

DESCRIPTIONS OF SOME NEW LIZARDS FROM SOUTH AFRICA AND A FROG FROM SOUTHERN RHODESIA

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With 1 Plate and 8 Text-figures

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Pachydactylus capensis barnardi n.sp. (Pl. XII, fig. 6)

Pachydactylus formosus part., Boulenger, 1910, *Ann. S. Afr. Mus.* v, 461 (Concordia, Little Namaqualand).

Pachydactylus rugosus FitzSimons, 1938, *Ann. Transv. Mus.* XIX, 178 (15 miles east of Port Nolloth).

DESCRIPTION based on a series of specimens from Little Namaqualand in the collection of the South African Museum, together with one from the same area in the Transvaal Museum collection. Holotype, male (S.A.M. 18055—Garies). Paratypes: S.A.M. 4297; Concordia, 17948 and 18055; Garies, 18146; Kamieskroon, 18540; Kleinzee and T.M. 18013; 15 miles east of Port Nolloth.

DESCRIPTION. Head not or but feebly depressed, distinct from neck, from $1\frac{1}{3}$ to $1\frac{2}{3}$ times as long as broad. Snout rounded, its length about $1\frac{1}{4}$ times distance between eye and ear opening and $1\frac{1}{2}$ times diameter of eye. Ear opening moderate, oval and slightly oblique. Nostril pierced between three nasals only; the nasorostrals separated from one another mesially by one or two small granules. Rostral pentagonal, from $1\frac{1}{3}$ to $1\frac{1}{2}$ times as broad as deep. Upper labials 8–10 (usually 9), lower 8. Mental a little narrower than (sometimes subequal to) adjoining lower labials, distinctly longer than broad, not or but slightly narrowed behind. Scales on snout granular, subequal, keeled and subconical; back of head covered with minute granules fairly densely intermixed with rounded, conical, striated tubercles which are a little larger than scales on snout; back covered with small unequal-sized granules and closely set (usually only a single granule apart), large, trihedral tubercles, arranged in more or less longitudinal series; enlarged, conical, keeled and striated tubercles on upper surface of hindlimbs. Chin and throat covered with small, equal-sized, convex to subconical granules; scales on belly flattened and strongly imbricate, larger than granules on throat, smaller than or subequal to scales on snout. Digits with 5 (including the divided distalmost lamella) transverse

adhesive lamaellae below; no enlarged subdigital scales on basal portion of digits. Tail much shorter than head and body, segmented, covered above with unequal-sized, flattened, keeled, spinose, strongly imbricate scales and whorls (one to each segment) of 8-6 (8 basally and 6 distally) enlarged, flattened conical tubercles or scales, which are strongly keeled, spinose and often much elongated and recurved; below, scales (except for basal segment which is granular) elongate, spinose, strongly imbricate and larger than those above. On either side base of tail near vent is a series of 2-3 enlarged, flattened, sharply edged tubercles, bordered below by small granules.

COLOUR. Dark brown to blackish above, with white to pale brownish white spots and marking on head as follows: a short streak on either side from rostral to upper anterior corner of eye, joined up with a transverse streak just anterior to orbits, thus isolating a small triangular dark spot on middle of snout; five spots on back of head, i.e. two on each side of occiput (one behind the other) and a median one posteriorly; a well-defined strongly dentated white streak, dark-edged below, arising on posterior labials, passing through ear opening and completely encircling back of head. Four dentated white transverse bands on back, much narrower than the dark interspaces, which are usually divided into more or less symmetrical elongate, oval spots or blotches, by thin longitudinal projections from the pale crossbands. Tail with narrow white crossbands. Labials dark spotted. Lower surfaces, creamy to greyish white, chin and throat with dark vermicular spots, chest and belly speckled with dark brown, sometimes spotted preanally and on underside of thighs.

DIMENSIONS. Male (S.A.M. 18055) H. and B. 53, tail (partly reproduced) 38, length head 15.1, breadth head 12.8 mm.

