

and Leipzig of any foreign university, on the faculties of the institutions under discussion.

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#### BOTANICAL NOTES.

##### MICHIGAN FORESTRY.

THAT rational views as to forestry are steadily growing in popular favor is shown by the increasing attention which is given the subject by state and local organizations. The recent appearance of the report of the Michigan Forestry Commission forcibly emphasizes the changed attitude of the people with reference to the forests. Many years ago the writer was an interested eye witness of the lumbering operations which finally denuded the state of its fine forests, and at that time nothing that any one said had the least effect in staying the hands of the destroyers. There was but one thing to be done with the forests, and that was to destroy them. And now, alas, when it is too late to save even a remnant of the magnificent tree growth the public conscience has been awakened, and the enormity of the crime is beginning to be realized.

The report enumerates the steps taken by the commission in the campaign of education which it has inaugurated, and includes the report of the warden of the state forest reserves (Professor Roth), followed by a collection of essays by a considerable number of public-spirited citizens, all tending to create an interest in the planting or conservation of forests. The forest reserves include about 34,000 acres near Higgins and Houghton lakes in Crawford and Roscommon counties. Originally almost all of the land of these reserves was covered by heavy forest of pine, cedar, tamarack and some hardwoods. In a few striking sentences Professor Roth tells the story of the destruction of the great forest, and the transformation of the sylvan landscape into a dreary waste. It is a pitiful tale of greed for gain coupled with utter carelessness as to the future of the country. Photographs make very real the story he so graph-

ically tells. Yet other photographs give us a view of the more cheerful story which may be told in the future when the seedlings now springing up are allowed to grow into a new forest. If the fires are kept out these areas may again be covered with trees. To this end the commission is working, and in this laudable undertaking every scientific man in the country will wish them Godspeed.

##### A NEW BOOK ON ECOLOGY.

At last, after much delay, the University Publishing Company, of Lincoln, Nebr., has issued Professor Clement's book on 'Research Methods in Ecology.' An adequate review of this important contribution to modern botany will appear in due time, and it is only necessary to say now that it analyzes critically the problems which confront the practical ecologist (theoretical ecologists appear to have no such difficulties), and discusses the methods of solution with great detail, in which many illustrations and descriptions of instruments are used.

##### ORIGINAL DESCRIPTIONS OF SPECIES.

A. A. HELLER, of Los Gatos, California, has undertaken the publication of a series of fascicles in which appear the original descriptions of all of the North American species of certain genera of plants. He has already issued such fascicles for *Lupinus*, *Trifolium*, *Ribes*, *Castilleja* and *Artemisia*, including descriptions of 464 species. Each species is given a separate sheet, and the sheets for each genus are enclosed in special manila paper covers. The cheap price of these reprints (about one cent each) places them within the reach of all botanists who are interested in this department of systematic botany.

##### NORTH AMERICAN RUSTS.

PROFESSOR HOLWAY, of the University of Minnesota, has begun the publication of an important work on the rusts, entitled 'North American Uredineae,' of which Part 1 of Volume I. has just appeared. This part is a quarto pamphlet of 32 pages of text, accompanied with ten photomicrograph plates of

uredospores and teleutospores. The arrangement is by hosts, the present part being devoted to the species of *Puccinia* parasitic on certain Ranunculaceae (*Caltha*, *Delphinium*, *Anemone*, *Pulsatilla*, *Clematis*, *Trautvetteria*, *Ranunculus*, *Cyrtoryncha*), Berberidaceae (*Berberis*, *Podophyllum*), Papaveraceae (*Capnoides*), Bromeliaceae (*Pitcairnia*), Commelinaceae (*Commelina*), Juncaceae (*Juncoides*), Liliaceae (*Chrosperma*, *Veratrum*, *Xerophyllum*, *Zygadenus*, *Allium*, *Brodiaea*, *Calochortus*, *Asparagus*, *Clintonia*, *Aletris*, *Smilax*), Amaryllidaceae (*Cooperia*, *Bomarea*), Iridaceae (*Iris*), Orchidaceae (*Cypripedium*, unknown orchid). The photographs are excellently reproduced, and with the full descriptions (all drawn from the specimens) should prove very helpful to the student of these plants.

CHARLES E. BESSEY.

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#### MUSEOGRAPHY.

AN historical and bibliographical work of great value is that recently published by Dr. David Murray, of Glasgow, under the title of 'Museums, their History and their Use' (3 vols., Glasgow, 1904). The first volume forms a notable repository of information concerning the development of the museum as a scientific institution, beginning with the earliest times. Interspersed with accounts of the older museums and their exhibits are brief notices of scientific workers, together with their contributions and attitude of mind toward controverted questions. An excellent summary is given, for instance, of the discussion of fossils amongst learned circles of two and three hundred years ago and earlier.

The author remarks that his purpose has been to provide, in the first place, 'a short list of the books bearing on the bibliography of museums, which I had found useful, that is, a bibliography of bibliographies.' The next subject, museography, is dealt with more fully, but not exhaustively, after which is given a selection of books on the practical work of museums—the collection, preparation and preservation of specimens, their registration and exhibition. Nearly the whole of the second and third volumes is devoted to cata-

logues and other works relating to particular museums and special collections. Not the least important section of the work contains individual suggestions and criticisms on the part of the author, his extensive acquaintance with museums the world over rendering all that he has to say timely and instructive. Yet on the whole the work is written from the archeological standpoint, rather than the technical, or purely scientific.

C. R. E.

#### THE UNIVERSITY OF WISCONSIN.

THE legislature of Wisconsin has passed a law giving the University of Wisconsin two sevenths of a mill tax for current expenses, and has made a special appropriation of \$200,000 a year for three years for constructional and other emergency work. On the basis of the present assessed valuation the two sevenths of a mill tax will yield \$525,000, which with the \$200,000 make the appropriation from the state \$725,000, even if there is no increase in the assessed valuation. The other sources of income are sufficient to make the budget of the university for the coming year about \$1,000,000.

A number of appointments and promotions have been made: E. B. McGilvary, A.M. (Princeton), Ph.D. (California), Sage professor of moral philosophy of Cornell University, has been appointed professor of philosophy; and Edward C. Elliott, B.S. (Nebraska), Ph.D. (Columbia), now instructor in Teachers College, Columbia University, associate professor of education. Dr. Charles E. Mendenhall has been promoted to a professorship of physics; Dr. Frank C. Sharp to a professorship of ethics; C. F. Burgess to a professorship of engineering, and Ransom A. Moore, to a professorship of agronomy. Albert H. Taylor has been promoted to be assistant professor of physics; Leonard S. Smith, to be associate professor of topographic and geodetic engineering; Herbert F. Moore, to be assistant professor of mechanics, and Edwin G. Hastings to be assistant professor of agricultural bacteriology.

Instructors have been appointed as fol-