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A NEW SYSTEMATIC ARRANGEMENT FOR *PHILODRYAS SERRA* (SCHLEGEL) AND *PHILODRYAS PSEUDOSERRA* AMARAL (SERPENTES: COLUBRIDAE)

By Robert A. Thomas and James R. Dixon

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W. W. Newcomb, Director

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A NEW SYSTEMATIC ARRANGEMENT FOR *PHILODRYAS SERRA* (SCHLEGEL) AND *PHILODRYAS PSEUDOSERRA* AMARAL (SERPENTES: COLUBRIDAE)

by Robert A. Thomas* and James R. Dixon**

INTRODUCTION

Following publication of the "Catalogue of the Neotropical Squamata" by Peters and Orejas-Miranda (1970) and Peters and Donoso-Barros (1970), there has been a resurgence of interest in South American reptiles. Many persons hampered with poor libraries were able to tentatively identify old and poorly known material long stored on collection shelves. Such activities resulted in the discovery of numerous chaotic systematic arrangements and, in turn, initiated revisions of various taxonomic units. This chain of events has produced a better understanding of systematic relationships among many difficult groups of reptiles, especially the snakes.

Recent revisionary studies of the colubrid snake genus *Philodryas* Wagler (Thomas 1976a) have shown that two species traditionally included in the genus, *P. serra* (Schlegel) and *P. pseudoserra* Amaral, constitute a distinct genus, sharing numerous features which indicate their congeneric nature. They are virtually identical in habitus, pattern, osteology, and overall squamation (including microornamentation), being exclusively diagnosed from one another only on the basis of number of ventral scales, dorsal scale carination, and hemipenial features. The purpose of this study was to examine the relationships of *Philodryas serra* and *P. pseudoserra* with respect to the other species of the genus.

Nomenclatural History of the Species. Only two synonyms of *Philodryas serra* were recognized by Boulenger (1896: 134) and Peters and Orejas-Miranda (1970: 245): *Galeophis jani* Berthold and *Teleolepis striaticeps* Cope. *Galeophis jani* was questionably placed in the synonymy of *P. serra* by Boulenger (1896: 134). The subcaudal number of 163 given by Berthold (1859: 181) is the only factor that renders their conspecificity doubtful. We have examined the holotype of *G. jani* (ZMUG 518a) and found it to have 103 subcaudals. The number cited by Berthold seems to have been a *lapsus calami. Galeophis jani* can now be placed with certainty in the synonymy of *P. serra.*

Examination of the holotype of *Teleolepis striaticeps* (MCZ 2909) reveals that it is not conspecific with *Philodryas serra,* but with *P. pseudoserra.* It is a female with 201 ventrals (191-209 in *pseudoserra* females vs. 218-237 in *serra* females) and smooth scales (vs. keeled in *serra).* The species-group

*Department of Biology, Texas A&M University, College Station, Texas 77843.

**Department of Wildlife & Fisheries Sciences, Texas A&M University, College Station, Texas 77843.

name *striaticeps* antedates *pseudoserra* by 67 years. Since the species-group name *pseudoserra* has been used fewer than 10 times, the Law of Priority may be invoked in resurrecting the older name as *Philodryas striaticeps* and placing *P. pseudoserra* in its synonymy.

Another name that should be mentioned is *Philodryas serra* var. *laevis* Jan (1863:84). Our efforts to locate the type for comparison have failed and it has not been mentioned again in the literature. Although its varietal name suggests smooth scales, it was not diagnosed from *P. serra* by Jan, thus, *P. serra* var. *laevis* is a *nomen nudum* and need not be discussed further.

Methods and Materials

Ventral scales were counted by the method of Dowling (1951); subcaudal counts include the distal spine. Dorsal scale row reduction formula summations are after Thomas (1976b). Scales used in the electron microscopy were prepared by the techniques described by Cole and Van Devender (1976:458-459) and individuals in various stages of their shedding cycle were examined (basic morphology was found to be consistent). Hemipenes dissected *in situ* were cut along their ventral surface. Descriptions include the morphology of the ventral lobe of the bilobed organ. All hemipenial lengths are expressed in terms of subcaudals. Abbreviations used include SC (subcaudals), LOA (length overall), and SVL (snout-vent length). All counts given in the descriptions are frequencies within the hypodigm; specific labials are identified by Roman numerals. The following abbreviations are used for museums from which specimens were cited:

AMNH	American Museum of Natural History, New York
BMNH	British Museum (Natural History), London
CM	Carnegie Museum of Natural History, Pittsburgh
FMNH	Field Museum of Natural History, Chicago
IRSNB	Institut Royal des Sciences Naturelles de Belgique, Brusselles
MCZ	Museum of Comparative Zoology, Harvard Univ., Cambridge
MNHP	Museum National d'Histoire Naturelle, Paris
MSNG	Museo Civico de Storia Naturale "Giacomo Doria," Genova
NMB	Naturhistorisches Museum, Basel
NMW	Naturhistorisches Museum, Vienna
NRS	Naturhistoriska Riksmuseet, Stockholm
RMNH	Rijksmuseum van Natuurlijke Histoire, Leiden
SMNS	Staatliches Museum für Naturkunde, Stuttgart
UMMZ	Museum of Zoology, University of Michigan, Ann Arbor
USNM	National Museum of Natural History, Washington
ZIMH	Zoologisches Institut und Zoologisches Museum, Hamburg
ZMB	Zoologisches Museum an der Humbolt-Universität, Berlin
ZMUG	Zoologisches Institut und Museum, Universität Göttingen
ZSM	Zoologisches Staatsmuseum des Bayerischen Staates, München
ZUMC	Universitetes Zoologiske Museum, Københaven

Results and Discussion

A number of characters serve to separate *serra* and *striaticeps* from all other species of *Philodryas*.

