

No. 10.— *New Reptiles and Amphibians from Tanganyika Territory
and Kenya Colony*

BY ARTHUR LOVERIDGE

THE following descriptions have been abstracted from the main body of a report dealing with 4,876 reptiles and amphibians collected by the author during an eight months' expedition in East Africa in 1929-30. It is hoped that this report will appear as a Bulletin of the Museum of Comparative Zoölogy later in the year, but as these descriptions have already been in typescript nearly a year it is considered inadvisable to delay their publication longer.

The first three forms are little more than color races, the naming of which is a practice generally to be deprecated. The salmon-colored marking on the mountain form of wolf snake is, however, so strikingly different from the ordinary drab and plumbeous hue of the well-known and widespread Cape Wolf Snake that it may merit recognition.

In the case of the agamas the gorgeous throat coloring of the males is of great importance in their sexual display and no overlapping has been observed in the large series of the other named races; in scale-counts, however, there is some overlapping in geographically adjacent areas, though series from the extremes of the range of the species are distinct. A colored plate of these distinctively marked throats has been prepared for publication with the report. In this paper the descriptions are abridged as far as possible.

LYCOPHIDION CAPENSE UZUNGWENSIS subsp. nov.

Type.— Museum of Comparative Zoölogy, No. 30,117. A ♂ from Dabaga, Uzungwe Mountains, Tanganyika Territory, collected by Arthur Loveridge, January 1, 1930.

Paratype.— Museum of Comparative Zoölogy, No. 30,118. A ♀ from Kigogo, Uzungwe Mountains, Tanganyika Territory, collected by Arthur Loveridge, January 23, 1931.

Diagnosis.— Differs from *Lycophidion c. capense* in possessing a bright salmon-colored, \cap -shaped band following the contour of the

snout. It agrees with the typical form in lepidosis and scale counts, which are as follows:

	♂ Type	♀ Paratype
Midbody scale rows	17	17
Ventrals	177	193
Anal	1	1
Subcaudals	30	22
Labials	8-8	8-8
Labials entering orbit	3d, 4th, 5th	3d, 4th, 5th

Coloration in life.— ♂. Above, blue-black, each scale with a white spot posteriorly; a \cap -shaped salmon-colored band follows the outline of the snout, being on the upper half of the labials, most of the prefrontals, outermost corner of the frontal, outer edge of the parietals, all of the upper temporals and the other anterior head shields, including the pre- and post-oculars. Below blue-black, each ventral and caudal scute with a pair of white streaks near the sides. In alcohol the band fades to pinkish white.

Measurements.— Type ♂. Head and body 195 mm., tail 24 mm. Paratype ♀. Head and body 255 mm., tail 20 mm.

AGAMA AGAMA TURUENSIS subsp. nov.

Type.— Museum of Comparative Zoölogy, No. 30,686. A ♂ from rocks in arid, semi-desert, thorn-bush country of Unyanganyi, east of Singida, Tanganyika Territory, collected by Arthur Loveridge, December 3, 1929.

Paratypes.— Museum of Comparative Zoölogy, Nos. 30,687-30,735 and unnumbered duplicates from the type locality and from Mangasini, Usandawi, Tanganyika Territory, collected by Arthur Loveridge, December 12, 1929.

Diagnosis.— The males of this new form differ from those of all other races of *Agama agama* in possessing a black \cup -shaped marking on the base of their otherwise uniformly brick red throats.

Midbody scale rows 78 (range in paratypes 72-82, with an average of 76 for fifty specimens); preanal pores 12 (range 9-14, with an average of 11.3 for thirty-four males; No. 30,691 has a double row of pores, each with 11 but only the posterior row is counted in assessing the average).

Coloration in life.— Above, the head as far as the shoulders is a rich brick-red, the back dark blue spotted with light blue; hind limbs and base of tail light blue, rest of tail dark blue. Below, throat and neck

rich brick-red, except for a black U-shaped mark, sixteen scales in width, on the base of the throat; the underside of body and fore limbs are dark blue except for an irregular patch of white on the belly; hind limbs and tail light blue.

