

—Mr. R. M. Bache has been ordered by the coast survey to continue the topographical work on the south-east shore of Staten Island, and on the south side of Raritan Bay towards Sandy Hook; Mr. F. W. Perkins is daily expected from his field-operations on the coast of Louisiana.

—Velhagen & Klasing (Leipzig) have begun the publication, in twelve monthly parts, of a new edition of Andree's 'Allgemeiner handatlas.' It will contain a hundred and twenty maps.

—The following works of interest to scientific readers have been lately announced: 'Earthquakes and other earth movements,' by John Milne (New York, *Appleton*); 'A manual of mechanics,' by T. M. Gordon (New York, *Appleton*); a work on the labor question in America, by Professor Ely (New York, *Crowell*); 'Photo-engraving processes,' by A. F. W. Leslie (New York, *Fuchs & Lang*); 'The flow of water through pipes and open conduits and from weirs and orifices,' by H. Smith, jun. (London, *Trübner*); 'The world as will and idea,' vols. ii. and iii., by A. Schopenhauer. tr. by R. B. Haldane and J. Kemp (London, *Trübner*); 'The Indian empire: its history, people, and products,' by W. W. Hunter (London, *Trübner*).

LETTERS TO THE EDITOR.

** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

A national zoological garden.

IN 1870 an act of incorporation was passed, establishing a zoological society in Washington; but during the last sixteen years little or nothing has been done towards carrying out what the charter of this society provides for, or taking any steps in the direction of putting into effect the chief objects such an organization would have in view.

We learn from *Science* (vii. No. 160) that the public-spirited and venerable exhibitor of animals, Mr. P. T. Barnum, now comes forward and says, that, if congress will grant him thirty acres of the reclaimed flats on the Washington side of the Potomac River, he will expend the generous sum of two hundred thousand dollars in starting a national zoological garden.

Now, the eastern extension of these flats is not far from the Smithsonian grounds, and, taking every thing else into consideration, there is probably not a better site in this country for this particular purpose. The incalculable advantages that would be the outcome of such an establishment can be easily appreciated; and it is only to be hoped that at an early day congress will take Mr. Barnum's proposition into favorable consideration.

Few institutions in any country afford better educational advantages than a large, well-kept, and well-managed zoological garden. No better proof of this can be brought forward than the report of Mr. P. L. Sclater, F.R.S., secretary of the Zoological society of London, for the year ending 1885. Mr. Sclater tells us that during the year quoted, 659,896 persons visited the gardens, and that the receipts of

the society amounted to the extraordinary sum of £25,809 10s 1d; while during the previous year 745,460 persons visited the gardens, and the receipts were proportionately greater; in fact, £3,129 more.

Many of the larger animals in this country are now rapidly disappearing from off the face of the earth,—notably the bison, the elk, and moose,—while numbers of the smaller representatives of our splendid mammalian and avi-fauna are unfamiliar to the eyes of the vast majority of the people of this country, from the simple fact that we are so poor in institutions where the living-specimens can be put on exhibition.

Mr. F. W. True, curator of the department of mammals in the Smithsonian institution, points out in *Science* (vii. No. 171) another deplorable neglect, which unfortunately we are likewise guilty of, and which the establishment of a zoological society in Washington would do much towards rectifying. With the disappearance of our larger animals and other vertebrates, the opportunities are forever being placed beyond our reach, to intimately know about the anatomical structure of these very forms. In regard to this, anatomists are too apt to say something like this: "Oh, yes! a prairie dog; no doubt its organization is very much like the squirrels, and will not repay exhaustive examination." Now, I say that these related and interrelated types are the very ones that will repay the most exhaustive research.

A competent prosector attached to our zoological garden—one who combined the qualities of an artist, an author, and a general anatomist—would soon demonstrate the high importance of his work, and contribute the most efficient aid to animal taxonomy. The brilliant productions of Garrod and Forbes, in the Proceedings of the Zoological society of London, speak volumes in favor of this advantage.

A share of the pecuniary receipts that would accrue from such an establishment could be set aside to meet the expenses following the publication of handsomely illustrated memoirs, giving large colored plates of the rarer acquisitions to the gardens, and the investigations of the prosector into the structure of such animals as died from time to time, and thus fell into his hands. We have long felt, in this country, the need of just some such standard publication as the excellently conducted Proceedings of the Zoological society of London; and this would certainly be realized, and follow as one of the natural results pending the establishment of our national zoological garden.

R. W. SHUFELDT.

Fort Wingate, N. Mex., May 26.

Scent-organs in some bombycid moths.

At intervals during the past year or two, isolated observations have been made of peculiar filamentary processes protruding from the abdomen of the male of some of our common bombycids, *Leucarcia acraea* and *Scepsis fulvicollis* being the observed species. Not long since, I described a peculiar abdominal character in the male of *Cosmosoma omphale*; and the recent capture and examination of specimens of *Leucarcia acraea* has enabled me to add something to the knowledge of the structure in that species. Between the seventh and eighth ventral segments is a narrow opening, entirely invisible in the dried insect, but readily discerned on a