

## RECENT FOODPLANT RECORDS OF THE LOOCHOOAN BUTTERFLIES

by TARO IWASE

4, Shinhana-cho, Hongo, Tokyo, JAPAN

This is a summary of the recent records pertaining to the plants fed on by the butterfly larvae, from the Okinawa Group and the Sakishima Group, among the Loochoo (Ryukyu) Islands. Additional data from the Amami Group are supplemented to these records with asterisks. All are from the actual field observations by the very enthusiastic members of the Lepidopterological Society of Japan (journal: *Tyo to Ga*), the Kagoshima Konchu Dokokai (journal: *Satsuma*), and the Keihin Konchu Dokokai (journal: *Insect Magazine*).

### HESPERIIDAE

1. *Hasora chromus inermis* Elwes & Edwards, on *Pongamia pinnata* (Leguminosae).
2. *Choaspes benjamini japonica* Murray & *C. b. formosana* Fruhstorfer, on *Meliosma oldhami* (Sabiaceae).
3. *Tagiades trebellius martinus* Ploetz, on *Dioscorea alata*, *D. cirrhosa* (Dioscoreaceae).
4. *Notocrypta curvifascia curvifascia* Felder & *N. c. yaeyamana* Shirozu, on *Alpinia speciosa*, *A. intermedia* (Zingiberaceae).
5. *Udaspes folus* Cramer, on *Alpinia speciosa* (Zingiberaceae).
6. *Telicota colon stinga* Evans, on *Miscanthus sinensis*, *Microstegium* sp. (Gramineae).
7. *Parnara naso bada* Moore, on *Oryza sativa*, *Bambusa* sp. (Gramineae).
8. *Parnara guttata guttata* Bremer & Grey, on *Miscanthus sinensis* (Gramineae).
9. *Borbo cinnara* Wallace, on grasses (Gramineae).
10. *Pelopidas mathias oberthueri* Evans, on *Miscanthus sinensis*, *Imperata cylindrica*, *Arundo donax*, *Oplismenus compositus*, *Saccharum officinarum*, *Bambusa* sp. (Gramineae).

### PAPILIONIDAE

1. *Byasa alcinous loochooanus* Rothschild, *B. a. bradanus* Fruhstorfer, & *B. a. miyakoensis* Omoto, on *Aristolochia liukuensis* (Aristolochiaceae).
2. *Graphium sarpedon morium* Fruhstorfer, on *Cinnamomum japonicum*, *Litsea japonica*, *Machilus thunbergii* (Lauraceae).
3. *Graphium doson perillus* Fruhstorfer, on \**Michelia formosana*? (Magnoliaceae).

4. *Papilio xuthus xuthus* Linnaeus, on *Zanthoxylum beecheyanum*, *Fagara ailanthoides* (Rutaceae).
5. *Papilio polytes polytes* Fruhstorfer, on *Citrus depressa*, *Toddalia asiatica* (Rutaceae).
6. *Papilio protenor liukuensis* Fruhstorfer, on *Citrus depressa* (Rutaceae).
7. *Papilio bianor okinawaensis* Fruhstorfer, & *P. b. junia* Jordan, on *Evodia glauca* (Rutaceae).
8. *Papilio memnon pryeri* Rothschild, on *Citrus depressa* (Rutaceae).
9. *Papilio helenus nicconicolens* Butler, on *Citrus depressa* (Rutaceae).

## PIERIDAE

1. *Pieris rapae curcivora* Boisduval, on *Brassica oleracea*, *B. juncea*, *Rorippa indica* (Cruciferae).
2. *Hebomoia glaucippe liukuensis* Fruhstorfer & *H. g. cincia* Fruhstorfer, on *Crataeva religiosa* (Capparidaceae).
3. *Catopsilia pyranthe* Linnaeus, on *Cassia obtusifolia*, *C. occidentalis* (Leguminosae).
4. *Catopsilia crocale* Cramer, on *Cassia siamea*, *C. fistula* (Leguminosae).
5. *Catopsilia pomona* Fabricius, on *Cassia siamea* (Leguminosae).
6. *Eureme hecabe subdecorata* Moore & *E. h. hobsoni* Butler, on *Leucaena glauca*, *Cassia occidentalis*, *C. fistula*, *C. siamea*, *C. surattensis*, *Acacia farnesiana*, *Lespedeza cuneata* (Leguminosae).
7. *Eurema blanda arsakia* Fruhstorfer, on *Caesalpinia nuga* ?, *Wagatea spicata* (Leguminosae).
8. *Eurema laeta bethesba* Janson, on \**Cassia mimosoides* ? (Leguminosae).
9. *Colias erate poliographus* Motschulsky, on *Melilotus suaveolens* (Leguminosae).

