

A New Genus and Species of Gymnophthalmid Lizard (Squamata: Gymnophthalmidae) from Kaieteur National Park, Guyana

by Philippe J. R. KOK

Abstract

A new genus and species of gymnophthalmid are described from Kaieteur National Park, central western Guyana, South America. The new genus mainly differs from all other known gymnophthalmids by the following combination of characters: five fingers and toes, all clawed; tongue with oblique plicae anteriorly and posteriorly, interrupted by a midsection of scalelike papillae; dorsal scales keeled, hexagonal, forming transverse rows only; ventral scales smooth, hexagonal, forming transverse rows only; nasal divided; frontonasal single; prefrontals absent; complete supraciliary series; interparietal heptagonal with a straight posterior margin, not projecting posteriorly.

Key-words: Gymnophthalmidae; New genus; New species; *Kaieteurosaurus hindsi* genus and species novum; Squamata; Taxonomy; Kaieteur National Park; Guyana; South America.

Résumé

Un nouveau genre et une nouvelle espèce de gymnophthalmide sont décrits du Parc National de Kaieteur, au centre ouest du Guyana, Amérique du Sud. Le nouveau genre diffère de tous les autres gymnophthalmides connus principalement par la combinaison de caractères suivants: cinq doigts et orteils, tous avec griffe; langue portant des replis obliques antérieurement et postérieurement, séparés par une série de papilles en forme d'écailles; écailles dorsales carénées, hexagonales, en rangs transverses uniquement; écailles ventrales lisses, hexagonales, en rangs transverses uniquement; nasale divisée; frontonasale unique; absence de préfrontales; série complète d'écailles superciliaires; interpariétale heptagonale avec une marge postérieure droite ne se projetant pas postérieurement.

Mots-clés: Gymnophthalmidae; Nouveau genre; Nouvelle espèce; *Kaieteurosaurus hindsi* genus and species novum; Squamata; Taxonomie; Parc National de Kaieteur; Guyana; Amérique du Sud.

Introduction

The taxonomic status of the family Gymnophthalmidae has a long history of controversy, and some authors still consider the Gymnophthalmidae as a subfamily (Gymnophthalminae) of the Teiidae. However, recent molecular evidence (e.g. PELLEGRINO *et al.*, 2001; DOAN, 2003; CASTOE *et al.*, 2004) advocates the validity of the Gymnophthalmidae as a family.

The lizards of the family Gymnophthalmidae, informally referred to as "microteiids" (RUIBAL, 1952), currently include approximately thirty-seven genera. Gymnophthalmids are widely distributed in temperate, subtropical, and tropical areas of southern Mexico, Central America and South America. Approximately 15 gymnophthalmid genera are currently known to occur in the Guiana Shield region [region as defined by HUBER & FOSTER (2003)]. While most of these genera were first described during the nineteenth century and are widespread in northern South America, three new endemic gymnophthalmid genera were described from the Guiana Shield from the beginning of the twentieth century to the present. *Amapasaurus* was created by CUNHA (1970) to accommodate *A. tetradactylus*, a species endemic to the state of Amapá, Brazil. The genus *Riolama* was erected by UZZELL (1973) to accommodate *R. leucostictus*, a species restricted to Mount Roraima in Venezuela and formerly included in the genus *Prionodactylus*. The third genus, *Adercosaurus*, was recently described by MYERS & DONNELLY (2001) to accommodate *A. vixadnexus*, a species known from only one specimen, which appears to be endemic to the Yutajé-Corocoro massif in Venezuela.

Until recently, little herpetological research had been conducted in much of this region and very few surveys had documented herpetofaunal assemblages in Guyana. The herpetofaunal diversity of the remarkable site of Kaieteur National Park, central western Guyana, remains very poorly known and the only amphibian and reptile species list currently available is the short compilation of 29 species by Cole, Townsend and Reynolds given in KELLOFF (2003), which contains several mistakes and dubious records (e.g. "*Gastrotheca* sp. nov."). In efforts to further investigate the herpetological species richness and community structure in Kaieteur National Park, we recently completed the first collections in a series that will be conducted in the park over the next few years. These initial collections resulted in the expansion of the preliminary list to 93 species and included one specimen of gymnophthalmid that, in the field, was assumed to be an *Arthrosaura*. After further examination in the laboratory, it became clear that it does not fit in any gymnophthalmid genus known from the Guiana Shield area, nor could it be placed in any of the extralimital genera. The new genus and species are described herein.

