

POISONOUS SNAKES OF THE WORLD¹

PART I

CHECK LIST OF THE PIT VIPERS VIPEROIDEA, VIPERIDAE, CROTALINAE

BY

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ABSTRACT: An account on the Crotalid snakes with synonymy; type locality; range; vernacular name etc. The genus *Agkistrodon* "sensu auctores" is considered as formed by five genera: *Agkistrodon* for the American species; *Calloselasma* for *C. rhodostoma* and *C. annamensis*; *Deinagkistrodon* for *D. acutus*; *Gloydius* nom. subst. for the Asiatic forms except *Deinagkistrodon*, *Calloselasma* and *Hypnale*, for *H. hypnale*, *H. nepa* and *H. walli*.

The solenoglyphous snakes are included in a superfamily, *Viperoidea* subdivided into two families: *Atractaspidiidae* for the primitive colubrid-like Mole false vipers; *Viperidae* for the vipers with four subfamilies: *Viperinae* (true vipers); *Azemiopinae* (Mole Vipers); *Causinae* (Night adders) and *Crotalinae* (Pit Vipers). The *Crotalinae* are divided in two tribes; *Agkistrodontini* for the genera already mentioned and *Crotalini* for the genera; *Crotalus* and *Sistrurus* (Rattlesnakes); *Bothrops* (American Pit Vipers); *Trimeresurus* (Asiatic Pit Vipers); *Tropidolaemus* (Chin Keeled Pit Vipers) and *Ovophis* (The Mountain and Okinawan Pit Vipers). The subdivision of the genera *Bothrops* and *Trimeresurus* are awaiting for more observations.

This paper is based on the study of several thousands of preserved and live specimens.

INTRODUCTION AND PURPOSE

The last complete revision of the pit vipers of the world is included in the 3th volume of Boulenger's "Catalogue of the Snakes in the British Museum, published 83 years ago, and although not up to date it is still the only one.

Additions to Boulenger's Catalogue were published by Werner (1922-1923). Later Klemmer made the first attempt to elaborate a complete check list of the poisonous snakes of the world publishing his "Liste der rezenten Giftschlangen der Erde" (1963). Klemmer called the attention to the fact that only a few revisions of isolated taxons of poisonous snakes were published in the last 50 (now already nearly 70 years).

Werner's additions were intended only to complete Boulenger's Catalogue.

Klemmer's list although chiefly based on bibliographic compilations and critical review of scientific names in accordance to the international rules of nomenclature is still useful for a quick glance at the recognised species without long and painful research.

As already pointed out by Klemmer (:256) the main purpose was to stimulate critical reviews and contributions from the herpetologists.

With regard to the pit vipers, a few publications of special interest must be quoted:

Klauber's monumental work on the "Rattlesnakes" (1956 and 1972).

Hoge's "Preliminary account on neotropical Crotalinae" (1966).

Hoge and Romano's "Check list of neotropical pit vipers, coral snakes and sea snakes" 1971 and "Synopse das serpentes peçonhentas do Brasil (1973).

Burger's doctoral thesis "Genero of pit vipers" (1971). Altough our studies about the *Bothrops* — *Trimeresurus* — *Tropidolaemus* complex are not complete it is already evident that this complex needs to be split into several taxons. Some of this taxons were revalidated by Burger l.c. for the american pit vipers.

To avoid useless changes in nomenclature we will wait to complete our studies before introducing some of this taxons, and maintain here a more conservative nomenclature.

The publications of the "Vertebrates of the World", (two editions) compiled by: Gainesville Field Station National Fish and Wildlife Service was only a simple list of specific names without any other indication.

The senior author contributed to the 2th edition of this list (*Viperidae* and critical review).

Informed that at least for the moment this list will no more be continued and attending suggestions of several colleagues we decided to publish, not a simple list of the poisonous snakes but a check list including scope of name; important synonymy; type locality, ranges; key to families and subfamilies, redefinition and discusion of the actual status of some taxa.

We submit the following check list with full understanding of its preliminary status in relation to the taxonomic position of the genera *Bothrops* and *Trimeresurus* "sensu auctores".

For the rattlesnakes we followed Klauber's monumental work the "Rattlesnakes", 1th and 2th edition except for the *durissus* subspecies.

Klauber opined that the recognition of the several subspecies revalidated or described by Hoge (1966), (two of them already predicted by Klauber) was premature. Altough there is still much to do in the *durissus* group the subspecies described by the senior author are easily distinguished from each other (except in the northern parts of Venezuela where they are more related to the Central American subspecies).

The rattlesnakes could have been ommited from this check list and substituted by references to Klaubers, Hoge and a few other publications, but in order to attend the completeness of this check list they are included.

We believe that even with these shortcomings the time is ripe to publish a check list on *Crotaline* snakes and that its availability will stimulate critical reviews contributions and sugestion wich will be very useful for our monographic study on *Crotaline* snakes and check list of *Viperidae*.

MATERIAL AND METHODS

This paper is not a simple check list but is based on the study of thousands of preserved and alive specimens, study which included, besides the classical methods in systematical zoology, anatomical studies and electromicroscopy of the stratum corneum.

We have examined all preserved, and alive specimens, in the following museums (With the abbreviations used in this study).

The examination and study of this specimens needed several trips extending over a period of more than ten years and some of this Museums were visited several times.³

AUSTRIA Naturhistorisches Museum, Wien. (N.H.M.W.)

Naturhistorisches Museum, Wien.
(N.H.M.W.)

BELGIUM

Institut Royal des Sciences Naturelles de Belgique, Bruxellas.
(I.R.S.N.B.)

BRAZIL

Instituto Butantan, São Paulo.
(I.B.)

Museu de Zoologia da Universidade de São Paulo.
(D.Z.)

Museu Goeldi, Belém, Pará.
(M.G.)

Museu Nacional do Rio de Janeiro, Rio de Janeiro.
(M.N.R.)

FRANCE

Museum National d'Histoire Naturelle, Paris.
(M.N.H.N.P.)

FRENCH GUYANA

Instituto Pasteur de Cayenne.
(C.I.P.)

Musée de Cayenne.

GERMANY

Senckenberg Museum, Frankfurt a/m Ocidental Germany.
(S.M.F.)

⁽³⁾ Institutions not visited but material received as a loan.

GREAT BRITAIN

British Museum Natural History, Londres.
(B.M.)

IRAN

Institut de Sérum et Vaccins, Razi, Hessarak. (I.R.)

JAPAN

Japan Snake Institut, Yabuzuka, Guma.
(J.S.I.)

NETHERLAND

Rijksmuseum van Natuurlijke Historia, Leyden.
(R.M.N.H.L.)

PORTUGAL

Museu Bocage, Lisboa.
(M.B.L.)

SWEDEN

Linnémuséet, Upsala.
(L.M.)

Naturhistoriska Riksmuseum, Stockholm.
(N.R.S.)

Univ. Upsala
(U.U.)

SURINAM

Surinaam Stichting Museum, Paramaribo.
(S.S.M.)

URUGUAY

* Museo Nacional de História Natural de Montevideo.³
(C.M.N.H.N.)

U.S.A.

The Academy of Natural Sciences of Philadelphia, Philadelphia.
(A.N.S.P.)

The American Museum of Natural History, New York.
(A.M.N.H.)

Carnegie Museum, Pittsburgh.
(C.M.)

Duke University, Department of Zoology Durham, N.C.
(D.Z.D.)

⁽³⁾ Institutions not visited but material received as a loan.

- Field Museum of Natural History, Chicago.
(F.M.N.H.)
- Museum of Comparative Zoology at Harvard College, Cambridge.
(M.C.Z.)
- Stanford University, Division of Systematic Biology Stanford.³
(S.U.)
- State University of New York at Buffalo, Buffalo.
(S.U.N.Y.B.)
- United States National Museum, Smithsonian Institution,
Washington.
(U.S.N.M.)
- University of Illinois Department of Zoology. Urbana Illinois.³
(U.I.M.D.Z.)
- University of Michigan, Museum of Zoology Ann Arbor, Michigan.
(U.M.M.Z.)
- University of Southern California, Allan Hancock Foundation³
Department of Biological Sciences, Los Angeles.
(U.S.C.)
- U.S.S.R.
- Zool. Inst. Leningrad.
(Z.I.L.)
- VENEZUELA**
- Museu de Ciencias Naturales de Caracas.
(M.C.N. CARACAS).

CLASSIFICATION

Superfamily *Viperoidea*

(Solenoglyphous Snakes)

Family *Atractaspidiidae* (*Atractaspididae*) Cope 1860
(Mole False Vipers)

Family *Viperidae* Laurenti, 1768 (Vipers)

Subfamily *Viperinae* Laurenti, 1768
(True Vipers)

Subfamily *Azemiopinae* Liem, Marx et Rabb, 1971
(Mole Vipers)

Subfamily *Causinae* Cope 1860
(Night adders)

Subfamily *Crotalinae* Oppel 1811 (Pit Vipers)

Tribe *Agkistrodontini*
(Copperheads, Moccasins and Mamushi)

Tribe *Crotalini* Gray; 1825 Scale snout
pit vipers Bushmasters and Rattlesnakes.

(^a) Institutions not visited but material received as a loan.

ARTIFICIAL KEY TO THE FAMILIES, SUBFAMILIES AND TRIBES OF THE *Viperoidea*¹

(fig. 1 and 9)

I — No postorbital; head covered with large symmetrical shields as in colubrine snakes eye very small, pupil round (fig. 11), mandibular teeth reduced in number, absent on the anterior and posterior portions of mandibular (fig. 12) *Atractaspidiidae*

(fig. 2)

II — Postorbital bone present; eye normal; mandibular teeth present on the anterior part of mandibular (fig. 13) *Viperidae*

Atractaspidiidae

Contains a single genus.

ARTIFICIAL KEY TO THE *Viperidae*

I — No loreal pit.

A — Head covered with nine large symmetrical shields as in colubridae. (fig. 15 and 16)

1 — Nostril between several scales fig.; dorsais scales keeled and oblique on the sides; pupil round; apical pits present; anterior ventrals in contact with posterior chin shields fangs not extending posteriorly beyond the eye, poison gland generally extending beyond the head (fig. 16) *Causinae*

2 — Nostril into a single nasal; pupil vertical; no apical pits; anterior ventrals not in contact with posterior chin shields; fangs extending posteriorly beyond the eye (fig. 14) *Azemiopinae*

B — Some or all head-shilds broken up into scales or small shields *Viperinae*

II — Loreal pit present *Crotalinae*

ARTIFICIAL KEY TO THE TRIBES OF *Crotalinae*

I — No rattle; large symmetrical shields as in colubridae on top of the head; praefrontals and internasals sometimes broken up in scales or scale-like (fig. 3) shields if broken up, dorsals in 17 rows fig. 6) *Agkistrodontini*

II — Rattle present, if absent no symmetrical shields as in colubridae (sometimes large shields, not of colubrine type present in *Bothrops barbouri* and *T. macrolepis* (fig. 4 and 5) *Crotalini*

GENERA OF *Agkistrodontini*

Agkistrodon "Sensu auctores"

⁽¹⁾ Hoge et Romano Hoge 1981, Mem. Inst. Butantan 42/43:386, 1978/79.

Since Boulenger included in the same genus *Ancistrodon* the genera *Hypnale* Fitzinger, 1843, *Halys* Gray, 1849 (non Fabricius, 1803) and *Calloselasma* Cope (nom. nov. pro *Leiolepis* Duméril, 1853) (non Cuvier, 1829), nearly no attempt was made for the revival of those genera, except by:

- 1957 Chernov who removed *Calloselasma* from the synonymy and gave additional reasons for the revival of the genus.

Unfortunately he was not followed by the authors.

- 1971 Burger in his doctor thesis (1.c.) revived *Calloselasma* and *Hypnale*. Burger used *Agkistrodon* for the American species, *Calloselasma* for the species *rhodostoma* and *Acutus* and *Hypnale* for the other Asiatic species.

- 1977 Gloyd revived *Hypnale* (without mention to Burger's thesis or to Dissertation Abstracts International 32 (10) 1972 but restricted to *Hypnale* only the species *H. hypnale*; *H. nepa* and a new species *H. walli*, giving a good diagnosis.

- 1978 Gloyd describes a new genus *Deinagkistrodon* for the single species *acutus*.

It is already clear to us that *Agkistrodon* "sensu auctores" is a complex of five genera easily separated either by external or cranial characters.

Although several genera have to be recognized it is our opinion that their relationship warrant to recognise them all as belonging to a single tribe.

TRIBE *Agkistrodontini*

Rattleless pit vipers with large symmetrical shields on top of the head; sometimes the internasals and prefrontals broken up into scales or scale-like shields. (fig. 3 and 6).

Contains five genera:

Agkistrodon Beauvois, 1799; *Calloselasma* Cope 1859; *Deinagkistrodon* Gloyd 1978; *Gloydius* nom nov., and *Hypnale* Fitzinger, 1843.

Range: Asia from the borders of Caspian Sea Eastwards to Japan and southwards to Sri-Lanka and Indonesia; North and Central America.

Diagnoses of the genera:

Agkistrodon

A rattleless Pit Viper; nine large symmetrical shields on the upper surface of the head; internasals and praefrontals well developed; dorsals keeled; anterior subcaudals single; upper labials usually forming the anterior border of the loreal pit; snout not produced in a dermal appendage;

skull short and broad; supratemporal (tabular) extending beyond the braincase (fig. 17, 18). Skull very broad as broad or nearly as broad as the distance of praefrontals from posterior end of braincase (fig. 17-18); palatine; not deeply forked (fig. 29); ectopterygoid not hooked, broad and strongly curved, articulated with pterygoid on both internal and external side (fig. 23 and 39).

Contains: 3 species. Most closely related to *Deinagkistrodon* and *Calloselasma*.

Calloselasma

A rattleless Pit Viper related to *Agkistrodon* but dorsal scales smooth; loreal pit separated from the labials; subcaudals paired; palatine with a long anterior process toothless or provided with a single tooth (fig. 33-34); ectopterygoid slender, hooked, and not strongly curved (fig. 42); supratemporals not or only slightly extending beyond the braincase (fig. 21).

Contains: Two species.

Deinagkistrodon

A rattleless Pit Viper related to both *Agkistrodon* and *Calloselasma*. Dorsal scales keeled; snout with a distinct dermal appendage; scales of the lowermost row near the tip of the tail distantly higher than wide, (upper head shields finely granulated (fig. 7-8); loreal pit bordered by the second upper labial; palatine with a dorsal process, deeply forked in front and provided by \pm 5 teeth (fig. 32) ectopterygoid slender not hooked, even more strongly articulated with pterygoid than in *Agkistrodon* (fig. 27 and 41).

Contains: One species.

Gloydius nom subs.

A rattleless pit viper different from, *Agkistrodon*, *Calloselasma* and *Deinagkistrodon* by cranium which is long and narrow (fig. 19) scales of the lowermost row near the tip of the tail not distantly higher than wide, from *Calloselasma* by the keeled dorsals and not hooked ectopterygoid; (fig. 41), from *Deinagkistrodon* by the absence of produced dermal appendage on snout; from both *Agkistrodon* and *Deinagkistrodon* by very short supratemporals not extending posteriorly beyond the braincase (fig. 19).

Hypnale

Distinct from, *Agkistrodon*, *Calloselasma*, *Deinagkistrodon* and *Gloydius* by the praefrontals and internasals which are broken up in scales (fig. 3) by the dorsals which are in 17 rows; by the presence of a very short and strongly hooked ectopterygoid (only slightly hooked in *rhostostoma*).

Contains: Three species.

A more complete description of the genera will be given in a forthcoming publication.

It is interesting to remember that Keegan and al. (406TH. Medical Laboratory special Report 1965) already mentioned "The failure of *acutus* and *halys* antivenins to neutralize *rhodostoma* is not surprising, particularly in view of the dissimilar electrophoric patterns".

Since *Calloselasma rhodostoma* and *Deinagkistrodon acutus* are probably both monotypic it should be interesting to study comparatively the species of the two other Asian genera *Gloydius* and *Hypnale*. (*A. halys* mentioned by Keegan 1.c is actually *Gloydius blomhoffi blomhoffi*.

GENUS *Agkistrodon* Beauvois

Copperheads and Moccasins

- 1799 *Agkistrodon* Beauvois, Amer. Phil. Soc. 4:381.
1802 *Scytale* Latreille (not of Menschen, 1778), Hist. Nat. Rept. 3:158.
Type species: *mokasen*.
1803 *Cenchrus* Daudin, Bull. Soc. Phil. Paris, 3:188.
Type species: *mokasen*.
1826 *Tisiphone* Fitzinger, Neue Class. Rept.: 34-63.
Type species: *cuprea*.
1836 *Acontias* Troost (not of Cuvier, 1817). Ann. Lyc. Nat. Hist. N.Y. 3:190. Type species: *leucostoma*.
1836 *Toxicophis* Troost, Ann. Lyc. Nat. Hist. N.Y. 3:190 Type species:
leucostoma.
Type species: *Agkistrodon mokasen* Beauvois, 1799

Range: Northern America and Central America Southward to Nicaragua.

Agkistrodon bilineatus bilineatus Günther

Mexican Moccasin or Cantil

- 1863 *Ancistrodon bilineatus* Günther, Ann Nat. Hist. London (3) 12:364.
1896 *Ancistrodon bilineatus*; Boulenger (partim), Cat. Sn. brit. Mus., 3:521.
1951 *Agkistrodon bilineatus bilineatus*; Burger et Robertson, Univ. Kansas Sci. Bull., Lawrence, 34:214; pl. 25 Fig. 3.
Type locality: Pacific coast of Guatemala.
Range: Pacific coastal region from southern Mexico to Nicaragua.

Agkistrodon bilineatus taylori Burger et Robertson

Taylor's Moccasin or Taylor's Cantil

- 1951 *Agkistrodon bilineatus taylori* Burger et Robertson, Univ. Kansas Sci. Bull., Lawrence, 34:213; pl. 25, Fig. 1-2.

Type locality: 21 km north of Villagrán (Tamaulipas, Mexico).

Range: Tamaulipas and Nuevo León (México).

Agkistrodon bilineatus russeolus Gloyd

Yucatecan Moccasin or Yucatecan Cantil

- 1972 *Agkistrodon bilineatus russeolus* Gloyd, Proc. Biol. Soc. Washington, 84 (40):327-334.

Type locality: 11,7 km. north of Pisté, Yucatan, México.

Range: Yucatan peninsula, States of Yucatan and Campeche (Mexico) southward into Carozal, northern Belize.

Agkistrodon contortrix contortrix (Linnaeus)

Southern Copperhead

- 1766 *Boa contortrix* Linnaeus, Syst. Nat. 12th ed. 1:373.

- 1853 *Agkistrodon contortrix*; Baird et Girard (partim).

- 1896 *Ancistrodon contortrix*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:522-523.

- 1943 *Agkistrodon mokeson austrinus*, new name pro *Agkistrodon mokeson mokeson* Gloyd et Conant (1934:2) (partim).

- 1948 *Agkistrodon contortrix contortrix*; Klauber, Copeia, Ann Arbor, 1948:8.

Type locality: Restricted by (Schmidt 1953 to Charleston, south Carolina, U.S.A.).

Range: Lowlands areas of Atlantic coastal regions from Maryland to eastern Texas southern Oklahoma, northwards into the Lowland areas of the Mississippi Valley; absent in peninsula of Florida, (U.S.A.).

Agkistrodon contortrix laticinctus Gloyd et Conant

Broad-banded Copperhead

- 1934 *Agkistrodon mokasen laticinctus* Gloyd et Conant, Occ. Pap. Mus. Zool. Univ. Michigan, Ann Arbor, 283:2; pl. 1.1-2.

1948 *Agkistrodon contortrix laticinctus*; Klauber, Copeia, Ann Arbor,
1948:8.

Type locality: Twenty-six miles northwest of San Antonio, Bexar
County, Texas, (U.S.A.).

Range: Central and north-central Texas into central Oklahoma,
northwards to Cowly County, Kansas, (U.S.A.).

Agkistrodon contortrix mokeson (Daudin)

Northern Copperhead

1803 *Cenchrus mokeson* Daudin, Hist. Nat. Rept., 5:358; pl. 60:25, pl.
70:3-4.

1948 *Agkistrodon contortrix mokeson*; Klauber, Ann. Arbor, 1948:8.

Type locality: *restricted*: by (Gloyd et Conant 1943:150) to vi-
cinity of Philadelphia, Pennsylvania U.S.

Range: Massachusetts, Connecticut, southeast New York, northern
New Jersey, Pennsylvania, Maryland, Delaware, Virginia, North
Carolina; eastwards to Indiana and Illinois, (U.S.A.).

Agkistrodon contortrix phaeogaster Gloyd

1968 *Agkistrodon contortrix phaeogaster* Gloyd, Proc. Biol.
Soc. Washington 82:219-232, fig.

Type locality: Mc South Jefferson County Kansas, U.S.A.

Range: Known from type locality.

Agkistrodon contortrix pictigaster Gloyd et Conant

Trans-Pecos Copperhead

1943 *Agkistrodon mokeson pictigaster* Gloyd et Conant
Bull. Chicago Acad. Sci., 7:156; Fig. 10.

1948 *Agkistrodon contortrix pictigaster*; Klauber, Copeia, Ann Arbor,
1948:8.

Type locality: Maple Canyon, Chisos Mountains, elevation 5200 ft,
Breroster County, Texas, U.S.

Range: Trans-Pecos (Texas); (U.S.A.)

Agkistrodon piscivorus piscivorus (Lacépède)

Eastern Cottonmouth Moccasin

1789 *Crotalus piscivorus* Lacépède, Hist. Nat. Serp.: 130.

1875 *Ancistrodon piscivorus* *piscivorus*; Cope, Bull. U.S. N. Mus., Washington, 1:34.

1895 *Agkistrodon piscivorus*; Stejneger (partim) Ann. Rep. U.S.N.M., 1893:406.

1896 *Ancistrodon piscivorus*; Boulenger (partim) Cat. sn. brit. Mus., 3:520.

Type locality: Carolina.

Range: Atlantic coastal plains from southeastern Virginia to tip of Florida through North and South Carolina, Westwards to Escambia County, Florida and Baldwin County, Alabama, U.S.A.

Agkistrodon piscivorus conanti Gloyd

1969 *Agkistrodon piscivorus conanti* Gloyd, Proc. Biol. Soc. Washington, 82:214-232, fig.

Type locality: Gainesville, Alachua County Florida U.S.A.

Agkistrodon piscivorus leucostoma (Troost)

Western Cottonmouth Moccasin

1836 *Acontias leucostoma* Troost, Ann. Lyc. Nat. Hist. New York, 3:176; pl. 5, fig. 1-4 (*Toxicophis* substituted for *Acontias*, *ibid*:190).

1853 *Toxicophis pugnax* Baird et Girard, Cat. N. Am. Rept.:20, fig. 13.

1943 *Agkistrodon piscivorus leucostoma*, Gloyd et Conant Bull. Chicago Acad. Sci., 7:164; Abb. 5, 13, 15.

Type locality *restricted*: (Smith et Taylor 1945): to 10 miles northeast of Bolivar, Hardeman County, Tennessee (U.S.A.) by designation of Neotype.

Range: From Mexican border, Rio Grande Valley through eastern Oklahoma to central Missouri and south Illinois, western Kentucky, Tennessee to Mobil Bay, Alabama; U.S.A.

GENUS *Calloselasma* Cope

1853 *Leiolepis* Duméril. Preoccupied by *Leiolepis* (lizard) Cuvier 1829. Mem. Acad. Sci. France 23:534.

1860 *Calloselasma* Cope (*nom. nov. pro Leiolepis* Duméril 1.c.), Proc. Acad. Nat. Sci. Philadelphia 1860 (1859).

1896 *Ancistrodon*; (partim) Boulenger, Cat. Sn. Brit. Mus., 3:519.

1957 *Calloselasma*; Chernov, Zool. J., 36 (5) :792.

1970 *Calloselasma rhodostoma*; Campden-Main, Simon M. A field guide to the snakes of South Vietnam. Division of Reptiles and Amphibian, U.S. National Museum, Washington, D.C., :96 + fig.

Type species: *Trigonocephalus rhodostoma* Boie, 1827 = *Calloselasma rhodostoma*; (Cope, 1859).

Contains: one species.

Range: Same of the single species.

Calloselasma annamensis (Angel)

Annamenian Pit Viper

1933 *Ancistrodon annamensis* Angel, Bull. Mus. Nat. Hist., Paris (2) 5:277; fig. 1.

Type locality: Vinh-Hoa, Southern Annam, Vietnam.

Range: Known from Southern Vietnam and extreme south-eastern Cambodge.

Calloselasma rhodostoma (Boie) Fig. 53

Malayan Pit Viper

1827 *Trigonocephalus rhodostoma* Boie, Isis, Oken, Jena, 20:561.

1860 *Calloselasma rhodostoma*; Cope., Proc. Acad. Nat. Sci. Philadelphia 1860 (1859).

1864 *Calloselasma rhodostoma*; Günther, Rept. Br. India :391.

1892 *Ancistrodon rhodostoma*; Boettger, Ber. offenb. Ver. Naturk., Offenbach am Main, 29/32 :135.

1896 *Ancistrodon rhodostoma*; Boulenger, Cat. Snak. Brit. Mus., 3:527.

1929 *Ancystrodon rhodostoma*; Naiggolan, Trop. Nat., 81:189.

1957 *Calloselasma rhodostoma*; Chernov. Zool. J. 36 (5) :792.

Type locality: Java.

Range: Thailand, Cambodia, Laos, Malaya and Indonesia (Sumatra, Java).

Deinagkistrodon Gloyd

DIAGNOSE: a *Crotalinae* with nine symmetrical normal shields snout produced into a pointed dermal appendage directed forwards

(upwards in life), dorsals strongly and tubercly keeled; anterior subcaudals sometimes single; palatine forked anteriorly with four five teeth (fig. 32); maxilar with a small process on the lateral border (fig. 37). Ectopterygoid longer than the posterior portion of pterygoid (fig. 27); articulated with the pterygoid not only on the inner side but also strongly on the outer side (fig. 27). Ectopterygoid not hooked as in *Hypnale* or even in *Calloselasma supratemporals* extending backwards beyond the skull (fig. 21) skull short and large (fig. 21).

Type species: *Halys acutus* Günther 1888.

Contains: one species.

Range: same as single species.

Deinagkistrodon acutus (Günther)

Snorkel Pit Viper or Hiyatsupoda

1888 *Halys acutus* Günther, Ann. Mag. Nat. Hist., London (6) 1:171;
pl. 12.

1896 *Ancistrodon acutus* Boulenger, Cat. Snak. Brit. Mus., 3:524.

1978 *Deinagkistrodon acutus*; Gloyd. Proc. Biol. Soc. Washington. 91
(4):963.

Type locality: designated (Pratt, 1892) Wusueh Hupeh, (China).

Range: Sul da China, Tong-King, Taiwan.

Gloydius Nom. nov. pro *Halys* Gray 1849

DIAGNOSE: a *Crotalinae* with nine symmetrical normal shields; supratemporals not extending backwards beyond the skull (fig. 19); snout never distinctly produced into a dermal appendage like in *Deinagkistrodon acutus*; palatine not deeply forked anteriorly (fig. 30); Ectopterygoid not hooked as in *Hypnale* or even as in *Calloselasma* (Fig. 40). Skull long and narrow (fig. 19); dorsals keeled; subcaudals all paired; loreal pit separated from the upper labials.

Gloydius nom nov.⁴

1849 *Halys* Gray Cat. Snak. Brit. Mus., :14. Type species:

Trigonocephalus halys; Boie preoccupied by *Halys* Fabricius 1803.

Type species: *Trigonocephalus halys*; Boie 1827 = *Halys halys*; Gray 1849 = *Gloydius halys* (Pallas, 1776).

Contains: seven species.

Range: Eastern Europe, Continental Asia southwards to Indonesia and westwards to Japan.

(*) Dedicated to the late Howard K. Gloyd, eminent American Herpetologist who contributed so much to the knowledge of *Crotalus*, *Sistrurus* and *Agkistrodon*.

Gloydius blomhoffii blomhoffii (Boie)

Mamushi

- 1826 *Trigonocephalus blomhoffii* Boie, *Isis, Oken, Jena*, 1826:214.
1916 *Ancistrodon halys blomhoffii*, Nikolsy, *Faune Russie, Rept.*, 2:284.
1972 *Agkistrodon blomhoffii blomhoffii*; Gloyd, *Proc. Biol. Soc. Washington* 85:560.

Type locality: Japan.

Range: Japan.

Gloydius blomhoffii brevicaudus (Stejneger)

Short-tailed Mamushi or Tairiku Mamushi

- 1907 *Agkistrodon blomhoffii brevicaudus* Stejneger, *Bull. U.S. Nation. Mus., Washington*, 58:463.

Type locality: Fusan (Korea).

Range: Korea, Masan-Pusan area in the south and northward into South Manchuria (Yalu River).

Gloydius blomhoffii dubitatus (Gloyd)

Tung Ling Mamushi

- 1977 *Agkistrodon blomhoffii dubitatus* Gloyd, *Proc. Biol. Soc. Washington* 90:1007.

Type locality: Hsinglungshan, Eastern Tombs Hopei Province, Chine.

Range: Known only from the region of the type locality, Hsinglung in a mountain valley near the northern edge of the North Chinese plain.

Gloydius blomhoffii siniticus (Gloyd).

Yangtze Mamushi

- 1977 *Agkistrodon blomhoffii siniticus*, Gloyd, *Proc. Biol. Soc. Washington* 90:1004.

Type locality: Ningkwo, Anhwei Province, China.

Range: The Yangtze Kiang basin from eastern Szechwan Province to the delta region on the East China Sea; northward into Anhwei, Kiangsu possibly Shantung, and southward to northern Hunan and Kiangsi provinces. (China)

Gloydius caliginosus (Gloyd) Fig. 57.

Caliginous Mamushi

- 1972 *Agkistrodon caliginosus* Gloyd, *Proc. Biol. Soc. Washington*, 85(49):563, fig. 2.

Type locality: Vicinity of Seoul, South Korea.

Range: Korea, from the Masan-Pusan area and Chejo-do (Quelpart Island) in the south to the extreme northeast of the peninsula above Ch'ongjin, and South Manchuria (Yalu River and Imienpo, North Kirin).

Gloydius halys halys (Pallas)

1776 *Coluber halys* Pallas Reise. 3:703.

1916 *Ancistrodon halys halys*, Nikolsky, Faune Russie, Rept., 2:267; fig.

Type locality: restricted by (Strauch 1873).

Salt lakes near Lugaskoi Sawed, upper Ienissei USSR.

Range: Southern Siberia and Mongolia.

Gloydius halys affinis (Gray)

1849 *Trigonocephalus affinis* Gray, Cat. Snak. Brit. Mus.: 14.

1933 *Ancistrodon halys affinis*, Rendahl, Ark. Zool., Stockholm, (A) 25 (8):4.

Type locality: Unknown.

Range: Southern Riu-Kiu Islands (Yaeyama group).

Gloydius halys caraganus (Eichwald)

1831 *Trigonocephalus caraganus* Eichwald, Zool. spec. Roas. Polon., 3:170.

1934 *Agkistrodon halys caraganus*, Gernov, CR. Acad. Sci. URSS, Leningrad, 1924 (1):352.

Type locality: Karagan (East of Caspian sea).

Range: From Volga mouth to eastern Kazakstan USSR.

Gloydius halys caucasicus (Nikolsky) Fig. 58.

Caucasian Mamushi

1916 *Ancistrodon halys caucasicus* Nikolsky, Faune Russie, Repet., 2:274.

Type locality: Lenkoran.

Range: Eastern Transcaucasien and adjacent northern Iran.

Gloydius halys cognatus (Gloyd)

Alashan Pit Viper (or Alashan Mamushi)

1977 *Agkistrodon halys cognatus* Gloyd, Proc. Biol. Soc. Washington 90(4):1002.

Type locality: Choni (on Tao River), Kansu Province, China.

Range: China; eastern Tsinghai Province (Lake Koko Nor), southern Kansu (Alashan desert, Choni, Lanchou), and possibly eastward into the province of Shansi.

