true neoplasm has been found. Seven hundred and forty-four animals have died, and, as is the routine custom at the New York Zoölogical Park, have been autopsied, either by the resident pathologist or by the author. In this series of 744 consecutive cases but one case of tumor has been found. This case, significantly enough, was found in a white raccoon dog, an animal whose purity of species is decidedly in question and which has been classed by some zoölogists as a "sport" or albino. The animal has, however, been described by Hornaday as a new species, *Nyctereutes albus*. The animal was secured in northern Japan, but was unrecognized by Japanese zoölogists. The tumor in this case was found to be myxosarcoma of the ovary. Tumors of parasitic origin, granulomas, tubercles, actinomycotic foci and the like are, on the other hand, relatively common.

In addition to these data, the author also referred to various other animals, chiefly ruminants, taken in the wild, and of which none presented tumors. The latter observation was made by the author himself in the field and was in accord with statements of reliable guides and naturalists.

The author felt that the number of cases cited was sufficiently large to permit him to conclude with a reasonable amount of certainty that true neoplasms are extremely rare in wild animals living under natural conditions. Abnormal conditions of life, such as close inbreeding, semidomesticity or contamination of species as seen in dogs, horses, cattle, and particularly in those animals usually employed for laboratory experiment, notably the white mouse, unquestionably increase the relative occurrence of new growths.

19 (111). **"The cutaneous excretion of nitrogenous material":** **F. G. BENEDICT.**[1] (Presented by **WILLIAM J. GIES.**)

A number of experiments were reported in which the subjects wore previously extracted underclothing and at the end of the experiment the nitrogenous materials were extracted with water and determined by the Kjeldahl process. Rest and work experiments were made. During rest there is considerable variation in the actual quantity of excreted nitrogen, the average of 5 experiments being

[1] *Journal of Biological Chemistry*, 1906, i, p. 263.

0.071 gm. per day. The exact nature of the nitrogenous material thus excreted was not studied. A number of experiments were made on a professional bicycler, riding a bicycle ergometer. The exercise was very severe, as the total output of heat was 600 calories per hour. The bath water and the extract water from the clothing gave a total of 0.87 gm. in a 4-hour experiment, or 0.22 gm. of nitrogen per hour.

Of greatest significance is the important bearing of this channel for the excretion of nitrogenous material in experiments on the metabolism of protein. Profuse perspiration, whether induced passively or by muscular work, results in a considerable excretion of nitrogenous material through the skin. While the work engaged in by the subjects of these experiments was severe, certainly that of some of them was not extraordinarily so, and might well be equaled by many men engaged in ordinary occupations involving muscular work. A total excretion equivalent to one or more grams of nitrogen per day is not at all inconsiderable, and hence in accurate metabolism experiments we must give recognition to the possibility of excretion through this hitherto almost unconsidered channel. Especially is this so in experiments where the total amounts of nitrogen in the ingesta and egesta are smaller than normal, since the percentage error is thereby proportionally larger.

20 (112). **"The effects of intravenous injections of solutions of dextrose upon the viscosity of the blood": RUSSELL BURTON-OPITZ.**

The experiments were performed upon dogs, in accordance with the method devised by Hürthle. When small quantities (5 c.c.) of a concentrated solution of dextrose were injected intravenously, the viscosity of the blood became slightly greater. By the administration of large quantities (50 c.c. to 100 c.c.) the viscosity was markedly decreased at first, but reassumed its normal value in the course of about one hour.

By producing artificial glycosuria, the viscosity was decidedly increased. In the latter series of experiments the surface of the pancreas was painted with solution of adrenalin. The specific gravity of the blood pursued in all cases a harmonious course with the viscosity.