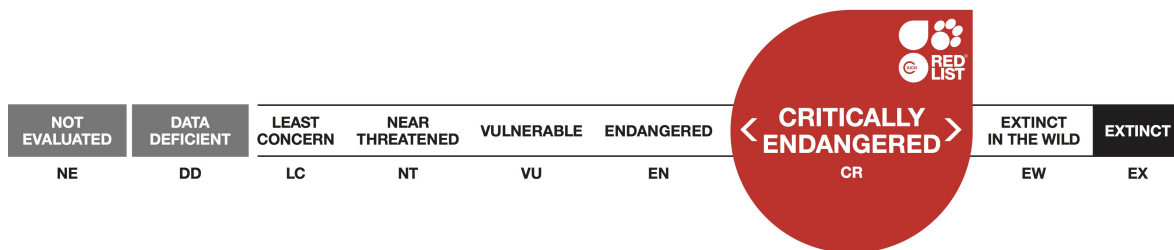




Centromerus sexoculatus

Assessment by: Cardoso, P., Crespo, L.C., Silva, I., Borges, P. & Boeiro, M.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Arachnida	Araneae	Linyphiidae

Taxon Name: *Centromerus sexoculatus* Wunderlich, 1992

Taxonomic Source(s):

Platnick, N.I. 2014. The World Spider Catalog, Version 14.5. P. Merrett & H.D. Cameron (eds). American Museum of Natural History. Available at: <http://research.amnh.org/iz/spiders/catalog/index.html>. (Accessed: 31 March 2014).

Taxonomic Notes:

Possible senior synonymy with *Centromerus anoculus* Wunderlich, 1995 (Reboleira et al. 2011)

Assessment Information

Red List Category & Criteria: Critically Endangered B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) [ver 3.1](#)

Year Published: 2018

Date Assessed: January 17, 2018

Justification:

Centromerus sexoculatus is only known from a single lava tube system on the island of Madeira, Portugal. This species is assessed as Critically Endangered (CR), since it has a very restricted geographic range (extent of occurrence (EOO) and area of occupancy (AOO) are both only 4 km²) and there is a continuing decline in the EOO, AOO and the number of mature individuals. Additionally, the number of locations is only one, based on the habitat degradation due to uncontrolled visits to the caves and accumulation of litter. The remaining habitat of the species needs to be protected and a management plan for the habitat as well as the species should be implemented. More research is needed, especially into the taxonomy, the population trend and the ecology of the species.

Geographic Range

Range Description:

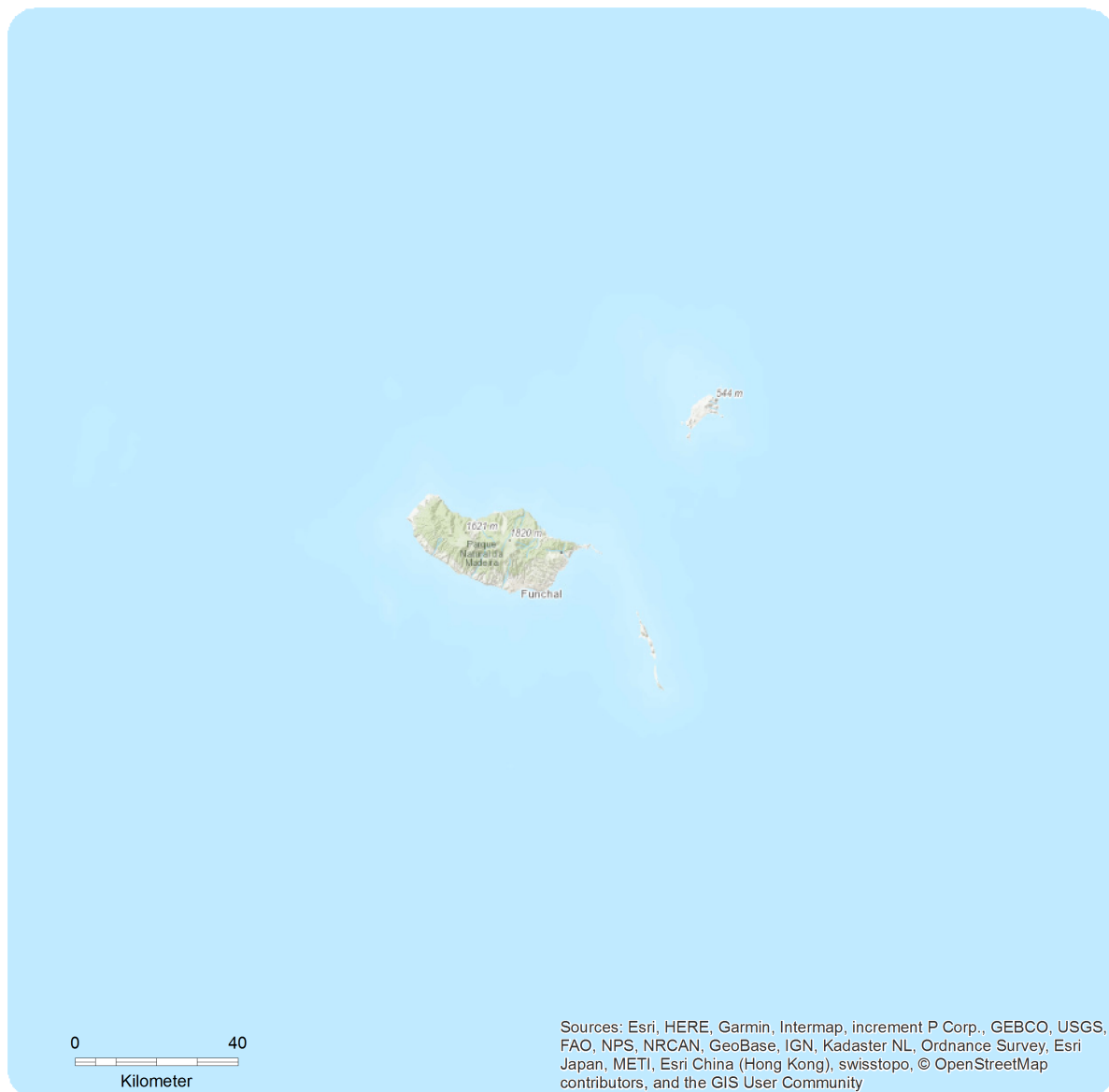
Centromerus sexoculatus is only found in the lava tubes of Furnas do Cavalum, close to Machico on eastern Madeira Island (Wunderlich 1992), although, if the synonymy with the more widespread *C. anoculus* is confirmed, it occupies two cave systems (see assessment for the latter species). Given the relative scarcity and small size of caves in Madeira, this could correspond to the entire range of the species. The extent of occurrence (EOO) and area of occupancy (AOO) are both only 4 km².

