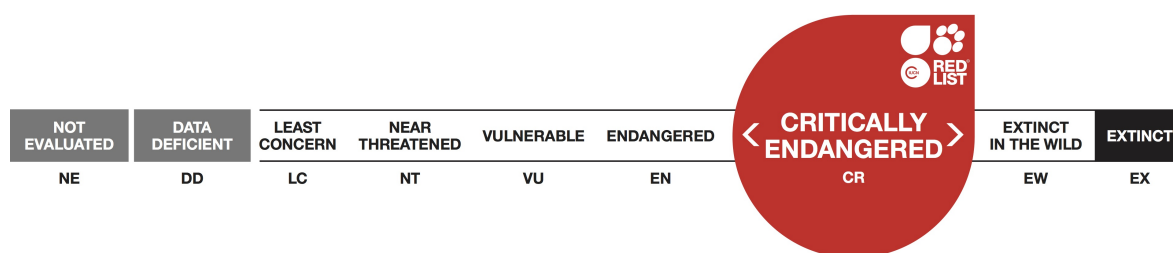


## *Helenoconcha relict*, Ammonite snail

Assessment by: White, L. & Pryce, D.



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## Taxonomy

| Kingdom  | Phylum   | Class      | Order           | Family     |
|----------|----------|------------|-----------------|------------|
| Animalia | Mollusca | Gastropoda | Stylommatophora | Charopidae |

**Taxon Name:** *Helenoconcha relict*a Solem, 1977

**Common Name(s):**

- English: Ammonite snail

## Assessment Information

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

**Year Published:** 2014

**Date Assessed:** August 22, 2014

**Justification:**

This is a highly restricted species that mainly occurs on the highest parts of the High Central Ridge but one specimen has also been found at Deep Valley Gumwoods (*Commidendrum robustum* (Roxb.) DC.) site at intermediate elevation. It is currently found in very small patches of habitat that are under pressure from invasive non-native plants such as New Zealand Flax (*Phormium tenax* J.R. Forst. & G. Forst.) and is reliant on on-going conservation management. This species is also at elevated risk from stochastic events, such as long periods of dry weather and other climatic extremes. It has an extent of occurrence (EOO) and area of occupancy (AOO) both of 4 km<sup>2</sup> and the population is considered to be severely fragmented. Therefore, it is assessed as Critically Endangered.

**Previously Published Red List Assessments**

1996 – Not Evaluated (NE)

1994 – Endangered (E)

