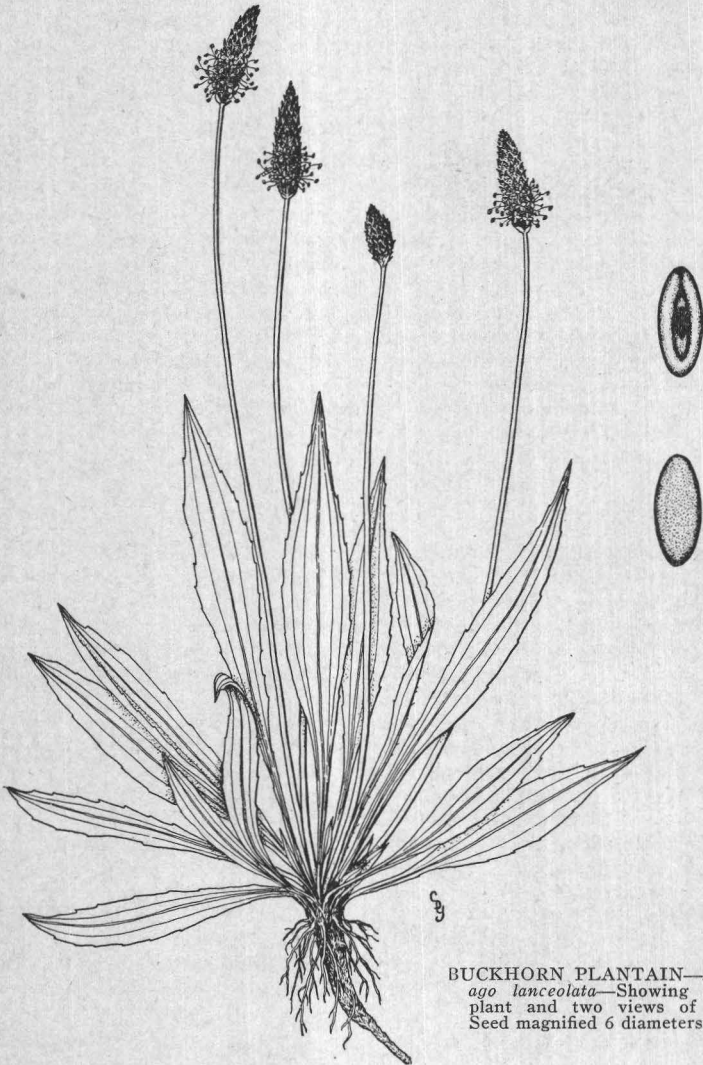


Plantains

LAWRENCE JENKINS

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BUCKHORN PLANTAIN—*Plantago lanceolata*—Showing entire plant and two views of seed. Seed magnified 6 diameters.

Oregon State System of Higher Education
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BUCKHORN PLANTAIN and RIPPLESEED PLANTAIN

By LAWRENCE JENKINS and E. R. JACKMAN*

Illustrations by Cathrine Davis Young

THESE two weeds are found in all sections of the state and grow under the same conditions. They are commonly found along roadsides, in lawns, pastures, and meadows. As they are so closely related and their control is the same, they are both discussed here.

BUCKHORN PLANTAIN

(*Plantago lanceolata*)

Other common names: Narrow-leaved plantain, Rib-grass, English plantain.

Buckhorn plantain is a perennial that reproduces by seed and by new shoots from roots. Numerous prominent-veined narrow leaves are produced from the crown of short, thick roots. The leaves are not borne on visible stems, but each leaf attaches directly to the crown. The lance-shaped leaves vary from 3 inches to nearly 1 foot in length, and are usually less than 1 inch wide. In pastures and lawns they grow flat on the ground, but in meadows may grow erect. Each leaf has from 3 to 5 prominent veins running from base to tip; hence the name "rib-grass." Leaves are dark green on the upper side and pale underneath. They taper to a sharp point and have unbroken edges. A tuft of brown hair is found at the base of each leaf.

The crown is at or near the surface of the ground. The tap-root tapers quickly from the crown and is covered by short rootlets. The main root system is in the top six inches of soil.

Flower heads are borne on the end of a long, slender, and grooved stem. Stems are generally about 1/16 inch in diameter, and from a few inches to 2 feet in height. The cylindrical flower heads are about 1/4 inch in diameter and from 1 to 4 inches long, somewhat resembling a timothy head. When the heads are in bloom, numerous pale stamens, which give the appearance of a ruffled collar, are apparent. There is no distinct blooming period. Heads form all summer on each plant if moisture is sufficient. The pollen produced is reported to be an important cause of hay fever in Oregon.

