

OCCASIONAL PAPERS OF THE MUSEUM OF
ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN

PUBLISHED BY THE UNIVERSITY

TWO NEW FRESHWATER SNAILS FROM
MICHIGAN

BY MINA L. WINSLOW

The forms described below were found in the course of field work for the Museum of Zoology of the University of Michigan. Both were submitted to Dr. Bryant Walker, to whom grateful acknowledgment is made for helpful criticism. For a discussion of the subspecies of *Planorbis antrosus* reference may be made to Dr. Walker's "Notes on *Planorbis* II: *P. bicarinatus*," in *The Nautilus*, Vol. XXIII, pp. 1-10, 1909. It is interesting to find still another distinct form of *P. antrosus* in the same general northern region from which the varieties *percarinatus*, *royalensis* and *portagensis* have already been listed.

***Planorbis antrosus jordanensis*, new subspecies**

Figs. 1-5

Shell with four and a half closely coiled whorls, upper surface decidedly flattened, concave, apical whorls deeply im-

mersed, funicular; umbilicus narrow, deeply funicular; superior and basal carinae each forming a distinct, prominent, rounded cord; whorls flat, almost straight-sided; lines of growth strong, revolving sculpture distinct; aperture large, somewhat descending, auriculate, higher than wide, angled at the carinae; lip thickened within, edge sharp, somewhat expanded at the outer edge. Altitude, 6.5 mm.; diameter, 11.5 mm.; height of body whorl in front of aperture, 4.8 mm.

Type Locality: South Arm of Pine Lake, about two miles north of East Jordan, Charlevoix County, Michigan.

Type Specimen: Museum of Zoology, University of Michigan, No. 27440. Cotypes in the collection of Bryant Walker.

This form combines features of at least two other varieties of *Planorbis antrosus*, but is typical of none of them. It is perhaps nearer to *portagensis* in size and general appearance, but differs from that form in having pronounced cords accenting the carinae, in flatter whorls, and in the wider angle which the upper edge of the aperture makes with the superior carina. It resembles *royalensis*, but differs from that subspecies in its smaller size, in the relatively smaller size and auriculate shape of the aperture, the two corded carinae, flatter whorls, and finer, more regular lines of growth.

The series shows some variation in the degree of descent of the aperture, resulting in some specimens in the aperture being applied to the lower half only of the body whorl. In twenty adult specimens the altitude varies from 7.5 to 5.8 mm., diameter from 13.1 to 11.5 mm., and altitude of the body whorl in front of the aperture from 5.0 to 4.3 mm.

***Ferrissia michiganensis*, new species**

Figs. 6, 7, 8

Shell depressed, oval, slightly wider anteriorly, anterior and posterior margins broadly rounded, the latter slightly oblique

on the right side; right lateral margin slightly curved, left lateral margin more convex; the dorsal outline is flattened above posteriorly and slightly curved anteriorly, the greatest height being about in the centre of the shell, from which point it slopes slightly towards the apex and more rapidly towards the anterior margin, left lateral slope somewhat convex; the right lateral slope a little concave; apex blunt, slightly depressed, excentric, turned toward the right side, situated at about the posterior fourth of the length and about halfway between the median line and the right margin, radially striate; lines of growth rather strong and irregular, the anterior slope is obsoletely radially rippled; light horn color.

Length 4.25 mm., width 2.75 mm., altitude 1 mm.

Type Locality: Willow Brook, west of Harbert, Chickaming Township, Berrien County, Michigan.

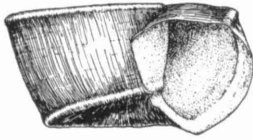
Type Specimen: Museum of Zoology, University of Michigan, No. 13057. Cotypes in the collection of Bryant Walker.

This well marked species is the largest yet described from the Northern States of the depressed group of *Ferrissias*. While nearly as large as many examples of *F. rivularis* and *F. tarda*, the depressed form and apex readily differentiate it from either.

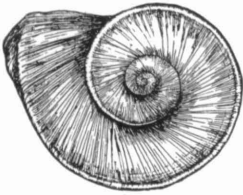
Numerous examples were collected from dead leaves and sticks in a small pond above a dam in the brook, in 1917, and again in 1918 and 1922. In the same pond numerous other species of freshwater snails were found, among them the small *Planorbis buchanaensis* Lea, *Planorbis rubellus* Sterki, *Lymnaea columella* Say, *Lymnaea humilis modicella* Say, and others.

PLATE I

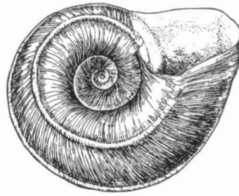
- Figs. 1, 2, 3. *Planorbis antrosus jordanensis*. Type. x 3.
- Fig. 4. *Planorbis antrosus jordanensis*. Cotype, Mus. Zool., Univ. of Mich., No. 27442. Most inflated specimen. x 3.
- Fig. 5. *Planorbis antrosus jordanensis*. Cotype, Mus. Zool., Univ. of Mich., No. 27441. Example of abruptly descending aperture. x 3.
- Figs. 6, 7, 8. *Ferrissia michiganensis*. Type. x 10.



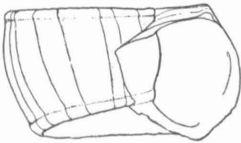
1



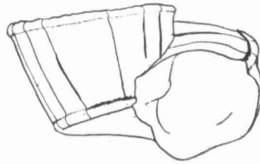
2



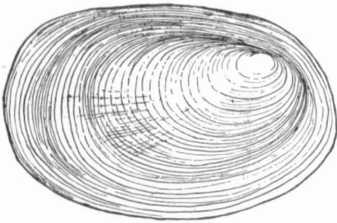
3



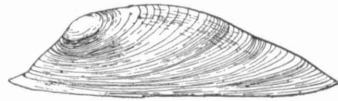
4



5



6



7



8

