



*Stock-Poisoning Plants  
Of North Carolina*

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## Stock-Poisoning Plants of North Carolina<sup>1</sup>

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Poisonous plants continue to be responsible for the death of many livestock in North Carolina every year. Actual losses are greater than many people realize because a large percentage of the deaths from unknown causes are no doubt a result of poisonous plants. As losses are likely to become greater because of the increase in number of livestock in the state, it is more necessary now than ever before that farmers learn to recognize the more dangerous plants so that corrective measures can be taken.

### THE TEN KILLERS

Of the thousands of kinds of flowering plants found in North Carolina, only about 50 to 60 are poisonous, and of these only ten appear to be responsible for most of the losses. They are as follows:

Common Name	Botanical Name	Page
White Snakeroot	<i>Eupatorium rugosum</i> Houtt.	3
Lambkill Kalmia	<i>Kalmia angustifolia</i> L.	4
Mountain-Laurel	<i>Kalmia latifolia</i> L.	5
Black Cherry, and Common Chokecherry	<i>Prunus serotina</i> Ehrh. <i>Prunus virginiana</i> L.	6
Spotted Water-Hemlock	<i>Cicuta maculata</i> L.	7
Carolina Jessamine	<i>Gelsemium sempervirens</i> (L.) Ait. f.	8
Yellow Buckeye	<i>Aesculus octandra</i> Marsh	9
Crow-Poison, and Pink Deathcamas	<i>Amianthium muscaetoxicum</i> (Walt.) A. Gray <i>Zigadenus densus</i> (Desr.) Fern.	10

There is much yet to be learned about poisonous plants and research work on this problem should be started at the earliest possible date. However, enough is already known about these more dangerous species, and presented in this bulletin, to be useful to farmers in trying to avoid livestock losses.

<sup>1</sup> This bulletin is a revision of "Some Stock-Poisoning Plants of North Carolina," by A. O. Shaw, H. H. Biswell, J. E. Foster, and R. W. Collins.

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The authors are indebted to Mr. W. A. Dayton of the U. S. Forest Service who arranged for the drawings and helped in other ways; to Miss L. Hughey of his office for making the drawings; and to Dr. B. W. Wells of the Botany Department of the North Carolina State College for checking the distributions and the descriptions of the plants.



### WHITE SNAKEROOT

**OTHER LOCAL NAMES**—White-sanicle, Fall Poison.

**DESCRIPTION**—Perennial herb 1½ to 4 feet tall, leaves 1½ to 4½ inches long; flowers white.

**DISTRIBUTION**—Mountain Coves.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Leaves and stems.

**ANIMALS MOST COMMONLY POISONED**—Cattle, sheep, hogs, horses, and goats. Also humans drinking milk from affected animals.

**SYMPTOMS OF POISONING**—In animals weakness and trembling; increases with exercise.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—Mainly during the fall when palatable forage is not plentiful; but may occur any time during the grazing season.

**TREATMENT**—No satisfactory treatment known. Should be prevented by fencing out dangerous areas, or getting rid of the plants. Avoid too heavy grazing.



### LAMBKILL KALMIA

**OTHER LOCAL NAMES**—Wicky, Narrow-leaf-laurel, Calf-kill, Dwarf-Laurel, Sheep-laurel.

**DESCRIPTION**—Small shrub 1 to 3 feet tall. Leaves pale beneath, bright green above, smooth, 1 to 2 inches long. Flowers purple or crimson.

**DISTRIBUTION**—Coastal Plain mainly, but throughout the state.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Leaves and flowers.

**ANIMALS MOST COMMONLY POISONED**—Cattle, sheep, and goats.

**SYMPTOMS OF POISONING**—Frothing at mouth, nausea and attempting to vomit, watering at the eyes, secretions from the nose, spasms, weakness and lack of coordination.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—Poisoning seems to occur mostly when the plants are in bloom. A small quantity of leaves will cause poisoning.

**TREATMENT**—For mature cattle drench with a mixture composed of one cup of melted lard, two eggs, and a quart of sweet milk. For smaller animals use a decreased dose. Repeat about every six hours until recovered.



### MOUNTAIN-LAUREL

**OTHER LOCAL NAMES**—Mountain-ivy, Poison-laurel, Big-ivy, Broad-leaf laurel.

**DESCRIPTION**—Large evergreen shrub or tree 3 to 35 feet tall, most commonly a shrub 4 to 10 feet tall. Leaves bright green on both sides, smooth, 2 to 5 inches long. Flowers white or pink.