Gloydius halys intermedius (Strauch)

Siberian Mamushi

- 1868 *Trigonocephalus intermedius* Strauch, (partim *Agkistrodon saxatilis*), Trud. 1. Sjezda rusk. Eastestwa Zool. : 294.
1896 *Ancistrodon intermedius*, Boulenger, Cat. Snak. Brit. Mus., 3:525.
1916 *Ancistrodon halys intermedius*, Nikolsky, Faune Russie, Rept. 2:276; fig. 63-64.

Type locality: Irkutsk (Sibiria)

Range: Southern Siberia Mongolia and eastern Turkestan.

Gloydius halys ussuriensis (Emelianov)

- 1929 *Ancistrodon blomhoffii ussuriensis* Emelianov, Zap: Wladiwostok. RGO, 3:123; fig. 38-41.
Type locality: Suchan River.
Range: From Central and Northern China to the mouth of the Amur Basin.

Gloydius himalayanus (Günther)

Himalayan Mamushi

- 1864 *Halys himalayanus* Günther, Rept. brit. India: 393; Pl.24:AA.
1890 *Ancistrodon himalayanus*, Boulenger, Fauna brit. India, Rept.: 424; fig.
1896 *Ancistrodon himalayanus*, Boulenger, Cat. Snak. brit. Mus., 3:526.
Type locality: Garhval (Western Himalaya).
Range: Western Pakistan, district of Chitral Kashmir, northern Punjab (India) : Sikkim, Nepal.

Gloydius monticola (Werner)

Yunnan Mamushi

- 1922 *Ancistrodon blomhoffii monticola* Werner, Anz. Akad. Wiss. Wien, math. naturw. KL., 59:222.
Type locality: Yao-Schan near Lidjiang, Yunnan, China.
Range: Mountains of Yunnan (China).

Gloydius saxatilis (Emelianov)

Brown Mamushi

- 1937 *Ancistrodon saxatilis* Emelianov, Mem. Vladivostock Sec. Russien. Geog. Soc. 3(1):26-30, figs. 1-4.

- 1972 *Akistrodon saxatilis*; Gloyd, Proc. Bull. (Soc. Washington 85(49) : 569, figs. 3 e 4.

Type locality: Vladivostok, Voroshilovo (Ussriysk), and Suchan River.

Range: Far East, Manchuria and Korea, from the Pacific Coast West to the Great Khingan Range, north to the lower Amur River, south to Port Arthur on the Liaotung Peninsula.

Gloydius strauchi (Bedriaga)

Strauch's Mamushi

- 1912 *Ancistrodon strauchi* Bedriaga, Wiss. Res. Przewalski Cent. Asien Reisen, Zool., 3(1) :728; pl. 10:1.

Type locality: restricted: (Pope 1935) : Tungnolo (Hsikiang).

Range: Hsikiang and Szechwan western China.

GENUS *Hypnale* Fitzinger

- 1843 *Hypnale* Fitzinger, Syst. Rept. :28.

- 1862 *Hypnale*; Peters, Monatber. K. Akad. Wiss. Berlin, 1862:673.

- 1890 *Ancistrodon*; Boulenger [partim], Fauna Brit. India :423.

- 1935 *Akistrodon*; Pope [partim] Nat. Hist. Central Asia 10:386.

- 1971 *Hypnale*; Burger [partim], Genera of pitviper microfilm of the (unpublished) thesis for Phd., Fac. grad School Un. Kansas.: 79.

- 1972 *Hypnale*; Burger [partim] Genera of Pitviper, [Dissertation abstract International 32, (10)] (no diagnosis).

- 1977 *Hypnale*; Gloyd, Proc. Biol. Soc. Washington 90, (4) :1009.

Type species: *Trigonocephalus hypnale*; Schlegel = *Hypnale hypnale* (Merrem, 1820).

Contains: Three species.

Range: Sri-Lanka and India, Western Ghats as far north as 16.^o L.N.

Hypnale hypnale (Merrem)

Merrem's Hump — nosed Pit Viper

- 1820 *Cophias hypnale* Merrem. Tentamen Syst. Amphibiorum, :155.

- 1837 *Trigonocephalus hypnale*; Schlegel. Essai Sur Le Physionomie des Serpens 2:550, pl. 20. fig. 6, 7.

- 1842 *Trimeresurus ceylonensis* Gray, Zool. Miscell., :49.

- 1864 *Hypnale nepa*; Günther [partim]. Rept. of brit. India.

- 1871 *Hypnale affinis* Anderson, J. A. S. Bengal 40, :2 and : 20.

- 1890 *Ancistrodon hypnale*; Boulenger [partim]. Fauna Brit. Ind.

- 1921 *Ancistrodon hypnale*; Wall, Snakes of Ceylon; :549.
1950 *Agkistrodon hypnale*; Taylor, Univ. Kansas Sci. Bull., 33, pt. 2
(14), :596.
1971 *H. [ypnale] hypnale*; Burger, Genera of pitviper (microfilm
of the unpublished) thesis for Phd., Fac. grad. School Univ.
Kansas.: 99.
1977 *Hypnale [hypnale]*; Gloyd, Proc. Biol. Soc. Washington 90,
(4):1011.

Type locality: 'Arquipelago, Arabia, Aegypta.' restricted to
Ceylon = Sri-Lanka (by implication) Schlegel 1837.

Range: Sri-Lanka, India, Western Ghats as far North as 16.^o L.N.

Hypnale nepa (Laurenti)

Lorenz's Hump-nosed Pit Viper

- 1768 *Coluber nepa* Laurenti. Syn. Rept., :97.
1864 *Hypnale nepa*; Günther, [partim]. Rept. Brit. Ind., :394.
1890 *Ancistrodon hypnale*; Boulenger [partim]. The Fauna of British
India including Ceylon and Burma, :424.
1921 *Ancistrodon millardi*; Wall (not *millardi*; Wall, 1908).
Ophidia Taprobanica or the Snakes of Ceylon :554.
1937 *Ancistrodon nepa*; Smith, Journ. Bombay Nat. Hist. Soc., 39:730.
1977 *Hypnale nepa*; Gloyd, Proc. Biol. Soc. Washington 90, (4) :1011.

Type locality: Madagascar, in error, obviously Sri-Lanka.

Range: Sri-Lanka.

Hypnale walli Gloyd

Wall's Hump-nosed Pit Viper

- 1977 *Hypnale walli* Gloyd, Proc. Biol. Soc. Washington 90, (4) :1011.
Type locality: Kanneliya Forest, Udugama Southern Province,
Sri-Lanka ± 1,000 ft.
Range: Sri-Lanka.

GENERAL OF *Crotalini*

GENUS *Bothrops* Wagler

- 1824 *Bothrops* Wagler, in Spix, Sp. Nov. Serp. Bras.: 50.
1859 *Bothriechis* Peters, Monats. Akad. Wiss. Berlin, 1859:278. Type
species: *Bothriechis nigroviridis* Peters.
1860 *Teleuraspis* Cope, Proc. Nat. Sci. Phila., 1859:338. Type species:
Trigonocephalus schlegelii Berthold.

- 1860 *Thamnophis* Salvin, Proc. Zool. Soc. London, 1860:459. Type species: *Thamnophis aurifer* Salvin.
- 1861 *Bothriopsis* Peters, Monats. Akad. Wiss. Berlin, 1861:359. Type species: *Bothriopsis quadriscutatus* Peters.
- 1871 *Porthidium* Cope, Proc. Acad. Nat. Sci. Phila., 1871:207. Type species: *Trigonocephalus lansbergii* Schlegel.
- 1881 *Rhinocerophis* Garman, Bull. Mus. Comp. Zool. 8:85. Type species: *Rhinocerophis nasus* Garman.
- 1887 *Ophryacus* Cope, Bull. U.S. Nat. Mus., 32:88. Type species: *Atropos undulatus* Jan.
- 1889 *Thanatophis* Posada-Arango, Bull. Soc. Zool. France, 14:343. Type species: *Thanatophis torvus* Posada-Arango.
Type species: *Coluber lanceolatus* Lacépède, 1824.
Contains: 61 species.
Range: From Mexico; through Central America; to Chubut in Argentina, absent in Chile.

Bothrops leucurus Wagler

White tailed Pit Viper

- 1824 *Bothrops leucurus* Wagler, In Spix, Serp. Brasil., Sp. Nov.: 57; Pl. XXII, fig. 2. Type locality: Provincie Bahia, Brazil.
- 1824 *Bothrops megaera* Wagler, [homonym of *megaera* Shaw = *Bothrops lanceolatus* (Lacépède)] In Spix Serp. Brazil., Sp. Nov.:50; Pl. XIX. Type locality: City of Bahia (Salvador), Brazil.
- 1966 *Bothrops megaera*; Hoge, Mem. Inst. Butantan, 32:110.
Type locality: Bahia, actually Salvador, Brazil.
Range: Known from the interior of State Bahia, Brazil.

Bothrops albocarinatus Shreve

White keeled Pit Viper

- 1934 *Bothrops albocarinatus* Shreve, Occ. Pap. Boston Soc. Nat. Hist., 8:130.
Type locality: Pastaza River, between Canelos and Marañon River, Ecuador.
Range: Pastaza River, drainage; Ecuador.

Bothrops alternatus Duméril, Bibron et Duméril

Urutu

- 1854 *Bothrops alternatus* Duméril, Bibron et Duméril, Exp. Gen., 7,(2); Atlas Pl. 82 bis, fig 1 and 1a.
- 1896 *Lachesis alternatus*; Boulenger, Cat. Sn. Brit. Mus., 3:543.

- 1925 *Lachesis inaequalis* Magalhães, Mem. Inst. Oswaldo Cruz, 18(1) : 153; Pl. 7-12.

Type locality: South America, Argentine, and Paraguay.

Range: Argentine: provinces of Buenos Aires, Entre Ríos, Corrientes, Missiones, Santa Fe, Cordoba, Santiago del Estero, Chaco, Tucuman, San Luiz, La Pampa, Rio Negro. Uruguay. Brazil: State of Rio Grande do Sul, Santa Catarina (except coastal region), Parana and São Paulo (except coastal regions), Minas Geraes (only in the broadleaved forest), Mato Grosso (only along the Paraná River and the extreme south-center of the state. Paraguay (southern parts only).

Bothrops alticulus Parker

- 1934 *Bothrops alticola* Parker, Ann. Mag. Nat. Hist., 14, (10) : 272.

Type locality: Five kilometers east of Loja, 9,200 ft. Ecuador.

Range: Known only from type locality.

Bothrops ammodytoides Leybold Fig. 44

Patagonian Pit Viper

- 1873 *Bothrops Ammodytoides* Leybold, Excurs. Pamp. Argent., :80.

- 1881 *Rhinocerophis nasus* Garman, Bull. Mus. Comp. Zool. Harv., 8:85.

- 1884 *Bothrops nasus* Berg, Acta Acad. Cordoba, 5:96.

- 1885 *Bothrops patagonicus* Müller, Verh. Nat. Ges. Basel, 7:697.

- 1895 *Bothrops burmeisteri* Koslowsky, Rev. Mus. La Plata, 6:369; Pl. 4.

- 1896 *Lachesis ammodytoides*; Boulenger, Cat. Sn. Brit. Mus., 3:543.

Type locality: Northern Argentina.

Range: Argentina: Province of Buenos Aires (southern), Chubut, Cordoba, Mendoza, Neuquen, Rioja, San Juan, San Luiz, Santa Cruz, Tucuman (only in the mountains).

Bothrops andianus Amaral

Andian Pit Viper

- 1923 *Bothrops andiana* Amaral, Proc. New Engl. Zool. Club, 8:103.

Type locality: Machu Pichu, Department of Cuzco, 9,000-10,000 ft. Peru.

Range: Known from Department of Cuzco, Peru.

Bothrops asper (Garman)

Barba Amarilla. Fer-de-lance

Andian Pit Viper

- 1883 *Trigonocephalus asper* var, n.c. *lanceolati* Garman, Bull. Mus. Comp. Zool. Harv., 8:124.

- 1896 *Lachesis atrox*; Boulenger (*partim*), Cat. Sn. Brit. Mus., 3:537.
- 1918 *Bothrops atrox asper*; Morfin, Informe rendido por la Comision Geografica exploradora de Quintana Roo al C. Secretario de Fomento: 1-57,1-10 (not seen).
- 1966 *Bothrops asper*; Hoge, Mem. Inst. Butantan, 32:113; Pl. VI.
Type locality: Obispo, Isthmus of Darien, Panama.
Range: Mexico, St. Campèche, Chiapas, Oaxaca, San Luiz Potosi, Tabasco, Vera Cruz and Yuacatán.
In the low and moderate elevations of Guatemala, Costa Rica, Honduras and Panamá. In South America along the Pacific coast from Panamenian border through Colombia Southward to Guayaquil, Ecuador, and Gorgona Island.

Bothrops atrox (Linnaeus) Fig. 45

Jararaca grão de arroz Terciopello, Mapepire balsin (balcin),
Mapepire Valsin.

- 1758 *Coluber atrox* Linnaeus, Syst. Nat., 10th ed., 1:222.
- 1824 *Bothrops furia* Wagler, In Spix, Serp. Brazil., Sp. Nov.: 52.
- 1824 *Bothrops taeniatus* Wagler, In Spix, Serp. Brazil., Sp. Nov: 55;
Pl. XXI.
- 1896 *Lachesis atrox*; Boulenger (*partim*), Cat. Sn. Brit. Mus., 3:537.
- 1966 *Bothrops atrox*; Hoge, Mem. Inst. Butantan, 32:113; Pl. V, figs, 1,
1a, and 1b.

Type locality: Restricted to Surinam.

Range: The equatorial forests of Colombia, Venezuela, the Guianas, Brazil, Peru, Ecuador, and Bolivia.

Bothrops barbouri (Dunn)

Barbous Pit Viper

- 1919 *Lachesis barbouri* Dunn, Proc. Biol. Sci. Wash., 32:213.
- 1930 *Bothrops barbouri*; Amaral, Mem. Inst. Butantan, 4:232.
- 1938 *Agkistrodon browni* Shreve, Copeia, (1):9. Type locality: Omilteme, Guerrero.

Type locality: Omilteme, Guerrero, Mexico.

Range: Sierra Madre del Sur, Guerrero, Mexico.

Bothrops barnetti Parker

Barnett's Pit Viper

- 1938 *Bothrops barnetti* Parker, Ann. Mag. Hist. Nat., 2, (11):447.

Type locality: Between Lobitos and Talara, northern Peru.

Range: Northern Peru.

Bothrops bicolor Bocourt

- 1868 *Bothrops bicolor* Bocourt, Ann. Sci. Nat. Zool. Paleont., 10, (5) :202.
1878 *Bothrops (Bothriechis) bernouilli* Müller, Verh. Nat. Ges. Basel, 6 :399.
1896 *Lachesis bicolor*; Boulenger, Cat. Sn. Brit. Mus., 3 :566.
Type Locality: Saint Augustin de Sololá, Guatemala.

Range: Pacific foothills of Guatemala and Mexico (Chicharas and Mount Ovando in extreme south of Chiapas).

Bothrops bilineatus bilineatus (Wied)

Surucucu de patioba

- 1821 *Cophias bilineatus* Wied, Reise Brazil, 2 :339.
1822 *Trigonocephalus bilineatus*; Schinz, Cuv. Thier., II :143.
1824 *Cophias bilineatus*; Wied, Abbild. Naturg. Brazil, Pls. 5 and 6.
1824 *Cophias bilineatus*; Wied, In Isis v. Oken, :446.
1825 *Cophias bilineatus*; Wied, Beitr. Nat. Brazil, 1 :483.
1830 *Bothrops*... species... *Cophias bilineatus* Neuw., Wagler, Syst. Amph., :174.
1869 *Trigonocephalus (Bothrops) arboreus* Cope, Proc. Amer. Phil. Soc., 9 :157. Type locality: near to Bahia, Brazil.
1896 *Lachesis bilineatus*; Boulenger (partim), Cat. Sn. Brit. Mus. 3 :565.
1966 *Bothrops bilineatus bilineatus*; Hoge, Mem. Inst. Butantan, 32 :114; Pl. I, fig. 1.
Type locality: "Villa Viçosa" on Peruhybe River (now Marobá State of Bahia, Brazil).

Range: The equatorial forests of Venezuela and the Guianas. In Brazil Territorio Federal do Amapa, and an isolated population in the tropical forests of the Atlantic slope from the State of Bahia to Rio de Janeiro.

Bothrops bilineatus smaragdinus Hoge

Cobra papagaio or Emerald Pit Viper

- 1966 *Bothrops bilineatus smaragdinus*; Hoge, Mem. Inst. Butantan, 32 :114; Pl. I, Fig. 2a and 2b.
Type locality: Upper Purús, State of Amazonas, Brazil.
Range: Known from Ecuador, Peru, Bolívia, Brazil, and Colombia.

Bothrops caribbaeus (Garman)⁴

St. Lucia Pit Viper

- 1842 *Bothrops sabinii* Gray, Zool. Miscellany, :47.

(*) Non Ven.

- 1842 *Bothrops cinereus* Gray, Zool. Miscellany, :47.
1887 *Trigonocephalus caribbaeus* Garman, Proc. Amer. Phil. Soc., 24:285.
1896 *Lachesis lanceolatus*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:535.
1964 *Bothrops caribbaeus*; Lazell, Bull. Mus. Comp. Zool. Harv., 132, (3):250.
1979 *Bothrops lanceolatus*; Sandner Montilla (partim St. Lucia) Mem. Cient. Ofidología (3):4.

Type locality: Restricted (Lazell 1.c.:251) to Grande Anse, Sainte Lucia, accepting Lazzel's restriction of the type locality of *Trigonocephalus caribbaeus* Garman 1877. The authors had opportunity of comparing the types of *Bothrops caribbaeus*, *Bothrops cinereus* and *Bothrops sabinii*, and the valid name will be selected.

Range: Coastal lowlands of northern part, except extreme north and southern parts of Sainte Lucia Island.

Bothrops brazili Hoge

Brazil's Pit Viper

- 1923 *Bothrops neglecta* Amaral, (partim paratype), Proc. New Engl. Zool. Club, 8:99.

- 1953 *Bothrops brazili* Hoge, Mem. Inst. Butantan, 25:15-21.

- 1966 *Bothrops brazili*; Hoge, Mem. Inst. Butantan, 32:115.

Type locality: Tome Assú on Acará Mirim River, State of Pará, Brazil.

Range: The equatorial forest, known from Venezuela, the Guianas, Colombia and Brazil, States of Pará, Amazonas and extreme north Mato Grosso.

Bothrops castelnaudi castelnaudi Duméril, Bibron et Duméril Fig. 46

Castelnau's Pit Viper

- 1853 *Bothrops castelnaudi* Duméril, Mem. Acad. Sci., 23 (:139 of reprint) (no description).

- 1854 *Bothrops castelnaudi* Duméril, Bibron et Duméril, Erp. Gen., 7, (2):1511.

- 1861 *Bothrops quadricarinatus*; Peters, Mber, Berlin Acad., :359. Type locality: Quito (in error fide Peters Rev. Equat. Ent. Parasit., 2, 1955:347).

- 1889 *Thanatophis montanus* Posada-Arango, Bull. Soc. Zool. France, 1889:244, Type locality: Mountains of Antioquia, Colombia 2,200 m.

- 1896 *Lachesis castelnaudi*; Boulenger, Cat. Sn. Brit. Mus., 3:544.

Type locality: Unknown (Guichenot in Castelnau gives "Province du Goyas") now State of Goias, Brazil.

Range: Equatorial forest of Brazil, Ecuador, Peru, Bolivia, Colombia and Venezuela.

Bothrops castelnaudi lichenosus Roze
Lichen-like Pit Viper

1958 *Bothrops lichenosa* Roze, Acta Biol. Venez., 2:308.

Type locality: Chimanta-Tepui, Estado Bolivar, Venezuela.

Range: Known only from type locality.

Bothrops colombiensis (Hallowell) Fig. 47
Mapanare, Macagua, Colombian Pit Viper

1845 *Trigonocephalus colombiensis* Hallowell, Proc. Acad. Sci. Phil., 2:241 — 247.

1934 *Bothrops neuwiedii Venezuelenzi* Briceno Rossi, Bol. Min. Salubrid. Agricola, 2(15):46.

1933 *Bothrops jararaca*; Briceno Rossi, Bol. Min Salubrid. Agricola, 2(15):48.

1933 *Bothrops amarali* Briceno Rossi, Bol. Min. Salubrid. Agricola, 2(15):53.

1966 *Bothrops colombiensis*; Hoge, Mem. Inst. Butantā, 34:164.

1979 *Bothrops lanceolatus*; Sandner Montilla (partim Venezuela), Mem. Cient. Ofidologia 3:1-7.

Type locality: "Republic of Colombia within 200 miles of Caracas".

Range: From northern and northwestern Venezuela to northeastern Colombia.

Bothrops cotiara (Gomes)
Cotiara

1913 *Lachesis cotiara* Gomes, Ann. Paul. Med. Cirurg. São Paulo, 1, (3):65.

1925 *Bothrops cotiara* Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:53.

Type locality: Marechal Mallet, Parana, Brazil.

Range: The Araucaria forest of Argentina (Missiones) and Brazil (states of Rio Grande do Sul, Santa Catarina, and Parana, also known from two localities in southeastern São Paulo, near the border of Parana).

Bothrops dunnii (Hartweg and Oliver)
Dunn's Pit Viper

1938 *Trimeresurus dunnii* Hartweg et Oliver, Occ. Pap. Mus. Zool. Univ. Mich., (390):6.

- 1945 *Bothrops dunni* Smith et Taylor, Bull. U.S. Nat. Mus., 187:181.
Type locality: Vicinity of Village of Tehuantepec, Oaxaca, Mexico.
Range: Mexico, the Pacific slopes of the State of Oaxaca.

Bothrops eneydae Sandner Montilla
Meokarima

- 1976 *Bothrops eneydae* Montilla, Mem. Cien. de Ofidiologia (1):1-4 + 1 fig., (contr. oc. Instituto Venezolano de ofidiologia).
Type locality: Arround the Franciscan Mission of Kavanayen, Edo. Bolivar Venezuela.
Range: Known only from type locality.

Bothrops erythromelas Amaral
Red and Black Pit Viper

- 1923 *Bothrops erythromelas* Amaral, Proc. New Engl. Zool. Club., 8:96.
Type locality: Near Joazeiro, State of Bahia, Brazil.
Range: Known from Brazil (the caatinga vegetation of States Ceará, Piauí and Bahia), possibly also the other states with same vegetation.

Bothrops fonsecai Hoge et Bellumini
Fonseca's Pit Viper

- 1959 *Bothrops fonsecai* Hoge et Bellumini, Mem. Inst. Butantan, 28:195.
Type locality: Santo Antonio do Capivary, State of Rio de Janeiro, Brazil.
Range: Northeast São Paulo, south of Rio de Janeiro, and extreme south of Minas Gerais, Brazil.

Bothrops godmanni (Günther)
Godmann's Pit Viper

- 1863 *Bothriechis godmanni*, Günther Ann. Mag. Nat. Hist., 12, (3):364.
1868 *Bothrops brammianus* Bocourt, Ann. Sci. Nat. Zool. Paleont., 10, (5):201.
1878 *Bothrops (Bothriopsis) godmanni*; Müller, Verh. Nat. Ges. Basel., 6:402.
1880 *Bothriechis scutigera* Fisher, Arch. Nat., :218.
1883 *Bothriechis triangulifera* Fisher, Oster. Prg. Gymn. Hamburg, :13.
1896 *Lachesis godmanni*; Boulenger, Cat. Sn. Brit. Mus., 3:545.
1929 *Bothrops godmanni*; Barbour et Loveridge, Bull. Antivenin Inst. Amer., 3, (1):3.

Type locality: Dueñas and other parts of tableland of Guatemala.

Range: From Mexico (Chiapas) along the moderate to high elevation to Panama. Known in Mexico only from a few localities.

Bothrops hesperis Campbell

Western hognosed pit viper; colmillo de puerco

1976 *Bothrops hesperis* Campbell, J. Herpetology, 10, (3):152, fig. 1 and 3.

Type locality: West-facing slope in the foothills ca. 12 airline km. NE of Tecoman, Municipio de Ixlahuacan, Colima, Mexico.

Range: Known only from type locality.

Bothrops hyoprorus Amaral

Amazonian hognosed Pit Viper

1935 *Bothrops hyoprora* Amaral, Mem. Inst. Butantan, 9:222.

Type locality: La Pedrera, Colombia.

Range: Known from a few localities from the equatorial forests of Colombia, Ecuador, Peru, and western Brazil.

Bothrops iglesiasi Amaral

Iglesias' Pit Viper

1923 *Bothrops iglesiasi* Amaral, Proc. New Engl. Zool. Club, 8:97.

Type locality: Near Fazenda Grande on the Right riverside of the Gurgueia River, State of Piauí, Brazil.

Range: Known only from northern Piauí, Brazil.

Bothrops insularis Amaral

Jararaca Ilhoa or Queimada Grande Pit Viper

1921 *Lachesis insularis* Amaral, Anex. Mem. Inst. Butantan, Sec. Ofiol., 1, (1):18.

1930 *Bothrops insularis*; Amaral, Mem. Inst. Butantan, 4:114.

Type locality: Island "Queimada Grande" on the coast of the State of São Paulo, Brazil.

Range: Known only from type locality.

Bothrops isabelae Sandner Montilla

Isabela's Pit Viper

1979 *Bothrops isabelae* Sandner Montilla, Mem. Cient. de Ofiologia (4)3, + Fig.

Type locality: 7 km Southeast of Guanare, Estado Portuguesa,
alt. 182 m.

Range: States of Tachira, western Apure, Barinas and Portuguesa
(fide Sandner Montilla 1.c.).

Bothrops itapetiningae (Boulenger)

Cotiarinha

1907 *Lachesis itapetiningae* Boulenger, Ann. Mag. Nat. Hist., 20,
(7):338.

1910 *Lachesis neuwiedii itapetiningae*; Ihering (partim) Rev. Mus.
8:360.

1930 *Bothrops itapetiningae*; Amaral, Mem. Inst. Butantan, 4:235.

Type locality: Itapetininga, State of São Paulo, Brazil.

Range: Brazil, from northeastern Paraná, through the State of
São Paulo and Minas Gerais, northward to Brasilia, Distrito Federal;
also known from a single locality in State of Mato Grosso
(there is a specimen from Rio Grande do Sul but this occurrence
must be confirmed).

Bothrops jararaca (Wied) Fig. 48

Jararaca

1824 *Cophias jararaca* Wied, Abbild. Nat. Brazil, Lief. 7. (in text)
Cophias atrox "pullus" (on plate) Non *Cophias jararaca* Merrem
1822 = nom. nov. pro *Coluber jauanus* Gmelin [iconotype in Seba
I, Pl. LXX, 12] Type locality: Java "in error". = *Crotalus durissus*
subsp. (pos. *C. d. cascavella* Wagler 1824).

1824 *Cophias atrox ... jararaca*; Wied, In Isis v. Oken, 14,(9):987.

1824 *Cophias jararaca*; Wied, Abbild. Nat. Brazil, Lief, 8.

1824 *Cophias jajaraca*; (misspelling of jararaca) Wied, In Isis v. Oken,
14, (10):1103.

1825 *Cophias jararaca*; Wied, Beitr. Nat. Brazil, I:470.

1830 *Bothrops ... species ... Cophias jararaca* Neuw., has syn. of
Coluber Ambiguus Gmelin, Wagler, Syst. Amph.,:174.

1896 *Lachesis lanceolatus*; Boulenger (partim), Cat. Sn. Brit. Mus.,
3:53.

Type locality: Espírito Santo, Brazil.

Range: Northern Argentina (Misiones); Paraguay and Brazil,
states of Rio Grande do Sul, Sta. Catarina, Paraná, São Paulo,
extreme eastern Mato Grosso, Rio de Janeiro, Espírito Santo and
Southern Bahia, also known from the broad-leaved forests of the
State of Minas Gerais.

Bothrops jararacussu Lacerda

Jararacussu

1884 *Bothrops jararacussu* Lacerda, Lec. Ven. Serp. Brésil, :8.

- 1896 *Lachesis lanceolatus*; Boulenger (*partim*), Cat. Sn. Brit. Mus. 3:535.

Type locality: Province of Rio de Janeiro, Brazil.

Range: Northeastern Argentine, Brazil, states of Sta. Catarina, Paraná, Mato Grosso, São Paulo, southern Minas Gerais, Rio de Janeiro, Espírito Santo and extreme southern Bahia, Paraguay and extreme southern Bolivia.

Bothrops lanceolatus (Lacépède)

Vipere Jaune, Fer de Lance, Triconocephale or
Martinican Pit Viper

- 1768 *Vipera coerulescens* Laurenti, Syn Rept., :19. Type locality: Martinique.

- 1788 *C (oluber) glaucus* Gmelin, Caroli Linnei S. Nat., 13th ed., 1:1092 (based on *Vipera coerulescens* Laurenti).

- *1789 *C (oluber) Lanceolatus* La Cépède, Hist. Nat. Serp., II:80 and 121, Pl. V, fig. 7.

- 1798 *Coluber hastatus* Suckow, Naturg. Thiere, III:239 (based on La Cepede's *Lanceolatus*).

- 1802 *Coluber megaera* Shaw, Gen. Zool., 3, (2):406 (based on La Cepede's *Lanceolatus*).

- 1811 *Trigonocephalus lanceolatus*; Oppel, Ord. Rept., :66.

- 1820 *C. (ophias) lanceolatus*; Merrem, Tent. Syst. Amph., :155.

- 1830 *Bothrops lanceolatus*; Wagler, Syst. Amph., :174.

- 1896 *Lachesis lanceolatus*; Boulenger (*partim*) Martinique.

- 1952 *Bothrops lanceolatus*; Hoge, Mem. Inst. Butantan, 24:231-236.

- 1964 *Bothrops lanceolatus*; Lazell, Bull. Mus. Comp. Zool. Harv., 132 (3):254.

Type locality: Martinique.

Range: Island of Martinique, in the wet regions, two disconnected populations, one in the highlands above Fort de France and northward in the mountains to the Mount Pelée massif and also along the coastal wet regions; the other one is confined to the southern highlands from Morne Serpent and Morne Vauclin to the hills between Trois-Ilets and Les-Anses D'Arlets.

Bothrops lansbergii lansbergii Schlegel

Mapanare rabo amarillo, or Lansberg's Pit Viper.

- 1841 *Trigonocephalus lansbergii* Schlegel, Mag. Zool. Rept., (1-3).

- 1863 *Bothrops lansbergii*; Jan, Elenco Sist. Ofid., :127.

• Nom. ven.

1896 *Lachesis lansbergii*; Boulenger (*partim*), Cat. Sn. Brit. Mus., 3:546.

Type locality: Turbaco, Colombia.

Range: Colombia, the arid and semiarid region of the "Costa del Caribe" and Baja Magdalena.

Bothrops lansbergii annectens (Schmidt)

1936 *Trimeresurus lansbergii annectens* Schmidt, Proc. Biol. Soc. Wash., 9:50.

Type locality: Subirana-Tal, Yoro, Honduras.

Range: Honduras.

Bathrops lansbergii janisrozei Fig. 50

Roze's Pit Viper

1959 *Bothrops lansbergii venezuelensis* Roze, Amer. Mus. New York, (1934):11. (Homonym of *Bothrops venezuelensis* Montilla, 1952).

1968 *Bothrops lansbergii rozei* Peters, (*nom. nov. pro Bothrops venezuelensis* Roze), Proc. Biol. Soc. Washington, 81:320.

Type locality: Caripito, Monagas, Venezuela.

Range: Northern Venezuela, from State of Monaga to State of Zulia (Vide Roze).

Bothrops lateralis (Peters)

Yellow liped palm Viper

1863 *Bothriechis lateralis* Peters, Mn. Akad. Wiss. Berlin, :674.

1878 *Bothrops (Bothriechis) lateralis*; Müller, Verh. Nat. Ges. Basel, 6:401.

1896 *Lachesis lateralis*; Boulenger, Cat. Sn. Brit. Mus., 3:566.

Type locality: Veragua and Volcan Barbo, Costa Rica.

Range: Costa Rica and Panama.

Bothrops lojanus Parker

Lojan Pit Viper

1930 *Bothrops lojana* Parker, Ann. Mag. Nat. Hist., 5(10):568.

