3'4116

ened outwardly, broadly dilated at the insertion, partly covering the umbilious; parietal film transparent but not very thin.

Height 12.7, diam. 20 mm. Aperture with peristome 12.7 mm. wide; umbilicus 1.7mm. wide.

Locality.—Sinaloa, Mexico, Wm. M. Gabl. Type No. 58124 A. N. S. P.

The special features of this species are its narrow umbilicus, very wide last whorl, large aperture and surface free from any trace of spiral incised lines. The apex is slightly worn, but I think I see traces of the same sculpture described for the first whorl of S. peninsularis. It is one of the specimens Gabb identified as Ilelix rémondi Tryon—which is quite a different thing. Gabb was a really notable geological explorer, but sometimes he was not fussy over identifications of shells.

EPIPHRAGMOPHORA ELLIPSOSTOMA Pilsbry. Pl. 2, figs. 6.

Described in Nauthus VIII, p. 81 (1894), but not figured before. The locality given by Gabb, San Juan del Norte, is rather ambiguous. It would be taken for the place so named in Nicaragua were it not that the specimen was stuck on a label with a shell of Sonorella peninsularis, suggesting a Lower Californian habitat. The malleation and epidermis recall Californian and Peruvian Helices, but no similar species has been taken in Nicaragua. The figures represent the type-specimen, no. 10745 A. N. S. P.

OBSERVATIONS ON THE UNIO COR, OF CONDAD.

BY L. S. FRIERSON.

T. A. Conrad published in 1834, his "New Fresh Water Shells" describing and figuring a number of species. His figures were not very good, and some confusion ever since has been the result. For instance, his figure of *U. prasinus* is so unlike the figure given by Dr. Lea for his *U. schoolcrafti* that the two have been placed as different sub-species in our lists; yet both figures were drawn from the same identical specimen! Mr. Conrad figured a shell, (presumably his *Unio stramineus*) on plate 7, but he omitted it altogether from the text!

But above all, the confusion greatest, for there is not the described one species, and I under this name!

Through the kindness of M of Natural Sciences, this confi

Mr. Conrad published, in Unio mytilloides (Am. Jl. Sci. of Unio cor (New Fresh Water 1834. These figures were a represent the same species. "Mytifloides" figured is a deor, is much like it, yet not id

No shell exactly like Courad if the figure is accurate, the sp

The true *Cor*, however, is in the collection of the Acader herewith (pl. iii, figs. 1, 2, Pilsbry.[†]

U. cor Conrad is a native of are tributaries of the Tennes U. crapulus, of Lea, with whited, come from a different dr

The true Unio cor is characterys,—the young, beautifully the beak to base. Neither lewisi, nor are indicated upo Conrad says the young shot (Mr. Conrad's conception and Lamark).

The true *U. cor* is to be for other names, among which the tuscumbiensis, andersonensis, an nensis Lea represents an old, short behind, but otherwise q

Or, Pilabry believes that character he described as Unio cor, and that a now figured, but of the same species

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CONBAD.

fiew Fresh Water of species. His ion ever since has U. prasinus is so schoolcrafti that the in our lists; yet entical specimen! Unio stramineus) the text!

But above all, the confusion concerning his *Unio cor* is the greatest, for there is not the slightest doubt that Mr. Conrad described one species, and figured an entirely different one under this name!

Through the kindness of Mr. E. C. Vanatta, of the Academy of Natural Sciences, this confusion has been cleared up.

Mr. Conrad published, in January 1834, a shell he called *Unio mytilloides* (Am. Jl. Sci. xxv, pl. 1, fig. 7), and his figure of *Unio cor* (New Fresh Water Shells, plate iii, fig. 3) in May, 1834. These figures were assumed by Mr. C. T. Simpson, to represent the same species. There is little doubt but that the "Mytilloides" figured is a *Unio chenus* Lea, and the figure of cor, is much like it, yet not identical.

No shell exactly like Conrad's cor has yet been obtainable, and if the figure is accurate, the species is probably yet undescribed.

The true Cor, however, is well characterized, and the type, in the collection of the Academy of Natural Sciences, is figured herewith (pl. iii, figs. 1, 2, 3) through the courtesy of Dr. Pilsbry.

U. cor Conrad is a native of the Elk and Flint Rivers. These are tributaries of the Tennessee River. The Unio lewisi, and U. crapulus, of Lea, with which U. cor has hitherto been identified, come from a different drainage system.

