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EC 176 Nebraska Hayfever Weeds

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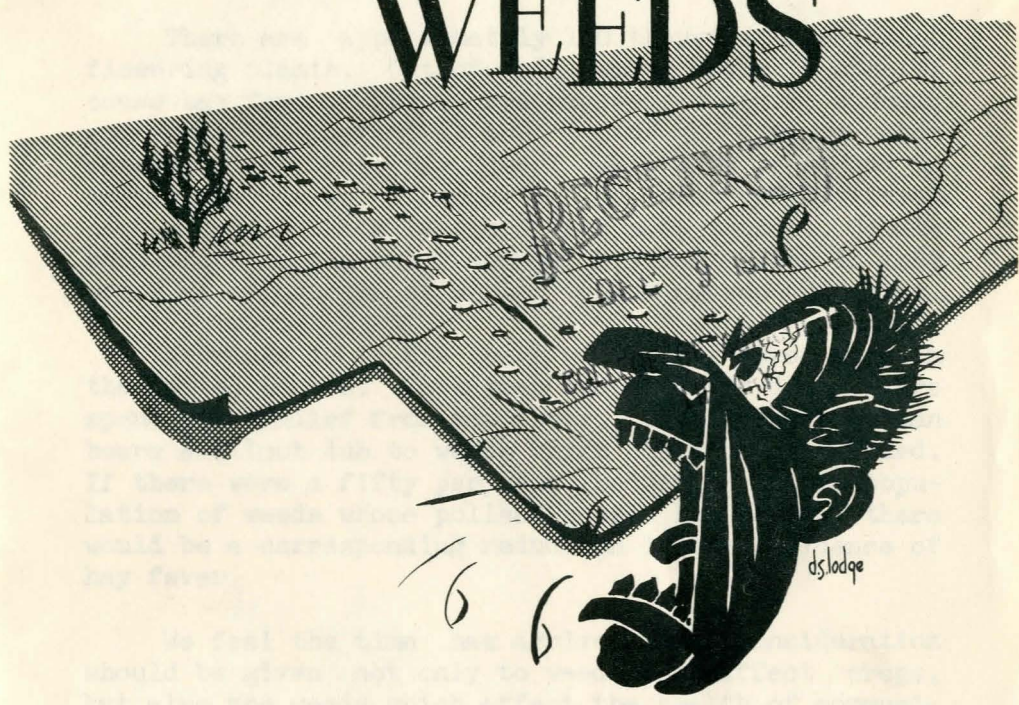
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NEBRASKA

HAYFEVER

WEEDS



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Cooperative Extension
University of Nebraska
Department of Agriculture cooperating, H. G. Gould, Acting Director,
Lincoln.

Home Economics

NEBRASKA WESLEYAN UNIVERSITY

NEBRASKA HAY FEVER WEEDS

J. D. Furrer and Dr. E. L. MacQuiddy¹

The depressing effects of weeds upon crop yields has been known for years. The ill effects of weeds upon the health of humans has been realized, but has received little consideration in the past.

Due to advances in the knowledge of allergies, a great deal of attention has been paid recently to the effect of pollen, particularly air-borne pollen, upon human health. Medical authorities are now in a position to know that the pollens of certain weeds, when breathed by man, cause detrimental effects upon the health of certain individuals.

There are approximately 100 thousand species of flowering plants. Out of this number about 35 species cause hay fever. The three ragweeds, giant, annual, and perennial, stand at the top of the list of weeds whose pollen causes hay fever. Wild hemp is second in importance as an offender. The form of hay fever caused by wild hemp is one of the most violent. Cocklebur, kochia, pigweed, and marsh elder follow in that order as producers of pollen which causes suffering.

Nebraska is in the heart of the hay fever area in the United States. Each year thousands of dollars are spent for relief from hay fever, and hundreds of man hours are lost due to weeds which could be controlled. If there were a fifty per cent reduction in the population of weeds whose pollen causes hay fever, there would be a corresponding reduction in the incidence of hay fever.

We feel the time has arrived that consideration should be given not only to weeds that affect crops, but also the weeds which affect the health of communities. This bulletin gives a brief description of the most important weeds which produce wind borne pollen that is harmful to a goodly percentage of our population.

