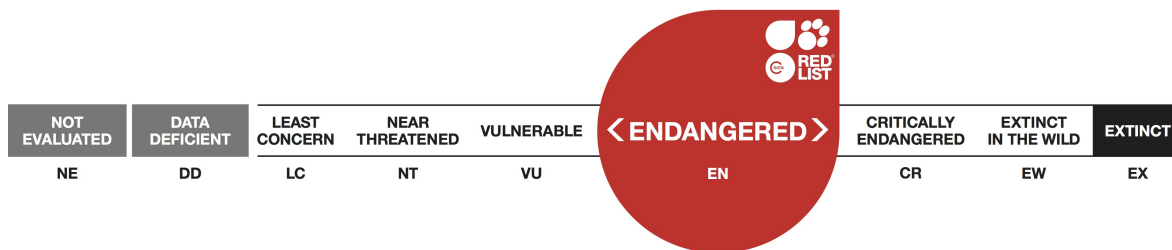


Scybalocanthon arcabuquensis

Assessment by: Medina, C. & Cardoso, P.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Scarabaeidae

Taxon Name: *Scybalocanthon arcabuquensis* Molano & Medina, 2010

Identification Information:

Is a typical medium sized roller dung beetle (7-8 mm.), with elongated medial and posterior legs. The species is dark and it has a very distinctive colour pattern in the pronotum, a clear white spot in the middle that is unique for this species.

Assessment Information

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

Year Published: 2018

Date Assessed: August 31, 2017

Justification:

Dung beetles are amply used as indicators of habitat quality due to their association with food resources from animal dung or carrion. In general dung beetles are collected massively in dung beetle traps, and low numbers of individuals in the surveys are likely to reflect a small population size. *S. arcabuquensis* has an extent of occurrence (EOO) of 4817 km² and an area of occupancy (AOO) of 56 km². The presence of this species is conditioned to oak forests in a narrow altitudinal range of the oriental Andean mountain chain. Currently less than 10% of the original forest extent and probably less than 5% of the high Andean forest remains conserved (Etter *et al.* 2006). Based on the map of terrestrial and marine ecosystems of Colombia (IDEAM *et al.* 2007), we estimate that more than 50% of the subpopulations where the species occurs are isolated, without connectivity each with low numbers of individuals and all are possibly decreasing in numbers making the subpopulations potentially non-viable. We therefore infer that the population of *S. arcabuquensis* is severely fragmented. Continuing decline has been observed due to the loss of at least one of the localities. Also, the species has a very low number of records in collections (224 registers in 20 years), compared to other species of forest dung beetles, with similar biology, size, and distribution. The species is therefore assessed as Endangered, under criteria B1ab(ii,iii,v)+2ab(ii,iii,v). It is urgent to obtain information on population dynamics and to know the status of subpopulations, both size and viability, to confirm the current status.

Geographic Range

Range Description:

Scybalocanthon arcabuquensis is a species of dung beetle of the subfamily Scarabaeinae, with a distribution restricted to the Oriental Chain of Mountains in Colombia (Departments of Boyacá and Santander). It is one of the few species of the genus that occurs above 2000 meters (Molano & Medina

2010). Its extent of occurrence (EOO) is observed at 4817 km², the area of occupancy (AOO) at 56 km².

It is currently known from the following localities: Boyacá, Arcabuco, Peñas Blancas (2546 - 2574 m), Boyacá, Arcabuco, Pomeca (2650 m), Boyacá, Arcabuco, SFF Iguaque (2730 m), Boyacá, Miraflores, Guamal (2182 m), Boyaca, Ramiriqui, Escobal (3201 m), Boyacá, Tibaná, Suta arriba (2935 m), Santander, El Encino, El Desengaño (2238 m), Santander, El Encino, Los Nogales (2102 m), Santander, El Encino, Martina Flórez (2257 m), Santander, El Peñón, Jabonera (2820 m)

