

i. e., the excessive development of the pre-molars and the reduced number and size of the true molars.

"The condyle of *Plagiaulax*, therefore," observes Falconer, "inculcates an emphatic warning against too much stress being laid upon any single character in Palæontological determinations." And he adds that "this ancient fossil is interesting not only for its affinity to the existing Kangaroo-rat of Australia, but also as seeming to furnish a crucial test of the soundness, in some respects, of certain generalizations which have been put forward respecting the order of the successive appearance of mammalia upon the surface of the earth. It is maintained by some British palæontologists and comparative physiologists of high authority, that, while there is no positive proof of serial progressive development from the lower to the higher forms, there is clear evidence of another order of development or passage, viz., from the *general* to the *special*, as we pass from the oldest tertiary to the modern period. It is urged by the advocates of this doctrine, that the mammalia of the Eocene Period assimilated more to the general archetype and embryonic condition of vertebrate organization, while the mammalia of later times successively furnish examples of increasing deviation from the original or normal type as well as of special adaptation. Among other arguments, they insist that the earliest Eocene mammalia, both herbivorous and carnivorous, possessed in most cases the full complement of teeth; while forms characteristic of later times, such as the *Felidæ* and *Ruminantia*, are remarkable for special suppression of these organs. If the generalization were really of as wide an application as has been claimed for it, we ought, in every great family of the mammalia, to find evidence of closer adherence to the archetype the further we recede in time. But so far is this from being the case, that *Plagiaulax*, the oldest well-ascertained herbivorous mammal, presents to us the most special exception to be met with in the whole range of marsupialia, fossil or recent. It had the smallest number of true molars of any known genus in that sub-class; thus exhibiting at the most distant end of the chain the very characters which, under the influence of the assumed law, we ought only to have found in some type of existing marsupials."

While the MS. of these pages was preparing for the press (February 10, 1857), part of the cranium of a mammal was received from Mr. Beckles, comprising the two superior maxillary bones and teeth, with the intermediate palate crushed, of a small insectivore. On the right side of the jaw the whole series of molar teeth and the incisors are seen. The grinders are more numerous, but the dental characters, says Dr. Falconer, bear a relation to those of the insectivorous genus *Ericulus*, peculiar to Madagascar, and from the general bearing of the evidence, it is presumed that the fossil was a minute Placental Insectivore.*

* Although the teeth differ considerably in shape from those of the other Purbeck fossils, it is just possible that this creature may be the same as some of the minuter species above alluded to, and known as yet only by their lower jaws.