THE PRONUNCIATION OF "CENTIMETER"

AT a recent meeting of the American Institute of Electrical Engineers in New York frequent use was made, necessarily, of the word "centimeter." Sometimes it was given a thoroughly Anglicized pronunciation and occasionally an equally good French pronunciation, but several times during the day one would hear a rather unpleasant variation, an unsuccessful attempt being made to pronounce the first syllable as in French while the last was given a distinctly English sound. Since the nasal sound and slight lisp and burr are difficult to the average American, why not adopt the Anglicized pronunciation as the standard for English speech?

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DISCOVERER OF THE CALCULUS

THE correspondent in your current issue (SCIENCE, August 15, 1930)—Professor G. A. Miller—says on page 168 that English and German writers have long been claiming for their respective countries the honor of having discovered the calculus. Your readers will find in the forthcoming number of *Science Progress* for October a full article by J. M. Child, showing that the calculus was discovered by Newton's teacher, Professor Isaac Barrow, of Cambridge, before 1670. All that Newton added was the algebraic statement of the calculus, while Leibnitz suggested only the algorism now in use. Mr. Child has long been studying the matter and has given it close attention. So far as I can see his contention is perfectly sound, and I think that it was Barrow who invented the calculus. Important works are so apt to be lost sight of in the rush of publications that I think your readers will thank me for calling attention to the matter.

RONALD ROSS
Editor of Science Progress

SPECIAL CORRESPONDENCE

WORK IN PARASITOLOGY AT THE UNIVERSITY OF MICHIGAN BIOLOGICAL STATION

A CENTER for teaching and research in the field of parasitology has been developed in the last few years at the University of Michigan Biological Station on Douglas Lake, Michigan. Researches in this subject at the Douglas Lake station date back to the first collections of parasites made from this region in 1912. During the next five years researches on the life cycles of the digenetic trematodes were carried on by several visiting investigators. Beginning with the session of the summer of 1917, when the directorship of the station was taken over by Dr. George R. LaRue, a regular program of investigations on parasitic worms, chiefly on the trematodes, has been carried out by the director and his students aided from time to time by visiting investigators. In 1927 a regular course was first given at the Michigan Biological Station in the field of parasitology by Dr. W. W. Cort, of the Johns Hopkins University, and Dr. L. J. Thomas, of the University of Illinois. The presence at the station of three men interested in parasitology and representing three different institutions has made it possible each summer to gather together a considerable group of graduate students and visiting investigators in this subject.

The course as at present outlined covers only the field of helminthology. It is limited to graduate students and seniors who have completed sixteen hours of zoology. The lectures are devoted chiefly to the biology of the parasitic worms, but include also reviews of the more important helminths of man and domesticated animals. In the laboratory periods special emphasis is given to the study of living material illustrating all the stages in the life histories of the different groups of parasitic worms. The class makes a number of host examinations and learns the methods of preserving and mounting. In the summer of 1930 each student made for himself a set of about a hundred slides representing all the groups of the parasitic worms, mounted according to a variety of technique methods. In 1929 eleven students were registered in this course and in 1930 the number was nine.

Researches in parasitology at the Biological Station are carried on by the members of the staff, visiting investigators and graduate students. In the summer of 1930 the total group carrying on investigations of some kind or another in this field amounted to sixteen individuals. The subjects that were covered by this group were quite varied. The largest number investigating any one phase of the subject were working on the life cycles of the digenetic trematodes, including studies on the further development of holostome, schistosome and stylet cercariae. Another group was studying the life cycles of tetraphyllidean and proteocephalid cestodes. The other researches on the helminths were concerned with cestode and nematode morphology and with the life cycles of several nematodes in aquatic hosts. The protozoa of the region have been hardly touched. One interesting research on the blood-inhabiting protozoa was carried out during the summer of 1930. Life history studies seem to be best suited to the location and equipment of the Biological Station. The life cycles of a considerable number of parasitic worms have already been worked

out and others are in the process of solution. Facilities are available for the keeping of experimental animals, including an aquarium building and houses for mammals, birds and reptiles. The location of the laboratories in the midst of the lake region of northern Michigan makes available a wealth of problems on the parasites of aquatic animals. A permanent collection of the parasites of the region is being built up which is becoming of increasing value in the researches.

The summer of 1930 saw the moving of the University of Michigan Biological Station into enlarged quarters. Two laboratories are entirely given up to the work in parasitology, and plans are under way to increase considerably the facilities for handling experimental animals for the life history studies and for other types of experimental work. The work is well past the preliminary stages and every indication points to increased development of personnel and facilities. Interest in parasitology has greatly increased in the United States in the last decade, and the development of this center at the Michigan Biological Station will help to meet the demand for summer work in the biological phases of this subject.

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BOTANICAL LEGACIES OF WALTER DEANE

BY bequest of the late Walter Deane, who died at his home in Cambridge, Mass., July 30, 1930, in his eighty-third year, there have been received by the Gray Herbarium of Harvard University: (1) His herbarium, consisting of about 40,000 sheets, selected and mounted with special care, representing chiefly the flowering plants, ferns and fern-allies of the region covered by Gray's Manual; (2) his botanical library, including about 500 volumes; (3) his collection of portraits of botanists.

Mr. Deane, for many years widely known as an enthusiastic amateur botanist with extensive correspondence and wide-reaching exchange relations, was a member of the visiting committee of the Gray Herbarium since 1897, and one of the founders of the New England Botanical Club, being at different times its phanerogamic curator, its vice-president, from 1908 to 1911 its president and for some years its librarian. His botanical specimens were left to the Gray Herbarium with the provision that the New England Botanical Club be allowed to take from them such as might be useful in supplementing its own collections.

Mr. Deane's herbarium has long been noted among American amateur collections of its kind. In it there are many series to illustrate the development of the seedling from earliest germination to normal adult foliage. Particular care was also taken to illustrate the ripe fruit and mature seed, as well as to supply pocket material for dissection. Finally, unusual attention was devoted to the effective exhibition of the roots and other subterranean parts so far as possible.

The collection is historically important since a large part of its specimens have been from time to time studied by specialists and monographers such as Gray, Watson, Bebb, Morong, Davenport and many others, so that the value of the specimens has been greatly increased by critical notes of such authorities recorded during monographic work.

In addition to the valuable botanical collections here described, Mr. Deane bequeathed to the Gray Herbarium the sum of $20,000, the income thereof to be expended in the care of its library, and a further legacy of $25,000 to be paid to Harvard University at the expiration of certain life interests and to be used for the general purposes of the Gray Herbarium. He also left the sum of $1,000 to the New England Botanical Club for the promotion and care of its herbarium.

The passing of Mr. Deane removes from American botany a notable figure. His modesty and enthusiasm as well as his exceptional powers of friendly and helpful interest in the work of others won for him the affectionate regard of all who came into touch with his scientific pursuits.

B. L. ROBINSON

SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN IMPROVED SOIL SAMPLER

SOIL samplers of various designs have been employed for many years. The most common tool used in the classification of soil types is the screw type soil auger. A sharp spade and the post-hole digger are likewise frequently employed in securing soil samples. The major disadvantages of these three tools lie in the necessity of handling the sample and in the disturbed condition of the soil. Perhaps the spade and the post-hole digger are not as unsatisfactory as is the screw type auger, but they are awkward to manipulate.

For use on any soil free from gravel or rocks the writer has devised a tool which enables one to obtain a sample in the form of a cylinder of any desired length. This instrument has proved particularly useful in obtaining undisturbed soil samples in nearly natural condition.

The tool is made in one piece. It consists of a heavy galvanized iron pipe 36 inches long and 1¼