RICHARD J. NEVES

QH1
A19

they are sufficiently remarkable to constitute a different species, when taken in connexion with other peculiarities. I have seen a number of the S. *subviolacea*, and they all corresponded in their markings with the figure Professor Barton has given in the 6th volume of the Transactions of the Amer. Philos. Soc.

The S. *tigrina* has also some resemblance to the S. *terrestris* of Europe, which has been so much the subject of fables; it wants, however, the tubercles on the skin.

Mr. Titian Peale has made a very accurate drawing of the S. *tigrina*.

Description of a new species of the genus SAURUS, (Cuvier.) *By* C. A. LESUEUR. *Read July* 26, 1825.

SAURUS.

S. *minutus*. Pl. v. *Snout* twice the length of the diameter of the eye, pointed: *mouth* deeply cleft: *head* tolerably large, a little depressed above: *first dorsal fin* short and elevated, and placed rather posterior of the ventrals: *second dorsal* with a single divided ray, truncated above, supplying the place of the small adipose fin and situated above the anterior portion of the anal: *pectorals* rounded and sufficiently long to reach the ventrals: *anal* elongated, narrow

J. Academy of Natural Sciences of Philadelphia

Ser. 1 Vol 5-6 1825-1830

and straight: *tail* elongated and terminated by a forked fin: *scales* on the body, head, and opercula, corresponding to the size of the fish: *opercula* moderate: *lateral line* straight.

Length about two inches; breadth, two lines.

P. 12. V. 9. D. 10. 2d D. 1. A. 10. C. 12.

Isle of France.

Although the snout of this fish is rather longer than that of the S. *fasciatus*, Risso, and OSMERUS SAURUS, (Lacep. page 235) and the second dorsal fin is truncated, it nevertheless appears to me that it appertains to the genus SAURUS, Cuvier.

Descriptions of some new species of FRESH WATER *and* LAND SHELLS *of the United States. By* THOMAS SAY. *Read May* 3, 1825.

HELIX.

H. *fallax*. Spire convex; volutions five, with elevated lines forming grooves between them: *labrum* reflected, contracting the aperture, bidentate; teeth separated by a profound sinus; superior tooth inflected into the mouth; inferior tooth situated near the base: *labrum* with a large, prominent, oblique, lamelliform tooth, curving downwards so as nearly to reach the termination of the labrum: *umbilicus* open, exhibiting the volutions.

MUSEUM of COMPARATIVE ZOOLOGY

1825 v.5

Greatest transverse diameter $\frac{9}{20}$ of an inch.

This resembles the *tridentata*, Nob. but the upper tooth of the labrum is much inflected, the spire is more elevated, and the size is less considerable; in the former character it coincides with H. *inflecta*, Nob. but that shell has the umbilicus closed.

Presented to the Academy by Messrs. Hyde and Mason, who found it in the vicinity of Philadelphia, where they are not uncommon.

Since the above was written I have received a specimen from Mr. Stephen Elliott, of South Carolina, fully equal in size to the *tridentata*.

2. H. *egena*. *Shell* convex, polished: *whorls* five, not distinctly wrinkled, rounded: *aperture* rather narrow, transverse: *labrum* simple, at its inferior extremity terminating at the centre of the base of the shell: *umbilicus* none, but the umbilical region deeply indented.

Breadth more than $\frac{1}{10}$ of an inch.

This shell was found by Mr. John S. Phillips, on the bank of the Delaware river, about ten miles from Philadelphia. It is much more elevated and not so broad as the H. *arborea*, Nob. the aperture also is of a different shape. It is much broader than the H. *chersina*, Nob.

Bulimus.

B. *multilineatus*. *Shell* conic, not very obviously wrinkled: *whorls* not very convex, yellowish-white, with transverse entire reddish-brown lines; a blackish subsutural revolving line: *suture* not deeply indented, lineolar: *apex* blackish: *umbilicus* small, surrounded by a broad blackish line: *columella* whitish: *labrum* simple, blackish.

Length less than $\frac{7}{10}$ of an inch; greatest breadth less than $\frac{7}{20}$ of an inch.

This species was found by Mr. Titian Peale on the southern part of East Florida.

Pupa.

