eludes the territory within a radius of 30 to 35 miles of New York harbor. How many more than 1,480 elms are infected will be brought out by further scouting by the Bureau of Entomology this spring and summer. Most of the diseased trees were found in New Jersey. In New York infected trees so far number more than 200. Only two have been discovered in Connecticut. More than 400,000 elms have been examined. When infection is found, the tree is destroyed.

At Cleveland and Cincinnati, where the first infected trees were found in 1930, it is hoped there are now no more cases of the disease. Only one infected elm was found last year and only nine in four years.

Not every sick elm has the Dutch elm disease, but elms with wilting, yellow or brown leaves, accompanied by brown streaks in the young wood, are under suspicion. If any elm has any of these symptoms, twigs which show the brown streaks should be sent at once to the newly established Dutch Elm Disease Laboratory, Room 207, Postoffice Building, Morristown, N. J. Small branches approximately ⅜ inch in diameter and 6 inches long make a satisfactory sample. A statement of the exact location of the tree should accompany each sample.

If a clean cut is made across a twig affected with the Dutch elm disease, a brownish discoloration will be seen in the sapwood. In general the discolored tissue does not form a completely closed circle, but is made up of numerous small, brown dots. If the bark is peeled away and the sapwood exposed, the discoloration is evident as a series of short, brown streaks.

An insect, the smaller European bark beetle, probably spreads the disease from tree to tree but there may be other important ways of spreading it. If it were possible to eradicate either all the infected trees or all the bark beetles, the spread of infection might cease. The bark beetle, carrying spores of the disease, feeds preferably in the crotches of tender elm twigs. The fungus, as it grows, travels up and down the tree, probably reducing the sap flow through the affected parts. Eventually it kills the tree.

Once the tree is infected and begins to die, it forms a perfect nest for eggs of the beetles. The female, followed by the male, burrows under the bark for an inch or more, leaving dozens of eggs. The young beetles emerge contaminated with spores, and, feeding upon other parts of the tree or other trees, complete the cycle of infection.

Tree surgeons, park superintendents and tree lovers everywhere can help in combating this menace to America's finest shade trees by being on the lookout all summer for the wilting, yellow or brown leaves, accompanied by brown streaks in the young wood.

FOURTH FIELD CONFERENCE OF PENNSYLVANIA GEOLOGISTS

THE fourth Field Conference of Pennsylvania geologists was held at Pittsburgh on May 25, 26 and 27. About 75 geologists attended. Most of those present were from Pennsylvania, but representatives from New York, New Jersey and West Virginia also came. The University of Pittsburgh, the Carnegie Institute of Technology and the Gulf Companies acted as hosts to the conference, ably represented by the local committee consisting of Henry Leighton, *chairman,* M. G. Gulley, *secretary,* R. W. Clark, I. P. Tolmachoff, C. R. Fettke, W. A. Copeland and B. Perkins.

Following registration at the Carnegie Museum on the morning of May 25, parties were conducted through the museum by Messrs. Tolmachoff and Burke. In the afternoon a choice of either one of two field trips was offered. The first of these, led by R. E. Sherrill, visited localities in and about Pittsburgh. Many important physiographic features were observed, including "the Allegheny peneplane" and the abandoned and present valleys of the Monongahela River. Sections in the Conemaugh formation at and near Brilliant were visited, where not only the stratigraphic succession but some interesting structural features thought to be of landslide origin were observed. The other Friday afternoon excursion, under W. A. Copeland, consisted of a trip through one of the larger bituminous coal mines of the Pittsburgh district.

General trips for the entire conference were held on Saturday and Sunday. The Saturday trip, under C. R. Fettke, toured the area immediately west and northwest of Pittsburgh, during which representative strata of practically the entire Pennsylvanian system were seen. Of particular interest were the thin, fossiliferous, marine limestones which appear in this section. The party crossed the northeastern end of the McDonald oil pool, and the largest coal stripping operation in western Pennsylvania which is run by the Harmon Creek Coal Company, was observed south of Florence. Certain physiographic features were also pointed out. On the Sunday trip, which was led by Henry Leighton, various observations were made going south from Pittsburgh to Uniontown. At Uniontown the party turned east to examine the well-known section exposed along the National Pike where it crosses the Chestnut Ridge anticline. Here are exposed beds assigned to the Allegheny, Pottsville, Mauch Chunk, Greenbrier, Pocono, Loyalhanna and Chemung. Important structural features are also observable. Fossil collecting was indulged in at a large quarry in the Loyalhanna limestone on the east

limb of the fold. The trip ended at Ohiopyle, where the curious physiographic relations of the Youghiogheny River were observed. Exposures of the Allegheny series were seen. These rocks contain many plant impressions, and at one point a pothole six feet in diameter in them is exposed.