Tail morphology. The distal portion of the tail in juveniles of both species have the exposed tips of the scales flared out from the main axis (fig. 1B). In *serra*, this feature is ontogenetically lost and was used as a diagnostic feature between the species by Amaral (1937), as shown in figure 1A. Flared subcaudal scales are not seen in any other species of *Philodryas* nor any other Neotropical snake genus. An additional feature is that the number of scale rows around the tail is consistently higher than in other species of *Philodryas* at 10 SC from the tip and usually at 30 SC (table 1).

Macroscopic scale structure. *Philodryas serra* has keeled dorsal scales which, especially posteriorly, are produced into serrations in both sexes (fig. 2). Variation in development of serrations is great, possibly leading Hoge and Garcia (1949) to erroneously consider it a sexually dimorphic character. To our knowledge, this is the only colubrid species other than the species of *Dasypeltis* having this character.

Microscopic scale structure. Electron microscopic examination of dorsal scales of all species of *Philodryas* (auct.) revealed that *serra* and *striaticeps*

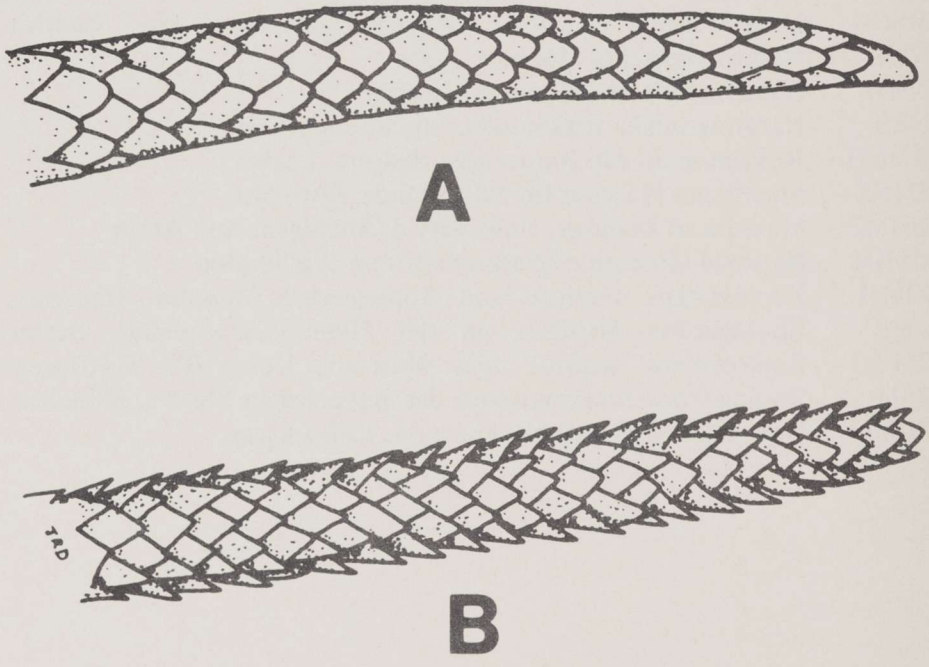


Fig. 1.—Distal tail morphology of adult *Philodryas serra* (A) and of juvenile *P. serra* and all ages of *P. striaticeps* (B).

TABLE 1. Number of scale rows (including subcaudals) around the tail of various *Philodryas*. Counts taken 30 and 10 subcaudal scales from tip of tail. Number of scales around tail followed parenthetically by sample size.

SPECIES	30 SC	10 SC
P. aestivus	6(4)	6(2), 4(2)
P. baroni	6(2)	6(2)
P. borellii	8(1), 6(8), 4(1)	6(9), 4(1)
P. burmeisteri	6(2)	6(2)
P. chamissonis	6(7)	6(5), 4(2)
P. mattogrossensis	6(3)	4(3)
P. nattereri	6(11)	6(5), 5(1), 4(5)
P. olfersi	6(14)	6(7), 5(2), 4(5)
P. patagoniensis	7(1), 6(13), 5(2)	6(5), 4(11)
P. psammophideus	6(19)	6(14), 4(5)
P. tachymenoides	8(1)	6(1)
P. viridissimus	6(4), 5(1), 4(11)	4(16)
P. serra	8(4)	8(4)
P. striaticeps	10(3), 8(9)	10(6), 9(1), 8(5)

possess ultrastructural features different from all other congeners (fig. 3). Their microornamentation consists of densely associated papillae instead of the Overhäuchten laminae (*sensu* Stewart and Daniel 1975: 127) characteristic of all other *Philodryas*.

Karyology. The diploid number of *serra* is 28, while all other species of *Philodryas* whose karyotypes are known *(P. aestivus, P. olfersi, P. patagoniensis)* have 36 (Gilboa 1975: 111); *striaticeps* has not been karyotyped.

Hemipenes. The hemipenes of *serra* and *striaticeps,* like those of other *Philodryas* species, are typical of the xenodontine alsophiini (Dowling 1975: 198) (fig. 4). The two differ from all other species of *Philodryas* in the following features: deep calyces absent from asulcate side of organ; band of small spines present between bases of lobes on asulcate surface; lobes calyculate laterally, with calyculate area bordered by spines; top of lobes, and intervening area, nude with a papillate median ridge; sulcus spermaticus divides near base of lobes and the fork thus formed produces an obtuse angle (in fig. 4A, the sulcus of the left lobe appears to be a derivative of a continuous sulcus extending from the base to the right lobe); sulci terminating on lateral surface of lobes in calyculate depression; and absence of enlarged spines below sulcus bifurcation.

Skull. The skulls of *serra* and *striaticeps* are similar to those of other species of *Philodryas,* but several differences are noteworthy. Both *serra* and *striaticeps* have an abrupt enlargement of dentary teeth anterior to the mental foramen (fig. 5). The same description may be applied to palatine teeth anterior to the maxillary process. The anterior-most palatine teeth in *serra* and *striaticeps* are always larger than adjacent maxillary teeth and are equal to or larger than the postdiastemal teeth.

