

Report of a recent entomological collection trip on Cyclops mountain (Indonesia, Papua)

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Abstract: An introductory entomological survey is started in the Cyclops Mountains. The area has always been poorly visited in history. A start is made with an inventory of the Lepidoptera fauna during which some interesting and possibly new species were found.

Rangkuman: Survei entomologi awal dilaksanakan di daerah Gunung Cyclops. Sejak dulu, daerah ini jarang sekali dikunjungi oleh peneliti. Pada waktu inventaris Lepidoptera (kupu-kupu) dijalankan, beberapa jenis yang menarik ditemukan. Ada kemungkinan ini jenis baru.

Keywords: Cyclops Mountain Range, *Dicallaneura*, *Platyphima*, *Trigonopterus*, new species

Introduction

From 24-26th February 2017 the authors had the opportunity to climb the highest peak of Cyclops mountain range, in the Jayapura Regency of Papua Province.

For years the authors had passed through and lived in the Pos 7 area in Sentani, the town surrounding Jayapura's airport, on the south side of Cyclops mountain. From the Pos 7 area, Cyclops' densely forested slopes rise up very steeply to an altitude of more than 2000 meters. Most of the time these mountain peaks are covered with heavy clouds. Because of the steep terrain and the unpredictable weather on the mountain, it is very inaccessible and this is one of the reasons that biological research in this area has been limited. Another reason would be that the local people consider the mountain to be sacred and therefore avoiding the mountain was always recommended. The aim of this short expedition was to reach the area above 1500 meters in order to collect butterflies, moths and *Trigonopterus* beetles, a genus of flightless weevils (Coleoptera: Curculionidae, Cryptorhynchinae).

Cyclops Nature Reserve

Since 1987 Cyclops mountain range has been set aside as a Strict Nature Reserve (36,800 ha), mainly in order to protect the future water supply of the capital city Jayapura. The wisdom of this is being put to the test at the moment, with a growing population of 400.000 people in the city of Jayapura and the villages surrounding the Reserve. Despite efforts to protect the area, more and more people are entering the Reserve for hunting, collecting firewood, logging, mining and gardening. In certain areas on the south side of the mountain, the impact of gardening already goes up to an altitude of 700 meters.

