

A TAXONOMIC REVISION OF SOUTH AMERICAN *STENOCERCUS* (SQUAMATA: IGUANIA) LIZARDS

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ABSTRACT: South American *Stenocercus* lizards occur mostly in the Andes and adjacent lowland areas from northern Colombia and Venezuela to central Argentina at elevations of 0–4000 m. In this paper, 61 species of *Stenocercus* are recognized, including one resurrected as *S. angulifer*. Morphologically, *S. angulifer* more closely resembles *S. aculeatus*. For each species, a diagnosis, description, and summary of distribution are provided based on examination of 2001 specimens and data from the literature. Notes on color in life and natural history are included for most species. Additionally, a dichotomous key to assist in the identification of specimens is provided.

Key words: Andes; Iguania; South America; *Stenocercus*; Systematics; Taxonomy

The iguanian lizard *Stenocercus* is one of the most geographically and ecologically widespread reptile taxa currently ranked as a genus in South America. It includes 61 species that occur at elevations between 0–4000 m in the Andes and adjacent lowland areas from northern Venezuela and Colombia to central Argentina, with some species in the Atlantic lowlands between southern Brazil and central Argentina, and other species in northeastern Brazil (Fig. 1). Members of this genus occupy a variety of habitats such as dry and humid lowland tropical forests, montane forests, Cerrado, puna, and paramo.

Systematic studies on *Stenocercus* (family Tropiduridae of Frost et al., 2001a; Iguanidae of Macey et al., 1997; subfamily Tropidurinae, tribe Tropidurini of Schulte et al., 2003) include mostly species descriptions and taxonomic revisions. Interestingly, even though the type species *S. roseiventris* was described more than 150 yrs ago (Duméril and Bibron, 1837), approximately one-fourth of the species of *Stenocercus* have been described after 1990 (Avila-Pires, 1995; Cadle, 1991, 1998, 2001; Torres-Carvajal, 2000, 2005a,b,c). One of the main causes of this dramatic rate of species discovery is that collections have recently been made in previously unexplored areas throughout the Andes. Another reason is that

careful examination of existing collections has revealed several undescribed species that have remained misidentified as morphologically similar species.

Taxonomic revisions of those species occurring in Ecuador (Torres-Carvajal, 2000), northern Peru (Cadle, 1991, 1998), and Brazilian Amazonia (Avila-Pires, 1995) have been published. In contrast, until recently there were only a few phylogenetic studies (e.g., Etheridge and de Queiroz, 1988; Fritts, 1974; Frost, 1992; Frost and Etheridge, 1989; Frost et al., 2001b; Harvey and Gutberlet, 2000; Schulte et al., 1998, 2003) including species of *Stenocercus* (usually $n < 5$). Most of these studies recognized a close relationship among *Stenocercus*, “*Ophryoessoides*”, and “*Proctotretus*”, which were considered as a monophyletic group sister to the *Tropidurus* Group. Frost (1992) synonymized “*Ophryoessoides*” and “*Proctotretus*” with *Stenocercus* based on morphological evidence suggesting that “*Ophryoessoides*” and “*Proctotretus*” were derived from *Stenocercus*. In a phylogenetic analysis including 32 species of *Stenocercus* and 1641 bp of mitochondrial DNA, Torres-Carvajal et al. (2006) found strong support for (1) monophyly of *Stenocercus* sensu Frost (1992), (2) sister-taxon relationship between *Stenocercus* and the *Tropidurus* Group, (3) non-monophyly of “*Ophryoessoides*” and (4) six clades within *Stenocercus*—*Anatomegalepis*, *Boreomegalepis*, *Micro-*

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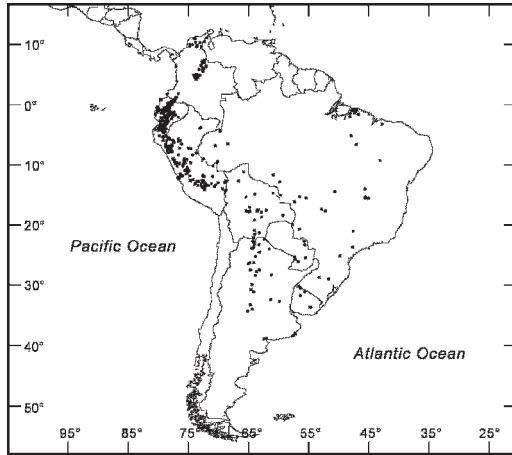


FIG. 1.—Distribution of *Stenocercus* in South America.

phractoides, *Microphractus*, *Saccodeira*, *Scelotrema*. A more recent and comprehensive phylogenetic study including most species of *Stenocercus* as well as molecular and morphological characters concluded that (1) species of *Stenocercus* are nested within two major clades and (2) the most recent common ancestor of *Stenocercus* occurred in the eastern cordillera of the central Andes (Torres-Carvajal, 2007a).

The taxonomy of *Stenocercus* has always been problematic. This is partly reflected in the use of different generic names to describe new species of *Stenocercus*, as well as the description of species more than once under different specific epithets (Table 1). Moreover, some of the early descriptions are inadequately brief, making species identification very complex in some cases. The purpose of this paper is to provide a revised taxonomy of *Stenocercus* including diagnoses, standardized descriptions, distribution, notes on color and natural history if available, and a key for species identification.

MATERIALS AND METHODS

Morphological data was obtained for all species of *Stenocercus* upon examination of 2001 specimens (Appendix) and from the literature (Avila-Pires, 1995; Cadle, 1991, 1998, 2001; Torres et al., 2000; Torres-Carvajal, 2000, 2005a,b,c). A description is provided as a numbered list of 42 characters for each species, with each number corre-

sponding to the same character across all species; absence of a character indicates that data for that character was not available. Data from the holotype of *S. tricristatus* was provided by R. Etheridge or obtained from Avila-Pires (1995). Two species, *S. quinarius* and *S. squarrosus*, were described while this manuscript was in review; therefore, no specimens of those species were examined and their accounts contain only data available from the original descriptions (Nogueira and Rodrigues, 2006). Museum institutional abbreviations follow Leviton et al. (1985) except for Museo de Historia Natural, Pontificia Universidad Javeriana, Bogotá, Colombia (MUJ), Museo de Historia Natural, Universidad Industrial de Santander, Colombia (UIS), Museo de Zoología, Pontificia Universidad Católica del Ecuador, Quito (QCAZ), Museum für Tierkunde Dresden, Germany (MTD; formerly abbreviated as MTKD, Fritz, 2002), and Museum Wiesbaden Naturwissenschaftliche Sammlung, Germany (MWNH). I follow the terminology of Fritts (1974); Cadle (1991), and Torres-Carvajal (2000) for most characters included in the descriptions; when available, scutellational data were obtained from the literature. Data for patterns of abdominal rib attachment were mostly obtained from Torres-Carvajal (2004a) after correcting some species misidentifications noted below; additional osteological data were obtained from cleared-and-double-stained specimens or x-ray photographs. Measurements of snout-vent length (SVL) and tail length (TL) were taken with a ruler and recorded to the nearest 1 mm. All other measurements were made with digital calipers and recorded to the nearest 0.1 mm. Sex was determined either by dissection or by noting the presence of hemipenes or sexually dichromatic characters. Clutch size was determined either by dissection or from x-ray radiographs. Egg volume was calculated with the prolate spheroid formula: $V = 4/3 \pi (\text{length}/2)(\text{width}/2)^2$. A total of 604 localities were geo-referenced mostly using Global Gazetteer Version 2.1 (Falling Rain Genomics, Inc.); all distribution maps were elaborated in ArcMap 9.1 (ESRI, Inc.).

Presence and shape of mite pockets are useful characters for identifying *Stenocercus*

TABLE 1.—Summary of names and combinations that have been used for species of *Stenocercus*. Original name, author, date, and current name are provided. Cases where original and current names are identical are excluded.

Original name	Author and date	Current name
<i>Brachysaurus erythrogaster</i>	Hallowell, 1856	<i>Stenocercus erythrogaster</i>
<i>Heterotropis (Trachycylus) marmorata</i>	Fitzinger, 1843	<i>Stenocercus marmoratus</i>
<i>Holotropis trachycephalus</i>	Duméril, 1851	<i>Stenocercus trachycephalus</i>
<i>Leocephalus aculeatus</i>	O'Shaughnessy, 1879	<i>Stenocercus aculeatus</i>
<i>Leocephalus aculeatus</i>	O'Shaughnessy, 1881	<i>Stenocercus angulifer</i>
<i>Leocephalus angulifer</i>	Werner, 1901a	<i>Stenocercus angulifer</i>
<i>Leocephalus formosus</i>	Burt and Burt, 1933	<i>Stenocercus formosus</i>
<i>Leocephalus iridescens aculeatus</i>	Burt and Burt, 1931	<i>Stenocercus aculeatus</i>
<i>Leocephalus iridescens iridescens</i>	Burt and Burt, 1930	<i>Stenocercus iridescens</i>
<i>Leocephalus ornatus</i>	Gray, 1845	<i>Stenocercus ornatus</i>
<i>Liocephalus bolivianus</i>	Boulenger, 1890	<i>Stenocercus caducus</i>
<i>Liocephalus caducus</i>	Boulenger, 1894	<i>Stenocercus caducus</i>
<i>Liocephalus dumerilii</i>	Boulenger, 1885a	<i>Stenocercus dumerilii</i>
<i>Liocephalus erythrogaster</i>	Boulenger, 1885a	<i>Stenocercus erythrogaster</i>
<i>Liocephalus festae</i>	Peracca, 1897	<i>Stenocercus festae</i>
<i>Liocephalus formosus</i>	Boulenger, 1880	<i>Stenocercus haenschi</i>
<i>Liocephalus guentheri</i>	Boulenger, 1885a	<i>Stenocercus guentheri</i>
<i>Liocephalus haenschi</i>	Werner, 1901a	<i>Stenocercus haenschi</i>
<i>Liocephalus iridescens</i>	Günther, 1859b	<i>Stenocercus iridescens</i>
<i>Liocephalus lineogularis</i>	Werner, 1901b	<i>Stenocercus formosus</i>
<i>Liocephalus rhodogaster</i>	Boulenger, 1901	<i>Stenocercus formosus</i>
<i>Liocephalus rhodomelas</i>	Boulenger, 1899	<i>Stenocercus rhodomelas</i>
<i>Liocephalus scapularis</i>	Boulenger, 1901	<i>Stenocercus scapularis</i>
<i>Liocephalus trachycephalus</i>	Boulenger, 1885a	<i>Stenocercus trachycephalus</i>
<i>Liocephalus tricristatus</i>	Boulenger, 1885a	<i>Stenocercus tricristatus</i>
<i>Liolaemus (Proctotretus) pectinatus</i>	Fitzinger, 1843	<i>Stenocercus pectinatus</i>
<i>Liolaemus (Sauridis) modestus</i>	Tschudi, 1845	<i>Stenocercus modestus</i>
<i>Liolaemus azureus</i>	Boulenger, 1885b	<i>Stenocercus azureus</i>
<i>Microphractus humeralis</i>	Günther, 1859a	<i>Stenocercus humeralis</i>
<i>Ophryoessoides aculeatus</i>	Etheridge, 1966	<i>Stenocercus aculeatus</i>
<i>Ophryoessoides caducus</i>	Etheridge, 1966	<i>Stenocercus caducus</i>
<i>Ophryoessoides dumerilii</i>	Steindachner, 1867	<i>Stenocercus dumerilii</i>
<i>Ophryoessoides erythrogaster</i>	Etheridge, 1966	<i>Stenocercus erythrogaster</i>
<i>Ophryoessoides festae</i>	Etheridge, 1966	<i>Stenocercus festae</i>
<i>Ophryoessoides formosus</i>	Etheridge, 1966	<i>Stenocercus formosus</i>
<i>Ophryoessoides guentheri</i>	Etheridge, 1966	<i>Stenocercus guentheri</i>
<i>Ophryoessoides haenschi</i>	Etheridge, 1966	<i>Stenocercus haenschi</i>
<i>Ophryoessoides iridescens</i>	Etheridge, 1966	<i>Stenocercus iridescens</i>
<i>Ophryoessoides liocephaloides</i>	Etheridge, 1966	<i>Stenocercus caducus</i>
<i>Ophryoessoides rhodomelas</i>	Etheridge, 1966	<i>Stenocercus rhodomelas</i>
<i>Ophryoessoides scapularis</i>	Etheridge, 1966	<i>Stenocercus scapularis</i>
<i>Ophryoessoides trachycephalus</i>	Etheridge, 1966	<i>Stenocercus trachycephalus</i>
<i>Ophryoessoides tricristatus</i>	Duméril, 1851	<i>Stenocercus tricristatus</i>
<i>Proctotretus azureus</i>	Burt and Burt, 1930	<i>Stenocercus azureus</i>
<i>Proctotretus doello-juradoi</i>	Freiberg, 1944	<i>Stenocercus doellojuradoi</i>
<i>Proctotretus ornatissimus</i>	Burt and Burt, 1930	<i>Stenocercus ornatissimus</i>
<i>Proctotretus pectinatus</i>	Duméril and Bibron, 1837	<i>Stenocercus pectinatus</i>
<i>Proctotretus splendidus</i>	Girard, 1857	<i>Stenocercus pectinatus</i>
<i>Ptygoderus pectinatus</i>	Gray, 1845	<i>Stenocercus pectinatus</i>
<i>Saccodeira azurea</i>	Boulenger, 1885a	<i>Stenocercus azureus</i>
<i>Saccodeira ornatissima</i>	Girard, 1857	<i>Stenocercus ornatissimus</i>
<i>Saccodeira pectinata</i>	Boulenger, 1885a	<i>Stenocercus pectinatus</i>
<i>Scartiscus caducus</i>	Cope, 1862	<i>Stenocercus caducus</i>
<i>Scartiscus liocephaloides</i>	Werner, 1910	<i>Stenocercus caducus</i>
<i>Scelotrema formosum</i>	Tschudi, 1845	<i>Stenocercus formosus</i>
<i>Scelotrema crassicaudatum</i>	Tschudi, 1845	<i>Stenocercus crassicaudatus</i>
<i>Steironotus (Stenocercus) rosei-ventris</i>	Fitzinger, 1843	<i>Stenocercus roseiventris</i>
<i>Stenocercus atrigularis</i>	Werner, 1913	<i>Stenocercus roseiventris</i>
<i>Stenocercus difficilis</i>	Werner, 1910	<i>Stenocercus marmoratus</i>

TABLE 1.—Continued.

Original name	Author and date	Current name
<i>Stenocercus ervingi</i>	Stejneger, 1913	<i>Stenocercus crassicaudatus</i>
<i>Stenocercus juminensis</i>	Shreve, 1941	<i>Stenocercus variabilis</i>
<i>Stenocercus moestus</i>	Boulenger, 1885a	<i>Stenocercus modestus</i>
<i>Stenocercus seydi</i>	Andersson, 1908	<i>Stenocercus formosus</i>
<i>Trachycyclus marmoratus</i>	Duméril and Bibron, 1837	<i>Stenocercus marmoratus</i>
<i>Tropidocephalus azureus</i>	Müller, 1880	<i>Stenocercus azureus</i>
<i>Urocentrum meyeri</i>	Werner, 1901b	<i>Stenocercus crassicaudatus</i>

species. Cadle (1991) recognized five types of mite pockets in *Stenocercus* regardless of their location (i.e., posthumeral or postfemoral). However, the posthumeral (axillary) and postfemoral mite pockets are two separate structures with different morphologies and levels of variation, which makes a single classification inappropriate. Here I recognize three types of posthumeral and two types of postfemoral mite pockets; to avoid problems related to ontogenetic variation, the following classification is based on adult specimens. The posthumeral mite pocket can be present as (1) one or more vertical folds or ridges, (2) a shallow depression with a wide opening, or (3) a deep depression with a wide or narrow opening (Fig. 2). The postfemoral mite pocket can be present as (1) one or more vertical folds or ridges, or (2) a distinct pocket of variable depth with a vertical or posteroventrally oriented slit-like opening (Fig. 3). In addition to these pockets, I report for some species the presence of an inguinal granular pocket, which is a short vertical fold covered by granular scales in the inguinal region (Fig. 4). I follow Frost (1992) in considering

this fold as homologous with the inguinal pocket of the *Tropidurus* Group because they are similar structures that occur in the same topographic position. Another character included in the species account below that has not been previously defined is the inguinal groove, which is a longitudinal groove located ventrally at the insertion of each hind limb (Fig. 5).

The taxonomic conclusions of this study are based on the observation of morphological features and color patterns. I follow the general lineage concept of species (de Queiroz, 1998; Wiley, 1978, 1981).

RESULTS

Stenocercus Duméril and Bibron

Stenocercus Duméril and Bibron, 1837(4): 349. Type species (by monotypy): *Stenocercus roseiventris* Duméril and Bibron, 1837.

Trachycyclus Duméril and Bibron, 1837(4): 355. Type species (by monotypy): *Trachycyclus marmoratus* Duméril and Bibron, 1837.

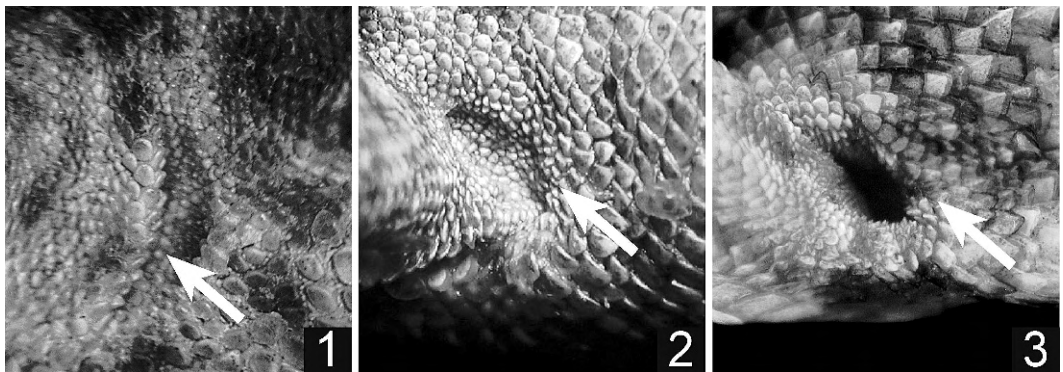


FIG. 2.—Left posthumeral (axillary) mite pocket of *Stenocercus frittsi* (left), *S. guentheri* (middle), and *S. rhodomelas* (right) in lateral view. Numbers correspond to descriptions in text.

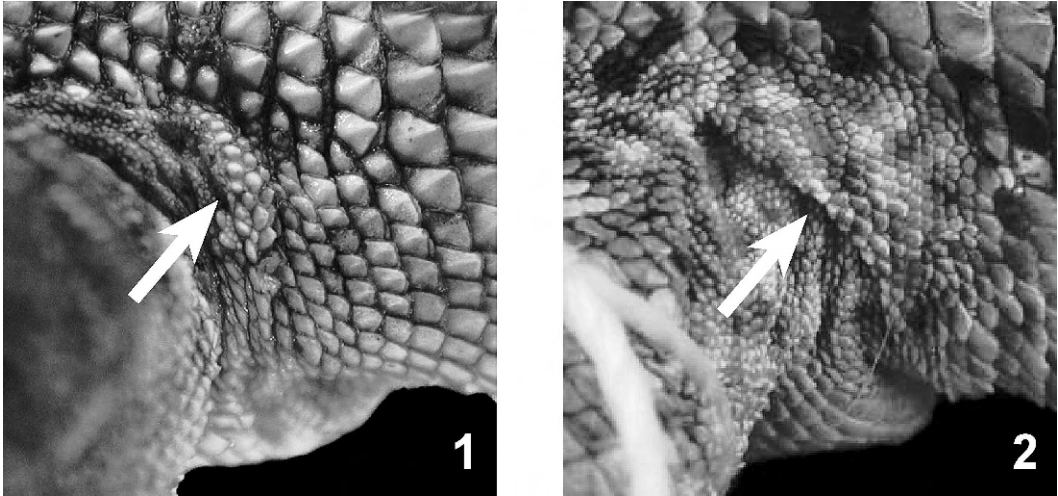


FIG. 3.—Left postfemoral mite pocket of *Stenocercus boettgeri* (left) and *S. variabilis* (right) in lateral view. Numbers correspond to descriptions in text.

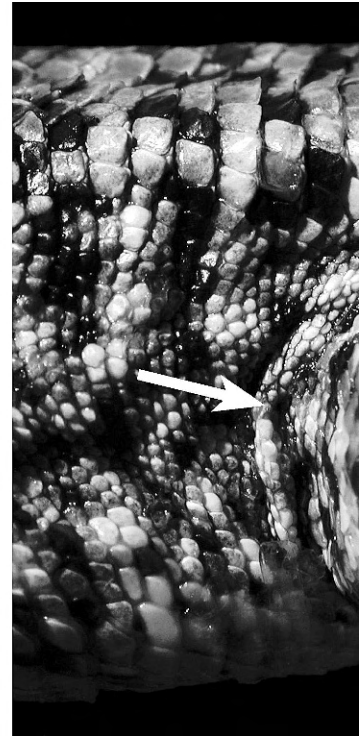
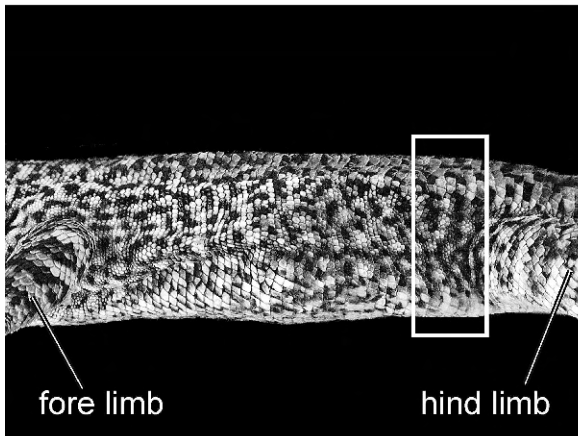


FIG. 4.—Inguinal granular pocket of *Stenocercus empetrus* in lateral view. Close-up of white box to the right.

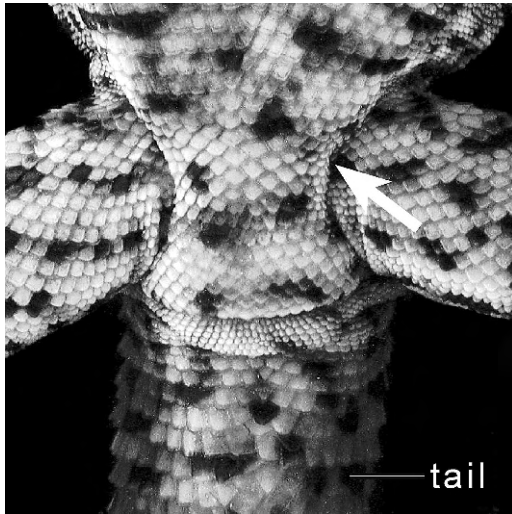


FIG. 5.—Preanal region in *Stenocercus empetrus*. White arrow indicates inguinal groove.

Proctotretus Duméril and Bibron, 1837(4): 266. Type species (subsequent designation by Fitzinger, 1843): *Proctotretus pectinatus* Duméril and Bibron, 1837.

Heterotropis (*Trachycyclus*) Fitzinger, 1843: 71. Type species (by monotypy): *Trachycyclus marmoratus* Duméril and Bibron, 1837.

Steironotus (*Stenocercus*) Fitzinger, 1843:71. Type species (by monotypy): *Stenocercus roseiventris* Duméril and Bibron, 1837.

Scelotrema Tschudi, 1845:154. Type species: none designated.

Ptygoderus Gray, 1845:216. Type species (by monotypy): *Proctotretus pectinatus* Duméril and Bibron, 1837.

Ophryoessoides Duméril, in Duméril and Duméril, 1851:66. Type species (by monotypy): *Ophryoessoides tricristatus* Duméril, in Duméril and Duméril, 1851.

Brachysaurus Hallowell, 1856:232. Type species (by monotypy): *Brachysaurus erythrogaster* Hallowell, 1856.

Saccodeira Girard, 1857:197. Type species (by monotypy): *Saccodeira ornatissima* Girard, 1857.

Microphractus Günther, 1859a:90. Type species (by monotypy): *Microphractus humeralis* Günther, 1859.

Scartiscus Cope, 1862:182. Type species (by monotypy): *Scartiscus caducus* Cope, 1862.

Tropidocephalus Müller, 1880:45. Type species (by monotypy): *Tropidocephalus azureus* Müller, 1880.

Diagnosis.—*Stenocercus* can be distinguished from other iguanian genera by the following combination of characters (Arnold, 1984; Boulenger, 1885a; Frost and Etheridge, 1989; Frost, 1992; Frost et al., 2001b): (1) maxillae do not articulate anteromedially posterior to palatal portion of premaxilla; (2) premaxillary spine not overlapped by nasals; (3) nasal concha fused to roof of nasal chamber; (4) jugal and squamosal not broadly juxtaposed; (5) parietal roof trapezoidal in shape; (6) parietal foramen in frontoparietal suture or absent; (7) supratemporal overlaps lateral aspect of supratemporal process of parietal; (8) nuchal endolymphatic sacs do not penetrate nuchal musculature; (9) labial blade of coronoid poorly developed or absent; (10) anterior surangular foramen dorsal to posteriormost extent of dentary; (11) marginal teeth pleurodont; (12) palatine teeth absent; (13) posterior coracoid fenestra present; (14) anterior process of interclavicle poorly developed or absent; (15) posterior process of interclavicle anterior to contact with sternum long; (16) sternal ribs three; (17) interparietal scale not enlarged; (18) gular scales imbricate posteriorly; (19) gular fold incomplete medially; (20) femoral pores absent; (21) preanal pores absent; (22) hemipenes weakly bilobate, with distinctly divided sulci; (23) hemipenial sheath musculature extensive; (24) hemipenial dorsal accessory muscle absent; (25) colic septa absent.

Stenocercus aculeatus (O'Shaughnessy)

Leiocephalus aculeatus O'Shaughnessy, 1879: 303. Syntypes: BM 1946.8.12.33–36, from "Moyobamba, [Departamento San Martín], Peru"; BM 1946.8.12.34 herein designated as lectotype.

Leiocephalus aculeatus (part) Boulenger, 1885a:167.

Leiocephalus iridescens aculeatus (part) Burt and Burt, 1931:269; Burt and Burt, 1933:27; Burt and Myers, 1942:302; Cunha, 1961:85.

Ophryoessoides aculeatus (part) Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:213.

Stenocercus aculeatus (part) Frost, 1992:43; Torres-Carvajal, 2000:5; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus* with strongly keeled ventrals and laterally oriented nostrils, *S. aculeatus* is similar to *S. angulifer*, *S. caducus*, *S. fimbriatus*, *S. prionotus*, and *S. scapularis* in having a distinct posthumeral mite pocket. It differs from *S. caducus*, *S. fimbriatus*, and *S. prionotus* by having a distinct postfemoral mite pocket. From *S. scapularis* (character states in parenthesis) it differs by having a laterally compressed tail in adults (cross-section shape of tail rounded), caudal fractures planes (fracture planes absent), smooth infralabials and sublabials (infralabials and sublabials keeled), and postxiphisternal inscriptional ribs continuous medially (postxiphisternal inscriptional ribs not in contact medially). *S. aculeatus* can be distinguished from *S. angulifer* by having a much deeper postfemoral mite pocket, a wider opening of the posthumeral mite pocket, and a lower tail in adult males. The strongly laterally compressed tail in adult males of *S. angulifer* is more than twice as high as the tail in males of *S. aculeatus* of similar size. Although sample size for *S. aculeatus* is small ($n = 5$), this species has fewer vertebrae (31–39, $X = 35.20$), fewer scales around midbody (32–37, $X = 35.00$), and more subdigitals on Toe IV (23–27, $X = 25.00$) than *S. angulifer* (37–47, $X = 41.63$, 38–50, $X = 42.10$, and 19–25, $X = 22.84$, respectively).

Description.—(1) Maximum SVL in males 103 mm ($n = 3$); (2) maximum SVL in females 91 mm ($n = 2$); (3) vertebrae 31–39; (4) paravertebrals 41–48; (5) scales around midbody 32–37; (6) supraoculars four; (7) internasals 4–5; (8) postrostrals 5–6; (9) loreals four; (10) gulars 15–18; (11) subdigitals on Finger IV 18–19; (12) subdigitals on Toe IV 23–27; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region large, wrinkled, subimbricate; (17) projecting angulate temporals two; (18) row of enlarged supraoculars occupying most of supraocular region present; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular

fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 70–73% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in adult males present; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Patterns 6A and 7, with the posteriormost pair not articulating with corresponding dorsal ribs (specimens of *Stenocercus aculeatus* in Torres-Carvajal [2004a] correspond to *S. angulifer*, *S. fimbriatus*, and *S. prionotus*.)

Color in life.—Although no descriptions of color in life are available for *S. aculeatus*, when described the type specimens still retained a vertical white line on the shoulder between fore limb insertion and dorsolateral crest, as well as two longitudinal white lines between tympanum and shoulder (O’Shaughnessy, 1879).

Distribution.—*Stenocercus aculeatus* occurs on the eastern slopes of the central Andes in northern Peru (8°S–5°S). This species is known from Departamentos La Libertad, Loreto, and San Martín at elevations of 723–1311 m (Fig. 6). It is possible that *S. aculeatus* occurs in sympatry with *S. prionotus* (Cadle, 2001).

Remarks.—Torres-Carvajal (2000) described syntype BM 1946.8.12.34, which is

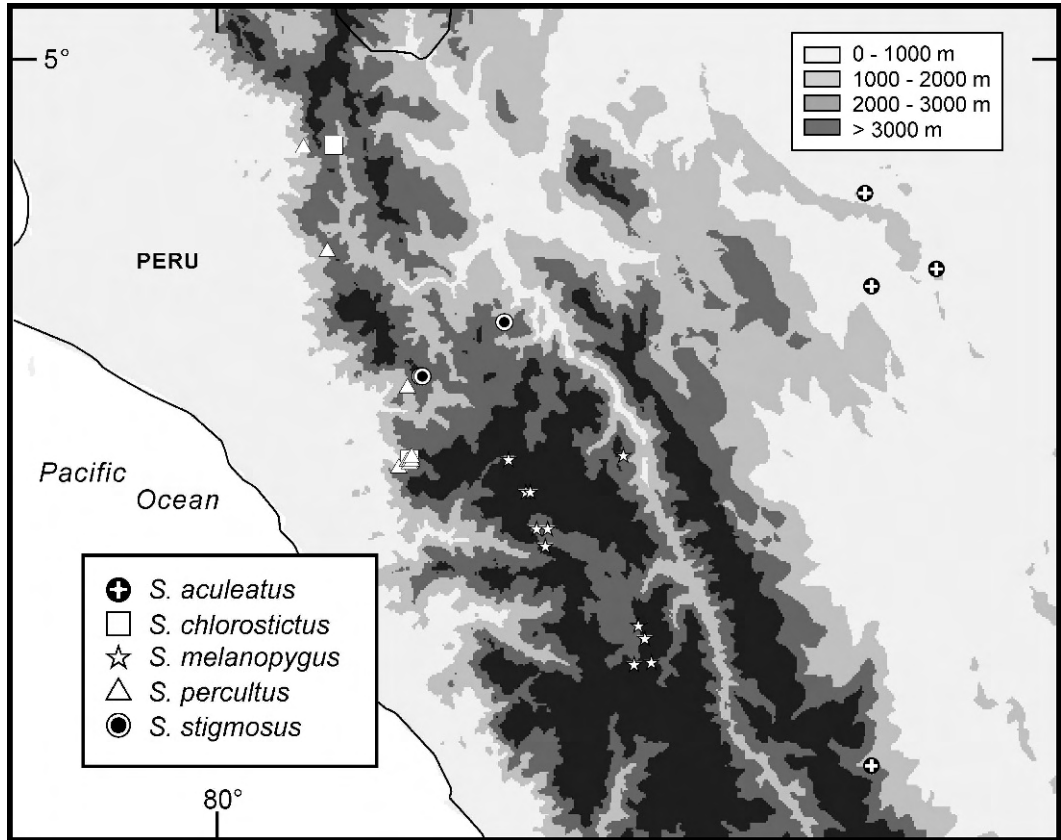


FIG. 6.—Distribution of five species of *Stenocercus* in Peru.

herein designated as lectotype of *S. aculeatus*. The tail in this specimen is subelliptical, but not “strongly compressed” as mentioned by Torres-Carvajal (2000). In fact, one of the main characters that distinguish *S. aculeatus* from the herein resurrected *S. angulifer* is that adult males of the latter species have strongly compressed tails.

Stenocercus angel Torres-Carvajal
(Fig. 7)

Stenocercus angel Torres-Carvajal, 2000:9.
Holotype: QCAZ 3733, a male from “8 km NE El Angel on road to Tulcán, 00°40'N, 77°52'W, Provincia Carchi, Ecuador.”

Stenocercus guentheri (part) Castro and Granados, 1993:296.

Diagnosis.—*Stenocercus angel* differs from all other species of *Stenocercus* except *S. chota*, *S. festae*, *S. guentheri*, and *S. nigromaculatus* by having imbricate scales on posterior

surface of thighs, smooth ventrals, a posthumeral mite pocket consisting of a shallow depression with a wide opening (more distinct in adult specimens), small scales on occipitoparietal region, and supraoculars of similar size. Of these species, *S. nigromaculatus* is unique in having an antehumeral fold. *S. angel* differs from *S. festae* and *S. guentheri* in adult males lacking a distinct, black transverse band on ventral surface of neck, which is variably present in adult males of those two species. In addition, *S. guentheri* has more scales around midbody than *S. angel* (Torres-Carvajal, 2000). *S. angel* can be distinguished from *S. chota* by lacking (1) a distinct black midventral stripe in most adult males (polymorphic), and (2) large black spots on gular region of juveniles and females (Torres-Carvajal, 2000). Moreover, some adult males of *S. angel* have a dark green dorsum, a condition not present in *S. chota* (dorsum brown).

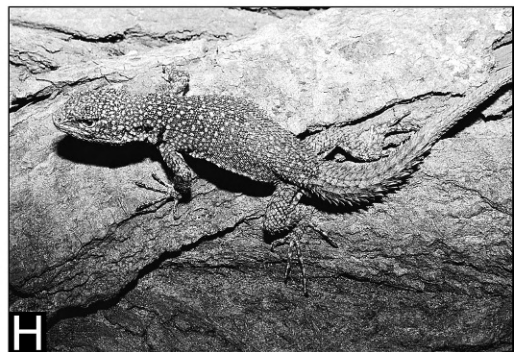
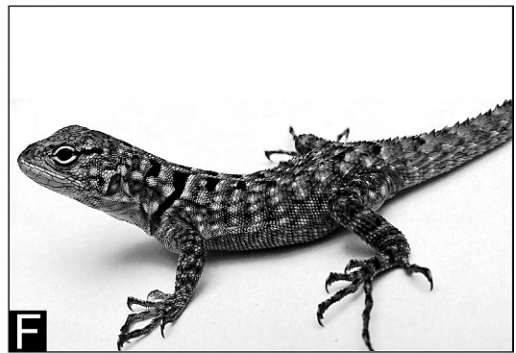
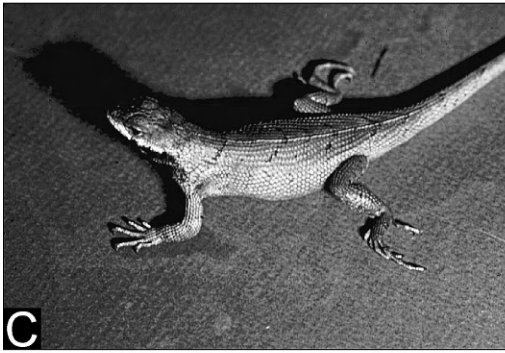
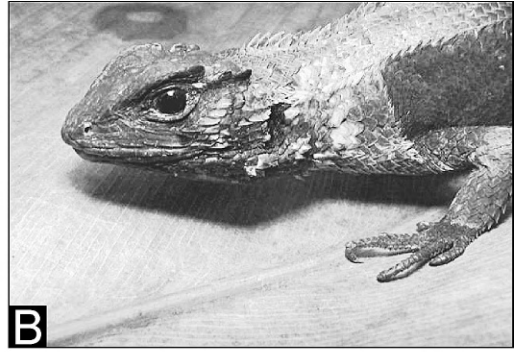
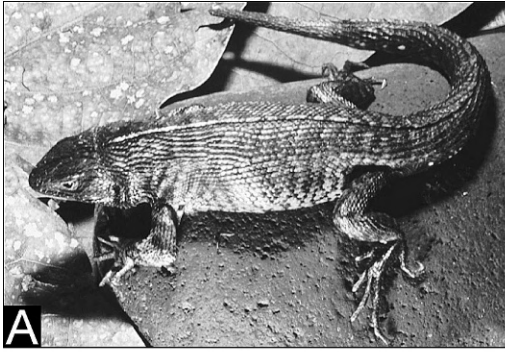


FIG. 7.—Eight species of *Stenocercus*. (A) *S. angel* (LAC); (B) *S. angulifer* (FAY); (C) *S. apurimacus* (WED); (D) *S. azureus* (SCA); (E) *S. boettgeri* (MLU); (F) *S. bolivarensis* (FCA); (G) *S. caducus* (LSI); (H) *S. chlorostictus* (MLU).

Description.—(1) Maximum SVL in males 87 mm ($n = 21$); (2) maximum SVL in females 76 mm ($n = 9$); (3) vertebrae 39–56; (4) paravertebrals 51–75; (5) scales around mid-body 49–68; (6) supraoculars 4–6; (7) internasals 1–4; (8) postrostrals 3–6; (9) loreals 2–3; (10) gulars 19–27; (11) subdigitals on Finger IV 13–22; (12) subdigitals on Toe IV 20–28; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 76% of specimens; (16) scales on occipitoparietal region small, keeled or multicarinate, and juxtaposed or subimbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth or slightly keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail weakly compressed laterally in adult males; (33) tail length 59–69% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 14% of adult males; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 57% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions ribs not in contact mid-ventrally, Pattern 2A.

Color in life.—Dorsal background dark brown in females and juveniles, dark brown or dark green in adult males; several transverse brown bars over vertebral line, from

neck to base of tail; gular region black or bluish green in adult males; ventral surface of body, tail, and limbs with irregular yellow and green spots in some adult males, and yellowish-brown with scattered brown flecks in females; ventral aspect of pelvic region, base of tail, and thighs yellow in some male specimens.

Natural History.—Clutch size in *S. angel* is two eggs (Castro and Granados, 1993; Torres-Carvajal, 2000). Weight of two eggs deposited on 4 April 1987 was 1.3 g and 1.4 g, respectively; field observations suggest remarkable territoriality in this species (Castro and Granados, 1993). In Ecuador, *S. angel* has been found in mesic environments (paramo) usually basking on the ground near the base of the spiny bromeliad *Puya*, which is used by this species as shelter (Torres-Carvajal, 2000).

Distribution.—*Stenocercus angel* occurs in the northern Andes between 0°30'N–1°30'N (Fig. 8). This species is known from elevations between 2400–3560 m in southern Colombia (Departamentos Cauca and Nariño; Castro and Granados, 1993) and northern Ecuador (Provincia Carchi; Torres-Carvajal, 2000).

Stenocercus angulifer (Werner)
(Fig. 7)

Leiocephalus angulifer Werner, 1901a:595.

Holotype: ZMB 16594, from "Ecuador."

Leiocephalus aculeatus O'Shaughnessy, 1881: 243.

Leiocephalus iridescens aculeatus (part) Burt and Burt, 1931:269; Burt and Burt, 1933:27; Burt and Myers, 1942:302; Cunha, 1961:85.

Ophryoessoides aculeatus (part) Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:213.

Stenocercus aculeatus (part) Frost, 1992:43; Torres-Carvajal, 2000:5; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus* with strongly keeled ventrals and laterally oriented nostrils, *S. angulifer* is similar to *S. aculeatus*, *S. caducus*, *S. fimbriatus*, *S. prionotus*, and *S. scapularis* in having a distinct posthumeral mite pocket. It differs from *S. caducus*, *S. fimbriatus*, and *S. prionotus* by having a distinct postfemoral mite pocket. From *S. scapularis* (character states in parenthesis) it differs by having a laterally compressed tail in adults (cross-section shape of

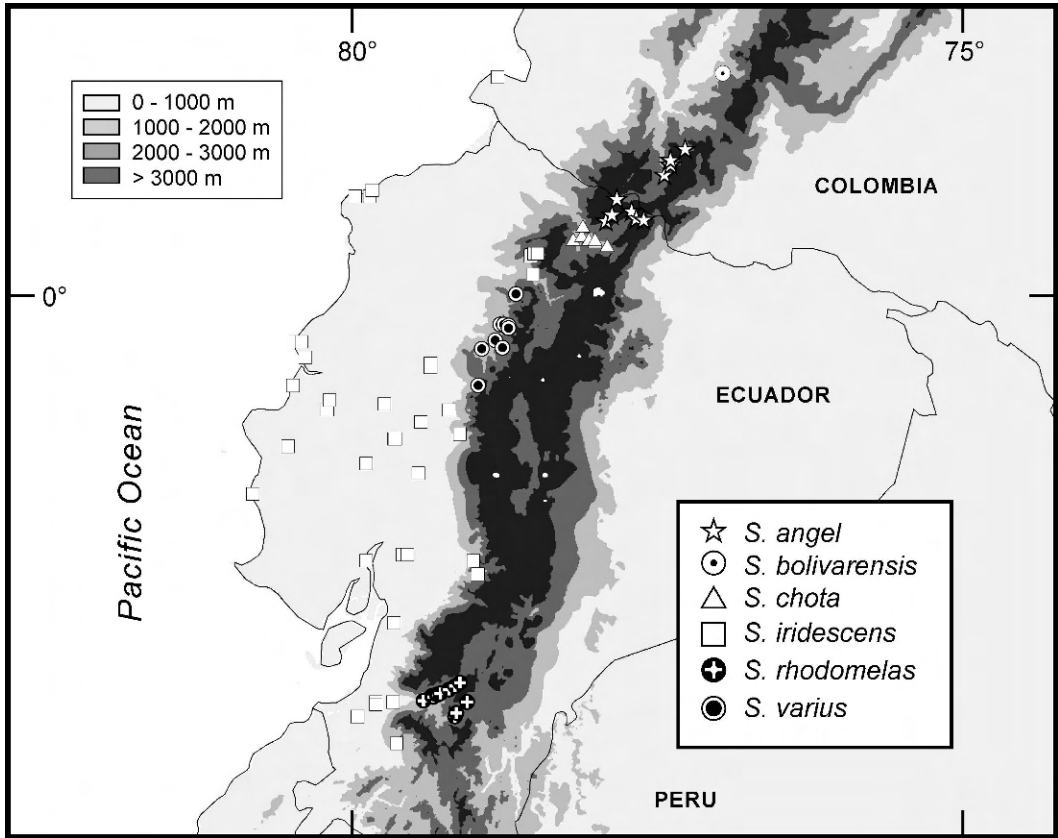


FIG. 8.—Distribution of six species of *Stenocercus* in Colombia and Ecuador.

tail rounded), caudal fracture planes (fracture planes absent), smooth infralabials and sublabials (infralabials and sublabials keeled), and postxiphisternal inscriptional ribs continuous medially (postxiphisternal inscriptional ribs not in contact medially). *S. angulifer* can be distinguished from *S. aculeatus* by having a shallower postfemoral mite pocket, a narrower opening of the posthumeral mite pocket, and a higher tail in adult males. The strongly laterally compressed tail in adult males of *S. angulifer* is more than twice as high as the tail in males of *S. aculeatus* of similar size. Although sample size for *S. aculeatus* is small ($n = 5$), *S. angulifer* has more vertebrae (37–47, $X = 41.63$), more scales around midbody (38–50, $X = 42.10$), and fewer subdigitals on Toe IV (19–25, $X = 22.84$) than *S. aculeatus* (31–39, $X = 35.20$, 32–37, $X = 35.00$, and 23–27, $X = 25.00$, respectively).

Description.—(1) Maximum SVL in males 96 mm ($n = 15$); (2) maximum SVL in females 82 mm ($n = 9$); (3) vertebrae 37–47; (4) paravertebrals 37–57; (5) scales around midbody 38–50; (6) supraoculars 4–5; (7) internasals 4–8; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 16–20; (11) subdigitals on Finger IV 15–19; (12) subdigitals on Toe IV 19–25; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region large, wrinkled, subimbricate; (17) projecting angulate temporals two; (18) row of enlarged supraoculars occupying most of supraocular region present; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal,

projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 68–73% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in adult males present; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Pattern 6B (KU 121093, identified as *S. aculeatus* in Torres-Carvajal [2004a], corresponds to *S. angulifer*.)

Description of holotype.—Juvenile male; SVL = 44 mm; TL = 91 mm; maximum head width = 9.53 mm; head length = 11.58 mm; head height = 8.14 mm; scales on parietal and occipital regions large, wrinkled, subimbricate; parietal eye not visible; supraoculars in five rows, wrinkled, imbricate, one row occupying most of supraocular region; canthal single; scales in frontonasal region imbricate; internasals four; lorilabials in one row; lateral temporals imbricate, keeled; gulars in 19 rows between tympanic openings; all gulars keeled, imbricate; lateral and dorsal scales of neck, body, and limbs keeled, imbricate; scales around midbody 41; vertebrae large, in 38 rows, forming serrate vertebral crest; one dorsolateral crest on each side; paravertebrals 45; ventrals strongly keeled, imbricate, mucronate; preauricular fringe absent; neck folds absent; subdigitals on Finger IV 15; subdigitals on Toe IV 21; tail slightly compressed laterally; caudals keeled, imbricate; tail length 2.1 times SVL; posthumeral mite pocket deep

with narrow opening; postfemoral mite pocket present with slit-like opening.

Color in preservative of holotype.—Dorsum yellowish brown with seven posteriorly-oriented dark triangular transverse marks arranged middorsally between occiput and vent; throat and flanks of body dark brown; venter bronze; antehumeral fold whitish (Werner, 1901a). The “antehumeral fold” of Werner (1901a) corresponds to a weak vertical crest between the insertion of the fore limb and the dorsolateral crest.

Color in life (males only).—Background dark brown; dorsal aspect of head and flanks darker than dorsum; six faint, dark chevrons longitudinally arranged on dorsum between fore and hind limbs; faint creamish-brown vertical line from insertion of fore limb to dorsolateral crest; some scales on sides of neck cream; sides of head dark gray; gular region black; mental and infralabials gray; a reddish-brown to pink tint extends midventrally from pectoral region and ventral aspect of fore limbs to pelvic region and ventral aspect of thighs; tail with alternating wide, dark brown rings and narrow, light brown rings; white, small, irregular marks on ventral aspect of tail (based on photographs of QCAZ 6761 taken by F. Ayala.)

Natural History.—Clutch size in *S. angulifer* is two eggs; the smallest individual was collected in May 1993 and had a total length of 112 mm (SVL = 39 mm, TL = 73 mm; Torres-Carvajal, 2000).

Distribution.—*Stenocercus angulifer* occurs on the eastern slopes of the northern Andes in central Ecuador (2°S–1°S). This species is known from Provincias Morona-Santiago, Pastaza, and Tungurahua at elevations of 266–1200 m (Fig. 9).

Remarks.—Cadle (2001) was the first author to note some differences between Ecuadorian and Peruvian populations of “*Stenocercus aculeatus*”. Here I conclude that they represent different species and resurrect *S. angulifer* from synonymy with *S. aculeatus*.

