

REMARKS UPON THE IDENTITY OF "UNIO FASCIATA," RAFINESQUE.

BY L. S. FRIERSON.

Lampsilis fasciata, Rafinesque.
 Unio fasciata, Rafinesque, 1820.
 Unio siliquoideus, Barnes, 1823.
 Unio inflatus, Barnes, 1823.
 Unio distans, Anthony, 1865.
 Unio luteolus, Auct. as of Lamarck.

The above wide-spread, common, and well-known Naiad, is seldom given the name which we adopt ("fasciata, Rafinesque") but is all but universally known as "luteolus" as of Lamarck.

The use of the latter as the specific name of the shell is merely the unquestioning acceptance of the dictum of Dr. Lea, who on returning from Europe in 1833, wrote that the "specimen cited by Lamarck" seen by him in the "Garden of Plants" was a "true siliquoideus" of Barnes. Against this application of Lamarck's name for the species, the following reasons seem just.

(1) Lamarck's description does not describe the species in question, but does fairly well describe the *Unio cariosus*, Say, as evidenced by the unanimous opinion of all writers previous to Lea's pronouncement of 1833 (as well as by some of the more courageous spirits since that event).

(2) Lamarck gives as habitats (he must have seen more than one?) the "Susquehanna and Mohawk Rivers."

The *cariosus* abounds in these streams, but from neither of them did Lamarck obtain specimens of the species *luteolus*, Auct. (The shell does not live in the Susquehanna; but according to Marshall the species is now an immigrant in the Mohawk through the Erie canal, and this is confirmed as to the Genesee by Ortman.)

(3) Lea claimed that the specimen seen by him, "cited by Lamarck," was a "true siliquoideus, Barnes;" but his identification was disputed by Férussac, who stated that according to Lamarck's "example" the shell was "*cariosus*, Say."

The use of "luteolus" as the specific name of the species in question is therefore unwarranted by the description; is absolutely contradicted by the habitats assigned, and rests solely upon the identification of a specimen made by one student which was at once contradicted by another of equal ability, for it must not be overlooked that in 1832 Lea was by no means the "authority" that he afterwards became.

(In 1829 Lea considered the "Unio cornutus" to be a "protean species" whose "varieties run into the aesopus," and embraced those species which Lea afterwards knew as "Unio perplexus" and "foliatus." It was still later before he appreciated the specific differences existing between "Unio verrucosus" and "pustulosus;" or between the "Unio plicatus and multiplicatus.")

Notwithstanding that Lea in 1832 conversed with Férussac over the cabinet of the latter, concerning their "favorites, the Unios," the latter student (who had specimens of the present species in his cabinet) stuck to his opinion that the "luteolus of Lamarck" was the "cariosus, Say."

In view of the above the continued use of Lamarck's name for the present species is clearly unwarranted, except by the rather flimsy claim of usage.

Turning now to the name we adopt (*fasciata*, Rafinesque) we find from its description that Rafinesque had before him an extremely wide-spread species, found practically all over the Ohio drainage, occurring, he writes, "in the rivers Ohio, Alleghany, Muskingum, Kentucky, Green, Salt, etc."

Aside from other characters he states that his species (which though ordinarily small, attains a length of three inches) is inequilateral, elliptical, ventricose and rather thick.

Its epidermis is olive, with brownish rays; a variety has dark rays; another is greenish with blackish rays, alternately wide and narrower; others are copper-colored, with olive rays.

The nacre is bluish, except that in the last variety it is coppery-white. The cardinal tooth is "divaricate."

A handsome species approaching the "ochraceus, Say."

The above characters can be ascribed to no known Naiad from the Ohio drainage except to the species in question.

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(A conclusion made doubly certain when we know that even Dr. Lea thought that the "*Lampsilis fasciola*, Rafinesque" might be the species which he (Lea) had afterwards named "*Unio multiradiatus*.")

It is true that the name "*Unio fasciata*, Rafinesque," was given by Conrad to a rayed specimen of "*ligamentinus*, Lamarck" (Monography, Plate I, 1836), an error which may yet quite often be found duplicated in cabinets.

But this patent error of Conrad's scarcely militates against the conclusions drawn, since we find in the same work (Monography) figured as one species, specimens of the very diverse shells, *Unio fisherianus*, Lea, and *Unio nasutus*, Say (Plate 18).

We find, too, that Conrad figured under the name of "*Unio glans*, Lea," a specimen of the very different *Unio perpurpureus*, Lea (Monography, Plate 9), etc.

As bearing upon Conrad's figure referred to, Dr. Lea cogently remarks: "Mr. Conrad thinks the '*crassus*, Say,' is the '*fasciata*' of Rafinesque. An examination of his description ought to satisfy any one that the '*crassus*, Say' could not have been under the eye of the author when he made his description of '*fasciata*.'"

As bearing upon the identification of "*fasciata*" with the "*pseudo-luteolus*"—the "*Unio siliquoideus*, Barnes," it is a matter of history that Rafinesque often sent to Ferussac specimens of shells from the West, bearing names given by the donor.

Dr. Lea records the fact that specimens of the "*siliquoideus*, Barnes" were seen by him in the cabinet of Ferussac in 1832, labeled "*Unio fasciata*, Rafinesque."

All of the available evidence therefore goes to show that the name "*fasciata*, Rafinesque" must supplant as the specific name of the species, the "*luteolus*, Lamarck," the latter being a synonym of the early "*Unio cariosus*, Say."