

No. 11.—*Revisionary Studies of Some
South American Teiidae*¹

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INTRODUCTION

As is well known to most students of South American herpetology, the small specialized teiids of this continent represent a bewildering array of species and genera, few of which are in a satisfactory taxonomic condition. Since the publication of Boulenger's second volume of the "Catalogue of Lizards in the Collection of the British Museum" in 1885, very few adequate generic revisions have been attempted. Burt and Burt's "South American Lizards in the Collection of the American Museum of Natural History" in 1931 attempted to summarize and clarify the generic and specific characters of some of the forms, but with very limited success. Nevertheless, this work and their check list of South American lizards published in 1933, has been of considerable value as a reference source.

The greatest problem in attempting any revision of South American teiids is the scarcity of representative material in the museums. Furthermore, the inadequate descriptions of some of the species, and the impossibility of examining all of the type specimens, make a satisfactory revision difficult.

In this paper an attempt has been made to revise *Leposoma*, *Cercosaura*, *Alopoglossus*, and *Pantodactylus*. These genera have been chosen because examples of all the species were available. Keys for the species of these four genera have been prepared. However, it is impossible to devise a key for the genera of "micro-teiids" until more of the genera are studied and redefined in the light of the many species described since the publication of Boulenger's Catalogue.

All generic as well as specific descriptions have been rewritten on the basis of the specimens examined. Any character that is common to all the species is given in the generic definition, but is usually not mentioned again in the description of the species.

The terminology has been standardized throughout and consequently it differs from that used in some of the original descriptions. The term loreal is reserved for the scale posterior to the nasal and anterior to the first superciliary; the frenoocular is the scale below the loreal and anterior to the eye, which in some cases comes in contact with the nasal, and consequently separates the loreal from the

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upper labials. Whether these scales are homologous in the different genera is not known; however, for clarity I believe that it is excusable to consider them as such. The preulars are the scales anterior to an imaginary line linking one ear opening to another and lying between the more posterior postmentals. The gulars are the scales between this ear line and the collar.

The scale count at the midbody includes the ventrals, laterals, and dorsals. Counting the ventrals and dorsals separately at the midbody is often accompanied by a wide margin of error since it is difficult to delimit the ventrals in many cases. The number of transverse rows of dorsals was determined by counting from the posterior margin of the hind limbs to, and including, the nuchals. In the species that lack well developed nuchals and postparietals, the count was made to include the row of scales bordering the interparietal and parietals posteriorly. The number of transverse rows of ventrals was made by counting from the row posterior to the collar to, and including, the anterior preanals. The number of transverse rows of gulars was ascertained by counting from the collar to the ear line.

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The abbreviations designated above in parentheses will be used throughout the text to denote the respective museums.

The taxonomic alterations included in this paper are summarized below.

The new species and subspecies proposed are:

- Leposoma annectans* sp. nov.
Leposoma guianense sp. nov.
Alopoglossus andeanus sp. nov.
Cercosaura ocellata bassleri subsp. nov.
Cercosaura ocellata petersi subsp. nov.
Pantodactylus schreibersii parkeri subsp. nov.

The following genera have been placed in synonymy:

- Mionyx* Cope = *Leposoma* Spix
Loxopholis Cope = *Leposoma* Spix

The following species have been placed in synonymy:

- Leposoma bisecta* Taylor = *Leposoma southi* Ruthven and Gaige
Leposoma dispar Peters = *Leposoma rugiceps* (Cope)
Alopoglossus amazonius Ruthven = *Alopoglossus carinicaudatus* (Cope)
Alopoglossus copii surinamensis Brongersma = *Alopoglossus carinicaudatus*
 (Cope)
Pantodactylus femoralis Vanzolini = *Pantodactylus quadrilineatus* Boettger

The generic allocation of the following species has been changed as indicated:

- Mionyx parietalis* Cope becomes *Leposoma parietale* (Cope)
Alopoglossus plicatus Taylor becomes *Ptychoglossus plicatus* (Taylor)
Prionodactylus quadrilineatus (Boettger) becomes *Pantodactylus quadrilineatus*
 Boettger
Loxopholis rugiceps Cope becomes *Leposoma rugiceps* (Cope)
Pantodactylus tyleri Burt and Burt becomes *Arthrosaura tyleri* (Burt and Burt)

The species of *Leposoma*, *Cercosaura*, *Alopoglossus*, and *Pantodactylus* that are recognized in this paper are listed below:

- Leposoma scincoides* Spix
Leposoma annectans sp. nov.
Leposoma percarinatum (Müller)
Leposoma guianense sp. nov.
Leposoma parietale (Cope)
Leposoma rugiceps (Cope)
Leposoma southi Ruthven and Gaige
Cercosaura ocellata ocellata Wagler
Cercosaura ocellata bassleri subsp. nov.
Cercosaura ocellata petersi subsp. nov.
Alopoglossus buckleyi (O'Shaugnessy)

- Alopoglossus carinicaudatus* (Cope)
Alopoglossus andeanus sp. nov.
Alopoglossus copii Boulenger
Alopoglossus festae Peracca
Pantodactylus schreibersii schreibersii (Wiegmann)
Pantodactylus schreibersii albostrigatus (Griffin)
Pantodactylus schreibersii parkeri subsp. nov.
Pantodactylus quadrilineatus Boettger

Genus LEPOSOMA Spix

- Leposoma* Spix, 1825, Spec. Nov. Lacert. Bras., p. 24.
Lepidosoma Wagler, 1830, Nat. Syst. Amphibiens, p. 157.
Lepisoma Gray, 1845, (in part), Cat. Liz. Brit. Mus., p. 60.
Loxopholis Cope, 1868, Proc. Acad. Nat. Sci. Philadelphia, p. 305.
Leposoma Peters, 1880, Monatsb. Akad. Wiss. Berlin, p. 309.
Mionyx Cope, 1885, Proc. Amer. Philos. Soc., vol. 23, p. 96.
Hylosaurus Müller, 1923, Zool. Anz., vol. 57, p. 146.

In 1868 *Loxopholis rugiceps* was described by Cope on the basis of a specimen collected in the Rio Magdalena region of Colombia. In 1880 Peters described *Leposoma dispar* from Caceres, on the Rio Cauca in Colombia. *Loxopholis* was considered to be generically distinct due to the presence of smooth ventral scales. An examination of the type and other specimens of *rugiceps* demonstrated that *rugiceps* and *dispar* are identical. The condition of the ventrals is not correlated with geographic distribution, since specimens from the same locality may have keeled or smooth ventrals. Consequently, *Loxopholis* is included in the synonymy of *Leposoma*, and *dispar* placed in the synonymy of *rugiceps*. E. R. Dunn had previously arrived at the same conclusion and has graciously given me the information he had on the subject.

The genus *Mionyx* Cope was described in 1885 from a specimen collected at Pebas, Ecuador. Its inclusion in the synonymy of *Leposoma* is based upon the examination of specimens from Ecuador, Colombia and Peru that compare perfectly with Cope's description of *Mionyx parietalis* except for two points: Cope's description states that *parietalis* has smooth head plates and a reduced first toe on the fore and hind limbs, bearing a rudimentary straight claw. The specimens examined all have striated head scales and the first toes, though reduced, have a small curved claw. Cope, however, further states that the type specimen was in poor condition. I have found that if the cuticle of the head scales is removed the striations disappear. This, I believe, had occurred in the type specimen, the smooth head scales being the result of poor preservation. The presence of a straight,

4. Scales on side of neck keeled, imbricate and shaped like the dorsals; 27-31 scales from parietals to posterior margin of hind limbs; range: Canal Zone, Panama (below Canal Zone), and Colombia *rugiceps*
Scales on side of neck not shaped like the dorsals; 32-39 scales from parietals to posterior margin of hind limbs 5
5. Preanal scales 5, medial preanal large, elongate (fig. 1); female with uniform body color; range: Dunoon, British Guiana *guianense* sp. nov.
Preanal scales 5, medial preanal much smaller than other preanal scales; female body color not uniform 6
6. An irregular dorsolateral dark stripe 1 or 2 scales wide, extending onto the tail where it is bordered below by a white stripe originating at insertion of hind limb; 36-39 scales from parietals to posterior margin of hind limbs; range: northeastern South America *percarinatum*
A dark lateral band 4-5 scales wide; no white stripe on tail; 32-36 scales from parietals to posterior margin of hind limbs; range: southern Colombia, eastern Ecuador, and northeastern Peru *parietale*

LEPOSOMA SOUTHI Ruthven and Gaige

Leposoma southi Ruthven and Gaige, 1924, Occas. Papers Mus. Zool., Univ. Michigan, no. 147, p. 1.

Leposoma dispar Burt and Burt, 1931, (in part), Bull. Amer. Mus. Nat. Hist., vol. 61, p. 347.

Leposoma bisecta Taylor, 1949, Univ. Kansas Sci. Bull., vol. 33, pt. 1, no. 5, p. 275.

Type locality. Progreso, Chiriqui Province, Panama.

Description. Frontonasal longitudinally divided; prefrontals in broad contact medially; frontal long and hexagonal; frontoparietals slightly larger than prefrontals; interparietal longer than parietals, but no wider than the parietals at their greatest width. All dorsal head plates with marked longitudinal striations. Nostril in a divided nasal, the suture of the nasal passing through or posterior to the nostril; superciliaries 4; suboculars 5-7; palpebrals 2-4; temporal scales keeled; upper labials 6, the sixth being the largest and bearing a longitudinal keel upon its lower surface; lower labials 5-6; single postmental followed by 2 pairs of postmentals in contact medially, the second pair of postmentals the largest; a third pair of postmentals not in contact medially nor with the lower labials; the preregulars may be keeled, but are quadrangular and non-imbricate; side of neck covered with large conical scales.

Dorsals leaf-shaped, broad; laterals like the dorsals. Ventrals keeled, imbricate and mucronate, more hexagonal in shape than the dorsals and in longitudinal and transverse rows. Gular scales keeled, imbricate and in transverse and diagonal rows. A collar is present but

SUMMARY OF DATA FOR SPECIES OF *LEPOSOMA*

(Mean value of scale counts is in parentheses below extreme values)

Species	No. of Specimens	Sex Ratio ♂ / ♀	Maximum Snout to Vent Length (mm.)	SCALE COUNTS			
				Midbody	Transverse Dorsal Rows	Transverse Ventral Rows	Gulars
<i>rugiceps</i>	30	15/14	44	20-25 (22.9)	27-31 (28.8)	22-24 (22.7)	8-10
<i>parietale</i>	9	4/5	36	23-28 (25.2)	32-36 (34.0)	21-23 (22.1)	9-10
<i>percarinatum</i>	19	0/19	35	24-29 (25.9)	36-39 (37.4)	24-28 (26.0)	9-10
<i>southi</i>	12	6/6	35	20-25 (22.4)	28-33 (30.2)	20-24 (21.6)	7-10
<i>guianense</i>	2	0/2	37	24	33	22	9-10
<i>scincoides</i>	1	0/1	45	25	32	22	8
<i>annectans</i>	1	0/1	37	24	29	21	8

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is indistinct. Caudals and subcaudals keeled and in longitudinal and transverse rows. Scales of the limbs keeled and imbricate. Inner toe of forelimb reduced, with only 2 segments. Posterior preanals consist of a small median scale bordered by 2 larger scales on each side. The anterior preanal is a single large median scale or 3 median scales. All preanal scales keeled. Males with 2 preanal pores and 4/4 femoral pores; females with 2 preanal pores only.

Scale counts. Midbody, 20–25; transverse dorsal rows, 28–33; transverse ventral rows, 20–24; gulars, 7–10.

Color. Overall color dull-brown. Top of head a darker brown. Laterally from the head to the proximal portion of the tail a darker brown than the dorsum. Lower labials heavily pigmented. White scales or ocelli may be present on the side of the neck and above the forelimb. The males tend to be more heavily pigmented than the females. Underside of head, gular region and abdomen cream colored and spotless, though marginal spotting of the postmentals may be present. Venter of tail with dark blotches.

Remarks. Burt and Burt (1931) incorrectly placed *southi* in the synonymy of *rugiceps* (*dispar*).

The possibility that *southi* and *rugiceps* are subspecies has been considered, but no substantiating evidence has been found. Both species are readily distinguishable, by color as well as scalation, and none of the specimens from the possible intergrade area — the Canal Zone — shows signs of hybridization. It appears that the two species are allopatric even in the Canal Zone. The range of *rugiceps* extends into the Canal Zone but not to Barro Colorado Island, while *southi* is found from southern Costa Rica to Barro Colorado Island. Collecting on Barro Colorado has been intensive enough to warrant the assumption that *rugiceps* does not occur there.

Taylor (1949) described *L. bisecta* from Costa Rica without reference to *southi* since he followed Burt and Burt in considering *southi* synonymous with *dispar*. The type locality of *southi* is Progreso, near the Costa Rican border of Chiriqui Province, on the Pacific side of Panama. Taylor's specimen was collected at El General (San Isidro del General?) on the Pacific Slope of Costa Rica. The only differences in scalation between *bisecta* and *southi* are that *bisecta* has "26 scales in row about middle of body," and "35 rows from chinshields to preanal pore-scales." In contrast the maximum midbody scale count of *southi* specimens examined is 25 and the maximum chinshields to preanal pore-scales is 34. This difference is not significant and is probably the result of different counting techniques. Taylor's type is further characterized by having 7/7 femoral pores, in contrast to 4/4 femoral pores in the male specimens of *southi* examined. However, since there is identity

with *southi* in all other characters, *bisecta* is placed in the synonymy of *southi*.

Specimens examined. COSTA RICA: Suretka, Rio Sixaola, M.C.Z. 18916-17. PANAMA: Barro Colorado Island, Canal Zone, M.C.Z. 22298, U.M.M.Z. 63625-27; Progreso, Chiriqui Province, M.C.Z. 18915, U.M.M.Z. 58053 (paratype), 58065B (paratype), 58486, and 58484; El Valle, Coclé Province, A.N.S.P. 21088.

LEPOSOMA SCINCOIDES Spix

Leposoma scincoides Spix, 1835, Spec. Nov. Lacert. Bras., p. 24.

Leposoma scincoides Gray, 1845, (in part), Cat. Liz. Brit. Mus., p. 60.

Lepidosoma scincoides Tschudi, 1847, Arch. f. Nat., p. 45.

Lepidosoma scincoides Peters, 1862, Abhandl. Akad. Wiss., Berlin, p. 190.

Leposoma scincoides Boulenger, 1885, Cat. Liz. Brit. Mus., vol. 2, p. 386.

Type locality. Amazon River.

Description. Frontonasals longitudinally divided, the posterior borders concave and in contact with the first supraocular and prefrontals; prefrontals in contact medially; frontal hexagonal and bordered laterally by the second and part of the third supraocular; frontoparietals in contact medially and slightly larger than the prefrontals; interparietal narrower and equal in length to the parietals. All head scales with longitudinal striations. Nostril in a nasal that is grooved dorsally; superciliaries 5; palpebrals 3; suboculars 5; temporals keeled; upper labials 6; lower labials 5, of which the second is the largest. A single mental followed by 2 pairs of postmentals in contact medially, the second pair being the largest; a third pair of postmentals separated medially by 2 keeled and imbricate scales and in contact laterally with the lower labials. Pregular scales convex and posteriorly pointed.

Dorsals hexagonal, longer than wide. Side of neck with very small, keeled, non-imbricate scales. Gulars and ventrals longer than wide, keeled, imbricate and mucronate, in transverse and diagonal rows rather than longitudinal. An indistinct collar fold. A single median anterior preanal; posterior preanals 5, the median scale the smallest. Scales of the forelimbs keeled and imbricate; on hind limbs also keeled and imbricate except for the posterior surface of femur that bears flat, non-imbricate scales. Tail with keeled and imbricate scales on ventral and dorsal surface; the scales are arranged in diagonal and transverse series but *not* in longitudinal rows. The specimen is a female and has 2 preanal pores but no femoral pores.

Scale counts. Midbody, 25; transverse dorsal rows, 32; transverse ventral rows, 22; gulars, 8.

Color. It is impossible to give a color description from the specimen examined since it is completely faded. Peters (1862) describes the type specimen as having the head, tail and ground color of dorsum a dark yellow-brown, the dorsum having from 3 to 4 longitudinal series of irregular dark flecks and the ventral region being yellow-gray.

Remarks. In Peters' description (1862) of the type specimen the frontonasal is described as single. However, the excellent illustration of the type accompanying the description shows a faint longitudinal line running the length of the frontonasal. In the single specimen that I have examined, the frontonasal is divided as in the drawing, but the specimen corresponds perfectly with Peters' description on all other characters.

The type locality of *scincoides* is given by Spix as the Amazon River. It is, therefore, surprising that the single specimen of *scincoides* available to the author bears as its locality Ipiranga, on the outskirts of São Paulo, Brasil.³ It is difficult to believe that a species of *Leposoma* covers so immense and varied a region as the above localities indicate. It appears probable that one of the two localities is an error.

Some may be of the opinion that the distinctness of *scincoides* warrants generic separation of all other species of *Leposoma*. What distinguishes *scincoides* from the other species thus far described are the elongate dorsals, narrow interparietal, the convex pointed preulars and the ventrals in diagonal rather than longitudinal rows. The new species, *annectans*, described below resembles *scincoides* except for the presence of a broad and enlarged interparietal such as is found in the other species of *Leposoma*. The presence of this distinctive interparietal in *annectans* indicates a close relationship between the *scincoides* group (*scincoides* and *annectans*) and the *parietale* group (all other species of *Leposoma*). Consequently, I do not believe that any useful purpose can be served by dividing this evidently monophyletic genus.

