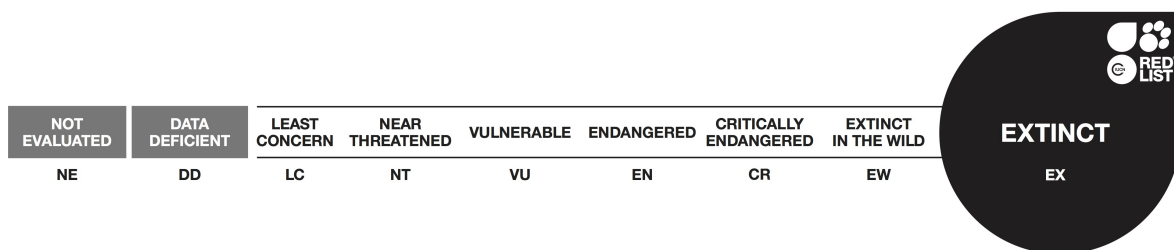


## *Calathus extensicollis*, Ground beetle

Assessment by: Borges, P.A.V.



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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Carabidae

**Taxon Name:** *Calathus extensicollis* Putzeys, 1863

### Synonym(s):

- *Calathus mollis* Marsh.

### Common Name(s):

- English: Ground beetle

### Taxonomic Source(s):

Roskov, Y., Abucay, L., Orrell, T., Nicolson, D., Kunze, T., Culham, A., Bailly, N., Kirk, P., Bourgoin, T., DeWalt, R.E., Decock, W., De Wever, A., eds. 2016. Catalogue of Life. Available at: <http://www.catalogueoflife.org>.

### Identification Information:

*Calathus extensicollis* was described from a single mature female collected in Pico island and deposited in the collection of Chaudoir. The hind-wings are quite reduced (Lindroth, 1960).

## Assessment Information

**Red List Category & Criteria:** Extinct [ver 3.1](#)

**Year Published:** 2018

**Date Assessed:** July 16, 2016

### Justification:

*Calathus extensicollis* was endemic to Pico (Azores, Portugal). It has a very small extent of occurrence (EOO = 0-16 km<sup>2</sup>) and area of occupancy (AOO = 0-16 km<sup>2</sup>). The last record dates from 1859. Exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual (Borges *et al.* 2016). The species is considered Extinct.

## Geographic Range

### Range Description:

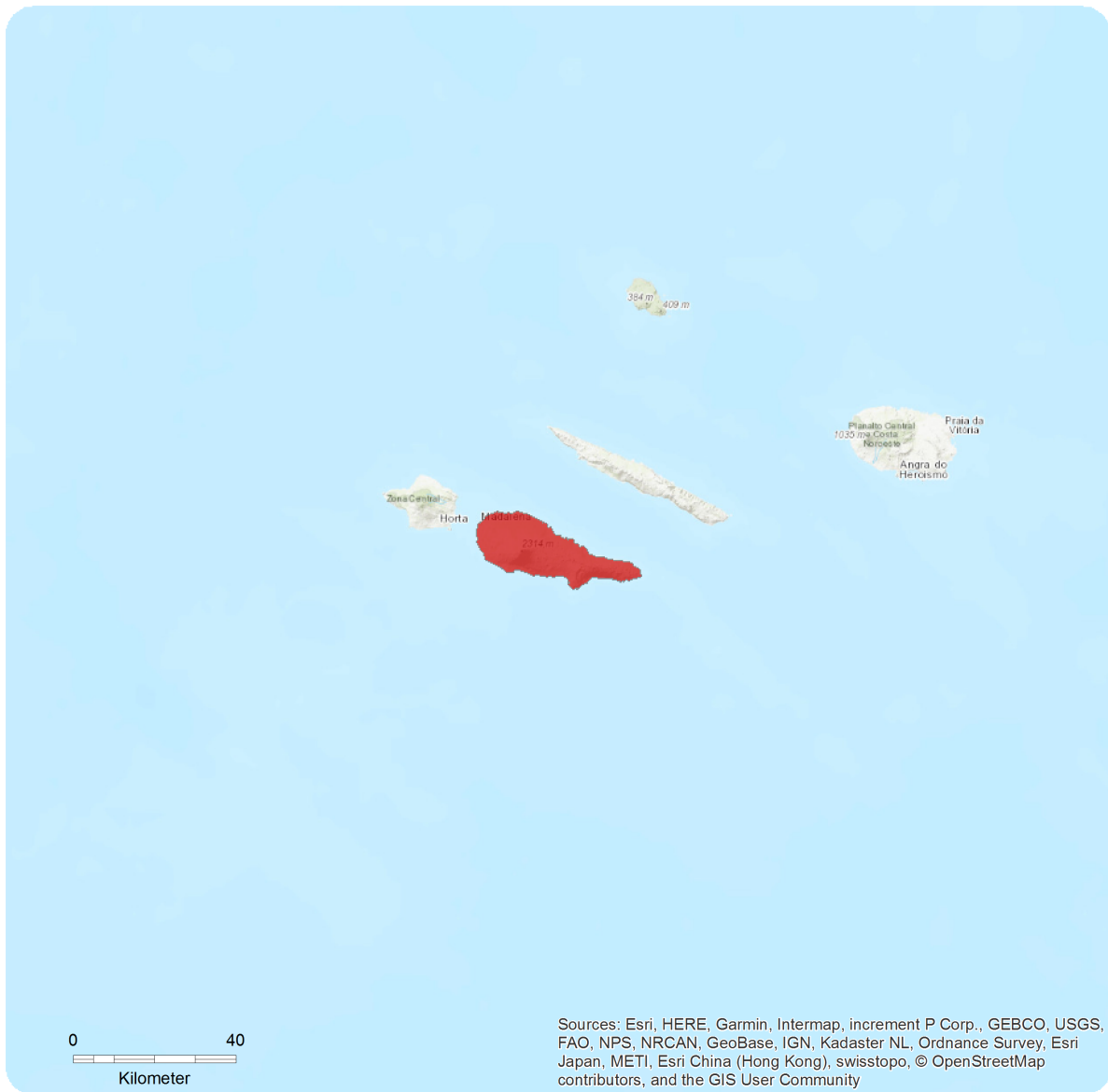
*Calathus extensicollis* was a single island endemic species restricted to Pico (Azores, Portugal) (Borges *et al.* 2010), known from high elevation native forest (900-1000 m). This large bodied species is considered extinct (Terzopoulou *et al.* 2015). No precise location was indicated in the original description, but at the indicated elevation there are the current main remnants of native forest.