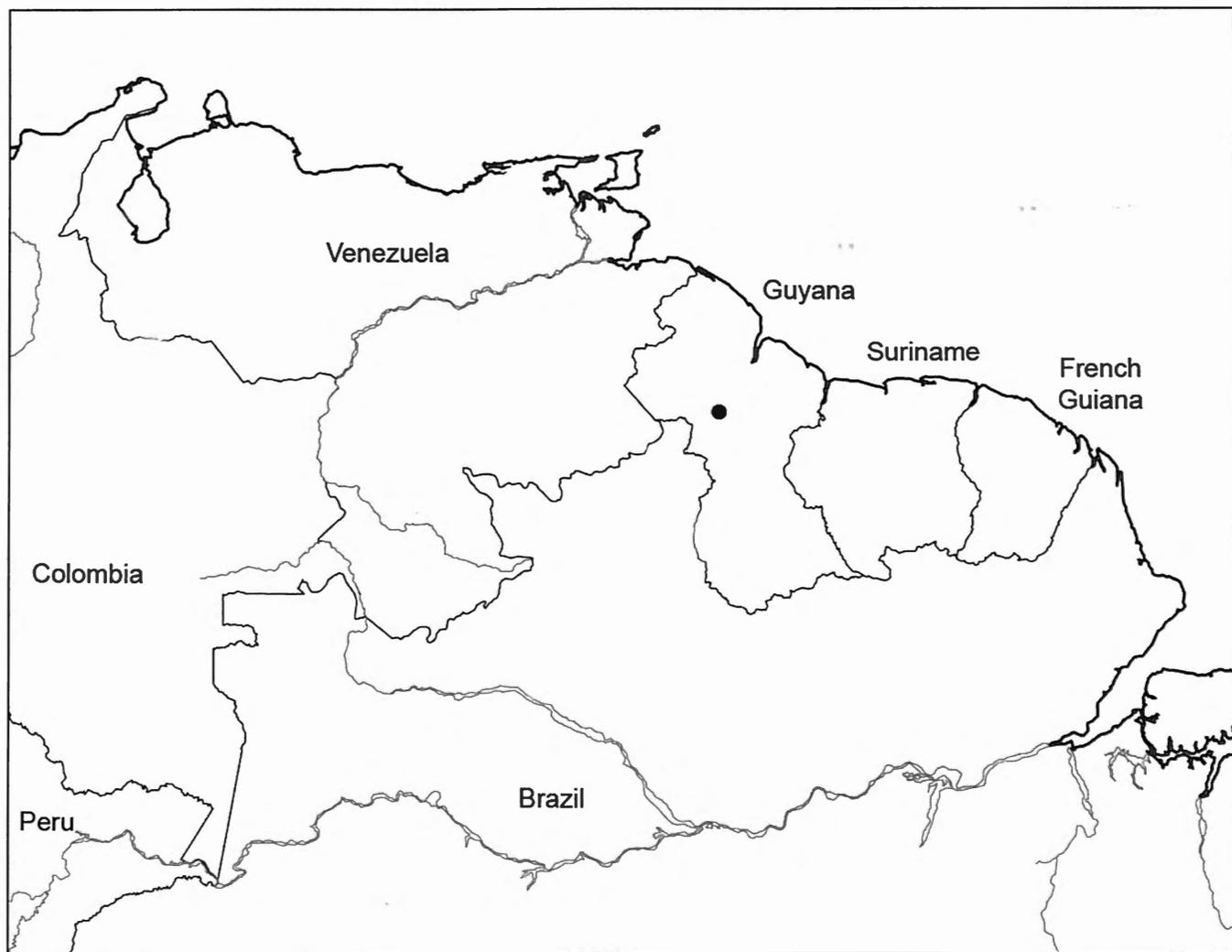


Fig. 1. Map of northeastern South America showing the type locality of *Kaieteurosaurus hindsi*, new species (circle).

Materials and Methods

The holotype, fixed in 10% formalin, was transferred to and stored in 70% ethanol and was deposited in the herpetological collections of the Royal Belgian Institute of Natural Sciences, Brussels, Belgium. Measurements to the nearest 0.1 mm were taken with electronic digital calipers. Scale terminology and character definitions follow those of SMITH (1946), PETERS (1964), HARRIS (1994), and KIZIRIAN (1996) except that scales posterior to the parietals and interparietal on the dorsal surface of the head are referred to as occipitals, *sensu* UZZELL (1958). Scale counts were made using a stereo dissecting microscope. Comparisons with other genera were made with museum material in the collections of the Royal Belgian Institute of Natural Sciences, Brussels (IRSNB), the Muséum National d'Histoire Naturelle, Paris (MNHN), the American Museum of Natural History, New York (AMNH), with digital photographs of specimens in the care of the National Museum of Natural History, Washington (USNM) as well as original published descriptions and descriptions provided in taxonomic revisions and broader faunal treatments (*e.g.* BOULENGER, 1885;

AMARAL, 1933; RUIBAL, 1952; UZZELL (1959, 1965, 1966, 1969, 1973); CUNHA, 1970; MONTANUCCI, 1973; DIXON (1973, 1974); OFTEDAL, 1974; HARRIS & AYALA, 1987; HOOGMOED & AVILA-PIRES, 1992; HARRIS, 1994; AVILA-PIRES, 1995; KIZIRIAN, 1996; RODRIGUES, 1997; RODRIGUES & BORGES, 1997; GORZULA & SEÑARIS, 1999; MACCULLOCH & LATHROP, 2001; MYERS & DONNELLY, 2001; FRITTS *et al.*, 2002 ; RODRIGUES *et al.*, 2002).

Kaieteurosaurus hindsi genus and species novum Fig. 3-6, 7 (left), 8

HOLOTYPE

Royal Belgian Institute of Natural Sciences (IRSNB) 2628, an adult male collected by Philippe Kok, Hemchandranauth Sambhu, Reuben Williams and Festus Marco, 23 November 2004, on Tukeit trail, *ca.* 1,250 m NEE from the beginning of the Kaieteur National Park airstrip (from point closest to the gorge), 420 m elevation, Kaieteur National Park, Potaro-Siparuni district, Guyana (Fig. 1-2).

