

WHAT'S SPECIAL ABOUT acacia plants?

Special Leaves



Melissa Borel



UC IPM

Insect pests are naturally deterred by chemical compounds in the leaves of many acacias.

Notice that many acacias have foliage that hasn't been chewed by insects. This is because these *Acacia* species produce chemical compounds that deter insects from taking a bite out of their leaves. UC Davis' own Dr. Eric Conn researched this phenomenon.

Testing....Testing...

Acacias (pronounced uh-KAY-shuhs) grow naturally in places with hot, often dry summer climates. The Arboretum is growing a variety of acacias in this grove. We are testing their tolerance to the occasional freezes we experience in the Central Valley. Acacias that are cold hardy can be beautiful, drought-tolerant additions to Central Valley gardens.

The only *Acacia* species native to California is catclaw acacia (*Acacia greggii*).

Special Flowers



Ellen Zagory



Holly Crossen

Acacias in the Arboretum bloom in February and March.

Acacias come in many different forms. The majority of them are fast-growing, evergreen shrubs that are covered with beautiful, fragrant spring flowers. Although they produce a lot of pollen, the pollen is too heavy to be windborne and does not typically cause allergies.

Special Uses



Wayne Armstrong



Melissa Borel

Did you know these products contain Gum Arabic from acacia plants?

Notice the acacia sap dripping from this branch. In their native range, branches of some *Acacia* species are tapped for their sap, which is used in many commercial products, including food and pharmaceuticals. Look for Gum Arabic on ingredient labels.

Native Range of Acacias



John Maslin

■ = Acacia Range



WELCOME TO THE Eric E. Conn Acacia Grove



Louise and Eric Conn

Who is Eric Conn?

Eric Conn is a professor emeritus of biochemistry at UC Davis and a long-time supporter of the Arboretum. He served as President of the Friends of the UC Davis Arboretum from 1980-84 and 1990-1992. The Acacia Grove was dedicated to Dr. Conn on the occasion of his retirement in 1992 after 40 years with the University. Dr. Conn continues to support the Arboretum and the Acacia Grove through an endowment he established with his late wife, Louise. Income from the endowment helps us improve the acacia collection and test different species for use in Central Valley gardens.

Dr. Conn's Acacia Research

Dr. Conn, an internationally recognized plant biochemist, did extensive research on the diverse *Acacia* genus. He even has an acacia named after him: *Acacia conniana*. Dr. Conn investigated the natural production of cyanide compounds that deter insects from eating acacias. He identified the *Acacia* species that produce these compounds. Some of his research plants are still growing in this Acacia Grove.

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SHOULD I GROW AN **acacia?**

You decide. Many acacias are well adapted to our climate.

to grow...

- Acacias have interesting foliage, soft clouds of yellow flowers, and a pleasant fragrance
- Most acacias are heat and drought tolerant
- Acacias rarely have pest or disease problems
- Many acacias are small to medium-sized shrubs or trees
- Acacias can be quite hardy; some have been growing here since 1964



Ellen Zagory

The Snowy River wattle (*Acacia boormanii*) is an Arboretum All-Star, one of our top recommended plants for California gardens.

or not to grow...

- Some acacia species are frost tender and won't survive our worst freezes
- Some species have wicked thorns; Australian species are usually spineless
- Some acacias have weak wood that is prone to breaking



Ellen Zagory

It's a myth!

Acacias are sometimes blamed for allergies, but their pollen is too heavy to be carried by the wind. Most allergies are caused by wind-pollinated plants.

Explore the Eric E. Conn Acacia Grove to see the approximately 50 species of acacias in the Arboretum's collection—just a small fraction of the world's 1,300 species.

Eric E. Conn Acacia Grove



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HAVE YOU EVER... eaten an acacia?