Measurements.—Type ♂. Head and body 109 mm., tail 184 mm. Largest paratype ♀. Head and body 115 mm., tail 182 mm.

The measurements of the type are far surpassed in length from snout to vent by many of the paratype males which, however, as is usual with adult agamas, have lost the ends of their tails; the greatest head and body length of any male of the series is 140 mm.

AGAMA AGAMA UFIPAE subsp. nov.

Type.—Museum of Comparative Zoölogy, No. 30,741. A ♂ from rocks on the shore of Lake Tanganyika just across the bay from Kipili, Ufipa, Tanganyika Territory, collected by Arthur Loveridge, May 19, 1930.

Paratypes.—Museum of Comparative Zoölogy, No. 30,742–30,745. Four ♀ ♀ collected at the same place and time as the type.

Diagnosis.—The males of this new form differ from those of all other East African races of *Agama agama* in possessing a wholly blue throat instead of orange, carmine or red.

It has an exceptionally high average (series small, however) number of midbody scale rows and number of preanal pores. Approaches *A. a. lionotus* and *A. a. mwanzae* in the very obtuse keeling of the dorsal scales of which there are 54 on the vertebral line between the origin of the fore limbs and the origin of the hind limbs; midbody scale rows 84 (range in paratypes 78–84, with an average of 82); upper labials 10; lower labials 9–10 (range 9–11 upper and 9–11 lower); 4th finger a trifle longer than the 3d; preanal pores 15; tail flattened, its strongly spinose and mucronate scales forming annuli.

Coloration in life.—♂. Above, crown of head and nape a pale yellowish brick-red with numerous cream-colored spots; back and tail, various shades of green and blue, a lighter, almost bluish white, vertebral streak, the whole dorsal area speckled with lighter; tail transversely ringed with light bands except on the broadened basal portion; fore limbs blue; hind limbs pale verdigris-green blotched with darker. Below, labials buff, throat a pale navy-blue margined with light red laterally posterior to the angles of the mouth, three black spots which are ringed with white, across the hind end of the throat, posterior to them is an ill-defined blackish area; region of shoulders,

breast, a diamond-shaped central area of the belly, as well as patches on the posterior aspect of the thighs, navy-blue but lighter than on the throat, sides of belly and lower surface of hind limbs bluish green merging to white on the base of the tail; lower sides of the fore limbs pale blue, soles of all four feet white.

Measurements.—Type ♂. Head and body 118 mm., tail injured. Paratype ♀. Head and body 85 mm., tail 148 mm.

ZONURUS UKINGENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 30,761. A ♂ from Tandala, Ukinga Mountains, southwestern Tanganyika Territory, collected by Arthur Loveridge, February 11, 1930.

Diagnosis.—Agrees with the *cordylus* group in having the fronto-nasal separated from the rostral by the nasals, absence of occipital spines and supranasal, the nostril being in a large nasal, a scaly lower eyelid, large lateral scales, a frontonasal, nasal not strongly swollen.

It differs from all of the *cordylus* group in lacking a loreal which is correlated with the presence of an enormous preocular; also in its possession of sharply keeled temporals and obtusely keeled ventrals.

It also differs from *Z. c. jonesi* in the much greater development of mucros and keels on all parts of the body.

It also differs from *Z. c. cordylus* in the short blunt head which is not so depressed and in the reticulate ribbing of the dorsal scales which it shares with *Z. c. jonesi*.

A complete description will be published in due course.

Coloration in life.—♂. Above, dark sepia-brown, mottled with ochraceous brown; scattered over the flanks are light-colored scales. Below, white, faintly mottled with gray.

Measurements.—Type ♂. Head and body 54 mm., length of head 16 mm., breadth of head 12 mm., length of tail 33 mm.

Comparative material.—In addition to thirteen of the South African species including *Z. c. jonesii* which appears to be the nearest relative of this new zonure, the Museum of Comparative Zoölogy possesses the type of *Z. tropidosternum* Cope and three specimens from near the type locality of its synonym *Z. frenatus* Pfeffer, described from Mhonda, Tanganyika Territory.

