

desirable that the next volume of Summarized Proceedings be published in fall of 1925, to include the proceedings of the 1924 (Washington) meeting.

13. It was voted that the executive committee recommend to the Council that the 1925 meeting (for the year 1925-6) be held at Kansas City, Mo.

14. The general secretary was instructed to communicate with the Pacific Division and to say that if the Pacific Executive Committee arranged its summer meeting for 1922 in Salt Lake City, the executive committee would consider the matter of arranging a meeting of the whole Association for that time and place.

15. The permanent secretary was instructed to invite all past presidents to be present at the Toronto meeting, especially to attend the sessions of the council at Toronto and to take part in the council's deliberations.

16. The general secretary was asked to invite one or more Russian scientists to attend the Toronto meeting.

The meeting adjourned at 10 o'clock, to meet in Toronto, at 10 A.M. on Tuesday, December 27.

BURTON E. LIVINGSTON,
Permanent Secretary

EDUCATIONAL EVENTS

AN AMERICAN BAMBOO GROVE OPEN TO INVESTIGATORS

RESEARCH men connected with the state and other institutions are invited to visit the bamboo grove at Savannah on the Ogeechee Road. This grove covers an acre of ground, and the culms rise fifty-five feet into the air, producing a dense forestlike effect with their smooth dark green culms three and four inches in diameter. It is the largest grove of the Madane bamboo (*Phyllostachys bambusoides*) east of the Mississippi and comparable in beauty to groves of similar size in Japan. Any botanist who has never seen a bamboo grove has waiting for him a thrilling experience, for the sight of a giant grass over fifty feet tall changes one's ideas of grasses just as the sight of a victoria regia changes one's ideas of water lilies or the discovery of the pterodactyl changed our ideas of lizards and birds. A simple laboratory, which is being equipped with limited living accommodations, stands in the center of the grove, and its facilities are at the disposal of

the research workers of the Department of Agriculture and other institutions upon application to this office.

While the grove is wonderfully interesting at any time, it is peculiarly fascinating about the middle of April when the new shoots four inches in diameter are coming through the ground and shooting skyward at a great rate.

Botanists to or from Florida should by all means stop and see this grove. It lies twelve miles from Savannah on a new concrete highway, the Ogeechee Road. Long distance telephone central will connect anyone with the "Government Bamboo Grove," and they can talk with Mr. Rankin, the superintendent.

DAVID FAIRCHILD

OFFICE OF FOREIGN SEED AND PLANT
INTRODUCTION,
BUREAU OF PLANT INDUSTRY

FLIGHTS OF HOUSE FLIES

THAT the house fly not uncommonly makes a journey of five to six miles in the space of twenty-four hours is shown by experiments conducted by the Bureau of Entomology, United States Department of Agriculture. The ease with which flies travel many miles shows the importance of general sanitary measures to destroy breeding places. Fly flight tests were conducted in northern Texas, where approximately 234,000 flies of many different species were trapped, then dusted with finely powdered red chalk, and liberated. Fly traps baited with food highly relished by the flies were placed at measured intervals in all directions from the points of release. By means of these secondary traps, it was possible to determine the direction and flight of different species of flies. The tests showed that the flies, after regaining their freedom, would travel distances up to 1,000 feet in a few minutes. The screw-worm fly evidenced its power to cover a half mile in three hours, while the black blowfly traveled anywhere from half a mile to eleven miles during the first two days' release. The house fly covered over six miles in less than twenty-four hours. Observations at the Rebecca Light Shoal off

the coast of Florida seemed to show that flies come down the wind from Cuba (ninety miles distant), and at times from the Marquesas Keys (twenty-four miles distant), and even from Key West, Fla., forty-six miles away. The maximum distance traveled by the house fly in these experiments was 13.14 miles. The tests proved that the injurious forms of fly life were not distributed on any large scale by artificial means, but rather that many of the far-flying species showed marked migratory habits.

IMPACT ON BRIDGES

A NEW instrument devised by the Bureau of Public Roads of the United States Department of Agriculture measures with scientific precision the effect of every shock and blow delivered by moving vehicles in crossing a bridge. Attached to any part of the bridge structure, this instrument makes a photographic record of the effect of the moving load. The amount of stretching or shortening of the part as a result of the shocks is represented by a fine black line on the photograph. No blow or shock can be delivered so quickly that the instrument will not record its effect. It has never before been possible to measure the effect of such blows. Engineers have long been able to calculate the effect of standing loads very exactly; but because of their inability to measure the effect of quickly delivered blows or impacts, they have never been able to proportion the various parts of a bridge with absolute assurance. It has been necessary to make a liberal allowance for this unknown quantity. In some cases the allowance has not been sufficient and the bridges have collapsed under moving loads. Many bridges still in service are probably too weak to withstand safely the sharp blows of swiftly moving vehicles, though they will safely carry the same vehicles at rest or moving at a slow speed. The familiar warning posted at the portals of a bridge: "Speed limit on this bridge 8 miles per hour," means that the design of the bridge to which it is attached is not strong enough to allow for impact. In the light of the recent experiments with motor trucks in which it was shown that

a swiftly moving motor truck may strike a blow equivalent to seven times its actual weight, it is rather surprising, the department road experts say, that failures have been so few. It is believed this new measuring instrument will soon do away with uncertainty. The knowledge gained by its use will enable the engineer to design bridges which are sure to hold up under fast-moving vehicles, and to build such bridges without undue waste of material and money.

THE TORONTO MEETING

THE section of medical sciences of the American Association has arranged the following program:

Vice-presidential Address: "The past and the future of the medical sciences in the United States": Professor Joseph Erlanger, professor of physiology, Washington University.

"Hereditary factors in development": Dr. Charles B. Davenport, director of the Laboratories for Experimental Evolution of the Carnegie Institution.

"The metabolism of children in health and disease": Professor Harold Bailey, Cornell Medical School, N. Y.

"Newer aspects in dietetics of children": Dr. Alfred Hess, College of Physicians and Surgeons, New York.

"Movie exhibition of tonsil-adenoid clinics in operation": Dr. George W. Goler, health officer, Rochester, N. Y.

"The mental hygiene of children": Dr. C. M. Hineks, associate medical director, Canadian National Committee for Municipal Hygiene, Toronto, Canada.

PROFESSOR E. S. MOERE, secretary of the section of geology and geography, writes:

The section has prepared a very interesting program for the Toronto meeting and the officers of the section will be glad to hear at once from any of the members who wish to contribute. While the meetings of the other societies affiliated with the association are drawing many of the geologists and mineralogists from this side of the international boundary to Amherst, quite a number are going to take part in the Toronto meeting and the Canadian geologists are most heartily cooperating in preparation for the meeting. Many of the geologists of the Canadian Geological Survey and