

Cercophana frauenfeldii Felder, 1862 (Lepidoptera: Saturniidae) in the far south of Chile: contextual notes on a GBIF occurrence record

Association Karukinka, Paris, France

01/05/2026



Cercophana frauenfeldii Felder, 1862 is a Neotropical saturniid moth endemic to Chile, with a known range extending from central Chile to the Magallanes Region. Based on a male observed at Bahía Tres Brazos, northwest of Gordon Island, this note provides contextual information for a new occurrence record published in the Global Biodiversity Information Facility (GBIF) as occurrence 6235116312, mediated by the iNaturalist Research-grade Observations dataset (<https://doi.org/10.15468/ab3s5x>).

The observation was made in mid-April 2026 during a small-boat expedition in the Cape Horn Biosphere Reserve, a sub-Antarctic archipelago where Lepidoptera have been less documented than many other taxa. The record documents the presence of *C. frauenfeldii* on a sub-Antarctic forest island south of the mainland Magellanic sector, in line with previous reports from the Magallanes Region (including Puerto Williams, Omora Park) and with the distribution of its host tree *Drimys winteri*.

By combining opportunistic naturalist observations with open infrastructures such as GBIF, this contribution complements existing Chilean work on the species by refining its known southern distribution and illustrating how low-intensity fieldwork from small vessels can support future biogeographical and conservation studies in southern South America.

Keywords: *Cercophana frauenfeldii*; Saturniidae; Chile; Magallanes; Cape Horn Biosphere Reserve; Gordon Island; GBIF; iNaturalist; temperate forests; sub-Antarctic biogeography

1. Introduction

Cercophana frauenfeldii Felder, 1862 is a saturniid moth endemic to Chile, where it has been reported from temperate forest regions between central Chile and the far south. Earlier works describe it as a characteristic component of the nocturnal moth fauna in humid forests dominated by southern beech (*Nothofagus* spp.) and associated broadleaved trees.

Despite its distinctive wing pattern, the species remains relatively sparsely represented in modern, openly accessible distribution datasets, even though Chilean authors have provided important information on its taxonomy, immature stages, phenology and host plants across much of its range. Most occurrence records compiled so far come from continental or large-island localities in southern Chile, and fewer observations have been documented from smaller sub-Antarctic islands in the Cape Horn province.

The Cape Horn Biosphere Reserve, designated under UNESCO's Man and the Biosphere Programme and managed under Chilean jurisdiction, encompasses a vast network of fjords, channels and forested islands at the southern tip of South America. This region is recognized as a global hotspot for sub-Antarctic biodiversity but remains comparatively less represented in entomological datasets, particularly for Lepidoptera on remote islands accessible only by small vessels.

This note provides context for a recent occurrence of *C. frauenfeldii* observed by members of Association Karukinka during a sailing expedition in the Cape Horn Biosphere Reserve and now published as a GBIF occurrence record. It aims to situate this observation within the known distribution of the species, in continuity with Chilean research on *C. frauenfeldii* and Magellanic forests, and to highlight the contribution of low-impact expeditions and citizen-science platforms to documenting southern South American moths.

2. Context of the Observation and Methods

2.1 Expedition context

Association Karukinka operates the sailing vessel *Milagro* as a platform for exploration and documentation of natural and cultural heritage in southern Patagonia and the Cape Horn region. During April 2026, *Milagro* undertook a multi-week voyage through the channels and islands north and west of Cape Horn, including several anchorages around Gordon Island, within the Cape Horn Biosphere Reserve.

The primary objectives of the expedition included support to ongoing research and the collection of opportunistic naturalist observations of flora and fauna in remote inlets and bays. No dedicated

entomological trapping devices were deployed. Nocturnal moths were recorded informally whenever conditions allowed; the attraction of the observed individual to the vessel is considered incidental to the expedition's presence at anchor, with the vessel's lighting acting as a passive and unintentional attractant. During this leg of the voyage, Milagro spent two consecutive nights at anchor in Bahía Tres Brazos. Nocturnal moths were not the primary focus of the expedition and effort was not standardized, but crew members remained attentive to incidental observations in the vicinity of the vessel.



2.2 Observation details

In mid-April 2026, at dawn on the morning of departure after two nights at anchor, a saturniid moth was observed on board in Bahía Tres Brazos, on the north-western side of Gordon Island, Chile. The individual was found on deck, having apparently been attracted incidentally by the vessel's lights during the night at anchor, and was photographed in situ by the crew before flying away. The locality corresponds to a small, sheltered bay surrounded by evergreen temperate forest including *Drimys winteri* and other typical Magellanic forest taxa.

The observation was documented on iNaturalist and subsequently ingested into GBIF as a research-grade record. The occurrence is published in GBIF as occurrence 6235116312, with precise decimal coordinates and metadata providing date, locality and taxonomic assignment.

2.3 Link to the GBIF occurrence record

This note provides contextual information for the following GBIF occurrence:

GBIF occurrence: *Cercophana frauenfeldii* Felder, 1862 — occurrence 6235116312

URL: <https://www.gbif.org/occurrence/6235116312>

Accessed on 15 May 2026.