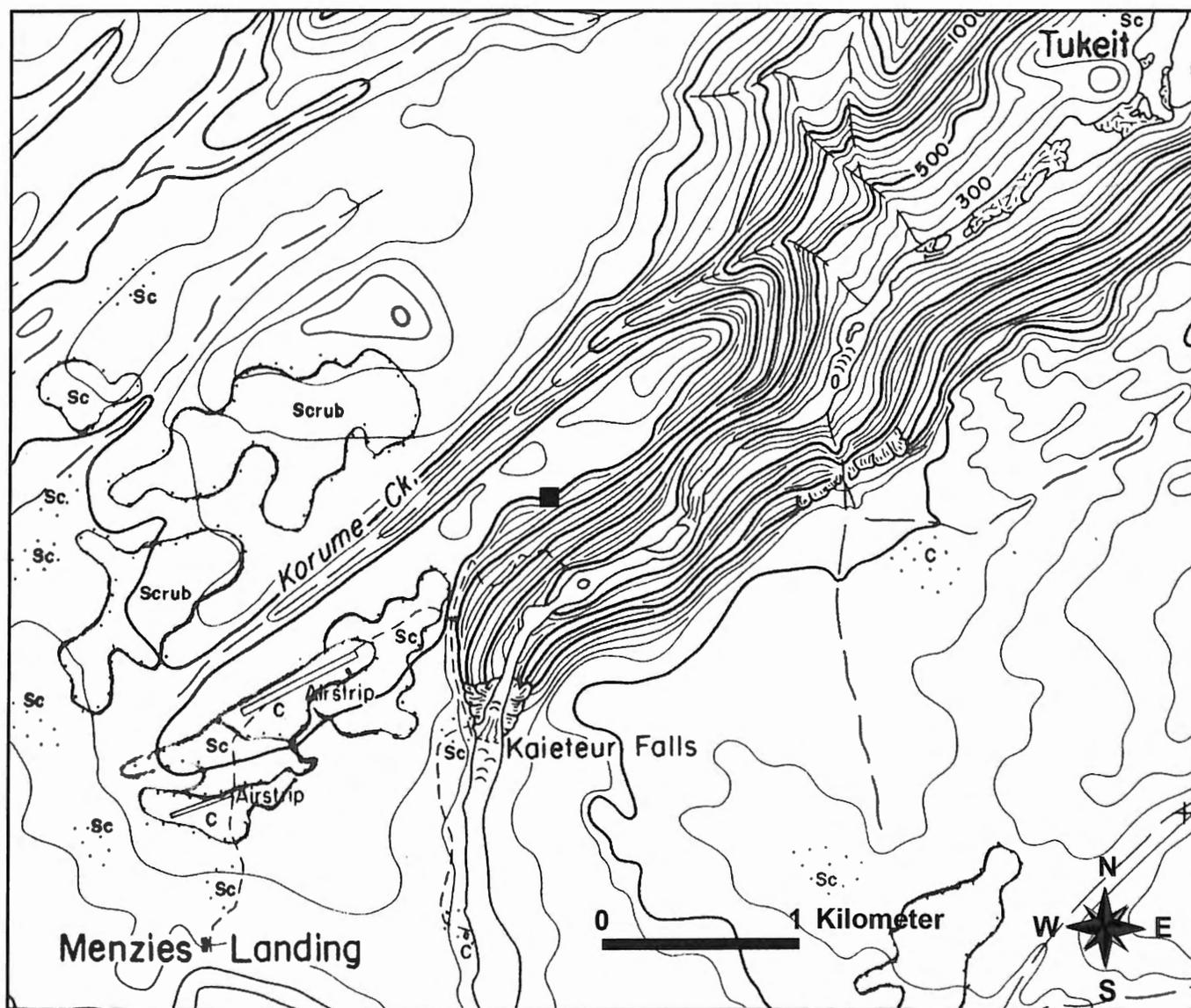


Fig. 2. Area map of Kaieteur National Park between Menzies Landing and Tukeit showing the collection site of *Kaieteurosaurus hindsi*, new species (square). Map after "Kaieteur Sheet 43 SW" published by Survey Department of Guyana, 1972.

ETYMOLOGY

The generic name is a noun in apposition and is derived from "Kaieteur" referring to the Kaieteur National Park where the type species occurs, the connecting *-o*, and the Greek "*sauros*" meaning "lizard". The gender is masculine. The specific epithet is a patronym honouring the Prime Minister of Guyana, Mr. Samuel Hinds who kindly granted permission to conduct our study in the Kaieteur National Park; without his enthusiastic support our research would not have been possible.

GENERIC DIAGNOSIS

A small (44.4 mm SVL) gymnophthalmid lizard with cylindrical, slightly depressed body, tail long, round in cross section, without longitudinal ridges. Ear opening present. Limbs well developed, pentadactyl, with all digits clawed. Nasals divided, separated by an undivided frontonasal. Prefrontals absent. Loreal separated from labials by nasal and frenocular.

Complete supraciliary series; anterior supraciliary large, not expanded dorsally. Lower eyelid with semi-transparent disc, consisting of six palpebrals. Frontoparietals and occipitals present. Interparietal heptagonal with a straight posterior edge. Interparietal and parietals of approximately same length, forming a more-or-less straight line across the rear of the head (posterior margin of parietals and interparietal slightly convex due to the shape of parietals). Dorsal head scales smooth. Single postmental scale followed by two pairs of large genials in contact with labials and a third pair, much smaller, separated from the labials. Gular scales in transverse rows, first two rows of subequal scales, followed by three rows with a central pair of enlarged scales. Collar with seven scales, the three central ones largest, forming a scalloped posterior border. Dorsals lanceolate (appearing hexagonal¹ because of imbrication), strongly keeled, strongly mucro-

1. See MYERS & DONNELLY (2001: 56) for an accurate definition of hexagonal scales as understood here. Refer also to Fig. 8 in this paper.