**DISTRIBUTION**—Mountains mainly; dry rocky woods and hillsides.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Leaves.

**ANIMALS MOST COMMONLY POISONED**—Cattle, sheep, and goats.

**SYMPTOMS OF POISONING**—Frothing at mouth, nausea and attempting to vomit, watering at the eyes, secretions from the nose, spasms, weakness and lack of coordination.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—In winter when snow is on the ground and the animals crave something green, or in early spring when new forage is scarce.

**TREATMENT**—For mature cattle drench with a mixture composed of one cup of melted lard, two eggs, and a quart of sweet milk. For smaller animals use a decreased dose. Repeat about every six hours until recovered.



### BLACK CHERRY

**OTHER LOCAL NAMES**—(Including Common Chokecherry), Wild-cherry, Cabinet-cherry, Whiskey-cherry, Choke-cherry.

**DESCRIPTION**—Trees commonly 15 to 30 feet tall although the Black cherry may become as tall as 90 feet. Leaves shiny and smooth, 1 to 5 inches long. Flowers white. Bark very bitter.

**DISTRIBUTION**—Throughout the state.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Leaves and twigs.

**ANIMALS MOST COMMONLY POISONED**—Cattle and sheep.

**SYMPTOMS OF POISONING**—Difficult breathing, spasms, coma, sickness of short duration.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—Eating wilted leaves and twigs from blown over or cut trees. The poison develops as the leaves wilt.

**TREATMENT**—An injection of a combination of sodium thiosulfate and sodium nitrate in the veins or peritoneum by a veterinarian may be helpful if given promptly.



### SPOTTED WATER-HEMLOCK

**OTHER LOCAL NAMES**—Spotted-cowbane, Wild Parsnip, Cowbane, Water-hemlock, Spotted Parsley, Poison-hemlock.

**DESCRIPTION**—Perennial herb 3 to 6 feet tall. Flowers white. Stems purplish-spotted.

**DISTRIBUTION**—Wet meadows and pastures and along wet margins of streams and ditches throughout the state.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—All parts, but particularly the fleshy, tuberlike roots.

**ANIMALS MOST COMMONLY POISONED**—Cattle and sheep.

**SYMPTOMS OF POISONING**—Violent spasms, frothing at mouth.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—Animals trampling along soft banks often expose roots in the spring. Roots may also be pulled up by animals grazing, particularly during droughts when they may graze more than usual in marshy places.

**TREATMENT**—Most cases practically hopeless. Some give 1 to 2 cups of melted lard once a day for 2 or 3 days. Avoid heavy grazing in early spring.



### CAROLINA JESSAMINE

**OTHER LOCAL NAMES**—Yellow Jessamine, Evening-trumpet-vine, Carolina Wild-woodbine, False Jessamine.

**DESCRIPTION**—A twining or trailing evergreen vine often becoming 20 feet in length. Leaves about 2 inches long. Flowering shoots reddish brown. Flowers deep yellow and very fragrant.

**DISTRIBUTION**—In Coastal Plain and lower Piedmont.

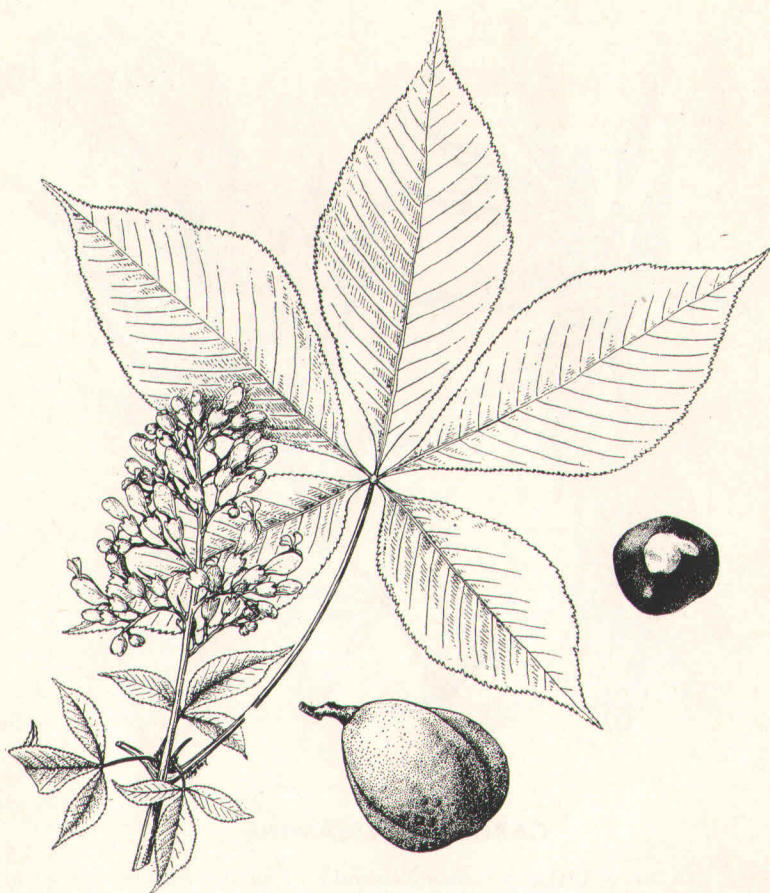
**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Leaves and flowers.