¹Extension Weed Specialist, College of Agriculture and Associate Professor, Medical College, respectively.



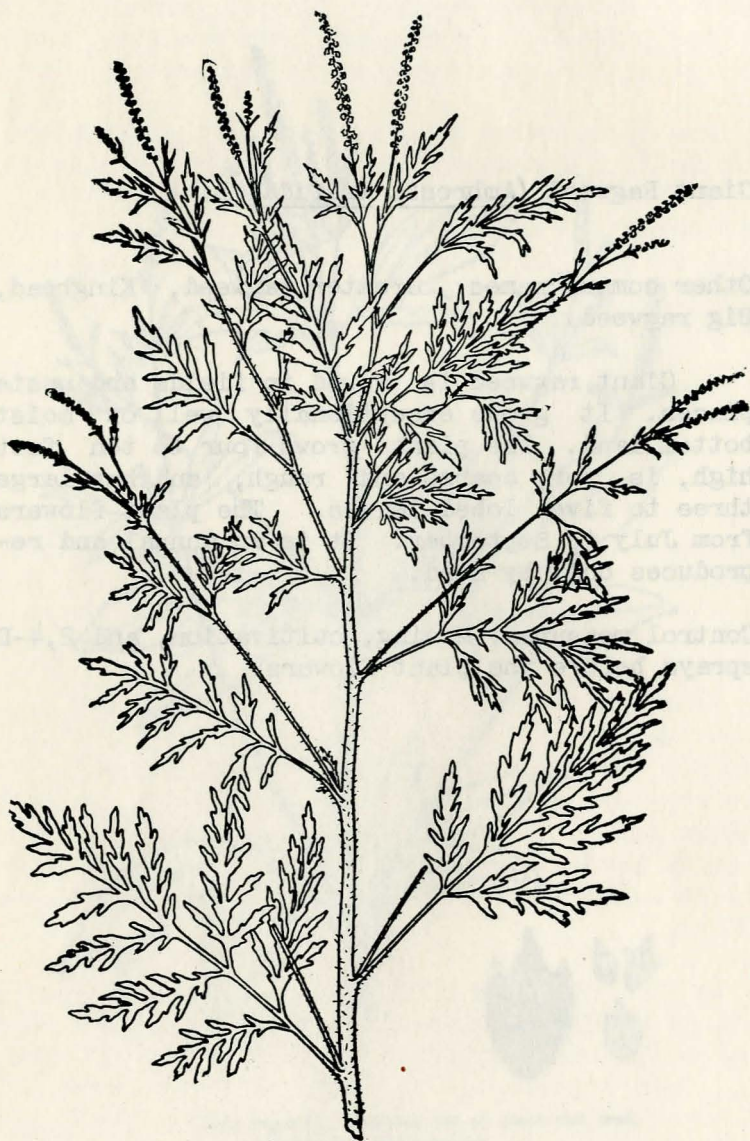
Giant ragweed. Showing top of plant and seed,
natural size and enlarged.

Giant Ragweed (Ambrosia trifida) L.

Other common names: Greater ragweed, Kinghead, Big ragweed.

Giant ragweed is found in fields and waste places. It grows exceptionally well on moist bottom land. The plant grows four to ten feet high, is very coarse and rough, and has large three to five lobed leaves. The plant flowers from July to September. It is an annual and reproduces only by seed.

Control measures: Mowing, cultivation, and 2,4-D sprays before the plant flowers.



Ragweed. Showing top of plant.