### Country Occurrence:

**Regionally extinct:** Portugal (Azores)

# Distribution Map

*Calathus extensicollis*

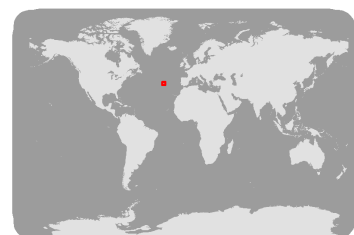


## Range

■ Extinct

## 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.



## Population

The species is only known from a single subpopulation. A continuing decline in the number of mature individuals is inferred from historical records. According to Terzopoulou *et al.* (2015) this species is extinct.

## Habitat and Ecology (see Appendix for additional information)

The species occurred in the native forest of the Pico Island (Azores). It was a night activity predator that lived in the high elevation native forest with an altitudinal range between 900 and 1000 m. This species is considered extinct (Terzopoulou *et al.* 2015).

**Systems:** Terrestrial

## Use and Trade

The species is not utilised.

## Threats (see Appendix for additional information)

In the past, the species has probably strongly declined due to changes in habitat size and quality and its large body size (Terzopoulou *et al.* 2015).

## Conservation Actions (see Appendix for additional information)

The species is not protected by regional law. Its habitat is in a regionally protected area (Natural Park of Pico). Further research is needed into its ecology and life history in order to find extant specimens and obtain information on population size, distribution and trends.

## Credits

**Assessor(s):** Borges, P.A.V.

**Reviewer(s):** Danielczak, A.

**Contributor(s):** Lamelas-López, L.

## Bibliography

Borges, P.A.V., Costa, A., Cunha, R., Gabriel, R., Gonçalves, V., Martins, A.F., Melo, I., Parente, M., Raposeiro, P., Rodrigues, P., Santos, R.S., Silva, L., Vieira, P. and Vieira, V. 2010. *A list of the terrestrial and marine biota from the Azores*. Príncipeia, Cascais.

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Lindroth, C.H. 1960. The Ground-Beetles of the Azores (Coleoptera: Carabidae) with some reflexions on over-seas dispersal. *Boletim do Museu Municipal do Funchal* 13(31): 5-48.

Terzopoulou, S., Rigal, F., Whittaker, R.J., Borges, P.A.V. & Triantis, K.A. 2015. Drivers of extinction: the case of Azorean beetles. *Biology Letters* 11: 1-4.

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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 -> 1.4. Forest - Temperate	Resident	Suitable	Yes

### 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 -> 2.1.1. Shifting agriculture	Past, unlikely to return	Minority (50%)	Very rapid declines	Past impact
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success		

### Conservation Actions Needed

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

Conservation Actions Needed
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
2. Land/water management -> 2.3. Habitat & natural process restoration
4. Education & awareness -> 4.1. Formal education
4. Education & awareness -> 4.3. Awareness & communications
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

<b>Research Needed</b>
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

## Additional Data Fields

<b>Distribution</b>
Estimated area of occupancy (AOO) (km <sup>2</sup> ): 0-16
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 0-16
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): Unknown
Number of Locations: 1
Continuing decline in number of locations: Unknown
Lower elevation limit (m): 900
Upper elevation limit (m): 1000
<b>Population</b>
Continuing decline of mature individuals: Unknown
Population severely fragmented: No
<b>Habitats and Ecology</b>
Continuing decline in area, extent and/or quality of habitat: Yes
Movement patterns: Not a Migrant

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