P. *fallax*. *Shell* turreted, pale horn colour; wrinkles rather obtuse, hardly prominent: *suture* rather deeply impressed: *volutions* nearly seven, a little convex: *apex* somewhat obtuse: *aperture* unarmed, suboval, truncated above by the penultimate whorl, less than $\frac{1}{3}$ the whole length of the shell: *labium* nearly transverse, colour of the exterior part of the shell: *columella* reflected, rectilinear, longitudinal, forming an obvious though a rounded angle with the labrum and labium: *labrum* hardly reflected: *umbilicus* narrow.

Length more than $\frac{3}{10}$ of an inch.

For this species I am indebted to Dr. T. W. Harris of Milton, Massachusetts.

It closely resembles P. *marginata*, Nob. but is much larger, and the labrum is not widely reflected; when viewed in front it has a reflected appearance, but the opposite view presents only a very limited excurvature.

Achatina.

A. *solida*. *Shell* conic, rather elongated, nearly smooth, or with distant wrinkles, polished, yellowish, paler towards the apex, which is white, rather ponderous: *whorls* about seven: *spire* prominent: *mouth* rather small: *labrum* on its inner submargin thickened: *columella* hardly truncated, with a somewhat prominent ridge on the inner side near the base.

Length $2\frac{1}{4}$ inches.

This species was found by Mr. Titian Peale in the southern part of East Florida, where he also obtained the A. *flammigera*, Ferruss. and *vexillum*, Humph. or their analogues, in plenty. In outline it bears some resemblance to Lister's figure 9 of plate 14, but is much smaller. It appears to be rare, but one specimen having been brought home by Mr. Peale.

Lymneus.

1. L. *modicellus*. *Shell* blackish, not elongated: *whorls* rather more than four, convex: *suture* deeply impressed: *apex* acute: *aperture* very regular, the labium and labrum being subequally curved; the fold of the columella rather slight.

Total length $\frac{7}{20}$ of an inch; breadth $\frac{1}{5}$; length of the aperture $\frac{1}{5}$.

Smaller than any of the species I have hitherto described. It was found by Dr. M'Euen at Owego, on the Susquehanna river near the state of New York.

2. L. *obrussus*. *Shell* oblong, rather slender, pale yellowish testaceous: *whorls* five, slightly rounded: *apex* acute: *suture* deeply impressed: *aperture* not dilated, within pure white: *columella* with the sinus of the fold very obvious.

Lister, pl. 114, fig. 8.?

Total length $\frac{9}{20}$ of an inch; aperture $\frac{1}{4}$; breadth nearly $\frac{1}{5}$.

All the individuals that have occurred were covered with an earthy slime. They inhabit a small rivulet below the fish-ponds at Harrowgate, the seat of my friend Mr. J. Gilliams.

3. L. *pinguis*. *Shell* oval, rather ventricose, pale dirty yellowish: *whorls* nearly four, rapidly diminishing to the apex, which is dull fulvous: *suture* moderate: *spire* rather more than half the length of the aperture: *aperture* large: *labrum* with the inner submargin a little thickened.

Total length $\frac{11}{20}$ of an inch; aperture rather more than $\frac{7}{20}$; breadth $\frac{7}{20}$.

Proportionally shorter and much more dilated than other species of the country, with the exception of L. *macrostomos*, Nob. from which it is readily distinguished. It inhabits the Delaware and Schuylkill rivers near Philadelphia, in company with L. *catascopium*, Nob.

4. L. *galbanus*. *Shell* subovate: *whorls* nearly five, very convex: *suture* very deeply impressed:

apex acute: *body whorl* a little flattened in the middle: *aperture* not dilated: *columella* with the sinus of the fold very obvious.

Length $\frac{3}{10}$ of an inch; aperture rather more than half the whole length.

For this shell I am indebted to Mr. Nuttall, who obtained it in a marl pit near Franklin, New Jersey. He considers it fossil, as well as numerous specimens of PLANORBIS *campanulatus*, VALVATA *tricarinata*, and PHYSA *heterostropha*, found with it. I have never seen a recent specimen, but the present corresponds with some individuals belonging to the Philadelphia Museum, also said to be fossil.

PHYSA.

P. *ancillaria*. *Shell* heterostrophe, subglobose, pale yellowish: *whorls* rather more than four, very rapidly attenuated: *spire* truncated, hardly elevated beyond the general curve of the surface: *suture* not impressed: *aperture* but little shorter than the shell, dilated: *labrum* a little thickened on the inner margin.

Length more than $\frac{1}{2}$ an inch.

