



**OCCASIONAL PAPERS**  
OF THE  
**CALIFORNIA ACADEMY OF SCIENCES**

No. 28, pp. 3, 3 figures

November 1, 1960

---

**A NEW SPECIES OF MEGOMPHIX**  
**FROM CALIFORNIA**

By

**Allyn G. Smith**

*Research Malacologist*  
*California Academy of Sciences*

The California speleologist Raymond deSaussure has submitted a fairly large series of a land snail from a cave in Trinity County, California that proves to be an interesting find. Not only does it indicate a new genus record from the State, but the species also is undescribed.

**Megomphix californicus** A. G. Smith, new species.

(Figures 1-3)

**HOLOTYPE.** A dead but well-preserved shell with five and one-half closely-coiled whorls, of thin, transparent texture, covered with an exceedingly thin periostracum having a greenish-yellow tinge. Spire planulate, the last whorl descending beginning with its final quarter turn. Nuclear whorls one and three-quarters, somewhat shining, smooth and without sculptural characters even under high magnification. Postnuclear whorls relatively smooth, not shining, marked by fine growth-lines that are sinuate across the whorls. Under fairly high magnification these are seen to be crossed by subobsolete and hardly noticeable spiral depressions or grooves that are widely spaced, breaking up the growth-lines into thin elongated granulations. This sculptural character is apparent principally on the last whorl. Lip simple, thin and sharp. Aperture subovate, its plane at a small angle from the axis of the shell. Inside the aperture the parietal wall is not callused

but sculptured with fine, closely spaced spiral striations that terminate abruptly in the plane of the aperture. Umbilicus broad, deep, and vortex-shaped, contained about three and one-half times in the major diameter of the shell. Dimensions: major diameter, 13.8mm.; minimum diameter, 11.5mm.; height in front of aperture, 4.5mm.; height including aperture, 5.8mm.

**TYPE LOCALITY.** Natural Bridge Cave, Trinity County, California, the type lot consisting of 28 shells in various growth stages, collected August 23, 1958, by Raymond deSaussure on the dirt floor in a remote section of the cave in an area of total darkness.

**DISPOSITION OF SPECIMENS.** Holotype No. 12413 and paratype Nos. 12414-12419, incl., Paleo. Type Coll., California Academy of Sciences.

**REMARKS.** Dimensions of the holotype and 18 paratypes in the epehic stage yield the following data:

	Max. Diam.	Height	H/D Ratio	N. Whorls
Largest shell	14.8 mm.	6.9 mm.	0.47	5-5/8
Smallest shell	10.3 "	4.7 "	0.47	4-7/8
Tallest shell	14.1 "	7.0 "	0.5	5-1/8
Average of 19	12.9 "	6.05 "	0.47	5-3/8

The ratio between the minimum diameter and maximum diameter averages 0.82 and is quite as constant as is the ratio between the height and maximum diameter (H/D).

This interesting species of *Megomphix* is most closely related to *M. lutarius* H. B. Baker from Weston, Oregon, but differs from the latter species mainly in its larger size, somewhat wider umbilicus, and the depressed final quarter turn of the body whorl. Compared to *M. hembilli* (W.G. Binney) it is smaller in size but without the shining surface of the former species, has evidences of spiral sculpture on the body whorl, and a wider and more funnel-shaped umbilicus. In most specimens of *M. californicus* the spire is nearly flat although in one or two shells it is slightly raised. Most of the shells collected have long since been dead and are covered with a thin layer of cave deposit. Several younger specimens, however, are quite fresh and one or two evidently were collected alive.

What is undoubtedly this same species of *Megomphix* has been available for some time, consisting of a single adult specimen collected by E. P. Chace on September 30, 1937, and a living adult and two juvenile shells collected by the writer on June 1, 1941 (AGS No. 7908), both lots from Shasta Springs, Shasta County, California. The writer's adult shell has 5-1/2 whorls with a maximum diameter of 13.9 and a height of 6.3 mm.; the H/D ratio is 0.45. The only notable differences between these other specimens and the holotype of *M. californicus* is the somewhat less descending

body whorl and the fact that the spiral sculpture on this whorl is only vaguely suggested. These differences are minor. They may be well within the limits of variation in the species due to age, availability of proper food, or other environmental conditions. The Shasta Springs specimens have not been designated as paratypes because of the locality difference.

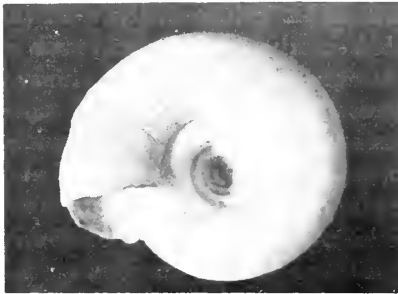
The genus *Megomphix* is reviewed thoroughly by Pilsbry in his Monograph on the Land Mollusca of North America (Acad. Nat. Sci. Philadelphia, mon. no. 3, vol. II, pt. 1, pp. 506-512). Little can be added to this account except to add that adult shells of *M. bempbilli* range from 5-1 4 to 6 whorls in four lots in the writer's collection from Oregon and Washington. Information on this point has been omitted from published accounts of this species.



1



2



3

Figure 1. *Megomphix californicus*, n.sp., Holotype, dorsal view. Max. diam., 13.8 mm.

Figure 2. Same. Apertural view. Height, 5.8 mm.

Figure 3. Same. Ventral view.

Photographs by Charles E. Crompton, California Academy of Sciences.

