The Dryopithecus Tooth Pattern as a Racial Characteristic of the Mound Builders

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In order to properly understand the significance of the articulation patterns, as shown by the lower molar teeth of the aboriginal Mound Builders, it is necessary to take into account and trace the evolution of tooth structures. Passing over the long period of time which saw the gradual evolution of some primitive invertebrate form into a type which exhibited the first differentiation of the body into head and tail portions, and considering briefly the Ostracaderms of the upper Silurian period, we note that these latter gave rise to the abundant though primitive and toothless fishes of the Devonian period. First of the vertebrates to develop a masticatory apparatus were the Devonian sharks, in which the body scales surrounding the mouth were gradually drawn into the tough skin of the jaws and enlarged to form rudimentary grinding surfaces. They were arranged in rows and succeeded each other in series, as is still the case, recapitulating the relationship of the teeth to the body scales.

Fig. 1.—Left side of mandible of *Dryopithecus frickae* of the Miocene of India, showing the earliest manifestation of the "Dryopithecus pattern" on the crown surface of the molars.

The lung fishes developed a more advanced type of tooth with a recognisable base for attachment to the jaw, a double-folded structure and a thick alveolar wall. This type of tooth was carried over into the amphibians. Branching off from the amphibians, we find that the reptiles rapidly developed incisors, cuspids, premolars and molars, as well as initiating the deciduous and permanent tooth stages. Their teeth were cylindrical in cross-section.

Later the first mammals appeared, with their teeth exhibiting a triangular cross-section. At the bases of these triangular teeth on both the upper and lower jaws, there were evolved spurs on the insides. These spurs engaged each other when the teeth were in occlusion. As the anthropoid mammals came in and progressed anatomically, their dentition was reduced. More clearly expressed—there was a progressive reduction in the number of teeth from the canines back, thus accommodating the enlargement of the brain case and the shortening of the snout and face. The lingual posterior angles of the upper molar teeth were increased, accompanied by the formation of corresponding crushing basins on the lower molars. In the teeth of the giant anthropoid apes that roamed the hills of the Mediterranean and south Asian regions in mid-Miocene time (some 14 million years ago), we find the same pattern on the lower molars that we see on those of the chimpanzee, gorilla, and man.

These teeth possess three cusps on the outside and two on the inside, against the tongue, resulting in a pattern having the appearance of a five-pointed star. All three lower molars of the giant apes show this Dryopithecus pattern, which though inherited by the teeth of modern man, varies in amount of expression with different races and individuals.

In an examination of the lower jaws of 75 Illinois Mound Builders, this pattern was found on every first molar tooth. It characterized the second molars of fifteen individuals; but was not present on any of the third molars studied. It is probable that the percentage of occurrences as applied to the second molars was in reality somewhat higher, since teeth were missing in some cases, and in others showed so much wear, due to the chewing of gritty foods, that the surface was worn flat and any original pattern obliterated. Even so, when we consider that the human race has shown a tendency towards abandonment of the Dryopithecus type molar, and having before us evidence that the teeth of the Mound Builders show a much closer relationship to the parent stock of mankind, than do those of modern races, we can safely assume that as a race they date far back into antiquity and truly represent a distinct branch of the human family tree. Contemperaneous as they probably were with the white race, they were undoubtedly more primitive in type, probably mentally, and certainly from a skeletal standpoint—their teeth supplying the evidence for such an hypothesis.