Type locality: Loja, Ecuador.

Range: Only known from the vicinity of type locality.

Bothrops marajoensis Hoge

Marajoan Pit Viper

1966 *Bothrops marajoensis* Hoge, Mem. Inst. Butantan, 32:123.

Type locality: Severino, Island of Marajó, State of Pará, Brazil.

Range: The savannah of Marajó.

Bothrops medusa (Sternfeld)

Viejita

- 1920 *Lachesis medusa* Sternfeld, Senckenbergiana, 2:180.
1930 *Bothrops medusa*; Amaral, Mem. Inst. Butantan, 4(1929):23b.
Type locality: Caracas, Venezuela.
Range: Central region of "Cordillera de la Costa" from Caracas to Valencia 1,400m-2,000m.

Bothrops melanurus (Müller)

Black-tailed Pit Viper

- 1924 *Trimeresurus melanurus* Müller, Mitt. Zool. Mus. Berlin, 11:92.
1930 *Bothrops melanura*; Amaral, Mem. Inst. Butantan, 4:236.
1940 *Trimeresurus garciai* Smith, Proc. Biol. Soc. Wash., 53:62.
Type locality: Mexico.
Range: (Mexico) Desert region of southern Puebla and probably northern Oaxaca.

Bothrops microphthalmus microphthalmus Cope

Small eyed Pit Viper

- 1876 *Bothrops microphthalmus* Cope, Journ. Acad. Art. Sci. Phil., 8, (2):182.
1896 *Lachesis microphthalmus*; Boulenger, Cat. Sn. Brit. Mus., 3:540.
1912 *Lachesis pleuroxanthus* Boulenger, Am. Mag. Nat. Hist., 10, (8):423.
1960 *Bothrops microphthalma microphthalma*; Peters, Bull. Mus. Comp. Zool. Harv., 122, (9):510.
Type locality: Between Balsas Puerto and Moyobamba, (Peru).
Range: Amazonian equatorial forests of Ecuador, Peru, known from Bolivia by a single specimen and another in Brazil.

Bothrops microphthalmus colombianus (Randahl and Vestergren)

- 1940 *Bothrops microphthalmus colombianus* Rendahl et Vestergren, Ark. Zool., 33A:15.
Type locality: La Costa, Cauca, Colombia.
Range: Colombia.

Bothrops moojeni Hoge

Caissaca

- 1966 *Bothrops moojeni* Hoge, Mem. Inst. Butantan, 32:126, Pl. IV.

Type locality: Brasilia, Distrito Federal, Brazil.

Range: The savannah of Central Brazil, southward to the State of Paraná.

Bothrops nasutus Bocourt

Horned Hog-nosed Pit Viper

- 1868 *Bothrops nasutus* Bocourt, Ann. Sci. Nat. Paris, 10, (5) :202.
1876 *Bothriopsis proboscideus* Cope, Journ. Acad. Nat. Sci. Phil., 8,
(2) :150.
1896 *Lachesis brachystoma*; Boulenger, Cat. Sn. Brit. Mus., 3:547.

Type locality: Panzos, Río Polochic, Guatemala.

Range: Mexico (Vera Cruz), southwards through Guatemala, Costa Rica, Panama, Colombia, and Ecuador.

Bothrops neuwiedi neuwiedi Wagler

Neuwied's Pit Viper

- 1824 *Bothrops neuwiedi* Wagler, In Spix, Serp. Brazil, Sp. Nov., :56.
1896 *Lachesis neuwiedi*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:542.
1925 *Bothrops neuwiedii neuwiedii*; Amaral, Contr. Harv. Inst. Trop.
Biol. Med., 2:57.

Type locality: Province of Bahia, Brazil.

Range: Southern Bahia, Brazil.

Bothrops neuwiedi bolivianus Amaral

Bolivian Pit Viper

- 1927 *Bothrops neuwiedii boliviana* Amaral, Bull. Antivenin, Inst. Amer.,
1:6.

Type locality: Buenavista, Provincie Sara, Departamento Santa Cruz
de la Sierra, Bolivia.

Range: Known from Bolivia, Department of Santa Cruz de la
Sierra, provinces of Chiquitos, Ibañez, Ichilo, Velasco, Department
of Cochabamba, Brazil: State of Mato Grosso, extreme west.

Bothrops neuwiedi diporus Cope

- 1862 *Bothrops diporus* Cope, Proc. Ac. Nat. Sc. Philadelphia, 14:347.
1896 *Lachesis neuwiedii*; Boulenger, Cat. Sn. Brit. Mus., 3:542.
1930 *Bothrops neuwiedii meridionalis* Amaral, Bull. Antiv. Inst. Amer.,
438:66.

Type locality: Rio Vermejo, Argentina, Paraguay, border line.

Range: Argentina; Brazil-Paraguay border line.

Bothrops neuwiedi goyazensis Amaral

Goiaz Pit Viper

1925 *Bothrops neuwiedi goyazensis*; Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:58; Table XIV:3; Table XV:3.

Type locality: Ypamery, Goias, (Brazil).

Range: State of Goias, (Brazil).

Bothrops neuwiedi lutzi (Miranda-Ribeiro)

Lutz's Pit Viper

1915 *Lachesis lutzi* Miranda-Ribeiro, Arch, Mus. Nac. Rio de Janeiro, 17:4.

1925 *Bothrops neuwiedii bahiensis* Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:57.

1930 *Bothrops neuwiedii lutzi*; Amaral, Mem. Inst. Butantan, 4:238.

Type locality: Sao Francisco River, Bahia, (Brazil).

Range: Dry regions of the State of Bahia, Brazil.

Bothrops neuwiedi matogrossensis Amaral

Matto Grosso Pit Viper

1925 *Bothrops neuwiedii matogrossensis* Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:60; Table 14:6; Table 16:6.

Type locality: Miranda, State of Mato Grosso, Brazil.

Range: Southern Mato Grosso, (Brazil).

Bothrops neuwiedi meridionalis Müller

Southern neuwied's Pit Viper

1885 *Bothrops atrox meridionalis* Müller, Verh. Nat. Ges. Basel, 7:699.

1896 *Lachesis neuwiedii*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:542.

1932 *Bothrops neuwiedii fluminensis* Amaral, Mem. Inst. Butantan, 7:97.

1966 *Bothrops neuwiedi meridionalis*; Hoge, Mem. Inst. Butantan, 32:128.

Type locality: Andaray, State of Rio de Janeiro (Brazil).

Range: States of Rio de Janeiro and Espirito Santo (Brazil).

Bothrops neuwiedi paranaensis Amaral

Parana Pit Viper

1925 *Bothrops neuwiedi paranaensis* Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:61; Pl. 14:7; Pl. 16:7.

Type locality: Castro, Paraná, Brazil.

Range: State of Paraná (Brazil).

Bothrops neuwiedi pauloensis Amaral

St. Paul Pit Viper

- 1925 *Bothrops neuwiedii pauloensis*; Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:59.

Type locality: Leme, São Paulo, Brazil.

Range: Southern parts of State of São Paulo (Brazil).

Bothrops neuwiedi piauhyensis Amaral

Northern Pit Viper

- 1916 *Bothrops neuwiedii piauhiense* Gomes, In Neiva et Penna... (no diagnosis)

- 1925 *Bothrops neuwiedii piauhyensis* Amaral, Contr., Harv. Inst. Trop., Biol. Med., 2:58.

Type locality: Regeneração, Piauí.

Range: State of Piauhy, Pernambuco, Ceará, and southern Maranhão (Brazil).

Bothrops neuwiedi pubescens (Cope)

- 1869 *Trigonocephalus* (*Bothrops*) *pubescens* Cope, Amer. Phil. Soc. Phil., 11:57.

- 1896 *Lachesis neuwiedii*; Boulenger, Cat. Sn. Brit. Mus., 3:542.

- 1925 *Bothrops neuwiedii riograndensis* Amaral, Contr. Harv. Inst. Trop. Biol. Med., 2:61, pl. 14, Fig. 8, pl. 16, Fig. 8.

- 1959 *Bothrops neuwiedi pubescens*; Hoge, Mem. Inst. Butantan, 28:84.

Type locality: Rio Grande do Sul, Brazil.

Range: State of Rio Grande do Sul (Brazil), and Uruguay.

Bothrops neuwiedi urutu Lacerda Fig. 49

- 1884 *Bothrops urutu*; Lacerda, Leç. Ven. Serp. Brésil, (11).

- 1896 *Lachesis neuwiedii*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:542.

- 1937 *Bothrops neuwiedi urutu*; Amaral, Mem. Inst. Butantan, 10.

Type locality: "Province de Minas Geraes", now State of Minas Geraes.

Range: Southern parts of Minas Geraes and northern State of São Paulo, (Brazil).

Bothrops nigroviridis nigroviridis (Peters)

Black-spotted palm Viper

- 1859 *Bothriechis nigroviridis* Peters, Mber. Akad. Wiss. Berlin, :278.
Fig. 4.
- 1878 *Bothrops [Bothriechis] nigroviridis*; F. Müller, Verh. Nat. Ges. Basel, 6:401.
- 1929 *Lachesis nigroviridis nigroviridis*; Barbour et Loveridge, Bull. Antivenin, Inst. Amer., 3(1):1.
Type locality: Vulcan Barbo, Costa Rica.
Range: From Costa Rica to Panama.

Bothrops nigroviridis aurifer (Salvin)

- 1860 *Thamnocenchis aurifer* Salvin, Proc. Zool. Soc. London, 1860:459,
Fig. 1.
- 1878 *Bothrops aurifer*; F. Müller, Verh. Nat. Ges. Basel, 6:401.
- 1896 *Lachesis aurifer*; Boulenger, Cat. Snak. Brit. Mus., 3:568.
- 1929 *Bothrops nigroviridis aurifera*; Barbour and Loveridge, Bull. Antivenin, Inst. Amer., 3(1):1-3.
Type locality: Cobán, Alto Verapaz, Guatemala.
Range: Moderate and intermediate elevations of the Caribbean versant from Chiapas, Mexico throughout Guatemala.

Bothrops nigroviridis macdougalli Smith and Moll

- 1969 *Bothrops nigroviridis macdougalli* Smith and Moll, J. Herpetology 1969, 3:152-153.
Type locality: Higher slopes of Cerro Azul of the Sierra Madre 5000ft, roughly 10 miles east (straight line) La Gloria, Oaxaca, (Mexico).
Range: Known only from type locality.

Bothrops nigroviridis marchi Barbour and Loveridge

- 1929 *Bothrops nigroviridis marchi* Barbour and Loveridge, Bull. Antivenin, Inst. Amer., 3(1):1, fig. 1.
Type locality: Gold mines near Quimistan, Santa Barbara, Honduras.
Range: Honduras.

Bothrops nigroviridis rowleyi Bogert

- 1968 *Bothrops rowleyi* Bogert, Am. Mus. Novitates (2341):3, fig. 1, a, b, c, 2.
1969 *Bohtrops nigroviridis rowleyi*; Smith and Moll. J. Herp. 1969, 3(34):151-153.

Type locality: On a ridge that extends northward from Rancho Vicente, Colonia Rodolfo Figueroa, approximately 5 miles west of Cerro Baúl. The site is at an elevation of approximately 1520 meters, on the headwaters of the Rio Grijalva, roughly 30 kilometers to the north and slightly to the east of San Pedro Tapánatepec, in the Distrito de Juchitán, Oaxaca, Mexico.
Range: Oaxaca, (Mexico).

Bothrops nummifer nummifer (Rüppel)

- 1845 *Atropos nummifer* Rüppel, Ver. Mus. Senckenberg, 3:313.
1863 *Bothrops nummifer*; Jan, Elenco Syst., :126.
1896 *Lachesis nummifer*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:540.
1950 *Bothrops nummifer veraecrucis* Burger, Bull. Chicago Acad. Sci., 9, (3):65.

Type locality: Restricted (Burger 1950, l.c.) to: Teapa, Tabasco; Mexico.

Range: The dry tropical shrub vegetation on the southeastern edge of the Mexican plateau from São Luiz de Potosi, southward to Oaxaca, (Mexico).

Bothrops nummifer mexicanus (Duméril, Bibron et Duméril)

- 1854 *Atropos mexicanus*; Duméril, Bibron et Duméril, Erp. Gen., 7, (2):1521, pl. 83 bis, Fig. 1, 2 and 3.
1880 *Bothriechis nummifer* var. *notata* Fischer, Arch. Nat., 46:222, pl. 8, Fig. 10-12.
1882 *Bothrops mexicanus*; F. Müller, Verh. Nat. Ges. Basel, 7:154.
1896 *Lachesis nummifer*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:544.
1952 *Bothrops nummifer mexicanus*; Mertens, Abh. Senckenb. Naturf. Ges., 487:79.

Type locality: Cobán (Alta) Verapaz, Guatemala.

Range: The Caribbean Slopes (low to intermediate elevations) from extreme southern Mexico to Panama.

Bothrops nummifer occiduus Hoge

- 1868 *Bothrops affinis* Bocourt, Ann. Sci. Nat., 10, (5):10-201. (homonym of *Bothrops affinis* Gray 1849 = *Bothrops atrox* Linnaeus, 1758).
1963 *Bothrops nummifer affinis*; Stuart, Misc. Publ. Mus. Zool. Univ. Mich., (122):130.
1966 *Bothrops nummifer occiduus*; Hoge (nomen novum pro *Bothrops affinis* Bocourt, 1868). Mem. Inst. Butantan, 32:130.
Type locality: San Augustin, on the west (south) slope of the mountains, Guatemala; 610m.

Range: The deciduous moist monsoon forest on the low to moderate elevations along the Pacific slopes in El Salvador (possible in Eastern Chiapas, Mexico into El Salvador).

Bothrops oligolepis (Werner)

- 1901 *Lachesis bilineatus* var. *oligolepis* Werner, Abh. Ber. Mus. Dresden, 9, (2) :13.
1912 *Lachesis chloromelas* Boulenger, Ann. Mag. Nat. Hist., 10, (8) :423.
1976 *Bothrops chrysomelas*; Amaral (error for *chloromelas*) Boulenger Ann, Carnegie Mus., 16:320.

Type locality: Bolivia.

Range: Peru and Bolivia.

Bothrops ophryomegas Bocourt

- 1868 *Bothrops ophryomegas*; Bocourt, Ann. Sci. Nat. Zool. Paleont., 10, (5) :201.
1896 *Lachesis lansbergi*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:546.
Type locality: Occidental slopes of Cordillera Escuintla, Guatemala.
Range: Pacific slope of Central America from western Guatemala to Panama.

Bothrops peruvianus (Boulenger)

Peruvian Pit Viper

- 1903 *Lachesis peruvianus* Boulenger, Ann. Mag. Nat. Hist., 12, (7) :354.
1930 (1929) *Bothrops peruvianus*; Amaral, Mem. Inst. Butantan, 4:240.
Type locality: La Oroya, Carabaya, southeastern Peru.
Range: Southeastern Peru.

Bothrops picadoi (Dunn)

Picado's Pit Viper

- 1939 *Trimeresurus nummifer picadoi* Dunn, Proc. Biol. Soc. Wash., 52:165.
1945 *Bothrops picadoi*; Smith et Taylor, Bull. U.S. Nat. Mus. Wash., 187:183.
Type locality: La Palma, Costa Rica, 4,500 ft. Range: Central plateau of Costa Rica and surrounding mountains.

Bothrops pictus (Tschudi)

- 1845 *L. [aclesis] picta* Tschudi, Arch. F. Naturg., 11:166 and Faun. Per. Herp., :61, fig. 10.

- 1863 *B. [othrops] pictus*; Jan, Elenco Syst. Ofid., :126.
1896 *Lachesis pictus*; Boulenger, Cat. Sn. Brit. Mus., 3:540.
Type locality: The high mountains of Peru.
Range: Coastal region of Peru.

Bothrops pirajai Amaral

Piraja's Pit Viper — Jararacussu

- 1923 *Bothrops pirajai* Amaral, Proc. New Engl. Zool. Club, 8:99.
1923 *Bothrops neglecta* Amaral (partim) Proc. New Engl. Zool. Club, 8:100.
1966 *Bothrops pirajai*; Hoge, Mem. Inst. Butantan, 34:132.
Type locality: Ilheos, State of Bahia, Brazil.
Range: Known only from southern Bahia, (Brazil).

Bothrops pradoi (Hoge)

Prado's Pit Viper

- 1948 *Trimeresurus pradoi* Hoge, Mem. Inst. Butantan, 20:193-202;
Fig. 1-6.
1955 *Bothrops atrox*; Amaral, Mem. Inst. Butantan, 26:215-220.
1966 *Bothrops pradoi*; Hoge, Mem. Inst. Butantan, 32:132.
Type locality: Pau Gigante, State Espirito Santo, (Brazil).
Range: Known from type locality northward to southern Bahia,
(Brazil).

Bothrops pulcher (Peters)

- 1863 *Trigonocephalus pulcher* Peters, Mber. Dtsch. Akad. Wiss. Berlin,
27. 1862 (1863):672.
1896 *Lachesis pulcher*; Boulenger, Cat. Sn. Brit. Mus., 3:539.
1930 *Bothrops pulchra*; Amaral, Mem. Inst. Butantan, 4:240.
Type locality: Quito, Ecuador.
Range: Equatorial forests of Ecuador and Peru.

Bothrops punctatus (Garcia)

Spotted Pit Viper

- 1896 *Lachesis punctata* Garcia, Los Ofid. Ven. del Cauca, Cali Colombia,
(31), Fig. 8.
1910 *Lachesis Monticelli* Peracca, An., Mus. Napoli, 3, (12):1-3.
1923 *Bothrops leptura* Amaral, Proc. New Engl. Zool. Club, 8:102.
1944 *Bothrops punctatus*; Dunn, Caldasia, 3, (12):215.
Type locality: "Las montanhas del Dagua." Colombia.
Range: From Darien, Panama, Colombia, to Chocó, Ecuador.

Bothrops roedingeri Mertens

Roedinger's Pit Viper

1942 *Bothrops roedingeri* Mertens, *Beitr. Fauna, Perus*, 11:284.

Type locality: "Hacienda Huayri", southern Peru.

Range: The desert region along the Pacific coast of Peru.

Bothrops sanctaecrucis Hoge

St.^a Cruz Pit Viper

1966 *Bothrops sanctaecrucis* Hoge, *Mem. Inst. Butantan*, 32:133; pl. 9.

Type locality: Oromomo, Rio Secure, upper Beni, Bolivia.

Range: Known from Bolivia.

Bothrops schlegeli (Berthold) Fig. 51

Horned-palm Viper, or Pestañosa

1846 *Trigonocephalus schlegelli* Berthold, *Nachr. Univ. Ges. Wiss. Göttingen*, :147.

1859 *Lachesis nitidus* Günther, *Proc. Zool. Soc. London*, 1859:414, pl. 20, fig. C.

1863 *B. [othrops] Schlegeli*; Jan, *Elenco Sist. Ofidi*:127.

1870 *Bothrops (Teleuraschia) nigroadspersus* Steindachner, *Sitz. Math.-Natur. Cl. Akad. Wiss. Wien*, 62:348, pl. 8.

1889 *Thanatophis torvus* Posada Arango, *Bull. Soc. Zool. France*, 1889: 345.

1951 *Bothrops schlegeli*; Taylor, *Univ. Kansas Sci. Bull.*, 34:173.

1966 *Bothrops schlegeli*; Hoge (in error for *schlegelii* Berthold), *Mem. Inst. Butantan*, 32 (1965):134.

Type locality: Popayon, restricted to Popayon, Colombia (Dunn et Stuart, 1954).

Range: From southern Mexico to Ecuador and Venezuela.

Bothrops sphenophrys Smith

1960 *Bothrops sphenophrys* Smith, *Trans. Kansas Acad. Sci.*, 62:267.

Type locality: La Soledad, Oaxaca, Mexico.

Range: Known from South Oaxaca, Mexico.

Bothrops supraciliaris Taylor

1954 *Bothrops schlegelii supraciliaris* Taylor, *Kansas Univ. Sci. Bull.*, 36, (2-11):791, Fig. 39.

1963 [*Bothrops supraciliaris*]; Stuart, *Misc. Publ. Mus. Zool. Univ. Michigan*, (122):131.

Type locality: Mountains near San Isidoro del General, San José Province, Costa Rica.

Range: Known only from type specimens and a specimen without locality (banana shipping) in MCZ.

Bothrops undulatus (Jan)

- 1859 *Trigonocephalus (Atropos) undulatus* Jan, Rev. Mag. Zool., :157, pl. E.
1895 *Bothrops undulatus*; Günther, Biol. Centr. Amer. Rept. Amph., :187.
1896 *Lachesis undulatus*; Boulenger, Cat. Sn. Brit. Mus., 3:565.

Type locality: Mexico.

Range: High elevations of central Vera Cruz, southward through central Oaxaca, and northward in central Guerrero in the Sierra Madre del Sur (known from Omilteme and Chilpaziungo Guerrero); Oaxaca, Oaxaca; Adopan and Orizaba; Vera Cruz, (Mexico).

Bothrops venezuelensis Sandner Montilla Fig. 52

Tigra Mariposa

- 1952 *Bothrops venezuelensis* Sandner Montilla, Mon. Cien. Inst. Ter. Exp. Lab. "Veros" Ltda., (21):4 (not *Bothrops neuwiedii venezuelensi* Rossi 1933 = *Bothrops colombiensis*).
1961 *Bothrops venezuelae* sp. no. (sic) Sandner Montilla, Non. Cienc. Contr. Ocas. Mus. Nat. La Salle, Caracas, Zool., (30):3.
1961 *Bothrops pifanoi* Sandner Montilla and Romer, 129:3, fig. 1-4.

Type locality: "Boca de Tigre", Serranía de El Avila, Distrito Federal al Norte de Caracas.

Range: Northern and central part of Venezuela, Avila mountains, the western mountains of Los Tigres, the forests of Rancho Grande and Fila Miranda, from the State of Aragua and the forests of Gualapo (fide Sandner Montilla).

Bothrops xanthogrammus (Cope)

- 1868 *Tgrigonocephalus xanthogrammus* Cope, Proc. Acad. Nat. Sci. Phil., 1868:110.
1889 *Bothrops quadriscutatus* Posada Arango (preoccupied by *quadriscutatus* Peters, 1861), Bull. Soc. Zool. France, 1889:345.
1896 *Lachesis xantogrammus*; Boulenger; Cat. Sn. Brit. Mus., 3:543.
1929 *Bothrops xanthogramma*; Amaral, Mem. Inst. Butantan, 4:241.

Type locality: Pallatanga, Ecuador.

Range: Apparently to be found in the highlands of Ecuador, Andes of Colombia? (fide Boulenger l.c.).

Bothrops yucatannicus (Smith)

Yucatan Pit Viper

1941 *Trimeresurus yucatannicus* Smith, *Zoologica*, 26:62.

1944 *Bothrops yucatannicus*; Smith, *Carnegie Mus.*, 30:92.

Type locality: Chichzen Itzá, Yucatan, Mexico.

Range: Northern and northeastern Yucatán Peninsula, Mexico,
Known only by a few specimens from several localities in Yucatán.

GENUS *Crotalus* Linnaeus

1758 *Crotalus* Linnaeus, *Syst. Nat.*, ed. 10, :214.

1764 *Crotalophorus* Houttuyn, *Natuur. Hist.*, 6, (1):290. Type species
horridus.

1768 *Caudisona* Laurenti, *Synops. Rept.*, :92. Type species *terrificus*,
by page priority.

1818 *Crotalinus* Rafinesque, *Amer. Month. Mag. & Crit. Rev.*, 3, (6):
416. Type species *cyanurus*=*horridus*.

1820 *Crotalurus* Rafinesque, *Annals of Nature*, (1):5. Type species
catenatus.

1830 *Uropsophus* Wagler, *Nat. Syst. Amph.*, :176. Type species *triseriatus*.

1843 *Urocrotalon* Fitzinger, *Syst. Rept.*, :29. Type species *durius*.

1866 *Aploapis* Cope, *Proc. Acad. Nat. Sci. Phila.*, 18, (4):310. Type
species *lepidia-lepidus*.

1875 *Aechmophrys* Cohes, *Rept. Explor. & Surv. W. of 100th Mer.*
(Wyeler), 5, chap. 5, :609. Type species *cerastes*.

1883 *Haploapis* Cope, *Proc. Acad. Nat. Sci. Phila.*, 35, part 1, :13 (emen-
dation of *Aploaspis*, Cope 1866).

1930 *Paracrotalus* Reuss, *Glasnik Zem. Muz.*, Sarajevo, '42, :88. Type
species *terrificus*.

Type species: *Crotalus horridus* Linnaeus, 1758, confirmed by
Opinion 92, Int. Comm. Zool. Nomen. See Also Direction 56, :356.
1956, and Direction 57, :374 Opinions and Orders, 1.

Range: From southern Canada to northern Argentina.

Crotalus adamanteus Beauvois

Eastern Diamondback Rattlesnake

1799 *Crotalus adamanteus* Beauvois, *Trans. Amer. Soc.*, 4(42): 368.

1802 *Crotalus rhombifer* Latreille, in Sonnini et Latreille, *Hist. Nat.*
Rept., 3:197.

1805 *Crotalus rhombiferus* Brickell, (non Latreille 1802) Philadelphia
Med. & Phys J., 2(1) sec. 3:164.

- 1858 *Crotalus adamanteus* var *adamanteus*; Jan, Rev. Mag. Zoöl., (2); 10:153.
- 1895 *Crotalus adamanteus*; Stejneger, Rept. U.S. Nat. Mus. 1893:433.
- 1896 *Crotalus durissus*; Boulenger, (partim) Cat. Sn. brit. Mus. 3:578.
Type locality: U.S.A. Restricted to Charleston S.C. (Schmidt, 1953:227). Type specimen: None designated.
Range: U.S.A. the Coastal plains of: North Carolina south of Albemarle Sound; South Carolina; Georgia; Florida and several of the adjacent Keys; Alabama; Mississippi; and extreme southeastern Louisiana. U.S.A.

Crotalus aquilus Klauber

Queretaran Blotched Rattlesnake

- 1952 *Crotalus triseriatus aquilus* Klauber (partim), Bull. Zool. Soc. San Diego, (26):24.
- 1956 *Crotalus triseriatus aquilus*; Klauber, Rattlesnakes, 1:44.
- 1977 *Crotalus aquilus*; Harris et Simmons, Bull. Maryland Herp. Soc., 14 (3):107.
Type locality: Near Alvarez, San Luiz Potosí, Mexico.
Range: Mexico, Southern San Luiz Potosí, Guanajuato, Northeast Michoacan, Queretaro and Hidalgo, probably in Northwestern Veracruz.

Crotalus atrox Baird and Girard

Western Diamondback Rattlesnake

- 1853 *Crotalus atrox* Baird and Girard, Cat. North. Amer. Rept., (1):5.
- 1861 *Caudisona atrox* var. *atrox*; Kennicott, Proc. Acad. Nat. Sci. Philad., 13:206.
- 1861 *Caudisona atrox* var *sonoraensis* Kennicott, Proc. Acad. Nat. Sci. Philad., 13:206.
- 1896 *Crotalus confluentus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:576.
- 1956 *Crotalus atrox*; Klauber, Rattlesnakes, 1:29.
Type locality: Indianola [Calhoun County], Texas, U.S.A.
Range: From Arkansas and Oklahoma, U.S.A. South to Mexico, Sonora, Chihuahua, Durango, Coahuila, Nuevo Leon, Tamaulipas, San Luis de Potosí and Northern Veracruz, isolated colonies in Central Veracruz and Southern Oaxaca probably present in Northern Zacatecas and possibly Hidalgo. Also Tiburón, Turna on San Pedro Matir Islands.

Crotalus basiliscus basiliscus (Cope)

Mexican West-coast Rattlesnake

- 1864 *Caudisona basilisca* Cope, Proc. Acad. Nat. Sci. Philadelphia. 16 (3):166.

1875 *Crotalus basiliscus* Cope, in Yarrow, Surv. W. of 100 Merid.
(Wheeler) 5 (4):532.

1896 *Crotalus terrificus*; Boulenger (partim), Cat. Sn. Brit. Mus., 3:573.

1948 *Crotalus basiliscus basiliscus*; Gloyd, Nat. Hist. Misc., (17):1.

1956 *Crotalus basiliscus basiliscus*; Klauber, Rattlesnakes, 1:30.

Type locality: Near Colima, Mexico restricted Smith et Taylor,
1950 to Colima, Mexico.

Range: Mexico, from extreme Southern Sonora along Westcoast
of Mexico through Sinaloa, Jalisco, Colima and Western Michoacán,
and Nayarit.

Crotalus basiliscus oaxacus Gloyd

Oaxacan Rattlesnake

1948 *Crotalus basiliscus oaxacus* Gloyd, Nat. Hist. Miscl., (17):1.

1956 *Crotalus basiliscus oaxacus*; Klauber, Rattlesnakes, 1:30.

Type locality: Oaxaca, Oaxaca, Mexico.

Range: Known from type locality and Chilpanzingo Region.

Crotalus catalinensis Cliff

Santa Catalina Island Rattlesnake

1954 *Crotalus catalinensis* Cliff. Trans. San Diego Soc. Nat. Hist., 12
(5):80.

1956 *Crotalus catalinensis*; Klauber, Rattlesnake, 1:30.

Type locality: Santa Catalina Island, Gulf of California, Mexico.

Range: Known only from type locality.

Crotalus cerastes cerastes Hallowell

Mojave Desert Sidewinder

1854 *Crotalus cerastes* Hallowell, Proc. Acad. Nat. Sci. Philadelphia.,
7,:95.

1944 *Crotalus cerastes cerastes* Klauber, Trans. San Diego Soc. Nat.
Hist., 10 (8):94

Type locality: Borders of the Mohave River, and in the desert of
the Mohave California.

Range: The desert regions of eastern (but not extreme southeastern)
California, southern Nevada, southwestern Utah, and northwestern Arizona, including the following: extreme southern Mono,
Inyo, eastern Kern, northeastern Los Angeles, and San Bernardino
counties in California; Southeastern Esmeralda, southern Nye,
extreme southern Lincoln and Clark counties in Nevada; south-
western and central Washington County, Utah; and extreme north-
western and west-central Mohave County, Arizona.

Crotalus cerastes cercobombus Savage and Cliff
Sonoran Desert Sidewinder

1953 *Crotalus cerastes cercobombus* Savage and Cliff, Nat. Hist. Miscl., (119) :2.

1956 *Crotalus cerastes cercobombus*; Klauber, Rattlesnakes, 1:31.

Type locality: Near Gila Bend, Maricopa, Arizona, U.S.

Range: Eastern Yuma, southern Maricopa western Pinal and western Pima counties, Arizona, U.S.A. and Northwestern Sonora (except parts of the state North and West of Bahia Adair) also Tiburón Island Mexico.

Crotalus cerastes laterorepens Klauber
Colorado Desert Sidewinder

1944 *Crotalus cerastes laterorepens* Klauber, Trans. San Diego Soc. Nat. Hist., 10 (8) :94.

1956 *Crotalus cerastes laterorepens*; Klauber, Rattlesnakes, 1:31.

Type locality: The Narrows, San Diego County, California, U.S.

Range: The desert areas of Central and Eastern Reverside, Northeastern San Diego and Imperial County in California, Western Yuma County, Arizona; Northeastern Baja California, USA and Sonora, Mexico.

Crotalus durissus durissus Linnaeus
Central American Rattlesnake

1758 *Crotalus durissus* Linnaeus, Syst. Nat. 10th, ed., 1:214.

1802 *Crotalus simus* Latreille in Sonnini and Latreille, Hist. Nat. Rept., 3:202, 4:323.

1896 *Crotalus terrificus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:573.

1936 *Crotalus durissus durissus*; Klauber (partim) Occ. Pap. San Diego Soc. Nat. Hist. (1).

1956 *Crotalus durissus durissus*; Klauber, Rattlesnakes, 1:31-32.

1966 *Crotalus durissus durissus*; Hoge, Mem. Inst. Butantan, 32:137.

Type locality: America, restricted (Taylor and et Smith, 1950) to Jalapa, Veracruz, Mexico.

Range: Mexico, Central Veracruz, Southeastern Oaxaca, Tabasco and Chiapas, Southwestern Nicaragua. Northwestern and Central Costa Rica.