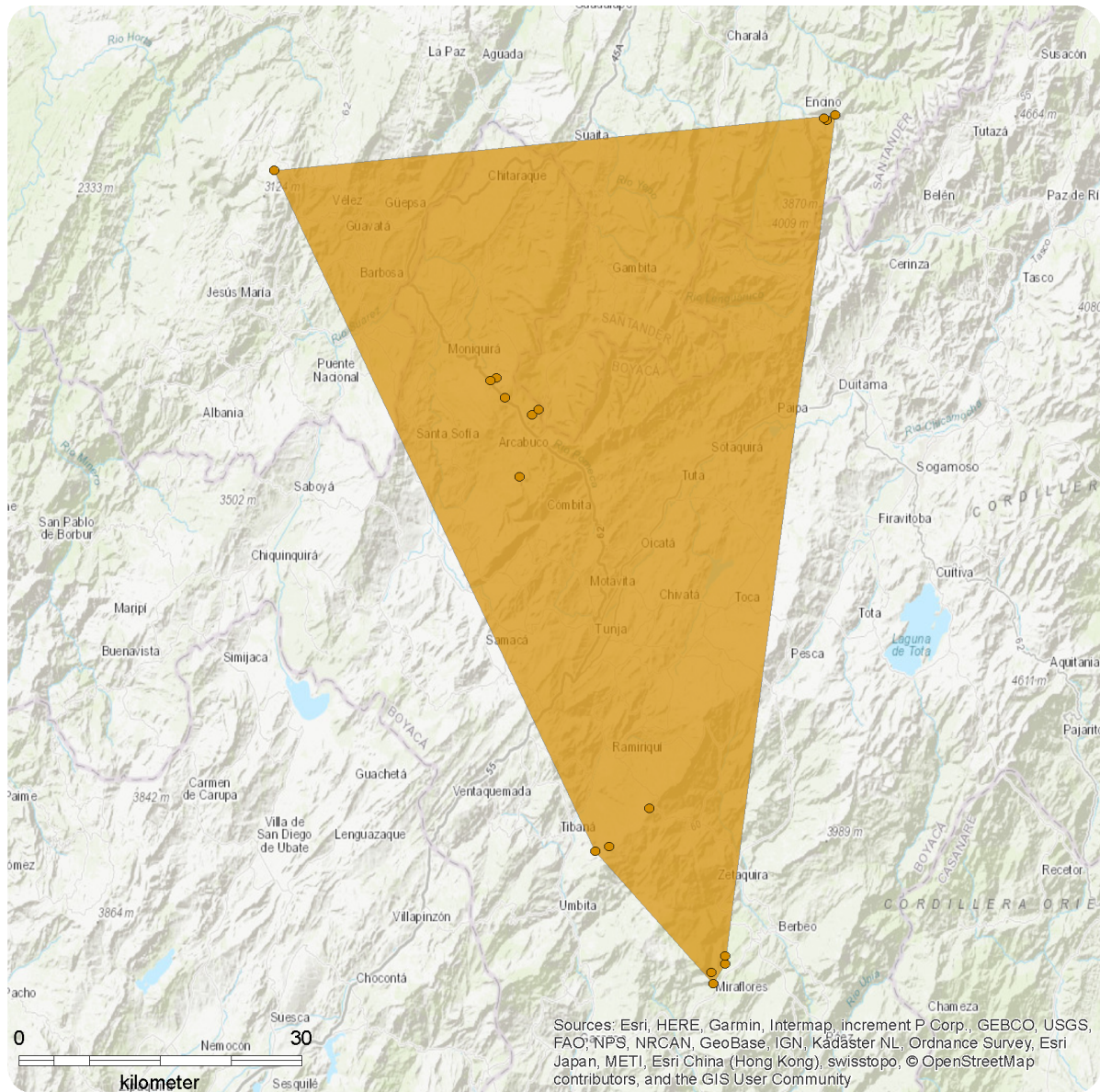
Continuing declining is occurring with the recent loss of at least one of the subpopulations. Intensive sampling was carried out in one of the localities after 12 years, and no individuals were registered. It is unknown if this is due to changes in the population structure or external effects on the quality of the habitat, as the species requires well-preserved forest.