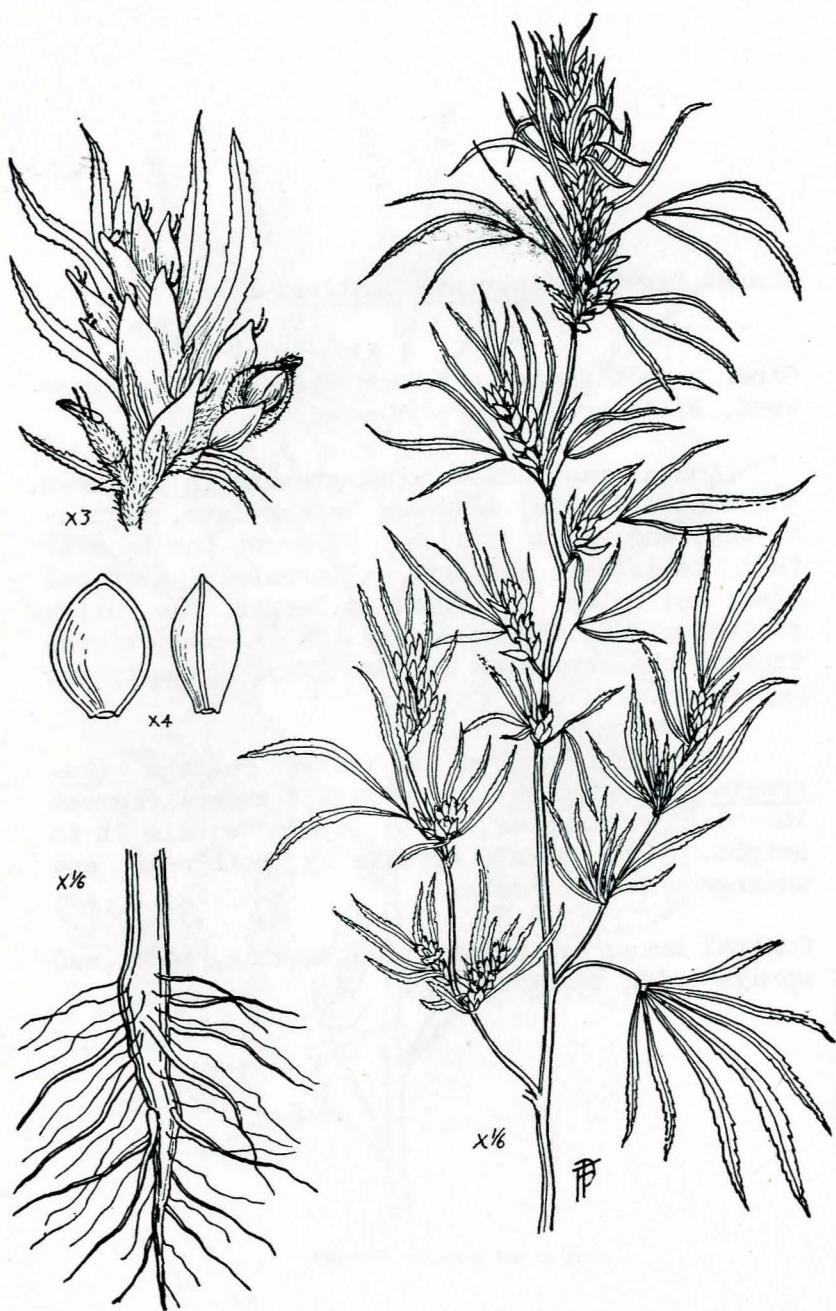
Annual Ragweed (Ambrosia elatior) L.

Other common names: Common ragweed, Hay fever weed, Bitterweed, Short ragweed.

Annual ragweed is found growing in pastures, cultivated fields, meadows, vacant lots, rights-of-way, and waste places. It grows one to four feet tall; has a hairy, alternately branched stem; and hairy, much-divided leaves. The pollen-producing, flowering parts are formed at the tips of the branches during July, August, and September.

Perennial ragweed or Western ragweed (Ambrosia psilostachya) L. resembles annual ragweed in plant character, but seldom equals it in height. The plant spreads by both seed and underground rootstocks.

Control measures: Cultivation, mowing, and 2,4-D sprays prior to flowering.



