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## HEMPRICH'S CORAL SNAKE

*Micrurus hemprichi*

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One of the most distinct of the species of coral snakes, *Micrurus hemprichi* Jan, is also one of the least known, for only nineteen specimens have come to my notice, with very few others on record. The species has long been known from the region of the Guianas but has now been found sparingly in Ecuador and Peru, with a single record from Pará. As in my other papers on coral snakes, beginning with a review of *Micrurus surinamensis* (1952), the stimulus to renewed study comes from the collections made by the late Harvey Bassler and lent to me for study by my colleague, Mr. Charles M. Bogert, of the American Museum of Natural History. My first studies on this species were made as John Simon Guggenheim Fellow in 1932.

### MATERIAL EXAMINED

GUIANAS (no other data): Mus. Comp. Zool. 5477; (arbitrarily allocated) Mus. Comp. Zool. 20173; Basel 5655 (labeled "Central America").

BRITISH GUIANA: Bartica, Univ. Mich. Mus. Zool. 82867; Kamuri Creek, Demerara River, Univ. Mich. Mus. Zool. 80423; Kartabo, Chicago Nat. Hist. Mus. 14840.

DUTCH GUIANA (no other data): Acad. Nat. Sci. Phila. 6798; British Museum "a" and "b"; Munich 27/ 1920.

ECUADOR: Luoula, Rio Upana, Amer. Mus. Nat. Hist. 28816.

PARÁ: Belem, Munich, specimen without number.

PERU: Sta. Teresa, Lower Rio Tigre, Amer. Mus. Nat. Hist. 53182; Puesta Carachame, Lower Rio Tigre, 53199; Alto Caxabatay River, 53793; Iquitos, 52594; Rio Itaya, 55057; Madre de Dios, Univ. Arequipa 171; Pebas, Mus. Comp. Zool. 12423.

### *Micrurus hemprichi* Jan

*General account of the species.*—*Micrurus hemprichi* is sharply distinguished from all other species of *Micrurus* by having an undivided anal plate. No exception is known in *hemprichi*, and I find no record of a single anal as an anomaly in any other species. The

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color pattern affords almost as distinctive a character, for in the pattern of triads of black rings, the black rings are almost equal; the yellow intermediate rings (within the triad) are narrower than the red rings that separate one triad from the next. There is a nuchal red ring, so that the first triad is complete. The head is black nearly to the tips of the parietals, without a light crossband. The type locality given by Jan in the original description is Colombia. His specimen agrees excellently with our series from the Guianas, and as no further specimen from either Colombia or Venezuela has turned up in nearly one hundred years since 1858, it seems plausible to regard the statement of Colombian origin as in error, and to amend the type locality to "Vicinity of Bartica, British Guiana."

In the number of triads the series of specimens available falls into two sharply divided groups, without overlap. The specimens from Dutch and British Guiana have from seven to ten triads, whereas those from the Upper Amazon region of Ecuador and Peru have only five or six triads; the single specimen from Belem has six triads, and I am inclined to think that this specimen may be one transported, either by man or by flotation, from the upper river. The Amazonian form is named for James Orton, an early American zoological explorer of the Andes and the Amazon, whom I have long wished to honor. Cope (1876) reported on the Orton collection, but includes no mention of this distinctive species unless it is *Elaps isozonus* in his list. The synonymy of *Micrurus hemprichi* will then be:

### **Micrurus hemprichi Jan**

*Elaps hemprichii* Jan, 1858, Rev. Mag. Zool., (3), 1: 523—Colombia.

### **Micrurus hemprichi hemprichi Jan**

*Elaps hemprichii* Jan, 1859, Prodr. Icon. Descr. Ophid., p. 12, pl. A; Cope, 1860, Proc. Acad. Nat. Sci. Phila., 12: 72; Jan, 1872, Icon. Gén. Ophid., Livr. 42, pl. 4, fig. 3; Boulenger, 1896, Cat. Snakes Brit. Mus., 3: 421; Lidth de Jeude, 1904, Notes Leyden Mus., 25: 86.

*Micrurus hemprichii* Amaral, 1929, Mem. Inst. Butantan, 4: 230 (part); Parker, 1935, Proc. Zool. Soc. London, 1935: 529 (part).

