

air temperature of the day, and the minimum soil temperatures also lagged about an hour and forty minutes behind the minimum air temperatures. At a twelve-inch depth there was a lag of eight hours in the case of the maximum and of six hours in the case of minimum temperatures.

The importance of the soil profile was emphasized by several speakers. C. F. Shaw discussed its importance as a basis for soil classification. He called attention to the necessity for recognizing the individual layers or horizons in drawing samples for any kind of analytical work. Plant roots range through the soil to a considerable depth; therefore the characteristics of the horizons in the root zone must be known and recognized.

C. F. Shaw and Alfred Smith presented results from which they conclude that surface evaporation can not pull water from an indefinite distance in the soil. It seemed that a soil like those they employed would lose no water by evaporation if the water table lay at a depth of ten feet or more from the surface.

An interesting session on Tuesday evening was devoted to "Research Methods on Soil and Plant Interrelationships." The more or less informal discussion was led by J. S. Burd and D. R. Hoagland and elicited many important suggestions.

At the business meeting, the following officers were elected: *President*, J. S. Burd, University of California, Berkeley; *vice-president*, R. E. Neidig, University of Idaho, Moscow; *secretary-treasurer*, H. S. Reed, Citrus Experiment Station, Riverside, California.

Following are the officers of the Pacific Division, American Association for the Advancement of Science, for 1926-1927:

President: Arthur A. Noyes, director, Gates Chemical Laboratory, California Institute of Technology, Pasadena, California.

Vice-President: Joel H. Hildebrand, professor of chemistry, University of California, Berkeley, California.

Secretary-Treasurer: W. W. Sargeant, California Academy of Sciences, San Francisco, California.

Executive Committee of the Pacific Division

Joel H. Hildebrand, chairman, professor of chemistry, University of California, Berkeley, California.

Arthur A. Noyes, director, Gates Chemical Laboratory, California Institute of Technology, Pasadena, California.

Walter S. Adams, director, Mount Wilson Observatory, Pasadena, California (1928).

Bernard Benfield, consulting engineer, Kohl Building, San Francisco, California (1929).

Leonard B. Loeb, assistant professor of physics, University of California, Berkeley, California (1931).

Ernest G. Martin, professor of physiology, Stanford University, California (1929).

Emmet Rixford, professor of surgery, Stanford University, 1795 California Street, San Francisco, California (1928).

J. O. Snyder, professor of zoology, Stanford University, California (1930).

O. F. Stafford, professor of chemistry, University of Oregon, Eugene, Oregon (1930).

W. W. SARGEANT,
Secretary

THE INTERNATIONAL CONGRESS OF PLANT SCIENCES

It is now possible to make a more definite announcement regarding the program of the congress to be held in Ithaca the third week in August. Since interest centers largely in the speakers, a list of these will suffice to indicate the general character of the program.

At the opening meeting, to be held on the evening of Monday, August 16, it is expected that the entire congress will be welcomed by Livingston Farrand, president of Cornell University, and addressed by W. M. Jardine, United States Secretary of Agriculture. On Wednesday evening Professor F. A. F. C. Went, of the University of Utrecht, will deliver a public address on the subject "Plant Movement," and on Friday evening Dr. Erwin F. Smith, of the Bureau of Plant Industry, will speak similarly on "Fifty Years of Phytopathology."

Following is a fairly complete list of those who will participate formally in the programs of the various sections. Those whose names are starred are not expected to present their papers in person.

A. Agronomy. Zavitz (Guelph), Tulaikov (Saratov), McCall (U. S. D. A.), Marcello (Venice), Prianishnikov* (Moscow), Arrhenius* (Stockholm), Stoklasa (Prague), Love (Cornell), Christie* (Norway), Stadler (Missouri), Kiesselbach (Nebraska), Hayes (Minnesota), Leighty (U. S. D. A.), Holbert (U. S. D. A.), Jones (Conn. Agr.), Vavilov* (Leningrad).