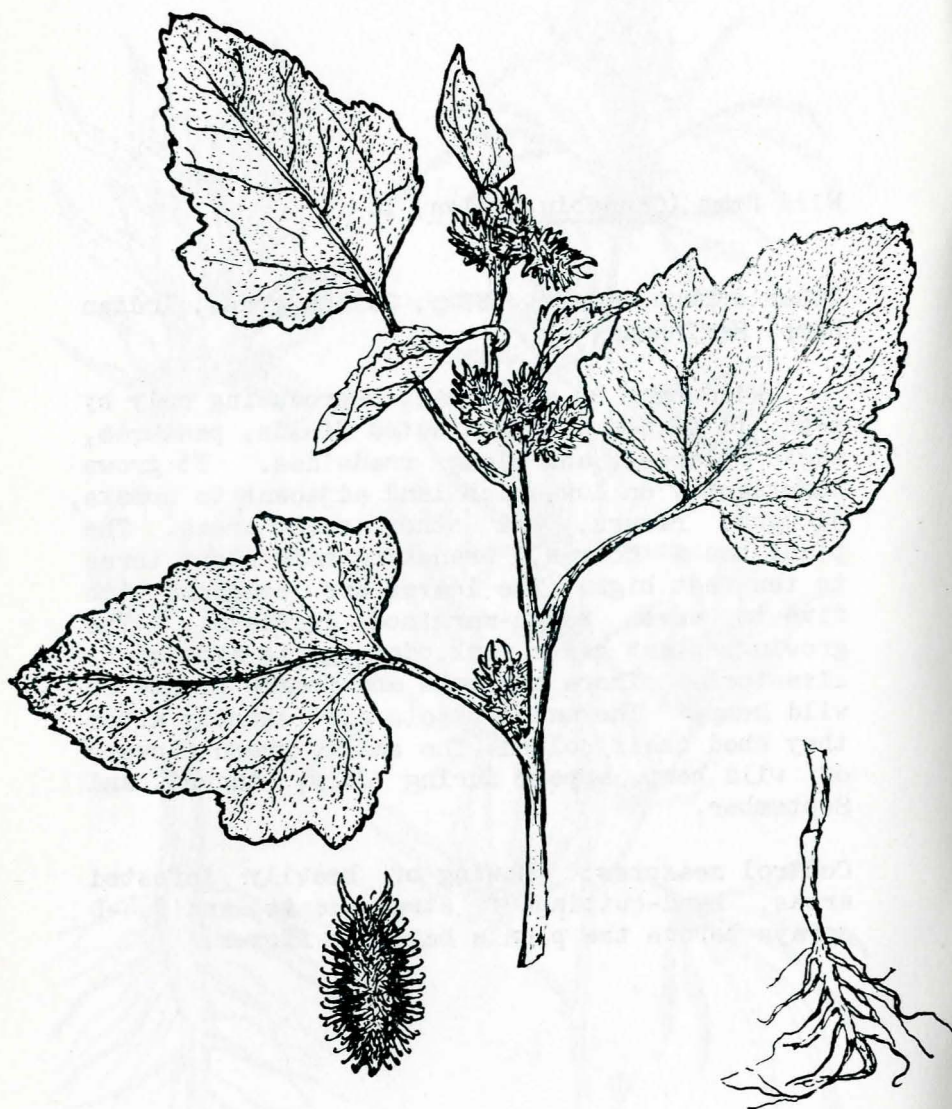
Wild Hemp. Showing plant, enlarged branch and seeds.

Wild Hemp (Cannabis sativa) L.

Other common names: Hemp, Gallow grass, Indian hemp, Marihuana.

Wild hemp is an annual, reproducing only by seed. It is found in neglected fields, pastures, waste places, and along roadsides. It grows luxuriantly on low, rich land adjacent to creeks, sloughs, rivers, and other moist areas. The plant has a coarse, branching main stem three to ten feet high. The leaves are compound with five to seven rough-margined leaflets. The growing plant has a rank odor and is avoided by livestock. There are male and female plants of wild hemp. The male plants die shortly after they shed their pollen. The small, green flowers of wild hemp appear during July, August, and September.

Control measures: Mowing of heavily infested areas, hand-cutting of stray plants, and 2,4-D sprays before the plants begin to flower.



Cocklebur. Top of plant, root, and enlarged bur.

