

## A NEW SPECIES OF AMNICOLID SNAIL FROM CHIHUAHUA, MEXICO

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The desert region in the northern part of the Mexican states of Chihuahua and Sonora south of New Mexico and Arizona in the United States has a small number of forms of the Amnicolidae living in isolated springs and temporary pond habitats. Undoubtedly these very small snails represent part of a relict aquatic fauna formerly more extensive and populous (see Pilsbry 1895, 1928, 1935; Pilsbry and Ferriss 1906, 1909; Smith 1953).

Discussion of the region where the present new species was discovered and circumstances of its collection has been given previously (Drake 1953). Drs. Harald A. Rehder and Joseph P. E. Morrison of the U. S. National Museum, Dr. Leo G. Hertlein and Mr. Allyn G. Smith of the California Academy of Sciences, and Dr. Wendell O. Gregg of Los Angeles, California, were very helpful to study of the undescribed form which is named in honor of an advisor and associate of nineteen years. Mrs. Margaret M. Hanna kindly made the drawing of the holotype.

### *Lyrodes hertleini*, new species

(Plate 15)

DIAGNOSIS: An amnicolid species that seems most nearly related conchologically to those forms described as *Paludestrina diaboli* Pilsbry and Ferriss (1906: 170, fig. 36) from New Mexico Pleistocene or Recent alluvium and *Potamopyrgus cheatumi* Pilsbry (1935: 91, fig. 4) living in Texas. *Cheatumi* has  $5\frac{1}{2}$  whorls and is near 1.75 mm. high and *diaboli* has  $4\frac{1}{2}$  whorls and is smaller than *L. hertleini* being around 1.30 mm. high. The  $4\frac{3}{4}$  whorls of *hertleini* are not as convex as those of *diaboli*. Another amnicolid living in 1949 with *Lyrodes hertleini* at the type locality, *Amnicola brandi* Drake (1953), is far more globose and has nearly one whorl less than *hertleini*.

HOLOTYPE: Length, 2.48 mm.; major diameter, 1.96 mm.; height of aperture, 1.02 mm.; width of aperture, 0.83 mm. Aperture ovate, slightly rimmed, a bit oblique, contained in the



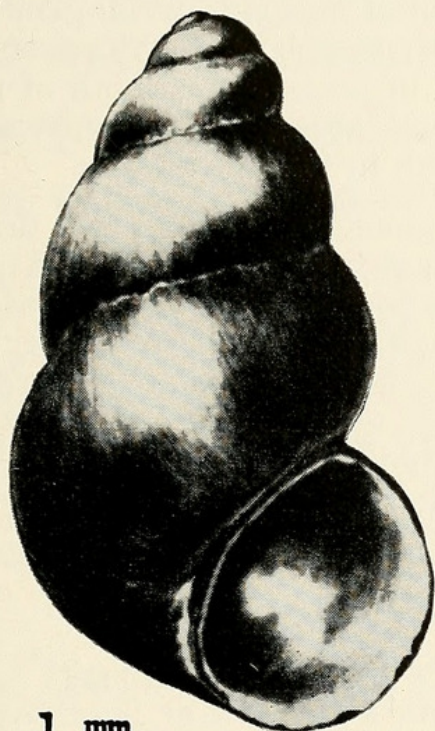


PLATE 15

*Lyrodes hertleini* Drake Holotype

total shell about  $2\frac{1}{2}$  times for height and less than half for width, generally adnate. Color, yellowish chalky-white with an olive stain. Protoconch slightly eroded, almost flat, not depressed. Whorls,  $4\frac{3}{4}$ , quite convex, deep suture, no sculpture other than faint growth lines; body whorl projects at bottom and on the right when viewed from the front. Umbilicus narrow, barely visible through chink in callus. Columella slender, has no processes. Shell shape: not acutely pointed, not globose, not slender. No. 9982 in the Department of Paleontology Type Collection, California Academy of Sciences (Golden Gate Park, San Francisco, California). Type material collected by Dr. C. Clayton Hoff and R. J. Drake, 15 April 1949, from springs at Las Palomas, Chihuahua, Mexico.

PARATYPES: California Academy of Sciences Department of Paleontology Type Collection, Nos. 9983-9987; British Museum (Natural History), Nos. 1955.9.22.10-13; U. S. National Museum Division of Mollusks, No. 600498; Chicago Natural History Museum, No. 53877; Museum of Comparative Zoölogy, No. 186777; San Diego Museum of Natural History, No. 13218; University of California Museum of Paleontology, Nos. 34813a-d; University of Arizona Invertebrate Museum, No. 101; Wendell O. Gregg Collection, No. 7218.



NOTES: Placement of *hertleini* in the genus followed the helpful suggestion of Dr. Joseph P. E. Morrison who examined reproductive anatomy in preserved animals of paratypes deposited in the U. S. National Museum. The operculum was not later available for inclusion in the description.

Still another amnicolid, of which two dead shells were collected by Maj. Mearns in 1892 (Drake 1953: 26) from the general area of the type localities of *L. hertleini* and *A. brandi*, and described as *Bythinella palomasensis* Pilsbry (1895: 68-69) perhaps may be either a *Durangonella* or a *Lyrodes*—as to be determined sometime by malacological investigation and if fresh specimens are eventually available.

Malacological comparison of *Potamopyrgus* Stimpson and *Lyrodes* Doering after examination of dried-in animals was given by Morrison (1939).

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