



Riverside Fwy – Santa Ana Canyon

Ailanthus Control Methods

Ailanthus altissima

Common names in U.S.:

West Coast – (Chinese)
Tree of Heaven

East Coast – Stink Tree

Calfiora Taxon Report 161

Ailanthus altissima (Mill.) Swingle
Ailanthus, Tree of heaven

Ailanthus altissima, a dicot, is a tree that is **not native** to California.

Cal-IPC rating: Moderate

Plant Range

Observation Search (4435 records)

Plant Characteristics

■ one or more occurrences within a 7.5-minute quadrangle

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Bloom Period

Photos from Calfiora / CalPhotos

Family: Simaroubaceae
Genus: Ailanthus

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Name Status:
Accepted by PLANTS

Alternate Names:

PLANTS *Ailanthus glandulosa*
PLANTS *Toxicodendron altissimum*

Toxicity: MINOR, DERMATITIS
Wetlands: Occurs usually in non wetlands, occ

Habitat: disturbed

Communities: weed, characteristic of disturbed places

photo size:

WIDESPREAD IN SOUTHERN CALIFORNIA & SIERRA NEVADA FOOTHILLS

Natural Areas treated during past 20 years:

Whittier Narrows – Army Corps Engineers
Griffith Park – City of Los Angeles
Montecito Heights – North East Trees
Big Tujunga Canyon – Angeles N. Forest
Mill Creek Canyon – Inland Empire RCD

Private yards treated during past 10 years:

Mt. Washington/Pasadena --- 75
Calabasas/Agoura/Topanga – 15
Lake Hughes/Leona Valley --- 18



Ailanthus flourishes in degraded soil where few other trees can survive;
abundant on abandoned factory sites of eastern US.



CONTROL AND UTILIZATION OF TREE-OF-HEAVEN

A Guide for Virginia Landowners

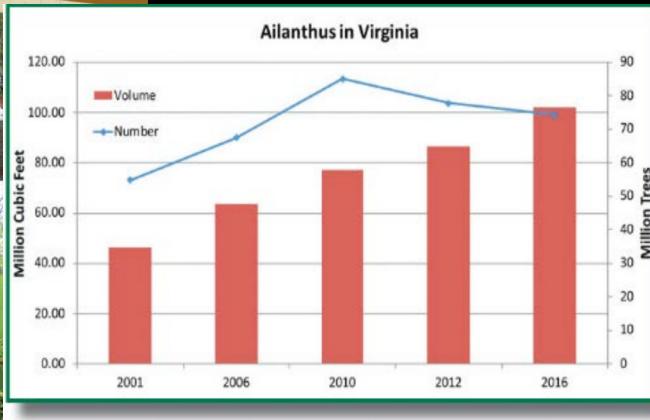
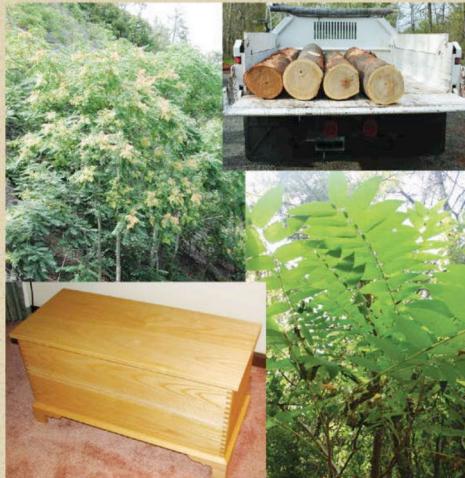


Figure 1. Volume and number of trees (≥ 5.0 inches d.b.h.) of Ailanthus by survey year, Virginia.

VIRGINIA DEPARTMENT OF FORESTRY
WWW.DOF.VIRGINIA.GOV

How to recognize Ailanthus

- > Long pinnate compound leaves
- >> Leaflets have notch at base
- >>> Mottled yellow-gray bark
- >>>> Foliage odor resembles male cat urine
(Wikipedia) or rancid peanut butter





