tesy of Dr. H. B. Tukey, analyses of soil gases in boxes containing newly planted apple trees, kept under controlled conditions, were made by the authors at the Geneva Agricultural Experiment Station, and present a possible explanation of this situation—namely, that a high oxygen level may be necessary for initiation of new roots from an existing root system. In this case, a soil atmosphere containing about 12 per cent. oxygen appeared to reduce the size of the root systems and tops considerably.

(3) *Growth of existing root tips.* Normal growth of existing root tips occurs at the upper critical concentration of oxygen, as defined by Cannon. The greenhouse study with apple seedlings indicates that normal growth does not occur at oxygen concentrations below 10 per cent., even though there may be considerable growth at percentages between 5 per cent. and 10 per cent.

(4) *Absorption and accumulation.* The experiments of Hoagland and Broyer[4] have emphasized the dependence of the processes resulting in absorption and accumulation on aeration. In this connection it is noted that the ash content (as percentage dry weight) of apple seedlings grown at different oxygen pressures decreased uniformly as the oxygen percentage was decreased below 15 per cent. Since the dry weight of the root tissue was less at oxygen percentages below 10 per cent., it is probable that absorption and accumulation were inhibited at oxygen pressures below 10 per cent. This happens to coincide with the apparent upper critical concentration and may mean that maximum accumulation occurs at the upper critical concentration of oxygen.

DAMON BOYNTON
J. DEVILLIERS
WALTER REUTHER

DEPARTMENT OF POMOLOGY,
CORNELL UNIVERSITY

A PECULIARITY OF PIGMENTATION OF THE UPPER ARM OF NEGROES

DURING the routine examination of Negroes in the Johns Hopkins Hospital, Baltimore, Maryland, we have recently observed a peculiarity of pigmentation common to a significant proportion of the patients. At a point on the antero-lateral surface of the upper arm the darker color of the outer aspect of the extremity abuts on the less heavily pigmented flexor surface. In the subjects referred to, this change is not a gradual fading of the dark pigment as the eye passes medianward over the flexor surface, but the transition is an abrupt one, producing a very definite linear appearance. Usually this margin between the darker dorso-lateral and the lighter antero-median surfaces begins to be obvious a little below the greater tubercle of the humerus and follows the lateral edge of the belly of the biceps muscle distally, disappearing again just below the middle of the humerus; it averages about ten centimeters in length. The line tends to parallel and superimpose itself over the course of the cephalic vein; however, it bears no constant relation to this vessel, its course lying lateral to that of the vein in one subject and medial to it in another. The mark is usually bilateral and more or less symmetrical in the two arms, but is occasionally present on one arm and absent on the other.

A total of two hundred Negroes of both sexes, aged eleven to seventy-four years, in the hospital wards for adult patients, were examined for the presence of the line. It was sharp and distinct bilaterally in thirty-five patients, or 17.5 per cent.; in another 2 per cent., it was present unilaterally. The incidence was the same in both sexes and at all ages. The occurrence of the line was relatively as frequent in light-skinned as in dark-skinned Negroes; it has been seen in young children. In emaciated subjects with relaxation of the skin the line was usually more striking than in well-nourished patients; this was to be expected. In a colored male Jamaican the line was particularly marked and could be followed upward to the point of the shoulder bilaterally, higher than usual. This latter subject volunteered that his father had the same mark. However, there were encountered no other patients who had noted the phenomenon in relatives; the very few who had been aware of its presence on their own persons stated that it had been there as long as they could remember. Biopsy of the skin of one Negro was taken across the line; microscopically there could be observed no variation between the two sides of the line either in morphology or in the amount of pigment in the epidermis. No similar line has been encountered on the inner side of the arm, the trunk or the lower extremities of a Negro or anywhere on the body of a white subject.

Probably this observation has been made before, but we have been unable to find any reference to it. Texts such as Cockayne's "Inherited Abnormalities of the Skin and Its Appendages"[1] one would not expect to discuss apparently so common and insignificant a variation as the one under consideration. Dr. Adolf Schultz, of the Department of Anatomy of the Johns Hopkins Medical School, when consulted on the subject, stated that it is a well-known anthropological tenet that in general the dorsal and extensor surfaces of the body are somewhat more heavily pigmented than the ventral and flexor areas. It is the abruptness of

[4] D. R. Hoagland and T. C. Broyer, *Plant Phys.*, 11: 471–507, 1936.