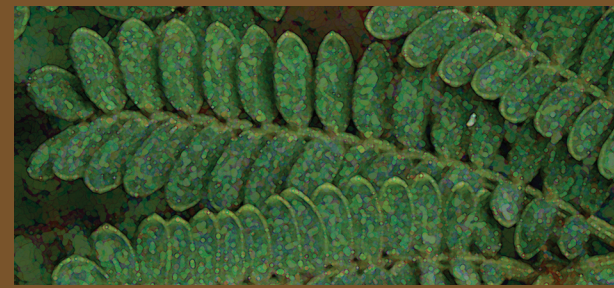
Gum arabic made from acacia is used by the food industry as a stabilizer. It makes candy chewy and is found in many common food products. Gum arabic is very important economically as a major export of several African nations.



The tree that you see in front of you and that is pictured to the right, *Acacia caffra*, produces gum arabic. Most commercially-harvested gum arabic, however, is from other African species, *Acacia senegal* and *Acacia seyal*. These are known as the gum acacias. They are not able to grow in the UC Davis Arboretum because it is too cold during the Central Valley winters for them to survive here.



Hookthorn acacia, *Acacia caffra*.



United Nations Environment Programme (UNEP) Sudan Environmental Database

A fresh drop of gum arabic on the gum acacia, *Acacia senegal*.

Gum arabic is harvested by cutting holes in the bark of the tree during the summer rainy season in sub-Saharan Africa.

Mia Ingolia

Eric E. Conn Acacia Grove



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HAVE YOU EVER... **sat on an acacia?**

Blackwood acacia is prized by furniture makers because of its rich brown color and luster. It is also a very hard wood, making it quite durable. Downed urban trees are a sustainable and local source of blackwood acacia.



Diane Cary



Mia Ingolia



Christine Ashe

Pale yellow to white flowers grace this tree in February and March.



Carmia Feldman

Blackwood acacia,
Acacia melanoxylon

Recycled wood from urban blackwood acacias was used to make the benches in the Acacia Grove, like the one behind you.

Eric E. Conn Acacia Grove



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HAVE YOU EVER... worn an acacia?

An extract from the flowers of the sweet acacia is used to make perfume. Perfume makers use acacia oil to soften and tie the different notes of the perfume together.



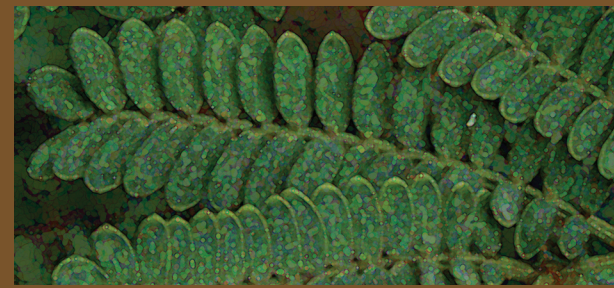
Sweet acacia (*Acacia farnesiana*)

Forest & Kim Starr

Visit the Eric E. Conn Acacia Grove in February and March to experience clouds of perfume in the garden.



Flowering branches of the sweet acacia, *Acacia farnesiana*, are collected in spring, and the aromatic oils are carefully extracted to make perfume.



University of Arizona Campus Arboretum

Sweet acacia,
Acacia farnesiana

Eric E. Conn Acacia Grove



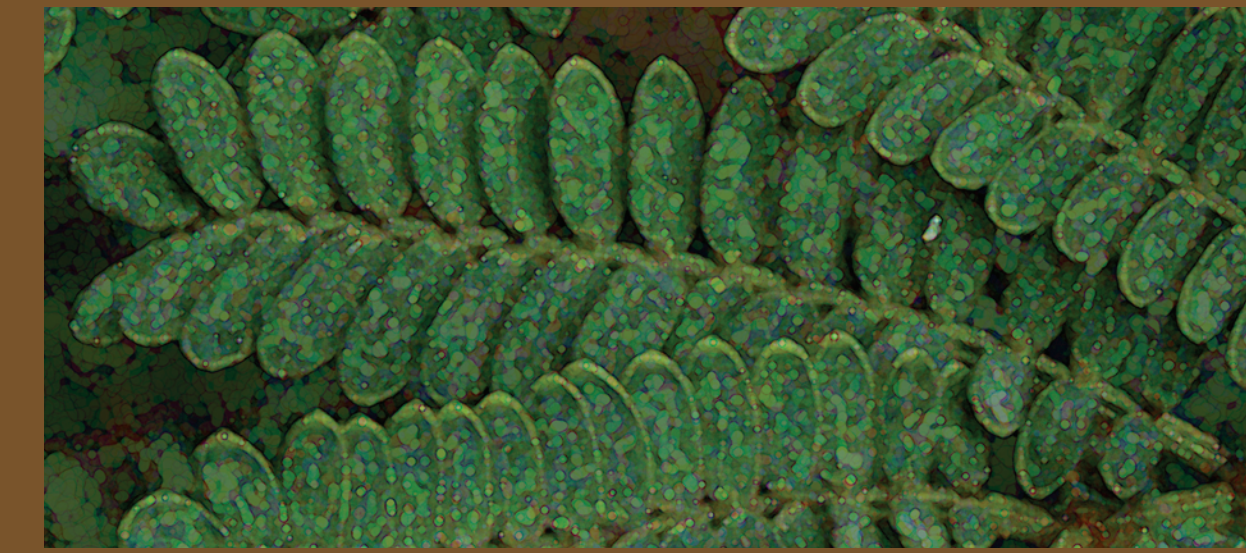
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How is this Plant like a fortress?

