forms of birds and reptiles and going straight to the amphibia for the progenitors of the mammalia are quoted with approval; and that author's subdivision of the class into three sub-branches—Prototheria, Metatheria, and Eutheria—is adopted. The history of the distribution of the mammals in time and space follows; and then we have the characters of the different orders and families, and of the principal forms of the class. In this section of the memoir the illustrations, taken from the best sources, are especially to be praised, and in many instances the information as to rare or new species is brought well up to date. This seems to us especially so in the interesting group of the bats and insectivora, for which Prof. Flower acknowledges his indebtedness to Dr. G. E. Dobson, but in the portion devoted to the order Primates, an order which Prof. Flower makes to include the lemurs, the monkeys, and man, we read the little that is written under the impression that it was but introductory to a good deal that was to follow, and when we turned over to p. 446 we found the essay was finished and that we had arrived at the index; even this bears marks of a forced compression, for while the earlier letters are fairly done, the last in the index have evidently had a lot "squeezed" out.

One other article relating to zoology in this volume is also by Prof. W. H. Flower, on the "Mammoth." He alludes to the derivation of this name as being by some ascribed to a Tartar origin, by others that it is a corruption of the Arabic word *Behemoth*, or great beast, but on the authority of Prof. Sayce it is a corruption of the Biblical Behemoth, Arabic behîmat.

The scientific articles in vol. xvi. are so numerous and important that it is impossible for us to give them satisfactory notice in the space at our disposal; we can do no more than name the more important. From Prof. Dittmar we have Metallurgy and Metals; Prof. Chandler Roberts and Mr. R. A. Hill contribute the article on Mint, in which all aspects of the subject are fully as well as interestingly treated; while Mining, by Dr. Le Neve Foster, is both practical and scientific. Meteorology, of course, has been undertaken by Mr. Buchan and Prof. Balfour Stewart, and forms an admirable exposition of the present condition of a science of great and growing complexity; Mr. Buchan treating of instruments and phenomena, while Prof. Stewart deals with the science that underlies the subject. The article on Micrometer is by Dr. David Gill; while it is natural to find Dr. W. B. Carpenter's name attached to that on Microscope. Prof. Heddle contributes an elaborate and profusely illustrated article on Mineralogy. Molecule has a triple authorship, Rev. H. W. Watson, Mr. S. H. Burbury, and Prof. Crum Brown, both its physical and chemical aspects being thus fully treated. The article on Mollusca in this volume, by Prof. Ray Lankester, is as complete and masterly and richly illustrated as that on Mammalia in the previous volume. Under Moon we have a short article on the lunar theory, by Prof. Simon Newcomb; other aspects of the subject have been dealt with under Astronomy. Mr. P. Geddes has a careful and wonderfully exhaustive article on Morphology; and Mr. R. M'Lachlan finishes off the volume with a somewhat tiny article on Mosquito. There are many other smaller articles in all departments of science,—Prof. A. Newton, for example, doing all birds,—and several important ethnologico-geographical articles, as Mexico, by Mr. E. B. Tylor and Prof. Keane, and Mongols, by Prof. Douglas and Prof. Jülg. We hope in a future number to be able to refer in detail to some of the articles mentioned.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.*]

Living Scorpions, Mygale, and Protopterus

WILL you allow me to use your columns in order to ask any of your readers residing in tropical localities, who may be generous enough to wish to help a naturalist in his researches, to send to me *living* specimens of *large* Scorpions (not less than three inches in length), and *living* specimens of large Mygale (birdsnesting spider); also I would beg for *living* Earthworms of large size from African, Indian, American, and Australian localities. Any of these animals can be sent in a small tin box in which a few holes are perforated; the tin box being packed in a much larger wooden box with hay or loose paper. Damp moss should be placed with the Scorpion or Mygale. Each specimen should be inclosed in a separate tin box, since these animals are cannibals. The holes in the tin box containing an Earthworm should be very few, and the amount of damp moss very great. Earthworms would travel best in a Wardian case, should the opportunity offer—not loose, but in the above-mentioned tin box.

I would further take this opportunity to ask for information concerning the best way of keeping the African Lepidosiren, or mud-fish (*Protopterus annectens*), in confinement. I require to ascertain (1) its natural food, (2) the temperature of the waters in which it naturally lives, (3) whether these are stagnant or rapidly running, (4) whether anything is known as to habits in the breeding season, and if this season immediately precedes or succeeds the dry season.

Some of your readers in this country or in Africa may have gained experience on these points, and would greatly help me in an attempt to breed the mud-fish by communicating with me.

E. RAY LANKESTER

11, Wellington Mansions, North Bank, N.W.

Electricity in India.—The Green Sun

[THE following letter has been sent us for publication by Sir William Thomson, to whom it is addressed :—]

For nearly a month the air has been in a state of electrification, which seems to me so interesting that I thought you would probably like to hear of it at once without my waiting to complete my observations. Unfortunately I cannot tell the exact date at which it began, but August 31 showed positive electricity all day apparently. On September 1 and 2, I was not able to get any measurements, but on the 3rd at 1.10 p.m., I got negative readings from −28 to −17 div., wind light, S. by W. By 2.45 it had changed to +6. Next morning at 10.5 a.m. it varied from −136 to −44; this was on the roof. I then took it to the ground, to a place quite open, and found readings from −460 in gusts of wind to −162 when the wind was light. The wind was fresh, westerly. Up to 1h. 14m. it continued negative, but at my next reading, 3 p.m., it was +35, and remained steadily positive, the wind having now gone round to the east (sea breeze).

5th, 6 a.m., positive, from 9 a.m. to 2.5 negative, and thereafter positive.

This continued with the exception of the 9th, when it was positive all day till the 13th.

On the 20th the reading at 9.55 was −34, but at 11.55 it was +44, the wind in the meanwhile having changed from west (land wind) to east (sea breeze). A similar state of affairs still continues.

During all this time the weather in Madras has been fine, and