

up by the boots; a bullet well placed, and that quickly, can only check the fury of the beast, and there may be more than one adversary with which to reckon. Possessed of such a wonderful scent, together with certain other habits which are described, not to speak of memory, it is not surprising that they seem to possess such unerring knowledge of the velt.

Many interesting facts in natural history are recorded in the pictures and text. The South African ostrich breeds in September and October, and nests were found with eight to twenty-five eggs during those months, while a single egg was taken from the ovary of a female shot at the end of February. This sporadic activity of the reproductive organs outside of the breeding season, attributed to excessive feeding on newly sprouted grass, was often observed by the natives, who frequently found single eggs scattered over the velt. Many similar cases among our own wild birds could be given.

The common stork, *Ciconia ciconia*, which winters in vast numbers in equatorial East Africa, were preparing to migrate in early February, while some even remained until the first of April. On April 2, 1904, I saw great numbers of these storks, on the desert in Nubia above the first cataract of the Nile, huddled together like a dense flock of sheep. They were very wary and would not allow even a rider to approach them. Five days later the advance guard had reached Edfu, sixty miles northward, and were fraternizing with Arabs in the ploughed fields. Though bound for Europe, they appeared to be advancing at the leisurely pace of twelve to fifteen miles a day.

Schillings speaks of hawks seizing locusts on the wing, of 'sign-post' trees of elephants, or rubbing places, some of which he thinks must have been in use for hundreds of years: of the sleeping places of hippopotami on islands, 'which seem to have been in use for ages,' and their deep-worn paths leading down to the water; of the tail-language and dumbness of the giraffe, the harmony of the zebra's stripes with the coloring of the velt, the cunning of the ostrich in enticing the lion from its nest and young, the alarm-calls of the reed-

bucks heeded by birds, the watchfulness of the yellow baboons, and their wonderful alertness in flight, the tameability and affection of the marabou storks, the attachment which sprung up between a young rhinoceros and an East African goat, and the often fatal policy of first shooting at the lion when the lioness is near.

The connection between malaria and mosquitoes is well illustrated by the following account of the usual sequel to a night of shooting and photographing on the velt, although the very brief incubation here suggested does not accord with the common type of this disease:

When the morning breaks I return to the camp, feeling as if broken to pieces, stung all over by mosquitoes, and with that peculiar sensation which unmistakably heralds an attack of fever. I was not deceived, and for two days I am confined to camp by a bad attack of malaria.

The water-famine in the dry season, the terrible pests of mosquitoes and flies of many kinds, which the traveler to the Nile valley in March and April should be able to appreciate, the scourge of malaria and dysentery following in their wake, not to speak of many other enemies which make the white man's burden well-nigh insupportable on the velt, will for long postpone the day when Herr Schillings's studies on the general natural history and photography of animals in equatorial East Africa are equaled or surpassed.

FRANCIS H. HERRICK.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Comparative Neurology for March contains the following articles: Margaret F. Washburn and I. Madison Bentley, 'The Establishment of an Association Involving Color-Discrimination in the Creek Chub, *Semotilus atromaculatus*.' An association involving the discrimination of red from green in the feeding reactions was quickly established under rigid experimental control. H. H. Newman, 'The Habits of Certain Tortoises.' Detailed observations upon five American fresh-water species. T. H. Boughton, 'The Increase in the Number and Size of the

Medullated Fibers in the Oculomotor Nerve of the White Rat and of the Cat at Different Ages.' The increase in number of medullated fibers is more closely correlated with the advance in body-weight than of age. The medullated fibers increase in size during the life of the animal. The two types, 'large' and 'small,' increase in diameter at the same rate. Dr. Edinger contributes a criticism of Dr. Yerkes' article on the sense of hearing of frogs, published last year, and this is followed by a reply from Dr. Yerkes.

The Journal of Nervous and Mental Diseases, for February, opens with a paper by Dr. Charles L. Dana on those forms of muscular atrophy which are progressive in character, and are degenerative and central in origin, viz., progressive ophthalmoplegia, bulbar paralysis, amyotrophic lateral sclerosis, and the various types of spinal progressive atrophy, whether beginning in the arms, legs, shoulders or hip girdle. The paper presents a clinical study of seventy-two cases, and is illustrated. Dr. Hoppe follows with a discussion of hysterical stigmata caused by organic brain lesions. Dr. C. K. Mills reports a case of crural monoplegia, probably representing the early stage of a unilateral ascending paralysis due to degeneration of the pyramidal tracts, and Dr. Spiller discusses briefly the question of separate sensory centers in the parietal lobe for the limbs.

The Journal of the Outdoor Life, published at Trudeau, N. Y., in the Adirondack Mountains, has been made the official organ of the National Association for the Study and Prevention of Tuberculosis, of which Dr. Herman M. Biggs, medical director of the New York City Health Department, is president. The membership of the association includes the leading workers in the field of tuberculosis, both lay and professional, throughout the United States and Canada. The *Journal of the Outdoor Life* aims to be helpful to persons suffering from or having a tendency toward lung trouble. It deals with the outdoor treatment of tuberculosis in an intelligent and scientific manner and, while

not advocating self-treatment by the laity, or attempting to supplant personal medical advice, it points out some of the common pitfalls that beset the unwary health-seeker. It advocates fresh air, nourishing food, carefully regulated exercise and competent medical supervision.

In the near future the *Schweizerische Naturforschende Gesellschaft* intends to publish a national journal containing investigations by Swiss students of science. It will be supported by the Federal Government. At present the details concerning the character and form of the journal are being discussed by the various Cantonal branch societies.

It is announced that *American Medicine*, edited by Dr. George M. Gould, will hereafter be published monthly instead of weekly.

DISCUSSION AND CORRESPONDENCE.

THE DISTRIBUTION OF GOVERNMENT PUBLICATIONS.

TO THE EDITOR OF SCIENCE: On page 7 of the issue of SCIENCE for January 5, 1906, in the address of the president of the American Association for the Advancement of Science, appears the assertion that the large editions of government publications imply a 'pecuniary waste,' because many of the copies fall into the hands of persons not competent to appreciate them. That seems a very short-sighted view, explainable only upon the theory that the distinguished speaker considered all who were not in position to receive, or buy, or secure access to limited editions are not competent to appreciate them. Large editions are greatly to be commended and are certainly not a pecuniary loss in the end, for with the constant increase of public and quasi-public libraries and consequent search for publications to complete the collections, and the increased demand arising from constantly increasing numbers of scientific workers, the great majority of copies of all worthy works sooner or later reach the hands of men who can use and appreciate them, or become available in school or public libraries. The high prices of many publications issued by educational institutions and private publishers pro-