**ANIMALS MOST COMMONLY POISONED**—Cattle, sheep, goats, and horses.

**SYMPTOMS OF POISONING**—Muscular weakness, slow breathing, decreased temperature.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—When palatable green forage is scarce.

**TREATMENT**—No good treatment known. Some give Epsom salts. Morphine is said to be an antidote. Where practical prevent by destroying the vines or fencing them out.



### YELLOW BUCKEYE

**OTHER LOCAL NAMES**—Buckeye, Horse-chestnut.

**DESCRIPTION**—Tree up to 80 feet or more tall. Flowers greenish yellow, the outer ones often tinted with rose.

**DISTRIBUTION**—River banks and woodlands in the Mountains.

**PARTS OF PLANTS THAT USUALLY CAUSE POISONING**—Nut-like seeds.

**ANIMALS MOST COMMONLY POISONED**—Cattle, and horses.

**SYMPTOMS OF POISONING**—Weakness, lack of coordination, twitching of muscles, paralysis.

**CONDITIONS UNDER WHICH POISONING USUALLY OCCURS**—When nuts are on the ground in the fall and are easily accessible.

**TREATMENT**—One to two pints of melted lard, or 1 to 3 pints of olive oil or linseed oil. Prevent by killing the trees in grazed areas.



### CROW-POISON

**OTHER LOCAL NAMES**—Fly-poison, Stagger-grass. (Pink Deathcamas looks very much like Crow-poison and for practical purposes the two can be treated together.)

- DESCRIPTION—Perennial herb 1 to 4 feet tall. Flowers white.
- DISTRIBUTION—Open woods and fields. In the Mountains and in the Coastal Plain.
- PARTS OF PLANTS THAT USUALLY CAUSE POISONING—Leaves.
- ANIMALS MOST COMMONLY POISONED—Cattle and sheep.
- SYMPTOMS OF POISONING—Frothing at mouth, nausea and vomiting; weakness and staggering.
- CONDITIONS UNDER WHICH POISONING USUALLY OCCURS—Eaten along with other forage in spring.
- TREATMENT—For mature animals drench with a mixture composed of one cup of melted lard, two eggs, and a quart of milk. For smaller animals use a decreased dose. Repeat about every six hours until recovered.

### OTHERS THAT MAY CAUSE TROUBLE

Some of the other less dangerous plants that may occasionally cause trouble are:

