

Threatened species of the Northern Territory

Cleome insolata

Conservation status

Australia: Not listed

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

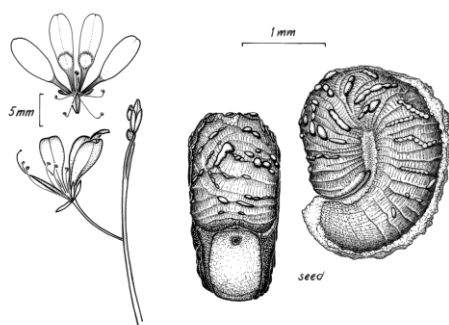
Territory Parks and Wildlife Conservation Act 1976

Description

Cleome insolata is an annual herb with ascending to weakly erect branches to c. 40 cm long. Leaves are trifoliolate, with glabrous linear leaflets, the mid one longer than laterals. Large showy flowers occur in a raceme with the four yellow 10 mm long petals held erect in the one plane. Seeds are dark and shallowly ribbed with wart-like protuberances on the surface¹. The species is part of a complex involving *C. tetrandra* and it was confused with this species in the past.

Flowering and Fruiting: March to April.

Cleome sp. Solar Village



Caption: *Cleome insolata* flower and seed (Credit: M. Osterkamp).

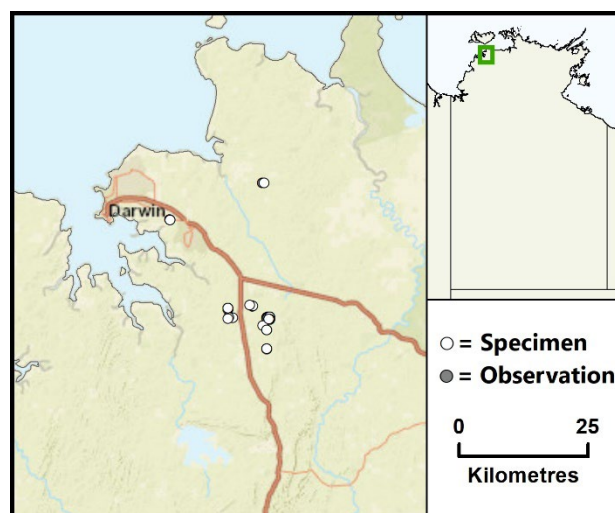


Credit: B.M. Stuckey

Distribution

Cleome insolata is endemic to the Northern Territory (NT), where to date it is known from the Darwin rural area.

NT conservation reserves where reported: Shoal Bay Conservation Reserve.



Caption: Known locations of *Cleome insolata* in the NT (nrmmaps.nt.gov.au)

Ecology

Cleome species are typically annual herbs with passively dispersed seed. *Cleome insolata* occurs in poorly drained sandsheet habitats, often on the margins of seasonally inundated drainage depressions. Associated vegetation includes sedgeland; *Melaleuca viridiflora* low open woodland with *Dapsilanthus*, *Sorghum* and *Alloteropsis*; *Melaleuca nervosa* mixed woodland over *Sorghum intrans*; *Grevillea pteridifolia* low open woodland with *Eriachne burkittii* and *Fimbristylis* spp.; *Lophostemon lactifluus*, *Melaleuca viridiflora*, *M. nervosa*, *E. miniata* and *C. polysciada* low mixed species woodland, and *Pandanus spiralis* - *Melaleuca* with *Xyris complanata* and *Eriachne burkittii*. Soils include lateritic hydrosols and lateritic brown kandosols. At times it may occur on disturbed sites such as roadsides in these habitats. The epithet 'insolata' reflects the open exposed habitat in which it has been found.

Threatening processes

The key threats to *Cleome insolata* are intensification of land uses, extractive industry, changes in surface and near surface hydrology and grassy weed invasion in conjunction with changed fire regimes. Extensive areas of its sand sheet habitat within the extent of occurrence have been lost or converted. It shares similar threats to other restricted endemic plant species found only in sand sheet vegetation.

Most plants in the known localities occur on private freehold tenure with one group of plants located on Shoal Bay Conservation Reserve. However, this area has a history of extractive operations and further activities are not precluded.

Some *Cleome* species are regularly found in modified environments indicating a level of resilience to disturbance. *Cleome insolata* has been recorded in a paddock and roadside situations so it may likewise be capable of coping with a certain limited level of disturbance.

Conservation objectives and management

Reservation of high quality habitat, control of exotic grasses and improved management of the only reserved locality are priority management requirements. Targeted survey for the species is required across suitable potential habitat in the Darwin rural district to determine if further occurrences exist. Such survey needs to be conducted during a period when the species is expected to flower and produce seed.

References

¹ Short, P.S. 2010. New species of *Cleome* L. (Cleomaceae) from the Northern Territory, Australia. *The Beagle, Records of the Museum and Art Galleries of the Northern Territory* **26**, 1-12.