

supial! secondly, Was it herbivorous? The general resemblance of the jaws and teeth to those of the living Kangaroo-rats raises at once a strong presumption in favor of the affirmative on both these points. There is, as before noticed, a distinct indication in the fossil of a bending inwards, or towards the observer, of the posterior inner margin of jaw *o*, fig. 1 (lower figure), stretching from the anterior boundary of the dentary foramen *n*. The significance of this character will be appreciated by referring to what was said of such an inflection in reference to the Stonesfield Mammalia (p. 311, figs. 379–381). In both species the true molars are limited to two; yet the jaw of *P. Becklesii* was clearly that of an adult, having its full complement of teeth. This is an unexpected number in a quadruped inferred to be marsupial, in which tribe the normal number of molars should be four. In both species, moreover, the true molars are dwarfed in size, as well as reduced in number.

In the Kangaroo-rat there is a single grooved pre-molar and four back molars, while in *Plagiaulax*, the true molars being reduced to two, we find, as if in compensation, three or four grooved pre-molars. In the pigmy flying opossum of Australia (*Acrobata pygmæa*) there is an analogous development of pre-molars with a reduction of the back grinders to three; and in the Sub-genus *Dromicia*, or pigmy phalanger, there are four pre-molars, while the back molars are reduced to three. In the living *Myrmecobius** the true molars are greatly in excess of the normal number; while in the fossil *Plagiaulax* they are few and rudimentary, fewer even than in any of the placental herbivora. It is true that in general form the coronoid (*e*, fig. 1) of *Plagiaulax* resembles more that of the predaceous marsupials, and of *Dasyurus* especially, than of the herbivorous families; but on the other hand it is less elevated, and its surface of less area, than in the predaceous genera, whether marsupial or placental.

The condyle (*d*, fig. 1), which is well preserved, is remarkable for its depressed position,—a character which, considered apart from all the rest, might have been taken to indicate a beast of prey; but it is counterbalanced by another peculiarity without example, so far as Dr. Falconer is aware, among the predaceous genera, whether marsupial or placental; viz., the long neck and horizontal projection of the condyle *d* behind the coronoid *e*. The other leading indications imply a vegetable feeder; viz., the limited surface and moderate elevation of the coronoid above the plane of the teeth, the feeble development of the inflected margin, the absence of a thick angular process, the advanced position of the orifice of the dentary canal (*n*, fig. 1), and the offset of the inflected margin above it. These characters, taken in conjunction with those of the teeth, would place the *Plagiaulax* with the vegetable feeders; and the exceptional position of the condyle may be a special modification, having reference to the abnormal character of the teeth;

* A figure of the lower jaw of this quadruped is given in my Principles of Geology, ch. ix. p. 138, 9th ed.