Specimens examined. BRASIL: Porto Cachoeiro, State of Espirito Santo, D.Z. 3002.

LEPOSOMA ANNECTANS sp. nov.

Type. D.Z. 790B, female, collected at Baia, State of Baia, Brasil. Snout to vent length, 37 mm.

Diagnosis. Related to *scincoides* but distinguished from that species by the presence of an enlarged interparietal and the fact that the third pair of postmentals are separated from the lower labials by a

³ After the completion of the manuscript Paulo Vanzolini notified the author that this locality was erroneous, and that the actual locality is in the state of Espirito Santo. This correction has been made in the text; however, the map showing the distribution of *Leposoma* has not been corrected.

small scale. This new species can be distinguished from the other species of *Leposoma* by having the ventrals in transverse and diagonal rows.

Description. All head scales with sharp longitudinal striations; frontonasal divided longitudinally, in contact with the first supraocular; prefrontals in broad contact medially; frontal hexagonal; frontoparietals small and with a short medial suture; interparietal longer than the parietals, its anterior width less than its posterior width; nostril in a divided nasal; very small loreal separated from the upper labials by the larger frenoocular; palpebrals 5; temporals small and keeled; about 5 upper labials; lower labials 4, elongate; postmentals with longitudinal striations, the first single and followed by 3 pairs, the last pair separated medially and also separated from the third lower labial by a small scale.

Dorsals lanceolate-hexagonal, in diagonal and transverse rows. Laterals like the dorsals. Scales on the side of the neck small and conical. Ventrals keeled, lanceolate-hexagonal and in diagonal and transverse rows. Gulars keeled, pointed, in diagonal and transverse rows. An indistinct collar fold. Scales of the limbs keeled. Posterior preanals 5, arranged as in *scincoides*. Caudals and subcaudals keeled, hexagonal, not in longitudinal rows. The type is a female and has no femoral or preanal pores.

Scale counts. Midbody, 24; transverse dorsal rows, 29; transverse ventral rows, 21; gulars, 8.

Color. No description of color can be given since the specimen is completely faded.

LEPOSOMA RUGICEPS (Cope)

Loxopholis rugiceps Cope, 1868, Proc. Acad. Nat. Sci. Philadelphia, p. 305.

Leposoma dispar Peters, 1880, Monatsb. Akad. Wiss. Berlin, p. 309.

Pantodactylus rugiceps Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 358.

Type locality. Rio Magdalena region, Colombia.

Description. Frontonasal single, as broad or broader than long and not in contact with the first supraoculars; prefrontals in contact medially; frontal long and in contact laterally with the second supraoculars; frontoparietals slightly larger than the prefrontals; interparietal longer and usually wider than the parietals. All head scales with longitudinal striations, though in some specimens the anterior scales are devoid of striations. All specimens have only 2 large palpebrals. Superciliaries 4; suboculars small, 4-6; upper labials about 6, the fifth being the highest; lower labials 5-6; temporals large and keeled. A

single anterior postmental followed by 2 pairs of postmentals in contact medially, a third smaller pair may or may not be in contact medially and are separated from the lower labials by a small scale. Pregulars small, flat and not pointed.

Dorsals leaf-shape, broad; laterals like the dorsals. The side of the neck is covered by smaller, keeled and imbricate scales. Gulars keeled and imbricate though in some specimens the median gulars are smooth. No longitudinal rows of enlarged gulars present. Ventrals may be smooth and posteriorly truncate or oval, or keeled and mucronate, in transverse and longitudinal rows. Scales of the limbs keeled except for the posterior surface of the hind limbs. Subcaudals elongate, keeled and in longitudinal and transverse rows; caudals are broader, keeled and only form longitudinal rows on the last two-thirds of the tail. A small median posterior preanal flanked by 1 or 2 larger scales on each side. A single or 3 anterior preanals. Females without preanal or femoral pores. Males with 4 preanal scales and 2/2-5/5 femoral pores.

Scale counts. Midbody, 20-25; transverse dorsal rows, 27-31; transverse ventral rows, 22-24; gulars, 8-10.

Color. The dorsum is brown and may be devoid of any markings or with the paravertebral scales having the keels dark-brown and with dark flecks on the rest of the scale. The lateral surface is darker than the dorsum, dark-brown or black, and with the tip of the scales white. The side of the neck is of the same dark color as the side of the body but with diagonal rows of white scales. Usually two diagonal rows are present, one starting at the upper border of the ear and ending above the forelimb, the other stripe originating on the lower border of the ear and terminating anterior to the forelimb. Each upper labial has a vertical or diagonal dark stripe that passes to the neighboring lower labial. The top of the head is slightly darker than the dorsum. A white stripe originates on the posterior surface of each hind limb and continues laterally along the tail. Ventrals are colorless except for the most lateral row, which shows dark flecking. The gulars and mentals show moderate to light flecking in the males but little, if any, on females. The subcaudals are spotless except for the scales bordering the vent; these may have dark flecking. The color of the juveniles is the same as that of the adults.

Remarks. Keeled ventrals appear to represent a juvenile character that may or may not be retained in adults. Of the 30 specimens examined 14 have keeled ventrals. Of these specimens, 8 are juvenile (snout to vent length less than 25 mm.) and represent the total number of juvenile specimens examined. Of the 6 adult specimens having keeled ventrals, 4 are males and 2 are females. Specimens with

keeled ventrals are recorded from the Santa Marta Mountains region and the Department of Santander in Colombia, and from the Canal Zone and Juan Diaz in Panama. Specimens with smooth ventrals are recorded from the Rio Magdalena region (type), and the Santa Marta Mountains region in Colombia, and from the Canal Zone in Panama.

Specimens examined. PANAMA: Canal Zone, A.N.S.P. 23210; Ft. Clayton, Canal Zone, M.C.Z. 24392; Ft. Randolph, nr. Colon, Canal Zone, M.C.Z. 18892-93; Juan Diaz, Panama Prov., M.C.Z. 34379; Gatun, Canal Zone, M.C.Z. 22321-23, U.S.N.M. 120793-94, A.N.S.P. 20858. COLOMBIA: Rio Frio, M.C.Z. 29720-22, 29724-25; Fundacion, M.C.Z. 16834-35; Las Pavas, Santa Marta Mts., M.C.Z. 16836-37, U.M.M.Z. 56511; Santa Marta Mts., nr. Bolivar, U.M.M.Z. 54738, Santa Marta Mts., Valencia, U.M.M.Z. 54736; Santa Marta Mts. U.M.M.Z. 48214-16; Tucurinca, U.M.M.Z. 55721; A.N.S.P. 19729; El Centro, Santander, A.N.S.P. 25200; Magdalena River Region, A.N.S.P. 9635 (type).

LEPOSOMA GUIANENSE sp. nov.

Type. U.M.M.Z. 46770, adult female, collected at Dunoon, Demerara River, British Guiana, by A. G. Ruthven, on July 27, 1914. Snout to vent length 37 mm.

Paratype. U.M.M.Z. 46768, female with the same data as the type. Snout to vent length 27 mm.

Diagnosis. Related to *L. percarinatum* from which it differs in having an elongate median preanal (fig. 1) instead of a small triangular one and in having larger body scales, 33 transverse dorsal rows, instead of 36-39, and a proportionately larger interparietal.

Description of type. Frontonasal single and as long as broad, and not in contact with the first supraocular; prefrontals in broad contact medially; frontal hexagonal; frontoparietals as large as prefrontals; interparietal very large, having twice the width and length of a single parietal. Nostril in an undivided nasal; superciliaries 4; palpebrals 4; suboculars 5; temporals small and keeled; upper labials 7, the sixth being the largest; lower labials 5-6, the third the largest. A single mental followed by 2 pairs of postmentals in contact medially, the second pair being larger than the first. A third pair of postmentals separated medially by a small scale and laterally not in contact with the lower labials. A smooth flat preangular scale behind each third postmental.

Dorsals leaf-shaped, about as broad as long. Side of neck with granular scales. Gulars keeled and mucronate and in diagonal and transverse rows only. An indistinct collar fold. Ventrals in longi-

tudinal and transverse rows, keeled, imbricate and mucronate, shaped like the dorsals but narrower. Preanal scales consisting of 5 elongate keeled scales (fig. 1). Two preanal pores. Tail with scales in longitudinal and transverse rows, all keeled and mucronate, but the subcaudals are narrower than the caudals. Forelimbs with keeled scales except for inferior surface of humerus; inner toe with 3 segments. Hindlimbs having keeled scales except for posterior surface of femur.

Scale counts. Midbody, 24; transverse dorsal rows, 33; transverse ventral rows, 22; gulars, 10.

Color. A uniform brown dorsum without trace of any lateral or dorsolateral markings. Gular region and abdomen spotless. Lateral portion of second and third postmental with brown blotches. No white stripe on the lateral region of tail, dorsally the tail is brown and ventrally heavily splotched with brown.

Remarks. The paratype is identical with the type in all respects, varying only in having 9 gular rows instead of 10.

This new species is distinct from all other *Leposoma* in having the median preanal elongate and enlarged. It is possible that *guianense* is sympatric with *percarinatum* since a specimen of this species was also collected at Dunoon.

The interparietal in *guianense* is much larger than the parietals, much more so than in any other species of *Leposoma*. In all the species of *Leposoma*, except *scincoides*, the interparietal is always longer than the parietals. Furthermore the anterior width of the interparietal is always less than the posterior width. However, in *rugiceps* and *parietale*, the maximum width of the interparietal is in some specimens equal to the width of the parietals. In *southi* the width of the interparietal is always equal to that of the parietals.

LEPOSOMA PERCARINATUM (Müller)

Hylosaurus percarinatus Müller, 1923, Zool. Anz., vol. 57, p. 146.

Leposoma taeniata Noble, 1923, Zoologica, vol. 3, no. 15, p. 303.

Hylosaurus muelleri Mertens, 1925, Senckenbergiana, vol. 7, p. 76.

Leposoma percarinatum Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 349.

Type locality. Peixeboi, State of Para, Brasil.

Description. A single frontonasal as broad as long and not in contact with the first supraocular; frontal long and hexagonal though at times it may be octagonal; frontoparietals slightly larger than prefrontals; interparietal longer and broader than parietals. The nostril is in a divided or single nasal; palpebrals 3-5. Suboculars small 6-7; the temporals are small and keeled. Upper labials 6, the sixth being the

largest; lower labials 5-6. A single postmental and 2 pairs of postmentals in contact medially, the second pair being the larger. A third pair of postmentals not in contact medially nor in contact with the lower labials. Pregular flat and quadrangular.

Dorsals leaf-shaped (fig. 6) about as wide as long; laterals like the dorsals; ventrals keeled and mucronate and in longitudinal and transverse rows. Gulars keeled and in transverse and diagonal rows or in irregular longitudinal rows. Caudals and subcaudals in longitudinal and transverse rows; the longitudinal rows of caudals not evident at the base of the tail. The subcaudals are narrower than the caudals. Scales of the limbs keeled. Inner toe of forelimb with 3 segments. Inner toe of hind limb with 3 or 4 segments. All the specimens examined are females and have 2 preanal pores with the exception of 2 specimens that have no pores.

Scale counts. Midbody, 24-29; transverse dorsal rows, 36-39; transverse ventral rows, 24-28; gulars, 9-10.

Color. Over-all color reddish-brown. An irregular dark stripe 1-2 scales wide, extends along both sides of the dorsum. Each stripe originates on the side of the neck, passes above the fore and hind limbs and extends for a short length on the tail where it is bordered inferiorly by a white stripe originating at the insertion of the hind limb. In some specimens the dorso-lateral stripe may be broken in an irregular fashion due to the failure of some scales to contain as much pigment as others.

Remarks. *Hylosaurus percarinatus* Müller has been shown by Burt and Burt (1931) to be identical with *Leposoma taeniata* Noble. The Burts further contended that *Hylosaurus* was not only a preoccupied name but had no reason to be considered a genus distinct from *Leposoma*. Contrary to Müller's assertion, *L. scincoides* does have a collar, but it is indistinct, as in *Hylosaurus*. Mertens in 1925 described *Hylosaurus muelleri* from "Inirida," Venezuela. The diagnostic characters of *muelleri*, according to Mertens, are an octagonal frontal, tricuspid maxillary teeth, and 12 scales to the collar. Burt and Burt (*supra cit.*) included *muelleri* in the synonymy of *percarinatum*. I have examined specimens from Venezuela and British Guiana and find that the maxillary teeth may be bi- or tricuspid and that the frontal is occasionally octagonal. The number of scales to the collar I find to be a very inaccurate character, inasmuch as it is difficult to determine the exact number of scales. Since the distinguishing characters of *muelleri* and *percarinatum* are indiscriminately present in the specimens examined, it is impossible to consider *muelleri* as distinct from *percarinatum*. It is necessary to say that "Inirida," the type locality of *muelleri* in Venezuela, was interpreted by Burt and Burt to be "Inirida

River, southern Venezuela." The Rio Inirida does not enter Venezuela; furthermore, I have been unable to find any locality in southern Venezuela or the upper Orinoco named Inirida. The correct locality is probably the Rio Inirida, Colombia.

The type specimens of *percarinatum*, *taeniata*, and *muelleri*, as well as the 19 specimens examined, are females. This disproportionate sex ratio, whether seasonal or actual, has prevented any description of *percarinatum* males.

Specimens examined. BRITISH GUIANA: Dunoon, Demerara River, U.M.M.Z. 46769; Tukheit Hills, Potara River, U.M.M.Z. 63050; Kartabo, U.M.M.Z. 58420 (paratype of *taeniata*), A.M.N.H. 21263 (type of *taeniata*), and 46433-35; Wismar, A.M.N.H. 58981; Kamakusa, A.M.N.H. 25082; Isheartun, A.M.N.H. 61418 (3 specimens), 61419 (4 specimens). VENEZUELA: 12 miles north of Esmeralda, A.M.N.H. 39320; Rio Pescada, Mt. Duida, A.M.N.H. 36637; BRASIL: Near Salto da Hua, Amazonas, U.S.N.M. 83573.

LEPOSOMA PARIETALE (Cope)

Mionyx parietalis Cope, 1885, Proc. Amer. Philos. Soc., vol. 23, p. 96.

Type locality. Pebas, eastern Ecuador.

Description. Frontonasal single and about as wide as it is long, not in contact with the first supraocular; frontal hexagonal; frontoparietals about as large as prefrontals; parietals longer and usually slightly wider than the parietals. All head scales with marked longitudinal striations. Nostril in a divided nasal; supraciliaries 4; palpebrals 3-4; suboculars 4-5; temporals small and keeled; upper labials 6-7; the sixth the largest; lower labials 5-6, the third the largest. A single postmental followed by two pairs of postmentals in contact medially, the second pair being larger than the first. A third pair of postmentals not in contact medially nor in contact with the lower labials; a flat smaller preular bordering posteriorly each of the last postmentals.

Dorsals leaf-shaped, about as wide as long. Side of neck with small granular scales, some of which are keeled. Gulars in diagonal and transverse rows, keeled, imbricate and mucronate. Ventrals in transverse and longitudinal rows, narrower than the dorsals and also keeled, imbricate and mucronate. Posterior preanals 5, a small median scale bordered on each side by a large scale and smaller outer lateral scales. A single small anterior preanal immediately preceding the posterior median preanal. All preanals keeled. Females with 2 preanal pores, males with 6 preanal pores and from 5/5 to 6/6 femoral pores. All scales of the fore and hind limbs keeled. Inner toe of forelimb reduced

with only 2 segments. Caudals in longitudinal and transverse rows, keeled, imbricate and mucronate, the subcaudals like the caudals but narrower.

Scale counts. Midbody 23-28; transverse dorsal rows, 32-36; transverse ventral rows, 21-23; gulars, 9-10.

Color. Dorsum dark-brown, sides of the body and neck darker, almost black. The dark band on the side of the body about 4 scales wide. The lateral region at the base of the tail without the white stripe that is typical of *L. percarinatum*. Side of the head darker than the top, a black stripe passing from each upper labial to each lower labial.

Remarks. It is possible that *percarinatum* is a subspecies of *parietale*. However, few specimens are available and the range of both species is poorly determined. More collecting, especially in the Amazon River region, is necessary before any conclusion can be reached.

Specimens examined. COLOMBIA: Morelia, Caqueta, A.N.S.P. 25507-08; ECUADOR: Sarayacu, M.C.Z. 38442; San Francisco, Rio Napo, U.M.M.Z. 48740-41, Napo-Pastaza, near Tena, U.M.M.Z. 48739; PERU: Rio Itaya, Iquitos Region, A.M.N.H. 56261-62; Iquitos, A.M.N.H. 56260.

Genus CERCOSAURA Wagler

Cercosaura Wagler, 1830, Naturl. Syst. Amphibien, München, p. 158.

Emminia Gray, 1845, Cat. Liz. Brit. Mus., p. 24.

The range of this monotypic genus is the most widespread of the species studied in this paper. The three subspecies of *Cercosaura ocellata* together occupy a region that extends from British Guiana to Peru, Bolivia, and Rio Grande du Sul in southern Brasil.

Due to the scarcity of specimens it has been impossible to determine accurately the distribution of each of the subspecies. The approximate range of each subspecies is given in the key presented here.