REMARKS. This new form is related to *P. formosus* and *P. rugosus*, but is readily distinguishable as follows: from *formosus*, on the less depressed head and body, larger ear opening, scales on snout more conical, tubercles on back of head larger and more numerous, enlarged tubercles on back more raised and closely set, scales and tubercles on tail more elongate and pointed, colour markings quite different; from *rugosus*, on the shorter snout, scales on snout not so rough or pointed, enlarged tubercles on back trihedral and not conical, scales on throat equal-sized and smooth, scales on belly flat, imbricate and larger than scales on throat, tubercles on either side base of tail not so enlarged with no closely set conical scales below, colour markings different. (See Pl. XII, figs. 4-6, for comparison of colour markings.)

Pachydactylus weberi acuminatus n.subsp.

?*Pachydactylus weberi* Werner, 1915, in Michaelsen, *Land u. Susswasserfauna Deutsch.-S.W. Afr.* 1, 334 (Keetmanshoop).

Pachydactylus weberi weberi? FitzSimons, 1938, *Ann. Transv. Mus.* XIX, 181 (Aus and Konkiep, Great Namaqualand).

Description based on a series of eight specimens (T.M. Nos. 17689-17695 from Aus, and No. 17722 from Konkiep) in the collection of the Transvaal Museum, Pretoria. These specimens, comprising one adult and seven immature, were previously recorded under *P. weberi weberi*? (see above), but are now regarded as subspecifically separable and distinguished from typical *weberi* as follows: Head and body generally, more slender; snout more sharply pointed, about $1\frac{1}{2}$ times diameter of the larger eye and $1\frac{1}{3}$ times distance from eye to ear opening; nasorostrals in longer contact with one another; rostral subrectangular (not subpentagonal as in *weberi*), just less than twice as broad as deep; smooth, rounded, button-like tubercles on back of head much smaller

than scales on snout; tubercles on back in 16–18 more regular longitudinal rows, more strongly keeled, those down middle of back being more distinct but not so clearly differentiated in size from those dorsolaterally, which are less conspicuous than in *weberi* and decrease more rapidly in size laterally; tubercles on upper surface forearm and on hindlimbs not so strongly raised.

COLOUR. Pale olive grey above, with reddish brown irregular crossbars (similar to, but narrower than in, *weberi*), sometimes edged with pinky brown or with patches of the same colour between the crossbars mesially; a conspicuous dark streak on side of head from nostril, through eye (edged above with yellow from nostril to eye), over ear and often completely encircling occiput behind; eye reddish; upper eyelid yellow; head tinged with pink. Lower surfaces creamy to greyish white. Tail usually a pale pinkish to yellowish brown, with narrow barring of dark brown, the dark bars being less than half as broad as pale interspaces; enlarged scales yellow.

DIMENSIONS. Male (T.M. 17722) H. and B. 42, length head 11.2, breadth head 8.7 mm.; tail reproduced, but normal tails about one and a fifth times length of head and body.

REMARKS. Werner's record of *weberi* from Keetmanshoop has, on geographical grounds, been provisionally included with *acuminatus*. Specimens of *weberi* recorded from Windhoek and Gobabis (Sternfeld, 1911, *Mitt. Zool. Mus. Berl.* v, 397), and from Windhoek and Hoffnung (Parker, 1936, *Novit. Zool.* XL, 130), probably belong to yet another subspecies.

Acontias plumbeus occidentalis n.subsp.

Acontias meleagris FitzSimons, 1935, *Ann. Transv. Mus.* xvi, 374 (Kalahari).

Description based on the following: three specimens (S.A.M. No. 14772) from junction of Crocodile and Marico Rivers, Western Transvaal, and two specimens (S.A.M. No. 15990) from Otjiwarongo, Damaraland, in the collection of the South African Museum; one specimen (T.M. No. 14460) from Central Kalahari, and one (T.M. No. 13692) from junction of Limpopo and Magalakwin Rivers, in the Transvaal Museum collection; two specimens (A.M. No. 5978) from Honingfontein, nr Nylstroom, and one (A.M. No. 6064) from Okahandja, in the Albany Museum collection.

