

BEAUTIFUL TREE OR Invasive Weed?

Brought to California during the Gold Rush, tree of heaven has become an aggressive invader.

Tree of Heaven or Wicked Weed?

Ailanthus altissima, commonly known as tree of heaven, is native to China and Taiwan. It was brought to California in the 1850s by Chinese immigrants who viewed the tree as a reminder of home. Beautiful and easy to grow, it was used extensively as a garden and street tree during the 19th century.

Over time, a dark side emerged. The same characteristics that make tree of heaven easy to grow in difficult conditions also make it an aggressive invasive weed:

- It tolerates poor soil, drought, and air pollution.
- It spreads aggressively both by seeds and by root sprouts.
- It produces chemicals that inhibit the growth of other nearby plants.
- It re-sprouts vigorously when cut.

Tree of heaven spreads rapidly wherever it is introduced, and is considered an invasive pest in much of Europe, the U.S., and Australia.



The tree of heaven specimen here is a remnant of an extensive population of trees that once covered the west end of the Arboretum and much of the Putah Creek Riparian Reserve. We've kept it in the Arboretum for educational purposes.



Tree of heaven produces large clusters of seeds that are carried by the wind and sprout easily wherever they land.



Tree of heaven can invade wild lands and form dense thickets that are extremely difficult to eradicate.



Managing Invasive Species

Managing invasive species in natural systems is a complex problem that involves ecological, economic, and political issues.

Faculty in the UC Davis Department of Environmental Science and Policy are collaborating on an NSF-funded study on the restoration of salt marshes following eradication of the invasive salt marsh cordgrass *Spartina*, which had spread widely in the San Francisco Bay and has now been largely eradicated.



Professor Ted Grosholz (left) studies restoration and recovery for the entire food web—from micro-algae to crabs, fish, and shorebirds—once invasive *Spartina* has been eradicated, and how replanting native species enhances this recovery.

Professor Alan Hastings is leading a team that is developing a bioeconomic model of the tradeoffs among eradication and restoration programs under different scenarios of agency participation.

Their research will help determine the most effective timing and targeting of eradication and restoration efforts and the best use of limited funding for this critical work.

The Arboretum and Public Garden is participating in the project by educating visitors about invasive species.

Learn more at: two.ucdavis.edu/spartina

UC DAVIS



ARBORETUM AND PUBLIC GARDEN

DON'T PLANT a Pest!

These plants are aggressive invaders in California's Central Valley.



DON'T PLANT

Mexican feather grass



Alex Lomas

Stipa tenuissima

Stan Shebs

Mexican feathergrass is an extremely vigorous plant that crowds out pasture species and native grasses. It can be harmful to livestock, forming indigestible balls in the animals' stomachs, causing weight loss and even death.

Periwinkle



David Hoban

Vinca major

Jin

Periwinkle is a fast-growing, competitive perennial vine that forms dense mats of growth. These mats crowd out other plants and degrade animal habitat in infested areas, especially near creeks and streams.

Chinese tallow tree



Alexey Sergeev

Triadica sebifera
[syn. *Sapium sebiferum*]

Chinese tallow trees spread rapidly and form dense communities of trees that outgrow native vegetation. Over time, the tree's decomposing leaves negatively alter the composition of soil nutrients and make it hard for some native plants to grow.

What's the Problem with Invasive Plants?

A plant is considered invasive when it becomes established and spreads aggressively on its own in an area where it does not occur naturally.

Invasive plants:

- are one of the world's top threats to biodiversity, second only to habitat destruction.
- displace native plants by crowding them out, blocking their light, and using the water and soil nutrients they need.
- reduce habitat for native pollinators and other wildlife.
- can clog waterways, increase wildfires, and reduce the productivity of range and timber lands.
- require substantial expense to control—over \$82 million per year in California.

You Can Help!

Make sure that the garden plants you choose are not invasive. Arboretum All-Star plants are our recommended garden choices—they include native and non-native plants that have proven to perform well without being invasive in our region.

Learn more at:
arboretum.ucdavis.edu
plantright.org

CONSIDER THESE ARBORETUM ALL-STARS INSTEAD



blue grama grass
Bouteloua gracilis



pine muhly
Muhlenbergia dubia



hybrid catmint
Nepeta x faassenii



dwarf pumbago
Ceratostigma plumbagoides



Formosan flame tree
Koelreuteria elegans



Washington hawthorn
Crataegus phaenopyrum

WELCOME TO THE UC DAVIS ARBORETUM teaching nursery

A horticultural hub where teams of staff, students, and volunteers grow plants for the Arboretum collections and for plant sales.