## Geographic Range

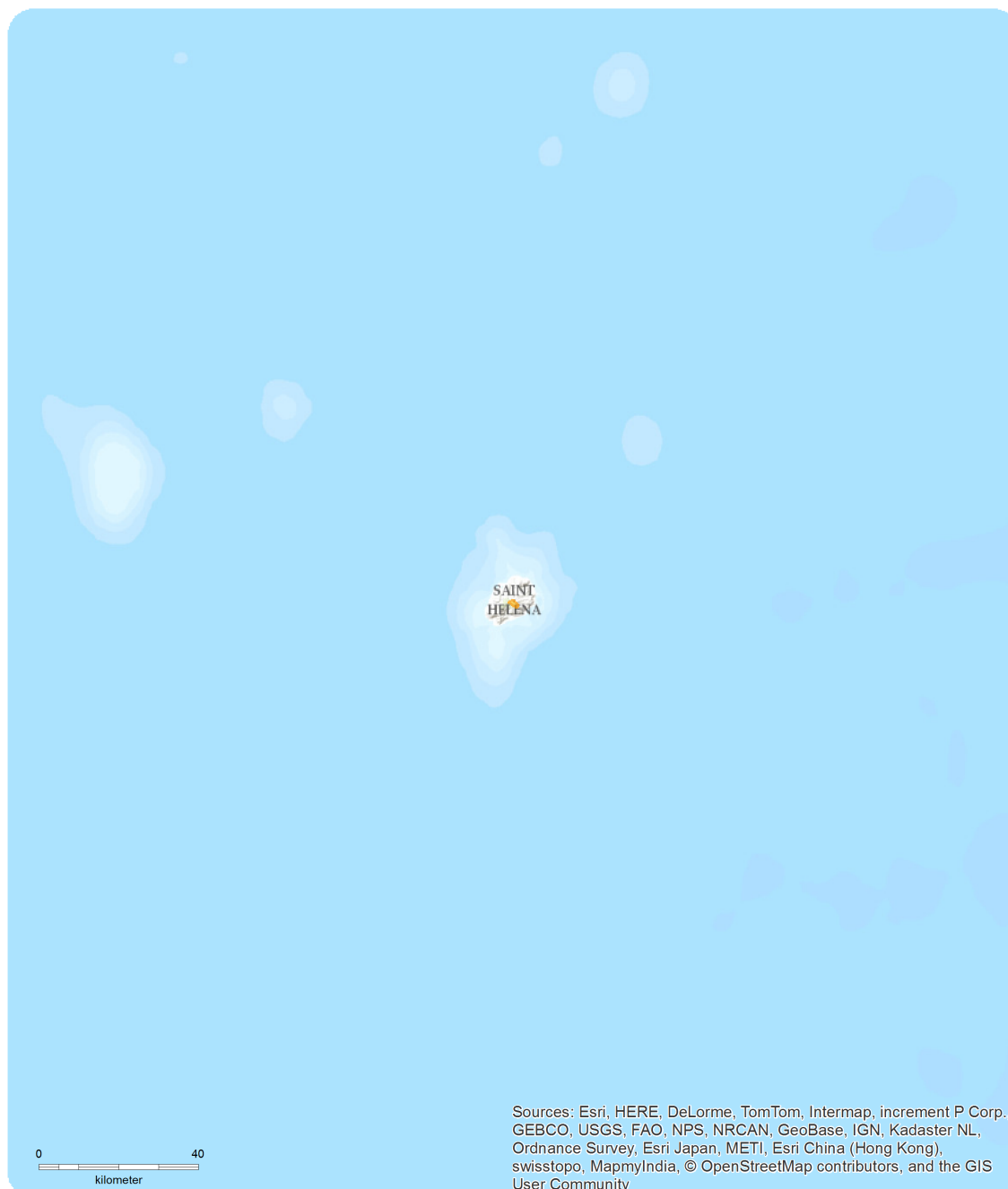
**Range Description:**

This species is endemic to the island of St Helena, in the South Atlantic Ocean, where it is almost entirely confined to the highest portions of the island.

**Country Occurrence:**

**Native:** Saint Helena, Ascension and Tristan da Cunha (Saint Helena (main island))

## Distribution Map



### *Helenoconcha relicta*

Range

■ Extant (resident)

Compiled by:  
St Helena National Trust



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



## Population

This species is confined to a few small damp areas on the High Central Ridge (Mendel, Ashmole and Ashmole 2008). The habitat in these areas is declining in quality due to invasive non-native plants, particularly New Zealand Flax (*Phormium tenax* J.R. Forst. & G. Forst), and is reliant on continuing conservation activities to clear these; were this to stop, habitat decline would be rapid. There has also been an increase in invasive non-native predator species that will also be adding pressure to this species. It is therefore inferred that the numbers of this species will be declining.

This species was thought to be extinct as it was erroneously assumed that all but one of the endemic land snails of St Helena had been lost. It was rediscovered in 2005-6 (Mendel, Ashmole and Ashmole 2008).

**Current Population Trend:** Decreasing

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

This species is mainly restricted to the upper portions of the island. It was found, during a survey conducted between 2005 and 2006, along Cabbage Tree Road where it seems to be associated with Black Scale Fern (*Diplazium filamentosum* (Roxb.) Cronk); it was also found south of the central ridge (Mendel, Ashmole and Ashmole 2008). The same survey found a further specimen at a lower elevation on a Gumwood (*Commidendrum robustum* (Roxb.)) at Deep Valley. The species has recently been found in damp valleys on the underside of Jellico (*Berula bracteata* (Roxb.) Spalik & S.R. Downie) leaves on the northeast side of the ridge. As this species seems to prefer damp habitats in the highest portions of the island it probably has an elevated chance of being affected by global warming and stochastic events, such as long periods of dry weather, particularly at lower and drier elevations.

