location, the northeast corner of the Olympic Peninsula, the matter seems worthy of record.

The find included two tusks in a fair state of preservation, one entire and one broken in two. The tusks were 64 and 64 3/16 inches long, respectively, the measurement being made on the outer curve. The diameter at the base was slightly over 20 inches. The weight was estimated at 35 pounds.

Just below the base of the tusks, which were in a horizontal position, were five teeth and a number of bony fragments, presumably of the jaw. One tooth comprised five sets of triple protuberances which were well pointed. Another tooth comprised four sets of triple protuberances with a fifth small stub. The enamel in both of these was in good condition. The other three teeth, each three and one-half to five and one-half inches long, comprised three sets each of double protuberances, in one case worn down about three-fourths of an inch, in the second, worn slightly more, and in the third, the smallest of the group, worn to the base of the points.

The bones were found in the course of the digging of a ditch to drain a swampy area which has been a beaver swamp within the memory of the present inhabitants of the region. The following section was exposed in the trench:

a. peaty bog muck, 2 feet 0 inches; b. marly clay, 0 feet 1 inch; c. peaty clay, dark, 2 feet 6 inches; d. sandy clay, fossiliferous, 1 foot 0 inches (base concealed).

The fossils have not been studied, but include abundant fragments of minute gastropods and other shells. The mastodon remains were in the layer c. approximately three feet below the present surface of the swamp, which is not far above sea-level.

HAROLD E. CULVER
STATE GEOLOGIST OF WASHINGTON

AVAILABLE MATERIAL IN COMPARATIVE ANATOMY AND PATHOLOGY

THE Laboratory of Comparative Pathology of the Philadelphia Zoological Society has rather extensive material of anatomical and of pathological character, some of which is not entirely used by the laboratory personnel. It has been our policy to supply to accredited investigators a moderate amount of material for their problems.

I am writing this letter to make it more generally known that material is available, because we wish no opportunities lost to be of service to workers in these general lines. This material will be given to research and teaching institutions that receive the approval of the American Association for the Advancement of Science. It will be sold to dealers whose business it is to distribute material.

Since this laboratory has no shipping department, it will be necessary for workers who desire material to supply us with mailing and express cases suitable for the specimens they desire, and to pay postage and expressage. The laboratory can not engage to embalm or inject tissues free of charge, but may be able to undertake small problems of this kind for the time-cost of the labor.

There are now available a moderate number of male and female genital tracts and of intestinal tracts. A few central nervous systems and ductless glands may also be supplied, but many of these in our laboratory are already preempted. The group specimens are grossly normal, but have not been investigated microscopically.

In so far as pathological material is concerned, the laboratory will supply only what develops in the routine autopsies and is not needed for museum purposes. Specimens needed for the collection, and those already mounted for the museum will not be supplied.

HERBERT FOX
THE ZOOLOGICAL SOCIETY
OF PHILADELPHIA

REPORT OF THE RANSOM MEMORIAL COMMITTEE

THE committee which has been in charge of the establishment of a memorial to the late Dr. Brayton H. Ransom, after a careful study of the opinions expressed in answer to a questionnaire on the subject and a consideration of the limitations placed on the choice of a memorial by the size of the fund, has come to a decision as to the form to be taken by the memorial. It has been decided that the fund be invested and that the interest be used as a money prize of $100 when that amount is available, to be awarded by the committee to a person of any nationality who has not passed his fortieth birthday at the time of the award, and who has made a comparatively recent noteworthy contribution in the field of parasitology.

The fund at present totals $930 in actual subscriptions and $135 in unpaid pledges, approximately 100 persons, representing fifteen countries in addition to the United States, having cooperated in bringing the fund to its present status, the individual contributions ranging from $1 to $100.

The fund has thus far been kept in a savings account drawing the usual interest, in the hope that a $1,000 total might be actually available for investing in a more remunerative manner; the question of investment is now being carefully investigated by the committee.

It is hoped that outstanding pledges will be paid in the near future and that any persons still desirous of joining in the establishment of this memorial to Dr. Ransom will not delay longer.

