

NEW AND OTHERWISE INTERESTING TERTIARY MOLLUSCA
FROM TEXAS.

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While employed as Tertiary paleontologist to the Geological Survey of Texas during the years 1892 and 1893, the writer prepared a large monograph on the Tertiary mollusca of the State with the intention of publishing it in the 5th Annual Report of that Survey. For want of funds the printing of this report has been indefinitely postponed, and accordingly the following facts and descriptions of new species, taken from the monograph in question, have here found an appropriate place for publication.

The points in stratigraphy brought out by the study of the various Tertiary faunas of the State have been included with other matter in an article published by the State Geologist in the Journal of Geology, 1894, p. 549.

Suffice it to say here that the Midway stage, so well developed in Georgia and Alabama and known also in Mississippi and Arkansas, exists also in Texas, as is proved by the occurrence of such species as *Enclimatoceras ulrichi*, *Ostrea pulaskensis*, *Cucullæa macrodonta*, *Volutilithes limopsis* and others.

The Lignitic stage, so far as has been observed, is destitute of molluscan remains. The exposure on Brazos River, known as "Smiley's Bluff," two miles above the mouth of Pond Creek, is evidently about synchronous with the Matthews Landing beds of Alabama. These are now included in the Midway stage.

The Lower Claiborne beds are replete with fossils, many of which are common to this horizon in Louisiana, Mississippi, Alabama, and South Carolina. Besides these well-known forms there are many new ones, some of which are described below.

The true Claiborne, the Jackson, and the Vicksburg stages seem to have no representatives in Texas. This fact cannot be too strongly emphasized since most writers on Texas geology have referred certain fossil bearing outcrops to some of these upper Eocene stages.

Aldrich and Meyer as "*T. divisura* Con., var." They give as localities, Claiborne and Lisbon, Ala.; Wautubbee and Newton, Miss.; Wheelock, Tex.

Geological horizon.—Lower Claiborne Eocene.

Type.—Texas State Museum.

Terebra houstonia nov. sp. Pl. 3, fig. 11, and Pl. 4, fig. 1.

T. polygyra Heilp. (*non* Con.), Coll. U. S. Nat. Mus.

T. vetusta Heilp. (*non* Lea), Proc. Ac. Nat. Sci. Phila., 1890, p. 398.

T. vetusta Gregorio, Mon. Faun. Eoc. de l'Ala., pl. 1, figs. 40, 41.

Specific characterization.—Size and general form as indicated in the figure; whorls 12 or 13, longitudinally ribbed, the ribbing being much coarser in the upper part of the shell than in the lower; suture margined below by an obscurely impressed revolving line; columella straight, smooth, tapering rapidly.

This species is characterized at once by the height of its whorls in comparison to their respective diameters, the bulging sides of the whorls, the irregularities of the ribbing, and the straight, smooth columella.

Localities.—Smithville, Bastrop Co.; near McBee's school-house, Cherokee Co.; Little Brazos River, near iron bridge, on Mosley's Ferry road; Cedar Creek, Wheelock League, Robertson Co.; Elm Creek, Lee Co.; near Crockett and 2 miles west of Crockett, Houston Co.; Collard's farm, Sparks' Headright, Brazos Co.; Arnold's Ranch, Frio Co.; southeast of Campbellton, just south of Lipan Creek, Atascosa Co. Also in Claiborne, Webb, and Bienville Parishes, La.; 2 miles east of Newton, Miss.; Claiborne, Ala.; 2 miles west of Orangeburg, S. C.

Geological horizon.—Lower Claiborne Eocene.

Type.—Texas State Museum.

Genus CONUS.

Conus smithvillensis nov. sp. Pl. 4, fig. 2.

Specific characterization.—General form as figured; whorls about 12; smaller spiral whorls costate or crenulate; penultimate whorl smooth; body whorl smooth, except about 12 revolving lines at base.

This species bears much resemblance to the figure given in Proc. Ac. Nat. Sci. Phila., 1879, pl. 13, fig. 8, of "*Conus*" *pulcherrimus* Heilp., but upon examining the type of this species now in the Amer. Mus. Nat. Hist., N. Y. City, it was found to be, as already

stated by Meyer, a Pleurotomoid shell. *C. parvus* of H. C. Lea is evidently the young of *sauridens* Con.

Locality.—Smithville, Bastrop Co., Tex.

Type.—Texas State Museum.

Genus PLEUROTOMA.

Pleurotoma enstricrina nov. sp. Pl. 4, fig. 3.

Specific characterization.—General form and size as indicated by the figure; whorls 10; nuclear whorls 1, 2, 3, 4 smooth, 5 costate, whorls 6, 7, 8, 9 ornamented by (a) a crenulated narrow band below the suture, (b) a narrow concave space in which there are two or three fine but distinct spiral striae, (c) a broad costate band, (d) a spiral line or two, body whorl marked below the costate band by coarse spiral lines and with more or less apparent lines of growth.

Locality.—Smithville, Bastrop Co., Tex.

Geological horizon.—Lower Claiborne Eocene.

Figured Type.—Texas State Museum.

Pl. (*Pleurotomella*) *anacona* nov. sp. Pl. 4, fig. 4.