This form differs from typical *plumbeus*, of Portuguese East Africa, Zululand and Eastern Transvaal, as follows: Apparently much smaller, the largest specimen examined not exceeding 233 mm. in total length; snout short and head broad behind (often more elongate in young specimens); interparietal usually distinctly longer than broad and sometimes much reduced in size; scales of the two median dorsal rows not so strongly broadened; 16 rows of scales round middle of body (usually 18 or 20 in *plumbeus*); from 168 to 177 (average 172) ventral scales in a line from chin shield to preanal plate (150–162 in *plumbeus*); usually three suboculars (two in *plumbeus*); parietals apparently proportionately broader than in *plumbeus*.

COLOUR. Above, uniform dark purplish brown to greyish black; below, a little lighter than above, uniform or with scales paler edged and a few irregular, dirty white to creamy patches scattered along median ventral line.

DIMENSIONS. Male (S.A.M. No. 14772) H. and B. 198, tail 35, breadth head 9.2, greatest diameter body 9.8 mm.

REMARKS. From its distribution, *A. p. occidentalis* is apparently confined to the western sandveld country, where it replaces typical *plumbeus*; records of the latter from South-West Africa (Sternfeld, 1911, *Mitt. Zool. Mus. Berl.* v, 409) and Angola (Monard, 1937, *Arq. Mus. Boc. Lisb.* VIII, 96) are probably

referable to *occidentalis*. As mentioned by Hewitt (1938, *Trans. Roy. Soc. S. Afr.* xxvi, 45), there is a specimen in the Albany Museum from Omatjenne, nr Otjiwarongo, which, on the tail character at least, apparently belongs to the *plumbeus* group, coming nearest to *tasmani*; no doubt, when more material is available, this will prove to be yet another subspecies, including the *A. meleagris* of various authors.

***Typhlosaurus gariepensis* n.sp.** (Text-figs. 1-3)

TYPE. An adult specimen (No. 11232) in the South African Museum, collected at Upington by G. St Leger Lennox, 1910.

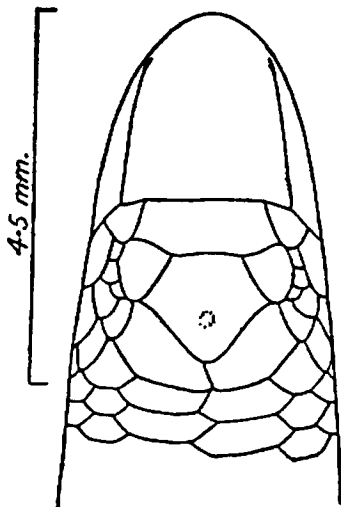


Fig. 1.

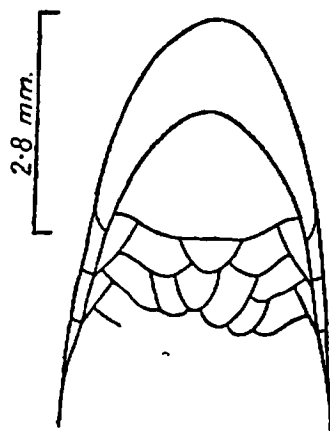


Fig. 2.

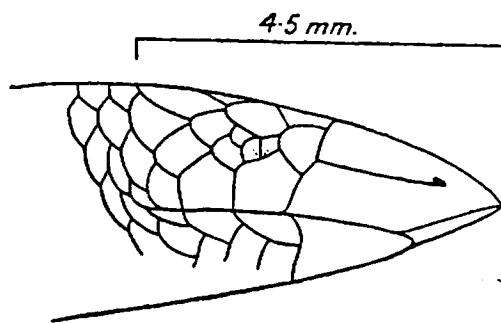


Fig. 3.

