

ESPECIALLY FOR FIELD COLLECTORS

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**BUTTERFLY HUNTING IN THE MOUNTAINS OF
CENTRAL JAPAN**

by KAIYA KUBO

The Tobira Spa is located between Mt. Hachibuse and the Utsukushi-ga-hara Heights, and can be reached in an hour by bus from Matsumoto City, Nagano Prefecture, central Japan. In 1956, I stayed at one of the spa hotels from early June through the end of the summer season to collect and photograph butterflies there.

In early summer when the fresh-green hills and valleys are adorned with scarlet mountain azaleas, the most abundant butterflies on the wing are perhaps *Parnassius glacialis* and *Papilio maacki*. The former is an elegant butterfly, though without red spots on the white wings, while the latter is one of the finest 'black' swallowtails of Japan. These huge swallowtails are frequently seen gathering on the edges of way-side pools and streams, or even the puddles on the bus road. The drinking butterflies were so numerous that I was tantalized over and over again at the sight of startled butterflies that scattered away from the road on which the bus was carrying me to the mountain resort. The number of butterflies getting together to take moisture varies from two to fifteen. They did not form an exclusive drinking society, for they were often joined by other species *e. g.* *Papilio machaon*, *P. bianor*, *P. macilentus*, *Dichorragia nesimachus* (Nymphalidæ), *Daimio tethys* (Hesperiidæ), etc. In photographing these large butterflies taking to water, I had no particular difficulties in approaching them, but every time I focussed my camera near the road I could not escape from inquisitive people, who only caused the butterflies to fly away. When the butterflies are absorbed in drinking water, they seldom flutter. Some of the spring brood butterflies (that is, those resulting from the hibernated pupæ) keep the wings open while drinking, but others of these, and all summer brood individuals, drink with their wings closed.

Parnassius glacialis and *Pararge deidamia* (Satyridæ) are two butterflies, appearing about the same time, which are difficult to photograph in spite of their slow, fluttering flight. The former flies incessantly while there is sunshine and hardly alights on anything other than flowers, and after all I could not take a good picture of it at the Tobira area. The latter, an uncommon mountain satyrid, has a peculiar habit of resting on the cliff, usually half way up from the road. I had to disturb one

butterfly continually by throwing stones to it, trying to make it come down. It finally alighted on a stone by the roadside to pose for me. Here are some of the butterflies to be seen about the middle of June: the danaid *Caduga sita* (Blue Monarch or Chestnut Tiger); *Argynnis anadyomene* and *Araschnia burejana* (Nymphalidæ); the satyrid *Neope goschkevitschii*, *Leptalina unicolor* and *Erynnis montanus* (Hesperiidæ), *Anthocaris scolymus*, the lycænid *Rapala arata*; and hibernated specimens of *Nymphalis antiopa*, *Inachus io*, *Polygonia c-album*, *Gonepteryx rhamni*, etc. (Incidentally, the Mourning Cloak is a single-brooded highland butterfly in Honshu, and hibernated butterflies have the wing borders whitened.) The best season for the Papilionidæ is early June.

Apart from the adult insects, there are found on grassy patches about this time various caterpillars that grow to be summer butterflies. On plantains and *Veronica virginica* are seen the spiny larvæ, with a beautiful orange dorsal line, of a Heath Fritillary, *Mellicta ambigua*, and a little later, in mid-June, luxuriant wild Hops, *Humulus cordifolius*, are ravaged by the gregarious black larvæ of the Peacock (*I. io*). The latter seem to be easy prey of parasitic flies and wasps, and I was disappointed to find a great many grown larvæ of the lot collected had been parasitized. As a result, I obtained only a few adults from the pupæ. Toward the end of this month, fresh butterflies emerge, one species after another; *Fabriciana adippe*, *Paraneptis rivularis* and *P. pryeri* (Nymphalidæ); *Libythea celtis*; *Japonica lutea* and *Antigius attilia* (Lycænidæ); then *Inachus io*. They are soon followed by *Kalkasia aluwina*, *Argynnis paphia*, *Apatura ilia*, all fine Nymphalid butterflies. About the same time, in early July, a large number of *Iratsume orsedice* (one of the several Hairstreaks indigenous to Japan) make their appearance on the tips of sunny twigs. I saw a female of *I. orsedice* sit on a leaf of a willow branch extending over the river, and having climbed the willow tree with great care I snapped it with my camera. After developing the film, however, I found the shots had not been successful. Though many Hairstreaks can be spotted at the extremities of branches jutting out of the foliage, it is difficult to get good pictures unless by lucky chances.