- American False-hellebore, *Veratrum viride* Ait.
- Annual Larkspur, *Delphinium ajacis* L.
- Arrow Crocalaria, *Crotalaria sagittalis* L.
- Bitterweed and Sneezeweeds, *Helenium* spp.
- Blueflag Iris, *Iris versicolor* L.
- Black Nightshade, *Solanum nigra* L.
- Bog Kalmia (Wicky), *Kalmia polifolia* Wang.
- Bracken (Eagle Fern), *Pteridium latiusculum* (Desv.) Maxon.
- Bunchflower, *Melanthium virginicum* L.
- Buttercups, *Ranunculus* spp.
- Chinaberry, *Melia azedarach* L.
- Cockleburs, *Xanthium* spp.
- Common Velvetgrass, *Holcus lanatus* L.
- Corn Cockle, *Agrostemma githago* L.
- Datura (Jimsonweed), *Datura* spp.
- Drooping Leucothoe, *Leucothoe catesbaei* (Walt.) A. Gray.
- Dutchman's Breeches, *Dicentra cucullaria* (L.) Bernh.
- Elderberry, *Sambucus canadensis* L.
- Euphorbia (Spurge) *Euphorbia* spp.
- Fetterbush Lyonia, *Lyonia lucida* (Lam.) K. Koch
- He-huckleberry, *Lyonia ligustrina* (L.) DC.
- Horse Nettle, *Solanum carolinense* L.
- Horsetails, *Equisetum* spp.
- Johnson Grass, *Sorghum halepense* (L.) Pers.
- Lobelia, *Lobelia* spp.
- Milkweeds, *Asclepias* spp.
- Mountain Pieris, *Pieris floribunda* (Pursh) Benth. and Hook.
- Polkweed, *Phytolacca americana* L.
- Rhododendrons, *Rhododendron* spp.
- Ridged Pod-grass, *Triglochin striata* R. & P.
- Sorghum, *Sorghum vulgare* Pers.
- Squirrel-corn, *Dicentra canadensis* (Goldie) Walp.
- St. Johnsworts, *Hypericum* spp.
- Sudan-grass, *Sorghum vulgare* var. *sudanese* (Piper) Hitchc.
- Wormseed Goosefoot, *Chenopodium ambrosioides* L.

Future observations and studies may show that some of these are equally as dangerous in some sections as those discussed here in more detail. Many seldom cause trouble either because they are rarely eaten or because they are not very abundant. Furthermore, others, such as sorghum and Sudan-grass, that frequently cause poisoning in some of the drier western states, are rarely, if ever, harmful in North Carolina.

### PREVENTING LIVESTOCK LOSSES

Because the farmer can usually do more to prevent poisoning than to cure it, considerable attention should be given to this phase of the poisonous plant problem. In many cases poisoning can be prevented with very little trouble and expense. As illustration, a farmer had been losing a cow or two each year in the early part of August. An examination of the area where the cattle grazed, perhaps 25 acres, showed that broomsedge blue-stem (*Andropogon virginicus*), commonly called broomsedge, furnished practically all the forage. In the corner of the pasture was a small woodland tract of about two acres that contained a quantity of Carolina jessamine. This poisonous plant, like most of the others, usually is not eaten when palatable forage is plentiful; but in this pasture the broomsedge was mainly dry, unpalatable, and closely grazed by the first of August, and the cattle ate the green Carolina jessamine. In this case the poisoning could have been prevented either by fencing off the small two-acre tract or by destroying the plant. The farmer was at a loss, however, because he did not recognize this poisonous plant and did not know that it might be responsible for the trouble.

In the Mountains sheep and cattle are often poisoned by mountain-laurel, also known locally as mountain-ivy. This poisoning usually occurs in winter when snow is on the ground and the sheep and cattle are hungry for something green. Losses here could be prevented during this time by keeping the animals in lots where there is no mountain-laurel.

### CONTROLLING POISONOUS PLANTS

Once the plants are identified the problem arises as to how they may be controlled.

#### Cultural Methods

In many pastures the occurrence of poisonous plants is an indication of low soil fertility and improper pasture management. Follow recommended fertilizer and management practices. If

poisonous plants and other weeds persist follow a timely mowing schedule to prevent seed production, then remove the woody species by hand cutting.

### **Chemical Methods**

For the control of small trees, shrubs and sprouts from cut stumps a mixture of 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) may be used. The ester forms of 2,4-D and 2,4,5-T should be used, and the acid equivalent to make up the solution should consist of 50 per cent 2,4-D and 50 per cent 2,4,5-T. A good mixture to use is 2 pounds acid equivalent (1.0 pound 2,4-D acid equivalent plus 1.0 pound 2,4,5-T acid equivalent) in 10 gallons of diesel oil per acre. This treatment will give control of most woody plants and other weeds and also prevent cut stumps from resprouting.

Wilted vegetation of poisonous plants is usually more toxic than the vegetation of plants making normal growth. Regardless of whether the poisonous plants are killed by cultural or chemical methods wilted vegetation should be removed from the pasture.

By recognizing the more dangerous poisonous plants, taking every precaution to keep the animals from eating them, and giving early treatment where it is possible, farmers can reduce livestock losses in North Carolina.



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