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 catalogues 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-

lows: *Mathematics*—R. S. Peotter, B.S. (Wisconsin), and R. A. Moritz, B.S., M.A. (Wisconsin). *Physics*—Leonard R. Ingersoll, B.S. (Colorado College), now fellow in physics. *Chemistry*—Roy D. Hall, B.S., M.S. (Wisconsin), Ph.D. (Pennsylvania); F. L. Shinn, B.S. (Indiana); Harry B. North, Ph.G., B.S. (Wisconsin), now assistant, and Edgar B. Hutchins, B.S. (Ottawa), M.S., Ph.D. (Wisconsin). *Education*—Walter F. Dearborn, A.B., A.M. (Wesleyan), Ph.D. (Columbia). *Mechanics*—M. O. Withey, C.E. (Thayer). *Mechanical drawing*—E. S. Moles, B.S (Wisconsin), and John E. Boynton, B.S. (Wisconsin). *Topographical engineering*—Ray Owen, B.S. (Wisconsin). *Hydraulic engineering*—Charles J. Davis, C.E. (Cornell). *Electrical engineering*—Frank J. Petura, B.S. (Wisconsin); George G. Post, B.S. (Wisconsin), now assistant, and John C. Potter, B.S. (Wisconsin), now assistant.

Assistants have been appointed as follows: *Anatomy*—David A. Crawford, B.A. (Wisconsin). *Botany*—William G. Marquette, B.A. (Wisconsin), now assistant; Ruth F. Allen, B.S. (Wisconsin). *Physics*—Willibald Weniger, B.A. (Wisconsin); R. A. Wetzler, B.S. (Minnesota); W. E. Wickenden, B.S. (Dennison); Elmer H. Williams, B.A. (Wisconsin); Archie S. Worthing (Wisconsin); Vernon A. Suydam, B.L. (Wisconsin); V. P. Spence, A.B. (Northwestern). *Zoology*—A. B. Clawson, B.S., M.S. (Michigan). *Civil Engineering*—R. F. Ewald, B.S. (Wisconsin).

THE MUSEUM OF THE BROOKLYN INSTITUTE.

ON June first the central section of the museum of the Brooklyn Institute was opened to the public, as well as the halls that have been temporarily closed, owing to the installation of new collections and the rearranging of the picture galleries. The ethnological collections obtained by Mr. Culin during two seasons' work in Arizona and New Mexico are shown for the first time. They occupy the hall formerly devoted to casts from the antique, and comprise a well-balanced series illustrating the arts and industries of the Pueblo Indians, while special attention has been given to objects pertaining to their religious ceremonies. There are thus displayed about 200 small figures representing the costumes worn by the dancers and 100 of the actual masks worn on these occasions, this being much the most complete collection in any museum.

The natural history collections have been completely rearranged during the past year and extensive additions made to them, but, owing to the architectural features of the central section a thoroughly systematic arrangement will not be possible until the completion of the new wing now in process of construction. Among the special collections still in process of installation may be mentioned one illustrating the problem of flight and the various adaptations by which it has been solved in nature, and one illustrating individual, sexual, seasonal and geographic variation. The latter includes eight of the thirteen sub-species of horned owls recognized by Mr. Oberholser, the contrast between the Alaskan, Hudsonian and desert forms being very striking. A group of Ellesmere Land musk oxen, *Ovibos moschatus wardi,* has also been placed on exhibition, which includes an old male, a female and yearling from the same herd.

AWARD OF THE BARNARD MEDAL.

THE Barnard medal of Columbia University has been awarded to M. Henri Becquerel. In making this award at the recent Columbia exercises, President Butler said: "In accordance with the terms of the will of Frederick A. P. Barnard, tenth president of Columbia University, a gold medal is established, known as the Barnard medal for meritorious service to science. This medal is awarded at commencement at the close of every quinquennial period, to such person, if any, whether a citizen of the United States or of any other country, as shall, within the five years next preceding, have made such discovery in physical or astronomical science, or such novel application of science to purposes beneficial to the human race, as, in the judgment of the National Academy of Sciences, of the