

BOTANICAL LITERATURE IN THE STATE LIBRARY. BY JOHN S. WRIGHT.

As a member of the Academy Committee on the State Library, sometime ago I made a list of the works in that institution which are upon botany and related subjects. The number of such books is small, the authorities who have in charge the purchases are inclined to increase the collection in lines of literature, biography and history rather than science. While it may be true that those who most use the library have greatest use for works of that nature, yet the State Library should also be the repository of the standard and best works in the various departments of science, especially of the larger and more expensive sets which are often beyond the purse of the individual worker.

In talking over this matter with the present Librarian and her predecessor each expressed a desire to make the sections of botany and other sections of scientific works what they should be. They also said that they would be glad of any suggestions, from those competent, as to additional purchases. In accordance with this wish about two years ago I prepared a circular letter addressed to the professors of botany in the several colleges of the State. This letter contained a list of the main botanical works then in the Library, and a request that they would recommend such others as they thought it should contain, giving the name of the publisher, place and date of publication and cost of each work so recommended. Nearly every one to whom a letter was addressed responded, and from these letters a list of books was compiled and recommended to the State Librarian for purchase, each one of which was accompanied by the name of the person or persons requesting its purchase and the other data mentioned. Since that time, however, the Library has changed management, has been thoroughly overhauled and rearranged, so the purchases asked for have not been made. The present Librarian, however, is quite favorable to the improvement of the Library in this respect and I believe that it is only necessary to bring a little influence to bear upon other library officials in order to secure to the Library a creditable number of botanical works of reference. While it will be impossible to withdraw books from the State-house, the establishment of such a collection should, nevertheless, be of interest to botanists of the State.

LIST OF WORKS IN STATE LIBRARY ON BOTANY AND RELATED SUBJECTS.

An accurate classification could not well be made; many pamphlets on diverse subjects are bound together in one volume, and other works are general in character, not falling wholly under any single division.

Agriculture—

1. How Crops Feed, S. W. Johnson, 1882.
2. How Crops Grow, S. W. Johnson, 1888.
3. Resena sobre el cultivo de algunas plantas industriales que se explotau sou susceptibles oc explotarse, J. C. Sequera, 1844.
4. Sugar Cane, the Nature and Property of, Geo. R. Porter, 1843.

Botany, General Works on—

- British Wild Flowers in Relation to Insects, Sir John Lubbock, 1882.
 Chronological History of Plants, Chas. Pickering, 1878.
 Desmids of the United States, Francis Wolle, 1884.
 Dictionary of Economic Plants, John Smith, 1882.
 Encyclopedia of Plants, J. C. Loudon, 1841.
 Ferns of North America, D. C. Eaton.
 Ferns of North America, Native and Foreign, D. J. Browne, 1846.
 Flora America Septentrionalis, Frederick Pursh, 2 vols., 1861.
 Floral Structures, Origin of, Geo. Henslow, 1888.
 Flowers and Ferns of the United States, Native and Foreign. Thos. Meehan, 188—.
 Flowers, Fruits and Leaves, Sir John Lubbock, 1886.
 Flowers, How to Know the Wild Flowers, Mrs. Wm. Starr Dana, 1893.
 Fungi, Their Nature and Uses, M. C. Cooke, 1830.
 Genera of the Plants of the United States, Gray & Sprague, 1849.
 Genera Plantarum, 3 vols. of 7 parts, Benthau & Hooker, 1862.
 Geological History of Plants, Sir Wm. Dawson, 1888.
 Manual of Botany of North America, Amos Eaton, 1836.
 Manual of Botany of Northern United States, Asa Gray, 1848.
 Manual of Flora of the Rocky Mountains, J. M. Coulter, 1885.
 Manual of Flora of Southern United States, Chapman, 1889.
 Origin of Cultivated Plants, Alphonse DeCandolle, 1885.
 Pamphlets on Botany (bound in one volume)—
 Fern List of United States, Eaton.
 Plants of United States, Horace Mann.
 Forests and Forestry of Sweden, C. C. Andrews.
 Duty of Preserving Forests, F. A. Hough.
 Medicinal Plants of United States, A. C. Clapp.
 El Algedoners, Donato, Gutierrez.
 Development of Cork Wings, Emily Gregory.
 Woody Plants of Ohio, J. A. Warder.

