

THE MINDANAO *HESTIA* AND ITS *PAPILIO* MIMIC  
(DANAIDÆ, PAPILIONIDÆ)

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The University of San Carlos of Cebu City, Philippines, sent an exploring and collecting party to northern Mindanao last summer. The group, composed of Rev. Fr. HENRY SCHOENIG, Head of the Biology Department, Messrs. SAMUEL OCHOTORENA and CRISTOBAL PLATEROS, both Instructors in Zoology, and the writer, selected the northern portion of Mindanao to try its reportedly rich insect fauna and to hunt for the rare *Papilio idæoides*, a swallowtail supposed to mimic the huge *Hestia* (*H. leuconoe* subsp. *movia*). This opportunity offered him was happily welcomed by the writer because it finally gave him the chance to observe the mimetic butterfly of which little or nothing is known by local collectors.

We spent a month working around the marshy areas of Lake Mainit and the forests bordering the eastern side of the lake, up to an elevation of from 500 to 3,000 feet, and inland, as far as eight kilometers from the lake and provincial highway. During the last week of April, the mountain area at northern Agusan had almost daily showers, usually an alternation of light drizzle and brief sunshine, which otherwise made the day generally cloudy. It was found that these conditions were favorable for the activities of female *Papilio mariae* Semper, a good number of which were observed hovering low in search of a shrub where their eggs were deposited. The males of this butterfly were later encountered, from the first to the last weeks of May, usually at an elevation of over 1,500 feet. These gambol leisurely in groups of from two to over ten in small openings between tall trees at the ridge of the mountain. They fly around and around in tight circles, darting at passing butterflies, and resting only the moment the sun disappears and flying again when sunlight brightens their den. They seldom came lower to within our nets' reach, so only a few males were collected by the expedition.

Along the swampy areas on the western and southern shores of Lake Mainit, the thick pandanus groves offered ideal conditions for the breeding of the moody *Hestia*. In the dim interior of the pandanus jungle therefore, it was not unusual to frequently meet a couple or more of these huge floating "ghosts." Between the towns of Jabonga and Jaliobong along the lakeside inside Agusan province, one may stumble into a den of loafing *Hestia*. Here, one day, Fr. SCHOENIG netted nearly twenty perfect specimens. At between 1,500 and 2,500 feet in a well forested mountain, occasional individuals of this huge danaid were collected or encountered, some on a bright sunny day, others under weather conditions favorable only to the activity of shade lovers. Generally, *Hestias* move about when the sun is bright. They usually alight when it is cloudy. Individuals were observed venturing in the open sunlight, leaving their cool, shady dens to feast upon flowers of shrub-trees and vines, unmindful of the presence of droning bees and wasps.

In flight our *Hestias* are slow. They float and sail like "ghosts," lazing the hours away in their favorite nooks. The marsh *Hestia* of Agusan and Surigao in Mindanao, are at home in the dense pandanus groves and could be easily taken while hovering low over the grassy meadows nearby in the early part of the morning. In these areas, we also encountered *Parthenos salentia* Hopffer, a nymphalid, in abundance. They were everywhere, darting fore and aft the confused collector, seeking the cooler wooded hills nearby and speeding again into the steaming swamp, filling the area with a liveliness so fascinating to collectors. Thousands of these are in the air daily in the pandanus jungle around the lake.

