

Spiny Cocklebur

Xanthium spinosum



FAMILY

Asteraceae-daisies & sunflowers

ORIGIN

South America

LIFE CYCLE

Annual

OTHER NAMES

Bathurst burr, clotweed, dagger cocklebur, Spanish thistle, spiny clotbur

QUICK FACTS

- Spiny cocklebur is an herbaceous annual that can grow up to **3 feet tall**, has dark green leaves that are lanceolate and three-lobed, yellow spikes at leaf axils, and burs that contain two seeds each.
- Native to South America, it has only one known medicinal use: as a diuretic. This weed is most commonly spread by clinging to animal fur or hay bales, but **burs can also spread through human movement, equipment, and water**.
- This plant has adapted to grow under various conditions. It invades disturbed areas and affects crop growth, and can **poison** animals.



Barry Rice, sarracenia.com, Bugwood.org

A poisonous, worldwide nuisance.

Spiny Cocklebur is an herbaceous annual that is invasive in several countries worldwide. It is considered a noxious weed in most U.S. states, including New Mexico. It can adapt to grow under various climatic conditions and thrives in disturbed soils. Its allelopathic effects affect the growth of plants such as soybeans, tomatoes, cotton, and corn.

What does it look like?

Spiny cocklebur is an herbaceous annual that can grow in a variety of habitats. It grows up to 3 feet tall, has yellow spikes out of leaf axils, and dark green leaves that have 3 lobes. Its flowers are small and green, and can develop into burs with 2 seeds each. Burs are brown and have small hooks that adhere to several materials, including animal fur, hair, wool, and clothing. Spiny cocklebur may be confused with common cocklebur (*X.strumarium*), but can be differentiated by its narrow leaves, spikes at the leaf base, and oval burs with hooked thorns.



Spyridon Oikonomidis, iNaturalist.org

Plant: Spiny cocklebur grows up to 3 feet tall. Its stem is yellow to brown, tough, hairy, and branched. Leaves are dark green, 3-lobed, and up to 3 inches long, with yellow spikes at leaf axils.



Copyright © 2007 The Regents of the University of California - All rights reserved 5374594

Joseph M. DiTomaso, University of California - Davis, Bugwood.org

Roots: Fibrous or branched taproots; not considered important for management or identification.



ton_bal, iNaturalist.org

Leaves: The leaves are dark, shiny, and hairy on the top side of the leaf, and a paler, downy color on the bottom of the leaf. They can grow up to 3 inches long and 1 inch wide. Leaves are lanceolate, entire, and usually three-lobed. The bases of the leaves have yellow spikes approximately 1 inch long.

Flowers: Spiny cocklebur has small, inconspicuous flowers. Male flowers grow on top of stems. They are small, green, and develop in clusters. Female flower heads grow on leaf axils either singly or in small clusters. Female flower heads have 2 flowers and harden into prickly burs that contain seeds.

Seeds: Seeds are found in the fruit, which is a brown egg-shaped burr about 1/2 inch long and 1/3 inch wide. Burs are smooth and covered in spines with hooked ends. There are two seeds in each burr, each flat, 3/8 inch long, and brown.

Impact and Management

Erosion

Spiny cocklebur significantly increases the risk of soil erosion by outcompeting and displacing native bunchgrasses and ground cover. These native plants play a crucial role in stabilizing soil through extensive root systems that bind the soil and reduce runoff. When spiny cocklebur takes over, it replaces these stabilizing plants with its shallow, less effective root structure, leaving the soil more vulnerable to water erosion.

Health and Safety

Spiny cocklebur can physically injure children, workers, livestock, and wildlife with its spikes. Its spikes are a nuisance to workers hand-picking crops. This plant is poisonous when ingested, especially when young.

Economic

This weed can grow in a range of environmental conditions. It establishes itself in cultivated fields and competes with agricultural crops, resulting in yield losses of up to 70%. It becomes entangled in sheep wool, thereby increasing production costs.

Livestock

Spiny cocklebur is poisonous to all animals, especially horses and pigs. Although grazing animals tend to avoid it because of its spikes, it is most toxic in its early stages of life, before spikes appear. Burs attach to animal fur and can spread to new areas. Additionally, animals will avoid this plant and graze the surrounding area, leaving space for new plants to establish.

Agriculture and Food Security

Farmers and ranchers face increased costs associated with managing this weed. It is considered allelopathic, particularly for summer crops such as corn, where it inhibits plant growth and germination. Furthermore, spiny cocklebur can harbor pests and diseases that may affect crops, exacerbating the threat to food production. The economic burden on farmers and the potential for decreased food supply contribute to the overall negative impact on food security in the region.

Ecosystem Health

Once established, spiny cocklebur displaces native plants, resulting in a notable loss of floral and faunal biodiversity.

Prevention is the most effective and easiest way to manage this weed. Avoid unnecessary disturbance of areas and maintain vegetation health. Clean equipment and shear woolly animals before moving to a new area to prevent seed dispersal. If an infestation occurs, mechanical methods are effective when applied before burrs develop. Seeds can remain dormant for several years, so it is important to continue mowing or removing plants for at least 3 years. Do not leave plants with immature burs on site, as they can still develop viable seeds. Some herbicides are effective, especially when combined with mechanical control methods.

DO's

- Remove spiny cocklebur before burs develop to prevent seed production and stop the spread.
- Maintain healthy vegetation and avoid unnecessary soil disturbance.
- Continue to monitor for reemergence for at least 3 years after the infestation.

DON'Ts

- Leave plants with immature burs on site, as seeds can still develop.
- Leave it until it becomes a widespread problem, as it is easier to manage individual or small infestations.
- Allow animals to graze infected areas, as spiny cocklebur is poisonous.



For more information on managing Spiny Cocklebur, please visit www.nmweeds.org

