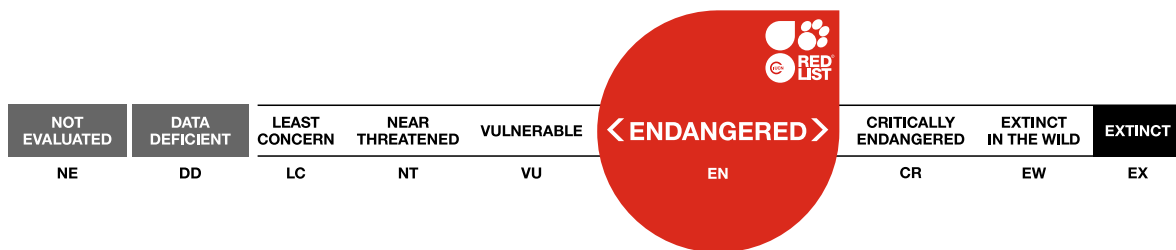




Syzygium bourdillonii

Assessment by: Amitha Bachan, K.H. & Devika, M.A.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Magnoliopsida	Myrtales	Myrtaceae

Scientific Name: *Syzygium bourdillonii* (Gamble) Rathakr. & Nair

Synonym(s):

- *Jambosa bourdillonii* Gamble

Taxonomic Source(s):

POWO. 2023. Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Available at: <http://powo.science.kew.org/>. (Accessed: 2023).

Identification Information:

Syzygium bourdillonii is a small evergreen tree grows up to 10 m high, smooth bark with greyish-white brown blaze. Leaves 7–12.5 x 2.3–4 cm, elliptic, lanceolate or elliptic-oblong with acuminate apex and 8-10 pairs of nerves. Pedicel 5 mm long, subtetragonal. Flowers in terminal few-flowered cymes; Petals 4, orbicular, gland-dotted. Stigma slightly acute. Fruits berry, 1.5-2 x 1.2-1.5 cm. Flowering and fruiting February-June.

Assessment Information

Red List Category & Criteria: Endangered A2c; B2ab(i,ii,iii,iv,v); C2a(i) [ver 3.1](#)

Year Published: 2023

Date Assessed: February 26, 2023

Justification:

Syzygium bourdillonii is a medium-sized evergreen tree of medium elevation riparian rainforest habitat of the southern Western Ghats, with an elevation of 600–1,200 m. This once thought extinct species was rediscovered with few scattered individuals close to the type locality (Mohan 1996). Presently the species has seven locations with an estimated population size of 350–500 and 75 mature individuals in the largest subpopulation. The population is considered severely fragmented. The extent of occurrence of the species is 11,973 km² and area of occupancy is 32 km². The riparian forest habitat is under threat due to dams and reservoirs, agro-industrial plantations and climate change induced floods in the monsoonal tropical mountain landscape. Due to these threats, the available habitat has declined by over 70% in three generations (75 years) and the population is inferred to have declined at a similar rate. Hence the species assessed as Endangered (EN).

Previously Published Red List Assessments

[1998 – Endangered \(EN\)](#)

1998 – Endangered (E)

Geographic Range

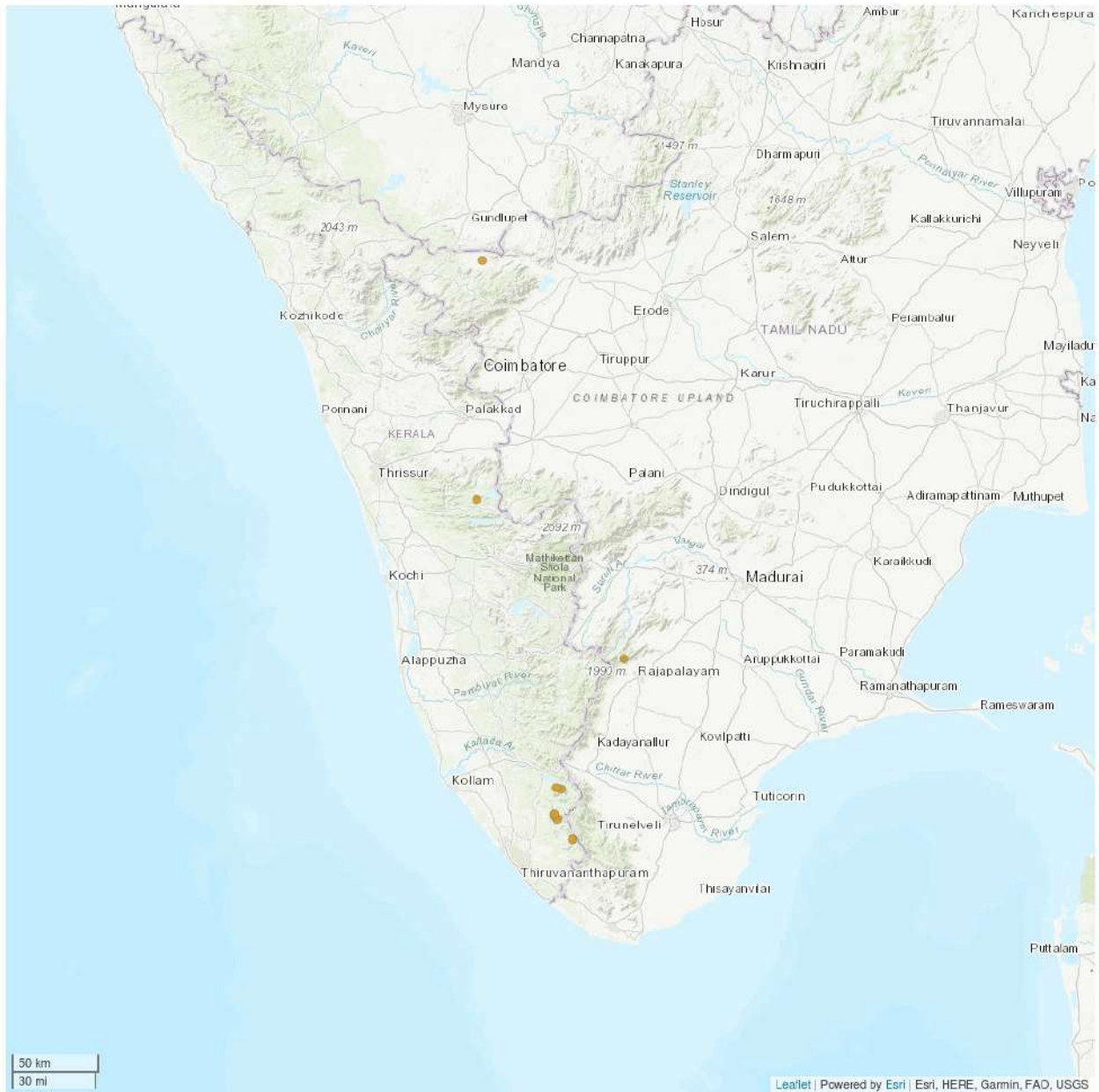
Range Description:

