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Miscellaneous publications, no. 5.

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Geological and Natural History Survey
OF
MINNESOTA.
BOTANY.

[Minneapolis
Johnson, Smith & Harrison
1876]. HISTORICAL GEOLOGY

Misc Pub 5

THE
Geological and Natural History
SURVEY OF MINNESOTA.

(BOTANY.)

To the Botanists of the State:

At the annual meeting of the Board of Regents, held in St. Paul in December, 1875, action was taken ordering the commencement of a thorough and systematic examination of the flora of the State. This was done in conformity to the law ordering a geological and natural history survey of the State, and placing it in charge of the Regents of the University. One clause of that law reads as follows:

"SEC. 3. The natural history survey shall include, first, an examination of the vegetable productions of the State, embracing all trees, shrubs, herbs and grasses native or naturalized in the State; second, a complete and scientific account of the animal kingdom as properly represented in the State, including all mammalia, fishes, reptiles, birds and insects."

In the prosecution of this examination it is expected that the Regents will have the assistance of the botanists of the State, and it is for their information that the following suggestions are made concerning the collection and preservation of information, and especially of botanical specimens.

1st. Make as full notes as possible on the flora of your own locality, not only naming species, but mentioning peculiarities and variations of structure, habitat, color, and relative abundance. Recollect that there is no published text book that professes to give an account of the flora of the country west of the Mississippi in this latitude, and that you are very largely an independent observer. Therefore repeated verifications of an observed variation or peculiarity, or of a species not named in the familiar text-books, should be made *before reporting such observation as a fact.*

2d. Collect and preserve as many specimens as possible. They will exemplify the local flora of your region, and will serve as duplicates for exchange with other portions of the State and with foreign botanists. The most valuable portion of your contribution to the survey will be, after all, the collections which you may make and forward for careful identification.

3rd. It is the design of the Regents to collect together at the University a complete representation of the plants of the State as ordered by the law, and to have them so arranged and exhibited that they can be seen for comparison by any of the botanists of the State that may wish to examine them.

4th. For aid in the study of the flora of the State the following works will be useful :

Gray's *Manual of Botany*.

Torrey & Gray's *Flora of North America*, 2 vols., to *Zoöphytes*.

De Candolle's *Prodromus*, 18 vols., down to *Endigenæ*.

U. S. Geological Exploration of the Fortieth Parallel. Vol. v. Botany. (Watson.)

Pacific R. R. Reports.

Transactions of the St. Louis Academy.

Proceedings of the American Academy, Philadelphia.

Catalogue of the Plants of Minnesota, by I. A. Lapham, published in the Annual Report of the State Horticultural Society for 1875. Furnished by the Secretary of the Society.

Hayden's *Nebraska Plants*.

Hooker's *Fl. Bot. Am.*, 2 vols.

Flora of Colorado, 1 vol. Porter & Coulter.

Nuttall's *Genera*, 2 vols.

Bentham's *Genera*, 4 parts.

It is evident that there is no botanist, nor even any public library in the State that possesses the books necessary for the thorough study and satisfactory determination of the species of our flora. Within certain limits our flora can be studied, but the burden of our first efforts must be the collection of specimens. Their exhaustive study can only be done by experts, with the fullest facilities for comparison.

The present design of the survey is to act as a means of communication between botanists in the State, to enable them to compare specimens, and as a depository for duplicates. To this end exchanges will be made with such as desire to compare species, and any aid or information will be rendered that it is possible to give. Lists of the local flora in different parts of the State should be made out as thoroughly as possible, to judge of the distribution of species. The areas that are covered with timber in the various counties, or townships, and the kinds of trees, should be stated. It is highly desirable that a local botanist be assigned to the working up of each county. For this purpose the survey should be furnished with the names of such botanists as are known to be interested in our State flora. Annual reports made by such local botanists would indicate the progress of the work.

N. H. WINCHELL.