AMPHISBAENA MPWAPWAENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 30,767. A ♂ from Mpwapwa, Ugogo, Tanganyika Territory, collected by Arthur Loveridge, November 22, 1929.

Paratype.—Museum of Comparative Zoölogy, No. 30,768. A ♀ taken with the type.

Diagnosis.—Of similar appearance to *Amphisbaenula orientalis* from which it differs in possessing an *ocular*¹ scale which separates the frontal from the first labial, which is the *smallest*; second labial *largest*; three scales bordering the upper lip besides the rostral; the first being a fusion of prefrontals, nostril, and former first labial; followed by two upper labials; a pair of frontals forming a *sexagon*; a pair of parietals *smaller* than the frontals; chin-shields 1+3+4; temporals 2, the uppermost being in contact with the frontal; 273 body segments; 30 midbody annuli (14 above, 16 below); 26 caudal annuli; 6 preanal pores.

In the paratype the outline of frontals and parietals is less regular than in the type; chin-shields 1+4+4; temporals 3 (the larger upper one of the type being divided horizontally); 269 body segments; 5 preanal pores, very indistinct.

Coloration in life.—♂, ♀. Flesh-pink.

Measurements.—Type ♂. Head and body 175 mm., tail 19 mm. Paratype ♀. Head and body 147 mm., tail 15 mm.

Comparative material.—Though a true *Amphisbaena*, this lizard is most nearly related to *Amphisbaenula orientalis* Sternfeld from Mikindani, southeastern Tanganyika Territory, of which a cotype is in the Museum of Comparative Zoölogy (No. 21,904). *Amphisbaenula* is at most a subgenus only, distinguished from *Amphisbaena* by the absence of an ocular.

Mpwapwa is the type locality of *Geocalamus modestus* Günther, represented in the Museum of Comparative Zoölogy by two specimens collected by the author some years ago. *Geocalamus* is an entirely different creature from that just described above.

CHAMAELEON WERNERI DABAGAE subsp. nov.

Type.—Museum of Comparative Zoölogy, No. 31,344. An adult ♀ from the bamboo forest near Dabaga, Uzungwe Mountains, Tanganyika Territory, collected by Arthur Loveridge, January 1, 1930.

Paratypes.—Museum of Comparative Zoölogy, Nos. 31,345–31,348. Both sexes, collected at the same time as the type.

Diagnosis.—Agreeing in all respects with *C. weneri weneri* except that the female is hornless, or has a very rudimentary horn, while that of the type of *weneri* as figured by Tornier, as well as five pre-

¹ Points in which it differs from *orientalis* are italicized.

sumably topotypic females of *weneri* from the southern end of the Uzungwe range, possess a large, well-developed rostral horn.

In the smaller paratype female (No. 31,348) there is a rudimentary horn less than a millimetre in length. In view of the wide range of variability in chameleons it may be somewhat rash to describe a new form on the basis of so small a series. There are, however, parallel cases in other horned chameleons which hold good, as for example:

Female hornless

C. jacksoni jacksoni Boulenger

C. fischeri fischeri Reichenow

Female horned

C. jacksoni vauerescecae Tornier

C. fischeri multituberculatus Nieden

Measurements.—Type ♀. Head and body 91 mm., tail 96 mm. Paratype ♂. Head and body 96 mm., tail 109 mm.

Comparative material.—Ten examples of *C. weneri weneri* from Kigogo and Mufindi East at the southern end of the Uzungwe Mountains, and an almost complete collection of East African chameleons.

CHAMELEON INCORNUTUS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 31,350. An adult ♂ from the forest edge at Madehani, Ukinga Mountains, southwestern Tanganyika Territory, collected by Arthur Loveridge, February 14, 1930.

Paratypes.—Museum of Comparative Zoölogy, Nos. 31,351–31,355 being 11 specimens from Madehani, collected February 14–28, 1930; Nos. 31,356–9 being 4 specimens from Nyamwanga, Poroto Mountains, collected April 17, 1930; Nos. 31,360–4 being 5 specimens from Nkuka Forest, Rungwe Mountain, collected March 19–30, 1930.