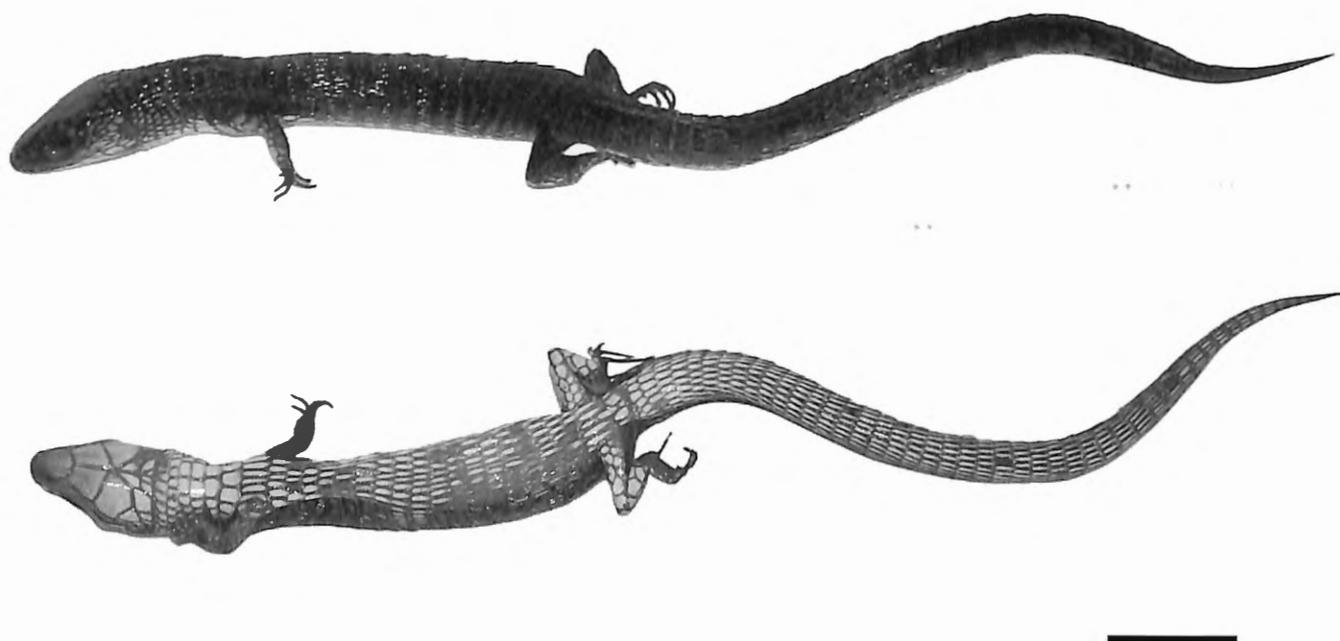


Fig. 3. *Kaieteurosaurus hindsi*, new species. Dorsolateral (top) and ventral (bottom) views of the preserved holotype (IRSNB 2628). Scale bar = 10 mm.

nate, in transverse rows only, ventrals lanceolate (appearing hexagonal because of imbrication), smooth, strongly mucronate, in transverse rows only. Dorsals and laterals of equal size. Tongue with oblique plicae anteriorly and posteriorly; midsection with scalelike papillae (Fig. 5). By this unique combination of characters the new genus is readily distinguishable from all other known South American gymnophthalmids. In having hexagonal ventral scales that do not form longitudinal rows and the lingual plicae interrupted by a midsection of scalelike papillae, *Kaieteurosaurus* most closely resembles *Ecpleopus* from southeastern Brazil, but is distinctive in many ways, in particular in having a larger head, quadrangular gular scales (gular scales mucronate in *Ecpleopus*), six paramedian gular scales enlarged toward collar (no enlarged paramedian gular scales in *Ecpleopus*), no prefrontals, divided nasal (single in *Ecpleopus*), first supraocular separated from frontonasal by frontal-loreal contact (first supraocular touching both loreal and frontonasal in *Ecpleopus*), complete supraciliary series (incomplete in *Ecpleopus*), interparietal heptagonal with a straight posterior margin (interparietal hexagonal, posteriorly slightly projecting in *Ecpleopus*), proportionally longer fingers, two enlarged thenar scales with produced inner edge (edge not produced in *Ecpleopus*), ventrals narrower and much more lanceolate (as sharply pointed as the dorsals in *Kaieteurosaurus* versus less sharply pointed than the dorsals in *Ecpleopus*), and presence of femoral pores in males (absent in *Ecpleopus*). In having hexagonal and strongly mucronate ventral scales, *Kaieteurosaurus* could be confused with *Leposoma* of the *scinoides* group from the Brazilian Atlantic forests, but these species are distinctive

mainly by the tongue morphology, in having keeled ventral scales (smooth in *Kaieteurosaurus*), mucronate gular scales (quadrangular gular scales in *Kaieteurosaurus*), longitudinal striations on head scales (no striations in *Kaieteurosaurus*) and in lacking occipitals (present in *Kaieteurosaurus*). In having oblique plicae on the anterior and posterior part of the tongue, *Kaieteurosaurus* also resembles *Adercosaurus*, *Alopoglossus*, *Ptychoglossus* and *Riolama*, agreeing only with *Adercosaurus* and *Riolama* in having a midsection of scalelike papillae between the anterior and posterior plicae (tongue entirely plicate in *Alopoglossus* and *Ptychoglossus*), but these two genera are distinctive in having the interparietal posteriorly projecting, forming a jagged or irregular line (parietals and interparietal forming a more-or-less straight line across the rear of the head in *Kaieteurosaurus*), and in having quadrangular ventral scales in transverse and longitudinal rows (hexagonal ventral scales in transverse rows only in *Kaieteurosaurus*). In addition, *Riolama* also differs from *Kaieteurosaurus* in lacking claw on the first finger (see MYERS & DONNELLY, 2001: 52). *Kaieteurosaurus* could also be confused with *Arthrosaura* but is easily distinguished, primarily by the tongue morphology, in having hexagonal ventral scales in transverse rows only (quadrangular ventral scales in transverse and longitudinal rows in *Arthrosaura*), in having smooth scales on the forelimbs (keeled in *Arthrosaura*), and in having a divided nasal (undivided in *Arthrosaura*).

SPECIES DIAGNOSIS

The species diagnosis is the same as that for the genus.

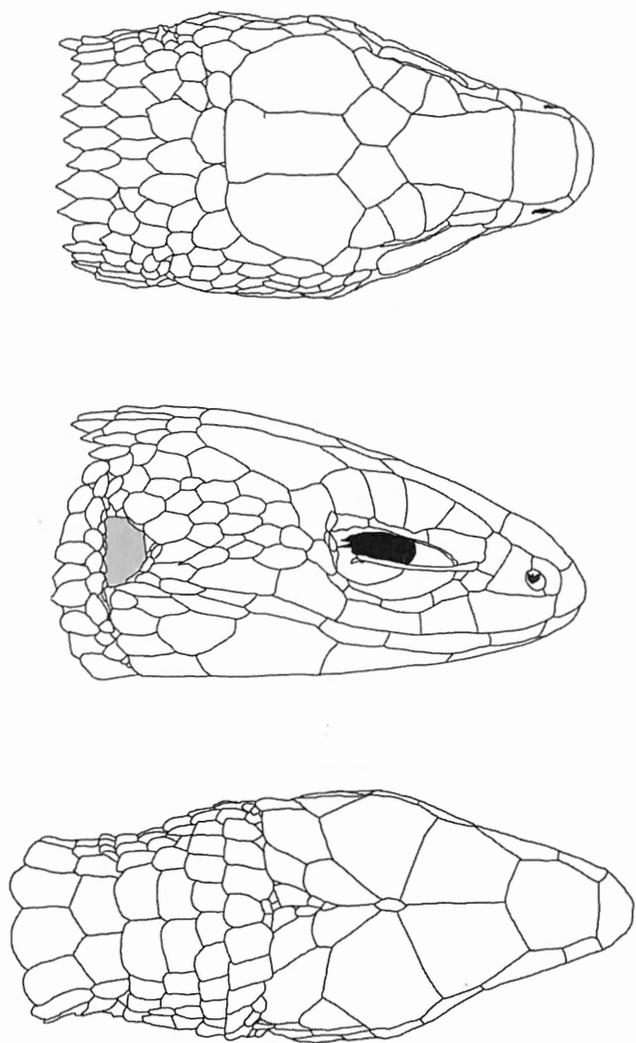


Fig. 4. Head squamation of holotype of *Kaieteurosaurus hindsi* (IRSNB 2628): top- dorsal view, middle- lateral view, bottom- ventral view. Scale bar = 1 mm.