- Fig. 1. *Typhlosaurus gariepensis* n.sp. Dorsal view of head.
 Fig. 2. *Typhlosaurus gariepensis* n.sp. Ventral view of head.
 Fig. 3. *Typhlosaurus gariepensis* n.sp. Side view of head.

DESCRIPTION. Head depressed. Snout strongly projecting, flattened inferiorly, with a sharp horizontal edge. Rostral as long as other head shields together, posterior border more or less straight. Frontonasal very broad, slightly less than three times as broad as long, forming a broad suture with rostral. Frontal subpentagonal, a little narrower than frontonasal but almost twice as long. A pair of parietals in contact with one another behind frontal. Eye just discernible as a dark spot below suture of two small oculars, which rest on first upper labial; anterior ocular in contact with a moderately large loreal which separates first upper labial from frontonasal above; a small supraciliary between posterior ocular and anterior supraocular; a postocular resting on first and second upper labials; two supraoculars, the anterior

larger and in contact with loreal and anterior ocular. Three upper labials, first largest and as long as deep, third smallest, not vertically elongate as in *lineatus*. Mental large, extending about as far back as rostral, posterior border feebly convex. Three lower labials. Scales on body hexagonal, much broader than long, those of two median dorsal rows being broadest and over twice as broad as long; 12 scales round middle of body. A single large, semicircular preanal plate. Tail very short, obtusely pointed at end.

COLOUR. Yellow above, with 4 longitudinal series of dark spots over back and tail; those of the two median rows are larger and confluent forming two continuous stripes which arise on parietals and are broadest on tail; outer series of spots from eye, confluent only on tail; a short stripe on either side of head from posterior end of nasal groove, through eye and fading out on side of neck. Sides and lower surfaces creamy yellow.

DIMENSIONS. Type (S.A.M. No. 11232), H. and B. 110, tail 20, length head (to posterior border parietals) 4.5, breadth head 3.1 mm.

REMARKS. Superficially much like *lineatus*, but head generally more depressed and a little narrower; three upper labials, not vertically elongate (four vertically elongate upper labials in *lineatus*); eye below suture of two small oculars which rest on first upper labial, no subocular nor preocular and only one supraciliary (eye under a single ocular which is bounded by a subocular, a preocular and two supraciliaries in *lineatus*); 12 scales round middle of body (14 in *lineatus*).

Monopeltis ocularis n.sp. (Text-figs. 4-8)

TYPE. An adult specimen (no number) in the collection of the McGregor Museum, Kimberley, collected at Swart Modder, Rietfontein, by Lennox.

DESCRIPTION. Rostral subhexagonal, separating nasals. A single large oval shield covering upper part of head, about $1\frac{1}{2}$ times as long as broad, bordered behind by two large polygonal occipitals, which are broader than long. Ocular much elongated, with eye faintly discernible in anterior corner; a small preocular separating ocular from nasal. Nasals not reaching labial margin. Three upper labials, second longer than first, third largest. Mental small, quadrangular, much narrower than rostral. Three lower labials, second much reduced in size and triangular, third very large. A pentagonal postmental, followed behind by a pair of elongate chin shields, which are in contact with one another mesially and on the sides with first lower labial; bordering the chin shields behind is a row of four small irregular shields. Six elongate pectoral shields, the median pair strongly narrowed anteriorly and equal in length to distance from tip of snout to beyond posterior edge of first annulus on nape; second pair slightly shorter than median, while outer are about two-thirds length of median pair. Three hundred annuli on body and 15 on tail; an annulus about middle of body made up of 36 dorsal and 20 ventral segments; two median rows of ventral segments about twice as broad as long. Two pairs of enlarged preanal plates, the inner pair much larger than the outer. Two preanal pores present, one on each side in a subtriangular shield anterior to outer preanal plate. Tail rounded at end.

DIMENSIONS. H. and B. 183.5, tail 9.5, diameter body 4 mm.