## LYCAENIDAE

1. *Narathura japonica* Murray, on *Quercus acutissima* (Fagaceae).
2. *Narathura bazalus turbata* Butler, on \**Lithocarpus edulis* (Fagaceae).
3. *Deudorix eryx okinawana* Matsumura, on *Gardenia jasminoides* (Rubiaceae).
4. *Euchrysops cnejus* Fabricius, on *Vigna marina*, *Phaseolus angularis*, *Crotalaria* sp. (Leguminosae).
5. *Lampides boeticus* Linnaeus, on *Vigna marina*, *Phaseolus angularis*, *Pisum sativum*, *Crotalaria sessiflora* (Leguminosae).
6. *Jamides bochus ishigakianus* Shirozu, on *Pueraria montana* ?, *Pongamia pinnata*, *Oromacarpum cochinchinensis* (Leguminosae).
7. *Nacaduba kurava septentrionalis* Shirozu, on *Ardisia sieboldii*

- (Myrsinaceae).
8. *Nacaduba nora kanoi* Omoto, on *Entada phaseoloides* (Leguminosae).
  9. *Megisba malaya iwasakii* Matsumura, on *Mallotus japonicus* (Euphorbiaceae).
  10. *Everes lacturnus kawai* Matsumura, on *Desmodium heterocarpum* (Leguminosae).
  11. *Pithecopis nihana ryukyuensis* Shirozu on *Desmodium caudatum*, *D. tashiroi* (Leguminosae).
  12. *Zizina otis riukiensis* Matsumura, on *Melilotus suaveolens*, *Kummerowia striata*, *Lespedeza cuneata*, *Vigna marina* (Leguminosae).
  13. *Zizeeria maha okinawana* Matsumura, on *Oxalis corniculata* (Oxalidaceae).
  14. *Zizeeria knysna karsandra* Moore, on *Amaranthus spinosus*, *A. ascendens* (Amaranthaceae).
  15. *Celastrina puspa ishigakiana* Matsumura, on \**Rosa wichuraiana*? (Rosaceae).
  16. *Curetis acuta paracuta* de Nicéville, on \**Robinia pseudoacacia* (Leguminosae).

## LIBYTHEIDAE

1. *Libythea celtis amamiana* Shirozu, on *celtis boninensis* (Ulmaceae). ceae).

## DANAIDAE

1. *Limnas chrysippus* Linnaeus, on *Asclepias curassavica* (Asclepiadaceae).
2. *Salatura genutia* Cramer, on *Tylophora tanakae* (Asclepiadaceae).
3. *Radena similis similis* Linnaeus, on *Tylophora tanakae* (Asclepiadaceae).
4. *Caduga sita nipponica* Moore, on *Hoya carnosa*, *Marsdenia tinctoria*, *Asclepias curassavica* (Asclepiadaceae).
5. *Idea leuconoe riukiensis* Holland, on *Cynanchum formosanum* (Asclepiadaceae).

## NYMPHALIDAE

1. *Argyreus hyperbius hyperbius* Linnaeus, on *Viola pseudo-japonica* (Violaceae).
2. *Precis almana* Linnaeus, on *Lippia nodiflora* (Verbenaceae), *Lindernia verbenaeifolia* (Scrophulariaceae).
3. *Precis orithya* Linnaeus, on \**Justica procumbens* (Acanthaceae).
4. *Vanessa cardui* Linnaeus, on *Arctium lappa* (Compositae).
5. *Vanessa indica indica* Herbst, on *Boehmeria nivea* (Urticaceae).
6. *Kaniska canace siphnos* Fruhstorfer & K. c. *ishima* Fruhstorfer, on *Smilax bracteata*, *S. sebeana* (Liliaceae).

7. *Hypolimnas misippus* Linnaeus, on \**Portulaca oleracea* (Portulacaceae).
8. *Hypolimnas bolina philippensis* Butler, on \**Ipomea adulis* (Convolvulaceae).
9. *Hypolimnas antilope truentus* Fruhstorfer, on *Villebrunea* sp. ? (Urticaceae).
10. *Kallima inachus eucerca* Fruhstorfer, on *Strobilanthes glandulifera*, *S. tashiroi* (Acanthaceae).
11. *Cyrestis thyodamas mabella* Fruhstorfer & *C. t. ishigakiana* Matsumura, on *Ficus septica*, *F. erecta* (Moraceae).
12. *Neptis hylas luculenta* Fruhstorfer, on *Pueraria montana*, *Glycine max* (Leguminosae).
13. *Tacoraea selenophora ishiana* Fruhstorfer, on *Mussaenda pubescens* (Rubiaceae).
14. *Dichorragia nesimachus ishigakianus* Shirozu, on \**Meliosma* sp. (Sabiaceae).
15. *Polyura eudamippus weismanni* Fritze, on *Celtis boninensis* (Ulmaceae), *Rhamnella franguloides* (Rhamnaceae).
16. \**Hestina assimilis shirakii* Shirozu, on \**Celtis boninensis* (Ulmaceae).

