

POISONOUS SNAKES OF TRINIDAD

By LUDOLF WEHEKIND

When they hear that there are numerous species of snakes in Trinidad, visitors have often asked me, "What are the chances of being bitten by a snake? What danger is there?" When told "Practically none at all!" they appear rather astonished, especially after hearing the tall stories told by local guides and chauffeurs.

For instance, I heard a chauffeur at Lady Chancellor Road, some years ago, pointing to the Caroni Swamp and telling some tourists it was impenetrable owing to the number of venomous snakes found there!

In all my forty years of tramping and hunting in Trinidad, I have encountered very few venomous snakes, despite the fact that on several occasions the main object was to find them. Only once have I been in grave danger of being bitten. This happened while walking through some undergrowth at the head of the Maraval Valley, when I almost put my foot on a coiled Mapepire Z'anana (*Lachesis muta*). Fortunately it was asleep and my backward jump put me well out of the danger zone.

For its small size Trinidad is particularly rich in ophidians, 38 different species having been recorded to date, of which four are dangerously venomous to man. They fall into three well defined groups, based on the manner of their feeding:

1.—**Non-venomous.** This group, comprising the greater number of snakes, simply seize prey in their flexible jaws. Four rows of recurved teeth and the loosely hinged jaw bones move alternately and independently over the victim until it reaches the gullet and is swallowed.

2.—**Constrictors.** Snakes of this group squeeze prey in their coils, killing by asphyxiation before swallowing.

3.—**Venomous.** The true poisonous snakes who kill by injecting venom through poison-bearing fangs.

Scientifically, Trinidad snakes are divided into eight families; i. Typhlopidae; ii. Leptotyphlopidea; iii. Anilidae; iv. Boidae; v. Colubridae Series A. Aglypha—solid teeth, not grooved. vi. Colubridae Series B. Opisthoglypha—rear maxillary teeth grooved. Most of these snakes are slightly poisonous, paralysing their prey.

The Deadly Snakes: vii. Elapidae—the Coral snakes; viii. Orotalidae—the pit vipers.

Of all the Trinidad snakes, only four are dangerously poisonous

to man. They are the two pit vipers, *Lachesis muta*, known locally as the Mapepire Z'anana, or Bushmaster; *Bothrops atrox*, known locally as the Mapepire balcin or Fer-de-lance; and two Coral snakes, *Micrurus circinalis* and *Micrurus lemniscatus diutius*.

The Mapepire Z'anana is the world's largest true viper, growing up to twelve feet, but specimens this size are rare. It is the only New World viper which lays eggs; all others produce live young.

The Mapepire balcin grows slightly over eight feet and can produce sixty to seventy young at a time. At birth each of these is about 12-ins. long and fully provided with poison fangs.

Both snakes have similar habits but the Mapepire Z'anana prefers higher and drier ground than the Mapepire balcin. Both have rough skins with large highly keeled scales arranged in triangular patterns, making them easily identifiable. Viewed from the side, Z'anana has the point of the triangle pointing downward toward the belly, while the balcin has the triangle point pointing upward toward the backbone. Colours range from chocolate brown to salmon brown in the Z'anana and olive-green in the balcin.

The hour-glass or X-shaped saddles of Mapepire balcin down the back are edged with a lighter yellowish green, the belly being yellow. The retractible fangs of adult snakes are $\frac{3}{4}$ in. long and built like a hypodermic needle. The action of the venom is mainly hæmolytic. According to the late Dr. R. L. Ditmars, world authority on snakes, "the effects of the poison are dramatically sinister and rapid, destroying the red blood cells and breaking down the walls of the conveying vessels, which produces great extravasation. The tissue about the wound is practically dissolved by rapid necrosis and gangrene. The effects are, however, efficaciously neutralised by serum produced by several research laboratories in the tropics."

Coral snakes differ in form, coloration and size from vipers. They have smooth, glossy skins with highly coloured bands of white, black and red. Four feet is their greatest length, and they are related to the Old World cobras and mambas. The coral's bite is extremely dangerous, the venom being neurotoxic. On account of its small mouth and non-aggressive habits it is not considered a menace. The coral snake does not strike out as the vipers will, but if stepped on will deliberately bite and retain its hold by a chewing motion of its jaws. This allows the venom of the very short, grooved fangs to take effect.

It is worth knowing that a snake can only strike to a distance two-thirds of its length, and investigations by Dr. Walker Van Riper of Denver Museum of Natural History show that a snake crawls at 4.4 ft. per second, while man walks at 5.8 ft. per second (Animal Kingdom, March-April 1950, p. 53). There is no danger of being "chased" or overtaken by a snake.