A complimentary smoker was given the conference by the Gulf Companies in their Pittsburgh laboratory on Friday evening, and the annual dinner was held at the Carnegie Inn on Saturday evening. During the smoker a short business session was held. It was unanimously voted to hold the 1935 meeting in or near Philadelphia since several invitations from geologists and institutions in that part of the state had been received. The advisability of holding the 1936 meeting jointly with the New York State Geological Association somewhere in the anthracite fields was favorably discussed, but no final action was taken.

BRADFORD WILLARD,
Secretary-treasurer

PARTICIPATION OF AMERICAN CHEMISTS IN THE NINTH INTERNATIONAL CONGRESS OF PURE AND APPLIED CHEMISTRY

THE Ninth International Congress of Pure and Applied Chemistry, the first world congress of chemistry to be held since that of New York in 1912, met at Madrid from April 5 to 11.

According to *Industrial and Engineering Chemistry,* from which the following facts are taken, the congress was a brilliant success. More than six hundred representatives, from some twenty-five countries, were in attendance with an equal number of chemists from Spain. The official delegation from the United States consisted of A. K. Balls, Edward Bartow, chairman, J. V. N. Dorr, Raleigh Gilchrist, L. W. Jones, G. N. Lewis, Atherton Seidell, Alexander Silverman, R. E. Swain and J. W. Turrentine. Harry N. Holmes and Burrows Morey were also officially delegated, but were unable to attend. Other American members in attendance included M. L. Crossley, R. K. Strong and A. Terry, Jr.

The provisions of the Spanish organizing committee for the scientific program were carefully made and the entertainment features and hospitality were lavish.

At the opening session the President of the Spanish Republic presided and the principal address was that by O. Ferandez, president of the congress, who spoke upon "The Evolution of Chemistry since the Last Congress in 1912."

There were four principal addresses.

G. B. Bonino, of Bologna, "The Raman Spectra and New Ideas upon the Constitution of Aromatic Nuclei."
R. Kuhn, of Heidelberg, "Flavine, a New Class of Natural Coloring Matters."
A. de Galvez-Cañero, of Madrid, "The Metallurgy of Silver and Mercury." A historical paper.
G. N. Lewis, of California, "Different Kinds of Water."

These were followed by twenty-one introductory addresses by leading chemists from all countries. In addition, some 250 papers were presented in the twelve different sections. Besides the introductory address on the isolation of the antineuritic vitamin, by Dr. Atherton Seidell, the following papers were presented by members of the American delegation:

Edward Bartow, "Glutamic Acid."
R. Gilchrist, "A New System of Analytical Chemistry for the Platinum Metals."
A. K. Balls and W. S. Hale, "Darkening of Apples."
J. V. N. Dorr, "Chemical and Mechanical Aspects of Sewage Disposal Practise."

Dr. P. Walden, who was present at the eighth International Congress of Pure and Applied Chemistry in Washington and New York in 1912, and who at that time was chosen president of the conference to be held in St. Petersburg, in 1915, was present at Madrid. He presided at the closing session of the congress.

The next meeting of the International Chemical Union, to which the United States may send fifteen delegates, will be held in Zurich during the summer of 1936, whereas the International Congress of Chemistry, to which American chemists are invited, will meet in Rome in 1938. The following officers were elected by the International Union: *President,* N. Parravano, Italy; *Vice-presidents,* Edward Bartow, United States; M. Bodenstein, Germany; M. F. Fichter, Switzerland; K. Matsubara, Japan; E. Moles, Spain. The holdovers are: M. Delépine, France; R. H. Kruyt, Netherlands; J. F. Thorpe, England.

The decoration of Commander of the Spanish Republic was bestowed upon one representative from each of eleven countries, one coming to Dr. Atherton Seidell for the United States. Representatives of ten different countries were made corresponding members of the Spanish Academy of Science. Among these were Professor Edward Bartow, of the State University of Iowa. Honorary degrees were conferred by the University of Madrid on eight individuals, one from each country, and in this group is Professor Gilbert N. Lewis, of the University of California.

Messrs. Bartow, Jones, Lewis, Silverman, Swain and Turrentine were members of the council of the union at the Madrid meeting.

During their stay in Madrid the American delegates were informally received by Ambassador Claude H. Bowers, and the American Club at Madrid gave a luncheon at which the Ambassador and the delegation were guests of honor. On this occasion Dr. Bartow