

The arrangement of the Monocotyledons is merely begun, the families of the Helobiae alone being given (*Butomaceae*, *Alismaceae*, *Hydrocharitaceae*, *Potamogetonaceae*, *Aponogetonaceae*, *Juncaginaceae*, *Triurdiaceae*).

We can agree with the author in regard to the general plan of his system, of which he says: "I freely confess that it gives only an approximate idea of lines of descent and of the natural relations of the flowering plants: it is only one step in the further progress of phylogenetic botany. But I am sure that this step is not a wrong and useless one, and that it will lead to a broader knowledge of the flowering plants."

THE AMERICAN FOREST CONGRESS.

EARLY in the present year (January 2 to 6) the American Forest Congress was in session in Washington, D. C. Its purpose was 'to establish a broader understanding of the forest in its relation to the great industries depending upon it: to advance the conservative use of forest resources for both the present and future need of these industries: to stimulate and unite all efforts to perpetuate the forest as a permanent resource of the nation.' The papers read in this congress have been collected by Mr. H. M. Suter and published in a volume of 475 pages. These have been arranged systematically under the following heads. (1) 'Forestry as a National Question'; (2) 'Importance of the Public Forest Lands to Irrigation'; (3) 'The Lumber Industry and the Forests'; (4) 'Importance of the Public Forest Lands to Grazing'; (5) 'Railroads in Relation to the Forest'; (6) 'Importance of Public Forest Lands to Mining'; (7) 'National and State-Forest Policy.' The book possesses much value, not only to foresters, but to botanists as well.

MORE PLANT CELL STUDIES.

THE series of articles by Bradley M. Davis entitled 'Studies on the Plant Cell,' which began in the May number (1904) of the *American Naturalist*, has been brought to a close in the October number (1905), and we have now the whole work before us. In look-

ing over its pages, we are more and more impressed with its value and importance to students of plant cytology, since it presents a summary of the results of recent work not attainable elsewhere. It is to be hoped that the author may be able to push to early completion the preparation of a book on cytology planned to follow pretty closely the outlines given in these studies. In the meantime, many botanists will be glad to know that reprints of these papers are obtainable of the author, at the University of Chicago.

The closing section, which covers about forty-five pages, is devoted to the 'Comparative Morphology and Physiology of the Plant Cell.' About a dozen pages are given to the simplest types of cells, as they occur in the blue green algae, the bacteria and the yeasts, and a clear summary is made of the views of the investigators of these low plants. The author is able, from the incomplete and somewhat conflicting testimony, to find some justification of the belief in the presence of nuclear structures, even in the smallest bacteria. Interesting comparisons are made of the structure of simpler plant cells with those of higher types, in which many gaps in our knowledge are pointed out, one of which is the connection of the Schizophyta with the lower green algae. The structure of the trophoplasm, the reproduction of plastids, the individuality of the chromosomes, the functions of the vacuoles, the nature and occurrence of centrosomes, the balance of nuclear and cytoplasmic activities, are among the topics discussed in the closing pages of this interesting section, which, like the preceding sections, is followed by an extensive bibliography.

CHARLES E. BESSEY.

THE UNIVERSITY OF NEBRASKA.

THE AMERICAN CHEMICAL SOCIETY.

THE sessions of the thirty-third general meeting of the American Chemical Society and those of Section C of the American Association for the Advancement of Science will be held in the lecture rooms of Tulane University, New Orleans, from December 29 to January 2.

The preliminary program is as follows:

FRIDAY, DECEMBER 29.

Forenoon.—At the close of the general session of the American Association for the Advancement of Science, Section C will hold a brief session for organization. This will be followed by the opening session of the American Chemical Society in the same room at about 11:45 A.M. Two addresses will be given: 'Some Important Problems in Agricultural Chemistry,' by Harvey W. Wiley; 'Recent Experimental Researches on Osmosis,' by Louis Kahlenberg.

Afternoon, 2:30 P.M.—Address of the retiring chairman of Section C of the American Association for the Advancement of Science, Leonard P. Kinnicutt. Subject: 'The Sanitary Value of a Water Analysis.'

SATURDAY, DECEMBER 30.

Forenoon.—Session of the American Chemical Society at 9:30 A.M. Subject: 'The Construction of a Chemical Laboratory,' by William L. Dudley. This will be followed by meetings of the sections: Physical and Electrochemical, Louis Kahlenberg, chairman; Inorganic, William L. Dudley, chairman; Organic, Charles F. Mabery, chairman; Agricultural and Sanitary, Harvey W. Wiley, chairman; Industrial, Samuel W. Parr, chairman.

If enough papers are offered to warrant it, a biological section will be formed, with William J. Gies as chairman.

Afternoon, 2 P.M.—Excursions to visit industrial establishments. The following excursions have been suggested, but the exact details are not yet arranged: Visits to a sugar refinery, a molasses distillery, a cotton-seed oil mill, cotton compress, plants for the distillation of wood and for the manufacture of vinegar by the rapid process from molasses, fertilizer works and rice mills.

Evening, 8 P. M.—The retiring president of the American Chemical Society, Francis P. Venable, will deliver an address upon the subject of 'Chemical Research in the United States.'

MONDAY, JANUARY 1.

Forenoon, 9:30 A. M.—General meeting of Section C of the American Association for the Advancement of Science, at which Professor Charles F. Mabery will preside. Addresses: 'The Composition of Petroleum from American Fields—Pennsylvania, Ohio, Texas, Kansas, Wyoming, Colorado, Kentucky and California,' by Charles F. Mabery; 'Some Notes on the Service Waters of a Railway System,' by Samuel W. Parr. These addresses will be followed by meetings of the sections.

Afternoon, 2 P.M.—Excursions to visit industrial establishments.

Evening, 7 P.M.—A subscription dinner open to all chemists in attendance on the meeting.

TUESDAY, JANUARY 2.

Forenoon, 9:30 A.M.—Meetings of the sections, or visits to industrial establishments, according to the exigencies of the program.

RAILWAY RATES FOR THE NEW ORLEANS MEETING.

THE railway rates for the New Orleans meeting of the American Association for the Advancement of Science are now all in. As already noted in previous numbers of SCIENCE and in the preliminary announcement, which is now in the hands of all members, a standard rate of one fare plus twenty-five cents for the round trip has been granted by the Southeastern Passenger Association and by the Central Passenger Association. The Southeastern Passenger Association includes the territory south of the Ohio and Potomac Rivers and east of the Mississippi except that in West Virginia the territory is south of Charleston and in Virginia the town of Staunton is in the Trunk Line Association. The Central Passenger Association includes the whole of Michigan, Ohio and Indiana, the northwest corner of Pennsylvania and lower Ontario, in addition to the southern and eastern portion of Illinois. The Trunk Line Association, including New York, New Jersey, Delaware and Maryland, and all of Pennsylvania, except the northwestern corner, West Virginia north of Charleston, and northwestern Virginia, offers one fare and one third to the southern or western termini of Trunk Line railroads, and one fare plus twenty-five cents from those points. The Western Passenger Association, including the northern peninsula of Michigan, Wisconsin, Minnesota, the eastern half of North Dakota, all of South Dakota, Nebraska, Iowa, Kansas, the northern portion of Illinois, the northern portion of Missouri north of St. Louis, and the eastern half of Colorado, offer one fare plus two dollars for the round trip, except that from points from which the local railway rate to the eastern gateways of the Association (Chicago, Peoria and St. Louis)