

# ALACHE Science Page

## DID YOU KNOW?

Alache is a multi-purpose plant. People use it as a vegetable, an herb, and as medicine. When the plant gets big, farmers cut it to feed their animals.



I hope this tea made from alache leaves gets rid of my cough.

## CLASSIFYING ALACHE

Alache belongs to the Malvaceae, or Mallow, family. About 1,000 species are in this family, including cotton, hollyhock, and okra.

**FAMILY**  
Malvaceae  
(Mallow family)

cotton

Flowers of plants in this family are large and showy, with five petals.

hollyhock

**GENUS**  
*Anoda*

In Latin, this means "without nodes."

Nodes are places along a stem where leaves are attached. The flower stem of alache has no nodes or leaves attached.

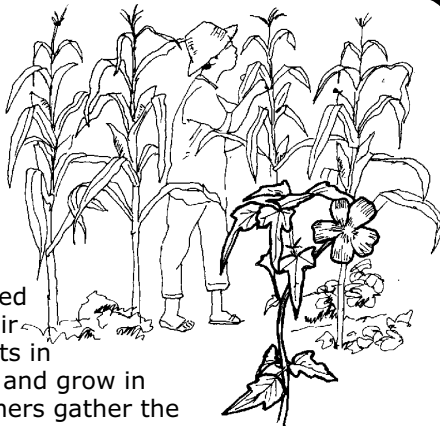
**SPECIES**  
*cristata*  
means "crest" or "ridge."

The seed pod of alache has ridges radiating out from its center.

## ORIGINS

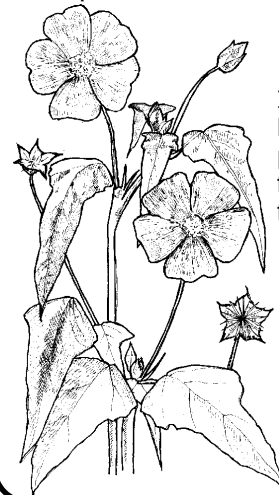
Alache is native to tropical America, north to Arizona and Texas.

For centuries, farmers in Central America have allowed alache to grow freely in their cornfields. Seeds from plants in one growing season sprout and grow in the next rainy season. Farmers gather the plants as needed.



## THE ALACHE PLANT

Alache is a soft-stemmed plant, with pointed leaves.



It has white, lavender, or purple-blue flowers with five petals.

The seed pods are shaped like stars.

## GROWING AND HARVESTING ALACHE

In most parts of the U.S. you can grow alache as an annual. This means it lasts for only one growing season.

Will alache grow here? I know alache likes sunny and sheltered places like this, but the soil is poor.



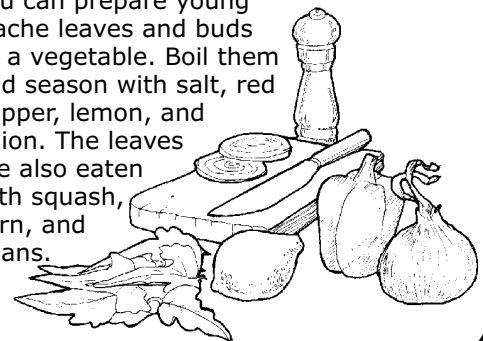
That's true, but it's well-drained. These alache plants will grow to about 1.5 meters.

Harvest the alache leaves and stems when they are young and tender. Cut the stems near the bottom. The plants resprout easily after cutting. Once alache forms seeds, the leaves become too old and tough to eat.

## USES IN COOKING

In Latin America, alache is used as a vegetable and cooking herb.