REMARKS. Allied to *Monopeltis habemichti*, but readily distinguishable on the much elongated ocular, a single pair of occipitals, nasals not bordering lip between rostral and first labial, small mental, greater number of annuli on body and segments to an annulus.

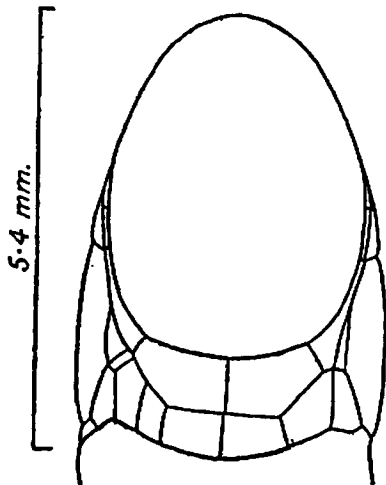


Fig. 4.

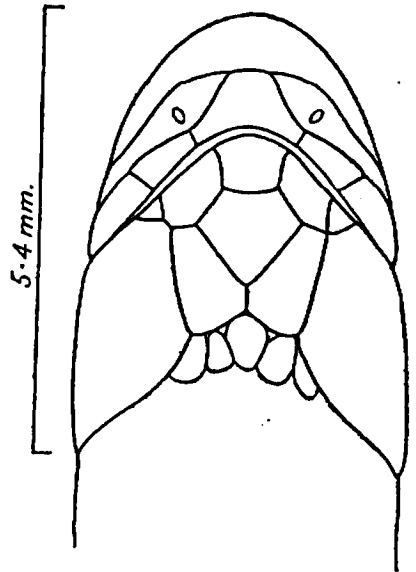


Fig. 5.

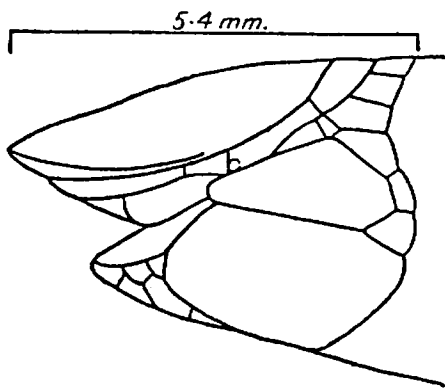


Fig. 6.

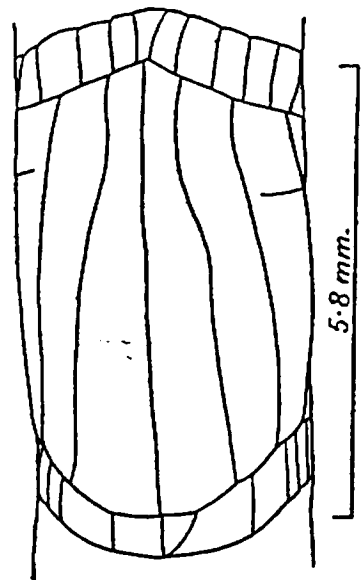


Fig. 7.

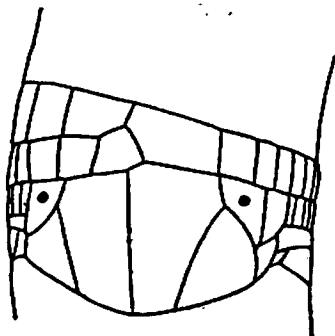


Fig. 8.

- Fig. 4. *Monopeltis ocularis* n.sp. Dorsal view of head.
 Fig. 5. *Monopeltis ocularis* n.sp. Ventral view of head.
 Fig. 6. *Monopeltis ocularis* n.sp. Side view of head.
 Fig. 7. *Monopeltis ocularis* n.sp. Showing arrangement of pectoral shields.
 Fig. 8. *Monopeltis ocularis* n.sp. Showing arrangement of anal plates and preanal pores.

Platysaurus guttatus rhodesianus n.subsp.

