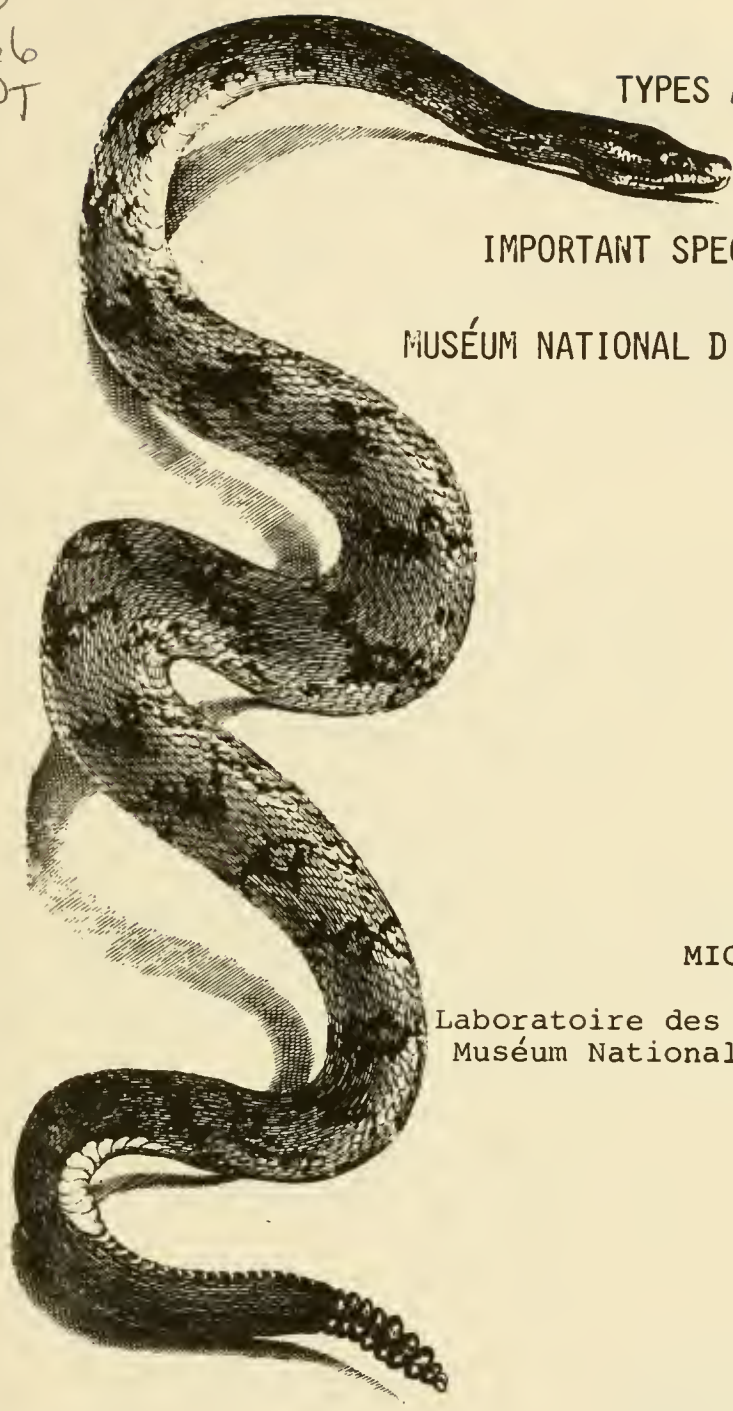


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TYPES AND HISTORICALLY

IMPORTANT SPECIMENS OF RATTLESNAKES
IN THE
MUSÉUM NATIONAL D'HISTOIRE NATURELLE (PARIS)

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The cover illustration is from Lacepede 1788:pl. 18.

INTRODUCTION

According to the classification of Hoge and Romano-Hoge (1981), rattlesnakes, "serpents à sonnettes," are members of the Viperidae Laurenti 1768, which consists of four subfamilies: Viperinae Laurenti 1768, Azemiopinae Liem, Marx and Rabb 1971, Causinae Cope 1860, and Crotalinae Oppel 1871. The Crotalinae is further subdivided into the tribes Agkistrodontini Gray 1825 and Crotalini Gray 1825. One group of Crotalini contains two genera: Sistrurus Garman 1883 and Crotalus Linné 1758; the former represents the primitive rattlesnakes, the latter the derived ones. The evolution of the rattlesnakes has been discussed in several important monographs (e.g., Gloyd, 1940, Klauber, 1956 & 1972, Brattstrom, 1964).