Country Occurrence:

Native: Portugal (Madeira)

Distribution Map

Centromerus sexoculatus



Range

Extant (resident)

Compiled by:

IUCN (International Union for Conservation of Nature)



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



Population

A single subpopulation exists of unknown size. The population is assumed to be decreasing, inferred by the threats of visits to the caves and accumulation of litter (Reboleira *et al.* 2011) which decrease the habitat quality and ability of the species to occupy its full historical range.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Centromerus sexoculatus is known from a single lava tube system, Furnas do Cavalum, Machico. This is a troglobiont species with considerable eye reduction, depigmentation and appendage elongation. Ecology and traits are largely unknown as the only reference to the species is from a short taxonomic description. However, congeners are known to build sheet webs and this species might build them on cave walls on the hunt for insects.

Systems: Terrestrial

Use and Trade

This species is not utilized.

Threats (see Appendix for additional information)

This species is possibly threatened by uncontrolled visits to the caves and accumulation of litter (Reboleira *et al.* 2011) which decrease the habitat quality and ability of the species to occupy its full historical range. Based on this threat it only occurs in one location.

Conservation Actions (see Appendix for additional information)

No specific conservation measures are in place for this species. Furnas do Cavalum are considered scientific patrimony by the "Plano Director Municipal" of Machico. Yet, this cave species would benefit from effective protection with adequate legislation of the lava tube system where it occurs with eventual restoration of natural conditions of the environment and recovery of its population. It should also be formally protected by adequate legislation. The taxonomical status of the species and possible synonymy with *C. anoculus* should be clarified. Research on population trends and its causes is needed to know the real threat levels and how to minimize them. A species conservation plan and a management plan would improve its survival chances for the future.

Credits

Assessor(s): Cardoso, P., Crespo, L.C., Silva, I., Borges, P. & Boieiro, M.

Reviewer(s): Henriques, S. & Russell, N.

Bibliography

IUCN. 2018. The IUCN Red List of Threatened Species. Version 2018-2. Available at: www.iucnredlist.org. (Accessed: 15 November 2018).

Reboleira, A.S.; Borges, P.; Goncalves, F.; Serrano, A.; Oromi, P. 2011. The subterranean fauna of a biodiversity hotspot region - Portugal: an overview and its conservation. *International Journal of Speleology* 40(1): 23-27.

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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?
7. Caves and Subterranean Habitats (non-aquatic) -> 7.1. Caves and Subterranean Habitats (non-aquatic) - Caves	Resident	Suitable	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success		
9. Pollution -> 9.4. Garbage & solid waste	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 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 Research, Monitoring and Planning
Action Recovery plan: No
Systematic monitoring scheme: No
In-Place Land/Water Protection and Management
Conservation sites identified: No
Occur in at least one PA: No
Percentage of population protected by PAs (0-100): 0
Area based regional management plan: No
Invasive species control or prevention: No
In-Place Species Management

Conservation Actions in Place
Harvest management plan: No
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No
In-Place Education
Subject to recent education and awareness programmes: No
Included in international legislation: No
Subject to any international management/trade controls: No

Conservation Actions Needed

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

Conservation Actions Needed
1. Land/water protection -> 1.1. Site/area protection
1. Land/water protection -> 1.2. Resource & habitat protection
2. Land/water management -> 2.3. Habitat & natural process restoration
3. Species management -> 3.2. Species recovery
5. Law & policy -> 5.1. Legislation -> 5.1.1. International level
5. Law & policy -> 5.1. Legislation -> 5.1.2. National level
5. Law & policy -> 5.1. Legislation -> 5.1.3. Sub-national level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-national level

Research Needed

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

Research Needed
1. Research -> 1.1. Taxonomy
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
2. Conservation Planning -> 2.1. Species Action/Recovery Plan
2. Conservation Planning -> 2.2. Area-based Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 4
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): No
Estimated extent of occurrence (EOO) (km ²): 4
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): No
Number of Locations: 1
Continuing decline in number of locations: No
Extreme fluctuations in the number of locations: No
Lower elevation limit (m): 150
Upper elevation limit (m): 150
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: Unknown
Population severely fragmented: No
No. of subpopulations: 1
Continuing decline in subpopulations: No
Extreme fluctuations in subpopulations: No
All individuals in one subpopulation: Yes
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 1
Movement patterns: Not a Migrant

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