Stenocercus apurimacus Fritts
(Fig. 7)

Stenocercus apurimacus Fritts, 1972:2. Holotype: KU 134273, a male from “Puente Pachachaca, 15 km W Abancay, 1800 m,

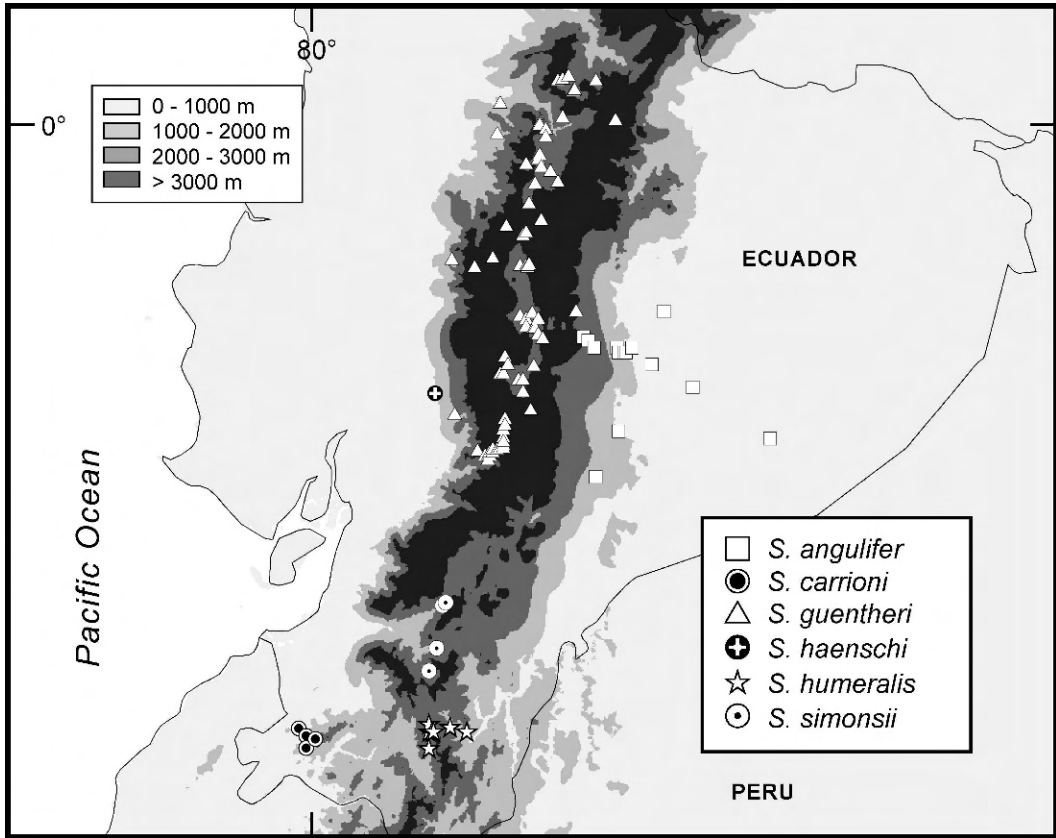


FIG. 9.—Distribution of six species of *Stenocercus* in Ecuador.

Departamento Apurimac, Peru"; Fritts, 1974:39.

Diagnosis.—Among species of *Stenocercus* with imbricate scales on the posterior surface of thighs, *S. apurimacus* is similar to *S. caducus*, *S. fimbriatus*, and *S. prionotus* in having a deep posthumeral mite pocket and lacking a postfemoral mite pocket. *S. apurimacus* differs from all three species (character states in parentheses) by having smooth ventrals (strongly keeled ventrals), nostrils medial to canthal ridge (laterally oriented nostrils), and lacking dorsolateral crests (one dorsolateral crest on each side).

Description.—(1) Maximum SVL in males 83 mm ($n = 19$); (2) maximum SVL in females 68 mm ($n = 17$); (3) vertebrae 48–64; (4) paravertebrals 57–70; (5) scales around mid-body 48–64; (6) supraoculars 5–6; (7) internasals 3–5; (8) postrostrals 4–7; (9) loreals 2–3; (10) gulars 16–25; (11) subdigitals on Finger

IV 14–21; (12) subdigitals on Toe IV 20–27; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket absent; (15) parietal eye visible through interparietal cornea in 89% of specimens; (16) scales on occipitoparietal region large, smooth, subimbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal

groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail length 64–71% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region in 6% of females; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscripational ribs not in contact mid-ventrally, Patterns 2A and 2D.

Color in life.—Dorsum brown with black chevrons more distinct in males than in females; males with dorsal nuchal black collar edged with white posteriorly; chin white with gray flecks in males, black in females; venter beige or gray with faint blue or pink tint in males, grayish white in females; pelvic region, base of tail, and thighs ventrally yellow in males (Fritts, 1972, 1974).

Natural History.—Mostly found in xeric habitats, *S. apurimacus* is active on the ground at the bases of shrubs, on rock piles, or in rows of *Agave* (Fritts, 1972, 1974).

Distribution.—*Stenocercus apurimacus* occurs in the eastern Cordillera of the central Andes in Peru (14°S–12°S). This species is known from the upper valleys of Río Apurimac at elevations between 1800–2700 m in Departamentos Apurimac, Ayacucho, and Cusco (Fig. 10). *S. apurimacus* is sympatric with *S. ochoai* (Apurimac) and *S. roseiventris* (Ayacucho).

Stenocercus azureus (Müller)

(Fig. 7)

Tropidocephalus azureus Müller, 1880:45.

Holotype: NMB 3601 from “Uruguay”; Müller, 1885:107.

Liolaemus azureus Boulenger, 1885b:192.

Saccodeira azurea Boulenger, 1885a:160; Kolesowsky, 1898:183.

Proctotretus azureus Amaral, 1937:180; Burt and Burt, 1930:21; Burt and Burt, 1931:286; Burt and Burt, 1933:41; Peters and Donoso-Barros, 1970:241.

Stenocercus azureus Frost, 1992:43; Cei, 1993:304.

Diagnosis.—Among species of *Stenocercus* that lack posthumeral and postfemoral mite pockets, and have imbricate scales on the posterior surface of thighs (i.e., *S. azureus*, *S. doellojuradoi*, *S. dumerilii*, *S. pectinatus*, *S. quinarius*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus*), those species formerly assigned to “*Proctotretus*” (i.e., *S. azureus*, *S. doellojuradoi* and *S. pectinatus*) are unique in having posteriorly projected preanals that form a denticulate border, and two longitudinal rows of lorilabials between the anterior portion of the subocular and the corresponding supralabials. *S. azureus* can be distinguished from *S. doellojuradoi* and *S. pectinatus* (character states in parentheses) by having unnotched, strongly keeled ventrals and gulars (smooth ventrals and gulars, with caudal notch).

Description.—(1) Maximum SVL in males 59 mm ($n = 2$); (2) maximum SVL in females 83 mm ($n = 4$); (3) vertebrae 30–37; (4) paravertebrals 34–42; (5) scales around midbody 33–39; (6) supraoculars five; (7) internasals 4–5; (8) postrostrals four; (9) loreals two; (10) gulars 13–19; (11) subdigitals on Finger IV 10–14; (12) subdigitals on Toe IV 16–23; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled, imbricate (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral fold present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals strongly keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate, mucronate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 64% of total length; (34) caudal whorls

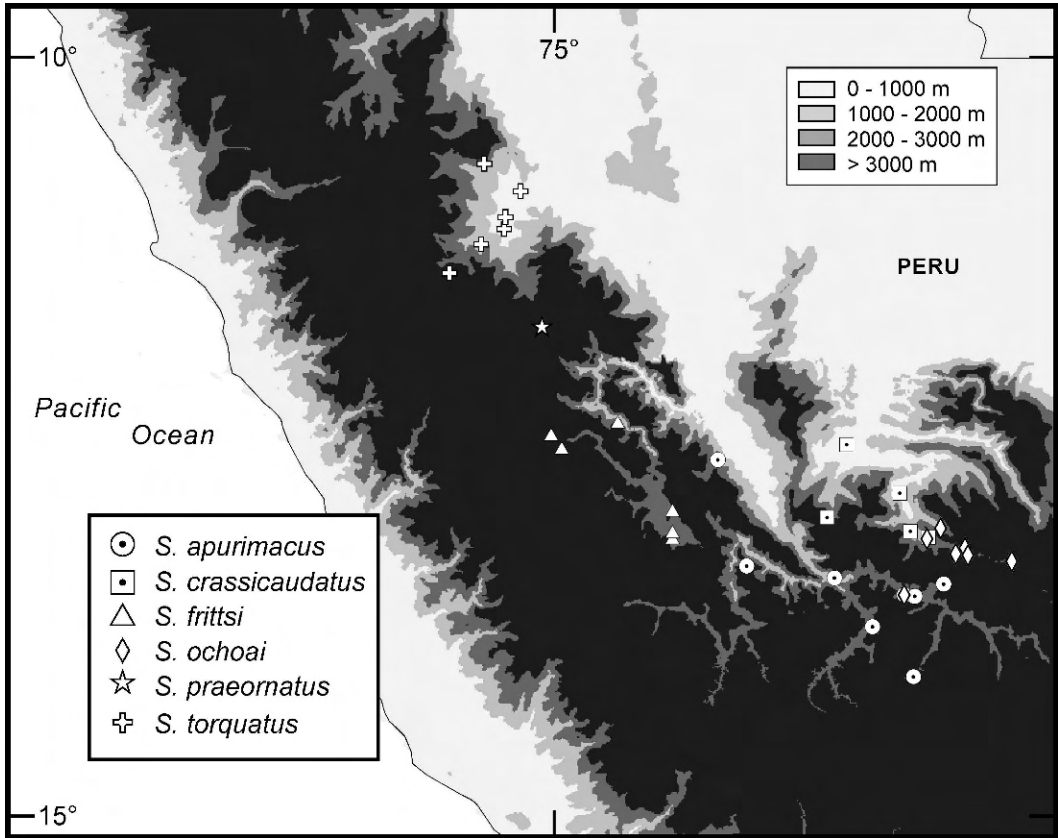


FIG. 10.—Distribution of six species of *Stenocercus* in Peru.

per autotomic segment two; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supriliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1C, 2C, and 2D.

Color in life.—Background with green and chestnut tones, occasionally with an iridescent blue tint; dorsum with one pair of dorsolateral cream stripes extending posteriorly above tympania from each eye to base of tail, as

well as a longitudinal series of three semi-circular marks between dorsolateral stripes; flanks with a ventrolateral stripe usually extending between head and hind limbs; dorsum of head with a V or M-shaped interorbital bar and another mark anterior to it; distal portion of tail with dark rings; ventral surfaces homogeneous and lighter than dorsal surfaces (Carreira et al., 2005).

Natural History.—Eggs are laid around January; females ranging between 67–80.2 mm SVL contained 6–9 oviductal eggs (Carreira and Baletta, 2004; Torres-Carvajal, 2004b).

Distribution.—*Stenocercus azureus* is known from the lowlands (150–250 m) of southeastern South America between 34°S–24°S (Fig. 11). This species occurs in Estados Paraná, Rio Grande do Sul, and São Paulo in southern Brazil, as well as Departamentos

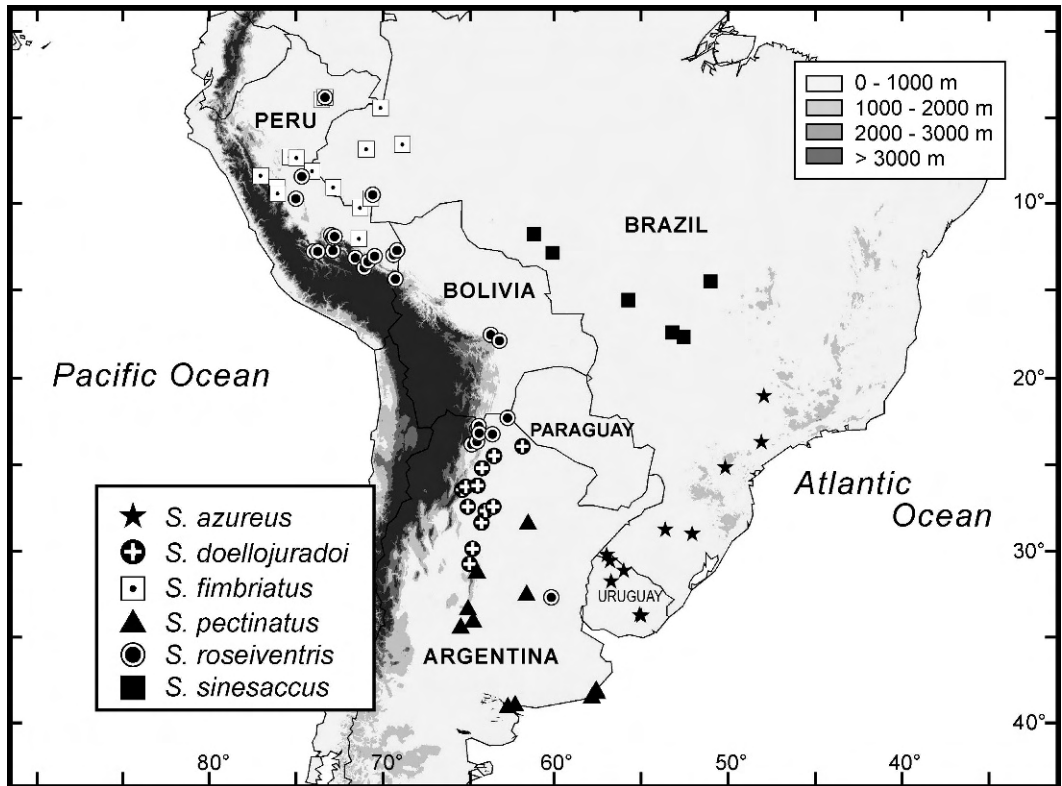


FIG. 11.—Distribution of six species of *Stenocercus* in South America.

Artigas, Canelones, Cerro Largo, Lavalleja, Rivera, Salto, Soriano, and Tacuarembó in Uruguay (Carreira et al., 2005; Nogueira and Rodrigues, 2006).

Remarks.—Although small sample size did not allow me to study intraspecific variation in *S. azureus* in more detail, there are some observations worth mentioning. Similar to *S. doellojuradoi* and *S. pectinatus*, *S. azureus* has a small antehumeral mite pocket. However, two female specimens (AMNH 131858 and MCZ 133257) from Estados Paraná and Rio Grande do Sul in southern Brazil lack this structure, suggesting that there is variation in the presence of the antehumeral mite pocket, or that the two specimens in question represent a new species similar to *S. azureus*. Furthermore, R. Etheridge (personal communication) has examined specimens from Uruguay that seem to be hybrids between *S. azureus* and *S. pectinatus* based on several morphological characters.

Stenocercus boettgeri Boulenger
(Fig. 7)

Stenocercus boettgeri Boulenger, 1911:22.
Syntypes: BM 1911.12.13.25–32 (RR 1946.8.11.92–99) from “Huancabamba, Peru” (restricted to Huancabamba [10°20′60″S, 75°31′60″W, 2686 m], Departamento Pasco, Peru, by Cadle [1991]); Burt and Burt, 1930:22; Burt and Burt, 1931:287; Burt and Burt, 1933:42; Peters, 1967:34; Etheridge, in Peters and Donoso-Barros, 1970:255; Fritts, 1974:39.

Diagnosis.—*Stenocercus boettgeri* is distinguished from other species of *Stenocercus* except *S. haenschii*, *S. humeralis*, and *S. varius* by having granular scales on the posterior surface of thighs, enlarged vertebrals, three caudal whorls per autotomic segment, a medially complete antegular fold, non-spinose caudals, and by males lacking a black transverse band on the ventral surface of neck. *S. boettgeri* has more scales around midbody

(79–104, $X = 88.61$) than *S. haenschi* (57–64, $X = 60.50$) and *S. varius* (74–88, $X = 82.35$). Both males and females of *S. boettgeri* are larger (maximum SVL = 108 and 94 mm, respectively) than *S. varius* (maximum SVL = 85 in both sexes). *S. boettgeri* is distinguished from *S. humeralis* (character states in parentheses) by having lateral nuchals less than half the size of dorsal nuchals (lateral and dorsal nuchals similar in size), 79–104 ($X = 88.61$) scales around midbody (98–125, $X = 110.05$), and 64–93 ($X = 76.86$) vertebrales (81–112, $X = 92.21$).

Description.—(1) Maximum SVL in males 108 mm ($n = 20$); (2) maximum SVL in females 94 mm ($n = 15$); (3) vertebrales 64–93; (4) paravertebrales 93–123; (5) scales around midbody 79–104; (6) supraoculars 5–7; (7) internasals 2–6; (8) postrostrals 4–6; (9) loreals 2–5; (10) gulars 41–62; (11) subdigitals on Finger IV 22–30; (12) subdigitals on Toe IV 27–34; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye visible through interparietal cornea in 5% of specimens; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrales larger than adjacent paravertebrales; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 55–67% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch

extensively covering gular region in 13% of adult females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1B, 2C, and 4B.

Color in life.—Dorsum black with yellow flecks or grayish brown with yellow and black spots; black vertical bar on shoulder delimited by irregular yellow line posteriorly in males; dorsal head scales with black borders; venter slightly pink (based on Fritts [1974] and a photograph taken by M. Lundberg.)

Natural History.—The microhabitat occupied by *S. boettgeri* usually consists of large piles and walls made of dark rocks partially covered with yellow lichens, which suggests that this species mimics the color of the substrate; *S. boettgeri* seeks refuge in rock crevices, where it wedges its body tightly after inflating its lungs (Fritts, 1974).

Distribution.—*Stenocercus boettgeri* is known from the central Andes in the eastern Cordillera in Peru (12°S–10°S). This species occurs in the upper valleys of Río Perene at elevations between 2900–3250 m in Departamentos Huánuco, Junín, and Pasco (Fig. 12). *S. boettgeri* is sympatric with *S. formosus*, *S. scapularis*, and *S. torquatus* at María Teresa, 10°42'05"S, 75°27'22"W, 1470 m, Departamento Pasco (Torres-Carvajal et al., 2005). This species has been erroneously reported for northern Peru (Fritts, 1974) and Ecuador (Etheridge, in Peters and Donoso-Barros, 1970; Peters, 1967).

Stenocercus bolivarensis Castro and Ayala
(Fig. 7)

Stenocercus bolivarensis Castro and Ayala, 1982:474. Holotype: ICN 4210, a male from “surroundings of Municipio Bolívar, 1°50'N, 76°58'W, 1650–1750 m, Departamento Cauca, Colombia”; Ayala, 1986:563.

Diagnosis.—*Stenocercus bolivarensis* differs from all other species of *Stenocercus* except *S. carrioni*, *S. chlorostictus*, *S. crassicaudatus*, *S. empetrus*, *S. eunetopsis*, *S.*

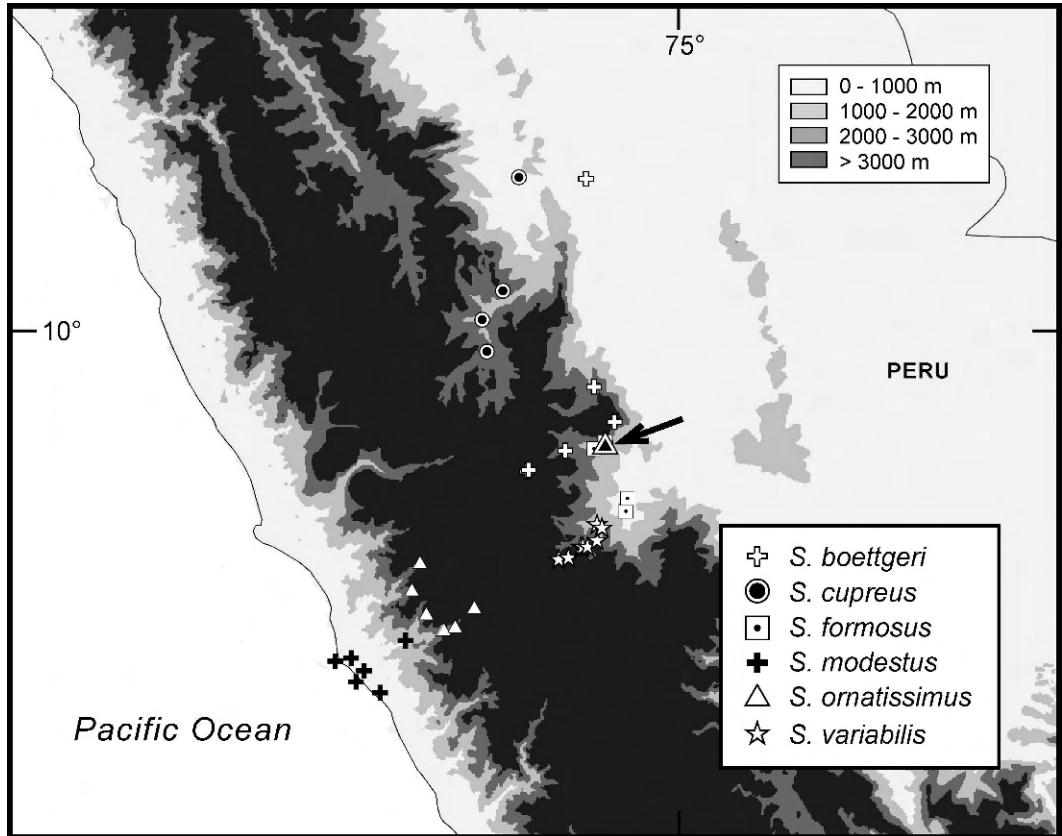


FIG. 12.—Distribution of six species of *Stenocercus* in Peru. Black triangle pointed by arrow corresponds to María Teresa ($10^{\circ}42'05''S$, $75^{\circ}27'22''W$, 1470 m, Departamento Pasco), where *Stenocercus boettgeri*, *S. formosus*, *S. scapularis*, and *S. torquatus* occur in sympatry.

simonsii, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, *S. bolivarensis* is unique in having strongly keeled and imbricate lateral body scales, which are granular or smooth and weekly imbricate in the species mentioned above.

Description.—(1) Maximum SVL in males 90 mm ($n = 9$); (2) maximum SVL in females 81 mm ($n = 3$); (3) vertebrales 60–83; (4) paravertebrales 76–95; (5) scales around mid-body 67–82; (6) supraoculars 5–7; (7) internasals four; (8) postrostrals six; (9) loreals 3–5; (10) gulars 39–56; (11) subdigitals on Finger IV 22–27; (12) subdigitals on Toe IV 26–30; (13) posthumeral mite pocket present as one

or more vertical folds or ridges; (14) post-femoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrales larger than adjacent paravertebrales;

(26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 59–60% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 11% of adult males; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 4A and 4B.

Color in life.—Dorsum and flanks brown or olive green with numerous yellow or light green spots; pairs of black marks on each side of vertebral crest; black dorsal antehumeral collar bordered by pale lines; venter light green in juveniles and cream in adults, sometimes with pink tint; gular region light green in juveniles and gray with pale blotches in adults; borders of eyelids bright yellow (Castro and Ayala, 1982).

Distribution.—*Stenocercus bolivarensis* occurs in the northern Andes between 2900–3250 m (Fig. 8). This species is known from the central Cordillera in Colombia, Departamento Cauca (1°N–2°N).

Stenocercus caducus (Cope)

(Fig. 7)

Scartiscus caducus Cope, 1862:182. Holotype: USNM 5852, a female from “Paraguay”; Boulenger, 1885a:127.

Liocephalus bolivianus Boulenger, 1890:82. Holotype: BMNH 89.12.16.25 (RR 1946.8.29.76), a female from “Bolivia.” Synonymy fide Boulenger, 1894:342.

Liocephalus caducus Boulenger, 1894:342.

Scartiscus liocephaloides Werner, 1910:23. Synonymy fide Etheridge in Peters and Donoso-Barros, 1970:213.

Liocephalus liocephaloides Burt and Burt, 1933:28.

Liocephalus caducus Burt and Burt, 1930:12; Burt and Burt, 1931:269; Burt and Burt, 1933:26.

Ophryoessoides liocephaloides Etheridge, 1966:88.

Ophryoessoides caducus Etheridge, 1966:88; Etheridge, in Peters and Donoso-Barros, 1970:213.

Stenocercus caducus Frost, 1992:43; Cei, 1993:302; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus* with strongly keeled ventrals and laterally oriented nostrils, *S. caducus* is similar to *S. aculeatus*, *S. angulifer*, *S. fimbriatus*, *S. prionotus*, and *S. scapularis* in having a distinct posthumeral mite pocket. Of these species, only *S. caducus*, *S. fimbriatus*, and *S. prionotus* lack a postfemoral mite pocket. Furthermore, *S. caducus* and *S. prionotus* are unique in having an axillary flap covering the antehumeral mite pocket (Cadle, 2001). *S. caducus* can be distinguished from *S. prionotus* by lacking projecting angulate temporals (two projecting angulate temporals in *S. prionotus*), and by having a less prominent vertebral crest.

Description.—(1) Maximum SVL in males 72 mm (Cadle, 2001); (2) maximum SVL in females 93 mm (Cadle, 2001); (3) vertebrae 30–43; (4) paravertebrals 42–50; (5) scales around midbody 34–44; (6) supraoculars 4–6; (7) internasals 6–8; (8) postrostrals 4–7; (9) loreals 3–5; (10) gulars 16–23; (11) subdigitals on Finger IV 15–21; (12) subdigitals on Toe IV 23–30; (13) posthumeral mite pocket present as a deep depression covered by an axillary flap; (14) postfemoral mite pocket absent; (15) parietal eye visible through interparietal cornea in 97% of specimens; (16) scales on occipitoparietal region large, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25)

vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate, mucronate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 67–74% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries always present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Pattern 6A.

Color in life.—Dorsum tan or dark brown with darker chevrons arranged longitudinally on vertebral line; head with dark brown interorbital bar and oblique stripe extending anterodorsally from subocular region to supraciliaries; white or yellowish-cream vertical line extending from insertion of fore limb to dorsolateral crest; venter gray or brown with scattered light blotches; ventrolateral aspect of body light pink or purple (Cei, 1993; Marcus, 1986; Scrocchi et al., 1985).

Natural History.—Based on the stomach contents of 10 adult specimens, Marcus (1986) reported the following food items for *S. caducus*: Arachnida (scorpions), Lepidoptera (Sphingidae adults and other unidentified families), Diptera (unidentified larvae), Hymenoptera (Formicidae, including *Solenopsis*; larvae of Vespidae), Coleoptera (larvae of Tenebrionidae and Scarabidae), Orthoptera, and Oligochaeta. Scrocchi et al. (1985) observed individuals of *S. caducus* that remained immobile after adopting a position in which the pink ventrolateral edges of the body between fore and hind limbs were displayed; moreover, as part of this behavior, the snout was moved downwards giving the lizard the appearance of being dead.

Distribution.—*Stenocercus caducus* occurs in the eastern Cordillera of the central and southern Andes and adjacent lowlands (26°S–14°S) at elevations between 50–2000 m (Fig. 13). It is known from Argentina (Provincias Jujuy, Salta; Marcus, 1986), Bolivia (Departamentos Beni, Chuquisaca, Cochabamba, Santa Cruz, Tarija), Brazil (Estados Mato Grosso, Mato Grosso do Sul; Nogueira and Rodrigues, 2006), and Paraguay (Departamentos Alto Paraguay, Amambay, Caaguazu, Canindeyu, Central, Itapua, and Paraguari). This species is known to occur in sympatry with *S. roseiventris* (Bolivia: Santa Cruz).

Stenocercus carrioni Parker

Stenocercus carrioni Parker, 1934:268. Holotype: BMNH 1933.6.24.75 (RR 1946.8.11.83), a male from “Zamora, 3250 ft (= 990.6 m), [Provincia Zamora Chinchipe] Ecuador”; Peters, 1967:34; Etheridge, in Peters and Donoso-Barros, 1970:256; Fritts, 1974:41; Torres-Carvajal, 2000:13.

Diagnosis.—*Stenocercus carrioni* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. chlorostictus*, *S. crassicaudatus*, *S. empetrus*, *S. eunetopsis*, *S. simonsii*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, only *S. carrioni*, *S. bolivarensis*, *S. chlorostictus*, and *S. eunetopsis* have strongly keeled and imbricate dorsal scales on neck and body (granular, smooth, or slightly keeled in remaining species). *S. carrioni* is distinguished from these species by lacking a black dorsal collar in adult males.

Description.—(1) Maximum SVL in males 74 mm (Cadle, 1991); (2) maximum SVL in females 71 mm (Cadle, 1991); (3) vertebrals 55–72; (4) paravertebrals 76–96; (5) scales around midbody 66–96; (6) supraoculars 5–7; (7) internasals four; (8) postrostrals 4–7; (9) loreals 2–4; (10) gulars 37–52; (11) subdigitals on Finger IV 23–28; (12) subdigitals on Toe IV 27–32; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through

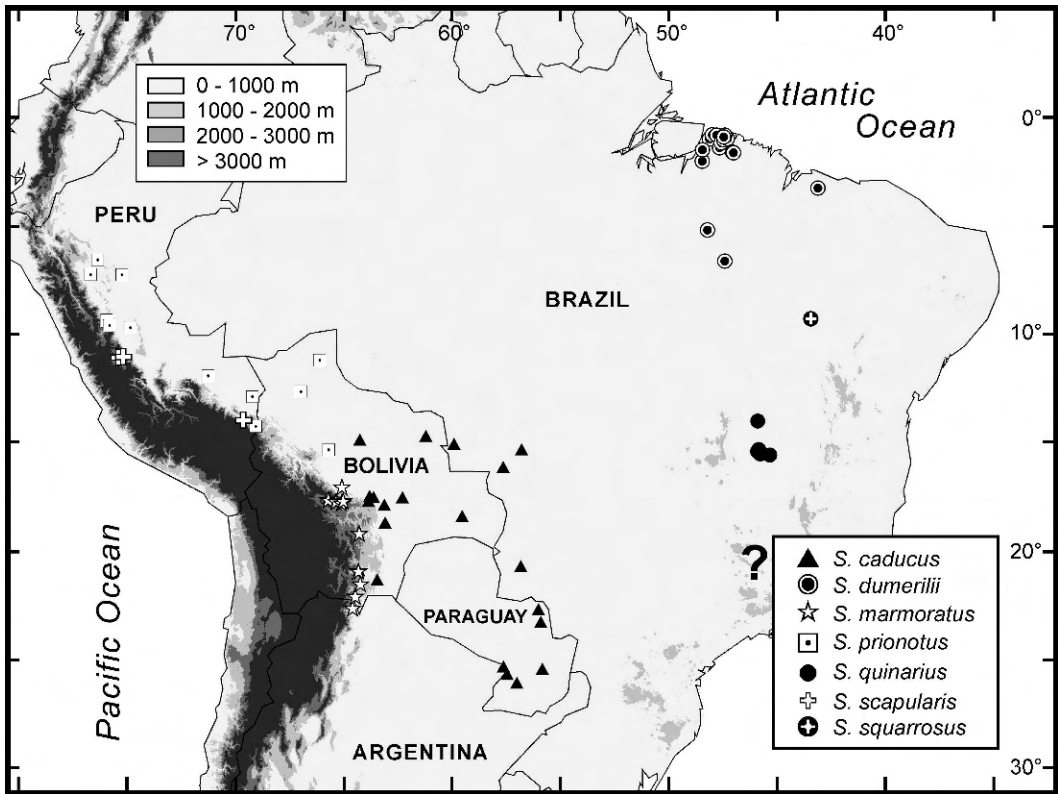


FIG. 13.—Distribution of seven species of *Stenocercus* in South America. Question mark indicates possible distribution of *S. tricristatus*.

interparietal cornea in 21% of specimens; (16) scales on occipitoparietal region small, smooth or slightly wrinkled, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult

males; (33) tail length 57–60% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1A.

Color in preservative of holotype.—Although notes of color in file of *S. carrioni* are not available, Parker (1934) described the color in preservative of the holotype probably not too long after it was collected. Dorsum greenish brown with irregular black blotches

and light dots; black blotches form dorsomedial zigzag stripe posteriorly; flanks olive with light spots; light stripe from eye to side of neck; venter uniform olive-green (Parker, 1934).

Natural History.—Enlarged ova (>10 mm) were found in two females collected in August 1965 and between August–September 1921, respectively (Cadle, 1991).

Distribution.—*Stenocercus carrioni* occurs in the northern Andes between 1320–1900 m (Fig. 9). It is known from the upper valley of Río Chira (Pacific drainage) in the western slopes of the Andes of southern Ecuador, Provincias El Oro and Loja (latitudes near 4°S). Besides the holotype, no specimens of this species have been collected at the type locality (Zamora, Provincia Zamora-Chinchipe), which lies east of the Andes and is therefore separated from all other verified localities by a major geographical barrier. Because a similar situation is true for other species of amphibians and reptiles with the same type locality, this locality is probably erroneous (Fritts, 1974; Torres-Carvajal, 2000). *S. carrioni* is sympatric with *S. limitaris* (Loja). It is probably also sympatric with *S. puyango* (Torres-Carvajal, 2005a) and *S. ornatus* (Fritts, 1974).

Stenocercus chlorostictus Cadle
(Fig. 7)

Stenocercus chlorostictus Cadle, 1991:71. Holotype: ANSP 31760, a male from “El Chorro, a village 1 km N (airline) Monte Seco, Río Zaña, 1350 m, Departamento Cajamarca, Perú”.

Diagnosis.—*Stenocercus chlorostictus* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. crassicaudatus*, *S. empetrus*, *S. eunetopsis*, *S. simonsii*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, only *S. chlorostictus*, *S. carrioni*, *S. bolivarensis*, and *S. eunetopsis* have strongly keeled and imbricate dorsal scales on neck and body (granular, smooth, or slightly keeled and subimbricate in remaining species). *S. chlorostictus* is distinguished from

these species by having more scales (80–110, $X = 89.00$) around midbody (66–96, $X = 82.43$ in *S. carrioni*; 67–82, $X = 73.08$ in *S. bolivarensis*; 60–80, $X = 70.62$ in *S. eunetopsis*).

Description.—(1) Maximum SVL in males 75 mm (Cadle, 1991); (2) maximum SVL in females 69 mm (Cadle, 1991); (3) vertebrae 63–73; (4) paravertebrals 93; (5) scales around midbody 80–110; (6) supraoculars 5–6; (7) internasals four; (8) postrostrals six; (9) loreals two; (10) gulars 34–42; (11) subdigitals on Finger IV 20–26; (12) subdigitals on Toe IV 24–32; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 56–60% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphis-

ternal inscriptional ribs not in contact mid-ventrally, Pattern 1A.

Color in life.—Dorsum brown in females and green with pale green or yellow spots in males; black antehumeral vertical bar in males, sometimes extending dorsally to form a collar; ventral aspect of head and neck greenish yellow; venter whitish with pink or orange tint (Cadle, 1991; Schlüter, 1999a). Males of *S. chlorostictus* can change the dorsal background color between green and brown (Schlüter, 1999a), a condition also known in *S. torquatus* (Torres-Carvajal et al., 2005).

Natural History.—The holotype of *Stenocercus chlorostictus* was found in a tree 5–6 m above the ground, which suggests that this species is arboreal (Cadle, 1991). This would explain why this species is difficult to find in terrestrial microhabitats.

Distribution.—*Stenocercus chlorostictus* occurs in the central Andes between 8°S–4°S (Fig. 6). It is known from the upper valleys (1350–1740 m) of Río Zaña and Río Piura (Pacific drainage) in Departamentos Cajamarca and Piura, respectively. The distribution lies in the western Cordillera of northern Peru. This species occurs in sympatry with *S. imitator* and *S. percultus* in both Departamentos.

Stenocercus chota Torres-Carvajal
(Fig. 14)

Stenocercus chota Torres-Carvajal, 2000:13.

Holotype: QCAZ 3768, a male from “Panamerican hwy 5 km E Chota, 00°28'N, 78°01'W, Valle del Chota, Provincia Imbabura, Ecuador.”

Diagnosis.—*Stenocercus chota* differs from all other species of *Stenocercus* except *S. angel*, *S. festae*, *S. guentheri*, and *S. nigromaculatus* by having imbricate scales on posterior surface of thighs, smooth ventrals, a posthumeral mite pocket consisting of a shallow depression with a wide opening (more distinct in adult specimens), small scales on occipitoparietal region, and supraoculars of similar size. Of these species, *S. nigromaculatus* is unique in having an antehumeral fold. *S. chota* differs from *S. festae* and *S. guentheri* in adult males lacking a distinct, black transverse band on ventral surface of neck, which is variably present in adult males of those two species. In

addition, *S. guentheri* has more scales around midbody than *S. chota* (Torres-Carvajal, 2000). *S. chota* can be distinguished from *S. angel* by having a distinct black midventral stripe in most adult males (polymorphic), and large black spots on gular region of juveniles and females (Torres-Carvajal, 2000). In addition, the dorsum of adult males in *S. chota* is generally brown, whereas some adult males of *S. angel* have a dark green dorsum.

Description.—(1) Maximum SVL in males 97 mm ($n = 17$); (2) maximum SVL in females 65 mm ($n = 20$); (3) vertebrales 39–50; (4) paravertebrals 55–74; (5) scales around midbody 45–59; (6) supraoculars 4–6; (7) internasals 2–4; (8) postrostrals 4–5; (9) loreals 2–4; (10) gulars 18–25; (11) subdigitals on Finger IV 14–20; (12) subdigitals on Toe IV 23–31; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 92% of specimens; (16) scales on occipitoparietal region small, keeled or multicarinate, and juxtaposed or subimbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrales larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 60–65% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral

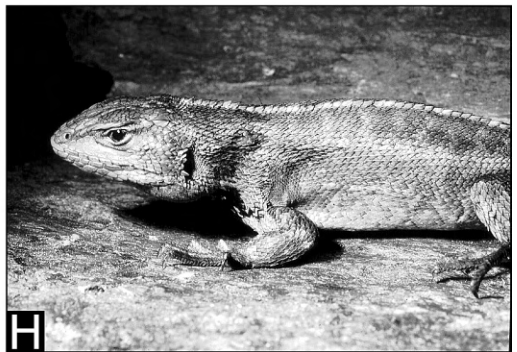
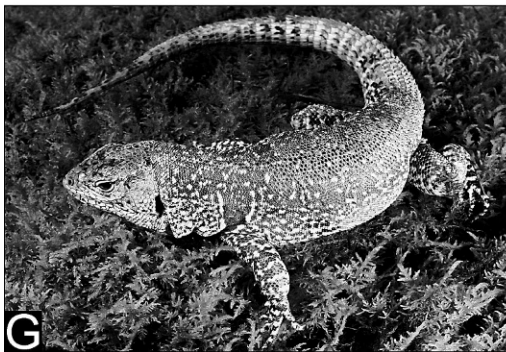
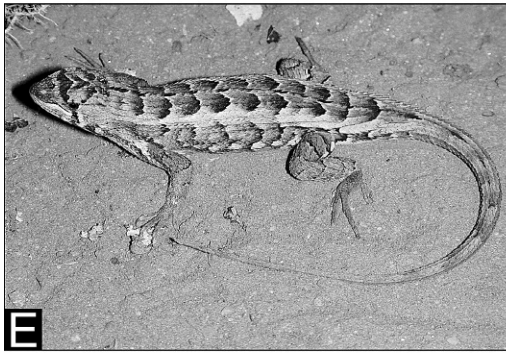
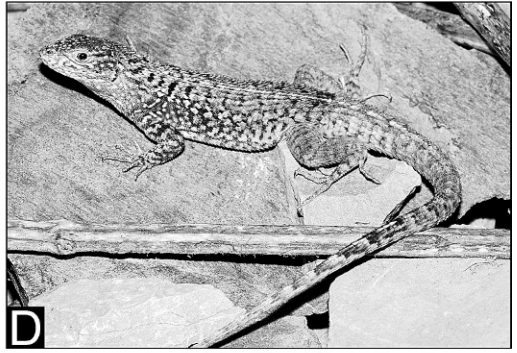
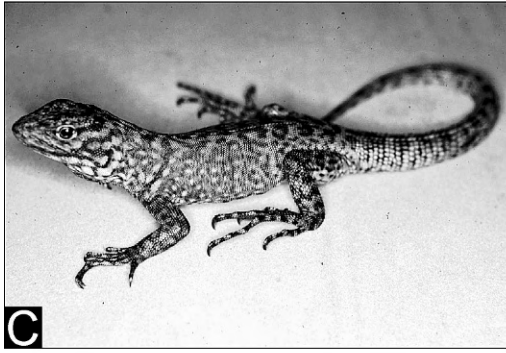
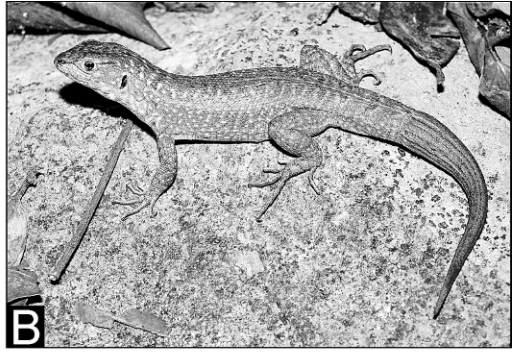
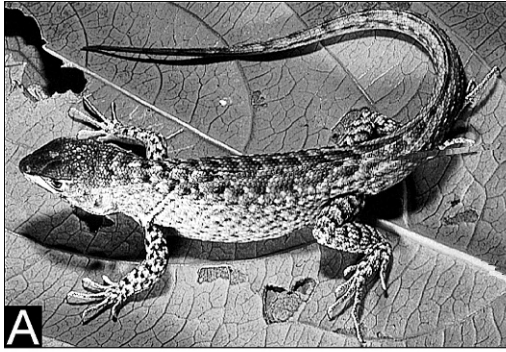


FIG. 14.—Eight species of *Stenocercus*. (A) *S. chota* (LAC); (B) *S. chrysopygus* (MLU); (C) *S. crassicaudatus* (WED); (D) *S. cupreus* (MLU); (E) *S. doellojuradoi* (JAS); (F) *S. dumerilii* (TAP); (G) *S. empetrus* (RON); (H) *S. festae* (OTC).

longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 82% of adult males; (41) dark patches on ventral surface of thighs in 12% of adult males; (42) postxiphisternal inscriptional ribs not in contact mid-ventrally, Pattern 2A.

Color in life.—Dorsum grayish brown to dark brown with or without transverse dark irregular bars arranged longitudinally from neck to base of tail; white and dark brown spots scattered over dorsum and flanks in males; yellow blotch on axillary region in some males; limbs with dark brown reticulations dorsally; loreal and subocular regions white or cream; gular region reddish cream or dark brown in males and cream with large black spots in females; venter light blue, slightly orange on the sides, with black midventral stripe in some males; venter in females cream; pelvic region, base of tail, and thighs in some males bright yellow ventrally; iris bronzed green or bronzed red.

Natural History.—Females lay two eggs; gravid females and neonates have been collected during June–July (Torres-Carvajal, 2000). This species has been collected in undisturbed areas, as well as very disturbed areas such as sugar cane plantations.

Distribution.—*Stenocercus chota* occurs on the northern Andes in northern Ecuador (Fig. 8). It is known from elevations of 1575–1940 m in the upper valley of Río Mira (Pacific drainage) in Provincias Carchi, Esmeraldas, and Imbabura. The distribution lies between 0°20'N–0°40'N.

Stenocercus chrysopygus Boulenger
(Fig. 14)

Stenocercus chrysopygus Boulenger, 1900: 183. Syntypes: BMNH 1900.6.20.8–17 (RR 1946.8.9.33–46 from “Carao [Caraz], 8000 ft, Peru”, BMNH 1900.6.20.18 (RR 1946.8.11.84) from “Huaraz, 10,000 ft, Peru”, and BMNH 1900.6.20.19 (RR 1946.8.5.98) from “Recuay, 11,000 ft, Peru” (restricted to Huaraz, 10,000 ft, Departamento Ancash, Peru, by Fritts [1974]); Burt and Burt, 1933:42; Etheridge, in Peters and Donoso-Barros, 1970:256; Fritts, 1974:42.

Diagnosis.—*Stenocercus chrysopygus* is distinguished from other species of *Stenocercus* except *S. cupreus*, *S. latebrosus*, *S.*

modestus, *S. orientalis*, and *S. ornatissimus* by having granular scales on the posterior surface of thighs, conspicuous antehumeral and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. latebrosus* and *S. ornatissimus* are unique in having deep neck mite pockets under the antehumeral and oblique neck folds, whereas *S. orientalis* is unique in having prominently keeled dorsal head scales. *S. chrysopygus* can be distinguished from *S. cupreus* and *S. modestus* (character states in parentheses) by having granular or smooth and subimbricate scales on the lateral aspect of neck (keeled and imbricate), and by lacking caudal notches on ventral scales (caudal notch on ventrals present). In addition, *S. chrysopygus* has more vertebrae (54–86, $X = 66.01$) and more scales around midbody (48–82, $X = 64.31$) than *S. cupreus* (44–58, $X = 51.53$ and 51–66, $X = 59.47$, respectively) and *S. modestus* (39–46, $X = 42.00$ and 32–38, $X = 35.17$, respectively).

Description.—(1) Maximum SVL in males 76 mm ($n = 49$); (2) maximum SVL in females 69 mm ($n = 55$); (3) vertebrae 54–86; (4) paravertebrals 52–85; (5) scales around midbody 48–82; (6) supraoculars 4–8; (7) internasals 2–5; (8) postrostrals 4–6; (9) loreals 1–3; (10) gulars 19–27; (11) subdigitals on Finger IV 16–23; (12) subdigitals on Toe IV 22–30; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) post-femoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, slightly imbricate or juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) pre-auricular fringe present; (21) antehumeral, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate;

(28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 60–69% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females present; (38) dark patch extensively covering gular region of adult males present; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 59% of adult males; (41) dark patches on ventral surface of thighs in 61% of adult males; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 2B, 2C, and 3.

Color in life.—Males of this species exhibit considerable variation in color within and among populations (for more detailed descriptions see Cadle, 1998; Fritts, 1974; Schlüter, 1999b, 2000a, 2001a, 2005). For instance, the ventral aspect of the body between fore limbs and hind limbs varies from grayish white to black; ventrally, the pelvic region and thighs are yellow or black; the chin and gular region are blue with black reticulations or cream with blue suffusion and gray blotches. Most females have a gray middorsal stripe and a whitish-beige venter with scattered gray flecks (Fritts, 1974).

Natural History.—Schlüter (1999b, 2000b) reported clutch sizes of 5–6 eggs from two captive females collected in the western slopes of Cordillera Blanca in Peru. These eggs were laid only in October during two consecutive years suggesting that this species reproduces once a year. Incubation time varied between 103–110 days at 24–25 C; hatchlings varied in size between 25–27 mm SVL. Fritts (1974) observed most males on small rocks or mud walls, and most females under rocks or at the base of small shrubs.

Distribution.—*Stenocercus chrysopygus* occurs in the central Andes (10°S–8°S) at elevations between 2265–3500 m (Fig. 15). It is known from the upper valleys of Ríos Chiquián and Santa (Pacific drainage), and

Río Marañón (Atlantic drainage) on the western and eastern Cordilleras of Peru in Departamentos Ancash and Huánuco.

Remarks.—Several differences in scale counts and coloration among populations of *S. chrysopygus* from both Pacific and Atlantic drainages have been reported (Cadle, 1998; Fritts, 1974; Schlüter, 2000a). However, no morphological diagnostic characters supporting the split of these populations into more than one species have been proposed. Although more collections from some populations are needed, phylogeographic studies using DNA might be more appropriate to better assess the history and taxonomic status of populations of *S. chrysopygus*.

Stenocercus crassicaudatus (Tschudi)
(Fig. 14)

Scelotrema crassicaudatum Tschudi, 1845: 155. Lectotype (Ortiz, 1989): MHNN 2267, a juvenile from “mountains in central Peru, Urubamba.” (restricted to surroundings of Río Perené, 10°55’S, 75°13’W, Peru, by Ortiz [1989]; restricted to Urubamba [Departamento Cusco], Peru, by Torres-Carvajal et al. [2005]).

