

marsh on the Paint Rock

n. subsp.

imperiate; whorls a little
length 27.5, diam. 20.5
P. from Dougherty, Georgia.
both lots from the Wheatley

n. subsp.

citine, paler at the shoulder;
as usual, crossed by many
striae. Spire shortly conic, the
nearly shouldered, the shoulder
apical part. Aperture large,
lip slightly sinuous.

length of aperture 17.8 mm.

length of aperture 18.2 mm.

Creek; Crozier's Branch, Ca-
rona. Type 122781 A. N. S. P.
shape and distinct striation.

n. subsp.

ing in color and sculpture, but
elevated, and the whorls have a
low which the wall is nearly
ata (Conrad). It differs from
the mouth and on the eroded

length of aperture 16.8 mm.

122782 A. N. S. P.

" (as synonym of *C. limum*),
Laboratory of Natural History,
fig. 7 (May, 1886).

a MS. name under *Campeloma*
had not seen the true

Paludina lima Anth., as his description does not fit it, being partly drawn from the Florida species, partly compiled from Anthony.

The shell has a rather short spire and large aperture, it varies on different parts of the same specimen, and in different specimens, from dark citrine to blackish brown. The interior is chocolate, chestnut-brown or dark indian-red; the invariably dark color being highly characteristic. The surface has unequal, minute, spiral striae. The last whorl is somewhat compressed below the narrow subsutural shoulder. Columella rather heavy, nearly white. A large specimen measures, length 34.6, diam. 22.3, aperture 19.8 mm., 4 whorls remaining.

So far as known, this species is restricted to the St. Johns River and tributary creeks, in Florida. Mr. Johnson and the writer dredged it in Lake County. It is one of the most distinct species, owing to its color.

Campeloma limum (Anth.) is a more slender, green species with a smaller mouth, bluish within, and a more or less distinctly subangular periphery. *Melantho decampi* W. G. Binney is a synonym of *C. limum*.

THE RAFINESQUE-POULSON UNIOS.

BY BRYANT WALKER.

In publishing the complete list of the Rafinesquean Unios in the Poulson collection with their modern equivalents, Mr. Vanatta has rendered a distinct service to all students of the American Naiades. Now, for the first time, we, to whom the specimens are inaccessible, are informed exactly as to which of the species familiar to us under Simpsonian designations are represented in that famous collection and their names as identified by Rafinesque himself.

While, with a single exception, it is not claimed that these are the original types of Rafinesque's species, and it is explicitly stated that the ultimate recognition of any of Rafinesque's species "depends upon whether it could be identified by descriptions published prior to any other recognizable name for

the same species," nevertheless it is a distinct advantage to know exactly what Rafinesque in 1831 understood or claimed to be the species that he had described in 1820.

The author has presented a tentative synonymy of the species represented in the Poulson collection, "if they were recognized and the names dated from 1820." In this suggested arrangement, Rafinesque's genera and subgenera are ignored and all of his species are treated as *Unios* and synonymy is based entirely on the supposition that they were described as *Unios*.

In this, the author seems to have overlooked Rafinesque's explicit statement, (p. 298), as to his method of compiling his Monograph.

In 1819, Rafinesque had proposed to divide the North American *Unios*, "provisionally," into eight subgenera. In 1820, in his "Monographie," after referring to this fact he says:

"Since then, having increased my species and verified their characters, it appears to me to be proper to make from them many genera and subgenera, but to humor ("pour complaire") naturalists, who might hesitate to adopt the changes in nomenclature that the discoveries necessitate, I will give the name of *Unio* in the second place to all new species, observing to those, who would assign them all to the genus *Unio*, which thereby would contain more than seventy species, that it would be necessary in the description of the specific characters to repeat those of my new genera, this would render the definitions of the species long and prolix."

In accordance with this statement, throughout the Monographie he first prints *his* name for the species in italics and then, "pour complaire," adds in parenthesis and in Roman type the popular or conventional name.

If, instead of adopting this system, he had in every instance stated in his explanatory remarks that for those who did not adopt his new genera the species would be an *Unio*, there could be no possible doubt of his intention to use his new generic terms. And, in view of his explicit statement, I do not see how any other inference can be properly drawn from the method that he did adopt. There is not to be found anywhere in the Monographie the slightest intimation that he had ever

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any doubt as to the correctness of his new classification or that in any degree he intended to impugn its validity.

If I am right in this contention, much of the tentative synonymy proposed by Mr. Vanatta will have to be reviewed.

In view of the fact that the adequacy of Rafinesque's original descriptions is expressly left in abeyance, it would seem to be better to retain the Simpsonian names until all of those questions can be definitely determined.

Expressly reserving, therefore, all questions relating to the adequacy of Rafinesque's original descriptions and simply to determine "the effect on nomenclature if they were recognized and the names dated from 1820," taking the species in the order given by Vanatta, it would appear to be necessary to make the following changes :

Truncilla brevidens Lea.

Described by Rafinesque as *Obliquaria interrupta*. It is not, therefore, preoccupied by *Unio solenoides interrupta* and, if identifiable, would take precedence over Lea's name.

