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(TO BE CONTINUED QUARTERLY.)

NEW HAVEN:

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tate to admit a *possible* error of more than 10' independent of local attraction, and this cause might easily increase the error to a half degree. I do not see how Prof. Locke can refuse his assent to this, after publishing the dip at Cincinnati to be in Nov. 1837, $70^{\circ} 45'.7$, and in April, 1840, writes, "I have lately found the dip at Cincinnati to vary between $70^{\circ} 25'$ and $70^{\circ} 29'$," and yet in his last article he assigns 0'.86 as the *limit* of instrumental error. As for the errors of my own observations, given on page 87, I have twice observed the dip at Cleveland, on two opposite sides of the city, and in both instances have obtained a result greater than was to have been expected from its geographical position. The other three observations were in Michigan, where I was told iron ore was quite abundant.

ART. IX.—*Description of some new species of Fossil Shells, from the Eocene, at Claiborne, Alabama; by HENRY C. LEA. Philadelphia, Oct. 17, 1840.*

It has long been a desideratum to the American geologist, to have the fossils of the widely extended beds of the tertiary formation of this country, accurately described, and compared with those of a similar date in Europe. The works of my father, Mr. Conrad, and other geologists, have done much to effect this, but there are, still, no doubt, many undescribed species remaining. The following descriptions of species, which the author presumes to be new, are as exact as he was able to make them, as he frequently labored under the disadvantage of having but one specimen of a shell, and that one often fractured. They were mostly obtained from a box of sand from the tertiary deposit at Claiborne, which my father has identified with the London clay, or calcaire grossiere of European geologists. The author hopes that his descriptions are sufficiently clear and minute to determine the species permanently.

FAMILY MELANIANA.

GENUS PASITHEA.—*Lea.*

P. minima. Pl. 1, fig. 1.

P. testâ subulatâ, imperforatâ, politâ, tenuissimâ; apice obtusâ; suturis minimis; anfractibus —, planulatis; columellâ lævi; aperturâ ovatâ.

GENUS VOLUTA.—*Linnaeus*.

V. dubia. Pl. 1, fig. 23.

V. testâ fusiformi, crassâ, longitudinaliter sulcatâ, striis transversis minimis; spirâ valdè elevatâ, mammillatâ; anfractibus septenis, planulatis: suturis minimis; columellâ quadriplicatâ; plicis inferioribus æqualibus superioribus; aperturâ angustâ.

Shell fusiform, thick, with very small transverse lines, longitudinally sulcate: spire very elevated, mammillate; whorls seven, flat; sutures very small; columella with four folds, the lower ones equal to the upper ones; mouth narrow.

Length .7. Breadth .35 of an inch.

Remarks.—The sulcations become more strongly marked upon the last whorl. It is with some doubt, that I place this singular shell among the *Volutæ*, to which genus, however, it seems to belong, from its mammillated apex; its general form, however, is that of a *Mitra*, while the folds on the columella are between the two, being all equal.* The mouth is only half as long as the shell, instead of extending nearly from the apex to the base, as in most *Volutæ*. Mr. Conrad has described two species of *Mitra* from Claiborne, the *M. pacilis* and *M. bolaris*, which, as they have mammillated spires, seem to me rather to belong to the *Volutæ*.

FAMILY CONVOLUTA.

GENUS CONUS.—*Linnæus*.