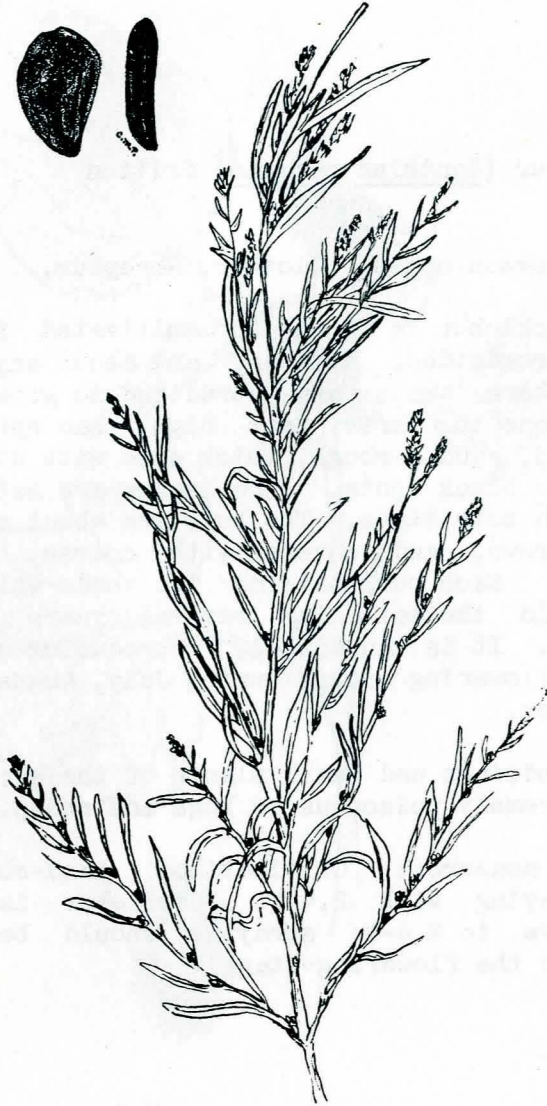
Cocklebur (Xanthium commune) Britton

Other common names: Clobur, Sheepbur.

Cocklebur is found in cultivated fields, along roadsides, ditches, and about any other place where weeds are permitted to grow. It grows one to three feet high, has spreading branches, and a rough, thick stem with distinct brown or black spots. The leaves are extremely rough on both sides. The burs are about an inch long, brown, and covered with coarse, hooked spines. Each bur contains two seeds which may remain in the soil for several years before growing. It is an annual, reproducing only by seed. Flowering occurs during July, August, and September.

Seedlings and small plants of the cocklebur are extremely poisonous to hogs and sheep.

Control measures: Cultivation, hand-cutting, and spraying with 2,4-D. Cocklebur is very sensitive to 2,4-D; spraying should be done prior to the flowering stage.



Kochia. Showing portion of the stem and enlarged seeds.

Kochia (Kochia scoparia) (L.) Roth.

Other common names: Fireweed, Burning bush, Mexican fireweed, Alkali weed.

Kochia is found growing any place where weeds are allowed to grow. It is especially common in fence rows, gardens, alfalfa fields, and cultivated fields. It normally grows two to seven feet high in an erect, bushy form with considerable branching from a central stem. The plant has the ability to grow rather prostrate in areas subject to trampling or traffic. The small, linear leaves are attached directly to the stems. The inconspicuous greenish to reddish flowers of this annual are borne in the axils of the upper leaves from July to September.

The ornamental summer cypress or burning bush is nothing more than a cultivated form of kochia which will revert back to the wild form in a few years if allowed to do so.

Control measures: Cultivation, mowing, and spraying with 2,4-D when the plants are young and tender. If kochia is allowed to become woody, it becomes very resistant to 2,4-D



Rough pigweed. Top of plant and root.

