALOBATRACHUS BONEBERGI, GEN. ET SP. NOV.

Fig. 1.—The animal viewed from dorsal aspect.  $\times \frac{3}{4}$ .  
Fig. 2.—The animal viewed from ventral aspect.  $\times \frac{3}{4}$ .  
Fig. 3.—The left hand from below. Nat. size.  
Fig. 4.—The left foot from below. Nat. size.