Stenocercus torquatus Boulenger, 1885a:133. Holotype: BMNH 61.5.22.4 from “Peru.” Synonymy fide Burt and Burt, 1930:22.

Urocentrum meyeri Werner, 1901b:4. Holotype: MTD D 1764, from “Lima [Departamento Lima], Peru.” Synonymy fide Etheridge, 1968:58.

Stenocercus ervingi Stejneger, 1913:545. Holotype: USNM 49550, a juvenile from “Huadquinia, 5000 ft [Departamento Cuzco], Peru.” Synonymy fide Burt and Burt, 1930:22.

Stenocercus crassicaudatus Roux, 1907:299; Burt and Burt, 1930:22; Burt and Burt, 1931:287; Etheridge, in Peters and Donoso-Barros, 1970:256; Fritts, 1974:45.

Diagnosis.—*Stenocercus crassicaudatus* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. chlorostictus*, *S. empetrus*, *S. eunetopsis*, *S. simonsii*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species,

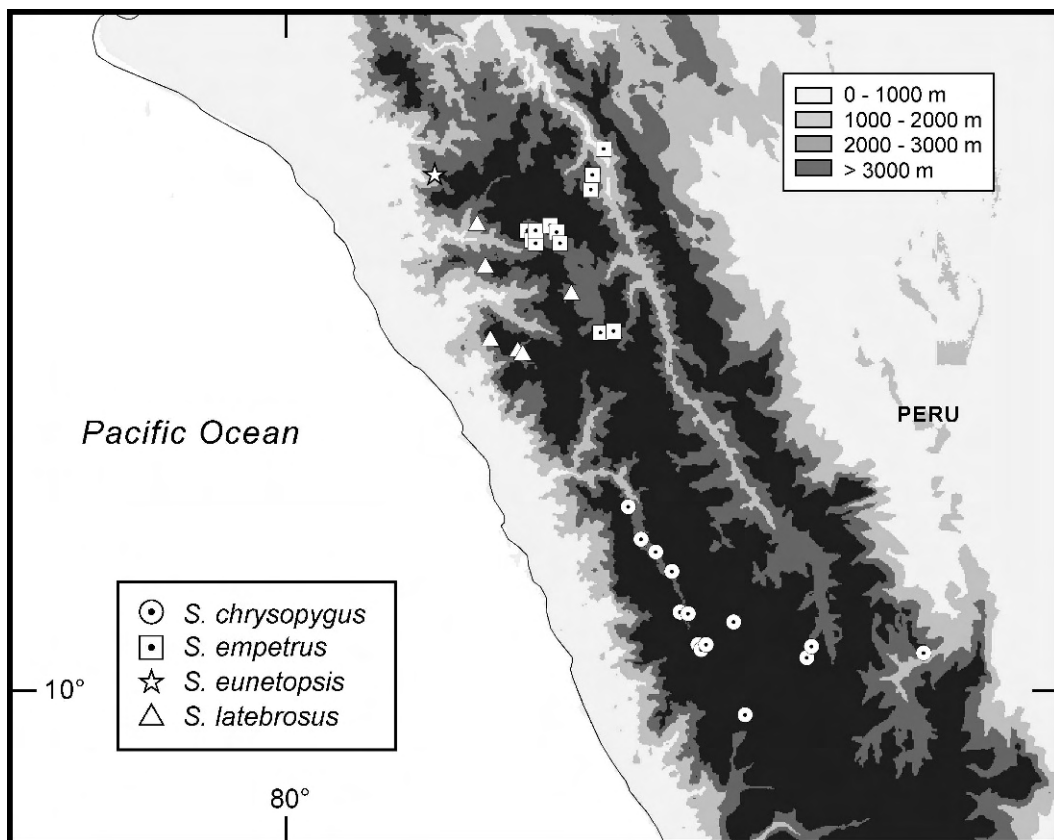


FIG. 15.—Distribution of four species of *Stenocercus* in Peru.

only *S. crassicaudatus*, *S. simonsii*, and *S. torquatus* have granular dorsal scales on neck (imbricate, and smooth or keeled in remaining species). *S. crassicaudatus* differs from *S. simonsii* and *S. torquatus* by lacking a distinct black antehumeral collar (collar middorsally incomplete in *S. simonsii* and complete in *S. torquatus*), and by having 97–121 ($X = 108.87$) scales around midbody (79–102, $X = 94.20$ in *S. simonsii*; 102–137, $X = 116.96$ in *S. torquatus*), and 83–97 ($X = 89.80$) vertebrals (59–98, $X = 73.75$ in *S. simonsii*; 83–115, $X = 98.86$ in *S. torquatus*).

Description.—(1) Maximum SVL in males 95 mm ($n = 16$); (2) maximum SVL in females 85 mm ($n = 14$); (3) vertebrals 83–97; (4) paravertebrals 107–166; (5) scales around midbody 97–121; (6) supraoculars 6–8; (7) internasals 4–7; (8) postrostrals 6–8; (9) loreals 3–4; (10) gulars 44–55; (11) subdigitals on Finger IV 23–32; (12) subdigitals on Toe IV

26–38; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales closer to vertebral line; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals

smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 57–62% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapular region absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally (AMNH 23132, 23143–44, 23146 and MCZ 29303, 45882 identified as *S. crassicaudatus* in Torres-Carvajal [2004a] correspond to *S. torquatus*.)

Color in life.—Dorsum gray or brown with numerous black spots (Fritts, 1974).

Natural History.—This species has been found on large rock piles and rocky cliffs (Fritts, 1974).

Distribution.—*Stenocercus crassicaudatus* occurs in the eastern Cordillera of Peru (central Andes) between 14°S–12°S (Fig. 10). It is known from the upper valley of Río Urubamba (Atlantic drainage) in Departamento Cusco at elevations of 1060–2404 m. This species occurs in sympatry with *S. ochoai*.

Stenocercus cupreus Boulenger
(Fig. 14)

Stenocercus cupreus Boulenger, 1885a:135.

Holotype: BM 76.7.4.4, a male from “Huánuco [Departamento Huánuco], Peru”; Burt and Burt, 1933:43; Etheridge, in Peters and Donoso-Barros, 1970:256; Fritts, 1974:47.

Diagnosis.—*Stenocercus cupreus* is distinguished from other species of *Stenocercus* except *S. chrysopygus*, *S. latebrosus*, *S. modestus*, *S. orientalis*, and *S. ornatissimus* by having granular scales on the posterior surface of thighs, conspicuous antehumeral

and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. latebrosus* and *S. ornatissimus* are unique in having deep neck mite pockets under the antehumeral as well as the oblique neck folds, whereas *S. orientalis* is unique in having prominently keeled dorsal head scales. *S. cupreus* can be distinguished from *S. chrysopygus* (character states in parentheses) by having keeled and imbricate scales on the lateral aspect of neck (granular or smooth and subimbricate), and by having a caudal notch on ventral scales (caudal notch on ventrals absent). *S. cupreus* has fewer vertebrae (44–58, $X = 51.53$) and fewer scales around midbody (51–66, $X = 59.47$) than *S. chrysopygus* (54–86, $X = 66.01$ and 48–82, $X = 64.31$, respectively), as well as more vertebrae and more scales around midbody than *S. modestus* (39–46, $X = 42.00$ and 32–38, $X = 35.17$, respectively). In addition, *S. cupreus* is unique among the species mentioned above (character states in parentheses) in having two caudal whorls per autotomic segment (three) and prominently keeled caudal scales (moderately keeled).

Description.—(1) Maximum SVL in males 78 mm ($n = 18$); (2) maximum SVL in females 73 mm ($n = 19$); (3) vertebrae 44–58; (4) paravertebrals 46–60; (5) scales around midbody 51–66; (6) supraoculars 5–7; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 2–4; (10) gulars 20–28; (11) subdigitals on Finger IV 16–23; (12) subdigitals on Toe IV 24–33; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antegular, antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) laterals reduced in size, less than half the size of dorsal body scales; (25) vertebrae and

adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 59–67% of total length; (34) caudal whorls per autotomic segment two; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1B.

Color in life.—Dorsum reddish brown with copper tone posteriorly and yellowish brown anteriorly; dorsum of head gray with scattered light spots; black vertical bar anterior to fore limb; flanks with scattered black spots (male, color photograph in Lehr [2002]).

Natural History.—Clutch size in *S. cupreus* is 2–5 eggs (Lehr, 2002). This species occupies xeric habitats. Fritts (1974) observed most males basking on rocks or at the base of cacti and shrubs, whereas most females were found at the bases of shrubs or under rocks.

Distribution.—*Stenocercus cupreus* occurs at elevations between 1900–2300 m in the eastern Cordillera of Peru, central Andes (Fig. 12). It is only known from the upper valley of Río Huallaga in Departamento Huánuco (10°S–9°S).

Stenocercus doellojuradoi (Freiberg)
(Fig. 14)

Proctotretus doello-juradoi Freiberg, 1944: 473. Holotype: MACN 1670 from “La Rioja [Provincia La Rioja], Argentina”; Peters and Donoso-Barros, 1970:241; Cei, 1986:278.

Stenocercus doellojuradoi Frost, 1992:43; Cei, 1993:306.

Diagnosis.—Among species of *Stenocercus* that lack posthumeral and postfemoral mite pockets and have imbricate scales on the

posterior surface of thighs (i.e., *S. azureus*, *S. doellojuradoi*, *S. dumerilii*, *S. pectinatus*, *S. quinarius*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus*), those species formerly assigned to “*Proctotretus*” (i.e., *S. azureus*, *S. doellojuradoi* and *S. pectinatus*) are unique in having posteriorly projected preanals that form a denticulate border, and two longitudinal rows of lorilabials between the anterior portion of the subocular and the corresponding supralabials. *S. doellojuradoi* can be distinguished from *S. azureus* by having notched and smooth ventrals and gulars (unnotched and strongly keeled in *S. azureus*). It can be distinguished from *S. pectinatus* by not having the mental in contact with the first pair of sublabials and by lacking an antehumeral fold. In addition, *S. doellojuradoi* differs from *S. azureus* and *S. pectinatus* in having a longitudinal series of large, cream circular blotches ventral to each dorsolateral crest, as well as pink ventrolateral body edges.

Description.—(1) Maximum SVL in males 72 mm ($n = 11$); (2) maximum SVL in females 78 mm ($n = 17$); (3) vertebrae 33–41; (4) paravertebrals 39–46; (5) scales around midbody 32–41; (6) supraoculars 4–5; (7) internasals 3–4; (8) postrostrals four; (9) loreals 2–4; (10) gulars 15–19; (11) subdigitals on Finger IV 11–15; (12) subdigitals on Toe IV 19–24; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 61–66% of total length; (34) caudal whorls per autotomic segment two; (35) caudals not

spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1B.

Color in life.—Dorsal background dark olive-green or brown with a longitudinal series of 10–11 pairs of dark, semicircular blotches posteriorly bordered with white, cream, or yellow; flanks with longitudinal series of dark blotches dorsally and whitish cream blotches ventrally; ventrolateral aspect of body and base of tail faint pink; dorsal aspect of head with two transverse black bands bordered with white, of which the posteriormost extends posteroventrally to comisure of mouth; ventral surfaces reddish-cream; throat and lateral aspect of gular region with scattered dark flecks (Cei, 1986, 1993).

Natural History.—One female specimen (FML 1347; SVL = 78 mm) collected around November–December 1982 in Provincia Santiago del Estero contained seven eggs occupying more than half of the body volume. Volumes of these eggs were 395.52–727.47 mm³ (mean = 543.20). This species occupies xeric habitats (Cei, 1993).

Distribution.—*Stenocercus doellojuradoi* is known from the eastern slopes of the southern Andes and adjacent lowland areas (100–1000) in Argentina (Fig. 11). It occurs between 34°S–24°S in Provincias Córdoba, Formosa, Salta, Santiago del Estero, and Tucumán. This species also has been reported for Provincias Catamarca, San Juan, and San Luis (Cei, 1986; Laspiur and Acosta, 2006).

Stenocercus dumerilii (Steindachner)
(Fig. 14)

Ophryossoides dumerilii Steindachner, 1867: 33. Holotype: NMW 16363, a female from “Brazilien bei Pará” (restricted to surroundings of Belém, Pará, Brazil, by Cunha [1981]); Etheridge, 1966:88.

Liocephalus dumerilii Boulenger, 1885a:170.

Liocephalus dumerilii Müller, 1912:14.

Liocephalus dumerilii Burt and Burt, 1933:27; Amaral, 1937:178; Cunha, 1961:86.

Ophryossoides tricristatus (part) Etheridge in Peters and Donoso-Barros, 1970:215; Cunha, 1981:4.

Stenocercus dumerilii Frost, 1992:43; Avila-Pires, 1995:143; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. Of these species, only *S. dumerilii*, *S. quinarius*, *S. squarrosus*, and *S. tricristatus* have a pyramidal head, as well as enlarged, dorsally-projected posterior supraciliaries. *S. dumerilii* can be distinguished from *S. tricristatus* (character states in parentheses) by having distinctly pointed posterior supraciliaries (posterior supraciliaries blunt), two enlarged scales above tympanum (no enlarged scales above tympanum), tibia about as long as thigh (tibia shorter than thigh), and 41–50 (33) scales around midbody (Avila-Pires, 1995). From *S. quinarius* and *S. squarrosus* (character states in parentheses) it can be distinguished by having a longer—53–58% of total length—tail (50–52% and 44–47%, respectively), keel on each dorsal scale prominent only distally (keel prominent throughout length of scale), 41–50 (47–56 and 46–53, respectively) scales around midbody, and a wider rostral scale (Nogueira and Rodrigues, 2006).

Description.—(1) Maximum SVL in males 100 mm ($n = 5$); (2) maximum SVL in females 109 mm ($n = 12$); (3) vertebrae 24–30; (4) paravertebrals 33–41; (5) scales around midbody 41–50; (6) supraoculars 3–5; (7) internasals 6–7; (8) postrostrals 2–6; (9) loreals 2–4; (10) gulars 15–20; (11) subdigitals on Finger IV 12–18; (12) subdigitals on Toe IV 18–24; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region large, keeled or wrinkled, juxtaposed; (17) two projecting angulate temporals; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly

imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 53–58% of total length; (34) caudal autotomic segments absent; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) five pairs of postxiphisternal inscriptional ribs not in contact midventrally, second pair of xiphisternal ribs not fused with xiphisternal rods.

Color in life (females only).—Dorsum brown with paired, blackish, triangular marks; blackish stripe extending anterodorsally from subocular region to supraciliaries; sides of neck with large black mark extending posteriorly to a level anterior to midbody; ventral surfaces with brown irregular pattern, iris verona brown (Avila-Pires, 1995).

Natural History.—Food items of *Stenocercus dumerilii* include Arachnidae, Chilopoda, Coleoptera (adults and larvae), Diplopoda, Hemiptera, Hymenoptera, Lepidoptera (larvae), and Orthoptera (Avila-Pires, 1995; Cunha, 1981). Females collected between January–June contained 2–6 oviductal eggs (Cunha, 1981). A female kept in captivity laid eggs in September; incubation time and hatchling size varied between 88–112 days and 33–35 mm SVL, respectively (Avila-Pires, 1995).

Distribution.—*Stenocercus dumerilii* occurs between 6°30'S–0° in the Amazon basin in northeastern Brazil (Fig. 13). It is known from Estados Pará and Maranhão at elevations of 0–100 m (Andrade et al., 2003; Avila-Pires, 1995; Nogueira and Rodrigues, 2006).

Stenocercus empetrus Fritts
(Fig. 14)

Stenocercus empetrus Fritts, 1972:7. Holotype: KU 134394, a male from “Huamachuco, 3350 m, Departamento La Libertad, Perú”; Fritts, 1974:47.

Diagnosis.—*Stenocercus empetrus* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. chlorostictus*, *S. crassicaudatus*, *S. eunetopsis*, *S. simonsii*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a longitudinal row (continuous or discontinuous) of enlarged vertebral scales. In these species the dorsal scales on neck and body are granular in *S. crassicaudatus*, *S. simonsii*, and *S. torquatus*. *S. empetrus* can be distinguished from *S. bolivarensis*, *S. carrioni*, and *S. eunetopsis* by having more (85–111) scales around midbody (67–82, 66–96, and 60–80, respectively). It differs from *S. chlorostictus* by lacking caudal scales with strongly projected mucrons, and presumably by attaining a larger size (Table 2). Furthermore, the dorsal background color in *S. empetrus* is not green as in some male specimens of *S. chlorostictus*.

Description.—(1) Maximum SVL in males 103 mm ($n = 20$); (2) maximum SVL in females 90 mm ($n = 17$); (3) vertebrae 68–105; (4) paravertebrals 83–111; (5) scales around midbody 85–111; (6) supraoculars 5–7; (7) internasals 3–4; (8) postrostrals 4–8; (9) loreals 2–5; (10) gulars 36–49; (11) subdigitals on Finger IV 17–24; (12) subdigitals on Toe IV 22–30; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent;

(19) scales on frontonasal region juxtaposed; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) pre-anals not projected; (32) tail not compressed laterally in adult males; (33) tail length 53–61% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A and 1B.

Color in life.—Dorsum black, brown, or gray, with yellow flecks and spots; interorbital and occipital regions with red spots; venter yellowish orange in males and yellow in females, with black reticulations in both sexes (Fritts, 1972; Schlüter, 1999*c,d*, 2005). Remarkably, juveniles of *Stenocercus empetrus* from nearby the type locality have partially red or orange tails (Schlüter, 2005). Brightly colored tails in juveniles are not known in other species of *Stenocercus*; moreover, this condition is uncommon among iguanian lizards.

Natural History.—A female laid six eggs in captivity in June 1998 (Schlüter, 1999*d*). Incubation time was 112 days at a temperature of 22–25°C; SVL of hatchlings was about 32 mm. Mostly found in mesic habitats, this species is active in large rock piles and rock exposures (Fritts, 1972).

Distribution.—*Stenocercus empetrus* occurs between 8°S–6°S in the western Cordillera of Peru (central Andes). It is known from the upper valleys of Río Marañón (Atlantic drainage) at elevations of 2650–3200 m in Departamentos Cajamarca and La Libertad (Fig. 15). This species is sympatric with *S. melanopygus* at several localities. Fritts (1974) reported *S. empetrus* from the upper valley of Río Moche (Pacific drainage) based on erroneous locality data (Cadle, 1991).

Stenocercus erythrogaster (Hallowell)

Brachysaurus erythrogaster Hallowell, 1856: 232. Holotype: ANSP 8607, a male from “New Grenada [Colombia].”

Liocephalus erythrogaster Boulenger, 1885*a*: 168; Ruthven, 1922:59.

Liocephalus erythrogaster Burt and Burt, 1933:27.

Ophryoessoides erythrogaster Etheridge, 1966:88; Etheridge, in Peters and Donoso-Barros, 1970:213; Fritts, 1974:35; Ayala, 1986:563.

Stenocercus erythrogaster Frost, 1992:43; Cadle, 2001:184; Harvey et al., 2004:941.

Diagnosis.—*Stenocercus erythrogaster* can be distinguished from other species of *Stenocercus* except *S. huancabambae*, *S. iridescens*, *S. limitaris*, *S. puyango* and *S. santander* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. erythrogaster* and *S. iridescens* lack a postfemoral mite pocket. *S. erythrogaster* differs from *S. iridescens* (character states in parentheses) by having keeled or wrinkled dorsal head scales (smooth) and distinctly keeled ventrals (slightly keeled in juveniles, smooth in adults).

Description.—(1) Maximum SVL in males 87 mm ($n = 8$); (2) maximum SVL in females 91 mm ($n = 8$); (3) vertebrae 39–46; (4) paravertebrals 48–56; (5) scales around mid-body 39–46; (6) supraoculars 3–5; (7) inter-nasals 3–4; (8) postrostrals 4–5; (9) loreals 2–4; (10) gulars 16–22; (11) subdigitals on Finger IV 14–20; (12) subdigitals on Toe IV 23–28; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket absent; (15)

TABLE 2.—Summary of morphological characters and measurements (mm) of species of *Stenocercus*. Range (first line) and mean \pm standard deviation or mode (second line) are given for quantitative characters. Numbers in posthumeral and postfemoral mite pockets correspond to descriptions given in materials and methods (Figs. 2,3). Superscript numbers indicate that some data were obtained from the corresponding reference at the bottom of the table; sample size in cited reference is given in parentheses.

Character	<i>S. aculeatus</i> n = 5	<i>S. angel</i> n = 33	<i>S. angulifer</i> n = 38	<i>S. apurimacus</i> n = 36	<i>S. azureus</i> n = 6
Scales around midbody	32–37 35.00 \pm 2.00	49–68 56.09 \pm 3.71	38–50 42.10 \pm 2.37	48–64 54.03 \pm 3.46	33–39 35.83 \pm 2.48
Vertebrales	31–39 35.20 \pm 3.27	39–56 45.7 \pm 2.84	37–47 41.63 \pm 2.25	48–64 54.00 \pm 3.27	30–37 33.83 \pm 2.48
Paravertebrales	41–48 45.20 \pm 2.95	51–75 59.39 \pm 4.72	37–57 50.42 \pm 3.81	57–70 63.33 \pm 2.95	34–42 38.00 \pm 3.03
Gulars	15–18 16.60 \pm 1.14	19–27 21.97 \pm 1.70	16–20 18.47 \pm 0.76	16–25 19.75 \pm 1.79	13–19 17.50 \pm 2.51
Supraoculars	4 4	4–6 5	4–5 4	5–6 5	5 5
Internasals	4–5 4	1–4 4	4–8 6	3–5 4	4–5 4
Subdigitals Finger IV	18–19 18.80 \pm 0.45	13–22 17.45 \pm 1.91	15–19 17.28 \pm 1.11	14–21 17.39 \pm 1.61	10–14 12.67 \pm 1.51
Subdigitals Toe IV	23–27 25.00 \pm 1.58	20–28 25.21 \pm 1.98	19–25 22.84 \pm 1.44	20–27 24.75 \pm 1.73	16–23 19.50 \pm 2.66
Tail length/total length	0.70–0.73 0.71 \pm 0.02	0.59–0.69 0.65 \pm 0.03	0.68–0.73 0.70 \pm 0.02	0.64–0.71 0.66 \pm 0.02	0.64 —
Maximum SVL males	103	87	96	83	59
Maximum SVL females	91	76	82	68	83
Posthumeral mite pocket	3	2	3	3	absent
Postfemoral mite pocket	2	2	2	absent	absent

Character	<i>S. boettgeri</i> n = 38	<i>S. bolivarensis</i> n = 13	<i>S. caducus</i> ¹ n = 41 (43)	<i>S. carioni</i> ² n = 30 (21)	<i>S. chlorostictus</i> ² n = 1 (5)
Scales around midbody	79–104 88.61 \pm 6.27	67–82 73.08 \pm 4.63	34–44 38.20 \pm 2.10	66–96 82.43 \pm 8.13	80–110 89.00 \pm 12.69
Vertebrales	64–93 76.86 \pm 6.53	60–83 67.54 \pm 6.04	30–43 35.90 \pm 5.59	55–72 64.43 \pm 5.18	63–73 68.40 \pm 3.58
Paravertebrales	93–123 105.17 \pm 6.87	76–95 86.15 \pm 5.41	42–50 45.47 \pm 2.11	76–96 86.67 \pm 5.36	93 —
Gulars	41–62 49.39 \pm 4.96	39–56 46.85 \pm 4.54	16–23 18.60 \pm 1.41	37–52 46.48 \pm 4.14	34–42 37.40 \pm 3.13
Supraoculars	5–7 6	5–7 6	4–6 5	5–7 6	5–6 6
Internasals	2–6 4	4 4	6–8 7	4 4	4 4
Subdigitals Finger IV	22–30 25.39 \pm 1.52	22–27 25.46 \pm 1.51	15–21 17.60 \pm 1.16	23–28 25.19 \pm 1.25	20–26 24.20 \pm 2.68
Subdigitals Toe IV	27–34 30.97 \pm 1.80	26–30 27.62 \pm 1.26	23–30 26.00 \pm 1.59	27–32 29.80 \pm 1.44	24–32 27.60 \pm 3.21
Tail length/total length	0.55–0.67 0.63 \pm 0.03	0.59–0.60 0.59 \pm 0.01	0.67–0.74 0.71 \pm 0.01	0.57–0.60 0.58 \pm 0.01	0.56–0.60 0.58 \pm 0.02
Maximum SVL males	108	90	72	74	75
Maximum SVL females	94	81	93	71	69
Posthumeral mite pocket	1	1	3	1	1
Postfemoral mite pocket	1	1	absent	2	2

Character	<i>S. chota</i> ³ n = 37 (55)	<i>S. chrysopygus</i> n = 105	<i>S. crassicaudatus</i> ⁴ n = 31 (31)	<i>S. cupreus</i> n = 39	<i>S. doellojuradoi</i> n = 31
Scales around midbody	45–59 50.93 \pm 2.96	48–82 64.31 \pm 7.21	97–121 108.87 \pm 5.99	51–66 59.47 \pm 3.48	32–41 37.00 \pm 2.59
Vertebrales	39–50 45.19 \pm 2.79	54–86 66.01 \pm 6.62	83–97 89.80 \pm 3.74	44–58 51.53 \pm 3.52	33–41 37.29 \pm 2.19

TABLE 2.—Continued.

Character	<i>S. chota</i> ³ n = 37 (55)	<i>S. chrysopygus</i> n = 105	<i>S. crassicaudatus</i> ⁴ n = 31 (31)	<i>S. cupreus</i> n = 39	<i>S. doellojuradoi</i> n = 31
Paravertebrals	55–74 61.60 ± 4.65	52–85 65.42 ± 8.29	107–166 126.67 ± 12.21	46–60 53.61 ± 3.34	39–46 42.23 ± 2.00
Gulars	18–25 20.52 ± 1.82	19–27 22.45 ± 1.63	44–55 49.57 ± 2.73	20–28 23.28 ± 2.15	15–19 16.30 ± 1.06
Supraoculars	4–6 6	4–8 6	6–8 6	5–7 6	4–5 5
Internasals	2–4 4	2–5 4	4–7 6	2–4 4	3–4 4
Subdigitals Finger IV	14–20 17.64 ± 1.48	16–23 19.07 ± 1.32	23–32 28.53 ± 1.80	16–23 20.05 ± 1.57	11–15 13.19 ± 1.01
Subdigitals Toe IV	23–31 26.29 ± 1.58	22–30 25.97 ± 1.67	26–38 33.00 ± 2.86	24–33 28.26 ± 1.86	19–24 21.19 ± 1.28
Tail length/total length	0.60–0.65 0.62 ± 0.02	0.60–0.69 0.66 ± 0.02	0.57–0.62 0.59 ± 0.01	0.59–0.67 0.64 ± 0.02	0.61–0.66 0.63 ± 0.01
Maximum SVL males	97	76	95	78	72
Maximum SVL females	65	69	85	73	78
Posthumeral mite pocket	2	1	1	1	absent
Postfemoral mite pocket	2	2	2	2	absent

Character	<i>S. dumerilii</i> ⁵ n = 17 (33)	<i>S. empetrus</i> n = 38	<i>S. erythrogaster</i> n = 18	<i>S. cunetopsis</i> ² n = 22 (29)	<i>S. festae</i> n = 93
Scales around midbody	41–50 45.30 ± 2.50	85–111 97.25 ± 5.44	39–46 42.53 ± 1.81	60–80 70.62 ± 5.38	47–66 55.91 ± 4.85
Vertebrals	24–30 26.90 ± 1.50	68–105 87.53 ± 8.55	35–46 38.78 ± 2.96	59–80 71.45 ± 5.42	39–55 47.28 ± 3.58
Paravertebrals	33–41 36.53 ± 2.70	83–111 92.38 ± 6.87	48–56 51.06 ± 2.41	65–78 70.86 ± 3.81	46–81 62.42 ± 6.19
Gulars	15–20 16.35 ± 1.32	36–49 39.92 ± 3.32	16–22 18.56 ± 1.38	37–57 44.00 ± 4.75	16–29 22.96 ± 2.22
Supraoculars	3–5 4	5–7 6	3–5 4	4–8 5	4–6 5
Internasals	6–7 6	3–4 4	3–4 4	3–5 4	2–4 4
Subdigitals Finger IV	12–18 14.80 ± 1.10	17–24 20.95 ± 1.61	14–20 16.18 ± 1.47	22–27 23.62 ± 1.37	14–22 17.28 ± 1.79
Subdigitals Toe IV	18–24 20.60 ± 1.30	22–30 26.94 ± 2.10	23–28 25.65 ± 1.41	28–35 31.17 ± 1.95	21–33 26.37 ± 2.20
Tail length/total length	0.53–0.58 0.55 ± 0.01	0.53–0.61 0.56 ± 0.03	0.68–0.72 0.70 ± 0.01	0.62–0.66 0.64 ± 0.01	0.61–0.69 0.65 ± 0.02
Maximum SVL males	100	103	87	82	102
Maximum SVL females	109	90	91	70	79
Posthumeral mite pocket	absent	1	2	1	2
Postfemoral mite pocket	absent	2	absent	2	2

Character	<i>S. fimbriatus</i> ^{1,5} n = 28 (33–50)	<i>S. formosus</i> n = 17	<i>S. frittsi</i> ⁶ n = 46 (46)	<i>S. guentheri</i> n = 86	<i>S. haenschii</i> ⁷ n = 1 (1)
Scales around midbody	39–51 44.40 ± 3.00	74–82 77.88 ± 2.37	60–76 65.14 ± 3.70	59–83 68.48 ± 4.78	57–64 60.50 ± 4.95
Vertebrals	37–52 43.80 ± 2.80	58–72 64.71 ± 3.75	48–71 57.24 ± 5.07	44–64 55.54 ± 3.51	50 —
Paravertebrals	42–52 45.50 ± 2.60	96–115 106.41 ± 5.41	59–90 70.16 ± 6.74	59–89 74.36 ± 5.60	64 —
Gulars	17–25 20.10 ± 2.29	24–31 26.47 ± 1.68	20–28 22.63 ± 1.77	21–31 25.61 ± 2.02	56 —
Supraoculars	4–6 4	5–6 5	4–6 6	5–7 6	5 5
Internasals	4–7 6	4–5 4	4–5 4	2–4 4	3 3

TABLE 2.—Continued.

Character	<i>S. fimbriatus</i> ^{1,5} n = 28 (33–50)	<i>S. formosus</i> n = 17	<i>S. frittsi</i> ⁶ n = 46 (46)	<i>S. guentheri</i> n = 86	<i>S. haenschii</i> ⁷ n = 1 (1)
Subdigitals Finger IV	12–16	18–21	16–22	15–23	26–28
	14.60 ± 0.80	19.35 ± 0.70	19.02 ± 1.39	18.16 ± 1.57	27.00 ± 1.41
Subdigitals Toe IV	19–27	26–30	24–29	22–36	30
	23.00 ± 1.30	27.53 ± 1.23	26.98 ± 1.65	27.30 ± 2.37	—
Tail length/total length	0.61–0.68	0.63–0.65	0.59–0.65	0.58–0.68	0.61
	0.65 ± 0.03	0.64 ± 0.01	0.64 ± 0.02	0.64 ± 0.02	—
Maximum SVL males	74	89	79	96	76
Maximum SVL females	91	79	66	73	—
Posthumeral mite pocket	3	absent	1	2	1
Postfemoral mite pocket	absent	2	absent	2	1
Character	<i>S. huancabambae</i> ² n = 32 (102)	<i>S. humeralis</i> n = 44	<i>S. imitator</i> n = 34 (80–115)	<i>S. iridescens</i> n = 77	<i>S. icitius</i> n = 1
Scales around midbody	37–53	98–125	85–124	35–52	44
	43.94 ± 3.20	110.05 ± 6.68	102.96 ± 8.31	41.50 ± 3.34	—
Vertebrales	37–51	81–112	49–66	40–52	47
	43.39 ± 3.40	92.21 ± 6.82	56.87 ± 3.44	45.31 ± 3.37	—
Paravertebrals	48–64	106–148	89–119	43–58	46
	56.31 ± 3.74	128.23 ± 8.69	102.15 ± 6.39	49.93 ± 3.60	—
Gulars	18–28	41–68	29–44	16–20	21
	20.93 ± 1.64	48.84 ± 4.31	34.98 ± 2.97	18.13 ± 1.06	—
Supraoculars	3–6	6–9	4–7	2–5	6
	4	7	5	4	6
Internasals	4–7	3–4	3–5	2–4	3
	6	4	4	3	3
Subdigitals Finger IV	14–20	24–33	19–26	15–18	20
	16.81 ± 1.41	29.43 ± 2.10	22.95 ± 1.34	15.91 ± 0.88	—
Subdigitals Toe IV	20–28	28–41	28–37	22–28	26
	24.62 ± 1.56	37.02 ± 2.43	32.60 ± 1.89	24.55 ± 1.59	—
Tail length/total length	0.67–0.70	0.62–0.68	0.65–0.70	0.65–0.70	—
	0.69 ± 0.01	0.66 ± 0.01	0.68 ± 0.01	0.68 ± 0.01	—
Maximum SVL males	99	112	100	99	—
Maximum SVL females	75	108	87	81	64
Posthumeral mite pocket	3	1	1	2	absent
Postfemoral mite pocket	2	2	2	absent	2
Character	<i>S. lache</i> n = 40	<i>S. latebrosus</i> ⁸ n = 46 (37)	<i>S. limitaris</i> ⁸ n = 37 (44)	<i>S. marmoratus</i> ⁹ n = 15 (32)	<i>S. melanopygus</i> n = 44
Scales around midbody	61–74	38–57	39–54	44–59	47–56
	67.03 ± 3.41	44.20 ± 4.19	47.30 ± 3.16	52.00 ± 4.00	50.93 ± 2.41
Vertebrales	43–58	43–53	40–52	44–66	45–59
	49.26 ± 3.88	48.20 ± 3.07	45.70 ± 2.54	55.00 ± 4.00	54.50 ± 3.01
Paravertebrals	53–73	42–56	48–60	51–68	45–58
	61.73 ± 4.68	49.80 ± 3.60	54.19 ± 3.06	52.00 ± 4.00	53.20 ± 2.45
Gulars	20–28	18–26	17–23	23–30	20–25
	22.93 ± 1.73	20.90 ± 1.79	20.10 ± 1.28	27.00 ± 2.00	22.57 ± 1.35
Supraoculars	4–6	5–7	3–5	4–8	5–6
	5	6	4	6	5
Internasals	2–4	2–4	4–5	2–4	4–5
	4	4	4	4	4
Subdigitals Finger IV	13–20	17–23	17–23	12–21	15–19
	17.03 ± 1.80	19.30 ± 1.37	19.70 ± 1.26	17.00 ± 2.00	16.75 ± 1.06
Subdigitals Toe IV	17–30	23–28	24–32	16–23	21–28
	24.85 ± 2.70	25.20 ± 1.55	27.50 ± 1.93	20.00 ± 1.00	24.00 ± 1.57
Tail length/total length	0.61–0.67	0.63–0.69	0.69–0.72	0.56–0.60	0.61–0.66
	0.63 ± 0.02	0.66 ± 0.02	0.70 ± 0.01	0.58 ± 0.01	0.64 ± 0.02
Maximum SVL males	88	76	97	83	85
Maximum SVL females	81	67	82	77	63

TABLE 2.—Continued.

Character	<i>S. lache</i> n = 40	<i>S. latebrosus</i> ⁸ n = 46 (37)	<i>S. limitaris</i> ⁸ n = 37 (44)	<i>S. marmoratus</i> ⁹ n = 15 (32)	<i>S. melanopygus</i> n = 44
Posthumeral mite pocket	absent	1	3	1	absent
Postfemoral mite pocket	2	1	2	2	2
Character	<i>S. modestus</i> n = 19	<i>S. nigromaculatus</i> n = 38	<i>S. nubicola</i> n = 2	<i>S. ochoai</i> n = 31	<i>S. orientalis</i> n = 34
Scales around midbody	32–38 35.17 ± 1.47	45–60 52.31 ± 3.42	93–94 93.50 ± 0.71	56–69 61.83 ± 3.33	46–59 52.59 ± 3.37
Vertebrales	39–46 42.00 ± 2.11	43–60 52.54 ± 4.02	67 —	46–67 54.52 ± 5.25	44–58 51.24 ± 2.98
Paravertebrals	38–46 41.89 ± 2.56	52–71 60.27 ± 4.60	97 —	59–91 71.00 ± 7.17	48–62 54.56 ± 3.35
Gulars	15–18 17.00 ± 0.84	18–24 21.11 ± 1.70	38–39 38.50 ± 0.71	16–23 20.57 ± 1.55	20–26 22.47 ± 1.50
Supraoculars	4–5 5	4–7 6	5–6 —	5–7 6	5–6 6
Internasals	2–4 4	2–4 2	4 4	3–4 4	3–5 4
Subdigitals Finger IV	17–21 19.29 ± 1.31	14–20 17.53 ± 1.48	17–22 19.50 ± 3.54	15–20 18.58 ± 1.23	16–21 18.29 ± 1.40
Subdigitals Toe IV	24–28 26.82 ± 1.13	22–31 25.26 ± 2.05	24–28 26.00 ± 2.83	21–29 26.42 ± 1.95	21–30 25.79 ± 1.96
Tail length/total length	0.70–0.73 0.72 ± 0.01	0.66–0.70 0.68 ± 0.01	0.67 —	0.63–0.67 0.65 ± 0.01	0.65–0.69 0.68 ± 0.02
Maximum SVL males	72	77	71	92	79
Maximum SVL females	64	64	—	74	66
Posthumeral mite pocket	1	3	2	absent	1
Postfemoral mite pocket	1	2	2	2	2
Character	<i>S. ornattissimus</i> ⁸ n = 18 (21)	<i>S. ornatus</i> ³ n = 37 (40)	<i>S. pectinatus</i> n = 31	<i>S. percultus</i> ² n = 18 (42)	<i>S. praeoronatus</i> ² n = 7 (6)
Scales around midbody	49–60 52.60 ± 3.03	46–58 51.70 ± 2.88	33–46 39.45 ± 2.97	50–65 56.64 ± 3.79	99–122 107.67 ± 8.41
Vertebrales	52–59 55.40 ± 2.38	36–50 43.87 ± 3.45	31–37 34.06 ± 1.65	35–50 42.19 ± 3.26	65–71 67.83 ± 2.56
Paravertebrals	50–61 55.17 ± 3.26	53–66 59.92 ± 3.61	37–49 43.10 ± 3.42	62–77 70.39 ± 3.73	90–101 95.29 ± 4.39
Gulars	19–26 22.30 ± 1.71	15–23 18.38 ± 1.48	16–22 19.65 ± 1.64	20–28 24.37 ± 1.84	38–50 46.50 ± 4.28
Supraoculars	4–7 5	4–7 5	4–6 5	4–6 5	4–7 6
Internasals	2–5 4	2–4 4	4–5 4	2–4 4	4–5 4
Subdigitals Finger IV	15–20 17.80 ± 1.34	17–25 21.35 ± 1.83	7–12 9.39 ± 1.26	17–22 19.55 ± 1.50	19–22 20.83 ± 1.33
Subdigitals Toe IV	20–29 24.10 ± 1.85	27–37 30.13 ± 2.16	16–23 19.48 ± 1.73	24–32 27.54 ± 1.96	27–30 28.80 ± 1.30
Tail length/total length	0.64–0.70 0.67 ± 0.03	0.66–0.72 0.70 ± 0.02	0.52–0.59 0.54 ± 0.02	0.69–0.71 0.70 ± 0.01	0.62–0.66 0.64 ± 0.02
Maximum SVL males	61	85	69	105	100
Maximum SVL females	59	71	66	86	81
Posthumeral mite pocket	1	3	absent	3	1
Postfemoral mite pocket	1	2	absent	2	2
Character	<i>S. prionotus</i> ¹ n = 34 (55)	<i>S. puyango</i> ¹⁰ n = 33 (33)	<i>S. quinarius</i> ¹¹ n = 12 (12)	<i>S. rhodomelas</i> n = 57	<i>S. roseiventris</i> ¹² n = 36 (36)
Scales around midbody	36–48 40.80 ± 3.02	30–45 41.06 ± 2.78	47–56 52.00 ± 3.22	43–58 49.70 ± 3.08	55–82 69.80 ± 7.39

TABLE 2.—Continued.

Character	<i>S. prionotus</i> ¹ n = 34 (55)	<i>S. puyango</i> ¹⁰ n = 33 (33)	<i>S. quinarius</i> ¹¹ n = 12 (12)	<i>S. rhodomelas</i> n = 57	<i>S. roseiventris</i> ¹² n = 36 (36)
Vertebrales	27–39 34.20 ± 2.69	42–50 46.38 ± 2.62	24–30 25.83 ± 1.75	43–55 48.80 ± 3.50	44–66 53.17 ± 5.01
Paravertebrals	42–54 46.68 ± 2.65	43–53 50.74 ± 3.59	36–46 —	49–61 55.96 ± 3.05	63–84 73.91 ± 5.50
Gulars	15–22 18.50 ± 2.69	18–22 19.00 ± 1.17	— —	17–21 18.65 ± 1.02	24–32 27.90 ± 2.12
Supraoculars	4–7 5	4–6 4	— —	3–6 5	5–7 6
Internasals	5–8 7	2–3 2	3–5 5	2–4 2	4–6 5
Subdigitals Finger IV	16–21 18.80 ± 1.30	15–20 16.64 ± 1.32	14–16 14.75 ± 0.75	14–21 16.74 ± 1.32	13–20 15.86 ± 1.78
Subdigitals Toe IV	24–31 26.60 ± 3.64	22–27 24.70 ± 1.45	16–19 17.92 ± 0.90	22–30 25.58 ± 1.57	17–24 20.67 ± 1.57
Tail length/total length	0.70–0.73 0.72 ± 0.01	0.68–0.73 0.70 ± 0.01	0.50–0.52 0.51 ± 0.01	0.60–0.66 0.64 ± 0.02	0.49–0.57 0.52 ± 0.02
Maximum SVL males	89	115	75	93	99
Maximum SVL females	93	82	90	73	96
Posthumeral mite pocket	3	2	absent	3	1
Postfemoral mite pocket	absent	2	absent	2	2
Character	<i>S. santander</i> ¹³ n = 13 (13)	<i>S. scapularis</i> n = 30	<i>S. simonsii</i> ² n = 20 (20)	<i>S. sinesaccus</i> ¹² n = 4 (4)	<i>S. squarrosus</i> ¹¹ n = 12 (12)
Scales around midbody	37–47 40.08 ± 3.28	52–70 59.84 ± 4.81	79–102 94.20 ± 6.63	31–34 32.50 ± 1.29	46–53 49.50 ± 2.43
Vertebrales	33–40 36.23 ± 2.42	43–53 48.95 ± 3.17	59–98 73.75 ± 9.76	28–30 28.50 ± 1.00	22–27 24.33 ± 1.37
Paravertebrals	45–57 50.23 ± 3.79	59–77 67.00 ± 4.22	94–118 107.20 ± 9.02	32–34 33.25 ± 0.96	35–45 —
Gulars	16–21 18.46 ± 1.13	19–27 22.67 ± 1.80	36–57 49.26 ± 5.33	12–14 13.00 ± 1.15	— —
Supraoculars	3–5 4	3–5 4	6–9 7	4 4	— —
Internasals	3–4 4	4–7 6	4 4	6 6	3–5 5
Subdigitals Finger IV	15–19 17.75 ± 1.48	18–23 20.29 ± 1.23	24–28 26.15 ± 1.23	13–16 15.00 ± 1.41	13–15 14.00 ± 0.60
Subdigitals Toe IV	24–29 26.77 ± 1.54	25–30 27.10 ± 1.30	28–37 31.15 ± 2.46	23–25 23.75 ± 0.96	16–20 18.58 ± 1.31
Tail length/total length	0.70–0.74 0.72 ± 0.02	0.67–0.72 0.69 ± 0.01	0.57–0.63 0.60 ± 0.02	0.70–0.73 0.71 ± 0.01	0.44–0.47 0.46 ± 0.01
Maximum SVL males	96	92	88	73	88
Maximum SVL females	78	92	79	81	88
Posthumeral mite pocket	3	3	1	absent	absent
Postfemoral mite pocket	2	2	2	absent	absent
Character	<i>S. stigmatosus</i> ⁸ n = 4 (12)	<i>S. torquatus</i> ⁴ n = 46 (46)	<i>S. trachycephalus</i> n = 78	<i>S. tricristatus</i> ¹² n = (1)	<i>S. variabilis</i> ⁶ n = 19 (19)
Scales around midbody	49–57 52.70 ± 2.27	102–137 116.96 ± 8.21	43–67 52.54 ± 5.76	33 —	61–86 71.29 ± 6.94
Vertebrales	51–61 56.40 ± 3.09	83–115 98.86 ± 7.94	34–53 43.59 ± 3.47	22 —	50–60 57.41 ± 2.85
Paravertebrals	56–62 59.75 ± 2.63	103–151 124.05 ± 12.17	45–64 54.00 ± 4.17	28 —	70–81 75.71 ± 4.21
Gulars	19–27 23.30 ± 2.38	47–67 54.09 ± 4.58	18–29 22.99 ± 2.12	— —	26–33 28.29 ± 2.14
Supraoculars	4–5 4	6–8 7	3–6 5	— —	5–7 6

TABLE 2.—Continued.

Character	<i>S. stigmusos</i> ⁸ n = 4 (12)	<i>S. torquatus</i> ⁴ n = 46 (46)	<i>S. trachycephalus</i> n = 78	<i>S. tricristatus</i> ¹² n = (1)	<i>S. variabilis</i> ⁶ n = 19 (19)
Internasals	2–4 4	4–6 4	2–5 4	— —	3–4 4
Subdigitals Finger IV	14–19 17.50 ± 1.38	22–29 25.76 ± 1.49	15–20 17.05 ± 1.28	16 —	19–24 21.47 ± 1.07
Subdigitals Toe IV	24–29 26.50 ± 1.68	26–32 28.96 ± 1.55	21–31 25.36 ± 2.02	19 —	26–35 30.00 ± 2.15
Tail length/total length	0.64–0.67 0.65 ± 0.01	0.47–0.54 0.51 ± 0.02	0.60–0.71 0.67 ± 0.03	0.63 —	0.60–0.67 0.65 ± 0.02
Maximum SVL males	68	84	89	60	94
Maximum SVL females	61	74	79	—	76
Posthumeral mite pocket	1	1	absent	absent	1
Postfemoral mite pocket	2	2	2	absent	2

Character	<i>S. varius</i> n = 34
Scales around midbody	74–88 82.35 ± 4.05
Vertebrales	60–85 69.53 ± 5.02
Paravertebrals	76–104 88.85 ± 6.01
Gulars	39–60 49.26 ± 5.17
Supraoculars	4–7 5
Internasals	3–5 4
Subdigitals Finger IV	24–28 25.75 ± 1.11
Subdigitals Toe IV	27–34 29.50 ± 1.41
Tail length/total length	0.60–0.66 0.63 ± 0.02
Maximum SVL males	85
Maximum SVL females	85
Posthumeral mite pocket	1
Postfemoral mite pocket	2

¹Cadle (2001), ²Cadle (1991), ³Torres-Carvajal (2000), ⁴Torres-Carvajal et al. (2005), ⁵Avila-Pires (1995), ⁶Torres-Carvajal (2005b), ⁷Boulenger (1880), ⁸Cadle (1998), ⁹Torres et al. (2000), ¹⁰Torres-Carvajal (2005a), ¹¹Nogueira and Rodrigues (2006), ¹²Torres-Carvajal (2005c), ¹³Torres-Carvajal (2007b).

parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region large, keeled or wrinkled, imbricate; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrales larger than adjacent paravertebrals; (26) dorsolateral crest

absent; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate, mucronate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 68–72% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 12% of adult males;

(39) black patch on ventral surface of neck in 10% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 90% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Pattern 6A.

