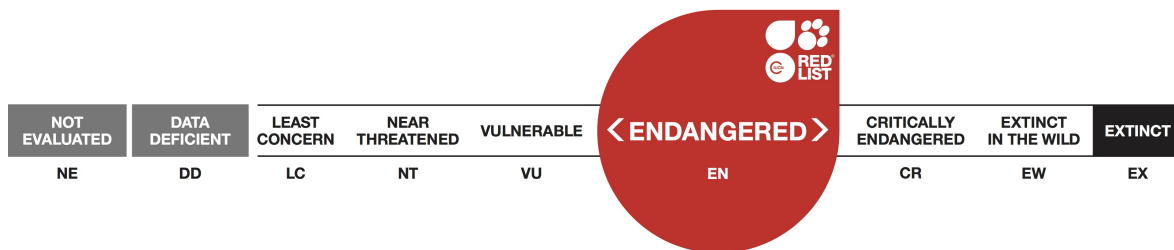


Gymnoderma insulare

Assessment by: Ohmura, Y., Nadyeina, O. & Scheidegger, C.



View on www.iucnredlist.org

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Fungi	Ascomycota	Lecanoromycetes	Lecanorales	Cladoniaceae

Taxon Name: *Gymnoderma insulare* Yoshim. & Sharp

Taxonomic Notes:

This attractive macrolichen is easy to recognize by lichen specialists. The species can be identified in the field and because it has been recognized as an extremely rare species for decades, the species is relatively well documented in literature and herbaria.

Assessment Information

Red List Category & Criteria: Endangered B2ab(i,ii,iii,v) [ver 3.1](#)

Year Published: 2014

Date Assessed: August 14, 2014

Justification:

The global distribution of this species is limited to only five locations in Japan (for the period of 1926-2012) and Taiwan (discovered in 2007), with an area of occupancy (AOO) of 24 km². This species grows in old-growth forests at the base of trunks of veteran trees of *Cryptomeria japonica* (in Japan) and *Chamaecyparis obtusa* (in Taiwan). Both host species are Near Threatened according to the IUCN Red List. Old forests with these two tree species were largely destroyed in the past by forestry or typhoons, and now only exist in limited protected areas. Hurricanes and other severe stand-level disturbances pose continuing threats to the species. It is assessed as Endangered.

Geographic Range

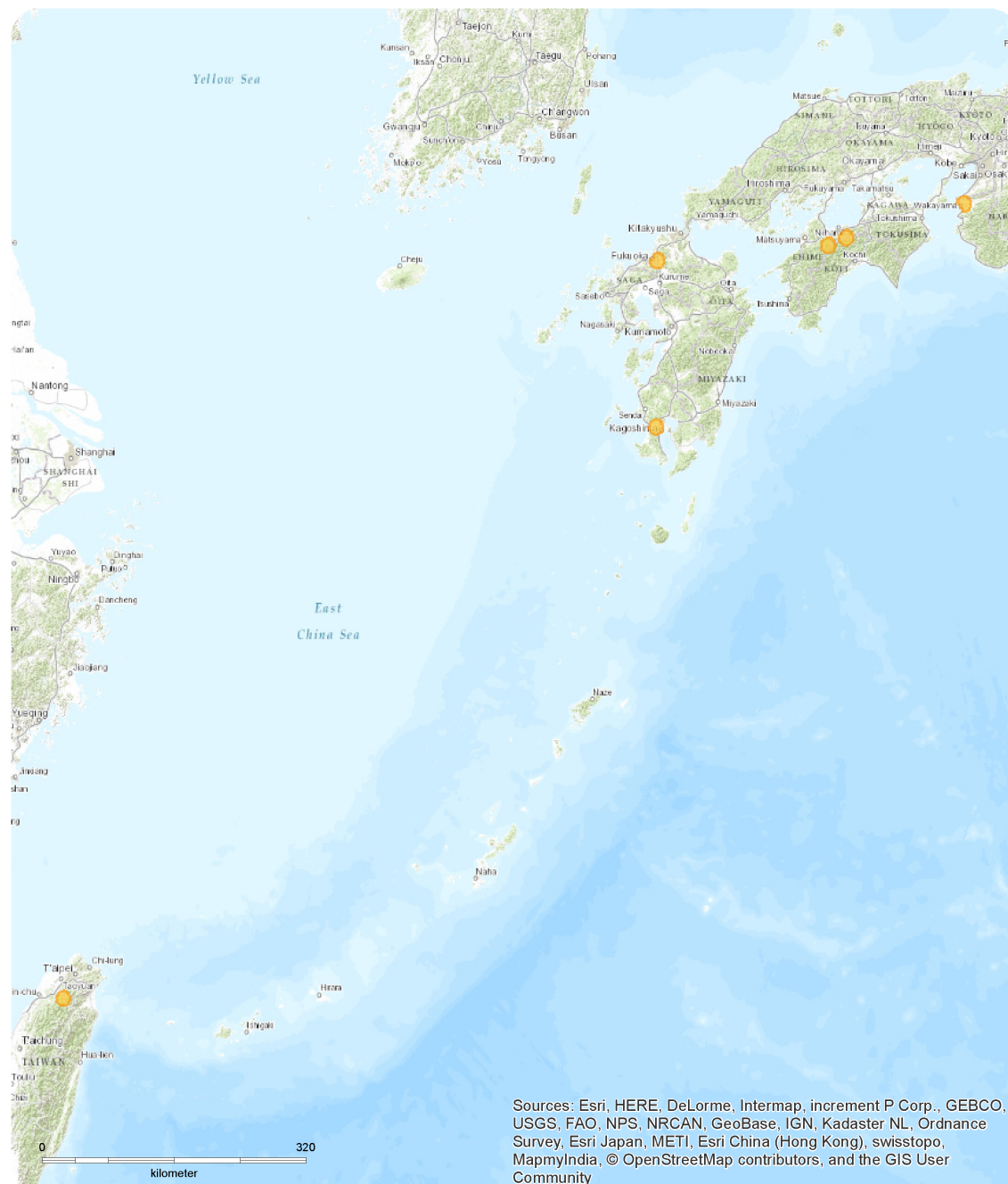
Range Description:

