

Here, however, it will be necessary to make a slight digression, as some views of Dr. Keith<sup>1</sup> help to throw much light on the present investigation. He remarks that in all anthropoid forms, both recent and extinct, the canine teeth are so developed that a side to side grinding movement in mastication is impossible; that the canine teeth are developed to prevent such a movement, and that they serve as guides to prevent the jaws from "skidding" or slipping when brought forcibly into action; that in crushing their food, the lower teeth ascend more or less forcibly against the upper.

Dr. Keith then goes on to show that in Mousterian man the form of the palate had far departed from the anthropoid type, and that this departure, made possible by the subsidence of the canine teeth to the level of their neighbours, was due to the evolution of a new form of mastication, namely, a side-to-side chewing movement. Now the palate of Mousterian man was remarkable for its horseshoe shape and its relatively great width, while the dental roots of the Mousterian race were highly specialized. The roots of the teeth from St. Brelade bay, Jersey, were remarkable for their fusion due to the great hypertrophy of their dentine and cementum and, as Dr. Keith has pointed out, it seems clear that these features were due to the side-to-side grinding movement in mastication, "the fusion of the roots being a result of overgrowth to withstand the great lateral strain thrown on the teeth in a side to side mastication," whilst "the great width of the palate was also due to the preponderance of the side to side movement." . . . "In modern races," on the other hand, "especially highly civilized races, a modified form of the anthropoid bite has reasserted itself. In place of the canines serving as guides to prevent a side to side movement the lower incisors bite and pass upwards behind the upper; the incisor teeth serve to insure a vertical and scissor-like action of the teeth. With the evolution of the modern and overlapping bite and diminution of the side-to-side movement there is a tendency to narrowing of the palate."

<sup>1</sup> See a description of teeth of palaeolithic man from Jersey by A. Keith and F. H. S. Knowles, *Journ. Anat. and Phys.*, Vol. 46.