Acacias have many ways to defend themselves against hungry animals.

Look at the thorns on the sweet thorn acacia (*Acacia karoo*) in front of you. Would you try to eat this plant?



Mia Ingolia



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BITING INSECTS

Biting ants live in the swollen thorns of some species (like *Acacia caven*). They attack other insects and animals that try to feed on their home plant. These biting ants do not occur here!



Mia Ingolia



Stan Shebs

SPINES

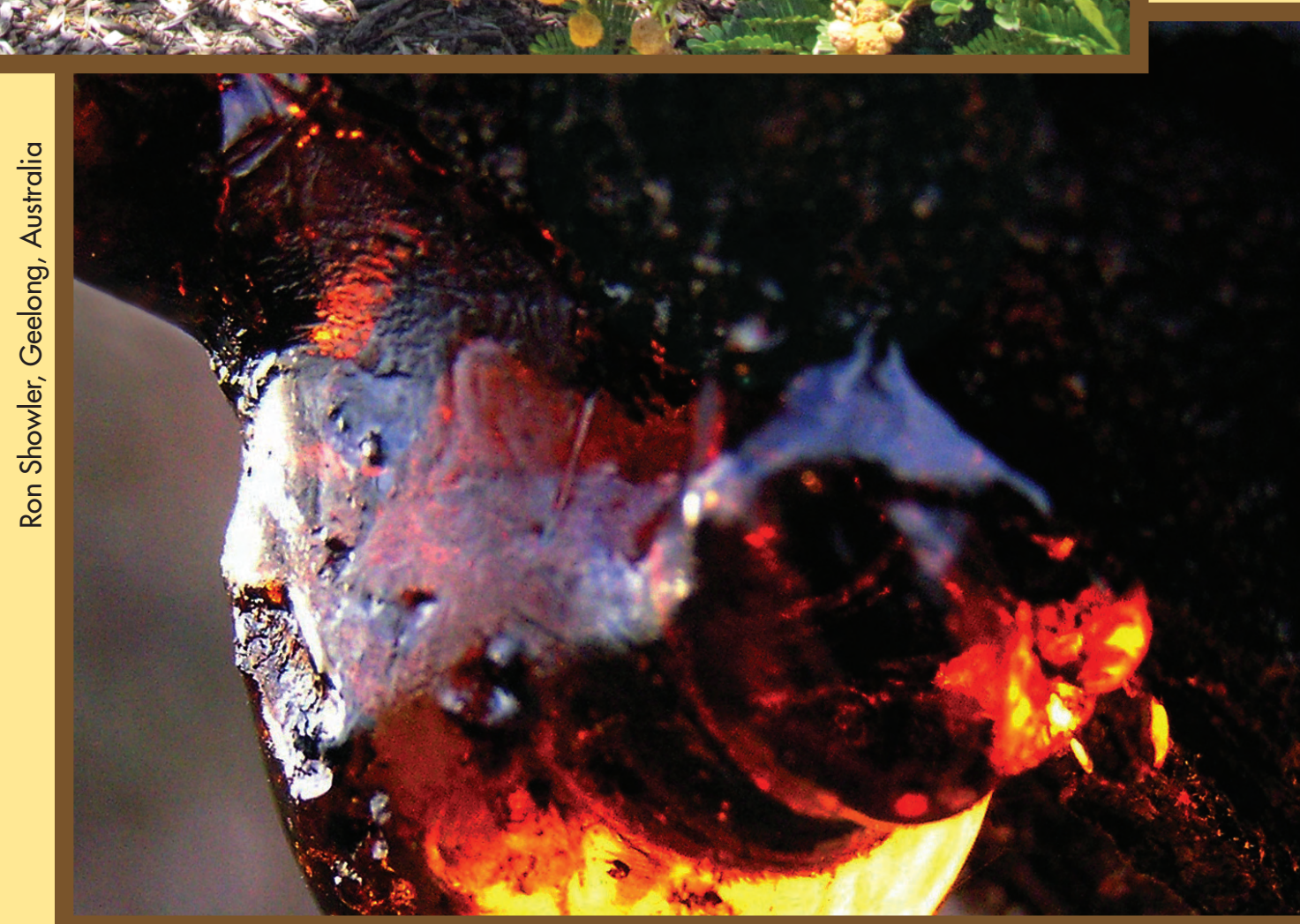
Spines keep large, hungry animals away. Spines are common on African and American acacia species. Australian acacias are usually spineless.