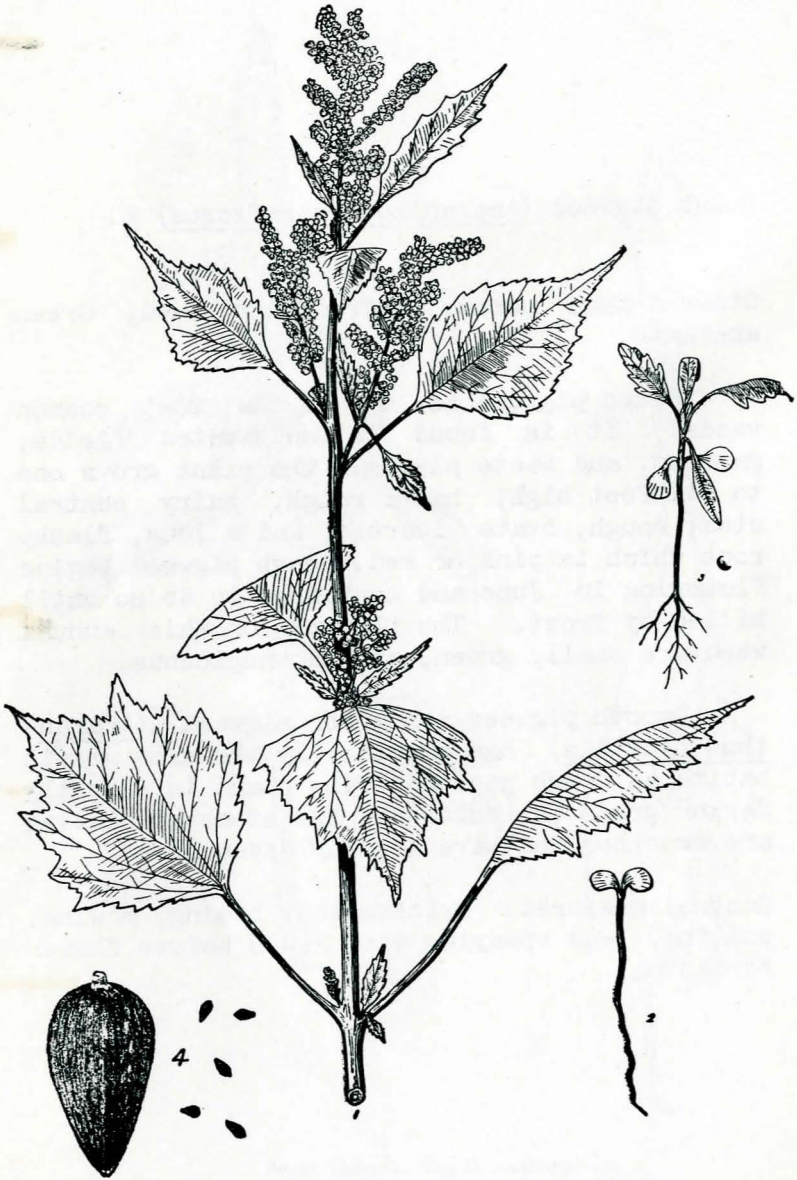
Rough pigweed (Amaranthus retroflexus) L.

Other common names: Redroot, Pigweed, Green amaranth.

Rough pigweed is one of the most common weeds. It is found in cultivated fields, gardens, and waste places. The plant grows one to six feet high; has a rough, hairy central stem; rough, ovate leaves; and a long, fleshy root which is pink or red. Rough pigweed begins flowering in June and continues to do so until killed by frost. The flowers on this annual weed are small, green, and inconspicuous.

Smooth pigweed or green pigweed (Amaranthus hybridis) has practically the same growth habits as rough pigweed. The plant is slightly darker green in color and the stems and leaves are smoother and have a shiny appearance.

Control measures: Cultivation, hoeing, mowing, pulling, and spraying with 2,4-D before flower formation.



Marsh elder. Showing top of plant, seedlings, and seeds,
natural size and enlarged.

Marsh elder (Iva xanthifolia) Nutt.

Other common names: High water shrub, False sunflower, Trail weed, Burweed marsh elder.

Marsh elder grows four to eight feet high and has an unbranched, heavy stem of a light grayish-green color. The leaves are large, simple, rough-margined, and are also grayish-green. It is found growing in cultivated fields, meadows, along roadsides, and in waste places. Marsh elder is an annual which flowers from July to September.

Control measures: The plant should be mowed or sprayed with 2,4-D prior to the flowering stage.



Bur ragweed. Showing top of plant, rootstock, and enlarged bur.

