

identified as *Glycymeris (Glycymerita) veatchii* (GABB, 1864). Specimens are abundant at most Bell and Dayton Canyon fossil localities; at some they are mainly large, at others nearly all small (UCLA loc. 6232). Whether this reflects ecologic conditions or results from current sorting is not at present determined. Ribs on *Glycymeris* from Lang Ranch localities and UCLA loc. 1600 are slightly tri-angulate with the sharp central angle highest until the shell reaches a height of about 30 mm. The ribs then become more rounded but remain narrow with respect to the interspaces. These specimens are identified as *Glycymeris (Glycymerita?) banosensis* ANDERSON, 1958, a species described from the Moreno Formation of Los Baños Creek, Merced Co. At its type locality *G. (G.?) banosensis* is probably more nearly of mid Maestrichtian age rather than early Maestrichtian as at Lang Ranch, Ventura Co.

MYTILOIDA

A few mytilids (MYTILIDAE), belonging to several genera, are in the collections. They are not a major element in these faunas. One fragment of a *Pinna?* (PINNIDAE) has been found at CIT loc. 1537.

PTEROIDA

Except for INOCERAMIDAE and ANOMIIDAE this order is poorly represented in the Simi Hills Cretaceous rocks. *Inoceramus* is common to abundant in Dayton Canyon localities, but Bell Canyon and Lang Ranch localities are deficient in INOCERAMIDAE. Matsumoto (1960, p. 68) identified Dayton Canyon *Inoceramus* as *I. cf. I. subundatus* MEEK, 1861. A shell fragment that may have been part of a large *Inoceramus* sp. is from UCLA loc. 6020A; it is thus far the only Bell Canyon inoceramid.

All ANOMIIDAE have been ascribed to *Anomia* sp.; specimens are common only from CIT loc. 1537, but this may be an artifact of preservation or preparer's preference.

LIMIIDAE is possibly represented by one incomplete specimen from UCLA loc. 6931.

"Oyster" fragments are referred to OSTREIDAE because of their shell texture and amorphous shape. Except for those from UCLA loc. 6932 all were relatively thin-shelled, small forms, not especially indicative of shallow water. Fragments from UCLA loc. 6932, however, are of a thick-shelled type with a strongly angled shape. Such a form suggests a very shallow water habitat.

TRIGONIOIDA

TRIGONIIDAE are present in collections from Bell and Dayton Canyons but, thus far, absent from those from Lang Ranch. *Pterotrigonia evansana* (MEEK, 1858) is present in both Bell and Dayton Canyon beds. The largest specimens are from Bell Canyon, the greater abundance of specimens is from Dayton Canyon. The absence of this species from Lang Ranch is probably not of time significance as it is present in the Jalama Formation, Santa Ynez Mts., Santa Barbara Co., but may instead suggest unstable bottom conditions. Two specimens of *Yaardia robusta* SAUL, 1978 (pl. 2, fig. 11), have been found at CIT loc. 1159, and a juvenile probably of this species was collected at CIT loc. 1538. As *Yaardia* spp. appear to have had a shallow, sublittoral habitat (Saul, 1978, p. 16), its scarcity in the Simi Hills deposits favors the

Plate 2.-- Bivalves from the Chatsworth Formation

[All figures natural size unless otherwise indicated.]

- 1-2. *Crassatella* (?) n. sp. near *C. (?) elongata* ANDERSON, 1958, right valve. UCLA 59208. CIT loc. 1157, Bell Canyon; late mid Campanian
- 3, 5. *Crassatella* (?) *elongata* ANDERSON, 1958, right valve. UCLA 59209. CIT loc. 1159, Dayton Canyon; late Campanian
4. *Crassatella* (?) *elongata* ANDERSON, 1958, left valve. UCLA 59210. CIT loc. 1159, Dayton Canyon; late Campanian
- 6, 8. *Crassatella* (?) *lomana* (COOPER, 1894), left valve, UCLA 59080. UCLA loc. 3339, Lang Ranch; early Maestrichtian. 8. x.75; photo by T. Susuki
7. *Cymbophora suciensis* (WHITEAVES, 1879), left valve. UCLA 59211. CIT loc. 1158, Bell Canyon; late mid Campanian
9. *Cymbophora triangulata* (WARING, 1917), left valve. UCLA 59212. CIT loc. 1159, Dayton Canyon; late Campanian
10. *Cymbophora* n. sp., right valve. UCLA 59213. UCLA loc. 3812, Lang Ranch; early Maestrichtian
11. *Yaardia robusta* SAUL, 1978, left valve, x.56. UCLA 38634. CIT loc. 1159, Dayton Canyon; late Campanian
12. *Calva bowersiana* (COOPER, 1894), left valve. UCLA 59214. CIT loc. 1159, Dayton Canyon, late Campanian

deeper, inner sublittoral, stable shelf interpretation for the fauna in general.

VENEROIDA

One species of ASTARTIDAE, *Eriphyla veatchii* (GABB, 1864), has been found in the Chatsworth Fm. It is common at Bell Canyon localities CIT loc. 1158 and UCLA loc. 6020, and one doubtfully identified specimen is in the collection from Dayton Canyon, CIT loc. 1537. Characteristics of West Coast *Eriphyla* spp. have not been well delimited, and the species have been haphazardly identified. Therefore stratigraphic occurrence and time ranges of species are not determined. Most occurrences of *Eriphyla* spp. are in fine-grained sediments (it is present in the Holz Shale, Santa Ana Mts., Orange Co.,) and the matrix at CIT loc. 1158 and UCLA loc. 6020 is a very poorly sorted sandstone with a high clay content.

Three lineages of CRASSATELLIDAE are present in the Chatsworth Formation (Table 1). All have dentition and crenulated margins suggestive of *Crassatella* but their subgeneric affinities are still unclear. The species have not been well defined. This is not surprising, as in addition to ontogenetic shape and sculpture changes, there is apparently considerable morphologic variation within each species. The three lineages recognized are *lomana*-group, *saules*-group, and *conradiana*-group. The *conradiana*-group appears to be ancestral to an unnamed species occurring in the Rosario Formation near Carlsbad, San Diego Co. This unnamed species of early Maestrichtian age has a hinge like that of *Crassatella (Crassatella)*, and the *conradiana*-group is referred to *Crassatella (Crassatella)* despite hinge differences in the geologically older species. The species of this lineage, *Crassatella (Crassatella) cf. C. (C.) conradiana* (GABB, 1864), from Bell (pl. 1, figs. 10-11) and Dayton