Diagnosis.—No gular or ventral crest of enlarged scales, no beard-like gular scales, no horn-like processes in either sex, no fin-like dorsal crest.

Well-developed occipital flaps fused in a short median suture behind the casque; a decidedly indistinct parietal crest forked anteriorly; a low dorsal crest comprised of sharply spinose scales (well separated or in groups of two or three followed by an interspace) from the nape to the base of the tail.

A more detailed description will appear later.

Coloration in life.—Type ♂. Above, crown of head pale reddish brown with bright chestnut-red bars which almost form three chevrons; bars of the same shade on the eyelid are very conspicuous; the vertebral line is flanked on either side by a greyish brown band; below this band is a broader, less sharply defined one of vivid emerald green inter-

rupted in three places by vertical, olive markings proceeding from three, more or less circular, olive-bordered, pale blue patches on the flanks; the intervening spaces between these patches are whitish; below this area the flanks are bright emerald green though not such a vivid shade as that of the cheeks or lower edge of the occipital flaps; the upper side of the limbs is the same less brilliant green as on the flanks. Throat greenish anteriorly and on the margins, the center white, which continues as a narrow band along the belly and the underside of the tail.

Measurements.—Type ♂. Head and body 84 mm., tail 77 mm. Largest paratype ♀. Head and body 93 mm., tail 95 mm.

CHAMAELEON LATERISPINIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 31,386. An adult ♂ from the forest edge above the forestry house at Kigogo, near Mufindi, Uzungwe Mountains, Tanganyika Territory, collected by Arthur Loveridge, January 23, 1930.

Paratypes.—Museum of Comparative Zoölogy, Nos. 31,387–8. Two adult ♂♂ collected in the same vicinity as that of the type during January, 1930.

Diagnosis.—This small chameleon seems to hold a somewhat isolated position with no near relatives. It is characterized by its very spinose appearance, not only a dorsal ridge of large, distinct spines, but equally large ones growing at right angles from the flanks.

A more detailed description will appear later.

Coloration in life.—Type ♂. Above olive brown; a black line with a white one below it passes from the posterior edge of the eye to the margin of the casque; a light greenish white, dorso-lateral line along either side connected with three areas of the same color on the flanks, the intermediate areas consisting of black, somewhat hourglass-shaped patches linked with similarly colored saddle-like blotches whose narrow necks cross the dorso-lateral line; there are on this line three pairs of white thorn-like spines which are thrown into sharp relief by the velvety black line passing between each pair. Seven black saddles on the tail. Below, buffy brown.

Measurements.—Type ♂. Head and body 67 mm., tail 62 mm.

BOULENGERULA CHANGAMWENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 16,301 from Changamwe, near Mombasa, Kenya Colony, collected by Arthur Loveridge, October 31, 1929.

Paratypes.— Museum of Comparative Zoölogy, Nos. 16,302–16,304, collected at the same place and time as the type.

Diagnosis.— Intermediate between *B. uluguruensis* Barbour and Loveridge of the Uluguru Mountains, Tanganyika Territory and *B. denhardt* Nieden of the Tana region; ultimately this new species may have to be united with the latter from which it is distinguished by the smaller number of annuli (vide Loveridge, 1930, Proc. Zoöl. Soc. London, p. 9, for key to the species).

Habit slender, vermiform. Snout obtusely pointed, projecting far beyond the lower jaw; eye indistinguishable; tentacle round, exsertile, with indications of a circular groove surrounding it, placed about halfway along the head just above the middle of the upper jaw; 18 teeth round the upper jaw; 152 annuli (150–152 in the paratype series), these annuli are interrupted on the middle dorsal line except on the nape and on the tail.

Coloration in life.— A livid flesh-pink, perhaps a little brighter than in *B. uluguruensis*. In alcohol it becomes opaque and colorless except for an ill-defined greyish dorsal area.

Measurements.— Type. Total length 207 mm., midbody diameter 4.5 mm. Paratypes. Total length 152–163 mm., midbody diameter 3.5–4 mm.

BUFO PARKERI sp. nov.