Cercosaura is predominantly a lowland form. Most of the localities are below an altitude of 700 meters; however, one locality (Chanchamayo, Colonia de Perené, Depto. de Junin, Peru) appears to be about 1,500 meters. Chanchamayo is not present on the maps of Hispanic America published by the American Geographical Society and the altitude is the maximum given in the notes of the collector, Dr. Harvey Bassler, for that locality.

This genus is closely related to *Pantodactylus*; however, *Cercosaura* can be distinguished from *Pantodactylus*, as well as all other teiid genera, by the presence of large rectangular keeled dorsals arranged in longitudinal rows (fig. 7).

Generic definition. Tongue anteriorly covered with imbricate scale-like papillae. The head scales are smooth and consist of the following: undivided frontonasal; prefrontals; frontal; elongate frontoparietals; interparietal longer than the parietals; postparietals and a median occipital; nuchals present or absent; upper temporals larger than the lower temporals; nostril in a divided or single nasal; a large single or divided loreal; triangular frenoocular; supraoculars 3; superciliaries 3-4, the first expanded dorsally; palpebrals 1-4; suboculars 4-5; upper labials 6-7, and lower labials 5-6; first postmental single and followed by 4 pairs of postmentals, the last pair being the smallest and separated medially by a pair of very large prementals. Dorsals in longitudinal and transverse rows, imbricate, longer than broad, posterior border slightly convex and with a heavy keel. Laterals smaller than the dorsals and not in regular longitudinal rows. Scales on the side of the neck granular. Ventrals are wider than, or as wide as, long, smooth, truncate and in longitudinal and transverse rows. Gulars smooth, in 2 longitudinal rows of transversely enlarged scales. Caudals like the dorsals but smaller, the subcaudals like the ventrals and in 2 longitudinal rows. Femoral pores, but no preanal pores present.

Key to the subspecies of CERCOSAURA OCELLATA

1. Loreal large, undivided, and in contact with the upper labials 2
Loreal horizontally divided (fig. 3); range: eastern Peru and northwestern Bolivia *o. bassleri* subsp. nov.
2. Midbody scale count, 25-31; females with 2/2 or more femoral pores; range: northeastern South America *o. ocellata*
Midbody scale count, 22-24; females with 1/1 or no femoral pores; range: southern Brasil and Bolivia *o. petersi* subsp. nov.

CERCOSAURA OCELLATA OCELLATA Wagler

Cercosaura ocellata Wagler, 1830, Naturl. Syst. Amphibien, München, p. 158.

Emminia olivacea Gray, 1845, Cat. Liz. Brit. Mus., p. 24.

Cercosaura humilis Peters, 1862, Abhandl. Akad. Wiss., Berlin, p. 180.

Type locality. Unknown. Probably somewhere in northeastern South America; Surinam?

Description. Frontonasal single, longer or as long as it is broad; prefrontals in contact medially; frontal hexagonal; frontoparietals as large as the prefrontals; a pair of large postparietals that are usually separated medially by a smaller occipital; about 4 square, flat nuchals bordering the occipital and postparietals posteriorly; 2-3 semitransparent palpebrals. The first 2 pairs of postmentals are always in

SUMMARY OF DATA FOR SUBSPECIES OF *CERCOSAURA*

(Mean value of scale counts is in parentheses below extreme values)

Species	No. of Specimens	Sex Ratio ♂/♀	Maximum Snout to Vent Length (mm.)	SCALE COUNTS			
				Midbody	Transverse Dorsal Rows	Transverse Ventral Rows	Gulars
<i>o. ocellata</i>	8	4/4	59	25-31 (26.8)	29-35 (32.2)	19-21 (20.0)	8-10
<i>o. petersi</i>	6	3/3	48	22-24 (23.0)	30-32 (31.3)	21-23 (21.8)	8-9
<i>o. bassleri</i>	21	10/11	63	24-34 (27.5)	30-33 (32.0)	18-22 (20.2)	7-10

contact medially, the third pair may or may not be in contact medially, whereas the last pair are separated medially by the large prelegals but are in contact with the fifth lower labial. The large prelegals are in turn separated medially by 1 or 2 longitudinal rows of small scales.

The laterals are smaller than the dorsals, irregular and keeled. The demarcation between dorsals and laterals is very sharp. The scales of the fore and hind limbs are smooth. There are 2/2-5/6 femoral pores in the males as well as the females.

Scale counts. Midbody, 25-31; transverse dorsal rows, 29-35; transverse ventral rows, 19-21; gulars, 8-10.

Color. A dorsolateral white stripe originates on the posterior margin of each eye and extends the length of the dorsum onto the tail. A pair of paravertebral white stripes are also evident and originate on the nuchal region and fade out at the base of the tail. The area between the white stripes is black. However, the dark vertebral region, between the paravertebral light stripes, may have a thin white or light stripe. In this case there are 5 longitudinal light stripes on the dorsum. Ocelli are present on the side of the body. The chin region is spotless except for the third and fourth pair of postmentals that have pigment on their lateral margins. The gulars are spotless or with a few dark flecks. All the ventrals and subcaudals have the central portion flecked with gray.

Due either to preservation or true dimorphism some of the specimens have no black pigment but are instead a reddish-brown. This is especially true of the specimens from Dunoon, British Guiana. The light longitudinal stripes, however, are still present.

Remarks. All of the males examined (4 specimens) had 2 preanal scales. In contrast 3 of the females examined had 4 preanal scales and the fourth female (D.Z. 707) had 3 asymmetrical preanal scales. The femoral pore counts on the British Guiana specimens are for the females, 3/3, 5/5 and 5/6, while the males have 4/4 and 5/6. In contrast, the female from Para has 3/2 and the males from Baia both have 2/2. It is very possible that the femoral pore count is clinal, for in specimens from Rio Grande du Sul, which are described here as a new subspecies, there are 1/1 in one specimen and no pores in the other.

Specimens examined. BRITISH GUIANA: Kartabo, A.M.N.H. 21264; Marudi, A.M.N.H. 61385; Demerara River, U.M.M.Z. 53896; Dunoon, Demerara River, U.M.M.Z. 46771-72. BRASIL: Rio Tapajoz, State of Para, D.Z. 707; Baia, D.Z. 790, 790A.

CERCOSAURA OCELLATA PETERSI subsp. nov.

This new subspecies occurs in the southern Brazilian states of São Paulo and Rio Grande du Sul and extends into central Bolivia (Provincia del Sara).

This new form has been named in honor of Wilhelm Peters whose excellent work, "Ueber *Cercosaura* und die mit dieser Gattung verwandten Eidechsen aus Südamerika," published in 1862, has been of great assistance.

Type. M.C.Z. 43300, an adult female, collected at Santa Maria, State of Rio Grande du Sul, Brasil, by L. I. Price and T. E. White. Snout to vent length 46 mm.

Paratype. M.C.Z. 43300A, an adult female, with the same data as the type. Snout to vent length 47 mm.

Diagnosis. Distinguished from all other subspecies by having a low midbody scale count, 22-24, and by the females having 1/1 or no femoral pores.

Description. Besides the characters included in the above diagnosis, this subspecies differs from *o. ocellata* in that the nuchals are irregular, not flat and quadrangular, with some bearing a blunt keel. The type and paratype are further distinguished in having the lateral scales broad and well keeled, and in that the scales of the tibia have a well developed keel. In the type the frontal is short and does not reach the second supraocular.

The type has a single palpebral, 4 preanal scales, no femoral pores, 24 scales at the midbody, 30 transverse rows of dorsals, 22 transverse rows of ventrals, and 9 gulars. The paratype has 2 palpebrals, 4 preanal scales, 1/1 femoral pores, 24 scales at the midbody, 32 transverse rows of dorsals, 21 transverse rows of ventrals, and 8 gulars.

The specimens from the State of São Paulo, Brasil, and Bolivia, though included below as representing this subspecies, are not identical to the type and paratype. The specimens from São Paulo differ in that the lateral scales are not broader than in *o. ocellata*. In these specimens the tibial scales are not so markedly keeled as in the type and paratype. The differences of the Bolivian specimens are described under the discussion of color.

One of the specimens from São Paulo is a male and has 3/3 femoral pores and 2 preanal scales. The second specimen is a female with 1/1 femoral pores and only 2 preanal scales. Both Bolivian specimens are males and have 2/2 femoral pores and 2 preanal scales.

Scale counts (All specimens, including the type and paratype): Midbody, 22-24; transverse dorsal rows, 30-32; transverse ventral rows, 21-23; gulars, 8-9.

Color. The overall color of the type is an olive-drab. Dorsolateral white stripes extend from the temporals to the tail. There is a barely distinguishable darker vertebral stripe, but no evidence of the white paravertebral stripes typical of *o. ocellata*. No ocelli are present on the sides of the body. The central portion of each ventral is lightly flecked with gray. The gulars and postmentals are spotless except for the lateral borders of the last 2 pairs of postmentals.

The paratype differs from the type in having the dorsolateral stripes more clearly defined and faint paravertebral stripes enclosing the darker vertebral region. The specimens from São Paulo have dorsolateral stripes but lack paravertebral stripes and have the ventrals very lightly pigmented. In the male from São Paulo (D.Z. 1953) there is a single ocellus above each fore limb. The Bolivian specimens differ in that the dorsolateral and paravertebral stripes are well defined in contrast to the Brazilian specimens. One of the Bolivian specimens is badly preserved and it is difficult to distinguish ocelli. However, the other specimen (C.M. 4667) is a male, and has about 10 ocelli on each side.

Remarks. All the subspecies of *Cercosaura ocellata* have 8 longitudinal rows of dorsals and 6 (rarely 8) longitudinal rows of ventrals. Consequently the reduction in the number of scale rows around the midbody is the result of the reduction in the number of lateral scales. It is evident that this can be achieved by either enlarging the lateral scales or reducing the width of the lateral region. In the type and paratype of *o. petersi* the lateral scales have become broader than in *o. ocellata*; in contrast the São Paulo specimens of *o. petersi* have lateral scales that are identical to those of *o. ocellata*, but due to the narrow lateral region have a low midbody count. The São Paulo specimens are similar to the type and paratype of *o. petersi* in color and femoral pore counts. The different methods of reducing the midbody scale count are possibly the result of different genetic mechanisms and it may be thus argued that they represent distinct subspecies. This course has not been followed because of the few specimens available for comparison and a careful analysis of the character.

It is interesting to note that one of the São Paulo specimens that has a perfect tail measures 45 mm. from snout to vent, and has a tail that measures 163 mm., more than 3 times the snout to vent length. The other specimen is also in perfect condition and measures 40 mm. from snout to vent, and 123 mm. from the vent to tip of tail.

Specimens examined. BRASIL: Cachoeira das Emas, Pirassununga, São Paulo, D.Z. 1952-53; Santa Maria, Rio Grande du Sul, M.C.Z. 43300 (type) and 43300A (paratype). BOLIVIA: Provincia del Sara, C.M. 986; Rio Surutu, Provincia del Sara, C.M. 4667.

CERCOSAURA OCELLATA BASSLERI subsp. nov.

Euspondylus simonsii Burt and Burt (not Boulenger), 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 337.

Specimens of this subspecies were incorrectly identified as *Euspondylus simonsii* by Burt and Burt. Boulenger's description of *simonsii*, though incomplete, clearly shows that his specimen is not a *Cercosaura*.

In contrast to *o. ocellata* and *o. petersi*, this subspecies is found in eastern Peru and in the northwestern corner of Bolivia.

The new subspecies is named in honor of the late Dr. Harvey Bassler, who made very extensive herpetological collections in Peru.

Type. A.M.N.H. 23191, an adult male measuring 45 mm. from snout to vent, collected at Perené, Rio Perené, Peru, by Carlos Schunke in 1921.

Paratypes. A.M.N.H. 23190, 23193, 23216, and 23232, with the same data as the type.

Diagnosis. Distinguished from all other subspecies by the presence of a horizontally divided loreal (fig. 3).

Description. The scalation of this subspecies is identical to that of *o. ocellata* except for the above mentioned diagnostic character. The nuchals are flat, quadrangular, and in a single transverse row. The last pair of postmentals is separated from the lower labials in all the specimens examined except one (A.M.N.H. 56489). In this specimen the last pair of postmentals is exceptionally large.

The scale counts for the type and paratypes are: Midbody 26-28; transverse dorsal rows 32; transverse ventral rows 20; gulars 7-10. The counts for all of the specimens examined, including the type and paratypes, are tabulated at the beginning of this section.

Color. The specimens examined show considerable variation in color pattern. The type and paratypes are an overall dark olive-gray. The type and some of the paratypes have a darker vertebral stripe with only a faint indication of dorsolateral white stripes. The type is a male and has 3 ocelli on each side, one above the forelimb and one anterior and another posterior to the forelimb. Light paravertebral stripes are not present on any of the types. However, dark vertebral stripes and faint dorsolateral stripes may or may not be present. The postmentals are spotless, the gulars may have a few black dots, while the ventrals and subcaudals have the central portion of each scale heavily pigmented.

Three of the other specimens examined are melanistic (A.M.N.H. 56300-02, ♀ ♀). The dorsal and lateral surfaces are black without any indication of lighter markings. Ventrally the outer rows of abdominal scales are very heavily pigmented, while the medial rows,

though not as heavily pigmented, are still darker than in other specimens. The gulars in one of these specimens are spotless. In the others they are moderately flecked. The postmentals are only pigmented on their lateral surfaces where they come in contact with the darkly pigmented lower labials.

The light dorsolateral and paravertebral stripes that are typical of *o. ocellata*, are present on all the other specimens examined. The paravertebral stripes, however, may be ill-defined and confluent with the surrounding darker pigment. The ventrals in these specimens are centrally pigmented or spotless. Some of the males have about 10 well-marked ocelli on the side of the body. One specimen (A.M.N.H. 56275), a female, has about 10 very faint ocelli on each side of the body.

A total of 6 juveniles (snout to vent length of 30 mm. or less) were examined. All showed well marked dorsolateral and paravertebral light stripes. Large white blotches, instead of ocelli, were present on the sides of the body of some of the juveniles.

Remarks. Of the 21 specimens examined, 16 had 2 preanal scales and the rest had either 3 or 4 preanals. There were from 3/3 to 5/5 femoral pores. There was no sexual dimorphism in respect to these 2 characters. There were from 1 to 5 palpebrals, only a single specimen having 1 palpebral.

One specimen (A.M.N.H. 23190) has three prefrontals, rather than the normal two.

Specimens examined. PERU: Uchpayacu, upper Rio Cushabatay, Rio Ucayali system, A.M.N.H. 56489; Lower Rio Cushabatay, A.M.N.H. 56300; Pampa Hermosa, near mouth of Rio Cushabatay, A.M.N.H. 56275, 56290; Pachisa, valley of Rio Huayabamba, Rio Huallaga system, A.M.N.H. 56273-74, 56288; Bombo, Rio Tapiche Valley, A.M.N.H. 56271-72, 56287, 56301-02; Chanchamayo, Dept. Junin, A.M.N.H. 56289, 56391; Perené, Rio Perené, Dept. Junin, A.M.N.H. 23191 (type), 23190, 23193, 23216, 23232 (paratypes). BOLIVIA: Tumupasa, A.M.N.H. 22530-31.

Genus ALOPOGLOSSUS Boulenger

Alopoglossus Boulenger, 1885, Cat. Liz. Brit. Mus., vol. 2, p. 383.

The species of this genus have been in greater taxonomic confusion than any of the species so far studied. The classification that is proposed here undoubtedly is neither final nor perfect. However, it is believed that the taxonomic position of the species has been improved and when series of specimens become available the more rudimentary problems will already have been solved.

Alopoglossus is a lowland as well as a mountain form and as a result, there has probably been considerable subspeciation. However, due to the poor data that accompany the few specimens that are now available an analysis of this problem is impossible. *A. buckleyi*, as well as some of the other species defined here, is not a natural group. It represents a taxonomically expedient grouping, arrived at arbitrarily, but which should facilitate further studies.

Taylor (1949) described *Alopoglossus plicatus* from Costa Rica without reference to *Ptychoglossus*. With the aid of Taylor's careful description and an immature (24 mm. snout to vent length) specimen of *plicatus* from La Costilla, Costa Rica (A.N.S.P. 23753), it has become evident that Taylor's species is a *Ptychoglossus*, probably closely related to *Ptychoglossus festae* of Panama. Taylor's *plicatus* superficially approaches *Alopoglossus* more than any of the other species of *Ptychoglossus*. It is not, however, an annectant form. *Ptychoglossus*, in contrast to *Alopoglossus*, is characterized by much smaller dorsal scales, which have parallel sides and are in perfect transverse rows; by having the gulars quadrangular and subimbricate, and by having the ventrals rectangular or quadrangular, with the posterior borders truncate. The only species of *Alopoglossus* that may be confused with *Ptychoglossus* is *A. festae* of Ecuador. In this species the gular scales, though not pointed, as in most of the other species of *Alopoglossus*, are imbricate and the width of the posterior margin of the scales is less than the width of the base of the scales. The ventrals are also truncate, but have the same proportions as the gulars. The dorsals, furthermore, are markedly mucronate and with non-parallel borders. It may also be added that all species of *Alopoglossus* have keeled scales on the forelimbs whereas the species of *Ptychoglossus* all have smooth scales.