California Walnut
Ailanthus

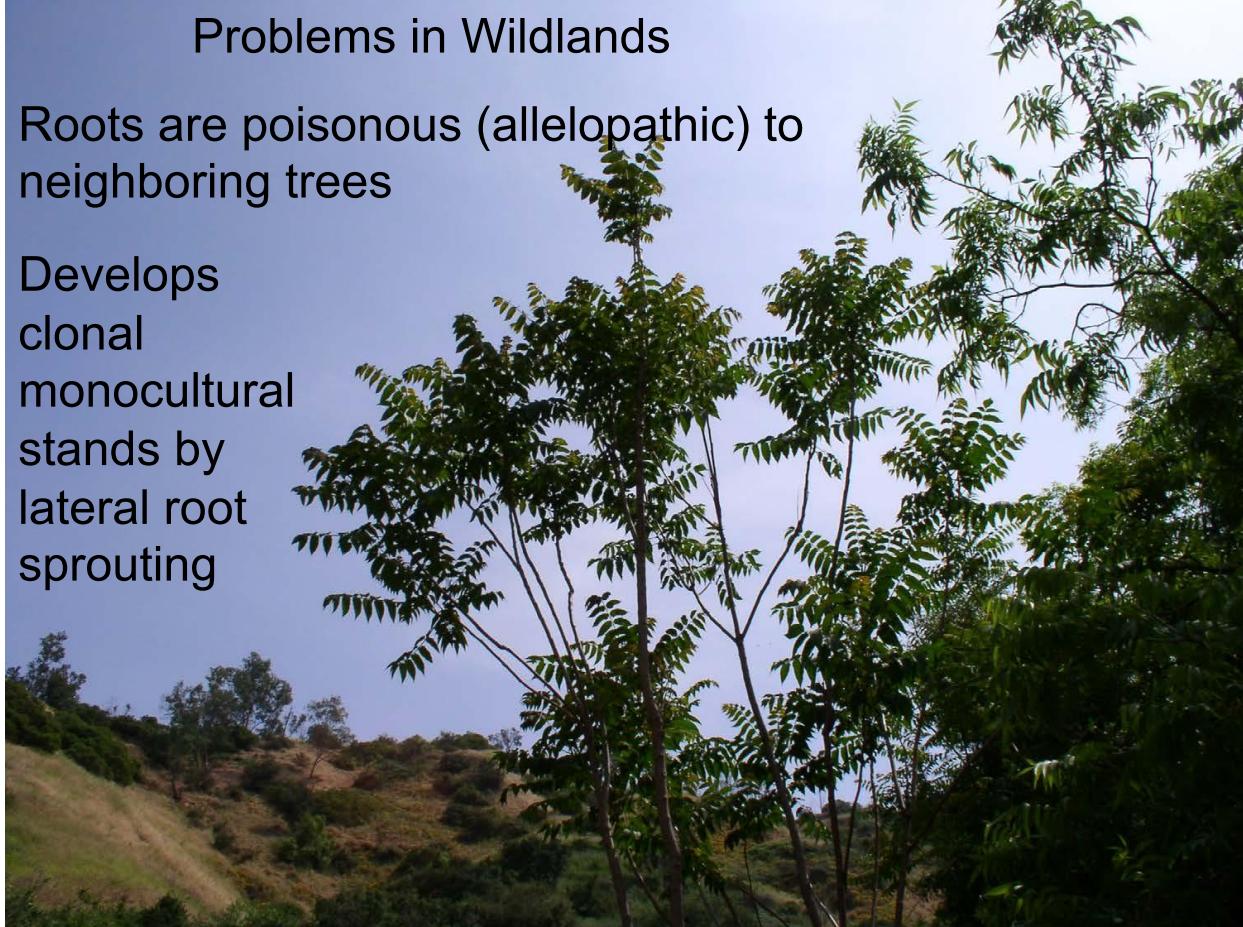


In Big Tujunga Canyon, basal bark application of Pathfinder II herbicide
accentuates yellow-gray mottling of bark on 2-inch trunk

Problems in Wildlands

Roots are poisonous (allelopathic) to neighboring trees

Develops
clonal
monocultural
stands by
lateral root
sprouting



**Large parent tree surrounded by saplings grown from lateral roots –
outlier plants to left, possibly sprouted from seeds --
6 weeks after herbicide treatment, in Santa Fe Dam basin
of San Gabriel Valley**

Half-acre dense grove of Ailanthus at Griffith Park



Quarter-acre Ailanthus grove
on Glendora Ridge in San Gabriel Mountains,
4 weeks after herbicide treatment



Upper: Ailanthus grove in Big Tujunga Canyon, sprouted after 2009 wildfire
Lower: Defoliated trees 7 weeks after basal bark herbicide application

AILANTHUS Control Considerations

- > Felling or girdling trunks causes profuse root sprouting
- > Has thin bark like castor bean, so saplings & juvenile trees are susceptible to basal bark application of Pathfinder II without cutting
- > For large trunks, use hatchet to chop frill cuts in vertical rows, followed by basal bark treatment with Pathfinder II
- > Imazapyr (BASF's Stalker & Habitat) effective for foliar spraying of saplings



Preferred Control Methods

Highly susceptible to triclopyr herbicide
 → Pathfinder II for basal bark
 → or 25% Garlon 4 in veg oil or diesel oil



Apply Pathfinder II herbicide using spray bottle with chemical-resistant trigger, available from janitorial supply stores.