Type.— Museum of Comparative Zoölogy, No. 16,330. An adult ♂ from swamped flats below Mangasini Village, Usandawi, Tanganyika Territory, collected by Arthur Loveridge, December 14, 1929.

Paratypes.— Museum of Comparative Zoölogy, Nos. 16,331–16,350 being 29 specimens of both sexes, many taken in embrace, at the same place and time as the type.

Diagnosis.— In the field these toads were identified as being near *Bufo vittatus* Boulenger of Entebbe, Uganda. Later, specimens were submitted to Mr. H. W. Parker of the British Museum for favor of comparison with the type of *vittatus*. He writes: "*Bufo vittatus* differs in the less raised canthus rostralis; more rounded snout; large, circular, very well marked tympanum measuring three-quarters the diameter of the eye; much longer fingers and toes; single sub-articular tubercles, much less spinose hands and feet; longer hind limbs, the tip of the 5th toe extending well past the tip of the snout (vide anterior border of eye in Mangasini toad); the digital length can be shown by the length of the foot (measured from the tip of the 4th toe to the proximal side of the outer metatarsal tubercle), being contained in the length from

snout to vent 2.25 times in *B. vittatus* and 3 to 3.25 times in the toad from Mangasini."

A complete description will appear later. The species is named in appreciation of Mr. Parker's kindness in making comparison of this and other specimens with the types in his care.

Coloration in life.—Above, in both sexes, muddy black corresponding to the black cotton soil on which they were found, warts ochraceous or very dull brownish red. Below, the throat of the type and other males was dull chrome, that of the females white like the rest of the underparts. *In alcohol*. Above, grey with blotches of darker and some of the warts lighter, a V-shaped interorbital marking like that of *B. r. regularis*.

Measurements.—Type ♂. Head and body 29 mm., length of foot 9 mm. Range in 13 paratype ♂♂. Head and body 27–30 mm., with an average of 29 mm. Range in 7 paratype ♀♀. Head and body 31–32 mm., with an average of 32 mm.

BUFO URUNGUENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 16,376. An adult ♀ from the remnant of rain forest at Kitungulu, Urungu, Tanganyika Territory, collected by Arthur Loveridge, May 14, 1930.

Paratypes.—Museum of Comparative Zoölogy, Nos. 16,377–16,379, taken at the same place and time as the type.

Diagnosis.—Differs from *parkeri* sp. nov. in the interorbital space being flat instead of concave, the tympanum rounded instead of vertically elongate, the tibio-tarsal articulation of the adpressed hind limb reaching to the axilla instead of to the middle of the flank as in *parkeri*.

Crown without bony ridges; snout short, truncated, with very distinct canthus; interorbital space flat, equal in width to an upper eyelid; tympanum small but quite distinct, round, its diameter scarcely half that of the eye. Fingers long and rather pointed, first considerably shorter than the second; toes provided with minute lateral spines, not, or but scarcely, webbed at the base, paired conical subarticular tubercles. soles of feet covered with spinose or sharply conical tubercles, two conspicuous conical metatarsal tubercles, no tarsal fold; the tibio-tarsal articulation of the adpressed hind limb reaches the axilla while the metatarsal tubercles scarcely reach to the eye. Upper parts very rough by reason of the numerous little warts surmounted by sharp spines, the warts vary considerably in size.

Coloration in life.— ♀. Above, grey tinged with brick-red and a trace of purple, a paler area on the snout extends backwards between the eyes and then branches so as to cover the parotid glands; several dark brown blotches, irregular in shape and position, but usually a V-shaped one, with apex directed posteriorly, just above the anus. Below, creamy white speckled with purple, a concentration of these specks upon the chest and along the median ventral line; soles of hands and feet dark, the tubercles conspicuously white.

Measurements.— Type ♀. Head and body 28 mm., snout to back of tympanum 7.5 mm., length of hind limb 23 mm., length of longest toe 4 mm. The paratype series ranges in length of head and body from 19–29 mm.

RANA MASCARENIENSIS UZUNGWENSIS subsp. nov.

Type.— Museum of Comparative Zoölogy, No. 16,626. An adult ♀ from Dabaga, Uzungwe Mountains, Tanganyika Territory, collected by Arthur Loveridge, January 1, 1930.