On the basis of data presented above, it is clear to us that the nominal taxa *Philodryas serra* (Schlegel) and *P. striaticeps* (Cope) together constitute a distinct genus of Neotropical colubrid snake. The earliest available name is *Tropidodryas* Fitzinger (1843: 26), whose type-species is *Herpetodryas serra* Schlegel. The combination *Tropidodryas serra* has been used by Cope (1884: 192) and Beçak et al. (1966).

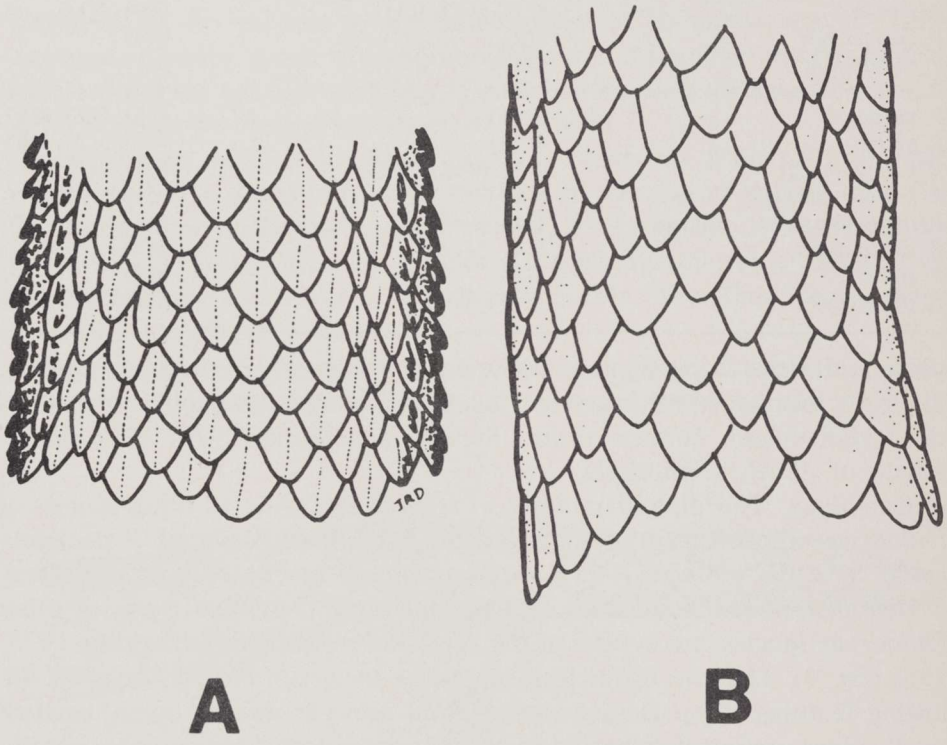


Fig. 2.—Dorsal scales near the vent of *Philodryas serra* (A) and *P. striaticeps* (B). Serrations in *P. Serra* are less prominent anteriorad.

SPECIES ACCOUNTS

Tropidodryas Fitzinger

Tropidodryas Fitzinger, 1843:26 (type-species by original designation, *Herpetodryas serra* Schlegel).

Philodryas Wagler (part): Günther 1858: 125.

Galeophis Berthold 1859: 181. (type-species by monotypy, *Geleophis [sic] jani* Berthold).

Teleolepis Cope 1869: 153 (type-species by monotypy, *Teleolepis striaticeps* Cope).

Definition and Diagnosis. Snakes of the colubrid xenodontine Alsophiini characterized by the following combinations of characters: hemipenes bilobed, calyculate on outer surfaces of lobes only, spines extending around border of calyculate area, no enlarged spines on lower half of unlobed surface, asulcate surface acalyculate with spinules at base of lobes; tip of tail with eight scale rows, the individual scales being flared at their posterior margins (most obvious in juveniles of both species; retained in adult *striaticeps);* anterior palatine teeth always larger than anterior maxillary teeth, and equal to or larger than postdiastemal maxillary teeth; pupil round; dorsal scale rows reducing in numbers posteriorly (usually 21-21-17 or 21-21-15); microornamentation of dorsal scales consists of papillae which are not arranged in individual Oberhauchten cells; dorsal pattern consists of a series of mid-dorsal and lateral intercalary blotches.

Tropidodryas is diagnosed from *Philodryas* in the preceding section (table 2). The combination of characters given above should serve to distinguish *Tropidodryas* from all other snake genera.

Content. Two species: *T. serra* (Schlegel) and *T. striaticeps* (Cope).