DESCRIPTION OF HOLOTYPE

The male holotype is the only known specimen. It was collected alive in a pitfall trap and was slightly damaged, probably by large black ants that also fell in the trap. The specimen died in the collecting bag during transportation to the base camp and was already slightly desiccated when fixed in preservative.

Snout-vent-length 44.4 mm; tail length 58.3 mm (apparently complete); head length (obliquely from tip of snout to posterior margin of ear) 10 mm; greatest head width 6.2 mm; greatest head height 5 mm; snout-axilla length 17.6 mm; length of neck (posterior margin of ear to forearm) 5.7 mm; trunk length (axilla-groin) 22.7 mm; length of forelimb and hindlimb (from axilla or groin to tip of longest digit) 8.8 and 13.5 mm, respectively. Head relatively long, conical, depressed, head length 23% of SVL, head length 1.6 times head width, head width 1.2 times head height. Head large, wider than neck; neck as wide as anterior body. Neck 57% of head length, 25% of trunk length. Snout-axilla length 78% of

trunk length, 40% of SVL. Body cylindrical, slightly depressed. Complete tail 1.3 times SVL, nearly circular in cross section. Limbs pentadactyl, all digits with terminal claws. Forelimbs 19.8% of SVL, 39% of trunk length; hind legs 30% of SVL, 59% of trunk length; adpressed limbs not overlapping, separated by two or three lateral scales.

Tongue lanceolate, bifid, grey anteriorly. Most of anterior half behind fork with oblique plicae, replaced posteriorly by a zone of scalelike papillae, most of them unpigmented, which occupy the midsection of the tongue. Behind the scalelike papillae, the unpigmented posterior half of the tongue bears anteriorly converging plicae. Condition of infralingual plicae seems most similar to the condition illustrated for *Ecleopus* by HARRIS (1985). Anterior teeth conical, posterior teeth bicuspid.

Head scales smooth, small pits on rostral, frontonasal and anterior part of frontal.

Rostral rectangular, wider than deep, visible from above, laterally in contact with nasal and first supralabial, dorsally in contact with frontonasal. Frontonasal single, quadrangular, laterally in contact with nasal and loreal. Prefrontals absent. Frontal pentagonal, longer than wide, broader anteriorly than posteriorly, laterally concave, in contact with first, second and third supraocular. Two pentagonal frontoparietals,



Fig. 5. Tongue of *Kaieteurosaurus hindsi*, new species (holotype). Photograph by J. Constant.

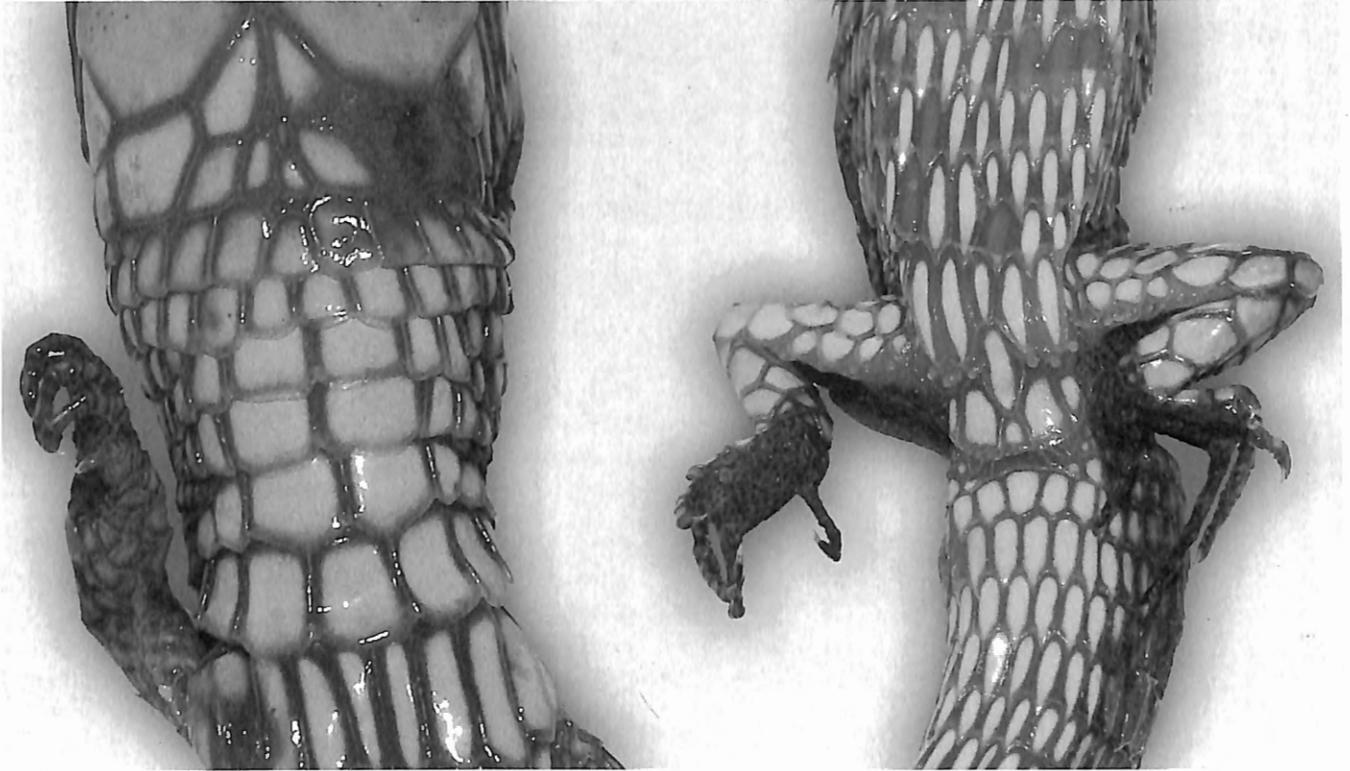


Fig. 6. *Kaieteurosaurus hindsi*, new species (holotype). Details of gular (left) and sub-pelvic (right) regions.