It took the party quite some time before they found traces of *Papilio idaeoides* (= *Chilasa idaeoides* Hewitson). At an elevation of between 300 and 600 feet in a well vegetated area at the foot of the mountain at Jaliobong, the writer had his first encounter with the swallowtail. The first specimen seen, a female, was out at past ten in the morning of a semi-cloudy day. In flight, when undisturbed, only an experienced observer can distinguish it from the *Hestia*. This butterfly can indeed pass for a *Hestia*, since in size, color, wing markings and even in flight, the two are almost identical. In bagging the only three specimens he encountered during the expedition, the writer noted a difference in habit, that is, when the insects are disturbed or frightened or, perhaps, excited. *Hestia* usually take to a higher elevation when it senses danger or pursuit. All three *P. idaeoides* (one male, two females) taken by the writer were at first swing of the net missed. Their flight then became brisker, but none made any attempt to gain altitude. An almost even, parallel course to the ground was continued by the quarries, even under excitement. The third offered a chase for a few minutes on account of the course it took. All were taken with a 6½-foot-handled net. The area where these were taken is a small valley not exceeding 200 meters in width and which gradually rises toward the mountain. On one side is a creek emerging from a well forested mountain which suddenly rises to high elevation. The spots at which the capture of all specimens were effected do not exceed 20 meters apart. It is probable that its foodplants are found around the area. It is also possible that these butterflies breed at much higher elevations in the surrounding mountains and merely seek the lower places in search of the flowers of shrub-trees which are more abundant at lower altitudes around here.

This article can not establish a definite altitude and range for *P. idaeoides* of this part of Mindanao. In other sections of the provinces of Surigao and Agusan, and the other provinces in northern Mindanao, the same butterfly may be found to occupy lower or higher elevations, depending upon the availability of foodplants and, perhaps, climatic conditions. In the future, when we can get here more people to develop interest in collecting and research work, or, when our group will have the opportunity to comb all these areas and stay there longer, it may be possible to talk conclusively of range, seasonal preference, and such other facts so valuable to the lepidopterist. The same could be said of many other Philippine butterflies.

While *Hestias* of Agusan and Surigao provinces were found by our party to be unusually abundant in the areas worked over for a whole month (April 24 — May 24), the *P. idæoides* which is supposed to mimic the former is rather rare or retiring. A fourth, badly worn out female, was taken by Mr. PLATEROS at Kitcharao, some eight kilometers from the area where the first three were caught, at approximately the same elevation and weather conditions. It is interesting to observe that, in these same areas, a species of an *Elymnias*, in a special sub-family of Satyridæ, is found. Half the size of the *Hestia*, its colors, markings, and flight are similar to those of our typical danaid. In flight it appears to be like the female *Danaus glaphyra*. Our party erroneously gave it the name of "Lesser Hestia" although it is more appropriate to give this name to the female of *Danaus glaphyra* (= *Ideopsis glaphyra* Moore). So many are the interesting phases of resemblances among local butterflies that assembling them together in a large frame for comparative study is not only fascinating but also a rich source for the study of patterns of a common trend.

Whether the *P. idæoides*, as suspected, is found only in parts of northern Mindanao, or ranges far beyond the southern borders of the northern provinces, remains in the hands of the patient Lepidopterists to solve. This report presents only the fact that the USC party found this swallowtail in northern Mindanao; that they were encountered at two places some eight kilometers apart at the northern boundary of Agusan province and that they are admittedly uncommon and very similar to the *Hestia* in various ways as actually observed by the writer. The first specimen possessed by the writer (a female) was taken in the province of Misamis before the last war by another collector, but the circumstances surrounding its capture were not reported. Misamis is also in northern Mindanao. It is probable that this butterfly may not be very rare in the same and similar grounds in parts of northern Mindanao from July to October, for, by then, greater inducements to be out in numbers are present, by way of favorable weather and abundant food when flowers are all around, and the joy to be out in the sun after the many rainy spells.

The same group had already worked in the islands of Leyte, Bohol, Mindoro, and in the provinces of Zamboanga, Tayabas, and Lanao in the past summers. All these expeditions were financed and equipped by the University of San Carlos of Cebu City, Philippines. Materials collected go into the university's expanding entomological collection, and a good deal of excess materials are distributed to several museums and research laboratories abroad. Expeditions intending to concentrate in the collection of insects will find the Philippines a very rich region here in the Pacific. Much remains to be discovered and described. The island of Mindanao alone is a treasure house for butterflies. I have never seen a richer collecting ground.