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Contributions to the Tertiary Paleontology of Northern Peru: Part 3, Eocene Mollusca

By A. A. OLSSON

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Harris Co., Ithaca, N. Y. U. S. A.

Family CONIDAE Adams Genus CONUS Linné

Conus chiraensis, n. sp.

Plate 5, figs. 1, 2, 4, 10.

Shell small or medium-size; in porportions the height approximately twice the diameter; the spire is flat to slightly elevated or conic; shells with a flat spire, have a higher, projecting tip, formed of the nuclear and early post-nuclear whorls; in the higher spired forms, the outline of the spire is low, conic with a higher, projecting nuclear tip; sides of last whorl straight; shoulder of the body-whorl is sharply angled, below which the upper face of the whorl is usually feebly rounded or beveled; post-nuclear whorls about 8, with concave spire faces, lying between the high, ridge-like, peripheral edge of the whorl and the inner sutures; this concave zone sculptured with about 4 low, broad spirals and finer transverse (radial) lines; surface of the whorl below the shoulder is smooth, polished except for growth lines and feeble, irregular spirals on the anterior canal, the growth lines are straight below, curving above to the right and deeply retracted at the shoulder; anterior canal with 12 or more feeble, irregular spiral threads; aperture long, narrow.

Height 39mm. (broken); diameter 31mm.

45mm.;

28mm.

32mm. (broken);

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Remarks.—The distinguishing characteristics of this Cone are the straight smooth sides, feebly sculptured with revolving spirals about the anterior canal; the spirally-sculptured spire whorls; and strong'y retracted growth lines at the sharp shoulder angle. The flat spired shells illustrated by figure 2 is selected as the typical form. This is the dominant form in the older beds first appearing in the basal Talara of Yasila and Cunas de Jaquey near Paita. The higher spired form illustrated by figure 1 is the common Oligocene variety, but all gradations occur between it and the flat-spired form.

This species resembles the *Conus planiceps* Heilprin from the Tampa Silex beds of Florida as figured by Dall³² and the two species have probably a common ancestor. The *Conus sauridens* Conrad from the Jackson Eocene and *C. alveatus* Conrad from Vicksburg belong to the same group, but both species have the spire-whorls more concave.

Locality and Geologic Occurrence.—Talara formation, Yasila and Jaquey de Cunas. Saman formation, Lagunitas, Casa Saman. Chira formation, near Casa Saman, Quercotilla. Mancora formation, Que. Charanal.

Conus peruvianus, n. sp.

Plate 5, figs. 13, 14, 15.

Shell small with moderately high spire, straight sides and generally noded shoulder angle; whorls 8 or more, forming a moderately high, conic spire whose height is approximately ¼th the full length; sutures close, distinct, situated slightly below the edge of the spire-whorls; the upper surface of the spire-whorls is flat to slightly concave, sculptured simply by the strongly curved growth-lines; the shoulder of the last whorl is strongly angled smooth or noded; the spire-whorls are coarsely noded, just above the lower suture, there being on an average about 16 nodes to a volution of a later turn; upper 2/3rds of the surface of last whorl smooth, with 8 or 9 wide spiral bands on the anterior canal.

Height 21mm.; diameter 9.5mm.; aperture 15mm.

Remarks.—The noding of the shoulder angle is a variable feature some shells remaining coarsely noded throughout life while in others the shoulder angle becomes sharp and smooth on the later turns. There are several small, noded Cones which distantly resemble peruvianus, Conus remondi Gabb from the Tejon Eocene of California, according to Stewart's³³ figure is a smaller species with more numerous (22) shoulder nodes. Conus parvus Lea from the Claiborne sands differs in having the upper surface of the spire-whorls finely spirally sculptured. In the Parisian Eocene, peruvianus finds its closest parallel with Conus parisiensis Desh.

Locality and Geologic Occurrence.—Talara formation, Yasila.

Superfamily RACHIGLOSSA Family OLIVIDAE d'Orbigny Genus OLIVA Martyn Subgenus OLIVA, s. s.

Oliva misti, n. sp.,

Plate 6, figs. 2, 6, 8, 11, 12.

Shell small, stout; nucleus pointed; subsequent whorls 5 or 6,

³²Dall, 1915, Bull. 90, U. S. Nat. Museum, p. 37, pl. 61, figs. 1, 2.
 ³³Stewart 1926, Proc. Acad. Nat. Sci. Phila., vol. 78, p. 414, pl. 29, fig. 15.

EXPLANATION OF PLATE 5

1.	Conus chiraensis, n. sp.	39
•	Cotype, height 40 mm.	
	Chira Shales.	
2.	Conus chiraensis, n. sp.	39
	Holotype, height 46 mm.	
	Chira Shales.	
3.	Natica (Nerinatica) paytensis, n. sp.	68
	Cotype, spire view, greater diameter 20 mm.	
	Yasila.	
4.	Conus chiraensis, n. sp.	39
	Cotype, height 28 mm.	
	Talara form. Yaslia.	
5.	Terebra (Strioterebrum) negritensis, n. sp.	28
	Holotype, length 14.5 mm.	
	Talara form. Negritos.	
6.	Natica (Nerinatica) paytensis, n. sp.	68
	Cotype, front view showing aperture and parietal callus	
	Greater diameter 13.5 mm.	
	Yasila.	
7.	Natica (Nerinatica) paytensis, n. sp.	68
	Cotype, spire view, greater diameter 13.5 mm.	
8.	Terebra (Strioterebrum) negritensis, n. sp.	28
	Fragmentary specimen, length 8.25 mm.	
	Negritos.	
9.	Natica (Nerinatica) paytensis, n. sp.	68
*	Apertural view, greater diameter 11.25 mm.	
	Yasila.	
10.		39
	View of sculptured spire-whorls. Same specimen as figure 1.	
	Diameter 31 mm.	
11.		
	Cotype, greater diameter 11.5 mm. Natica (Nerinatica) paytensis, n. sp.	
12.	Natica (Nermatica) paytensis, n. sp.	68
	Holotype, greater diameter 12.5 mm.	
	Basal view, note superior position of umbilical rib.	
	Yasila.	
13.		40
	Holotype, length 21.5 mm. Yasila.	
1 1		40
14.	Cotype, height 19.5 mm.	41
	Yasila.	
15.		40
10.	Cotype, height 13.5 mm.	T(
	Yasila.	
16.		25
-0.	Fragmentary shell, length 7.5 mm.	
	Negritos.	
17.	Amphiperas bullen-newtoni, n. sp.	68
	Ventral view of Holotype, length 10 mm.	
	Yasila.	
18.	Amphiperas bullen-newtoni, n. sp.	68
	Dorsal view of Holotype, length 10 mm.	
	Yasila.	