## SATYRIDAE

1. *Ypthima riukiwana* Matsumura, on grasses (Gramineae).
2. *Lethe europa pavidia* Fruhstorfer, on *Bambusa* sp. (Gramineae).
3. *Mycalesis gotama madjicosa* Butler, on *Miscanthus sinensis*, *Oplismenus compositus* (Gramineae).
4. *Melanitis leda leda* Linnaeus, on grasses (Gramineae).

## References

- (Originals in Japanese with Latin names, unless otherwise stated)
- Fujioka, Tomoo, *et al.*, 1962. Butterflies from Amami Group. *Insect Magazine* 55: 1-70, 4 pls., 16 figs. (mimeograph).
- Kawazoe, Akito, 1959-1960. On the butterflies from the Amami-Gunto. Parts (1)-(4). *Tyo To Ga* 10: 16-20, 9 figs.; 31-34, 6 figs.; 52-59, 40 figs.; 11: 21-25, 14 figs.
- Kubo, Kaiya, 1963. On the life history of the Great Nawab, or *Polyura eudamippus weismanni* Fritze, of Okinawa Island. *Tyo To Ga* 14: 14-22, 1 pl., 18 figs.
- Nagamine, Kunio, 1962a. Host-plants of butterflies in Okinawa Island. *Satsuma* 11: 58-63 (mimeograph).
- Nagamine, Kunio, 1962b. On the butterflies from the Yaeyama Group of the Ryukyu. (1), (2). *Tyo To Ga* 13: 30-34, 14 figs.; 83-88.
- Nakamura, Ichiro, & Kaiya Kubo, 1962. Notes on the butterflies from the Yaeyama-Islands, with the list of butterflies collected by authors. (1), (2). *Tyo To Ga* 13: 1-12, 2 maps, 4 figs.; 60-67 figs.
- Omoto, Keiichi, 1959-1960. List of the butterflies from Ishigaki Island, the southern Loochoos, collected by Dr. R. Kano, with the description of a new subspecies. Parts (1)-(4) [in English]. *Tyo To Ga* 10: 23-28, 22 figs.; 36-42, 31 figs.; 60-65, 30 figs.; 11: 1-6, 18 figs.

- Omoto, Keiichi, 1960. Butterflies from Miyako Island, the southern Loochoos [partly in English, with description of a new subspecies]. *Tyo To Ga* 11: 39-43, 8 figs.
- Shirozu, Takashi, & Hara Akira, 1960, 1962. *Early stages of Japanese butterflies in colour*. Vol.I 130 pp., 60 pls.; Vol.II: 129 pp., 60 pls. Hoikusha Ltd., Osaka.
- Takara, Tetsuo, 1958. On the snout butterfly of Okinawa Islands. *Shin Konchu* 11 (12): 43, 4 figs.
- 

## BUTTERFLY COLLECTING AT THE TIME OF A SOLAR ECLIPSE

by JOSEF MOUCHA

National Museum, Praha, CZECHOSLOVAKIA

June 30th 1954 was the day of a remarkable partial solar eclipse. This day I collected near the village of Cejkov near the Slovak-Hungarian frontier (SE of the town of Košice, E. Czechoslovakia). This locality is very interesting for the collector. During my stays in Cejkov (May 5-9th 1951, June 30th 1954, and July 13-14th 1950) I have found here 142 species of Lepidoptera, of which 58 are Rhopalocera and 42 Geometridae, all collected by day only.

In the surroundings of Cejkov are a number of biotopes, chiefly oak woods, hillsides covered with bushes and xerophilous plants, cultivated fields with different agricultural plants (for example corn, tobacco, red pepper, sunflower, etc.), and fruit-trees and vineyards also. Geographically this region belongs to the hilly country of Čergov, where some of hills reach about 350-470 m a.s.l. Towards the south is low-lying land (99-125 m a.s.l.) on the rivers Ondava and Bodrog. The locality of Cejkov is situated on the border between this lowland and the hilly region, at an elevation above sea level of about 180 m.

I observed the partial solar eclipse here on June 30th 1954. The information of the time of this solar eclipse for the village of Cejkov with the exactness of  $\pm 15$  seconds: the beginning after noon, at 12:52.2, the middle at 14:08.2, and the end at 15:18.2 of Central European time. The middle is the moment of the maximal eclipse of the solar disc. The intensity (the maximal part of the solar diameter covered by the moon) was 0.87.

Immediately after the beginning of the solar eclipse I observed a remarkable uneasiness in the diurnal species. This behavior was common in other insects also (mainly Odonata and Diptera). On this day there was a breeze, which changed during the solar eclipse to a perceptible wind. After the beginning of the eclipse the butterflies became uneasy and began searching for resting places, as before their night's rest. The Blues (*Lycaenidae*) came to rest on flowers, the Browns (*Satyridae*)