

1st very few butterflies came near the pole; but among the visitors was another kind, a species of *Mycalesis*. There was heavy rain during the afternoon. The next day the tents were struck.

I am inclined to think that what attracted these butterflies was the remnants of human skin secretions clinging to the pole. My tent-poles had had much more frequent handling than those of Mr. Marcan, which may explain why mine were the more favoured. The diminution in the number of butterfly visitors towards the end of our visit may, perhaps, be accounted for by the gradual dissipation of the skin secretions on the pole.

It has been suggested that butterflies alighting on one's bare skin, as not infrequently happens, particularly in the case of blues and skippers, are seeking the salt contained in the sweat; but it may be some other constituent of the skin secretion which attracts them. That skin secretions have an attraction for some butterflies, there seems very little doubt. In Vol. II, p. 146, of the Journal of the Natural History Society of Siam, Mr. E. J. Godfrey records an interesting observation made by Mr. K. G. Gairdner on a skipper, *Bibasis sena* Moore. Mr. Gairdner observed this skipper exuding drops of fluid on the back of his hand. This fluid it then sucked up again. It was seen doing the same thing on camp furniture. By this means the butterfly probably dissolved some substance, or substances, of the skin secretion and made them more absorbable. I also have observed this species carrying out the same process. Indeed *Bibasis sena* is a familiar friend of mine, and I expect to see him in the early morning, darting about and occasionally settling on the pole, or camp furniture, whenever my tent is pitched anywhere near the jungle. He seems to prefer things that have been well handled, and is very partial to leather straps which have been over the bare human shoulder. Several other species of skipper visit one's tent thus in the early morning, but none is such a constant visitor as the *Bibasis*.

I have to thank Mr. E. J. Godfrey for kindly identifying these butterflies for me.

A. KERR.

Bangkok, August 3, 1931.

#### No. X. Note on a Flight of Butterflies (*Cirrochroa tyche mithila* M.).

In January, 1928, in Nakawn Sritamarat Province, I witnessed a flight of a tawny-coloured butterfly, specimens of which have been identified by Mr. E. J. Godfrey as *Cirrochroa tyche mithila* M. The following account is taken from notes made at the time.

About mid-day on January 27th, on arrival by train from the south at Ta Samet, a station on the Southern Line some 40 kilometres north of Patalung, I noticed a number of tawny-coloured butterflies crossing the line diagonally from north to south. All the butterflies

of this species were flying in the one direction. There were other species of butterflies about, but they were not flying with regularity in one direction.

The tawny butterflies were flying singly, or sometimes three or four flew near each other. Sitting in my tent, close to the station, I counted the numbers passing between me and a group of trees about 100 yards off. A few were doubtless missed, as those furthest away were not always easy to see. In ten minutes, between 1.26 and 1.36 p. m., 436 of these butterflies passed this space. There was little or no wind at the time.

Later in the same afternoon, on walking further up the line, where its direction was more north and south, I found the butterflies following the line. They rarely stopped, but one or two were seen to alight for a few seconds on the flowers of a *Eugenia*.

On the 28th, at the same place, the butterflies were not so numerous, but were still flying south. There was a shower in the afternoon.

On the 29th only a few butterflies were seen, some of which were settling. Only very few were flying continuously southwards. There was heavy rain during the evening and in the night.

On the 30th the butterflies were again numerous, flying southwards as on the first day. In 5 minutes, between 11.2 and 11.7 a.m., 54 passed, within a distance of 50 yards.

At mid-day on the 30th I went on by train to Kao Chum Tawng, a station about 30 kilometres to the north of Ta Samet. At Kao Chum Tawng the line runs nearly east and west. Here the tawny butterflies were again numerous, and crossing the line at right angles, flying south. There was a fresh northeast breeze blowing and the day was sunny. Sitting in the station, between 1 and 1.30 p.m., and facing west, I counted 22 of these butterflies in 15 minutes, passing within 30 yards of me. A few minutes later, on turning round and facing eastwards, I saw the butterflies were more numerous on this side, and counted 102 in five minutes, passing within 30 yards. I then noticed that a stream of butterflies was coming down the village street, which ran north and south, about 100 yards north of the station. On facing west I had seen only the edge of this stream, but on turning round most of it came into view.

On coming to the edge of the jungle south of the line, most of the butterflies ascended and passed over the tops of the trees, a few tried to find ways lower down. In passing over open grassy ground they flew usually at not more than three feet from the ground. A few were seen to settle during the day. That evening I went north by the Bangkok express, and saw no more of the flight.

It will thus be seen that this unidirectional flight of one species of butterfly went on, with varying intensity, for at least four days, and that the flight was observed at two places 30 kilometres apart. It is improbable, however, that this was the full extent of

the flight, either in time or space.

I have no suggestions to offer as to the reason, origin or goal of this flight.

A. KERR.

Bangkok, August 18, 1931.

#### No. XI. Note on the Mosquito *Anopheles vagus* in Siam.

The following letter was received from the late Dr. Louis Schapiro, Adviser in Public Health, about three months before his death; it was dated October 21, 1931:—

"The Journal of the Siam Society, Natural History Supplement, Vol. VIII, no. 3, carries a review on 'Les moustiques de Cochinchine et de Sud-Annam' stating that 'the four species not found in Siam being.....and *Anopheles vagus*.'

"In the mosquito surveys recently made by the Department of Public Health in Bangkok we found that *A. vagus* formed 80% of the catch during the dry season and 50% during the rainy season.

"Lt. Col. A. J. Sinton collected larvae and mosquitoes in Siam during December 1930 which were indentified by Barraud and Christophers,<sup>1</sup> reporting *A. vagus* caught at Bangkok; Patalung railway station; Rajburi railway station; Lampang railway station; and Chiangmai."

The reviewer is indebted to Dr. Schapiro for drawing attention to the valuable paper referred to above which had not been published when the review was written. The quotation concerning *A. vagus* occurs in the course of comparison of the records of Barnes with those of the French worker Borel, since the former did not record *A. vagus* at all while the latter found it to be the most common anopheline species in Indochina. Barraud and Christophers refer to Barnes's paper which was published in Vol. VI of this Journal and clear up several obscure points. With regard to *A. vagus*, they say, "*A. rossii*, as shown by material now examined, must certainly apply to *A. vagus* and in part to *A. rossii* var. *malayensis*".

The external characteristics of *A. vagus* and *A. rossii* are very similar and it is probable that they were not differentiated by many workers at the time when Dr. Barnes carried out his work on the Anophelines of Siam.

C. J. House.

#### No. XII. A New Bird for Siam.

There was taken in Bangkok in January, 1932, a female specimen of the pintail green pigeon *Sphenurus seimundi* (Robinson). The skin was sent for identification to the Raffles Museum Singapore, and the curator, Mr. F. N. Chasen, reported thereon as follows:

<sup>1</sup> "On a collection of Anopheline and Culicine mosquitoes from Siam." By P. J. Barraud and S. R. Christophers. 1931. Record of the Malaria Survey of India, Vol. II, no. 2, pp. 269-285.