

## ***CROTALUS MOLOSSUS*, THE BLACK-TAILED RATTLESNAKE**

By: Pete Strimple, 5310 Sultana Drive, Cincinnati, Ohio 45238, U.S.A.

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### HISTORICAL

The black-tailed rattlesnake of the southwestern United States and the central plateau of Mexico was first described by Baird & Girard in 1853 as *Crotalus molossus*. The type specimen was collected at Fort Webster, Santa Rita del Cobre (Grant County, New Mexico). The specific name '*molossus*' is in reference to the Molossian hound or 'Wolfdog', a famous breed of dog from centuries ago.

Although *Crotalus molossus* had a rather extensive range from central Arizona, east through west-central Texas, and then south through most of Mexico, it was not until 1936 that the first subspecies were recognized and named.

In 1936, Howard K. Gloyd described the first subspecies based on a specimen from Zacatecas, Mexico. He named the subspecies *Crotalus molossus nigrescens*. The name '*nigrescens*' is from the word *nigresco* which means 'to become dark in color,' referring, of course, to the darker coloration of this Mexican subspecies.

In accordance with the rules of nomenclature this automatically established the second and nominate subspecies as *Crotalus molossus molossus* Baird & Girard.

These remained the only two subspecies of *Crotalus molossus* until 1949, when Klauber described *Crotalus molossus estebanensis*, the San Esteban Island rattlesnake.

### HABITAT

*Crotalus molossus* is primarily a mountainous or rock-dwelling form, whose habitats are quite varied and include: rocky outcrops, talus slopes in open woods, rocky streambeds, wooded rocky canyons, chaparral, rocky foothills, forested areas, rock pile slides, and the vicinity of cliffs. Within some of these habitats it can be found around old dwellings and abandoned sawmills, as well as deserted mines.

Black-tailed rattlesnakes can be found at elevations between 600-2750 m, although they tend to be more common at elevations below 2150 m.

### FOOD

The three subspecies of *Crotalus molossus* generally feed upon various mice and rats as well as other small mammals. However, considering their habitat, it is not surprising to find that they will occasionally eat lizards, especially juveniles of the species.

## HABITS

Black-tailed rattlesnakes are active both day and night, but their nocturnal habits are frequently a result of excessive daytime temperatures, especially during the summer months. They are also reportedly active after warm rains.

Overall, black-tailed rattlesnakes are considered to be rather unaggressive, as compared to other members of the genus *Crotalus*. They can, however, inflict a serious bite if provoked to strike.

## BREEDING

*Crotalus molossus* typically breed in the spring (March-May), but there have been reports of breeding as early as the first week or two in February. Females generally give birth to between 3-8 young during the summer or early fall, although a large female could presumably give birth to a larger brood. At birth, the young rattlesnakes average between 23-30 cm in total length.



Foto 1: *Crotalus molossus*, black tailed rattlesnake, Chiricahua Mountains, Arizona, U.S.A. Foto C. Matisson.

## THE SUBSPECIES OF *CROTALUS MOLOSSUS*

*CROTALUS MOLOSSUS MOLOSSUS* Baird & Girard (Northern Black-tailed rattlesnake)

### **Description**

This subspecies usually has a gray, greenish-brown, or yellowish ground color with a series of 22-39 (mean 31.1) dorsal blotches. These blotches are typically gray, grayish-brown, or black in color and have lighter colored centers and margins. The shape is generally rhomboid or a narrow diamond, being wider than they are long. They are commonly open at the sides and join with the lateral blotches, forming crossbands at or before mid-body and continuing posteriorly towards the tail.

The ventral coloration of this subspecies is normally cream or yellowish with brown punctuations.

The head is colored much the same as the ground color, except in the internasal-prefrontal region, which is brownish to black in color. There is also a dark postocular stripe on each side of the head that extends from the eye to above the angle of the jaw.

The tail, which is also darker than the ground color, is usually black. Occasionally, tail rings are evident, especially in younger specimens after they have shed.

### **Scalation**

Specimens of *Crotalus molossus molossus* have 27 scale rows at mid-body, the range being between 25-29. Subcaudal scale counts range between 22-29 (mean 25.4) for males and between 18-25 (21.2) for females.

### **Size**

*Crotalus molossus molossus* is the largest of the three subspecies, attaining a maximum length of 125 cm. Most adults average between 76-106 cm in total length.

### **Range**

This subspecies occupies the northern part of the range of the species *Crotalus molossus*. In the United States it is found throughout most of Arizona, eastward through western, central and southern New Mexico, and into western and central Texas.

