pertaining to the specimens. The collection will be maintained as a separate unit by the Office of Mycology and Disease Survey, in the Bureau of Plant Industry, under the immediate supervision of a custodian to be named by the Smithsonian Institution. It will be housed in steel herbarium cases and in a fireproof building.

THE Museum of Comparative Zoology at Cambridge has acquired the large private collection of Diptera amassed during the past thirty years by Mr. C. W. Johnson.

A 300-ACRE public arboretum in which all plants, shrubs and trees which grow in the climate will be planted will be established on the Moneypenny Farm in Yonkers, according to an announcement made by Dr. Frederick J. Pope, secretary of the William Boyce Thompson Institute for Plant Research in Yonkers. The arboretum will be open to the public and laid out on plans similar to the Arnold Arboretum in Boston.

THE new Rose Garden of the Brooklyn Botanic Garden was opened to the public for the first time on Sunday afternoon, June 24. Hereafter the garden will be open to the public every afternoon except Sundays and holidays. This garden was made possible by a contribution of $15,000 from Mr. and Mrs. Walter V. Cranford, and the planting has been arranged from the educational as well as artistic point of view. The older horticultural varieties are placed at the north end of the garden, proceeding thence with the newer varieties in progression to the latest introductions at the south end. The border plantings represent the species of the genus *Rosa*. The planting also includes a representation of roses used for various economic purposes and roses of historical interest.

BEQUESTS made by the late Frederick Bruce, of New York, include $25,000 each to the American Society for the Control of Cancer and the Memorial Hospital, New York, and $10,000 to the Johns Hopkins University.

OXFORD UNIVERSITY has received from Dr. J. E. Crombie a gift of £500 towards the cost of the seismological room in the university observatory.

A GIFT of $500,000 has been made by Max Adler, of Chicago, for a planetarium on an island off Chicago's lake front near the Field Museum.

ACCORDING to the census of 1926 the population of the Union of the Soviet Republics is 145 million as compared with only 104 million in 1897, so that in spite of the war, famine and epidemics the population has increased by 40 per cent. in the last thirty years. During this period the number of urban dwellers has increased twofold, while the increase in the rural population has been only 30 per cent.

THE government's plans for geodetic operations for the season of 1928, including cooperation with Canada in attaining a single system of leveling for the two countries and with the Carnegie Institution of Washington in studies of earthquake disturbances, were outlined on June 1 by the director of the Coast and Geodetic Survey, E. Lester Jones. The activities described relate to all the 48 states. The work includes not only triangulation and leveling but also astronomical studies for determination of latitudes and longitudes.

UNIVERSITY AND EDUCATIONAL NOTES

GIFTS of $365,000 were announced at the commencement exercises of Wellesley College, including $75,000 from friends of Dr. Emilie Jones Barker, for a chair of physics.

PRESIDENT ERNEST M. HOPKINS on June 16 announced the promise of two gifts totaling $1,500,000 to Dartmouth College for developing the honors courses, recently introduced into the curriculum.

THE legislature of New Brunswick has appropriated $200,000 for the erection of a building at the University of New Brunswick in which will be housed a forest school, a department of geology and a library.

DR. EDWARD W. KOCH has been made acting dean of the University of Buffalo School of Medicine. Dr. Koch has been secretary of the medical faculty and head of the department of pharmacology for several years.

DR. E. J. CAREY has resigned as acting dean of the Marquette University School of Medicine, but will retain the directorship of the department of anatomy.

HARRY ISLER LANE, of Cornell University, has been appointed acting head of the department of mathematics at the University of South Dakota.

DR. RUDGER H. WALKER, assistant professor of agronomy at the Colorado Agricultural College, has been appointed assistant chief in soil bacteriology for the Iowa State College at Ames.

HENRY E. STARR, of the University of Pennsylvania, has been appointed professor of psychology at Rutgers University.

AT the University of Buffalo, Dr. Carleton F. Scofield, of Yale University, has been appointed assistant professor of psychology, and Dr. Arthur H. Copeland, assistant professor of mathematics.

DR. VICTOR T. ALLEN, assistant professor of geology in the University of California, has been appointed assistant professor of geology at St. Louis University.

