

object was to ascertain the best method of arranging the specimens. The last two divisions being only suggested as additions to be made at some future time, did not on that occasion demand attention ; while the manner in which the first four divisions should be arranged was so far evident that it was unnecessary to enter into details with regard to them. The microscopic specimens should follow the comparative anatomy series, and it was, therefore, the arrangement of this important division of the museum which had to be considered. The question was whether the same order and arrangement must be followed, as the naturalist has adopted from the study of the other organs, or whether the teeth could be taken as a basis of a classification without violating the natural affinities of the different families and orders belonging to the vertebrate sub-kingdom, and more especially of those which constitute the class Mammalia.

In order to answer this question, Mr. Hulme next entered upon a most able and elaborate examination of the comparative anatomy of the teeth, and also of the different modes of zoological classification adopted by Aristotle, Ray, Linnaeus, Cuvier, Owen, and Huxley.

In most fish the teeth closely resembled each other, and exhibited little difference in either their form or their function, excepting that those at the anterior part of the mouth might be adapted to seizing and holding the prey, while those at the posterior part might serve to lacerate and crush it, as exemplified in the tessellated jaws of the Cestracion Philippi or Port Jackson shark. The only use which the naturalist had made of the teeth in the classification and arrangement of existing fishes had been to designate some two or three families from certain peculiarities in their teeth. When defining the minor groups into which the primary divisions of the class are sub-divided, the teeth even in the fish often afforded useful and readily ascertained characters, by which the different genera might be distinguished from each other, or by which individuals belonging to the same family might be brought together.

Similar remarks would also apply, although in a somewhat diminished degree, to the class Reptilia, in which therefore, the teeth could not be relied upon to any great extent for the purpose of classification.

Passing to the class Mammalia, Mr. Hulme pointed out that anatomical and structural peculiarities had been commonly adopted by the eminent authorities cited, as a basis of classification. To this there was one obvious and practical objection, namely, that in the case of a newly discovered animal, it was only after careful dissection that