Paratypes.— Museum of Comparative Zoölogy, Nos. 16,627–16,639 from Dabaga and Kigogo, Uzungwe Mountains and Lukungu, Ubena Mountains, Tanganyika Territory, collected between January 1 and February 8, 1930, also three specimens in the British Museum from “Benguella to Bihé, Angola.”

Diagnosis.— Closely related to *mascareniensis*, from which it may be distinguished by the less extensive webbing of the hind feet and very different, more brilliant coloration in life, though the latter is not noticeable in preserved material. A comparison with the cotype ♀ of *mascareniensis* from Madagascar in the collection of the Museum of Comparative Zoölogy shows the following differences:

<i>R. m. mascareniensis</i> ♀ cotype	<i>R. m. uzungwensis</i> ♀ type
Joints of 1st toe free of web 1	1½ joints free of web
Joints of 2d toe free of web 1	1½ joints free of web
Joints of 3d toe free of web 1	1½ joints free of web
Joints of 4th toe free of web 2	3 joints free of web
Joints of 5th toe free of web 1	1 joint free of web

When first seen in the field I decided that these frogs were not *mascareniensis* nor any member of the genus with which I was acquainted; they were subsequently submitted to Mr. H. W. Parker for his views before describing; he replied as follows: “Boulenger, as you know, revised *Rana* but never published his views. Our col-

lection was labeled according to his findings and he recognized four 'varieties' of *mascareniensis*, viz.: *R. m. mascareniensis*, *R. m. mossambicus* Peters, *R. m. venusta* Werner and *R. m. benguellensis*. Do you know the author of the last name? I do not, and think it must be a manuscript name only. At any rate that is what these two Dabaga frogs are. We have three specimens, locality Benguella to Bihé, Angola, with which yours agree exceedingly well." These Angolan frogs were submitted for my examination and I concur with Mr. Parker's opinion as to their subspecific identity with the Dabaga series.

Coloration in life.—Most unfortunately the detailed color notes made in the field were inadvertently destroyed after my return. From memory I recall that the males had bright yellow throats.

Measurements.—Type ♀. Head and body 44 mm., breadth of head 15 mm., length of head 15.5 mm., length of snout 8.5 mm., length of hind limb 80 mm., length of 4th toe 22 mm. Paratype ♂. 42 mm.

ARTHROLEPTIS UKINGENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 17,137. An adult ♀ from Madehani, Ukinga Mountains, Tanganyika Territory, collected by Arthur Loveridge, February 14, 1930.

Paratypes.—Museum of Comparative Zoölogy, Nos. 17,138–9 taken at the same place and time as the type, and Nos. 17,076–8 from Ilolo, Rungwe district, Tanganyika Territory, collected by Arthur Loveridge, March 15, 1930.

Diagnosis.—Near *A. minutus* Boulenger from which it is distinguished by very well developed digital expansions.

Tongue with a conical papilla. Snout moderate, much longer than the horizontal diameter of the eye; nostril much nearer to the end of the snout than the eye; interorbital space much broader than an upper eyelid; tympanum concealed. Tips of fingers and toes dilated into distinct disks (a condition more marked in life than as now preserved, since the specimens have suffered from frequent removal from alcohol, which has resulted in the shrinking of the disks on some of the toes); 1st finger shorter than the 2d, which is shorter than the 4th, the 3d being much the longest; a tarsal and two metatarsal tubercles; toes webbed, the four terminal joints of the 4th toe free, three terminal joints on the 3d and 5th toes free; only two terminal joints on the 1st and 2d toes free; the tibio-tarsal articulation of the adpressed hind limb reaches the eye. Skin of back smooth with inconspicuous flattened warts.

Coloration in life.—Type ♀. Above, like the ♂ but darker by reason of denser mottling; a light vertebral line from snout to anus, similar lines on thighs and tibiae. Below, largely transparent posteriorly but the throat presenting a varnished appearance and dusky specklings which extend to the breast well between the forearms, the breast to midbody with the satiny appearance as noted below for the male.