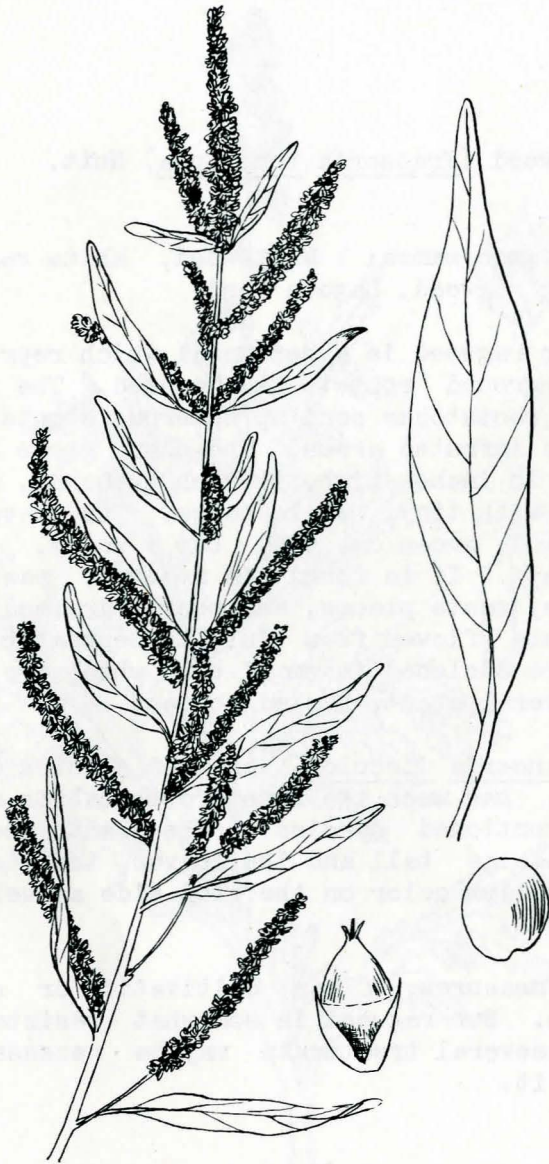
Bur Ragweed (Franseria tomentosa) Nutt.

Other common names: Whiteweed, White ragweed, Creeping ragweed, Lagoon weed.

Bur ragweed is a perennial which reproduces by underground rootstocks and seed. The underground rootstocks send up numerous shoots which dominate infested areas. The plant grows from a foot to 18 inches high, is much branched, and is covered with tiny, white hairs. The leaves are smooth and green on top, but a wooly, white underneath. It is found in meadows, pastures, orchards, waste places, and poorly drained areas. The plants flower from July to September. The seeds are enclosed in small burs which are armed with several stout, hooked spines.

Franseria discolor, another species of bur ragweed, has much the same growth habits as the above mentioned species. The plant does not grow quite as tall and the leaves tend to take on a whitish color on the top side as well as underneath.

Control measures: Clean cultivation or sodium chlorate. Bur ragweed is somewhat resistant to 2,4-D; several treatments may be necessary to control it.