Color in life.—Dorsum brown with pale olive-green vertebral crest; vertical dull yellow stripe on shoulder; flanks with rose tint anteriorly and yellow keels in some scales; straw-yellow stripe from above tympanum onto shoulder; face bright straw-yellow with black suborbital bar; venter violet; gular and pectoral regions pale grayish brown; ventral aspect of tail with slight violet cast (ICN 9098, adult male, J. D. Lynch field notes, 24 June 1983). Harvey et al. (2004) also describe a series of dark brown chevrons longitudinally arranged over the vertebral line; however, they probably examined only female specimens because the venter is described as “immaculate tan” and not violet or pink as is characteristic in males of this species.

Distribution.—*Stenocercus erythrogaster* occurs between 9°N–11°N marking the northern limit of the distribution of *Stenocercus* (Figs. 1, 16). It is known from elevations of 50–1000 m in northern Colombia (Departamentos Bolívar, Chocó, El César, and Magdalena) and northwestern Venezuela (Estado Zulia; Harvey et al., 2004). This species is probably widespread in the northern lowlands of Colombia including Departamentos Antioquia, Atlántico, Córdoba, La Guajira, and Sucre (Torres-Carvajal, 2007b). Miyata (1982) erroneously reported *S. erythrogaster* for Ecuador.

Stenocercus eunetopsis Cadle

Stenocercus eunetopsis Cadle, 1991:60. Holotype: FMNH 232537, a male from “approximately 1 km SSW Udima, Río de Udima (tributary of Río Zaña), 2500 m, Departamento Cajamarca, Perú”.

Diagnosis.—*Stenocercus eunetopsis* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. chlorostictus*, *S. crassicaudatus*, *S. empetrus*, *S. simonsii*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls

per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, only *S. eunetopsis*, *S. carrioni*, *S. chlorostictus*, and *S. bolivarensis* have strongly keeled and imbricate dorsal scales on neck and body (granular, smooth, or slightly keeled in remaining species). *S. eunetopsis* is distinguished from *S. carrioni* by having a black dorsal collar across the antehumeral region, from *S. chlorostictus* by having fewer (60–80) scales around midbody (80–110 in *S. chlorostictus*), and from *S. bolivarensis* by having granular or subimbricate and smooth lateral scales (strongly keeled in *S. bolivarensis*).

Description.—(1) Maximum SVL in males 82 mm ($n = 15$); (2) maximum SVL in females 70 mm ($n = 6$); (3) vertebrae 59–80; (4) paravertebrals 65–78; (5) scales around midbody 60–80; (6) supraoculars 4–8; (7) internasals 3–5; (8) postrostrals 5–7; (9) loreals 1–4; (10) gulars 37–57; (11) subdigitals on Finger IV 22–27; (12) subdigitals on Toe IV 28–35; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 62–66% of total length; (34) caudal whorls per autotomic segment two; (35) caudals strongly spinose; (36) dark brown stripe extending

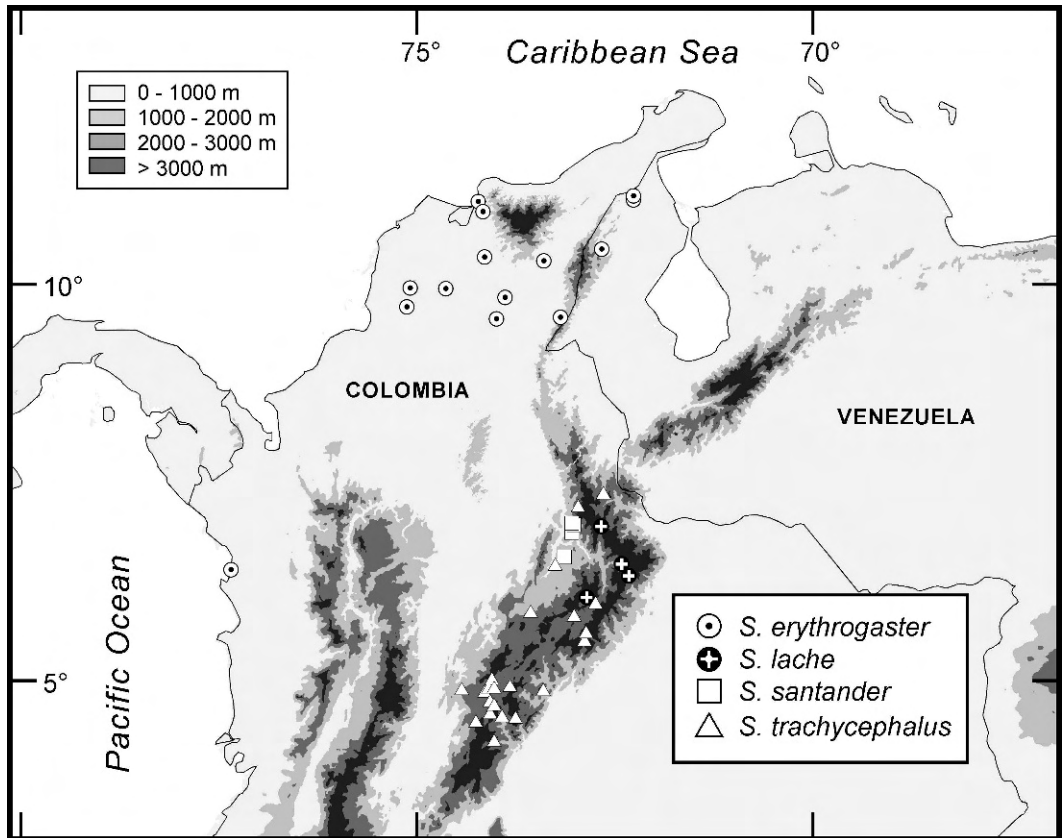


FIG. 16.—Distribution of four species of *Stenocercus* in Colombia and Venezuela.

anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally.

Color in life.—Dorsum with black transverse bars separated by discontinuous bright yellow lines that broaden to form blotches dorsolaterally; black dorsal collar across antehumeral region; dorsal aspect of neck with two middorsal transverse bars anterior to antehumeral collar; dorsal head scales yellow or brown with black borders; dorsal aspect of limbs barred with black and yellow; throat

mottled with gray and white; pectoral region, belly, and ventral aspect of tail pale yellow (Cadle, 1991).

Natural History.—Clutch size in *S. eunetopsis* is two eggs. Gravid females were collected in January 1989 and May–June 1987; this species seems to prefer areas with crevices or holes for retreat (Cadle, 1991).

Distribution.—*Stenocercus eunetopsis* occurs in the western Cordillera of northern Peru (central Andes) between 8°S–6°S (Fig. 15). It is known from the upper valleys of Río Zaña and Río Reque (Pacific drainage) in Departamento Cajamarca at elevations of 2450–2640 m. This species occurs in sympatry with *S. imitator*.

Stenocercus festae (Peracca)
(Fig. 14)

Liocephalus festae Peracca, 1897:6. Neotype: QCAZ 4059, an adult male from “Sevilla de

Oro (02°48'S, 78°39'W), 2630 m, Provincia Azuay, Ecuador" designated by Torres-Carvajal (2000).

Leiocephalus ornatus ornatus Burt and Burt (part), 1931:271.

Ophryoessoides festae Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:213.

Stenocercus festae Fritts, 1974:49; Torres-Carvajal, 2000:15.

Diagnosis.—*Stenocercus festae* differs from all other species of *Stenocercus* except *S. angel*, *S. chota*, *S. guentheri*, and *S. nigromaculatus* by having imbricate scales on posterior surface of thighs, smooth ventrals, a posthumeral mite pocket consisting of a shallow depression with a wide opening (more distinct in adult specimens), small scales on occipitoparietal region, and supraoculars of similar size. Of these species, *S. nigromaculatus* is unique in having an antehumeral fold. *S. festae* differs from *S. angel* and *S. chota* in adult males having a distinct, black transverse band on ventral surface of neck (polymorphic). In general, *S. festae* has larger scales than *S. guentheri*, which is reflected in relatively lower numbers for most scales counts (Table 2). Juveniles of *S. festae* have distinctly keeled ventrals, which are smooth or weakly keeled in juveniles of *S. guentheri*. In addition, *S. festae* differs from *S. guentheri* in that adult males have a black antehumeral patch, although not always distinct, as well as in having higher frequencies of a dark patch on the ventral surface of the neck (93%), and a dark longitudinal midventral mark (93%; 50% and 66% in *S. guentheri*, respectively).

Description.—(1) Maximum SVL in males 102 mm ($n = 36$); (2) maximum SVL in females 79 mm ($n = 44$); (3) vertebrae 39–55; (4) paravertebrals 46–81; (5) scales around midbody 47–66; (6) supraoculars 4–6; (7) internasals 2–4; (8) postrostrals 3–6; (9) loreals 2–4; (10) gulars 16–29; (11) subdigitals on Finger IV 14–22; (12) subdigitals on Toe IV 21–33; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 79% of specimens; (16) scales on occipitoparietal region small, keeled or multicarinate, juxtaposed or subimbricate;

(17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals in adult specimens smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 61–69% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 7% of adult males; (39) black patch on ventral surface of neck in 93% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 93% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 2B.

Color in life.—Dorsum grayish tan, grayish brown, pale olive brown, or brown, with or without short, transverse bands arranged longitudinally over vertebral line; flanks with or without scattered green or yellow flecks and blotches in adult males; females and juveniles with or without a pale gray, beige, or cream dorsolateral stripe; antehumeral region with large black mark in some males; supralabials and infralabials black in some males; gular region yellow, yellowish green, or orange in adult males and yellow or pale gray in females and juveniles; black patch on ventral surface of neck in most adult males; in some males venter entirely black, or yellowish-green to pale yellow with a black midventral stripe; venter pinkish white, pale yellow, or pale gray in females and juveniles, sometimes with

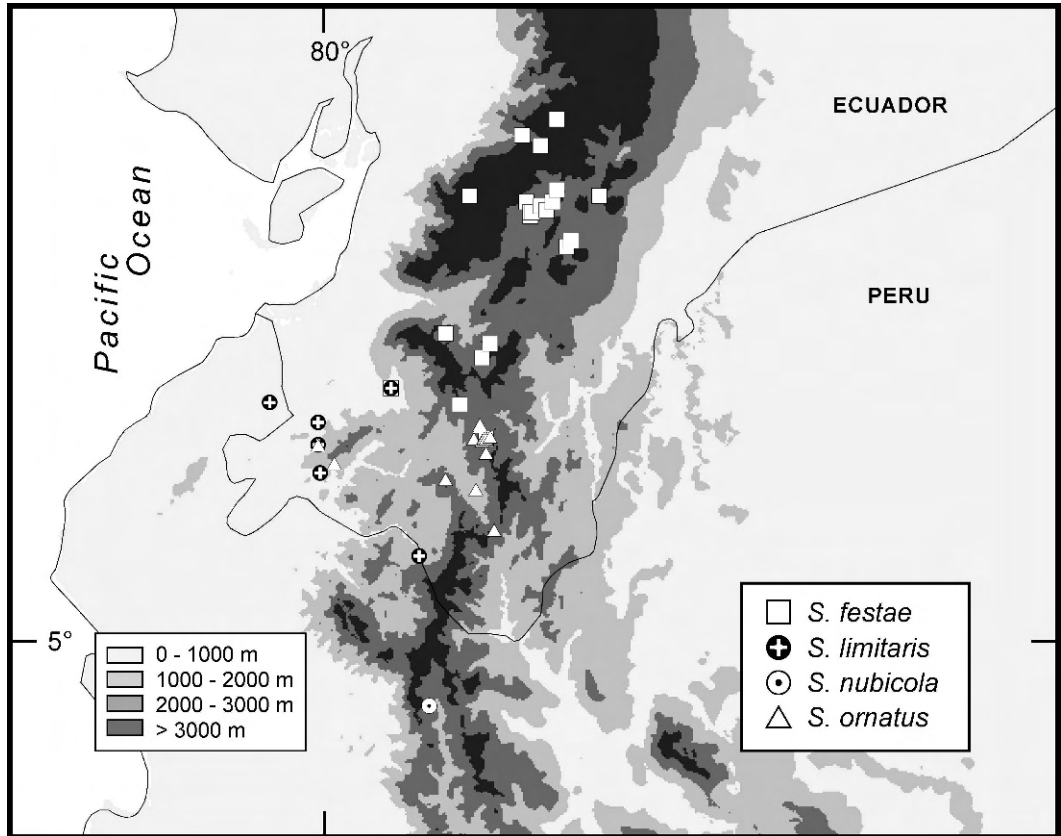


FIG. 17.—Distribution of four species of *Stenocercus* in Ecuador and Peru.

scattered dark flecks; ventral aspect of pelvic region, base of tail, and thighs yellow in some males (Torres-Carvajal, 2000).

Natural History.—This species is usually found at or near the base of *Agave* plants and small shrubs.

Distribution.—*Stenocercus festae* occurs in the northern Andes and inhabits the upper valleys of Río Paute (Atlantic drainage) and Río Jubones (Pacific drainage) in southern Ecuador (4°S–2°20'S). This species is known from elevations between 1050–3200 m in Provincias Azuay, Cañar, El Oro, Loja, and Zamora-Chinchipe (Fig. 17). *S. festae* is sympatric with *S. simonsii* in the upper valley of Río Jubones (Fritts, 1974), and *S. limitaris* in Salvias, Provincia El Oro. Additionally, *S. festae* possibly occurs in sympatry with *S. rhodomelas* in the Saraguro Basin (Torres-Carvajal, 2000).

Stenocercus fimbriatus Avila-Pires
(Fig. 18)

Stenocercus fimbriatus Avila-Pires, 1995:151. Holotype: TCWC 41795, a male from “Mishana, Iquitos Region, Departamento Loreto, Peru”; Cadle, 2001:184.

Ophryoessoides aculeatus (part) Dixon and Soini, 1975:32, 1986:37.

Diagnosis.—Among species of *Stenocercus* with strongly keeled ventrals and laterally oriented nostrils, *S. fimbriatus* is similar to *S. aculeatus*, *S. angulifer*, *S. caducus*, *S. prionotus*, and *S. scapularis* in having a distinct posthumeral mite pocket. Of these species, only *S. caducus*, *S. fimbriatus*, and *S. prionotus* lack a postfemoral mite pocket. *S. fimbriatus* can be distinguished from *S. prionotus* and *S. caducus* by lacking an axillary flap covering the antehumeral mite pocket (Cadle, 2001), and by having a row of

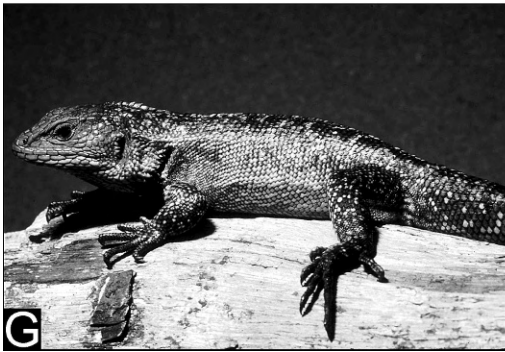
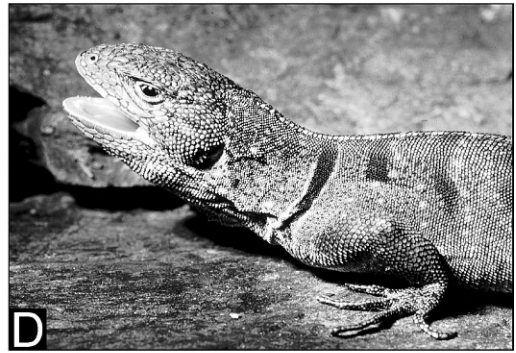
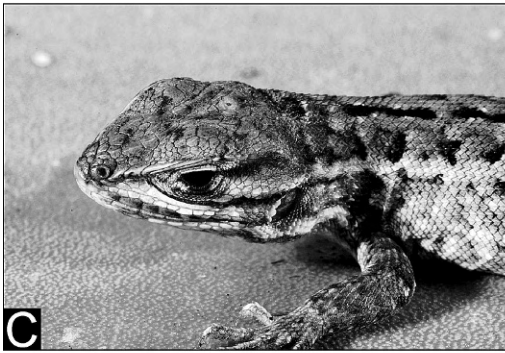


FIG. 18.—Eight species of *Stenocercus*. (A) *S. fimbriatus* (JCA); (B) *S. formosus* (MLU); (C) *S. guentheri* (LAC); (D) *S. humeralis* (OTC); (E) *S. imitator* (PVE); (F) *S. iridescens* (RWM); (G) *S. lache* (JMR); (H) *S. limitaris* (PVE).

enlarged, projecting scales on the dorsal aspect of thighs (Avila-Pires, 1995). In addition, dorsal head scales in *S. fimbriatus* are smooth or wrinkled, whereas these scales are strongly keeled in *S. caducus* and *S. prionotus*.

Description.—(1) Maximum SVL in males 74 mm (Cadle, 2001); (2) maximum SVL in females 91 mm (Cadle, 2001); (3) vertebrae 37–52; (4) paravertebrals 42–52; (5) scales around midbody 39–51; (6) supraoculars 4–6; (7) internasals 4–7; (8) postrostrals 4–7; (9) loreals 2–6; (10) gulars 17–25; (11) subdigitals on Finger IV 12–16; (12) subdigitals on Toe IV 19–27; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket absent; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region large, smooth or wrinkled, weakly imbricate; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 61–68% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries always present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Patterns 6A and 6B (KU 212628

identified as *S. aculeatus* in Torres-Carvajal [2004a] corresponds to *S. fimbriatus*.)

Color in life.—Dorsum golden brown with thin, dark brown V-shaped marks arranged longitudinally from neck to tail, and one pair of black spots between fore limbs; dorsal and lateral aspects of head and neck golden brown with a thin, dark brown interorbital bar and a dark brown stripe extending anterodorsally from subocular region to supraciliaries; flanks and limbs dark brown or black; cream line between comisure of mouth and base of fore limb; cream vertical line between insertion of fore limb and dorsolateral crest; gular region with short, oblique, cream lines starting on labials; venter walnut brown to vinaceous pink (more intense in males) with light spots; iris orange brown (Avila-Pires, 1995; Dixon and Soini, 1975, 1986).

Natural History.—*Stenocercus fimbriatus* takes advantage of its cryptic coloration to escape predators by “freezing” when against a background of dead leaves becoming difficult to see (Avila-Pires, 1995; Dixon and Soini, 1975, 1986).

Distribution.—*Stenocercus fimbriatus* occurs in the western Amazon basin and eastern slopes of the central Andes between 10°S–4°S (Fig. 11). This species is known from altitudes of 300–1000 m in Brazil (Estados Acre and Amazonas) and Peru (Departamentos Huánuco, La Libertad, Loreto, Madre de Dios, and Ucayali). Lehr and von May (2004) erroneously reported *S. fimbriatus* for Departamento Junín based on a specimen of *S. scapularis* (MTD 45664). Similarly, Langstroth (2005) reported this species for Bolivia based on the assumption that specimens collected in Tumi Chucua (Bolivia: Beni), and identified as *S. aculeatus* by Fugler (1986), corresponded to *S. fimbriatus*; these specimens (USNM 280246–51) are actually paratypes of *S. prionotus* (Cadle, 2001). *S. fimbriatus* is sympatric with *S. prionotus* (Peru: Loreto) and *S. roseiventris* (Peru: Loreto, Madre de Dios).

Stenocercus formosus (Tschudi)
(Fig. 18)

Scelotrema formosum Tschudi, 1845:155.
Lectotype (Ortiz, 1989): MHNN 2266,
a juvenile from “mountains in central Peru,

Río Tulumayo [Departamento Junín], Peru.”

Liocephalus rhodogaster Boulenger, 1901: 547. Syntypes: BMNH 1900.11.27.24–25 (RR 1946.8.29.81–2) from “La Merced, 3250 ft, Río Perene [Departamento Junín], Perú.” Synonymy fide Fritts, 1974:51.

Liocephalus lineogularis Werner, 1901b:3. Holotype: MTD D 1781 from “Chanchamayo [Departamento Junín], Perú”. Synonymy fide Fritts, 1974:51.

Stenocercus seydi Andersson, 1908:301. Holotype: MWNH 473, a male from “La Merced [Departamento Junín], 1000 m, Peru”; Burt and Burt, 1933:44. Synonymy fide Fritts, 1974:51.

Leiocephalus formosus Burt and Burt, 1933:27.

Ophryossoides formosus Etheridge, 1966:88; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus formosus Fritts, 1974:51.

Diagnosis.—*Stenocercus formosus* is distinguished from other species of *Stenocercus* except *S. ochoai* by having imbricate scales on the posterior surface of thighs, a well-developed postfemoral mite pocket, antehumeral and oblique neck folds, and by lacking an antehumeral mite pocket. *S. formosus* differs from *S. ochoai* (character states in parentheses) in having four caudal whorls per autotomic segment (three), keeled dorsal head scales (smooth), lateral and dorsal nuchals similar in size (lateral nuchals less than half the size of dorsal nuchals), more scales (74–82, $X = 77.88$) around midbody (56–69, $X = 61.83$), and pink ventral coloration in adult males (venter black with some yellow laterally).

Description.—(1) Maximum SVL in males 89 mm ($n = 5$); (2) maximum SVL in females 79 mm ($n = 8$); (3) vertebrae 58–72; (4) paravertebrals 96–115; (5) scales around midbody 74–82; (6) supraoculars 5–6; (7) internasals 4–5; (8) postrostrals 4–7; (9) loreals 2–5; (10) gulars 24–31; (11) subdigitals on Finger IV 18–21; (12) subdigitals on Toe IV 26–30; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled, imbricate; (17)

projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral, oblique, postauricular, and supra-auricular neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 63–65% of total length; (34) caudal whorls per autotomic segment four; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries always present; (37) dark patch extensively covering gular region in 14% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 67% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1A (SDSU 1688 identified as *Stenocercus arenarius* [invalid name] in Torres-Carvajal [2004a] corresponds to *S. formosus*.)

Color in life.—Venter in adult males pink with black midventral stripe (Fritts, 1974).

Natural History.—Fritts (1974) observed individuals of this species on the ground, small shrubs, and small rock piles.

Distribution.—*Stenocercus formosus* is known from the eastern Cordillera of the central Andes in Peru (11°S–10°S). It occurs at elevations between 1000–1600 m in Departamentos Junín and Pasco (Fig. 12). *S. formosus* is sympatric with *S. boettgeri*, *S. scapularis*, and *S. torquatus* at María Teresa, 10°42′05″S, 75°27′22″W, 1470 m, Departamento Pasco (Torres-Carvajal et al., 2005). It is also sympatric with *S. torquatus* at several

localities (see Appendix) in Departamento Junín.

Remarks.—The uncertain number and location of type specimens used by Tschudi (1845) to describe *Scelotrema formosum* and *Steironotus arenarius* has led some authors to reach taxonomic conclusions that are in conflict with the arrangement presented in this study. Ortiz (1989) proposed *Stenocercus* (*Steironotus*) *arenarius* (Tschudi, 1845) as a junior synonym of “*Liocephalus rhodogaster*” and recognized *S. formosus* as a separate taxon, which he even proposed as a senior synonym of *S. ochoai*. This was based on examination of different specimens than the ones used by Fritts (1974) to propose the arrangement presented herein. I reject Ortiz’s, 1989 proposal for three reasons. First, even though Tschudi’s (1845) descriptions are brief, he listed “*Steironotus*” *arenarius* under the subgenus “*Eulophus*”, which was described as having an enlarged occipital (interparietal) scale, a diagnostic feature of the *Tropidurus* Group that is not observed in *Stenocercus*. In this regard, I find more reasonable Fritts’ (1974) decision to place “*Steironotus*” *arenarius* in synonymy with “*Tropidurus tschudi*.” Second, the type locality of “*Scelotrema*” *formosum* lies in the same area (i.e., eastern Andean slopes in central Peru) as the type locality of “*L. rhodogaster*”, as well as the localities of all subsequently collected specimens of *Stenocercus formosus* sensu Fritts (1974). In contrast, the type locality of “*Steironotus*” *arenarius* lies far away on the opposite side of the Andes, and no species of *Stenocercus* is known to have such a disjunct distribution on both sides of the Andes. Third, the ventral coloration of “*Scelotrema*” *formosum* was described as violet (Tschudi, 1845), which is characteristic of males of *Stenocercus formosus* sensu Fritts (1974). Regarding the proposed synonymy between *S. ochoai* and *S. formosus*, males of the former species have dull black venters (Fritts, 1972), which among other features makes *S. ochoai* very distinct from *S. formosus*.

Stenocercus frittsi Torres-Carvajal

Stenocercus frittsi Torres-Carvajal, 2005b:471.

Holotype: KU 134181, a male from “Mar-

iscal Cáceres, 12°34’S, 74°57’W, 3966 m, Departamento Huancavelica, Peru.”

Stenocercus variabilis Fritts (part), 1974:65.

Synonymy fide Torres-Carvajal, 2005b:471.

Diagnosis.—*Stenocercus frittsi* is distinguished from all species of *Stenocercus* except *S. variabilis* in having granular scales on the posterior surface of thighs, imbricate and keeled lateral body scales, a distinct row of enlarged vertebral scales, unnotched gular scales, three caudal whorls per autotomic segment, gray or brown dorsal ground color, and distinct neck folds, of which the antegular fold is not continuous medially. The main difference between *S. frittsi* and *S. variabilis* is that the former species lacks a postfemoral mite pocket (distinct, deep pocket in *S. variabilis*). In addition, *S. frittsi* is smaller than *S. variabilis* (maximum SVL = 79 mm and 94 mm in males, 66 mm and 76 mm in females, respectively), and it has on average fewer scales around the midbody (60–76, $X = 65.14$ and 61–86, $X = 71.29$), as well as fewer gulars (20–28, $X = 22.63$ and 26–33, $X = 28.29$), paravertebrals (59–90, $X = 70.16$ and 70–81, $X = 75.71$), and subdigitals on Toe IV (24–29, $X = 26.98$ and 26–35, $X = 30.00$).

Description.—(1) Maximum SVL in males 79 mm ($n = 23$); (2) maximum SVL in females 66 mm ($n = 21$); (3) vertebrales 48–71; (4) paravertebrals 59–90; (5) scales around midbody 60–76; (6) supraoculars 4–6; (7) internasals 4–5; (8) postrostrals 5–7; (9) loreals 2–4; (10) gulars 20–28; (11) subdigitals on Finger IV 16–22; (12) subdigitals on Toe IV 24–29; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral pocket absent; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales in frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antegular, antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral

scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals in adults smooth, imbricate, not mucronate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 59–65% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region in 48% of adult females; (38) dark patch extensively covering gular region in 44% of adult males; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions not in contact midventrally, Pattern 2B (specimens identified as *S. variabilis* in Torres-Carvajal [2004a] correspond to *S. frittsi*.)

Color in life.—Dorsum dark gray with extensive black reticulations in males and grayish-beige with paired dull black blotches in juveniles and females; scales on dorsal surface of head black with white centers in some males; dorsal aspect of hind limbs light gray with dark blotches; angle of jaw and post-tympanic area tan in some specimens; chin white with black reticulations or entirely black in males, and light gray without reticulations in females; ventral surface of body, hind limbs, and tail pale yellow in males and light gray in females; light blue midventral stripe in some males; posterior surface of thighs and ventral aspect of tail orange in some males (Torres-Carvajal, 2005b). There is considerable variation in the amount of dark pigment on the chin of both males and females of *S. frittsi* (Fritts, 1974; Torres-Carvajal, 2005b).

Distribution.—*Stenocercus frittsi* occurs between 13°S–12°S in the eastern Cordillera of the central Andes in Peru (Fig. 10). This species is known from Departamentos Ayacucho and Huancavelica at elevations of 2350–3966 m.

Stenocercus guentheri (Boulenger)
(Fig. 18)

Liocephalus guentheri Boulenger, 1885a:169.
Syntypes: BM 58.7.25.16–18; 59.9.20.6; 60.6.16.18–21; 71.2.7.7–10; 71.4.16.53; 80.12.8.53, from “Guayaquil [Provincia Guayas, Ecuador], Sarayacu [Provincia Pastaza] Ecuador, Western Ecuador, and Colombia” (restricted to San Antonio de Pichincha, 2500 m, Provincia Pichincha, by Fritts [1974]).

Leiocephalus ornatus ornatus Burt and Burt (part), 1931:271.

Ophryoessoides guentheri Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus guentheri Fritts, 1974:54; Ayala, 1986:563; Torres-Carvajal, 2000:17.

Diagnosis.—*Stenocercus guentheri* differs from all other species of *Stenocercus* except *S. angel*, *S. chota*, *S. festae*, and *S. nigromaculatus* by having imbricate scales on posterior surface of thighs, smooth ventrals, a posthumeral mite pocket consisting of a shallow depression with a wide opening (more distinct in adult specimens), small scales on occipitoparietal region, and supraoculars of similar size. Of these species, *S. nigromaculatus* is unique in having an antehumeral fold. *S. guentheri* differs from *S. angel*, *S. chota*, and *S. festae* by having smaller scales, which is reflected in relatively higher numbers for most scales counts (Table 2). Males of *S. angel* and *S. chota* lack a distinct, transverse black band on ventral surface of neck, which is present in some males of *S. guentheri* and *S. festae*. Juveniles of *S. festae* have distinctly keeled ventrals, which are smooth or weakly keeled in juveniles of *S. guentheri*. In addition, *S. guentheri* differs from *S. festae* by lacking a black antehumeral patch in adult males, which also have lower frequencies of a dark patch on the ventral surface of the neck (50%), and a dark longitudinal midventral mark (66%; 93% in both cases in *S. festae*).

Description.—(1) Maximum SVL in males 96 mm ($n = 45$); (2) maximum SVL in females 73 mm ($n = 26$); (3) vertebrae 44–64; (4) paravertebrals 59–89; (5) scales around midbody 59–83; (6) supraoculars 5–7; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 3–4; (10) gulars 21–31; (11) subdigitals on Finger

IV 15–23; (12) subdigitals on Toe IV 22–36; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 94% of specimens; (16) scales on occipitoparietal region small, keeled or multicarinate, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 58–68% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in 50% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 66% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A, 1B, 2A, 2B, 4A, and 4B.

Color in life.—In females, dorsum brown or dark olive-green, with or without scattered dark spots or short, transverse dark marks arranged longitudinally over vertebral line; venter yellow or cream with or without dark flecks. Males exhibit considerable variation in color within and among populations (for more detailed descriptions see Fritts, 1974; Torres-Carvajal, 2000): dorsum olive-green, greenish brown, or dark brown, with or without short, transverse dark marks arranged longitudinally

over vertebral line; gular region iridescent pale green, cream, or brown, with or without dark flecks; black patch on ventral surface of neck in some males; ventral body background color grayish blue, greenish gray, bluish green, yellow, or orange, with or without a black or yellow midventral stripe.

Natural History.—Clutch size of *S. guentheri* is two eggs. Females of this species deposit eggs around May–June (Fritts, 1974; Torres-Carvajal, 2000). The smallest individual was collected in June 1998 and had a total length of 72 mm (SVL = 20 mm, TL = 52 mm). Fritts (1974) reported one female covering a small hole on the ground containing two eggs, which suggests that there is some degree of parental care in this species. Males tend to occupy rocks or other elevated positions, whereas females are more commonly found on the ground (Fritts, 1974).

Distribution.—*Stenocercus guentheri* occurs in the northern Andes between 2°20'S–0°30'N in Ecuador (Fig. 9). Known from elevations of 2135–3890 m, this species inhabits the upper valleys of several rivers of the Pacific (Río Mira, Río Esmeraldas, and Río Guayas) and Atlantic (Río Pastaza and Río Paute) drainages in Provincias Bolívar, Chimborazo, Cotopaxi, Imbabura, Pichincha, and Tungurahua (Torres-Carvajal, 2000). Specimens of *S. guentheri* reported from the Andes of southern Colombia in Departamentos Cauca and Nariño (Castro and Ayala, 1982; Castro and Granados, 1993; Corredor, 1983) correspond to *S. angel*.

Stenocercus haenschi (Werner)

Liocephalus formosus Boulenger, 1880:43. Holotype: MRHN 2007 from “Andes of Ecuador” (restricted to Balsapamba, 750 m, Provincia Bolívar, Ecuador, by Fritts [1974]); Boulenger, 1885a:168. Replacement of the name *Liocephalus formosus* with the junior synonym *Liocephalus haenschi* was necessary because *L. formosus* became a junior secondary homonym of *Scelotrema formosum* when both taxa were combined into *Stenocercus*. Synonymy fide Fritts, 1974:55.

Liocephalus haenschi Werner, 1901a:595. Holotype: ZMB 16595, a male from “Balsa-

pamba [Provincia Bolívar], 750 m, Ecuador”.

Leiocephalus haenchi Burt and Burt, 1933:27.

Ophryossoides formosus Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214.

Ophryossoides haenschi Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus haenschi Fritts, 1974:55; Torres-Carvajal, 2000:21.

Diagnosis.—*Stenocercus haenschi* is distinguished from other species of *Stenocercus* except *S. boettgeri*, *S. humeralis*, and *S. varius* by having granular scales on the posterior surface of thighs, enlarged vertebrales, three caudal whorls per autotomic segment, a medially complete antegular fold, non-spinose caudals, and by males lacking a black transverse band on the ventral surface of neck. *S. haenschi* differs from these species by having fewer scales (57–64, $X = 60.50$) around midbody (79–104, $X = 88.61$ in *S. boettgeri*; 98–125, $X = 110.05$ in *S. humeralis*; 74–88, $X = 82.35$ in *S. varius*). Additionally, the temporals and lateral body scales in *S. haenschi* are keeled and imbricate (smooth or granular in the other three species).

Description.—(1) Maximum SVL in males 76 mm ($n = 1$); (3) vertebrales 50; (4) paravertebrales 64; (5) scales around midbody 57–64 (lower count taken from Fritts, 1974); (6) supraoculars five; (7) internasals three; (8) postrostrals four; (9) loreals three; (10) gulars 56; (11) subdigitals on Finger IV 26–28; (12) subdigitals on Toe IV 30; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth or multicarinate, juxtaposed; (17) two projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars rhomboidal, smooth or slightly keeled,

imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrales larger than adjacent paravertebrales; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) pre-anals not projected; (32) tail not compressed laterally in adult males; (33) tail length 61% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapular region absent; (37) dark patch extensively covering gular region of adult males absent; (38) black patch on ventral surface of neck in adult males absent; (39) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (40) dark patches on ventral surface of thighs in adult males absent; (41) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 2B.

Color in preservative of holotype.—Flanks grayish green with pale green spots; large black blotch on shoulder; irregular dark transverse stripes on limbs; dorsum of head olive-brown; gular region grayish green with pale spots; venter bluish green; dorsal aspect of tail brown with dark transverse bands; ventral surface of tail gray with narrow, pale transverse bands (Werner, 1901a).

Natural History.—Fritts (1974) suggested that this species is arboreal because of the large number of subdigitals on Finger IV.

Distribution.—*Stenocercus haenschi* occurs in the northern Andes and is known only from its type locality (Balsapamba, 1°46'0"S, 79°11'0"W, 750 m, Provincia Bolívar) on the western slopes of the western Cordillera in Ecuador (Fig. 9). This locality lies in the upper valley of Río Babahoyo (Pacific drainage); habitat destruction has probably reduced or eliminated populations of *S. haenschi* in this area (Torres-Carvajal, 2000).

Stenocercus huancabambae Cadle

Stenocercus huancabambae Cadle, 1991:30.

Holotype: MCZ 165319, a male from “San José (Bagua Grande), Departamento Amazonas, Perú”; Cadle, 2001:184.

Diagnosis.—*Stenocercus huancabambae* can be distinguished from other species of *Stenocercus* except *S. erythrogaster*, *S. iridescens*, *S. limitaris*, *S. puyango* and *S. santander* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. huancabambae*, *S. limitaris*, *S. puyango*, and *S. santander* have a postfemoral mite pocket. *S. huancabambae* is unique among these species (character states in parentheses) in having 2–3 dorsally-projected angulate temporals (angulate temporals not projected) and a single canthal (two canthals).

Description.—(1) Maximum SVL in males 99 mm ($n = 16$); (2) maximum SVL in females 75 mm ($n = 11$); (3) vertebrae 37–51; (4) paravertebrals 48–64; (5) scales around midbody 37–53; (6) supraoculars 3–6; (7) internasals 4–7; (8) postrostrals 4–6; (9) loreals 2–4; (10) gulars 18–28; (11) subdigitals on Finger IV 14–20; (12) subdigitals on Toe IV 20–28; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region large, keeled, imbricate; (17) projecting angulate temporals 2–3; (18) one row of enlarged supraoculars occupying most of supraocular region; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 67–70% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries in 67% of specimens; (37) dark patch extensively cover-

ing gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in 88% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Patterns 5 and 6A.

Color in life.—Dorsum brown with distinct dark transverse blotches longitudinally arranged over vertebral line in males; light vertical line on shoulder; males with distinct black blotch posterior to vertical shoulder line; light, faded, sometimes pinkish dorsolateral stripe from dorsal aspect of tympanum to hind limbs in males; flanks greenish in some males; black patch on ventral surface of neck in males; belly and throat pink in males (Cadle, 1991; Schlüter, 1999e, 2000b).

Natural History.—Clutch size in *Stenocercus huancabambae* is two eggs; a female specimen (SVL = 62 mm) with two oviductal eggs was collected in August 1967 (Cadle, 1991). This species seems to prefer arid environments.

Distribution.—*Stenocercus huancabambae* occurs between the central and northern Andes (6°S–5°S) in the Huancabamba Depression (Fig. 19). This species is known from the upper valleys of Río Marañón (Atlantic drainage) at elevations between 200–920 m in Departamentos Amazonas and Cajamarca, Peru (Cadle, 1991).

Stenocercus humeralis (Günther)
(Fig. 18)

Microphractus humeralis Günther, 1859a:90. Syntypes: BM 1946.8.11.76–77, from “Andes of Ecuador” (restricted to Loja, 2150 m, Provincia Loja, Ecuador, by Fritts [1974]).

Stenocercus humeralis Boulenger, 1885a:134; Burt and Burt, 1931:288; Burt and Burt, 1933:43; Peters, 1967:34; Etheridge, in Peters and Donoso-Barros, 1970:256; Fritts, 1974:56; Torres-Carvajal, 2000:22.

Diagnosis.—*Stenocercus humeralis* is distinguished from other species of *Stenocercus* except *S. boettgeri*, *S. haenschi*, and *S. varius* by having granular scales on the posterior

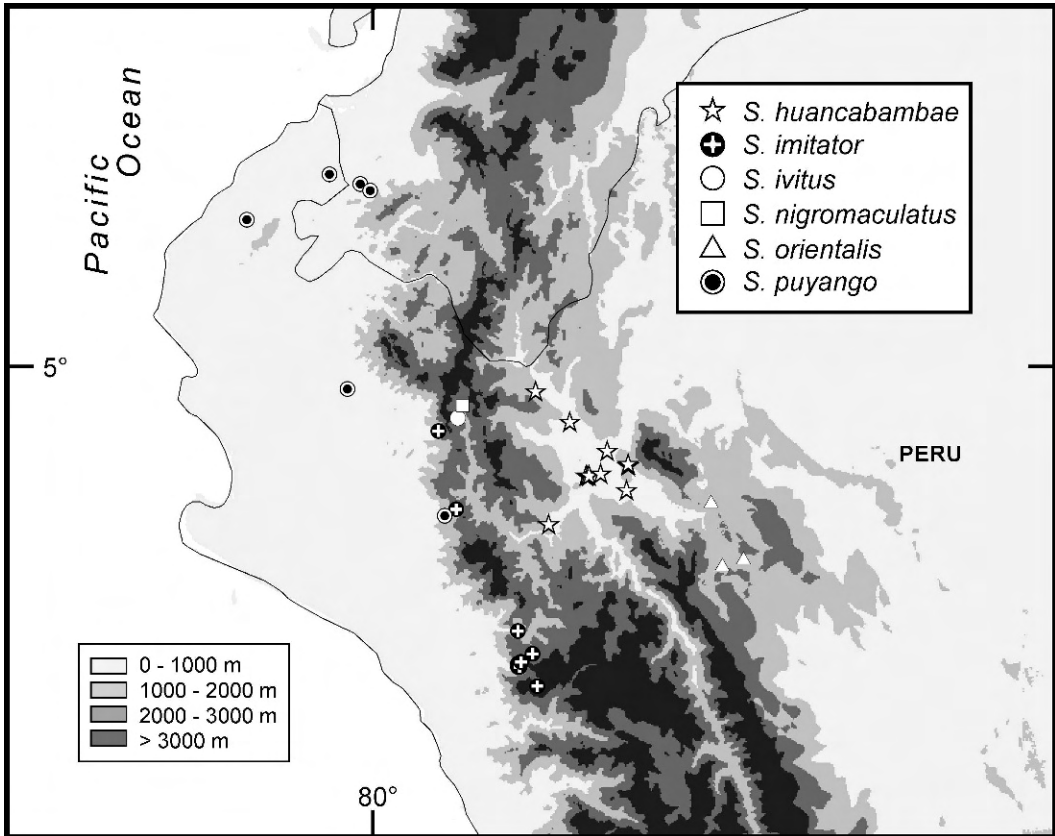


FIG. 19.—Distribution of six species of *Stenocercus* in Ecuador and Peru.

surface of thighs, enlarged vertebrales, three caudal whorls per autotomic segment, a medially complete antegular fold, non-spinose caudals, and by males lacking a black transverse band on the ventral surface of neck. *S. humeralis* differs from these species (character states in parentheses) by having 98–125 ($X = 110.05$) scales around midbody (79–104, $X = 88.61$ in *S. boettgeri*; 57–64, $X = 60.50$ in *S. haenschi*; 74–88, $X = 82.35$ in *S. varius*), 81–112 ($X = 92.21$) vertebrales (64–93, $X = 76.86$ in *S. boettgeri*; 50 in *S. haenschi*; 60–85, $X = 69.53$ in *S. varius*) lateral and dorsal nuchals similar in size (lateral nuchals less than half the size of dorsal nuchals), and a black antehumeral dorsal collar in adult males (antehumeral collar absent).

Description.—(1) Maximum SVL in males 112 mm ($n = 15$); (2) maximum SVL in females 108 mm ($n = 15$); (3) vertebrales 81–112; (4) paravertebrales 106–148; (5) scales

around midbody 98–125; (6) supraoculars 6–9; (7) internasals 3–4; (8) postrostrals 4–7; (9) loreals 2–4; (10) gulars 41–68; (11) subdigitals on Finger IV 24–33; (12) subdigitals on Toe IV 28–41; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales

reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 62–68% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A, 1B, 2B, and 2C.

Color in life.—Dorsum yellowish green with scattered black flecks or yellow spots that form transverse rows in some males; short, black, middorsal transverse marks arranged longitudinally over vertebral line in some specimens; black antehumeral collar in most adult males; venter pale yellow (Torres-Carvajal, 2000).

Natural History.—Four enlarged oviductal eggs (two in each oviduct) were reported from a large female (SVL = 90 mm) collected in December 1968; the smallest individual was collected in October 1996 and had a total length of 118 mm (SVL = 40 mm, TL = 78 mm; Torres-Carvajal, 2000). Fritts (1974) observed this species on small shrubs, eucalyptus tree trunks, and *Agave* plants; I also have observed this species on large rock walls in mesic habitats.

Distribution.—*Stenocercus humeralis* occurs in the northern Andes at elevations of 2000–3000 m in Provincia Loja, southern Ecuador (Fig. 9). This species inhabits the upper valleys of Río Catamayo (Pacific drainage) and Río Zamora (Atlantic drainage) between 4°S–3°S. It occurs in sympatry with *S. ornatus* in the upper valley of Río Zamora.

Stenocercus imitator Cadle

(Fig. 18)

Stenocercus imitator Cadle, 1991:38. Holotype: FMNH 232634, a male from “road above Monte Seco toward Chorro Blanco, approximately 1.5 km (airline) NE Monte Seco, 1450 m, Río Zaña, Departamento Cajamarca, Perú”.

Diagnosis.—*Stenocercus imitator* and *S. praeornatus* are unique among species of *Stenocercus* with granular scales on the posterior surface of thighs in that adult males have a distinct black transverse band across the ventral surface of neck and a pink or lavender ventral background. *S. imitator* can be distinguished from *S. praeornatus* by having fewer vertebrae (49–66, $X = 56.87$ and 65–71, $X = 67.83$, respectively), fewer gulars (29–44, $X = 34.98$ and 38–50, $X = 46.50$, respectively), and fewer scales around midbody (85–124, $X = 102.96$ and 99–122, $X = 107.67$, respectively).

Description.—(1) Maximum SVL in males 100 mm (Cadle, 1991); (2) maximum SVL in females 87 mm (Cadle, 1991); (3) vertebrae 49–66; (4) paravertebrals 89–119; (5) scales around midbody 85–124; (6) supraoculars 4–7; (7) internasals 3–5; (8) postrostrals 4–5; (9) loreals 2–3; (10) gulars 29–44; (11) subdigitals on Finger IV 19–26; (12) subdigitals on Toe IV 28–37; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth or wrinkled, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on

posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 65–70% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries in 75% of specimens; (37) dark patch extensively covering gular region in 40% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males present; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A and 2B.

Color in life.—Dorsum brown with dark bars middorsally and bright yellow spots in males; black vertical antehumeral bar bordered posteriorly by yellow line in males; black circular mark on scapular region in males; vertebral crest with some light blue patches in males; infralabials and gular region yellowish; yellow longitudinal line extends posteriorly from eye, over tympanum, to about a third of distance between fore and hind limbs in females; black patch on ventral surface of neck in males; throat and belly bright lavender in males; pectoral region white in females; belly and ventral aspect of hind limbs with orange wash in females; ventral aspect of tail pale orange (Cadle, 1991). Considerable variation in color patterns has been reported for *S. imitator* (Cadle, 1991; Schlüter, 1999a).

Natural History.—Clutch size in *S. imitator* is 4–5 eggs; gravid females range in size between 70–83 mm SVL (Cadle, 1991). Females with enlarged ova (>10 mm) were collected around May–June 1987. This species has been collected mostly on the ground in open areas within the forest, as well as disturbed areas such as agricultural plantations (Cadle, 1991).

Distribution.—*Stenocercus imitator* occurs in the western Cordillera of the central Andes in Peru between 7°S–5°S (Fig. 19). It is

known from the upper valleys of Río Zaña, Río Piura (Pacific drainage), and Río Marañón (Atlantic drainage) in Departamentos Cajamarca and Piura at elevations of 1200–2600 m. *S. imitator* occurs in sympatry with *S. chlorostictus* and *S. percultus* in both Departamentos, and *S. eunetopsis* in Cajamarca.

Stenocercus iridescens (Günther)
(Fig. 18)

Liocephalus iridescens Günther, 1859b:409.
Syntypes: BM 60.6.16.2–7, from “Andes of western Ecuador”; Boulenger, 1885a:167.

Liocephalus iridescens iridescens Burt and Burt, 1930:12; Burt and Burt (part), 1931:269; Burt and Burt, 1933:28; Burt and Myers, 1942:302.

Ophryoessoides iridescens Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214; Ayala, 1986:563.

Stenocercus iridescens Frost, 1992:43; Torres-Carvajal, 2000:24; Cadle, 2001:184.

Diagnosis.—*Stenocercus iridescens* can be distinguished from other species of *Stenocercus* except *S. erythrogaster*, *S. huancabambae*, *S. limitaris*, *S. puyango* and *S. santander* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. erythrogaster* and *S. iridescens* lack a postfemoral mite pocket. *S. iridescens* differs from *S. erythrogaster* (character states in parentheses) by having smooth dorsal head scales (keeled or wrinkled) and smooth ventrals in adults (distinctly keeled).

