

University of Oregon Leaflet Series

Published by the Extension Division

Botanical Bulletin

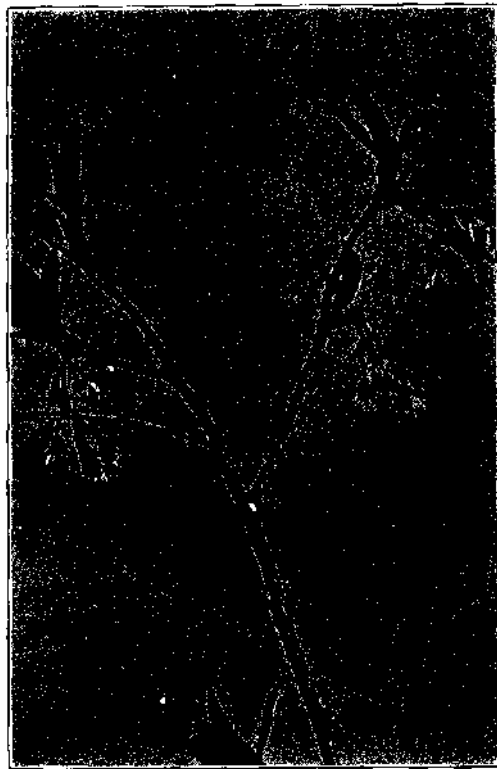
February, 1917

Vol. 2, No. 6. Part 2

Indian Plum and Oregon Grape

By ALBERT R. SWEETSER

Professor of Botany in the University of Oregon. Eugene, Oregon



INDIAN PLUM (*Osmaronia cerasiformis*)

it is desired that these leaflets reach those to whom they are of the most service. Accordingly, if you wish them continued, kindly send your request on a postal to the Extension Division, University of Oregon.

Admitted as second class matter at the postoffice at Eugene, Oregon

The Indian Plum

Rose Family (*Rosaceae*)

LONG with the coming, of the pussy pads and the opening of the catkins or the alder, another one of our common shrubs hangs out its white petaled flowers and waves them in welcome to the returning spring. This is the so-called Indian plum or squaw berry; or speaking scientifically, the *Osmaronia cerasiformis*. It belongs to the same family as the apple and the plum. Its fruit is a bony pitted, elliptical-shaped plum, with a very thin flesh, which is first green, then becomes reddish, and when ripe is grayish black in color. The flowers appear along with or a little before the leaves, and help form a striking object in the vacant woods.

The flowers are white and have a somewhat disagreeable odor; whence the scientific name *Osmaronia*, coming from the Greek word meaning "smelling."

The shrub prefers moist ground, and under favorable conditions often attains a height of fifteen feet.

The bark when crushed has somewhat the same odor as wild cherry. Figure 1, on the title page, shows a young twig and gives an idea of its general appearance.

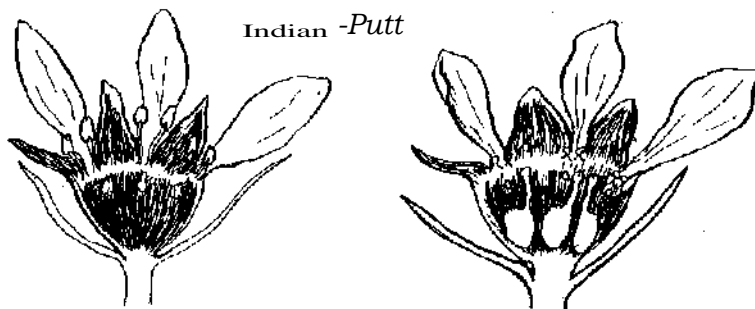


Figure. 3
Section of Staminate
(male) flower.

Figure
Section of pistillate
(female) flower, with
aboriginal, sfa Mena

Detailed Description

Figure 3 is a section cut lengthwise through one of the flowers. The stamens are found in two rows attached to the calyx, ten in the upper circle and five in the lower.

It will be noticed that the five petals are also attached to the calyx, and that the calyx in its lower portion is united to form a cup. The absence of the pistil should also be noticed, showing that this is a male

or staminate flower. Some search may be necessary to find a flower with a pistil. Figure 2 shows a section of such a flower, and in this the stamens appear as little rudiments. The pistils are several in number and distinct; they are simple and contain a single ovule. Occasionally flowers are found having both the stamens and the pistils. When the sexes are separated the flowers will be found on different shrubs, and in scientific language they are called dioecious.