slightly longer than wide, median suture short, each in contact with the interparietal, one parietal, and supraoculars 3-4. Interparietal elongate, heptagonal, broader posteriorly, distinctly narrower than parietals, with a straight posterior margin. The trace of a short suture is visible on the left side of the

interparietal just before it starts to widen. Parietals longer than wide, broader anteriorly. A row of five rectangular occipitals, tending to be shorter and wider than dorsal neck scales; median occipital scale widest. Four supraoculars, in direct contact with supraciliaries, first and fourth smallest,

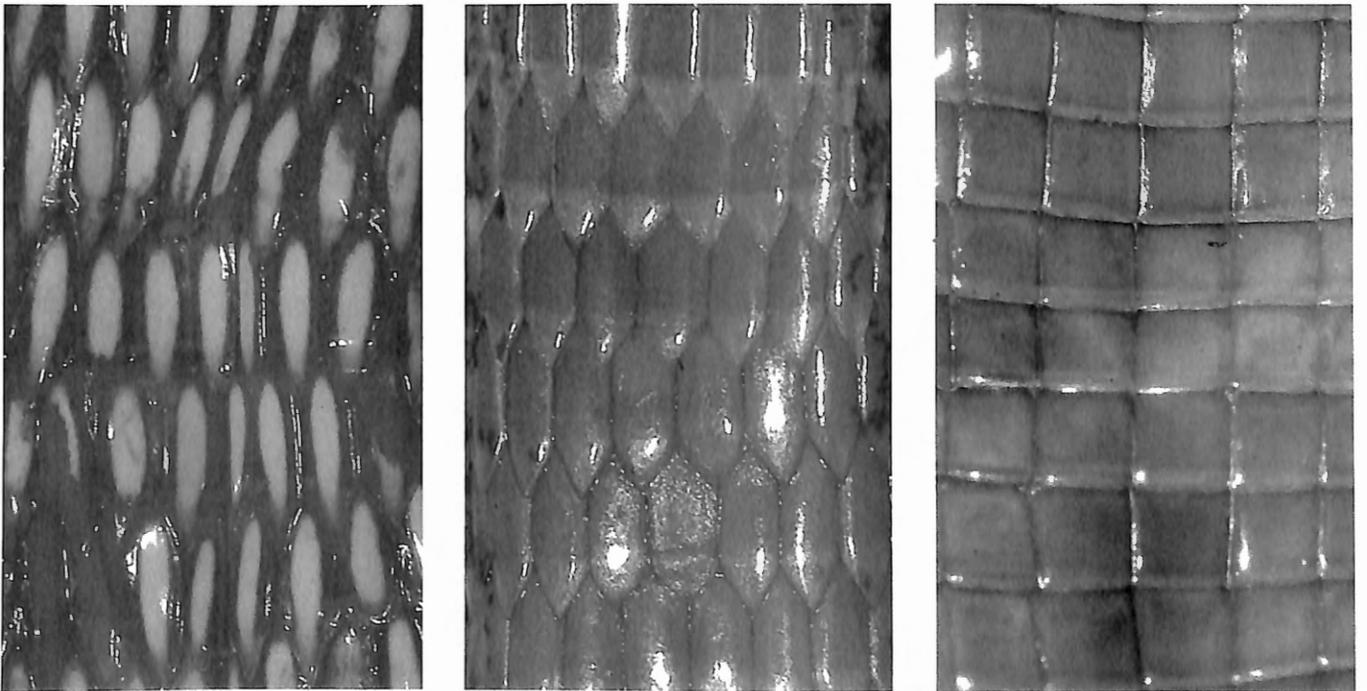


Fig. 7. Ventral midbody scales. Left: *Kaieteurosaurus hindsi*, new species (holotype). Middle: *Ecleopus gaudichaudii* (AMNH 131869, Brazil). Right: *Ptychoglossus brevifrontalis* (MNHN 1999.4902, Colombia).

third slightly larger, second largest. Three supraciliaries, first distinctly larger.

Nasal divided, wider than high; nostril below the center. Loreal higher than long, in contact with nasal, frenocular, frontonasal, frontal, first supraocular, first supraciliary; separated from first supralabial by frenocular-nasal contact. Frenocular pentagonal, half the size of the loreal. Suboculars five. Supralabials five, fourth highest, third under middle of eye; first supralabial longer than nasal, in contact with first subocular on the right side, separated from first subocular by frenocular-supralabial 2 contact on the left side. Temporal scales 23, large, variable in shape, smooth, increasing in size posteriorly, not in rows. Ear opening higher than wide, rounded anterior margin bordered by small scales, posterior margin straight; auditory meatus short, tympanum visible.

Mental trapezoidal with straight posterior margin, postmental large, heptagonal, longer than wide, in lateral contact with infralabials 1 and 2. Two pairs of genials equal in length, first pair in contact medially; second pair in contact with infralabials but separated medially by a small scale; a third pair of genials, much smaller than the preceding two pairs, separated medially by a patch of scales of varying size and widely separated from the infralabials. Five infralabials. Small pits on infralabials, supralabials, mental and genials. No distinct pregulars. Five transverse rows of smooth quadrangular gulars, the anterior two rows consisting of subequal scales, the posterior three rows with a pair of enlarged median scales, which are enlarged towards the collar. Collar with seven scales, the median three distinctly larger, forming a scalloped posterior border. Collar fold well developed.