Alopoglossus gracilis Werner (1913) is not included in this study. The description is very poor and it is impossible to determine whether the generic allocation is correct. Very possibly *gracilis* represents a species of *Ptychoglossus*.

Generic definition. Tongue covered with oblique plicae. Single or divided frontonasal; prefrontals in contact medially; frontal; frontoparietals; interparietal equal in length to the parietals; no postparietals; nostril in a divided nasal; loreal small and separated from the upper labials by the nasal and frenoocular; supraoculars 4; superciliaries 4, the first without dorsal expansion; palpebrals 3-6; suboculars 3-4, the second 3 times the length of the first; upper labials 5-7; lower labials 5-6; first postmental single and followed by 3 pairs of postmentals. Dorsals large with well developed keels, mucronate, in diagonal and transverse rows. Laterals like the dorsals, unreduced. Ventrals with

a pointed or truncate posterior border, keeled or smooth, and in longitudinal and transverse rows. Gulars pointed or truncate, keeled or smooth, and in diagonal and transverse rows or in 2 longitudinal rows. Caudals like the dorsals, subcaudals narrow and in longitudinal rows. Scales of the limbs keeled. Femoral and preanal pores may be present.

Key to the species of ALOPOGLOSSUS

1. Gulars transversely enlarged and arranged in 2 longitudinal rows; 3 preanal scales; range: Pacific side of Ecuador *festae*
Gulars not arranged in 2 longitudinal rows; 4 preanal scales 2
2. Scales on the side of the neck large and conical; scales on the posterior half of the dorsum in longitudinal rows; range: eastern Ecuador *copii*
Not as above 3
3. Scales on the side of the neck small, almost granular; range: Ecuador and northeastern Peru *buckleyi*
Scales on the side of the neck keeled, imbricate, not granular 4
4. Gulars keeled or smooth, pointed, not truncate; ventrals spotless; range: eastern Ecuador, eastern Peru, Brasil, and Guianas *carinicaudatus*
Gulars smooth with a convex posterior border; ventrals with basal and lateral margins pigmented; range: Dept. Puno, Peru *andeanus* sp. nov.

ALOPOGLOSSUS FESTAE Peracca

Alopoglossus festae Peracca, 1904, Boll. Mus. Zool. Univ. Torino, vol. 19, no. 465, p. 7.

Pantodactylus buckleyi buckleyi Burt and Burt, 1930, Proc. U. S. Nat. Mus., vol. 78, p. 35.

Pantodactylus buckleyi festae Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 359.

Type locality. Vinces, Ecuador.

Description. Frontonasal broader than long; prefrontals in contact medially; frontal hexagonal; frontoparietals elongate; parietals and interparietals equal in length, the anterior width of the interparietal being greater than its posterior width; first supraocular much smaller than the other 3 supraoculars; palpebrals 3-6; temporals keeled and irregular, the 2 upper temporals larger than the rest; upper labials 7, the third the largest; lower labials 5-6; the last pair of postmentals are in contact medially in all the specimens examined except one (U.S.N.M. 20613); no well developed pregulars.

Dorsals longer than exposed width, keeled, imbricate, mucronate, and in transverse and diagonal rows. Ventrals smooth, truncate, in longitudinal and transverse rows. Gulars transversely enlarged and arranged in 2 longitudinal rows. Scales on the side of the neck small,

SUMMARY OF DATA FOR SPECIES OF *ALOPOGLOSSUS*

(Mean value of scale counts is in parentheses below extreme values)

Species	No. of Specimens	Sex Ratio ♂/♀	Maximum Snout to Vent Length (mm.)	SCALE COUNTS			
				Midbody	Transverse Dorsal Rows	Transverse Ventral Rows	Gulars
<i>festae</i>	11	1/10	59	23-28 (25.6)	30-31 (30.4)	18-22 (19.7)	6-8
<i>buckleyi</i>	11	7/4	50	24-28 (25.7)	28-33 (30.4)	16-21 (19.1)	7-8
<i>carinicaudatus</i>	4	2/2	54	19-22	27-30	16-21	6-8
<i>copii</i>	2	1/1	52	20	23-25	20	8
<i>andeanus</i>	1	1/0	58	20	28	17	8

convex, nonimbricate, smooth or faintly keeled. Scales of the fore and hind limbs keeled except for the ventral surface of the hind limbs. There are 3 preanal scales, the median scale being twice as large as the laterals. Caudals and subcaudals in longitudinal rows; the subcaudals are narrower than the caudals and keeled except for the proximal portion of the tail. The distal digital lamellae are double while the proximal lamellae are single. The lamellae of the toes are double. Females have no pores or may have up to 2/2 pores. The pores may be actually preanal or femoral. The single male examined had 7/8 pores, the more proximal pores being preanal in position.

Scale counts. Midbody, 23-28; transverse dorsal rows, 30-31; transverse ventral rows, 18-22; gulars, 6-8.

Color. There is no sexual dimorphism in pattern. The dorsal surface of the head and body is very dark brown or black. In a single specimen a hardly distinguishable blue vertebral stripe was evident. With the exception of this single specimen all others were characterized by the unbroken coloration of the dorsum. The outer row of ventrals is moderately pigmented while the median rows are spotless. The gulars and postmentals may be spotted with black or spotless. The subcaudals are spotless.

Remarks. I have examined the specimens that lead Burt and Burt to claim hybridization between *festae* and *buckleyi*, and have not found any evidence for this opinion. Burt and Burt limited themselves to distinguishing *festae* and *buckleyi* by a single character — the third pair of postmentals in contact medially (*festae*) or separated (*buckleyi*). Actually only one specimen of *festae* has the third pair of postmentals separated medially; this is U.S.N.M. 20613 from Playa de Oro, Rio Santiago, Esmeralda Prov., in the northwestern coastal plain of Ecuador. This locality is actually far from the known range of *buckleyi*. These two species may be distinguished by the following characters:

<i>buckleyi</i>	<i>festae</i>
1. Four preanal scales.	1. Three preanal scales.
2. Gulars not in 2 longitudinal rows.	2. Two longitudinal rows of transversely enlarged gulars.
3. Brown dorsum with darker vertebral spots.	3. Black or very dark-brown dorsum without darker vertebral spots.

It is not claimed that hybridization does not occur between *festae* and *buckleyi* but rather that there is no evidence for this at present.

Parker (1934) gives a brief description of 3 specimens from Zamora, Ecuador, which he believes to represent *A. buckleyi festae*. He apparently had no specimens of true *festae* for comparison at the time.

J. C. Battersby of the British Museum kindly examined the specimens for me. From his data and Parker's description, it is evident that the specimens differ more from *festae* than they do from *buckleyi*. Parker observed sexual dichromatism in these specimens, which is a typical character of *buckleyi* and not of *festae*. Battersby informs me that the color pattern is of dark-brown vertebral spots, with the sides of the body darker than the ground color of the dorsum. This is also typical of *buckleyi*. Two of the specimens have the third postmentals in contact medially, the other specimen has them separated. The specimens further differ from *buckleyi* in that the gulars are flat, smooth, and wider than long. However, the gulars are not in 2 longitudinal rows as in *festae*. These specimens may well represent a subspecies of *buckleyi*, but evidently not of *festae*.

All of the specimens examined are from the coastal plain of Ecuador and all localities are below an altitude of 600 meters. It is interesting to note that *festae* is the only species of the four genera studied that is found on the Pacific coast of South America.

Specimens examined. ECUADOR: Playa de Oro, Rio Santiago, Esmeralda Prov., U.S.N.M. 34867; Santa Elena, A.M.N.H. 21855; Naranjal, A.M.N.H. 23429; Pasaje, Rio El Rompido, A.M.N.H. 21856, M.C.Z. 34867; Ventura, Rio Chanchan, A.M.N.H. 23038-39; Bucay, Rio Chimbo, A.M.N.H. 21956; Puente de Chimbo, near Bucay, A.M.N.H. 24342; Santa Rosa, Rio Santa Rosa, A.M.N.H. 21995; Piñas, north of Alamor, A.M.N.H. 22217.

ALPOGLOSSUS COPII Boulenger

Alopoglossus copii Boulenger, 1885, Cat. Liz. Brit. Mus., p. 383.

Pantodactylus copii Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 357.

Type locality. Pallatanga and Canelos, Ecuador.

Description. This species is similar to *carinicaudatus* and is characterized by the following: The dorsal scales are very broad, keeled and mucronate; some scales broader than long. The dorsals on the posterior half of the dorsum are in longitudinal rows. At the midline, especially at the base of the tail, small scales are interspersed between the paravertebral rows of dorsals. The lateral scales are not as wide as the dorsal. Ventrals pointed and with a flat keel. The scales on the side of the neck are large and conical. A slightly enlarged preular is present on the medio-posterior border of each of the last postmentals. Gulars triangular and with a flat keel. From the specimens examined it appears that the distal lamellae of the toes tend to be single. There

are 14/14 femoral pores and 4 preanal pores in the male, and 0/0 and no preanals in the female.

Scale counts. Midbody, 20; transverse dorsal rows, 23 and 25; transverse ventral rows, 20; gulars, 8.

Color. No evident sexual dimorphism. The dorsum is brown with darker irregular vertebral spots and some white dorsolateral scales. The lowermost scale rows of the sides are lighter than the dorsals. The top of the head is light-brown with dark spots on the prefrontal suture and posterior edge of the parietals. There are 2 white spots above the forelimb on both specimens. The mentals and preulars have large dark-brown blotches. All gulars and ventrals are lightly flecked with brown on the anterior portion of the scale. The preanals and subcaudals are more heavily pigmented.

Remarks. Little can be said about the variation or range of this species. Boulenger's specimens came from Pallatanga and Canelos, and the two specimens examined are from eastern Ecuador. Although this species appears to be closely related to *carinicaudatus*, it cannot be determined whether they overlap in distribution or are full species or subspecies, due to the scarcity of specimens.

Specimens examined. ECUADOR: Rio Cotopino, Oriente, U.M.M.Z. 90776; Pastaza River, M.C.Z. 37267.

ALPOGLOSSUS BUCKLEYI (O'Shaughnessy)

Leposoma buckleyi O'Shaughnessy, 1881, Proc. Zool. Soc. London, p. 233.

Alopoglossus buckleyi Boulenger, 1885, Cat. Liz. Brit. Mus., p. 385.

Pantodactylus buckleyi buckleyi Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 385.

Type locality. Canelos, Ecuador.

Description. Frontonasal about twice as broad as it is long; in 2 of the 10 specimens examined (M.C.Z. 45781 and A.M.N.H. 56263) the frontonasal is longitudinally divided, rather than single. The prefrontals have a short medial contact; frontal hexagonal; frontoparietals elongate; interparietal equal in length to the parietals; with broad longitudinal striation, especially marked on parietal and interparietal of males, in the females these scales may be smooth; nostril is in a divided nasal; 3 suboculars, the second 3 times the length of the other 2; temporals are small and irregular, keeled in the males and smooth or faintly keeled in the females; about 7 upper labials, the third the longest; 6 lower labials; first postmental single and followed by 2 pairs of postmentals in contact medially; the third pair of postmentals are usually not in contact with the labials and are separated medially by small scales. Smaller, flat, preular scales border the last pair of postmentals posteriorly. Dorsals are longer than wide, keeled, imbric-

cate, mucronate and in diagonal and transverse rows. The lateral scales are blunter than the dorsals. Scales on the side of the neck are small and almost granular. Ventrals are in transverse and longitudinal rows, either smooth and pointed, rounded, or truncate posteriorly, or keeled and pointed posteriorly. Only a single male, A.M.N.H. 56263, of the 6 males examined had smooth, though pointed ventrals. The gulars are pointed and smooth or keeled. There are 4 preanal scales, the 2 medial scales being the largest. The caudals and subcaudals are in longitudinal rows; the subcaudals much narrower than the caudals. Scales of the dorsal and posterior surfaces of the fore and hind limbs keeled, those of the ventral surface smooth. Lamellae of the digits single except for the most distal lamellae, which are usually double. The lamellae of the toes are double. Males with 9/9 to 14/14 femoral pores and without or with 2 to 4 preanal pores. Females without preanal or femoral pores.

Scale counts. Midbody, 24-28; transverse dorsal rows, 28-33; transverse ventral rows, 16-21; gulars, 7-8.

Color. Overall color dark to light-brown. Head usually lighter than the body. Males with irregular dark brown vertebral blotches and with the lateral surface of the body a very dark-brown or black. Some of the lowermost lateral scales are white. Side of the neck dark, like the side of the body and with white scales dispersed or forming a white line from the lower labials along the lower border of the ear and ending above the forelimb. Dark vertebral spots are present on the females; however, the lateral surfaces are only slightly darker than the dorsum. At the base of the tail, in both sexes, a dark vertebral band is present with a white blotch on the dorsolateral edges. This same marking may be repeated on the tail. Ventrally the males are heavily pigmented, the anterior portion of each scale dark-brown while the rest of the scale is white. This same type of pigmentation may or may not be present on the gular region. The mentals are likewise either totally, partially, or not at all pigmented. The subcaudals tend to be alternately darkly pigmented and lightly pigmented so as to form regular bands of light and dark scales. In the females the ventral surface is colorless except for spotting on the preanals and subcaudals.

Remarks. The variation present in this form is considerable. The problem of subspeciation is in this case made more difficult by the fact that *buckleyi* is present on both the Pacific and Amazon sides of the Andes.

Specimens examined. ECUADOR: San Jose de Sumaco, A.M.N.H. 28898; Naranjal, A.M.N.H. 32777; between Rio Pastaza and Rio Santiago, C.M.N.H. 42508-09, Santiago-Zamora Prov., M.C.Z. 45781; Alpa Yacu, U.M.M.Z. 90774; Rio Pastaza, Oriente Prov., U.M.M.Z.

90775; Ecuador, M.C.Z. 25916. PERU: Mouth of Rio Santiago, Rio Marañon Valley, A.M.N.H. 56263, 65276; Peru-Brasil, Utoquinia-Tapiche, A.M.N.H. 56279.

ALPOGLOSSUS CARINICAUDATUS (Cope)

Leposoma carinicaudatum Cope, 1876, Jour. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 8, p. 160.

Alopoglossus carinicaudatus Boulenger, 1885, Cat. Liz. Brit. Mus., p. 384.

Alopoglossus amazonius Ruthven, 1924, Occas. Papers Mus. Zool. Univ. Michigan, no. 153, p. 1.

Pantodactylus carinicaudatus Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 358.

Alopoglossus copii surinamensis Brongersma, 1946, Zool. Mededeel., Leyden, vol. 26, p. 231.

Type locality. Valley of Rio Marañon, Peru.

Description. Frontonasal single and broader than long; prefrontals with a short medial contact, or separated by a posterior extension of the frontonasal; frontal hexagonal; prefrontals elongate; interparietal as long as the parietal; nostril in a divided nasal; 3 suboculars, the second three times the length of the first; temporals small, irregular and keeled, the two larger upper temporals bordering the parietal; about 7 upper labials and 6 lower labials; the third pair of postmentals in contact medially only at their anteriormost point in a single specimen, the other specimens having the third pair of postmentals separated by a single row of small scales. This last pair of postmentals are also separated from the lower labials by a small scale. No definite large preregulars bordering this last pair of mentals posteriorly as in *buckleyi*. Dorsals are keeled, imbricate, mucronate, in transverse and diagonal rows and much broader than in *buckleyi*. The width of the dorsals is nearly as great as their length. The mucro is slightly reduced on the lateral scale. Ventrals are smooth or with a broad, flat keel, pointed and in longitudinal and transverse rows. Gulars are in diagonal and transverse rows, keeled and mucronate. However, the medial gulars may merely be pointed and without a keel. The scales on the side of the neck are keeled, imbricate and mucronate, but smaller and of the same shape as the dorsals. Preanals composed of two large medial scales and a smaller lateral scale on each side. The preanals may have a dull keel. Caudals and subcaudals keeled, mucronate and in longitudinal rows. Scales of the fore and hind limb keeled, except for those of the ventral surface of the hind limbs. Digital lamellae single, though the more distal lamellae may be paired. Lamellae of the toes double. Males with 10/10 femoral pores and two preanal pores. Females without femoral or preanal pores.

Scale counts. Midbody, 19-22, transverse dorsal rows, 27-30; transverse ventral rows, 16-21; gulars, 6-8.

Color. Overall color dark or light-brown. Irregular dark vertebral splotches present. Irregular dorsal lateral light spots are faintly evident. There is no evident sexual dichromatism. The lateral surfaces of the body are slightly darker than dorsal. The entire ventral surface is spotless, except for spotting on the preanals and irregular blotches on the subcaudals. The dorsal surface of the head is yellow-brown. The spot on the preanals is located on the lateroposterior edge of the median preanals.

Remarks. Ruthven's *amazonius*, though from a more southern locality (Villa Murinho, Brasil) than any of the specimens examined, appears to be similar to *carinicaudatus*. The smooth, though pointed, gulars that Ruthven attributes to his species are also found in the more northern examples of *carinicaudatus*.

It is to be expected, from the evidence in other teiid genera, that species extending from the upper Amazon to the Guianas should subspeciate. However, the single available specimen of *carinicaudatus* from British Guiana is identical with the Peruvian specimens. *A. copii surinamensis* described by Brongersma is actually a specimen of *carinicaudatus*. The description compares very well with the British Guiana and Peruvian examples of *carinicaudatus*. Brongersma used the proportion of snout-to-vent length to length of hind limb to differentiate his species. Below are the tabulations of the measurements for the specimens examined of *copii* and *carinicaudatus*, as well as those for the types of *carinicaudatus*, *copii surinamensis*, and the type and one of the paratypes of *copii*.

