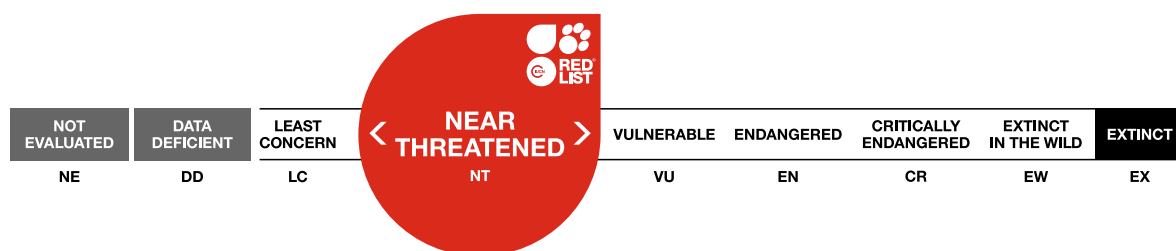


Encephalartos ferox, Zululand Cycad

Assessment by: Donaldson, J.S., Matimele, H.A., Raimondo, D., Bandeira, S., Burrows, J.E., Darbyshire, I., Massingue, A.O. & Timberlake, J.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Cycadopsida	Cycadales	Zamiaceae

Scientific Name: *Encephalartos ferox* G.Bertol

Synonym(s):

- *Encephalartos kosiensis* Hutch.

Infra-specific Taxa Assessed:

- [Encephalartos ferox subsp. emersus](#)
- [Encephalartos ferox subsp. ferox](#)

Common Name(s):

- English: Zululand Cycad, Kozi Cycad, Tongaland Cycad
- Zulu: umThobane

Assessment Information

Red List Category & Criteria: Near Threatened A4cd [ver 3.1](#)

Year Published: 2022

Date Assessed: September 16, 2020

Justification:

Encephalartos ferox is assessed as Near Threatened. Large subpopulations occur from northern KwaZulu-Natal in South Africa to at least as far north as Inhambane in Mozambique. The northern-most subpopulation was described as a distinct subspecies in 2015 (Rousseau *et al.* 2015) and this subspecies is assessed as Critically Endangered because it occurs at a single location and the subpopulation has declined over several years. The rest of the population is also experiencing declines due to collecting for the ornamental trade as well as clearing of its coastal habitat for tourism developments and agriculture. Currently the ongoing decline is estimated at 20-25% over three generations but this could easily increase as coastal development expands. If this such threats do continue to expand this taxon may qualify as Vulnerable under criterion A.

Previously Published Red List Assessments

2010 – Near Threatened (NT)

<https://dx.doi.org/10.2305/IUCN.UK.2010-3.RLTS.T41943A10607271.en>

2003 – Least Concern (LC)

1998 – Rare (R)

Geographic Range

Range Description:

Encephalartos ferox is a widespread species occurring in northern KwaZulu-Natal Province of South Africa from north of Richards Bay in the vicinity of Lake St. Lucia northwards into southern Mozambique, where it is found in the Maputo, Gaza, and Inhambane provinces as far north as Pomene National Reserve and toward Vilanculos. The newly described subspecies *E. ferox* subsp. *emersus* occurs in the far north-eastern corner of Inhambane. It occurs at low elevations up to 100 m altitude

Country Occurrence:

Native, Extant (resident): Mozambique; South Africa (KwaZulu-Natal)

Population

Encephalartos ferox is a relatively abundant species where it occurs. Although population surveys have not been conducted to assess numbers, the population probably exceeds 10,000 mature plants. Despite this abundance, there have been declines in several locations, notably along the Mozambique coastline where plants have been removed for coastal developments (Rousseau *et al.* 2015) and for sale along roadsides.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The habitats of this species range from closed evergreen coastal forest to dense shrubland, and also on deep sands of old beach dune systems and in dune grassland areas.

Systems: Terrestrial

Use and Trade

It has been collected and sold for use in the horticultural trade.

Threats (see Appendix for additional information)

The major threats affecting this species include over-collecting for ornamental purposes and habitat destruction due to current and future coastal developments and agricultural expansion. A high burning frequency of grassland habitats also destroys many seedlings.

Conservation Actions (see Appendix for additional information)

This species is listed in Appendix I of the CITES Appendices. Subpopulations of *Encephalartos ferox* are present in the Isimangaliso Wetland Park and Tembe Elephant Park in South Africa and in the Maputo Special Reserve and the Pomene National Reserve in Mozambique. An education and awareness programme as well as the long-term monitoring of subpopulations will support the conservation of this species.

Credits

Assessor(s): Donaldson, J.S., Matimele, H.A., Raimondo, D., Bandeira, S., Burrows, J.E., Darbyshire, I., Massingue, A.O. & Timberlake, J.

Reviewer(s): von Staden, L.

Authority/Authorities: IUCN SSC Cycad Specialist Group

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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	-	Suitable	-
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	-
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	-	Suitable	-
13. Marine Coastal/Supratidal -> 13.3. Marine Coastal/Supratidal - Coastal Sand Dunes	-	Suitable	-

Plant Growth Forms

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

Plant Growth Form
C. Cycad

Use and Trade

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

End Use	Local	National	International
13. Pets/display animals, horticulture	No	Yes	Yes
16. Establishing ex-situ production *	No	Yes	No

Threats

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

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	-	Low impact: 3
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	-	-	Low impact: 3

	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	-	-	Low impact: 3
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.2. Gathering terrestrial plants -> 5.2.1. Intentional use (species is the target)	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
7. Natural system modifications -> 7.1. Fire & fire suppression -> 7.1.1. Increase in fire frequency/intensity	Ongoing	Unknown	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

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

Conservation Action in Place
In-place land/water protection
Occurs in at least one protected area: Yes
In-place education
Included in international legislation: Yes
Subject to any international management / trade controls: Yes

Conservation Actions Needed

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

Conservation Action Needed
1. Land/water protection -> 1.2. Resource & habitat protection
4. Education & awareness -> 4.3. Awareness & communications
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.1. International level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

Research Needed

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology

Research Needed
1. Research -> 1.4. Harvest, use & livelihoods
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution
Continuing decline in area of occupancy (AOO): Yes
Estimated extent of occurrence (EOO) (km ²): 109253
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): No
Lower elevation limit (m): 0
Upper elevation limit (m): 100
Population
Continuing decline of mature individuals: Yes
Population severely fragmented: No
Extreme fluctuations in subpopulations: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 30

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