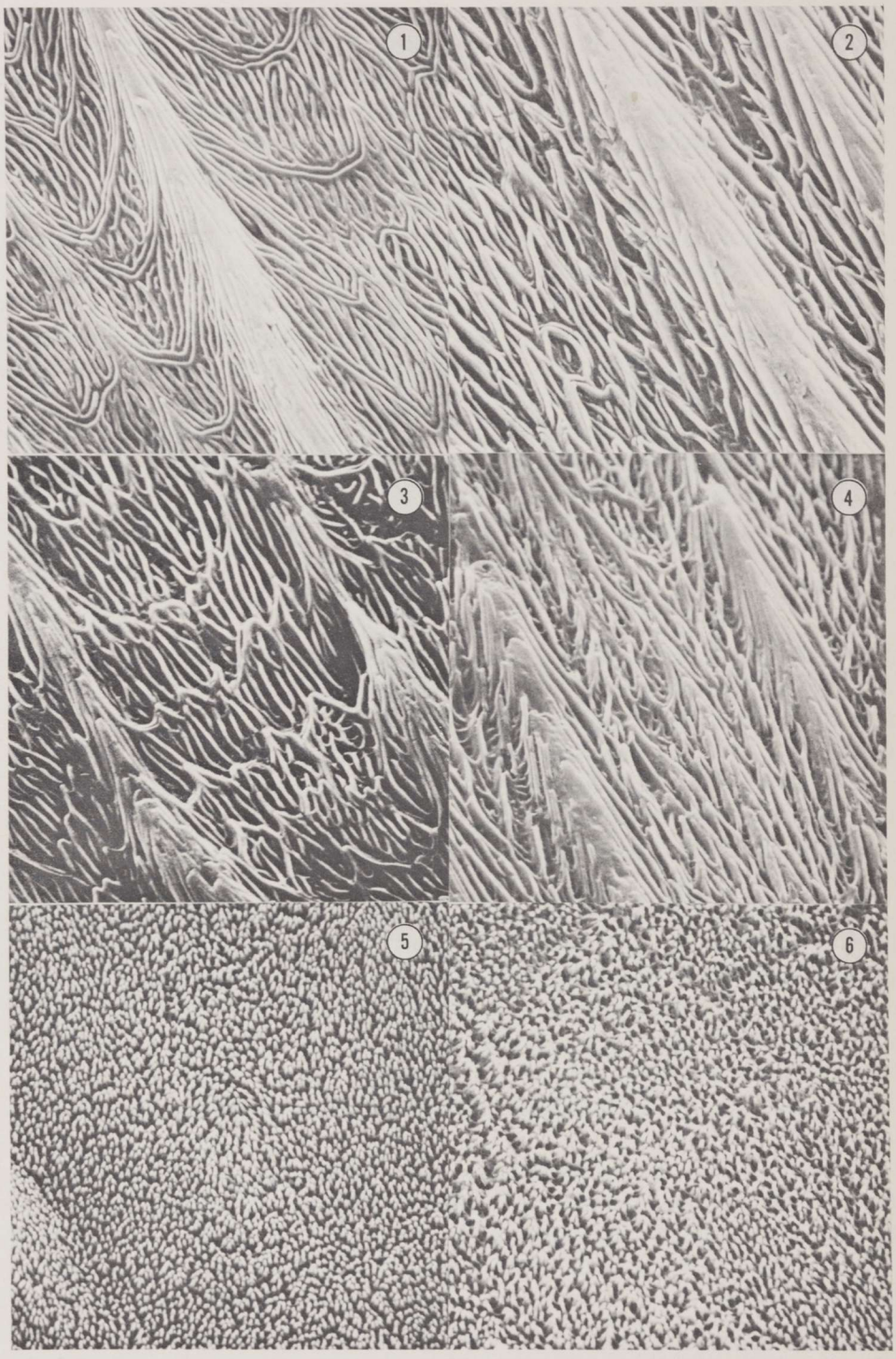
Tropidodryas serra (Schlegel)

Herp. [etodryas] Serra Schlegel 1837: 180-181 + Pl. VII, Figs. 1 & 2.
Dryophylax serra (Schlegel): Duméril 1853: 508.
Philodryas serra (Schlegel): Günther 1858: 125.
Geleophis [sic] jani Berthold 1859: 181. Holotype: ZMUG 518a, an adult female from Bahia, Brasil (tag on specimen gives Santa Catarina, Brasil).
Chlorosoma serra (Schlegel): Amaral 1929: 105.
Philodryas serra (Schlegel): Amaral 1937: 205.

Of the two syntypes of *Tropidodryas serra,* the principal specimen used (and apparently figured) was RMNH 624 and is here designated the lectotype. It is an adult female with 231 ventrals, a divided anal plate, 104 subcaudals, and an abbreviated dorsal scale row formula of 21-21-17. The other specimen, MNHP 3845 (termed the "paratype" by Guibé and Roux-Estéve (1972), is the paralectotype. It is a subadult female with 228 ventrals, a divided anal plate, 99 subcaudals, and an abbreviated dorsal scale row formula of 21-21-17.

Diagnosis. A species of *Tropidodryas* separable from its only known congener in having keeled scales and 218-237 ventrals (vs. smooth scales and 179-209 ventrals in *T. striaticeps).*

Description. Largest male 1053 mm LOA, tail 217 mm; largest female 1254 mm LOA, tail 219 mm; smallest individual a female 314 mm LOA, tail 66 mm; tail/LOA 0.18-0.22 ($\bar{x}$=0.202) in males, 0.18-0.20 ($\bar{x}$=0.195) in females; usual colubrid complement of head scales present; supralabials 7(2) or 8(26), III & IV (2) or IV and V (26) entering orbit; infralabials 9(5), 10(21), or 11(2); 5(5) or 6(23) infralabials contacting both genials on each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side; loreal single; preoculars 1(27) or 2(1) (92.9% contacting frontal); postoculars 3(25) or 4(3); temporals 1+2+4(1), 1+3+3(1), 1+3+4(1), 2+3(7), 2+3+4(4), 2+3+5(2), 2+4(5), 3+3+5(1), or 3+4(2); ventrals 219-230 ($\bar{x}$=224.0) in males, 218-237 ($\bar{x}$=229.6) in females; anal plate divided (7) or entire (7); subcaudals in two rows, 95-111 ($\bar{x}$=105.0) in males, 93-105 ($\bar{x}$=99.4) in females; juveniles with 156-182 ventrals anterior to umbilical scar (2 or 3 scales in scar); dorsal scales keeled (serrate toward rear), normally with two apical pits; abbreviated dorsal scale row formula 21-21-17(11), 22-19-17(1), or 23-21-17(2), with the following summation for complete formulae:

	[4] 10+11	$\bar{x}$=129.0		[2] 8+9			
21(10)	[6] 3+4	(120-143)	19	[4] 3+4	$\bar{x}$=133.5	17	$\bar{x}$=226.5
	[7] 3+4	(120-146)		[4] 9+10	(122-147)		(218-237)
	[2] 10+11	$\bar{x}$=130.9		[6] 9+10	(125-151)		
	[1] 4+5			[2] 3+4	$\bar{x}$=136.7		
				[2] 8+9			

Maxilla with 13(4), 14(7), or 15(1) ($\bar{x}$=13.8) prediastemal teeth plus two weakly grooved postdiastemal teeth; dentary teeth 20(3), 22(6), 23(2), 24(1), or 25(1) ($\bar{x}$=22.1); palatine teeth 7(2); pterygoid teeth 15(1) or 16(1).