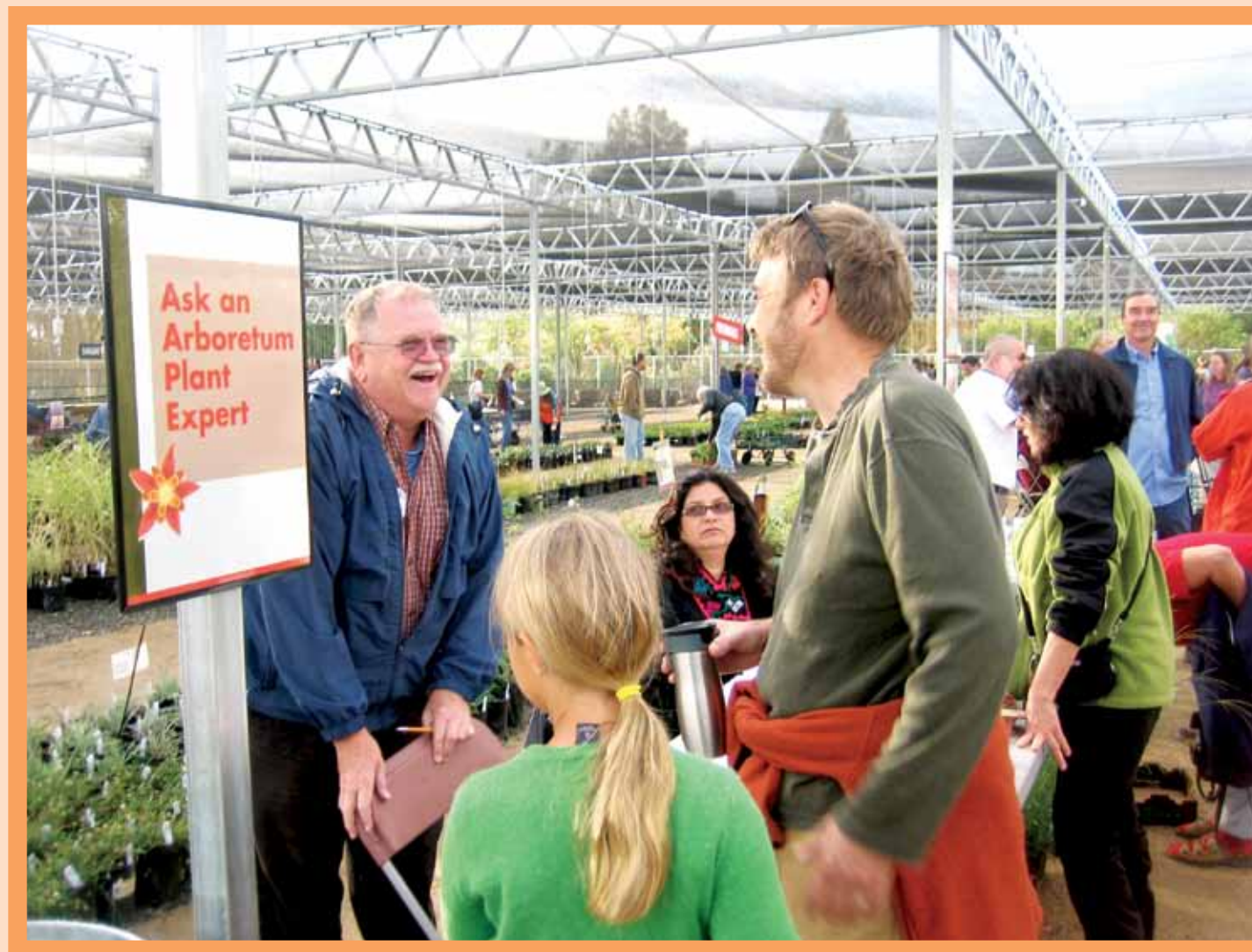


TOUR demonstration plantings

and see the Arboretum All-Stars—our top recommended plants for California gardens. These tough, reliable plants have been tested at UC Davis, are easy to grow, have few problems with pests or diseases, and have outstanding qualities in the garden.

LEARN about sustainable gardening

—create a beautiful home landscape that saves water, doesn't require chemical pesticides or fertilizers, and supports native birds and pollinators.



SHOP at our plant sales

where you can find the Arboretum All-Stars and other great plants for your home garden and get expert gardening advice from our staff and volunteers. Your purchases provide crucial support for the Arboretum gardens and programs.



VOLUNTEER your time

to help the Arboretum grow. Join one of our outstanding volunteer teams and help in the nursery, the garden, the educational programs, the office, or at special events.



Our Thanks to These Donors for supporting nursery construction

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JOIN the Friends of the UC Davis Arboretum

Enjoy great member benefits like free plants, a 10% discount at our sales, discounts at our partner nurseries, free parking privileges, and invitations to special events.

FIND out more about plant sales, sustainable gardening, and how you can get involved at arboretum.ucdavis.edu