C. parvus. Pl. 1, fig. 24.

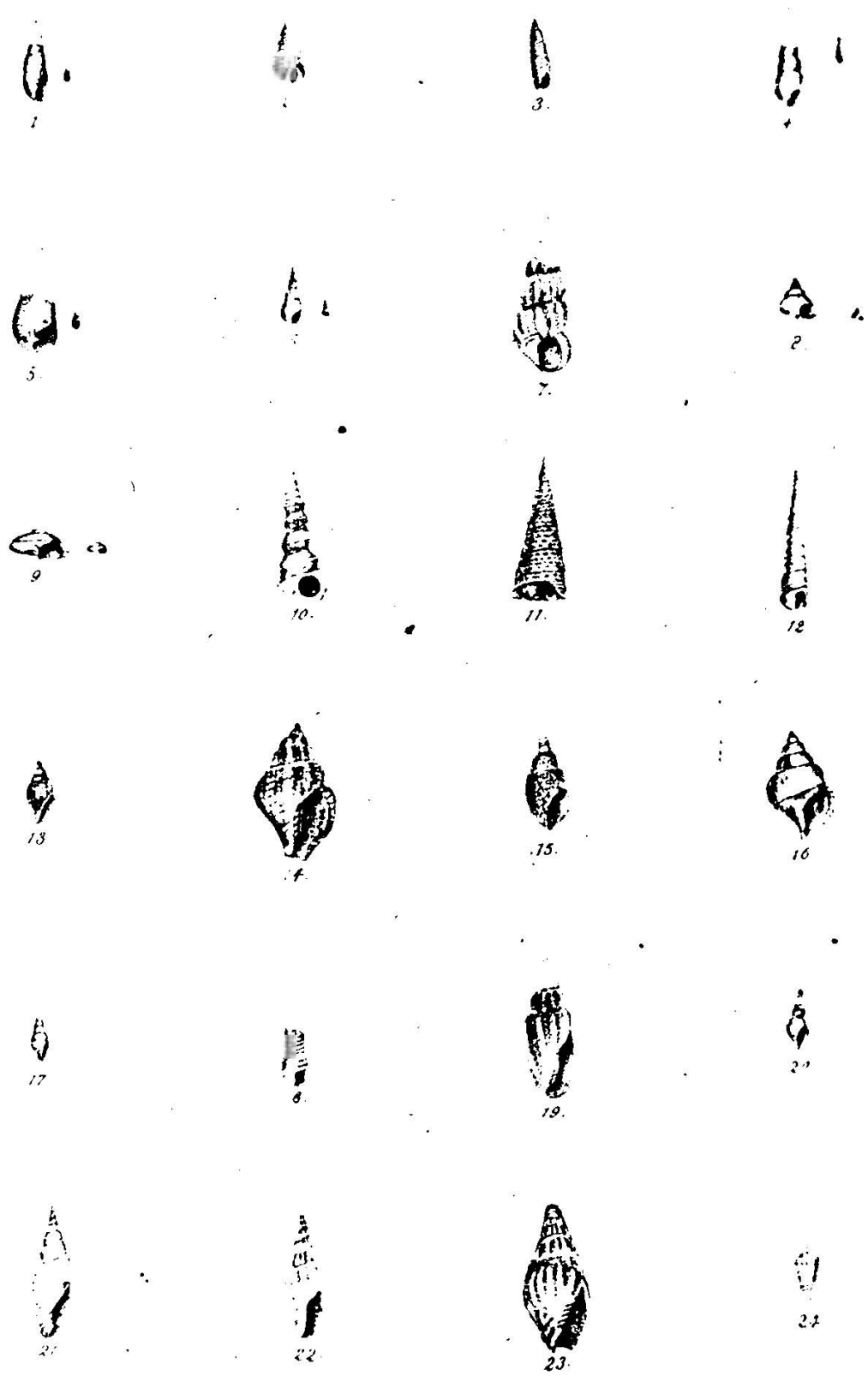
C. testâ conicâ, lævi, politâ, crassâ; anfractibus —, planulatis, supernè et transversè striatis, longitudinaliter et obliquè plicatis infra angulatum; suturis parvis; basi striatâ; aperturâ angustissima.

Shell conical, smooth, polished, thick; whorls —, flat, transversely striate above, longitudinally and obliquely folded below the angle; sutures small; base striated; mouth very narrow.

Length —. Breadth .12 of an inch.

Remarks.—This little shell has nothing remarkable about it, except its folds near the shoulder, which, together with its small size, distinguish it from the *C. sauridens* of Conrad.

* The distinction between *Mitra* and *Voluta* is thus drawn by Lamarck, *Animaux sans Vert.* Vol. VII, part 1, p. 323. "C'est avec les Mitres que les Volutes ont le plus de rapports; mais elles en sont éminemment distinguées: 1, par les plis de leur columelle dont les inférieurs sont les plus gros et les plus obliques; 2, par l'extrémité de leur spire qui est obtuse ou en mammelon."



1. <i>Pasilica minima.</i>	9. <i>Trachus planulatus.</i>	17. <i>Buccinum parvum.</i>
2. " <i>cancellata.</i>	10. <i>Turritella carinata.</i>	18. <i>Terebra constricta.</i>
3. " <i>elegans.</i>	11. " <i>montifera.</i>	19. <i>" multiplicata.</i>
4. <i>Helix lucis.</i>	12. " <i>gracilis.</i>	20. <i>Mitra gracilis.</i>
5. " <i>magniplicatus.</i>	13. <i>Pleurolema cancellata.</i>	21. " <i>eburnea.</i>
6. <i>Strophomena elegans.</i>	14. <i>Trochostoma fusoides.</i>	22. " <i>elegans.</i>
7. " <i>reusta.</i>	15. <i>Cancellaria pulcherrima.</i>	23. <i>Volula dubia.</i>
8. <i>Tridacna parvus.</i>	16. <i>Triton pyramidatum.</i>	24. <i>Cerata parvus.</i>