Paratype ♂. Above, olive, very minutely mottled with dusky brown. Below, largely transparent except for the throat which is dusky and a patch across the belly at midbody which is cream colored with a satiny gloss.

Measurements.—Type ♀. Head and body 18 mm., breadth of head 7 mm., length of head 7 mm., length of snout 3.5 mm., length of hind limb 27 mm., length of 4th toe 7 mm. Paratype ♂♂. 16 mm.

ARTHROLEPTIS RUNGWENSIS sp. nov.

Type.—Museum of Comparative Zoölogy, No. 17,141. An adult ♀ from just below the Moravian Mission at Ilolo at the base of Rungwe Mountain, southwestern Tanganyika Territory, collected by Arthur Loveridge, March 15, 1930.

Diagnosis.—Closely related to *A. minutus* Boulenger, from which it may be distinguished by its larger size, 24 mm. as against 22 mm., more extensive webbing of the toes and longer snout which is greater than the orbital diameter. It has been compared with the type of *minutus* by Mr. H. W. Parker who considers them distinct. Further discussion on its affinities will be published in due course.

Tongue with a conical papilla. Snout longer than the horizontal diameter of the eye; nostril nearer to the end of the snout than to the eye; interorbital space equal to, or a trifle wider than, an upper eyelid; tympanum hidden. Tips of fingers and toes tapering, not dilated; 1st finger much shorter than the 2d, which is shorter than the 4th, the 3d being much the longest; a rather indistinct tarsal tubercle; an inner and an outer metatarsal tubercle, the latter being larger and more compressed than in *A. minutus*; toes webbed, the three terminal joints of the 4th toe free, only two terminal joints free on the other four toes, thus the webbing is slightly more extensive than in *minutus*; the tibio-tarsal articulation of the adpressed hind limb reaches to the eye. Skin of back smooth with flattened warts.

Coloration in alcohol.—Type ♀. Above, dusky brown, heavily overlaid with black, the latter forming distinct cross bars on the

hind limbs. Below, white, blotched with brown on the throat as far back as the forearms and also along the flanks.

Measurements.— Type ♀. Head and body 24 mm., breadth of head 8.5 mm., length of head 8.5 mm., length of snout 3.5 mm., length of hind limb 33 mm., length of 4th toe 10 mm.

PROBREVICEPS MACRODACTYLUS RUNGWENSIS subsp. nov.

Type.— Museum of Comparative Zoölogy, No. 16,451. An adult ♀ from the Nkuka Forest, Rungwe Mountain, southwestern Tanganyika Territory, collected by Arthur Loveridge, March 25, 1930.

Paratypes.— Museum of Comparative Zoölogy, Nos. 16,452–4, taken at the same locality as the type during March, 1930.

Diagnosis.— Agrees with *Probreviceps m. macrodactylus* (Nieden) of the Usambara Mountains excepting in the tympanum (which happens to be a good character in this genus). The diameter of the tympanum, which varies in distinctness, equals that of the eye in *P. m. rungwensis* and is two-thirds that of the eye in *P. m. macrodactylus*. Having noted this in the field with a view to describing the form as new, I placed this material at the disposal of Mr. H. W. Parker when engaged on his revision of this and allied genera; after comparing them with a topotypic series of *macrodactylus* he confirms this conclusion and the validity of the new form.

Coloration in life.— As in the typical form.

<i>Measurements</i> .—	Type ♀	Paratype ♀	Paratype ♂♂
Head and body	58 mm.	48 mm.	23–40 mm.
Length of head	17 mm.	15 mm.	11 mm.
Breadth of head	20 mm.	17 mm.	12 mm.
Diameter of orbit	4 mm.	4 mm.	3.5 mm.
Diameter of tympanum	4 mm.	4 mm.	4 mm.
Length of tibia	21 mm.	21 mm.	15 mm.
Length of foot	33 mm.	32 mm.	23–23 mm.



Loveridge, Arthur. 1932. "New Reptiles and Amphibians from Tanganyika Territory and Kenya Colony." *Bulletin of the Museum of Comparative Zoology at Harvard College* 72, 375–387.

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