ELOISE B. CRAM,
Secretary, Ransom Memorial Committee
BUREAU OF ANIMAL INDUSTRY,
WASHINGTON, D. C.

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLE DEVICE FOR WASHING CULTURE TUBES

ONE of the most irksome and time-consuming operations of the bacteriological laboratory is the washing of culture tubes. Recently, we have been using a very simple piece of apparatus which has proved to be so satisfactory in this laboratory that we believe others will find it useful.

The device consists of a water-motor which attaches directly to the faucet by means of a screw connection. A 4-inch motor furnishing ⅛ h. p. on 80 pounds water pressure with a free speed of 4,500 revolutions per minute is used. Because of its simplicity, cheapness and ease of control this motor appears to be more satisfactory for the purpose than an electric motor. The test-tube brush is attached to the motor shaft by means of a metal chuck. We have found it more satisfactory to employ only about two inches of the bristle-tipped portion of the brush in a chuck about six inches long. This arrangement causes the brush to revolve steadily when running free and facilitates insertion into the tube. Brushes with straight bristle-tipped ends have been found more satisfactory than the newer kinds with the so-called "spray tuft" end. After the tubes have been given the preliminary preparation for brushing they can be handled rapidly and with much less breakage than by the method of hand brushing. The rate should approximate 800 to 1,000 tubes per hour.

So far as we are aware none of the supply houses is furnishing the complete apparatus at the present time. The chuck we are using can be made in a few minutes from a piece of brass rod of suitable size for attachment to the motor shaft and turned down to a diameter of about ¼ inch. A hole drilled in the end of the rod receives the brush wire, which is held in place by means of a screw. The entire apparatus costs only a few dollars.

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SPECIAL ARTICLES

NOTES ON A SPECIES CROSS IN MICE AND ON AN HYPOTHESIS CONCERNING THE QUANTITATIVE POTENTIALITY OF GENES

SPECIES crosses in laboratory rodents are not very numerous. That of *Cavia rufescens* Lund. and *C. porcellus* Linn. reported by Detlefsen,[1] and of *Rattus rattus* × *R. alexandrinus* studied by de L'Isle ('65),[2] and of Morgan,[3] are among the more important.

The present note deals with a cross between males of *Mus wagneri* (Eversman) from China[4] and tame *Mus musculus* females of a dilute brown race which has been inbred brother to sister in my laboratory since 1909.

Mus wagneri is small, nervously active, with relatively long ears and short tail, and is white-bellied, black agouti in color. This color variety was first described genetically by Cuénot[5] as a "gris à ventre blanc." It is allelomorphic and epistatic to ordinary grey-bellied black agouti.

The hybrids were easily obtained, grew vigorously, and were intermediate in size between the two parent species. In color they were white-bellied black agouti, but with deeper pigmentation than that of *M. wagneri*. In many of them the proportion of black hairs on the dorsal surface was very high, suggesting a weakened condition of the agouti pattern. The same tendency was seen in the ventral surface where dark-tipped hairs frequently were found in areas which in contrast to the white-tipped hairs gave a pattern which we have described as a "vest." It is extremely interesting to note this condition, which will again be referred to.

The three recessive genes of the dilute brown *M. musculus* females—a. (non agouti), b. (brown) and d. (dilution) disappeared in F_1 just as they would have done had the white-bellied black agouti pattern of *M. wagneri* been that of the same color variety of *M. musculus*.

A back cross of F_1 males and dilute brown females showed segregation of the three genes. The eight classes listed below were expected in equal numbers. The actual figures, however, depart widely from equality as follows:

[1] *Publ. Carnegie Inst. of Wash.* (1914) No. 205.

[2] *Arch. f. Rassen u. Gesellschafts Biologie* (1911) 8; 697.

[3] *Am. Nat.* (1907) 43; 182–

[4] I am greatly indebted to Dr. Sheo Nan Cheer, who personally brought with him from China the live specimens of *M. wagneri* which form my breeding stock of that species.

[5] *Arch. Zool. Exp. et Gén.* (1911) 8, 40–56.