Basal-bark treatment of large multi-trunk plants takes less than one minute



No cutting of bark required on largest trunks with diameters up to 16 inches



Unlike girdling, vertical columns of frill cuts by hand ax followed by basal bark application preserves fluid communication between tree crown and roots, thus avoiding massive sucker sprouting from lateral roots

Successful
single basal-
bark treatment
near Arroyo
Seco



Successful
single basal-
bark treatment
in Santa Ana
Canyon





**One-acre grove of Ailanthus trees in Montecito Heights
(northeast of downtown Los Angeles) in July 2020,
two weeks after basal bark application of Pathfinder II at top**



**One-acre Ailanthus grove in Montecito Heights, September 2020,
6 to 8 weeks after basal bark application of Pathfinder II;
approx. 150 trunks treated in 4 hours with 1 gallon herbicide**



**One-acre grove of dead Ailanthus trees at Montecito Heights,
July 2021, one year after basal bark herbicide treatment;
foliage of few new stems sprayed with dilute imazapyr**

The cover of the Cal-IPC News, Spring 2005 issue. The title "Cal-IPC News" is prominently displayed in large serif letters. Below it is the subtitle "Protecting California's Natural Areas from Wildland Weeds". To the left of the title is a small framed photograph of tall, thin grasses or reeds. At the bottom left is a larger, partially visible photograph of a landscape with hills and water. The issue number "Vol. 13, No. 1, Spring 2005" and the publisher information "Quarterly newsletter of the California Invasive Plant Council" are at the bottom.

Tools and Techniques

The Basal Bark Method of Applying Triclopyr Herbicide

By Bill Neill, Riparian Repairs and Team Arundo Angeles

As we celebrate the 5th anniversary of Cal-IPC's *Invasive Plants of California's Wildlands* (UC Press, 2000), I would like to offer some insights about control methods that were not fully appreciated when the book was assembled during the late 1990's. My comments address basal bark and foliar treatment methods using Pathfinder II and Garlon 4 formulation.

Basal Bark

Over the last several years, we have been able to control castor bean plants in numerous riparian corridors, stream channels, natural areas, and other locations throughout California by spraying

spray one-inch diameter stems from a distance, hitting adjacent stems. For treating large infestations of castor bean plants, I sometimes use a backpack sprayer diluted to 20 percent in diesel oil, as permitted by the product label. Once I tried diluting to 15 percent, but it was ineffective.

Not only is the basal bark treatment method safe for applicators, it limits plant contact with the plant's poison, ricin toxin present in castor bean seeds, foliage, and roots. Ricin is a potent toxin found in the human body, where one ricin molecule can deactivate ribosome molecules necessary for protein synthesis. Manufactured compounds, such as ricinase, have been used in medical treatments for cancer. Human health exposure to natural poisons such as ricin have been reported in the U.S. EPA.

After herbicide treatment, dead trees left standing

For more information, see Spring 2005 Cal-IPC News, posted at www.cal-ipc.org

After cutting without herbicide, shallow roots sprout abundant saplings that can be controlled by foliar spraying



Los Angeles freeway margin



After wildfire, Ailanthus foliage grows rapidly from root crowns and lateral roots, here at Whittier Narrows. Fire followed by foliar spraying allows control of established groves relatively easily and cheaply.



One options: Spray post-fire foliage with 2.5% imazapyr herbicide (Habitat or Polaris) plus methylated seed oil to control regrowth effectively and easily.



Imazapyr is effective at translocating through long lateral roots, but slow-acting so foliage turns yellow and wilted about 4 to 6 weeks after application



About ten weeks after foliar spraying, Ailanthus foliage is mostly brown; resprouted Mexican elderberry behind dead foliage is thriving.



The preferred herbicide for Arundo control stops protein synthesis by plants, hence is inert to animal life.

Habitat herbicide is registered for aquatic use, and livestock are allowed to drink treated water.



