SOCIETIES AND ACADEMIES

THE BIOLOGICAL SOCIETY OF WASHINGTON

THE 464th meeting of the society was held January 8, 1910, in the west hall of George Washington University, with President T. S. Palmer in the chair and a large attendance of members. Vernon Bailey exhibited a skull and beak of the water turkey (*Anhinga anhinga*), calling attention to the peculiar adaptation of the barblets on the sides of the beak.

The following communications were presented:

The Muskrat Industry of Maryland: D. E. LANTZ.

The muskrat, because of its abundance and the adaptability of its fur to a variety of uses, has lately become the most important fur animal of North America. The tide-water region of Maryland, Delaware and New Jersey furnishes a large percentage of the entire catch of this fur, which last year amounted to five and a half million skins, bringing nearly $1,700,000 to the trappers of America. Last March the speaker visited Dorchester County on the eastern shore of Maryland and studied the methods by which trappers and marsh owners carry on the muskrat industry there.

The marshes of that region are usually leased to trappers for half the catch of fur. Measured by the returns of last year, the marshes are worth nearly as much as ordinary agricultural lands adjoining them. About 250,000 skins were taken in the county. These and the muskrat meat sold brought into Dorchester County an income of over $100,000, or more than was netted from the vast oyster industry of the county.

Muskrat meat is common on the tables of the inhabitants of that region, and the surplus is shipped to Baltimore, Wilmington and other cities, where it commands a ready sale and is eaten by all classes.

The eastern shore is noted for the large proportion of black, or melanistic, muskrats, the pelts of which command a higher price than those of the common color. Some of the Dorchester County marshes yield fully half of this variety.

The importance of wise laws for the protection of muskrats in sections where it is not destructive to dams and embankments was pointed out and the common practise of trapping this animal before its pelt is prime was condemned. The protective law for Dorchester County limits trapping to the period from January 1 to March 15, experience having shown that with this restriction the supply of this fur is reasonably constant from year to year. The animals breed three or four times during a season, producing from three to twelve young at a litter.

From Nairobi to Washington with a Collection of Living Animals: A. B. BAKER.

While the Smithsonian African Expedition was at Nairobi, Mr. W. N. McMillan offered to the National Zoological Park through Lieutenant Colonel E. A. Mearns, chief of the expedition, a small collection of wild animals which he had at his ranch, "Juja Farm," about 25 miles from Nairobi. These animals, which included five lions, a leopard, two cheetahs, a warthog and several other animals and birds, had been in captivity for some time, most of them having been caught when very young. The offer was referred to Washington and an acceptance of the gift was cabled back at once.

Mr. Baker sailed from New York on July 24 and after stopping at London and Hamburg to arrange for transportation, and visiting some of the European zoological gardens, reached Mombasa, September 16 and Nairobi two days later.

In addition to the McMillan animals several antelopes, a zebra and a few other animals were secured by purchase and as gifts. Shipping boxes were made at Nairobi, much of the material used for them having been sent out with the outfit of the Smithsonian party.

Much difficulty was experienced in obtaining suitable forage, as it was not in the market at Mombasa, and a two-years' drought about Nairobi had made forage extremely scarce there. A supply was finally obtained from farther up the country, where the rains had been less scanty. The animals were shipped from Nairobi October 26, and after some delay, owing to a washout on the railway, they left Mombasa, October 28, by the steamer *Melbourne,* of the Compagnie des Messageries Maritimes.

Reaching Port Said on the night of November 8, the animals were kept on a lighter there until the twenty-first, one of the conditions imposed by the U. S. Department of Agriculture in granting the permit for entry being that the animals should not be landed at any place en route, unless it might be in England. Through the kindness of Captain S. S. Flower, director of the Giza Zoological Gardens, near Cairo, the assistance of a trained animal keeper was had during the stay at Port Said. The animals were forwarded from there by a German freight steamer, and reached Philadelphia, December 17. Favorable weather was experienced throughout the journey. A pair of gnus, and an impala died during the first four

days of the journey. They had been caught only a few days before shipping. Two young bottle-fed gazelles and a lophiomys also died, and one eland (a gift) which was very thin and weak at the start. Both of the McMillan cheetahs died before the shipment was made. The other animals arrived in excellent condition and were as follows: five lions, a leopard, Ælian's warthog, Grant's zebra, pair Livingstone's eland, pair Coke's hartebeest, female waterbuck, Thomson's gazelle, baboon (species not yet determined), lophiomys, crested eagle, Bateleur eagle, two vultures and a hawk.

The ruminants and warthog were subject to fifteen days quarantine, and Mr. A. E. Brown, director of the Philadelphia Zoological Garden, kindly received them there for that period. The others were brought to Washington at once, and reached the park December 19. All of the animals have done well thus far, except the male eland, which died suddenly at the Philadelphia garden. The autopsy did not show any condition which would account for the death. Rabbits have been inoculated with the blood of the quarantined animals, and the animals will be kept at Philadelphia until the results of this are known.

The collection includes fifteen species, of which eleven are new to the park.

The Present Status of the Bark Disease of the Chestnut: HAVEN METCALF. (Illustrated with lantern slides.)

