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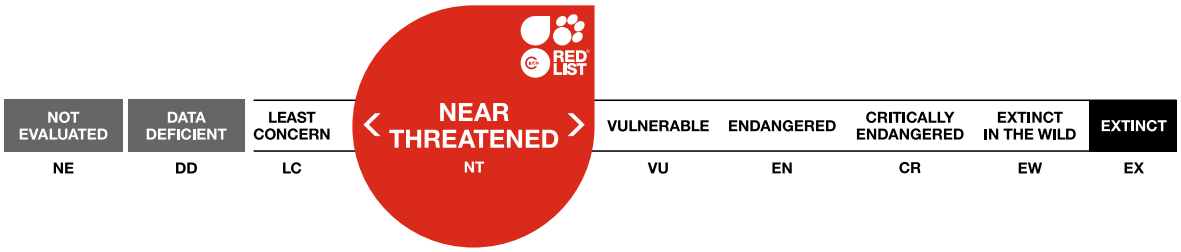
Scope(s): Global
Language: English

Humerobates pomboi

Assessment by: Nunes, R. & Borges, P.A.V.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Arachnida	Oribatida	Humerobatidae

Scientific Name: *Humerobates pomboi* Pérez-Íñigo, 1992

Assessment Information

Red List Category & Criteria: Near Threatened B1ab(iii)+2ab(iii) ver 3.1

Year Published: 2021

Date Assessed: April 1, 2018

Justification:

Humerobates pomboi is an endemic species of the Azores (Portugal), known from the islands of Flores, Graciosa, Terceira and S. Miguel. From the available data, it has a relatively small extent of occurrence (EOO = 14,670 km^2), and a limited area of occupancy (AOO = 60 km^2), which are likely underestimates, as this species probably has a wider distribution through the soil component of the islands. It can be assumed that this species is affected by human activities and invasive plant species that alter the natural structure and composition of the soil, and future climatic changes and increased risk of droughts will also affect this species. The present situation of this species needs to be further assessed and further research is needed into its population, distribution, threats, ecology and life history. However, the EOO and AOO of the species are relatively small, on the global scale, and if there were more data available it is possible that the species could qualify as threatened under criterion B. Therefore, the species is assessed as Near Threatened. Conservation of natural habitats and invasive species control could potentially aid this species' conservation.

Geographic Range

Range Description:

Humerobates pomboi is an Azorean-endemic oribatid mite species known from Flores, Graciosa, Terceira and S. Miguel islands (Azores, Portugal) (Borges *et al.* 2010), known mainly from several natural areas. It is present in six Natural Forest Reserves; Caldeiras Funda e Rasa and Morro Alto e Pico da Sé (Flores), Biscoito da Ferraria and Caldeira Sta. Bárbara e Mistérios Negros (Terceira) and Graminhais and Pico da Vara (S. Miguel). From the available data, the extent of occurrence (EOO) could be ca. 14,670 km² and the area of occupancy (AOO) could be 60 km².

Country Occurrence:

Native, Extant (resident): Portugal (Azores)

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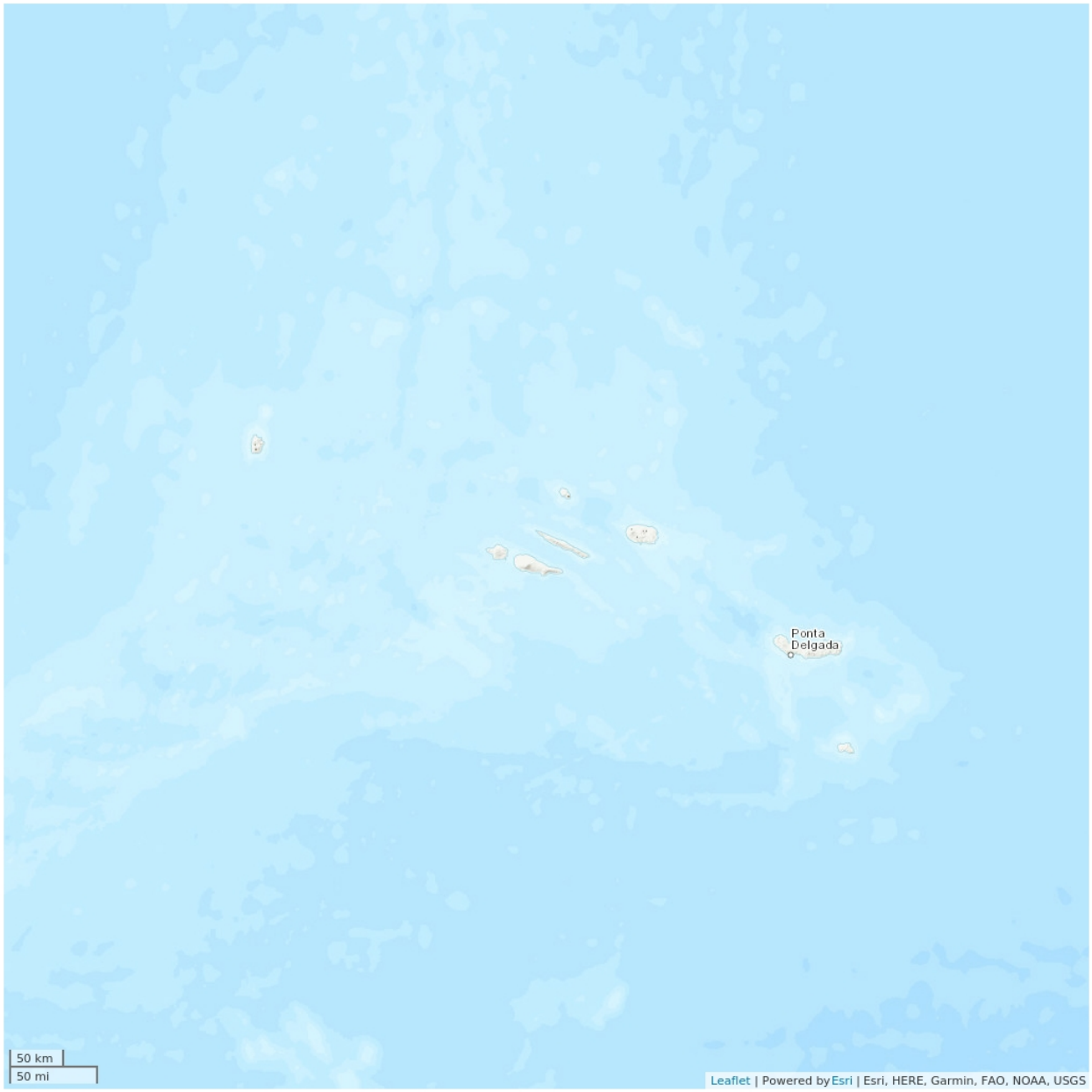
Distribution Map