**Systems:** Terrestrial

## Threats (see Appendix for additional information)

The habitat quality in these areas is declining due to invasive non-native plants, such as New Zealand flax (*Phormium tenax* J.R. Forst. & G. Forst.), and predatory species of animal (*e.g.* Formicidae). The habitat is reliant on continuing conservation activities involving clearing of non-native plants and re-planting native and endemics; were this to stop, habitat decline would be rapid. Global warming is also a potential threat to habitat quality. If temperatures rise, this will cause drying out of the higher elevations, reducing the area of suitable habitat available.

## Conservation Actions (see Appendix for additional information)

The habitat of this species is undergoing current conservation activities to remove invasive plant species, such as New Zealand flax (*Phormium tenax* J.R. Forst. & G. Forst), and re-plant native and endemic species to improve habitat quality and area. Any research and monitoring of this species would be of value.

## Credits

**Assessor(s):** White, L. & Pryce, D.

**Reviewer(s):** Gerlach, J.

## Bibliography

IUCN. 2014. The IUCN Red List of Threatened Species. Version 2014.3. Available at: [www.iucnredlist.org](http://www.iucnredlist.org). (Accessed: 13 November 2014).

Mendel, H., Ashmole, N.P., Ashmole, M.J. and Thorpe, E.A. 2008. Invertebrates of the Central Peaks and Peak Dale, St Helena. Commissioned by the St Helena National Trust, Jamestown, St Helena.

Solem, A. 1977. Charopidae. In: Basilewsky, P. (Ed.). La faune terrestre de l'île de Sainte-Hélène. Quatrième partie. *Annales du Musée Royal de l'Afrique Centrale, Zoologie* 220: 521-533.

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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 -> 1.6. Forest - Subtropical/Tropical Moist Lowland | Resident | Suitable    | Yes               |

### Threats

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

| Threat   | Timing    | Scope   | Severity                   | Impact Score     |
|--|-----------|---|----------------------------|------------------|
| 8. Invasive & other problematic species & genes -><br>8.1. Invasive non-native/alien species -> 8.1.1.<br>Unspecified species            | Ongoing   | Whole (>90%)  | Slow, significant declines | Medium impact: 7 |
|  | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance |                            |                  |
| 8. Invasive & other problematic species & genes -><br>8.1. Invasive non-native/alien species -> 8.1.2.<br>Named species                  | Ongoing   | Whole (>90%)  | Slow, significant declines | Medium impact: 7 |
|  | Stresses: | 2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance  |                            |                  |
| 8. Invasive & other problematic species & genes -><br>8.1. Invasive non-native/alien species -> 8.1.2.<br>Named species (Phormium tenax) | Ongoing   | Whole (>90%)  | Slow, significant declines | Medium impact: 7 |
|  | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation   |                            |                  |
| 11. Climate change & severe weather -> 11.1. Habitat shifting & alteration   | Ongoing   | Whole (>90%)  | Slow, significant declines | Medium impact: 7 |
|  | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation<br>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 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: Yes                 |

## 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 |

## 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                    |

## Additional Data Fields

| Distribution  |
|---|
| Estimated area of occupancy (AOO) (km <sup>2</sup> ): 4           |
| Extreme fluctuations in area of occupancy (AOO): No               |
| Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 4        |
| Extreme fluctuations in extent of occurrence (EOO): No            |
| Number of Locations: 2  |
| Extreme fluctuations in the number of locations: No               |
| Lower elevation limit (m): 470                                    |
| Upper elevation limit (m): 771                                    |
| Population  |
| Population severely fragmented: Yes                               |
| Habitats and Ecology  |
| Continuing decline in area, extent and/or quality of habitat: Yes |



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