- Plants of Michigan, Wheeler & Smith.
 Physiology of Plants, J. Von Sachs, 1887.
 Plants of Boston and Vicinity (*Florula Bostoniensis*), Jacob Bigelow, 1824.
 Plants of North America, The, Frederick Pursh, 1816.
 Plants of the United States, Geo. Putnam, 1849.
 Sylva, The North American, 3 vols. 2 parts, Michaux, 1865.
 Systematic and Physiological Botany, Introduction to, Nuttall, 1830.
 Vegetable Mold. The Formation of, Darwin, 1882.

Forestry—

- American Grove, Humphrey Marshall, 1785.
 Forests and Moisture, J. C. Brown, 1877.
 Forests of Northern Russia, J. C. Brown, 1884.
 Forestry in Norway, J. C. Brown, 1884.
 French Forest Ordinance of 1669, J. C. Brown, 187-.
 Hydrology of South Africa, J. C. Brown.
 Pine Plantations on Sand Wastes of France, J. C. Brown.
 Practical Forestry, A. S. Fuller, 1884.
 Schools of Forestry in Germany, J. C. Brown.
 Trees of America, J. Brown, 1846.
 Trees and Shrubs of Massachusetts, By Order of State Legislature, 1846.

Government Reports—

- Agricultural Grasses and Forage Plants of the U. S., Geo. Vasey, 1889.
 Contributions from U. S. National Herb. Botany of Western Texas, Coulter,
 1891-4.
 Journal of Mycology, Vols. 1-6, Bound.

Forestry—

- Reports on Four Years, 1877, '78, '79, '82, '84, and '88.

Horticulture—

- Elementary Treatise on American Grape Culture, W. R. Prince, 1830.
 An Elementary Treatise on Grape Culture and Wine Making, P. B. Meade,
 1867.
 Cultivateur de Dahlias, Legrand, 1848.
 Du Fuchsia, son Histoire et sa Culture, etc., ——— 1844.
 Gardening, Encyclopedia of, J. C. London, 1834.
 Grape Culture, Wines and Wine Making, A. Haraszthy, 1862.
 Hortus Botanicus Americanus, Sketches toward, W. J. Titford, 1812.
 Horticulture Pratique, G. Laroque, 1883.

- Journal of Visit to Vineyards of Spain and France, Jas. Bushby, 1835.
 Observations on Character and Cultivation of European Wine, S. I. Fisher,
 1834.
 Rural Essays on Horticulture, A. J. Downing, 1858.
 The American Grape Growers' Guide, Wm. Charlton.
 The Fruits and Fruit Trees of North America, A. J. Downing, 1886.
 Theory of Horticulture, John Lindley, 1841.
 Plants, Henderson's Hand Book of, Peter Henderson, 1881.
 Plants and Fruits, Hand Book of, L. D. Chapin, 1843.
 Trans. of Mississippi Valley Horticultural Society, 1883.
 Vineyard Culture, A. Du Breuil, 1867.
 Western Fruit Book, F. R. Ellicott, 1859.

Medical Botany—

- Flora Medica, John Lindley, 1838.
 Medical Botany, R. E. Griffiths, 1847.

Periodicals—

- Botanical Gazette, partially bound, Vols. viii, x, xix, bound, x, xvi, xvii,
 xviii, incomplete and unbound.
 Botanical Magazine, Curtis, Vols. 1-10 inclusive, 1793———.

MICROSCOPE SLIDES OF VEGETABLE MATERIAL FOR USE IN DETERMINATIVE
 WORK. BY JOHN S. WRIGHT.

In the determination of plants it is frequently necessary, or at least desirable, to make examinations of various organs with the aid of a lens. Seed markings, glandular structures and many portions of the flower upon which determinations are partly based may be so minute as to necessitate slight magnification for satisfactory work. For example we have in the *Euphorbias* and *Lobelias* many species in which the seeds are to the naked eye mere granules, but under a hand lens their surfaces are seen to be decidedly marked with irregular ridges and pits, or are handsomely sculptured. Many leaves contain glandular structures, or are covered with hairs or scales which can be best seen under the lens. In determining specimens on which such structures exist and are of value in classification, it is often desirable to compare them with like material from well determined herbarium specimens. Commonly the material for these comparisons is dug out of or cut off the herbarium specimen as it is needed from time to time and placed