Description.—(1) Maximum SVL in males 99 mm ($n = 28$); (2) maximum SVL in females 81 mm ($n = 37$); (3) vertebrae 40–52; (4) paravertebrae 43–58; (5) scales around midbody 35–52; (6) supraoculars 2–5; (7) internasals 2–4; (8) postrostrals 4–5; (9) loreals 2–5; (10) gulars 16–20; (11) subdigitals on Finger IV 15–18; (12) subdigitals on Toe IV 22–28; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket absent; (15) parietal eye visible through interparietal cornea in 88% of specimens; (16) scales on occipitoparietal region large, smooth, imbricate.

cate; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth or indistinctly keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 65–70% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region in 14% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males always present; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions ribs continuous midventrally, Patterns 5, 6A.

Color in life.—Dorsum brown with dark chevrons, more distinct on neck; vertebrae light blue in some male specimens; vertical white line on shoulder; white longitudinal line extending from tympanum to midbody in some females; sides of head white or cream in females; dark brown stripe extending anterodorsally from subocular region to supraciliaries; dark brown interorbital bar in some specimens; gular region mostly red with scattered black dots (also present around tympanum) in males; black patch on ventral surface of neck in males; throat bright yellow in males; venter lavender pink; iris copper (Schlüter, 2001b; Torres-Carvajal, 2000, 2005a).

Distribution.—*Stenocercus iridescens* is known from the western slopes of the

northern Andes and adjacent Pacific lowlands of Ecuador and southern Colombia between 3°30'S–2°N (Fig. 8). This species occurs at elevations of 0–2000 m in Provincias Azuay, Chimborazo, Cotopaxi, El Oro, Esmeraldas, Guayas, Imbabura, Los Ríos, and Manabí in Ecuador, as well as Departamento Nariño in Colombia.

Stenocercus ivitus Fritts

Stenocercus ivitus Fritts, 1972:10. Holotype: KU 134653, a female from “summit of Cordillera Huancabamba between Canchaque and Huancabamba, 3100 m, Departamento Piura, Perú”; Fritts, 1974:56.

Diagnosis.—*Stenocercus ivitus* is unique among species of *Stenocercus* in having granular scales on the posterior surface of thighs, and lacking neck folds and a vertebral crest.

Description.—(2) maximum SVL in females 64 mm ($n = 1$); (3) vertebrae 47; (4) paravertebrals 46; (5) scales around midbody 44; (6) supraoculars six; (7) internasals three; (8) postrostrals six; (9) loreals two; (10) gulars 21; (11) subdigitals on Finger IV 20; (12) subdigitals on Toe IV 26; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, raised into small ridges, subimbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region

of females absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 3.

Color in life (females only).—Dorsum brown with large black blotches arranged in two longitudinal rows between two yellow dorsolateral stripes; venter white with pinkish bronze tint; gular region with dark flecks (Fritts, 1972).

Natural History.—The only known specimen of *S. ivitus* was found basking on a pile of dead branches at the edge of a shrub forest (Fritts, 1972).

Distribution.—*Stenocercus ivitus* is only known from its type locality (5°19'0"S, 79°29'0"W, 3100 m) in Departamento Piura, Peru (Fig. 19). This locality lies north of the western Cordillera of the central Andes between 6°S–5°S. This species is sympatric with *S. nubicola*.

Stenocercus lache Corredor
(Fig. 18)

Stenocercus lache Corredor, 1983:2. Holotype: ICN 5749, a male from "La Esperanza-Púlpito del Diablo trail, quebrada Pantanogrande (tributary of Río Nevado), Municipio Güicán, 3700–4000 m, Departamento Boyacá, Colombia"; Ayala, 1986:563.

Diagnosis.—*Stenocercus lache* is distinguished from other species of *Stenocercus* except *S. trachycephalus* by having imbricate scales on the posterior surface of thighs, a well-developed postfemoral mite pocket, and by lacking an antehumeral mite pocket and neck folds. It differs from *S. trachycephalus* (character states in parentheses) in having smooth ventrals (smooth or weakly keeled), a weakly compressed tail in adult males (strongly compressed laterally), more (61–74, $X = 67.03$) scales around midbody (43–67, $X = 52.54$), and postxiphisternal ribs in contact medially (postxiphisternal inscriptional ribs not in contact medially). In addition, the black ventral nuchal patch in adult males of *S. lache* is usually continuous with the black midventral patch; these patches are not in contact in *S. trachycephalus*.

Description.—(1) Maximum SVL in males 88 mm ($n = 16$); (2) maximum SVL in females 81 mm ($n = 22$); (3) vertebrae 43–58; (4) paravertebrals 53–73; (5) scales around mid-

body 61–74; (6) supraoculars 4–6; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 20–28; (11) subdigitals on Finger IV 13–20; (12) subdigitals on Toe IV 17–30; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 3% of specimens; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 61–67% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in 88% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Patterns 5, 7.

Color in life.—Dorsum olive-brown with scattered turquoise-green spots in males and brown with a light gray dorsolateral stripe extending from rostrum to base of tail in females; middorsal aspect of body with a series of dark chevrons longitudinally arranged over vertebral line in females; loreal region olive-green in males; in most male specimens, ventral surface of neck with transverse black band that extends dorsally on scapular region

and is posteriorly bordered by yellow stripe; ventral aspect of flanks orange-yellow in some males and yellow in females; venter pale yellow, light gray, or cream with dark flecks on gular region in females. Ventral pattern in most adult males as follows: chin yellowish green; gular region light bluish green; black band on ventral aspect of neck extends posteriorly as a distinct midventral stripe laterally bordered with orange-yellow or blue; tail light gray ventrally (Corredor, 1983).

Natural History.—Females of *S. lache* lay two eggs probably between July and September (Corredor, 1983).

Distribution.—*Stenocercus lache* occurs in the eastern Cordillera of Colombia (northern Andes) between 6°N–7°N (Fig. 16). This species is known from Departamentos Boyacá and Santander at elevations of 2908–4000 m. *S. lache* might occur in sympatry with *S. santander* and *S. trachycephalus* (Fig. 16).

Stenocercus latebrosus Cadle

Stenocercus latebrosus Cadle, 1998:268. Holotype: MHNSM 16744, a male from “Bosque de Cachil, approximately 3 km (airline) SE Contumazá, 7°23'S, 78°47'W, 2500 m, Departamento Cajamarca, Peru.”

Diagnosis.—*Stenocercus latebrosus* is distinguished from other species of *Stenocercus* except *S. chrysopygus*, *S. cupreus*, *S. modestus*, *S. orientalis*, and *S. ornatissimus* by having granular scales on the posterior surface of thighs, conspicuous antehumeral and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. latebrosus* and *S. ornatissimus* are unique in having deep neck mite pockets under both antehumeral and oblique neck folds. *S. latebrosus* differs from *S. ornatissimus* (character states in parentheses) in having lateral and dorsal nuchals similar in size (lateral nuchals less than half the size of dorsal nuchals), and by lacking small black dots on the venter in adult males (small ventral black dots usually present). See Cadle (1998) for a more detailed comparison between these two species.

Description.—(1) Maximum SVL in males 76 mm ($n = 20$); (2) maximum SVL in females 67 mm ($n = 18$); (3) vertebrae 43–53; (4) paravertebrals 42–56; (5) scales around mid-

body 38–57; (6) supraoculars 5–7; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 1–3; (10) gulars 18–26; (11) subdigitals on Finger IV 17–23; (12) subdigitals on Toe IV 23–28; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) post-femoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth or keeled, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral and oblique neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 63–69% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent.

Color in life.—Dorsum chestnut-brown with longitudinal series of dark brown marks (sometimes as a paired series of triangles) middorsally, as well as grayish white or yellowish-brown dorsolateral stripes in some females and subadults; dorsal aspect of neck and anterior body with bright blue flecks in some males; dorsal aspect of head blackish brown with irregular light brown marks; supra- and infralabials blackish brown; lorila-

bials and loreals white; throat and ventral aspect of neck white with dark streaking (less conspicuous in females), or black with large white spots (males only); pectoral region, venter, and ventral aspect of limbs and base of tail with brilliant yellow or blue streaks in males; ventrolateral edges of body with orange tint in some females (Cadle, 1998).

Natural History.—Gravid females and hatchlings of *S. latebrosus* were collected in August 1994 at Bosque de Cachil in Departamento Cajamarca, Peru (Cadle, 1998). This species has been observed in disturbed areas including secondary growth areas, agricultural land, stone fences, and eucalyptus forests (Cadle, 1998).

Distribution.—*Stenocercus latebrosus* is known from the western Cordillera of the central Andes in northern Peru between 8°S–7°S (Fig. 15). This species occurs in the upper valleys of Río Chicama and Río Chilete (Pacific drainage), and Río Marañón (Atlantic drainage) at elevations of 2400–2600 m in Departamentos Cajamarca and La Libertad.

Stenocercus limitaris Cadle

(Fig. 18)

Stenocercus limitaris Cadle, 1998:261. Holotype: AMNH 22183, a male from “Alamor, 04°02’S, 80°02’W, 1325 m, Provincia Loja, Ecuador”; Torres-Carvajal, 2000:27; Cadle, 2001:184.

Diagnosis.—*Stenocercus limitaris* can be distinguished from other species of *Stenocercus* except *S. erythrogaster*, *S. huancabambae*, *S. iridescens*, *S. puyango* and *S. santander* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. huancabambae*, *S. limitaris*, *S. puyango*, and *S. santander* have a postfemoral mite pocket. *S. limitaris* differs from *S. huancabambae* (character states in parentheses) by lacking projected angulate temporals (2–3 dorsally-projected angulate temporals), and by having two canthals (canthal single). From *S. puyango* it differs by having keeled dorsal head scales and keeled ventrals (smooth in *S. puyango*). *S. limitaris* is different from *S. santander* in color patterns (e.g., males of *S. santander* lack

a distinct black mark on the ventral surface of neck, which is characteristic of *S. limitaris*); moreover, males of *S. santander* have a more prominent vertebral crest.

Description.—(1) Maximum SVL in males 97 mm (Cadle, 1998); (2) maximum SVL in females 82 mm (Cadle, 1998); (3) vertebrals 40–52; (4) paravertebrals 48–60; (5) scales around midbody 39–54; (6) supraoculars 3–5; (7) internasals 4–5; (8) postrostrals 2–5; (9) loreals 2–3; (10) gulars 17–23; (11) subdigitals on Finger IV 17–23; (12) subdigitals on Toe IV 24–32; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 78% of specimens; (16) scales on occipitoparietal region large, keeled, subimbricate; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region present; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 69–72% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapularies always present; (37) dark patch extensively covering gular region in 40% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males always present; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Pattern 6A.

Color in life.—Dorsum brown with a longitudinal series of dark chevrons (more distinct

in subadults); side of neck and flanks yellowish brown in females; loreal and supralabial regions dull yellowish white; light yellow vertical stripe on shoulder; throat and pectoral region grayish white with yellow tint in females; ventral surfaces of body, limbs, and tail grayish tan in females; upper edge of posterior surface of thigh with light yellowish-brown stripe in females and subadults (Cadle, 1998).

Natural History.—Although some specimens were collected in humid deciduous forest, *S. limitaris* has been mostly observed among thickets and fencerows in disturbed areas including pastures, agricultural land, and secondary forest (Cadle, 1998).

Distribution.—*Stenocercus limitaris* occurs in the western slopes of the western Cordillera of the northern Andes between 5°S–3°S (Fig. 17). This species is known at elevations of 600–2200 m in the upper valley of Río Chira (Pacific drainage) in southern Ecuador (Provincias El Oro and Loja) and northern Peru (Departamentos Piura and Tumbes). *S. limitaris* is sympatric with *S. carrioni* (Ecuador: Loja), *S. festae* (Ecuador: El Oro), and *S. puyango* (Peru: Tumbes).

Stenocercus marmoratus
(Duméril and Bibron)
(Fig. 20)

Trachycylus marmoratus Duméril and Bibron, 1837:356. Holotype: MNHN 2513, a juvenile from “province de Rio-Grande” (restricted to Pampa Ruiz, between Valle Grande and El Pescado, Provincia de La Laguna, east of Chuquisaca, [Departamento Chuquisaca], Bolivia, by d’Orbigny [1847].)

Heterotropis (Trachycylus) marmorata Fitzinger, 1843:71.

Stenocercus marmoratus Boulenger, 1885a: 132; Burt and Burt, 1933:43; Fritts, 1974:57; Etheridge, in Peters and Donoso-Barros, 1970:256; Torres et al., 2000:129.

Stenocercus difficilis Werner, 1910:23. Holotype: ZMH specimen destroyed in WWII, a male from “Cochabamba [Departamento Cochabamba], Bolivia”; Burt and Burt, 1933:43. Synonymy fide Etheridge in Peters and Donoso-Barros, 1970:256.

Diagnosis.—Among species of *Stenocercus* with imbricate scales on the posterior surface

of thighs, *S. marmoratus* and *S. roseiventris* are unique in having caudal scales with strongly projected mucrons. *S. marmoratus* is distinguished from *S. roseiventris* (character states in parentheses) by having a low and discontinuous vertebral crest (conspicuous and continuous), granular temporals (keeled and imbricate), lateral body scales half the size of dorsal body scales (laterals and dorsals similar in size), a prominent ventrolateral fold (fold inconspicuous or absent), 44–59 ($X = 52.00$) scales around midbody (55–82, $X = 69.80$), and by lacking a preauricular fringe (present).

Description.—(1) Maximum SVL in males 83 mm (Torres et al., 2000); (2) maximum SVL in females 77 mm ($n = 7$); (3) vertebrae 44–66; (4) paravertebrals 51–68; (5) scales around midbody 44–59; (6) supraoculars 4–8; (7) internasals 2–4; (8) postrostrals five; (9) loreals 2–4; (10) gulars 23–30; (11) subdigitals on Finger IV 12–21; (12) subdigitals on Toe IV 16–23; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe inconspicuous or absent; (21) antegular, antehumeral, gular, longitudinal, oblique, postauricular, and neck folds present (but see Torres et al., 2000); (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) anteriormost and posteriormost vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 56–60% of total length; (34) caudal whorls per autotomic segment two; (35) caudals strongly spinose; (36) dark brown stripe extending anterodor-

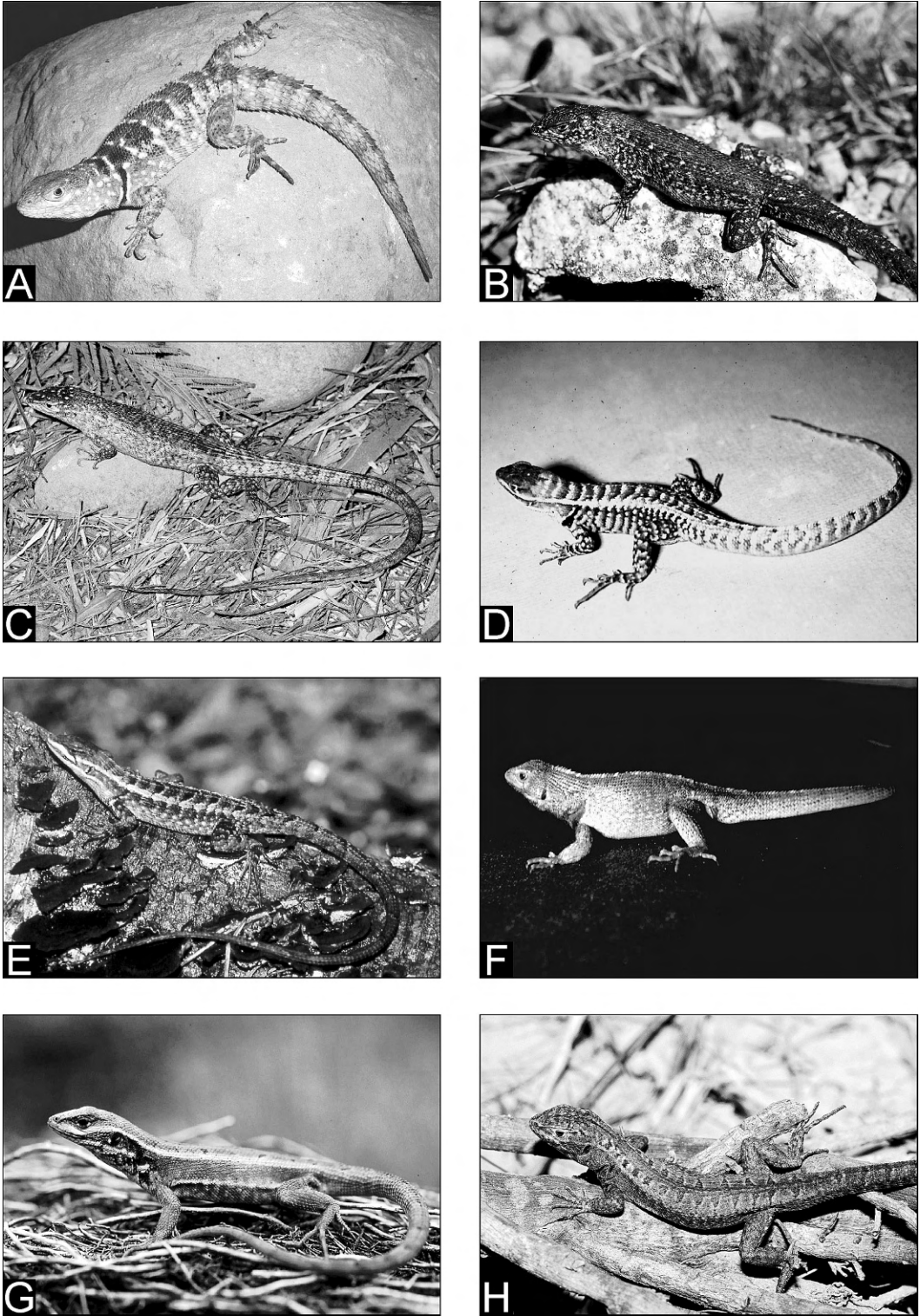


FIG. 20.—Eight species of *Stenocercus*. (A) *S. marmoratus* (AMU); (B) *S. melanopygus* (PVE); (C) *S. modestus* (MLU); (D) *S. nigromaculatus* (WED); (E) *S. nubicola* (PVE); (F) *S. ochoai* (WED); (G) *S. orientalis* (PVE); (H) *S. ornatissimus* (MLU).

sally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1B.

Color in life.—Dorsum grayish brown with dark brown cross bands and white or yellow blotches; white or yellow dorsolateral stripe, continuous or discontinuous, extending from subocular region to approximately midbody; flanks and sides of neck with white or yellow blotches; dark brown or black vertical bar anterior to fore limb in some specimens; throat charcoal with cream spots in some males; venter uniform cream, orange in some males (based on Torres et al. [2000] and a photograph taken by A. Muñoz.)

Natural History.—Females of *S. marmoratus* probably lay eggs twice a year. This species prefers rock outcrops and hides in crevices or underneath rocks (Torres et al., 2000).

Distribution.—*Stenocercus marmoratus* is known from the eastern Cordilleras of the central and southern Andes between 24°S–16°S (Fig. 13). This species occurs at elevations of 1000–3350 m in Provincia Salta, Argentina, as well as Departamentos Chuquisaca, Cochabamba, Santa Cruz, and Tarija in Bolivia (Cruz et al., 1996; Torres et al., 2000).

Stenocercus melanopygus Boulenger
(Fig. 20)

Stenocercus melanopygus Boulenger, 1900: 182. Syntypes: BMNH 1900.3.30.6–8 (RR 1946.8.11.85–88), BMNH 1900.3.30.6–9 (MCZ 126133), 1900.3.30.10–13 (RR 1946.8.11.78–81) from “Baños, 9000 ft, [Departamento] Cajamarca, Peru”; Burt and Burt, 1933:43; Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974: 57.

Diagnosis.—*Stenocercus melanopygus* is distinguished from all species of *Stenocercus* except *S. stigmosus* in having granular scales

on the posterior surface of thighs, vertebral and paravertebrals similar in size (i.e., no vertebral crest), three caudal whorls per autotomic segment, and imbricate or subimbricate smooth scales on the lateral surface of neck that are approximately less than half the size of dorsal neck scales. *S. melanopygus* differs from *S. stigmosus* (character states in parentheses) by lacking a posthumeral mite pocket (posthumeral mite pocket present as one or more vertical folds or ridges) and an oblique neck fold (oblique neck fold present). In addition, adult males of *S. melanopygus* lack the ventral black spots characteristic of *S. stigmosus*.

Description.—(1) Maximum SVL in males 85 mm ($n = 23$); (2) maximum SVL in females 63 mm ($n = 21$); (3) vertebrae 45–59; (4) paravertebrals 45–58; (5) scales around midbody 47–56; (6) supraoculars 5–6; (7) internasals 4–5; (8) postrostrals 4–8; (9) loreals 1–3; (10) gulars 20–25; (11) subdigitals on Finger IV 15–19; (12) subdigitals on Toe IV 21–28; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antehumeral and longitudinal neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 61–66% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively

covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 4% of adult males; (41) dark patches on ventral surface of thighs in 52% of adult males; (42) postxiphisternal inscriptional ribs not in contact mid-ventrally, Patterns 1A, 2B.

Color in life.—Schlüter (2004) describes seven patterns to summarize color variation among males of *S. melanopygus*, which have a characteristic black or yellow patch covering at least the ventral surfaces of the pelvic region, base of tail, and hind limbs (Fritts, 1974; Schlüter, 1999*d*, 2004). Females have the following color features: dorsum light brown to grayish brown; whitish dorsolateral stripe from face to base of tail (this stripe also present in juveniles of both sexes); venter white or cream, sometimes with pink tint; ventral aspect of tail yellowish-brown (Schlüter, 1999*d*, 2004).

Natural History.—A female laid seven eggs in captivity in October 1998 (Schlüter, 1999*d*). Incubation time was 98–100 days at a temperature of 22–25 C. This species has been observed on the ground, blades of *Agave* plants, small rocks, and large rock piles (Fritts, 1974).

Distribution.—*Stenocercus melanopygus* occurs in the western Cordillera of the central Andes in northern Peru (Fig. 6). This species is known from the upper valley of Río Marañón (Atlantic drainage) at elevations between 2700–3250 m in Departamentos Cajamarca and La Libertad (8°S–7°S). It is sympatric with *S. empetrus* at several localities.

Stenocercus modestus Tschudi
(Fig. 20)

Liolaemus (Sauridis) modestus Tschudi, 1845:157. Holotype: BM 75.2.13.3, a male from “Peru” (restricted to Miraflores [Departamento Lima], Peru by Tschudi [1846]); Roux, 1907:297.

Stenocercus moestus Boulenger, 1885*a*:136. Holotype: BM 75.2.13.3, a male from “Lima [Departamento Lima], Peru”; Burt and Burt, 1933:43; Burt and Myers, 1942:307; Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974:58. Synonymy fide Laurent, 1984:368.

Diagnosis.—*Stenocercus modestus* is distinguished from other species of *Stenocercus* except *S. chrysopygus*, *S. cupreus*, *S. latebrosus*, *S. orientalis*, and *S. ornatissimus* by having granular scales on the posterior surface of thighs, conspicuous antehumeral and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. latebrosus* and *S. ornatissimus* are unique in having deep neck mite pockets under the antehumeral and oblique neck folds, whereas *S. orientalis* is unique in having prominently keeled dorsal head scales. *S. modestus* can be distinguished from *S. chrysopygus* (character states in parentheses) by having keeled and imbricate lateral nuchal scales (granular, or smooth and subimbricate) and a caudal notch on ventral scales (caudal notch on ventrals absent). It can be distinguished from *S. cupreus* by having three instead of two caudal whorls per autotomic segment. *S. modestus* has fewer vertebrales (39–46, $X = 42.00$) and fewer scales around midbody (32–38, $X = 35.17$) than *S. chrysopygus* (54–86, $X = 66.01$ and 48–82, $X = 64.31$, respectively) and *S. cupreus* (44–58, $X = 51.53$ and 51–66, $X = 59.47$, respectively). In addition, *S. modestus* differs from the above mentioned species in having a much longer tail (tail length 70–73% of total length).

Description.—(1) Maximum SVL in males 72 mm ($n = 8$); (2) maximum SVL in females 64 mm ($n = 5$); (3) vertebrales 39–46; (4) paravertebrales 38–46; (5) scales around midbody 32–38; (6) supraoculars 4–5; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 1–2; (10) gulars 15–18; (11) subdigitals on Finger IV 17–21; (12) subdigitals on Toe IV 24–28; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed or weakly imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antehumeral and oblique neck folds present; (22) lateral and dorsal nuchals similar in size; (23)

posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 70–73% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions not in contact midventrally, Pattern 2B.

Color in life.—Dorsum dark brown with scattered pale yellow irregular marks in males and a faint dorsolateral light stripe in females; dorsum of head, neck, and lateral aspect of neck with bright yellow spots in males; dorsal aspect of limbs with pale yellow spots in males; venter cream; yellow transverse band on pectoral region in males; yellow patch on ventral aspect of pelvic region, thighs, and base of tail in males, this patch partially retained in some females.

Distribution.—*Stenocercus modestus* inhabits the Pacific lowlands and slopes of the western Cordillera of the central Andes in Peru between 12°S–11°S (Fig. 12). This species occurs in the valley of Río Rimac (Pacific drainage) at elevations of 0–762 m in Departamento Lima (Fritts, 1974; Laurent, 1984).

Stenocercus nigromaculatus Noble
(Fig. 20)

Stenocercus nigromaculatus Noble, 1924:112.
Holotype: MCZ 17975, a male from “Huancabamba, Province of Piura [Departamento Piura], Peru”; Burt and Burt, 1931:288; Burt and Burt, 1933:43; Peters, 1967:35; Fritts, 1974:59.

Diagnosis.—*Stenocercus nigromaculatus* differs from all other species of *Stenocercus* except *S. angel*, *S. chota*, *S. festae*, and *S. guentheri* by having imbricate scales on posterior surface of thighs, smooth ventrals, a posthumeral mite pocket consisting of a shallow depression with a wide opening (more distinct in adult specimens), small scales on occipitoparietal region, and supraoculars of similar size. Of these species, *S. nigromaculatus* is unique in having an antehumeral fold and black patches on the ventral surface of thighs in adult males. In addition, *S. nigromaculatus* is smaller in size, with males reaching up to 77 mm SVL (*S. angel* = 87 mm, *S. chota* = 97 mm, *S. festae* = 102 mm, *S. guentheri* = 96 mm) and females up to 64 mm SVL (*S. angel* = 76 mm, *S. chota* = 65 mm, *S. festae* = 79 mm, *S. guentheri* = 73 mm).

Description.—(1) Maximum SVL in males 77 mm ($n = 16$); (2) maximum SVL in females 64 mm ($n = 19$); (3) vertebrae 43–60; (4) paravertebrals 52–71; (5) scales around midbody 45–60; (6) supraoculars 4–7; (7) internasals 2–4; (8) postrostrals 3–6; (9) loreals 2–4; (10) gulars 18–24; (11) subdigitals on Finger IV 14–20; (12) subdigitals on Toe IV 22–31; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled or multicarinate, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral fold present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs smooth or keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail

length 66–70% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapularies absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 81% of adult males; (41) dark patches on ventral surface of thighs in 81% of adult males; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1B, 2A, and 2B.

Color in life.—Dorsum greenish brown with one pair of light dorsolateral stripes that are more conspicuous in females (these stripes fade posterior to shoulder in males); longitudinal series of dark brown transverse bars over vertebral line (less conspicuous in females, usually as a series of spots); black vertical bar on shoulder in males; throat with indistinct pale brown mottling; venter yellowish or greenish, slightly iridescent; in males, black midventral stripe extending to ventral aspect of hind limbs; pink suffusion on ventral aspect of tail (Noble, 1924).

Natural History.—This species has been observed basking and foraging in rows of *Agave* plants and around bases of shrubs (Fritts, 1974), as well as in rock-walls or piles of rocks (Noble, 1924).

Distribution.—*Stenocercus nigromaculatus* occurs north of the western Cordillera of the central Andes in Peru between 6°S–5°S (Fig. 19). This species occurs in the valley of Río Huancabamba (Atlantic drainage) at elevations of 1900–2300 m in Departamento Piura (Fritts, 1974).

Stenocercus nubicola Fritts

(Fig. 20)

Stenocercus nubicola Fritts, 1972:11. Holotype: KU 134107, a male from “summit of Cordillera Huancabamba between Canchaque and Huancabamba, 3100 m, Departamento Piura, Perú”; Fritts, 1974:59.

Diagnosis.—*Stenocercus nubicola* differs from all other species of *Stenocercus* except *S. frittsi* and *S. variabilis* in having granular

scales on the posterior surface of thighs, a distinct vertebral crest, lateral nuchals less than half the size of dorsal nuchals, strongly keeled lateral body scales, and three caudal whorls per autotomic segment. It can be distinguished from *S. frittsi* and *S. variabilis* by having a distinct mite pocket underneath the oblique neck fold, lateral and dorsal body scales similar in size, and a black longitudinal midventral stripe in adult males.

Description.—(1) Maximum SVL in males 71 mm ($n = 1$); (2) vertebrae 67; (3) paravertebrals 97; (4) scales around midbody 93–94; (5) supraoculars 5–6; (6) internasals four; (7) postrostrals four; (8) loreals three; (9) gulars 38–39; (10) subdigitals on Finger IV 17–22; (11) subdigitals on Toe IV 24–28; (12) posthumeral mite pocket present as a shallow depression with a wide opening; (13) postfemoral mite pocket distinct with slit-like opening; (14) parietal eye not visible through interparietal cornea; (15) scales on occipitoparietal region small, smooth, juxtaposed; (16) projecting angulate temporals absent; (17) row of enlarged supraoculars occupying most of supraocular region absent; (18) scales on frontonasal region juxtaposed anteriorly; (19) preauricular fringe present; (20) antehumeral, gular, longitudinal, oblique, and supra-auricular neck folds present; (21) lateral nuchals less than half the size of dorsal nuchals; (22) posterior gulars cycloid, smooth, slightly imbricate, not notched; (23) lateral and dorsal body scales similar in size; (24) vertebrae larger than adjacent paravertebrals; (25) dorsolateral crest absent; (26) ventrals smooth, imbricate; (27) scales on posterior surfaces of thighs granular; (28) inguinal granular pocket absent; (29) inguinal groove absent; (30) preanals not projected; (31) tail not compressed laterally in adult males; (32) tail length 67% of total length; (33) caudal whorls per autotomic segment three; (34) caudals not spinose; (35) dark brown stripe extending anterodorsally from subocular region to suprascapularies absent; (36) dark patch extensively covering gular region of adult males present; (37) black patch on ventral surface of neck in adult males absent; (38) dark midventral longitudinal stripe present; (39) dark patches on ventral surface of thighs in adult males absent.

Color in life of holotype.—Dorsum brown with small dark brown or black blotches, bluish-green transverse marks, and beige dorsolateral stripes; antehumeral region with black vertical bar; supralabials and infralabials black; loreal region white; gular and pectoral regions white with black spots; wide, gray midventral stripe; lateral aspect of body and venter light green with reddish-orange spots and flecks (Fritts, 1972).

Natural History.—The holotype (adult male) was found basking on a fallen tree trunk.

Distribution.—*Stenocercus nubicola* is only known from its type locality (5°19'0"S, 79°29'0"W, 3100 m) in Departamento Piura, Peru (Fig. 17). This locality lies north of the western Cordillera of the central Andes between 6°S–5°S. This species is sympatric with *S. ivitus*.

Stenocercus ochoai Fritts
(Fig. 20)

Stenocercus ochoai Fritts, 1972:13. Holotype: KU 133888, a male from "Chilca, 10 km NW Ollantayambo, 2700 m, Departamento Cuzco, Perú"; Fritts, 1974:60.

Diagnosis.—*Stenocercus ochoai* is distinguished from other species of *Stenocercus* except *S. formosus* by having imbricate scales on the posterior surface of thighs, a well-developed postfemoral mite pocket, antehumeral and oblique neck folds, and by lacking an antehumeral mite pocket. *S. ochoai* differs from *S. formosus* (character states in parentheses) in having three caudal whorls per autotomic segment (four), smooth dorsal head scales (keeled), lateral nuchals less than half the size of dorsal nuchals (lateral and dorsal nuchals similar in size), fewer (56–69, $X = 61.83$) scales around midbody (74–82, $X = 77.88$), and a black venter with some yellow laterally in adult males (pink ventral coloration).

Description.—(1) Maximum SVL in males 92 mm ($n = 14$); (2) maximum SVL in females 74 mm ($n = 15$); (3) vertebrals 46–67; (4) paravertebrals 59–91; (5) scales around midbody 56–69; (6) supraoculars 5–7; (7) internasals 3–4; (8) postrostrals 4–7; (9) loreals 2–4; (10) gulars 16–23; (11) subdigitals on Finger IV 15–20; (12) subdigitals on Toe IV 21–29; (13) posthumeral mite pocket absent; (14)

postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea in 3% of specimens; (16) scales on occipitoparietal region small, smooth, juxtaposed or slightly imbricate; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral and oblique neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs smooth or keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) pre-anals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 63–67% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 7% of adult males; (39) black patch on ventral surface of neck in 20% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 87% of adult males; (41) dark patches on ventral surface of thighs in 7% of adult males; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A, 2A, and 2B.

Color in life.—Dorsum brown, with small black blotches in males and beige or light gray scales in females; lateral surface of body, limbs, and tail with lime-green suffusion in males; ventrolateral aspect of body greenish yellow in males and grayish brown with bronze or reddish-orange suffusion in females; gular region yellow with black suffusion in males and beige with gray suffusion in females; venter dull black (yellow laterally) in males and beige-white in females; ventrally, pelvic region, base of tail, and thighs dull yellow in males (Fritts, 1972).

Natural History.—This species is active on ground and rock (mostly males) substrates (Fritts, 1972, 1974).

Distribution.—*Stenocercus ochoai* occurs between 14°S–12°S in the eastern Cordillera of the central Andes in Peru (Fig. 10). This species is known from the upper valleys of Río Apurimac and Río Urubamba (Atlantic drainage) at elevations of 2000–3000 m in Departamentos Apurimac and Cusco. *S. ochoai* is sympatric with *S. apurimacus* in Apurimac and *S. crassicaudatus* in Cusco.

Stenocercus orientalis Fritts

(Fig. 20)

Stenocercus orientalis Fritts, 1972:14. Holotype: KU 134466, a male from “Chachapoyas, 2340 m, Departamento Amazonas, Perú”; Fritts, 1974:60.

Diagnosis.—*Stenocercus orientalis* is distinguished from other species of *Stenocercus* except *S. chrysopygus*, *S. cupreus*, *S. latebrosus*, *S. modestus*, and *S. ornatissimus* by having granular scales on the posterior surface of thighs, conspicuous antehumeral and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. orientalis* is unique in having prominently keeled dorsal head scales.

Description.—(1) Maximum SVL in males 79 mm ($n = 17$); (2) maximum SVL in females 66 mm ($n = 17$); (3) vertebrae 44–58; (4) paravertebrals 48–62; (5) scales around midbody 46–59; (6) supraoculars 5–6; (7) internasals 3–5; (8) postrostrals 4–7; (9) loreals 2–3; (10) gulars 20–26; (11) subdigitals on Finger IV 16–21; (12) subdigitals on Toe IV 21–30; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) no preauricular fringe present; (21) antehumeral and oblique neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly

imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 65–69% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1B and 2C.

Color in life.—Dorsum brown with dark brown or black blotches, occasionally forming chevrons in males; light lateral stripe extends posteriorly from subocular region to dorsal aspect of tympanum and continues dorsolaterally to approximately the level of fore limb insertion; gular region and venter beige in males and grayish beige in females; ventrally, pelvic region and thighs yellow in males (Fritts, 1972).

Natural History.—This species has been found in open areas at the bases of shrubs (Fritts, 1972, 1974).

Distribution.—*Stenocercus orientalis* is known from the eastern Cordillera of the central Andes in northern Peru (6°S–5°S). This species occurs in the valley of Río Utcubamba (Atlantic drainage) at elevations between 2200–2900 m in Departamento Amazonas (Fig. 19).

Stenocercus ornatissimus (Girard)

(Fig. 20)

Saccodeira ornatissima Girard, 1857:198. Lectotype (Cadle, 1998): USNM 5655, a female from “Yangas, 3106 m, Departamento Lima, Peru”; Boulenger, 1885a:159.

Proctotretus ornatissimus Burt and Burt, 1930: 22; Burt and Burt, 1931:287; Burt and Burt, 1933:42; Burt and Myers, 1942:304.

Stenocercus ornatissimus Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974:61.

Diagnosis.—*Stenocercus ornatissimus* is distinguished from other species of *Stenocercus* except *S. chrysopygus*, *S. cupreus*, *S. latebrosus*, *S. modestus*, and *S. orientalis* by having granular scales on the posterior surface of thighs, conspicuous antehumeral and oblique neck folds, a distinct mite pocket under oblique neck fold, and by lacking a vertebral crest. Of these species, *S. latebrosus* and *S. ornatissimus* are unique in having deep neck mite pockets under both antehumeral and oblique neck folds. *S. ornatissimus* differs from *S. latebrosus* (character states in parentheses) in having lateral nuchals less than half the size of dorsal nuchals (lateral and dorsal nuchals similar in size), and by usually having small black dots on the venter in adult males (small ventral black dots absent). See Cadle (1998) for a more detailed comparison between these two species.

Description.—(1) Maximum SVL in males 61 mm (Cadle, 1998); (2) maximum SVL in females 59 mm (Cadle, 1998); (3) vertebrae 52–59; (4) paravertebrals 50–61; (5) scales around midbody 49–60; (6) supraoculars 4–7; (7) internasals 2–5; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 19–26; (11) subdigitals on Finger IV 15–20; (12) subdigitals on Toe IV 20–29; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket present as one or more vertical folds or ridges; (15) parietal eye visible through interparietal cornea in 89% of specimens; (16) scales on occipitoparietal region small, smooth or slightly keeled, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral and oblique neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae and adjacent

paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 64–70% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A, 2A, 2B, and 2C.

Color in life.—Dorsum grayish brown (pale in females) with a series of dark brown subtriangular marks longitudinally arranged on each side of vertebral line; flanks with olive-green hue dorsally; limbs with dark brown reticulations; dorsum of head dark brown with yellowish supraciliary ridge and light red spots in some specimens; sides of head and neck variegated with black, yellowish white, or light red in males; black longitudinal stripe between temporal and axillary regions in some females; chin, gular, and pectoral regions whitish with scattered black spots; ventral aspect of body and tail uniform dull yellow, with gray flecks in females (based on Girard [1857] and a photograph taken by M. Lundberg.)

Natural History.—Clutch size in *S. ornatissimus* is two eggs (Cadle, 1998).

Distribution.—*Stenocercus ornatissimus* occurs between 12°S–11°S in the western Cordillera of the central Andes in Peru (Fig. 12). This species is known from elevations of 2000–3400 m in Departamento Lima. It was erroneously reported for Ecuador by Peters (1967).

Stenocercus ornatus (Gray)

(Fig. 21)

Leiocephalus ornatus Gray, 1845:219. Holotype: BM 1946.8.29.72 from “Guayaquil

[Provincia Guayas, Ecuador]" (restricted to Loja, 2150 m, Provincia Loja, Ecuador, by Fritts [1974]).

Liocephalus ornatus Boulenger, 1885a:168.

Leiocephalus ornatus ornatus Burt and Burt, 1930:12; Burt and Burt (part), 1931:271; Burt and Burt (part), 1933:28; Burt and Myers, 1942:303.

Ophryossoides ornatus Etheridge, 1966:88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus ornatus Fritts, 1974:62; Torres-Carvajal, 2000:27.

Diagnosis.—*Stenocercus ornatus* is distinguished from other species of *Stenocercus* except *S. percultus* and *S. rhodomelas* by having imbricate scales on the posterior surface of thighs, smooth ventrals, deep posthumeral and postfemoral mite pockets, and keeled dorsal head scales. *S. ornatus* differs from *S. percultus* and *S. rhodomelas* in lacking an extensive black patch on the gular region in adult males. In addition, the scales on the occipitoparietal region in *S. ornatus* have a central keel and are slightly imbricate, whereas these scales in *S. percultus* are multicarinate and juxtaposed. *S. ornatus* is further distinguished from *S. rhodomelas* by having an inconspicuous antehumeral fold (absent in *S. rhodomelas*).

Description.—(1) Maximum SVL in males 85 mm ($n = 23$); (2) maximum SVL in females 71 mm ($n = 9$); (3) vertebrals 36–50; (4) paravertebrals 53–66; (5) scales around mid-body 46–58; (6) supraoculars 4–7; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 15–23; (11) subdigitals on Finger IV 17–25; (12) subdigitals on Toe IV 27–37; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 98% of specimens; (16) scales on occipitoparietal region small, keeled, slightly imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) inconspicuous antehumeral fold present (supra-auricular and dorsolateral folds recorded by Torres-Carvajal [2000] in error);

(22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail length 66–72% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 92% of adult males; (41) dark patches on ventral surface of thighs in 83% of adult males; (42) postxiphisternal inscriptional ribs not in contact mid-ventrally, Patterns 2A and 2B.

Color in life.—Dorsum brown with dark transverse marks longitudinally arranged over vertebral line, and cream or beige dorsolateral stripes in some specimens; shoulder with large black blotch in males; chin black, light red, pink or yellow; gular region pale red or pinkish red in males; pectoral region with yellow patch in males; broad, black midventral stripe (medially separated by a yellow longitudinal line in some specimens) in males; ventral background pink or reddish cream, with gray dotted pattern in females; ventral surfaces of pelvic region, base of tail, and thighs yellow (heavily suffused with black in some specimens) in males (Fritts, 1974; Torres-Carvajal, 2000).

Natural History.—Clutch size in *S. ornatus* is two eggs (Torres-Carvajal, 2000). Fritts (1974) observed this species in open areas on the ground and in rows of *Agave*.

Distribution.—*Stenocercus ornatus* occurs between 4°30'S–4°S in the western Cordillera and inter-Andean basins of the northern Andes in southern Ecuador (Fig. 17). This species is known from Provincia Loja at

elevations of 1500–3000 m in the upper valleys of Río Catamayo (Pacific drainage) and Río Zamora (Atlantic drainage), where it occurs in sympatry with *S. humeralis*.

Stenocercus pectinatus (Duméril and Bibron)

Proctotretus pectinatus Duméril and Bibron, 1837:292. Syntypes: MNHN 6868, 6868A from “Chili”; Burt and Burt, 1930:22; Burt and Burt, 1931:287; Burt and Burt, 1933:42; Peters and Donoso-Barros, 1970:241; Cei, 1986:277.

Liolaemus (Proctotretus) pectinatus Fitzinger, 1843:74.

Ptygoderus pectinatus Gray, 1845:216.

Proctotretus splendidus Girard, 1857:198. Syntypes: ANSP 8546, MNHN 0074, USNM 5695, 565026, “Patagonia [Argentina].”; ANSP 8546 erroneously listed as holotype by Malnate (1971:360); USNM 5695 herein designated as lectotype. Synonymy fide Boulenger, 1885a:159.

Saccodeira pectinata Boulenger, 1885a:159; Koslowsky, 1898:183.

Stenocercus pectinatus Frost, 1992:43; Cei, 1993:308.

Diagnosis.—Among species of *Stenocercus* that lack posthumeral and postfemoral mite pockets and have imbricate scales on the posterior surface of thighs (i.e., *S. azureus*, *S. doellojuradoi*, *S. dumerilii*, *S. pectinatus*, *S. quinarius*, *S. sinesaccus*, *S. squarrosus* and *S. tricristatus*), those species formerly assigned to “*Proctotretus*” (i.e., *S. azureus*, *S. doellojuradoi* and *S. pectinatus*) are unique in having posteriorly projected preanals that form a denticulate border, and two longitudinal rows of lorilabials between the anterior portion of the subocular and the corresponding supralabials. *S. pectinatus* can be distinguished from *S. azureus* by having notched and smooth ventrals and gulars (unnotched and strongly keeled in *S. azureus*). It can be distinguished from *S. doellojuradoi* by having a distinct antehumeral fold, and the mental usually in contact with the first pair of sublabials. In addition, *S. pectinatus* is unique among species of *Stenocercus* in having four instead of five phalanges in Finger IV, which makes this finger shorter than Finger III.

Description.—(1) Maximum SVL in males 69 mm ($n = 11$); (2) maximum SVL in females

66 mm ($n = 16$); (3) vertebrae 31–37; (4) paravertebrals 37–49; (5) scales around mid-body 33–46; (6) supraoculars 4–6; (7) internasals 4–5; (8) postrostrals 4–5; (9) loreals 1–3; (10) gulars 16–22; (11) subdigitals on Finger IV 7–12; (12) subdigitals on Toe IV 16–23; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral fold present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 52–59% of total length; (34) caudal whorls per autotomic segment two; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact mid-ventrally, Patterns 1B, 1C, 2C, 2D, and 3.

Color in life.—Dorsal background grayish brown and green; dorsum between dorsolateral crests with three longitudinal series of dark brown marks posteriorly bordered with white; dorsum of head with broad, brown interorbital bar, as well as brown occipitoparietal marks and one or two large brown patches on frontonasal region; ventral surfaces whitish cream; gular region in males with

bright-orange transverse band (Cei, 1986, 1993).

Natural History.—Among southwestern populations in Provincia Buenos Aires, Argentina, eggs are probably laid around December (Gallardo, 1970).

Distribution.—*Stenocercus pectinatus* occurs between 40°S–25°S in the Atlantic lowlands of Argentina marking the southern limit of the distribution of *Stenocercus* (Figs. 1, 11). This species is known from elevations of 0–1100 m in Provincias Buenos Aires, Córdoba, La Pampa, Patagonia, Río Negro, San Luis, and Santa Fe (Avila, 1999; Cardinale and Vignolo, 1996).

Stenocercus percultus Cadle

(Fig. 21)

Stenocercus percultus Cadle, 1991:18. Holotype: FMNH 232525, a male from “approximately 1–2 km (airline) NNW Monte Seco, along an acequia [irrigation ditch] running between El Chorro and La Montañita, 1350–1380 m, Río Zaña, Departamento Cajamarca, Perú”.

Diagnosis.—*Stenocercus percultus* is distinguished from other species of *Stenocercus* except *S. ornatus* and *S. rhodomelas* by having imbricate scales on the posterior surface of thighs, smooth ventrals, deep posthumeral and postfemoral mite pockets, and keeled dorsal head scales. Of these species, *S. percultus* is unique in having expanded haemal spines in the caudal vertebrae, protuberant and multicarinate dorsal head scales, and in lacking an interparietal cornea. In addition, only adult males of *S. rhodomelas* and *S. percultus* have the gular region extensively covered in black. However, the black patches on the ventral surfaces of hind limbs characteristic of *S. rhodomelas* adult males are absent in *S. percultus*.

Description.—(1) Maximum SVL in males 105 mm (Cadle, 1991); (2) maximum SVL in females 86 mm (Cadle, 1991); (3) vertebrals 35–50; (4) paravertebrals 62–77; (5) scales around midbody 50–65; (6) supraoculars 4–6; (7) internasals 2–4; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 20–28; (11) subdigitals on Finger IV 17–22; (12) subdigitals on Toe IV 24–32; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral

mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, multicarinate, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antehumeral fold present, other inconspicuous neck folds might be present (Cadle, 1991); (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail length 69–71% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males always present; (39) black patch on ventral surface of neck in adult males always present; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1A.