Crotalus durissus cascavella (Wagler, 1824)
Northeastern Brazilian Rattlesnake

1824 *Crotalus cascavella* Wagler, in Spix, Serp. Bras. spec. nov.: 60.
pl. 24.

1925 *Crotalus terrificus* var. *collirhombeatus* Amaral, Rev. Mus. Paulista, 15:90, pl. 1.

1966 *Crotalus durissus cascavella*; Hoge, Mem. Inst. Butantan, 32:139.

1972 *Crotalus durissus terrificus*; Klauber, Rattlesnakes (2.^a) ed., 1:35.

1972 *Crotalus [durissus] cascavella*; Harris et Simmons, Bull. Maryland, Herp. Soc., 8 (2):34.

Type locality: "In campis provinciae" (Caatinga of the interior of Bahia). Restricted by (Hoge 1966:139) to Mina Caraiba, State Bahia, Brazil.

Range: The dry Caatinga regions of States Maranhão, Ceará, Piauhy, Pernambuco, Alagoas, Rio Grande do Norte and Bahia, possible extreme North Eastern Minas Gerais, Brazil.

Crotalus durissus collilinatus Amaral

Central Brazilian Rattlesnake

1926 *Crotalus terrificus* var. *collilinatus* Amaral (partim), Rev. Mus. Paulista, 15:90.

1956 *Crotalus durissus terrificus*; Klauber (partim), Rattlesnakes, 1:33.

1966 *Crotalus durissus collilinatus*; Hoge, Mem. Inst. Butantan, 32:139.

1972 *Crotalus durissus terrificus*; Klauber, Rattlesnakes, (2.^a) ed., 1:35.

1972 *Crotalus [durissus] collilinatus*; Harris et Simmons, Bull. Maryland, Herp. Soc., 8 (2):35.

Type locality: Central, Southeastern and Southern Brazil, Argentina, Paraguay and probably Bolivia. Restricted (Hoge, 1966) to the State of Mato Grosso, Brazil.

Range: South Eastern State of Mato Grosso, State of Goias, Federal District; Minas Gerais and Northeastern São Paulo. Intergradation with *terrificus*, over a large area in the State of São Paulo.

Crotalus durissus culminatus Klauber

Northwestern Neotropical Rattlesnake

1952 *Crotalus durissus culminatus* Klauber, Bull. Zool. Soc. San Diego, 26:65.

Type locality: Hacienda el Sabino, near Uruapan, Michoacan, Mexico.

Range: Southwestern Michoacan, Southern and Morilos Guerrero and Southwestern Oaxaca, Mexico. Possibly Western Puebla and Distrito Federal.

Crotalus durissus cumanensis Humboldt Fig. 55

Venezuelan Rattlesnake

1833 *Crotalus cumanensis* Humboldt in Humboldt et Bonpland, Recueil d'obs. Zool. Anat. Comp., 2:6.

1833 *Crotalus loeflingi* Humboldt in Humboldt et Bonpland, Recueil d'obs.
Zool. Anat. Comp., 2:6.

1896 *Crotalus terrificus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:373.

1956 *Crotalus durissus terrificus*; Klauber, (partim) Rattlesnakes,
1:32.

1966 *Crotalus durissus cumanensis*; Hoge, Mem. Inst. Butantan, 32:142.

1972 *Crotalus durissus terrificus*; Klauber Rattlesnakes (2.^a) ed., 1:35.

1972 *Crotalus [durissus] cumanensis*; Harris et Simmons, Bull. Maryland
Herp. Soc., 8(2):35.

Type locality: Cumaná, Venezuela.

Range: Venezuela, except the high mountains, the savannah of
Monagas and the equatorial forests of the Delta, Bolívar and Amazonas.
Colombia in the extreme northeast.

Crotalus durissus dryinus Linnaeus

Guianian Rattlesnake

1758 *Crotalus dryinus* Linnaeus, Syst. Nat. 10th, ed., 1:214.

1896 *Crotalus terrificus*; Boulenger, Cat. Sn. Brit. Mus., 3:573.

1956 *Crotalus dryinus*; Klauber (as senior, but rejected synonym for
the South American Rattler)

1966 *Crotalus durissus dryinus*; Hoge, Mem. Inst. Butantan, 32:142,
pl. XIV.

1972 *Crotalus durissus terrificus*; Klauber Rattlesnakes. (2.^a) ed., 1:35.

1972 *Crotalus [durissus] dryinus*; Harris et Simmons Bull. Maryland
Herp. Soc., 8(2):35.

Type locality: America, restricted: (Hoge 1966 to Paramaribo,
Surinam.).

Range: The Guianas.

Crotalus durissus marajoensis Hoge

Marajoan Rattlesnake

1966 *Crotalus durissus marajoensis*; Hoge, Mem. Inst. Butantan., 32:
143, pl. XV.

1972 *Crotalus durissus terrificus*; Klauber, Rattlesnakes (2.^a) ed., 1:35.

1972 *Crotalus [durissus] marajoensis*; Harris et Simmons, Bull.
Maryland Herp. Soc., 8(2):35.

Type locality: Tuyuyu, Ilha de Marajó, State of Pará, Brazil.

Range: The Savannah of Marajó, Brazil.

Crotalus durissus ruruima Hoge

Mt. Roraima Rattlesnake

1966 *Crotalus durissus ruruima*; Hoge, Mem. Inst. Butantan, 32:145,
pl. XVI.

Type locality: Paulo Camp, Mt. Roraima, Venezuela.

Range: Known from Venezuelan slopes from Mt. Roraima, and Carinan, Peru, Amazonas, Brazil, a single specimen from Territorio Federal of Roraima.

Crotalus durissus terrificus (Laurenti) Fig. 54

South American Rattlesnake

- 1768 *Caudisona terrifica* Laurenti, *Syn. Rept.*, :93.
1896 *Crotalus terrificus*; Boulenger (partim) *Cat. Sn. Brit. Mus.*, 3:573.
1926 *Crotalus terrificus collilineatus* Amaral (partim) *Rev. Mus. Paulista*, 15:90.
1936 *Crotalus durissus terrificus*; Klauber (partim) *Rattlesnakes*, 1:32.
1966 *Crotalus durissus terrificus*; Hoge, *Mem. Inst. Butantan*, 34:147, pl. XVII.
1972 *Crotalus [durissus] terrificus*; Harris et Simmons, *Bull. Maryland Herp. Soc.*, 8(2):34.

Type locality: Júlio de Castilho, Município Taquari, State of Rio Grande do Sul, Brazil (by indication of neotype Hoge, 1966).

Range: Extreme Southern America, Southern Brazil, Uruguay, Argentina, Paraguay and Bolivia and possibly Peru.

Crotalus durissus totonacus Gloyd and Kauffeld

Totonacan Rattlesnake

- 1940 *Crotalus totonacus* Gloyd and Kauffeld, *Bull. Chicago Acad. Sci.*, 6(2):12.
1945 *Crotalus durissus totonacus*; Smith and Taylor, *U.S. Mus. Bull.*, 187:190.

Type locality: Panaco Island, about 75 miles South of Tampico, Veracruz, Mexico, 12 miles inland from Cabo Rojo.

Range: Southern Tamaulipas, Southeastern San Luiz Potosí, and Northern Veracruz.

Crotalus durissus trigonicus Harris et Simmons

Rupunini Savanna Rattlesnake

- 1977 *Crotalus durissus trigonicus* Harris et Simmons, *Mem. Inst. Butantan*, 40:306, 3 fig.

Type locality: Rupununi Savanna of southwestern Guyana.

Range: Known at present only from the type locality: the isolated Rupununi Savannas of southwestern Guyana and the Savannas of Tiriós Territory Amapa, Brazil.

Crotalus durissus tzabcan Klauber

Yucatán Neotropical Rattlesnake

- 1952 *Crotalus durissus tzabcan* Klauber, Bull. Zool. Soc. San Diego, (26):71.

Type locality: Kantunil, Yucatan, Mexico.

Range: From Yucatan South into Northern El Petén, Guatemala and Belize.

Crotalus durissus unicolor Van Lidth de Geude

Aruba Island Rattlesnake

- 1887 *Crotalus horridus* var. *unicolor* Van Lidth de Geude, Notes Leyden Mus., 2(8):133.

- 1896 *Crotalus terrificus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:573.

- 1940 *Crotalus durissus unicolor*; Brongersma, Studies of the Fauna of Curaçao, Aruba, Bonaire and Venezuelan Islands.

- 1956 *Crotalus unicolor*; Klauber, Rattlesnakes, 1:44.

- 1966 *Crotalus durissus unicolor*; Hoge, Mem. Inst. Butantan., 32:148.

Type locality: Aruba Island, Netherlands West Indies.

Range: Known from Aruba Island only. A specimen described as *Crotalus pulvis* by Ditmars from Manacos, Nicaragua is probably based on a specimen with erroneous locality.

Crotalus enyo enyo (Cope)

Lower California Rattlesnake

- 1861 *Caudisona enyo* Cope, Proc. Acad. Sci. Philadelphia., 13:208.

- 1875 *Crotalus enyo*; Cope, Bull. U. S. Mus., 1:33.

- 1954 *Crotalus enyo enyo*; Lowe et Norris, Trans. San Diego, Soc. Nat. Hist., 12(4):52.

- 1956 *Crotalus enyo enyo*; Klauber, Rattlesnakes, 1:34.

Type locality: Lower California.

Range: Mexico, Baja California, from the vicinity of El Marmol (lat. 30.^o N) south to Cape San Lucas and the Islands Magdalena, Santa Margarida, Espírito Santo, Partida, San Francisco and Carmem.

Crotalus enyo cerralvensis Cliff

Cerralvo Island Rattlesnake

- 1854 *Crotalus enyo cerralvensis* Cliff, Trans. San Diego Soc. Nat. Hist., 12(5):82.

- 1956 *Crotalus enyo cerralvensis*; Klauber, Rattlesnakes, 1:34.

Type locality: Mexico Ceralvo Island, Gulf of California.

Range: Cerralvo Island.

Crotalus enyo furvus Lowe et Norris

Rosario Rattlesnake

1954 *Crotalus enyo furvus* Lowe et Norris, Trans. San Diego Soc. Nat. Hist., 12 (4) :52.

1956 *Crotalus enyo furvus*; Klauber, Rattlesnakes, 1 :34.

Type locality: 10.9 mil. North of El Rosario, Baja California del Norte, Mexico.

Range: Mexico, Baja California del Norte, on West Coast from San Telmo River to El Rosario.

Crotalus exsul Garman

Cedros Island Diamond Rattlesnake

1883 *Crotalus exsul* Garman, Mem. Mus. Comp. Zool., 8 (3) :114.

1956 *Crotalus exsul*; Klauber, Rattlesnakes., 1 :34.

Type locality: Cedros Island (or Cerros), Pacific Coast of Baja California, Mexico.

Range: Mexico, Cedros (or Cerros) Island, Pacific Coast of Baja California.

Crotalus horridus horridus Linnaeus⁵

Timber Rattlesnake

1758 *Crotalus horridus* Linnaeus, Syst. Nat., ed. 10:214.

1818 *Crotalinus cyanurus* Rafinesque, Amer. Month. Mag. Mag. & Crit. Rev. 3, (6) :416; 4 (1) :41.

1859 *Crotalus durissus* var. *concolor* Jan, Rev. et Mag. Zool., ser. 2, 10, :153.

1873 *Crotalus fasciatus* Higgins, Ophidians, :81.

1935 *Crotalus horridus horridus* Gloyd, Copeia, (4) :176.

Type locality: America restricted by (Schmidt 1953:227) to vicinity of New York City, U.S.

Range: The Niagara and Essex Peninsula areas of the Lake Erie, Ontario, Canada (it may now be extinct). Northwestern and North central United States; including the Atlantic States from central Vermont to Virginia (except Delaware); West Virginia, Ohio, Kentucky western North Carolina; northwestern South Carolina; northwestern South Carolina, Northern Georgia Tennessee except western parts; extreme Northern Alabama; from central Indiana to Kentucky, all central south Illinois, except extreme southern corner southwestern Wisconsin, southwards along Western and southern Iowa; Missouri, Northwestern Arkansas; extreme southwestern Nebraska; western Kansas Central and western Oklahoma southwards into North eastern Texas, U.S.A.

(⁵) Pisani, Collins and Edwards in Trans. Kansas Acad. Sci., 75(3)1972 (1973):255 concludes that, on the basis of morphological characters no subspecies of *C. horridus* can be recognised.

Crotalus horridus atricaudatus Latreille
Canebrake Rattlesnake

- 1790 *Crotalus horridus* (part) Bonnaterre, Encycl. Meth.; Ophiologie, : 1.
1802 *Crotalus atricaudatus* Latreille, in Sonnini and Latreille, Hist. Nat. Rept., 3, : 209.
1805 *Crotalus zetazomae* Brickell, Philadelphia. Med. & Phys. Jour., 2, part. 1, sec. 3:164.
1820 *Crotalus catesbeiae* Hemprich. Grund. Natur., : 387.
1859 *Crotalus durissus* var. *melanurus* Jan, Rev. et Mag. Zool., ser. 2, 10:153.
1863 *Crotalus durissus* var. *mexicana* Jan, Elenco Syst. Ofidi, : 123.
1935 *Crotalus horridus atricaudatus* Gloyd, Copeia, (4):176.

Type locality: Restricted by (Schmidt 1953:228) to Charleston, SC, USA.

Range: From southeastern Virginia through the lowlands of North Carolina; South Carolina; Georgia, Northern Florida; Alabama except extreme North; Mississippi; extreme western Tennessee; extreme western Kentucky; extreme southern corner of Illinois; extreme southeastern Missouri; eastern and southern Arkansas; Louisiana and southwestern Texas.

Crotalus intermedius intermedius Troschel
Totalcan Small-Headed Rattlesnake

- 1865 *Crotalus intermedius*, Troschel, in Müller. Reisen in den Vereinigten Staaten, Canadá und Mexico, 3:613.
1896 *Crotalus triseriatus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:581.
1940 *Crotalus triseriatus anahuacus*, Gloyd (partim) Chicago Sci. Soc. Publ. (4):91.
1941 *Crotalus triseriatus gloydi* Taylor, Univ. Kansas Sci. Bull., 27(1):130.
1946 *Crotalus gloydi*; Smith, Univ. Kansas Sci. Bull., 31(1):73.
1952 *Crotalus intermedius intermedius*; Klauber, Bull. Zool. Sec. San Diego, (26):9.
1956 *Crotalus intermedius intermedius*; Klauber, Rattlesnakes, 1:36.

Type locality: Mexico.

Range: Imperfectly known from Michoacan, Northeastern Puebla, west central Vera Cruz, and central Oaxaca.

Crotalus intermedius gloydi Taylor
Oaxacan Small-Headed Rattlesnake

- 1941 *Crotalus triseriatus gloydi* Taylor, Univ. Kansas. Sci. Bull., 27, part 1, (7):130.

- 1946 *Crotalus gloydi gloydi* Smith, Univ. Kansas. Sci. Bull., 31, part 1 (3) :78.
1952 *Crotalus intermedius intermedius* (partim) Klauber, Bull. Zool. Soc. San Diego, (26) :9.
1957 *Crotalus intermedius gloydi* Davis and Dixon, Sw. Nat., 2(1) :25.
Type locality: Cerro San Felipe, elevation 10,000 feet, near (15 km. northeast of) Oaxaca da Juárez, Oaxaca, Mexico.
Range: Mountain areas of central Oaxaca and Michoacán.

Crotalus intermedius omiltemanus Günther
Omilteman Small-Headet Rattlesnake

- 1895 *Crotalus omiltemanus* Günther, Biol. Centr. Amer. Rept. Batr.: 192.
1896 *Crotalus triseriatus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:381.
1938 *Crotalus triseriatus omiltemanus*; Klauber, Copeia, (4) :196.
1952 *Crotalus intermedius omiltemanus*; Klauber, Bull. Zool. Soi. San Diego, (26) :14.
1956 *Crotalus intermedius omiltemanus*; Klauber, Rattlesnakes, 1 :36.
Type locality: Omilteme Guerrero, Mexico.
Range: Mexico, Central Guerrero.

Crotalus lannomi Tanner
Autlán Rattlesnake

- 1966 *Crotalus lannomi* Tanner, Herpetologica, 22(4) :298.
Type locality: 1,8 miles west of the pass, Puerto Los Mazos or 22 miles west by road from Tuxcacuisco, a branch of the Rio Armenia on Mexican Highway n. 80, Jalisco, Mexico.
Range: Known from type locality only.

Crotalus lepidus lepidus (Kennicott)
Mottled Rock Rattlesnake

- 1861 *Caudisona lepida* Kennicott, Proc. Acad. Nat. Sci. Philadelphia., 13:206.
1883 *Crotalus lepidus*; Cope (partim) Proc. Acad. Sci. Philadelphia., 35:13.
1887 *Crotalus (tigris) palmeri* Garman, Bull. Essex Inst., 19:124.
1936 *Crotalus lepidus lepidus*; Gloyd, Occ. Papers Mus. Zool. Univ. Mich., (337) :2.
1956 *Crotalus lepidus lepidus*; Klauber, Rattlesnakes, 1 :37.
Type locality: Presidio del Norte and Eagle Pass, Texas, Restricted (Smith et Taylor, 1950) : Presidio del Norte, Presidio County, U.S.A.

Range: Southeastern New Mexico, Southwestern Texas, and Northeastern Mexico, Coahuila, western Nuevo León, western San Luiz Potosí and Southeastern Zacatecas (integration with *Klauberi*), U.S.A.

Crotalus lepidus klauberi Gloyd

Banded Rock Rattlesnake

1936 *Crotalus lepidus klauberi* Gloyd, Occ. Papers Mus. Zool. Univ. Mich., (337) :2.

1944 *Crotalus semicornutus* Taylor, Univ. Kansas Sci. Bull., 30 part 1 (4) :52.

1956 *Crotalus lepidus*; Klauber, Rattlesnakes, 1 :37.

Type locality: Carr. Canyon, Huachuca Mountains, Cochise County, Arizona, U.S.A.

Range: Southeastern Arizona, Southwestern New Mexico, the El Paso area in Texas and north-central Mexico, including the Santa Rita, Huachuca, Dragoon Dos Cabezas and Chiricahua Mountains of southeastern Arizona; Mexico (mountains areas northeastern Sonora, southeastern Sinaloa, Chihuahua, Durango, Nayarit (in this area although in the territory of *Crotalus lepidus klauberi* they are different and may justify the recognition of another subspecies (fide Klauber 1956), U.S.A.

Crotalus lepidus maculosus Tanner, Dixon et Harris

Durango Rock Rattlesnake

1972 *Crotalus lepidus maculosus* Tanner, Dixon et Harris, Great Basin Nat., 32(1) :16. (Fig. 1-3)

Type locality: 15 miles west of La Ciudad, near Highway 40, Durango, Mexico.

Range: Known from type locality and a narrow area along the high mountain Pacific slopes Durango-Sinaloa, Nayarit region and perhaps as far south as adjacent Jalisco.

Crotalus lepidus morulus Klauber

Tamaulipan Rock Rattlesnake

1952 *Crotalus lepidus morulus* Klauber, Bull. Soc. San Diego, (26) :52.

1956 *Crotalus lepidus morulus*; Klauber, Rattlesnakes, 1 :37.

Type locality: 10 m. northwest of Gómez Farías on the trail to la Joya de Salas, Tamaulipas, Mexico.

Range: Mexico, Mountains northwest of Gómez Farías, and near Chinas, Tamaulipas, Mexico.

Crotalus mitchellii mitchellii (Cope)

San Lucas Speckled Rattlesnake

1861 *Caudisoma mitchellii* Cope, Proc. Acad. Nat. Sci. Philadelphia., 13:293.

- 1875 *Crotalus mitchellii*; Cope in Yarrow, Surv. W of 100 th Merid.
(Wheeler) 5(4):535.
- 1895 *Crotalus mitchellii mitchellii*; Stejneger (partim) Rept. U.S. Nat.
Mus., 1893:454.
- 1936 *Crotalus mitchellii mitchellii*; Klauber, Trans. San Diego Soc. Nat.
Hist., 8(19):154.
- 1956 *Crotalus mitchellii mitchellii*; Klauber, Rattlesnakes, 1:38.
Type locality: Cape San Lucas, Baja California, Mexico.
Range: Distrito del Sur of Baja California, also the islands of
Cerralvo, Espiritu Santo, San José, Santa Cruz, and Carmen (Gulf
coast) and Santa Margarita (Pacific coast).
Intergrades with *pyrrhus*, Mexico.

Crotalus mitchellii angelensis Klauber

Angel de la Guarda Island Speckled Rattlesnake

- 1963 *Crotalus mitchellii angelicus* Klauber, Trans. San Diego Soc. Nat.
Hist., 13(5):73-80.
Type locality: Isla Angel de la Guardia, Mexico.
Range: Isla Angel de la Guardia, Mexico.

Crotalus mitchellii muertensis Klauber

El Muerto Island Speckled Rattlesnake

- 1949 *Crotalus mitchellii muertensis* Klauber, Trans. San Diego Soc. Nat.
Hist., 11(6):97.
1952 *Crotalus mitchellii muertensis*; Klauber, Bull. Zool. Ser. San Diego,
(26):123.

Type locality: El Muerto Island, San Luis group, Gulf of California,
coast of Baja California, Mexico.

Range: Known only from type locality.

Crotalus mitchellii pyrrhus Cope

Southwestern Speckled Rattlesnake

- 1866 *Caudisona pyrrhas* Cope, Proc. Acad. Nat. Sci. Philadelphia.,
18:308.
1875 *Crotalus pyrrhus*; Cope, In Yarrow, Surv. W. of 100 at Merd.
(Wheeler) 5(5):535.
1895 *Crotalus mitchellii pyrrhus*; Stejneger (partim) Rept. U. S. Nat.
Mus., 1893:456.
1922 *Crotalus godmani*; Schmidt, Bull. Amer. Mus. Nat. Hist.,
46(11):701.
1936 *Crotalus mitchelli pyrrhus*; Klauber, Trans. San Diego Soc. Nat.
Hist., 8(19):157.

1956 *Crotalus mitchellii pyrrhus*; Klauber, Rattlesnakes.

Type locality: "Not stated" [stated by Klauber 1956] as a
"Canyon Prieto, Yavapac County, Arizona", U.S.A.

Range: Southern California, Southern Nevada, Western Arizona,
Northwestern Sonora, Mexico, Northern Baja California, U.S.A.

Crotalus mitchellii stephensi Klauber

Panamint Rattlesnake

1930 *Crotalus confluentus stephensi* Klauber, Trans. San Diego Soc.
Nat. Hist., 6(3):108.

1936 *Crotalus mitchellii stephensi* Klauber, Trans. San Diego Soc. Nat.
Hist., 8(19):162.

Type locality: 2 miles west of Jackass Springs, Panamint Mountains,
altitude 6,200 ft., Inyo County, California. U.S.A.

Range: The rocky mountain desert areas of Southwestern Nevada
and east central California, U.S.A.

Crotalus molossus molossus Baird and Girard

Northern Black-Tailed Rattlesnake

1853 *Crotalus molossus* Baird and Girard, Cat. Sn. Amer. Rept., (1):10.

1854 *Crotalus ornatus* Hallowell, Proc. Acad. Nat. Sci. Philadelphia.,
7:192.

1936 *Crotalus molossus molossus*; Gloyd, Occ. Papers Mus. Zool. Univ.
Mich., (325):2.

1956 *Crotalus molossus molossus*; Klauber, Rattlesnakes, 1:39.

Type locality: Fort Webster, Santa Rita del Cobre, Grand County,
New Mexico, U.S.A.

Range: From Central Texas to Western Arizona, U.S.A., Mexico,
Northern Mexico.

Crotalus molossus estebanensis Klauber

San Esteban Island Rattlesnake

1949 *Crotalus molossus estebanensis* Klauber, Trans. San Diego Soc.
Nat. Hist., 11(6):104.

Type locality: San Esteban Island, Gulf of California, Mexico.
Range: Only on San Esteban Island, Gulf of California, Mexico.

Crotalus molossus nigrescens Gloyd

Mexican Black-Tailed Rattlesnake

1936 *Crotalus molossus nigrescens* Gloyd, Occ. Papers Mus. Zool. Un
Mich., (325):2.

1956 *Crotalus molossus nigrescens*; Klauber, Rattlesnakes, 1:39-40.

Type locality: 4 mil, West of La Colorada, Zacatecas, Mexico.

Range: Tableland from Southern Sonora, Southwestern Chihuahua and Southern Coahuila to Oaxaca and Veracruz. Probably also in Eastern Jalisco, Aguas Calientes and Morelos, Mexico.

Crotalus polystictus Cope

Mexican Lance-Headed Rattlesnake

1865 *Caudisona polysticta* Cope, Proc. Ac. Nat. Hist. Philadelphia., 17:191.

1875 *Crotalus polystictus*; Cope, in Yarrow, Surv. W. of. 100th Mer. (Wheeler) 5(4):533.

1877 *Crotalus jimenezii* Dugés, La Naturaleza, 4:23.

1956 *Crotalus polystictus*; Klauber, Rattlesnakes, 1:40.

Type locality: Restricted [Taylor et Smith 1950] Tupátaro, Guanaputo, Mexico.

Range: Tableland of Central Mexico from Southern Zacatecas to Central Veracruz including Eastern Jalisco, Guanajuato, Michoacan, Distrito Federal Morelos and east-Central Veracruz. Probably also in State Aguas Calientes, Gueretaro, Hidalgo, Mexico, Tlaxcala, Puebla and Oaxaca, Mexico.

Crotalus pricei pricei Van Denburgh

Western Twin-Spotted Rattlesnake

1895 *Crotalus pricei* Van Denburgh, Proc. Calif. Ac. Sci., 5(2):856.

1931 *Crotalus triseriatus pricei*; Klauber, in Githens and George, Bull. Ant. Inst. Amer., 5(2):33.

1946 *Crotalus pricei pricei*; Smith, Univ. Kansas Sci. Bull., 31 part 1(3):79.

1956 *Crotalus pricei pricei*; Klauber, Rattlesnake, 1:40.

Type locality: Huachuca Mountain, Cochise County, Arizona, U.S.A.

Range: Southeastern Mountain of Arizona, Mexico, Northwestern Mountains. Including the Pinaleo, Santa Rita, Huachuca and Chiricahua Mountains in Arizona, and the Sierra Tarahumare and Sierra Madre in Eastern Sonora, Western Chihuahua and Durango, probably also in the mountains of Eastern Sinaloa and Northern Nayarit, U.S.A.

Crotalus pricei miquihuanus Gloyd

Eastern Twin-Spotted Rattlesnake

1936 *Crotalus triseriatus triseriatus*; Klauber (partim) Trans. San Diego Sci. Hist. Nat., 8(20):248.

1940 *Crotalus triseriatus miquihuanus* Gloyd, Chicago Acad. Sci. Spe. Publ., (4):102.

- 1946 *Crotalus pricei miquihuana*; Smith, Univ. Kansas
Sci. Bull., 31 part 1(3):79.
- 1956 *Crotalus pricei miquihuana*; Klauber, Rattlesnake, 1:41.
Type locality: Cerro Potosi, near Galeana, Nuevo León, Mexico.
Range: Southeastern Nuevo León and Southwestern Tamaulipas,
and extreme Southeastern Coahuila Mexico.
- Crotalus pusillus* Klauber
Tancitaran Dusky Rattlesnake
- 1952 *Crotalus pusillus* Klauber, Bull. Zool. Soc. San Diego Soc. Nat.
Hist., 8(20):247.
- 1956 *Crotalus pusillus*; Klauber, Rattlesnakes, 1:41.
Type locality: Tancitaro Michoacan, alt. 5000 ft., Mexico.
Range: Mountains of Western Michoacan and Southern Jalisco,
Mexico.
- Crotalus ruber ruber* Cope
Red Diamond Rattlesnake
- 1892 *Crotalus adamanteus ruber* Cope, Proc. U.S. Mus., 14:690.
- 1949 *Crotalus ruber ruber*, Klauber, Trans. San Diego Soc. Nat. Hist.,
11(5):59.
- 1956 *Crotalus ruber ruber*; Klauber, partim Rattlesnakes, 1:41.
Type locality: Not designated. Restricted [Smith et Taylor
1959] to Dulzura, San Diego County, California, U.S.A.
Range: USA Southwest California to Mexico, Northern Baja
California.
- Crotalus ruber elegans* Schmidt
Ángel de la Guarda Red Diamond Rattlesnake
- 1922 *Crotalus atrox elegans* Schmidt, Bull. Amer. Mus. Nat. Hist.,
46(11):699.
- 1978 *Crotalus ruber elegans*; Harris and Simmons, Bull. Maryland
Herp. Soc., 14(3):120.
Type locality: Ángel de La Guarda Island, Gulf of California,
(Mexico).
Range: Known only from the type locality.
- Crotalus ruber lorenzoensis* Radcliffe and Maslin
San Lorenzo Red Diamond Rattlesnake
- 1975 *Crotalus ruber lorenzoensis* Radcliffe and Maslin, Copeia 1975,
(3):490.
Type locality: San Lorenzo Sur Islands in the Gulf of California,
Baja California North, (Mexico).
Range: Same of type locality.

Crotalus ruber lucasensis Van Denburgh

San Lucan Diamond Rattlesnake

- 1920 *Crotalus lucasensis* Van Denburgh, Proc. Calif. Acad. Sci. Ser., 4,
10(2):29.
1949 *Crotalus ruber lucasensis*; Klauber, Trans. San Diego Soc. Nat.
Hist., 11(5):59.
1956 *Crotalus ruber lucasensis*; Klauber, Rattlesnakes, 1:42.

Type locality: Aguas Calientes, Cape region of Baja California.

Range: The southern part of the Baja California peninsula from
Loreto where there is intergradation with *C. r. ruber* south to
Cape San Lucas. Also Santa Margarita and San José Islands.

Crotalus ruber monserratensis Harris and Simmons

Monserrate Red Diamond Rattlesnake

- 1978 *Crotalus ruber monserratensis* Harris and Simmons, Bull, Maryland Herp. Soc., 14(3):122.

Type locality: Isla Monserrate, Gulf of California, Baja Sur, (Mexico).

Range: Known only from the type locality.

Crotalus scutulatus scutulatus (Kennicott)

Mojave Rattlesnake

- 1861 *Caudisona scutulata* Kennicott, Proc. Acad. Nat. Sci. Philadelphia.,
13:207.
1875 *Crotalus scutulatus*; Cope in Yarrow, Surv. W. of 100th Mer.
(Wheeler), 5(4):533. see also :992.
1896 *Crotalus scutulatus*; Boulenger, (partim) Cat. Sn. Brit. Mus.,
3:575.
1929 *Crotalus confluentus kollyi* Amaral, Bull. Antiv. Inst. Amer.,
2(4):91.
1940 *Crotalus scutulatus scutulatus*; Gloyd, Chicago Acad. Sci. Spe.
Publ. (4):200.
1956 *Crotalus scutulatus scutulatus*; Klauber, Rattlesnakes, 1:42.

Type locality: Designated [Smith et Taylor 1950] Wichenburg,
Maricopa, County, Arizona, U.S.A.

Range: Mexico, from the Mojave Desert, California Southeast to
South Central Mexico, U.S.A.

Crotalus scutulatus salvini Günther

Huamantlan Rattlesnake

- 1895 *Crotalus salvini* Günther, Biol. Centr. Amer. Rept. Batr., :193.
1896 *Crotalus scutulatus*; Boulenger (partim) Cat. Sn. Brit. Mus., 3:575.

1940 *Crotalus scutulatus salvini*; Gloyd, Chicago Acad. Sci. Spe. Publ. (4) :201.

1956 *Crotalus scutulatus salvini*; Klauber, Rattlesnakes, 1 :201.

Type locality: Huamantla [Tlaxcala] Mexico, alt. 8000 ft.

Range: Tlaxcala, Puebla, Queretaro and west central Veracruz,
Probably present in Hidalgo, Mexico.

Crotalus stejnegeri Dunn

Long-Tailed Rattlesnake

1919 *Crotalus stejnegeri* Dunn, Proc. Biol. Soc. Washington, 32 :214.

1956 *Crotalus stejnegeri*; Klauber, Rattlesnakes, 1 :43.