AT Syracuse University, Dr. Earl T. Apfel, head of the department of geology in Illinois Wesleyan University, has been appointed associate professor of geology, and Dr. Ernest Thelin, of Florida State College, associate professor of psychology and director of the psychological laboratory.

DR. JOSEPH KAPLAN, of Princeton University, and Dr. E. L. Kinsey, of Yale University, both National Research Fellows, have been elected assistant professors of physics at the University of California.

DR. WAYNE E. MANNING, instructor in botany in the University of Illinois, has been appointed assistant professor of botany in Smith College.

DISCUSSION AND CORRESPONDENCE

THE HEREDISCOPE AND ARTIFICIAL POPULATIONS

THE writer and a collaborator[1] have shown that there is probably much to be learned from the empirical analysis of the constants of a population the genetic constitutions of whose members are known by hypothesis. The problem attacked in the paper cited was that of the counteractive influence of assortative mating upon the negative correlation between fertility and intelligence in determining trends in the population mean in the latter trait; other factors which strongly suggest that fruitful results might be obtained from their isolation and study are incidence ratios, selection rates and degree of monogamy. Generalized, the problem is that of describing the mathematical, logical or ideal behavior of specific factors in heredity, in order that their presence may be recognized when complicated by the presence of other factors in populations of actual organisms.

Studies like that cited, however, are excessively laborious, even with the small number of genes dealt with (five); this comes about principally because a die must be thrown or a coin flipped for every appearance in a mating of a gene in the heterozygous phase, and the result recorded; in the experiment in question, twenty-five thousand is a conservative estimate of the number of dice throws necessary, although the work was continued through only five generations.

I suggest that Mr. Graves' herediscope, reported in *J. Hered.*, 1928, 19, 54–56, although designed for demonstration purposes only, embodies a principle enabling a considerable magnification of the efficiency of research with artificial populations. I can not at this writing suggest ways and means for adapting the appliance to large-scale work; but even if it had to be reset by hand for each individual mating, the saving of labor over the dice method would be considerable, and the number of genes studied could easily be doubled.

RAYMOND R. WILLOUGHBY

CLARK UNIVERSITY

[1] Willoughby and Goodrie, "Neglected Factors in the Differential Birth Rate Problem," *Ped. Sem.*, 1927, 34, 373–393.

AN IMPORTANT SOURCE OF BROAD TAPEWORM IN AMERICA[1]

IN a recent paper[2] I reported the presence of plerocercoids of *Diphyllobothrium latum* in four species of food fishes from Lake Superior and Portage Lake, Houghton County, Michigan. Evidence was presented that the Great Lakes are probably not an important source of infested fish, because only a very small percentage of the annual consumption of these fish is taken there and it was pointed out that we had reason to believe that Canadian fish shipped to the United States to be marketed would prove to be an important source of infestation. Nearly 80 per cent. of all wall-eyes consumed in the United States are imported from Canada.[3] Two feeding experiments have been performed with plerocercoids taken from two shipments of wall-eyes from Lake Winnipeg, one of the most important sources of Canadian wall-eyes. In the first shipment of twenty-seven wall-eyes five plerocercoids were found. Four of these were fed to a dog from which four *Diphyllobothrium latum* adults were later recovered. One plerocercoid was found in the second shipment of twenty wall-eyes from the same lake. This larva was fed to another dog, from which a mature *D. latum* was later recovered. Both dogs were known as a result of fecal examinations to be free from *Diphyllobothrium* tapeworms before the experiments were performed.

These observations and experiments demonstrate that the eating of fish from Lake Winnipeg may be responsible for a large percentage of the cases of *D. latum* infestation in the United States—outside of the known endemic areas.

Because many of the settlers around the other Canadian lakes from which fish are shipped to the United States are immigrants from Baltic countries, it is here suggested that further investigation will

[1] Contribution from the Zoology Department, University of Michigan. This investigation was carried on under grant 96 awarded by the American Medical Association to Professors George R. La Rue and A. S. Warthin, of the University of Michigan, under the former of whom the work has been conducted and to whom I here express my grateful appreciation.

[2] *Journ. Am. Med. Ass.*, 90: 673–678, 1928.

[3] U S. Tariff Comm.: Lake Fish. Tariff Information Series, no. 36, 1927.