Sprawling stems of devil's-claw plants bear large heart-shaped leaves.

Devil's-claw, native to the southern United States, severely reduces cotton yields in Texas and Oklahoma and has spread to the Midwest and California. Scientists report that existing infestations are becoming more severe, and the weed is expanding to new areas. Devil's-claw infests river banks, waste places, pasture and rangeland, and hog lots from southern Indiana, Illinois and Missouri south to the Mexican border. It interferes with normal grazing on rangeland in Nebraska, Kansas, Oklahoma and Texas. Although sheep browse Devil's-claw foliage in California, the sharp pointed fruits sometimes fasten to noses of feeding animals, causing injury and infection.

Devil's-claw is grown and sold as an ornamental plant, both for its showy flowers and for its unusual seed pods. Some use the young tender pods like cucumbers for making pickles.

In Washington, devil's-claw grew in Benton, Klickitat, Pierce, Spokane, Thurston and Walla Walla counties, but did not persist. In Oregon, it grows west of the Cascades; most reports come from southwest Oregon. Idaho has not found devil's-claw. Montana has reported it from Custer and Stillwater counties. It is listed as a Class A noxious weed in Washington and as a Class C noxious weed in California. It is not considered a noxious weed in Idaho or Oregon.

After fruits dry, the single horn splits into two sharp claws (center).

IDENTIFICATION

Devil's-claw, which has distinctive seed pods, has inspired a variety of colorful names, including unicorn plant, ram's horn, cow catcher, elephant trunk, elephant tusks and proboscis flower. It grows as an annual with fibrous roots. Mature plants rarely grow more than 1 to 1 1/2 feet tall, but the thick, fleshy, hollow stems may spread out 3 feet from the base of the plant. Sticky, slimy or clammy hairs cover the entire plant. Large rounded leaves are roughly heart-shaped and have smooth or wavy margins. Stalks 2 to 6 inches long bear the 2- to 10-inch wide leaves. Leaves, opposite each other near the base of the plant, grow in alternate positions toward the stem ends.

Flower buds display square ends. The showy, funnel-shaped 1- to 2-inch long flowers are borne on...
short stalks in groups (racemes). Yellow or creamy white flowers are variously mottled with white, pink, purple, orange or red. Each flower produces a fleshy, sticky fruit that resembles a cucumber with a long horn. The body of the fruit, 1 1/2 to 4 inches long, has a horn up to three times the length of the body. Seeds disperse when the flesh falls away and the capsule splits lengthwise into 2 curved sharp woody claws. Thick, rough coated flat seeds are about 1/2 inch long, oblong and blunt on the ends.

**BIOLOGY AND ECOLOGY**

A summer annual, devil's-claw reproduces and spreads by seed. Reports from Texas indicate that devil's-claw seeds require warm soil temperatures to germinate, warmer than the requirements of puncturevine or barnyardgrass. Landowners in the Pacific Northwest notice devil's-claw from late August to early October, when it flowers and produces seed pods.

Because devil's-claw is self-sterile, pollen from another plant must pollinate flowers to produce seed. Plants that have not been pollinated do not produce pods. Oklahoma field-grown plants produced, on average, 122 pods per plant, each pod containing, an average of 71 seeds (over 8660 seeds per plant). Under dryland conditions in Texas, plants produced 1000 to 2300 seeds. Pods contained from 42 to 62 seeds.

Devil's-claw seed in the soil can present persistent problems for years. Seeds develop in three compartments in the pods. The center compartment releases seeds when the pod splits open. The two outer compartments do not release seed until the woody pod itself breaks down. This prevents all seed from a single pod from germinating the same year. The seed coat and the inner membrane enclosing the embryo also inhibit germination. In Texas, low seed germination (3%) increased to 17% when the seed coat was removed, and to 81% when the inner membrane was punctured. Oklahoma studies found increasing germination of buried seed over time, attributed to soil moisture leaching germination-inhibiting chemicals from the seed coat and fluctuating temperatures loosening the seed coat from the embryo.

**CONTROL**

Prevent establishment of new devil's-claw infestations. Flower catalogs market devil's-claw seed, and floral companies sell pods containing seeds as curios for decoration and winter bouquets. When people discard these bouquets outdoors, the seeds may start new infestations. Livestock, especially sheep, move seed. In Iowa it is common to see grazing animals that have chains of seed pods attached to their legs, scattering seeds as they walk. When sheep lie down in infested areas, the hooked seed pods attach to their fleece. To prevent movement of seed in California, growers often shear sheep before moving them from infested to clean pastures. Equipment, vehicles, livestock feed and bedding also may carry seed.

If allowed to establish, devil's-claw probably would cause problems in pasture and vegetable crops because it tolerates some widely used selective herbicides. Prevent seed production by pulling and destroying devil's-claw as soon as you find it. Any control method that prevents seed production will eventually eradicate this annual: repeated hoeing, extremely close mowing or pulling. Destroy seed pods if they have developed. Early mowing, cultivation, crop rotation and competitive pasture species can reduce devil's-claw where it is abundant.

For chemical control recommendations, refer to the *Pacific Northwest Weed Control Handbook*, an annually revised extension publication available from the extension bulletin offices of Oregon State University, Washington State University and the University of Idaho.

The author acknowledges the support of the Washington State Department of Agriculture and the Washington State Noxious Weed Control Board in preparation of this bulletin.

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Published and distributed in furtherance of the Acts of May 8 and June 30, 1914, by Washington State University Cooperative Extension, Larry G. James, interim director; Oregon State University Extension Service, O. E. Smith, director; University of Idaho Cooperative Extension System, LeRoy D. Luft, director; and the U. S. Department of Agriculture cooperating, Cooperative Extension programs and policies comply with federal and state laws and regulations on nondiscrimination regarding race, color, national origin, religion, gender, age, disability, and gender preference. Published June 1992. 50/0/50

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