the article on 'Quadruped,' the adjective 'mammalian.'

I have already indicated that mammalians had been used in translation of mammifères. The Rev. William Kirby, in 1835, in the once famous Bridgenater treatise 'On the Power, Wisdom and Goodness of God as manifested in the Creation of Animals and in their History, Habits and Instincts,' declined to use the form mammals, but invariably used, as the English equivalent of Mammalia, 'MAMMALIANS.' Chapter XXIV. is entitled 'Functions and Instincts. Mammalians'; in this, it is explained, 'the whole body, constituting the Class, though sometimes varying in the manner, are all distinguished by *giving suck* to their young, on which account they were denominated by the Swedish naturalist, *Mammalians*' (II., p. 476). In a footnote to this statement Kirby adds, 'Cuvier calls them *Mammifers,* but there seems no reason for altering the original term.'

We may cordially endorse the sentiment of Kirby and, doing so, refuse to follow him in action and to adopt his modification of 'the original term,' and revert to the genuine original—mammals or, in the singular, mammal.

No instance of the use of the singular—mammalian—has been found in Kirby's work or in any of his successors', nor does the singular form mammal occur in the 'Pantologia.'

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THE STARTING POINT FOR GENERIC NOMENCLATURE IN BOTANY.

As the subject of generic nomenclature has been considerably discussed of late, perhaps it may not be inappropriate to call particular attention to this phase of it.

The uniformity and permanence of any system of nomenclature must depend largely upon the selection of a proper starting point. The result of the application of any system of fixing genera must vary as the initial date varies. Hence it is of the utmost importance whether we start with Tournefort, Linnæus' 'Genera Plantarum,' 'Species Plantarum,' 'Systema Naturæ' ed. 1, or ed. 10, as one zoological friend has suggested. The starting point must, of course, be fixed more or less arbitrarily, but we believe there are several rational considerations which should influence the selection. Judging from past experience, no date is likely to meet with universal approval at present; but if the date be chosen with proper regard for principles of justice, rationality, and practicability it will stand a reasonable chance of being generally accepted in the future and of leading to that uniformity and stability which are the great desiderata at present. Some one has suggested that to be in accord with these principles we must simply begin at the beginning. To this opinion we heartily subscribe. It is necessary, however, to define just what we mean by 'beginning' and to inquire whether there is anywhere in the course of the development of the conception of genera a point at which genera in anything like a modern sense can be said to have originated. We cannot agree with those who would attribute this 'beginning' to the ancient Greeks or Romans, or even to the mediæval and later herbalists, though they contributed much to the development of the subject and in many instances had rather well-defined ideas of genera. There is, however, no one of them that has defined and illustrated the genera of the vegetable kingdom in general in such a manner as to deserve the title of 'founder of genera,' or as to furnish a practical basis for generic nomenclature. This honor, we believe, is reserved for Tournefort, who in 1700, in his great work 'Institutiones Rei Herbariæ,' described and illustrated in a most admirable manner nearly 700 genera, including members of all the groups of the vegetable kingdom. Here we have, I believe, the earliest practical starting point for generic nomenclature. Many of the systematists of the past have tacitly recognized this fact by crediting Tournefort and his prelinnæan successors, Vailliant, Micheli, and Dillenius with genera established by them. This practice has, however, followed no particular or consistent method.

Let us consider for a moment the claims to recognition of the different initial dates

proposed as compared with Tournefort. Two, —1737 and 1753—are perhaps sufficient to notice; they are practically the only ones that have been used as the basis of serious or systematic efforts to revise our nomenclature. The date of the appearance of the first edition of 'Species Plantarum,' 1753, is very naturally and properly taken as the starting point for specific nomenclature, as this was the first attempt to apply binomials in a systematic manner to a large number of species; but why it should be taken as the date for genera is not so evident. Linnæus's genera were not first described here, but in previous editions of his 'Genera Plantarum.' Hence Kunze's proposition to start with 1737, the date of the first edition of that work, is much more just and logical. But here practical difficulties arise in securing types, as no particular species is mentioned in connection with the generic diagnoses; whereas Tournefort's genera are not only described, but accompanied by lists of described species and excellent illustrations of at least one species of nearly every genus. Why thrust upon Linnæus the honor of founding genera when his most ardent admirers, so far as we are aware, have never claimed it for him?

From the standpoint of the mycologist either 1737 or 1753 is a most absurd date. Linnæus recognized but 11 genera of fungi. These were simply taken from his predecessors and renamed or rearranged. Tournefort described but 7 genera, and from this standpoint alone would have little more claim upon the mycologist than Linnæus. If, however, we have a single starting point for all plant genera, as seems desirable, Tournefort would be far preferable to Linnæus; as it would admit Micheli, one of the greatest mycologists of the eighteenth century, who in 1729, in his great work 'Nova Plantarum Genera,' described 31 genera of fungi, most of which were illustrated with excellent figures. Linnæus himself in his 'Bibliotheca Botanica' pays the following tribute to this acute observer: *Botanicorum vere Lynceus est in examinandis et depingendis minutissimis floribus Muscorum et Fungorum.*

To discard or ignore the work of Micheli, whose only crime was polynomialism, would be a great injustice which we do not believe our posterity would ever uphold. It would be far better to have a separate initial date for fungi than to accept either 1737 or 1753 as a general starting point.

The fact that Tournefort was a polynomialist might suggest itself to some as a possible difficulty. Scarcely any inconvenience need arise from this, however, as whatever species might be selected as the type of the genus, it would bear the oldest specific name it received subsequent to 1753. I fancy the greatest objection of some, however, to 1700 as a starting point, would be the supposed amount of change necessitated. This objection should have very little weight, if future stability and permanency can be secured. No temporary makeshift should be accepted which may involve a minimum of immediate change, but necessitate another revision a few years hence. We should have something which gives reasonable hope of meeting the needs of the present generation at least.

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MOSQUITO DEVELOPMENT AND HIBERNATION.

Dr. Harrison G. Dyar's observations upon 'The Eggs of Mosquitoes of the Genus *Culex*,' as given in Science, Vol. XVI., No. 408, are in line with those made by us during the past season. We doubt, however, the wisdom of the divisions into unbanded legged forms depositing eggs in boat-shaped masses, and banded forms depositing singly. We have failed yet to get boat-shaped masses of eggs from any species other than *pipiens* and *consobrinus*.

The matter of the floating of the eggs of mosquitoes is largely one of circumstance, as those of most species, barring, of course, those of the genus *Anopheles*, sink with slight agitation, unless they become attached to drifting débris, common upon most pools in which mosquitoes breed. The facility with which the majority of eggs sink usually warrants delay in hatching, and renders hibernation more than probable in the case of many species.