

tively small and subsidiary structures in the molar crown are certain to exhibit signs of variation, they are surprisingly constant in their relations. Secondly, they show throughout the family indications of a general type, best seen in *Peramys* and *Marmosa*. Thirdly, even in such a poorly differentiated radiation as that represented by the modern Didelphyidae, they show signs of adaptive change. The variations which appear seem to be for the most part significant. The general type indicated is one in which there are three main elements and three more subsidiary ones which I have designated respectively as a, b, c, and b₁, c₁, c₂. If the modern Didelphyidae reflect in the upper molar patterns the primary triberculate type these main elements are the ones for which homologies must be sought. The general type indicated seems to conform with that described for *Peratherium*, but whether this correspondence would be confirmed on examination of other specimens of *Peratherium* it is not possible to say. That the styler elements are worthy of consideration in estimating adaptive changes in the molars, or relative specialization, is indicated by Sinclair's* studies on the Santa Cruz marsupials, and my own on the Australian forms. Finally, considering the styler elements of the modern Didelphyidae as structures not wholly conservative but showing signs of adaptive change and in comparing the family with other, supposedly primitive, forms, the characters presented by *Marmosa* and *Peramys* should be consulted rather than those of the larger specialized forms such as *Didelphys*.

* Sinclair, W. J., *The Marsupial Fauna of the Santa Cruz Beds*. (Proc. Amer. Phil. Soc., vol. 49, pp. 73-81, 1905.)