Legend

EXTANT (RESIDENT)

Compiled by:

Azorean Biodiversity Group 2018

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

No current population size estimates exist for this species. This species occurs on several islands and as an oribatid mite, it is likely common and widespread in the soil habitat.

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

The ecology and traits of this species are unknown. Oribatid mites are associated with organic matter in most terrestrial ecosystems, being found throughout the soil profile, in surface litter, on grasses, shrubs or in the bark and leaves of trees, among other habitats. Oribatida are also one of the most numerically dominant arthropod groups in the organic horizons of most soils (Behan-Pelletier 1999). This species is present mainly in areas of native vegetation, but also in disturbed habitats. Some specimens of *Humerobates pomboi* were collected from under *Cryptomeria japonica* trees.

Systems: Terrestrial

Threats (see Appendix for additional information)

A lack of information regarding the present range of this species precludes an assessment of potential threats. Nevertheless, it can be assumed that this species will be affected by future habitat declines as a consequence of climate change (Ferreira *et al.*, 2016) and increased droughts. This species was found in areas of native vegetation but also in disturbed areas, and it can be assumed that factors degrade habitat quality, in the form of changes in the soil structure and composition, namely land use changes, agricultural practices, pesticides and nutrient loads or invasive plants might also affect this species.

Conservation Actions (see Appendix for additional information)

The species is not protected by regional law, but part of its habitat is in regionally protected areas (Natural Parks of Flores, Graciosa, Terceira and S. Miguel). Besides climate change and increased risk of droughts, land-use changes and invasive species are likely the main current and future threats faced. As such, conservation of native habitats and invasive species control could potentially aid this species' conservation. Further research is needed into its population, distribution, threats, ecology and life history, and it is necessary to develop a monitoring plan for the invertebrate community in order to contribute to the conservation of this species.

Credits

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

Reviewer(s): Russell, N.

Authority/Authorities: IUCN SSC Spider and Scorpion 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 -> 1.4. Forest - Temperate	Resident	Suitable	Yes
3. Shrubland -> 3.4. Shrubland - Temperate	Resident	Suitable	Yes
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	Resident	Unknown	-

Threats

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

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	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	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.1. Unspecified species	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.1. Nutrient loads	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.3. Herbicides and pesticides	Ongoing	Minority (50%)	Very rapid declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Majority (50-90%)	Slow, significant declines	Low impact: 4
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		

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11. Climate change & severe weather -> 11.2. Droughts	Future	Majority (50-90%)	Slow, significant declines	Low impact: 4
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		

Conservation Actions in Place

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

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No
Systematic monitoring scheme: No
In-place land/water protection
Conservation sites identified: No
Occurs in at least one protected area: Yes

Conservation Actions Needed

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

Conservation Action Needed
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
5. Law & policy -> 5.1. Legislation -> 5.1.3. 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
1. Research -> 1.5. Threats
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): 60
Continuing decline in area of occupancy (AOO): Unknown
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km²): 14670
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): Unknown
Number of Locations: 6
Continuing decline in number of locations: Unknown
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 200
Upper elevation limit (m): 600
Population
Continuing decline of mature individuals: Unknown
Extreme fluctuations: Unknown
Population severely fragmented: Unknown
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Unknown

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.