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# Ochna gamblei

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### Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Magnoliopsida	Malpighiales	Ochnaceae

Scientific Name: Ochna gamblei King ex Brandis

#### Synonym(s):

- Ochna beddomei Gamble
- Ochna obtusata DC. var. gamblei (King ex Brandis) Kanis

#### Taxonomic Source(s):

WCVP. 2022. World Checklist of Vascular Plants (WCVP), version 2.0. Facilitated by the Royal Botanic Gardens, Kew. Available at: http://wcvp.science.kew.org/. (Accessed: 2022).

### **Assessment Information**

Red List Category & Criteria:	Endangered A2ac; D <u>ver 3.1</u>	
Year Published:	2023	
Date Assessed:	January 16, 2022	

#### Justification:

*Ochna gamblei* is a 3 to 4 m high, large shrub or small tree that occurs in coastal sacred groves, sand dunes or inland hillocks in South India. It has a restricted distribution with an extent of occurrence (EOO) 82,226 km<sup>2</sup> and an area of occupancy (AOO) 36 km<sup>2</sup>. The species has been reported only from nine locations with less than 150 individuals. The population reduction in two subpopulations is 41% in 10 years, and the overall estimated population reduction is approximately 50% in the last three generations. It is known to occur in areas that have been subjected to severe habitat loss due to reclamation for infrastructure development. The coastal sand dunes and associated sacred groves have been subjected to heavy reclamation in the past few decades. The species is neglected due to less local significance and being a small tree even within sacred groves protected by the local people. All the nine locations are outside protected areas. Urgent awareness and conservation measures are recommended. This species is assessed as Endangered.

### **Geographic Range**

#### **Range Description:**

The species occurs in South India.

#### **Country Occurrence:**

Native, Extant (resident): India

### **Distribution Map**





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

### Population

Eleven mature individuals observed at a coastal sacred grove, Alappuzha, Kerala (Sunil and Sivadasan 2009). Recent observations confirmed only four mature individuals in the location. One individual is from another coastal region, Thrissur, Kerala (Amitha Bachan and Nair 2020). The species attains maturity within 3–4 years, and the generation length is 8–10 years. The overall population reduction is estimated to be approximately 50% in the last three generations. It is estimated that the number of mature individuals in the population is less than 150.

Current Population Trend: Decreasing

### Habitat and Ecology (see Appendix for additional information)

*Ochna gamblei* is a small tree or large shrub species occurring in sandy coastal sacred groves and dry hillocks in Southern India (Amitha Bachan and Nair 2020).

Systems: Terrestrial

#### Use and Trade (see Appendix for additional information)

No information available on trade and use of this species.

#### Threats (see Appendix for additional information)

Reclamation of habitat, coastal sand dunes, sacred groves and hillocks for infrastructure development is the main threat for the species. The species is neglected for being a large shrub and small tree species with less local significance (Sunil and Sivadasan 2009, Amitha Bachan and Nair 2020).

### **Conservation Actions** (see Appendix for additional information)

This species' natural habitats, coastal sacred groves, sand dunes and inland hillocks are under high pressure of reclamation for infrastructure development. A few locations are protected as sacred groves by local people, but the species is neglected, mainly due to less local use or importance.

### Credits

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

Reviewer(s): Hills, R.

## Bibliography

Amitha Bachan, K.H. and Devika, M.A. 2021. A perspective strategic plan for the conservation, monitoring and ecorestoration of coastal ecosystems and its biodiversity within the SN Puram Grama panchayat. Western Ghats Hornbill Foundation, Kerala, India.

Amitha Bachan, K.H. and Nair, Sreehari S. 2020. Diversity and status of endemic and threatened angiosperm flora of coastal ecosystems of central Kerala. *Meridian* 9(1): 27-33.

IUCN. 2023. The IUCN Red List of Threatened Species. Version 2023-1. Available at: <u>www.iucnredlist.org</u>. (Accessed: 11 December 2023).

Sunil, C.N. and Sivadasan, M. 2009. *Flora of Alappuzha District, Kerala, India*. Bishen Singh mahendra Pal Singh, Dehra Dun.

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### **External Resources**

For <u>Supplementary Material</u>, and for <u>Images and External Links to Additional Information</u>, please see the Red List website.

## Appendix

## Habitats

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

Habitat	Season	Suitability	Major Importance?
6. Rocky areas (eg. inland cliffs, mountain peaks)	-	-	-
13. Marine Coastal/Supratidal -> 13.3. Marine Coastal/Supratidal - Coastal Sand Dunes	Resident	Suitable	No

## Plant and Fungal growth forms

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

Plant and Fungal growth forms
SL. Shrub - large
TS. Tree - small

## Threats

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

Threat	Timing	Scope	Severity
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	Majority (50-90%)	Slow, significant declines
Stresses	s: 1. Ecosyst	em stresses -> 1.2. Eco	system degradation
	2. Species	Stresses -> 2.2. Specie	es disturbance
	2. Species	Stresses -> 2.3. Indire	ct species effects ->
	2.3.7. Rec	luced reproductive suc	cess

### **Conservation Actions in Place**

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

Conservation Action in Place	
In-place research and monitoring	
Action Recovery Plan: Yes	
In-place land/water protection	
Percentage of population protected by PAs: 0	
Occurs in at least one protected area: No	

## **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	Sacred groves and sand dunes need to be protected and restored.
3. Species management -> 3.4. Ex-situ conservation -> 3.4.1. Captive breeding/artificial propagation	-

### **Research Needed**

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

Research Needed	Notes
2. Conservation Planning -> 2.1. Species Action/Recovery Plan	-

## **Additional Data Fields**

Distribution
Estimated area of occupancy (AOO) (km <sup>2</sup> ): 36
Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 82226
Number of Locations: 9
Lower elevation limit (m): 0
Upper elevation limit (m): 500
Population
Number of mature individuals: 100
Continuing decline of mature individuals: Yes
No. of subpopulations: 9
Continuing decline in subpopulations: Yes
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 8-10

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