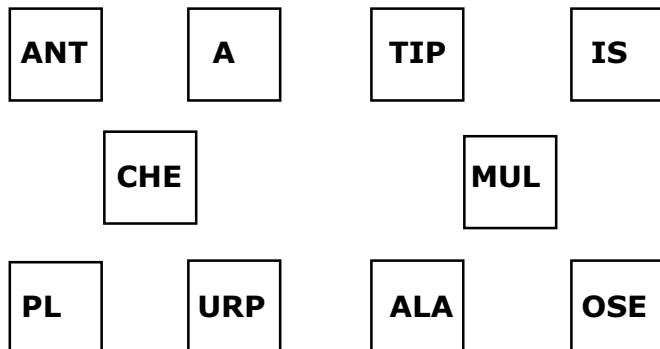
You can prepare young alache leaves and buds as a vegetable. Boil them and season with salt, red pepper, lemon, and onion. The leaves are also eaten with squash, corn, and beans.





## ALACHE LETTER TILES

Unscramble the tiles below to reveal a message.



## TRY THIS

### DISCOVER ALACHE RECIPES

Alache is traditionally prepared in several different ways. In this activity, you will collect information and write a traditional recipe for alache.

1. Try to find alache growing in a community garden. You will most likely find it growing in a Latino garden.
2. If possible, interview gardeners who grow alache. Find out what country the gardeners originally come from. Ask them to describe when and how alache is grown and harvested. Record this information.
3. Ask the gardeners to describe different ways it is used. For example do they use it as a medicine or as a food?
4. If it is used as a medicine, what ailments is it used to treat, and how is it prepared and administered?
5. If it is used as a food, ask them to describe exactly how it is prepared. Write down the directions, and then use your notes to develop a recipe. The recipe should include a list of ingredients, the number of servings, and step-by-step directions.
6. If possible, try out your recipe. You may wish to invite people who cultivate and use alache to help you prepare your dish.
7. Send in your recipes to Garden Mosaics, Department of Natural Resources, 16 Fernow Hall, Ithaca, NY 14853, or as an attached file to gardenmosaics@cornell.edu. We will share them with other Garden Mosaics participants.



## SPOTLIGHT ON RESEARCH

### Alache in fields grows taller than alache in forests

In central Mexico, alache grows wild in forests and along pathways. It also grows in farmers' fields and orchards. Scientists wanted to find out how the size and other traits of the plant vary from one place to another. They also wanted to find out how people in this area use alache.

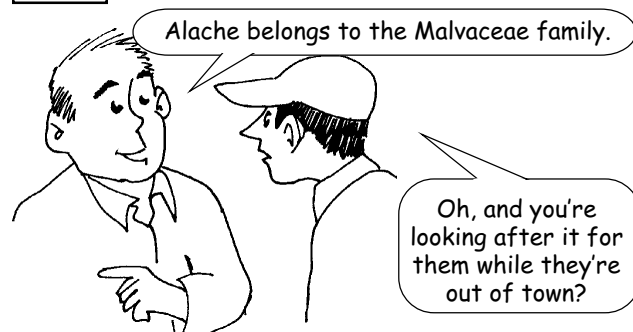
They randomly selected 134 plants from forests, fields, and orchards, and measured the height, number of branches, and number of seed pods for each plant. They found that alache growing in fields and orchards is taller and has more branches and seed pods than wild alache. The scientists proposed an explanation for this difference: Plants in fields and orchards are growing in richer soil and do not have to compete with weeds. How might the scientists design a study to see if their proposed explanation, or hypothesis, was correct?

The scientists also interviewed 34 farmers who grow, use, and sell alache. They discovered that most use alache as a vegetable. It is an important part of the diet during the rainy season. Farmers boil the fresh leaves and buds until they are soft and the water becomes slimy. Next they mix the leaves and buds with mushrooms, squash, beans, or meat. The scientists tested the nutrient content of alache, and discovered that it is high in protein and starch. Some people also use alache as a medicine, mostly as a tea for coughs. Many people harvest and sell alache at the local market.

Source: Rendon, B., Bye, R., and Nunez-Farfan, J. (2001). Ethnobotany of *Anoda cristata* (L.) S chl. (Malvaceae) in Central Mexico: uses, management and population differentiation in the community of Santiago, Mamalhuazuca, Ozumba, State of Mexico. *Economic Botany*. Vol. 55 (4), 545-554.



## JOKE



### CAUTION

Please get advice from a doctor before using alache for medicinal purposes.