Oregon Grape

Barberry Family (*Berberidaceae*)

THIS shrub, so familiar to the Oregonian, needs neither illustrating nor describing. When first seen by the newcomer, its leaves seem to resemble the holly, but close examination shows that the Oregon grape leaf is compound and made up of several leaflets, while that of holly is simple. It is found in all parts of the state and is represented by several species. It belongs to the barberry family (*Berberidaceae*). The tall form is *Berberis aquifolium* and is found all thru the state. We have several low forms like the *Berberis nervosa*, whose leaves have several main veins in distinction from the single vein of the other species, which is found mostly in the western part of the state. In the eastern portion, we have a low creeping form which is known as *Berberis repens*. The few seeded blue berries grow in clusters and make a delicious tart jelly.

The wood is yellow on the inside when cut or broken, and the root is sometimes used in medicine as a bitter tonic.

Detailed Description

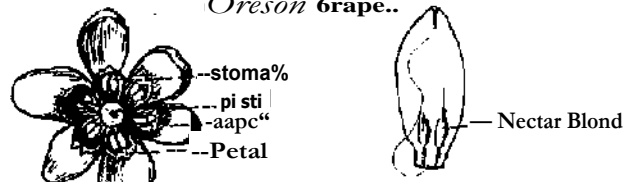
The flowers occur in clusters in which the flowering proceeds from the bottom towards the top, and is known as a raceme. The individual flower is somewhat mystifying in its structure, but a careful study will show that it is typical. From the outside we come to numerous small bracts, then six petal-like sepals forming the calyx; opposite each sepal is a true petal on the base of which are two honey glands (Figure 2); opposite the petals are six stamens. All of this will be clearly seen in Figure 1 which is a view looking down upon the flower, and Figure 5 which shows the cross and longitudinal plan. In the center is the single, barrel-shaped pistil with an exceedingly short style and flat top, around the edge of which is the surface receptive to the pollen or the stigma. All parts are distinct from each other and attached to the end of the flower stalk or receptacle.

A section of the ovary shows that it consists of but a single cell with few ovules coming from the bottom.

One of the most interesting things about this flower is its method of Pollination. Figure 3 shows a pistil and a single stamen in its earliest stages. A simple, interesting experiment can be made by touching the

bottom of the stamen when it will be seen to fly up and take the position as in Figure 4. As it ripens the parts marked "a" lift up as little valves carrying with them the pollen grains. Although the stamen flies up to the pistil, the pollen at "a" is too high to be placed upon the stigma, so even though it has the appearance of being able to self pollinate, it evidently is cross-pollinated. When an insect visits the flower it lights upon the top of the flat portion of the pistil, reaches down for the nectar and in so doing touches the bottom of the stamen, which then flies up and covers its body with pollen. When it goes to another flower it carries this pollen which it places upon the stigmatic surface, and in this manner brings about cross-pollination.

Oregon Grape..

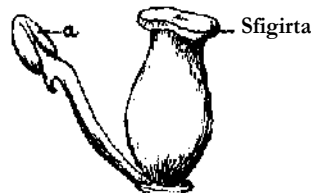


Flower a Oregon Grape.

Figure L_Ses.t_fivm above

Pistil

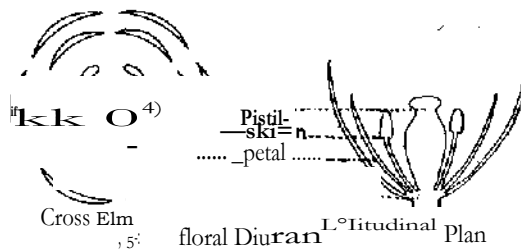
Figure 2.



Pistil mai Stumm
Figure a.



F lil and Mature Elan-ten
Figure 4.



NOTE: The botanical department will gladly name any of the wild flowers or shrubs for those who may desire it. Pick enough of the plant to show the tV1310111 characteristics: flower, fruit if present, leaves, and in some cases the root. Send by mail to the herbarium of the University of Oregon, Eugene.