

Phallus glutinolens

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Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|---------|---------------|----------------|-----------|------------|
| Fungi | Basidiomycota | Agaricomycetes | Phallales | Phallaceae |

Scientific Name: *Phallus glutinolens* (Möller) Kuntze

Synonym(s):

- *Ithyphallus glutinolens* Möller

Taxonomic Source(s):

Index Fungorum Partnership. 2021. Index Fungorum. Available at: <http://www.indexfungorum.org>.

Taxonomic Notes:

Phallus glutinolens (Möller) Kuntze was first described by Möller (1895) in the genus *Ithyphallus* Gray, a genus erected to accommodate phalloid species without indusium (veil). In 1898, the species was combined to the genus *Phallus* Junius ex L. by Kuntze. An emendation for the species was published by Trierweiler-Pereira *et al.* (2009) to add morphological data of mature basidiomata.

Assessment Information

Red List Category & Criteria: Vulnerable C2a(ii) [ver 3.1](#)

Year Published: 2022

Date Assessed: October 18, 2021

Justification:

Phallus glutinolens is a species endemic to Brazil, occurring in fragments of Atlantic Forest in southern and southeastern regions. Up to now, there are only a few records of the species from six different sites. The total population is estimated at around 4,800 mature individuals, in one subpopulation. Based on the habitat decline within the area, we suspect a population decline around 10% in the last three generations (20 years). *Phallus glutinolens* is, therefore, assessed as Vulnerable C2a(ii).

Geographic Range

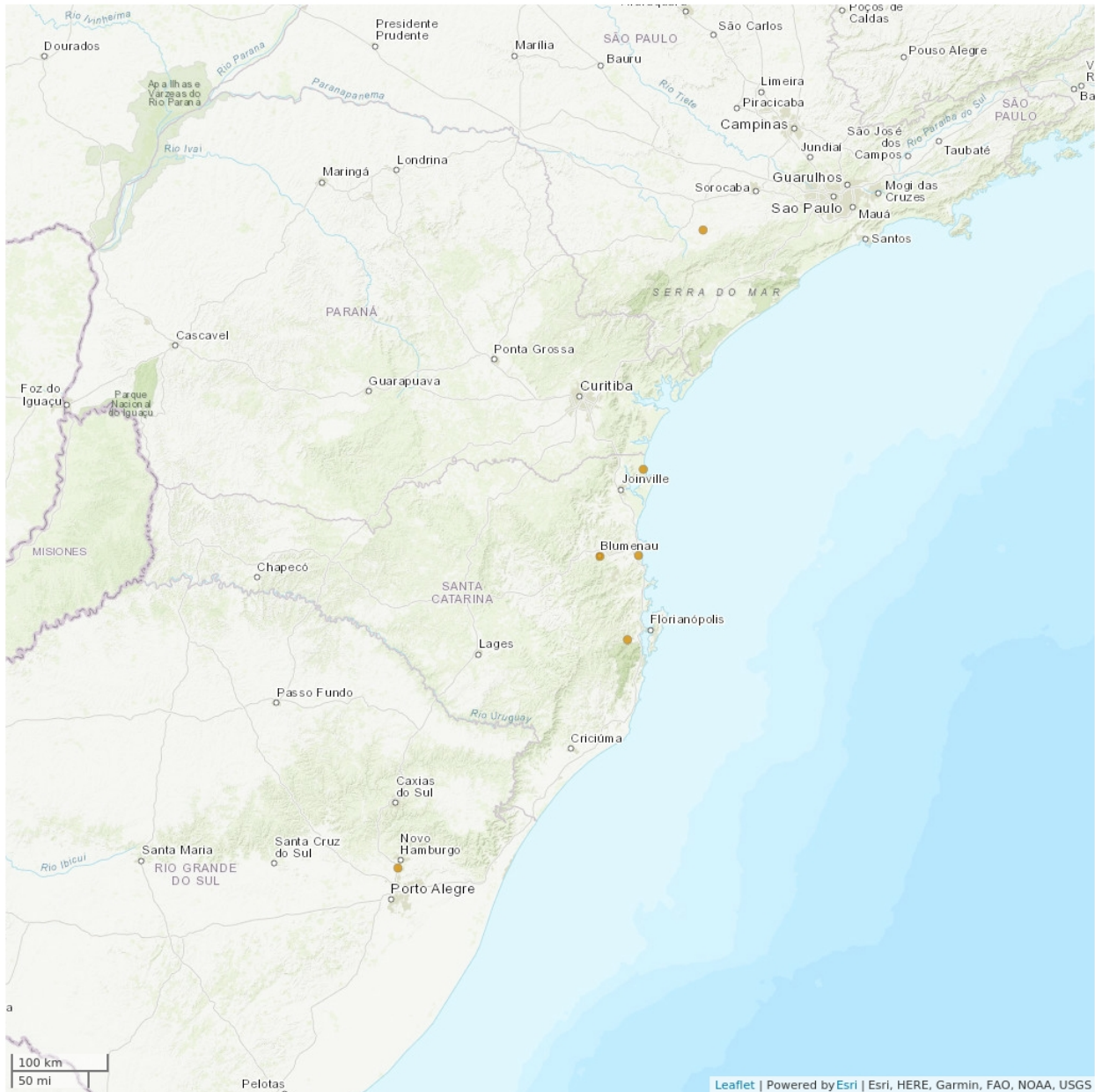
Range Description:

Phallus glutinolens was first discovered in the Atlantic Forest of Santa Catarina (Möller 1895). Many years later, the species was found in the State of Rio Grande do Sul (Braun 1932, Rick 1961). More recently, the species was found again in Santa Catarina (Trierweiler-Pereira *et al.* 2009, 2019; SpeciesLink 2021) and later, for the first time, it was reported from Southeastern Brazil (Fernandes *et al.* 2021). The species is expected to occur in fragments of Dense Ombrophilous Forest in Southern and Southeastern Brazil. Records from Argentina, Tucumán province (Wright 1960), are probably misidentifications, since the specimens described have a particular habitat and ecology (growing among grass in open fields) which more closely resembles the habitat described for members of *Itajahya* Möller (Hernandez Caffot *et al.* 2018).