Type locality: Plumosos = Plumosas, Sinaloa, Mexico.

Range: The mountains of Southwest and Western Durango, Mexico.

Crotalus tigris Kennicott

Tiger Rattlesnake

1859 *Crotalus tigris* Kennicott, in Baird, Rept. of Boundary U.S. Mexico. Boundary, Surv., 2 :14.

1896 *Crotalus tigris*; Boulenger, Cat. Sn. Brit. Mus., 3 :580.

1956 *Crotalus tigris*; Klauber, Rattlesnakes, 1 :43.

Type locality: Sierra Verde, and Pozo Verde [on the Sonoran side of the U.S. near Sasabe, Sonora], Mexico.

Range: U.S.A. The rocky desert foothills of South Central Arizona, and Mexico: Northern Sonora, U.S.A.

Crotalus tortugensis Van Denburg et Slevin

Tortuga Island Diamond Rattlesnake

1921 *Crotalus tortugensis* Van Denburg and Slevin, Proc. California. Acad. Sci. Ser. 4, 11 (17) :398.

1933 *Crotalus atrox tortugensis*; Stejneger, and Barbour.

1956 *Crotalus tortugensis*; Klauber, Rattlesnakes, 1 :43.

Type locality: Tortuga Island, Gulf of California, Mexico.

Range: Only known from Tortuga, Island, Mexico.

Crotalus transversus Taylor

Cross-Banded Mountain Rattlesnake

1944 *Crotalus transversus* Taylor, Univ. Kansas Sci. Bull., 30 (1) :47.

1956 *Crotalus transversus*, Klauber, Rattlesnakes, 1 :43.

Type locality: Near Tres Marias (Tres Cumbres) about 55 km., southwest of Mexico, D. F. in Morelos, Mexico.

Range: Distrito Federal and Northwestern Morelos, Mexico.

Crotalus triseriatus triseriatus (Wagler)

Central-Plateau Dusky Rattlesnake

- 1830 *Uropsophys triseriatus* Wagler, Nat. Syst. Amph., :176.
1831 *Crotalus triseriatus*, Gray, Syn. Spec. Clas. Rept. in Griffith¹ Animal Kingdom by Cuvier. 9:78.
1859 *Crotalus lugubris* Jan, Rev. Mag. Zool., Ser. 2 10:156, 1956.
1895 *Crotalus pallidus* Günther, (partim) Biol. Centr. Amer. Rept. Batr. :193.
1896 *Crotalus triseriatus*; Boulenger, Cat. Sn. Brit. Mus., 3:581.
1931 *Crotalus triseriatus triseriatus*, Klauber, (partim), in Githens and George, Bull. Antiv. Inst. Ame., 5(2) :33.
1952 *Crotalus triseriatus triseriatus*, Klauber, Bull. Zool. Soc. San Diego (26) :19.
1956 *Crotalus triseriatus triseriatus*; Klauber, Rattlesnakes., 1:44.

Type locality: Restricted [Smith et Taylor 1950] Alvarez, San Luiz Potosí, Mexico.

Range: Nayarit, West Central Veracruz, Jalisco, Michoacan, Mexico, Distrito Federal, Morelos, Pueblo and West Central Veracruz, probably occurs in Tlaxcala, Mexico.

Crotalus triseriatus anahuacus Gloyd

Montane Dusky Rattlesnake

- 1940 *Crotalus triseriatus anahuacus* Gloyd (partim), Chi. Acad. Sci. spec. pub. 4:91.
Type locality: Valley of Mexico. Restricted to Coyoacán D.F. Mexico, by Smith and Taylor 1950.
Range: Mexico. Distrito Federal, states of Veracruz, Puebla, Hidalgo, Michoacan, Morelos, Jalisco, Nayarit.

Crotalus triseriatus quadrangularis Harris and Simmons

Hidalgo Dusky Rattlesnake

- 1978 *Crotalus triseriatus quadrangularis* Harris and Simmons, Bull. Maryland Herp. Soc., 14(3) :126.
Type locality: 3mi SW Jacala, Hidalgo, Mexico at an elevation of 6700'.
Range: Known only from Minas Viejas, 3 mi, 18 mi, SW Jacala, Zacualtipan State of Hidalgo, (Mexico). Fide Harris and Simmons.

Crotalus vegrandis Klauber Fig. 56

Uracoan Rattlesnake

- 1941 *Crotalus vegrandis* Klauber, Trans. San Diego Soc. Nat. Hist., 9(30) :331.

- 1956 *Crotalus durissus vegrandis*; Klauber, Rattlesnakes, 1:34.
1966 *Crotalus vegrandis*; Hoge, Mem. Inst. Butantan, 34:149, Pl. 18.
Type locality: Maturín Savannah, near Uracoa, distr. Sotillo,
State Monagas, Venezuela.
Range: Known from several localities in States Monagas and
Anzoateguy, Venezuela.

Crotalus viridis viridis (Rafinesque)

Prairie Rattlesnake

- 1818 *Crotalinus viridis* Rafinesque, Amer. Mounth. Mag. et Crit, Rev.,
4(1):41.
1823 *Crotalus confluentus* Say in Long's Exped. from Pittsburgh to
Rocky Mountains, 2:48 footnote.
1852 *Crotalus lecontei* Hallowell, Proc. Acad. Nat. Sci. Philadelphia.,
6:180.
1883 *Crotalus confluentus* var. *pulverulentus* Cope, Proc. Acad. Nat.
Sci. Philadelphia., 35:11.
1896 *Crotalus confluentus*; Boulenger (partim) Cat. Sn. Brit. Mus.,
3:576.
1936 *Crotalus viridis viridis*; Klauber, Trans. San Diego Soc. Nat. Hist.,
8(2):191.
1956 *Crotalus viridis viridis*; Klauber, Rattlesnakes, 1:45.
Type locality: Restricted [Smith et Taylor 1950], Cross Boyd
County, Nebraska, U.S.A.
Range: The Great Plains from long 96 W to the Rocky Mountains
and from southern Canada to Mexico, extreme northern Sonora,
northern Chihuahua and northern Coahuila, U.S.A.

Crotalus viridis abyssus Klauber

Grand Canyon Rattlesnake

- 1930 *Crotalus confluentus abyssus* Klauber, Trans. San Diego Soc. Nat.
Hist., 6(3):114.
1936 *Crotalus viridis abyssus* Klauber, Trans. San Diego Soc. Nat. Hist.,
8(20):191.
Type locality: Tanner Trail, 300 ft. below the south rim of the
Grand Canyon, Coconino County, Arizona, U.S.A.
Range: The grand Canyon of the Colorado river, Grand Canyon
Nat. Park., Arizona, U.S.A.

Crotalus viridis caliginis Klauber

Coronado Island Rattlesnake

- 1896 *Crotalus confluentus*, Boulenger (partim) Cat. Sn. Brit. Mus.,
3:576.

1949 *Crotalus viridis caliginis* Klauber, Trans. San Diego Soc. Nat. Hist., 11(6):90.

1956 *Crotalus viridis caliginis*; Klauber, Rattlesnakes, 1:45-46.

Type locality: South Coronado Island, Northwest coast of Baja California, Mexico.

Range: Known from type locality.

Crotalus viridis cerberus (Coues)

Arizona Black Rattlesnake

1866 *Caudisona lucifer* Cope, Proc. Acad. Nat. Sci. Philadelphia., 18:307.

1875 *Caudisona lucifer* var. *cerberus* Coues, Surv. W. of 100th Merid. (Wheeler). 5, chap. 5:606.

1883 *Crotalus oregonus* var. *cerberus* Garman, Mem. Mus. Comp. Zool., 8(3):137.

1936 *Crotalus viridis oreganus* Klauber (partim) Trans. San Diego Soc. Nat. Hist., 8(20):191.

1949 *Crotalus viridis cerberus* Klauber, Trans. San Diego Soc. Nat. Hist., 11(6):83.

Type locality: San Francisco Mountains, Coconino County, Arizona, U.S.A.

Range: From Central Arizona, from Hualpai Mountains and Cottonwood Cliffs in the northwest to Santa Catalina Rincon, Pinaleno and Blue Mountains westward to extreme western New Mexico.

Crotalus viridis concolor Woodbury

Midget Faded Rattlesnake

1915 *Crotalus oreganus* Van Denburgh and Slevin (partim) Proc. Calif. Acad. Sci., ser. 4, 5(4):109.

1929 *Crotalus concolor* Woodbury, Bull. Univ. of Utah, 20(6):[2].

1930 *Crotalus confluentus decolor* Klauber, Trans. San Diego Soc. Nat. Hist., 6(3):111.

1936 *Crotalus viridis concolor* Klauber, Trans. San Diego Soc. Nat. Hist., 8(20):191.

1940 *Crotalus viridis decolor* Gloyd, Chi. Acad. Sci. spec. pub. 4:216.

1972 *Crotalus viridis concolor* Klauber, Rattlesnakes, 1:51. (Klauber :51 inaccurately listed himself as author of the subspecies).

Type locality: King's Ranch, at the base of the Henry Mountains, Garfield County, Utah. U.S.A.

Range: The basins of the Colorado and Green rivers, including a small region in southwestern Wyoming, Western Utah east of long. 111° W., except the southeastern corner and extreme east central Colorado, U.S.A.

Crotalus viridis helleri Meek

Southern Pacific Rattlesnake

- 1905 *Crotalus helleri* Meek, Field. Cat. Mus. Zool. Sci., 7(1) pub. 104:7.
1949 *Crotalus viridis helleri*; Klauber, Trans. San Diego Soc. Nat. Hist., 11(6):77.
1956 *Crotalus viridis helleri*; Klauber, Rattlesnakes, 1:46-47.
1971 *Crotalus viridis helleri*; Smith, Holland et Brown. (extention of range) J. Herpetology, 1971 5:200.

Type locality: San José, Baja California, Mexico.

Range: Southwest California, and Baja California west of the desert from, southwestern San Luis Obispo, to extreme southwestern Imperial counties also in Catalina Island Los Angeles County California, U.S.A. Southward through Baja California into Baja California Sur (Ter.) to about Lat. 27° 50'N.

Crotalus viridis lutosus Klauber

Great Basin Rattlesnake

- 1859 *Crotalus lucifer* Baird, Pac. R. R. Surv. (Williamson), 10, part. 4:10.
1875 *Crotalus confluentus* Yarrow (partim), Surv. W. of 100th. Merid. (Wheeler), 5, chap. 1:530.
1883 *Crotalus confluentus lucifer* Cope (partim), Proc. Acad. Nat. Sci. Philadelphia, 35, :11, 19, 22.
1892 *Crotalus confluentus lecontei* Cope, Proc. U.S. Nat. Mus. 14, (882):692.
1898 *Crotalus oregonus* Van Denburgh (partim), Proc. Amer. Philos. Soc., 37(157):141.
1929 *Crotalus confluentus kellyii* Amaral (partim) Bull. Antivenin Inst. Amer., 2, (4):91.
1930 *Crotalus confluentus lutosus* Klauber, Trans. San Diego Soc. Nat. Hist., 6(3):100.
1936 *Crotalus viridis lutosus* Klauber, Trans. San Diego Soc. Nat. Hist., 8(20):191.

Type locality: 10 miles northwest of Abraham on the road to Joy, Millard County, Utah. U.S.A.

Range: The Great Bassin between the Rocky Mountains and the Sierra Nevada South eastern Nevada Central south Idaho Western Utah, extreme north eastern Arizona Nevado except southwestern parts and extreme northern California, U.S.A.

Crotalus viridis nuntius Klauber

Hopi Rattlesnake

- 1883 *Crotalus confluentus* Yarrow (partim) Bull. U.S. Nat. Mus., (24):77.

1935 *Crotalus confluentus nuntius* Klauber, Trans. San Diego Soc., Nat. Hist., 8(13):78.

1936 *Crotalus viridis nuntius* Klauber, Trans. San Diego Soc. Nat. Hist., 8(20):191.

Type locality: Canyon Diablo, Coconino County, Arizona. U.S.A.

Range: North eastern Arizona, U.S.A.

Crotalus viridis oreganus Holbrook

Northern Pacific Rattlesnake

1840 *Crotalus oreganus* Holbrook, North Amer. Herp., ed. 1, 4:115.

1852 *Crotalus lucifer* Baird et Girard, Proc. Acad. Nat. Sci. Philadelphia., 6:177.

1859 *Crotalus lecontei* Hallowell, Pac. R. R. Surv. (Williamson), 10, part 4, (1):18.

1868 *Crotalus hallowelli* Cooper, in Cronise, Nat. Wealth California., :483.

1883 *Crotalus confluentus lucifer* Cope, Proc. Acad. Nat. Sci. Philadelphia., 35:11.

1929 *Crotalus confluentus oreganus* Amaral (partim), Bull. Antivenin Inst. Amer., 2(4):92.

1936 *Crotalus viridis oreganus* Klauber (partim) Trans, San Diego Soc. Nat. Hist., 8(20):191.

1949 *Crotalus viridis oreganus* Klauber, Trans. San Diego Soc. Nat. Hist., 11(6):67.

Type locality: Banks of the Oregon or Columbia River, [probably between Walla Walla, Washington, and the Pacific Coast]. Type locality subsequently restricted to The Dalles, Wasco County, Oregon, by Smith and Taylor, 1950, Univ. Kansas. Sci. Bull., 33, part 2(8):360.

Range: Central and western Washington except extreme northwestern corner, northwards into British Columbia (Canada); The Pacific slopes of southern Oregon, southwards to San Luis Obispo and Kern Mountains. Intergrades with *C. v. viridis* up to the Clearwater and Salmon Rivers in Idaho; with *lutosus* in western Idaho, southeastern Oregon, and northeastern California; and with *C. v. helleri* at about the line Lebec-Shandon-Cape San Martin in Kern and San Luis Obispo counties.

Crotalus willardi willardi Meek

Arizona Ridge-Nosed Rattlesnake

1905 *Crotalus willardi* Meek, Field. Columbian Misc. Publ., 104 Zool. Ser. 7(1):18.

1956 *Crotalus willardi willardi*; Klauber, Rattlesnakes, 1:48.

Type locality: [Corrected Swarth 1921] above Hamburg, Middle branch of Ramsay Canyon, Huachuca Mountains alt. above 7000ft. Cochise County, Arizona, U.S.A.

Range: The Huachuca and Santa Rita Mountains, southern Arizona, Mexico, Sierra de los Ojos and Sierra Azul, northern Sonora, U.S.A.

Crotalus willardi amabilis Anderson

Del Nido Ridge-Nosed Rattlesnake

- 1962 *Crotalus willardi amabilis* Anderson, *Copeia* (1) :160-163.

Type locality: Arroyo Mesteño 8500 feet Sierra del Nido, Chihuahua, Mexico.

Range: Known only from the Sierra del Nido, proper but may also occur in the high country of the Sierra Santa Clara and Cerro Campañas which are included in the Sierra del Nido complex.

Crotalus willardi meridionalis Klauber

Southern Ridge-Nosed Rattlesnake

- 1936 *Crotalus willardi* Klauber (partim) *Trans. San Diego Soc. Nat. Hist.*, 8(20) :231..

- 1949 *Crotalus willardi meridionalis* Klauber, *Trans. San Diego Soc. Nat. Hist.*, 11(8) :131.

Type locality: Coyotes, Durango, Mexico, altitude 8,000 ft;

Range: Southern Durango and southwestern Zacatecas, in west-central Mexico.

Crotalus willardi obscurus Harris et Simmons

New Mexican Ridge-Nosed Rattlesnake

- 1974 *Crotalus willardi obscurus* Harris et Simmons, *Nat'l. Parks and Conserv. Mag.*, 48(3) :23.

- 1976 *Crotalus willara obscurus* Harris et Simmons, *Bull. Md. Herp. Soc.*, 12(1) :5.

Type locality: Upper end Indian Creek Canyon, Animais Mountains, Hidalgo County, New Mexico.

Range: Known from type locality and a specimen from Extreme Northwestern Chihuahua, Mexico.

Crotalus willardi silus Klauber

West Chihuahua Ridge-Nosed Rattlesnake

- 1949 *Crotalus willardi silus* Klauber, *Trans. San Diego Soc. Nat. Hist.*, 11(8) :128.

- 1956 *Crotalus willardi silus*; Klauber (partim) *Rattlesnakes*, 1 :49.

Type locality: On the Rio Cavilán, 7 mi.
Southwest of Pacheco, Chihuahua, Mexico, alt. 6200ft.

Range: Northeastern Sonora, Mexico. and western Chihuahua,
Mexico and southwestern New Mexico.

GENUS *Lachesis* Daudin

1803 *Lachesis* Daudin, Hist. Nat. Rept., 5:349.

Type species: *Lachesis muta* (Linnaeus, 1766).

Contains: One species.

Range: As for the single known species.

Lachesis muta muta (Linnaeus) Fig. 59

Bushmaster, Surucucu, Pico de Jaca, Mapepire Z'anana, Pineapple
Mapepire, Z'anana Mapepire.

1766 [Crotalus] mutus Linnaeus, Syst. Nat. 12th:373.

1788 *Coluber crotalinus* Gmelin, Syst. Nat. 13th, 1:1094.

1802 *Coluber alecto* Shaw, Gen. Zool. Amph., 3:400.

1802 *Scytale catenatus* Latreille, in Sonnini and Latreille, Hist. Nat.
Rept., 3:162.

1802 *Scytale ammodytes* Latreille, in Sonnini and Latreille, Hist. Nat.
Rept., 3:165.

1803 *Lachesis mutus* Daudin, Hist. Nat. Rept., 5:351.

1803 *Lachesis ater* Daudin, Hist. Nat. Rept., 5:354.

1824 *Bothrops surucucu* Wagler in Spix, (partim), Sp. Nov. Ser. Brasil.
:59, pl. 23.

1896 *Bothrops achrochordus* Garcia, Ofidios Venenosos del Cauca :23,
pl. 4.

1951 *Lachesis muta muta*; Taylor, Univ. Kansas Sci. Bull., 34:184.

Type locality: Surinam.

Range: South american equatorial forest in Brazil, Guianas,
Venezuela, Trinidad, Peru, Ecuador and Colombia, also on the
pacific slopes of Ecuador and Colombia.

Lachesis muta rhombeata Wied Fig. 60

Bushmaster, Surucucu

1824 *Lachesis rhombeata* Wied, Abbild. Nat. Brazil, pt. 5, pl. 5 and 5a.

1825 *Lachesis rhombeata* Wied, Abb zur Naturgeschichte von Brasilien,
pt. 5, pl. 5 and 5a.

1825 *Lachesis rhombeata* Wied, Beitr. Nat. Braz. 1:449.

1872 *Trigonocephalus (Lachesis) brasiliensis* Liais. Climats Géol., Fau-
ne et Géogr. Botan. du Brésil :306.

1966 *Lachesis muta noctivaga* Hoge, Mem. Inst. Butantan, 32:162, pl. 20 (1965).

1978 *Lachesis muta rhombeata*; Hoge, Mem. Inst. Butantan, 40/41:54; (1976/77).

Type locality: restricted to Vitoria, Espírito Santo Brazil (Hoge & Romano) l.c. :54.

Range: Rain forest of Atlantic slope in Brazil, from Estado de Alagoas to Estado do Rio de Janeiro.

Lachesis muta stenophrys Cope

Bushmaster, Verrucosa, Cascabella muda

1876 *Lachesis stenophrys* Cope, Journ. Acad. Nat. Sci. Phila., (2) 8 (1875):152.

1951 *Lachesis muta stenophrys* Taylor, Univ. Kansas Sci. Bull., 34:184.

Type locality: Sipurio, Costa Rica.

Range: Forest of Costa Rica and Panama. Till now there is a large gap in the distribution of this subspecies and *L. muta muta*.

GENUS *Ovophis*

DIAGNOSIS (apud Burger 1971:104-105) "Asiatic rattleless, scale-snouted pitvipers; nasal pore situated prominently near external rim of nasal'pad; supraocular scales small; gular scales smooth; subcaudals single and paired; border of maxillary cavity having rounded projection forming two distinct curvatures; ectopterygoid having truncate anterior dorsolateral projection; pterygoid teeth extending nearly to posterior margin of articulation with ectopterygoid; basal portion of pterygoid shorter than ectopterygoid (fig.); splenial fused to angular; nasal pore near external rim of nasal pad.

In contrast *Tropidolaemus* has rudimentary nasal pore strongly keeled gulars, and splenial separate from angular. *Trimeresurus* has a shorter series of pterygoid teeth than *Ovophis*.

DEFINITION: — Size moderate, total length to 1.1 m; dorsal pattern consisting of dark brown spots; cranium moderately wide, its greatest width greater than its length; border of maxillary cavity forming a simple curve; prootic sloping evenly ventrolaterally without distinct dorsolateral ridge; anterior foramen of prootic not divided by bony partition; palatine having 4 teeth; dorsal projection of palatine a broad, very much rounded triangle with highest point slightly posterior to three-fourths length of palatine; pterygoid teeth 11, extending to or nearly to posterior edge of articulation with ectopterygoid; basal portion of pterygoid longer than ectopterygoid; ectopterygoid curved and extremely broad with truncate dorsolateral projection; squamosal long and narrow, its greatest width about one-third its length; quadrate shorter than cranium; mandible with splenial separate from angular having 17 teeth; hemipenis divided for about two-thirds length, basal two-thirds spinous, distal one-third calyculate.

COMPOSITION: — Four species, one with three subspecies: *Ovophis chaseni* (Smith), *Ovophis convictus* (Stoliczka), *Ovophis monticola monticola* (Günther), *Ovophis monticola makazayazya* (Takahashi). *Ovophis monticola tonkinensis* (Bourret), *Ovophis okinavensis* (Boulenger).

DISTRIBUTION: — Mountains of the Indo-Chinese region from southern China to Nepal, Assam, Burma, Malaya, Formosa, Okinawa and Borneo".

The diagnosis and definitions above are from Burger's doctoral thesis and copied *ipsis litere* in order to avoid a possible *nomen nudum*.

GENUS OVOPHIS Burger

- 1971 *Ovophis Burger*, Genera of Pit Vipers:104 (Dissertation).
1972 *Ovophis Burger* Genera of Pit Vipers [Serpentes Crotalidae]. Dissertation: abstracts international 32(10).

Type species: *Ovophis monticola* (Günther)

Range: From Nepal to China, Vietnam, Malayan Peninsula, Borneo, Taiwan, the Okinawa and Amami Islands; (Japan).

Ovophis chaseni (Smith)

Chasen's Pit Viper

- 1931 *Trimeresurus chaseni* Smith, Bull. Raffles Mus., (5):29; pl. 2, fig. 1.
1971 *O. [vophis] chaseni*; Burger l.c. :105.
Type locality: Kiao 3000 ft, Mt. Kinabalu Borneo.
Range: Region of Mt. Kinabalu, North Borneo.

Ovophis convictus (Stoliczka)

- 1870 *Trimeresurus convictus* Stoliczka, J. Asiat. Soc. Bengal, Calcutta, 39(2):224; pl. 12; fig. 1.
1896 *Lachesis monticola*, Boulenger (partim), Cat. Sn. Brit. Mus., 3:548.
1971 *O. [vophis] convictus*; Burger l.c. :105.
Type locality: "Western Hill" (Penang Malaya).
Range: Malaya, south of the Isthmus of Kra.

Ovophis monticola monticola (Günther)

Mountain Pit Viper

- 1864 *Trimeresurus monticola* Günther, Rept. brit. India, :388, pl. 24, fig. B.
1896 *Lachesis monticola*; Boulenger (partim), Cat. Snak. brit. Mus., 3:548.

1931 (1929) *Trimeresurus monticola monticola*; Mell, Lignan Sci. J. (8):218.

1971 *O. [vophis] monticola monticola*, Burger l.c. :105.

Type locality: Nepal and Sikkim.

Range: Nepal, Sikkim, India: Assam, Burma Yunnan and Szechewan, (China).

Ovophis monticola makazayazaya (Takahashi)

Arisan Habu

1922 *Trimeresurus makazayazaya* Takahashi Jap. ven. Snak. pl. 4.

1930 *Trimeresurus monticola makazayazaya*; Takahashi, Ter. Snak. Japan (58).

1931 *Trimeresurus monticola formosensis* Mell Lignan Sc. J. 1929, 8:219.

1931 *Trimeresurus monticola orientalis* Maki (non Schmidt 1927).

1964 *Trimeresurus monticola makazayazaya*; Leviton, Herpetologica 20(2):133.

1971 *O. [vophis] makazayazaya*; Burger l.c.:105.

Type locality: Makazayazaya, Taiwan.

Range: Taiwan.

Ovophis monticola meridionalis (Bourret)

Southern Mountain Pit Viper

1935 *Trimeresurus monticola meridionalis* Bourret (non *Trimeresurus jerdonii meridionalis* Bourret 1935); Bull. Instr. Pub., Hanoi 1935 (9):13.

Type locality: Chapa, Tonkin.

Range: Vietnam, Cambodge, Thailand and Malayan, Peninsula North of isthmus of Kra.

Ovophis monticola orientalis (Schmidt)

Oriental Mountain Pit Viper

1925 *Trimeresurus orientalis* Schmidt, Amer. Mus. Novit. New York, 175:3.

1929 *Trimeresurus monticola orientalis*; Mell, Lignan Sci. J., Canton, 8:219.

Type locality: "Min River" Fukien, China.

Range: Fukien and Chekiang, China.

Ovophis monticola zayuensis (Jiang)

Sanluotieton or Zhayuan Pit Viper

- 1977 *Trimeresurus monticola zayuensis* Jiang in Herpetological Division
of Sichuan Biological Institute Chengdu. Acta Zoologica Sinica,
23(1):67, fig. 1, 2, 3.

Type locality: Zayü Xian, Xizang, alt. 1,800 m.

Range: Known only from type locality.

Ovophis okinavensis (Boulenger) Fig. 61

Hime Habu or Okinawa Pit Viper

- 1892 *Trimeresurus okinavensis* Boulenger, Ann. Mag. Nat. Hist., London
(6) 10:302.

- 1896 *Lachesis okinavensis* Boulenger, Cat. Snak. brit. Mus., 3:549;
pl. 25:2.

- 1897 *Lachesis (Trimeresurus) okinavensis*; Namiye Zool. May. Tokyo
9:340.

- 1971 *O. [vophis] okinavensis*; Burger l.c.:105.

Type locality: Okinawa.

Range: Okinawa and Amami Islands. (Amami-ōshima, Tocuno-
shima, Iheya-jima, Noho-jima, Ygashi-jima, Izena-jima, Ie-jima,
Okinawa-jima, Kume-jima, Amuro-jima, Zamami-jima, Keruma-
-jima, Tokashiki-jima.

Ovophis tonkinensis Bourret

Tonkin Pit Viper

- 1934 *Trimeresurus tonkinensis* Bourret, Bull. Gén. Instr. Publ. Hanoi,
1934:138.

- 1971 *O. [vophis] monticola tonkinensis*; Burger l.c.:105.

Type locality: Chapa, Vietnam.

Range: Vietnam.

GENUS *Sistrurus* Garman

Pigmy Rattlesnakes

- 1766 *Crotalus* Linnaeus (partim), Syst. Nat., ed. 12, :372.

- 1820 *Crotulurus* (misprint for *Crotalurus*). Rafinesque, Ann. Nat.
(1):5. Type *catenatus*.

- 1822 *Crotalus* Fleming, Philos. of Zool., 2:294. Type *miliaris*. Not of
Linnaeus, 1758.

- 1825 *Crotalophorus* Gray, Annals of Philos., n.s., 10, art. 8:205. Type
miliaris. Not of Houttuyn. 1764.

- 1826 *Caudisona* Fitzinger, Neue Class. Rept.; :34, 63. Type *miliaria*.
Not of Laurenti, 1768.
- 1883 *Sistrurus* Garman, Mem. Mus. Comp. Zool., 8(3), pl. XXVII, 110,
118, 176. Type *miliarius* by generic substitution (Rules Zool.
Nomen., art. 30. 1926, ii, f.).
Type species: *Crotalus miliaris* Linnaeus.

Sistrurus catenatus catenatus (Rafinesque)

Eastern Massasauga

- 1818 *Crotalinus catenatus* Rafinesque, Amer. Month. Mag. & Crit. Rev.,
4,(1),:41.
- 1900 *Sistrurus catenatus catenatus* Cope, Rept. U.S. Nat. Mus. for 1898,
:1146.

Type locality: Prairies of the Upper Missouri, restricted to Kansas
City, Missouri, by Schmidt, 1953:226.

Range: USA central New York to Nebraska and Kansas, southern
Ontario along the shores of Georgian Bay, Lake Huron, and Lake
Erie; also Prince Edward Peninsula in Lake Ontario; extreme
western Pennsylvania; lower Michigan; northern and central Ohio
and Indiana; Illinois; southern and southwestern Wisconsin, extre-
me southeastern Minnesota; central and southern Iowa; northern
Missouri; extreme southeastern Nebraska; and extreme northeas-
tern Kansas; intergrades with *S.c.tergeminus* in the last two areas.

Sistrurus catenatus edwardsii (Baird and Girard)

Desert Massasauga

- 1853 *Crotalophorus edwardsii* Baird and Girard, Cat. N. Amer. Rept.,
part. 1,:15.
- 1955 *Sistrurus catenatus edwardsii* Gloyd, Bull. Chic. Acad. Sci., 10,:84.

Type locality: Tamaulipas, Mexico.

Range: USA Texas. West of the Pecos River, central and southern
New Mexico; extreme southeastern Arizona; and probably extreme
northern Tamaulipas, Mexico. Intergrades with *S.c.tergeminus*.

Sistrurus catenatus tergeminus (Say)

Western Massasauga

- 1823 *Crotalus tergeminus* Say, in Long's Exped. from Pittsburg to Rocky
Mts., edited by Edwin James, 1,:499.
- 1936 *Sistrurus catenatus tergeminus* Klauber, Occ. Papers San Diego
Soc. Nat. Hist., (1),:6.

Type locality: Between the Mississippi River and The Rocky Moun-
tains. Type locality subsequently restricted to Winfield, Cowley
County, Kansas.

Range: USA southwestern plains. Extreme southeastern Colorado; northwestern Oklahoma; Texas between the Brazos and the Pecos rivers, excluding the extreme southern tip. Intergrades with *S.c. catenatus* in southeastern Nebraska and northeastern Kansas.

Sistrurus miliarius miliarius (Linnaeus)

Carolina Pigmy Rattlesnake

- 1766 *Crotalus miliarius* Linnaeus, Syst. Nat., ed. 12:372.
1935 *Sistrurus miliarius miliarius* Gloyd, Occ. Papers Mus. Zool., Univ. Mich., (322), :4.

Type locality: Carolina.

Range: USA from extreme southern South Carolina (where it intergrades with *S.m.barbouri*), north throughout South Carolina and eastern North Carolina to Hyde County. Also central Georgia and central Alabama.

Sistrurus miliarius barbouri Gloyd

Dusky Pigmy Rattlesnake

- 1935 *Sistrurus miliarius barbouri* Gloyd, Occ. Papers Mus. Zool. Univ. Mich., (322), :2.

Type locality: Royal Palm Hammock, 12 miles west of Homestead, Dade County, Florida.

Range: USA from extreme southern South Carolina (where it intergrades with *S.m.miliarius*) and southern Georgia, south throughout Florida, and west across southern Alabama to southeastern Mississippi, intergrading with *S.m.streckeri* in the Pearl River Valley.

Sistrurus miliarius streckeri Gloyd

Western Pigmy Rattlesnake

- 1935 *Sistrurus miliarius streckeri* Gloyd, Occ. Papers Mus. Zool. Univ. Mich., (322) :4.

Type locality: near Imboden, Lawrence County, Arkansas.

Range: USA from the Pearl River Valley of southern Mississippi and southeastern Louisiana (where it intergrades with *S.m. barbouri*), north and west through Mississippi, Louisiana, southwestern Tennessee, southern Missouri, Arkansas, southeastern Oklahoma, and eastern Texas. Probably present in northwestern Alabama.

Sistrurus ravus ravus (Cope)

Mexican Pigmy Rattlesnake

- 1865 *Crotalus ravus* Cope, Proc. Acad. Nat. Sci. Phila., 17, (4), :191.
1896 *Sistrurus ravus* Boulenger, Cat. Snakes Brit. Mus., 3, :571.