[1] E. A. Cockayne, "Inherited Abnormalities of the Skin and Its Appendages." London, Oxford University Press, 1933.

this transition in the upper extremities of some Negroes which we wish to emphasize in this note.

PALMER HOWARD FUTCHER
DEPARTMENT OF MEDICINE,
JOHNS HOPKINS HOSPITAL
AND MEDICAL SCHOOL

ADDITIONAL RECORDS OF HIPPOBOSCIDAE FROM MOURNING DOVES

COATNEY[1] has reported on two species of Hippoboscidae from the Eastern mourning dove (*Zenaidura macroura carolinensis*). These are *Stilbometopa podopostyla* Speiser and *Ornithoica confluenta* Say.

The writer has taken an additional species, *Microlynchia pusilla* (Speiser), in southwestern Texas. From September 2 to September 12, 1936, two or three dozen doves were killed in Bexar County in the vicinity of San Antonio. Almost without exception each bird was infested with this hippoboscid, as many as ten flies being taken from one individual. *Stilbometopa podopostyla* was taken frequently, but not so abundantly as *M. pusilla*. In a few cases both species were found on the same dove.

Determinations were made by Dr. J. Bequaert, of the Harvard University Medical School.

Microlynchia pusilla, determined by Dr. Alan Stone, of the Division of Insects Identification of the Bureau of Entomology and Plant Quarantine, also was taken from a dove near Uvalde, Texas, on October 21, 1936, by W. L. Barrett and R. W. Burgess, of this bureau.

JAMES M. BRENNAN
DIVISION OF INSECTS AFFECTING MAN
AND ANIMALS, BUREAU OF ENTOMOLOGY
AND PLANT QUARANTINE, U. S. DEPARTMENT
OF AGRICULTURE

THE TEACHING OF BOTANY IN AMERICAN COLLEGES AND UNIVERSITIES

THE Committee of the Botanical Society of America on the Teaching of Botany wishes to express its appreciation to the 264 departments of botany that have cooperated in this study. The published report summarizes the objectives, content and procedures in the teaching of the general botany courses in these departments, and adds brief discussions concerning these. It has been mailed to all cooperating departments and to all members of the Botanical Society of America. A limited number of copies of the report is available to others interested; four cents postage should accompany requests.

An additional bulletin on the construction of tests for the measurement of student achievement will be published by the end of the year.

E. L. STOVER
CHARLESTON, ILL.

SOCIETIES AND MEETINGS

THE INTERNATIONAL CONGRESS OF MATHEMATICIANS

DURING the week beginning on September 4, 1940, the International Congress of Mathematics will hold a meeting in Cambridge, Mass.

The forerunner of the International Congress of Mathematicians was a meeting held at Chicago in 1893, in connection with the World's Columbian Exposition. The officers were: W. E. Storey, president; E. H. Moore, vice-president, and H. W. Tyler, secretary. Forty-five papers were read by mathematicians from seven different countries. The principal long addresses, later published by the American Mathematical Society, were delivered by Felix Klein, imperial commissioner from Germany.

The first congress in Europe was held at Zurich in 1897. Since that time, except for the interruptions caused by the world war, sessions have been held about once every four years. The only one of these in North America was the congress of 1924 at the University of Toronto. Here hospitality on a generous scale was made possible by subventions from the Dominion of Canada and the Province of Ontario.

The most recent congress was held in Oslo in 1936. At that meeting the invitation of the American Mathematical Society for 1940 was accepted.

The numbers in attendance have steadily increased, averaging about 600 at recent congresses. Some 250 short papers have been presented by representatives of about 40 different countries.

The dates of the forthcoming congress have been fixed as September 4 to 12, 1940. The American Mathematical Society will not hold its usual summer meeting in that year. Harvard University and the Massachusetts Institute of Technology will be the principal local hosts. Some neighboring institutions will join in the hospitality, but all the institutions of the United States and Canada are invited to consider themselves as participants. Mathematicians so desiring will be housed in the Harvard University dormitories at modest rates, and meals will be served at cost in the university dining rooms. There will be accommodations for members of families, with special provision for the care of children. Those visitors who prefer hotel accommodations can be comfortably provided for in Cambridge or Boston. The society will be able to provide room and board without charge to a considerable number of foreign guests during the week of the congress. In connection with the Harvard Tercentenary in 1936 the American Mathematical Society and the Mathematical Association of America held a highly successful meeting in Cambridge, attended by some eight hundred persons, and there is every reason to expect equally satisfactory arrangements for the 1940 congress.

[1] Coatney, SCIENCE, n.s., 88: 2281, 258, 1938.