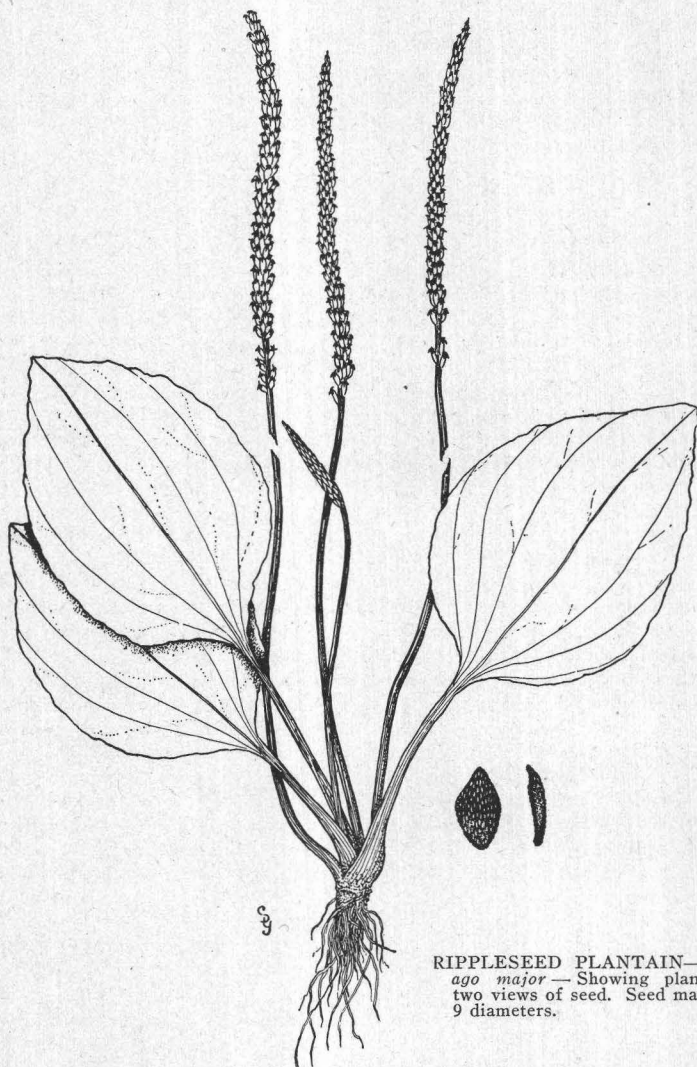
Seeds are produced in pairs, facing each other, enclosed in a paper-like capsule. They are canoe-shaped with the sides rolled inward and with rounded ends. They are glistening, about 1/10 inch long, and light to dark brown. The rolled edges do not quite meet, thus forming a longitudinal groove inside of which may be noted a dark-colored scar. All seeds are covered with a substance that becomes sticky when wet. The seed may remain uninjured buried in the soil for many years, and for this reason this pest is difficult to eradicate, if it becomes well established. This seed is probably the most common weed-seed impurity in alfalfa, red, alsike, and white clover. It is cleaned from clover seed by mixing damp sawdust with the seed, and then running the mixture through an ordinary cleaner. Buckhorn seeds stick to the sawdust, and can be screened out.

Damage

As the young plants do not ordinarily seed the year of germination, the weed is most noticeable in crops that occupy the land more than one year. The plant recovers immediately after cutting and forms new stems and flowers from early spring until frost. This habit enables the plant to reproduce in pastures, meadows, and lawns. The crowns spread slowly and tend to crowd out the

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grasses. Buckhorn is slightly bitter, and livestock prefer grass. The tendency to eat the grass in the spring and leave the buckhorn allows it to expand at the expense of the grass in closely grazed pastures. It is reported to give a slight off-flavor to dairy products.



RIPPLESEED PLANTAIN—*Plantago major*—Showing plant and two views of seed. Seed magnified 9 diameters.

It remains green longer than most plants when the soil is dry and will grow on thinner, poorer soil than most domestic plants. For these reasons some sheep and goat owners in Southern Oregon prize it as a pasture plant.

Oregon Seed Law

The state seed law classes buckhorn plantain as a noxious weed. If present, the amount must be stated on the tag. In addition, red clover, sweet clover, or al-

falfa seed may not be offered for sale legally if it contains more than 360 buckhorn plantain seeds per pound. Buckhorn seed, labeled as such, may be sold legally. According to the law, screenings containing the seed may not be sold without fine grinding or otherwise devitalizing.

Control

For badly infested fields the only satisfactory method of control is to plow the land and either put into a cultivated crop for a period or else give it a season of summer fallow. If buckhorn seeds plentifully on a field, the land should not be plowed at once, as that practice will distribute the seed throughout the soil. The land should be given a shallow working to keep the seeds on the surface and germinate them. Several shallow operations during the season should germinate most of the seeds as well as kill the seedlings.

Concentrated commercial sulphuric acid applied to the crowns of the weed is a satisfactory method for use in lawns and for scattered plants in fields. The acid can be carried in a can with a long wire handle. This acid is very caustic so care must be exercised not to allow it to get on clothing or hands. Of course it cannot be stored in tin. A pointed wooden stick can be dipped into the acid and jabbed well into the crown of the plant. In a short time the weed will die and grass will cover over the area. It is desirable to fertilize the lawn so the grass will grow vigorously. Sometimes fertilizing alone will do much to choke out the buckhorn plants. Many people dig buckhorn from lawns. It is necessary to cut the root below the crown or re-growth will take place from that point. A pinch of ammonium sulphate dropped into the crown will generally kill the weed and fertilize the immediately surrounding grass.

RIPPLESEED PLANTAIN

(*Plantago major*)

Other common names: Broad-leaved plantain, Common plantain, Dooryard plantain.

This weed reproduces from seed and by new shoots from the roots. It can be distinguished readily from buckhorn plantain by its wider leaves. They sometimes reach a width of 2 to 4 inches, while buckhorn leaves are rarely more than 1 inch in width. Rippleseed plantain leaves have long stems generally about as long as the leaf. They have 5 to 9 distinct veins running lengthwise of the leaf. Seed spikes are compact and generally from 3 to 12 inches long at the end of an unbranched stem. Flowers are inconspicuous, with purple stamens. The seed is about 1/20 inch long and greenish-brown in color. Size and shape of the seed vary greatly according to the number of seeds in the capsule, which may be from 6 to 20. Rippleseed plantain seeds are common in clover and lawn-grass seeds. With proper cleaning, most of them should be separated quite easily from clover seed. They are difficult to separate from the smaller grass-crop seeds such as bent grass.

Control

As the method of growth of this weed is similar to buckhorn plantain the same methods of control apply.

This is one of a series of 39 bulletins discussing 58 perennial weeds in Oregon and their control. A list of bulletins in this series will be found on the last page of Extension Bulletin 510. The individual bulletins are punched so that several may be bound together if desired.

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