- Platysaurus guttatus* Boulenger, 1902, *Proc. zool. Soc. Lond.* II, 16 (Mazoe).
 Chubb, 1909, *Proc. zool. Soc. Lond.* p. 593 (Mt Silosi, Matopos; Colleen Bawn Mine, Gwanda). Hewitt & Power, 1913, *Trans. Roy. Soc. S. Afr.* III, 154 (Insiza). FitzSimons, 1935, *Ann. Transv. Mus.* XVI, 350 (World's View, Matopos; Zimbabwe), and 1939, XX, 31 (Vumba Mountain; Changadzi River; Devuli River Bridge).
Platysaurus guttatus part., Hewitt, 1909, *Ann. Transv. Mus.* II, 29, 38 (Khami River; Matopo Hills). FitzSimons, 1930, *Ann. Transv. Mus.* XIV, 31 (Matopos).
Platysaurus capensis part., Boulenger, 1910, *Ann. S. Afr. Mus.* V, 469 (Importuni District; Salisbury).

A comparison of specimens of *guttatus* from Southern Rhodesia with those from the Transvaal reveals a number of differences, which appear to warrant subspecific distinction for the former. The new subspecies, for which the name *rhodesianus* is proposed, may be distinguished as follows: Nasals on the average only narrowly separated or in contact with one another (in *guttatus* nasals usually widely separated). Interparietal usually pentagonal and in contact with occipital, sometimes diamond-shaped and separated from occipital (in *guttatus* interparietal usually diamond-shaped and separated from occipital, seldom pentagonal and in contact with occipital). Ventral plates in 34-40 transverse and 20-24 longitudinal series (in *guttatus* ventral plates in 30-33 transverse and 16-18, exceptionally 20, longitudinal series). Fully adult specimens exceed 100 mm. for length of head and body (in *guttatus* length of head and body does not exceed 100 mm. and in fact seldom exceeds 95 mm.).

COLOUR. In general very similar to *guttatus*, but differing in the following respects: in adult males, posterior part of back reddish brown; a black patch or transverse bar usually present across chest in the form of a collar; anterior part of belly terra-cotta, extending on the flanks. In females the ground colour above is usually uniformly dark brown or black and quite devoid of the pale spots as found in *guttatus*; the pale longitudinal stripes are clearly cut and not uneven-edged as in *guttatus*.

DIMENSIONS. Type male (T.M. 18528, one of a series of specimens from Vumba Mountain, Southern Rhodesia, collected by V. FitzSimons, 12 December 1937), H. and B. 105, tail 167, length head 27, breadth head 20.8, forelimb 38, hindlimb 58 mm. A male specimen in the Albany Museum, Grahamstown (A.M. 7406—Musami, Southern Rhodesia), measures 113 mm. for length of head and body.

The distribution of *rhodesianus* appears to cover most of Southern Rhodesia and extends into the north-eastern corner of Bechuanaland Protectorate. Recorded localities in the collections of the South African Museums are as follows: Matopos (A.M., K.M., R.M., and T.M.).¹ Insiza (K.M. and S.A.M.). Plumtree (A.M. and K.M.). Penahlonga (K.M.). Importuni; Chishagwasha; Salisbury; Hunyani River; Bindura; Livingstone (S.A.M.). Musami; Chilimanzi; Driefontein; Bikita; Empanjeni; Mtoko; Tsessebee, Bechuanaland Protectorate (A.M.). Gwanda (R.M.). Strathmore,

¹ A.M. = Albany Museum, Grahamstown; K.M. = McGregor Museum, Kimberley; R.M. = Rhodesian Museum, Bulawayo; S.A.M. = South African Museum, Cape Town; T.M. = Transvaal Museum, Pretoria.

nr Bulawayo; Zimbabwe; Vumba Mountain; Changadzi River; Devuli River (T.M.).

Platysaurus minor orientalis n.subsp.

Platysaurus wilhelmi part., FitzSimons, 1930, *Ann. Transv. Mus.* XIV, 32 (Dientje, nr Vaalhoek, and Farm "Perkoe", nr Olifants River, Pilgrimsrest District). Hewitt, 1932, *Ann. Nat. Mus.* VII, 119 (Dientje).