Specific characterization.—General form as figured; whorls 8; 1 nearly or quite smooth; 2, 3, 4, 5, 6 with (a) a broad slightly concave band showing very faint spiral striae and a deep retral curve in the longitudinal striae, (b) a slight basal carina with two or three strong spiral lines and rather faint, slightly oblique nodules; body whorl with more or less alternating coarse and fine spiral lines from the nodose carina to the end of the beak.

Localities.—Well at Elgin, northeast corner of Bastrop County; Smiley's Bluff, Brazos River, 2 miles above Pond Creek, and perhaps on Rocky Cedar Creek, 5 miles west of Elmo.

Geological horizon.—Midway Eocene.

Type.—Texas State Museum.

Pl. (*Surcula*) *gabbi* Con. Pl. 4, fig. 5.

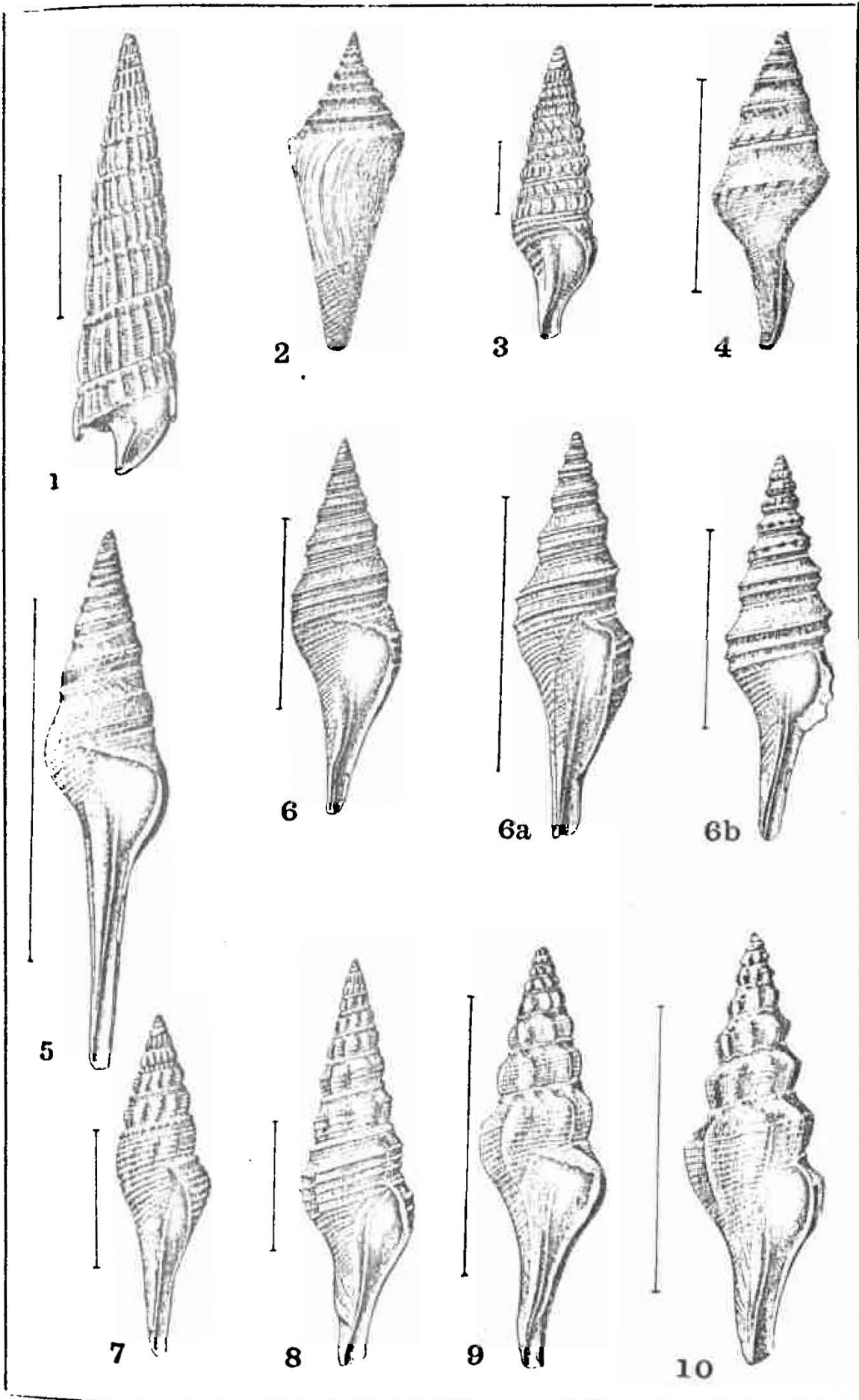
Surcula gabbi Con., Am. Jour. Conch., vol. 1, 1865, p. 142, pl. 11, fig. 5.

Pleurotoma platyzona Heilpr., Proc. U. S. Nat. Mus., 1880, p. 150, fig. 3.

Pleurotoma alveata Con., Coll. Ac. Nat. Sci. Phila.

In adult specimens there are 12 whorls; of the 5 nuclear, 1, 2, and 3 are smooth, while 4 and 5 are prominently costate. Heilprin's *platyzona* is an eroded specimen of this species.

This is one of the commonest fossils in the Texan Lower Claiborne Eocene and is specially abundant in Bastrop, Burleson, Lee and Houston Counties.



HARRIS, TERTIARY MOLLUSCA OF TEXAS.