The true *Unio cor* is characterized by Mr. Conrad, as having rays,—the young, beautifully rayed, and having a sulcus from the beak to base. Neither of which are ever exhibited by *lewisi*, nor are indicated upon the psendo-figure of *cor*. Mr. Conrad says the young shalls resemble the *undatus*, Barnes, (Mr. Conrad's conception of *undatus*, was the *obliquus* of *Lanark*).

The true *U. cor* is to be found in many collections, under other names, among which the writer has noted *U. edgarianus*, tuscumbiensis, andersonensis, and others. The figure of andersonensis Lea represents an old, much inflated specimen, rather short behind, but otherwise quite characteristic.

¹ Dr. Pilsbry believes that Conrad's figure, pl. 3, fig. 3, represents the shell he described as *Unio cor*, and that it was a slightly older specimen than that now figured, but of the same species.

Mr. Conrad also observes that mature specimens of *U. cor* are sometimes produced and cunciform behind, "like some varieties of triangularis of Raf.," (a species, in Mr. Conrad's estimation at that time, embracing the group of pyramidatus etc.

A NEW CALIFORNIAN LAND SNAIL.

BY HENRY A. PILSBRY.

Ерірника степні п. sp. Pl. III, lower figs.

The shell is strongly depressed, umbificate (width of umbilicus contained nearly eight times in greatest diameter of the shell), rather thin. The whorls of the spire and as far as the front of the last whorl are dilute cinnamon, then changing to ecru-olive or dark olive-buff; there is a chestnut-brown band at the shoulder (about 2 mm. wide), bordered with inconspicuous, hardly noticeable bands pater than the ground-color. Surface is glossy, distinctly, irregularly striate, and immediately behind the lip it is closely and minutely granulose. The spire is a little convex, whorls 53, moderately convex, slowly increasing to the last, which is about double the width of the preceding, and decends a little in front. The aperture is broadly lunate, decidedly wider than high. Lip thin, the upper margin scarcely expanded, outer very slightly, basal very narrowly reflexed, the columeller margin broadly dilated.

Alt. 15.2, diam. 31 mm.; aperture, alt. 14.3, width 17.8

mm.

Habitat, San Antonio Canyon, in the San Gabriel Mts., western edge of San Bernardino Co., California, at about 5000 ft. elevation (Miss Lilian Zech).

This fine species will probably prove to belong to the Helmin-thoglypta group, in which it most resembles H. sequoicola (Cooper); yet the absence of malleation on the last whorl and of granules on the spire are features more like Sonorella.

Miss Zech gives the following account of the locality.

The specimen was found in a narrow, winding canyon branching from the main San Antonio canyon at 4700 feet and at this point, some two or three hundred feet higher as near as I can

guess,—only wide er water, and the trail. columbine, lilies, : laurel. The trees w susil lay on a pile o mouth, and contain

DESC

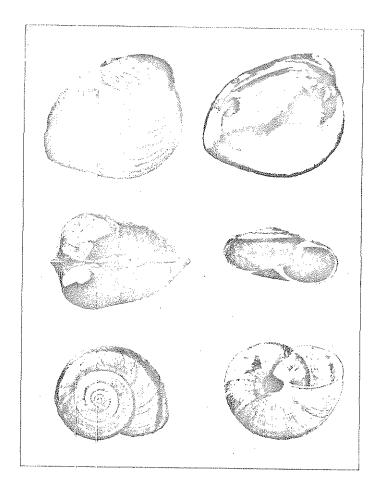
RIFIDARIA MINUTA,

Shell minute, or narrowly umbilicate four to four and a large, rounded at t strice, apex without rather large, well of the ends somewhat close to and paralle callus or none; lar simple, columellar base, or wanting; examined. Alt. 1

Hab.: Woods, p No. 1990, collectio

This Bifidaria is species as follows: are less in number last is comparative a very slight one, secondary ones (as

It was a surpris country, and it a represent a distincthe appearance of and probably wer Bifidarias of this;



FRIERSON: UNIO COR CONRAD.
PILSBRY: EPIPHRAGMOPHORA ZECHÆ.

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Vol. XXIX.

HELICES OF L

In my "Notes upon Acad. Nat. Sci. Phil given of the Helices of peninsula. The inlan

While it seems likely mountain Helices will of the genus Micrarion we have as yet now Sonorella. It seems shells of the Southwes long elsewhere by diss

G

Helices of this gree open umbilicus, more lip. They have the c

In the paper just menti a subspecies of Micrarionts since H. canescens was desstand as species until the intergrade, then vestchii wi