

## SCIENTIFIC INTELLIGENCE.

EXPLORATIONS.—Dr. H. Berendt, a well-known collector, has just departed for Honduras and Guatemala, intending to explore those interesting regions, principally for terrestrial and fluviatile Mollusks. The principal localities to be examined are: the Belize River from its mouth to its source, and the plateau and lakes in the Province of Peten, Guatemala.

The cost of the expedition is defrayed principally by a few of our Conchologists.

OUR READERS will be concerned to learn that Mr. John G. Anthony, attached, as Malacologist, to the Scientific Exploration of Brazil by Prof. Agassiz, has been compelled to return to Cambridge, in consequence of severe illness, which attacked him shortly after the arrival of the party in Rio Janeiro.

CONCHOLOGICAL MUSEUMS IN THE UNITED STATES.—We omitted to include in our List of the principal American Collections, published in our last Number, that of

William A. Haines, New York; 12,000 species.

We have also to add the splendid collection of terrestrial and fluviatile Mollusca possessed by

John H. Thomson, New Bedford, Mass.; over 6000 species.

Mr. Thomson informs us, that there are nearly fifty private collections, numbering 1000 species and upwards each, in the city of New Bedford.

HELIX SCULPTILIS, Pease, is pre-occupied by Mr. Bland for an American species.

## AMERICAN

## JOURNAL OF CONCHOLOGY.

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VOL. II.

APRIL 1, 1866.

No. 2.

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### FURTHER OBSERVATIONS ON MR. GABB'S PALÆONTOLOGY OF CALIFORNIA.

BY T. A. CONRAD.

In my observations on some species in Mr. Gabb's "Palæontology of California," I did not intend to disparage Mr. Gabb's labors; for the work is generally accurate, the plates excellent, and the whole highly creditable to the State of California and to Mr. Gabb. I only intended to call attention to the stratigraphical relations of the upper member of Mr. Gabb's Cretaceous formation, and to suggest that it might be Eocene, as I thought I detected Eocene species in his Division B: especially as he has referred only one exclusively Cretaceous genus to that division. Of whatever age Division B may eventually prove, whether Cretaceous or Eocene, I am certain that the fossils which I described in the Pacific Railroad Reports are from an Eocene boulder.

The only mode of conveying an idea of the stratigraphical position of Division B, is by a geological description, which I presume, will be published in Professor Whitney's Report. Are the strata distorted or inclined? or, are they in the form

AMERICAN  
1866

DESCRIPTIONS OF NEW AMERICAN FRESH WATER SHELLS.

BY JOHN G. ANTHONY.

1. ANODON MCNIELLI, Anthony.—t. 6, f. 1.

*Description.*—Shell smooth, elliptical, somewhat inflated, rounded before and biangular behind; substance of the shell thin and diaphanous; epidermis remarkably smooth and polished, of a pale yellowish-green color over the umbones, becoming darker and rougher on the posterior slope; beaks prominent, rugose at tip, the wrinkles occupying nearly the entire surface of the earliest growth; hinge margin slightly curved, with ligament long and slender; marks of growth distant and distinct, but not very broad, three only on each valve; anterior and posterior cicatrices scarcely perceptible; nacre silvery white and iridescent.

*Dimensions.*—Diam. 1 inch, length 2 7-10ths inches, breadth 1 ½ inches.

*Habitat.*—Michigan.

Collection Mus. Comp. Zoology, Cambridge, Mass.

*Observations.*—Without presenting any very prominent characters, this shell seems perfectly distinct; its texture is remarkably thin and diaphanous, and it has a strong but not very sharp carina on the umbonial slope; the basal edge is curved upward behind, giving the shell rather a cuneate appearance.

2. ANODON SUBGIBBOSA, Anthony.—t. 6, f. 2.

*Description.*—Shell smooth, inflated, subquadrate, inequilateral, and very thin; epidermis of a dull olive color and without rays; marks of growth not distant but distinct, about 4 on each valve, indicated by a rather broad darker line; beaks not very prominent, having coarse elevated rugæ at tip; anterior slope rounded, posterior slope obscurely angulated and somewhat excavated; anterior and posterior cicatrices both very indistinct; nacre bluish in color, but somewhat iridescent.

*Dimensions.*—Diameter 1 4-10ths inches, length 3 inches, breadth 2 inches.

\* *Habitat.*—Black Lake, Michigan.

Collection Mus. Comp. Zoology, Cambridge, Mass.