	A Snout to Vent Length (mm.)	B Length of Hind Limb (mm.)	A/B Ratio
<i>carinicaudatus</i>			
A.M.N.H. 61381 ♀	54	24	2.25
A.M.N.H. 56278 ♀	52	21	2.47
A.M.N.H. 56277 ♂	41	19	2.16
U.M.M.Z. 84737 ♂	37	17	2.18
TYPE ♂	50	23	2.18
<i>copii surinamensis</i>			
TYPE ♀ (?)	29	13.5	2.14
<i>copii</i>			
M.C.Z. 37267 ♀	55	30	1.83
U.M.M.Z. 90776 ♂	52	27	1.93
TYPE ♂	56	30	1.86
PARATYPE ♀	74	37	2.00

The number of specimens examined is probably not a statistically adequate sample. However, *copii surinamensis* is closer to the lower figures of the *carinicaudatus* males than to those of *copii*.

Specimens examined. BRITISH GUIANA: Marudi, A.M.N.H. 61381. ECUADOR: San Francisco, Rio Napo, U.M.M.Z. 84737. PERU: Iquitos, A.M.N.H. 56277; Rian-Rian, Rio Subumaya, Contamana Region, A.M.N.H. 56278.

ALPOGLOSSUS ANDEANUS sp. nov.

Type. M.C.Z. 45590, an adult male, collected at La Pampa, Dept. of Puno, Peru, at an altitude of 760 meters (2,500 feet) by G. P. Gardner, on January 23, 1940. Snout to vent length 58 mm.

Diagnosis. Related to *carinicaudatus* but distinguished from this species by the dark-brown pigmentation of the ventrals, gulars, and mental region. Also distinguished from *carinicaudatus* by having smooth, posteriorly rounded median gulars and ventrals. It is distinguished from the other species of *Alopoglossus* by the presence of keeled, imbricate and mucronate scales on the side of the neck.

Description. Frontonasal nearly twice as broad as long; prefrontals in contact medially; frontal hexagonal; frontoparietals elongate; interparietal as long, but narrower than the parietals. The parietals and the interparietal each have 2 longitudinal ridges. Nostril in a divided nasal; loreal small and separated from the labials by the frenoocular; supraoculars 4, the second and third larger than the first and fourth; superciliaries 4; palpebrals 3; suboculars 3, the second 3 times the length of the first; 2 upper temporals bordering the parietal and each bearing a blunt ridge; the rest of the temporals smaller, keeled and irregular; upper labials 7, the third the largest; lower labials 6. The first postmental is single and is followed by 2 pairs of postmentals in contact medially; the third pair of postmentals are separated medially by a single row of 2 scales and are separated from the lower labials by an elongate scale. A slightly enlarged preangular is present on the medio-posterior border of each of the third postmentals. Dorsals longer than wide, keeled, imbricate, mucronate and in transverse and diagonal rows. Laterals like the dorsals. Ventrals smooth with a rounded posterior border and in longitudinal and transverse rows. Gulars smooth, pointed, except for the median gulars that have a convex border, in diagonal and transverse rows. Scales on the side of the neck keeled, imbricate, mucronate and smaller than the dorsals. A large pair of median preanals with a smaller lateral scale on each side. Scales of the fore and hind limbs keeled, except for the ventral surface of the hind limbs. Caudals and subcaudals in longitudinal

rows, the subcaudals narrower than the caudals. Femoral pores 10/10 and 4 preanal pores, 2 preanal pores on each side, at the junction of the limb with the body. Distal digital lamellae double, the rest single. The lamellae of the toes double.

Scale counts. Midbody, 20; transverse dorsal rows, 28; transverse ventral rows, 17; gulars, 8.

Color. The top of the head is light-brown; the posterior edge of the parietals and interparietals is darker. The dorsum is mahogany-brown with a lighter dorsolateral region. The lateral surfaces are darker than the dorsum; however, the lowermost lateral scales are white-tipped. A white stripe extends from the angle of the mouth and ends anterior to the forelimb. The mentals are blotched with very dark-brown. The gulars and ventrals are dark-brown on the anterior and lateral portions; the rest of the scale is spotless. The lateroposterior border of the median preanals is dark-brown and a brown spot is present on the posterior end of the common median edges. The subcaudals have irregular brown blotches.

Remarks. The differences between this species and *carinicaudatus* have already been pointed out in the above diagnosis. *Alopoglossus andeanus* may be confused with Parker's specimens of *buckleyi* from Zamora, Ecuador, which have been referred to under the discussion of *festae*. However, Parker's specimens have dark vertebral spots, and J. C. Battersby kindly informed me that the scales on the side of the neck are granular. In contrast, *andeanus* is characterized by the absence of dark vertebral spots and in having large keeled and imbricate scales on the side of the neck.

Genus PANTODACTYLUS Duméril and Bibron

Pantodactylus Duméril and Bibron, 1839, Erp. Gen., vol. 5, p. 428 (*P. dorbignyi* Duméril and Bibron = *Cercosaura schreibersii* Wiegmann).

Burt and Burt (1931, p. 357) included in the genus *Pantodactylus* the genera *Loxopholis* Cope and *Alopoglossus* Boulenger. The first has been shown in this paper to be synonymous with *Leposoma*. *Alopoglossus* was considered by Burt and Burt to be synonymous with *Pantodactylus* because the obliquely plicated lingual papillae, diagnostic of *Alopoglossus*, were found by Peracca (1894) and the Burts on the posterior bifurcation of the tongue of *P. schreibersii*. Actually most teiids that have imbricate scale-like papillae on the tongue may have the posterior bifurcation covered with oblique plicae. In *Alopoglossus* the entire tongue is covered with oblique plicae without any evidence of scale-like papillae. In *Pantodactylus* the oblique plicae,

when present, are always restricted to the posterior portion of the tongue. This fact together with the many differences in scalation between the genera, is more than sufficient evidence for considering the two genera distinct.

Two species listed under *Pantodactylus* in the check list of South American lizards (Burt and Burt 1933) are not considered as such here. *Pantodactylus nicefori* Burt and Burt has been previously shown to be a lacertid (Ruibal, 1950). The other species, *Pantodactylus tyleri* Burt and Burt, actually represents a species of *Arthrosaura*. This is based on the fact that *tyleri* is like the other species of *Arthrosaura* (with the exception of *A. tatei*) and unlike *Pantodactylus* in that the subcaudals are elongate, narrow and with a convex posterior border; the first supraciliary does not expand dorsally; the parietals and interparietals are equal in length; and there is a line of demarcation between the lateral scales and the ventrals. *Arthrosaura tyleri* appears to be related to *A. kockii*.

All the species of *Pantodactylus* are lowland forms, none of the specimens examined having been collected above 600 meters.

Generic definition. Tongue anteriorly covered with imbricate scale-like papillae. Head scales smooth and consisting of the following: Single frontonasal; prefrontals; frontal; frontoparietals; an interparietal that is longer than the parietals; postparietals, median occipital and in some cases nuchals; nostril in a divided or single nasal; loreal large (fig. 4); triangular frenoocular; supraoculars 3; first superciliary large and expanded dorsally; single transparent palpebral; upper labials 6-7; lower labials 5-6; first postmental single and followed by 4 pairs of postmentals; temporals smooth, upper larger than the lower. The dorsals are elongate, pointed, hexagonal or lanceolate (fig. 5), keeled, and in diagonal and transverse rows. The laterals are like the dorsals or slightly reduced. The scales on the side of the neck are granular. Ventrals smooth, quadrate, imbricate or subimbricate; the posterior border may be truncate or slightly convex and in longitudinal and transverse rows. Caudals like the dorsals and in transverse and diagonal rows. Subcaudals like the ventrals and in 2 or 4 longitudinal rows. Males with femoral pores, females may or may not have femoral pores. No preanal pores.

Key to the species of PANTODACTYLUS

1. Males with less than 8/8 femoral pores; 2 preanal scales. 2
 Males with 8/8 or more femoral pores; 3 preanal scales; range: States of
 São Paulo, Minas Geraes and Rio de Janeiro, Brasil. *quadri-lineatus*
2. Lateral white stripe originating below the eye, passing through the lower
 half of the ear, and above the forelimb. 3

- No lateral white stripe; overall color gray or black and usually with a dorsolateral white stripe; range: northern Argentina, Uruguay, Paraguay and southern Brasil *schreibersii schreibersii*
3. Some of the dorsals black-tipped and arranged to form irregular vertebral and paravertebral longitudinal stripes; females with 0/0 or 1/1 femoral pores; range: southcentral Brasil (Minas Geraes and Matto Grosso) *schreibersii albostrigatus*
- Color pattern not as above; females with 2/2 or 3/3 femoral pores; range: Bolivia *schreibersii parkeri* subsp. nov.

PANTODACTYLUS QUADRILINEATUS Boettger

- Cercosaura (Pantodactylus) quadrilineata* Boettger, 1876, Ber. Senckenb. Ges., p. 141.
- Prionodactylus quadrilineatus* Boulenger, 1885, Cat. Liz. Brit. Mus., vol. 2, p. 393.
- Euspondylus quadrilineatus* Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 333.
- Pantodactylus femoralis* Vanzolini, 1948, Papeis Avulsos Dept. Zool. Sec. Agric. São Paulo, vol. 8, p. 337.

Type locality. São Paulo, Brasil.

Description. Frontonasal broader than long; prefrontals in broad contact medially; frontal hexagonal; interparietal longer and narrower than the parietals; postparietals and a median occipital; a pair of very large nuchals; nostril in a divided nasal; loreal large and in contact with the upper labials; superciliaries 3; single transparent palpebral; suboculars 4; first postmental single, first 2 pairs of postmentals in contact medially, the last 2 pairs separated medially.

Dorsals lanceolate; laterals like the dorsals but wider; scales on the side of the neck smooth and granular; ventrals truncate, the 2 median rows wider than the outer rows. There are 3 preanal scales, a median and 2 laterals. Scales of the forelimbs smooth, those of the hind limbs also smooth but for the tibials which are keeled. The specimen is a male and has 8/9 femoral pores.

Scale counts. Midbody, 26; transverse dorsal rows, 28; transverse ventral rows, 21; gulars, 8.

Color. Dorsally the specimen is a uniform brown-gray, without any evidence of stripes. The mental and gular regions are moderately flecked with brown. The abdominal and subcaudal surfaces are moderately spotted with brown.

Remarks. Boettger originally described *quadrilineatus* and placed it in the subgenus *Pantodactylus*. Boulenger (1885), disregarding Boettger's allocation, placed *quadrilineatus* in *Prionodactylus*. Actually

SUMMARY OF DATA FOR SPECIES OF *PANTODACTYLUS*

(Mean value of scale counts is in parentheses below extreme values)

Species	No. of Specimens	Sex Ratio ♂/♀	Maximum Snout to Vent Length (mm.)	SCALE COUNTS			
				Midbody	Transverse Dorsal Rows	Transverse Ventral Rows	Gulars
<i>s. schreibersii</i>	22	7/15	53	23-27 (25.2)	30-36 (32.4)	19-26 (22.1)	7-8
<i>s. albostrigatus</i>	3	0/3	39	25-26	31-32	19-20	7-8
<i>s. parkeri</i>	43	19/25	48	24-29 (26.5)	29-35 (32.4)	18-22 (19.9)	7-8
<i>quadrilineatus</i>	1	1/0	37	26	28	21	8

this species is distinct from *Prionodactylus* in having lanceolate, rather than hexagonal, dorsals and unreduced lateral scales.

A careful comparison of the single specimen examined with the description of the type reveals that it corresponds perfectly in scalation, but not color. Boettger described *quadrilineatus* as having 4 longitudinal white stripes, a lateral pair and what may be interpreted to be a pair of dorsolateral stripes. This character led Burt and Burt to include *albostrigatus* in the synonymy of *quadrilineatus*. Actually the differences in scalation between these species outweigh their apparent similarity in color pattern. The specimen examined was collected in 1865 and whether the lack of longitudinal stripes is the result of age, or of its representing a new subspecies, or dichromatism in the species, is impossible to say.

P. E. Vanzolini agrees with the author in regarding *femorialis* as synonymous with *quadrilineatus*.

Specimen examined. BRASIL: Rio de Janeiro, M.C.Z. 4326.

PANTODACTYLUS SCHREIBERSII SCHREIBERSII (Wiegmann)

Cercosaura schreibersii Wiegmann, 1834, Herpet. Mexicana, p. 10.

Pantodactylus dorbignyi Duméril and Bibron, 1839, Erept. Gen., vol. 5, p. 431.

Pantodactylus bivittatus Cope, 1863, Proc. Acad. Nat. Sci., Philadelphia, p. 103.

Pantodactylus schreibersii Boulenger, 1885, Cat. Liz. Brit. Mus., vol. 2, p. 388.

Pantodactylus borelli Peracca, 1894, Boll. Mus. Zool. Univ. Torino, vol. 9, no. 176, p. 1.

Type locality. Brasil.

Description. Frontonasal about as long as its maximum width; prefrontals in contact medially; frontal hexagonal, pentagonal in a few cases in which the posterior border is truncate; frontoparietals elongate and larger than the prefrontals; interparietal longer but narrower than the parietals; pair of postparietals, usually separated medially by a small occipital; a single transverse row of irregular flattened nuchals, not as large as in *quadrilineatus*; supraoculars 3; superciliaries usually 3, occasionally 4; suboculars 3-4; nostril in a divided or inferiorly grooved nasal; loreal large and usually in contact with the upper labials; the last 2 pairs of postmentals are widely separated medially by the preregulars; preregulars bordering the postmentals larger than the median preregulars.

Dorsals lanceolate (fig. 5), occasionally subhexagonal. Laterals like the dorsals but slightly wider. Ventrals truncate or lightly convex. There are 2 large preanal scales; occasionally a very small lateral scale may be present on each side. Males with 3/3-5/6 femoral pores, females with 1/1-2/3 femoral pores.

Scale counts. Midbody, 23–37; transverse dorsal rows, 30–36; transverse ventral rows, 19–26; gulars, 7–8.

Color. The specimens examined show dichromatism in this subspecies. About 40 per cent of the specimens are gray with a white stripe extending from each temporal region, passing above the ear and forelimb, dorsolaterally along the body and onto the tail. This stripe may be very distinct or faint. The dorsal surface of the head is gray and with a few black spots. Ventrally there is a dustlike flecking on each ventral. The rest of the specimens examined are melanistic, black or very dark gray-black, with the dorsolateral stripe faintly indicated or absent. Ventrally they are flecked with black or gray. In both forms each subcaudal has the central portion heavily pigmented.

Remarks. Of the 22 specimens examined 2 had the loreal separated from the labials by a forward extension of the frenoocular. Both these specimens (D.Z. 786, 789A) are from the northern range of this subspecies; however, they do not resemble *albostrigatus* in any other character.

One specimen (A.M.N.H. 17022) from Salta, Argentina, has a faint lateral white stripe from the lower half of the ear and along the neck. This specimen may thus be considered to be intermediate between *schreibersii* and *parkeri*. It is here considered as *schreibersii* because it is gray in color and has lanceolate dorsals, both of which are characters found in *schreibersii* and not in *parkeri*.

The only sexual dimorphism observed is in the case of femoral pores. One female had 1/1 femoral pores, another had 2/3, while all the rest had 2/2. The males have 3/3 or 4/4 with the exception of a single specimen that has 5/6 (A.N.S.P. 12954).

In a few of the gray specimens the black-tipped dorsals typical of *albostrigatus* are present. However, there are few black-tipped scales and never arranged as in *albostrigatus*.

In a well preserved specimen from São Paulo (D.Z. 1893) a series of ocellus-like white scales are present on the side of the body.

Pantodactylus borelli Peracca is included in the synonymy of *schreibersii* with some doubt. From the description *borelli* is identical to *schreibersii* in scalation. However, Peracca describes his specimen as having 5 longitudinal stripes on the dorsum. It is possible, but at present not demonstrable, that Peracca's specimen is an intergrade of *schreibersii* and *albostrigatus*.

This subspecies appears to be a widespread and common form of northern Argentina, Uruguay, Paraguay, and southernmost Brasil.

Specimens examined. BRASIL: Santa Maria, Rio Grande du Sul, M.C.Z. 43350; São Joao de Rio Negro, São Paulo, A.N.S.P. 12954–55; Ipiranga, São Paulo, D.Z. 1893, 527, 789A; Campo Grande, Matto

Grosso, D.Z. 786; Itaqui, Rio Grande du Sul, D.Z. 684 (2 specimens); Porto Alegre, Rio Grande du Sul, D.Z. 1956. URUGUAY: Near Melo, Dept. Cerro Largo, C.N.H.M. 12343; Montevideo, M.C.Z. 22155-56, U.S.N.M. 38112-13, 68034. ARGENTINA: Buenos Aires, A.M.N.H. 65208, U.M.M.Z. 94090 (2 specimens); Salta, A.M.N.H. 17022; Cordoba, U.S.N.M. 52599.

PANTODACTYLUS SCHREIBERSII ALBOSTRIGATUS (Griffin)

Prionodactylus albostrigatus Griffin, 1917, Ann. Carnegie Mus., vol. 11, p. 314.
Euspondylus quadrilineatus Burt and Burt, 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 335.