The purpose of this report is to summarize the information uncovered during my search for lost types and taxonomically-nomenclaturally important specimens. The information is presented in two parts. The first part examines the type specimens of nominal species, whether or not the specimen's presence has been confirmed in our collections. The second part examines historical specimens, i.e., those specimens used by A. M. C. Duméril, A. H. A. Duméril, and G. Bibron in their redescription of species named by their predecessors. The types represent eight binominals and one trinominal; the historical specimens were used in eight binominals. In each case, the species are arranged alphabetically. All the specimens discussed herein are stored in alcohol and are housed in the Museum national d'Histoire naturelle, Paris (MNHN).

The information for each species is arranged in the following manner: 1) the author, date of publication, reference (abbreviated) with page of original description and identification of any associated illustrations, occasionally outside text or as a painting on vellum; 2) the current status of the taxon; 3) the catalogue number in the registry of the Laboratoire de Zoologie (Reptiles et Amphibiens); 4) the status of the type; 5) the original citation of the type locality and subsequent restrictions; 6) the name of the collector and/or donor, sometimes with date(s) of collection/donation; 7) the length of the body (TL, from tip of snout to base of the rattle); 8) supplementary comments.

Finally, as much as possible, my purpose is to trace lost types as well as the historically important specimens.

TYPES

Crotalus atricaudatus Latreille In Sonnini et Latreille, 1801, Hist. nat. des Rept., 3:209, 4:323, 402.
 =Crotalus horridus Linnaeus, 1758; fide Collins & Knight, 1980.

No types specimens were located. Type locality, "Caroline"; restricted to "Charleston, South Carolina" by Schmidt (1953:228). Bosc was the collector of the type series. He proposed the name atricaudatus in a manuscript used by Latreille. Most likely, no specimens were sent to Paris (cf. also Daudin, 1803, 5:316 n.i.p.).

Crotalus boiquira Lacepède, 1789, Hist. Nat. Quadr. ovipares et des Serpens. In 4^o, 2:130, 390, pl.18, fig. 1. In 12^o, 4:6, 142, 209, 356, pl.7, fig. 1.
 =Crotalus horridus Linnaeus, 1758, fide Collins & Knight, 1980.

No types specimens were located. One specimen was deposited in the Royal Cabinet. Type locality, "Nouveau Monde," "depuis la terre de Magellan jusqu'au lac Champlain, vers le quarante-cinquième degré de latitude septentrionale," near "de la grande chute d'eau du Niagara," "Caroline." TL 132 cm (this is 4 feet, 10 lines and 4 inches, according to Lacepède (12^o, 4:142)).

Crotalus durissus var. melanurus Garman, 1883, Mem. Mus. Comp. Zool. 3(3):175.
 =Crotalus horridus Linnaeus, 1758; fide Collins & Knight, 1980.

Holotype, MNHN 821. Type locality, "Caroline du Sud." Collector and donor unknown. TL 91.5 cm. The synonymy derives from Pisani et al. (1973). Crotalus durissus var. melanurus Jan, 1859:153 is a nomen nudum, which has no official status according to the International Code of Zoological Nomenclature (1985:285-286). This holotype was received by the Paris museum in exchange from Milan (cf. e.g., Duméril, A.H.A., In Jan, 1858:438-439; Jan, 1858:515; Duméril, A.H.A., 1865:47-50).

Crotalus immaculatus Latreille In Sonnini et Latreille, 1801, Hist. nat. des Rept., 3:201, 4:323, 402.
 =Crotalus durissus terrificus (Laurenti, 1768); fide Klauber, 1972.

No type specimens were located. A specimen was maintained in the galleries of the Muséum d'Histoire naturelle. Daudin

(1803, 5:319) recorded its length as approximately two French ft, thus TL about 65 cm. Latreille incorrectly indicated that the type series derived from "Indes orientales," in his reference to Séba (1735, 2: pl. 95, no. 3 "Vipera Caudisona Ceilanica. Autre vipère à queue sonnante, de Ceylon, 100" and pl. 96, no. 1. "Vipera Orientalis, maxima, Caudisona, Foemina. Vipère à queue sonnante, Orientale, femelle, très grande, 101").

Crotalus jimenezii Dugès, 1877, *Natureleza*, 4:23, pl. h.t. 1, fig. 18-20.
 =Crotalus polystictus (Cope, 1865); fide Hoge and Romano-Hoge, 1981.