A disastrous chestnut disease was first reported in 1904, in the vicinity of New York city, and in 1906 was stated by Murrill to be caused by a new fungus, which he named *Diaporthe parasitica.* It is probable that this disease had existed for a number of years previously about New York and on Long Island. At the present time it has spread from Saratoga County, N. Y., and Suffolk County, Mass., on the north and east, to Bedford County, Va., on the south, and Greenbriar and Preston counties, W. Va. and Westmoreland County, Pa., on the west. The fungus attacks the tree at any point above the ground, producing cankers of the bark, which spread until they meet in the bark on the opposite side, thus girdling the trunk or limb upon which they are situated, thus death may result very quickly by girdling. Sprouts are regularly formed below girdled points, and are quite characteristic of this disease. Roots and first-year wood are rarely, if ever, attacked. The most common places for the occurrence of cankers are the large crotches, the base of the trunk and the ultimate twigs. Progress of the disease is most rapid during the spring months; but south of New York, at least, inoculations may take effect at any time of the year. A debilitated tree is no more subject to attack than a healthy one. So far as known, all species and varieties of the genus *Castanea* are subject to the disease, except the Japanese chestnut which is almost completely immune. It has so far been found impossible to produce the disease in any related genera. The fungus ordinarily gains entrance through wounds, of which the commonest are the tunnels produced by various bark borers. Such wounds as these are always moist, and hence favorable to the growth of any spore. Lesions resulting from winter injury afford entrance to the fungus, but winter injury bears no other relation to the disease. The presence of the characteristic fungus forms a certain basis for distinguishing whether any given case is the bark disease or winter injury alone, but recourse must be had, even by the expert, to the damp-chamber and the compound microscope, since in dry weather the fungus may produce no spores. The bark disease shows no definite relation to the points of the compass, as the location of lesions is determined by the position of the wounds through which the fungus gained entrance. In small, smooth-barked trees, death may be prevented by a system of inspection and cutting out of diseased tissue, somewhat similar to that practised with pear-blight. On large, thick-barked trees this is impracticable, as it is impossible to distinguish disease lesions under the thick bark. It is impossible to prognosticate what the disease will or will not do in the future, as there are very few historical data from which to judge the course of this or any other plant disease. The dry summers of the past two years have slightly checked the progress of the disease, but it remains to be seen what a damp summer may do.

D. E. LANTZ,
Recording Secretary

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

AT the 440th regular meeting, January 18, 1910, Dr. C. Hart Merriam addressed the society on "Myths of California Indians." The speaker confined himself to the three great groups of central California. Their myths, though they are obviously not homogenous, have the same personages and characters, viz., the pre-Indian inhabitants

who disappeared at the advent of the Indians and the coyote man. The myths quoted referred to the acquisition of fire.

In the discussion Drs. Fewkes, Swanton and Hewitt quoted parallels from the Casa Grande, the Northern Pacific and the Iroquois, respectively.

Dr. Walter Hough followed with a paper on "Incense and Incense Burners." The use of incense in America for religious ceremonies has never been very thoroughly studied. The paper treated in a general way of the diffusion of the materials employed and especially of the apparatus in which incense is burned. The discussion was therefore confined largely to the apparatus found among the cultured tribes of Central America, Mexico and the southwest United States. In the latter area occur forms which are possibly connected with those in Mexico. The paper also discussed the pipe as an incensario.

In the discussion Dr. Casanowicz dwelt on the use of incense, in domestic and social life as well as in the cult and magic, among the ancient nations and quoted passages which hint at a dæmonifuge background of its use. Mr. Hewitt pointed out that among the Iroquois incense is sometimes employed to emphasize a petition. Dr. Fewkes referred to the fact that among the Hopi Indians all ceremonies opened and closed with a smoke. Its object is to obtain rain; the smoke is to make a cloud, and the rain-god seeing the cloud would send rain.

I. M. Casanowicz,
Secretary

National Museum

THE AMERICAN CHEMICAL SOCIETY
NORTHEASTERN SECTION

The ninety-sixth regular meeting of the section was held on January 21, 1910, at the Twentieth Century Club, Boston.

A motion was passed in favor of holding alternated bi-monthly meetings jointly with the New England Section of the Society of Chemical Industry.

Professor Louis Derr, of the Massachusetts Institute of Technology, presented a paper entitled "Color Photography at the Present Time." After a brief statement of the underlying principles of color photography, the speaker pointed out the advantages of the process depending upon the use of finely ruled screens, and showed why it had failed commercially. He then described the French single plate process involving the use of dyed starch grains, and he showed how some of the very recent English single plates were prepared and used. The lecture was profusely illustrated with very beautiful and striking examples of color photography, including some most remarkable results with brilliant micro-photographs.

There were about one hundred members and guests present.

K. L. Mark,
Secretary

RHODE ISLAND SECTION

The regular meeting of the section was held January 20, 1910, at the University Club, preceded by the usual informal dinner.

The paper for the evening was given by Dr. John E. Bucher, of Brown University, on the subject "The Structure of Retene and its Relation to some Natural Resins." The presentation of Dr. Bucher's work, which was illustrated by charts, showed conclusively that the correct structure of retene is 8-methyl-2-isopropylphenanthrene and not the formula ordinarily published in the literature.

Several new and valuable methods of oxidation were developed during the work, notably the use of pyridine as a solvent for the potassium permanganate oxidation of substances insoluble in water; and also, oxidation by nitric acid in the presence of manganese nitrate as a catalytic agent.

As a continuation of the work the relation of retene to common rosin and abietic acid is now being studied.

The paper will soon be published in the *Journal of the American Chemical Society*.

Albert W. Claflin,
Secretary

Providence, R. I.

CLEVELAND SECTION

The third regular meeting of the session of 1909–10 was held in the Main Building of Case School of Applied Science, December 13.

The following papers were presented: Charles F. Brush, "The Commercial Manufacture of Oxygen from the Atmosphere"; F. R. Van Horn, "The Brick Industry of Cleveland."

This meeting marked the end of the first year of the existence of the Cleveland Section and was certainly the most interesting and successful meeting since the section was organized.

N. A. Dubois,
Secretary