Truncilla sulcata (Lea).

Unio sulcatus Lea (1830) is not preoccupied by *Pleurobema mytiloides sulcata* Raf. (1820). But *Obliquaria obliquata* Raf., if identifiable, would have priority.

Plagiola securis (Lea).

Obliquaria depressa Raf. (1820) is not preoccupied by the *Unio depressa* Lam. (1819). But both Say (1834) and Conrad (1834) have given preference to *lineolata* Raf. over *depressa* Raf., although the latter has page precedence. This they had the right to do under the Code and, if identifiable, Rafinesque's name will take precedence over Lea's.

Plagiola elegans (Lea).

Truncilla truncata Raf. (1820) is not preoccupied by *Unio truncata* Spengl. (1793). If identifiable, Rafinesque's name has priority over Lea's. *Metaplata* Raf. is subsequent to both.

Tritogonia tuberculata Bar.

Unio tuberculata Bar. (1823) is not preoccupied by either *Obliquaria tuberculata* Raf. or *Obovaria striata tuberculata* Raf. (1820). But *Obliquaria verrucosa* Raf., if identifiable, has priority for the species.

Cyprogenia irrorata (Lea).

Obovaria stegaria tuberculata Raf. is not preoccupied by *Obliquaria tuberculata* Raf. But *Obovaria striata tuberculata* has page precedence. If identifiable, *stegaria* Raf. (1820) has priority over *irrorata* Lea (1830) as the specific name.

Unio gibbosus Bar.

Barnes' name (1823) is not preoccupied by *Amblema gibbosa* Raf. (1820). But *Unio dilatata* Raf. (1820), if identifiable, has priority.

Unio pusillus Lea.

Obliquaria pusilla Raf. (1820) did not prevent the use of *pusillus* for a *Unio* by Lea in 1840. Lea's name will, therefore, stand.

Quadrula lachrymosa (Lea).

Simpson did not separate *asperrima* Lea varietally from *lachrymosa* as Vanatta's remark would indicate. If identifiable, Rafinesque's name, *quadrula*, has priority and would become the specific name and, if separable varietally, *lachrymosa* Lea would become a variety.

Quadrula pustulosa (Lea).

Obliquaria retusa Raf. (1820) is not preoccupied by *Unio retusa* Lam. (1819). If identifiable, Rafinesque's name would have priority over Lea's.

Quadrula subrotunda (Lea).

Unio subrotunda Lea (1831) is not preoccupied by *Obliquaria subrotunda* Raf. (1820). However, *sintoxia* Raf. (1820), if identifiable, has precedence over *subrotunda* Lea.

The statement that "many of Rafinesque's species have been credited to Conrad by Mr. C. T. Simpson" is hardly fair to the latter. Conrad did sufficiently describe and figure a considerable number of species in his "Monography" of 1836, which he credited to Rafinesque. At least one of these, *U. cordatus*, does not agree with the specimen under that name in the Poulson collection as identified by Vanatta. Simpson states expressly that he had made careful and repeated attempts to identify Rafinesque's species and that, while he found quite a number that should be recognized and which he did recognize, as to the remainder he was "utterly unable to make anything

out of them." Having that he could do was Monography under the

The list of names pro in Simpson's Synopsis i "Unios" listed, only 1 *Unio* by Rafinesque: 1 *Unio*, while the remain and eleven varieties de names. It would cert given a complete list of as long as he attempted value of quoting indele far as nomenclatorial pu *nomina nuda*.

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out of them." Having reached this conclusion, the only thing that he could do was to credit the species described in the Monography under these indeterminable names to Conrad.

The list of names proposed by Rafinesque and not mentioned in Simpson's Synopsis is also misleading. Of the twenty-three "Unios" listed, only three were described as distinct species of *Unio* by Rafinesque: eight are varieties of certain species of *Unio*, while the remaining twelve are made up of one species and eleven varieties described under various different generic names. It would certainly have been better if Simpson had given a complete list of all of the species named by Rafinesque as long as he attempted to compile such a list at all. But the value of quoting indeterminable species is questionable and so far as nomenclatorial purposes are concerned, they are practically *nomina nuda*.

In conclusion, Mr. Vanatta proposes new names for three species described by Lea and Conrad under names supposed to be preoccupied by Rafinesque.

One of them, *Pleurobema simpsoni*, proposed for *Unio striatus* Lea seems unnecessary as Rafinesque's *striata* was described as an *Obovaria* and not as an *Unio*.

If Rafinesque's *Unio nigra* and *Unio viridis* are identifiable, the other two changes proposed are proper under the Code.

These changes are but a foretaste of what is likely to happen to very many of the familiar names used for our American species, when the thankless and interminable task of collating all of the varietal names used for the *Unionidae* from the beginning has been completed and the unnecessary and vicious provisions of the Code in regard to the standing of varietal names is enforced according to the letter of the law.

A NEW TEREDO FROM THE WEST COAST OF AMERICA.

BY PAUL BARTSCH.

In looking over the West American Teredinidae in the collection of the U. S. National Museum, I find an undescribed species from the San Diego region which may be called :