Side of neck with medium-sized scales in eight rows. Anteriormost five rows of scales on the nape longer than wide, mucronate, smooth. Dorsal and lateral body scales of equal size; lanceolate (appearing hexagonal because of imbrication), strongly keeled, strongly mucronate, imbricate, in parallel transverse rows only; scale length more than three times scale width, in 31 rows from interparietal to posterior margin of leg (including occipitals and nape scales); no abrupt demarcation between dorsals and laterals. Ventrals lanceolate (appearing hexagonal because of imbrication), smooth, strongly mucronate, imbricate, in 20 transverse rows; scale length more than three times scale width, becoming slightly wider towards the pectoral and pelvic regions. Ventral scales becoming narrower and increasingly keeled laterally, grading into the laterals, with no granular scales separating ventrals and laterals. Scales around midbody 37. Six preanal scales, including one elongate anterior central scale and a row of five posterior scales just anterior to vent. Preanal pores 2/2 and femoral pores 7/5 in same line. Each femoral and preanal pore surrounded by a few very small scales.

Dorsal and lateral caudal scales similar to, but slightly shorter than, body scales, lanceolate (appearing hexagonal because of imbrication), strongly keeled, strongly mucronate, imbricate, in transverse rows only. Subcaudals smooth, strongly mucronate, imbricate, slightly larger than dorsal and lateral caudal scales, becoming keeled laterally, grading into laterals.

Scales on upper side of upper arms and forearms large, variably polygonal, smooth (three scales are keeled on the right

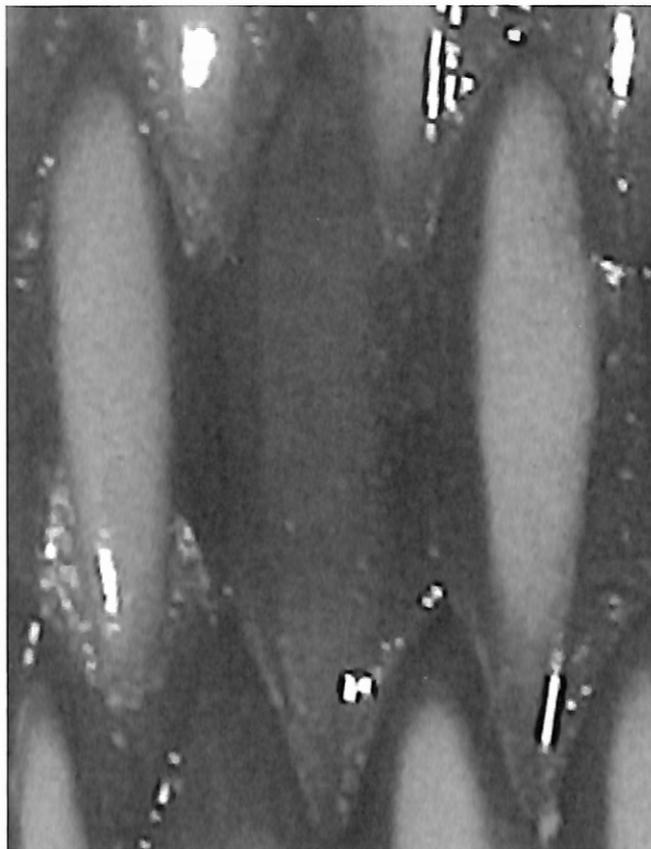


Fig. 8. Detail of three ventral midbody scales of *Kaieteurosaurus hindsi*, new species (holotype), showing the hexagonal aspect of the ventral scales.

forearm), imbricate, larger on anterior aspect; scales on underside of upper arms imbricate, similar to but smaller than scales of upper side. Upper side of thighs with scales that are hexagonal in appearance, keeled, bordered anteriorly by large, smooth, polygonal scales, reaching the line of pores; posterior surface of leg with small, granular, juxtaposed scales. Underside of shanks with large polygonal, smooth, imbricate scales, decreasing in size posteriorly. Palms and soles with small round juxtaposed scales. Two enlarged thenar scales on inner margin of palm below pollex, each with produced inner edge. Subdigital lamellae divided medially, numbers (Roman numerals = digits, Arabic numbers = lamellae on left/right feet): fingers I 4/4, II 6/7, III 10/12, IV 10/11, V 6/7; toes I 5/6, II 7/8, II 9/10, IV 12/11, V 8/9 (these counts are approximations due to desiccation of the specimen). Fingers and toes clawed, with the following relative sizes: $I < II = V < III < IV$ and $I < II < V < III < IV$, respectively.

COLOURATION IN LIFE

Dark brown dorsally and laterally. Chin whitish, venter and underside of limbs uniformly reddish orange. Proximal quarter of tail reddish orange, remaining distal part brownish speckled with whitish orange (field notes P. J. R. Kok).

COLOURATION IN PRESERVATIVE (70% ETHANOL)

Dark brown dorsally and laterally with tips of dorsal scales



Fig. 9. Setting the fence and pitfall traps along the Tukeit trail at the type locality of *Kaieteurosaurus hindsii*, new species.

darker and dorsals and dorsal surface of the head finely mottled by darker brown. No other pattern discernable dorsally. Scales on ventral parts are whitish with a darker edge.

HEMIPENIS

No data available.

DISTRIBUTION AND HABITAT

Kaieteurosaurus hindsii is only known from the type locality where the unique specimen was collected alive in a pitfall trap (Fig. 9) in late afternoon (around 5 p.m.). The collection site – located about 1 km from the shrub-herb “Guiana type” savannah found on the Potaro Plateau – is in tall mixed forest that can be characterized as a submontane forest of the Pakaraima uplands on white sands (TER STEEGE, 2001). This forest is composed of numerous tree species such as *Dicymbe*, *Dimorphandra*, *Eperua*, *Micrandra* and *Peltogyne* (SODERSTROM, 1965; TER STEEGE, 2001). Typical lower story trees belong to the families Annonaceae, Guttiferae, Lecythidaceae, Leguminosae, and Palmae, while members of the Araceae, Bromeliaceae, Marantaceae, Melastomataceae, and Rapateaceae noticeably dominate the vegetation of the forest floor (SODERSTROM, 1965; KELLOFF, 2003). Epiphytes are abundant, with species of aroids, bromeliads,

and orchids accounting for the great majority (SODERSTROM, 1965; KELLOFF, 2003).