DESCRIPTION. Based on a series of three males and one female in the Transvaal Museum collection (T.M. Nos. 4527-4530), collected by G. van Dam, November 1922, at Sekororo, on the lower slopes of the Drakensberg, about 40 miles south of Leydsdorp.

A small form similar to *minor*, but differing as follows: Snout more sharply pointed; head more swollen in temporal region and in general a little larger in proportion to body; granular area on lower temporal region less extensive and granules confined to 2-3 longitudinal rows (3-4 rows in *minor*); gular scales smaller, there being from 19 to 22 across throat on a line between the last large chin shield on either side (from 16 to 18 in *minor*); ventral plates smaller, in 34 transverse and 20-22 longitudinal series (30-34 transverse and 16-18 longitudinal series in *minor*); usually 16-20, exceptionally 14, femoral pores on each side and 2-3 rows of modified glandular scales anterior thereto (in *minor* usually 14-16 femoral pores and a single row of glandular scales anterior thereto); scales on forearm and tibia more strongly keeled and spinose, especially on heel where spines are long and sharply pointed; scales on tail obtusely keeled above (more or less smooth in *minor*), strongly keeled and sharply spinose on sides (moderately keeled and not or but bluntly spinose in *minor*). In colouring this form is very similar to typical *guttatus*, the males being dull green to bluish green above with pale streaks confined to the head, and small scattered pale spots over back (olive brown to reddish brown in *minor*, pale spots in longitudinal series); lower surfaces blue, passing to dark blue or bluish black on belly; sides of body similar to back, not orange buff as in *minor*. Females very dark brown to blackish above, with white streaks more clearly cut than in *minor* and pale spots between absent or at most confined to a few spots posteriorly (pale spots numerous in *minor*, and forming irregular longitudinal series); lower surfaces bluish white, with scattered irregular black spots (no black spots present in *minor*).

DIMENSIONS. Type male (T.M. 4527), H. and B. 65, tail 115, length head 15.5, breadth head 12.4, forelimb 26, hindlimb 38 mm.

Specimens of *orientalis* have also been collected from Farm "Perkoe" (T.M.) and Dientje, nr Vaalhoek, Pilgrimsrest District (A.M. and T.M.), thus indicating a distribution along the eastern slopes of the Drakensberg from Leydsdorp to Pilgrimsrest Districts.

Hyperolius swynnertoni n.sp. (Pl. XII, figs. 1-3)

Hyperolius marmoratus part., FitzSimons, 1939, *Ann. Transv. Mus.* XX, 43 (Chirinda Forest, Mt Silinda).

The series of *Hyperoli* from Chirinda Forest, previously described under *marmoratus* (see above) appear, on reconsideration, to be worthy of specific distinction, and have been named after the late Mr C. M. F. Swynnerton on whose farm a large part of the forest stands.

The type series comprises eighteen specimens, made up of the two types (male T.M. 18911, and female 18916), and sixteen paratypes (five males and

eleven females), of which five (one male and four females) are now in the collection of the Museum of Comparative Zoology at Harvard University, Cambridge, Massachusetts, U.S.A. These frogs agree closely with *marmoratus* in structure, but may be readily distinguished on: (1) their larger size, males measuring up to 32 mm. and females 35 mm., as compared with *marmoratus* males 28 mm. (exceptionally 30) and females 30 mm.; and (2) their dorsal colour pattern, which consists of dark vermiculations on a pale ground (or sometimes pale stippling on a dark ground), as compared with the striped or spotted (exceptionally immaculate) design of *marmoratus*.

DIMENSIONS. Type male (T.M. 18911) 32 mm., female (T.M. 18916) 35 mm.

It may be noted here that the frog from Birchenough Bridge, previously included by me with the Chirinda Forest specimens under *marmoratus*, is in fact the latter species, and is a female measuring 28 mm. in length.