Steve Benson

POISON

Many acacia species produce poisonous cyanide compounds that are activated when the plant is eaten. UC Davis scientist Dr. Eric Conn researched the chemistry of this process for many years.

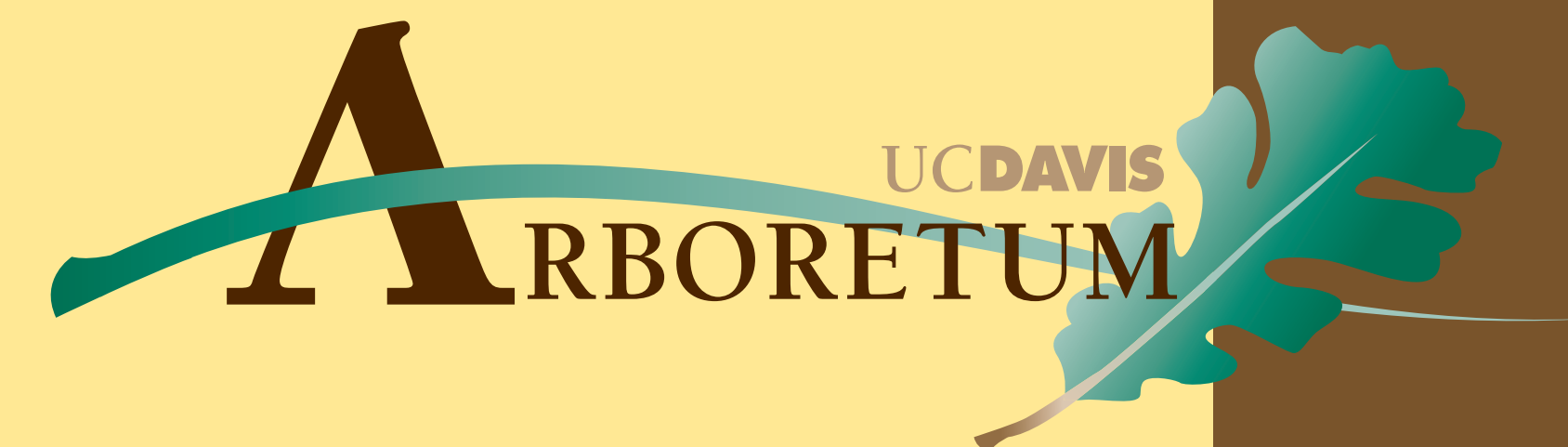


Ron Showler, Geelong, Australia

TOXIC SAP

The sap of many acacias contains poisonous toxins and sticky resins that taste bad.

Eric E. Conn Acacia Grove



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