Country Occurrence:

Native: Colombia (Colombia (mainland))

Distribution Map

Scybalocanthon arcabuquensis



Range

LEGEND

- Extant (resident)
- Extant (resident)

Compiled by:

Anja Danielczak



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



Population

The population of *S. arcabuquensis* is composed of five subpopulations with low numbers of individuals. There is not enough information for the population size to be estimated. However, it is known that the natural forest coverage, where the species occurs, is fragmented and populations could be isolated.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The species is restricted to humid mountain forest between 2,100 and 3,200 m Asl. Not much is known about the behaviour and ecology of the species, but it seems it is highly specialised because the efforts for *ex-situ* breeding has been unsuccessful and it has been searched without success in other areas of restored forest, near to where the species has been already collected.

Systems: Terrestrial

Use and Trade

Dung beetles of this size, near 10 mm, normally are not traded and there are no records of trade for this species.

Threats (see Appendix for additional information)

Deforestation mainly for pastures and livestock, as well as local hunting of native mammals, are the main threats to this species. It appears to have specific habitat requirements, and probably had as requirement some type of mammal dung or another unknown specific source of food provided by the forest. The main threat for the species is the loss of habitat. This threat has not ceased and in fact the natural forest is also affected by wood logging and threatened by growing mining and tourism activities, identified in the species range (Cordoba *et al.* 2017).

Conservation Actions (see Appendix for additional information)

There are no known species-specific conservation measures for this species. Establishment of protected areas, connectivity between forests, implementing processes of habitat restoration and educational programs will be necessary to guarantee the survival of the species. Since the description in 2010, there is no further information available. For this reason, it is mandatory to get basic information in natural history, life cycle and biology of the species. It is also important to gather information in aspects such as ecology and population dynamics to estimate the subpopulations size, as well as movement patterns in the landscape. Finally, it is necessary to identify other possible sources of threats such as the use of pesticides in nearby agricultural areas. It is imperative to develop a monitoring plan in order to identify population trends.

Credits

Assessor(s): Medina, C. & Cardoso, P.

Reviewer(s): Hochkirch, A.

Bibliography

Cardoso, P. 2017. red: IUCN Redlisting Tools. .

Etter A., C. MacAlpine, D. Pullar & H. Possingham. 2006. Modelling the conversion of Colombian lowland ecosystems since 1940: Drivers, patterns and rates. *Journal of Environmental Management* 79: 74–87.

IDEAM, IGAC, IAVH, INVEMAR, SINCHI, IAP. 2007. Ecosistemas continentales, costeros y marinos de Colombia. Bogotá, D.C.

IUCN. 2018. The IUCN Red List of Threatened Species. Version 2018-1. Available at: www.iucnredlist.org. (Accessed: 28 June 2018).

Molano F. & C.A. Medina. 2010. Especie nueva de *Scybalocanthon* (Coleoptera:Scarabaeinae: Canthonini) y descripción de la variación del organo genital masculino . *Revista Mexicana de Biodiversidad* 81: 689- 699.

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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?
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	Resident	Suitable	Yes

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%)	Unknown	Unknown
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	-	-
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	-	-	-
3. Energy production & mining -> 3.2. Mining & quarrying	Future	Unknown	Unknown	Unknown

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
In-Place Species Management
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No

Conservation Actions in Place
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 -> 2.1. Site/area management
2. Land/water management -> 2.3. Habitat & natural process restoration
3. Species management -> 3.4. Ex-situ conservation -> 3.4.1. Captive breeding/artificial propagation

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
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 56
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): No
Estimated extent of occurrence (EOO) (km ²): 4817
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): No

Distribution
Number of Locations: 5
Continuing decline in number of locations: No
Extreme fluctuations in the number of locations: No
Lower elevation limit (m): 2182
Upper elevation limit (m): 3201
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: Unknown
Population severely fragmented: Yes
No. of subpopulations: 5
Continuing decline in subpopulations: Unknown
Extreme fluctuations in subpopulations: Unknown
All individuals in one subpopulation: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 1

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