Type locality. Sete Lagoas, State of Minas Gerais, Brasil.

Description. Similar in scalation to *s. schreibersii* except for the following: the dorsal scales are definitely hexagonal and the lateral scales are slightly smaller than the dorsals. The 3 specimens examined are females, the type of *albostrigatus* having 0/0 femoral pores while the other 2 specimens have 1/1. In the type both loreals are in contact with the labials, in another specimen only one loreal is in contact, while in the third specimen both loreals are separated by the frenocular from the labials.

Scale counts. Midbody, 25-26; transverse dorsal rows, 31-32; transverse ventral rows, 19-20; gulars, 7-8.

Color. This subspecies is distinguished by having black-tipped dorsals that form irregular vertebral and paravertebral stripes. The scales between the stripes are white-tipped or lack a black tip. The width of the black stripes may be 1 or 2 scales, the scales lying next to each other having the black-tipped portions contiguous.

A white stripe originates below each eye, passes through the lower half of the ear, above the forelimb, and along the side of the body. The stripe may be faintly indicated on the side of the tail. The dorso-lateral white stripe typical of *s. schreibersii* is indicated in this subspecies by a series of white-tipped scales extending from the ear to the tail.

One specimen has a slight dark flecking on each of the ventrals while the type and the other specimen have immaculate ventrals. An ocellus is present above the forelimb of the type.

Remarks. Burt and Burt considered *albostrigatus* identical to *quadrilineatus*. Actually *quadrilineatus* is distinguished from *albostrigatus* by the presence of 3 preanal scales rather than 2, a higher femoral pore count (this being an inference since no *albostrigatus* males, and no *quadrilineatus* females are known), an enlarged pair of nuchals,

lanceolate dorsals, and fewer transverse dorsal rows. The possibility that *albostrigatus* represents the females of *quadrilineatus* has been considered. However, the differences listed above are greater than those of sexual dimorphism in teiids.

Griffin's figure of the type of *albostrigatus*, accompanying the description, has the first postmental longitudinally divided. This is an error, the first postmental in the type is actually single.

In the 3 specimens of *albostrigatus* examined the last pair of postmentals are separated from the lower labials by a small elongate scale. In *schreibersii* and *parkeri* this last pair of postmentals are in contact with the lower labials.

It is unfortunate that only 3 female specimens of this subspecies are available. These few specimens show considerable variation, and further collecting is necessary before the variations and geographic range can be definitely determined.

Specimens examined. BRASIL: Sete Lagoas, Minas Gerais, C.M. 952 (type); Chapada, N.E. of Cuyabá, Matto Grosso, A.N.S.P. 12956-57.

PANTODACTYLUS SCHREIBERSII PARKERI subsp. nov.

Pantodactylus schreibersii albostrigatus Parker, 1931, Linn. Soc. Jour. Zool., vol. 37, p. 286.

Pantodactylus schreibersii Burt and Burt (in part), 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 362.

Euspondylus champsonatus Burt and Burt (not Werner), 1931, Bull. Amer. Mus. Nat. Hist., vol. 61, p. 335.

Parker (*supra cit.*) realized that the species Griffin had described as *Prionodactylus albostrigatus* was in reality a subspecies of *Pantodactylus schreibersii*. However, of the specimens that Parker had for examination, none was from near the state of Minas Geraes, Brasil, the type locality of *albostrigatus*. The specimens that Parker considered to be *albostrigatus* were all from Paraguay or Bolivia. When the large series of Bolivian specimens available to the present author were compared with the type of *albostrigatus*, it was evident that the Bolivian specimens did not represent *albostrigatus*. Therefore the author takes the pleasure of naming this new subspecies in honor of Dr. Parker.

Type. M.C.Z. 20627, collected at Buenavista, Dept. de Santa Cruz, Bolivia, by J. Steinbach in 1923. Snout to vent length, 38 mm.

Paratypes. M.C.Z. 20628-29; U.M.M.Z. 60595-96; A.M.N.H. 32776. All from the same locality as the type.

Diagnosis. Differs from *s. albostrigatus* in not having longitudinal rows of black-tipped dorsal scales and in the females having a higher femoral pore count. It differs from *s. schreibersii* in having a lateral

white stripe that passes through the lower half of the ear and along the side of the body.

Description. Similar in scalation to *s. schreibersii* except for the following: dorsal scales definitely hexagonal; lateral scales equal in size to the dorsals or slightly reduced; in a few specimens the laterals are half the length of the dorsals. Nuchals more regular than in *s. schreibersii*, forming true nuchal plates, but never so large as in *quadrilineatus*. Females have from 2/2-3/3 femoral pores while the males have 3/3-5/5.

Scale counts. Midbody, 24-29; transverse dorsal rows, 29-35; transverse ventral rows, 18-22; gulars, 7-8.

Color. All of the 44 specimens examined were distinguished by having a white stripe originating below each eye, passing through the lower half of the ear, and above the forelimb. In a few specimens the stripe was not evident on the side of the body, while in some it continued along the side of the tail. This lateral stripe is bordered superiorly along all of its length by a dark-brown band. The dorsal surface of the body is of a lighter brown. In about 80 per cent of the specimens a dark vertebral stripe is present. This dark stripe may originate on the nuchal region and extend the entire length of the dorsum and onto the tail. Usually, however, this stripe is broken into an anterior nuchal stripe and a posterior sacral stripe, or the anterior stripe may be lost and only the sacral stripe remain. A few of the specimens show evidence of the dorsolateral white stripe typical of *s. schreibersii*. An irregular dark stripe extends from each upper labial to the neighboring lower labial. The mental region is cream-colored and spotless except for some of the scales bordering the posterior lower labials. The gulars are spotless or with a few dark flecks. The ventrals are likewise spotless; however, some of the posteriormost scales may have dark flecks. On well preserved specimens the abdomen is pink. In all the specimens the subcaudals are flecked with black.

Remarks. A single specimen (U.M.M.Z. 60598) has the black-tipped dorsals typical of *s. albostrigatus*. It is a female and has 2/2 femoral pores, unlike *s. albostrigatus*. The venter of this specimen is heavily pigmented in contrast to the other specimens of *s. parkeri*.

Three juvenile specimens (snout to vent length less than 30 mm.) were available and all had scale counts that fell within the variation observed in the adults and were similar in color.

The dorsal scales of this subspecies are definitely hexagonal, as in *s. albostrigatus*, in contrast to *s. schreibersii* which has lanceolate dorsals. The lateral scales are also hexagonal and the same size as the dorsals, slightly smaller, or as in 8 of the specimens, reduced to one-half the size of the dorsals.

Previously the only absolute distinguishing character between *Prionodactylus* and *Pantodactylus* was the presence of unreduced lateral scales in the latter and markedly reduced laterals in the former. No other character, or combination of characters, has been found to separate these two genera. Since *s. albostrigatus* and *s. parkeri* both have reduced lateral scales, it has become impossible to distinguish these genera in an absolute manner. It may be argued that both *s. parkeri* and *s. albostrigatus* represent examples of *Prionodactylus*, and that *s. schreibersii* and *quadrilineatus* constitute the genus *Pantodactylus* — both have lanceolate dorsals, a character not found in any species of *Prionodactylus*. The evidence for considering *parkeri* and *albostrigatus* subspecies of *schreibersii* is the possession of identical head scalation by the three forms and the almost identical scale counts. This is further supported by the single specimen of *s. schreibersii* from Salta, Argentina (A.M.N.H. 17022), which appears to represent an intergrade in that it has the lateral white stripe typical of *parkeri*. For the moment it appears best to leave *Prionodactylus* and *Pantodactylus* as separate genera, with the hope that further study will determine definitely the taxonomic position of the two genera.

One specimen examined has "Peru" as its locality. If *parkeri* is present in Peru it is probably restricted to the southeastern lowlands of Peru.

Specimens examined. BRASIL: Villa Murтинho, State of Matto Grosso, U.M.M.Z. 56900; PERU: "Peru," C.N.H.M. 40018; BOLIVIA: Ixiamus, A.M.N.H. 22527; Rurrenabaque, A.M.N.H. 22528; Tumpasa, A.M.N.H. 22529; Buenavista, Dept. de Santa Cruz, M.C.Z. 20627 (type), 20628–29 (paratypes), 24886–88; A.M.N.H. 32776 (paratype); U.M.M.Z. 60613, 60624, 60625 (4 specimens), 60514 (5 specimens), 60595 (paratype), 60596 (paratype), 60597 (3 specimens), 69598 (2 specimens), 60599 (4 specimens), 63795, 63796 (4 specimens), 63797, 63798 (3 specimens), and 68089.

SUMMARY OF GENERIC DATA

Leposoma, *Alopoglossus* and *Cercosaura* primarily inhabit the northern half of South America. *Leposoma* is widespread, extending from Costa Rica and Panama to Colombia, eastern Ecuador, northeastern Peru, Venezuela, the Guianas and south to the state of Espirito Santo, Brasil. *Alopoglossus* has a more restricted range, extending from the coast of Ecuador to eastern Peru and the Guianas. The range of *Cercosaura* is very extensive; it ranges from the Guianas to eastern Peru, Bolivia and the state of Rio Grande du Sul, Brasil. In contrast, *Pantodactylus* has a strictly "southern" distribution being

present in northern Argentina, Uruguay, Paraguay, southern Brasil, Bolivia and possibly in southeastern Peru. *Leposoma* and *Alopoglossus* show a more predominantly northern distribution than *Cercosaura*.

It should be noted that the loreal in *Pantodactylus* and *Cercosaura* is large and usually in contact with the labials. The loreal in *Leposoma* and *Alopoglossus* is small and separated from the labials by the nasal and the frenoocular. When the loreal does not reach the labials in specimens of *Cercosaura* or *Pantodactylus* it is primarily the result of an enlarging of the frenoocular. In *Leposoma* and *Alopoglossus* there appears to be a shortening of the snout, a posterior enlarging of the nasal and a reduction in the size of the loreal with the resulting failure of the loreal to come in contact with the labials.

The close relationship between *Leposoma* and *Alopoglossus* and between *Cercosaura* and *Pantodactylus* is made evident by the summary of generic characters given below.

Dorsal scales.

Leposoma: Keeled, mucronate, leaf-shaped (fig. 6), or hexagonal, in diagonal and transverse rows.

Alopoglossus: Keeled, mucronate, broad or leaf-shaped, never hexagonal, in diagonal and transverse rows (posterior dorsals of *copii* are in longitudinal rows).

Cercosaura: Keeled, rectangular, in longitudinal and transverse rows (fig. 7).

Pantodactylus: Keeled, lanceolate (fig. 5) or hexagonal, in diagonal and transverse rows.

Lateral scales.

Leposoma: Like the dorsals (fig. 6).

Alopoglossus: Like the dorsals.

Cercosaura: Much smaller than the dorsals (fig. 7).

Pantodactylus: Like the dorsals or slightly smaller (fig. 5).

Loreals.

Leposoma: Small, separated from the upper labials by the frenoocular and the nasal (fig. 2).

Alopoglossus: Small, separated from the upper labials by the frenoocular and the nasal.

Cercosaura: Large, usually in contact with the labials; may be divided (fig. 3).

Pantodactylus: Large, usually in contact with the labials (fig. 4).

First superciliary.

Leposoma: Lateral in position not expanded dorsally.

Alopoglossus: Lateral in position, not expanded dorsally.

Cercosaura: Expanded dorsally.

Pantodactylus: Expanded dorsally.

*Supraoculars.**Leposoma*: 4.*Alopoglossus*: 4.*Cercosaura*: 3.*Pantodactylus*: 3.*Frontonasal.**Leposoma*: Single or divided.*Alopoglossus*: Single or divided. (Divided only in 2 specimens of *A. buckleyi*.)*Cercosaura*: Single.*Pantodactylus*: Single.*Interparietal.**Leposoma*: Longer than the parietals in all species except *scincoides*.*Alopoglossus*: Equal in length to the parietals.*Cercosaura*: Longer than the parietals.*Pantodactylus*: Longer than the parietals.*Postparietals and occipitals.**Leposoma*: Not present.*Alopoglossus*: Not present.*Cercosaura*: Present.*Pantodactylus*: Present.*Head scales.**Leposoma*: With longitudinal striations.*Alopoglossus*: Smooth or with longitudinal striations on the interparietal and parietals.*Cercosaura*: Smooth.*Pantodactylus*: Smooth.*Tongue.**Leposoma*: With imbricate scale-like papillae.*Alopoglossus*: With oblique plicae.*Cercosaura*: With imbricate scale-like papillae.*Pantodactylus*: With imbricate scale-like papillae.*Gulars.**Leposoma*: Not enlarged or differentiated into two longitudinal rows.*Alopoglossus*: Not enlarged or differentiated; enlarged; or differentiated into two longitudinal rows of transversely enlarged scales.*Cercosaura*: Differentiated into two longitudinal rows of transversely enlarged scales.*Pantodactylus*: Differentiated into two longitudinal rows of transversely enlarged scales.

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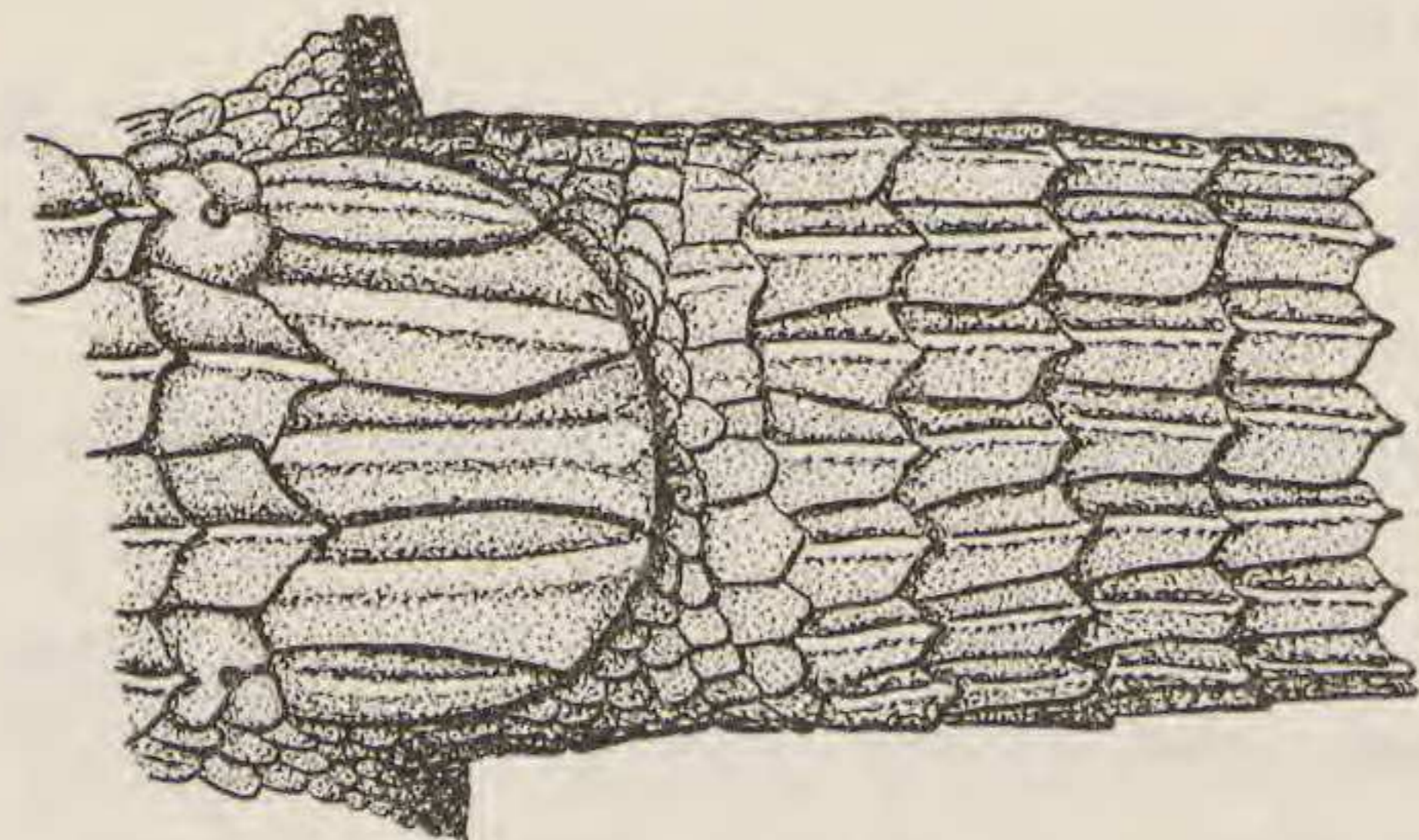


Fig. 1. Preanal scales of *Leposoma guianense* sp. nov. (type, U.M.M.Z. 46770). ■