Color in life.—Dorsum brown with darker transverse marks (sometimes chevrons) longitudinally arranged over vertebral line; vertebral crest in males with a few yellow scales; flanks reddish with yellow flecks in males, and brown or yellowish brown in females; dorsum of head with black and yellow spots in males, and dark brown or black splotches in females; loreal and subocular regions yellow in females; pale yellow stripe from eye to dorsal aspect of tympanum, extending posteriorly as a faded dorsolateral stripe in females; supralabials dark brown in females and pale yellow bordered with black ventrally in males; infra-

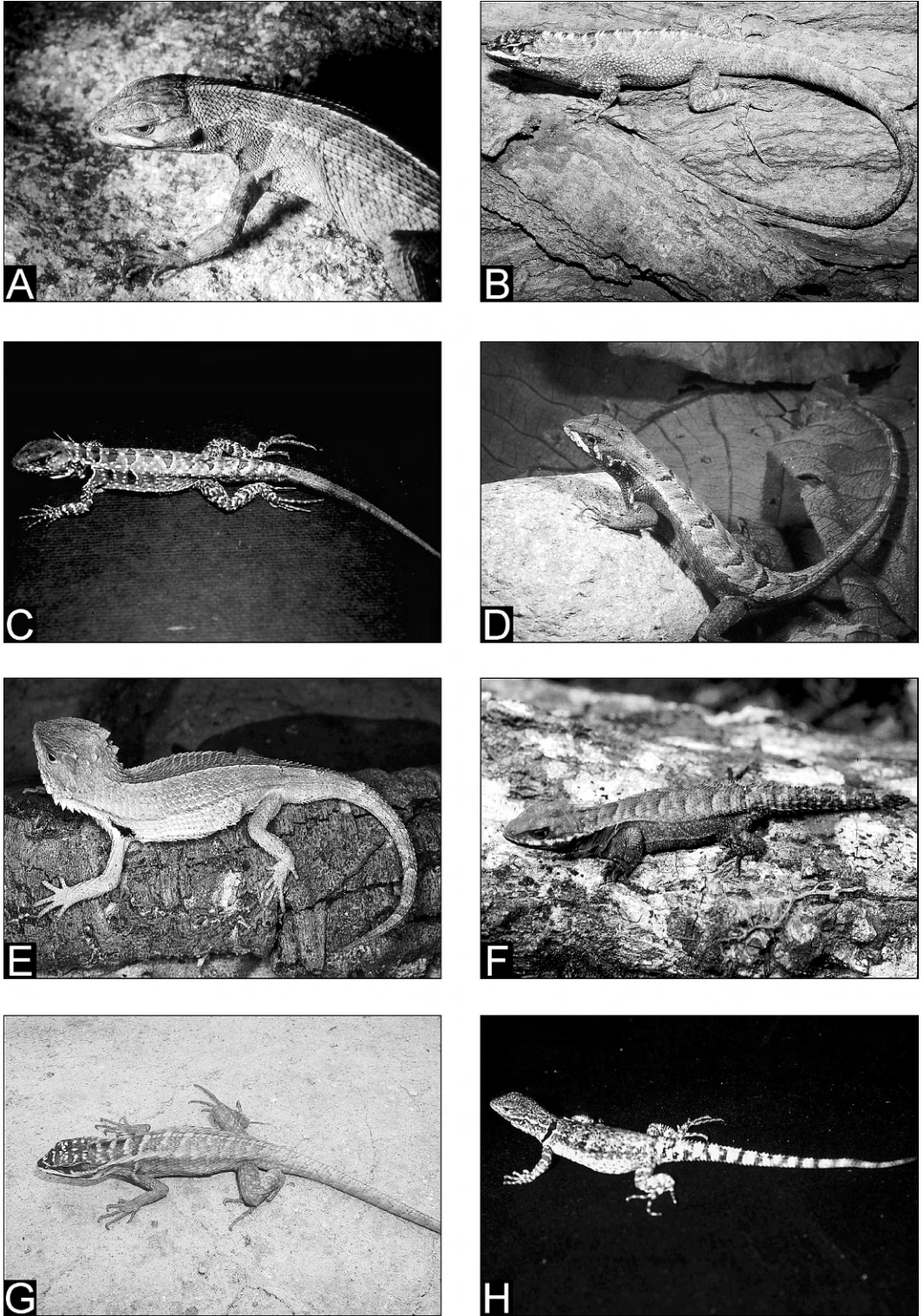


FIG. 21.—Eight species of *Stenocercus*. (A) *S. ornatus* (OTC); (B) *S. percultus* (MLU); (C) *S. praeornatus* (WED); (D) *S. puyango* (LAC); (E) *S. quinarius* (CNO); (F) *S. roseiventris* (WED); (G) *S. santander* (MPR); (H) *S. simonsii* (WED).

labials, chin, medial aspect of throat and gular regions, and anterior aspect of pectoral region black in males, with lateral aspect of throat and gular regions bright red; in males, pectoral region with yellow band posteriorly bordered by black bar that extends posteriorly as a midventral stripe in some specimens; belly reddish anteriorly and brown posteriorly in males; scales on throat, pectoral region, belly, and ventral surface of thighs and tail yellow edged with bright red in females; ventral aspect of tail yellow anteriorly, and lavender or brown posteriorly in males (Cadle, 1991).

Natural History.—Two gravid females (SVL 73 mm and 86 mm) collected in June 1987 deposited two eggs each; most specimens of *S. percultus* have been collected in cultivated areas or second-growth forest (Cadle, 1991).

Distribution.—*Stenocercus percultus* occurs between 7°S–5°S in the western Cordillera of the central Andes in northern Peru (Fig. 6). This species is known from the upper valleys of Río Zaña and Río Reque (Pacific drainage) in Departamentos Cajamarca and Piura at elevations of 800–1600 m (Cadle, 1991). This species occurs in sympatry with *S. imitator* and *S. chlorostictus* in both Departamentos.

Stenocercus praeornatus Fritts
(Fig. 21)

Stenocercus praeornatus Fritts, 1972:16. Holotype: KU 134231, a male from “Comas, 3220 m, Departamento Junín, Perú”; Fritts, 1974:62.

Diagnosis.—*Stenocercus praeornatus* and *S. imitator* are unique among species of *Stenocercus* with granular scales on the posterior surface of thighs in that adult males have a distinct black transverse band across the ventral surface of neck and a pink or lavender ventral background. *S. praeornatus* can be distinguished from *S. imitator* by having more vertebrales (65–71, $X = 67.83$ and 49–66, $X = 56.87$, respectively), more gulars (38–50, $X = 46.50$ and 29–44, $X = 34.98$, respectively), and more scales around midbody (99–122, $X = 107.67$ and 85–124, $X = 102.96$, respectively).

Description.—(1) Maximum SVL in males 100 mm (Cadle, 1991); (2) maximum SVL in

females 81 mm (Cadle, 1991); (3) vertebrales 65–71; (4) paravertebrales 90–101; (5) scales around midbody 99–122; (6) supraoculars 4–7; (7) internasals 4–5; (8) postrostrals 5–9; (9) loreals 3–5; (10) gulars 38–50; (11) subdigitals on Finger IV 19–22; (12) subdigitals on Toe IV 27–30; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, and postauricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrales larger than adjacent paravertebrales; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not strongly compressed laterally in adult males; (33) tail length 62–66% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males always present; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1A.

Color in life.—Dorsum in males grayish-brown with faint, dark brown, diamond-shaped marks; dorsum in females grayish beige with pairs of brown blotches middor-

sally; head brown with yellowish-beige spots in males; nape with diagonal yellow marks and spots in males; lateral aspect of body yellowish-brown with dull yellow spots in males; chin bluish-green with yellow spots in males, beige with brown spots or reticulations in females; gular region rose pink with gray reticulation in males; ventral aspect of neck black in males; venter grayish-white in females and rose pink with narrow, yellow midventral line in males; ventrally, base of tail yellowish-orange in males and thighs slightly yellow in females (Fritts, 1972).

Natural History.—This species has been collected in large rock piles and terraces made of rocks (Fritts, 1972, 1974).

Distribution.—*Stenocercus praeornatus* is known only from its type locality, 11°46'0"S, 75°5'0"W, 3220 m, in the eastern Cordillera of the central Andes in Peru (Fig. 10). This locality lies in the upper valley of Río Tulumayo (Atlantic drainage), Departamento Junín. Specimens of *S. praeornatus* reported from northwestern Peru by Fritts (1972, 1974) correspond to *S. imitator* (Cadle, 1991).

Stenocercus prionotus Cadle

Stenocercus prionotus Cadle, 1998:187. Holotype: USNM 193683, a male from "Jardín Botánico de la Universidad Agraria de La Selva, Tingo María, vicinity of Río Huallaga, 9°18'S, 75°59'W, 670 m, Departamento Huánuco, Perú".

Diagnosis.—Among species of *Stenocercus* with strongly keeled ventrals and laterally oriented nostrils, *S. prionotus* is similar to *S. aculeatus*, *S. angulifer*, *S. caducus*, *S. fimbriatus*, and *S. scapularis* in having a distinct posthumeral mite pocket. Of these species, only *S. caducus*, *S. fimbriatus*, and *S. prionotus* lack a postfemoral mite pocket. Furthermore, *S. prionotus* and *S. caducus* are unique in having an axillary flap covering the antehumeral mite pocket (Cadle, 2001). *S. prionotus* can be distinguished from *S. caducus* by having two projecting angulate temporals (projecting angulate temporals absent in *S. caducus*), and by having a more prominent vertebral crest.

Description.—(1) Maximum SVL in males 89 mm (Cadle, 2001); (2) maximum SVL in females 93 mm (Cadle, 2001); (3) vertebrales

27–39; (4) paravertebrals 42–54; (5) scales around midbody 36–48; (6) supraoculars 4–7; (7) internasals 5–8; (8) postrostrals 4–7; (9) loreals 3–5; (10) gulars 15–22; (11) subdigitals on Finger IV 16–21; (12) subdigitals on Toe IV 24–31; (13) posthumeral mite pocket present as a deep depression covered by an axillary flap; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled or multicarinate, juxtaposed or slightly imbricate; (17) two projecting angulate temporals; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrales much larger than adjacent paravertebrals; (26) dorsolateral crest absent (but see Cadle, 2001); (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 70–73% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region in 7% of adult males; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Patterns 6A and 7 (KU 212629 and KU 179058 misidentified by Torres-Carvajal [2004a] as *Stenocercus aculeatus* and *S. tricristatus*, respectively, correspond to *S. prionotus*.)

Color in life (males only).—Dorsum brown with white vertical line on shoulder; dorsum of

head with dark brown interorbital line; dark brown stripe extending anterodorsally from subocular region to supraciliaries; ventrolateral aspect of body between limbs lavender-brown; gular region streaked by light cream lines; midventral aspect of body between limbs tan brown (Cadle, 2001).

Natural History.—A female (KU 179058, SVL = 88 mm) collected in January 1969 in Departamento Huánuco contained two oviductal eggs. Sizes of these eggs are 26.65 mm × 12.49 mm and 27.97 mm × 12.34 mm; their volumes are 2176.8 mm³ and 2230.1 mm³, respectively. The smallest juvenile (USNM 247680) was collected in October 1983 and has a total length of 111 mm (SVL = 35, TL = 76). Most specimens of *S. prionotus* have been collected in open areas including disturbed habitats and light gaps within forests (Cadle, 2001).

Distribution.—*Stenocercus prionotus* occurs between 15°S–6°S in the eastern Cordillera and adjacent lowlands of the central Andes (Fig. 13). This species is known from Bolivia (Departamentos Beni and La Paz) and Peru (Departamentos Huánuco, Loreto, Madre de Dios, Puno, San Martín) at elevations of 176–1520 m (Cadle, 2001). *S. prionotus* is sympatric with *S. fimbriatus* (Peru: Loreto), *S. roseiventris* (Peru: Madre de Dios, Huánuco, Puno), and possibly *S. aculeatus* in northern Peru (Cadle, 2001).

Stenocercus puyango Torres-Carvajal
(Fig. 21)

Stenocercus puyango Torres-Carvajal, 2005a:

79. Holotype: QCAZ 6723, a male from “Puyango, 03°53’S, 80°04’W, 300 m, Provincia El Oro, Ecuador.”

Diagnosis.—*Stenocercus puyango* can be distinguished from other species of *Stenocercus* except *S. erythrogaster*, *S. huancabambae*, *S. iridescens*, *S. limitaris* and *S. santander* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. huancabambae*, *S. limitaris*, *S. puyango*, and *S. santander* have a postfemoral mite pocket. *S. puyango* is unique among these four species in having smooth dorsal head scales and smooth ventrals

(these scales are keeled in *S. huancabambae*, *S. limitaris*, and *S. santander*.)

Description.—(1) Maximum SVL in males 115 mm ($n = 19$); (2) maximum SVL in females 82 mm ($n = 16$); (3) vertebrals 42–50; (4) paravertebrals 43–53; (5) scales around midbody 30–45; (6) supraoculars 4–6; (7) internasals 2–3; (8) postrostrals four; (9) loreals 2–4; (10) gulars 18–22; (11) subdigitals on Finger IV 15–20; (12) subdigitals on Toe IV 22–27; (13) posthumeral mite pocket present as a shallow depression with a wide opening; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 97% of specimens; (16) scales on occipitoparietal region large, smooth, imbricate; (17) projecting angulate temporals absent; (18) enlarged supraoculars occupying most of supraocular region in one row; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals in adults smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail strongly compressed laterally in adult males; (33) tail length 68–73% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region in 50% of females; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in 72% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1B.

Color in life.—Dorsum brown with dark chevrons longitudinally arranged over verte-

bral line; cream vertical line on shoulder; cream line extending longitudinally from subocular region to level of insertion of fore limbs in females; subocular and loreal regions cream; posteroventrally oriented dark brown band on subocular region in some specimens; dorsum of head with dark brown interorbital bar; flanks of body with scattered red marks in males; gular region background rosy in males and brown in females; chin, gular region, and ventral and lateral aspects of neck with scattered red marks in males; black or dark red blotch on ventromedial aspect of neck in most males; throat bright yellow in males and cream, sometimes with an 8-shaped dark brown mark in females; ventral surface of body between pectoral and pelvic girdles lavender in males and cream in females, with a faint, narrow dark midventral line in both sexes; three large cream blotches on posterior surface of each thigh in females (Torres-Carvajal, 2005a).

Natural History.—A female laid two eggs in January 2004; after 96 days, a 0.7 g neonate (SVL = 26.7 mm, TL = 54.7 mm) hatched from one of the eggs (Torres-Carvajal, 2005a). Juveniles and females are more common in leaf litter, whereas adult males prefer exposed rocks and logs.

Distribution.—*Stenocercus puyango* occurs between 6°S–3°30'S in the Pacific lowlands and adjacent slopes of the western Cordilleras of the central and northern Andes (Fig. 19). This species is known from elevations of 90–1500 m in southern Ecuador (Provincias El Oro, Loja) and northern Peru (Departamentos Lambayeque, Piura, and Tumbes). *S. puyango* is sympatric with *S. limitaris* (Peru: Tumbes) and possibly *S. carrioni* in Ecuador (Torres-Carvajal, 2005a).

Stenocercus quinarius Nogueira
and Rodrigues
(Fig. 21)

Stenocercus quinarius Nogueira and Rodrigues, 2006:152. Holotype: MZUSP 94069, a male from “Parque Nacional Grande Sertão Veredas, 15°15'13"S, 45°53'20"W, municipality Formoso, Estado Minas Gerais, Brazil.”

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S.*

sinesaccus, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. Of these species, only *S. dumerilii*, *S. quinarius*, *S. squarrosus* and *S. tricristatus* have a pyramidal head, as well as enlarged, dorsally-projected posterior supraciliaries. Among other differences, *S. quinarius* can be distinguished from *S. dumerilii* and *S. tricristatus* (character states in parentheses) by having a shorter—50–52% of total length—tail (53–58% and 68%, respectively) and more—47–56, $X = 52$ —scales (41–50, $X = 45.30$, and 33, respectively) around midbody (Nogueira and Rodrigues, 2006). It differs from *S. squarrosus* mainly in having a longer tail (50–52% and 44–47% of total length, respectively) and inconspicuous longitudinal crests (dorsal, dorsolateral, and lateral crests prominent in *S. squarrosus*; Nogueira and Rodrigues, 2006).

Description.—(1) Maximum SVL in males 75 mm ($n = 4$); (2) maximum SVL in females 90 mm ($n = 5$); (3) vertebrae 24–30; (4) paravertebrals 36–46; (5) scales around midbody 47–56; (6) supraoculars in holotype four (Fig. 3 in Nogueira and Rodrigues, 2006); (7) internasals 3–5; (11) subdigitals on Finger IV 14–16; (12) subdigitals on Toe IV 16–19; (13) posthumeral mite pocket absent; (14) post-femoral mite pocket absent; (15) parietal eye visible through interparietal cornea; (16) scales on occipitoparietal region large, keeled, juxtaposed; (18) row of enlarged supraoculars occupying most of supraocular region absent; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (32) tail not compressed laterally in adult males; (33) tail length 50–52% of total length; (34) caudal autotomic segments absent; (35) caudals not spinose; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult

males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent.

Color in life.—Dorsum light brown; gular and ventral areas light cream; tail with dark flecks alternating with grey areas; black spot on shoulder (Nogueira and Rodrigues, 2006).

Distribution.—*Stenocercus quinarius* is known from Estados Bahia and Minas Gerais in Brazil at elevations between 800–1200 m (Fig. 13). It occurs in the Cerrado biome and is not known to occur in sympatry with other species of *Stenocercus* (Nogueira and Rodrigues, 2006).

Stenocercus rhodomelas (Boulenger)

Liocephalus rhodomelas Boulenger, 1899:455.

Syntypes: BM 1946.8.29.77–80, from “Oña [Provincia Azuay], Ecuador.”

Leiocephalus rhodomelas Burt and Burt, 1933:29.

Ophryossoides rhodomelas Etheridge, 1966: 88; Peters, 1967:28; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus rhodomelas Fritts, 1974:63; Torres-Carvajal, 2000:29.

Diagnosis.—*Stenocercus rhodomelas* is distinguished from other species of *Stenocercus* except *S. ornatus* and *S. percultus* by having imbricate scales on the posterior surface of thighs, smooth ventrals, deep posthumeral and postfemoral mite pockets, and keeled dorsal head scales. Of these species, *S. rhodomelas* is unique in lacking an antehumeral fold (weakly to moderately developed in *S. percultus* and *S. ornatus*). In addition, only adult males of *S. rhodomelas* and *S. percultus* have the gular region extensively covered in black. However, the black patches on the ventral surfaces of hind limbs characteristic of *S. rhodomelas* adult males are absent in *S. percultus*.

Description.—(1) Maximum SVL in males 93 mm ($n = 24$); (2) maximum SVL in females 73 mm ($n = 28$); (3) vertebrae 43–55; (4) paravertebrals 49–61; (5) scales around midbody 43–58; (6) supraoculars 3–6; (7) internasals 2–4; (8) postrostrals 3–6; (9) loreals 2–3; (10) gulars 17–21; (11) subdigitals on Finger

IV 14–21; (12) subdigitals on Toe IV 22–30; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, keeled or wrinkled, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth, imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail length 60–66% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males always present; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males always present; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 2A and 2B.

Color in life.—Dorsum dark brown with scattered pink, cream, or black scales and a black V-shaped mark between fore limbs; some vertebrae yellow in males; shoulder with black blotch; labials and rostral black in most specimens; gular region with large black patch in males and brown scattered flecks in females; throat pink and pectoral region with black patch extending posteriorly as a midventral stripe in males; ventral surfaces of pelvic region and hind limbs black in males; black ventral triangular mark pointing posteriorly on

base of tail in some males; ventral surface of tail pink proximally and cream distally in males (Torres-Carvajal, 2000).

Natural History.—Fritts (1974) observed this species on large rocks and on the ground at the base of cacti in xeric areas with sparse vegetation. I have seen this species on the ground near small shrubs.

Distribution.—*Stenocercus rhodomelas* occurs in southern Ecuador (northern Andes) between 3°30'S–3°S on the western slopes of the western Cordillera, as well as the Saraguro inter-Andean basin (Fig. 8). This species occupies the upper valley of Río Jubones (Pacific drainage) at elevations of 730–2100 m in Provincias Azuay and Loja. *S. rhodomelas* is sympatric with *S. simonsii* (Azuay) and possibly *S. festae* and *S. iridescens* (Fritts, 1974; Torres-Carvajal, 2000).

Stenocercus roseiventris Duméril and Bibron (Fig. 21)

Stenocercus rosei-ventris Duméril and Bibron, 1837:350. Holotype: MNHN 6879 from “Bolivia” (restricted to the slopes of the Irupana mountains, in the province of Yungas, toward the valley of Río de la Paz [Departamento La Paz], Bolivia, by d’Orbigny [1847]).

Steironotus (Stenocercus) rosei-ventris Fitzinger, 1843:71.

Stenocercus atrigularis Werner, 1913:11. Holotype: ZMH missing male specimen, probably destroyed during World War II (Hallerman, 1998:216), from “Provinz [Departamento] Beni, Bolivia”; Burt and Burt, 1933:42. Synonymy fide Etheridge in Peters and Donoso-Barros, 1970:257.

Stenocercus roseiventris Gray, 1845:219; Boulenger, 1885a:133; Koslowsky, 1898:170; Burt and Burt, 1931:288; Burt and Burt, 1933:43; Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974:63; Cei, 1993:309; Avila-Pires, 1995:159.

Diagnosis.—Among species of *Stenocercus* with imbricate scales on the posterior surface of thighs, *S. roseiventris* and *S. marmoratus* are unique in having caudal scales with strongly projected mucrons. *S. roseiventris* is distinguished from *S. marmoratus* (character states in parentheses) by having a conspicuous and continuous vertebral crest (low and

discontinuous), keeled and imbricate temporals (granular), lateral and dorsal body scales similar in size (laterals half the size of dorsals), ventrolateral fold inconspicuous or absent (distinct ventrolateral fold), 55–82 ($X = 69.80$) scales around midbody (44–59, $X = 52.00$), and a preauricular fringe (absent).

Description.—(1) Maximum SVL in males 99 mm ($n = 24$); (2) maximum SVL in females 96 mm ($n = 12$); (3) vertebrae 44–66; (4) paravertebrals 63–84; (5) scales around midbody 55–82; (6) supraoculars 5–7; (7) internasals 4–6; (8) postrostrals 4–7; (9) loreals 2–5; (10) gulars 24–32; (11) subdigitals on Finger IV 13–20; (12) subdigitals on Toe IV 17–24; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) post-femoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region smooth, weakly imbricate or juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed or weakly imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars rhomboidal, smooth, imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate, slightly keeled in some specimens; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 49–57% of total length; (34) caudal whorls per autotomic segment two; (35) caudals strongly spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapularies absent; (37) dark patch extensively covering gular region in 23% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult

males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 57% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 1A.

Color in life.—Dorsum greenish brown, bluish gray, or reddish brown with darker transverse bars or shallow chevrons; vertebral crest with cream and light green spots in some specimens; flanks reddish brown with yellowish-green spots; vertical black bar on antehumeral region bordered with yellow or white posteriorly; labials yellowish cream; gular region gray or white with brown and black spots; venter pink with faint, brown, longitudinal midventral line; tail gray dorsally and pinkish ventrally; iris reddish brown, gold towards periphery (Avila-Pires, 1995; Cei, 1993; d'Orbigny, 1847; Duellman, 2005).

Natural History.—A gravid female (SVL = 96 mm) collected in December 1991 contained two oviductal eggs (Duellman, 2005). Food items of *S. roseiventris* include ants, beetles (adults and larvae), dipterans, orthopterans, and roaches; this species was found in the stomach of the snake *Siphlophis cervinus* in Cusco Amazónico, Peru (Duellman, 2005).

Distribution.—*Stenocercus roseiventris* occurs in the western Amazon basin and eastern slopes of the central and southern Andes between 24°S–4°S (Fig. 11). This species is known at elevations of 37–2000 m in Argentina (Provincias Entre Ríos, Jujuy, and Salta), Bolivia (Departamentos Cochabamba and Santa Cruz), Brazil (Estado Acre), and Peru (Departamentos Ayacucho, Cusco, Huánuco, Loreto, Madre de Dios, and Puno). *S. roseiventris* is sympatric with *S. apurimacus* (Peru: Ayacucho), *S. caducus* (Bolivia: Santa Cruz), *S. fimbriatus* (Peru: Loreto, Madre de Dios), and *S. prionotus* (Peru: Madre de Dios, Huánuco, Puno).

Stenocercus santander Torres-Carvajal
(Fig. 21)

Stenocercus santander Torres-Carvajal, 2007b: 57. Holotype: UIS-R 478, a male from “Vereda Tres Esquinas, approximately 6°59'22"N, 73°3'13"W, Municipio Piede-

cuesta, Departamento Santander, Colombia.”

Stenocercus erythrogaster (part); Ayala, 1986:563; Cadle, 2001:217; Harvey et al., 2004:941.

Diagnosis.—*Stenocercus santander* can be distinguished from other species of *Stenocercus* except *S. erythrogaster*, *S. huancabambae*, *S. iridescens*, *S. limitaris*, and *S. puyango* by having imbricate scales on posterior aspect of thighs, nostrils medial to canthal ridge, and a longitudinal row of enlarged supraoculars occupying most of the supraocular region. Of these species, only *S. huancabambae*, *S. limitaris*, *S. puyango*, and *S. santander* have a postfemoral mite pocket. *S. santander* differs from *S. huancabambae* (character states in parenthesis) by lacking projected angulate temporals (2–3 dorsally-projected angulate temporals), and by having two canthals (canthal single). From *S. puyango* it differs by having keeled dorsal head scales and keeled ventrals (smooth in *S. puyango*). *S. santander* is different from *S. limitaris* in color patterns (e.g., males of *S. santander* lack a distinct black mark on the ventral surface of neck, which is characteristic of *S. limitaris*); moreover, males of *S. santander* have a more prominent vertebral crest.

Description.—(1) Maximum SVL in males 96 mm ($n = 7$); (2) maximum SVL in females 78 mm ($n = 2$); (3) vertebrals 33–40; (4) paravertebrals 45–57; (5) scales around midbody 37–47; (6) supraoculars 3–5; (7) internasals 3–4; (8) postrostrals 4–6; (9) loreals 2–3; (10) gulars 16–21; (11) subdigitals on Finger IV 15–19; (12) subdigitals on Toe IV 24–29; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 69% of specimens; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) enlarged supraoculars occupying most of supraocular region in one row; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body

scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail length 70–74% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to suprascapularies absent; (37) dark patch extensively covering gular region in 50% of females; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in 14% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males always present; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions ribs continuous midventrally, Pattern 6A.

Color in preservative.—Dorsum brown, dorsal aspect of head dark brown or black with large, light blotches in males (brown without marks in females); some vertebrae black in males; cream-white longitudinal stripe extends posteriorly from rostral through dorsal border of tympanum to scapular region, where it merges with a thin, vertical, cream-white line that extends ventrally to fore limb insertion; flanks brown; gular and ventral background light brown in males; venter yellowish cream in females; dark patch on ventral surface of neck in some males; black midventral stripe between pectoral and pelvic regions in some males; light transverse stripe extending across pectoral region between fore limbs in males, light (probably yellow in life) patch covering ventral surface of thighs, pelvic region, and base of tail in males.

Natural History.—An adult female collected on January 2003 contained four oviductal eggs; the smallest individual (SVL = 35, TL = 70) was collected on November 2003 (Torres-Carvajal, 2007b)

Distribution.—*Stenocercus santander* is known from the northern Andes in the eastern Cordillera in Colombia at elevations of 1189–1570 m (Fig. 16). This species is known from

Departamento Santander between 6°N–7°N, and might occur in sympatry with *S. lache* and *S. trachycephalus* (Fig. 16).

Stenocercus scapularis (Boulenger)

Liocephalus scapularis Boulenger, 1901:548.
Holotype: BMNH 1900.11.27.26 (RR 1946.8.12.37), a male from “Perené [Departamento Junín], 2600 ft, Peru.”

Liocephalus scapularis Burt and Burt, 1931:273; Burt and Burt, 1933:29.

Ophryoessoides scapularis Etheridge, 1966:89; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus scapularis Frost, 1992:43; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. Of these species, *S. scapularis* is unique in having posthumeral and postfemoral mite pockets (mite pockets absent in remaining species).

Description.—(1) Maximum SVL in males 92 mm ($n = 10$); (2) maximum SVL in females 92 mm (Cadle, 2001); (3) vertebrae 43–53; (4) paravertebrals 59–77; (5) scales around midbody 52–70; (6) supraoculars 3–5; (7) internasals 4–7; (8) postrostrals 4–7; (9) loreals 2–5; (10) gulars 19–27; (11) subdigitals on Finger IV 18–23; (12) subdigitals on Toe IV 25–30; (13) posthumeral mite pocket present as a deep depression; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small or large, wrinkled, juxtaposed; (17) projecting angulate temporals 3–4; (18) enlarged supraoculars occupying most of supraocular region in one row; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate,

mucronate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 67–72% of total length; (34) caudal autotomic segments absent; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Pattern 2B.

Color in preservative.—A series of dark chevrons longitudinally arranged over vertebral line; a white longitudinal line extending from dorsal border of tympanum to shoulder, where it curves downwards to reach behind insertion of fore limb; a ventrally expanded dark brown stripe across eye extending from subocular region to supraciliaries; a wide, dark interorbital bar in most females and juveniles; a pink tint on gular region and venter in some males.

Distribution.—*Stenocercus scapularis* is known from the central Andes in the eastern Cordillera of Peru between 1000–1800 m (Fig. 13). This species occurs in Departamentos Junín and Puno (14°S–10°S). *S. scapularis* is sympatric with *S. boettgeri*, *S. formosus*, and *S. torquatus* at María Teresa, 10°42'05"S, 75°27'22"W, 1470 m, Departamento Pasco (Torres-Carvajal et al., 2005).

Stenocercus simonsii Boulenger
(Fig. 21)

Stenocercus simonsii Boulenger, 1899:454. Syntypes: BM 1946.8.11.73–74, from “Oña, 6500 ft (= 1981.2 m), [Provincia Azuay] Ecuador”; Burt and Burt, 1933:44; Peters, 1967:35; Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974:64; Torres-Carvajal, 2000:31.

Diagnosis.—*Stenocercus simonsii* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. chlorostictus*, *S.*

crassicaudatus, *S. empetrus*, *S. eunetopsis*, and *S. torquatus* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, only *S. crassicaudatus*, *S. simonsii*, and *S. torquatus* have granular dorsal scales on neck (imbricate, and smooth or keeled in remaining species). *S. simonsii* differs from *S. crassicaudatus* (character states in parentheses) by having a distinct black antehumeral collar that is incomplete middorsally (collar absent or faint). It is distinguished from *S. crassicaudatus* and *S. torquatus* by having fewer scales (79–102, $X = 94.20$) around midbody (97–121, $X = 108.87$ in *S. crassicaudatus*; 102–137, $X = 116.96$ in *S. torquatus*), and fewer (59–98, $X = 73.75$) vertebrals (83–97, $X = 89.80$ in *S. crassicaudatus*; 83–115, $X = 98.86$ in *S. torquatus*).

Description.—(1) Maximum SVL in males 88 mm (Cadle, 1991); (2) maximum SVL in females 79 mm (Cadle, 1991); (3) vertebrals 59–98; (4) paravertebrals 94–118; (5) scales around midbody 79–102; (6) supraoculars 6–9; (7) internasals four; (8) postrostrals 5–7; (9) loreals 2–4; (10) gulars 36–57; (11) subdigitals on Finger IV 24–28; (12) subdigitals on Toe IV 28–37; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrals larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal

granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 57–63% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions ribs not in contact midventrally, Patterns 1A, 1B, and 2B.

Color in life.—Dorsum grayish-green, light gray, or greenish brown with black transverse blotches; antehumeral region with black vertical bar; white stripe from subocular region to shoulder in some specimens; limbs and tail with alternating black and white transverse bars in some specimens; chin and gular region pale yellowish green in males, with scattered brown or black spots in females; gular fold black interiorly in males; ventral surfaces of body, limbs, and base of tail orange-yellow in males, yellowish beige in females (Fritts, 1974; Torres-Carvajal, 2000).

Natural History.—This species is confined to rock piles and rock walls (Fritts, 1974).

Distribution.—*Stenocercus simonsii* is known from the northern Andes in the western Cordillera and Saraguro inter-Andean basin in southern Ecuador (Fig. 9). This species inhabits the upper valley of Río Jubones (Pacific drainage) at elevations of 1980–2500 m in Provincias Azuay and Loja (4°S–3°S). *S. simonsii* is sympatric with *S. festae* and *S. rhodomelas* in Azuay.

Stenocercus sinesaccus Torres-Carvajal

Stenocercus sinesaccus Torres-Carvajal, 2005c:

124. Holotype: BMNH 1903.3.26.7, a male from “Chapada [Chapada dos Guimarães, 15°26'S, 55°45'W, 690 m], Mato Grosso, Brazil.”

Stenocercus caducus (part) Cope, 1887:55; Etheridge, in Peters and Donoso-Barros,

1970:213; Cei, 1993:302. Synonymy fide Torres-Carvajal, 2005c:124.

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. *S. sinesaccus* differs from *S. dumerilii*, *S. quinarius*, *S. squarrosus* and *S. tricristatus* in lacking enlarged post-supraciliaries and a pyramidal head; *S. scapularis* differs from *S. sinesaccus* in having a distinct postfemoral mite pocket and projected supraciliaries. *S. sinesaccus* also resembles *S. caducus* and *S. prionotus*, from which it differs in lacking a posthumeral mite pocket; the latter two species have a deep posthumeral mite pocket covered by an axillary flap (Cadle, 2001; Torres-Carvajal, 2005c).

Description.—(1) Maximum SVL in males 73 mm ($n = 3$); (2) maximum SVL in females 81 mm ($n = 1$); (3) vertebrae 28–30; (4) paravertebrals 32–34; (5) scales around midbody 31–34; (6) supraoculars four; (7) internasals six; (8) postrostrals 4–5; (9) loreals three; (10) gulars 12–14; (11) subdigitals on Finger IV 13–16; (12) subdigitals on Toe IV 23–25; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region large, imbricate, strongly keeled; (17) projecting angulate temporals absent; (18) one row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region imbricate anteriorly; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals projected; (32) tail not compressed laterally in adult males; (33) tail length 70–73% of total length; (34) caudal fracture planes absent; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocu-

lar region to supraciliaries present; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs continuous midventrally, Pattern 6A.

Color in life.—Although data on color in life of *S. sinesaccus* are not available, preserved male specimens still retain an iridescent pink tint on the ventrolateral edges of the body between fore and hind limbs (Torres-Carvajal, 2005c).

Natural History.—Based on similarity in color patterns and morphology, Torres-Carvajal (2005c) suggested that *S. sinesaccus* might adopt the same defense behavior as *S. caducus*, which remains immobile while displaying its colorful (pink or purple) ventrolateral body edges and moving the snout downwards (Scrocchi et al., 1985).

Distribution.—*Stenocercus sinesaccus* is known from Estados Goiás, Mato Grosso, and Rondônia in western Brazil (Fig. 11). These localities lie mostly within the Cerrado Biome (savanna) east of the central Andes in Bolivia and west of the Araguaia basin.

Stenocercus squarrosus Nogueira
and Rodrigues

Stenocercus squarrosus Nogueira and Rodrigues, 2006:158. Holotype: MZUSP 94056, a male from “Chapada dos Gerais, Parque Nacional Serra das Confusões, 9°13'S, 43°29'W, Estado Piauí, Brazil.”

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. Of these species, only *S. dumerilii*, *S. quinarius*, *S. squarrosus* and *S. tricristatus* have a pyramidal head, as well as enlarged, dorsally-projected posterior supraciliaries. Among other differences, *S. squarrosus* can be distinguished from *S. dumerilii* and *S. tricristatus* (character states in parentheses) by having a shorter—44–47% of total length—

tail (53–58% and 68%, respectively) and more scales—46–53, $X = 49.50$ —around midbody (41–50, $X = 45.30$ and 33, respectively; Nogueira and Rodrigues, 2006). It differs from *S. quinarius* mainly in having a shorter tail (44–47% and 50–52% of total length, respectively) and prominent dorsal, dorsolateral, and lateral crests (corresponding crests inconspicuous in *S. quinarius*; Nogueira and Rodrigues, 2006).

Description.—(1) Maximum SVL in males 88 mm ($n = 6$); (2) maximum SVL in females 88 mm ($n = 6$); (3) vertebrales 22–27; (4) paravertebrals 35–45; (5) scales around midbody 46–53; (6) supraoculars in holotype 4–5 (Fig. 6 in Nogueira and Rodrigues, 2006); (7) internasals 3–5; (11) subdigitals on Finger IV 13–15; (12) subdigitals on Toe IV 16–20; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket absent; (15) parietal eye visible through interparietal cornea; (16) scales on occipitoparietal region large, keeled, juxtaposed; (18) row of enlarged supraoculars occupying most of supraocular region absent; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrales larger than adjacent paravertebrals; (26) dorsolateral crest present; (27) ventrals keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (32) tail not compressed laterally in adult males; (33) tail length 44–47% of total length; (34) caudal autotomic segments absent; (35) caudals not spinose; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent.

Color in life.—Dorsum tan; dark brown stripe extending anterodorsally from subocular region to supraciliaries; gular and ventral

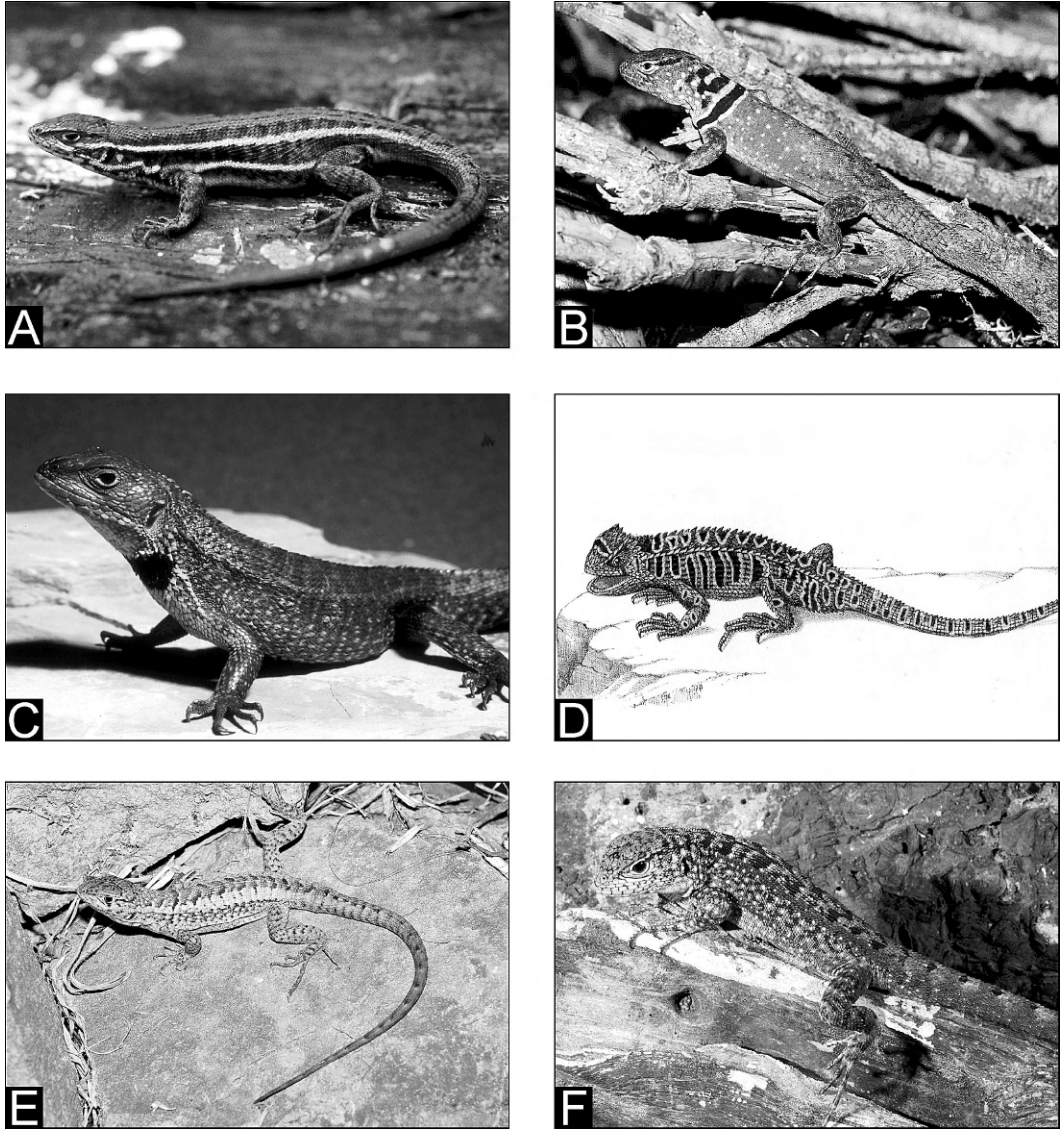


FIG. 22.—Six species of *Stenocercus*. (A) *S. stigmusus* (PVE); (B) *S. torquatus* (MLU); (C) *S. trachycephalus* (JMR); (D) *S. tricristatus* (illustration from plate XXII in Duméril, 1856); (E) *S. variabilis* (MLU); (F) *S. varius* (LAC).

areas light brown; tail with dark flecks; black spot on shoulder (Nogueira and Rodrigues, 2006).

Distribution.—*Stenocercus squarrosus* is only known from its type locality (9°13'S, 43°29'W) in Estado Piauí, Brazil (Fig. 13). This locality lies in a contact area between the Caatinga and Cerrado biomes (Nogueira and Rodrigues, 2006). This species is not known to

occur in sympatry with other species of *Stenocercus*.

Stenocercus stigmusus Cadle
(Fig. 22)

Stenocercus stigmusus Cadle, 1998:280. Holotype: MHNSM 10243, a male from “[forest at] El Pargo, 8 km by road (Llama to Huambos) N of La Colmena, then 3–

4 km NW by trail, 6°28'S, 79°3'W, 2950 m, Departamento Cajamarca, Peru."

Diagnosis.—*Stenocercus stigmatosus* is distinguished from all species of *Stenocercus* except *S. melanopygus* in having granular scales on the posterior surface of thighs, vertebral and paravertebrals of similar size (i.e., no vertebral crest), three caudal whorls per autotomic segment, and imbricate or subimbricate smooth scales on the lateral surface of neck that are approximately less than half the size of dorsal neck scales. *S. stigmatosus* differs from *S. melanopygus* (character states in parentheses) by having a posthumeral mite pocket in the form of one or more vertical folds or ridges (posthumeral mite pocket absent) and an oblique neck fold (oblique neck fold absent). In addition, adult males of *S. melanopygus* lack the ventral black spots characteristic of *S. stigmatosus*.

Description.—(1) Maximum SVL in males 68 mm (Cadle, 1998); (2) maximum SVL in females 61 mm (Cadle, 1998); (3) vertebrales 51–61; (4) paravertebrals 56–62; (5) scales around midbody 49–57; (6) supraoculars 4–5; (7) internasals 2–4; (8) postrostrals 4–5; (9) loreals 1–3; (10) gulars 19–27; (11) subdigitals on Finger IV 14–19; (12) subdigitals on Toe IV 24–29; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye always visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antehumeral, longitudinal, and oblique neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, notched; (24) lateral and dorsal body scales similar in size; (25) vertebrales and adjacent paravertebrals similar in size; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33)

tail length 64–67% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent.

Color in life.—Dorsum dark brown with one pair of pale tan and continuous (females), or bright yellow and discontinuous (males), dorsolateral stripes; in females, dorsolateral stripes bordered by reddish-brown stripes; dorsal aspect between neck and base of tail of males with pairs of blackish irregular marks well separated middorsally; sides of neck and flanks with yellow and dark brown flecks in males and pale tan flecks in females; subocular region and chin dull whitish; light stripe between mouth comisure and inguinal region in females; throat and gular region yellow in males and dull white in females, with dark brown spots in both sexes; belly bright green with dark brown spots in males and grayish tan in females (sometimes with light rosy or coppery sheen); ventral aspect of tail in males yellow proximally and green fading to brown posteriorly (Cadle, 1998).

Natural History.—Two hatchlings (28 and 24 mm SVL) of *S. stigmatosus* were collected on September 1991 at the type locality; this species has been observed near cloud forest areas including trail edges and cleared fields (Cadle, 1998).

Distribution.—*Stenocercus stigmatosus* occurs between 7°S–6°S in the western Cordillera of northern Peru, central Andes (Fig. 6). This species is known from Departamento Cajamarca at elevations of 2000–3100 m.

Stenocercus torquatus Boulenger
(Fig. 22)

Stenocercus torquatus Boulenger, 1885a:133.
Holotype: BMNH 61.5.22.4, a male from "Peru" (restricted to María Teresa, 19 km on road Oxapampa-Llaupui, 10°42'05"S,

75°27'22"W, 1470 m, Departamento Pasco, Peru by Torres-Carvajal et al. [2005]; Torres-Carvajal et al., 2005.

Stenocercus crassicaudatus (part) Burt and Burt, 1931:287; Etheridge, in Peters and Donoso-Barros, 1970; Fritts, 1974:45. Synonymy fide Burt and Burt, 1930:22.

Diagnosis.—*Stenocercus torquatus* differs from all other species of *Stenocercus* except *S. bolivarensis*, *S. carrioni*, *S. chlorostictus*, *S. crassicaudatus*, *S. empetrus*, *S. eunetopsis*, and *S. simonsii* in having granular scales on the posterior surface of thighs, two caudal whorls per autotomic segment, mucronate caudal scales, and a distinct longitudinal row of enlarged vertebral scales. Of these species, only *S. crassicaudatus*, *S. simonsii*, and *S. torquatus* have granular dorsal scales on neck (imbricate, and smooth or keeled in remaining species). *S. torquatus* is distinguished from *S. crassicaudatus* and *S. simonsii* by having a black antehumeral collar complete middorsally in adult males, subadult females, and juveniles, as well as two black transverse bands anterior to the antehumeral collar and the ability to change colors between emerald green and dark brown or gray. An antehumeral collar also is present in all species mentioned above except *S. crassicaudatus*; however, in those species the collar is usually incomplete middorsally. Additionally, two black transverse bands anterior to the antehumeral collar have been reported in *S. eunetopsis* (Cadle, 1991), but they are not as distinct as in *S. torquatus*.

Description.—(1) Maximum total length in males 84 mm ($n = 27$); (2) maximum total length in females 74 mm ($n = 16$); (3) vertebrae 83–115; (4) paravertebrals 103–151; (5) scales around midbody 102–137; (6) supraoculars 6–8; (7) internasals 4–6; (8) postrostrals 6–8; (9) loreals 2–5; (10) gulars 47–67; (11) subdigitals on Finger IV 22–29; (12) subdigitals on Toe IV 26–32; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of su-

praocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales closer to vertebral line; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 47–54% of total length; (34) caudal whorls per autotomic segment two; (35) caudals spinose; (36) dark stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) black patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally (AMNH 23132, 23143–44, 23146 and MCZ 29303, 45882, misidentified as *S. crassicaudatus* in Torres-Carvajal [2004a], correspond to *S. torquatus*.)

Color in life.—Dorsum emerald green, dark brown, or gray with yellow, black, or white scattered spots in some specimens; upper and lower eyelids light yellow in some specimens; black longitudinal stripe extending posterodorsally from preocular region to anterodorsal aspect of neck; black antehumeral collar in males bordered with yellow bands anteriorly and posteriorly; two short, black transverse bands anterior to antehumeral collar; ventral surface of body cream or light grey; pectoral and gular regions yellowish grey with light spots laterally in males; preanal region purple in some males and white in some females; tail gray, purple, or green. The dark antehumeral

collar and short transverse bands anterior to it are present in juveniles of both sexes; they are retained in adult males, whereas females seem to gradually lose them with age. Both sexes of *S. torquatus* have the ability to change their dorsal background color from emerald green to dark brown or grey (Torres-Carvajal et al., 2005).

