

Sesbania punicea

(syn. "*Sesbania tripetii*", "*Daubentonia punicea*")

(Rattlebox, Chinese Wisteria)

Summary: known invader sighted in new areas

We have found *Sesbania punicea* spreading into native vegetation along the American River Parkway in Sacramento, California. This is the first report of this species in North America, west of the Rockies. There is an undocumented report that it occurs in marshes around Suisun Marsh in the California Delta. Recently, we have been told of an infestation on the north shore of the North Forebay of Oroville Dam, Butte County (Dempsey, 2001). *S. punicea* is widely used as an ornamental plant because of its attractive compound leaves, bright sprays of red flowers and persistent winged fruit. Unfortunately, it has escaped from cultivation in several countries.

Description:

(Click on thumbnail images for a closer view)



Flowers



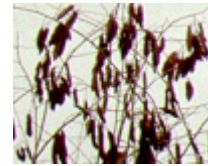
Flowering ranch



Small tree



Fruit



Fruiting tree

Sesbania punicea is a deciduous shrub or small tree, up to 4 meters tall. It has 10-20 cm long compound leaves each with 10-40 small dark-green leaflets in opposite pairs. Each leaflet is oblong and ends in a tiny pointed tip. The showy coral or red flowers appear in spring and early summer in dense sprays (up to 25 cm long) that droop or project outwards. The 2-3 cm long flowers are shaped like pea flowers. A characteristic feature are the seed pods, which are longitudinally 4-winged, oblong, 6-8 cm long, 1 cm broad, borne on short 1.5 cm stalks and may be dispersed by water. The tip of the pod is sharply pointed. The 4-10 seeds are separated by partitions and are freed only when the pod eventually breaks open.

The legume genus *Sesbania* includes a number of annual and woody species, many of commercial value.

Scientific and Common Names:

The name "*Sesbania tripetii*" Hort. ex F.T. Hubbard may be a synonym name of *Sesbania punicea* (Cav.) Benth. The genus name "*Daubentonia*" is occasionally used. The specific name "*punicea*" is the Latin word for crimson and refers to the brilliantly colored flowers. The common name "Rattlebox" is derived from the woody seed pods which loosely hold their seeds.

Impacts:

1) It is a serious weed in South Africa, and has also been reported in Lesotho and Zimbabwe. In southern Africa it is invading native vegetation where it forms dense thickets, especially in damp areas.

- 2) It is a problematic weed in wetlands in Florida, Texas and Georgia.
- 3) It produces abundant seed, can reproduce rapidly, and since it may grow along watercourses its buoyant pods may spread great distances.

Native Range:

Sesbania punicea is native to South America (Argentina, Brazil, Paraguay, and Uruguay). In Argentina it is common on the islands of the lower Parana Delta, along the Rio de la Planta and on the island of Martin Garcia.

Range As An Invader:

In the USA, it occurs from northern Florida and south Georgia to eastern Texas, and now in the central valley of California. In southern Africa it is a serious weed in South Africa, Lesotho, and Zimbabwe. In South Africa it has invaded the Natal, Transvaal, and Cape Provinces. It is especially troublesome along rivers and streams.

This plant may invade moist areas where there are long, hot summers. It can survive a hard freeze, but probably not ones of more than a few days. It is most likely to spread to wildlands adjacent to or downstream from ornamental plantings of *S. punicea*.

Control:

Young plants of *Sesbania punicea* can be pulled by hand or with a weed wrench. The root system is not very large, especially in waterlogged situations, so pulling is relatively easy. Larger trees can be cut, and the stumps should be treated with triclopyr. Flooding is not effective, but trees standing in water could be cut below the water line (without an herbicide application). Glyphosate has been used unsuccessfully in Florida when used alone (1%, as a foliar spray) and with triclopyr (1% Glyphosate, 1% triclopyr). Trees in California sprayed with glyphosate have responded with yellowed leaves, but the overall efficacy of this method has not yet been determined (Dempsey, 2001). Three biocontrol agents are used against *S. punicea* in South Africa.

Sesbania punicea



Volunteers removing first year sprouts of *Sesbania*.

Description

Sesbania punicea (Scarlet wisteria, Chinese rattlebox, Red sesbania) is a riparian plant native to Argentina, South America. It is a woody shrub that can grow up to 15 feet tall. The plant has bright green, drooping leaflets in opposite pairs, and in the spring and summer the plant displays bright red, showy flowers that are similar to pea flowers. Throughout the summer and fall, the plant produces hundreds of seedpods that may stay on the plant through the winter.

The four-winged seedpods are six-to-eight centimeters long, hang in clusters, and mature from green to brown. Each pod contains 3-9 seeds, which create a distinct rattling sound when shaken or moved by a breeze. The pods eventually break open, releasing thousands of seeds which grow into new *Sesbania* plants. All parts of the plant, particularly the seeds, are poisonous to mammals, birds and reptiles.