The spire of this species is unusually short, truncated at tip like the PALUDINA *decisa*, Nob.; and the suture is so inconspicuous as to give rise to the name which I have chosen for it. My brother, B. Say, obtained it in the Delaware river near Easton, and Mr. Jessup collected numerous specimens in the Connecticut river, above Hartford. It may be distinguished from P. *heterostropha*, Nob. by the shorter and truncated spire, inconspicuous suture, as well as by the more obtusely rounded junction of the labrum with the base, and by the general form.

CYCLOSTOMA.

C. *dentata*. *Shell* conic, cylindric, truncate at tip: *whorls* three or four, slightly convex, cancellate with fine, regular, subequal, longitudinal, and transverse elevated lines; superior edge fimbriated with prominences extending over the suture; one or more rufous revolving lines, sometimes obsolete: *labrum* somewhat reflected, white: *umbilicus* distinct.

Length less than $\frac{1}{2}$ an inch.

For this species we are indebted to the researches of Mr. T. Peale in Florida. It is the only true species of CYCLOSTOMA yet found within the limits of the Union. This species is probably somewhat like the TURBO *crenatus*, Linn. but that shell is not said to be truncated at tip, and has a keeled base.

PALUDINA.

P. *subglobosa*. *Shell* subglobose: *whorls* three and a half, much rounded, rapidly enlarging: *suture* profoundly impressed: *aperture* subovate: *umbilicus* very narrow, nearly closed by the labrum: *spire* very short, convex.

Inhabits the north-western Territory.

Length less than $\frac{3}{10}$ of an inch.

I obtained this shell when traversing the north-western part of the Union. It is much larger than the *porata*, Nob. which it resembles considerably, but its whorls are much more rapidly enlarged, and the umbilicus is much narrower.

Melania.

1. M. *simplex*. *Shell* conic, blackish, rather rapidly attenuated to an acute apex: *suture* not deeply impressed: *volutions* about eight, but little rounded: *aperture* longitudinal; within dull reddish: *labrum* with the edge not undulated, or but very slightly and obtusely so near the superior termination.

Length $\frac{3}{5}$ of an inch; greatest breadth $\frac{3}{10}$.

For this species we are indebted to Professor Vanuxem, who presented several specimens to the Academy. He informs me that he obtained them in Virginia, in a stream running from Abingdon to the Salt Works, and from the stream on which General Preston's grist-mill is situated, near the Salt works, as well as in a brook running through the salt water valley, and discharging into the Holstein river. Near the summit the whorls are marked by an elevated line near their bases.

It cannot be mistaken for the *conica*, Nob. for in that species the aperture is obviously oblique.

2. M. *proxima*. *Shell* conic, rather slender, black, gradually attenuated to the truncated apex: *suture* moderately impressed: *aperture* longitudinal, within milk white: *labrum* with the edge not undulated, or but very slightly, and obtusely so near the superior termination.

Length to the truncated apex, nearly $\frac{3}{5}$; greatest breadth less than $\frac{1}{4}$ of an inch.

Professor Vanuxem obtained this species in a small brook which discharges into the Catawba river, near Landsford, Chester district, South Carolina, and also in the warm springs, Buncombe county, North Carolina, and in the French Broad river, of the same county. It resembles the preceding very closely, but is decidedly more slender, and like that shell it has two elevated lines on the inferior margin of the terminal whorls. The interior of the aperture in many specimens is of a dull reddish colour, and in some the same part exhibits the appearance of two or three obsolete bands. Another variety, which Mr. Vanuxem obtained from a limestone spring near Broad river, Spartanburg district, South Carolina, is of a pale horn colour. In a stream of the Saluda range of mountains near Mill Gap, in Rutherford county, he found another variety of a somewhat smaller size, tinged with reddish-brown, and generally distinctly banded within the aperture; one of these specimens is very remarkably truncated, presenting only about one whorl and a quarter. The same variety also inhabits a brook near the Table rock. A variety which seems to differ from the latter only in size, was found by Mr. Vanuxem near Douthard's gap, of the Saluda mountains; the largest specimen he sent from that locality is only about $\frac{3}{10}$ of an inch long.

3. M. *subglobosa*. *Shell* subglobose, brownish horn colour: *spire* but little elevated, not half the length of the aperture: *volutions* about four: *aperture* rounded, nearly as broad as long; within more or less tinged with dull red: *labium* a little flattened.

Length $\frac{3}{5}$ of an inch; greatest breadth $\frac{11}{20}$ of an inch.

