hookworm, malaria. Climate in its relation to human efficiency.

G. *Physics:* Isostasy, arc of meridian in Australia, longitude by wireless, weather cycles and weather forecasting.

INTERNATIONAL CONFERENCE OF PHYTOPATHOLOGY AND ECONOMIC ENTOMOLOGY

ANNOUNCEMENTS have recently been received in this country inviting plant pathologists and entomologists to attend an International Conference of Phytopathology and Economic Entomology in Holland during June, 1923. Arrangements for this conference are in charge of a committee composed of Professor Dr. H. M. Quanjer, Professor Dr. Johanna Westerdijk, N. van Poeteren, T. A. C. Schoevers, J. Hudig, Dr. E. van Slogteren, G. Kruseman, J. C. Dorst, J. G. Hazeloop, E. H. Krelage and J. H. van Straaten van Nes.

The committee invites those who wish to read papers or bring up for discussion urgent questions on plant diseases or insect pests. The titles and short abstracts of the papers or questions for discussion should be sent in advance to the secretary, Mr. T. A. C. Schoevers, Villapark 8, Wageningen. The official language of the conference will be English, but papers can be read and discussion held in either English, French or German.

The conference will be held from June 25 to June 30, 1923, and participants are invited to arrive at Wageningen on Sunday, June 24. The following program has been arranged:

Monday, June 25: Presidential address of welcome and lecture on plant diseases as seen from the standpoint of general pathology. Demonstration of experiments, especially on potato diseases. In the afternoon and evening addresses, papers and discussions.

Tuesday, June 26: Address by Mr. van Poeteren on organization and methods of the Dutch Phytopathological Service. Discussion on international laws and requirements. In the afternoon demonstrations of some methods of control of pests and diseases as practiced in Holland, *e. g.*, the furrowing-wheel to destroy leather-jackets, control of American gooseberry mildew, of smut and stripe in grain crops, etc. Evening meeting: Addresses, papers and discussions.

Wednesday, June 27, and Thursday, June 28: Trips through the country. To prevent congestion of the program, participants are requested to subdivide into those interested in agriculture and those interested in horticulture. On Wednesday morning the first group will travel by rail to Friesland, where farms and selection-fields of potatoes are to be visited; next day Groningen Agricultural Experiment Station, address of Mr. Hudig on diseases of crops on alkaline and sour soils, and visit to Mr. Hudig's experiments. Visit to the Experimental Farm of the Groningen Seed Growers' Association.

The second group will visit first the nurseries of Boskoop and Aalsmeer, situated in a typical Dutch country region below sea level; thereafter visit to the bulb-growing districts near Haarlem. Dr. v. Slogteren will address the company and give a demonstration on modern methods of combatting some bulb diseases, *e. g.*, eelworm. This trip will end with a visit to the early potato districts of North Holland, where selection is practiced.

It would be possible to form a third group for visiting other centers of culture, such as the Westland, the most important district growing vegetables and fruit under glass; afterwards the orchards in North Holland and the early potato fields in the same district might be visited.

Friday, June 29: Meeting of Baarn; address of Professor Westerdijk on the cultivation of parasitic fungi and demonstration of research work. Afternoon devoted to discussions and inspection of the international collection of fungi-cultures. This meeting will be continued during the evening for addresses, papers and discussions, and to Saturday morning, if desired.

Saturday, June 30: In the afternoon of that day the conference will leave for the Hague, for an informal meeting at the office of the minister of agriculture. Thereafter the committee will entertain all participants at dinner in the bathing resort Scheveningen.

All scientific men planning to attend the conference should notify Secretary Schoevers in order that proper arrangements may be made for transportation and entertainment.

APPALACHIAN FIELD TRIP

MEMBERS of the Department of Geology in the Mississippi Agricultural and Mechanical College in the late summer of 1922 completed an Appalachian field trip in two automobile trucks, touring parts of eight states and covering more than 2,000 miles in direct travel.

From the college to Tuscaloosa, the whole of the Cretaceous was crossed. At various places from Birmingham, through Anniston, Gadsden,

Chattanooga, Cleveland and Knoxville, to Jellico, numerous stratigraphic sections of the Paleozoic beds were measured and many structure sections of the Southern Appalachians were made. On a side trip from Cleveland to Ducktown, Copper Hill and beyond, Archeozoic and Proterozoic beds were examined. In addition, coal, iron, zinc and copper mines; dolomite, limestone, slate and marble quarries; and iron, aluminum, and acid (industrial) plants were visited.

Across central Kentucky, the Blue Grass region of horizontally-bedded limestones was traversed. From Cincinnati to Columbus and thence across southeastern Indiana to New Albany, the glaciated area was studied. In western Kentucky, from Louisville to Mammoth Cave and Bowling Green, the cave and sink topography was almost continuously under observation. Thence the beautiful Blue Grass region of Tennessee, the phosphate mines about Nashville, the Wilson Dam power project at Muscle Shoals, and finally home.

From seats of vantage in the trucks, which passed across the plains, down into the valley depths, and over the mountain tops, the ever present and continuous opportunity was one of unobstructed vision. Under such conditions on this trip from a Gulf state to a Great Lakes state and back over a different route, obviously the great thing was the study of some of the larger phases of geology. Especially is this true of that part which may be termed geologic control of industrial environment. It was the major feature of the trip.

The tour aroused considerable interest among members of geologic departments of a number of universities and in deference to their requests it may be appropriate to mention something about the equipment, expense, etc. The two trucks were one-ton, high-gear Fords, equipped with bodies especially designed for field trips about the college. Three of the four seats were removed from one of the cars and in it the baggage and camp equipment were carried, while the other one was used as a passenger car. Only the maintenance (gasoline, repairs, etc.) cost, which scarcely exceeded the original individual deposit of twenty-five dollars, was charged to the members of the party, consisting of two instructors, Professors Morse and Vestal, and ten students. The living expense was approximately the same amount.

W. O. M.

REPORT OF THE DIRECTOR OF THE NEW YORK BOTANICAL GARDEN

IN his annual report to the board of managers Dr. N. L. Britton, director-in-chief of the New York Botanical Garden, stressed the need of funds to more completely develop the usefulness of the garden, commented on the greatly increased interest in plants of all kinds and spoke of the difficulty of preserving the beauty of the natural features of the reservation with the constantly growing number of visitors and with what he characterized as insufficient police supervision.

The following officers were elected to the Board of Managers: Dr. Frederic S. Lee, *president;* Henry W. de Forest and Frank L. Sturgis, *vice-presidents;* John L. Merrill, *treasurer;* Henry de la Montague, Jr., *assistant treasurer;* Dr. N. L. Britton, *secretary.* For the last three years Dr. Lee has served as vice-president of the board.

Dr. Britton's report deals with the progress made in the improvement of the grounds, in the increase, development and study of the collections of plants, specimens and books and in educational and scientific work. A somewhat insufficient force of gardeners and laborers also has militated against the more perfect maintenance of the older plantations.

The collections are now among the largest and most important anywhere, but their extended usefulness and increase, the further development of the reservation of nearly 400 acres, the completion of the buildings and the extension of educational and scientific work require more funds than as yet have been made available.

Approximately 16,000 kinds of plants have been in cultivation during the year, about 9,000 of which were under glass and 7,000 outdoors. The increase of the record over 1921 is largely covered by the planting in the iris garden and the new rock garden. The garden had the cooperation of the American Iris Society in the work in the iris garden; Mrs. Mortimer J. Fox and T. A. Havemeyer gave their aid in increasing the collections of lilies, Mr. Havemeyer also