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AN ANNOTATED LIST OF THE FORMS OF THE
GENUS *PITUOPHIS*

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IN the spring of 1929 the writer completed a revision of the genus *Pituophis* as a doctorate thesis, under the direction of Dr. Alexander G. Ruthven, in the Museum of Zoology, University of Michigan. Since the publication of this work has been delayed it seems advisable to present the taxonomic changes included therein in a preliminary list of the recognized forms.

Six species and thirteen subspecies are included in the genus. Three of these, *Pituophis deppei deppei*, *P. deppei jani*, and *P. lineaticollis*, form a natural group characterized by the presence of two prefrontals, a broad low rostral, and the entrance of two supralabials into the orbit on either side. The remaining forms all have four prefrontals and a single supralabial entering the eye on either side, but differ widely in the shape of the rostral plate.

The following names are recognized:

DEPPEI GROUP

Pituophis deppei deppei (Duméril and Bibron)

Type locality.—Mexico.

Range.—*P. deppei* is known to occur from Tehuantepec, in the southern part of Oaxaca, Mexico, north to Real de Piños, California, and to San Marcos, Hay's County, Texas, on the east. The most western locality reported in Mexico is "Gulf of Cali-

fornia," while the most eastern is "San José Acateno, Vera Cruz."

Although the name *pleurostictus* has priority over the name *deppei* by page precedence, the descriptions of both appearing within a few pages of each other in Duméril and Bibron,¹ the latter has been most generally used. Since it was accepted by Günther:² "I select the term *deppei* for this species in preference to *pleurostictus*, because the locality for the latter has been erroneously given as 'Monte Video,' the difficulty of recognizing the species having thus been unduly increased," it must be retained.

Pituophis deppei jani (Cope)

Type locality.—Buena Vista, Mexico.

Range.—The only localities from which specimens are known are Buena Vista (probably in Coahuila), Mexico, and Miquihauana, Tamaulipas, Mexico.

This snake, described as *Arizona jani* by Cope,³ has never been recognized. The type specimen, U.S.N.M. 1522, lacks the central part of the body, but it unmistakably agrees in pattern with specimens from Miquihauana, Tamaulipas, Mexico. The latter are not only quite distinct from typical *deppei* in the number of spots and the length of the interspaces between them, but also show marked average differences in the number of ventrals and the proportionate tail length. Cope's *jani* is therefore retained as a subspecies of *deppei*.

Pituophis lineaticollis (Cope)

Type locality.—Mexico.

Range.—Only two specimens with definite locality records have been examined. These are from Acahuizotla and Omiltema, Guerrero, Mexico. The range was given by Cope⁴ and Günther⁵ as "Southern Mexican plateau."

SAYI GROUP

Pituophis melanoleucus melanoleucus (Daudin)

Type locality.—Florida and South Carolina.

Range.—The recorded range of this form extends from Charles-

¹ *Erpetologie Générale*, 1854: 244, 268.

² *Biologia Centrali-Americana*, VII, 1885-1902: 124.

³ *Proc. Acad. Nat. Sci. Philad.*, 1860: 369.

⁴ *Bull. U. S. Nat. Mus.*, 32, 1887: 72.

⁵ *Loc. cit.*: 124.

ton, South Carolina, north to Rockland County, New York, and west to Murphy (near Knoxville), Tennessee.

Pituophis melanoleucus mugitus (Barbour)

Type locality.—Ten miles north of West Palm Beach, Florida.

Range.—The known range extends from the type locality, on the eastern coast of southern Florida, north to Jacksonville in the northeastern, and to Pensacola in the extreme northwestern part of Florida.

Pituophis melanoleucus ruthveni (Stull)

Type locality.—Longleaf, Rapides County, Louisiana.

Range.—The only range known is the type locality.

Pituophis melanoleucus lodingi (Blanchard)

Type locality.—Mobile County, Alabama.

Range.—All of the known specimens of this form have been collected in Mobile County, Alabama.

This is considered a subspecies rather than a full species because of its obviously close relationship to the other subspecies of *melanoleucus*, especially *ruthveni* (from which it is apparently derived), and because of its geographical position. No intermediates between *lodingi* and *ruthveni* are known. It seems permissible to postulate their existence, in consideration of the few known specimens of each form and the limited areas they represent.

