

Zoology.

The formation of as complete a collection as possible of the animals of New Zealand may be taken without comment as part of the province of the Dominion Museum. Opinions may differ as to how far the Museum should make collections of foreign animals, and it is here that the need of some definite limitation is felt. Foreign specimens are, I submit, necessary for three purposes: (1) To give a comprehensive view of the animal kingdom, requiring a representative systematic collection; (2) for the purposes of comparison in the study of New Zealand animals, in the form of a comparative research collection; (3) for illustrating zoological or biological relationships, in the form of special synoptic collections.

REPRESENTATIVE SYSTEMATIC COLLECTION.

The needs of the student and of the juvenile members of the community alike demand that a representative collection of the animals of the world should be possessed and, as far as possible, exhibited in the Museum, but, since anything like a complete collection is far beyond the probable means of the Museum, a principle of limitation such as is proposed below becomes necessary.

A genus in the Linnæan system is founded on a definite species, known as the type species or genotype. Thus there are about one hundred different kinds of oysters classed as species of the genus *Ostrea*, of which the type is the common European oyster, *Ostrea edulis* Linné. All these species are more closely related to *Ostrea edulis* than to the genotype of any other genus. Obviously, then, if a collection of molluscs is to be limited, but entirely representative, a collection of genotypes best meets the case.* Such a collection would be as interesting as any other to the general public, and would be of enormous value to the student and specialist. I am not aware that the formation of a collection of genotypes has been previously attempted in any other museum, but I strongly recommend that it should be adopted in the Dominion Museum as the principle of limitation for many groups of invertebrates.

A collection limited even to genotypes would, however, be beyond the probable means of the Museum, and for many groups a further limitation is necessary, and can be obtained by a similar idea. Genera are combined into families which take their name from a type genus. Thus the various genera of the family *Ostreidae* are more nearly related to the type genus *Ostrea* than to the type genus of any other family. A collection of the genera of *Mollusca* typical of the families would thus be still representative, although considerably limited. If still further limitation were desired recourse could be had to superfamilies, suborders, or orders. The amount of limitation I suggest as being within the future probable means of the Dominion Museum is shown, for the principal groups of animals, in the following table:—

<i>Mammalia</i> living.	Families.	<i>Mollusca</i> .	Genera.
„ fossil.	Suborders.	<i>Annelata</i> .	Genera.
<i>Aves</i> .	Families.	<i>Echinodermata</i> .	Genera.
<i>Reptilia</i> living.	Families.	<i>Brachiopoda</i> .	Genera.
„ fossil.	Orders.	<i>Bryozoa</i> .	Genera.
<i>Amphibia</i> .	Families.	<i>Cœlenterata</i> .	Genera.
<i>Pisces</i> .	Families.	<i>Porifera</i> .	Genera.
<i>Arthropoda</i> .	Families.		

If a scheme such as the above is adopted it will be possible in every case to know whether a given species offered as a donation, for exchange, or for sale is a desideratum, whereas, in the absence of any such test, museum officers have to exercise their private judgment in every case, and the growth of the collections is in danger of becoming haphazard and controlled by accident.

Strangely enough, there are few groups of animals in which lists of genotypes and type genera of families have been collected and published, so that before any progress could be made with the collections a large amount of preliminary work would be necessary in drawing up the lists. On the other hand, a published catalogue embodying this information would be of the utmost service to zoologists all over the world, and would materially enhance the reputation of the Museum. As for the collection itself, it would prove quite impossible ever to complete it, because some families and very many genera are founded on unique or very rare specimens; but the adoption of the scheme would ensure that, whether progress were fast or slow, the collections would be always progressing in a desired direction. Moreover, with the increase of knowledge and the discovery of new genera the scope of the collections would gradually extend, and thus there would always be room for “aggressive work.”

COMPARATIVE RESEARCH COLLECTIONS.

For the better knowledge of the animals of New Zealand the Museum needs a representative collection of similar types of animals from other parts of the world, particularly from Australia, the Pacific islands, and South America. The lack of such collections in New Zealand has always hampered research in the past, and will continue to do so in the future until this defect is remedied.† This does not involve complete collections from each of these countries in each major group represented in New Zealand, but only complete collections in certain families or genera. Thus, in the case of lizards, only the skinks and geckos would be required, and not the other families of lizards, while the other

* The reason for choosing the genotype in preference to any other species of the genus is that, if the advance of knowledge necessitates a further subdivision, a new genus may be founded on any of these species except the genotype of the original genus. A genotype collection would have to be continually augmented as new genera were proposed, but only in rare cases would it become necessary to remove a specimen owing to the discovery that the genus it represented was a synonym of some other.

† These remarks apply in a still greater degree to fossils.