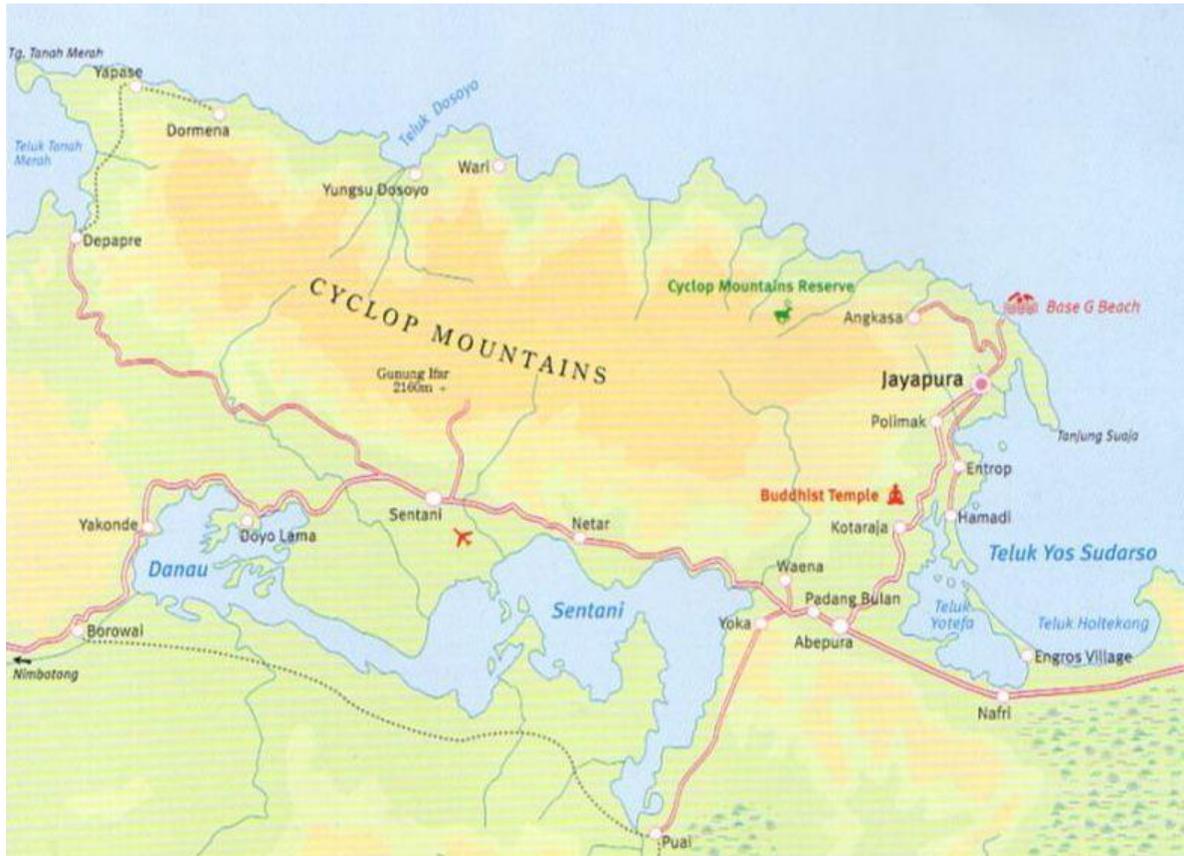


Fig. 1. Map of the Cyclops Mountains with the surrounding topography (<http://www.worldteampapua.org/mapscurrent.html>)

Climbing Cyclops

The team that climbed Cyclops included Mike Wild, Hudson Wild, Peter Jan de Vries, David de Vries, Habel Molonggatun (Korowai co-worker of Peter Jan de Vries), Urumi Penggu, a local guide and a local porter from the Dani tribe. The authors were ready to climb the mountain at 7am on the 24th of February. However, the arranged guides/porters didn't show up, so others had to be found on short notice. With three guides/porters they set off at about 10am. At the foot of the mountains the path took them through many gardens, used and abandoned. This made climbing difficult because of the many weeds that had overgrown the path, and because there were fewer roots and fewer small sapling trees to use as handholds. In one of the abandoned gardens they found a small Pacific Ground Boa (*Candoia carinata*). At about 500 meters the primary jungle became denser and they left the gardens behind them. The guides did not know the way exactly, but they found an old trail leading up the mountain. The expedition followed this trail up to 1100 meters, where it joined another trail that was more frequently travelled. This trail led them all the way up to a view point at 1500 meters.



Fig. 2. The expedition team: (from left to right) Mike Wild, local porter, Urumi Penggu, local guide, Hudson Wild, David de Vries, Habel Molonggatun, Peter Jan de Vries.

From 500 meters upward they regularly heard the calls of the Yellow crested cockatoo (*Cacatua sulphurea*), Blyths hornbill (*Rhyticeros plicatus*) and the Collared brush turkey (*Talegalla jobiensis*). They also encountered a nesting site of the Collared brush turkey. This nest consists of a small mound (2m diameter) of gathered leaves. The brush turkey lays its eggs in this mound of rotting leaves, letting the decomposition process incubate and hatch the eggs. The calls of the Variable pitohui (*Pitohui kirhocephalus*) followed them all the way up the mountain. Two times they came across the droppings of a Dwarf cassowary (*Casuarius bennetti*), native to the Cyclops range.

From 700 meters upward the forest composition gradually started to change. The undergrowth got thinner, with fewer and smaller rattan plants. More and more mosses were growing on the trunks of trees and on the branches of emergent trees. The most conspicuous of these emergent trees was the *Araucaria hunsteinii*, an evergreen tree native to the mountains of New Guinea. Some of these had a height of more than 50 meters.

