Zingiber flammeum

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Assessment by: Theilade, I., Mood, J. & Olander, S.B.


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**Taxonomy**

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantae</td>
<td>Tracheophyta</td>
<td>Liliopsida</td>
<td>Zingiberales</td>
<td>Zingiberaceae</td>
</tr>
</tbody>
</table>

**Taxon Name:** *Zingiber flammeum* Theilade & Mood

**Assessment Information**

**Red List Category & Criteria:** Endangered B2ab(iii) ver 3.1

**Year Published:** 2019

**Date Assessed:** March 15, 2019

**Justification:**

This species is endemic to Sabah (Malaysia) on Borneo (Lamb *et al.* 2013, ZRC 2019) and known from two localities; Paling-Paling and the Crocker Range (Lamb *et al.* 2013, Theilade and Mood 1997). The area of occupancy (AOO) may be underestimated, but is likely to be within the range of Endangered under B2 (<500 km²). The habitat is under threat (J. Mood pers. comm. 2019) and the type was collected near Tenom, where the majority of habitat has been converted. *Zingiber flammeum* is therefore considered Endangered.

**Geographic Range**

**Range Description:**

This species is endemic to Sabah (Malaysia) on Borneo (Lamb *et al.* 2013, Theilade and Mood 1997, ZRC 2019) where it is known from two localities; Paling-Paling (Type collection Mood 178) and the Crocker Range (Lamb *et al.* 2013, Theilade and Mood 1997). Adding a general data point for the Crocker Range, gives an area of occupancy (AOO) of 8 km². The species is considered relatively widespread (J. Mood pers. comm. 2019), making it likely that the AOO is underestimated. It will, however, be within the range of Endangered under B2 (<500 km²).

**Country Occurrence:**

**Native:** Malaysia (Sabah)
Population
The species is considered relatively widespread in the localities where it is found. Habitat degradation suggests a negative population trend.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)
This species has leafy shoots of up to 0.75 m, and is found in hilly forests at low altitudes (300-500 m asl) (Lamb et al. 2013, Theilade and Mood 1997).

Systems: Terrestrial

Use and Trade
No available use or trade information.

Threats (see Appendix for additional information)
The forests of Borneo are under continuous threat of being logged and the land converted (WWF 2019), and habitat at lower altitudes is especially at risk. Paling-Paling is not in any protected area which has been recorded by Protected Planet (2019). There is both protected and unprotected habitat in and around the Crocker Range (GFW 2019, Protected Planet 2019).

Conservation Actions (see Appendix for additional information)
This species has been recorded by BGCI (2019) to be grown at two ex situ sites. Depending on where in the Crocker Range this species is found, individuals may be present in a protected area (Crocker Range National Park).

Credits
Assessor(s): Theilade, I., Mood, J. & Olander, S.B.
Reviewer(s): Newman, M.F.
Bibliography


Citation


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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)

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Season</th>
<th>Suitability</th>
<th>Major Importance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forest -&gt; 1.6. Forest - Subtropical/Tropical Moist Lowland</td>
<td>Resident</td>
<td>Suitable</td>
<td>-</td>
</tr>
</tbody>
</table>

Plant Growth Forms
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Plant Growth Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forb or Herb</td>
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</table>

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

<table>
<thead>
<tr>
<th>Threat</th>
<th>Timing</th>
<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Threat</th>
<th>Timing</th>
<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Agriculture &amp; aquaculture -&gt; 2.2. Wood &amp; pulp plantations -&gt; 2.2.3. Scale Unknown/Unrecorded</td>
<td>Ongoing</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Stresses:
- 1. Ecosystem stresses -> 1.1. Ecosystem conversion
- 2. Species Stresses -> 2.1. Species mortality

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<tr>
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<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Biological resource use -&gt; 5.3. Logging &amp; wood harvesting -&gt; 5.3.3. Unintentional effects: (subsistence/small scale) [harvest]</td>
<td>Ongoing</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

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

Conservation Actions in Place
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Conservation Actions in Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Place Land/Water Protection and Management</td>
</tr>
</tbody>
</table>

Occur in at least one PA: Unknown
### Conservation Actions Needed


<table>
<thead>
<tr>
<th>Conservation Actions Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Land/water protection -&gt; 1.1. Site/area protection</td>
</tr>
</tbody>
</table>

### Research Needed


<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Research -&gt; 1.2. Population size, distribution &amp; trends</td>
</tr>
<tr>
<td>1. Research -&gt; 1.5. Threats</td>
</tr>
<tr>
<td>3. Monitoring -&gt; 3.4. Habitat trends</td>
</tr>
</tbody>
</table>

### Additional Data Fields

<table>
<thead>
<tr>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated area of occupancy (AOO) (km²): 8-500</td>
</tr>
<tr>
<td>Number of Locations: 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Habitats and Ecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing decline in area, extent and/or quality of habitat: Yes</td>
</tr>
</tbody>
</table>
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