

division "B," now known as the Tejon formation, Mr Conrad asserting that it is Eocene and Mr Gabb as strenuously maintaining its Cretaceous age.* On the one hand, the unquestionable fact that a number of the fossils are identical or closely related with species that elsewhere characterize the Eocene was regarded as proof of its Tertiary age; while on the other hand, the presence of an ammonite (*Ammonites jugalis*) and the apparently close faunal and stratigraphic connection with the Cretaceous beds beneath were believed to prove its Cretaceous age. According to Mr Gabb's† statement in one of his controversial articles, 23 species of the 107 in division B are found in the underlying beds. When his list of common species is critically examined, however, it is seen that, with the exception of the *Ammonites* and perhaps two or three others, they all belong to genera that have lived from the Cretaceous or earlier to the present time without undergoing much change. Professor Angelo Heilprin‡ has given a careful review of all the published evidence bearing on this question, and in preparing it he has studied a large part of Mr Gabb's original collections of California fossils. His article is a strong argument for the Eocene age of the Tejon and incidentally it throws considerable doubt on the accuracy of Mr Gabb's statements concerning the species that occur in both the Chico and the Tejon.

Professor Jules Marcou§ and Dr C. A. White|| have also referred the Tejon, or division B, to the Eocene, and this view is now generally accepted. While admitting its Tertiary age, both Dr White¶ and Dr G. F. Becker,** after studying the subject in the field, have stated their belief that in southern California the Tejon, is only the upper part of an unbroken series, the Chico-Tejon, in which the sedimentation as well as the life was continuous from the Cretaceous into the Tertiary.

In the second volume of the Paleontology of California, published in 1869, Professor Whitney†† again summarized Mr Gabb's latest views on the classification of the Cretaceous. Division B is named the Tejon and considered to be the probable equivalent of the Maestricht beds. Division A is separated into three groups: the Martinez group, which is doubtfully separated from the one next below; the Chico group, which

* Conrad's articles are in *Am. Jour. Conch.*, vol. i, 1865, pp. 362-365; vol. ii, 1866, pp. 97-100, and *Am. Jour. Sci.*, vol. xlv, 1867, pp. 376-377. Gabb's replies may be found in *Am. Jour. Conch.*, vol. ii, pp. 87-92; *Am. Jour. Sci.*, vol. xlv, pp. 226-229, and *Proc. Cal. Acad. Nat. Sci.*, vol. iii, 1867, pp. 301-306.

† *Proc. Cal. Acad. Nat. Sci.*, vol. iii, 1867, p. 392.

‡ *Proc. Acad. Nat. Sci. Phila.*, 1882, pp. 195-211; *Contributions to Tertiary Geol. and Paleont. of the United States*, 1884, pp. 102-117.

§ *Bull. Soc. Géol. de France*, tome xi, 1885, pp. 417-435.

|| *Bull. 15*, U. S. Geol. Survey, 1885, pp. 11-17; *Bull. 51*, 1889, pp. 11-14; *Bull. 82*, 1891, p. 193.

¶ See references just given.

** *Bull. 19*, U. S. Geol. Surv., 1885.

†† Pages xiii and xiv.