In Mexico, *Crotalus molossus molossus* is found throughout most of Sonora, Chihuahua, western Coahuila and southern Nuevo Leon. In the southern part of these states intergrades between *molossus* and *nigrescens* are found. There are also a few records of this subspecies for the following states: northern Sinaloa, northern Zacatecas, and extreme northern Durango. These areas are, however, close to the area of intergradation between the above mentioned subspecies.

*CROTALUS MOLOSSUS ESTEBANENSIS* Klauber (The San Esteban Island rattlesnake)

First described by Klauber in 1949 from a specimen collected on San Esteban Island, Gulf of California, Mexico.

### **Description**

The ground color of this subspecies can be grayish, greenish, or olive-brown. The dorsal pattern consists of a series between 39-43 (40.0) blotches, this exceeds the number in neither of the other two subspecies. These blotches are lighter in color than those found on *Crotalus molossus molossus*, and are olive-gray, olive-brown, or brownish in color. They often have light colored centers and edges as in the previous subspecies.

Ventrally the coloration is creamish with brown punctuations along the outer edges of the ventral scutes, which frequently extend up onto the sides of the body.

The head commonly lacks the darkened internasal-prefrontal area that is so typical in *Crotalus molossus molossus*. The dark postocular stripe, however, is generally present, although it is sometimes rather obscure.

The coloration of the tail is distinctly darker than that of the ground color, and is usually dark brown or black. Even with this dark coloration, tail rings are sometimes apparent and even quite distinct at times.

### **Scalation**

Typically this subspecies has between 25-27 scale-rows at mid-body. Subcaudal scale counts range between 25-27 (25.7) for males, and they average around 22 for females.

### **Size**

*Crotalus molossus estebanensis* is a dwarfed form of the black-tailed rattlesnake, with most adults averaging around 61-76 cm in total length. A male of this species was collected on 6 May 1952, and was only the third specimen of *Crotalus molossus estebanensis* to be collected at that time. This specimen had a total length of 99 cm. I have not been able to find any record of a total length in excess of this, although future collecting may result in finding a larger specimen.

### **Range**

*Crotalus molossus estebanensis* is endemic to San Esteban Island. This is a small island located in the middle of the Gulf of California. It is southwest of Tiburon, which is the second largest island in the Gulf.

San Esteban Island is a rather barren and rocky island, and is approximately 5.6 km in diameter.

## *CROTALUS MOLOSSUS NIGRESCENS* Gloyd (Mexican black-tailed rattlesnake)

First described by Howard K. Gloyd in 1936 from a specimen collected 6.4 km west of La Colorada, Zacatecas, Mexico.

### **Description**

The overall coloration of this subspecies is darker than either the Northern or the San Esteban Island black-tailed rattlesnakes. The ground colour can be olive-brown or brownish-black. Generally, the ground color darkens posteriorly and can become so dark that there is little, if any, color difference between this and the black color of the tail. The dorsal pattern consists of between 20-34 (27.8) blotches, which are somewhat diamond-shaped in appearance. The color of these blotches is usually brownish or reddish-brown, becoming dark brown or black posteriorly. These dark posterior blotches are difficult to see, and frequently the only evidence of them is the light colored scales along their outer edges.

The head color is dark, ranging from olive-brown or red-brown to dark brown or black, with few light colored markings. The dark postocular stripe may be present, but can be rather obscure due to the dark coloration of the head.

Ventrally, the coloration is creamish with gray mottling towards the outer edges, becoming darker posteriorly.

**Scalation**

*Crotalus molossus nigrescens* typically have 25 or fewer scale rows at mid-body with the range being between 23-27. Subcaudal scale counts range between 21-28 (24.3) for males, and 16-24 (19.6) for females.

**Size**

*Crotalus molossus nigrescens* are moderate in size, with adults averaging between 76-101 cm in total length. The largest specimen recorded so far had a total length of 109 cm.

**Range**

The Mexican black-tailed rattlesnake, *Crotalus molossus nigrescens*, is found from southern Chihuahua through the Mexican highlands into northern Oaxaca. This range includes the following states: Sinaloa, Durango, Coahuila, Nuevo Leon, Zacatecas, Aguascalientes, Nayarit, Jalisco, Michoacan, San Luis Potosi, Queretaro, Hidalgo, Mexico, Distrito Federal, Morelos, Puebla, Veracruz and Tlaxcala.

**NOTE**

If anyone has knowledge of documented record lengths exceeding those used in this article, please let me know so that my records can be updated.

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