*Micrurus psyches* Beebe, 1946, Zoologica, 31: 46, pl. 12, figs. 54, 55 (not of Daudin).

### **Micrurus hemprichi ortoni subsp. nov.**

*Micrurus hemprichii* Amaral, 1929, Mem. Inst. Butantan, 4: 230 (part); Boulenger, 1898, Ann. Mus. Stor. Nat. Genova, (2), 19: 131.



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*Type*.—Museum of Comparative Zoology no. 12423, male, collected at Pebas, Peru, December, 1867, by James Orton.

*Description of type*.—A coral snake with cylindrical habitus and short tail, head little wider than body. Head shields of normal *Micrurus* type; a single preocular and two postoculars on each side; temporals 1-1 on each side; upper labials 7, lower labials 7; third

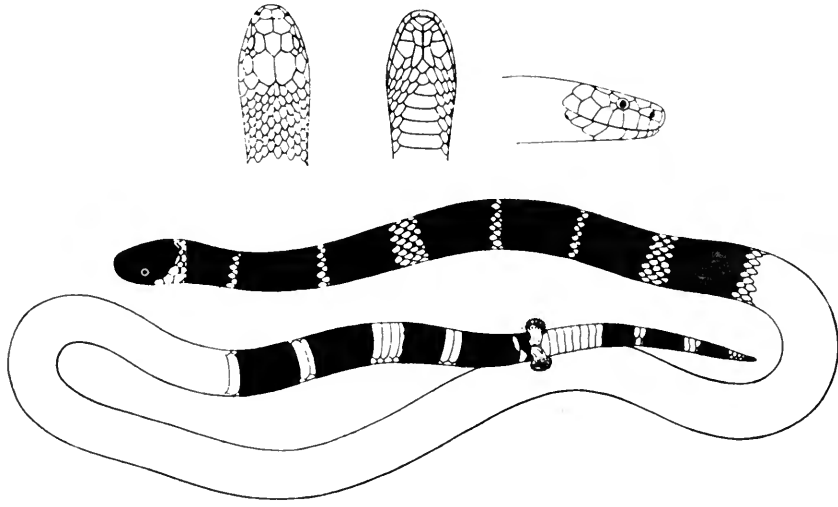


FIG. 31. *Micrurus hemprichi hemprichi*. After Jan, Icon. Gén. Ophid., Livr. 42, pl. 4, fig. 3, from a specimen in the Stuttgart Museum from "Guiana" (not the type).

and fourth upper labials entering eye; third upper labial highest; scale rows on body 15 (from first widened ventral); ventrals 187, anal single, caudals 29, all divided except terminal one.

Head with a black cap from rostral and third labial over the pileus, extending just to borders of parietals; tip of chin black, otherwise light (presumably red) beneath to fourth ventral behind chin-shields; second temporals and two rows of occipital scales black-tipped, as are scales of red zones on body. Black rings on body arranged in triads, the triads separated by red rings narrower above (two to three scale lengths) and widened below to cover seven to eight ventrals; the black rings of each triad subequal; middle triad covering ventrals as follows:

Red	Black	Yellow	Black	Yellow	Black	Red
7	8	1½	9	1½	9	7

Five triads on the body, two-thirds of a triad on the tail.

*Measurements of type.*—Total length 735 mm., tail 63 mm.

*Comparisons.*—The new form has the single anal and broad black rings of *hemprichi* and needs comparison only with the typical subspecies, from which it differs in having a somewhat higher number of ventrals and caudals, and a lower number of triads of black rings.

*Notes on paratypes.*—All of the Peruvian specimens examined and the single specimens from Ecuador and Pará are referred to *ortoni* as paratypes. The variation known for the two subspecies is as follows:

<i>Micrurus hemprichi hemprichi</i> (The Guianas)				
Sex	Number of specimens	Ventrals	Caudals	Triads on body
♂	6	159–184	26–29	7–10
♀	5	174–182	23–28	8–9

<i>Micrurus hemprichi ortoni</i> (Ecuador and Peru)				
Sex	Number of specimens	Ventrals	Caudals	Triads on body
♂	3	184–191	29–30	5–6
♀	6	172–186	24–28	5–6