The species occurs in Kerala and Tamil Nadu in southern Western Ghats.

Country Occurrence:

Native, Extant (resident): India (Kerala, Tamil Nadu)

Distribution Map



Legend
■ EXTANT (RESIDENT)

Compiled by:
 GTA 2023



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

Population

Syzygium bourdillonii was once thought extinct and was rediscovered with few scattered trees growing among the stream side vegetation at Attayar, growing in the foothills of Agasthyamalai (Mohanan 1996). Only a few trees were reported from all of its seven locations along the riparian or stream side vegetation of the medium elevation evergreen rainforest (Amitha Bachan 2010). The maximum number of mature individuals estimated is 350–500 within the seven locations, and most of the subpopulations are under threat of habitat degradation and climate change. Due to these threats, the available habitat has declined by over 70% in three generations (75 years). Studies indicate most of its subpopulation are isolated (Mohanan 1996, Shareef 2015). The stream side or riparian habitat is under pressure (Amitha Bachan 2010, Amitha Bachan *et al.* 2022). The species is considered severely fragmented with a small number of individuals in each subpopulation and that there is likely no genetic exchange between the subpopulations.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Syzygium bourdillonii is a small evergreen tree that occurs between an elevation of 660–1,200 m. The species was rediscovered with few scattered individuals along stream side vegetation in the low elevation forest of Attayar. The medium elevation evergreen riparian habitat of the species is highly threatened due to large scale conversion for dams and reservoirs in its four out of the seven locations and the threat is still continuing, with the two locations heavily impacted by a flood in 2018 (Amitha Bachan 2010, Amitha Bachan *et al.* 2022).

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

There is no use and trade information regarding this species.

Threats (see Appendix for additional information)

The medium elevation evergreen riparian habitat of the species is highly threatened due to submergence for dams and reservoirs in four out of the seven locations. Most of the remaining habitat is under pressure due to agriculture and forest plantations. Two locations are heavily impacted by a flood in 2018, indicating that climate change may impact the threatened riparian ecosystem and also the species (Amitha Bachan 2010, Amitha Bachan *et al.* 2022).

Conservation Actions (see Appendix for additional information)

The species is reported from four protected areas of which two are the human habited areas of Agasthyamalai and Nilgiri Biosphere reserves. The Agasthyamalai reserve has been impacted by seasonal pilgrimage.

Credits

Assessor(s): Amitha Bachan, K.H. & Devika, M.A.

Reviewer(s): Beech, E.

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External Resources

For [Supplementary Material](#), and for [Images and External Links to Additional Information](#), please see the Red List website.

Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	Resident	Suitable	Yes

Plant and Fungal growth forms

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Plant and Fungal growth forms
TS. Tree - small

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.4. Scale Unknown/Unrecorded	Ongoing	Majority (50-90%)	Slow, significant declines
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	Majority (50-90%)	Slow, significant declines
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.10. Large dams	Ongoing	Majority (50-90%)	Slow, significant declines
11. Climate change & severe weather -> 11.4. Storms & flooding	Ongoing	Unknown	Very rapid declines
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance	

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No
Systematic monitoring scheme: No
In-place land/water protection
Conservation sites identified: Yes, over entire range

Conservation Action in Place
Percentage of population protected by PAs: 51-60
Area based regional management plan: No
Occurs in at least one protected area: Yes

Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action Needed	Notes
2. Land/water management -> 2.3. Habitat & natural process restoration	-
3. Species management -> 3.2. Species recovery	-
3. Species management -> 3.4. Ex-situ conservation -> 3.4.2. Genome resource bank	-

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed	Notes
1. Research -> 1.2. Population size, distribution & trends	-
1. Research -> 1.5. Threats	-
2. Conservation Planning -> 2.1. Species Action/Recovery Plan	-
2. Conservation Planning -> 2.2. Area-based Management Plan	-

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 32
Continuing decline in area of occupancy (AOO): Yes
Estimated extent of occurrence (EOO) (km ²): 11973
Continuing decline in extent of occurrence (EOO): Yes
Number of Locations: 7
Continuing decline in number of locations: Yes
Lower elevation limit (m): 660
Upper elevation limit (m): 1,200

Population
Number of mature individuals: 350-500
Continuing decline of mature individuals: Yes
Population severely fragmented: Yes
No. of subpopulations: 7
Continuing decline in subpopulations: Yes
All individuals in one subpopulation: No
No. of individuals in largest subpopulation: 75
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 25

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