Madagascar Rubbervine

Taxonomy

Order: Gentianales

Family: Apocynaceae

Species: *Cryptostegia madagascariensis* Bojer ex Decne

Summary

A fast-growing woody evergreen vine or climbing shrub native to the north-western coast of Madagascar where it is used in traditional medicine, and to make ropes and rubber. It has become established in areas of the subtropics and subtropics, including India, Kenya, Brazil, Hawaii, Australia and the West Indies where it can quickly spread along water courses, coastal forests, pastures, forest edges, and disturbed areas, and may displace and out-compete native vegetation.

Cryptostegia madagascariensis flower and foliage

Biology

A fast growing weed that tolerates a wide range of soil types and with a preference for areas below 500-600 m altitude with 400 to 2400 mm annual rainfall. Seed germination requires high humidity and temperatures around 30°C. Flowers appear in the summer, in Puerto Rico, flowers occurred in August and from December to February. A self-compatible species, but self-pollination does not occur. Once pollinated, two fruit per flower develop. Fruit are present all year round, contain around 100 seeds and take an average of 210 days to open. Seeds can remain viable for up to one year and have high germination rate of 93-95% under controlled conditions.

Distribution in Caribbean

Puerto Rico, Virgin Islands, St Lucia, Montserrat and Anguilla.

Pathway of Entry

Natural dispersal: seeds are rapidly dispersed by wind, water, or by animals. Seeds can tolerate prolonged periods of immersion in saline water.

Intentional dispersal: planted as an ornamental plant or for rubber production

Impact

Can smother and out-compete both wild and pasture grasses, being a serious problem in pasture lands where they are toxic to cattle and horses if eaten.

It may also impact forest communities by preventing trees from getting sunlight, because it is able to overtop trees and then shade forests. In Puerto Rico and the Virgin Islands *C. madagascariensis* can invade coastal dry forests by climbing over trees at the periphery of the forest and slowly spreading further into the interior forest.

Further Information:

www.cabi.org/isc/datasheet/113682

https://keyserver.lucidcentral.org/weeds/data/media/Html/cryptostegia_madagascariensis.htm

Cryptostegia madagascariensis leaves © Forest and Kim Starr, Starr Environmental, Bugwood.org

Cryptostegia madagascariensis © Forest and Kim Starr, Starr Environmental, Bugwood.org

Cryptostegia madagascariensis fruit © toptropicals.com

Cryptostegia madagascariensis seeds © Tatters (Tatiana Gerus) (CC by 2.0)

Field Description

Madagascan Rubbervine is a woody, vigorous, many-stemmed vine that can climb up to 30m in tree canopies or 1-3m if unsupported. Branches are glabrous to hairy, greyish-brown and have prominent, whitish, warty spots (lenticels). A milky sap (latex) is released when broken or cut. Leaves are arranged oppositely, leaf blades are variable, although they are usually oblong or elliptic to ovate, 2-11 × 1.5-5.5 cm, almost truncate to usually tapering at base and usually acuminate at apex; glabrous to hairy below or on both sides or only along the veins; petiole are 3-10 mm long, glabrous to hairy.

The fruit resemble pods, 5-9 cm long and 1.5-4 cm wide and are produced in divergent pairs. They turn from green to brown and split open when fully mature. They contain numerous seeds (5.5-9 mm long and 1.8-3.5 mm wide) that are topped with a silky tuft of white hairs (i.e. coma) 10-35 mm long.

Flowers are trumpet shaped with 5 spreading petal lobes, pink to lilac, 4-6cm long and about 2.5cm wide.

Similar Species

Cryptostegia madagascariensis is similar to the related *Cryptostegia grandiflora*, but they differ in flower and fruit morphology. *C. madagascariensis* has flowers with simple corona lobes and follicles (dry unilocular fruit) 5.8 to 13 cm long. On the other hand, *C. grandiflora* has flowers with a corona with bifid lobes and follicles from 10 to 15.4 cm long.

It is also relatively similar in appearance to the common garden plant known as purple allamanda (*Allamanda blanchetii*). Purple allamanda has its leaves arranged in whorls of three or more along its stems (i.e. they are verticillate). Its younger stems and leaves are somewhat hairy (i.e. pubescent), its flowers are usually uniformly bright pink or purplish in colour, and its rounded fruit are rarely seen.