

for the repairs to and preservation of property valued at \$2,500,000. His brother officer at New York is supervising the investment of appropriations amounting to \$4,500,000, and is responsible for property estimated to be worth \$7,000,000. Yet his rank is only that of a lieutenant-commander, while the officer at Norfolk is merely a junior lieutenant. It is also a fact that there are but thirty-one officers in the corps, of whom one is Peary, who has been away from his regular duties, in the interest of science, for a number of years and who is about to go again. Promotion, too, is very slow. As the corps now stands, two of the junior lieutenants will not become full lieutenants until the age of fifty-nine, when they may, perhaps, be grandfathers. Altogether, it seems plain that if more rank and pay are to be bestowed anywhere in our rapidly expanding navy the civil engineers ought to be the first considered. Efficient men in this corps should mean better navy yards and docks, and so greater economies in the interest of the taxpayers.—New York *Evening Post*.

GEOLOGICAL EXPLORATIONS IN EGYPT.*

Thanks to the munificence of Mr. W. E. de Winton, who generously undertook to defray the entire cost of carrying on for one or two seasons geological explorations in the Libyan Desert, the trustees of the British Museum have been enabled, as the result of the past season's operations, to enrich considerably the national collection of fossils in the Natural History Museum. Dr. C. W. Andrews, of the geological department, was again sent on this mission, and he received valuable assistance from Captain H. G. Lyons, director-general of the Egyptian Geological Survey, and other officers of the survey. Dr. Andrews proceeded to the Fayûm and began work in the district to the north of the lake Birket-el-Kerun; and here he secured a fairly large collection of vertebrate remains, including several new forms and some specimens of great scientific interest, nearly all the bones being of Upper Eocene age.

* From the London *Times*.

The most important object obtained is a very fine and almost complete skull and mandible of a large, heavily-built ungulate, the first specimen of which was discovered two years ago by Mr. H. J. L. Beadnell, of the Egyptian Geological Survey, who called the genus *Arsinoitherium* (after Arsinoë, a queen of the Fayûm in the 3d century B. C.), naming the species *Zitteli*, after Professor K. von Zittel, the distinguished paleontologist at the University of Munich, and a pioneer of geological exploration in the Libyan Desert. *Arsinoitherium* probably resembled in general appearance a big rhinoceros, though in no way related to that animal. The form of the bones of the feet and legs suggests that it was most nearly allied to the elephants and to the Dinocerata, a remarkable group of huge extinct herbivorous hoofed mammals, remains of which have been found in great abundance in the Eocene Tertiary strata of Wyoming, North America; but in the possession of a pair of great bony horns over the nose, together with a smaller pair over the eyes and in the peculiar form of the teeth *Arsinoitherium* stands quite apart from other mammals.

Dr. Andrews also came across a very large mandible and a maxilla, both with well preserved teeth, which have characters indicating the existence of a species of *Arsinoitherium* much bigger than the one named after Zittel.

Of the early and primitive forms of Proboscidea a considerable series of specimens was acquired for the national collection at South Kensington. Mention may be specially made of a nearly complete skull of *Paleomastodon*, one of the early forms of the elephant family lately found in the Eocene beds of Egypt. It is of interest to note that most of the characters which give to the skull and teeth of the modern elephant their peculiar structure and appearance have in *Paleomastodon* only just begun to develop. Thus as regards the teeth, the grinders are much simpler than in later forms, and consist of three transverse ridges only. Moreover, all the cheek-teeth (premolars and molars) are in wear at once, as in ordinary mammals, while in the recent elephants the front cheek-teeth fall out before the hinder ones are cut. The shortening

of the face and the swelling up of the hinder part of the skull are connected with the development of the heavy tusks and trunk of the present day elephant; but in *Paleomastodon* these structures were comparatively small, and the animal must have presented much the appearance of a very large pig.

Peculiar interest attaches to the discovery of bones of a large Hyracoid about the size of a tapir, belonging to a new genus. It is only within recent years that fossil remains of this group of mammals, whose affinities have long been a puzzle to zoologists, have been described. Dr. Andrews relates the occurrence in these beds of four other species of *Hyraces*; and this fact would seem to indicate that the comparatively few and insignificant modern members of the group are the degenerate descendants of a once numerous stock which must at that time have been an important factor in the Ethiopian fauna.

The sands and clays in which these bones and fossilized trees are embedded in such abundance are evidence that in Eocene times this part of the Libyan Desert was the estuary of a great river, down which the carcasses of drowned animals, accompanied by big tree-trunks, were swept, and then buried in mud and sand.

Dr. Andrews also obtained a collection of specimens from the Pleistocene lake-beds of Birket-el-Kerun, including numerous flint implements and remains of an animal which he has identified as belonging to the African elephant (*Elephas Africanus*). The occurrence of elephant remains in this locality associated with flint implements is, as Dr. Andrews points out, very noteworthy, both as extending the known range of the African elephant and also as supplying a strong reason for regarding the implements as being of prehistoric age. Dr. Budge states that no representation of the elephant is met with on any of the early Egyptian monuments, which certainly would not be the case had the artists been familiar with the animal; and it is therefore probable that it became extinct in Egypt at some remote prehistoric period, when also the implements which were found with the remains must have been made.

The imposing-looking skull of *Arsinoitherium Zitteli* and specimens of *Paleomastodon* are now exhibited in the Central Hall of the Natural History Museum.

Mention may also be made here of other recent important additions to the exhibited collection in the gallery of fossil mammalia. These comprise a series of remains of mammals from the Lower Pliocene formation of Pikermi, near Athens, obtained during the excavations recently undertaken by the trustees at that place. The bones exhibited are only a small portion of the large collection secured by Dr. A. S. Woodward. They represent quadrupeds which were living in Greece in the Lower Pliocene period, when that country was connected by land with Asia and Africa, before the Mediterranean assumed its present form. Greece was then a land of forests, table-lands and lakes; and Pikermi is part of the bed of a silted-up lake, into which the bones of accidentally destroyed herds of quadrupeds were washed and buried. The remains shown at South Kensington belong to primitive elephants (*Mastodon*), rhinoceroses, three-toed horses (*Hipparion*), numerous antelopes, giraffes, pigs, hyenas and monkeys. Attention should be drawn to the instructive pieces of the bone-beds showing how the fossilized remains occur in the rock.

THE ELIZABETH THOMPSON SCIENCE FUND.

THIS fund, which was established by Mrs. Elizabeth Thompson, of Stamford, Connecticut, 'for the advancement and prosecution of scientific research in its broadest sense,' now amounts to \$26,000. As accumulated income will be available January next, the trustees desire to receive applications for appropriations in aid of scientific work. This endowment is not for the benefit of any one department of science, but it is the intention of the trustees to give the preference to those investigations *which can not otherwise be provided for*, which have for their object the advancement of human knowledge or the benefit of mankind in general, rather than to researches directed to the solution of questions of merely local importance.