The IUCN Red List of Threatened Species™
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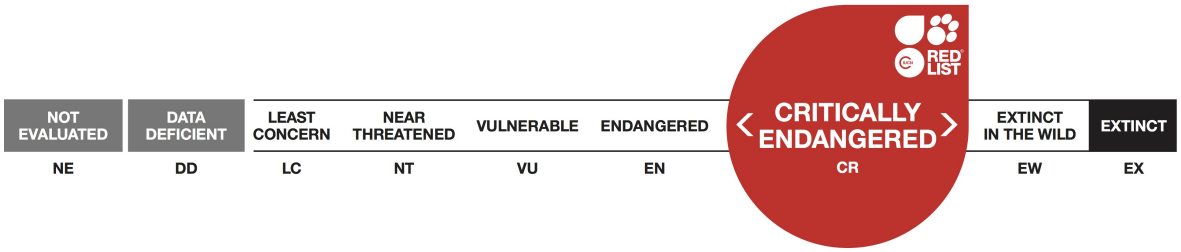
Scope: Global
Language: English

Trechus oromii, Cave grround-beetle

Assessment by: Borges, P.A.V. & Amorim, I.R.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Carabidae

Taxon Name: *Trechus oromii* Borges, Serrano & Amorim, 2004

Common Name(s):

- English: Cave grround-beetle

Taxonomic Source(s):

Anichtchenko A. et al., (editors):. 2016. Carabidae of the World. Available at: http://www.carabidae.org .

Assessment Information

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

Year Published: 2017

Date Assessed: December 5, 2016

Justification:

Trechus oromii is an endemic cave adapted species known from a single island, Faial (Azores, Portugal). It has a very small extent of occurrence (EOO = 4 km²) and reduced area of occupancy (AOO = 4 km²). The species is very rare and only known from a single subpopulation. The area surrounding the cave is heavily impacted by human activities. A habitat management plan is needed and anticipated to be developed during the coming years. We suggest also as future measures of conservation the regular monitoring of the species (every ten years) and fencing the entrance of the cave where the species occurs. The species is assessed as Critically Endangered (CR).

Geographic Range

Range Description:

Trechus oromii is a cave adapted endemic species known from Faial (Azores, Portugal) (Borges *et al.* 2010), occurring in only one lava tube cave (Gruta do Parque do Capelo). The extent of occurrence (EOO) is 4 km² and the maximum estimated area of occupancy (AOO) is 4 km².

Country Occurrence:

Native: Portugal (Azores)

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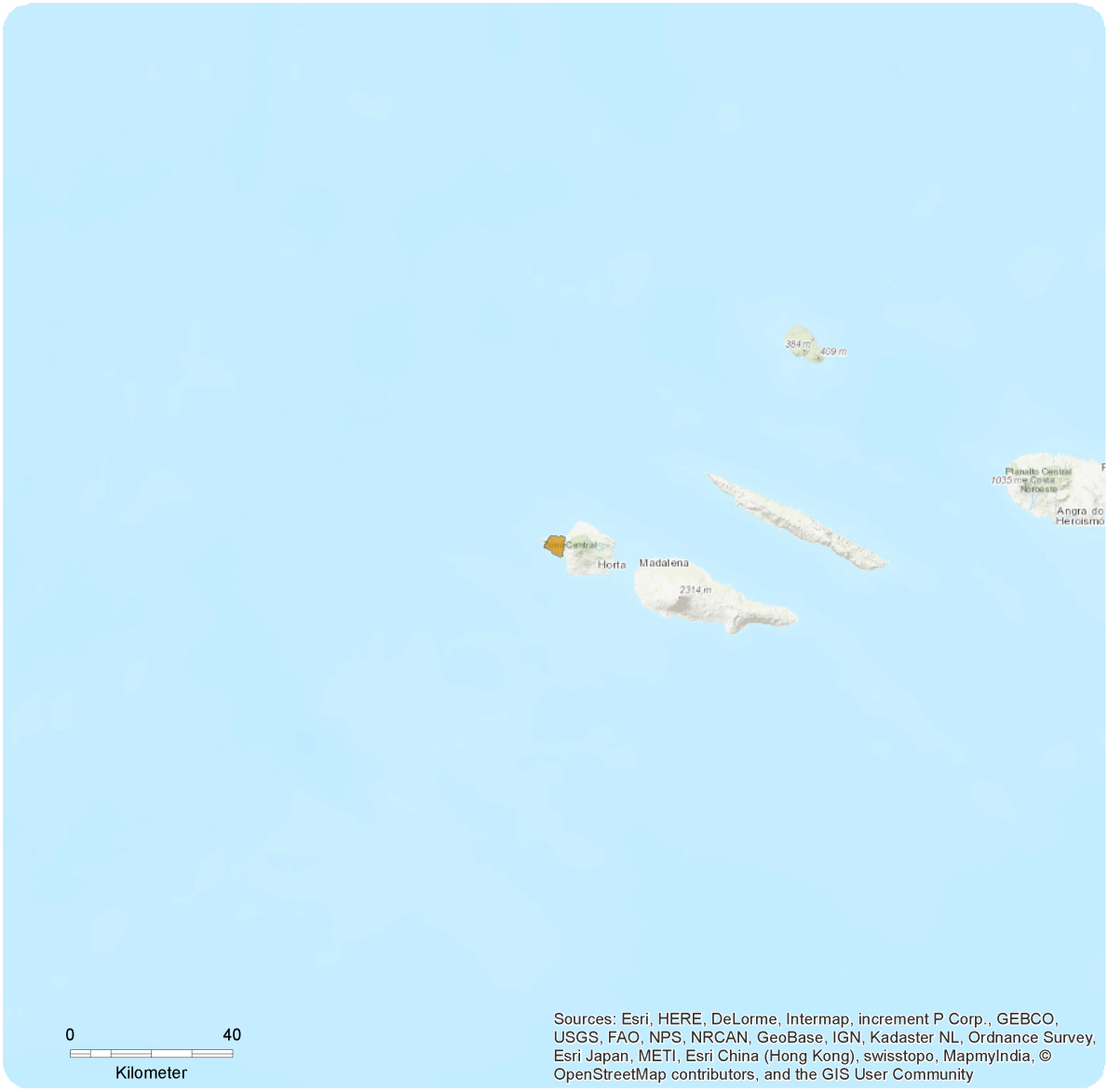
Distribution Map