Pituophis vertebralis (de Blainville)

Type locality.—“California.”

Range.—Throughout Lower California, as far north in California as Jim Grey, San Bernardino County. It occurs also on the outlying islands of Cerros, Margarita, and Magdalena.

Pituophis sayi sayi (Schlegel)

Type locality.—Missouri.

Range.—Throughout the Great Plains region. It occurs from the northern part of Mexico north to Door County, Wisconsin,

in the east, to Medicine Hat, Alberta, Canada, in the west, and ranges from the Rocky Mountains to western Indiana.

Pituophis sayi affinis (Hallowell)

Type locality.—New Mexico.

Range.—South to Batopilas, Chihuahua, Mexico, and north to Pagosa, Colorado. It ranges throughout Arizona, east in New Mexico to Otero and Gaudelupe counties, west in California to Silsbee, Imperial County, and south in Lower California to the Colorado Desert.

Recognition has never been given to the name *affinis*, which was proposed by Hallowell⁶ for New Mexican specimens. It must be retained as the earliest name, however, since both the description and the type locality identify Hallowell's specimens with this form.

The name *P. catenifer rutilus*, proposed by Van Denburgh⁷ for the Arizona gopher snakes, is a synonym of *affinis*, since no character could be found to distinguish Arizonan from New Mexican specimens in the series I examined, which included Van Denburgh's material.

Since *P. affinis* intergrades with *P. sayi sayi* in northern Mexico, where the two forms can be distinguished only with difficulty, while it is quite distinct from all subspecies of *catenifer* throughout its range, it is considered a subspecies of *sayi* rather than of *catenifer*. Furthermore, *affinis* is obviously much closer to *sayi* in scale and pattern characters than to any subspecies of *catenifer*.

Pituophis catenifer catenifer (de Blainville)

Type locality.—California.

Range.—From San Diego County, California, to southern British Columbia. It occurs also on Santa Cruz Island, off the coast of California. In California it has been found as far east as Kernville, Kern County, in the southern part of the range, as Eldorado and Placer counties farther north, and as the Warner Mountains in the most northeastern part of Modoc County. In Oregon it has been taken as far east as Summer Lake, Lake County, in the southern part, and as Heppner, Morrow County, in the northern part. In Washington it ranges west and north of the Columbia River.

⁶ *Proc. Acad. Nat. Sci. Philad.*, 1855: 181.

⁷ *Proc. Calif. Acad. Sci.*, (4) III, 1920: 24.

In the original description of *heermanni*⁸ no character is listed which distinguishes it from typical *catenifer*. The name was revived by Van Denburgh⁹ to apply to specimens from the Klamath region of Oregon and from northeastern California. The only distinguishing character mentioned by Van Denburgh is the lower average number of dorsal spots. The ranges of variation in the two forms as given by Van Denburgh overlap widely, and the difference in the averages for the two groups of specimens is well within the possible range of geographic variation within a single subspecies and should undoubtedly be accepted as such. So *heermanni* must again be considered a synonym of *catenifer catenifer*.

Pituophis catenifer deserticola (Stejneger)

Type locality.—Beaverdam Mountains, Utah.

Range.—From the eastern desert regions of California, throughout the states of Utah and Nevada, to western Colorado, and north to Idaho and the eastern parts of Oregon and Washington.

The name *P. catenifer stejnegeri* was given by Van Denburgh¹⁰ to the Utah specimens of *P. c. deserticola*. According to Van Denburgh, the sum of the scale rows and of preoculars on both sides of the head rarely exceeds 33 in *stejnegeri* and usually exceeds 33 in *deserticola*. The examination of a larger series of specimens has shown this character to be invalid, and no other distinguishing character could be found. Therefore, *stejnegeri* must be considered a synonym of *deserticola*.

Pituophis catenifer annectens (Baird and Girard)

Type locality.—San Diego, California.

Range.—From the southernmost tip of Lower California north to Santa Cruz and Contra Costa counties in the coastal strip, and the Mojave Desert farther inland, and including San Martin and South Coronado islands, Lower California, and Catalina Island, California.

⁸ Hallowell, *loc. cit.*: 236.

⁹ *Loc. cit.*: 4, 12, 16.

¹⁰ *Loc. cit.*: 21.