A brief description of the *in situ* hemipenis (based on IRSNB 9842) follows: retracted organ extends to rear of SC 10; lobes bifurcate at rear of SC 6; *m. retractor penis magnus* originates at SC 29 and is bifurcate anteriorad for 3SC; sulcus spermaticus bifurcates at rear of SC 3; single row of enlarged spines on a ridge along each lateral surface of lobe and continuous across distal tip, terminating proximally just below bifurcation of lobes; medial surface of lobes nude with two parallel ridges each bearing a single apical row of slightly recurved papillae; ventral surface with papillate calyces; sulcus spermaticus extends along ventral surface of lobe and terminates just below tip of lobe; spinules present from SC 2 to point of sulcus spermaticus bifurcation.

Overall color in preservative shades of brown and cream; head usually with three longitudinal stripes of varying lengths and often broken with various laterally connecting stripes; area between stripes cream-brown with suffusion of brown pigment; a dusky brown pigmented stripe extending around rostral through eye and across temporal region past rear corner of mouth; supralabials variously pigmented, but basically cream; lower surface of head cream with scattered pigment clusters; infralabials usually margined by dark pigmentation, but frequently (especially anteriorad) totally pigmented; dorsal body pattern consists of a series of dark brown, squarish blotches

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Fig. 3.—Scale microornamentation of selected species of *Philodryas*. [1] *P. aestivus*, CM 58983; [2] *P. mattogrossensis*, ZSM 9/1928; [3] *P. baroni*, ZSM 2080/0; [4] *P. nattereri*, ZSM 79/1928; [5] *P. serra*, ZMB 5435; [6] *P. striaticeps*, ZMB 24166. All other species of *Philodryas* are similar to 1-4. Note papillae of *serra* and *striaticeps* vs. overlain Oberhäuchten cells of others. All photographs taken just posterior to apical pits of middorsal scales on neck at 5000X.

TABLE 2. Diagnostic characters between *Philodryas* and *Tropidodryas*

CHARACTER	*Philodryas*	*Tropidodryas*
Flared tail	Absent	Present (juvenile *serra* and all *striaticeps)*
Scales around tail (10 SC from tip)	6 or less	8 or more
Serrate dorsal scales	Absent	Present (*serra* only)
Dorsal scale ultra-structure	Laminae	Papillae
Hemipenes	Lobes totally calyculate; enlarged calyces on asulcate surface; non-sculptured; many spines below fork of sulcus.	Lobes with nude areas; no enlarged calyces on asulcate surface; sculptured; few or no spines below fork of sulcus.
Abrupt enlargement of dentary teeth anteriorad	Absent	Present
Anterior-most palatine teeth larger than adjacent maxillary teeth and equal to or larger than post-diastemal teeth.	Absent	Present

(26-39, $\bar{x}$=31.2), often with faint blotches in interspaces (fig. 6A); lateral intercalary spots or areas suffused with brown pigment present; interblotch area usually heavily suffused with dark pigment; anterior portion of tail usually as dorsum, but suffusion of pigment posteriorly obscures pattern; ventral pattern consists of diffusely pigmented areas scattered on a cream ground color (fig. 6B); venter of tail normally heavily pigmented.

Distribution and habitat. The range of *T. serra* (fig. 7) is characterized by Hueck and Seibert (1972:20-22) as evergreen tropical rainforest.

Life history notes. Little has been recorded about the habits of this species. Uzzell (1959:14) reported a specimen that ate two teiid lizards, *Placosoma glabellum.* Two specimens examined by us contained an unidentifiable teiid lizard (BMNH 73.8.25.7) and a *Hemidactylus mabouia* (MNHP 5930). Amaral (1933: 4) stated that they are generalized feeders.

Remarks. Specimens cited in the literature as *Tropidodryas serra* that can be identified as *T. striaticeps* include those of Duméril et al. (1854: 113-15, in part), Günther (1861: 14), Jan and Sordelli (1879: Pl. IV, Fig. 1), Boulenger (1896: 135, specimens a, b, and f), Jensen (1900:109), and Müller (1927: 300, number 672).