Trechus oromii

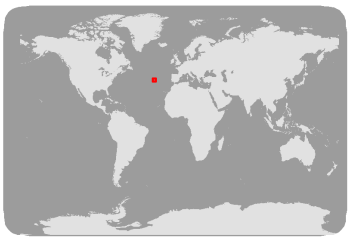


Range

Extant (resident)

Compiled by:

Paulo Borges



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

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Population

The species is very rare and only known from a single subpopulation in Faial island. The area surrounding the cave is heavily impacted by human disturbance.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

This species occurs inside of a small lave tube located in the Nature Reserve & Recreational Park of Capelo (Faial island) (Borges *et al.* 2004; Amorim 2015). It is a cavernicolous (i.e. a troglobitic species) predator and/or saprophagous species.

Systems: Terrestrial

Use and Trade

The species is not utilised.

Threats (see Appendix for additional information)

The main current threats to this species are the loss of habitat quality, due to recreational cave visitation and impact of the management of the Nature Reserve & Recreational Park where the cave is located. However, there are several future potential threats: climatic changes (see Ferreira et al. 2016) that can change the conditions inside the cave; change in the road infrastructure around the cave; potential human recreational activities with radical cave visitation and geological events (volcanic activity and earthquakes).

Conservation Actions (see Appendix for additional information)

The species is protected by regional law (RAA 2008). Its habitat is in a regionally protected area (Natural Park of Faial). Further research is needed into its ecology and life history in order to find extant specimens. It is necessary a monitoring plan for the invertebrate community in the habitat in order to contribute to the conservation of this species. We suggest as future measure of conservation the fencing the entrances of the caves where human intrusion and disturbance has been occurring. A habitat management plan is needed and anticipated to be developed during the coming years.

Credits

Assessor(s): Borges, P.A.V. & Amorim, I.R.

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RAA - Região Autónoma dos Açores. 2008. *Regime jurídico da conservação da natureza e da proteção da biodiversidade - Decreto Legislativo Regional n.° 15/2012/A de 2 de Abril*.

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Disclaimer

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
10. Geological events -> 10.1. Volcanoes	Future	Whole (>90%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
10. Geological events -> 10.2. Earthquakes/tsunamis	Future	Whole (>90%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Whole (>90%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.2. Droughts	Future	Majority (50-90%)	Rapid declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		

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		2. Species Stresses -> 2.2. Species disturbance		
4. Transportation & service corridors -> 4.1. Roads & railroads	Future	Whole (>90%)	Very rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		

Conservation Actions in Place

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

Conservation Actions in Place
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over entire range
Occur in at least one PA: Yes
Percentage of population protected by PAs (0-100): 91-100

Conservation Actions Needed

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

Conservation Actions Needed
2. Land/water management -> 2.1. Site/area management
4. Education & awareness -> 4.1. Formal education
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 -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
2. Conservation Planning -> 2.2. Area-based Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

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Distribution
Estimated area of occupancy (AOO) (km²): 4
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km²): 4
Continuing decline in extent of occurrence (EOO): Yes
Number of Locations: 1
Continuing decline in number of locations: Yes
Lower elevation limit (m): 254
Upper elevation limit (m): 254
Population
Continuing decline of mature individuals: Yes
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 1
Movement patterns: Not a Migrant

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.