The single Pará specimen, a female, in the Munich museum, has 174 ventrals, 28 caudals, and 6 triads on the body, thus fitting exactly into the ranges for *ortoni* in these characters. The larger number of black rings in the Guiana form is correlated with narrowness of the rings. The ventrals covered by black, yellow, and red rings in three specimens respectively from Kartabo, British Guiana (C.N.H.M. 14840), Rio Itaya, Iquitos, Peru (A.M.N.H. 55057), and Pará (Munich, no number) are as follows:

	Red	Black	Yellow	Black	Yellow	Black	Red
Kartabo . . . .	3½	4	1	5	1	4	4
Iquitos . . . . .	3	6	1	7	1	6	2
Pará . . . . .	4	7	2	6	2	6	5

In the subspecies *ortoni* the black triads may be consolidated by loss of a red ring into “quinquads.”

*Habits.*—The only note on the food of this species is that of Beebe, who reports a small snake and two small lizards. His “insect remains and a few quartz crystals” most probably represent the stomach contents of some other food animal.

Beebe has noted a female with two elongate eggs, 7 by 25 mm.; there is clearly an evolutionary trend in the coral snake group in the direction of reduced number and elongation of the eggs; *hemprichi* represents one of the extremes in this trend as *surinamensis* does the other.

*Distribution.*—Since *Micrurus hemprichi* has not turned up in the central Amazon basin, its distribution somewhat resembles that

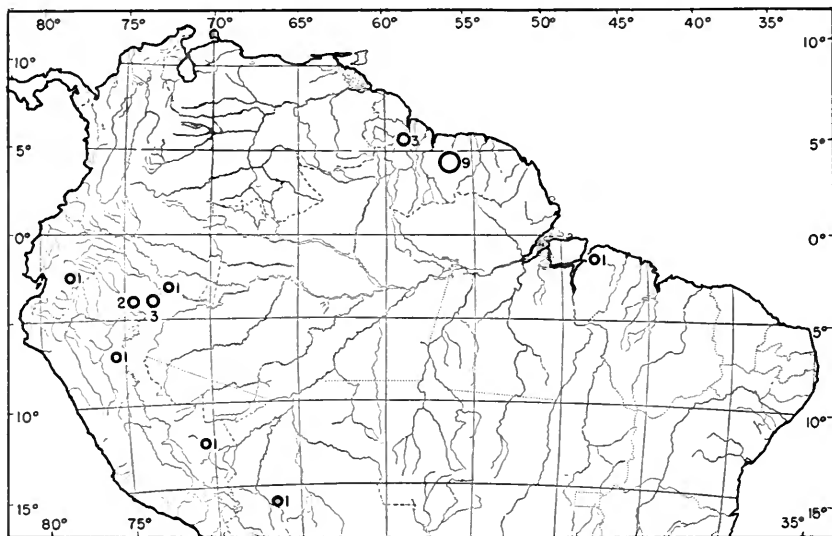


FIG. 32. Known distribution of *Micrurus hemprichi*. The figures give the number of specimens.

of *Micrurus surinamensis*. It is most regrettable that there are no adequate field observations as to the habitat of the several coral snakes that inhabit the same general region. The two subspecies are widely separated geographically, but to name them as distinct species would completely obscure their direct relations.

The single record from Bolivia (Boulenger, 1898) is from "Misiones Mosetenes." This is presumably in the Serrania de Mosetenes, northwest of Sacaba, Department of Cochabamba; the record is a logical extension of the range along the Amazonian slopes of the Andes.

#### REFERENCES

BOULENGER, G. A.

1898. A list of the reptiles and batrachians collected by the late Prof. L. Balzan in Bolivia. *Ann. Mus. Stor. Nat. Genova*, (2), 19: 128-133.

## COPE, E. D.

1876. Report on the reptiles brought by Professor James Orton from the middle and upper Amazon, and western Peru. Jour. Acad. Nat. Sci. Phila., (2), 8: 159-183.

## JAN, GIORGIO

1859. Prodrôme d'une iconographie descriptive des ophidiens et description sommaire de nouvelles espèces de serpents venimeux. Bouchard-Huzard, Paris. 32 pp., 8 pls.

## ORTON, JAMES

1870. The Andes and the Amazon; or, across the continent of South America. Harper and Brothers, New York. xxiv+356 pp., illus., map.

