

## Plants

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## Middelburg Cycad

### Taxonomy

<b>Scientific Name</b>	<b>Encephalartos middelburgensis</b> <b>Vorster, Robbertse &amp; S.van der Westh.</b>
<b>Higher Classification</b>	Gymnosperms
<b>Family</b>	ZAMIACEAE
<b>Synonyms</b>	Encephalartos eugene-maraisii I. Verd. subsp. middelburgensis Lavranos & D.L.Goode
<b>Common Names</b>	Broodboom (a), Cycad (e), Middelburg Cycad (e), Middelburg-broodboom (a)

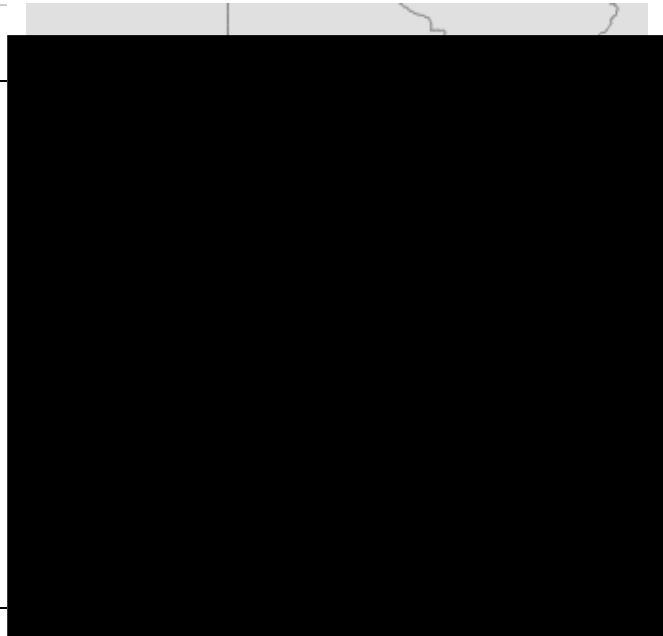
### National Status

<b>Status and Criteria</b>	<b>Critically Endangered</b> <b>A2acd+4acd; C1</b>
<b>Assessment Date</b>	2009/10/31
<b>Assessor(s)</b>	J.S. Donaldson
<b>Justification</b>	Recent surveys by conservation officials indicate the remaining wild population consists of ± 120 individuals. Subpopulations have continued to decline due to illegal collecting and some subpopulations are also impacted by disease. Overall population reduction in the past three generations (90 years) exceeds 80%. Surveys of seed set and pollinator abundance also indicate that several subpopulations are not producing viable seed.

### Distribution

<b>Endemism</b>	South African endemic
<b>Provincial distribution</b>	Gauteng, Mpumalanga
<b>Range</b>	Witbank and Middelburg districts.

### Habitat and Ecology



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**Major system** Terrestrial  
**Major habitats** Loskop Mountain Bushveld, Rand Highveld Grassland  
**Description** Open grasslands and in sheltered valleys.

## Threats

The discovery of the species in the Middelburg district triggered considerable collector interest during the 1960s. The general accessibility of sites and the proximity of the distribution region to the Pretoria/Witwatersrand urban complex resulted in an extremely heavy exploitation when cycad-collecting became a fashion (Fourie 1984). Although legislation has curbed the activities of collectors, the exploitation is still ongoing today. The development of semi-intensive agriculture within and around the distribution range of the species is suspected to have had a tremendous effect on the stability of the population, especially with the increased burning of the habitat and grazing practices (Fourie 1984). The species is extremely vulnerable to fire and not stimulated as is the case with *Encephalartos lanatus* (Fourie 1984). Individual plants have become isolated and there is consequent reproductive failure (Fourie 1984).

## Population

*E. middelburgensis* has declined continuously over at least the past 40 years and populations are still declining due to poaching and disease. Based on numbers of plants in collections, rate of decline, and a limited number of repeat photographs, decline is estimated as >80% over the past 50 years. The remaining wild population consists of an estimated 120 mature individuals.

**Population trend** Decreasing

## Conservation

Recorded from various private nature reserves. The species is listed as Specially Protected in provincial conservation Ordinances and is included on the National Environmental Management: Biodiversity Act's list of Threatened or Protected Species (TOPS), as well as CITES Appendix I. Within Gauteng, most wild individuals occur within private nature reserves.

## Assessment History

Taxon assessed	Status and Criteria	Citation/Red List version
Encephalartos middelburgensis	CR A2acd; C1	Raimondo et al. (2009)
Vorster, Robbertse &		

S.van der Westh.  
 Encephalartos **CR** Pfab and  
 middelburgensisA2acd+3cd Victor (2002)  
 Vorster,  
 Robbertse &  
 S.van der Westh.  
 Encephalartos **Endangered**Hilton-Taylor  
 middelburgensis (1996)  
 Vorster,  
 Robbertse &  
 S.van der Westh.

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## Citation

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