Country Occurrence:

Native, Extant (resident): Brazil

Distribution Map



Legend

■ EXTANT (RESIDENT)

Compiled by:
IUCN 2021



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

Population

There are eight collections of the species from six different sites. It is likely a rare species, and it is expected to only occur along the Atlantic Forest in the Dense Ombrophilous Forest in Southern and Southeastern Brazil. We estimate that there are up to 400 additional potential sites. This gives a total population estimate of around 4,800 mature individuals, restricted to one subpopulation (see Dahlberg and Mueller 2011 for methodology).

The Atlantic Forest has been deforested over decades, and the remaining fragments are suffering from biomass and biodiversity erosion. The Atlantic Forest is one of the most fragmented tropical/subtropical forests in the world, and only around 28% percent of the original forest in Brazil is left, much of it in small, unconnected fragments (Rezende *et al.* 2018). The population decline was estimated in light of extensive loss of suitable habitat (Rezende *et al.* 2018) and the putative influence that habitat degradation has on species occupation in a given environment (Berglund and Jonsson 2003, Haddad *et al.* 2015). Based on this information, we precautionarily assume there has been a habitat loss of at least 10% within the past three generations (20 years) and that this also equates to a population decline of the fungus of at least 10% or more within this timeframe.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Phallus glutinolens is a saprotrophic species that grows on wood debris or litterfall, inside preserved forest areas. It has a sweet smell when fresh and a tarlike smell when dry (Trierveiler-Pereira *et al.* 2009). In Brazil, it is characteristic of the Atlantic Forest, with all records from Ombrophilous Dense Forest near the coast (up to 80 km distant from the coast). The species is not difficult to recognize in the field, being highly detectable since its light-coloured basidiomes contrast with the litterfall and having a characteristic smell (Trierveiler-Pereira *et al.* 2009). Since the species occurs in wood debris or litterfall, we estimate that three generations = 20 years (see Dahlberg and Mueller 2011).

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

No use/trade is known.

Threats (see Appendix for additional information)

Phallus glutinolens is directly impacted by Atlantic Forest Biome threats, which has been losing its biodiversity along the time. Only 28% of its natural coverage remains, becoming an extremely patchy ecosystem and secondary forests (Tabarelli *et al.* 2010, Rezende *et al.* 2018). The threats involve urbanization, industrial and silvicultural centres that can cause pollution (Galindo-Leal and De Gusmao Câmara 2003). Furthermore, there is a great illegal timber extraction and intensive land use, contributing to Atlantic forest deterioration.

Conservation Actions (see Appendix for additional information)

The main action to preserve the species is the protection of its habitat and creation of new conservation areas to harbor the probable microhabitats to which the Atlantic Forest may be restricted in the future.

The preservation of pristine forests could be critical for the maintenance of this species, since it has only been found in preserved areas. Also, forest protection policies must be taken to assure that the protected Atlantic Forest areas reach a mature state. More studies are also necessary to better understand the species' distribution, ecology and population trends.

Credits

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Reviewer(s): Mueller, G.M.

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

Plant Growth Forms

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

| Plant Growth Form |
|-------------------|
| M. Fungus |

Threats

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

| Threat | Timing | Scope | Severity | Impact Score |
|--|-----------|---|----------|---------------|
| 1. Residential & commercial development -> 1.1. Housing & urban areas | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 1. Residential & commercial development -> 1.3. Tourism & recreation areas | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion | | |

| | | | | |
|---|-----------|---|---|---|
| | | | | 1. Ecosystem stresses -> 1.2. Ecosystem degradation |
| 5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.4. Unintentional effects: (large scale) [harvest] | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion | | 1. Ecosystem stresses -> 1.2. Ecosystem degradation |
| 9. Pollution -> 9.1. Domestic & urban waste water -> 9.1.3. Type Unknown/Unrecorded | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 9. Pollution -> 9.2. Industrial & military effluents -> 9.2.3. Type Unknown/Unrecorded | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.4. Type Unknown/Unrecorded | Ongoing | - | - | Low impact: 3 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |

Conservation Actions Needed

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

| |
|---|
| Conservation Action Needed |
| 1. Land/water protection -> 1.1. Site/area protection |
| 2. Land/water management -> 2.1. Site/area management |
| 4. Education & awareness -> 4.3. Awareness & communications |
| 5. Law & policy -> 5.2. Policies and regulations |

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 |
| 3. Monitoring -> 3.1. Population trends |

Additional Data Fields

| |
|---|
| Population |
| Number of mature individuals: 4,800 |
| Continuing decline of mature individuals: Yes |
| No. of subpopulations: 1 |
| All individuals in one subpopulation: Yes |

| |
|---|
| Population |
| No. of individuals in largest subpopulation: 4800 |
| Habitats and Ecology |
| Continuing decline in area, extent and/or quality of habitat: Yes |
| Generation Length (years): 6.67 |

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