FLORA OF NEBRASKA; A LIST OF THE CONIFERS AND FLOWERING PLANTS OF THE STATE, WITH KEYS FOR THEIR DETERMINATION

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649117970

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Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

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FLORA OF NEBRASKA

A List of the Conifers and Flowering Plants of the State
With Keys for their Determination.

BY

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PUBLISHED BY THE AUTHOR

Printed by
STATE PRINTING COMPANY
Lincoln, Nebraska

PREFACE

In making this list the aim has been to include all conifers and flowering plants, both native and introduced, which grow without cultivation in Nebraska. The known range of each species in the state is given, followed by a list of the localities from which it has been reported. These localities are mostly based on specimens in the herbarium of the University of Nebraska.

The arrangement of the larger groups is that of Dr. C. E. Bessey in his Synopsis of Plant Phyla. Within the families the order is usually that of Britton's Manual.

As this list contains no descriptions it should be used in connection with a descriptive manual. For this purpose Britton's Manual of the Flora of the Northern States and Canada is recommended as it is the only one covering the entire state. It is published by Henry Holt and Company, New York.

Each group is preceded by analytical keys and at the beginning of the book keys to the orders will be found. The aim has been to make these as simple and non-technical as possible. As the number of plants treated is much smaller than in the larger manuals the keys should be much easier to use. In order to make it easy to find the descriptions, after the name has been found by the keys, the page in Britton's Manual where the genus is treated is given after the name of each genus, thus Bromus 148.

Names of orders end in -ALES and of families in -ACEAE and may thus be recognized without repeating order or family before each. Synonyms are given where a different name is used than the one in Britton's Manual or when a different name is used in the New Gray's Manual.

In the appendix some of the structures most commonly used to distinguish flowering plants from each others will be described. It is hoped that will be more useful for beginners than a glossary of special terms.

I wish to express my thanks to Dr. C. E. Bessey for advice and assistance while doing the work; to Rev. J. M. Bates and Dr. H. Hapeman for allowing me to examine their collections of Nebraska plants; to Dr. P. A. Rydberg for looking over part of the manuscript and making valuable suggestions; to Miss Venus Pool for suggestions in making the keys to the grasses.

N. F. PETERSEN.

Louisiana State University,
September, 1911.

KEY TO THE ORDERS.

Ovules and seeds borne on the surface of a scale or bract; stigmas wanting. **Phylum STROBILOPHYTA.**
Ovules and seeds borne in a closed cavity, the ovary; stigmas present. **Phylum ANTHOPHYTA.**

Phylum STROBILOPHYTA.

Only one order represented in the state. CONIFERALES: 5.

Phylum ANTHOPHYTA.

Seeds with one cotyledon; fibrovascular bundles of the stem scattered; parts of the flowers usually in 3's or 6's; leaves mostly parallel veined. **Class. 1. MONOCOTYLEDONEAE.**
Seeds with two cotyledons; fibrovascular bundles of the stem forming a ring around a central core of pith; parts of the flowers rarely in 3's or 6's; leaves mostly net-veined. **Class. 2. DICOTYLEDONEAE.**

Class 1. MONOCOTYLEDONEAE.

Ovary superior.
Perianth of two series, the inner usually corolloid.
Carpels distinct. ALISMALES: 6.
Carpels united; i. e. ovary compound. LILIALES: 9.
Perianth reduced to scales or bristles, or wanting, never corolloid.
Flowers not in the axils of dry, chaffy bracts.
Plants with normal stems and leaves.
Aquatics, wholly submerged or the upper leaves floating.
Carpels separate. LILIALES: 9.
Carpels united. ALISMALES: 6.
Terrestrial plants or if aquatics not submerged. ARALES: 15.
Plants with stems reduced to leaf-like structures, called thalli; leaves wanting. ARALES: 15.
Flowers in the axils of dry or chaffy bracts. POALES: 17.
Ovary inferior.
Aquatic plants with submerged fruits. HYDRALES: 48.
Terrestrial plants, or if aquatic fruits not submerged.
Flowers regular. IRIDALES: 48.
Flowers irregular. ORCHIDALES: 49.

Class 2. DICOTYLEDONEAE.

Ovary superior.
A. Corolla present.
Petals distinct.
Carpels solitary, or several and distinct, or united only at the base.
Stamens borne at the base of the receptacle.
Herbs of moist places or xerophytic shrubs. RANALES: 51.
Xerophytic herbs with succulent leaves. **Sedum**: 142.

