

Buchanania barberi

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Magnoliopsida	Sapindales	Anacardiaceae

Taxon Name: *Buchanania barberi* Gamble

Assessment Information

Red List Category & Criteria: Critically Endangered B2ab(iii,v); D [ver 3.1](#)

Year Published: 2018

Date Assessed: November 6, 2017

Justification:

Buchanania barberi is a small tree species endemic to Kerala, India. The species was previously only known from its type locality but now it is only reported from along the Vamanapuram river. A recent survey of the Palode region, where the species was last reported, found just four trees, two juveniles and two mature individuals. As such the species has a very small area of occupancy and a very small population size. There is projected decline due to a lack of regeneration of the species as fruit production was low, germination was poor and seedling establishment was not reported. The remaining habitat of the species is also threatened by infrastructure development. The species is globally assessed as Critically Endangered.

Previously Published Red List Assessments

1998 – Critically Endangered (CR)

<http://dx.doi.org/10.2305/IUCN.UK.1998.RLTS.T31181A9605573.en>

1998 – Endangered (E)

Geographic Range

Range Description:

This species was previously only known from its 1916 type locality at Nadarai, in what was the Travancore District but is now the Thiruvananthapuram district of Kerala State. The species is still considered endemic to Kerala state but in 2002 could no longer be found at the Nadarai site. Up to four trees were found on the bank of the Vamanapuram river in the Palode region (Santhosh Kumar *et al.* 2002, Dhyani and Anilkumar 2017). The area of occupancy (AOO) of this species is below 5 km² (Dhyani and Anilkumar 2017).

Country Occurrence:

Native: India (Kerala)

Population

Prior to 2002 this species had not been recorded since 1916. Since this time four trees were found along the Vamanapuram river but the original type location of the species had undergone deforestation and development; trees here are assumed lost (Santhosh Kumar *et al.* 2002). A further survey of 11 sites in the Palode region found four individuals, two mature and two juvenile (Dhyani and Anilkumar 2017). Low seed production is reported as is a lack of seedling establishment and seed germination along with the predation of seed by bird. The remaining trees are found alongside a road, whose expansion is a major risk to the species (Dhyani and Anilkumar 2017). Overall population size is anticipated to be much smaller than 50 mature individuals.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Buchanania barberi is a small tree species, growing to 15 m in height (Santhosh Kumar *et al.* 2002). The species grows within forest and flowers between October and January.

Systems: Terrestrial

Use and Trade

There are no known uses for this species.

Threats (see Appendix for additional information)

This species is threatened by the development of roads and infrastructure. The original type locality of the species is thought to be lost due to the clearance of coastal forest land near Varkala (Santhosh Kumar *et al.* 2002). The remaining individuals are threatened by their locality along a road which if it were to expand would cause the loss of these trees too (Santhosh Kumar *et al.* 2002, Dhyani and Anilkumar 2017). It is also reported the remaining individuals produce few fruit, seedlings do not establish and there is slow germination and consumption of seeds by birds. All these factors reduce the regeneration potential of the species and are likely to cause further, future decline (Dhyani and Anilkumar 2017).

Conservation Actions (see Appendix for additional information)

This species is reported from one *ex situ* collection (BGCI PlantSearch 2017). A survey of the remaining population was carried out in 2016 by staff at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI). Seed collections were made during this survey and further research on the germination and propagation of these seeds is ongoing (Dhyani and Anilkumar 2017). It is recommended that further surveys are carried out to try to identify more individuals of *Buchanania barberi*. A species recovery action plan would also be beneficial.

Credits

Assessor(s): Barstow, M.

Reviewer(s): Dhyani, A.

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External Resources

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	-	Suitable	-

Threats

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

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Past, likely to return	Unknown	Rapid declines	Past impact
	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		
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	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		
12. Other options -> 12.1. Other threat	Ongoing	Unknown	Slow, significant declines	Unknown
	Stresses:	2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success		

Conservation Actions in Place

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

Conservation Actions in Place
In-Place Species Management
Subject to ex-situ conservation: Yes

Research Needed

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends
2. Conservation Planning -> 2.1. Species Action/Recovery Plan

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 0-5,2
Number of Locations: 1
Population
Number of mature individuals: 2
Continuing decline of mature individuals: Yes
All individuals in one subpopulation: Yes
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes

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