At 4pm the authors reached a view point, at 1500 meters. This was a small ledge following a very steep slope where some trees had been cut so that they could look out over Sentani town and Sentani lake. The site offered a small area with only a 5% increment where they set up camp with a tarp they had brought along. They stayed here for two nights.

The authors didn't bring a lot of water, so they were very grateful that previous visitors had left a plastic jerry-can with 5 liters of water at the viewpoint. However, this quickly ran out, and it didn't rain the first night. The following morning they set out to find a water source and after a lot of searching, they found a place where water welled up out of the mountain. This was just enough to fill a few bottles. In the middle of the day it started raining and they could fill up their water bottles with the run off from the tarp.



Fig. 3. Trunk of *Araucaria hunsteinii*



Fig. 4. Setting up camp at 1500 meters



Fig. 5. The camp site at 1500 meters, with a view at Sentani and Sentani lake.

Collecting butterflies and beetles

During the following days the weather was so cloudy and rainy that the authors hardly spotted any butterflies. After some exploring they decided that the camp site was the most suitable place to collect butterflies, because it was the only place where the forest canopy was broken to let the sunlight through. At this camp site they collected only three butterflies: one *Graphium weiski* Ribbe, 1900 (Papilionidae), two Lycaenidae: *Udara drucei* Bethune-Baker, 1906 and a *Dicallaneura* species. During a climb further up the mountain, at the side of a large gap (1650 meters) they came across a satyrinid: *Platyphima* sp. (Nymphalidae, Satyrinae).

Back down from the mountain the guide of Parsons (1998) and the KSP collection (Koleksi Serangga Papua) were used to try to identify the species they had collected. The authors were not able to identify the *Dicallaneura* and *Platyphima* species, pictured below. More research is needed to determine whether these are new to science.



Fig. 6. *Dicallaneura* spec. (upper side)



Fig. 7. *Platyphima* spec. (upper side)

To collect moths the authors used a pressurized kerosene lamp (Petromax). This was less heavy and easier to carry than a generator. In the evening the Petromax was lit and placed in front of a white sheet at the camp site with the view at Sentani. The light was not as bright as expected, probably due to the lower air pressure at 1500 meters altitude.

The first night was very clear and the second night was cloudy with a small drizzle now and then. The light did not attract many moths and both nights no hawk moths were seen. All moths that came to the light were collected. Identification of the collected specimens has not yet taken place. This will be presented in a following publication.

On the way up the mountain the authors discovered and collected *Trigonopterus* weevils (Coleoptera: Curculionidae) at different altitudes, on leaves between 1-3 meters off the ground, at altitudes of 500, 1100, 1500 and 1800 meters. *Trigonopterus* weevils measure only a few millimeters. They were collected by hand and stored in small vials with 70% alcohol. Copula's were collected in a separate vial. The collected *Trigonopterus* species have not been identified yet.

Discussion

With only four butterflies collected, the results of this short expedition were poor, but not disappointing. Two of these four species could not be identified and this has once again proven that Cyclops Mountain Range is biologically very interesting. This also motivated one of the authors to make regular trips up the mountain in order to collect more material to study. The Cyclops Mountains clearly are understudied, which is remarkable since it is located in the vicinity of the provincial capital Jayapura.

The authors were happily surprised to find the forest in good condition at higher altitudes. This is primarily due to the inaccessibility of the mountains. In areas around Jayapura that are more easily accessible, it is mainly the Cassowary, the Horn bill, the Collared brush turkey and the Yellow crested cockatoo that fall prey to hunters. Finding these birds is an indication that the forest is doing well.

However, it was disturbing to see that many gardens have been planted well inside the Nature Reserve, with some reaching up to about 700 meters. These gardens belong to people who originate from the Central Mountain Ranges and who have moved to Sentani. Gardening is their traditional livelihood. However, with gardens already well into the Reserve and with the population pressure rising, it is becoming more and more important for the government to take action in controlling these disturbances in Cyclops Nature Reserve.

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