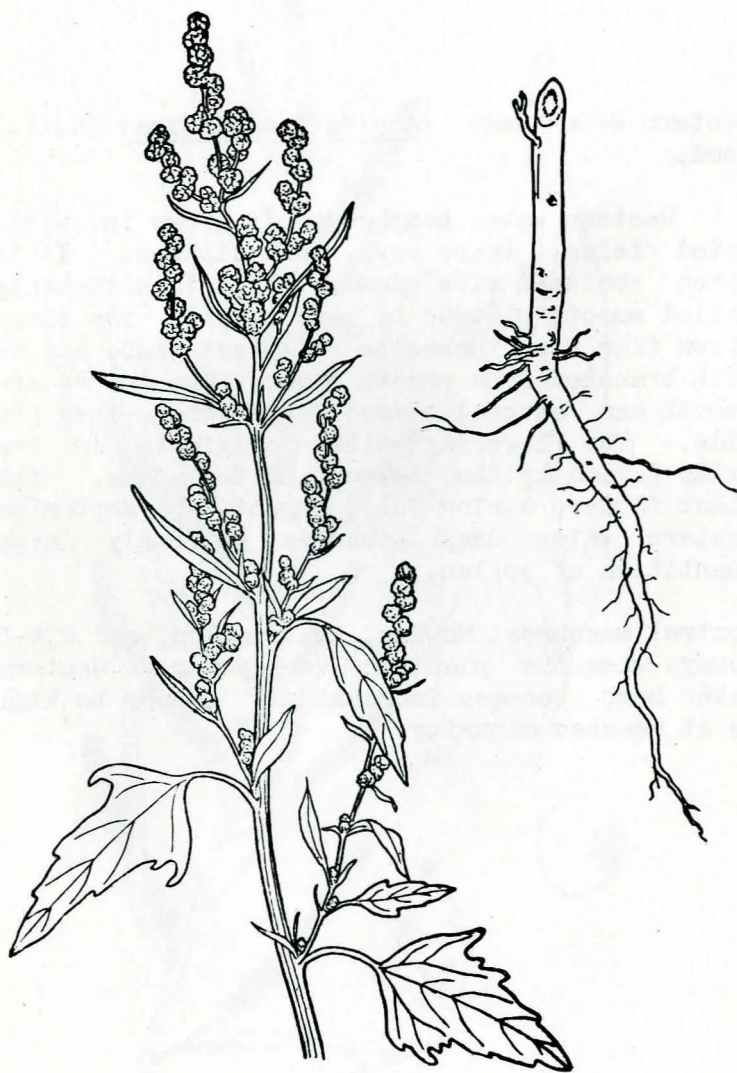


Western Water Hemp

Western Water Hemp (Acnida tamariscina) (Nutt.)
Wood.

Western water hemp commonly grows in cultivated fields, fence rows, and ditches. It is often confused with pigweed, and is mistakenly called smooth pigweed by many people. The plant grows from four inches to six feet high, and is much branched from smooth stems. The leaves are smooth and several times longer than they are wide. The flowering spikes originate in the axils formed by the leaves and the stems. The plant flowers during July, August, and September. Western water hemp produces extremely large quantities of pollen.

Control measures: Mowing, cultivation, and 2,4-D sprays when the plant is very young. Western water hemp becomes increasingly harder to kill as it reaches maturity.



Lambsquarters. Showing top of plant and root.

Lambsquarters (Chenopodium album) L.

Other common names: White goosefoot, Meal weed.

Lambsquarters is found in gardens, fields, and any other areas where weeds are allowed to grow. It has a slender stem which grows one to six feet high. The stem is much branched and is usually ridged or grooved. The leaves are one to three inches long and on the underside are generally covered with a white, mealy substance. The small, green flowers are produced from June to September. Lambsquarters is an annual and reproduces only from seed.

Control measures: Cultivation, hoeing, mowing, pulling, and spraying with 2,4-D when the plants are young.



Russian Thistle. Showing branch of young plant, one of mature plant, and seeds, natural size and enlarged.

Russian thistle (Salsola pestifer) A. Nelson

Other common names: Tumbleweed, Russian tumble weed.

Russian thistle is found in cultivated fields, stubble fields, fence rows, waste places, and gardens. It grows one to four feet high, branches profusely, and often forms a dense, nearly round bush. The leaves are round and reduced almost to spines. The small green or pinkish flowers are borne in the axils of the leaves and stems from July to September. Russian thistle is an annual and reproduces only by seed.

Control measures: Cultivation and 2,4-D sprays when the plant is very young.



Rugel's plantain. Entire plant.

Rugel's Plantain (Plantago rugelii) Dcne

Other common names: Broad-leaved plantain, Red-stemmed plantain, Dooryard plantain, Bird-seed plantain, Common plantain.

Rugel's plantain is very common in lawns, farmyards, fields, pastures, and waste places. It is a perennial which reproduces by seed and occasionally by root shoots. The plants produce only basal leaves which are oblong to ovate in shape; each has five to seven prominent veins running the entire length of the leaf. The leaf stems have a reddish to purplish color. The greenish flowers form on dense terminal spikes from June to September.

English or major plantain (Plantago major) closely resembles Rugel's plantain except for the reddish stem.

Control measures: Spudding and 2,4-D sprays.