- 1978 *Sistrurus ravus ravus*; Harris et Simmons, Bull. Maryland Herp. Soc., 14 (3) :135.

Type locality: Tableland of Mexico. Type locality subsequently restricted to Totalco, Veracruz; Mexico, by Smith and Taylor, 1950:351.

Range: Mexico, a small area of the Mexican plateau including eastern and south-central Mexico (state) Distrito Federal, Morelos, Tlaxcala, Puebla, west-central Veracruz and central Oaxaca.

Sistrurus ravus brunneus Harris et Simmons
Oaxacan Pigmy Rattlesnake

- 1972 *Sistrurus ravus*; Klauber, (partim), Rattlesnakes, 1:57.

- 1978 *Sistrurus ravus brunneus* Harris et Simmons, Bull. Maryland Herp. Soc., 14 (3) :135.

Type locality: 1.7 mi. E Ixtlán de Juárez (Vivero Rancho Teja), Oaxaca, Mexico.

Range: Known only from the State of Oaxaca, Mexico.

Sistrurus ravus lutescens Harris et Simmons
Montane Pigmy Rattlesnake

- 1972 *Sistrurus ravus*; Klauber, (partim), Rattlesnakes, 1:57.

- 1978 *Sistrurus ravus lutescens* Harris et Simmons, Bull. Maryland Herp. Soc., 14 (3) :136.

Type locality: Huitzilac, Morelos, Mexico.

Range: Known only from the vicinity of Huitzilac, Morelos, Mexico at an elevation from about 2.800-3.000 meters.

TRIBE *TRIMERESURUS*

GENUS *Trimeresurus* Lacépède

Asian Lance-headed Pit Vipers

- 1804 *Trimeresurus* Lacépède, Ann. Mus. Paris 4:209.

- 1830 *Megaera* Wagler, Syst. Amph.: 174. Type species: *Vipera trigonocephala* Daudin, by monotypy.

- 1830 *Atropos* Wagler, Syst. Amph., 175. Type species: *Trigonocephalus puniceus* (non Oken 1815), by monotypy.

- 1843 *Bothrophis* Fitzinger, Syst. Rept.: 28. Type species: *Trigonocephalus viridis* Cuvier (original designation).

- 1849 *Parias* Gray, Cat. Sn. Brit. Mus.: 11. Type species: *P. flavomaculatus* Gray, by subsequent selection (Smith, 1943).

1864 *Peltopelor* Günther, Rept. Brit. India :390. Type species: *P. macrolepis* Beddome by monotypy.

1871 *Atropophus* Peters, Ann. Mus. Civ. Stor. Nat. Genova (2)3:41
nom nov. pro *Atropos* Wagler (consequently type species =
Trigonocephalus puniceus Reinwardt).

Type species: *Trimeresurus viridis* Lacépède = *Coluber gramineus* Shaw 1802.

Range: Asia, from India to China and Japan southward to Timor.

Trimeresurus albolabris Gray

White-lipped Pit Viper

1842 *Trimesurus* (error typ. pro *Trimeresurus*) *albolabris* Gray, Zool. Miscel.: 48.

1896 *Lachesis gramineus* Boulenger, (partim) Cat. Sn. Brit. Mus. 3:553.

1941 *Trimeresurus albolabris*; Smith, M. Rec. Ind. 42:485 (1940).

Type locality: "China" (Hong Kong).

Range: Northern India from Simla to Punjab, Nepal, Napjur. From Katmandu to southern China including Hong Kong, Hainan, Burma and Cambodja to South Vietnam.

Trimeresurus borneensis (Peters)

Bornean Pit Viper

1871 *Atropophis borneensis* Peters, Ann. Mus. Civ. Genova 3:41.

1893 *Bothrops sandakanensis* Van Lidth de Jeude, Notes Leiden Mus., 15:256.

1896 *Lachesis borneensis*; Boulenger, Cat. Sn. Brit. Mus., 3:561.

1922 *Trimeresurus borneensis*; Stejneger, Nyt Mag. Nat. Kristiania 60:84.

1968 *Trimeresurus borneensis*; Hoge, Ciência e Cultura, 1969.

Type locality: Sarawak, Borneo.

Range: Borneo Island. Specimens registrad for Sumatra were based on specimens with wrong localities as we were able to confirm in the files of Brit. Mus.

Trimeresurus broningersmai Hoge

Brongersma's Pit Viper

1967 *Trimeresurus broningersmai* Hoge, Ciencia e Cultura, 1969.

Type locality: Simalur Island — Indonésia.

Range: Simalur Island — Indonésia.

Trimeresurus cantori (Blyth)

Cantor's Pit Viper

- 1846 *Trigonocephalus cantori* Blyth. J. Asiat. Soc. Bengal 15:337.
1860 *Trimeresurus viridis* var. *cantori*; Blyth, J. (partim Andaman Nicobar), Asiat. Soc. Bengal, 29:110.
1870 *Trimeresurus cantori*; Günther, Rept. Brit. India: 386 (quoted as *gramineus* but considered as a valid form).

Type locality: Nicobar Islands.

Range: Known only from the type locality. Probably also found on Andaman Islands.

Trimeresurus capite-triangulatus (Lacépède)

Green Polongo or Green Tie Pit Viper

- 1789 *Coluber capite-triangulatus* Lacépède, Hist. Nat. Serpens 2. Discours; 112, Serp. 132, pl. V, fig. 2.
1798 *Coluber triangularis* Luchoro (no. nov. pro *T. capite-triangulatus* Lacépède) consequently same type locality.
1798 *Coluber (trigonocephalus)* Donndorff, (no. nov.) Amph. icht. Zool. Beytrage XII Lin. Naturg. 3:203.
1801 *Vipera trigonocephala* Sonnini and Latreille Hist. Rept. 3(2):332.
1820 *Trigonocephalus [Cophias] nigromarginatus* Kuhl, Beyt. Zool. 1:90.
1822 *Trigonocephalus sagittiformis* Shins (nom. nov. pro *C. trigonocephalus* Merrem), Das Tierreich 2:142. Since *Cophias trigonocephalus*; Merrem 1820 = *Coluber capite-triangulatus* Lacépède the type locality = "Ille de St. Eustache".
1830 *Megaera nigro-marginata*, Wagler, Wat. Syst. am, : 156.
1842 *Megaera olivacea* Gray, Zool. Miscel:49.
1864 *Trimeresurus trigonocephalus*; Günther Rept. brit. India:390.
1890 *Trimeresurus trigonocephalus*; Boulenger, Fauna brit. India:431.
1896 *Lachesis trigonocephalus*, Boulenger, Cat. Sn. Brit. Mus. 3:559.
Type locality: "Ille de St. Eustache" = Sri-Lanka.
Range: Sri-Lanka, till 400 m high.

Trimeresurus cornutus Smith

Fan-si-pan horned Pit Viper

- 1930 *Trimeresurus cornutus* M. Smith, Ann. Mag. Nat. Hist., London (10) 6:682, fig. 1.
Type locality: Fan-si-pan, Tonkin, Vietnam.
Range: Tonkin, Vietnam.

Trimeresurus elegans (Gray)

Sakishima-habu or Elegant Pit Viper

- 1849 *Crasdocephalus elegans* Gray (non *Trimeresurus elegans* Gray 1853), Cat. Snak. Brit. Mus.:7.
1896 *Lachesis luteus*, Boulenger, (partim), Cat. Snak. Brit. Mus., 3:553.
1907 *Trimeresurus elegans*, Stejneger, Bull. US nation, Mus., Washington 58:470; fig. 366-368.

Type locality: Unknown: suggested by Gray as "West coast of (North) America", restricted by (Stejneger 1907:471) to Ishigaki-Shima.

Range: Islands on the south of Riu-Kiu. (Iriomote-jima, Ishigaki-jima, Kobama-jima, Kuro-jima).

Trimeresurus erythrurus (Cantor)

Red Tailed Pit Viper

- 1839 *Trigonocephalus erythrurus* Cantor, Proc. Zool. Soc. London 1839: 31.
1853 *Trimeresurus bicolor*; Gray, Ann. and Mag. Nat. Hist. London (2) 12:392.
1933 *Trimeresurus erythrurus* Pope and Pope, Amer. Mus. Novit., New York, 620:8.

Type locality: Delta dos Ganges.

Range: Oriental Bengal, India, Oriental Himalaia, Assam, Oriental Paquistao and Burma.

Trimeresurus fasciatus (Boulenger)

Banded Pit Viper

- 1896 *Lachesis fasciatus* Boulenger, Ann. and Mag. Nat. Hist., (6) 18:63.
1942 *Trimeresurus fasciatus*; Maslin, Copéia 1942 (1):24.

Type locality: Djampea, Indonésia.

Range: Known only from the Tanadjampea Island.

Trimeresurus flavomaculatus *flavomaculatus* Gray

Yellow spotted Pit Viper

- 1842 *Megaera flavomaculata* Gray, Zool. Miscel:49.
1842 *Megaera ornata* Gray, Zool. Misc.:49.
1842 *Megaera variegata* Gray, Zool. Misc.:50.
1879 *Trimeresurus flavomaculatus*, Günther, Proc. Zool. Soc. London 1879:79.

1885 *Trimeresurus schadenberghi* Fischer, Jarhb Wiss, Anst Hamburg
2:116. (not seen).

1896 *Lachesis flavomaculatus* Boulenger, Cat. Snak. Brit. Mus., 3:556,
pl. 25, fig. 3.

1961 *Trimeresurus flavomaculatus flavomaculatus* Leviton, Silliman J.
8:105.

Type locality: restricted (Leviton 1964) to Luzon Philippine.

Range: Philippine Islands (Camiguin, Jolo). Leyte (M. Lobi Da-gami, Bo Patok). Luzon: Bataan, Province (Lamao) Kalinga; Laguna Province, Los Baños, Mount Makiling. Majayjay. Mindanao (Davao Tagum Province, Lanao la and Lanao Prov.). Mindoro: Mount Halcon, Lag River; Balete. The specimen from Palarium is considered as from a dubious locality.

Trimeresurus flavomaculatus halieus Griffin

Polillo Pit Viper

1910 *Trimeresurus halieus* Griffin, Philip. J. Sci. Manila, 5:214.

1961 *Trimeresurus flavomaculatus halieus*; Leviton, Silliman J., Duman-
guete, 8:105.

Type locality: Polillo Island, Philippine.

Range: Known only from type locality.

Trimeresurus flavomaculatus mcgregori Taylor

Mc Gregor's Pit Viper

1919 *Trimeresurus mcgregori* Taylor, Philip. J. Manila, 14:110; fig. 1.

1961 *Trimeresurus flavomaculatus mcgregori*; Leviton, Silliman J., Du-
mague, 8:105.

Type locality: Bataan Island.

Range: Philippine (Bataan).

Trimeresurus flavoviridis (Hallowell) Fig. 62⁶

Habu

1860 *Bothrops flavoviridis* Hallowell, Proc. Acad. Nat. Sci. Philadelphia,
12:492.

1880 *Trimeresurus Riukiuanus* Hilgendorf Sb. Ges. Naturf. f. Berlin
1880:118, fig. 6-10.

1890 *Trimeresurus flavoviridis*; Boulenger, Fauna Brit. India Rept.:425.

1896 *Lachesis flavoviridis*; Boulenger, Cat. Snak. Brit. Mus., 3:550.

1931 *Trimeresurus flavoviridis flavoviridis*; Maki, Monogr. Snak. Japan
:230; Fig. 157-158, pl. 84.

(*) Specimens from Kumejima Island are easily distinguished from the Okinawa mainland specimens by variation in color pattern. May be the name of *T. flavoviridis tinkhami* Gloyd should be retained for this population.

- 1955 *Trimeresurus flavoviridis tinkhami* Gloyd, Bull. Chicago Acad. Sci., 10(8):223; fig. 1-3.

Type locality: "Amakarima Island" — Kumi-jima.

Range: Okinawa and Amami Islands, (Amami-ōshima, Edateku-jima, Kakeroma-jima; Yoro-jima, Uke-jima, Tokuno-jima, Iheya-jima, Yagashi-jima, Kōri-jima, Ie-jima, Menna-jima, Tonaki-jima, Sesoko-jima, Kume-jima, Henza-jima, Hamahika-jima, Yabuchi-jima).

Trimeresurus gracilis Oshima

Kikuchi Habu

- 1920 *Trimeresurus gracilis* Oshima, Ann. Rep. Inst. Sci. Governn. Formosa, Taipeh, 8 (2):78, pl. 12 :5-6.

Type locality: Taiwan.

Range: Taiwan.

Trimeresurus gramineus (Shaw) Fig

Green pit viper

- 1802 *Coluber gramineus* Shaw, Gen. Zool. 3:420.

- 1803 *Vipera viridis* Daudin, Hist. Nat. Rept., 5:112.

- 1853 *Trimeresurus elegans*, Gray (non Gray 1844) Ann. Mag. Nat. Hist. (2) 12:391.

- 1896 *Lachesis gramineus*; Boulenger (partim), Cat. Snak. Brit. Mus., 3:554.

- 1937 *Trimeresurus popeiorum* Smith (clerical error pro *Trimeresurus popeorum*) J. Bombay nat. Hist. Soc., 39:730.

Type locality: Vizagapatam, India (probably in error).

Range: From (Vizagapatam?), Himalaya, Assam, Birmania, Siam, Vietnam, Malayan Peninsula to Indonesia (Borneo and Sumatra).

Shaw's description of *Coluber gramineus* was obviously based on Russell's drawing 1 : 13 pl. 9 and surely he had no other specimens at the moment since he only mentioned the scale counts given by Russell (l.c. :13).

Russell gives his Boodroo Pam as being collected October 1788 on the Hills in the vicinity of Vizagapatam. Later (2pl. 20) he mentioned another specimen of Boodroo Pam from Java. Both drawings and descriptions refers to a green pit viper with: Ventrals 166-170; caudals 58-77; Dorsals strongly keeled all over the body, except paraventral rows; temporals strongly keeled; the anterior upper head covered with small and smooth orbicular scales the other small but slightly keeled; chin shields linear and truncated.

Coloration: ground color with a lateral yellow streak; ventral shields pale straw color, some of them with a small green spot on each side.

None of the characters mentioned agree with ones presented by the specimens from southwestern India which have: dorsals all smooth, except

in some specimens where the vertebral row on the posterior part of the body is sometimes faintly, never strongly keeled; the scales from the anterior part of upper head, are much larger than the posterior ones: the scales on the neck are not imbricated and in strong contrast with the black skin.

Pope and Pope (1933) considered this population from southwestern India as species distinct from all other green species and described it as *Trimeresurus occidentalis*; type locality Mudmalley, Wynard, southeastern India. Pope and Pope (l.c.) identified as *Trimeresurus gramineus* the specimens from upper Burma southwards into the Malayan Archipelago.

Smith (1943:515) although recognizing the specimens from southwestern India as belonging to a distinct species not accepted the new species considering it as synonym of *Trimeresurus gramineus* (Shaw 1802) on ground of the type locality of *Trimeresurus gramineus* bbeing Vizagapatam on the eastern coast of Southern India. Consequently he named *Trimeresurus gramineus* (sensu Pope and Pope l.c.) as *Trimeresurus popeiorum* sp. nov. (clerical error for *popeorum*) but did not give a type locality. Some authors posteriorly have given Sikkim as the type locality without any explanation or selection (possibly on ground of bbeing *Trimeresurus elegans*; Gray 1853 (non Gray 1849) from Sikkim and considered as identical to *Trimeresurus popeorum* Smith.

All known specimens of *Trimeresurus occidentalis* Pope and Pope 1933 are from locality within the range of the tropical rain forest on the westcoast of southern India, no extending northwards on the east coast (Fig.). No specimens of this species are known outside of this range and nevermore since Russell's statement any specimen was collected, at, or in the region of Vizigapatan. It is obvious to us that the drawings and descriptions of Russell do not fit the species described by Pope and the two specimens of Russell (l.c. :13 and 2, pl. 20) belong to a distinct species.

Since one (the second) of the specimens of Russell is mentioned as bbeing from Java and the other, although given as Vizigapatan, belongs to the never more found in the region of Vizigapatan which is ecologically completely different, and it seems to be possible that the statement was an error.

May be it should be necessary to correct the type locality from Vizigapatan to Java but at the present we think it is advisable to wait for more collecting data in the Vizigapatan region.

On ground of the data now available we consider *Trimeresurus occidentalis* Pope and Pope as a valid species and accept *Trimeresurus gramineus* (Shaw) sensu Pope and Pope as another distinct and valid species with *Trimeresurus popeorum* Smith 1937 as a synonym (at least for the moment) Vizigapatan will be considered in this paper as the type locality but witha?

Trimeresurus hageni (Lidth de Jeude)

1886 *Bothrops hageni* Lidth de Jeude, Not Leiden Mus, 8:53; pl.2 : 3.

- 1933 *Trimeresurus hageni*; Brongersma, Zool. Meded., Leiden, 16:6.
Type locality: Deli, Northeast of Sumatra.
Range: Indonésia: Sumatra, Batu, Bangka, Mentawai, Nias,
Simalur, Siam and South of Malasia Peninsula.

Trimeresurus huttoni Smith

- 1949 *Trimeresurus huttoni* M. Smith, J. Bombay nat. Hist. Soc., 48:596.
Type locality: High Wary mountains; Madura district, India.
Range: Known only from the type locality.

Trimeresurus jerdonii jerdonii Günther

Jerdon's Pit Viper

- 1875 *Trimeresurus jerdonii* Günther, Proc. Zool. Soc. London:233, pl. 34.
1896 *Lachesis jerdonii*; Boulenger, Cat. Snak. Brit. Mus., 3:551.
1922 *Lachesis melli* Vogt. Arch. Naturg (A), 88:143.
1936 *Trimeresurus jerdonii jerdonii*; Bourret Serp. Indochine 2:468.
Type locality: "Khasi Hills, Assam India".
Range: India (Assam). Septentrional Burma, China (Yunnan)
Burma-Thibet.

Trimeresurus jerdonii bourreti Klauber

- 1935 *Trimeresurus jerdonii meridionalis* Bourret (non *Trimeresurus monticola meridionalis* Bourret 1935), Bull. Instr. Pub. Hanoi, 1935:248.
1963 *Trimeresurus jerdonii bourreti*; Klemmer nom. nov. pro *Trimeresurus jerdonii meridionalis* Behringwerk, Mitt, Marburg :432.
Type locality: Chapa Tonkin, Vietnam.
Range: North Vietnam.

Trimeresurus jerdonii xanthomelas Günther

- 1889 *Trimeresurus xanthomelas* Günther, Ann. Mag. Nat. Hist., London, (6) 4:221.
1942 *Trimeresurus jerdonii xanthomelas*, Maslin, Copeia, Ann. Arbor, 1942:22.
Type locality: Ichang, Hupech, China.
Range: China, Szechwan, Hupech (China).

Trimeresurus kanburiensis Smith

- 1943 *Trimeresurus kanburiensis* M. Smith, Fauna Brit. India, Rept. Amph., 3:519.
Type locality: "Near Kanburi" Thailand.
Range: Known only from type locality.

Trimeresurus kaulbacki Smith

- 1940 *Trimeresurus kaulbacki* Smith, Rec. Ind. Mus., Calcutta, 42:485;
pl. 8:5.

Type locality: "North of the triangle Burma".

Range: Known from type locality and a few specimens from
Burma.

Trimeresurus labialis Steindachner

- 1869 *Trimeresurus labialis* Steindachner, Reise Novara, Zool. Rept.
:86, pl. 3.

- 1870 *Trimeresurus mutabilis* Stoliczka, J. Asiat. Soc. Bengal 39:219,
pl. 12.

Type locality: Nicobar Island.

Range: Andaman and Nicobar Islands.

Trimeresurus macrolepis Beddome

Large-scaled Pit Viper

- 1862 *Trimeresurus macrolepis* Beddome, Madras quart. J. Mad. Sci.,
5:2, pl. 2:6.

- 1890 *Trimeresurus macrolepis*; Boulenger, Fauna Brit. India, Rept.
Batr.: 431.

- 1896 *Lachesis macrolepis*; Boulenger, Cat. Snak. Brit. Mus., 3:560.

Type locality: "Anaimalai Hills". India.

Range: Meridional India from 600 to 2400 m.

Trimeresurus malabaricus (Jerdon)

Malabarian Pit Viper

- 1854 *Trigonocephalus (Cophias) malabaricus* Jerdon, J. Asiat. Soc. Ben-
gal, Calcutta, 22:523.

- 1854 *Trigonocephalus (Cophias) wardii* Jerdon, l.c.:524.

- 1896 *Lachesis anamallensis*, Boulenger, Cat. Snak. Brit. Mus., 3:558.

- 1917 *Lachesis coorgensis* Rao, Rec. Ind. Mus. 13:14.

- 1943 *Trimeresurus malabaricus*, M. Smith. Fauna Brit. India, Rept.
Amph., 3:513.

Type locality: Western Chats, India.

Range: Meridional and Occidental India to 600 m.

Trimeresurus medoensis Djao

Zhuryeging or Green Bamboo Leaf Pit Viper

- 1977 *Trimeresurus medoensis* Djao in Herpetological Division of Sichuan
Biological Institute Chengdu. Acta Zoologica Sinica 23(1):239
(1-5).

Type locality: near A-nie Bridge Medo Xian, Xizang, alt 1.200 m.
Range: Northern, Burma and Tagi Ling, India, possibly in Southern China.

Trimeresurus mucrosquamatus (Cantor)

Pointed-scales Pit Viper or Chinese habu, Taiwan habu,
Turtledesigned snake

1839 *Trigocephalus mucrosquamatus* Cantor, Proc. Zool. Soc. London, 1839:32.

1864 *Trimeresurus mucrosquamatus*; Günther, Rept. Brit. India :390.

1896 *Lachesis mucrosquamatus*; Boulenger, Cat. Snak. Brit. Mus., 3:552.

Type locality: "Naga Hills", Assam (India).

Range: North-east India, Oriental Paquistan, China: Fukien, Kwangsi, Kwangtung, Szechwan, Taiwan.

Trimeresurus occidentalis Pope et Pope

1933 *Trimeresurus occidentalis* Pope et Pope, Ann. Mus. Nov., 620:3.

1937 *Trimeresurus popeiorum* Smith (clerical error for *Trimeresurus popeorum*, J. Bombay Nat. Hist. Soc., 39:730.

Type locality: Mudmallay, Wynad, India.

Range: India, humid regions of the occidental south coast and Gudotapa.

Trimeresurus puniceus (Boie)

Ashy Pit Viper or Flat-nosed Pit Viper

1827 *Cophias punicea* Boie, Isis von Oken, Jena, 20:561.

1892 *Trimeresurus puniceus*; Boettger, Ber. Offenb. Ver Naturk. Offenbach am Main, 29/30:136.

1896 *Lachesis puniceus*, Boulenger, Cat. Snak. Brit. Mus., 3:560.

Type locality: Java.

Range: From Siam, Malayan Peninsulae, Menteai to Indonesia, (Java, Sumatra, Pagi and Arrambas) and Pulau Tinjil.

Trimeresurus purpureomaculatus purpureomaculatus (Gray)

Purple-spotted Pit Viper or Mangrove Pit Viper

1830 *Trigocephalus purpureo-maculatus* Gray, Ind. Zool., 1, pl. 81.

1842 *Trimeresurus purpureus* Gray, Zool. Misc.:48.

1842 *Trimeresurus carinatus* Gray, Zool. Misc.:48.

1861 *Trimeresurus porphyraceus* Blyt, Journ. Asiat. Soc. Bengal, 29:111.

1896 *Lachesis purpureomaculatus*; Boulenger, Cat. Snak. Brit. Mus., 3:553.

1926 *Trimeresurus acutimentalis* Werner, S.B. Akad. Wiss. Wien, 135: 257.

1943 *Trimeresurus purpureomaculatus purpureomaculatus*; Smith Fauna Brit. India Rept. Amph., 3:520.

Type locality: Singapura.

Range: Bengal, Assam (India) oriental Paquistan. Meridional Burma. Malayan Peninsule. Thailand to Riou Archipelago and Sumatra.

Trimeresurus purpureomaculatus andersoni Theobald
Shore Pit Viper

1868 *Trimeresurus andersoni* Theobald, Cat. Rept. Asiat. Soc. Mus.:75.

1943 *Trimeresurus purpureomaculatus andersoni*, M. Smith, Fauna Brit. India, Rept. Amph., 3:521.

Type locality: Andaman Islands.

Range: Andaman and Nicobar Islands.

Trimeresurus schultzei Griffin
Schultze's Pit Viper

1909 *Trimeresurus schultzei* Griffin, Philippine J. Sci. (A), 4:601.

1963 *Trimeresurus flavomaculatus schultzei*; Klemmer, Gift. Erde, Behring Werke :431.

1968 *Trimeresurus schultzei*; Leviton, Ven. an. Venoms I:572.

Type locality: Iwahig, Palawan Island.

Range: Balabac and Palawan, Phillipine.

Trimeresurus stejnegeri stejnegeri Schmidt
Stejneger's Pit Viper or Ao Habu

1925 *Trimeresurus stejnegeri* Schmidt, Amer. Mus. Novit. New York. 157:4.

1927 *Trimeresurus gramineus stejnegeri*; Stejneger Proc. U.S.N. Mus. 72(10):9.

1935 *Trimeresurus stejnegeri stejnegeri*; Pope: Rept. China: 428, fig 77.

Type locality: Shaowu, Fukien, China.

Range: China: Kwangsi, Kwangtung, Hainan, Fukien, Chekiang.

Trimeresurus stejnegeri formosensis Maki Fig. 64
Ayo Habu Taiwan Bamboo Pit Viper

1931 *Trimeresurus gramineus formosensis* Maki (non. *T. monticola formosensis* Mell 1931), Monogr. Snakes Japan: 214 (English text) fig. 142-143, pl. 77C.

1963 *Trimeresurus stejnegeri makii* Klemmer (nom. nov. pro. *T. g. formosensis* Maki which was believed to be preoccupied by *T. m. formosensis* Mell (Fide Leviton 1968)).

1968 *Trimeresurus stejnegeri formosensis*, Leviton, Ven. An. Venoms, Ac. Press. I:572.

Type locality: Taiwan.

Range: Taiwan.

Trimeresurus stejnegeri kodairai Maki

Aniao Habu

1931 *Trimeresurus gramineus kodairai* Maki, Nonogr. Snak. Japan (English text) :216, fig. 144-146, pl. 78.

1963 *Trimeresurus stejnegeri kodairai*; Klemmer, Behring-Mitt Marburg:436.

Type locality: Chikushiko, Taihoku, Taiwan.

Range: Taiwan (Mt. Daiton and Arisan).

Trimeresurus stejnegeri yunnanensis Schmidt

Yunnan Pit Viper

1925 *Trimeresurus yunnanensis* Schmidt, Amer. Mus. Novit., New York, 157:4.

1935 *Trimeresurus stejnegeri yunnanensis*; Pope, Rept. China, :423.

Type locality: Tengyneck, Yunnan, China.

Range: China, Yunnan. Nepal. Sikkim. India: Assam, Northeast of Burma.

Trimeresurus strigatus Gray

Horse-shoe Pit Viper

1842 *Trimeresurus strigatus* Gray, Zool. Misc.:49.

1854 *Atropos darwinii*, Bibron and Dumeril Erpet. Gén. 7:1518-1520.

1854 *Trigocephalus [Cophias] neelgherriensis* Jerdon, Journ. of the Asiat. Soc. of Bengal n.^o LXIII New Series XXII (VI), (1854) : 524.

Type locality: Madras (India).

Range: Meridional India, in the hilly regions.

Trimeresurus sumatranus sumatranus (Raffles)

Sumatran Pit Viper

1822 *Coluber sumatranus* Raffles, Trans. Linn. Soc. London, 13:334.

1842 *Trimeresurus sumatranus*; Gray, Zool. Misc.:48.

1896 *Lachesis sumatranus*; Boulenger, Cat. Snak. Brit. Mus., 3:557.

- 1938 *Trimeresurus sumatranus sumatranus*; Loveridge, Proc. Biol. Soc. Washington, 51:45.

Type locality: Sumatra.

Range: Indonesia: Simalur, Nias, Mentawai (P. Sipura; Sumatra; Bangka; Billiton; Borneo), Malaya; Singapura and Peninsula Malasia.

Trimeresurus sumatranus malcomi Loveridge

Malcom Pit Viper or Mount Kinabalu Pit Viper

- 1938 *Trimeresurus sumatranus malcomi* Loveridge, Proc. Biol. Soc. Washington, 51:45.

Type locality: "Sungii River near Bundutuan Mt. Kinabalu, Septentrional Borneo.

Range: Known only from the type locality.

Trimeresurus tokarensis Nagai Fig. 65

Tokara Habu Pit Viper

- 1928 *Trimeresurus tokarensis* Nagai, Rep. Nat. Hist. Prov. Kagoshima, 3:6.

- 1931 *Trimeresurus flavoviridis tokarensis* Maki, Monogr. Snak. Japan :233, fig. 158, pl. 85.

Type locality: Takarashima, Province of Kagoshima.

Range: Takara-jima, Kotakara-jima.

Trimeresurus tonkinensis Bourret

Tonkinean Pit Viper

- 1934 *Trimeresurus tonkinensis* Bourret, Bull. Gén. Instr. Publ. 1934:138.

Type locality: Chapa, Vietnam.

Range: Vietnam.

GENUS *Tropidolaemus* Wagler

Type species: *Tropidolaemus walgeri* Schlegel.

Range: Siam, Malasia, Singapura, Sumatra, Mentawai Island, Nias, Archipelago of Riou; Billiton, Bangka, Natuña Island, Sangihe Island, Borneo, Archipelago Karimata, Celebes, Buton; Palawan and group Calamianas in the Philippines.

Tropidolaemus wagleri (Schlegel, 1837) Fig. 66

Wagler's Pit Viper or Chin-keeled Pit Viper

- 1827 *Cophias wagleri* Boie Isis v. Oken 1827:561.

1964 *Tropidolaemus wagleri*; Brattström, Trans. San Diego Soc. Nat. Hist., 13 (11):251.

The complete synonymy is not given since the validity of some subspecies recognized by Taylor (1922) have been questioned (without any comment by Leviton 1968).

This matter will be studied, in the forth comming paper.

Type locality: Sumatra.

Range: Same as for the genus.

GENUS *Ammophis* Gmelin

Copperhead and Moccasin

A. ammophis Linnaeus Gmelin, 1789. Indian Moccasin.

A. ammophis Linnaeus Gmelin, 1789. Indian Moccasin.

A. ammophis Taylor, Major in Robertson, 1911. Taylor's Moccasin.

A. concolor concolor (Linnaeus, 1766). Southern Copperhead.

A. concolor laticeps Gloyd et Conant, 1938. Broad-headed Copperhead.

A. concolor mitchilli (Daudin, 1803). Northern Copperhead.

A. concolor phaeosticta Gloyd, 1968.

A. concolor pictipunctata Gloyd et Conant, 1943. Texas-Pecos Copperhead.

A. pictorius pictorius (Linnaeus, 1766). Eastern Cottonmouth Moccasin.

A. pictorius conanti Gloyd, 1968. Conant's Cottonmouth.

A. pictorius fasciolatus (Gray, 1873). Western Cottonmouth Moccasin.

GENUS *Calloselasma* Gray

Malayan Pit Viper

C. c. cerasiferum Angel, 1933. Annamian Pit Viper.

C. rhodostoma Boie, 1827. Malayan Pit Viper.

GENUS *Dipsas* Gray

100 Paces

D. indica (Günther, 1868). 100 Paces or Hylastoida.

GENUS *Gloydius* Gray

Mambas

G. blanfordii Blanford (Boie, 1828). Mambas.

CROSS-INDEX: TECHNICAL TO VERNACULAR (OR COMMON) NAMES

GENUS *Akistrodon*

Copperheads and Moccasins

- A. bilineatus bilineatus* Günther, 1863. Mexican Moccasin.
A. bilineatus russeolus Gloyd, 1972. Yucatan Moccasin.
A. bilineatus taylori Burger et Robertson, 1951. Taylor's Moccasin.
A. contortrix contortrix (Linnaeus, 1766). Southern Copperhead.
A. contortrix laticinctus Gloyd et Connant, 1934. Broad-banded Copperhead.
A. contortrix mokeson (Daudin, 1803). Northern Copperhead.
A. contortrix phaeogaster Gloyd, 1968.
A. contortrix pictigaster Gloyd et Conant, 1943. Trans-Pecos Copperhead.
A. piscivorus piscivorus (Lacépède, 1789). Eastern Cottonmouth Moccasin.
A. piscivorus conanti Gloyd, 1969. Conant's Cottonmouth.
A. piscivorus leucostoma (Troost, 1836). Western Cottonmouth Moccasin.