Stamens borne on the margin of a disc or hypanthium.
ROSALES: 122.
Carpels several and united.
Stamens borne at the base of the receptacle.
Stamens numerous, more than twice as many as the petals.
Stamen filaments distinct.
Aquatics with floating leaves. Nymphaeaceae: 56.
Terrestrial plants or if aquatic leaves not floating.
RHOEODALES: 57.
Stamen filaments united.
Filaments united into a tube around the styles.
MALVALES: 89.
Filaments in several sets, not forming a tube.
Trees. MALVALES: 89.
Herbs or shrubs. GUTTIFERALES: 86.
Stamens few, not more than twice as many as the petals.
Stamens as many as the petals and opposite them.
Flowers monoecious. Euphorbiaceae: 83.
Flowers perfect. Portulaceae: 69.
Stamens as many as the petals and alternate with them, or more; often twice as many.
Stamens 6, rarely 2, petals 1. RHOEODALES: 57.
Stamens as many as the petals or twice as many.
Ovary one celled.
Placentae central or basal. CARYOPHYLLALES: 64.
Placentae parietal. GUTTIFERALES: 86.
Ovary several celled.
Stamens not adnate to the gynoecium.
Filaments partly or wholly united.
GERANIALES: 80.
Filaments distinct.
Ovules numerous in each cavity of the ovary.
ERICALES: 94.
Ovules few or solitary in each cavity of the ovary.
Flowers regular. GERANIALES: 80.
Flowers irregular. Aesculus: 154.
Stamens adnate to the gynoecium. Asclepiadaceae: 107.
Stamens borne on the margin of a disk or hypanthium.
Stamens as many as the petals and opposite them.
Styles distinct, ovules numerous. Heuchera: 142.
Styles united, ovules 1 or 2 in each cavity of the ovary.
CELESTRALES: 151.
Stamens as many as the petals and alternate with them or more.
Hypanthium flat or obsolete, not enclosing the ovary.
Ovary one celled, fruit a small drupe.
Anacardiaceae: 154.
Ovary 2-several celled, fruit a dehiscent pod or capsule.
CELESTRALES: 151.
Hypanthium enclosing the ovary but free from it.
Lythraceae: 143.

Petals more or less united.

Stamens free from the corolla or diadelphous.

Gynoecium of a single carpel. ROSALES: 122.

Gynoecium of 2-several united carpels.

Filaments united, diadelphous, some of the sepals spurred. Papaveraceae: 37.

Filaments distinct or sepals not spurred.

Herbs with green leaves. GERANIALES: 80.

Shrubs or saprophytic herbs. ERICALES: 94.

Stamens partially adnate to the corolla.

Stamens as many as the lobes of the corolla and opposite them, or more; ovary 1 celled. PRIMULALES: 92.

Stamens as many as the lobes of the corolla and alternate with them, or fewer.

Corolla scarious, marcescent, fruit a pyxis in our species. Plantaginaceae: 93.

Corolla not scarious, fruit not a pyxis.

Flowers regular or stamens five.

Ovary 1-celled, with central placentae, or carpels distinct or nearly so. GENTIANALES: 106.

Ovary usually 2-3-celled, if one celled with parietal placentae. POLEMONIALES: 95.

Flowers irregular or fertile stamens only 4 or 2, except in Verbascum.

Fruit 1-4 seeded, usually separating into 1-seeded nutlets. LAMINALES: 116.

Fruit a 6-many seeded capsule. SCROPHULALES: 110.

B. Corolla wanting.

Flowers, at least the staminate, in aments.

Fruit a one-seeded nut or achene. SAPINDALES: 154.

Fruit a many seeded capsule, seeds with a tuft of hairs. Salicaceae: 68.

Flowers, at least the staminate, not in aments.

Gynoecium of one or of several distinct carpels, each with a single style.

Carpels several.

Stamens inserted below the carpels. RANALES: 51.

Stamens inserted on the margin of a disk or a hypanthium ROSALES: 122.

Carpel solitary.

Ovary not enclosed in a hypanthium.

Land plants, MALVALES: 89.

Submerged aquatics, flowers solitary in the axils. Ceratophyllaceae: 57.

Ovary enclosed in a hypanthium.

Shrubs or trees, calyx not corolloid. Eleagnaceae: 153.

Herbs, calyx corolloid. Nyctaginaceae: 70.

Gynoecium of 2 or more united carpels; if one celled styles and stigmas more than one.

Herbs.

Flowers perfect; stamens several. CARYOPHYLLALES: 64.