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DISTRIBUTION OF THE FAMILIES AND GENERA OF BUTTERFLIES WITH THE SPECIAL REFERENCE TO THOSE OF THE JAPAN-EMPIRE

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(松 村 松 年)

I. Fam. Papilionidae

This is a cosmopolitan family, 3 genera being found in Japan, Korea and Formosa.

- 1. Luehdorfia Crüg.—A palaearctic genus, being distributed from Japan to Korea, also known in Formosa and China, especially in the alpine regions. We have 2 species in Japan.
- 2. Papilio L.—A cosmopolitan genus, being nearly 500 species known in the world. In Japan, Korea and Formosa, we have 35 species.
- 3. Sericinus West.—A palaearctic genus, being only known from Korea, Amur and China.

2. Fam. Parnassiidae

1. Parnassius Latr.—This genus is known from the Palaearctic, Nearctic and Oriental Regions. In Japan and Korea we have only 4 species.

3. Fam. Pieridae

This is also a cosmopolitan family and the following 18 genera are known in the Japan-Empire:

- I. Anthocaris Bsp.—A palaearctic genus, being found in Saghalien and Korea; in the central part of Japan we can find it only at the alpine regions. We have only one species in the Japan-Empire.
- 2. Aporia HB.—A palaearctic genus, being found in the northern part of Japan, and Korea. We have only 2 species in Japan.
- 3. Appias HB. (Tachyris WALLGR.)—This is known from the Oriental and Australian Regions, being only found in Okinawa and Formosa. We have 6 species in the Japan-Empire.

- 4. Betaporia MATS.—An oriental genus, being distributed only in Formosa and China. We have only one species in Formosa.
- 5. Catopsilia HB.—This is known from the Oriental and Australian Regions, being very few species of this genus found in South-America. This is distributed only in the subtropical part of Kiushu, Okinawa and Formosa, having 4 representatives.
- 6. Colias F.—A common palaearctic genus, being found also in Southand North-America. In the Japan-Empire we have 4 species.
- 7. Delias HB.—An oriental and Australian genus, being only 3 species represented in Formosa.
- 8. Gonepteryx Lead—A common palaearctic genus, only one species of it being found in South-America (Argentine). We have in our faunistic region only 4 species, two of which are found in Formosa, especially in the mountainous region. From Hokkaido and Saghalien we have no representative.
- 9. Hebomoia HB.—An oriental genus, being common in the subtropical and tropical regions of Japan as in Okinawa and Formosa, being represented by a single species.
- 10. Huphina Moor.—An oriental and Australian genus, being found only in the subtropical region as in Formosa, represented by 2 species.
- 11. Ixias HB.—Also an oriental and Australian genus, being represented by a single species in Formosa.
- 12. Leptidia BILD.—A palaearctic genus, being found in all parts of the Japan-Empire except Saghalien and Formosa. It is represented by a single species.
- 13. Leptosia HB.—An oriental genus, being found in the mountainous region of Formosa, represented by a single species.
- 14. Leucochloë Röb.—Also a genus known from the Palaearctic Region, being found in Korea, represented by a single species.
- 15. Midea HB.—A palaearctic genus, being found in all parts of the Japan-Empire, except Saghalien, Okinawa and Formosa.
- 16. Pieris Schrk.—A cosmopolitan genus, being common in the Palaearctic Region, extending to the subfrigid zone, represented by 4 species.
- 17. Prioneris Schrk. This is an oriental and Australian genus, being common in Formosa, represented by a single species.
- 18. Terias Swains. (Eurema Hb.)—This is distributed throughout the Palaearctic, Oriental, Australian and Nearctic Regions, represented by 7 species. This is not found in Hokkaido, even though it is very common at Aomori near Hakodate.

4. Fam. Danaidae

This is distributed in the Palaearctic, Oriental, Australian, Polynesian, Nearctic and Neotropical Regions, being common in the subtropical regions, represented by 3 genera in the Japan-Empire.

- I. Danais LATR.—A cosmopolitan genus in the tropical and subtropical regions, represented by 12 species, being not rare even in the central part of Japan.
- 2. Euploea F.—Nearly a cosmopolitan genus in the subtropical and tropical regions, being found in Okinawa and Formosa, represented by 8 species.
- 3. Hestia HB.—An oriental genus, being found in Formosa and Okinawa, especially being abundant in the southern part of the former island.

5. Fam. Acraeidae

We have only one genus of this family in Formosa.

I. Acraea F. (Pareba DBL.)—This genus is widely distributed in the Oriental Region, the larva being very injurious to the fibrous plants as rhamie, hemp, jute, etc.