On July 3, I made my way across the slopes and grasslands to the Sanjiro Ranch for the first time. I reached the destination after two hours' walk, and there I was able to take specimens of *Pararge achine* and *Aporia hippia* (neither of which is found near the Spa), as well as *Mellicta ambigua*, *Paraneptis rivularis*, *Fabriciana adippe*, etc. *Aporia hippia* is one of the nine Alpine Butterflies of Japan. I took a male specimen at the Tobira Spa bus terminus on July 8, which proved to be unusual in view of the distribution of its food-plant, a Barberry.

I went farther beyond the Ranch on the 11th, and decided to put up at the Sakura-shimizu Hut, near Ishikiriba (or quarry) for a few days with a view to making best use of my net and camera up on the Heights. During this stay I made my first ascent to the Utsukushi-ga-hara Heights (highest point: 6800 feet above sea level). On the wind-blown field, which also becomes a meadow during the summer, there were not many kinds of butterflies flying. What I collected there were *Aporia hippia*, *Colias erate*, and some Fritillaries. However, many species could be seen on the lower half of the slope. Especially numerous were *Lycæides subsolana*, a large, pretty Blue, and *Paraneptis rivularis*. On the afternoon of the same day, I found a Nymphalid butterflies' assembly on the edge of a pool in a deserted charcoal kiln. I was photographing these drinking butterflies — *Nymphalis xanthomelas*, *P. rivularis*, *Ladoga camilla*, *M. ambigua*, etc. — when a butterfly was seen to settle on a white flower of *Astilbe japonica*. I took it for a Small Purple Emperor, *Apatura ilia*, at first sight, but on approaching it I found it to be a melanic aberrant *Fabriciana adippe*. I was too excited to try to take a photo.

Two days later I observed the oviposition of the Barberry White, *Aporia hippia*. When I was walking amid the Sanjiro Ranch, I saw a female butterfly flying lingeringly over a shrub of Barberry, touching leaves at intervals. I watched her closely for a while, and then walked up stealthily in the thorny bush. In the meantime she had settled on the underside of a leaf, head downwards and grasping the edge of the leaf very firmly. She laid one yellow, bottle-shaped egg, then let her abdomen dangle, and in about 10 seconds she eagerly bent it to resume oviposition. After forming a layer consisting of about 100 eggs closely glued together, the female butterfly began to make a second one, but this time she did not lay more than half as many. All this took place in about 20 minutes, and I had consumed all the exposures of a roll of film when the butterfly was gone. The whole process was really worth observing, in spite of the fact that I had to sit in the thorny scrub under the scorching sun.

Many butterflies emerge in mid-June, when, on a fine day, everyone is sure to see various kinds of fresh specimens on the wing, even within a few steps from the hotel. Most abundant species then were: *Gonepteryx mahaguru*, *Apatura ilia*, *Brenthis daphne*, *Antigius attilia*. Like many other Sulphurs of tropical lands, newly-emerged adults of *Gonepteryx mahaguru* huddle together on wet soil to drink. One day I caught sight of a group of 10 butterflies or so, but while I was preparing my camera, several charcoal burners came along, and the sensitive yellow butterflies had fled before I could warn the people. Many mountain butterflies gather in this way, attracted either by moisture or animal droppings. Also, *Araschnia burejana* and *Halpe varia* (Hesperiidæ) are often found

in groups of more than ten individuals. I found it difficult to photograph the latter butterflies drinking together, as these skippers were very nervous. To approach them unnoticed was only possible until I was about seven feet away; when I went nearer they began to fly, one by one.

On July 18 I repaired to the Ranch. This time I had given up taking pictures so that I could freely collect butterflies. The meadow was alive with *M. ambigua* and *Mesoacidalia charlotta*. After taking a sizable number of each species I proceeded to Hirokoba by way of Oidaira. The path ran through a dark softwood, and since horses and cattle were put to grass passing this course, there were quite a few droppings here and there on the way. "But they do attract many butterflies," I said to myself. Indeed, I had not known the real blessing of this mountain-path nuisance until I saw a black butterfly whirling over a log bridge suddenly land on cow-dung on the path, just about seven feet ahead of me. It was a rare Alpine Butterfly, *Limenitis populi*! With my heart pounding fast, yet trying my best to be cool-headed, I netted it — I made it! How I pinched it, how I put it in a paper envelope, entirely escaped my memory. But, at any rate, it was a fine, perfect male specimen. This was the only example I was ever able to take there, and I did not have the pleasure of even seeing another. Looking back upon that event, however, I still regret that I did not carry a camera with me that day.