The species is known from Japan (Honshu, Kyushu, Shikoku) and Taiwan.

Country Occurrence:

Native: Japan (Honshu, Kyushu, Shikoku); Taiwan, Province of China (Taiwan, Province of China (main island))

Distribution Map

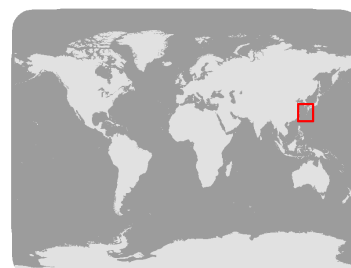


Gymnoderma insulare

Range

■ Extant (resident)

Compiled by:
IUCN (International Union for
the Conservation of Nature)



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 considered very rare but no detailed assessments of population size and possible decline exist. One out of six locations (17%) was destroyed by a typhoon in 1991, i.e. within the last generation. The extinction of the subpopulation in Fukuoka led to a 66% reduction in the extent of occurrence (EOO) and, if EOO were used as a proxy for population size assuming all sites are equal, this could represent a 66% population reduction. However, there are no additional data concerning declines prior to and after this event and there is uncertainty as to whether this loss represents an ongoing decline. This species has a generation length of 33 years and so declines for criterion A would need to be measured over a period of 100 years. As a result this species will not be assessed against criterion A and further work on population size and trend is recommended. Hurricanes are a continuing threat to this species and it should be noted that there will be no compensation for lost habitats through natural forest regeneration as this species is limited to old growth forests within protected areas.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

This species occurs in old-growth forests at the base of trunks of veteran trees of *Cryptomeria japonica* or *Chamaecyparis obtusa* in protected forests. Both tree hosts are Near Threatened according to IUCN Red List. It is an old-growth dependent species with an expected long generation time.

Systems: Terrestrial

Threats (see Appendix for additional information)

All known localities are within the borders of protected areas. It is likely that intensive forestry has led to a population decline in previous decades. Natural hazards such as typhoons are known and continuing threats.

Conservation Actions (see Appendix for additional information)

All locations of the species are within the borders of protected areas. Detailed assessments of local subpopulations (size and trends) are needed and the geographic distribution should be clarified in underexplored regions.

Credits

Assessor(s): Ohmura, Y., Nadyeina, O. & Scheidegger, C.

Reviewer(s): Dahlberg, A. & Nimis, P.L.

Bibliography

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

Kashiwadani, H. and Moon, K. H. 2010. Noteworthy species of lichens found in Taiwan. *Memoirs of the National Museum of Nature and Science* 46: 65-68.

Kawamata, A. 2007. *Gymnoderma insulare* Scharp. & Yoshim.: cover illustration. *Lichenology* 6(1).

Yoshimura, I. 1982. Distribution of *Gymnoderma coccocarpum* Nyl. and *G. insulare* Yoshim. & Sharp. *Bulletin of Kochi Gakuen Junior College* 13: 83-86.

Yoshimura, I. and Sharp, A.J. 1968. A revision of the genus *Gymnoderma*. *American Journal of Botany* 55: 635-640.

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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
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.2. Intentional use: (large scale)	Past, unlikely to return	Unknown	Unknown	Past impact
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 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 -> 11.4. Storms & flooding	Ongoing	Minority (50%)	Very rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success		

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: Yes
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
Invasive species control or prevention: Not Applicable
In-Place Species Management
Harvest management plan: Yes
Successfully reintroduced or introduced benignly: No

Conservation Actions in Place
Subject to ex-situ conservation: No
In-Place Education
Subject to recent education and awareness programmes: No
Included in international legislation: No
Subject to any international management/trade controls: No

Research Needed

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 24
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): No
Estimated extent of occurrence (EOO) (km ²): 167283
Continuing decline in extent of occurrence (EOO): Yes
Number of Locations: 5
Continuing decline in number of locations: Unknown
Extreme fluctuations in the number of locations: No
Lower elevation limit (m): 800
Upper elevation limit (m): 1000
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: No
Population severely fragmented: No
Continuing decline in subpopulations: Unknown
Extreme fluctuations in subpopulations: No
All individuals in one subpopulation: No

Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 33
Movement patterns: Not a Migrant

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