

## NOTES ON THE FLORA OF SOUTH DAKOTA

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The need for a modern and relatively complete list of vascular plants of the state of South Dakota has long been felt by teachers, students, and other interested biologists of the state and adjoining areas. Until W. H. Over's publication of the "Flora of South Dakota" (1) there was no checklist which completely covered the plants of the area. Over states, "The eastern border of the state of South Dakota was the western limit for authors treating plant life of the region east of the Missouri and, likewise, authors writing of the Rocky Mountain region have included plants indigenous only to the Black Hills" (1:7).

With P. A. Rydberg's publication of the "Flora of the Prairies and Plains of Central North America" (2) it was possible to use a single manual for the identification of a plant which grew in South Dakota, as well as to find its approximate range. As time progressed, however, two objections to the continued use of Rydberg's Flora became apparent. One was the use of antiquated nomenclatural terms used by Rydberg, abandoned or not used by more recent floristic workers. This confused students in the identification and application of correct names. The other objection is the fact that any list of plants for a given area becomes outmoded and incomplete when new information pertaining to distribution and range is uncovered by subsequent workers.

The problem of the treatment of the vascular plants in South Dakota stated previously by Over was neither solved by the publication of the 8th edition of "Gray's Manual of Botany" by M. L. Fernald (3), nor "The New Britton and Brown's Illustrated Flora of Northeast U.S. and Canada" by H. L. Gleason (4). Both used Iowa and Minnesota as the western limit of the area covered by their respective floras. The difficulty in using a modern manual which does not cover the area being studied has been faced for a decade by the Department of Botany at the State University of South Dakota. It is believed that other colleges and interested biologists were faced with the same problem.

For the past several years, the Department of Botany, under the senior authorship of J. M. Winter, has been working on a revised checklist of the plants of South Dakota to bring the nomenclature used in Over (1) and Rydberg (2) to fit the traditionally accepted usage of that found in "The New Britton and Brown's Illustrated

Flora of the U.S. and Canada" (4). "The Manual of Plants of Colorado" (5) was used as the authority in nomenclature of the plants found in the Black Hills and western South Dakota. This revision is now available in mimeographed form from the Department of Botany and includes the complete synonymy of not only Over's list of plants but other literature sources as well, including previous publications in the South Dakota Academy of Science, Rydberg's "Rocky Mountain Flora" (6), and A. C. McIntosh's "Botanical Survey of the Black Hills" (7). Included also are annotations of misidentifications of specimens in the Herbarium at the State University of South Dakota, which houses the Over and McIntosh collections and data of field collections by various workers in recent years.

The number of species as reported for the state in this checklist totals 1798. At present it is impossible to state how many of these reports are based on voucher specimens stored in the various herbaria, either in the state of South Dakota or elsewhere.

The checklist is to be considered as preliminary and is intended to be used in conjunction with Rydberg's Flora (2) and more recent manuals such as Gray's Manual (3) and the New Britton and Brown's Flora (4). It is hoped that in the not too distant future a modern manual of the plants of South Dakota will result from efforts by various workers now engaged in surveys of plants in the state. Recent published surveys or additions to our knowledge of the plants of South Dakota include "A Key to the Spring Flowering Plants in Southeast South Dakota," Winter (8), "New Plants for the Black Hills," Taylor (9), and "A Survey of the Flora of the Badlands National Monument," Lindstrom (10). Several county surveys are currently being made in South Dakota. Codington County is being studied by Janet Dugle of the Department of Botany, the northeastern counties of Marshal and Roberts are being surveyed by Bernard Ailts, and Lloyd Messerli is conducting a survey of the plants of Lincoln County and parts of the Big Sioux watershed in eastern South Dakota. Another approach to organizing our knowledge of the vascular plants of South Dakota is to critically study selected taxonomic groups. An example of this approach is that of Froiland (11) in a "Study of the Willows (*Salix*) of the Black Hills." Similar critical treatments of other groups of vascular plants would be most helpful if done on a statewide level.

#### RECENT ADDITIONS TO THE FLORA OF SOUTH DAKOTA

Several plants have recently been collected for which there are no previous publication data. Apparently they are new for the state. This information is presented here by families in Englerian sequence. Numbers following the names represent the author's collection numbers. These collections are deposited in the Herbarium of the State University of South Dakota unless otherwise noted.

#### Najadaceae

*Potamogeton pusillus* L. Collected at west side of Bitter Lake, Day County, July 17, 1958 by Thorne, Van Bruggen and Winter, 4353. Also found at Blue Dog Lake in the same county, 4412.

#### Gramineae

*Eragrostis trichodes* (Nutt.) Wood. Collected in sandy soil south of Vermillion in Clay County by Winter, 1957.

*Leersia virginica* Willd. Collected in alluvial woods at Lake Alvin Recreational Reserve, Lincoln County, September 3, 1958 by Van Bruggen, 4485.

*Muhlenbergia glomerata* (Willd.) Trin. Collected on mesic prairie slope by Bitter Lake, Day County, July 17, 1958 by Thorne, Van Bruggen and Winter, 4343.

#### Cyperaceae

*Carex bicknellii* Britt. Collected in prairie swale near Seiche Hollow in eastern Marshall County, July 19, 1958 by Thorne, Van Bruggen and Winter, 4458.

*Carex comosa* Boott. Collected along shore line of Blue Dog Lake, Day County, July 19, 1958 by Thorne, Van Bruggen and Winter, 4384.

*Carex lacustris* Willd. Collected along shoreline of Blue Dog Lake, Day County, July 19, 1958 by Thorne, Van Bruggen and Winter, 4385b.

#### Juncaceae

*Juncus alpinus* Vill. Collected on sandy floodplain along Missouri River by Elk Point, Union County, June 20, 1958 by Van Bruggen, 4318.

#### Salicaceae

*Salix rigida* Muhl. Wooded shoreline of Bullhead Lake, Roberts County, July 20, 1958 by Thorne, Van Bruggen and Winter, 4479.

#### Aristolochiaceae

*Asarum canadense* L. Rich loamy woods in Seiche Hollow, Marshall County, July 19, 1958 by Thorne, Van Bruggen and Winter, 4438.

#### Cruciferae

*Dentaria laciniata* Muhl. Collected in rich loamy woods at Seiche Hollow, near Roberts-Marshall County line, May 31, 1957 by O. A. Stevens and D. R. Moir, 1685.

#### Compositae

*Aster ontarionis* Wieg. Alluvial woods along Big Sioux River north of Akron, Union County, September 3, 1958 by Van Bruggen, 4495.

*Aster sagittifolius* Willd. Adjacent to Mud Lake in Marshall County, August 12, 1957 by Winter.

*Vernonia baldwinii* Torr. Near Vermillion in Clay County, 1957 by Winter.

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