HALOGETON
A Sheep Killing Plant

By O. A. Stevens[1]

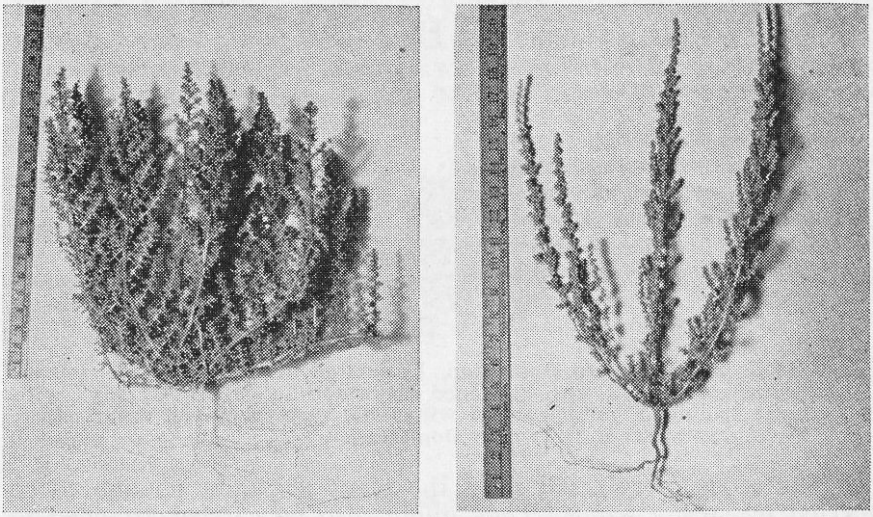

Fig. 1 Typical specimens of Halogeton. Left, bushy growth; right, tall growth. (Photos from Hoard's Dairyman)

Publicity regarding this new poisonous weed in the intermountain states has caused some apprehension in North Dakota. At present it is not known to have reached North Dakota and does not seem likely to become a problem here. However, modern methods of transportation are favorable to the movement of weeds as well as of people and goods. Most of our weeds have established themselves before we realized it and this has been true of Halogeton in the west.

Halogeton—pronounced haloGEEton—was first recognized in northeastern Nevada in 1935. Since then it has spread over a large part of that state, has become common in southern Idaho and appeared in California, Utah, Montana and Wyoming. It is native to the dry plains of west central Asia and is thought to have been brought to this country in grass seeds. We are told that its local distribution was increased by the fact that the seed-bearing branches are ornamental. They were picked for this purpose and the seeds were even planted about houses. The possibility of branches being picked by a curious tourist and later discarded hundreds of miles away is a serious menace.

[1] Botanist

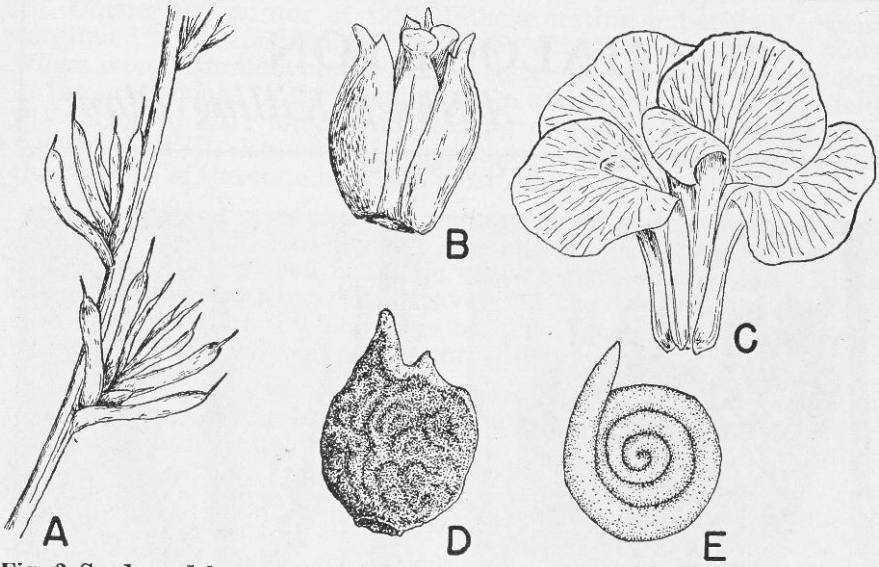

Fig. 2 Seeds and leaves of Halogeton. A, portion of stalk with short leafy branches; B, fruit with hardened calyx without wings; C, calyx with large, rounded, membranous wings; D, fruit removed from calyx; E, embryo of seed. Drawn by Don Hoag.