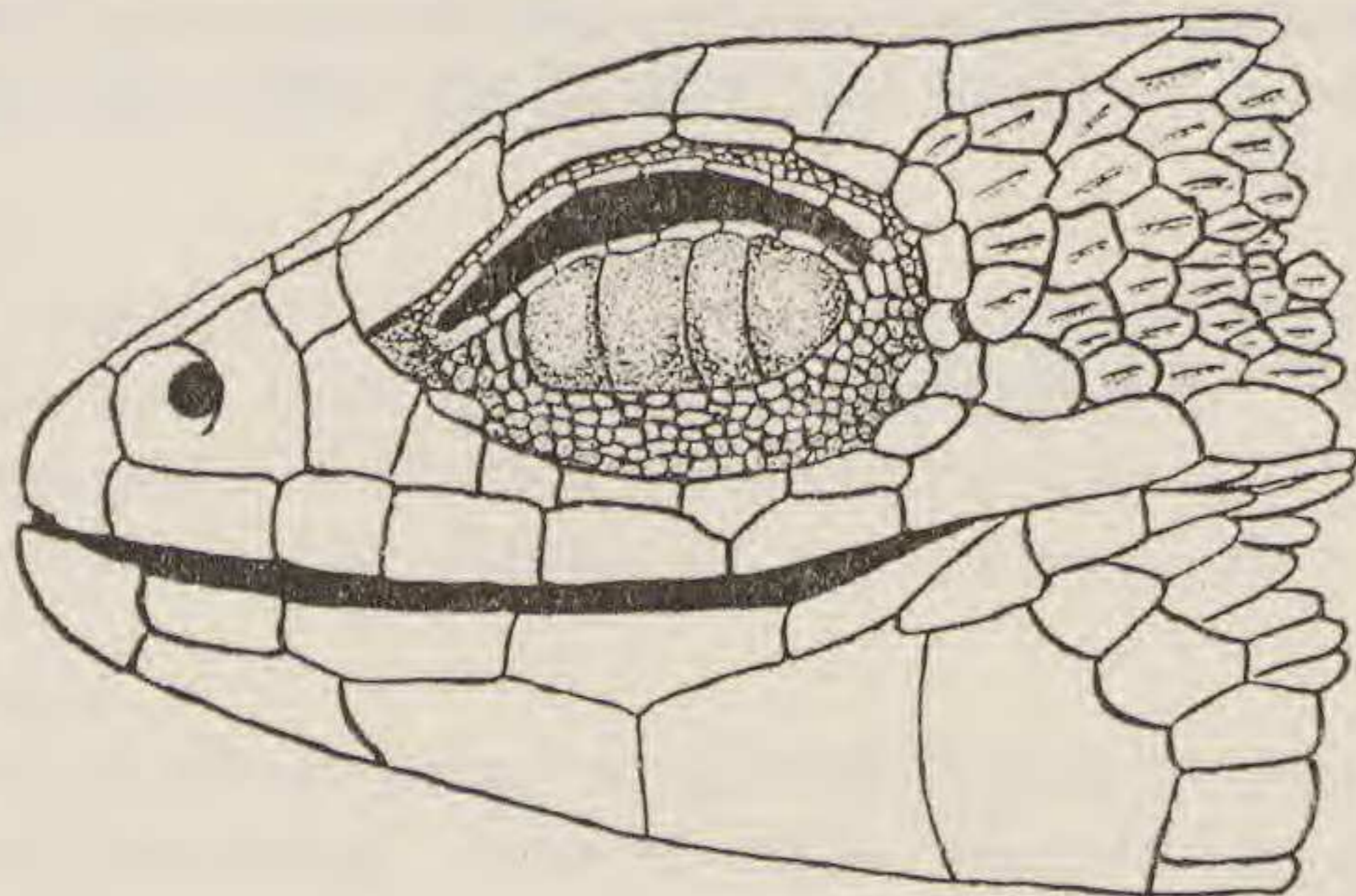


Fig. 2. *Leposoma guianense* sp. nov. (type U.M.M.Z. 46770). Lateral view of head showing reduced loreal typical of all species of *Leposoma*.

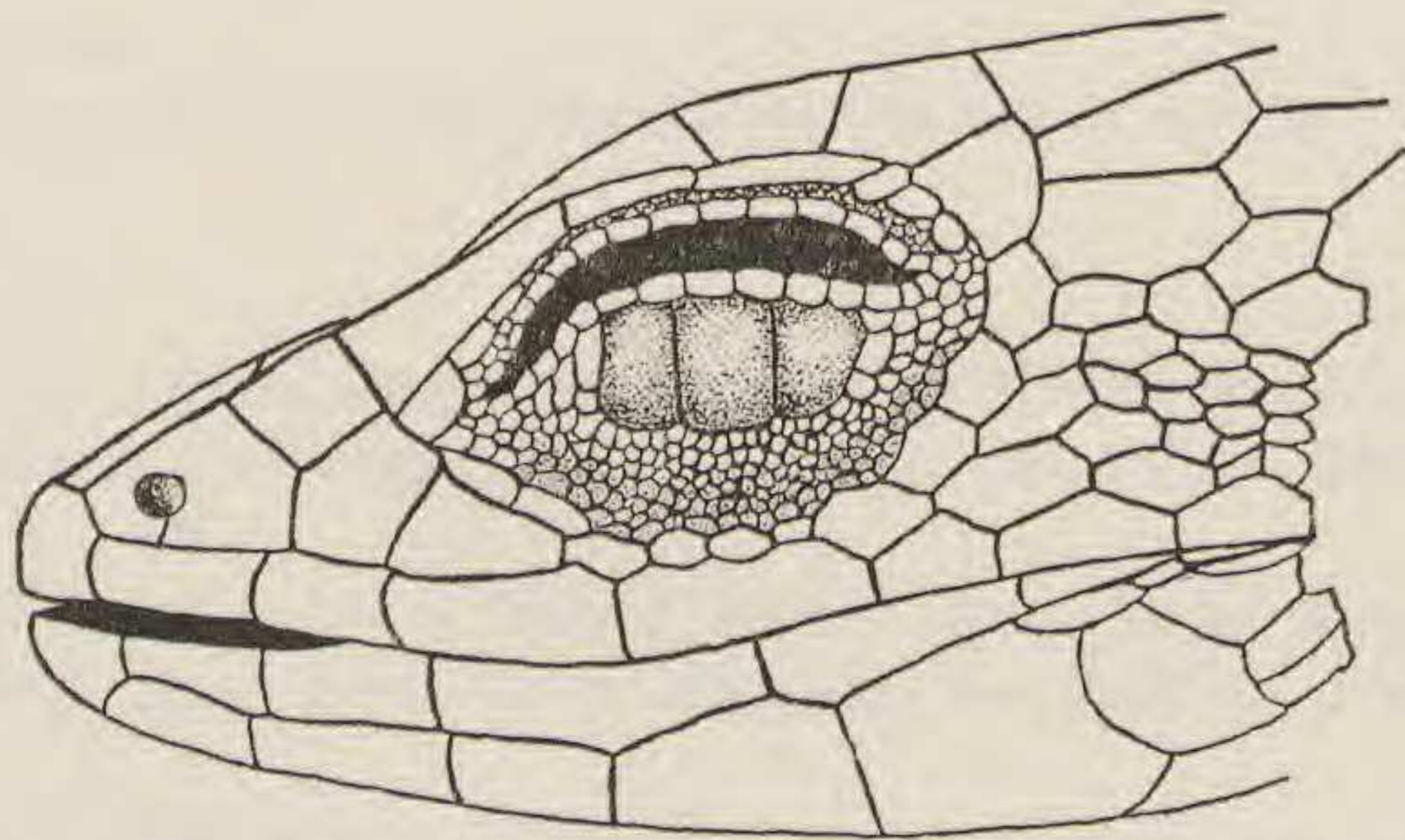


Fig. 3. *Cercosaura ocellata bassleri* subsp. nov. (A.M.N.H. 56391). Lateral view of head showing divided loreal.

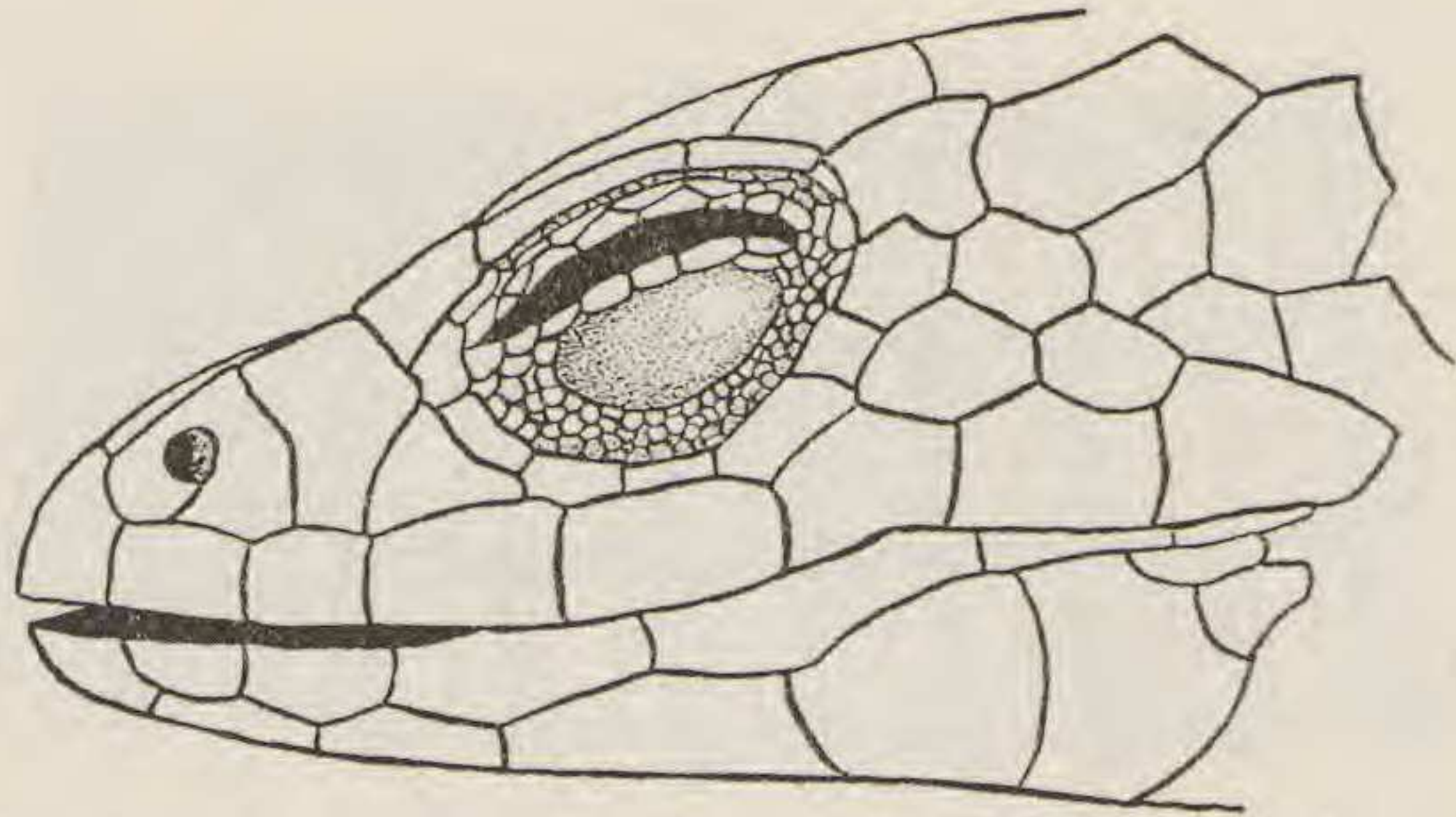


Fig. 4. *Pantodactylus schreibersii schreibersii* (M.C.Z. 22156). Lateral view of head showing large loreal typical of all species of *Pantodactylus*.

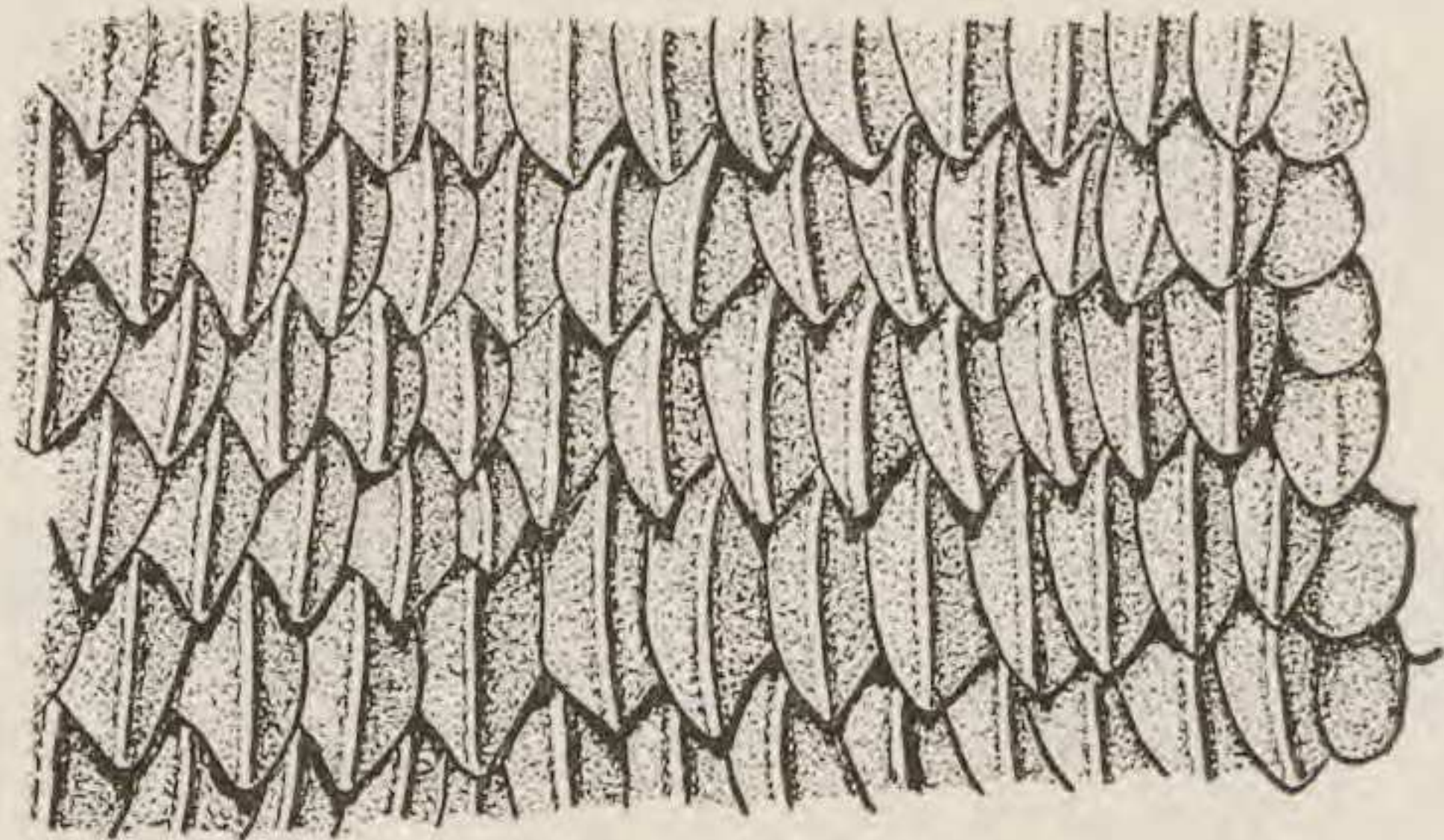


Fig. 5. Dorsal and right lateral scales of *Pantodactylus schreibersii schreibersii*.

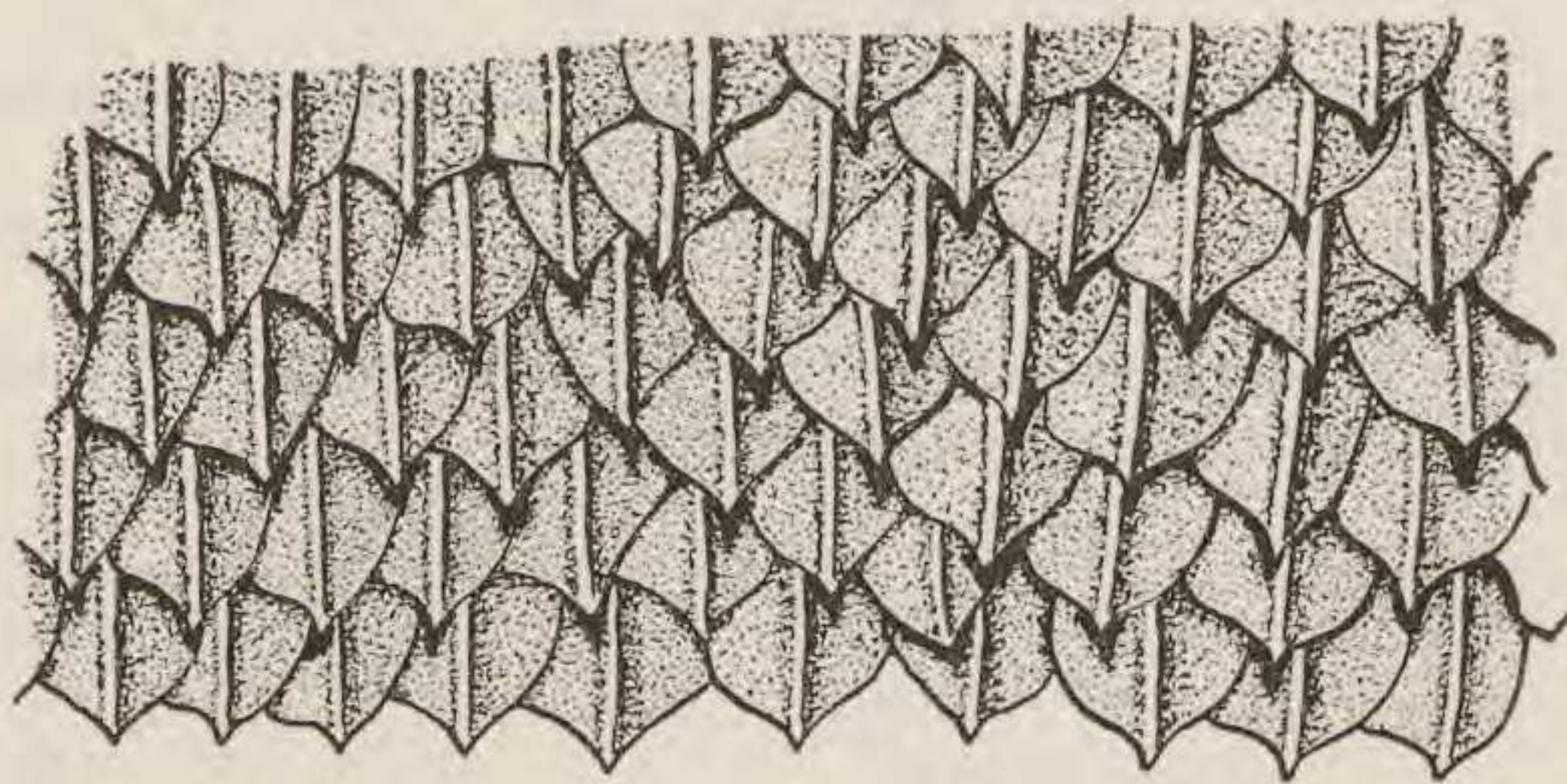


Fig. 6. Dorsal and right lateral scales of *Leposoma percarinatum*.