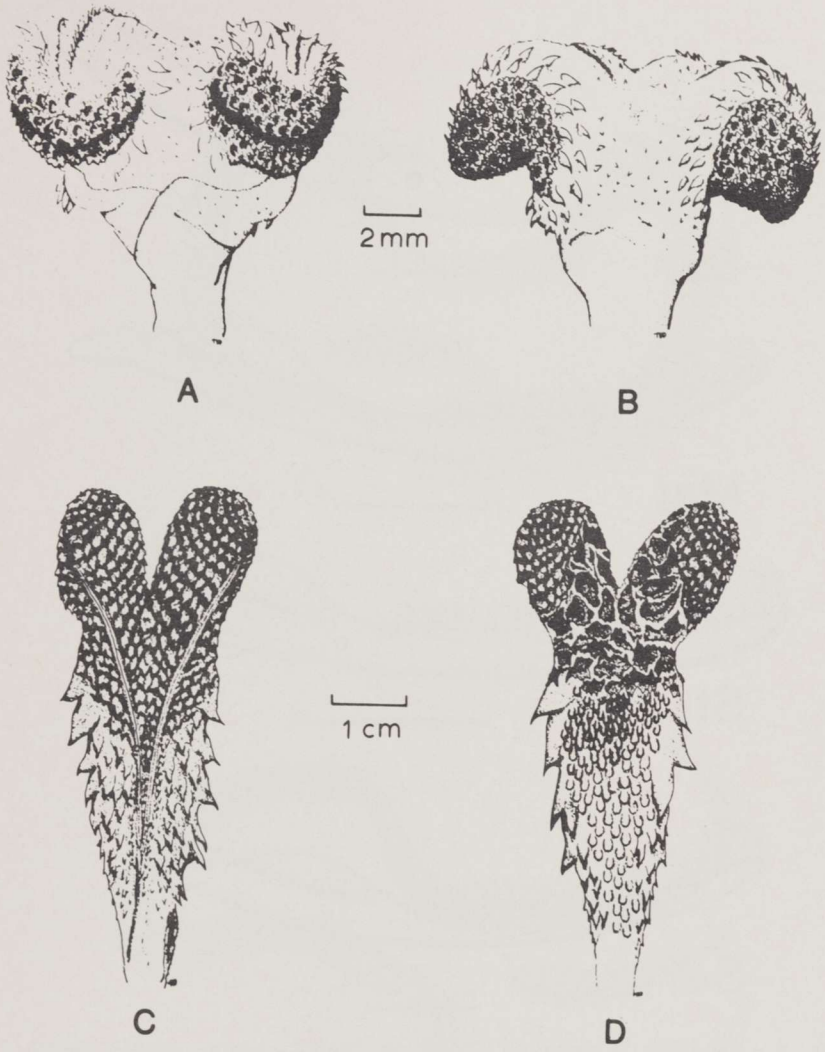

Fig. 4.—Hemipenis of *Philodryas striaticeps* (A, B; MNHP 1962.445) and typical *Philodryas* organ (C, D; *P. nattereri*, UMMZ 108993).

Tropidodryas striaticeps (Cope)

Teleolepis striaticeps Cope 1869: 153-54.
Philodryas pseudo-serra Amaral 1937: 205-11. Holotype: Instituto Butantan 802, a female from Pôrto Martins, Estado de São Paulo, Brasil.

Type and type locality. The holotype, MCZ 2909 (cited as "909" by Cope 1869: 154, but noted to be a presumed *lapsus calami* by Barbour and Loveridge 1929: 349), is a juvenile female from "Brasil," collected by George Sceva on the Thayer Expedition of 1864-1865.

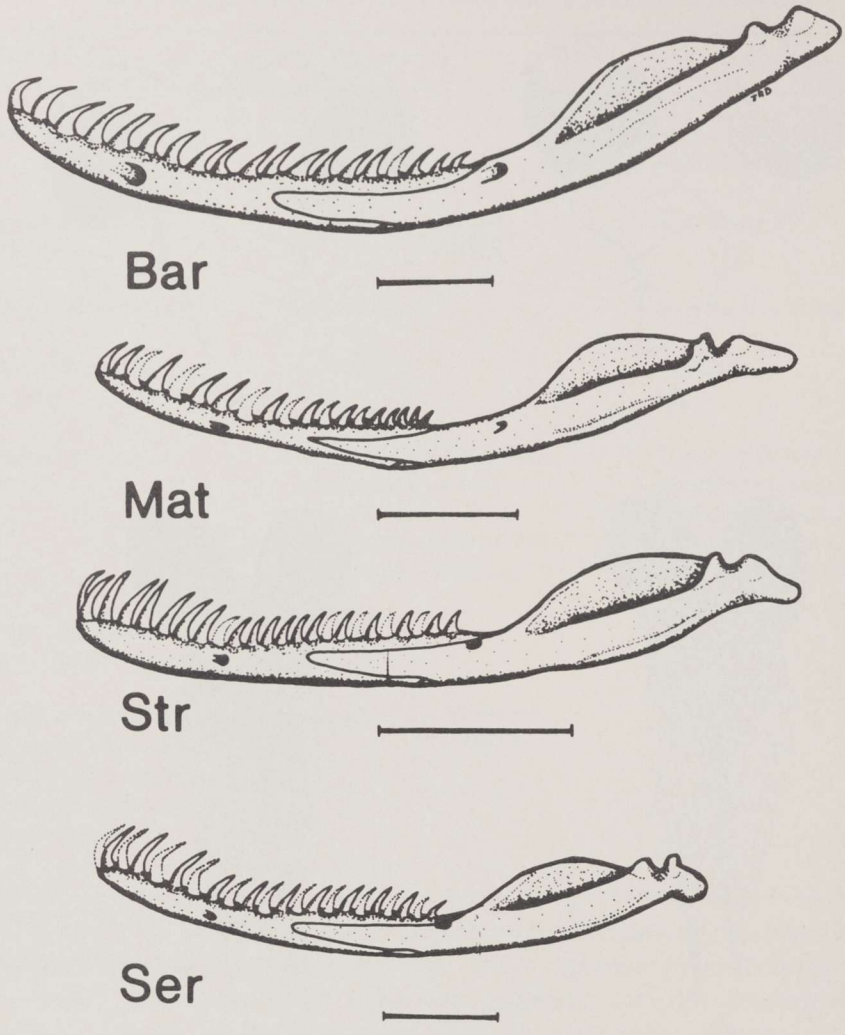

Fig. 5.—Mandibles of selected *Philodryas*. Bar=*P. baroni*, Mat=*P. mattogrossensis*, Str=*P. striaticeps*, and Ser=*P. serra*. Note abrupt enlargement of dentary teeth anterior to mental foramen in *P. striaticeps* and *P. serra*. Line equals 5 mm.

Diagnosis. A species of *Tropidodryas* separable from its only known congener in having smooth scales and 179-209 ventrals (vs. keeled scales and 218-237 ventrals in *T. serra.)*

Description. Largest male 780 mm SVL, tail incomplete; largest female 1236 mm LOA, tail 219 mm; smallest individual a male 284 mm LOA, tail 65 mm; tail/LOA 0.20-0.25 ($\bar{x}$=0.228) in males, 0.19-0.22 ($\bar{x}$=0.209) in females; usual colubrid complement of head scales present; supralabials 7(2), 8(82), or 9(2), III & IV (2), IV & V (82), or V & VI (2) entering orbit; infralabials 9(3), 10(72), or 11(11); 5(4), 6(81), or 7(1) infralabials contacting both genials on each side; loreal 0(2), 1(82), or 2(2); preoculars 1(82) or