GENUS *Calloselasma*

Malayan Pit Viper

- C. annamensis* Angel, 1933. Annamenian Pit Viper.
C. rhodostoma Boie, 1827. Malayan Pit Viper.

GENUS *Deinagkistrodon*

100 Pacer

- D. acutus* (Günther, 1888). 100 Pacer or Hiyatsupoda.

GENUS *Gloydius*

Mamushis

- G. blomhoffii blomhoffii* (Boie, 1826). Mamushi.

G. blomhoffii brevicaudus Stejneger, 1907. Short-tailed Mamushi or Tairiku.

- G. blomhoffii dubitatus* Gloyd, 1977. Tung Ling Mamushi.
G. blomhoffii siniticus Gloyd, 1977. Yangtze Mamushi.
G. caliginosus Gloyd, 1972. Caliginous Mamushi.
G. halys halys (Pallas, 1916).
G. halys affinis (Gray, 1849). Riyu Kiyu Mamushi.
G. halys caraganus (Eichwald, 1831). Karagan Mamushi.
G. halys caucasicus Nikolskij, 1916. Caucasian Mamushi.
G. halys cognatus Gloyd, 1977. Alashan Pit Viper. or Alashan Mamushi.
G. halys intermedius (Strauch, 1868). Siberian Mamushi.
G. halys ussuriensis Emelianov, 1929.
G. himalayanus (Günther, 1864). Himalayan Mamushi.
G. monticola Werner, 1922. Mountain Mamushi.
G. saxatilis Emelianov, 1937. Brown Mamushi.
G. strauchi Bedriaga, 1912. Strauch's Mamushi.

GENUS *Hypnale* Fitzinger 1843

Hump Nosed Pit Vipers

- H. hypnale* (Merrem, 1820). Merrem's Hum-Nosed Pit Viper.
H. nepa (Laurenti, 1768). Lorenz's Hump-Nosed Pit Viper.
H. walli Gloyd, 1977. Wall's Pit Viper.

AMERICAN PIT VIPERS OF THE GENUS *Bothrops*

- B. leucurus* Wagler, 1824. White tailed Pit Viper.
B. albocarinatus Shreve, 1934. White keeled Pit Viper.
B. alternatus Duméril, Bibron et Duméril, 1854. Urutu.
B. alticolus Parker, 1934.
B. ammodytoides Leybold, 1873. Patagonian Pit Viper.
B. andianus Amaral, 1923. Andian Pit Viper.
B. asper Garman, 1883. Barba Amarilla. Fer-de-lance.
B. atrox Linnaeus, 1758. Jararaca grão de arroz, Terciopello, Mapepirebalsin (balcin), Mapepire valsín.
B. barbouri (Dunn, 1919). Barbour's Pit Viper.
B. barnetti Parker, 1938. Barnett's Pit Viper.
B. bicolor Bocourt, 1868.
B. bilineatus bilineatus (Wied, 1821). Surucucu de patioba.

- B. bilineatus smaragdinus* Hoge, 1966. Cobra papagaio or Esmerald
Pit Viper.
- B. brazili* Hoge, 1923. Brazil's Pit Viper.
- B. caribbaeus* Garman, 1887. St. Lucia Pit Viper.
- B. castelnaudi* Duméril, Bibron et Duméril, 1853. Castelnau's Pit
Viper.
- B. castelnaudi lichenosus* Roze, 1958. Lichen like Pit Viper.
- B. colombiensis* (Hallowell, 1845). Mapanae, Macagua Colombian Pit
Viper.
- B. cotiara* (Gomes, 1913). Cotiara.
- B. dunni* Hartweg et Oliver, 1938. Dunn's Pit Viper.
- B. eneydae* Sandner Montilla. Eneyda's Pit Viper.
- B. erythromelas* Amaral, 1923. Red and Black Pit Viper.
- B. fonsecai* Hoge et Belluomini, 1959. Fonseca's Pit Viper.
- B. godmanni* (Günther, 1863). Godmann's Pit Viper.
- B. hesperis* Campbell, 1976. Western hognosed pit viper or colmillo
de puerco.
- B. hyoprorus* Amaral, 1935. Amazonian hognosed Pit Viper.
- B. iglesiasi* Amaral, 1923. Iglesias' Pit Viper.
- B. insularis* Amaral, 1921. Jararaca Ilhôa or Queimada Grande Pit
Viper
- B. isabelae* Sandner Montilla, 1979. Isabela's Pit Viper.
- B. itapetininga* (Boulenger, 1907). Cotiarinha.
- B. jararaca* (Wied, 1824). Jararaca.
- B. jararacussu* Lacerda, 1884. Jararacussu.
- B. lanceolatus* (Lacépède, 1768). Vipere Jaune. Fer de Lance or
Martinican Pit Viper.
- B. lansbergii lansbergii* Schlegel, 1841. Mapanare rabo amarillo.
Lansberg's Pit Viper.
- B. lansbergii anectans* (Schmidt, 1936).
- B. lansbergii janisrozei* (nomen novum pro *B. lansbergii venezuelensis* Roze, 1959). Roze's Pit Viper.).
- B. lateralis* (Peters, 1863). Yellow lived palm Viper.
- B. lojanus* Parker, 1930. Lojan Pit Viper.
- B. marajoensis* Hoge, 1966. Marajoan Pit Viper.
- B. medusa* (Sternfeld, 1920). Viejita.
- B. melanurus* (Müller, 1924). Black-tailed Pit Viper.
- B. microphthalmus microphthalmus* Cope, 1876. Small eyed Pit Viper.
- B. microphthalmus colombianus* Rendahl et Vestergren, 1940.
- B. moojeni* Hoge, 1966. Caissaca.

- B. nasutus* Bocourt, 1868. Horned Hog-nosed Pit Viper.
B. neuwiedi neuwiedi Wagler, 1824. Neuwied's Pit Viper.
B. neuwiedi bolivianus Amaral, 1927. Bolivian Pit Viper.
B. neuwiedi goyazensis Amaral, 1925. Goiaz Pit Viper.
B. neuwiedi lutzi (Miranda-Ribeiro, 1915). Lutz's Pit Viper.
B. neuwiedi mattogrossensis Amaral, 1925. Matto Grosso Pit Viper.
B. neuwiedi meridionalis Müller, 1885. Southern neuwied's Pit Viper.
B. neuwiedi paranaensis Amaral, 1925. Parana Pit Viper.
B. neuwiedi pauloensis Amaral, 1925. St. Paul Pit Viper.
B. neuwiedi piauhyensis Amaral, 1916. Northern Pit Viper.
B. neuwiedi pubescens (Cope, 1869).
B. neuwiedi urutu Lacerda, 1884.
B. nigroviridis nigroviridis (Peters, 1859). Black-spotted palm
Viper.
B. nigroviridis aurifer (Salvin, 1860).
B. nigroviridis macdougalli Smith et Mall, 1969. Macdougalli's
Pit Viper.
B. nigroviridis marchi Barbour et Loveridge, 1929. Marchi's
Pit Viper.
B. nigroviridis rowleyi Bogert, 1968. Rowley's Pit Viper.
B. nummifer (Rüppell, 1845).
B. nummifer mexicanus (Duméril, Bibron et Duméril, 1854).
B. nummifer occiduus Hoge, 1868.
B. oligolepis (Werner, 1901).
B. ophryomegas Bocourt, 1868.
B. peruvianus Boulenger, 1903. Peruvian Pit Viper.
B. picadoi (Dunn, 1939). Picado's Pit Viper.
B. pictus (Tschudi, 1845).
B. pirajai Amaral, 1923. Piraja's Pit Viper — Jararacussu.
B. pradoi (Hoge, 1948). Prado's Pit Viper.
B. pulcher (Peters, 1862).
B. punctatus (Garcia, 1896). Spotted Pit Viper.
B. roedingeri Mertens, 1942. Roedinger's Pit Viper.
B. sabinii Gray, 1842. St. Lucia Pit Viper.
B. sanctaerucis Hoge, 1966. Sta. Cruz Pit Viper.
B. schlegelli (Berthold, 1946). Horned-palm Viper, or Pestañosa.
B. sphenophrys Smith, 1960.
B. supraciliaris Taylor, 1954.
B. undulatus (Jan. 1859).
B. venezuelensis Sandner Montilla, 1952. Tigra Mariposa.

B. xantogrammus (Cope, 1868).

B. yucatannicus (Smith, 1941). Yucatan Pit Viper.

RATTLESNAKES OF THE GENUS *Crotalus*

C. adamanteus Beauvois, 1979. Eastern Diamondback Rattlesnake.

C. aquilus Klauber, 1952. Queretaram Blotched Rattlesnake.

C. atrox Baird et Girard, 1853. Western Diamondback Rattlesnake.

C. basiliscus basiliscus (Cope, 1864). Mexican West-Coast Rattlesnake.

C. basiliscus oaxacus Gloyd, 1948. Oaxacan Rattlesnake.

C. catalinensis Cliff, 1954. Santa Catalina Island Rattlesnake.

C. cerastes cerastes Hallowell, 1854. Mojave Desert Sidewinder.

C. cerastes cercobombus Savage et Cliff, 1953. Sonoran Desert Sidewinder.

C. cerastes laterorepens Klauber, 1944. Colorado Desert Sidewinder.

C. durissus durissus Linnaeus, 1758. Central American Rattlesnake.

C. durissus cascavella Wagler, 1824. Northeastern Brazilian Rattlesnake.

C. durissus collilineatus Amaral, 1926. Central Brazilian Rattlesnake.

C. durissus culminatus Klauber, 1952. Northwestern Neotropical Rattlesnake.

C. durissus cumanensis Humboldt, 1833. Venezuelan Rattlesnake.

C. durissus dryinus Linnaeus, 1758. Guianian Rattlesnake.

C. durissus marajoensis Hoge, 1966. Marajoan Rattlesnake.

C. durissus ruruima Hoge, 1966. Mt. Roraima Rattlesnake.

C. durissus terrificus (Laurenti, 1768). South American Rattlesnake.

C. durissus totonacus Gloyd et Kauffeld, 1940. Totonacan Rattlesnake.

C. durissus trigonicus Harris et Simmons, 1978. Rupunini Savana Rattlesnake.

C. durissus tzabcan Klauber, 1952. Yucatán Neotropical Rattlesnake.

C. durissus unicolor van Lidth de Jeude, 1887. Aruba Island Rattlesnake.

C. enyo enyo (Cope, 1861). Lower California Rattlesnake.

C. enyo cerralvensis Cliff, 1954. Cerralvo Island Rattlesnake.

C. enyo furvus Lowe et Norris, 1954. Rosario Rattlesnake.

C. exsul Garman, 1883. Cedros Island Diamond Rattlesnake.

C. horridus horridus Linnaeus, 1758. Timber Rattlesnake.

C. horridus atricaudatus Latreille, 1802. Canebrake Rattlesnake.

- C. intermedius intermedius* Troschel, 1865. Totalcan Small-Headed Rattlesnake.
- C. intermedius gloydi* Taylor, 1941. Oaxacan Small-Headed Rattlesnake.
- C. intermedius omiltemanus* Günther, 1895. Omilteman Small-Headed Rattlesnake.
- C. lannomi* Tanner, 1966. Autlán Rattlesnake.
- C. lepidus lepidus* (Kennicott, 1861). Mottled Rock Rattlesnake.
- C. lepidus klauberi* Gloyd, 1936. Banded Rock Rattlesnake.
- C. lepidus maculosus* Tanner, Dixon et Harris, 1972. Durango Rock Rattlesnake.
- C. lepidus morulus* Klauber, 1952. Tamaulipan Rock Rattlesnake.
- C. mitchelli mitchellii* (Cope, 1861). San Lucan Speckled Rattlesnake.
- C. mitchellii angelensis* Klauber, 1963. Angel de la Guarda Island Speckled Rattlesnake.
- C. mitchellii muertensis* Klauber, 1949. El Muerto Island Speckled Rattlesnake.
- C. mitchellii pyrrhus* (Cope, 1866). Southwestern Speckled Rattlesnake.
- C. mitchelli stephensi* Klauber, 1930. Panamint Rattlesnake.
- C. molossus molossus* Baird et Girard, 1853. Northern Black-Tailed Rattlesnake.
- C. molossus estebanensis* Klauber, 1949. San Esteban Island Rattlesnake.
- C. molossus nigriscens* Gloyd, 1936. Mexican Black-Tailed Rattlesnake.
- C. polystictus* (Cope, 1865). Mexican Lance-Headed Rattlesnake.
- C. pricei pricei* Van Denburgh, 1895. Western Twin-Spotted Rattlesnake.
- C. pricei miquihuana* Gloyd, 1940. Eastern Twin-Spotted Rattlesnake.
- C. pusillus* Klauber, 1952. Tancitaran Dusky Rattlesnake.
- C. ruber ruber* Cope, 1892. Red Diamond Rattlesnake.
- C. ruber elegans* Schmidt, 1922. Angel de la Guarda Red Diamond Rattlesnake.
- C. ruber lorenzoensis* Radcliffe et Maslin, 1975. San Lorenzo Red Diamond Rattlesnake.
- C. ruber lucasensis* Van Denburgh, 1920. San Lucan Diamond Rattlesnake.
- C. ruber monserratensis* Harris et Simons, 1978. Monserrate Red Diamond Rattlesnake.
- C. scutulatus scutulatus* (Kennicott, 1861). Mojave Rattlesnake.

- C. scutulatus salvini* Günther, 1895. Huamantlan Rattlesnake.
C. stejnegeri Dunn, 1919. Long-Tailed Rattlesnake.
C. tigris Kennicott, 1859. Tinger Rattlesnake.
C. tortugensis Van Denburgh et Slevin, 1921. Tortuga Island Diamond Rattlesnake.
C. transversus Taylor, 1944. Cross-Banded Mountain Rattlesnake.
C. triseriatus triseriatus (Wagler, 1830). Central-Plateau Dusky Rattlesnake.
C. triseriatus anahuacus Gloyd, 1940 Montane Dusky Rattlesnake.
C. triseriatus quadrangularis Harris et Simmons, 1978. Hidalgo Dusky Rattlesnake.
C. vegrandis Klauber, 1941. Uracoan Rattlesnake.
C. viridis viridis (Rafinesque, 1818). Prairie Rattlesnake.
C. viridis abyssus Klauber, 1930. Grand Canyon Rattlesnake.
C. viridis caliginis Klauber, 1949. Coronado Island Rattlesnake.
C. viridis cerberus (Coues, 1875). Arizona Black Rattlesnake.
C. viridis concolor Woodbury, 1929. Midget Faded Rattlesnake.
C. viridis helleri Meek, 1905. Southern Pacific Rattlesnake.
C. viridis lutosus Klauber, 1930. Great Basin Rattlesnake.
C. viridis nuntius Klauber, 1935. Hopi Rattlesnake.
C. viridis oreganus Holbrook, 1840. Northern Pacific Rattlesnake.
C. willardi willardi Meek, 1905. Arizona Ridge-Nosed Rattlesnake.
C. willardi amabilis Anderson, 1962. Del Nido Ridge-Nosed Rattlesnake.
C. willardi meridionalis Klauber, 1949. Southern Ridge-Nosed Rattlesnake.
C. willardi obscurus Harris et Simmons, 1974. New Mexican Ridge-Nosed Rattlesnake.
C. willardi silus Klauber, 1949. West Chihuahua Ridge-Nosed Rattlesnake.

AMERICAN PIT VIPERS OF THE GENUS *Lachesis*

- L. muta muta* Linnaeus, 1766. Bushmaster, Surucucu, Pico de Jaca, Mapepire Z'anana, Pineapple Mapepire, Z'anana Mapepire.
L. muta rhombeata Wied, 1824. Bushmaster, Surucucu.
L. muta stenophrys Cope, 1876. Bushmaster, Verrucosa, Cascabella muda.

SCALESNOUTS OF THE GENUS *Ovophis* Burger

- O. chaseni* (Smith, 1931). Chasen's Pit Viper.

- O. convictus* (Stoliczka, 1870).
O. monticola monticola (Günther, 1864). Mountain Pit Viper.
O. monticola makazayazaya (Takahashi, 1922). Arisan Habu.
O. monticola meridionalis (Bourret, 1935). Southern Mountain Pit Viper.
O. monticola orientalis (Schmidt, 1925). Oriental Mountain Pit Viper.
O. monticola zayuensis (Jiang, 1977). Shanluotieton or Zhayuan Pit Viper.
O. okinavensis (Boulenger, 1892). Hime Habu or Okinawa Pit Viper.
O. tonkinensis Bourret, 1934. Tonkin Pit Viper.

PYGMY RATTLESNAKES OF THE GENUS *Sistrurus*

- S. catenatus catenatus* (Rafinesque, 1818). Eastern Massasauga.
S. catenatus edwardsii (Baird et Girard, 1853). Desert Massasauga.
S. catenatus tergeminus (Say, 1823). Western Massasauga.
S. miliarius miliarius (Linnaeus, 1766). Carolina Pigmy Rattlesnake.
S. miliarius barbouri Gloyd, 1935. Dusky Pigmy Rattlesnake.
S. miliarius streckeri Gloyd, 1935. Western Pigmy Rattlesnake.
S. ravus ravus (Cope, 1865). Mexican Pigmy Rattlesnake.
S. ravus brunneus Harris et Simmons, 1978. Oaxacan Pigmy Rattlesnake.
S. ravus lutescens Harris et Simons, 1978. Montane Pigmy Rattlesnake.

ASIATIC PIT VIPERS OF THE GENUS *Trimeresurus*

- T. albolabris* Gray, 1842. White-lipped Pit Viper.
T. borneensis (Peters, 1871). Bornean Pit Viper.
T. brongersmai Hoge, 1967. Brongersma's Pit Viper.
T. cantori (Blyth, 1846). Cantor's Pit Viper.
T. capitetriangulatus Lacépède, 1789. Green Polongo or Green Tie Pit Viper.
T. cornutus Smith, 1930. Fan-si-pan horned Pit Viper.
T. elegans (Gray, 1849). Sakishima-Habu or Elegant Pit Viper.
T. erythrurus (Cantor, 1839). Red Tailed Pit Viper.
T. fasciatus (Boulenger, 1896). Banded Pit Viper.
T. flavomaculatus flavomaculatus Gray, 1842. Yellow spotted Pit Viper.
T. flavomaculatus halieus Griffin, 1910. Polillo Pit Viper.

- T. flavomaculatus macgregori* Taylor, 1919. Mc Gregor's Pit Viper.
T. flavoviridis (Hallowell, 1860). Habu.
T. gracilis Oshima, 1920. Kikuchi Habu.
T. gramineus (Shaw, 1802).
T. hageni (Lidth de Jeude, 1886).
T. huttoni Smith, 1949.
T. jerdoni jerdoni Günther, 1875. Jerdon's Pit Viper.
T. jerdonii bourreti Klemmer, 1935.
T. jerdonii xanthomelas Günther, 1889.
T. kanburiensis Smith, 1943.
T. kaulbacki Smith, 1940.
T. labialis Steindachneger, 1869.
T. macrolepis Beddome, 1862. Large-scaled Pit Viper.
T. malabaricus (Jerdon, 1854). Malabarian Pit Viper.
T. medoensis (Djao, 1977). Zhuryeging or Green Bamboo Leaf Pit Viper.
T. mucrosquamatus (Cantor, 1839). Pointed-scaled Pit Viper or Chinese Habu, Taiwan Habu, Turtle-designed Snake.
T. occidentalis Pope et Pope 1933 Green Pit Viper.
T. puniceus (Boie, 1827). Ashy Pit Viper or Flat-nosed Pit Viper.
T. purpureomaculatus purpureomaculatus (Gray, 1832). Purple-spotted Pit Viper or Mangrove Pit Viper.
T. purpureomaculatus andersoni Theobald, 1868. Shore Pit Viper.
T. schultzei Griffin, 1909. Schultze's Pit Viper.
T. stejnegeri stejnegeri Schmidt, 1925. Stejneger's Pit Viper or Ao Habu.
T. stejnegeri formosensis Maki, 1931. Ayo Habu Taiwan Bamboo Pit Viper.
T. stejnegeri kodairai Maki, 1931. Aniao Habu.
T. stejnegeri yunnanensis Schmidt, 1925. Yunnan Pit Viper.
T. strigatus Gray, 1842. Horse-shoe Pit Viper.
T. sumatranaus sumatranaus (Raffles, 1822). Sumatran Pit Viper.
T. sumatranaus malcomi Loveridge, 1938. Malcolm Pit Viper or Mount Kinabalu Pit Viper.
T. tokarensis Nagai, 1928. Tokara Habu Pit Viper.
T. tonkinensis Bourret, 1934. Tonkinean Pit Viper.

ASIATIC PIT VIPERS OF THE GENUS *Tropidolaemus*

T. wagleri Schlegel, 1837. Wagler's Pit Viper or Chin Keeled Pit Viper.

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| <i>C. ruber monserratensis</i> | 237 |
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| <i>C. scutulatus salvini</i> | 237 |
| <i>C. stejnegeri</i> | 238 |
| <i>C. tigris</i> | 238 |
| <i>C. tortugensis</i> | 238 |
| <i>C. transversus</i> | 238 |
| <i>C. triseriatus triseriatus</i> | 239 |
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| <i>C. viridis abyssus</i> | 240 |
| <i>C. viridis caliginis</i> | 240 |
| <i>C. viridis cerberus</i> | 241 |
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| <i>G. caliginosus</i> | 195 |
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| <i>S. miliarius miliarius</i> | 251 |
| <i>S. miliarius barbouri</i> | 251 |
| <i>S. miliarius streckeri</i> | 251 |
| <i>S. ravus ravus</i> | 251 |
| <i>S. ravus brunneus</i> | 252 |
| <i>S. ravus lutescens</i> | 252 |
| <i>Trimeresurus</i> | 252 |
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| <i>T. borneensis</i> | 253 |
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| <i>T. fasciatus</i> | 255 |
| <i>T. flavomaculatus flavomaculatus</i> | 256 |
| <i>T. flavomaculatus halieus</i> | 256 |
| <i>T. flavomaculatus mcgregori</i> | 256 |
| <i>T. flavoviridis</i> | 256 |
| <i>T. gracilis</i> | 257 |
| <i>T. gramineus</i> | 257 |
| <i>T. hageni</i> | 258 |
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| <i>T. jerdonii jerdonii</i> | 259 |
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| <i>T. jerdonii xanthomelas</i> | 259 |
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| <i>T. kaulbacki</i> | 260 |
| <i>T. labialis</i> | 260 |
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| <i>T. medoensis</i> | 260 |
| <i>T. mucrosquamatus</i> | 261 |
| <i>T. occidentalis</i> | 261 |
| <i>T. puniceus</i> | 261 |
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| <i>T. stejnegeri stejnegeri</i> | 262 |
| <i>T. stejnegeri formosensis</i> | 262 |
| <i>T. stejnegeri kodairai</i> | 263 |
| <i>T. stejnegeri yunnanensis</i> | 263 |
| <i>T. strigatus</i> | 263 |
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| <i>T. sumatranaus malcomi</i> | 264 |
| <i>T. tokarensis</i> | 264 |
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GEOGRAPHICAL DISTRIBUTION OF PIT VIPERS SPECIES

The following regions are not based on any Morphoclimatic or Zoogeographic data, are intended only to permit a quick glance at the general distribution of genera and species of pit vipers. Species even when occurring only at the border lines are included.

More accurate date on distribution will be found in the systematic part of this paper.

For visual localization of the regions a map () is included.

I — AMERICA — Subdivided in:

- I — 1 North America (including Canada)
- I — 2 Central America
- I — 3 South America

II — ASIA — Subdivided in:

- II — 1 Northern Asia (Asiatic USSR)
- II — 2 West Asia (Asiatic Turkey; Iran; Transcaucasian USSR; Egypt east of Suez; Israel, Jordania; Libanon, Syria, Saudi Arabia, Yemen, Hadramut and Irak.)
- II — 3 Central Asia (Afghanistan, Pakistan, India Bangladesh, Sri-Lanka, Cashmir and Nepal.)
- II — 4 Eastern Asia (Xizang autonomous regions; China; North and South Corea, Japan including Nansei Shoto Islands (Ryukyu Islands) and Taiwan.)
- II — 5 Far East (North and South Vietnam; Burma, former Laos, Cambodge; Malaya; Andaman an Nicobar Islands.)

III — EUROPE — Subdivided in:

- III — 1 European USSR.

I — AMERICA

1. North America (Canada and USA)

a) CANADA

Crotalus viridis

Crotalus horridus (now possibly extinct)

Sistrurus catenatus

b) USA

Agkistrodon contortrix

Agkistrodon piscivorus

Crotalus adamanteus

Crotalus atrox

Crotalus cerastes

Crotalus horridus

Crotalus lepidus

Crotalus mitchellii

Crotalus molossus

Crotalus pricei

Crotalus ruber

Crotalus scutulatus

Crotalus tigris

Crotalus viridis

Crotalus willardi

Sistrurus catenatus

Sistrurus miliarius

2. Central America

Agkistrodon bilineatus

Agkistrodon piscivorus

Bothrops asper

Bothrops barbouri

Bothrops bicolor

Bothrops dunni

Bothrops godmanni

Bothrops hesperis

Bothrops lateralis

Bothrops melanurus

Bothrops nasutus

Bothrops nigroviridis

Bothrops nummifer

Bothrops ophryomegas

Bothrops picadoi

Bothrops punctatus

Bothrops schlegelli

Bothrops yucatanicus

| | |
|-------------------------------|--------------------|
| <i>Crotalus atrox</i> | venomous spinytail |
| <i>Crotalus aquilus</i> | venomous spinytail |
| <i>Crotalus basiliscus</i> | venomous spinytail |
| <i>Crotalus catalinensis</i> | venomous spinytail |
| <i>Crotalus cerastes</i> | venomous spinytail |
| <i>Crotalus durissus</i> | venomous spinytail |
| <i>Crotalus enyo</i> | venomous spinytail |
| <i>Crotalus exsul</i> | venomous spinytail |
| <i>Crotalus intermedius</i> | venomous spinytail |
| <i>Crotalus lannoni</i> | venomous spinytail |
| <i>Crotalus lepidus</i> | venomous spinytail |
| <i>Crotalus mitchellii</i> | venomous spinytail |
| <i>Crotalus molossus</i> | venomous spinytail |
| <i>Crotalus polystictus</i> | venomous spinytail |
| <i>Crotalus pricei</i> | venomous spinytail |
| <i>Crotalus pusillus</i> | venomous spinytail |
| <i>Crotalus ruber</i> | venomous spinytail |
| <i>Crotalus scutulatus</i> | venomous spinytail |
| <i>Crotalus stejnegeri</i> | venomous spinytail |
| <i>Crotalus tigris</i> | venomous spinytail |
| <i>Crotalus tortugensis</i> | venomous spinytail |
| <i>Crotalus transversus</i> | venomous spinytail |
| <i>Crotalus triseriatus</i> | venomous spinytail |
| <i>Crotalus viridis</i> | venomous spinytail |
| <i>Crotalus willardi</i> | venomous spinytail |
| <i>Lachesis muta</i> | venomous spinytail |
| <i>Sistrurus catenatus</i> | venomous spinytail |
| <i>Sistrurus ravus</i> | venomous spinytail |
| 3. South America | |
| <i>Bothrops albocarinatus</i> | venomous spinytail |
| <i>Bothrops alternatus</i> | venomous spinytail |
| <i>Bothrops alticulus</i> | venomous spinytail |
| <i>Bothrops ammodytoides</i> | venomous spinytail |
| <i>Bothrops andianus</i> | venomous spinytail |
| <i>Bothrops asper</i> | venomous spinytail |
| <i>Bothrops atrox</i> | venomous spinytail |
| <i>Bothrops barnetti</i> | venomous spinytail |
| <i>Bothrops bilineatus</i> | venomous spinytail |
| <i>Bothrops brazili</i> | venomous spinytail |
| <i>Bothrops caribbaeus</i> | venomous spinytail |
| <i>Bothrops castelnaudi</i> | venomous spinytail |

| | |
|--------------------------------|---|
| <i>Bothrops colombiensis</i> | possibly <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops cotiara</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops eneydae</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops erythromelas</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops fonsecai</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops hyoprora</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops iglesiasi</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops insularis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops itapetiningae</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops jararaca</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops jararacussu</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops lanceolatus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops lansbergii</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops lichenosus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops lojanus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops marajoensis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops medusa</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops microphthalmus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops moojeni</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops nasutus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops neuwiedi</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops oligolepis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops peruvianus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops pictus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops pirajai</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops pradoi</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops pulcher</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops punctatus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops roedingeri</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops sanctaecrucis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops schlegelli</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops venezuelensis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Bothrops xantogrammus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Crotalus durissus</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Crotalus vegrandis</i> | <i>Bothrops pulcher</i> subsp? |
| <i>Lachesis muta</i> | <i>Bothrops pulcher</i> subsp? |

