

“anti-knock” material) produced from salt by chemical processes, has made possible the attainment of the high compressions now used in automobile engines. Salt also is used in the making of chlorinated hydrocarbons which are in turn used for refrigerants, both in refrigerators and in the “air conditioning” of homes, and for various dry-cleaning solvents.

The DuPont exhibit contains many other products in daily use, but the above list shows that chemistry has found new uses for farm products, that can be grown on land recently idle. The new plants bring to the chemist materials for making an ever increasing number of new products that add to the pleasure and efficiency of living.

SHELL REPAIR IN POLYGYRA TEXASIANA

Elmer P. Cheatum

It has long been known, on the basis of field observations and laboratory experiments, that snails and clams are able to repair breaks in their shells. However, with the exception of Andrews' ('34, '35) excellent work on shell-repair of West Indian gastropoda, and Daniel's ('12) studies, practically all observations have been made upon European mollusks.

Daniels reported the following instances of shell-repair in species of the genus *Polygyra*: in *Polygyra tridentata* (Say), when the “shell had been broken back of the peristome, the animal, instead of repairing the break, retreated eight mm, and formed a new peristome and parietal tooth”; in *Polygyra elevata* (Say), “the last half of the body-whorl was then broken off and a new peristome and parietal tooth were formed”; in *Polygyra hirsuta* (Say), “a new peristome and tooth were developed a fourth of a whorl behind the original aperture”. Binney ('85, p. 282) also figured a *Stenotrema monodon* (Rackett) that had developed a new peristome and parietal tooth.

The specimen figured and described in the present paper belongs to one of the most widely-distributed species of land snails in Texas. The specimen, which was living when taken, comes from San Marcos in this state, and was collected by Mr. D. M. Chumbley of Humble. It is of average size (greater diameter, 8 mm, height 4 mm). As Figure 1 shows, the original acutely-angular columellar callus was well developed before the snail met with an accident in which approximately half of the body-whorl was removed. If, as we assume, the columellar callus, denticles, and thickened and reflected peristome are all formed simultaneously, it is to be inferred that since the original callus was well developed, the other original structures must have been in a similar state of development before the basal whorl was broken.

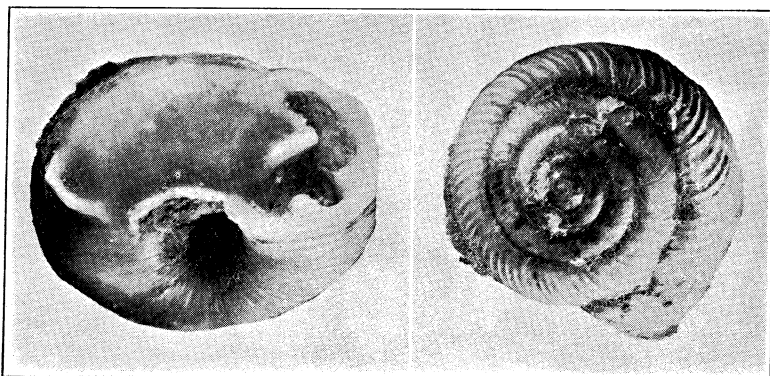


Fig. 1

Fig. 2

The normal restoration of all the structures above the aperture is well shown in Figure 1. Were it not for irregular remnants marking the original attachment of the basal whorl to the rest of the shell, and the presence of the original callus, the profiles of the shell would fail to show that the shell had been once broken, so complete is the restoration of the typical apertural structures. In Figure 2 is shown a dorsal view of the shell with one half of the body-whorl removed.

This occurrence of shell restoration is similar to those reported by Daniels, but in the present case a new set of denticles was formed in addition to the columellar callus.

LITERATURE CITED

- Andrews, E. A. (1934), "Shell repair in the snail *Pleurodonte rostrata* Pfr.", *Biol. Bull.*, Vol. 67, pp. 294-99.
 (1935), "Shell repair by the snail, *Neritina*".
Jour. Exper. Zool., Vol. 70, pp. 75-107.
 Binney, W. G. (1885), "A Manual of American Shells", Bull. 28, U. S. Nat. Museum.
 Daniels, L. E. (1912), "Abnormal Shells", *Nautilus*, Vol. 25, pp. 38-42.

A GASTROPOD NEW TO THE UNITED STATES

Elmer P. Cheatum

A species of branchiate snail new to the molluscan fauna of the United States, *Hydrobia palomasensis* (Pils.) (*vide* Pilsbry), was collected near Fort Davis, Texas, in April, 1936, by Mr. Ottys Sanders of Dallas. The specimens were found in a small canyon opening into Limpia Canyon, about five miles north of Fort Davis. The present writer, on a trip to this same locality last September, found this species in abundance. It occurs in greatest numbers on the thick, springy mat of vegetation covering the seepage area below the spring.* Under the rank grass that covers part of this sodden mat, optimum conditions appear to prevail for the propagation of this amphibious amnicolid. Considerable numbers also lived submerged in the clear pools of the creek below this area. The average shell size appears to be as follows: length, 2.75 mm; diameter, 2 mm. One specimen was found which measured 3 mm in length and 2.5 mm in diameter.

Lake Palomas, Chihuahua, Mexico is the type locality for this species; and hitherto has been the only reported locality. Lake Palomas lies some 250 miles south of Fort Davis.

*This locality (which is also the type locality for *Humboldtiana cheatumi* Pils.,) has been described in detail by the present writer in *Nautilus*, vol. 48, pp. 93-94, 1935.