*Observations.*—Distinguished by its inflated character and dull, dark olive color, in which it somewhat resembles *Anod. gibbosa*, Say, but it is more equilateral, less inflated, less ponderous, and the epidermis has not the fine green rays and general green color of that interesting species. The form of the present species in every stage of its growth differs essentially from *Anod. gibbosa*. The color of the epidermis is more like that of *Anod. Couperiana*, Lea, but in no other particular does it resemble that species.

3. ANODON INORNATA, Anthony.—t. 7, f. 1.

*Description.*—Shell broadly elliptical, very inequilateral, rounded before and sub-biangular behind; substance of the shell moderately thick; epidermis of a dull ochrey-yellow, without rays, deepening into a light brown color on the posterior slope; beaks rather prominent, with prominent, elevated, and waved wrinkles at tip; anterior cicatrices distinct and well defined, posterior cicatrices also distinct, but less deep than the anterior; marks of growth widely separated in the earlier stages of growth, becoming more crowded near the basal edge in old specimens; nacre silvery and highly iridescent, particularly at the posterior end, tinged with salmon color under the beaks.

*Dimensions.*—Diam. 1 ½ inches, length 3 ¾ inches, breadth 2 ¾ inches.

*Habitat.*—Michigan, Slawson's Lake.

Collection of Mus. Comp. Zoology, Cambridge, Mass.

*Observations.*—May be compared with *Anod. opalinus*, Nob., but is less inflated, less angular, is more elongate, and a thicker and heavier shell; with no other species would it be likely to be confounded. Although the substance of this shell is quite thick, it is, nevertheless, translucent and opalescent; the surface is finely and delicately striate longitudinally and transversely, and, under the microscope, presents an unusually beautiful appearance.

4. *UNIO OPALINUS*, Anthony.—t. 7, f. 2.

*Description*.—Subrhomboidal, somewhat inflated, rather thick; lines of growth becoming varicose anteriorly; beaks placed near to, and pointed towards, the anterior end of the shell, with several doubly-curved undulations; ligament margin straight and slightly declining, posterior slope and margin sub-biangular, basal margin almost straight, anterior margin somewhat rounded; epidermis light yellowish or greenish, iridescent. Cardinal teeth small, lateral teeth long and straight; cavity of the shell moderate, of the beaks rather deep and angular; anterior cicatrices distinct, posterior cicatrices confluent and indistinct, dorsal cicatrices in the cavity of the beaks; nacre pearly, very iridescent posteriorly.

*Dimensions*.—Length  $1\frac{3}{4}$  inches, breadth 1 inch, diameter  $\frac{1}{2}$  inch.

*Locality*.—Michigan.

Collection Mus. Comp. Zoology, Cambridge, Mass.

*Observations*.—Resembles somewhat *Unio Sayi*, but is longer in proportion to the breadth; the beaks are placed nearer to the anterior end, and the species is much smaller. It may also be compared with *Unio gibbosus*, Barnes, which it certainly resembles in general form. It is, however, more biangular behind; the color is very different, being dark and rayed in *gibbosus*; the latter is also a heavier species, the nacre either salmon, purple, or white, very much thickened anteriorly, and the cavity of the beaks very shallow. The undulations of the beaks are more decidedly marked and closer in *opalinus* than in *gibbosus*.

5. *GONIOBASIS CINGENDA*, Anthony.—t. 7, f. 3.

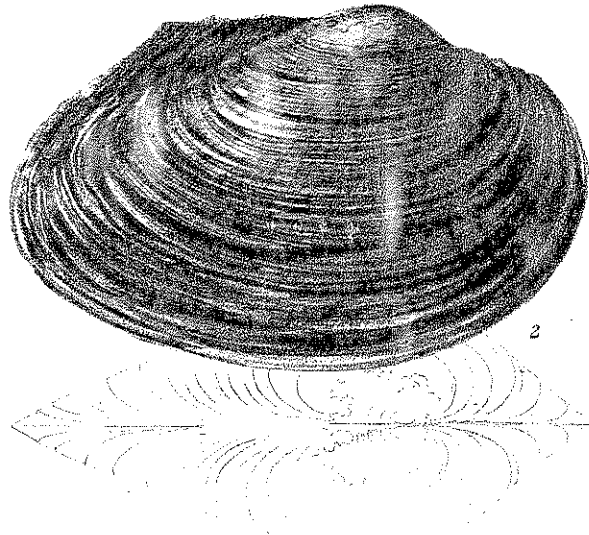
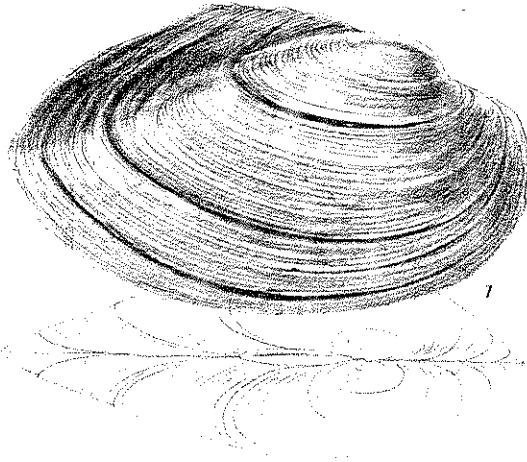
*Description*.—Shell conic, smooth, olivaceous; spire elevated, but decollate, exhibiting but 5 whorls, having lost at least 3 which it should have had in a perfect condition; whorls convex, slightly ridged below the middle, immediately below which a broad, dark brown band passes around the upper whorls, becoming double but confluent on the penultimate, but distinctly double and distant on the body whorl; sutures deep and sharply defined; aperture ovate and bluish within; columella deeply rounded, curved at the base, forming with the outer lip a distinct but not deep sinus; lines of growth very distinct and curved.