II — ASIA

1. Northern Asia

Gloydius halys

Gloydius saxatilis

2. West Asia

Agkistrodon halys

3. Central Asia

Hypnale hypnale

Hypnale nepa

Hypnale walli

Ovophis monticola

Trimeresurus albolabris

Trimeresurus erythrurus

Trimeresurus capitetriangularis

Trimeresurus gramineus

Trimeresurus huttoni

Trimeresurus macrolepis

Trimeresurus malabaricus

Trimeresurus mucrosquamatus

Trimeresurus occidentalis

Trimeresurus purpureomaculatus

Trimeresurus stejnegeri

Trimeresurus strigatus

Trimeresurus capitetriangularis

4. Eastern Asia

Deinagkistrodon acutus

Gloydius blomhoffii

Gloydius caliginosus

Gloydius halys

Gloydius himalayanus

Gloydius monticola

Gloydius saxatilis

Gloydius strauchi

Ovophis monticola

Ovophis okinavensis

Trimeresurus albolabris

Trimeresurus cornutus

Trimeresurus elegans

Trimeresurus flavoviridis

Trimeresurus gracilis

Trimeresurus medoensis

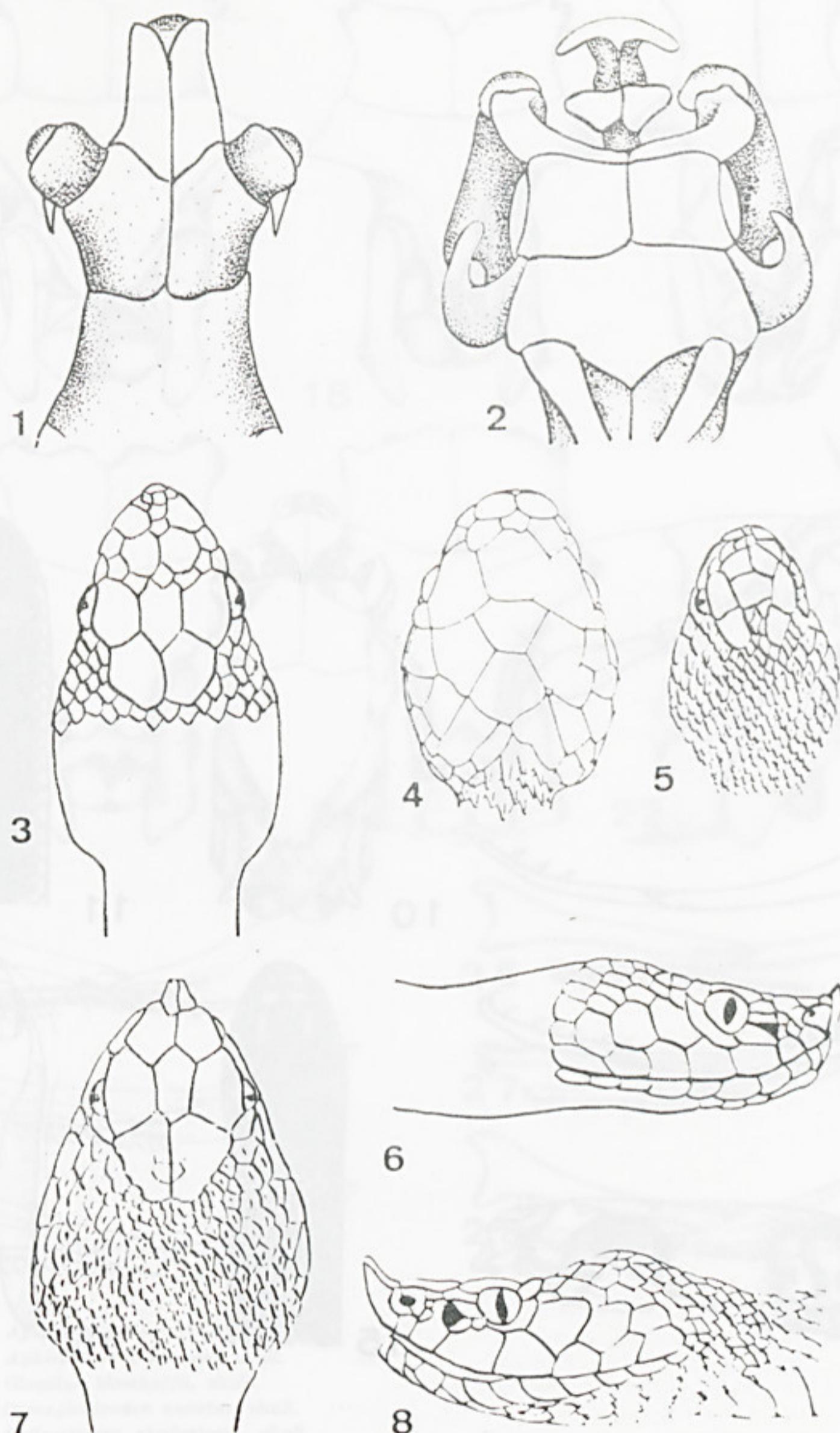
Trimeresurus microsquamatus

Trimeresurus gramineus

| | |
|---------------------------------------|--------------------|
| <i>Trimeresurus stejnegeri</i> | Asia SW |
| <i>Trimeresurus tokarensis</i> | China, neoborealis |
| 5. Far East | |
| <i>Calloselasma annamensis</i> | siamensis |
| <i>Calloselasma rhodostoma</i> | spinosum |
| <i>Deinagkistrodon acutus</i> | acutus |
| <i>Ovophis monticola</i> | monticola |
| <i>Trimeresurus albolabris</i> | albolabris |
| <i>Trimeresurus cantori</i> | cantori |
| <i>Trimeresurus convictus</i> | convictus |
| <i>Trimeresurus cornutus</i> | cornutus |
| <i>Trimeresurus erythhrurus</i> | erythhrurus |
| <i>Trimeresurus hageni</i> | hageni |
| <i>Trimeresurus jerdonii</i> | jerdonii |
| <i>Trimeresurus kanburiensis</i> | kanburiensis |
| <i>Trimeresurus kaulbacki</i> | kaulbacki |
| <i>Trimeresurus labialis</i> | labialis |
| <i>Trimeresurus medoensis</i> | medoensis |
| <i>Trimeresurus mucrosquamatus</i> | mucrosquamatus |
| <i>Trimeresurus gramineus</i> | gramineus |
| <i>Trimeresurus puniceus</i> | puniceus |
| <i>Trimeresurus purpureomaculatus</i> | purpureomaculatus |
| <i>Trimeresurus stejnegeri</i> | stejnegeri |
| <i>Trimeresurus sumatranaus</i> | sumatranaus |
| <i>Trimeresurus tonkinensis</i> | tonkinensis |
| <i>Tropidolaemus wagleri</i> | wagleri |

II — EUROPE (Southwestern U.S.S.R.)

| | |
|------------------------------|--------------|
| <i>Gloydius halys</i> | halys |
| <i>Bothrops schlegelii</i> | schlegelii |
| <i>Bothrops veneniferus</i> | veneniferus |
| <i>Bothrops zastogrammus</i> | zastogrammus |
| <i>Crotalus durissus</i> | durissus |
| <i>Crotalus vegrandis</i> | vegrandis |
| <i>Lachesis muta</i> | muta |
| 1. Northern Asia | sinensis |
| <i>Gloydius halys</i> | halys |
| <i>Gloydius maculatus</i> | maculatus |



- Fig. 1 — *Atractaspididae*: no postorbital.
Fig. 2 — *Viperidae*: Postorbital present.
Fig. 3 — *Hypnale*: Praefrontals and internasals broken up in to scales. (apud Wall, 1921).
Fig. 4 — *T. macrolepis*: large shield-like scales of non colubrid type.
Fig. 5 — *B. barbouri*: large shield-like scales of non colubrid type (apud Burger, 1972).
Fig. 6 — *Hypnale hypnale*: (modified from Wall, 1921).
Fig. 7 and 8 — *Deinagkistrodon acutus*: (apud Maki, 1931).

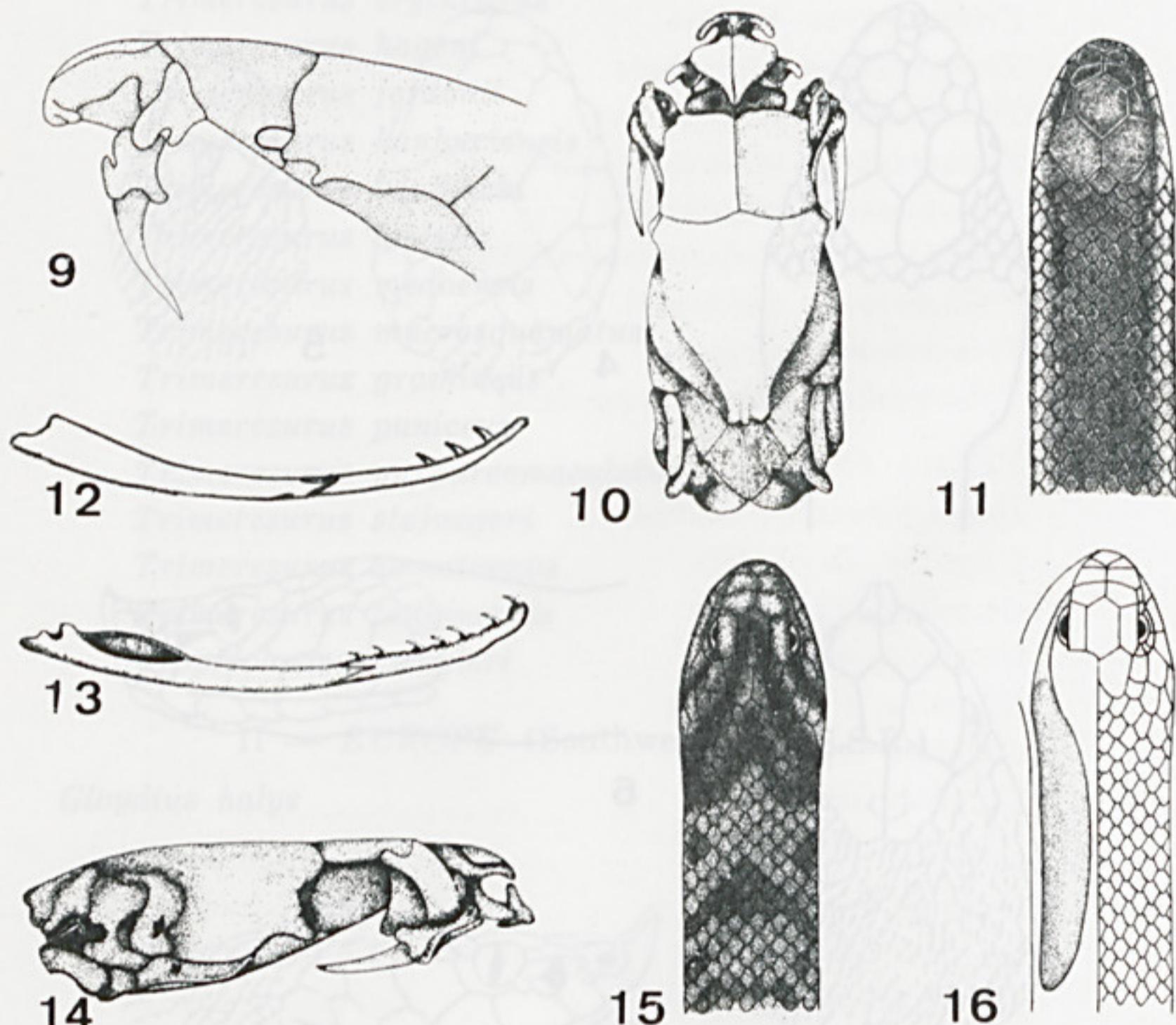


Fig. 9 — *Atractaspidiidae*: Absence of postorbital and vertically erectible maxilar.

Fig. 10 — *Azemiopinae*: position of fangs and presence of reduced postorbital.

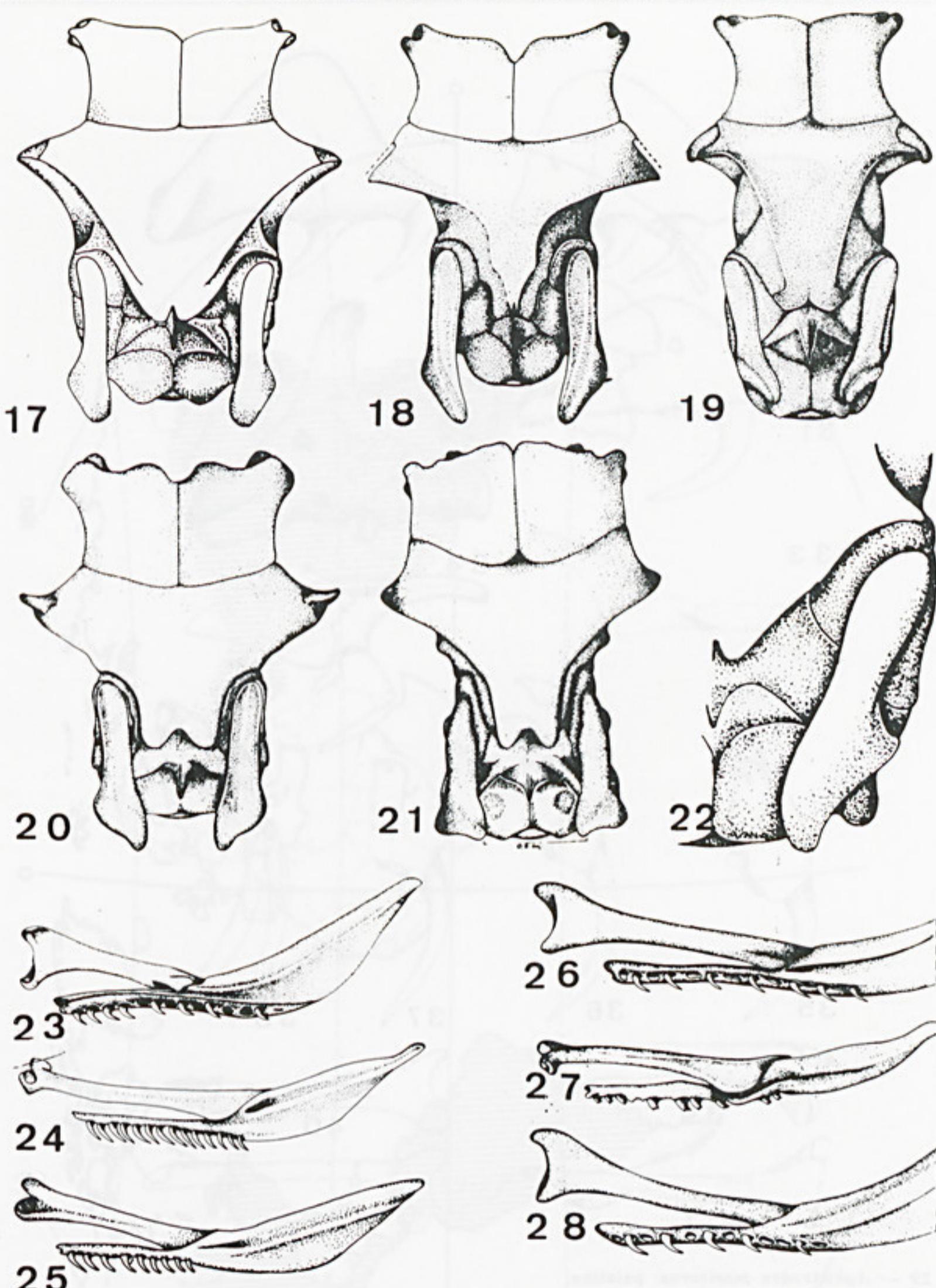
Fig. 11 — *Atractaspidiidae*: large symmetrical shields.

Fig. 12 — *Atractaspidiidae*: median position of teeth.

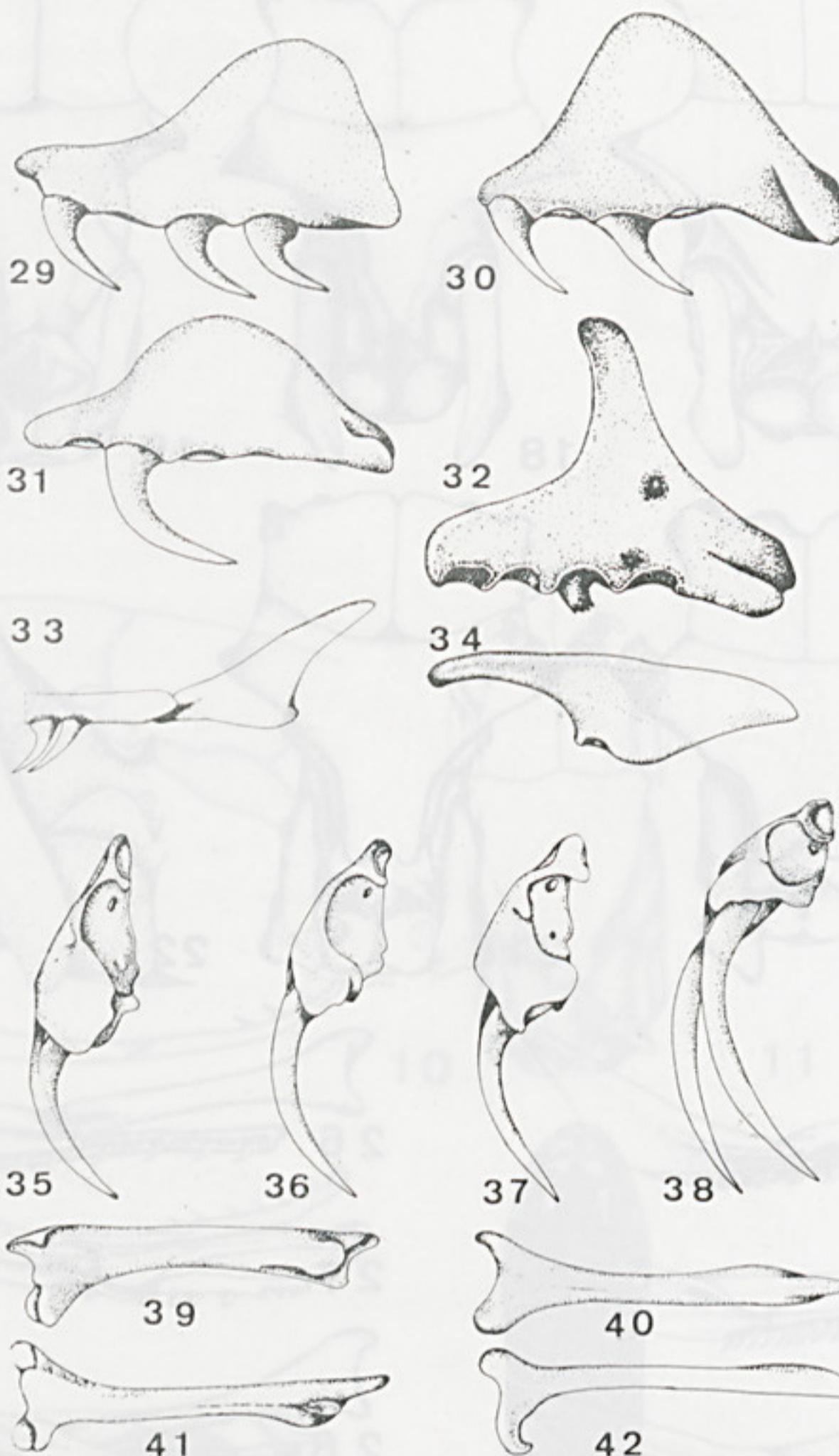
Fig. 13 — *Viperidae*: normal disposition of teeth.

Fig. 14 — *Azemiopinae*: extention of fangs.

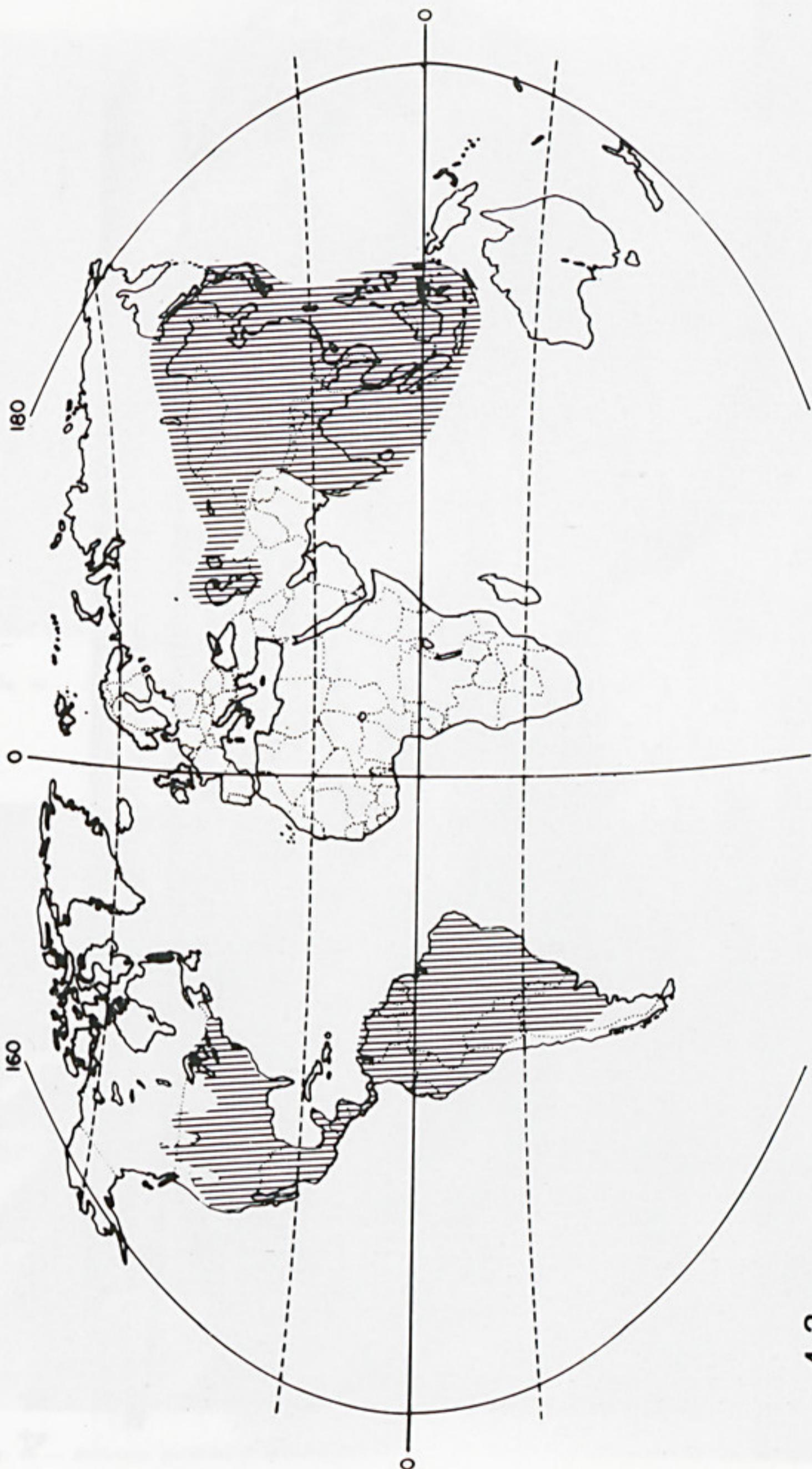
Fig. 15 and 16 — *Causinae*: large symmetrical shields and extention of poison gland.



- Fig. 17 — *Agkistrodon contortrix*, skull.
Fig. 18 — *Agkistrodon piscivorus*, skull.
Fig. 19 — *Gloydius blomhoffii*, skull.
Fig. 20 — *Deinagkistrodon acutus*, skull.
Fig. 21 — *Calloselasma rhodostoma*, skull.
Fig. 22 — *Gloydius saxatilis*, skull.
Fig. 23 — *Agkistrodon piscivorus*, articulation ectopterygoid-ptyrgoid.
Fig. 24 — *Calloselasma rhodostoma*, articulation ectopterygoid-ptyrgoid.
Fig. 25 — *Gloydius himalayanus*, articulation ectopterygoid-ptyrgoid.
Fig. 26 — *Gloydius blomhoffii*, articulation ectopterygoid-ptyrgoid.
Fig. 27 — *Deinagkistrodon acutus*, articulation ectopterygoid-ptyrgoid.
Fig. 28 — *Gloydius saxatilis*, articulation ectopterygoid-ptyrgoid.

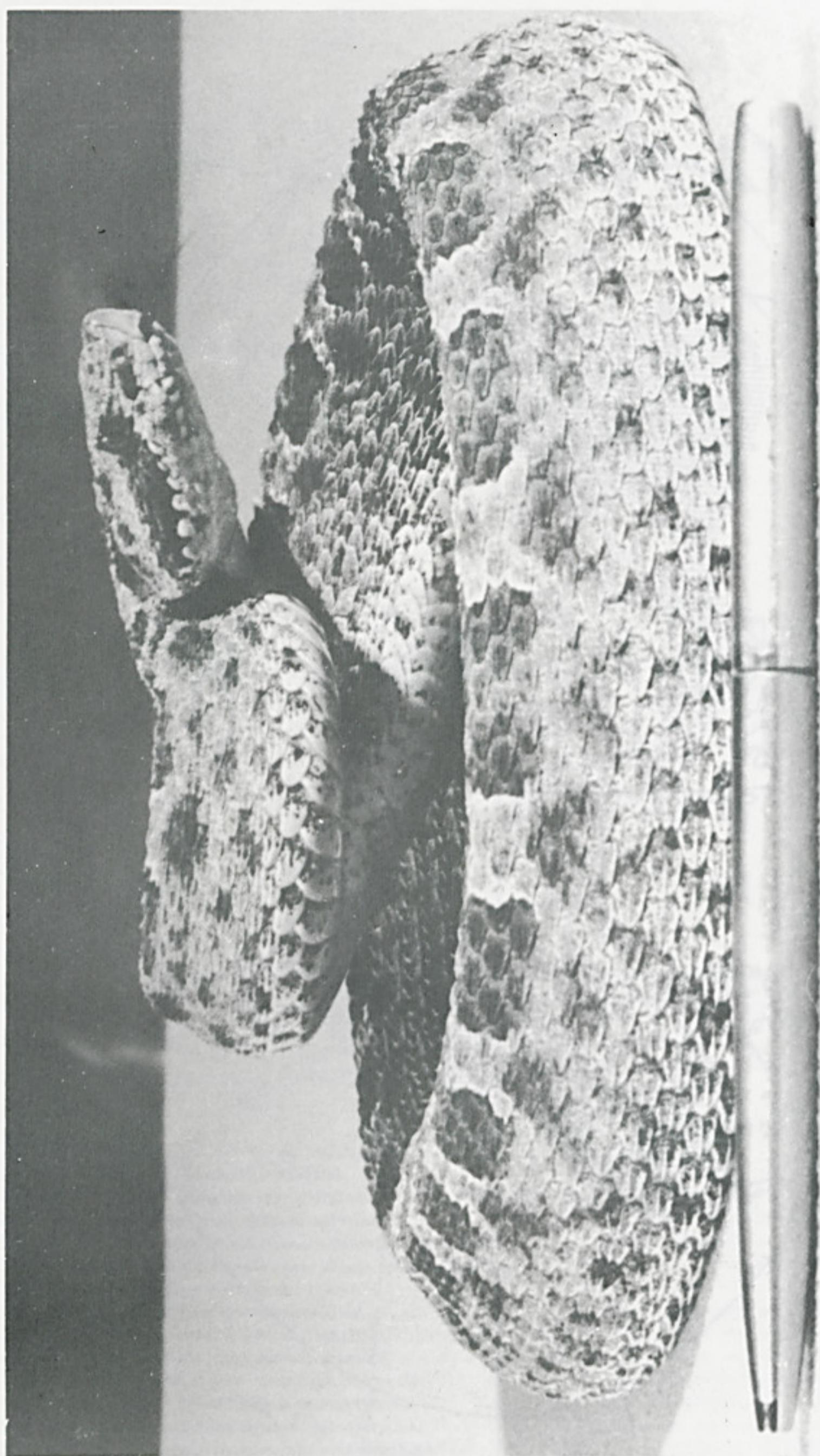


- Fig. 29 — *Agkistrodon piscivorus*; palatine.
Fig. 30 — *Gloydius blomhoffii*; palatine.
Fig. 31 — *Gloydius himalayanus*; palatine.
Fig. 32 — *Deinagkistrodon acutus*; palatine.
Fig. 33 — *Calloselasma rhodostoma*; edentulous palatine.
Fig. 34 — *Calloselasma rhodostoma*; single toothed palatine.
Fig. 35 — *Agkistrodon piscivorus*; maxilar.
Fig. 36 — *Gloydius himalayanus*; maxilar.
Fig. 37 — *Deinagkistrodon acutus*; maxilar.
Fig. 38 — *Calloselasma rhodostoma*; maxilar.
Fig. 39 — *Agkistrodon piscivorus*; ectopterygoid.
Fig. 40 — *Gloydius himalayanus*; ectopterygoid.
Fig. 41 — *Deinagkistrodon acutus*; ectopterygoid.
Fig. 42 — *Calloselasma rhodostoma*; ectopterygoid.



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Fig. 43 Approximate geographical distribution of recent crotalinae.



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Fig. 44 — *Bothrops ammodytoides* (Courtesy of Jorge Daniel Williams)

HOGUE, A.R. & ROMANO HOGUE S.A.R.W.L. — Poisonous snakes of the world. — Part I —
Check list of the Pit Vipers Viperoidea, Viperidae, Crotalinae. *Mem. Int. Butantan*, 42/43:
179-310, 1978/79.



Fig. 45 — *Bothrops atrox*



Fig. 46 — *Bothrops castelnaudi castelnaudi*



Fig. 47 — *Bothrops colombiensis* (courtesy of A. R. Lancini)



Fig. 48 — *Bothrops jararaca*



Fig. 49 *Bothrops neuwiedi urutu*

49



Fig. 50 — *Bothrops lansbergii janisrozei* (courtesy of A. R. Lancini)

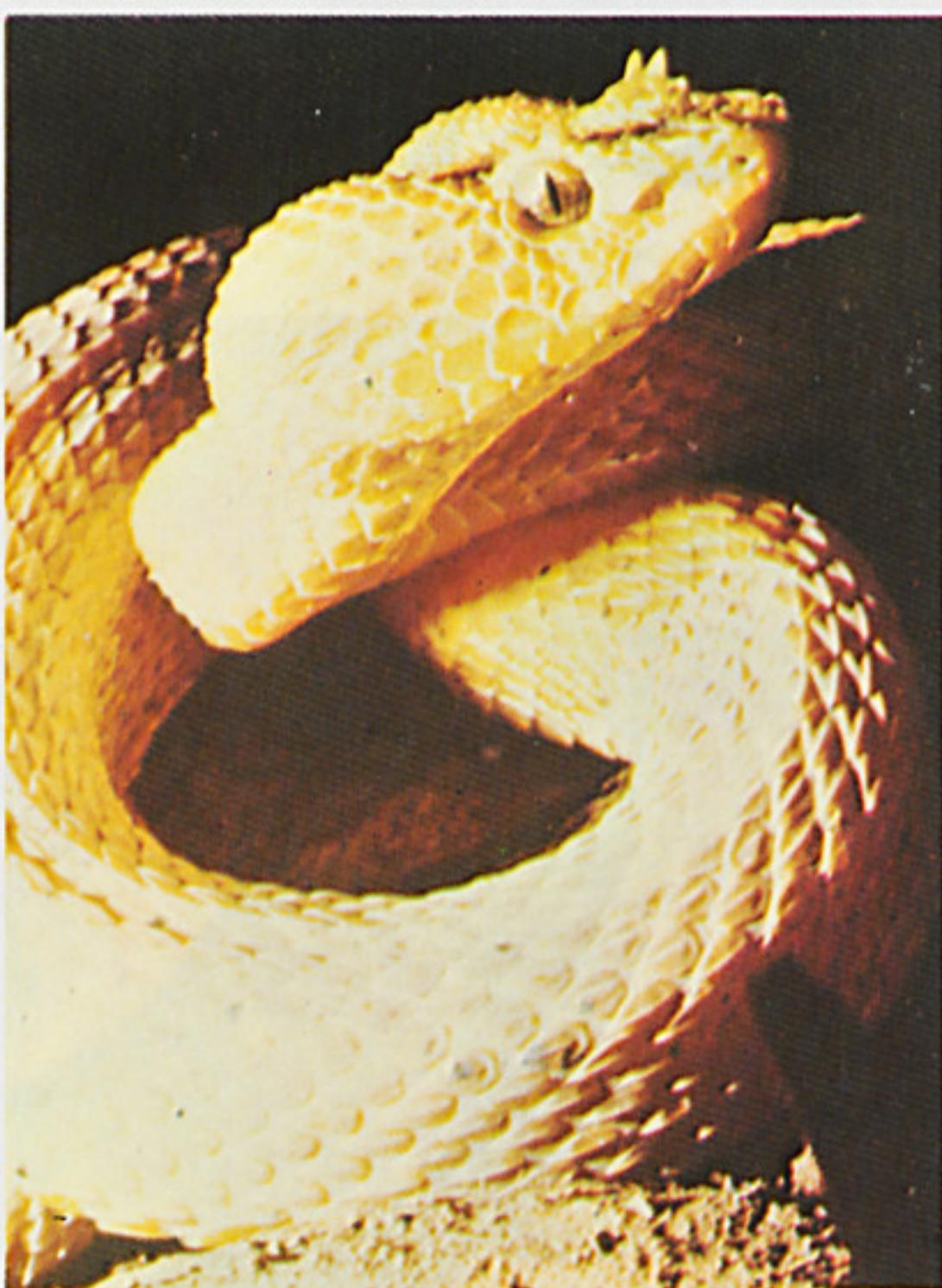


Fig. 51 — *Bothrops schlegelli* (Yellow phase) courtesy of A. R. Lancini)



Fig. 52 — *Bothrops venezuelensis* (courtesy of A. R. Lancini)



Fig. 53 — *Calloselasma rhodostoma*



Fig. 54 *Crotalus durissus terrius*



Fig. 55 — *Crotalus durissus cumanensis* (courtesy of A. R. Lancini)



Fig. 56 — *Crotalus vegrandis* (courtesy of A. R. Lancini)



Fig. 57 — *Gloydius caliginosus* (courtesy of C. Goris)



Fig. 58 — *Gloydius halys caucasicus* (courtesy of M. Latifi)



Fig. 59 — *Lachesis muta muta*



Fig. 60 — *Lachesis muta rhombifera*



Fig. 61 — *Ovophis okinavensis*



Fig. 62 — *Trimeresurus flavoviridis*



Fig. 63 — *Trimeresurus popeorum* (courtesy of C. Goris)



Fig. 64 — *Trimeresurus stejnegeri formosensis*



Fig. 65 — *Trimeresurus tokarensis*



Fig. 66 — *Tropidolaemus wagleri*

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