B. Bacteriology. Winogradsky (Paris), Bergstrand (Stockholm), Mellon (Rochester), Henrici (Minnesota), Löhnis* (Leipzig), Buchanan (Ames), Waksman (Rutgers), Clark (U. S. Hyg. Lab.).

C. Cytology. Tischler (Kiel), Nemeč (Prague), Seifriz (Pennsylvania), Guilliermond* (Paris), Taylor (Pennsylvania), Levine (New York), Goodspeed (California), Blackburn (Newcastle-upon-Tyne), Heilborn (Stockholm), Svedelius (Upsala), Harper (Columbia), Sakamura* (Sapporo), M. Nawaschin (Moscow), Ishikawa (Tokyo), Cleland (Goucher), Allen (Wisconsin), Sax (Maine), Randolph (Cornell).

D. *Morphology and Paleobotany*. Chodat (Geneva), Went (Utrecht), S. Nawaschin (Moscow), Porsch* (Vienna), Hoyt (Washington and Lee), Florin (Stockholm), Noé (Chicago), Jeffrey (Harvard), Eames (Cornell), Wieland (Yale), Mez (Königsberg), Svedelius (Upsala), Chamberlain (Chicago), Thomson (Toronto), Coulter (Yonkers), Buchholz (Texas).

E. *Ecology*. Rübel (Zürich), Skottsberg (Gothenburg), Cowles (Chicago), Conzatti* (Oaxaca), Domin (Prague), Szymkiewicz* (Lwow), del Villar* (Madrid), Pearsall (Leeds), Tansley (Cambridge), Toumey (Yale), Du Rietz (Upsala), Cooper (Minnesota), Nichols (Yale), Borza (Cluj), Palmgren* (Helsingfors), Szafer (Krakau), Maximow (Leningrad).

F. *Forestry*. Serpieri* and Pavari* (Florence), Jonson (Stockholm), Howe (Toronto), Toumey (Yale), Cajander* (Helsingfors), Endres* (Munich), Zon (U. S. F. S.), Fischer (Manila), Tkatchenko* (Leningrad), Petrini* (Stockholm), Rodger* (Dehra Dun), Dana (U. S. F. S.), Korstian (U. S. F. S.).

G. *Genetics*. Lehmann (Tübingen), Ernst* (Zurich), Tschermak* (Vienna), Sirks (Wageningen), Krenke* (Moscow), Blakeslee (Cold Spring Harbor), Malinowski (Warsaw), Shull (Princeton), East (Harvard), Muller (Texas), Eyster (Maine), Anderson (Michigan), Babcock (California), Davis (Michigan), Savastano (Acireale).

H. *Horticulture*. Chittenden (London), Macoun (Ottawa), Hansen (South Dakota), Jones (California), Kotowski (Skierniewice), Remy* (Bonn), Waugh (Amherst), Potter (New Hampshire), Hedrick (Geneva, N. Y.), Daniel* (Rennes), Overholser (California), Auchter (Maryland), Thompson (Cornell), Garner (U. S. D. A.), Hooker (Missouri), Carrick (Cornell), Anthony (Penn. State), Alderman (Minnesota).

I. *Physiology*. Lepeschkin (Prague), Ursprung* (Fribourg), Reed (Riverside), Lubimenko (Leningrad), Livingston (Johns Hopkins), Knudson (Cornell), Kostytschew* (Leningrad), Robbins (Missouri), Stoklasa (Prague), Scarth (McGill), Vouk (Zagreb), Crocker (Yonkers), Lloyd (McGill), Popoff* (Sofia), Swingle (U. S. D. A.), Nixon (U. S. D. A.).