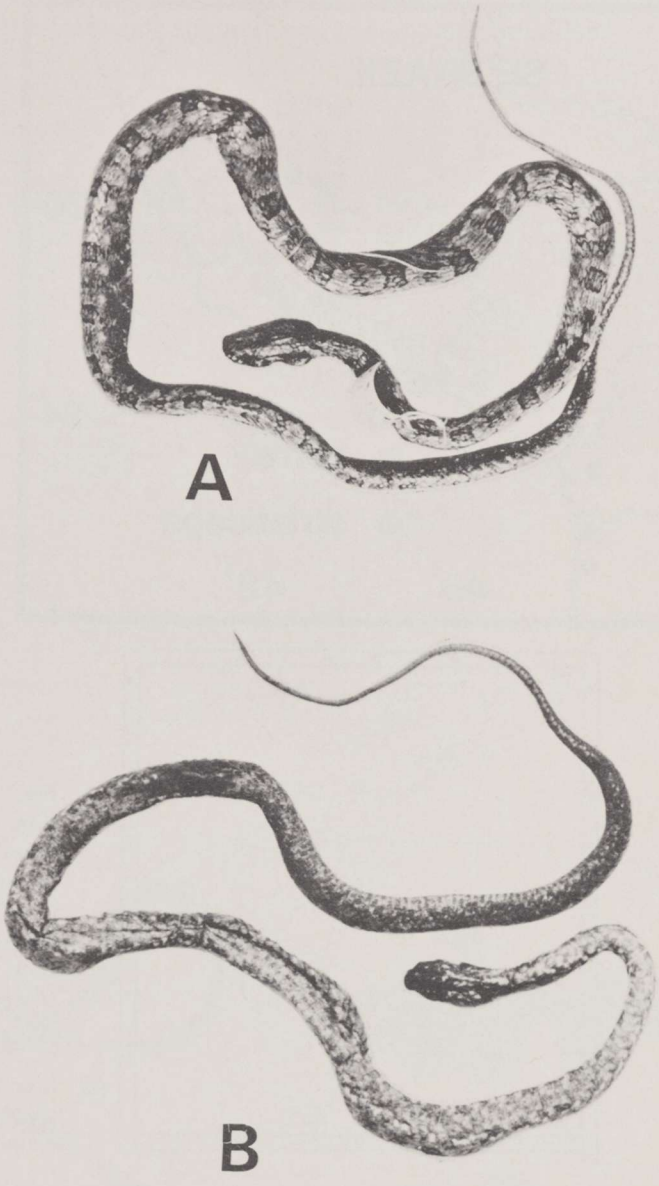

Fig. 6.—Paralectotype of *Tropidodryas serra* (MNHP 3845).

2(4) (87.2% contacting frontal); postoculars 2(6), 3(79), or 4(1); temporals 1+2+2(1), 1+2+3(3), 1+3(6), 1+3+3(3), 1+3+4(17), 1+3+5(2), 2+2+3(1), 2+3(7), 2+3+4(27), 2+3+5(8), 2+4(1), 2+4+2(1), 3+3(1), 3+3+4(1), 3+3+5(1), or 3+4(4); ventrals 179-202 ($\bar{x}$=189.6) in males, 191-209 ($\bar{x}$=199.4) in females; anal plate divided (42) or entire (1); subcaudals in two rows, 72-117 ($\bar{x}$=109.5) in males, 88-116 ($\bar{x}$=106.3) in females; juveniles with 154-163 ventrals anterior to umbilical scar (2 or 3 scales in scar); dorsal scales smooth, usually with two apical pits; abbreviated dorsal scale row

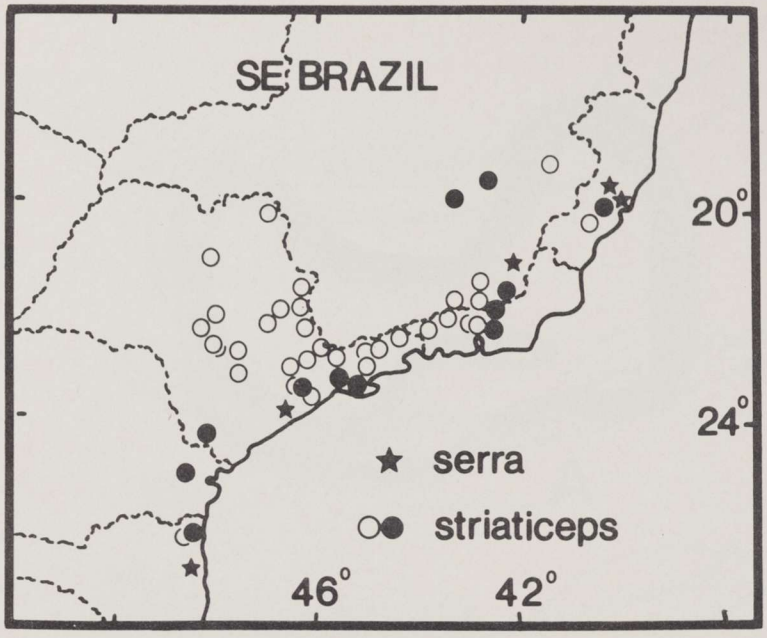

Fig. 7.—Distribution of *Tropidodryas* based on specimens examined and verified literature citations. Dots = *T. striaticeps* examined, open dots = *T. striaticeps* literature records, stars = *T. serra* examined.

formula 19-21-15(1), 21-21-15(12), 21-21-16(3), 21-21-17(26), or 23-21-17(1), with the following summation for complete formulae:

		[1]	-10			[1]	7+8							
		[1]	2+3			[1]	-9							
		[4]	10+11			[1]	4+5							
		[5]	9+10	$\bar{x}$=115.1		[5]	8+9							
21(10)		[12]	3+4	(109-124)	19	[6]	9+10	$\bar{x}$=120.0	17					16
		[12]	3+4	(106-124)		[9]	3+4	(113-129)		[2]	8+9	(126-151)		
		[7]	9+10	$\bar{x}$=116.1		[7]	3+4	(116-129)				$\bar{x}$=138.5		
		[2]	10+11			[6]	8+9	$\bar{x}$=121.1						
		[1]	8+9			[5]	9+10							
		[1]	4+5			[3]	4+5							
						[1]	-9							
						[1]	10+11							

