

Cenomanian. Of the 46 species figured by Sowerby as coming from Blackdown, at least 23, or one-half of the entire number, are represented in the Shasta-Chico fauna by closely related species. These include such well marked forms as—

From Blackdown—

Astarte striata.
Cucullaea costellata.
Cucullaea fibrosa.
Exogyra conica.
Mytilus edentulus. }
Mytilus lanceolatus. }
Thetis major. }
Thetis minor. }
Trigonia aliformis.
Trigonia davidalea. }
Trigonia spectabilis. }
Turritella granulata.

Represented in California by—

Eciphylla umbonata. (?)
Nemodaa rancourecensis.
Cucullaea tenuicosta.
Exogyra parasitica.
Mytilus lanceolatus. (?)
Thetis annulata.
Trigonia crassum.
Trigonia leana.
Turritella scitatum-granulata. (?)

In addition to these the Blackdown beds contain a number of species belonging to the Veneridae and Aporrhaidae, both of which groups are well represented in the Shasta-Chico fauna. In fact, so far as can be judged by figures and descriptions, the whole fauna of the Blackdown beds, if it had been found in the western part of the United States, would be referred to the Shasta formation and about to the horizon of the Horsetown beds.

Whether the Chico beds above the fossil-bearing Horsetown horizon represent all the rest of the upper Cretaceous remains to be determined. The close relationship of their fauna to that of the underlying beds which has been compared with the Gault and Cenomanian, and its distinctness from the upper Cretaceous faunas east of the Rocky mountains representing the Turonian and Senonian of Europe seem to favor the view that a large part of the upper Cretaceous series is absent from the Pacific coast.

CONCLUSIONS.

In view of all these facts, it seems to me that the exact relationship of the Chico and Tejon formations and the extent to which their faunas are connected must still be regarded as an open question that can be solved only, if at all, after exhaustive collections have been made from both formations and thoroughly studied.