J. *Pathology*. Quanjer (Wageningen), Murphy* (Dublin), Morstatt* (Berlin), Jaczewski (Leningrad), Whetzel (Cornell), Hollrung* (Halle), Shear (U. S. D. A.), Reddick (Cornell), Duggar (Mo. Bot. Garden), Klebahn (Hamburg), Earle (Washington, D. C.), Küster* (Giessen), Atanasoff* (Sophia), Walker (Wisconsin), Stakman (Minnesota), Allen (California), M. Löhnis (Schevingen), Jones (Wisconsin), Beauverie* (Lyons), Zweigbaumowna* (Skierniewice), Humphrey (U. S. D. A.), Nemeec (Prague), Güssow (Ottawa), Van Slogteren (Lisse), Appel (Berlin), Butler (Kew), Foëx* (Paris), Barrus (Cornell).

K. *Pharmacognosy and Pharmaceutical Botany*. Rusby (Columbia), Zörnig* (Basel), Schneider (Portland), Klan* and Farwell (Parke, Davis & Co.), Wasicky* (Vienna), Plitt (Maryland), Viehoever (Philadelphia), Starker (Corvallis), Schwarz (Eli Lilly & Co.), Beal

(Illinois), Gathercoal (Illinois), Zufall (Purdue), Hart (Columbia), Youngken (Boston), Tschirch* (Berne), Ballard (Columbia), Hogstad (Minnesota), Newcomb (Minnesota), Cortesi* (Rome).

L. *Taxonomy*. Ostenfeld (Copenhagen), Hutchinson* (Kew), de Wildeman* (Brussels), Sprague (Kew), Bailey (Ithaca), Hitchcock (U. S. D. A.), Briquet (Geneva), Hall (California), Illichevsky* (Poltava), Wiegand (Cornell), Hill (Kew), Fernald (Harvard), Abrams (Stanford), Rendle (British Museum), Nelson (Wyoming), Rydberg (N. Y. Bot. Garden), Skottsberg (Gothenburg), Schönland* (Rhodes Univ. College), Druce* (Oxford), Brand* (Sorau), Bonati* (Lure).

M. *Mycology*. Butler (Kew), Burt (Mo. Bot. Garden), Wollenweber (Berlin), Kauffman (Michigan), Guillionmond* (Paris), Shear (U. S. D. A.), Buller (Winnipeg), Brierley* (Rothamsted), Jaczewski (Leningrad), Wakefield (Kew), Ramsbottom (British Museum), Overholts (Penn. State), Cunningham* (Wellington), Arthur (Purdue), Klebahn (Hamburg), Faull (Toronto), Bea (Worcester), Jackson (Purdue), Dodge (U. S. D. A.), Fromme (Blacksburg), Mains (Purdue), Stakman (Minnesota), Wize* (Posen), Sartory* (Strasbourg), Diétel* (Zwickau), Siemaszko* (Skierniewice), Falck* (Hanover), Petrak* (Mähr-Weiskirchen), Kursanov* (Moscow).

Preliminary announcements of the congress have been mailed to all persons whose names appear in membership lists of American research societies in the plant sciences. All who contemplate attending the congress should return the reservation slips at once, in order that arrangements at Ithaca may be carried forward promptly and on an adequate scale. Any who have not received such slips should also engage accommodations in advance.

Response to the appeal for financial aid has so far been inadequate. Since the work of the organizing committee is almost wholly dependent on such aid, American plant workers are again urged to help. Any check, no matter how small, is a real contribution.

LESTER W. SHARP,

Secretary of the Program Committee

WILLARD STRAIGHT HALL,
ITHACA, N. Y.

SCIENTIFIC EVENTS

HELIUM IN THE NATURAL GASES OF JAPAN

THE thirteenth report of the Aeronautical Research Institute, Tokyo Imperial University, as summarized in *Nature*, contains an account of an examination of natural gases from Taiwan, Hokkaido, Honsyu and Kyusu, primarily for helium, by Messrs. Y. Kano and B. Yamaguti. The gas samples were taken from various sources, such as oil reservoirs, coal-mines,