Problems with *Sesbania punicea*:

Sesbania punicea forms solid stands along riverbanks, which displace native vegetation and associated wildlife, and in turn decrease the biodiversity of the riparian area. These dense stands of scarlet wisteria can decrease water flow and quality and decrease access to the river for fishing, boating and other recreational activities. The plant matures in one year and can produce thousands of seeds per year. The winged seedpods drop off of the plant into nearby water and then travel downstream to fertile ground. The seeds have a very high germination rate, so many new plants sprout annually.

Where is *Sesbania punicea* in the Parkway?

Sesbania punicea can be found along the river from the Highway 41 bridge downstream past the Highway 99 bridge. The large, dense areas of scarlet wisteria occur in both slow-

moving water (especially gravel mining ponds and other waterways outside the main channel of the river), and along the main channel. During the summer, scarlet wisteria can easily be spotted from the Milburn Overlook, on the island near Jensen River Ranch, Moen Lakes, and at Scout Island.

What are we doing about *Sesbania punicea*?

Volunteers and the California Conservation Corps have contributed to removing scarlet wisteria from the Parkway on lands to which we have access. Our staff and volunteers continue to monitor sites where scarlet wisteria has previously been removed. As access to areas of scarlet wisteria infestation become available, staff and volunteers will coordinate scarlet wisteria removal days.

Scientific Name

Sesbania punicea (*Daubentonia punicea*)

Common Name

Rattlebox, purple sesbane, false poinciana

HIGHLY
TOXIC,
MAY
BE
FATAL
IF
EATEN!



Characteristics

- ▶ Family
Fabaceae
- ▶ Plant Description
Deciduous shrub or small tree; leaves alternate, pinnately divided with 6-20 pairs of leaflets with smooth margins; flowers pea-like, red-orange or reddish purple, in drooping clusters; fruit a 4-winged pod with slight constrictions and partitions between the seeds.
- ▶ Origin
South America.
- ▶ Distribution
Coastal Plain.
- ▶ Where Found
Weedy in disturbed areas, roadsides, ditches; landscape as ornamental, naturalized in some areas of the Coastal Plain.
- ▶ Mode
Ingestion.
- ▶ Poisonous Part
Seeds.
- ▶ Symptoms



Nausea, vomiting, abdominal pain, diarrhea, weakness, depression, respiratory failure; may be fatal.	
▶ Toxic Principle Saponic glycosides.	
▶ Severity HIGHLY TOXIC, MAY BE FATAL IF EATEN!	

"Poisonous Plants of North Carolina," Dr. Alice B. Russell, Department of Horticultural Science; Dr. James W. Hardin, Botany; Dr. Larry Grand, Plant Pathology; and Dr. Angela Fraser, Family and Consumer Sciences; **North Carolina State University.** All Pictures Copyright @1997 Alice B. Russell, James W. Hardin, Larry Grand. Computer programming, Miguel A. Buendia; graphics, Brad Capel.

Disclaimer: The list of poisonous plants on this web site does not necessarily include every poisonous plant that is known, or that might be found in an urban landscape or home. North Carolina State University does not advise eating any of the plants included in this web site. The information concerning edibility is taken from the literature, and the degree of reliability is unknown. We discourage the use of any of these plants for self medication. In cases of accidental exposure or ingestion, contact the Carolina's Poison Center at 1-800-848-6946, PO Box 32861 Charlotte, NC 28232-2861. If not in North Carolina contact your local poison control center or a physician.



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Sesbania punicea

The scarlet wisteria tree is native to southern Brazil, northeastern Argentina, and Uruguay. The botanical name presents some difficulty. The plant was originally named *Daubentonia Tripetii* Poir. It was then classified as *Sesbania tripetii* (Poir.) Hort ex F.T. Hubbard, a name published in a nursery catalog and used horticulturally, but not valid botanically. It is now thought the plant is *Sesbania punicea* (Cavanilles) Benth.

The scarlet wisteria tree grows to about four meters in height. The compound leaves are evenly pinnate (no end leaflet). The flowers are a brilliant orangey-scarlet and borne on drooping racemes. The seedpods have four 'wings'. When mature, the seeds loosen and rattle within the pod. (This trait is totally unnerving to field personnel who are expecting to come upon rattlesnakes.)

Sesbania punicea is a nuisance exotic (non-native) in natural areas. It and other species of *Sesbania* are difficult to control within wetland mitigation areas. As the soil in wetlands becomes inundated, the lower portion of the stem splits and white spongy aerenchyma tissue protrudes through the splits. The plant grows additional spongy adventitious roots which serve to prop the plant in mucky soils.

The photographed plant threw me when I saw it in Mike's landscaping. It was very dramatic and bore little

resemblance to the nuisance *Sesbania*--the flowers were much larger and deeper colored. The racemes were longer with more flowers. The landscape tree was woodier and not as 'rangy' as the invaders I have seen in mitigation areas. Perhaps, care in a landscape accounts for the difference in appearance or those in the horticultural trade are 'selected' for better performance.

Seeds I received from Mike had one hundred percent germination within five days, so it is highly probable this plant will get out of hand quickly in a garden and escape into natural areas.

The Nature Conservancy has additional information about *Sesbania punicea*. To learn more about the plant, click on the link:

<http://tncweeds.ucdavis.edu/alert/alrtsesb.html> 



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