Natural History.—Clutch size in *S. torquatus* is two eggs; the smallest individual was collected on July 2004 and had a total length of 71 mm (SVL = 35 mm, TL = 36 mm). This species is arboreal, with individuals collected at 1–4 m on tree trunks or seen at higher distances. Color change has been observed immediately after capture suggesting that it occurs as a response to stressful situations. The green coloration blends into the color of the mosses and ferns where this species has been found, whereas the dark coloration might provide camouflage against dark backgrounds.

Distribution.—*Stenocercus torquatus* is known from the central Andes (12°S–10°S) in the eastern Cordillera of Peru (Fig. 10). This species occurs in Departamentos Junín and Pasco at elevations between 800–1800 m. *S. torquatus* is sympatric with *S. boettgeri*, *S. formosus*, and *S. scapularis* at María Teresa, 10°42'05"S, 75°27'22"W, 1470 m, Departamento Pasco (Torres-Carvajal et al., 2005). *S. variabilis* occurs allopatrically at higher elevations (>2500 m) in Departamento Junín (Fritts, 1974).

Stenocercus trachycephalus (Duméril)
(Fig. 22)

Holotropis trachycephalus Duméril, in Duméril and Duméril, 1851:70. Syntypes: MNHN 1787 (2), 2393 (2), 2394 (2) from “Nouvelle-Grenade, et en particulier Santa-Fé de Bogota [Departamento Cundinamarca, Colombia]”; Duméril, 1856:539.

Liocephalus trachycephalus Boulenger, 1885a: 169.

Leiocephalus ornatus trachycephalus Burt and Burt, 1930:12; Burt and Burt, 1931:272; Burt and Burt, 1933:28; Burt and Myers, 1942:303.

Ophryossoides trachycephalus Etheridge, 1966:89; Etheridge, in Peters and Donoso-Barros, 1970:214.

Stenocercus trachycephalus Fritts, 1974:65; Ayala, 1986:563; Frost, 1992:43.

Diagnosis.—*Stenocercus trachycephalus* is distinguished from other species of *Stenocercus* except *S. lache* by having imbricate scales on the posterior surface of thighs, a well-developed postfemoral mite pocket, and by lacking an antehumeral mite pocket and neck folds. It differs from *S. lache* (character states in parentheses) by having weakly to moderately keeled ventrals (smooth), a strongly laterally compressed tail in adult males (weakly compressed), fewer (43–67, $X = 52.54$) scales around midbody (61–74, $X = 67.03$), and by lacking postxiphisternal ribs in contact medially (postxiphisternal inscriptional ribs continuous medially). In addition, the black ventral nuchal patch in adult males of *S. lache* is usually continuous with the black midventral patch; these patches are not in contact in *S. trachycephalus*.

Description.—(1) Maximum SVL in males 89 mm ($n = 44$); (2) maximum SVL in females 79 mm ($n = 31$); (3) vertebrae 34–53; (4) paravertebrals 45–64; (5) scales around midbody 43–67; (6) supraoculars 3–6; (7) internasals 2–5; (8) postrostrals 4–7; (9) loreals 2–4; (10) gulars 18–29; (11) subdigitals on Finger IV 15–20; (12) subdigitals on Toe IV 21–31; (13) posthumeral mite pocket absent; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye visible through interparietal cornea in 77% of specimens; (16) scales on occipitoparietal region small, keeled, imbricate; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth or slightly keeled, imbricate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (31) preanals not projected; (32) tail strongly compressed laterally in adult males; (33) tail

length 60–71% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region in 26% of females; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in 91% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 89% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional ribs not in contact midventrally, Patterns 1A and 2A.

Color in life.—Dorsum dark brown, emerald green, or olive-green, with scattered yellow spots that form transverse lines in some males, and with a series of dark transverse marks longitudinally arranged over vertebral line in some specimens; light dorso-lateral stripe between eye and base of tail in some specimens; dorsum of head uniform dark brown or dark olive-green; vertical yellow line on shoulder in some specimens; flanks and dorsal aspect of limbs with scattered yellow spots in some specimens; ventral surface of body between fore and hind limbs orange in adult males (usually with wide black midventral patch), and cream or yellowish cream in females; gular region light blue or yellow in males and cream or yellowish cream in females; ventral surface of neck in most males with wide, black transverse band, sometimes bordered with yellow posteriorly; black ventral nuchal patch not in contact with black midventral patch.

Natural History.—Clutch size in *S. trachycephalus* is two eggs, with an incubation time of approximately six months (Osorno, 1938). A female (ICN 2853) contained two oviductal eggs of 16.62 mm × 8.72 mm and 16.75 mm × 9.34 mm. Volume of these eggs was 661.7 mm³ and 765.1 mm³, respectively. The diet of this species includes flies, bumblebees, other insects, and earthworms; this species is known to bury itself and remain underground for several weeks (Osorno, 1938).

Distribution.—*Stenocercus trachycephalus* is known from the northern Andes (4°N–6°N) in the eastern Cordillera of Colombia

(Fig. 16). This species occurs at elevations between 1749–3800 m in Departamentos Boyacá, Caldas, Cundinamarca, Norte de Santander, and Santander. *S. trachycephalus* might occur in sympatry with *S. lache* and *S. santander* (Fig. 16).

Stenocercus tricristatus (Duméril)
(Fig. 22)

Ophryoessoides tricristatus Duméril, in Duméril and Duméril, 1851:66. Holotype: MNHN 6825, a male from “Brésil [Brazil]”; Duméril, 1856:531; Etheridge, 1966:89; Etheridge, in Peters and Donoso-Barros, 1970:215.

Liocephalus tricristatus Boulenger, 1885a: 170.

Liocephalus tricristatus Amaral, 1937:178; Burt and Burt, 1933:29.

Stenocercus tricristatus Frost, 1992:43; Cadle, 2001:184.

Diagnosis.—Among species of *Stenocercus*, *S. dumerilii*, *S. quinarius*, *S. scapularis*, *S. sinesaccus*, *S. squarrosus*, and *S. tricristatus* are unique in lacking caudal fracture planes. Of these species, only *S. dumerilii*, *S. quinarius*, *S. squarrosus*, and *S. tricristatus* have a pyramidal head, as well as enlarged, dorsally-projected posterior supraciliaries. *S. tricristatus* can be distinguished from *S. dumerilii* (character states in parentheses) by having blunt posterior supraciliaries (posterior supraciliaries distinctly pointed), tibia shorter than thigh (tibia about as long as thigh), 33 scales around midbody (41–50), and by lacking enlarged scales above tympanum (two enlarged scales above tympanum). From *S. quinarius* and *S. squarrosus* (character states in parentheses) it can be distinguished by having a longer—63% of total length—tail (50–52% and 44–47%, respectively), 33 scales around midbody (47–56 and 46–53, respectively), and three longitudinal crests including one vertebral and two dorsolateral (five including one vertebral, two dorsolateral, and two lateral). In addition, males of *S. tricristatus* are unique in having large brown marks, bordered with yellow, vertically arranged on flanks (Fig. 22).

Description.—(1) Maximum SVL in males 60 mm ($n = 1$); (3) vertebrae 22; (4) paravertebrals 28; (5) scales around midbody

33; (11) subdigitals on Finger IV 16; (12) subdigitals on Toe IV 19; (13) posthumeral pocket absent; (14) postfemoral pocket absent; (16) scales on occipitoparietal region large, keeled or wrinkled, juxtaposed; (18) row of enlarged supraoculars occupying most of supraocular region absent; (20) preauricular fringe inconspicuous or absent; (21) neck folds absent; (22) lateral and dorsal nuchals similar in size; (23) posterior gulars rhomboidal, projected posteriorly, strongly keeled and imbricate, not notched; (24) lateral and dorsal body scales similar in size; (25) vertebrae larger than adjacent paravertebrae; (26) dorsolateral crest present; (27) ventrals keeled, imbricate, mucronate; (28) scales on posterior surfaces of thighs keeled, imbricate; (29) inguinal granular pocket absent; (30) inguinal groove absent; (32) tail not compressed laterally; (33) tail length 63% of total length; (34) caudal autotomic segments absent; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries present; (38) dark patch extensively covering gular region in adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptional rib articulation type unknown (KU 179058 identified as *Stenocercus tricristatus* in Torres-Carvajal [2004a] corresponds to *S. prionotus*.)

Color in life.—Dorsum brown with transverse dark brown marks that have a yellowish-white border; similar marks with black borders arranged vertically on flanks; triangular, dark brown interorbital mark with yellowish-white border; tail with dark brown transverse rings with yellowish-white margins; venter light brown (Duméril, 1856 [color plate]; Duméril and Duméril, 1851).

Distribution.—*Stenocercus tricristatus* was described from Brazil without specific locality data and no further collections of this species have been reported. However, there is evidence (Ávila-Pires, 1995) suggesting that the holotype of *S. tricristatus* was collected in Minas Gerais (Fig. 13).

Stenocercus variabilis Boulenger
(Fig. 22)

Stenocercus variabilis Boulenger, 1901:546. Syntypes: BMNH 1946.8.11.89–91, from “Palca, 1000 ft., Bolivia” (restricted to Palca [2875 m], Departamento Junín, Peru by Fritts [1974:65]); Fritts (part), 1974:65; Etheridge, in Peters and Donoso-Barros, 1970:257.

Stenocercus juninensis Shreve, 1941:75. Holotype: MCZ 45820, from “Huasqui [3822 m], near Tarma, Departamento Junín, Peru.” Synonymy fide Fritts, 1974:65.

Diagnosis.—*Stenocercus variabilis* is distinguished from all species of *Stenocercus* except *S. frittsi* in having granular scales on the posterior surface of thighs, imbricate and keeled lateral body scales, a distinct row of enlarged vertebral scales, unnotched gular scales, three caudal whorls per autotomic segment, gray or brown dorsal ground color, and distinct neck folds, of which the antegular fold is not continuous medially. The main difference between *S. variabilis* and *S. frittsi* is that the former species has a deep postfemoral mite pocket (absent in *S. frittsi*). In addition, *S. variabilis* is larger than *S. frittsi* (maximum SVL = 94 mm and 79 mm in males, 76 mm and 66 mm in females, respectively), and it has on average more scales around the midbody (61–86, \bar{X} = 71.29 and 60–76, \bar{X} = 65.14), as well as more gulars (26–33, \bar{X} = 28.29 and 20–28, \bar{X} = 22.63), paravertebrae (70–81, \bar{X} = 75.71 and 59–90, \bar{X} = 70.16), and subdigitals on Toe IV (26–35, \bar{X} = 30.00 and 24–29, \bar{X} = 26.98).

Description.—(1) Maximum SVL in males 94 mm (n = 15); (2) maximum SVL in females 76 mm (n = 4); (3) vertebrae 50–60; (4) paravertebrae 70–81; (5) scales around midbody 61–86; (6) supraoculars 5–7; (7) internasals 3–4; (8) postrostrals six; (9) loreals 2–4; (10) gulars 26–33; (11) subdigitals on Finger IV 19–24; (12) subdigitals on Toe IV 26–35; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of

supraocular region absent; (19) scales on frontonasal region weakly imbricate anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars rhomboidal, smooth or slightly keeled, imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 60–67% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in 9% of adult males; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in 9% of adult males; (41) dark patches on ventral surface of thighs in adult males absent; (42) pattern of postxiphisternal inscriptional rib attachment unknown (specimens identified as *S. variabilis* in Torres-Carvajal [2004a] correspond to *S. frittsi*).

Color in preservative of syntypes.—Dorsal ground color green with white spots laterally, or gray with black spots dorsally or laterally; venter whitish; throat marbled with olive; one specimen [BMNH 1946.8.11.89] with a black bar across scapular region and black throat and belly (Boulenger, 1901).

Color in life.—Dorsum brown with light tan dorsolateral area in some females; middorsal irregular dark brown transverse bands extending onto base of tail in females; flanks variegated pale blue and pale medium brown with small clusters of black scales in some males; head medium brown with whitish spots in males; chin grayish white with pale blue reticulations in males; ventral surface of body

light gray anteriorly and yellow posteriorly in females, and whitish beige with a pale yellow midventral stripe in males; iris bronze (Torres-Carvajal, 2005b).

Distribution.—*Stenocercus variabilis* occurs in the central Andes (12°S–11°S) on the eastern Cordillera of Peru (Fig. 12). This species is known from the upper valley of Río Perene (Atlantic drainage) in Departamento Junín at elevations between 1557–3822 m. Although no other species of *Stenocercus* is known to occur in sympatry with *S. variabilis*, there are other species—*S. boettgeri*, *S. formosus*, *S. praeornatus*, *S. scapularis*, and *S. torquatus*—inhabiting adjacent areas in the upper valleys of Río Perene (Torres-Carvajal, 2005b).

Stenocercus varius Boulenger
(Fig. 22)

Stenocercus varius Boulenger, 1885a:134. Holotype: BM 71.4.16.53, male, “unknown locality” (restricted to Tandapi, 1460 m, Provincia Pichincha, Ecuador, by Fritts [1974]); Burt and Burt, 1931:288; Burt and Burt, 1933:44; Peters, 1967:35; Etheridge, in Peters and Donoso-Barros, 1970:257; Fritts, 1974:67; Torres-Carvajal, 2000:31.

Diagnosis.—*Stenocercus varius* is distinguished from other species of *Stenocercus* except *S. boettgeri*, *S. haenschi*, and *S. humeralis* by having granular scales on the posterior surface of thighs, enlarged vertebrae, three caudal whorls per autotomic segment, a medially complete antegular fold, non-spinose caudals, and by males lacking a black transverse band on the ventral surface of neck. *S. varius* differs from these species (character states in parentheses) by having 74–88 ($X = 82.35$) scales around midbody (79–104, $X = 88.61$ in *S. boettgeri*; 57–64, $X = 60.50$ in *S. haenschi*; 98–125, $X = 110.05$ in *S. humeralis*), 60–85 ($X = 69.53$) vertebrae (64–93, $X = 76.86$ in *S. boettgeri*; 50 in *S. haenschi*; 81–112, $X = 92.21$ in *S. humeralis*). *S. varius* is morphologically more similar to *S. boettgeri*; however, both males and females of *S. boettgeri* get larger (maximum SVL = 108 and 94 mm, respectively) than *S. varius* (maximum SVL = 85 in both sexes).

Description.—(1) Maximum SVL in males 85 mm ($n = 16$); (2) maximum SVL in females

85 mm ($n = 16$); (3) vertebrae 60–85; (4) paravertebrals 76–104; (5) scales around midbody 74–88; (6) supraoculars 4–7; (7) internasals 3–5; (8) postrostrals 5–7; (9) loreals 2–4; (10) gulars 39–60; (11) subdigitals on Finger IV 24–28; (12) subdigitals on Toe IV 27–34; (13) posthumeral mite pocket present as one or more vertical folds or ridges; (14) postfemoral mite pocket distinct with slit-like opening; (15) parietal eye not visible through interparietal cornea; (16) scales on occipitoparietal region small, smooth, juxtaposed; (17) projecting angulate temporals absent; (18) row of enlarged supraoculars occupying most of supraocular region absent; (19) scales on frontonasal region juxtaposed anteriorly; (20) preauricular fringe present; (21) antegular (continuous medially), antehumeral, gular, longitudinal, oblique, postauricular, and supra-auricular neck folds present; (22) lateral nuchals less than half the size of dorsal nuchals; (23) posterior gulars cycloid, smooth, slightly imbricate, not notched; (24) lateral scales reduced in size, approximately half the size of dorsal body scales; (25) vertebrae larger than adjacent paravertebrals; (26) dorsolateral crest absent; (27) ventrals smooth, imbricate; (28) scales on posterior surfaces of thighs granular; (29) inguinal granular pocket present; (30) inguinal groove present; (31) preanals not projected; (32) tail not compressed laterally in adult males; (33) tail length 60–66% of total length; (34) caudal whorls per autotomic segment three; (35) caudals not spinose; (36) dark brown stripe extending anterodorsally from subocular region to supraciliaries absent; (37) dark patch extensively covering gular region of females absent; (38) dark patch extensively covering gular region of adult males absent; (39) black patch on ventral surface of neck in adult males absent; (40) dark midventral longitudinal mark such as faint line, conspicuous stripe, or extensive patch in adult males absent; (41) dark patches on ventral surface of thighs in adult males absent; (42) postxiphisternal inscriptions not in contact midventrally, Patterns 1A, 2A, 2B, and 2C.

Color in life.—Dorsum olive-green or light green with scattered yellowish-green spots and dark brown transverse marks longitudinally arranged over vertebral line in some

specimens; large, rhomboidal, black mark on shoulder in some males; dorsal surface of head with black and brown marks; gular and pectoral regions yellow; venter yellowish cream; iris bronze (Torres-Carvajal, 2000).

Natural History.—An adult female collected in October 1995 contained two oviductal eggs; the smallest individual was collected in May 1988 and had a total length of 134 mm (SVL = 45 mm, TL = 89 mm). A temperature of 34.2 C was recorded from a single female specimen (Torres-Carvajal, 2000). Fritts (1974) observed this species on tree trunks, fallen logs, and rocks.

Distribution.—*Stenocercus varius* occurs in the western Cordillera of Ecuador (northern Andes) between 1°S–1°N (Fig. 8). This species is known from the upper valleys of Río Blanco and Río Toachi (Pacific drainage) in Provincias Cotopaxi and Pichincha at elevations of 1460–2200 m.

KEY TO THE SPECIES OF *STENOCERCUS*

1. Scales on posterior surface of thighs granular..... 2
Scales on posterior surface of thighs flat, smooth or keeled, imbricate..... 28
2. Vertebral scales similar in size to adjacent paravertebral scales..... 3
Some or all vertebral scales larger than adjacent paravertebral scales, forming distinct middorsal row..... 13
3. Caudal whorls per autotomic segment two; caudal scales moderately to strongly mucronate.. 4
Caudal whorls per autotomic segment three; caudal scales not mucronate..... 6
4. Caudal scales strongly spinose..... *S. eunetopsis*
Caudal scales mucronate but not strongly spinose..... 5
5. Scales around midbody 51–66; tail length 59–67% of total length..... *S. cupreus*
Scales around midbody 85–111; tail length 0.53–0.61 of total length..... *S. empetrus*
6. Mite pocket underneath oblique neck fold deep.. 7
If present, mite pocket underneath oblique neck fold shallow..... 8
7. Lateral and dorsal nuchals similar in size; venter of adult males generally uniform in color..... *S. latebrosus*
Lateral nuchals less than half the size of dorsal nuchals; venter of adult males with scattered black dots..... *S. ornatissimus*
8. Lateral nuchals similar in size to dorsal nuchals..... *S. ivitus*
Lateral nuchals less than half the size of dorsal nuchals..... 9

9. Dorsal head scales prominently keeled
S. orientalis 10
 Dorsal head scales smooth 10
10. Scales around midbody fewer than 40; tail length at least 70% of total length *S. modestus*
 Scales around midbody more than 40; tail length less than 70% of total length 11
11. Oblique neck fold absent; posthumeral mite pocket absent *S. melanopygus*
 Oblique neck fold present; posthumeral mite pocket present as one or more vertical folds or ridges 12
12. Antehumeral fold weakly developed; mite pockets underneath oblique and antehumeral neck folds absent; males with distinct black spots on venter *S. stigmosus*
 Antehumeral fold strongly developed; distinct mite pockets underneath oblique and antehumeral neck folds; ventral color pattern in males variable, but never with distinct black spots *S. chrysopygus*
13. Caudal whorls per autotomic segment two 14
 Caudal whorls per autotomic segment three 20
14. Dorsal scales on neck and body keeled and imbricate 15
 Dorsal scales on neck and body granular 17
15. Adult males with black vertical bar anterior to each fore limb, sometimes forming antehumeral collar 16
 Adult males lack antehumeral collar, scales around midbody 66–96 *S. carrioni*
16. Scales on flanks granular; scales around midbody 80–110 *S. chlorostictus*
 Scales on flanks keeled and imbricate; scales around midbody 67–82 *S. bolivarensis*
17. Lateral nuchal scales less than half the size of dorsal nuchal scales *S. empetrus*
 Lateral and dorsal nuchal scales similar in size 18
18. Scales around midbody 79–102 *S. simonsii*
 Scales around midbody generally more than 100 19
19. Adult males with complete black antehumeral collar followed anteriorly by two black transverse bars on the neck; caudal scales strongly spinose; tail length 47–54% of total length *S. torquatus*
 Color pattern in adult males not as described above; caudal scales moderately spinose; tail length 57–62% of total length *S. crassicaudatus*
20. Antegular folds usually meet ventromedially forming continuous transverse fold 21
 If present, antegular folds never meet ventromedially 26
21. Adult males with black transverse band on ventral surface of neck and lavender ventral background 22
 Color pattern in adult males not as described above 23
22. Vertebrae fewer than 65 *S. imitator*
 Vertebrae more than 65 *S. praeornatus*
23. Scales around midbody fewer than 65; scales on temporal region and flanks distinctly keeled and imbricate *S. haenschi*
- Scales around midbody more than 65; scales on temporal region and flanks granular, or smooth or slightly keeled and imbricate 24
24. Lateral and dorsal nuchal scales granular and similar in size *S. humeralis*
 Lateral nuchal scales granular, less than half the size of keeled and subimbricate dorsal nuchal scales 25
25. Scales around midbody 74–88; black patch on shoulder in some males *S. varius*
 Scales around midbody 79–104; black patch on shoulder in males absent *S. boettgeri*
26. Lateral and dorsal body scales similar in size; generally more than 90 scales around midbody *S. nubicola*
 Lateral body scales reduced in size, approximately half the size of dorsal scales; generally fewer than 90 scales around midbody 27
27. Postfemoral mite pocket deep *S. variabilis*
 Postfemoral mite pocket absent *S. frittii*
28. Caudal fracture planes present 29
 Caudal fracture planes absent 57
29. Caudal whorls per autotomic segment two 30
 Caudal whorls per autotomic segment three or four 34
30. Caudal scales strongly spinose; preanals not projected 31
 Caudal scales not spinose; preanals posteriorly projected, forming denticulate border 32
31. Vertebral crest conspicuous and continuous; lateral body scales approximately half the size of dorsal scales *S. roseiventris*
 Vertebral crest low and discontinuous; lateral and dorsal body scales similar in size *S. marmoratus*
32. Ventral scales strongly keeled *S. azureus*
 Ventral scales smooth 33
33. Antehumeral fold present; four phalanges in Finger IV *S. pectinatus*
 Antehumeral fold absent; five phalanges in Finger IV *S. doellojuradoi*
34. Caudal whorls per autotomic segment three 35
 Caudal whorls per autotomic segment four *S. formosus*
35. Nostrils lateral to canthal ridge 36
 Nostrils medial to canthal ridge 40
36. Postfemoral mite pocket present 37
 Postfemoral mite pocket absent 38
37. Postfemoral pocket deep; tail in adult males slightly compressed *S. aculeatus*
 Postfemoral pocket shallow; tail in adult males strongly compressed laterally *S. angulifer*
38. Posthumeral mite pocket covered by axillary flap; scales on dorsal aspect of thigh not projected 39
 Posthumeral mite pocket not covered by axillary flap; dorsal aspect of thigh with one row of enlarged, projecting scales *S. fimbriatus*
39. Two projecting angulate temporals; vertebral crest strongly projected *S. prionotus*
 Angulate temporals not projected; vertebral crest less projected *S. caducus*

40. Longitudinal row of enlarged supraoculars occupying most of the supraocular region 41
 Longitudinal row of enlarged supraoculars occupying most of the supraocular region absent 46
41. Postfemoral mite pocket present 42
 Postfemoral mite pocket absent 45
42. Two or three dorsally-projected angulate temporals; one canthal *S. huancabambae*
 Angulate temporals not projected; two canthals 43
43. Dorsal head scales smooth; ventral scales smooth and imbricate *S. puyango*
 Dorsal head scales keeled; ventral scales keeled and imbricate 44
44. Adult males with black blotch on ventral surface of neck; vertebral crest in males conspicuous but not strongly projected
S. limitaris
 Adult males lack black blotch on ventral surface of neck; vertebral crest in males strongly projected *S. santander*
45. Dorsal head scales keeled or wrinkled; ventral scales distinctly keeled in juveniles and adults *S. erythrogaster*
 Dorsal head scales smooth; ventral scales slightly keeled in juveniles, smooth in adults *S. iridescens*
46. Postfemoral mite pocket absent *S. apurimacus*
 Postfemoral mite pocket distinct, with vertical or posteroventrally oriented slit-like opening 47
47. Antehumeral fold present 48
 Antehumeral fold absent 51
48. Oblique neck fold present *S. ochoai*
 Oblique neck fold absent 49
49. Posthumeral mite pocket shallow; males with black patches on ventral surface of thighs; maximum SVL approximately 80 mm in males and 65 mm in females
S. nigromaculatus
 Posthumeral mite pocket deep; males without black patches on ventral surface of thighs; maximum SVL more than 80 mm in males and more than 65 mm in females 50
50. Posterodorsal head scales juxtaposed, protuberant, and wrinkled or multicarinate; black gular patch in adult males; parietal eye not visible through interparietal cornea *S. percultus*
 Posterodorsal head scales subimbricate with a central keel; gular region in adult males not black; parietal eye usually visible through interparietal cornea *S. ornatus*
51. Posthumeral mite pocket deep with narrow opening; ventral aspect of hind limbs in adult males covered by black patch *S. rhodomelas*
 Posthumeral mite pocket absent or shallow with wide opening; ventral aspect of hind limbs in adult males not covered by black patch 52
52. Posthumeral mite pocket absent 53
 Posthumeral mite pocket shallow with wide opening 54
53. Ventral scales weakly keeled; tail in adult males strongly compressed; scales around midbody generally fewer than 60
S. trachycephalus
 Ventral scales smooth; tail in adult males weakly compressed; scales around midbody more than 60 *S. lache*
54. Scales around midbody generally more than 60 *S. guentheri*
 Scales around midbody generally fewer than 60 55
55. Black transverse band on ventral surface of neck in adult males generally present; venter extensively covered with black in some males *S. festae*
 Black transverse band on ventral surface of neck in adult males absent; longitudinal black midventral stripe usually present in adult males; venter not extensively covered with black 56
56. Black midventral stripe in most adult males; black blotches on gular region of juveniles and females *S. chota*
 Black midventral stripe in adult males absent; black blotches on gular region of juveniles and females absent *S. angel*
57. Posthumeral and postfemoral mite pockets present *S. scapularis*
 Posthumeral and postfemoral mite pockets absent 58
58. Posterior supraciliaries enlarged, projected; head pyramidal in shape 59
 Posterior supraciliaries not enlarged, not projected; head not pyramidal in shape
S. sinesaccus
59. Tail length 53–63% of total length 60
 Tail length 44–52% of total length 61
60. Posterior supraciliaries distinctly pointed; two enlarged scales above tympanum; tibia about as long as thigh; scales around midbody more than 40 *S. dumerilii*
 Posterior supraciliaries blunt; scales above tympanum not enlarged; tibia shorter than thigh; scales around midbody fewer than 40 *S. tricristatus*
61. Tail length at least 50% of total length; vertebral, paravertebral and lateral crests inconspicuous *S. quinarius*
 Tail length less than 50% of total length; vertebral, paravertebral, and lateral crests prominent *S. squarrosus*

RESUMEN: Las lagartijas sudamericanas *Stenocercus* se distribuyen principalmente en los Andes y tierras bajas aledañas, desde el norte de Colombia y Venezuela hasta el centro de Argentina a altitudes de 0–4000 m. En este estudio se reconocen 61 especies de *Stenocercus* luego de resucitar a *S. angulifer*, la cual es muy parecida morfológicamente a *S. aculeatus*. Para cada especie se incluyen una diagnosis, descripción y datos de distribución, para lo cual se examinaron 2001 especímenes y se revisaron datos bibliográficos. También se proveen datos de color en vida e historia natural de la mayoría de las especies y una clave dicotómica para ayudar con la identificación de especímenes.

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- 1°28'0"S, 77°53'0"W, USNM 200886–8; Río Licuna, tributary of Río Villano, USNM 200896; Río Liguino, USNM 200899; Río Oglán Alto, USNM 200893; Río Pastaza, Alpayaca, MCZ 8061; Río Pucuyacu, USNM 200895; Río Solís, EPN 5902–4; Río Villano, USNM 200894; Veracruz, 1°30'0"S, 77°56'0"W, 950 m, KU 121092. *Provincia Tungurahua*: Río Negro, 1°24'0"S, 78°12'0"W, QCAZ 1635. *No specific locality*: AMNH 5821, ZMB 16594 (holotype).

Stenocercus apurimacus.—PERU: *Departamento Apurímac*: Curahuasi, 13°32'26"S, 72°41'39"W, 2700 m, KU 134244; Hacienda Matara, 13°45'0"S, 72°54'0"W, MCZ 62253; *Provincia Gran, Villacabamba*, 14°4'32"S, 72°37'33"W, MCZ 156900; Puente Pachachaca, 13°25'30"S, 73°8'46"W, 1800 m, KU 134270–72, 134277, 134279–83, 134285–96, 134298, 134300–3, 134305, 134307 (paratypes). *Departamento Ayacucho*: Oceros, Hacienda Pajonal, 12°39'0"S, 73°55'0"W, 2000 m, FMNH 81496–97, 81411, 81420. *Departamento Cusco*: 8 km E Puente Cunyac, 13°33'0"S, 72°38'0"W, 2300 m, KU 134261.

Stenocercus azureus.—BRAZIL: *Estado Paraná*: no specific locality, AMNH 131858. *Estado Rio Grande do Sul*: Cruz Alta, 28°38'60"S, 53°36'0"W, 378 m, MCZ 133257; no specific locality, BMNH 85.2.3.3. URUGUAY: *Departamento Cerro Largo*: no specific locality, USNM 65535. *Departamento Soriano*: no specific locality, BMNH 74.10.9.5. *No specific locality*: AMNH 17013.

Stenocercus boettgeri.—PERU: *Departamento Huánuco*: Divisoria, 9°3'0"S, 75°35'0"W, FMNH 56058–60; Hacienda Pampayacu, MCZ 43765. *Departamento Junín*: Chanchamayo, MCZ 45881; Huachon, MCZ 45842. *Departamento Pasco*: 1–3 km NE Paucartambo, 10°52'14"S, 75°56'13"W, 2920 m, KU 139476–7; Auqui-marca, 10°44'58.4"S, 75°42'20.7"W, 2600 m, MTD 45226; Huancabamba, 10°20'60"S, 75°31'60"W, 2686 m, AMNH 5279, 13504–9, 13502–3, BMNH 1946.8.11.92–93 (synatypes), FMNH 3945–6, MCZ 8085, UMMZ 51277; María Teresa (km 19 on road Yaupi-Oxapampa), 10°42'5.6"S, 75°27'22.2"W, 1470 m, MTD 46357; Oxapampa, 10°34'0"S, 75°24'0"W, 3025 m, AMNH 13625–8; Paucartambo, 10°52'59"S, 75°56'59"W, 3000 m, KU 134011–3, 134015–7. *In error*: *Departamento Madre de Dios*: Buena Vista, Valle de Chimchao, 11°31'0"S, 69°46'0"W, 303 m, FMNH 5584–86.

Stenocercus bolivarensis.—COLOMBIA: *Departamento Cauca*: Bolívar, 1°58'15"N, 76°58'10"W, 1101 m, MCZ 151477; Municipio Bolívar, 1800 m, AMNH 130551; surroundings of Municipio Bolívar, 1°50'0"N, 76°58'0"W, 1650–1750 m, ICN 4205, 4207–9 (paratypes), 4210 (holotype), 4211 (paratype), KU 181994, 182812 (paratype), UV 5152, 13983.

Stenocercus caducus.—BOLIVIA: *Departamento Beni*: 6 km W Casarabe, 14°48'0"S, 64°17'21"W, 230 m, AMNH 143054. *Departamento Chuquisaca*: Sud Cinti, trail from Rinconada Bufete to El Palmer, 20°50'0"S, 64°21'0"W, 1170–2000 m, UTA 39102. *Departamento Cochabamba*: 6.5 km N Chipiri, 260 m, KU 133890; no specific locality, BMNH 1946.8.29.76. *Departamento Santa Cruz*: Buena Vista, 17°27'0"S, 63°40'0"W, 450 m, FMNH 16165, 21486, 21511, 37813–4, MCZ 20625, 29023, BMNH 1927.8.1.163; Chiquitos, Cantón-El Cerro, Finca Dos Milanos, 17°27'30"S, 62°20'0"W, UTA 38046; Santiago, Serranía and nearby, 18°19'0"S, 59°34'0"W,

APPENDIX

Specimens Examined

Stenocercus aculeatus.—PERU: *Departamento La Libertad*: Pampa Seca, Río Mixiollo valley, upper Huallaga region, AMNH 57085. *Departamento Loreto*: front range btw Moyobamba & Cahuapanas, 1000 m, AMNH 57083; Icuta, on trail Balsapuerto-Moyobamba, 1061 m, AMNH 56413. *Departamento San Martín*: Moyobamba, 6°2'60"N, 76°58'0"W, 723 m, BMNH 1946.8.12.33–34 (syntypes).

Stenocercus angel.—COLOMBIA: *Departamento Nariño*: 2 km S Tangua, 1°4'45"N, 77°24'53"W, 2300 m, ICN 4218; 3 km N Tangua, 1°7'28"N, 77°24'53"W, 2300 m, ICN 4214–17; Funes, 1°0'0"N, 77°27'0"W, 2044 m, ICN 4221; Hacienda La Joya, NE Funes, ICN 4219; La Joya, Funes, 1°0'0"N, 77°27'0"W, 2044 m, MCZ 159591–2; Laguna de Cumbal, ICN 2227; Pasto, 1°12'49"N, 77°16'52"W, 3040 m, ICN 4220; no specific locality, ICN 4222–3, 9041–3, UV 11167, UV 11169. ECUADOR: *Provincia Carchi*: 10 km WNW El Carmelo, 0°42'5"N, 77°43'0"W, 3182 m, USNM 201218–9; 13.6 km W Tulcán on road Tulcán-Tufiño, 0°49'0"N, 77°49'0"W, 3040 m, QCAZ 3792 (paratype); 8 km NE El Angel on road El Angel-Tulcán, 0°40'0"N, 77°52'0"W, 3560 m, 3732 (paratype), 3733 (holotype), 4117–9 (paratypes); ca. 2 km (by road) SW of Cocha Seca, 0°38'25"N, 77°40'50"W, 3770 m, USNM 325114, 325112; El Angel, 0°37'0"N, 77°56'0"W, 3015 m, QCAZ 1358 (paratype); Estación Biológica Guandera, QCAZ 3777 (paratype). *Provincia Sucumbios*: Caldera of Páramo Mirador, 3700 m, USNM 325113; El Playón de San Francisco, 0°37'59"N, 77°37'0"W, 3300 m, QCAZ 1322 (paratype).

Stenocercus angulifer.—ECUADOR: *Provincia Morona Santiago*: Chiguaza, 2°1'0"S, 77°58'0"W, 1077 m, USNM 200882; Macas, Río Yagupi, 2°19'0"S, 78°7'0"W, 1214 m, USNM 200880; Macas, Río Yagupi, 2°19'0"S, 78°7'0"W, 1214 m, USNM 200881. *Provincia Pastaza*: 10 km E Veracruz, 1°30'0"S, 77°54'59"W, 997 m, USNM 200889; 10 km E Veracruz, 1°30'0"S, 77°54'59"W, 997 m, USNM 200890; 2.5 km downstream Río Bobonaza headwaters, 1°28'0"S, 77°53'0"W, 652 m, USNM 200885; 3 km S Puyo, 1°30'0"S, 77°58'0"W, 920 m, KU 127094; Abitagua, 1°25'0"S, 78°10'0"W, 1200 m, FMNH 25804–5, 26892, 28011–12; Canelos, 1°34'59"S, 77°45'0"W, 631 m, MCZ 38530; Mera, 1°28'0"S, 78°7'60"W, 1123 m, EPN 1153, 4050–51, 8620; Montalvo, Río Bobonaza, 2°4'0"S, 76°58'0"W, 266 m, USNM 200892; near Arajuno, 1°13'60"S, 77°40'0"W, 537 m, USNM 200898; Palanda, E Sarayacu, 1°44'0"S, 77°29'0"W, USNM 200897; Puyo, 1°28'0"S, 77°58'59"W, 981 m, USNM 200891; Puyo, Santana, EPN 6499, 6505; Río Bobonaza headwaters,

700–750 m, FMNH 195983; Velasco, El Refugio, UTA 38047; Velasco, Inselburgs near Florida, 14°38'0"S, 61°15'0"W, UTA 38048. *Departamento Tarija*: Villa Montes, 21°15'0"S, 63°30'0"W, 450 m, KU 136354–5. PARAGUAY: *Departamento Alto Paraguay*: Parque Nacional Defensores del Chaco, 15 km N Tribu Nueva, Cerro León, USNM 347911; Primavera, BMNH 1960.1.2.62. *Departamento Amambay*: Estancia Paicuara, ca. 47 km W Capitán Bado, 3 km S Cerro Guaqu at Arroyo Blanco, 23°13'0"S, 55°57'0"W, USNM 342020; Parque Nacional Cerro Cora, ca. 32 km WSW Pedro Juan Caballero, 22°38'0"S, 56°3'30"W, USNM 342019. *Departamento Caaguazú*: Pastoreo, 25°23'0"S, 55°52'0"W, MCZ 34214–5. *Departamento Canindeyú*: Colonia Chupa Pou, apx. 35 km NE (or NW) Curuguaty, AMNH 143306–11. *Departamento Central*: Asunción, 25°16'0"S, 57°40'0"W, 54 m, BMNH 94.3.14.4, FMNH 9496; Colonia Nueva Italia, 25°37'0"S, 57°30'0"W, 129 m, FMNH 42281. *Departamento Itapúa*: Parabel, KU 290963. *Departamento Paraguari*: Parque Nacional Ybycui, 1 km E Administración, 26°1'0"S, 57°3'0"W, USNM 342021–3. *No specific locality*: USNM 5852 (holotype), 69874. NO SPECIFIC LOCALITY: SDSU 1689–90.

Stenocercus carrioni.—ECUADOR: *Provincia El Oro*: Llano de Guavos, Cordillera Chilla, AMNH 18308. *Provincia Loja*: 10 km N Celica, 4°3'0"S, 79°58'0"W, 1900 m, MCZ 93589; Alamor, 4°2'0"S, 80°2'0"W, 1325 m, AMNH 21847, 22136–7, 22140, 22154, 22156, 22169–70, 22172–3, 22175, 22177, 22187, 22192–7, 22199, 22201–2, 22207–8, 22210; Guainche, 8 km S Alamor, 4°6'20"S, 80°2'0"W, AMNH 22120; Río Lunamá, E Cerro Guachanamá, AMNH 22185; Seboyal, 8 km NW Alamor, 3°59'0"S, 80°5'0"W, AMNH 21848.

Stenocercus chlorostictus.—PERU: *Departamento Piura*: 15 km E Canchaque on Huancabamba road, 5°24'0"S, 79°27'53"W, 1740 m, SDSU 1535 (paratype).

Stenocercus chota.—ECUADOR: *Provincia Carchi*: Valle del Chota, USNM 201161–72, 201175–8, 201180–1, 201183–4, 201187–9, 201194–6; La Concepción, 0°35'0"N, 78°7'0"W, 1575 m, MZUT R2154.1–5, R2154.25–29 (paratypes); Río Chota, near village El Chota, 0°28'0"N, 78°4'0"W, 1580 m, USNM 211338, 211340, 211345, 211347, 211349. *Provincia Esmeraldas*: Río Cachabí, EPN 5858–5860, 5862–5864 (paratypes). *Provincia Imbabura*: 5 km E Chota on Panamerican hwy, 0°28'0"N, 78°1'0"W, QCAZ 2768 (paratype), 3755 (paratype), 3757 (paratype), 3762–3767 (paratypes), 3769–3776 (paratypes), 3768 (holotype); 6.5 km E Panamerican hwy on road Ambuquí-Monte Olivo, 0°25'0"N, 77°55'0"W, 1940 m, QCAZ 806, 897–902, 3791, 3794 (paratypes); Ambuquí, 0°27'0"N, 78°1'0"W, 1780 m, QCAZ 799 (paratype); Chota, 0°28'0"N, 78°4'0"W, QCAZ 2654–5, 2773–2778 (paratypes); El Juncal, Valle del Chota, USNM 201197, 201200, 201202, 201204; Palma Real, 0°20'0"N, 78°56'0"W, 574 m, USNM 201131–2; Salinas, 0°30'0"N, 78°8'0"W, QCAZ 4162; Tumbabiro, 0°28'0"N, 78°12'0"W, QCAZ 4161; surroundings of Yaguarcocha, EPN 5848 (paratype).

Stenocercus chrysopygus.—PERU: *Departamento Ancash*: 5 km N Recuay, 9°43'0"S, 77°25'19"W, 3450 m, KU 133918–54; Caraz, 9°3'59"S, 77°48'59"W, 2265 m, BMNH 1946.8.9.33–4 (syntypes), KU 133915–7; Chavín de Huantar, 9°34'59"S, 77°15'0"W, 3230 m, KU 134334–50; Chiquián, 10°8'59"S, 77°11'0"W, 3200 m, KU

134320–33, 134509; Huaraz, 9°31'59"S, 77°31'59"W, 3200 m, BMNH 1946.8.11.84 (syntype), KU 133891–4, 133896–905, 133907–14; Recuay, 9°43'0"S, 77°28'0"W, 3400 m, BMNH 1946.8.5.98 (syntype). *Departamento Huánuco*: 5 km NE La Unión, 9°44'5"S, 76°46'4"W, 3100 m, KU 134310–9.

Stenocercus crassicaudatus.—PERU: *Departamento Cusco*: Huadquiña, 13°7'0"S, 72°39'0"W, 2027 m, USNM 49550; Machu Picchu, 13°9'30"S, 72°31'53"W, 2404 m, KU 133955–71, 139264–66, 163596–601; Río Cosireni, near Yuvini, 12°33'0"S, 73°4'0"W, 1500 m, USNM 60731–32; San Fernando, 13°1'59"S, 73°12'0"W, 1500 m, USNM 60710, 60712; Santa Ana, 12°52'0"S, 72°43'0"W, 1060 m, USNM 60725.

Stenocercus cupreus.—PERU: *Departamento Huánuco*: 5 km N La Esperanza, 9°26'31"S, 75°59'57"W, 1900 m, KU 133994; Ambo, 10°7'51"S, 76°12'17"W, 1900 m, FMNH 5612–3; Huánuco, 9°56'0"S, 76°14'0"W, 1900 m, AMNH 63474, BMNH 76.7.4.4 (holotype), FMNH 3547, 16169, 16171, 16179, KU 133972–3, 133975, 133977–93, 133995–9, MCZ 43790–2; Pachachupán, slightly above Acomayo, Huánuco-Tingo María road, 9°45'0"S, 76°6'0"W, 2300 m, USNM 193681; W Ichocán, MTD 44380.

Stenocercus doellojuradoi.—ARGENTINA: *Provincia Córdoba*: Departamento Cruz del Eje, El Brete, 30°40'0"S, 64°54'0"W, 404 m, SDSU 3646; Departamento Pocho, border with Provincia La Rioja on route 20, SDSU 3645; Departamento Tulumba, Lucio V. Mansilla, 29°48'0"S, 64°43'0"W, 194 m, FML 2680. *Provincia Formosa*: Departamento Matacos, Ingeniero G. Juárez surroundings, 23°53'60"S, 61°51'0"W, 154 m, FML 8285. *Provincia Salta*: Departamento Anta, Finca Los Colorados centro, 100 km NE Joaquín V. González, 24°26'42"S, 63°28'56"W, FML 2708–1, 3099, 3106, 3152, 3189, 3390, 6320; Departamento Anta, Finca Los Colorados, 97 km NE Joaquín V. González, 24°27'51"S, 63°30'12"W, FML 2953; Departamento Anta, Finca Los Colorados, campo grande, 100 km NE Joaquín V. González, 24°26'42"S, 63°28'56"W, FML 3137, 6536, 6544, 6548, 6561–2, 6706; Departamento Anta, Finca Pozo Largo, 12 km E Finca San Javier, 8 km S Joaquín V. González, 25°9'20"S, 64°10'60"W, FML 3767. *Provincia Santiago del Estero*: Departamento Figueroa, Caspi Corral, 27°22'0"S, 63°31'60"W, 151 m, AMNH 140450, FML 1347 (3 specimens); Departamento Figueroa, Caspi Corral-Bandera Bajada, FML 1082; no specific locality, USNM 166542. *Provincia Tucumán*: Departamento Trancas, Choromoro, 26°23'60"S, 65°19'60"W, 815 m, FML 2629; Departamento Trancas, Uturunco, 4 km to Sierra de Medina, 26°13'60"S, 65°7'0"W, 1042 m, FML 3521 (2 specimens). NO SPECIFIC LOCALITY: SDSU 1678.

Stenocercus dumerilii.—BRAZIL: *Estado Pará*: Igarape-Assu, 1°7'0"S, 47°37'0"W, 16 m, BMNH 1904.7.26.5; km 23 road to Maracanã (PA-127), 0°59'0"S, 47°30'0"W, MPEG 6032, 6036, 6082–3, 6085, 6252, 6254, 7322–23, 7325, 7327–8; Vigia, Santa Rosa (PA-140), Estrada da Vigia, 0°57'0"S, 48°10'0"W, MPEG 7376, 7386.

Stenocercus empetrus.—PERU: *Departamento Cajamarca*: 10 km SSE Namora, 7°15'0"S, 78°19'0"W, KU 212633; 12 km S Cajamarca, N slope Abra El Gavilán, 7°13'30"S, 78°29'30"W, KU 181905–7; 13 km N San Juan, S slope Abra El Gavilán, 7°15'0"S, 78°28'20"W, KU

181909; 15 km SW Encanada, 7°8'15"S, 78°22'30"W, 3110 m, MCZ 172059; 2 km NW Namora, 7°10'35"S, 78°20'30"W, KU 212634-5; 3 km E Celendín, 6°50'0"S, 78°7'0"W, KU 134414, 134423-4; 9 km S Celendín, 6°55'0"S, 78°7'30"W, KU 212636; Baños, 7°10'0"S, 78°28'0"W, MCZ 8084; Cajamarca, 7°10'0"S, 78°31'0"W, 2800 m, FMNH 3942; no specific locality FMNH 5710. *Departamento La Libertad*: Huamachuco, 7°48'0"S, 78°4'0"W, 3350 m, AMNH 116328-9, KU 134380-91 (paratypes), 134394 (holotype), 134395-400 (paratypes); Laguna Sacsacochoa, 12 km E Huamachuco, 7°47'30"S, 77°59'15"W, KU 134406; Otuzco (in error *sensu* Cadle, 1991), 7°54'0"S, 78°34'59"W, 2730 m, FMNH 5708.

Stenocercus erythrogaster.—COLOMBIA: *Departamento Bolívar*: Carmen de Bolívar, 9°43'20"N, 75°7'59"W, 153 m, ICN 4224; San Juan Nepomuceno, Vereda Los Chivos, 9°57'24"N, 75°5'12"W, 142 m, ICN 10659. *Departamento Chocó*: Playitas de Nabugá, 6°24'0"N, 77°20'60"W, ICN 9096. *Departamento El César*: El Limón, 9°34'0"N, 74°0'0"W, 91 m, ICN 7950, 7973; La Victoria de San Isidro, 9°35'7"N, 73°11'8"W, 393 m, ICN 7970, 7972; Santa Marta mountains, Valencia, 10°18'0"N, 73°24'0"W, 182 m, UMMZ 54740. *Departamento Magdalena*: Parque Nacional Tairona, El Cedro, 9°56'60"N, 74°38'39"W, 360-420 m, ICN 9098-9, IND-R 0269; Río Frío, 10°55'8"N, 74°10'0"W, 43 m, MCZ 29707; Río Toribio, Hacienda Papare, second river on road Ciénega-Santa Marta, 11°3'0"N, 74°13'60"W, 17 m, FMNH 165153; Santa Marta mountains, MCZ 11303; Santa Marta mountains, between Mamatoca and La Tigrera, UMMZ 45468; Santa Marta mountains, near Bolívar, 10°20'60"N, 74°9'0"W, 125 m, UMMZ 54739; Santa Marta mountains, Río Tamocal, UMMZ 45466.