Syntype?, MNHN 1883.284. Catalogue locality, "Guanajuato, 200 km à l'Est de Guadalajare [Mexico]." Donor, Dugès (14 December 1888). TL 89.5 cm.

Syntype?, MNHN 1883.288. Catalogue locality, "Guanajuato, 200 km à l'Est de Guadalajare [Mexico]." Donor, Dugès (12 May 1883). TL 32 cm.

The date of publication for this new taxon was determined by Smith (1942:96). The type localities are "Silao [Guanajuato], Colima et Guadalajara," all three in Mexico. Smith and Taylor (1950:334) restricted the type locality to Guadalajara, Jalisco. Smith and Necker (1943:179) stated that Dugès sent ". . . specimens to many specialists in Europe and the United States to aid in the description and elucidation of the Mexican fauna." Smith and Necker (1943:180) reported "Cotypes of . . . Crotalus jimenezii are present in United States Collection, although lacking in the Dugès Muséum" and on a following page (1943:187) "A specimen in the U.S. National Museum (No 46508, from Guanajuato), is said to be a 'duplicate type' of jimenezii. It is a small specimen, presented to Nelson and Goldman by Dugès in 1896. Two other specimens in the Nat. Mus. presented by Dugès (Nos 24448, 26152), may be cotypes. The latter also are from 'Guanajuato.'" Cochran (1961:170) did not mention these latter two specimens, nor did McCranie (1976:180.1).

Crotalus lugubris Jan, 1859, *Plan d'une Iconographie descriptive des Ophidiens*, *Rev. Mag. Zool.*, 22ème sér., (11):153, 156, pl. E. (4ème fig.); off-print:28, 31, pl. E (4ème fig.).
 =Crotalus triseriatus triseriatus (Wagler, 1830); fide Hoge and Romano-Hoge, 1981.

Paralectotype, MNHN 7754. Type locality, "Mexique." Collector and donor unknown. TL 50 cm. The type specimen in the Paris museum was described specifically by Jan in his

table of quantitative data. The heterogeneity of the type series caused Klauber (1940:17) to designate a lectotype of C. lugubris, and he selected No. 1414 deposited in the Milan museum and described by Jan in his table (second column). Klauber later (1972:48) indicated that this specimen (originally from Mexico) had been destroyed.

Crotalus rhombifer Latreille, In Sonnini et Latreille, 1801, Hist. nat. des Rept. 3:197, 4:322, 402.
=Crotalus adamanteus Palisot de Beauvois, 1799; fide McCranie, 1980.

No type specimens were located. Type locality, "Amérique"; restricted to Gainesville, Florida [USA] by Schmidt (1953:230). Specimen(s) were supposedly present in the "Collection des serpens du Muséum d'Histoire naturelle de Paris" (fide Latreille).

Crotalus simus Latreille, In Sonnini et Latreille, 1801, Hist. nat. des Rept. 3:202, 4:323, 402.
=Crotalus durissus durissus (Linnaeus, 1758); fide Hoge and Romano-Hoge, 1981.

No type specimens were located. Type locality, "Ceylan". According to Latreille, "Un individu de cette espèce [est] conservé au Muséum national." According to Daudin (1803, 5:321), the type specimen of Paris was part of the Séba collection.

Crotalus strepitans Daudin, 1803, Hist. Nat. Gén. et Part. des Reptiles 5:318.
=Crotalus durissus terrificus (Laurenti, 1768); fide Klauber, 1972.

No type specimens were found. Type locality, "continent de l'Amérique". TL approx. 65 cm. According to Daudin " . . . l'individu, placé dans la galerie du muséum d'histoire naturelle de Paris, n'a que deux pieds environs de longueur."

HISTORICALLY IMPORTANT SPECIMEN

Crotalus atrox: DB&D, 1854, Erp. Gén. 7(2):1464, 1482.
=Crotalus atrox Baird and Girard, 1853.

MNHN 4034. Locality, Texas, USA. Donated by Trécul (August 1850?). Described also by A.H.A. Duméril (1857:45).

Crotalus confluentes: DB&D, 1854, Erp. Gén. 7(2):1464, 1475. Atlas Erp. Gén. 1854: pl. 84^{bis}, fig. 4. For Crotalus confluentes Say, 1823.
 =Crotalus viridis (Rafinesque, 1818).

MNHN 4035. Locality, Texas, USA. Donated by Trécul (August 1850?). TL 89.5 cm.

MNHN 4036. Locality, Texas, USA. Donated by Trécul (August 1850?). TL 113 cm. Illustrated in Atlas.

