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THE STATUS OF THE SNAKE GENUS *RHADINAEA* COPEBY E. R. DUNN¹

RECENT examination of several species of Central American snakes and of one species from the southeastern United States has revealed an identity in generic characters. These may be stated as follows: small; usually striped; normal head shields; maxillary dentition of about 14 teeth, increasing in size posteriorly, followed after a slight gap by one or two enlarged fangs; mandibular teeth subequal; no scale pits; scales smooth; subcaudals in two rows; hemipenis single; sulcus divided; hemipenis with basal portion spiny and distal portion calyculate; calyculate area with free proximal edge (capitate).

The species which agree in these characters are *flavilata*, *decorata*, *pachyura* (*fulviceps* auct.), and *vermiculaticeps* (types A.N. S.P: 3534-5).

The Central American forms are placed by Amaral² in *Liophis* Wagler 1830, type *cobella*.

Liophis cobella differs from these snakes in having no gap in the maxillary dentition, no fangs, bifurcate hemipenis without calyculate area at tip but with apical disk.

The species from the United States, *flavilata*, is listed in the *Check List* as a *Leimadophis* (Fitzinger 1843, type *almadensis*),

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² *Mem. Inst. Butantan*, IV, 18, 1929: 170 ff

but this species has two scale pits, and the hemipenis is identical with that just described for *Liophis cobella*.

Therefore the four species examined belong neither to *Liophis* nor to *Leimadophis*. The Panamanian special *vermiculaticeps* is the type of *Rhadinaea* Cope³ by original designation, and this name should be used for these four species. They have several Central American allies which probably belong with them in *Rhadinaea*. Of these I can name *calligaster*, *godmani*, *kinkelini*, *pulveriventris*, and *serperastra*, as known to me, and probably the Mexican *clavata*, *lachrymans*, *laureata*, and *vittata* also belong here. In short, *all* the Central American species listed as *Liophis* by Amaral in the paper referred to probably belong to *Rhadinaea*, for all those I have seen, or noted in the literature, resemble each other very considerably in external characters.

The species of *Coniophanes*, of similar distribution, repeat all the generic characters of *Rhadinaea*, differing only in the presence of a groove on the maxillary fangs. They are larger snakes, and perhaps the two genera should eventually be merged.

The present article, together with one recently published,⁴ splits the *Leimadophis* and *Liophis* of Amaral (*l.c.*) into five genera, whose characters may be summarized as follows:

- A. Maxillary dentition with gap and enlarged fangs.
- B. Hemipenis single, calyculate at tip. No scale pits.....*Rhadinaea*
- BB. Hemipenis bifurcate, calyculate at tip.
 - C. One scale pit*Dromicus*
 - CC. Two scale pits*Alsophis*
- BBB. Hemipenis bifurcate, no calyces, an apical disk, two scale pits*Leimadophis*
- AA. Maxillary dentition without gap or fangs; hemipenis as in *Leimadophis*; no scale pits*Liophis*

In this arrangement *Dromicus* and *Alsophis* occupy a central position. I am inclined to believe that this indicates an ancestral or primitive status, which may be borne out by their peripheral geographic range (the West Indies, the west coast of South America, the Galapagos). From such a stock *Rhadinaea* might be derived, and an opisthoglyph descendant, *Coniophanes*. In another direction, one might derive *Leimadophis* from the same stock (with *Liophis* as a more modified descendant), and also others of the South American genera of Xenodontine snakes.

³ *Proc. Acad. Nat. Sci. Philad.*, 12, 1860: 249.

⁴ *Copeia*, 2, 1932: 89-92.