zoological division of the earth" is made by "separating the Australian regions from the rest," and that the best natural division of the remainder is effected by cutting off the Neotropical region. We should then have three primary zoological regions, which first Prof. Huxley, and afterwards Mr. Sclater, in his oral lectures on geographical distribution seemed to consider as of nearly equal importance. On this Mr. Wallace remarks that "in isolation and speciality, determined by what they want, as well as by what they possess, the Australian and Neotropical regions are undoubtedly each comparable with the rest of the earth. But in richness and variety of forms they are both very much inferior, and are much more nearly comparable with the separate regions which compose it." After discussing this subject at some length, and disposing shortly of Mr. Allen's system of "circumpolar zones," Mr. Wallace comes to the conclusion that a consideration of all the facts zoological and palæontological, indicates that the great northern division, or *Arctogæa*, is as much more important than either Australia or South America, as its four component parts are less important. He therefore reverts to the six original regions proposed by Mr. Sclater in 1857, as the most workable, and most conveniently adapted for the study of zoological distribution.

Thus much having been settled, Mr. Wallace proceeds to point out the limits of the six great regions, and to indicate the sub-regions into which they may be best divided. As regards the latter part of this task there is much difficulty. It must be confessed that the sub-regions in many cases are as yet only approximately determined, and that those adopted by Mr. Wallace are in several instances open to serious question. For example, "the great central mass of South America, from Venezuela to Paraguay" is constituted in the present work as a single division of the Neotropical region under the name of the "Brazilian Sub-region." But there can be no doubt that within this area there are two, if not three, distinct sub-regions which deserve recognition. The fauna of south-eastern Brazil, so admirably investigated by Prince Max. of Neuweid, Burmeister, Reinhardt, and other well-known naturalists, is very distinct from that of the great Amazonian valley, and the adjacent flats of Guiana and the Orinoco. Many genera are peculiar to each of them, and a whole host of representative species perform similar functions within the respective areas. Herr von Pelzeln's divisions of the Neotropical region, and those employed by Messrs. Sclater and Salvin in their papers published in the Zoological Society's *Proceedings*, are much more natural than those suggested by Mr. Wallace. We fear that in spite of what he says on the subject our author has rather allowed a hankering after uniformity to lead him astray and to induce him to restrict his sub-regions to four in each case.

The chapter on Classification which next follows, and concludes the first portion of the work, contains some very apposite remarks. A natural classification of animals is, as Mr. Wallace observes, of first-rate importance in discussing matters of distribution. But, except in the case of a few groups, we have by no means yet attained to a natural classification of animals, and even as regards these we are, in the opinion of many naturalists, still very far from it. It is only therefore some few of the classes of animals that are sufficiently known to be useful for the study of distribution. As such Mr. Wallace selects the Vertebrata, the butterflies, and six families of Coleoptera amongst the insects, and the terrestrial and fresh-water land-shells amongst the Mollusca. Of these better-known groups he gives us tables of the arrangement which he proposes to adopt for the illustration of his remarks on their geographical distribution.

(*To be continued.*)

OUR BOOK SHELF

Notes on Collecting and Preserving Natural History Objects. By J. E. Taylor, E. F. Elwin, Thos. Southwell, Dr. Knaggs, E. C. Rye, J. B. Bridgman, Prof. Ralph Tate, Jas. Britten, Prof. Buckman, Dr. Braithwaite, Worthington G. Smith, Rev. Jas. Crombie, W. H. Grattann. Edited by J. E. Taylor, Ph.D., F.L.S., F.G.S., &c. (London: Hardwicke and Bogue, 1876.)

THIS is a republication of a series of papers from *Science Gossip;* and the names of the respective authors is a sufficient guarantee for the value and accuracy of the information it affords. It is a very useful book to put into the hands of young persons with some taste for natural history but quite ignorant of how to collect and what to observe; since it devotes as much space to the latter branch as to the former, and is thus a more instructive work than its title indicates. The subjects discussed are—geological specimens, bones, birds' eggs, lepidoptera, beetles, hymenoptera, land and fresh-water shells, flowering plants, grasses, mosses, fungi, lichens, and seaweeds. It is a pity that a few other essays were not obtained—on birds, mammals, reptiles, fresh-water fishes, crustacea, spiders, and sea-shells—so as to make the book somewhat more complete as regards "Natural History Objects;" but so far as it goes it is an excellent little work, and is perhaps better adapted to encourage an incipient taste for the study of nature than many more pretentious volumes. The chapters on birds' eggs, butterflies, and beetles, are especially full and interesting; while those on bones and fungi are valuable, as likely to incite the reader to take up the study of these somewhat neglected objects.

A. R. W.

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 Harris Cubit of Karnak

As the measures of this cubit hitherto published are more or less incomplete, the following series may be worth attention.

For permission to examine this relic, I am indebted to Dr. Birch, under whose care it is placed in the British Museum; and who, with his usual courtesy, gave every facility for its measurement.

The readings were taken by laying this wooden cubit on a brass standard scale, divided to tenths of an inch and to millimetres, with its divided face at right angles to that of the scale. Two observers then read the values of the divisions in both inches and metres, giving four readings in all, at about 66° F. The standard scale has since been kindly verified by Mr. H. W. Chisholm, Warden of the Standards, and its error is not of such an amount as to affect the figures here given; it is now in the Loan Collection of Scientific Apparatus (200), the sole representative at South Kensington of Kater's standards.

The readings were mapped on divided paper, and the mean result for each line carefully estimated, with its probable error, by the two observers: and though the following readings of the divisions are of course far from the limit of attainable accuracy, yet as their errors are but a small fraction of those of the gradua-