Crotalus durissus: DB&D, 1854, Erp. Gén. 7(2):1462, 1465. For Crotalus durissus Linnaeus, 1758.

=Crotalus adamanteus Palisot de Beauvois, 1799.

MNHN 7750. Locality, "Amérique septentrionale" = southern USA. Collected and donated by Bosc. TL 93.5 cm.

=Crotalus durissus Linnaeus, 1758.

MNHN 7752. Locality, Mexico. Collected and donated by Bosc. TL 121.5 cm.

Crotalus durissus: DB&D, 1854, Erp. Gén. 7(2):1465. Atlas, Erp. Gén. 1854: pl. 84^{bis}, fig. 1. Duméril, A.H.A., 1854, Arch. Mus. natn. Hist. nat., Paris 7:283. For Crotalus durissus Linnaeus, 1758.

=Crotalus horridus Linnaeus, 1758.

MNHN 883. Locality, "Amérique septentrionale" = southern USA. Donated by Harpert (February 1842). TL 104 cm. Atlas illustration not reported by Collins and Knight, 1980.

Crotalus durissus: DB&D, 1854, Erp. Gén. 7(2):1465, 1466. Duméril, A.H.A., 1854, Arch. Mus. natn. Hist. nat., Paris 7:282. Duméril, A.H.A., 1861, Arch. Mus. natn. Hist. nat., Paris 10:439. For Crotalus durissus Linnaeus, 1758.

=Crotalus horridus Linnaeus, 1758.

MNHN 3660. Locality, New York (center of Milbert's scientific operations, fide Boitard and Janin, 1842:37). Collected and donated by Milbert. TL 143.5 cm. Vél. 88(4)* drawn by Chazal from the living specimen in 1833. At this time, the tail has seven rattle segments, compared to 13 when deposited in the collection. [* A painting on vellum (tome 88, no. 4) held in the central library/MNHN, Paris.]

Crotalus horridus: DB&D, 1854, Erp. Gén. 7(2):1472. For Crotalus horridus Linnaeus, 1758.
= Crotalus durissus Linnaeus, 1758.

MNHN 3211. Locality, Brazil. Donated by Clossen (March 1844). TL 109 cm.

MNHN 4033. Locality, Ste. Marthe, District de Cundimarcha, about 700 km N Bogota, 11°19'N 76°24'W [Colombia]. Donated by son of Fontanier (July 1853). TL 37.5 cm.

Crotalus Kirtlandii: DB&D, 1854, Erp. Gén. 7(2):1482. Duméril, A.H.A., 1857, Cat. Rept. Coll. M.H.N.P. :45. For Crotalus kirtland Holbrook, 1842.
= Sistrurus catenatus (Rafinesque, 1818).

MNHN 890. Locality, Ohio [USA]. Donated by Hallowell (June 1855). TL 48 cm.

Crotalus miliarius: Duméril, A.H.A., 1857, Cat. Rept. Coll. M.H.N.P. :45.
= Sistrurus miliarius (Linnaeus, 1758).

MNHN 886. Locality, "Amérique septentrionale" = southern USA. Donated by Harlan. TL 35.5 cm. Palmer (1978:220.1) summarized only the AngloSaxon literature, except for two of 51 references cited.

Crotalus rhombifer: DB&D, 1854, Erp. Gén. 7(2):1470. Atlas, Erp. Gén. 1854: pl. 84^{bis}, fig. 3. For Crotalus rhombifer Latreille In Sonnini and Latreille, 1801.
= Crotalus adamanteus Palisot de Beauvois, 1799.

MNHN 882. Locality, United States. TL 138 cm. Atlas figure 3 depicts the dorsal pattern of MNHN 882 but with several modifications to the symmetry of the dorsorostral head scalation. McCranie (1980: 252.1) did not report the existence of this illustration.

Crotalus tergeminus: DB&D, 1854, Erp. Gén. 7(2):1479. Atlas, Erp. Gén., 1854: pl. 84^{bis}, fig. 5. For Crotalus tergeminus Say, 1823.
= Sistrurus catenatus (Rafinesque, 1818).

MNHN 887. Locality, Charlestown, north of Louisville, Indiana [USA]. Donated by Holbrook (January 1846). TL 55.5 cm. This is the specimen illustrated in the Atlas. Minton

(1983:332.1) did not report the existence of this illustration.

MNHN 2074. Locality, Charlestown, north of Louisville, Indiana [USA]. Donated by Holbrook (January 1846). TL 25 cm.

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