

Threatened Species of the Northern Territory

Xylopia sp. Melville Island

Conservation status

Australia: Endangered

Northern Territory: Endangered



Photos: D. Liddle

Description

Xylopia sp. Melville Island is an open shrub or erect sapling to 3 m, with lateral branches perpendicular to the stem. The leaves are orientated in one plane (distichous) and occasionally wavy on the margins.

Very little is known of this undescribed species. It is now placed in the genus *Xylopia*, although it was formerly identified as *Miliusa* (e.g. Fensham and Woinarski 1992). It has the currently unpublished manuscript specific name of *monosperma*.

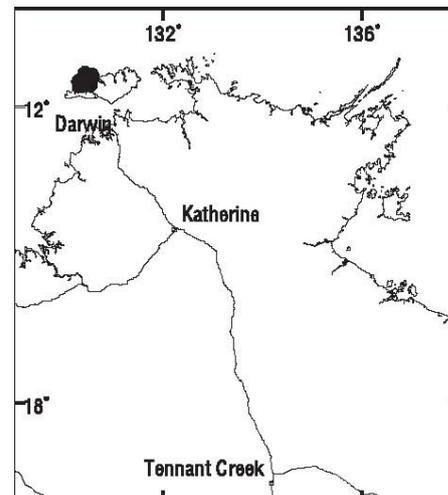


Distribution

This plant is thought to be endemic to the NT. In the NT, it is known only from five localities on the Tiwi Islands, two on Bathurst and three on Melville Island.

Conservation reserves where reported:

None.



Known locations of *Xylopia* sp. Melville Island

Ecology

This species grows in wet rainforests occurring at springs and is recorded as a small tree in the understorey.

Conservation assessment

On Melville Island, this species (reported as *Miliusa* sp.) was recorded from a 25 ha rainforest patch (Hanguana Jungle), a 10 ha patch (Ilinga Jungle), a 15 ha patch (Dudwell), a 100 ha patch (Mangkippi), and an unconfirmed patch possibly Banjo Beach Jungle (Fensham and Woinarski 1992).

Collection notes for the Hanguana Jungle specimens (in 1987) suggested that this species was common there, while the Ilinga Jungle record by J. Risler is known from only one individual.

The total population size for this taxon is highly speculative and is estimated at < 250 individuals, based on the fact that this species is readily identifiable and, as an understorey species, relatively visible when present. Russell-Smith (1992) characterized adult population sizes of common species as large if > 50 individuals where present. Applying a precautionary estimate of 50 individuals to each location, excluding the Ilinga population and assuming the 1987 populations are still extant, a total population size of < 250 individuals is proposed. Extent of occurrence is documented at approximately 469 km² and area of occupancy estimated as at least 150 ha based on the size of rainforest patches where collected (Fensham and Woinarski 1992).

This species is considered adequately surveyed, based on extensive surveys on the Tiwi Islands (Woinarski *et al.* 2003) and rainforest habitats across the Top End (Russell-Smith 1991; Fensham and Woinarski 1992; Liddle *et al.* 1994). Some specific survey was undertaken for this species during 1999, 2000 and 2001 by the NT Herbarium, The discovery of the Ilinga Jungle population by J. Risler was a result of those efforts, however no other populations were found or relocated.

This species is classified as **Endangered** (under criteria B1ab(iii)+2ab(iii); D) based on:

- a small number of locations (<5);
- small number of mature individuals (<250);
- an extent of occurrence <5000 km²;
- an area of occupancy <500 km²; and
- a projected decline due to quality of habitat.

Threatening processes

Very little is known about the processes that may threaten this species, which may be naturally rare. However, monsoon rainforests generally are vulnerable to disturbance from cyclones, cattle, buffalo, pigs and dry-season wildfires (Russell-Smith and Bowman 1992, Panton 1993; Woinarski *et al.* 2003). Cyclonic frequency for the Tiwi Islands is documented at 0.8 to 1.2 cyclones per annum.

While rainforest patches where the species occurs have been excised from clearing for plantation forestry, the adequacy of buffers around these areas is not known. If buffers are of insufficient width, the rainforests may be more vulnerable to wind damage. Monsoon rainforests may also be particularly susceptible to changes in ground water hydrology as a result of high water use from *Acacia mangium* plantations developing for areas on the Tiwi Islands. There is also a risk of invasion of rainforests by grassy weeds and concomitant increased vulnerability to fire as a result of intensive development and disturbance for forestry.

Conservation objectives and management

A Recovery Plan for this species, and other threatened plants on the Tiwi Islands, is due to be released in 2007, but many actions in its draft are currently being implemented.

Habitat protection at the known localities is required to maintain the status of the species.

Research priorities are to:

- i. provide a more detailed assessment of its distribution, habitat requirements and population size;
- ii. provide an assessment of the factors limiting distribution, and/or threats to its survival.

Further survey may yield additional populations. A monitoring program should be established for at least representative populations.

Complied by

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References

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