

**BERGEN'S BOTANY. KEY
AND FLORA. PACIFIC
COAST EDITION**

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Bergen's Botany. Key and Flora. Pacific Coast Edition by Alice Eastwood

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ALICE EASTWOOD

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BERGEN'S BOTANY

UNIV. OF
CALIFORNIA

KEY AND FLORA

PACIFIC COAST EDITION

PREPARED BY

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FLORA IN THE ROCKY MOUNTAIN EDITION

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PREFACE

THIS Flora of the Pacific States has been made to enable pupils to obtain a clear idea of the method of classifying plants through practical experience in identifying the most common genera and species of the coast. It is to serve as a guide in understanding the characteristics and relationships of large and important orders and genera, and, to some extent, in identifying species.

The species included have been those most widely distributed or those most abundant near large centers of population, so that sufficient material might easily be obtained for class study. Species not clearly and easily defined have been omitted even when abundant, so as to render the possibility of error as little as possible. Where a difference of opinion exists among botanists in regard to generic names, both have generally been given, one in parentheses.

Teachers will find, in whatever part of the Pacific States they may be, that they can collect a sufficient number of the plants here included to afford their pupils all the drill necessary. It is advised that the teachers furnish the plants for class study, being careful to select only from those here included rather than to allow the pupils themselves to select at random from the flora of the neighborhood; otherwise, the pupil is likely to become discouraged by failure in identifying plants not described in the book.

Teachers who are in doubt about any plants are earnestly requested to send specimens to the Academy of Sciences, San Francisco, where they will be compared with herbarium specimens and identified. The specimens should have both flower and fruit when possible, and in the case of herbs the entire plant should be sent, root and all.

It requires quite a library of botanical books to identify Pacific Coast species, since there is no book published that contains even all the known species, and there are many species still undiscovered. It is neither possible nor desirable to attempt to include all in a school flora. The chief books needed for a more complete study are the two large and expensive volumes of the State Geological Survey; the following botanical works of Prof. E. L. Greene: *Pittonia, Flora Franciscana*, and *The Botany of the Bay Region; Western Cone-bearers*, by J. G. Lemmon; and, for *Compositæ* and *Gamopetalæ*, Gray's *Synoptical Flora*.

The plan of arrangement in preparing this Flora has been that of Professor Bergen's *Key and Flora to the Spring-blooming Plants of the Northern and Middle States*, which replaces this in the Eastern edition of his book. It seemed that a plan which he had tried and found successful was better to adopt than one that was new and untried. Whenever possible, his descriptions have been used, the aim throughout having been to follow as he led.

The botany of the Geological Survey, Professor Greene's botanical works, and Dr. Behr's *Botany of the Vicinity of San Francisco* have all been used in compiling the descriptions and making the Key.

The pronunciation is indicated by accent marks and the division of the accented syllable. A vowel ending this syllable has a long sound; but when the accented syllable ends in a consonant, the vowel has a short sound. It matters little whether the English or Continental sounds for the vowels are used; the former are more generally authorized, though the latter are becoming more and more prevalent.

In this revised edition I am indebted to Prof. C. V. Piper, of the Agricultural College, at Pullman, Washington, for additions to the Flora from Washington and Oregon, and to Mr. Louis A. Greata, of Los Angeles, for additions from the country adjacent to Los Angeles.

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ACADEMY OF SCIENCES
SAN FRANCISCO

KEY TO SOME FAMILIES OF PHANEROGAMS

GYMNOSPERMS. Ovules not enclosed in an ovary.

Trees or shrubs, usually with needle-shaped or scale-like evergreen leaves and monoecious or dioecious flowers in catkins, the pistillate ones usually ripening into cones (Coniferae), Pine Family, p. 13

ANGIOSPERMS. Ovules in an ovary.

MONOCOTYLEDONS. Flowers generally on plan of 3, never of 5; leaves usually parallel-veined.

GLUMACEOUS DIVISION. Flowers rudimentary, enclosed in husk-like bracts.

Bracts for each flower 2; stems jointed, hollow, cylindrical or nearly so (Gramineae), Grass Family, p. 21

Bracts for each flower 1; stems not jointed, solid, triangular (Cyperaceae), Sedge Family, p. 22

PETALOIDEOUS DIVISION. Flowers having a true perianth; not on a spadix.

Ovary free from the perianth, Stamens 6 (Liliaceae), Lily Family, p. 23

Ovary adnate to the perianth.

Stamens 6 . . . (Amaryllidaceae), Century Plant Family, p. 36

Stamens 3 (Iridaceae), Iris Family, p. 37

Stamens 1 or (rarely) 2 . . . (Orchidaceae), Orchis Family, p. 39

DICOTYLEDONS. Flowers generally on the plan of 4 or 5. In woody plants the woody fiber forms concentric rings.

DIVISION I. APETALAE. With but one set of floral envelopes or none.

Flowers in catkins. Trees or shrubs.

Dioecious, 1 flower to each scale of the catkin; fruit a many-seeded pod, each seed furnished with a tuft of cotton (Salicaceae), Willow Family, p. 40

Monoecious; sterile catkins drooping; fertile, erect, cone-like, with 1 or 2 flowers under each stiff, shield-shaped scale (Betulaceae), Alder Family, p. 42