	[1]	2+3	$\bar{x}$=171.5		$\bar{x}$=193.3
16	[1]	7+8	(161-182)	15	(181-209)
	[2]	7+8	(160-180)		
	[1]	2+3	$\bar{x}$=167.3		

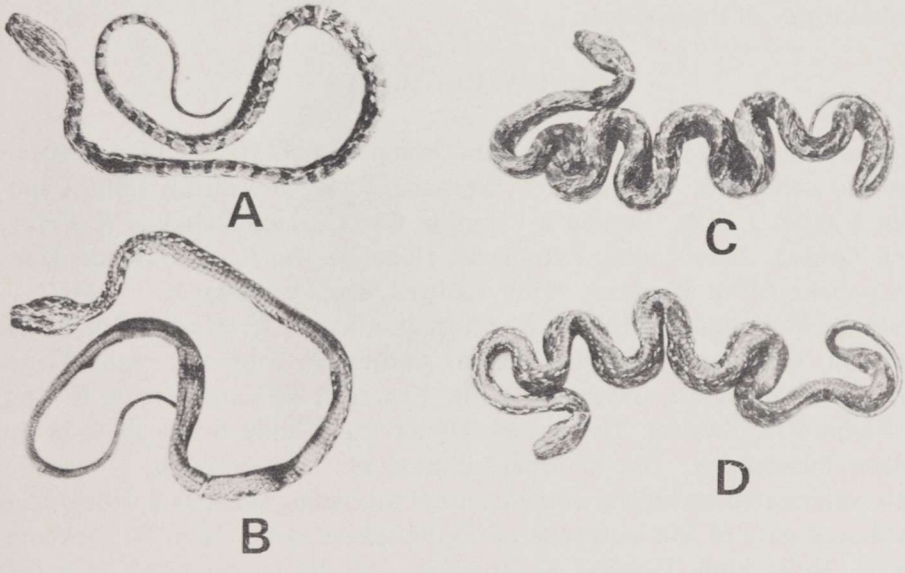

Fig. 8.—Dimorphic color patterns in *Tropidodryas striaticeps*. A, B: light phase (MCZ 2909, holotype); C, D: dark phase (NRS 1229).

Maxilla with 13(3), 14(6), 15(7), 16(9), or 17(2) ($\bar{x}$=15.1) prediastemal teeth plus two weakly grooved postdiastemal teeth; dentary teeth 20(1), 21(2), 22(2), 23(2), 24(10), 25(5), or 30(1) ($\bar{x}$=24.2); palatine teeth 7(2); pterygoid teeth 18(2).

The description of a typical *in situ* hemipenis (ZMB 6005) follows: retracted organ extends to middle of SC 8; lobes bifurcate at rear of SC 4; *m. retractor penis magnus* originates at SC 22 and is bifurcate anteriorad for 2 SC; sulcus spermaticus bifurcates at rear of SC 2; double row of enlarged spines on a ridge along each lateral surface of lobe and continuous across distal tip, terminating proximally just below bifurcation of lobes; medial surface of lobe nude with a central ridge bearing a single apical row of recurved papillae; ventral surface with papillate calyces; sulcus spermaticus extends along ventral surface of lobe and terminates just below tip of lobe; spinules present from SC 2 to point of sulcus spermaticus bifurcation.

Color pattern in preservative basically the same as for *T. serra,* but differing in the following ways: cream and brown (fig. 8A, B) to black (fig. 8C, D); (of individuals examined, 34% brown; 66% gray to black); dorsal blotches often more rectangular, ranging from 31-42 ($\bar{x}$=37.7); venter with much more pigmentation being evenly distributed, dark black with cream lines or reticulations, or predominantly cream with well defined dark spots; about last sixth of ventral surface of tail immaculate cream.

Distribution and habitat. The range of *T. striaticeps* (fig. 7) is characterized by Hueck and Seibert (1972: 20-22, 24-26) as evergreen tropical rainforest and deciduous mesophytic subtropical forest with numerous evergreen species present.

Life history notes. Müller (1970) presented the only information on the natural history of this species.

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SPECIMENS EXAMINED

Tropidodryas serra

BRASIL. *State unknown:* (NRS 2009; MNHP 3845, 5390). *Bahia:* Locality unknown (BMNH 73.8.25.7 & 9). *Espirito Santo:* Victoria (MSNG 30713), Santa Leopoldina (ZIMH 3001). *Minas Gerais:* Sereno (USNM 100716). *Rio de Janeiro:* Martens (ZMB 5435). *Santa Catarina:* Locality unknown (UMMZ 67224, ZMUG 518a), Blumenau (NMB 11410). *São Paulo:* Locality unknown (UMMZ 63031), Tapirai (IRSNB 9842).

Tropidodryas striaticeps

BRASIL. *State unknown:* (AMNH 6492; MNHP 40, 3844, 3846, 1885. 654-655; NRS 1229; ZUMC 63467-69, 63471; IRSNB 144 [2]; MCZ 2909). *Espirito Santo:* Araguaya (USNM 100751). *Minas Gerais:* Bello Horizonte (MCZ 39410), Lagoa Santa (ZUMC 63470), Fazenda Posse (FMNH 9018). *Paraná:* Serro Azul (MNHP 1961. 699). *Rio de Janeiro:* Locality unknown (MCZ 2666), Theresepolis (NMW 207481-82, 207491-92; BMNH 93.12.22.3), Pôrto Real (BMNH 87.12.29.26), Morro Azul (MCZ 39411), Garoz (ZMB 6005). *Santa Catarina:* Locality unknown (ZMB 26319), Hansa (MNHP 8784), Michaelis (ZMB 2612, 26319). *São Paulo:* Locality unknown (AMNH 31780, MCZ 20788-90, ZMB 24166), São Paulo (UMMZ 79650, SMNS 3410), Santa Branco (IRSNB 9843), Ribeira (MNHP 1962.445), Suzano (MCZ 39410), Leme (AMNH 6492), Santos (BMNH 1908.9.16.2).

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