*Dimensions*.—Length 1 2-10ths inches, diameter  $\frac{1}{2}$  inch, length of aperture  $\frac{1}{2}$  inch, breadth 4-10ths inch.

*Habitat*.—North Carolina.

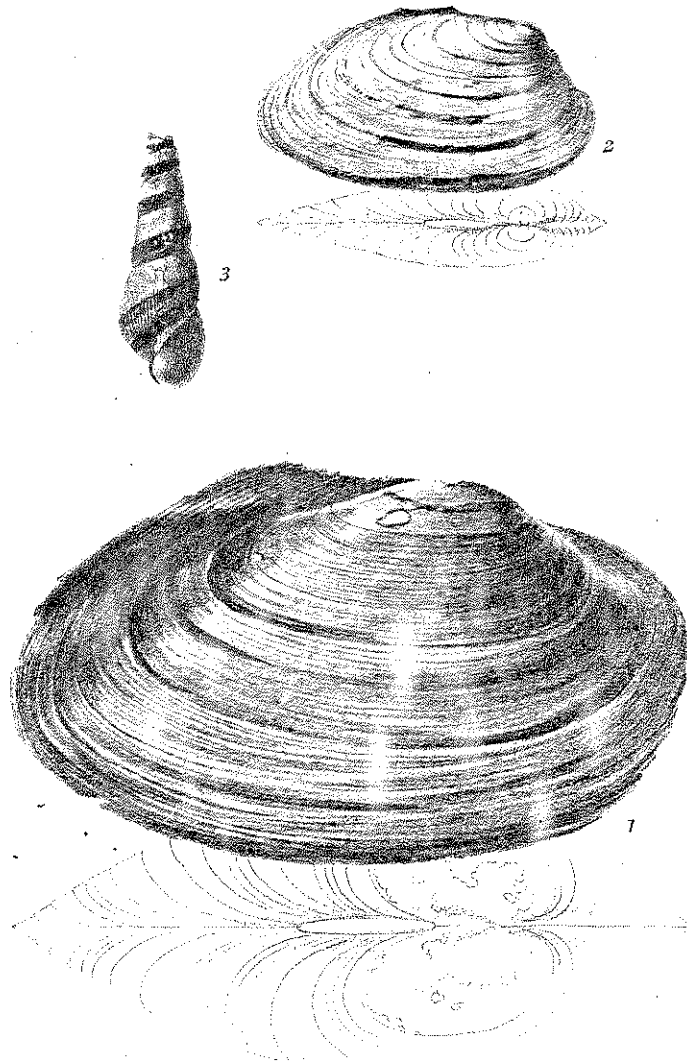
Collection Mus. Comp. Zoology, Cambridge, Mass.

*Observations*.—May be compared with *G. Virginica*, Say, which it resembles somewhat in form and coloring, but it is altogether of a more solid texture and more robust; it also has a broader, darker, and more distinct band round the whorls; the whorls are also less convex and more angulated. I know of no other shell with which it is likely to be confounded. The lines of growth are well defined, and on the body whorl become varicose.



1. *Anodon M. Nieltii*, Anthony. 2. *Anodon subgibbosa*, Anthony.

Burven & Co. Lith.



1. *Anodon inornata* Anthony. 2. *Unio opalinus* Anthony.  
3. *Gariobasis cingula* Anthony.  
Bowen & Co. Phila.