## SCHMIDT, KARL P.

1936. Preliminary account of coral snakes of South America. Field Mus. Nat. Hist., Zool. Ser., 20: 189-203.
1952. The Surinam coral snake, *Micrurus surinamensis*. Fieldiana, Zoology, 34: 25-34.



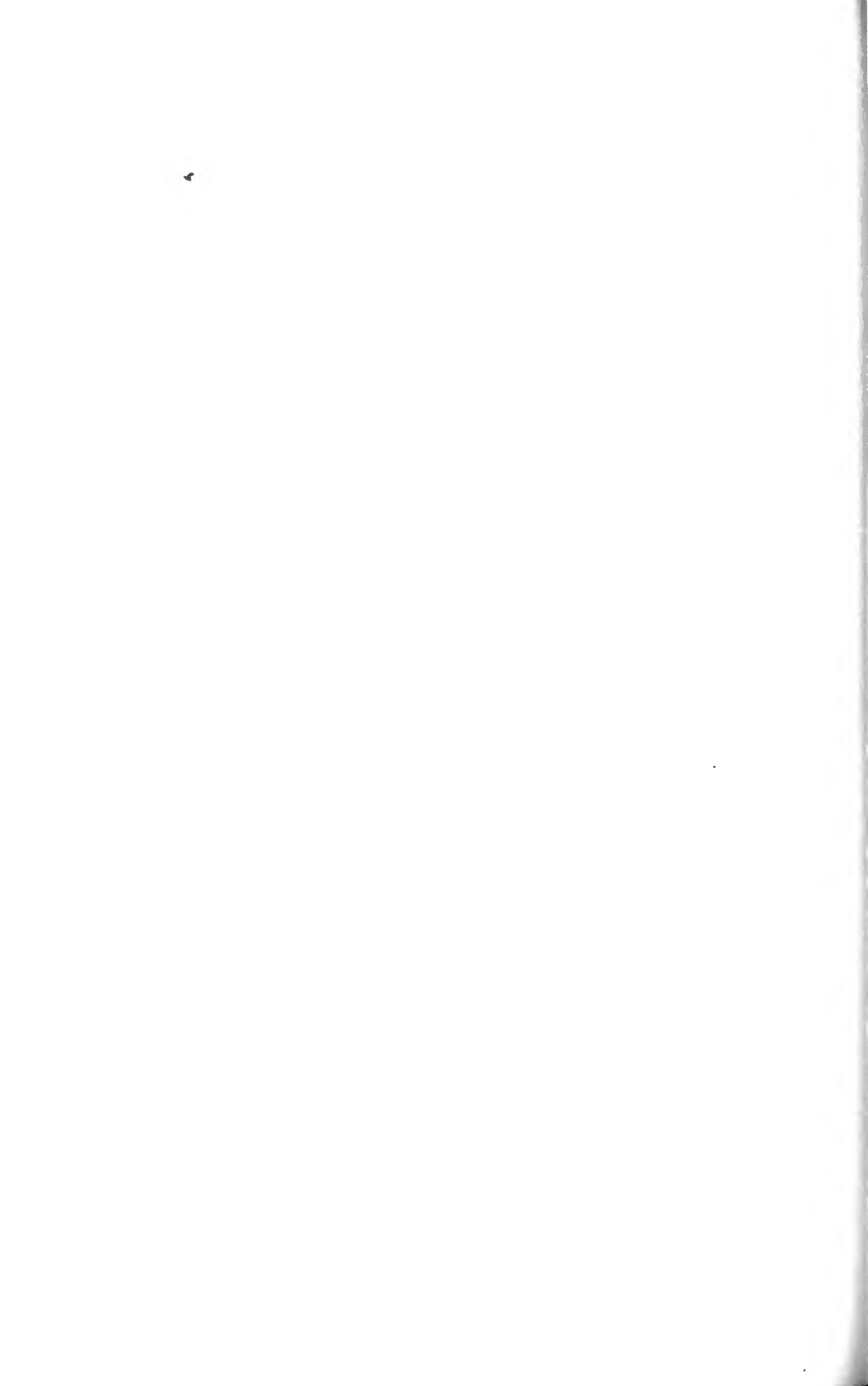
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