

## Class PELECYPODA

## Unidentified pelecypods

Most of the unidentified pelecypods are molds, although some bear traces of shell material. Molds of paired valves are especially common in the Santa Margarita Formation. At locality 298, the molds have been phosphatized.

Subclass CRYPTODONTA  
Order NUCULOIDA  
Family Nuculidae

Genus *Acila* H. and A. Adams, 1858

*Acila* sp.

Only a single, poorly preserved, unbroken valve of *Acila* sp. was found. The genus *Acila* was not reported from the Vaqueros Formation by Loel and Corey (1932).

Subclass PTERIOMORPHA  
Order ARCOIDA  
Family Arcidae

Genus *Anadara* Gray, 1847

*Anadara santana* Loel and Corey  
Pl. 3, fig. 1

*Anadara santana* Loel and Corey, 1932, p. 185, pl. 8, figs. 1a-1c, 2, 3a, 3b.

Nearly all specimens of *Anadara santana* are poorly preserved, broken, single valves, but one exceptional articulated specimen (Pl. 3, fig. 1) shows details of the surface sculpture. *A. santana* was not reported by Loel and Corey (1932) as occurring in the Sespe Creek region.

*Anadara* cf. *A. microdonta* (Conrad)  
Pl. 3, fig. 2

*Arca microdonta* Conrad, 1855, p. 13.

*Anadara* (*Anadara*?) *microdonta* (Conrad). Reinhart, 1943, p. 46-47, pl. 6, figs. 9, 10.

Of the four specimens found, three are fragments of valves and the other is articulated, but has shell material on only one of the valves. Although preservation is poor, tentative assignment to *Anadara microdonta* is based on the size, anterior position of the beaks, and the lack of grooves on the 26 ribs. The only specimen known to Reinhart (1943) was the holotype, which was supposedly collected from California.

*Anadara* sp.

Most of the specimens consist of molds which show impressions of the radial ribbing. Although species identification is not possible, some specimens at localities 287 and 294 show impressions of ribs that are longitudinally grooved.

Order MYTILOIDA  
Family Mytilidae

Unidentified mytilid

Unidentified mytilid specimens are mostly inter-

Plate 2. *Ostrea howelli* Wiedey from the middle member of the Vaqueros Formation. Plate illustrates variation in the species. (Figures are x0.7 natural size.)

Figure 1--Exterior of left (lower) valve, showing many, prominent, elevated ribs, hypotype UCLA 58198, CSUN loc. 39; 2--Exterior of left valve, hypotype UCLA 58193, CSUN loc. 32; 3--Exterior of left valve, showing few, prominent, elevated ribs, hypotype UCLA 58192, CSUN loc. 29; 4--Exterior of left valve, showing many, prominent, elevated ribs, hypotype UCLA 58195, CSUN loc. 32; 5--Exterior of right (upper) valve, showing few, low, broadly rounded ribs, hypotype UCLA 58202, CSUN loc. 52; 6--Exterior of left valve, showing few, prominent, elevated ribs, hypotype UCLA 58194, CSUN loc. 32. = LACMIP 16302

nal molds, but a few have small patches of shell material; a few are crushed and the others are fragments of single or paired valves.

Genus *Mytilus* Linnaeus, 1758

*Mytilus* sp.  
Pl. 1, fig. 7

At localities 10, 50, and 412, specimens of *Mytilus* sp. are internal molds of paired valves, the largest being the figured specimen. At locality 168, specimens are internal molds of single, mostly broken valves. Preservation of the distinctive beak areas is good enough in these specimens to allow identification as *Mytilus* rather than *Modiolus*.

Order PTERIOIDA  
Family Ostreidae

Genus *Crassostrea* Sacco, 1897

*Crassostrea titan* (Conrad)

*Ostrea titan* Conrad, 1853, p. 199-200.

*Ostrea* (*Crassostrea*) *titan* Conrad. Dall, 1909, p. 111.

*Crassostrea titan* typically occurs in distinct beds up to 1 m thick in which many specimens are articulated and in vertically oriented *in situ* clusters. Less closely spaced *in situ* specimens and disarticulated valves in horizontal position also occur. *C. titan* valves commonly bear attached *Balanus* sp. specimens.

Genus *Ostrea* Linnaeus, 1758

The following three species of *Ostrea* seem to represent an evolutionary lineage in the Sespe Creek area. *Ostrea howelli* occurs only in the lower and lower middle members of the Vaqueros Formation. *O. eldridgei ynezana* occurs in a few places in association with *O. howelli* in the lower middle member, but alone in the upper middle member. *O. eldridgei* is restricted to the upper member of the Vaqueros. Whether this apparent evolutionary line is truly biological or whether separate and already existing species were introduced as the environment changed is unknown.

Shells of the genera *Ostrea* and *Crassostrea* are not easily distinguished. One of the easier methods is by the respective presence or absence of chomata. Many specimens of *O. howelli* have the chomata (Pl. 3, figs. 3, 4) and are correctly