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HERBICIDE

- Excellent grass safety
- Caution signal word
- Premix of Milestone + Garlon 3A
- Broadcast use rates up to 9 pt/a or 9 qt/a max for spot treatments (50% acre limit)
- Not a Restricted Use Pesticide
- Best Post Resistance Management Product on the market
 - No grazing restrictions
- Packaging: 2.5's, 30's, bulk

| GROUP | 4 | HERBICIDE |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----------|
| Active Ingredient: | | |
| Trisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-..... 2.22% | | |
| Triethylamine salt of [3,5,6-trichloro-2-(pyridinyl)oxy]acetic acid)..... 16.22% | | |
| Other Ingredients | | |
| Total 81.56% | | |
| 100.0% | | |
| Acid Equivalents: | | |
| aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 1.15% (0.1 lb/gal)triclopyr (3,5,6-trichloro-2-pyridinyloxyacetic acid) – 11.63% (1 lb/gal) | | |
| Precautionary Statements | | |
| Hazards to Humans and Domestic Animals | | |
| EPA Reg. No. 62719-572 | | |
| CAUTION | | |
| Harmful if Swallowed • Causes Moderate Eye Irritation | | |
| Avoid contact with eyes, skin or clothing. | | |
| Personal Protective Equipment (PPE) | | |
| Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart. | | |
|  Entry Restrictions or allow other | | |
| Agricultural Use Use this prod... | | |

Capstone equivalent to
5% Milestone & 36% Garlon 3A

*Tree of Heaven Demo in Visalia
Foliar treatment
9 pints of Capstone/acre*



Beau Miller slide

*Tree of Heaven Caltrans Demos
With Capstone 9 pts/acre or 5% v/vol*



*Capstone on Tree of Heaven 7
months after treatment*



*Capstone on Tree of Heaven
54 Months after Treatment*



Beau Miller slide

THE ROLE OF HERBICIDES IN PRESERVING BIODIVERSITY

by Jake Sigg

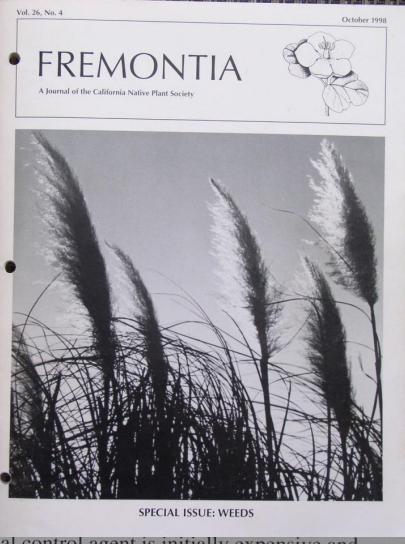
NO DATA EXIST for private land, but the Bureau of Land Management estimates that the United States is losing 6,000 acres of public land every day to invasive non-native plants (4,600 acres a day in the West alone), rendering land economically useless and biologically impoverished. In the frequently polarized debate over the use of herbicides in battling aggressive weeds, the subject of biodiversity is too often lost. Herbicides, per se, have become the focus of the debate. This is backwards—biological diversity should be front and center. This is the pivot on which CNPS policy must turn. Does proper use of herbicides work for or against biodiversity? Herbicide critics usually isolate the subject. They neglect the differences among herbicides and fail to address the serious weed problem confronting the California flora. I am a proponent of judicious use of herbicides, and favor their employment as a vital part of a weed management strategy.

Our discomfort with chemicals began with revelations in Rachel Carson's *Silent Spring* in the 1960s. The use of chemicals as a quick fix for complex problems created a backlash, resulting in a regulatory climate that protects the public against many of the dangerous substances used indiscriminately in the past. Herbicides became entangled in the reaction to chemicals, but evidence is skimpy re-

at those "who are unwilling to accept a short-term environmental insult to avoid a long-term ecological catastrophe." Weed warriors are keenly aware that once native biological controls are removed, they find it difficult to replace them sometimes for decades and deeply pain the environment.

Our present situation is that native weeds are often controlled by biological agents, man-made chemicals, and herbicides.

Classical biological control is perhaps only, if not the best, means of reducing weeds. An example of classical control is the introduction of the European beetle Klamath weed. For some plants, such as agricultural crops or trees, predators that feed on the weeds are effective. Developing a biological control agent is initially expensive and time-consuming, and there is no guarantee of success. Up



That's all, Folks!

Thank you!