NATURAL HISTORY

The sole specimen was collected in late November, which corresponds to the beginning of the short wet season in Guyana. The reddish orange colouration of the ventral parts suggests that the specimen was in breeding condition (males in breeding condition of many microteiids occurring on the Guiana Shield do have that character (Hoogmoed, pers. comm.; pers. obs.)). It is highly probable that this secretive species, like many other microteiids, is diurnal and inhabits the leaf litter.

Discussion

Relationships and affinities of *Kaieteurosaurus* are uncertain. Further resolution of relationships may be possible when additional specimens and tissues for molecular analysis are available. Examination of hemipenes condition should also be of interest and I strongly suspect that no calcareous spinules will be observed in the hemipenes of *Kaieteurosaurus* (as it is also the case in *Adercosaurus*, *Alopoglossus*, *Ecleopos* and *Ptychoglossus*).

Kaieteurosaurus shares with *Ecleopos* and *Leposoma* of the *scincoides* group a morphological feature rarely observed in the Gymnophthalmidae: the presence of hexagonal ventral scales. Those of *Kaieteurosaurus* are very long and strongly mucronate and are the most distinguishing feature of the genus (see Fig. 7-8). In addition to the aspect of the ventral scales, *Kaieteurosaurus* also shares the tongue morphology with *Ecleopos*, but while closest relatives to *Ecleopos* seem to be *Alopoglossus* (UZZELL, 1969) and more particularly *Leposoma* (see UZZELL, 1969; PELLEGRINO *et al.*, 2001; CASTOE *et al.*, 2004), closest relatives to *Kaieteurosaurus* could be *Adercosaurus* – a genus currently not placed in a subfamily (see CASTOE *et al.*, 2004) – and *Ptychoglossus* based on overall morphological similarity. *Adercosaurus* and some *Ptychoglossus* – even if both of these genera are different in several ways – share a number of morphological features with *Kaieteurosaurus* and I suspect close relationships between them.

MNHN 7048, identified as *Ecleopos gaudichaudii*, was examined and I agree with UZZELL (1969) who gave a complete description of the specimen and also reach the conclusion that it is not an *Ecleopos gaudichaudii*. MNHN 7048 is damaged and in poor state of preservation and it is difficult to determine its correct identity but it is clearly distinct from *Kaieteurosaurus hindsi*.

Several plant species endemic to the park were collected in the immediate surroundings of the type locality of *Kaieteurosaurus hindsi* (see KELLOFF, 2003; KELLOFF & FUNK, 2004). The discovery of a new lizard genus as well as a number of new amphibian taxa in the Kaieteur National Park (Kok *et al.* in prep.) is supplementary evidence for the high need for conservation of the site and the Government of Guyana is strongly encouraged to continue enforcing laws to protect the park from anthropogenic impacts.

List of specimens examined

Alopoglossus angulatus.- French Guiana: Roura: Crique Bagot, lieu-dit « Dégrad Kwata » (IRSNB 14792).

Arthrosaura kockii.- Brazil: Pará: Belém (S 1°26' W 48°29') [USNM 15921 (digital photographs)]. French Guiana: Régina: Pic Matécho (N 3°44'53" W 53°2'19") (IRSNB 15397). Saül: ca. 8 km from the village of Saül, near Montagne Belvédère (IRSNB 14574).

Bachia flavescens.- Guyana: Potaro-Siparuni: Kaieteur National Park (IRSNB 17079-81).

Ecleopos gaudichaudii.- Brazil: No other locality [MNHN 7047 (holotype)]. Espirito Santo: Santa Teresa (AMNH 131869).

"*Ecleopos gaudichaudii*".- Brazil: No other locality (MNHN 7048).

Euspondylus maculatus.- Chili: No other locality (IRSNB 951).

Iphisa elegans.- Guyana: Potaro-Siparuni: Kaieteur National Park (IRSNB 17068-69).

Leposoma guianense.- French Guiana: Roura: Crique Bagot, lieu-dit « Dégrad Kwata » (IRSNB 14791).

Leposoma percarinatum.- Guyana: Potaro-Siparuni: Kaieteur National Park (IRSNB 17053, IRSNB 17058-67).

Neusticurus bicarinatus.- Brazil: Amapá: No other locality (IRSNB 12179). Suriname: Marowijne: Paloemeu (Riv.) (N 3°21' W 55°26') (IRSNB 12369).

Neusticurus rudis.- Guyana: Potaro-Siparuni: Kaieteur National Park (IRSNB 17056-57).

Prionodactylus sp.- French Guiana: Roura: Crique Bagot, lieu-dit « Dégrad Kwata » (IRSNB 2560). Note: this specimen is being described by de Massary and Avila-Pires.

Proctoporus unicolor.- Ecuador: No other locality [IRSNB 950 (2 specimens)].

Proctoporus striatus.- Colombia: Cundinamarca: Bogota (IRSNB 11679).

Ptychoglossus brevifrontalis.- Colombia: No other locality (MNHN 1999.4902).

Additional digital photographs examined

Arthrosaura guianensis.- Guyana: Mazaruni-Potaro: Northern slope of Mount Roraima, 700 m (N 5°17' W 60°45') (USNM 549323).

Arthrosaura synaptolepis.- Venezuela: Amazonas: Cerro de la Neblina, ca. 6.2 km NNE of Pico Phelps (= Pico Neblina), Camp XI, 1400 m (N 0°51'45" W 65°58'52") (USNM 317882).

Arthrosaura tyleri.- Venezuela: Bolivar: Cerro Jaua, ca. 2 km from the central ridge, southern bank of the Marajano River, 1750 m (USNM 317880).

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Philippe J. R. KOK

Department of Vertebrates

Royal Belgian Institute of Natural Sciences

Rue Vautier 29, B-1000 Brussels, Belgium

E-mail: philippe.kok@naturalsciences.be