

- Sphaerium sulcatum* (Lamarck).    *Physa sayii* Tappan.  
*Lymnaea stagnalis appressa* Say    *Physa niagarensis* Lea.  
*Lymnaea (Galba) minnetonkensis*    *Vulvata tricarinata* (Say).  
     Baker.    *Amnicola limosa porata* Say.  
*Lymnaea (Galba) obrussa de-*    *Amnicola lustrica* Pilsbry.  
     *campi* Streng.    *Succinea retusa* Lea.  
*Planorbis trivolvis* Say.    *Succinea avara* Say.  
*Planorbis campanulatus* Say.    *Vitrea hammonis* (Ström.).  
*Planorbis antrosus* Conrad.  
*Planorbis a. unicarinatus* Hald.

Banks of Mississippi River, St. Paul, Hennepin Co.

*Polygyra profunda* Say.

*Polygyra profunda pleistocenica* Baker. A specimen comparing in size and shape with the form named *pleistocenica* (see NAUTILUS, XXXIV, p. 66) occurred with normal *profunda*. It was marked by one wide band of color above the periphery.

- Zonitoides arborea* (Say).    *Helicodiscus parallelus* (Say).  
*Vitrea hammonis* (Ström.).    *Strobilops virgo* (Pilsbry).  
*Pyramidula alternata* (Say).

Small stream flowing through ravine on bank of Mississippi River, St. Paul.

- Aplexa hypnorum* (Linn.).    *Lymnaea (Galba) caperata* Say.  
*Physa walkeri* Crandall.    *Succinea ovalis* Say.

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#### A LARGE QUADRULA HEROS SAY

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The collection of the United States National Museum contains the left valve of an unusually large and internally fine specimen of *Quadrula (Crenodonta) heros* Say. Mr. Ernest Danglade of Vevey, Indiana, formerly of the United States Bureau of Fisheries obtained the specimen from a pearl fisherman who had crushed the other valve. In transmitting the shell to the Museum Mr. Danglade sent the following note: "The shell was

found in Eagle Creek, near Eagle Station, Kentucky, on October 10, 1917. This stream flows through a fertile soil on a limestone formation and of course the water is naturally hard. This condition, in connection with an abundance of food, no doubt accounts for the unusual size and thickness of the shell, as well as the quality of the material." The locality is in Carroll County, Eagle Creek flowing into the Kentucky River a few miles above the junction of the latter with the Ohio River.

This is the largest shell of its kind ever seen by Mr. Danglade, who, as an attache of the Bureau of Fisheries, has observed and handled thousands of shells of this species. It is much larger than any other specimen in the National Museum.

The following data relating to size should be of interest:

Length 216 mm (about  $8\frac{1}{2}$  inches).

Height 150 mm. (about 6 inches).

Diameter (if both valves were present would be) 70 mm., about  $2\frac{4}{5}$  inches.

Perimeter 600 mm. (nearly 2 feet).

"Circumference", (i. e., around the shell crosswise to the length) would be  $14\frac{1}{2}$  inches. This is two inches larger than the specimen whose measurements were given by W. S. Strode in the Nautilus, IX, p. 116.

Weight of this valve about 723 grams (1 pound,  $9\frac{1}{2}$  ounces).

Weight of whole shell must have been about 1446 grams (3 pounds, 3 ounces).

Capacity of this valve, 295 c. c., about 18 cubic inches.

Capacity of whole shell about 590 c. c., about 36 cubic inches.

Amount of material in this valve 263 c. c., about 16 cubic inches.

Amount of material in whole shell about 526 c. c., about 32 cubic inches.

When gorged with water the specific gravity of the animal must have approximated that of water itself, so that it is reasonable to believe that the contents of the shell when living weighed about 590 grams (about 1 pound, 5 ounces) and that the shell, the animal and the water enclosed in the shell had a combined weight when collected of about 2036 grams (nearly 4 pounds, 8 ounces).

The beak is somewhat eroded but the rest of the exterior of the shell is in good condition and most of the periostracum is well preserved. Internally the shell is rather fine, the nacre being silvery and iridescent. The cardinal and lateral teeth as might be expected are massive, the muscular scars and pallial line are deeply impressed.

Doubtless the shell was at about the limit of size attainable to this species but there is nothing about the shell itself (other than its great size) to indicate that there will be no further growth. Apparently the shell-secreting organs of the animal were in full vigor and in readiness to perform their function should further growth of the animal require enlarged accommodations. It seems probable, too, that the secretion of calcareous matter was still going on and that if the animal had been permitted to live there would have been a further thickening.

The specimen is Cat. No. 346631, U. S. N. M.

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#### NOTE ON FENELLA A. ADAMS

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BY WM. H. DALL

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*Fenella* (originally spelled *Finella* by a typographical error) was described by Adams in 1860 and has suffered many vicissitudes. The species have been referred to the Rissoidae, Pyramidellidae, Cerithiidae, and Litiopidae. Carpenter made the error of identifying West American species with *Mesalia*, *Styliferina*, and *Alvania*, and a species of *Halistylus* with *Fenella*, which, as well as Adams' typical species, is figured by Tryon in his Manual.

The fortunate discovery in the collection of the National Museum of specimens of Adams' typical species received directly from him many years ago, has enabled me to positively identify *Fenella* with *Alabina* described by me in 1902. It has a normal protoconch of about three smooth brown turbinate whorls which definitely removes it from the Pyramidellidae. The data given by Fischer about the animal might apply to a *Bittium* or a Rissoid, but from an examination of dried specimens I have