Professor Vanuxem found this curious shell in the north fork of the Holstein river, Virginia, where they are extremely abundant. In the old shells the surface, and particularly that of the spire, is considerably corroded, presenting the appearance of having received a fortuitous deposition of calcareous matter. This corrosion, however, does not extend to the destruction of any of the whorls, as is the case with many shells, but its effects seem to be confined to the exterior. It is a second species of my proposed genus ANCULOTUS.

All the striæ of the operculum are concentric to the superior angle.

PIRENA.

P. *scalariformis*. *Shell* turreted, gradually tapering to the apex, which is acute: *whorls* rounded, crossed by numerous elevated, regular lines, which, on the body whorl, are terminated near the base by five or six more or less profound revolving grooves; *suture* pretty deeply impressed, with generally one of the grooves above it, so as to appear double: *colour* pale, with several revolving reddish-brown lines;

aperture rounded: *labrum* thickened, somewhat recurved; a slight but very obvious sinus at base, and another very slight, more obtuse one near the junction with the preceding whorl: *umbilicus* none.

Length $\frac{9}{10}$ of an inch.

Mr. Titian Peale found this handsome and curious shell in great abundance in the fresh water lakes of the Florida Keys. It is most certainly a fresh water shell, yet it is destitute of an epidermis. The labrum thickens with age; the operculum is orbicular, and so small as to admit of the animal retiring one half the length of the shell. It differs from MELANIA, MELANOPSIS, and PIRENA, in the rotundity of the aperture, the thickened labrum, and comparative smallness of the operculum.

The tentacula of the animal are two in number, and the eyes are placed a little above their exterior base.

FUSUS.

F. *fluvialis*. *Shell* fusiform, olive-green or brownish: *spire* much elevated, gradually tapering: *volutions* nearly six, wrinkled across, and with a series of elevated undulations on the middle: *suture* consisting only of an impressed line: *aperture* somewhat fusiform; within whitish, more or less with dull reddish, and with several lines of that colour, sometimes confluent: *labrum* on the inner margin immaculate, edge undulated: *canal* rounded at tip: *columella* very concave.

Length 1 $\frac{8}{10}$ inches; aperture $\frac{19}{20}$ of an inch; greatest breadth $\frac{19}{20}$ of an inch.

Professor Vanuxem found this curious and highly interesting shell on the north fork of the Holstein river, near the confluence of a brook of salt water. From the name of the genus it might reasonably be supposed to be a marine shell, but it has never been discovered on the coast, and seems to be limited to a very small district of the Holstein river, in company with UNIO *cariosus, subtentus*, nobis, MELANIA *subglobosa*, nobis, and no doubt other fluviatile shells. When the inhabitant becomes known it may authorize the formation of a new genus, but there appears no characters in the conformation of the shell that would readily distinguish it from FUSUS.

UNIO.

U. *subtentus.* Oblong-oval, subcompressed, slightly contracted at the middle of the base, dull yellowish brown: *beaks* not prominent, decorticated; dorsal edge regularly arcuated, without any appearance of an angle; anterior margin with numerous slightly reflected ribs.

Breadth 3 $\frac{1}{3}$ inches; length more than 1 $\frac{1}{3}$ inches.

This species was found by Professor Vanuxem in the north fork of the Holstein river, in company with U. *cariosus*, nobis, MELANIA *subglobosa*, nobis, and FUSUS *fluvialis*, nobis.

In consequence of the ribbed appearance of the anterior margin of the shell, it has much similarity

to an ALASMODON, but the lamelliform teeth are prominent and distinct.

ALASMODONTA.

A. *ambigua.* *Shell* transversely oblong-oval; somewhat inflated, rather thin, dusky, wrinkled; anterior and posterior margins almost equally rounded: *hinge margin* parallel with the base; basal margin a little compressed in the middle: *beaks* not prominent, approximate, their surface slightly undulated; a very obtuse, hardly elevated undulation extends from the beaks to the junction of the basal and anterior margins: *hinge* with very small, obsolete primary teeth: *within* somewhat iridescent; posterior and basal portion milk-white; hinge cavity brownish.

Breadth 1 $\frac{4}{5}$ inches; length $\frac{4}{5}$ nearly.

This is one of the many fine shells which I obtained in the north-western territory, when travelling with major Long's party. It forms a link between the genera ALASMODONTA and ANODONTA. When young the primary teeth are obvious, but when the shell arrives at the full growth the teeth are obsolete. and in some instances, not at all visible.