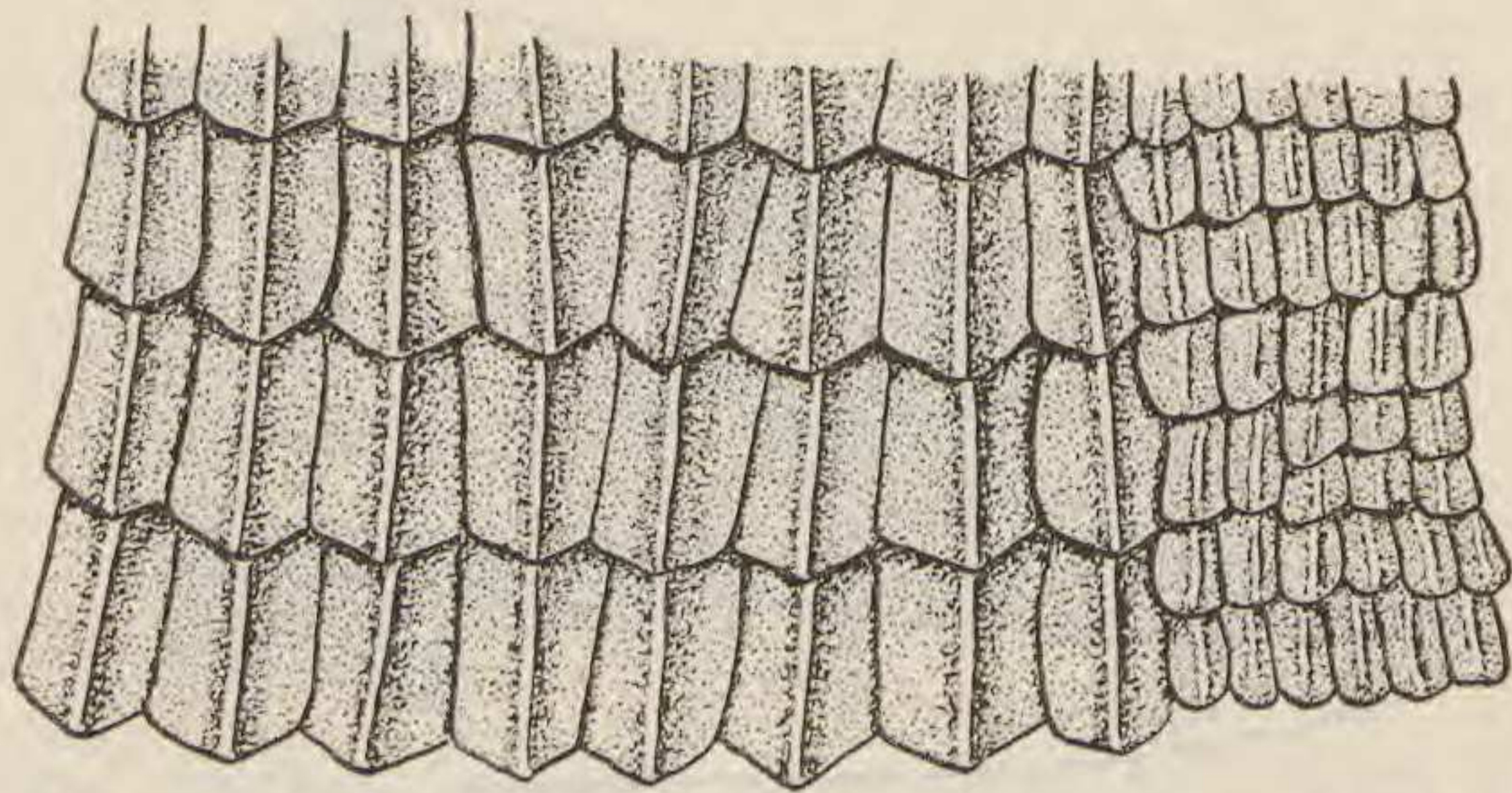


Fig. 7. Dorsal and right lateral scales of *Cercosaura ocellata ocellata*.

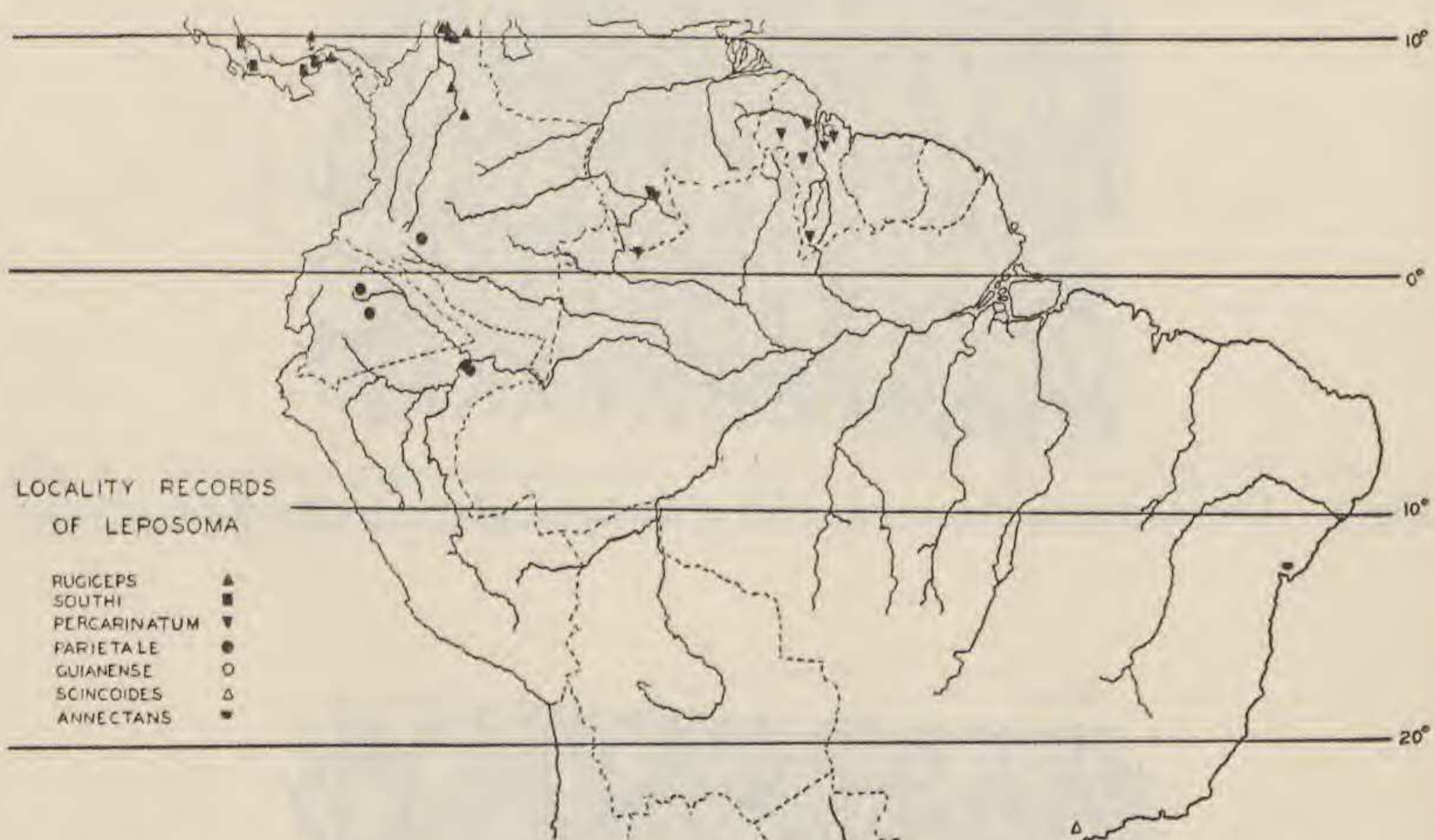


Fig. 8. Map showing the distribution of the species of *Leposoma*, based upon the locality data of specimens examined.

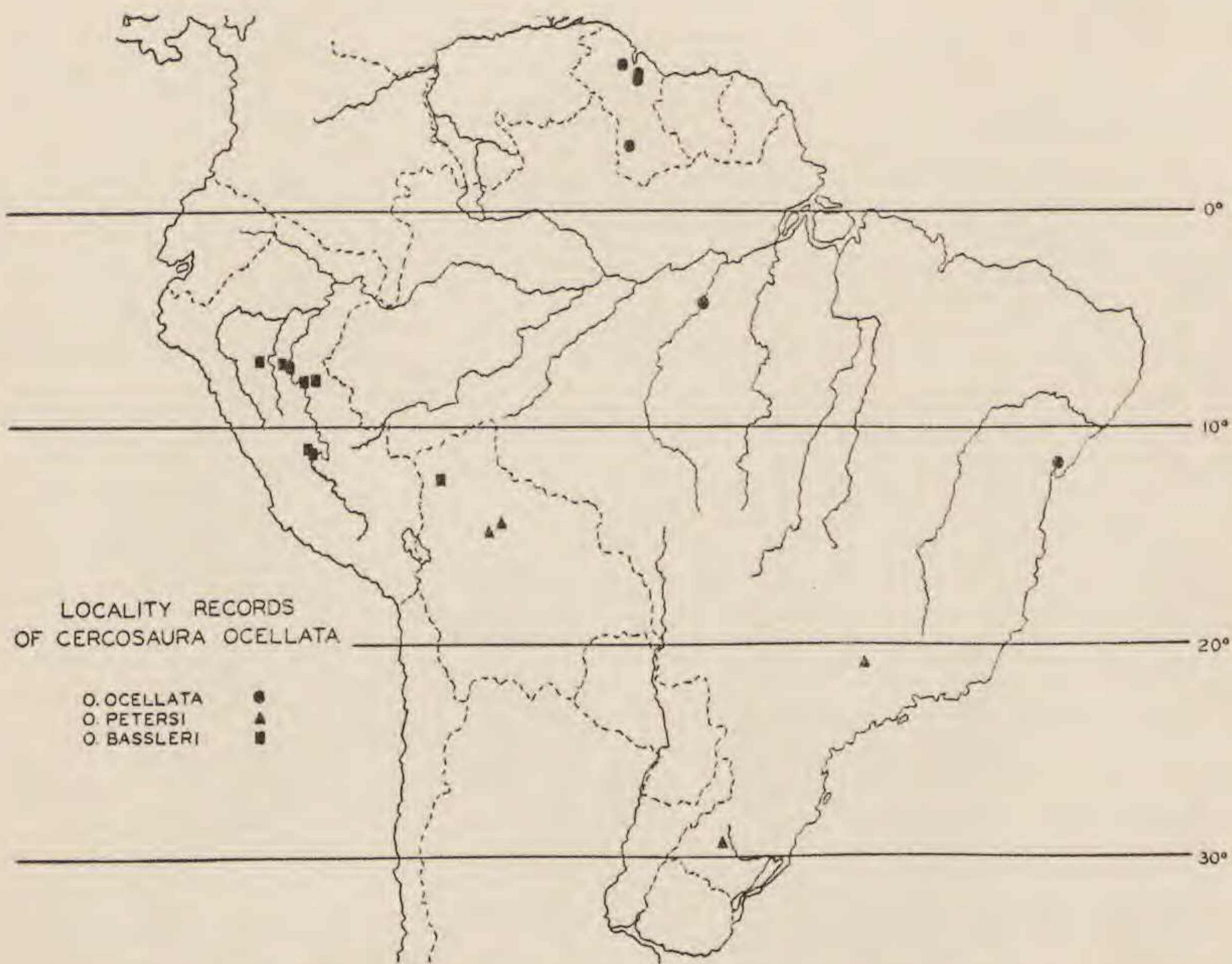


Fig. 9. Map showing the distribution of the subspecies of *Cercosaura ocellata*, based upon the locality data of the specimens examined.

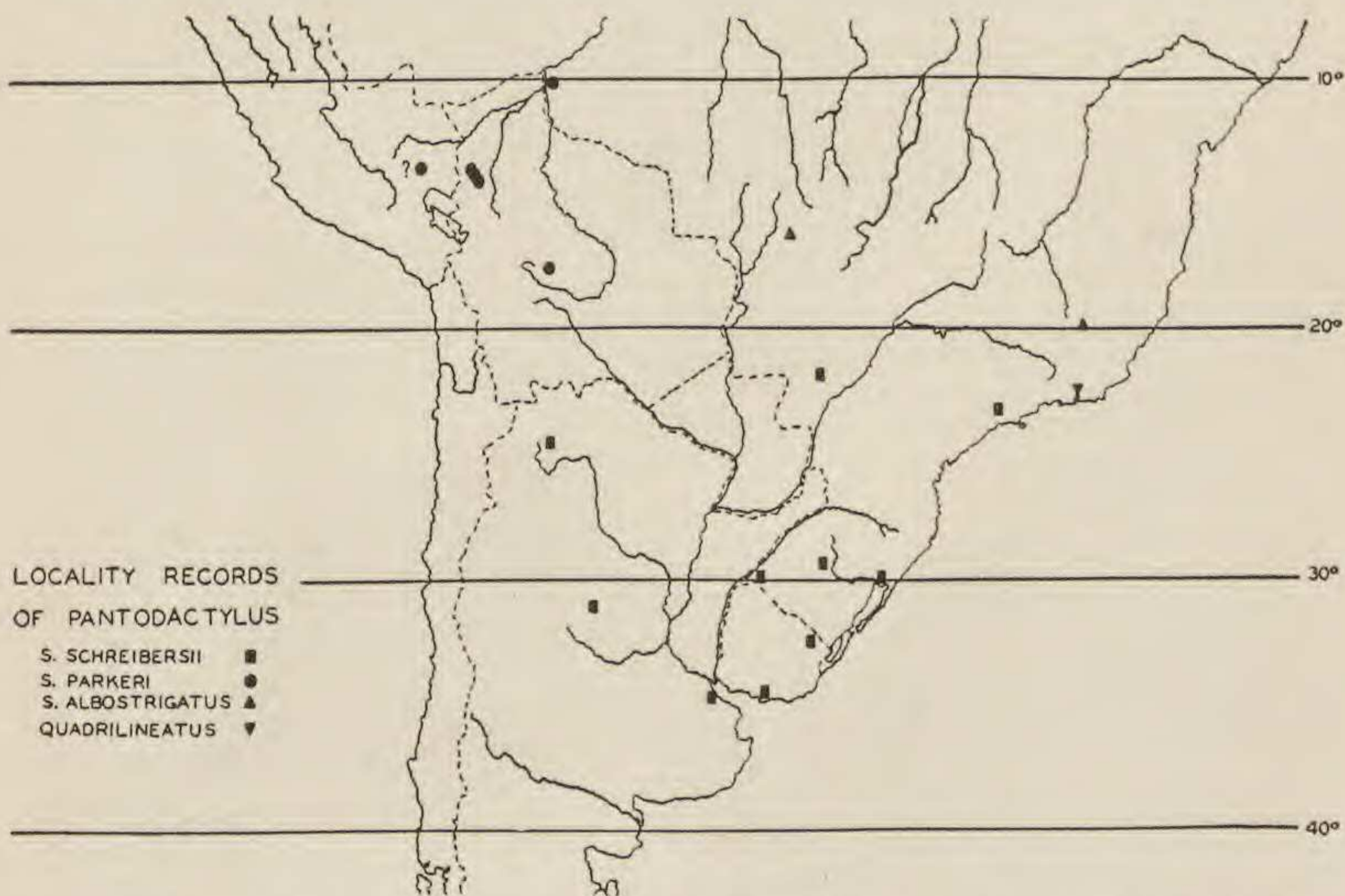


Fig. 10. Map showing the distribution of the species of *Pantodactylus*, based upon the locality data of the specimens examined.