Stenocercus eunetopsis.—PERU: *Departamento Cajamarca*: 1 km S (airline) Udima, 6°48'46"S, 79°5'8"W, MCZ 176917-8 (= ANSP 31755-6, respectively; paratypes); 1 km SSW Udima, Río Udima (tributary of Río Zaña), 6°48'46"S, 79°5'8"W, 2500 m, FMNH 232534-6 (paratypes), 232537 (holotype), 232538 (paratype), 232540-2 (paratypes), 232544-54 (paratypes), 232573 (paratype).

Stenocercus festae.—ECUADOR: *Provincia Azuay*: 1 km SE Cuenca, 2°54'0"S, 78°59'0"W, USNM 20121-3; 3.2 km E Sigsig, Sigsig-Shuso road, Río Santa Bárbara, 3°1'0"S, 78°47'0"W, 2450 m, QCAZ 3789; 4 km E Cuenca, 2°53'0"S, 78°58'0"W, 2540 m, KU 134574-134579, 134582, 134583, 134585-134592, 134594; 4 km W San Cristóbal, 2°50'0"S, 78°52'0"W, 2500 m, KU 121095; 6 km N Cuenca, 2°51'0"S, 78°56'0"W, 2612 m, AMNH 91819, 91823; Contrayerbas, W Cuenca, 2°47'60"S, 79°16'60"W, 3957 m, AMNH 23439, 23441-4; Cuenca, 2°53'0"S, 78°59'0"W, 2530 m, UDAR 11, USNM 201208-10; Sigsig, 3°3'0"S, 78°48'0"W, QCAZ 5599; Laguna Zurucuchu, 3200 m, KU 121094; Sevilla de Oro, 02°48'S, 78°39'W, 2630 m, QCAZ 4059 (neotype); Sigsig-Shiguinda road, 3200 m, QCAZ 1337; Sinincay, 2°49'60"S, 79°0'0"W, 2515 m, AMNH 23416, 23419, 23421, 23436, 23448-53; Ucubamba, 02°52'S, 78°54'W, 2530 m, UDAR 5; no specific locality, USNM 201222-3. *Provincia Cañar*: 3 km S Azogues, 2°46'0"S, 78°51'0"W, 2500 m, KU 134602, 134604-134607, 134609; Cañar, 2°33'0"S, 78°56'0"W, QCAZ 1409; Cebadas, Pacupala, EPN 2700; La Carbonería, 2°30'0"S, 79°1'0"W, QCAZ 3117; Laguna Culebrillas, 2°25'0"S, 78°51'0"W, QCAZ

1346-48. *Provincia El Oro*: Salvias, 3°45'0"S, 79°40'0"W, 1050 m, AMNH 18313-4. *Provincia Loja*: 14 km NE Urdaneta, 3°32'3"S, 79°10'33"W, 3050 m, KU 179419; Chuquiribamba, 3°50'0"S, 79°20'0"W, 2700 m, QCAZ 1340; Loja, 3°59'45"S, 79°11'58"W, 2064 m, QCAZ 1367; Loja-Zamora road, QCAZ 5526-7; Manú, 3°29'0"S, 79°24'0"W, 2200 m, QCAZ 3599-602; Saraguro, 3°36'0"S, 79°13'0"W, 2500 m, KU 134120, 134122-134126, QCAZ 3113. *Provincia Zamora-Chinchipec*: Cajanuma, Sendero Mirador, QCAZ 4039. *No specific locality*: Llapín, 8 km S Mollendo, 3151 m, AMNH 23422-4.

Stenocercus fimbriatus.—PERU: *Departamento La Libertad*: La Piñita, Río Mixiolla, tributary of upper Río Huallaga, 8°16'0"S, 76°58'0"W, 1067 m, AMNH 56797-8 (paratypes); *Departamento Loreto*: Contamana, Río Ucayali valley, 7°15'0"S, 74°54'0"W, 134 m, AMNH 56803 (paratype); E Contamana on trail to Contaya, 7°15'0"S, 74°54'0"W, 213 m, AMNH 56781-2 (paratypes); Iquitos, 3°44'53"S, 73°14'50"W, 100 m, AMNH 56786-7, 56793 (paratypes); Mishana, 3°53'0"S, 73°27'0"W, 150 m, KU 212628; Pampa Hermosa, mouth of Río Cushabatay, 7°12'0"S, 75°17'0"W, 152 m, AMNH 56788, 56790-1, 56794-6, 56801-2 (paratypes); Río Itaya, Iquitos region, 3°44'53"S, 73°14'50"W, 100 m, AMNH 56778-80, 56783-4 (paratypes). *Departamento Ucayali*: Alto Río Purús, Alto Río Curanja, Igarape Champuico, 9°34'0"S, 70°36'0"W, MCZ 61226 (paratype); Peru-Brazil border, Utoquinia region, 8°0'0"S, 74°0'0"W, 305 m, AMNH 56789, 56799-800 (paratype). NO SPECIFIC LOCALITY: FMNH 56070.

Stenocercus formosus.—PERU: *Departamento Junín*: Chanchamayo, MCZ 11295; La Merced, Río Perené, 11°3'0"S, 75°19'0"W, 985 m, BMNH 1946.8.29.81-2; San Ramón, 11°8'0"S, 75°20'0"W, 800 m, FMNH 40588, 40590-4; San Ramón, Río Chanchamayo, Pichita, FML 335. *Departamento Pasco*: María Teresa (km 19 on road Yaupi-Oxapampa), 10°42'5.6"S, 75°27'22.2"W, 1470 m, MTD 46278; Río Paucartambo, Yaupi, 10°44'30"S, 75°32'0"W, 1600 m, KU 134109, 134111-5. NO SPECIFIC LOCALITY: SDSU 1688.

Stenocercus frittsi.—PERU: *Departamento Ayacucho*: 20 km N Ayacucho, 13°9'29"S, 74°13'26"W, KU 134208-10 (paratypes); 4 km N Ayacucho, 13°9'29"S, 74°13'26"W, KU 134211-12 (paratypes); Ayacucho, 13°9'29"S, 74°13'26"W, 2804 m, KU 134199-207, 134215-23 (paratypes); vicinity of Ayacucho, USNM 306935-40 (paratypes). *Departamento Huancavelica*: Izcuchaca, 12°29'0"S, 75°1'0"W, 3327 m, KU 134191-92 (paratypes); Mariscal Cáceres, 12°34'0"S, 74°57'0"W, 3966 m, KU 134180 (paratype), 134181 (holotype), 134182-90 (paratypes); Villa Azul, 17 km by road NE Colcabamba, 12°24'0"S, 78°35'0"W, 2350-2400 m, KU 134193-97 (paratypes).

Stenocercus guentheri.—ECUADOR: *Provincia Chimborazo*: 14.5 km N Tixán on Panamerican Highway, 2°3'0"S, 78°44'0"W, 3200 m, QCAZ 3659-61. *Provincia Cotopaxi*: Panamerican Highway near Parque Nacional Cotopaxi, 3200 m, FHGO 629; Parque Nacional Cotopaxi, ca. 4000 m, QCAZ 1109. *Provincia Imbabura*: 7.5 km N Otavalo on Panamerican Highway, QCAZ 3761; Atuntatqui, 0°20'1"N, 78°18'8"W, 2387 m, QCAZ 776; Tabacundo-Mojanda road, 3150 m, QCAZ 3793. *Provincia Pichincha*: 1.6 km ENE Quito, 0°13'12"S, 78°30'0"W, 2879 m, USNM 201236-7; 2.4 km SSE Quito, 0°13'12"S, 78°30'0"W, 2879 m, USNM 201234, 201238; Cayambe,

SMF 11162; Cayambe volcano slopes, 0°2'10"N, 77°59'30"W, 3500 m, FHGO 1136; Guayllabamba, 0°3'20"S, 78°20'25"W, 2139 m, QCAZ 718, 777, 779, 782; Ilalá, Hacienda Chuspiyacú, QCAZ 722; Illiniza Sur, 0°39'34"S, 78°42'48"W, QCAZ 730; Jerusalem, 0°17'54"S, 78°25'0"W, 2578 m, QCAZ 1323; Lloa, 0°15'0"S, 78°35'0"W, 3060 m, QCAZ 4108; Machachi, 0°30'28"S, 78°33'46"W, 2940 m, QCAZ 720, 736, 758, 775, 778, 780–1, 783–4; below Pacto, 0°9'0"N, 78°45'0"W, USNM 201239; Pintag-Antisana road, 0°22'12"S, 78°22'18"W, 2880 m, QCAZ 2808; Pusuquí, 0°4'0"S, 78°27'0"W, 2747 m, QCAZ 4153; Quito, 0°11'22"S, 78°29'38"W, 2810 m, EPN 5900, QCAZ 432, 728, 737, 2857, SMF 60592, USNM 201226, 201230–3; San Antonio, 0°1'0"S, 78°27'9"W, QCAZ 713–6, 738, 740–54, 1357, 1400, 2163, 2199, BMNH 58.7.25.16, 58.7.25.16a, 58.7.25.18, 59.9.20.6, 60.6.16.18, 60.6.16.20–21 (syntypes); Uyumbicho, 0°23'0"S, 78°31'0"W, QCAZ 760. *Provincia Tungurahua*: Ambato, 1°15'0"S, 78°37'0"W, 2575 m, EPN 5898, 5899; Picailhua, 1°16'0"S, 78°35'0"W, EPN 5887–5889; Urbina, 0°2'54"S, 78°46'21"W, QCAZ 2858. *No specific locality*: FHGO 522, 852, 1493, SMF 53199.

Stenocercus haenschii.—ECUADOR: Bolívar: Balsapamba, 1°46'0"S, 79°11'0"W, 750 m, ZMB 16595 (holotype).

Stenocercus huancabamba.—PERU: *Departamento Amazonas*: Bagua, La Peca, 5°36'40"S, 78°26'5"W, 920 m, KU 212630 (paratype); San José (Bagua Grande), 5°45'22"S, 78°26'28"W, MCZ 165319 (holotype), 165322 (paratype). *Departamento Cajamarca*: Bellavista, 5°39'54"S, 78°40'37"W, AMNH 28529–30 (paratypes), MCZ 18791–3, 18795, 60040, 60042 (paratypes); Fundo Atapaca, Río Chinchipe, E of San Ignacio, 5°8'45"S, 79°0'5"W, 450 m, KU 209513–5 (paratypes); Perico, 5°20'38"S, 78°47'41"W, AMNH 28637–46 (paratypes), MCZ 59277–8, 59281, 59284, 59287, 59290, 59296–7 (paratypes).

Stenocercus humeralis.—ECUADOR: *Provincia Loja*: 2 km E Loja, 4°0'0"S, 79°11'55"W, 2200 m, KU 121137; 2.7 km E Loja on road NE Zamora road, 4°0'0"S, 79°11'32"W, 2135 m, KU 141162; 12.2 km S Loja, Río Malacatos valley on road to Vilcabamba, 4°6'37"S, 79°13'0"W, 2275 m, KU 141163; 27 km W Loja on road Loja-Zamora, 4°0'0"S, 78°58'25"W, 2080 m, KU 291508, QCAZ 5524; 5 km N Loja, 3°57'17"S, 79°13'0"W, 2150 m, KU 134003, 134005; 6 km N Loja, 3°57'17"S, 79°13'0"W, 2150 m, KU 134005; Catamayo-Jimbilla road, EPN 5824–43; Loja, 4°0'0"S, 79°12'0"W, 2064 m, BMNH 1946.8.11.76 (syntype), EPN 1343, 5807–8, 5810–3, 5815, FHGO 1494–5, KU 121136, 121138, 134000, 134002; Malacatos, EPN 1270, 5809.

Stenocercus imitator.—PERU: *Departamento Cajamarca*: ca. 1 km (airline) S to SSW Udima, Río Udima, 6°48'46"S, 79°5'8"W, 2500 m, FMNH 232629, 232636, 232638, 232645 (paratypes); El Chorro-Udima road, ca. 3 km (airline) N Monte Seco, 6°51'32"S, 79°6'42"W, 2200–2400 m, FMNH 231780 (paratype); Monte Seco-Udima road, ca. 2.5 km (airline) N Monte Seco, 6°51'32"S, 79°6'42"W, 2100–2300 m, MCZ 176913–5; road above Monte Seco toward Chorro Blanco, ca. 1.5 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, 1450 m, FMNH 232634 (holotype), 232648 (paratype); trail between Quebrada Chorro Blanco S toward Monte Chico, ca. 2 km ENE Monte Seco, 6°51'32"S, 79°6'42"W, 1580–

1640 m, FMNH 232627, 232646 (paratypes); trail Monte Seco-Chorro Blanco, ca. 15 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, 1600 m, MCZ 176916; trail Monte Seco-Chorro Blanco, ca. 2 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, 1550–1570 m, FMNH 232628, 232632, 232647, 232649, 232652 (paratypes); trail Monte Seco-Chorro Blanco, ca. 2.5 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, FMNH 232620, 232624, 232641–3, 232651, 232656 (paratypes), MCZ 176912; vicinity of Monte Seco, FMNH 232639 (paratype). *Departamento Piura*: 15 km E Canchaque, 5°24'0"S, 79°35'59"W, 1740 m, KU 181912–6 (paratypes), MCZ 174163 (paratype), SDSU 1534 (paratype).

Stenocercus iridescens.—COLOMBIA: *Departamento Nariño*: Boca Grande, Tumaco, 1°47'55"N, 78°48'56"W, 0 m, ICN 4225. ECUADOR: *Provincia Azuay*: Tamarindo, FHGO 416. *Provincia Chimborazo*: Chimbo bridge, near Bucay, 2°41'0"S, 79°40'0"W, AMNH 24337; Huigra, 2°16'60"S, 78°58'60"W, 1799 m, USNM 61755; Recinto Sacramento, 2°10'1"S, 79°0'57"W, 1566 m, QCAZ (number not assigned). *Provincia Cotopaxi*: La Maná, 0°55'60"S, 79°13'0"W, 889 m, QCAZ 2767, 3052. *Provincia El Oro*: 15 km E Pasaje, 3°20'0"S, 79°41'13"W, QCAZ 3620, USNM 200955; 2 km S Pasaje, 3°21'5"S, 79°49'0"W, 100 m, USNM 200946; Pasaje, 3°19'60"S, 79°49'0"W, 105 m, AMNH 21861–2, 21867–8, 21975–8, 21987–1; Piñas, 3°40'0"S, 79°39'0"W, 876 m, FHGO 1089; Río Jubones, AMNH 21944; road Santa Rosa-Chonta, AMNH 22121; Santa Rosa, 3°27'0"S, 79°58'0"W, 80 m, USNM 200977, 200980. *Provincia Esmeraldas*: Atacames, 0°52'0"N, 79°50'60"W, 0 m, EPN 5909; La Unión, 0°49'0"N, 79°52'0"W, 49 m, FHGO 97; Río Tiaone EPN 5906, 5908; Same, 0°49'20"N, 79°59'38"W, 0 m, QCAZ 721; Tonsupa, 0°53'N, 79°45'W, 0 m, QCAZ 762, 763, 804–5. *Provincia Guayas*: 21 km SW El Empalme, 1°8'3"S, 79°8'0"W, USNM 200995; 5 km E Milagro, 2°7'0"S, 79°33'18"W, USNM 200984; Balzar, 1°22'0"S, 79°54'0"W, 59 m, EPN 5925–5927, 5929–5931; Cerro Blanco, EPN 5005, 5007–5009; Guayaquil, 2°10'0"S, 79°54'0"W, 46 m, AMNH 13510, 22184, 22221, USNM 200992; Milagro, 2°7'0"S, 79°35'60"W, 71 m, USNM 200982, 200989. *Provincia Imbabura*: 1 km E Apuela, 0°21'0"N, 78°29'28"W, 1950 m, USNM 200902; 1 km SW Peñaherrera, 0°20'37"N, 78°32'23"W, 1950–2000 m, USNM 200912; 10 km S Peñaherrera, 0°10'41"N, 78°31'60"W, USNM 200919; 2 km W Apuela, 0°21'0"N, 78°31'5"W, 1850 m, USNM 200911; 3 km SW Peñaherrera, 0°19'51"N, 78°33'9"W, 1825 m, USNM 200914; Apuela, 0°21'0"N, 78°30'0"W, 2185 m, USNM 200901. *Provincia Los Ríos*: 1 km E Jaumeche, 1°10'0"S, 79°39'28"W, 40–70 m, USNM 285780; Jaumeche, 1°10'0"S, 79°40'0"W, EPN 5004, USNM 222801; Patricia Pilar, 0°33'0"S, 79°22'0"W, QCAZ 97; Quevedo, 1°2'0"S, 79°27'0"W, 111 m, USNM 200934; Río Palenque, 0°35'0"S, 79°22'0"W, QCAZ 431, 2205, 2206, 2212; Ventanas, 1°26'60"S, 79°28'0"W, 370 m, QCAZ 1655. *Provincia Manabí*: 12 km NNE Jipijapa, 1°13'59"S, 80°32'31"W, USNM 200935; 2 km N San Clemente, 0°43'55"S, 80°30'0"W, 0 m, USNM 200940; 27 km N San Vicente, 0°22'0"S, 80°26'0"W, 50 m, QCAZ 3329, 3330, 3343; 4 km W Calcuta, 0°51'0"S, 80°12'9"W, USNM 200936; 9 km N San Vicente, 0°30'7"S, 80°24'0"W, 0 m, USNM 200942–3, 200945; 32 km N San Vicente on road San Vicente-Pedernales, 00°20'0"S, 80°21'0"W, 183 m,

QCAZ 3314; Cabo Pasado, 0°22'0"S, 80°29'0"W, QCAZ 3322; Cerro San Sebastián, EPN 5014; Junín, 0°56'0"S, 80°13'0"W, 184 m, USNM 200939; Puerto Rico, 1°37'0"S, 80°50'0"W, 123 m, QCAZ 1634. *Western Ecuador*: BMNH 60.6.16.2-4 (syntypes).

Stenocercus ivitus.—PERU: *Departamento Piura*: summit Cordillera btw Canchaque & Huancabamba, 5°19'0"S, 79°29'0"W, 3100 m, KU 134653 (holotype).

Stenocercus lache.—COLOMBIA: *Departamento Boyacá*: Guicán, 6°27'55"N, 72°24'54"W, 2908 m, ICN 6712; Parque Nacional Natural El Cocuy, eastern flank Río Lagunillas, 13 km SE Municipio El Cocuy, 4000 m, IND-R 3054-63; Parque Nacional Natural El Cocuy, Trail La Esperanza-Púlpito del Diablo, close to Quebrada Pantanogrande (tributary of Río Nevado), 6°19'0"N, 72°20'0"W, 3700-4000 m, ICN 5749 (holotype), 5750-62 (paratypes); Sierra Nevada del Cocuy, Finca La Esperanza, IND-R 2178; Sierra Nevada del Cocuy, páramo Concavo, 3700 m, IND-R 550; Tutasá, km 49 Duitama-Susacom, Vereda la Capilla, 6°2'60"N, 72°52'0"W, 3250 m, ICN 9269. *Departamento Santander*: Chitagá-Cerrito road, Páramo del Almorzadero, 6°57'0"N, 72°41'0"W, 3750 m, ICN 9270-73.

Stenocercus latebrosus.—PERU: *Departamento Cajamarca*: Cachil forest, ca. 3 km (airline) SE Contumazá, 7°23'0"S, 78°47'0"W, 2400-2420 m, MCZ 178040-4, 178048-9, 178268-70, 182236-41 (paratypes); Carabamba, 7°33'0"S, 78°15'0"W, MCZ 154240 (paratype). *Departamento La Libertad*: Mountain ridge above Sinsicap, 7°50'0"S, 78°45'0"W, 2400-2600 m, MCZ 182242-4; Otuzco, 7°54'0"S, 78°34'59"W, 2730 m, KU 134352-9, 134361-78; San Pablo, 7°7'0"S, 78°50'0"W, 2400 m, BMNH 1900.3.30.14 (paratype).

Stenocercus limitaris.—ECUADOR: *Provincia El Oro*: Salvias, 3°45'0"S, 79°40'0"W, 1050 m, AMNH 18311 (paratype). *Provincia Loja*: 12.8 km N Alamor, 3°55'3"S, 80°1'60"W, 1097 m, AMNH 22215 (paratype); Alamor, 4°1'60"S, 80°1'60"W, 930 m, AMNH 18319, 22113-8, 22131-2, 22158-62, 22165-7, 22178-82, 22223-9 (paratypes); Cruzpamba, 4°10'0"S, 80°1'0"W, 1000 m, MCZ 85083 (paratype). PERU: *Departamento Piura*: Toronche, base of Cerro Ayapate, ca. 16 km (airline) SE Ayabaca, 4°35'0"S, 79°32'0"W, 1950-2100 m, MCZ 182245-8 (paratypes).

Stenocercus marmoratus.—BOLIVIA: *Departamento Cochabamba*: Totora, 17°43'19"S, 65°8'49"W, 2600 m, USNM 94093. *Departamento Santa Cruz*: La Yunga, UTA 38064-6. *Departamento Chuquisaca*: Cerro Bufete, 20°51'0"S, 64°22'0"W, UTA 39139-45. *Departamento Tarija*: 12.3 km NW Entre Ríos on road to Tarija, 21°27'17"S, 64°17'2"W, UTA 41051-4.

Stenocercus melanopygus.—PERU: *Departamento Cajamarca*: Baños, 7°10'0"S, 78°28'0"W, 2800 m, BMNH 1946.8.11.85, 1946.8.11.88 (syntypes), MCZ 126133; Cajabamba, 7°37'0"S, 78°3'0"W, 2700 m, KU 134037-40, 134047, 134050-3, 134056-7, 134059, 134061-3, 134065, 134067, 134069, 134071-3, 134076-80, 134082, 134084-5, 134087-8; Cajamarca, 7°10'0"S, 78°31'0", 2800 m, KU 221715; no specific locality, FMNH 5712 (5 specimens). *Departamento La Libertad*: Huamachuco, 7°48'0"S, 78°4'0"W, 3350 m, KU 134019, 134021, 134023-7; Laguna Sacsacochoa, 12 km E Huamachuco, 7°47'30"S, 77°59'15"W, 3200 m, KU 134029.

Stenocercus modestus.—PERU: *Departamento Lima*: Chosica, 11°56'35"S, 76°42'34"W, 762-914 m, FMNH 152204-7; Chosica, 11°56'35"S, 76°42'34"W, 762-914 m, FMNH 39363 (7 specimens); 1 km N Lurin, 12°16'27"S, 76°52'0"W, 0 m, MCZ 182144-7; Lima, 12°3'0"S, 77°3'0"W, BMNH 75.2.13.3; Callao, 12°4'0"S, 77°9'0"W, 20 m, BMNH 1900.11.27.10-11. NO DATA: SDSU 1686.

Stenocercus nigromaculatus.—PERU: *Departamento Piura*: Chumaya, AMNH 28532; Huancabamba, 5°14'40"S, 79°27'6"W, 1900 m, AMNH 28553-7, 28559, 28588-9, 28591-8, FMNH 73380 (MCZ 18769, paratype), KU 134090-1, 134093-106, 181911, MCZ 17975 (holotype), 18768 (paratype).

Stenocercus nubicola.—PERU: *Departamento Piura*: summit Cordillera btw Canchaque & Huancabamba, 5°19'0"S, 79°29'0"W, 3100 m, KU 134107 (holotype), 134108 (paratype).

Stenocercus ochoai.—PERU: *Departamento Apurímac*: Curahuasi, 13°32'26"S, 72°41'39"W, 2700 m, KU 134241, 134250. *Departamento Cusco*: Chilca, 10 km N Ollantaytambo, 13°14'0"S, 72°17'30"W, 2760 m, KU 133877, 133879-83, 133885-7 (paratypes), 133888 (holotype), 133889, 139263 (paratypes); Chilca, Ollantaytambo, 13°14'0"S, 72°17'30"W, 2760 m, MCZ 41984; Hacienda Urco, near Calca, 13°19'0"S, 71°59'0"W, 2788 m, FMNH 34123-6, 34134-5, 34138; Machu Picchu, 13°10'0"S, 72°32'30"W, 2400 m, KU 117108, 134233-4, 139267-8, 163603, MCZ 145045; Río Huaracundo, 3048 m, MCZ 12410.

Stenocercus orientalis.—PERU: *Departamento Amazonas*: Bongara, Pomacocha (= Florida), 5°49'60"S, 77°55'0"W, 2900 m, KU 212651-4, 212656-64; Chachapoyas, 6°13'0"S, 77°50'60"W, 2340 m, KU 134447-51, 134453-4, 134456-9, 134461-3 (paratypes), 134466 (holotype), 134467-71 (paratypes); Chachapoyas, 11 km W Molinopampa, 6°11'0"S, 77°42'58"W, 2200 m, KU 212774.

Stenocercus ornatissimus.—PERU: *Departamento Lima*: Caccay, near Infiernillo, 11°44'0"S, 76°16'45"W, 3340 m, USNM 548174; Matucana, 11°51'0"S, 76°24'0"W, 2378 m, FMNH 41559 (8 specimens); San Pedro de Casta, 11°46'0"S, 76°35'0"W, 3400 m, MCZ 182148-54; Verrugas, 11°52'0"S, 76°29'0"W, USNM 75398; Yangas, 11°37'0"S, 76°40'0"W, USNM 5655 (holotype).

Stenocercus ornatus.—ECUADOR: *Provincia Loja*: 10.6 km S Yangana, 4°27'0"S, 79°9'20"W, 2190 m, QCAZ 3790; 1-1.5 km E Loja, USNM 201270-1, 201273; 12 km W Loja, KU 134148; 15 km W Loja, 3°59'48"S, 79°15'18"W, KU 134140-134144, 134149; 2 km E Loja, 3°59'23"S, 79°10'42"W, 2200 m, KU 121127, 121129-121134; 3 km E Loja, 3°59'23"S, 79°10'42"W, USNM 201276-8; 3 km W Loja, 4°0'14"S, 79°12'49"W, 2150 m, KU 134127, 134129-134131, 134134, 134138, 134139; 4 km W Loja on road to Catamayo, 4°0'36"S, 79°13'12"W, 2280 m, KU 141167; 4.6 km N Loja, 3°56'8"S, 79°13'34"W, 2065 m, KU 141168-141170; 5 km N Loja, 3°56'0"S, 79°13'33"W, KU 134150, 134151, 134153, 134154; 6 km S Loja on road to Vilcabamba, 4°4'21"S, 79°11'53"W, 2300 m, FHGO 585; Celica, 4°7'0"S, 79°57'0"W, 1552 m, AMNH 18318; Cerro Uritusinga, 3000 m, QCAZ 2020; Cerro Villonaco, EPN 3540, QCAZ 2020; Loja, 4°0'0"S, 79°12'0"W, 2150 m, BMNH

1946.8.29.72 (holotype), KU 121126, QCAZ 6088-93; Purunuma, slopes of Cerro Colombo, 4°12'0"S, 79°24'0"W, 2464 m, QCAZ 5532; San Bartolo, 12.8 km NE Alamor, 4°2'0"S, 80°2'0"W, 2273 m, AMNH 22213; Vilcabamba, 4°15'0"S, 79°15'0"W, 1500 m, FHGO 405, 679, 1161; no specific locality, EPN 5877-5880.

Stenocercus pectinatus.—ARGENTINA: *Provincia Buenos Aires*: Bahía Blanca, 38°43'0"S, 62°16'60"W, 20 m, UMMZ 94095 (2 specimens); Mar Chiquita, Camet Norte, 37°52'60"S, 57°36'0"W, 24 m, FML 1595 (2 specimens), 1696 (3 specimens); Mar del Plata, 38°0'0"S, 57°32'60"W, 38 m, AMNH 37557-9, UMMZ 98880 (3 specimens), 109838; Miramar, 38°15'59"S, 57°50'59"W, 17 m, KU 187793, 187795-7, SDSU 1679, UMMZ 98881 (3 specimens). *Provincia Córdoba*: Achiras, 33°10'0"S, 65°0'0"W, 838 m, AMNH 65192; Punilla, Villa Giardino, 31°1'60"S, 64°28'60"W, 1119 m, FML 0853; Río Cuarto, Laguna Oscura, 33°53'0"S, 64°42'0"W, 343 m, SDSU 3643-4; no specific locality, AMNH 17012. *Provincia San Luis*: Soven, 34°13'60"S, 65°25'0"W, 394 m, MCZ 66989. *No specific political unit*: Patagonia, USNM 5695 (2 specimens). *No specific locality*: FML 1693.

Stenocercus perculatus.—PERU: *Departamento Cajamarca*: 0.5 km (airline) SW Monte Seco, 6°51'32"S, 79°6'42"W, 1170 m, FMNH 232517 (paratype); 1-2 km (airline) NNW Monte Seco, Río Zaña, 6°51'32"S, 79°6'42"W, 1350-1380 m, FMNH 232516, 232524 (paratypes), 232525 (holotype), 232526 (paratype); ca. 1 km (airline) NE Monte Seco along El Chorro-Monte Seco road, 6°51'32"S, 79°6'42"W, 1330-1370 m, FMNH 232515, 232519, 232523 (paratypes); ca. 1.5 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, 1500 m, FMNH 232518, 232521, 232527, 232529, 232637 (paratypes); Cerro Condoroáz, near Quebrada San Isidro, ca. 6 km (airline) WSW Monte Seco, 6°51'32"S, 79°6'42"W, 800-1000 m, FMNH 232522, 232526 (paratypes); Llama, 6°30'52"S, 79°7'13"W, 2095 m, MCZ 121234 (paratype); trail Monte Seco-Chorro Blanco, ca. 2 km (airline) NE Monte Seco, 6°51'32"S, 79°6'42"W, 1550-1570 m, FMNH 232528 (paratype). *Departamento Piura*: 15 km E Canchaque, 5°24'0"S, 79°35'59"W, 1740 m, SDSU 1596 (paratype).

Stenocercus praeornatus.—PERU: *Departamento Junín*: Comas, 11°46'0"S, 75°5'0"W, 3220 m, KU 134224-8 (paratypes), 134231 (holotype), 134232 (paratype).

Stenocercus prionotus.—BOLIVIA: *Departamento Beni*: Vacadiez, Tumi Chucua, 11°8'0"S, 66°10'0"W, 176 m, USNM 280246-51 (paratypes). *Departamento La Paz*: Barraca, Río Madidi, 12°35'0"S, 67°2'0"W, BMNH 98.6.9.4 (paratype). PERU: *Departamento Huánuco*: Buena Vista, Valle Chimchao, 9°31'0"S, 75°52'0"W, FMNH 5582 (paratype); Hacienda Pampayacu, 9°33'0"S, 75°54'0"W, MCZ 43758-9, 43761-2 (paratypes); Río Llullapichis, 4-5 km upstream Río Pachitea, 9°37'0"S, 74°55'0"W, 200 m, KU 178998, 179058 (paratype). *Departamento Madre de Dios*: Estación Biológica Cocha Cashu, Parque Nacional Manu, 11°51'0"S, 71°19'0"W, MCZ 150243 (paratype); Explorers Inn, Tambopata reserve, ca. 30 km (straight line) SSW Puerto Maldonado, 12°50'0"S, 69°17'0"W, 280 m, USNM 247468-9, 247680, 269022 (paratypes). *Departamento Puno*: Tambopata, San Juan del Oro, 14°12'0"S, 69°8'0"W, 1520 m, FMNH 64788-91, 64794-802 (para-

types). *Departamento San Martín*: Juanjui, 7°11'0"S, 76°45'0"W, MCZ 121233 (paratype); Tarapoto, 6°30'0"S, 76°25'0"W, 370 m, KU 212629 (paratype).

Stenocercus puyango.—ECUADOR: *Provincia El Oro*: 19 km N Alamor, 3°55'12"S, 80°1'26"W, QCAZ 6355 (paratype); Bosque Protector Puyango, 3°52'55"S, 80°4'59"W, QCAZ 6356 (paratype); Puyango, 3°53'0"S, 80°4'47"W, 300 m, QCAZ 6701-3, 6705-13, 6715-19, 6721-22 (paratypes), 6723 (holotype), 6724-5 (paratypes). *Provincia Loja*: 3 km SW Malacatos, 4°13'31"S, 79°16'3"W, 1500 m, MCZ 85086, 131823; comuna Achiotos, parroquia Mangahurquillo, 04°03'39"S, 80°16'45.6"W, 325 m, FHGO 3383-86. *No specific political unit*: Río Puyango, AMNH 21934-6 (paratypes). PERU: *Departamento Lambayeque*: 21 km E, 7 km N Olmos, 5°55'17"S, 79°33'20"W, 700 m, MVZ 82364 (paratype). *Departamento Tumbes*: Quebrada Faical El Caucho, 24 km SE Pampa de Hospital, 3°49'0"S, 80°16'0"W, LSUMZ 26989, 39446, 39451 (paratypes). *No specific locality*: FMNH 81450. NO SPECIFIC LOCALITY: AMNH 22186 (paratype).

Stenocercus rhodomelas.—ECUADOR: *Provincia Azuay*: 1.1-2.7 km SW Cataviña, 1310 m, KU 152188; 1.6 km W Minas at Río Minas, 3°17'6"S, 79°20'57"W, 1410 m, KU 152178, 152179; 12 km SW Girón, 3°14'0"S, 79°13'0"W, 2000 m, USNM 201285; 2.7-3.5 km SW Cataviña, 1250 m, KU 152185, 152187; 4.8 km W Abdón Calderón, 3°16'25"S, 79°18'23"W, 1435 m, KU 152183; 5 km S Nabón on road Nabón-San Isidro, 3°20'0"S, 79°4'0"W, UDAR 10; 50.5 km E Pasaje, 3°19'26"S, 79°25'51"W, 730 m, KU 152177; 7-8 km W Girón, 3°12'0"S, 79°10'0"W, 2100 m, USNM 201280-1; ca. 11 km W Santa Isabel, Río Jubones drainage, 3°16'44"S, 79°21'52"W, 1480 m, AMNH 110599-603; ca. 4 km E San Francisco, km 109 on Cuenca-Machala hwy, 1250 m, USNM 201288, 201293, 201296-8; Girón, 3°10'0"S, 79°8'0"W, EPN 3510, 3512; Girón, near Piedra Labrada, EPN 3532; Oña, 3°27'0"S, 79°10'0"W, 2522 m, BMNH 1946.8.29.77-78 (syntypes); N Oña, 1885 m, KU 141164, 141166; Río León, 11.8 km N Buenos Aires, 3°25'16"S, 79°9'37"W, 1940 m, KU 202945, 202946; Río León, 12.5 km N Oña, 3°25'16"S, 79°9'37"W, 1920 m, KU 142699-142701; Santa Isabel, 3°16'0"S, 79°19'0"W, QCAZ 3076, 5645, USNM 201305-8, 201310, 201316; Valle de Yunguilla, Chalacápac, 1550 m, QCAZ 3663. *Provincia Loja*: San José, QCAZ 6095; Valle de Casanga, EPN 3507, 5910-5921.

Stenocercus roseiventris.—ARGENTINA: *Provincia Jujuy*: Ledesma, Parque Nacional Calilegua, trail seccional Aguas Negras-Camping, FML 7640. *Provincia Salta*: General J. S. Martín, Macueta-Acabuco, FML 848; Orán, Aguas Blancas, shore of Río Bermejo, 22°43'60"S, 64°22'0"W, 562 m, FML 1092; Orán, Finca Abra Grande, Quebrada Tartagal, FML 1584; Orán, Finca Yakúlica, agosto del Río Pescado, FML 3644 (3 specimens); Orán, Río Blanco, ca. 6 S km Orán, 23°7'60"S, 64°19'60"W, 336 m, FML 591 (2 specimens); Santa Victoria, Baritú, 22°16'0"S, 64°42'0"W, 239 m, FML 1727. BOLIVIA: *Departamento Cochabamba*: Yungas de Cochabamba, USNM 94094; no specific locality, AMNH 6766. BRAZIL: *Estado Acre*: [Río] Alto Purus, MCZ 133219. PERU: *Departamento Cusco*: 84 km (by road) NE Paucartambo, Quitacalzón bridge, km 164 on Paucartambo-Atalaya road, 13°1'34"S, 71°29'46"W, 1180 m, USNM 346178; Cashir-

uari-3, S of Río Camisea, 11°52'57"S, 72°46'40"W, 690 m, USNM 538336, 538338; cordillera Vilcabamba, camp 1, 12°39'0"S, 73°40'0"W, 870 m, AMNH 101384-5; Pagoreni on Río Camisea, 11°42'23"S, 72°54'11"W, 465 m, USNM 538339; San Martín-3, ca. 5 km N Río Camisea, 11°47'8"S, 72°41'57"W, 474 m, USNM 538337; Misión Coribeni, 24 km ENE Rosalina, 12°36'0"S, 72°48'0"W, 680 m, KU 134156. *Departamento Huánuco*: Río Lullapichis, 4-5 km upstream from Río Pachitea, Finca Panguana, 9°36'0"S, 74°56'0"W, 200 m, KU 172194-5. *Departamento Madre de Dios*: Cusco Amazonico, 15 km E Puerto Maldonado, 12°35'0"S, 69°5'0"W, 200 m, KU 194939, 204987, 207769-70, 209967, 214964, 214966-7, 214969, 220188. *Departamento Puno*: 1 km W (by road) Yanahuaya, 14°16'0"S, 69°12'0"W, 1630 m, USNM 299525. *No specific political unit*: Chanchamayo, AMNH 56309, 57167, 57170; Monte Alegre, Río Pachitea, AMNH 57200.

Stenocercus santander.—COLOMBIA: *Departamento Santander*: Mesa de los Santos, Vereda La Granja, Hacienda El Roble, 6°51'57.1"N, 73°2'57"W, 1570 m, MUJ 542 (paratype); Mesa de los Santos, Vereda La Granja, Hacienda El Roble, 6°51'57.1"N, 73°2'57"W, 1570 m, MUJ 567 (paratype); Piedecuesta, 6°59'22"N, 73°3'13"W, 1189 m, MLS 1220 (paratype); Piedecuesta, Vereda Las Amarillas, 6°58'10.6"N, 73°1'17.5"W, 1400-1500 m, UIS-R-1286, 1199 (paratypes); Piedecuesta, Vereda Los Monos, UIS-R-1196 (paratype); Piedecuesta, Vereda Tres Esquinas, UIS-R-478 (holotype); San Gil, 6°33'34"N, 73°8'10"W, 1247 m, ANSP 24136, MLS 22-24, 38, 39 (paratypes).

Stenocercus scapularis.—PERU: *Departamento Junín*: Chanchamayo, 1200 m, FMNH 40608-11; Chanchamayo, AMNH 56765-9, 56771-6; Chanchamayo, 1500 m, AMNH 23154; Chanchamayo, Tarma, 1300 m, FMNH 45522; Pampa Hermosa, 10°59'33"S, 75°25'58"W, 1540 m, MTD 45664; [Río] Perené, 1200 m, AMNH 23145, 23147; [Río] Perené, AMNH 23121, 23123; [Río] Perené, 1000-1500 m, AMNH 23192, 23200; Perené, 10°58'0"S, 75°13'0"W, 827 m, BMNH 1946.8.12.37 (syntype). *Departamento Puno*: Sagrario, Río Quitín, 13°55'0"S, 69°40'60"W, 1287 m, FMNH 40408-9; *No specific locality*: Juliaca, lake Aracona (in error), AMNH 1701; FMNH 56444. NO SPECIFIC LOCALITY: SDSU 1691.

Stenocercus simonsii.—ECUADOR: *Provincia Azuay*: 3.3 km NE Girón, 3°8'44"S, 79°6'44"W, 2255 m, KU 152189-90; Girón, 3°10'0"S, 79°7'59"W, 2240 m, KU 134157-64; Oña, 3°27'0"S, 79°10'0"W, 2522 m, BMNH 1946.8.11.73 (syntype). *Provincia Loja*: Saraguro, 3°35'59"S, 79°13'0"W, 2500 m, KU 134165-74.

Stenocercus sinesaccus.—BRAZIL: *Estado Mato Grosso*: Chapadã near Cuyaba [Chapada dos Guimarães], 15°26'0"S, 55°45'0"W, 690 m, ANSP 12947, 12948 (paratypes), BMNH 1903.3.26.7 (holotype), MCZ 171198 (= BMNH 1903.3.26.9, paratype).

Stenocercus stigmus.—PERU: *Departamento Cajamarca*: 2-3 km (airline) NW El Pargo on Llama-Huambos road, 6°29'2"S, 79°2'49"W, 3000-3100 m, MCZ 182234-5 (paratypes); Cutervo, San Andrés de Cutervo, 6°13'0"S, 78°40'0"W, 2000 m, KU 221719; forest at El Pargo, 8 km by road Llama-Huambos N La Colmena, then 3-4 km NW by trail, 6°28'0"S, 79°3'0"W, 2950 m, MCZ 182232-3 (paratypes).

Stenocercus torquatus.—PERU: *Departamento Junín*: Chanchamayo, 11°3'0"S, 75°19'0"W, 1500 m, AMNH 23152-3; Chanchamayo, 11°3'0"S, 75°19'0"W, 1800 m, AMNH 56415, 57171, 57177; Chanchamayo, 1800 m, MCZ 8081, 45882; Chanchamayo, 1200 m, FMNH 40619-20; Huacapistana, 11°14'0"S, 75°29'0"W, 1300 m, FMNH 40621; La Merced, Chanchamayo, 11°3'0"S, 75°19'0"W, 1515 m, AMNH 57172; Perené, 10°52'60"S, 75°13'0"W, 1000 m, AMNH 23126-31, 23133, 23137-9, 23143-4, 23146, 23151, 23188, MCZ 29303-4; San Ramón, 11°8'0"S, 75°20'0"W, 800 m, FMNH 40622-4; Tarma, 11°25'11"S, 75°41'27"W, 1300 m, FMNH 45481-3; Ulcumayo: Llaupi, 1400 m, MTD 45921; Valle Chanchamayo, 800 m, FMNH 134451. *Departamento Pasco*: María Teresa (km 19 on road Yaupi-Oxapampa), 10°42'5.6"S, 75°27'22.2"W, 1470 m, BMNH 61.5.22.4 (holotype), MHNSM 19949-54, MTD 46289-94.

Stenocercus trachycephalus.—COLOMBIA: *Departamento Boyacá*: Aquitania, 5°31'11"N, 72°53'15"W, 3216 m, ICN 2821; Laguna de Tota, Las Cintas, 5°37'0"N, 72°52'0"W, 3524 m, ICN 1520-1; Moniquiró, 5°52'60"N, 73°34'29"W, 1780 m, ICN 2414; Paz del Río, 5°59'17"N, 72°45'8"W, 2365 m, ICN 691; San José de la Montaña, 3000 m, ICN 2853. *Departamento Cundinamarca*: Arrayán, 4°33'26"N, 73°56'2"W, 1749 m, ICN 1234; Arrayán, 4°33'26"N, 73°56'2"W, 1749 m, ICN 1235; Bogotá, 4°35'60"N, 74°4'60"W, 2619 m, ICN 495, 1496, 2752, 2820, 2838, 4212-3, 4524, IND-R 312, 1097, USNM 75958, 90064, 92493, 95178, 153973; Bogotá, km 4 Suba-Cota, ICN 5732; Bogotá, páramo de Granizo, ICN 5934; Bogotá, Río Chicó, 2700-2800 m, ICN 1238-46; Guatavita, 4°56'13"N, 73°49'57"W, 2717 m, ICN 1519; Iguaque Flora and Fauna Sanctuary, 3.5 km SE Arcahuato, 3300 m, IND-R 3051-2; km 11 road Bogotá-Choachi, 3000-3200 m, IND-R 262; NW Bogotá, UTA 3425-7; Páramo de Chingaza, ICN 2303, 2306; Parque Nacional Natural Chingaza, La Playa, 4°32'21"N, 73°45'42"W, 3219 m, IND-R 4251-2; Represa del Neusa, ICN 2201; Sabana de Bogotá, Laguna de Herrera, 3000-3100 m, ICN 1232-3, 1494; Sabana de Bogotá, Tabio, 4°55'0"N, 74°5'60"W, 2630-2650 m, ICN 1230; San Cayetano, 4°53'11"N, 73°24'20"W, 2080 m, ICN 6758; Sasaima, 4°53'53"N, 74°26'13"W, 2311 m, IND-R 276; Sibate, 4°29'29"N, 74°15'38"W, 2730 m, IND-R 583-4; Tenjo, 4°52'27"N, 74°8'54"W, 2679 m, ICN 2415; Usaquén, 4°42'0"N, 74°1'60"W, 2727 m, ICN 1236-7; Vía a Choachi, ICN 6252; Zipaquirá, 5°1'42"N, 74°3'30"W, 2892 m, ICN 2818-9; Zipaquirá, Laguna Verde, 3670 m, ICN 6069-73; no specific locality, USNM 153972, 153987-91. *No specific political unit*: Páramo de Sumapas, cerca de Laguna Larga, 3800 m, ICN 2378. *No specific locality*: SDSU 1692-5.

Stenocercus variabilis.—PERU: *Departamento Junín*: 16 km (by road) NNE Palca, 11°20'46"S, 75°34'7"W, 2540 m, MCZ 178166, USNM 299545-9; 28 km (by road) SW San Ramón, 11°7'59"S, 75°20'0"W, 2070 m, USNM 299612; 4 km W Palca, 11°21'0"S, 75°36'0"W, 3000 m, KU 134175; 5 km W Palca, 11°20'45"S, 75°36'30"W, 3000 m, KU 134176-9; Huacapistana, 11°13'60"S, 75°28'60"W, 1557 m, FMNH 40617; Huasqui, near Tarma, 11°25'33", 75°45'15"W, 3822 m, MCZ 45820-1; Palca, 11°20'46"S, 75°34'7"W, 2875 m, BMNH 1946.8.11.89-91 (syntypes); Tarma, 11°25'11"S, 75°41'27"W, 3500 m, FMNH 134425.

Stenocercus varius.—ECUADOR: *Provincia Cotopaxi*: Reserva Integral de Bosque Nublado La Otonga, 0°44'0"S, 78°59'0"W, 2000–2200 m, QCAZ 3118; Peñas Coloradas, QCAZ 1695; San Francisco de Las Pampas, 0°26'0"S, 78°57'0"W, QCAZ 86–91, 2015. *Provincia Pichincha*: 5 km E Chiriboga, 0°14'20"S, 78°43'57"W, USNM 201317; Llambo, 0°1'0"N, 78°40'0"W, USNM 201318–20, 201322; Estación Forestal La Favorita, 0°14'0"S, 78°46'0"W, 1900 m, FHGO 354, 412, 424, 445; Reserva Florística Ecológica Río Guajalito, 0°14'0"S,

78°48'0"W, 1840 m, QCAZ 717, 719, 1334, 3046, FHGO 337; Reserva Maquipucuna, 00°07'38"N, 78°40'49"W, FHGO 2939; Río Blanco, EPN 5932; Tandapi, 0°25'0"S, 78°47'0"W, 1460 m, QCAZ 590–1, 593–6. *No specific political unit*: Las Máquinas, AMNH 27135. [*Provincia Pastaza*]: Mera, Río Pastaza (in error), AMNH 60602–4. NO SPECIFIC LOCALITY: BMNH 71.4.16.53 (holotype).

Stenocercus sp.—BOLIVIA: *Departamento Cochabamba*: Yungas de Cochabamba, UMMZ 68115 (2 specimens).