The record is mediated by the iNaturalist Research-grade Observations dataset:

Dataset DOI: <https://doi.org/10.15468/ab3s5x>

3. Taxonomy and Identification

Cercophana frauenfeldii was described by Felder in 1862 and is currently treated as a valid species within the family Saturniidae, subfamily Cercophaninae. It is considered endemic to Chile and is included in recent syntheses of Chilean Saturniidae and regional Lepidoptera faunas.

The observed individual was an adult male. Photographic documentation shows the characteristic features of *C. frauenfeldii*: large wingspan, broad forewings with rounded apex and cryptic brownish-grey ground colour. The antennae are strongly bipectinate, as expected in males of this genus. These characters match published descriptions and figures of *C. frauenfeldii* from central and southern Chile. Identification was made by comparison with existing taxonomic literature and image resources on Chilean Saturniidae.

No specimens were collected, in line with the low-impact and non-extractive approach adopted by the expedition in this protected area. The GBIF/iNaturalist record, including photographs, thus constitutes the primary evidence for this occurrence. As the identification is based solely on photographic material, additional records including collected specimens examined by Chilean specialists would be valuable to further consolidate the species' presence on Gordon Island.

4. Geographical Distribution and Biogeographical Context

Published records indicate that *C. frauenfeldii* occurs in a longitudinal band of temperate forests running from central Chile (regions of Maule and Biobío) southwards through La Araucanía, Los Lagos and Aysén to Magallanes. Within this range, it is associated with native forest habitats rather than open or heavily modified landscapes. Chilean studies have documented the species and its host plants in several localities in southern Chile, including the Magallanes Region and the vicinity of Puerto Williams and Omora Park.

In the far south, the species has been documented from continental and large-island localities in the Magallanes Region, including areas of Magellanic evergreen and deciduous forest. Its apparent absence from smaller forested islands of the sub-Antarctic archipelagos has often been interpreted as a reflection of limited sampling rather than a strict distributional boundary.

Gordon Island, located within the Cape Horn Biosphere Reserve, is covered by a mosaic of evergreen forest, peatlands and alpine habitats, with *Drimys winteri* and other broadleaved trees forming stands similar to those found on the nearby mainland and large islands. The presence of *C. frauenfeldii* at Bahía Tres Brazos is therefore biogeographically consistent with the distribution of its host tree and with previous records from Magellanic forests, while adding a documented occurrence from a smaller sub-Antarctic island under Chilean management rather than indicating a major range extension.

5. Perspectives and Acknowledgements

5.1 Perspectives and limitations

This example illustrates how opportunistic observations made from small vessels in remote archipelagos, when documented via platforms such as iNaturalist and aggregated by GBIF, can complement land-based and institutional surveys conducted by Chilean researchers and improve knowledge of the southern distribution limits of forest-associated insects. In regions like the Cape Horn Biosphere Reserve, where conventional entomological surveys remain scarce on some islands, such data are particularly valuable as a complement to existing efforts.

At the same time, this single opportunistic record does not allow any inference about population size, persistence or trends of *C. frauenfeldii* on Gordon Island. It should therefore be interpreted as a first documented indication of presence rather than the result of a systematic survey. Future work, ideally designed and conducted in collaboration with Chilean entomologists and institutions, will be needed to assess how widespread and stable the species is in the archipelago.

Future observations should continue to be documented through iNaturalist and integrated into GBIF, following best practices for metadata completeness and licensing, so that they can be reused in comparative analyses and conservation planning. Collaboration with Chilean entomologists and institutions (for example universities and research centres in Magallanes and elsewhere in Chile) could further increase the scientific value of these records and lead to more comprehensive assessments of the Lepidoptera fauna of the Cape Horn Biosphere Reserve.

5.2 Acknowledgements

The authors are grateful to all crew members of Milagro who contributed to the expedition and to the documentation of natural history observations in the Cape Horn Biosphere Reserve. The authors also acknowledge the long-standing contributions of Chilean researchers to the study of Magellanic forests and their biota, which provide the essential context for interpreting this record, and the iNaturalist community for validating the observation as research-grade and GBIF for providing the infrastructure that makes such records openly available to the scientific community.

Bibliography

Angulo, Andrés O., Lemaire, Claude, & Olivares, Tania S. . [ILLUSTRATED CATALOGUE OF SATURNIIDAE' SPECIES IN CHILE \(LEPIDOPTERA: SATURNIIDAE\)](#). *Gayana (Concepción)*, 68(1), 20-42, 2004.

Monné, M. A., et al. [Immature stages, phenology, distribution and host plants of the Andean Moon Moth *Cercophana frauenfeldii* Felder, 1862 \(Lepidoptera: Saturniidae\)](#), *Revista Brasileira de entomologia* 65 (2), 2021.

Ureta R., E. . [La Familia Sáturniidae \(Heterocera\) en Chile: Parte III](#). *Boletín Museo Nacional De Historia Natural*, 22, 49–64, 1944.

Zúñiga-Reinoso, Á., Sepúlveda, J.,. [Sobre la planta hospedera de *Cercophana frauenfeldii* \(Felder\) \(Lepidoptera: Saturniidae\) en Magallanes](#). *Annales del Instituto de la Patagonia*, Punta Arenas, v.44, n.2, p.81-83, 2016.