The seeds as released from the plant are light enough to be carried by strong winds. They might also be carried attached to western sheep moved into new areas or lodged in railway cars, highway trucks or cars which have carried such sheep or which have driven through infested districts.

Present occurrence of the plant in Wyoming is along highways. This is a clear indication of its spread by motor vehicles or by sheep, either driven or hauled.

The plant is closely related to Russian thistle. So far we have learned it does not become a tumbleweed but the seeds are easily released when dry. In general appearance the plant is less rounded than a Russian thistle and is much less spiny. The main branches tend to spread out along the ground, producing upright branches which bear many short branches covered with flowers.

The leaves are short (½ inch), cylindrical, fleshy, tipped with an abrupt slender bristle. Most of the fruits have wide papery wings as in Russian thistle. The actual seed is distinctive. The embryo is coiled as in Russian thistle but the seed is more flattened and stands on edge with the tip of the radicle (primary root) prominently projecting upward (See Fig. 2). The seeds are a little smaller than those of lamb's quarters and are thin coated. Some fruits do not develop the large wings.

Poisoning is due to a very high content of oxalic acid and a low calcium content. This allows the acid to combine with the calcium in the blood of the animal and produce convulsions and

death. Russian thistle, sorrels, spinach and various other plants contain oxalic acid but if sufficient calcium is present in the feed, it combines with the acid and renders it harmless.

Halogeton grows on dry range land and often comes up where plant growth or surface soil has been removed. It does not compete well with other vegetation and is not expected to invade cropland or even range land in good condition. It is not very palatable and is dangerous chiefly where little other vegetation grows and especially late in the season when it retains its succulence. It is particularly dangerous if it grows abundantly along roadsides or trails where sheep are driven because the animals are likely to browse hurriedly upon it.

Chemical sprays such as 2, 4-D have been found effective in killing the weed but they do not prevent it from coming up again the next year. Such treatments are hardly practical on large areas but will be useful in checking the spread of the plant when it first becomes established. It should be watched for particularly along roadsides and around sheep bedding grounds or other bare ground in the western part of North Dakota.

Our knowledge is derived largely from information and specimens from the Idaho and Nevada Agricultural Experiment Stations.

STEVENS GETS INSTITUTE POSITION

In recognition of his continued service in research and instruction, Dr. O. A. Stevens, professor of botany at North Dakota Agricultural College and Experiment Station Botanist, will begin the 1951-52 academic year with the title of research professor of botany for the North Dakota Institute for Regional Studies. Dr. Stevens, member of the college and experiment station staffs since 1909, is author of two papers in this issue of the Bimonthly Bulletin.

RURAL TELEPHONES

Richard G. Schmitt Jr., of the Rural Electrification Administration in Washington, is author of a brief article on "Farmers Mutual Telephone Companies" in the Journal of Farm Economics for February. Development and characteristics of such phone companies are given as background for part of the rural telephone job REA is undertaking, and which is creating considerable interest in North Dakota communities.

J. ALLEN CLARK RETIRED

Mr. Clark, native of Fargo, N. D., educated at North Dakota Agricultural College and the University of Minnesota, and who joined the USDA Bureau of Plant Industry in 1911, has retired after 40 years of service. During that time he played a major role in the development of stem rust-resistant spring wheat varieties. The new and now widely grown Cadet and Pilot varieties originated from his breeding work. He aided in the organization of the Co-operative Regional Spring Wheat Improvement program and has served as its co-ordinator since 1928.