I revisited the Ranch five days later. Toward evening I took a Hair-streak, *Antigius butleri*, sitting on a leaf of *Clethra barbinervis* on my way back to the quarry. The season for *Chrysozephyrus smaragdinus* was now beginning. The steep hill at the back of a reservoir would prove to be a promising collecting ground of this emerald-green Hairstreak, good footings were found and a longer rod handle used for a net.

Then some of the finest summer butterflies, many of which are the second brood (marked with "II" in the following), begin to emerge in the last week of July. For example, there are the gigantic *Papilio maacki* (II); *Æromachus inachus* (Hesperiidæ); *Strymon merus*, *Araragi enthea*, *Rapala arata* (II), *Favonius jezoensis*, *F. cognatus* (all Lycænidæ); *Pararge deidamia* (II); and the White-Admiral-like second brood butterflies of *Araschnia burejana*. Early August is the hottest time of the year, and it is no wonder that butterflies also feel thirsty in the daytime. Thus, the wayside pools and puddles are frequently visited by drinkers such as *Polygonia vau-album* (Compton Tortoise), *N. antiopa*, *I. io* (II), *P. c-album* (II), *Dichorragia nesimachus* (II), *Choaspes benjamini* (Hesperiidæ), etc. Though not very common, *Pyrgus maculatus* (II) can be taken at times. *Papilio maacki* are most numerous between August 5 and 15, and male butterflies form larger groups on the ground than in June. Going up a stream by stepping stones, one will most probably come

across a batch of butterflies engaged in drinking water. The flowers of *Clerodendron tricotomum* are great *Papilio*-attracters, being in full bloom about the 10th of this month. However, males of *P. maacki* do not frequent them. Other Swallowtails, such as *P. macilentus* (II), *P. protenor* (II) and *P. xuthus* (II) may be taken on them.

I went to the Tobira Pass by bus on August 16. The winding bus road reminded me of the toll highway of Nikko. It was only a 40 minutes' ride, but on foot it would take over two hours to go from the Spa to the Pass. The view from the bus was simply superb, and there was a curve at which a distant view of the snow-capped Japan Alps could be enjoyed. On getting off the bus at the terminal stop, I was astonished at an unusual sight several yards away. The road, the precipice on the left side, and the ground were scattered with fresh specimens of *Nymphalis antiopa*. They were all taking moisture, and I, after twenty minutes' easy hunting, ran out of envelopes although I put three butterflies in each. My net, new and white, got blotted all over with that red excrement characteristic of many a nymphalid butterfly.

A week later, on the 23rd, I went there with a camera. The Mourning Cloaks were still found in plenty, though not so many as in my previous visit. A large maple tree had been uprooted in a small landslide, and several butterflies were sitting on the trunk to sip the sap exuding from a break. The road leading to the Pass is overlooked by cliffs for a few hundred yards near the bus terminal. Such a place is a haunt of *Pararge deidamia* and *Caduga sita*. Later on, I noticed a number of empty pupa cases hanging from the rugged surface of the cliff at a point of the Pass. They had been left by those numerous Mourning Cloaks. It is known that many nymphalid caterpillars leave the food-plants or their breeding ground to pupate in far-off places, but there was no knowing where the fully grown larvæ of *N. antiopa* came from.

From the Tobira Pass runs a path leading to the Utsukushi-ga-hara Heights via Mt. Cha-usu. From late August through early September, this ridgeway is crowded with *I. io* coming to the abundant, pale purple flowers of *Scabiosa japonica*. Thistles in the meadow also attract *Gonepteryx rhamni*. The busy butterfly season ends in mid-September, when, with the exception of some Fritillaries, those occasionally seen are only such hibernators as *N. antiopa*, *P. c-album*, *G. rhamni*. And it was also time for me to bid good-by to the Tobira Spa and the Utsukushi-ga-hara Heights, where I had so enjoyed my stay of a quarter of a year.

Translated from the Japanese original by TADAHIRO TAKAKURA.

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