6. Fam. Satyridae

This is widely distributed over the world, being a cosmopolite; in the Japan-Empire we have the following 13 genera:—

- I. Aphantopus WALLGR.—This genus is known from Korea, being represented by a single species.
- 2. Coenonympha HB.—This is a palaearctic genus, being distributed in Saghalien, Hokkaido, Honshu and Korea; only 3 species are known in the Japan-Empire.
- 3. Elymnias HB.—This is an oriental genus, being known from Formosa, represented by a single species.
- 4. Erebia DALM.—This is a palaearctic alpine genus, being known from Saghalien, Hokkaido, Honshu and Korea, represented by 3 species.
- 5. Lethe HB.—This genus is widely distributed in the Palaearctic Region, some being found in the mountainous parts of the Oriental Region; 19 species are known from the Japan-Empire.
- 6. *Melanargia* Meig.—This is a palaearctic genus and only one species is known from Korea.
- 7. Melanitis F.—This is known from the Oriental, Australian and Polynesian Regions, some species being distributed in the Palaearctic Region, represented by 2 species.

- 8. Mycalesis HB.—This is distributed especially in the subtropical region, some species of which are known from the Palaearctic Region. In the Japan-Empire we have 8 species, being unknown from Hokkaido and Saghalien.
- 9. Neope Butl.—This is a palaearctic genus, some species of it being known from the mountainous parts of the subtropical part of Formosa. In the Japan-Enpire we have 6 species.
- 10. Oeneis HB.—This is known from the alpine part of the Palaearctic Region, being found also in the table-land of Saghalien, represented altogether by 3 species.
- 11. Palaeonympha W. Mas.—This genus is only known from the mountainous part of Formosa, being represented by a single species.
- 12. Pararge HB.—This is a palaearctic genus, being known from Saghalien, Hokkaido, Honshu, Kiushu and Korea. In the Japan-Empire we have only 2 species.
- 13. Satyrus Latr.—This is widely distributed in the Palaearctic Region, especially abundant in the northern part of Japan, represented by 2 species. One species of them is known from the mountainous part of Formosa.
- 14. Ypthima HB.—This is a palaearctic genus, being widely distributed in the Japan-Empire, represented by 13 species.

7. Fam. Amathusiidae

This is known from the Oriental and Neotropic Regions, being represented by a single genus in Formosa.

I. Stichophthalma Feld.—This is distributed only in the mountainous part of Formosa, represented by a single species.

8. Fam. Nymphalidae

This is a cosmopolitan family, being represented by the following 35 genera in Japan.

- I. Abrota Moor.—We have only one species of this oriental genus, which is only distributed in the mountainous part of Formosa.
- 2. Apatura F.—This is a palaearctic genus, being widely distributed in Japan except in Saghalien. We have 7 species in the Japan-Empire.
- 3. Araschnia HB.—This is a palaearctic genus, being widely distributed in Hokkaido.
- 4. Argynnis F.—This is also a palaearctic genus, being rarely found in the mountainous part of Formosa, and altogether 21 species being known from the Japan-Empire.

- 5. Atella DBL.—This is an oriental genus, widely distributed in China and India, but very rare in Japan, only few specimens being found in Kiushu and Okinawa.
- 6. Callinaga Moor.—This is common in the mountainous part of Formosa, being an oriental genus, distributed in China and India. Only one species is known from Formosa.
- 7. Cirrochroa DBL.—In Formosa only one species is known, being caught only in the mountainous part. This is also distributed in China and India.
- 8. Cupha BIEB.—This is common in Formosa, being represented by one species, distributed also in China and India.
- 9. Cyrestis Bsp.—We have in Japan and Formosa only one species, being common in the latter region, but few in the former.
- 10. Diagora SNELL.—This is widely distributed in the Japan-Empire, represented by a single species, being common even in Hokkaido.
- II. Dichorragia Butl.—In Japan and Formosa is not rare, being distributed in the mountainous part. In the northern part of Japan and in Hokkaido it is absent. Only one species is known.
- 12. Doleschallia Feld.—This is rare in Japan, being caught only once in Okinawa.
- 13. Ergolis Bsp.—An oriental genus, known from Formosa, being represented by a single species. This is also distributed in China and India.
- 14. Eriboea HB.—This is an oriental genus, known from Okinawa and Formosa, represented by two species.
- 15. Euthalia Hb.—This is an oriental genus, known from the mountainous part of Formosa, being represented by 4 species.
- 16. Helcyra Feld.—This is found in the mountainous part of Formosa, being represented by only one species.
- 17. Hestina West.—In Okinawa and Formosa this is quite common, being found in the mountainous part, represented by a single species.
- 18. Hypolimnas HB. (Diadema Bsp.)—This is widely distributed in the Palaearctic, Oriental, Australian and Polynesian Regions, being rarely found at Kiushu. This is represented by 3 species in the Japan-Empire.
- 19. Issoria HB.—This is only known from the Polynesian Region, being represented by a single species.
- 20. Kallima West.—An oriental genus, being common in Okinawa and Formosa. We have one species in the Japan-Empire.
- 21. Limenitis F.—This is common in the Palaearctic Region, being found also in the mountainous part of Formosa and Okinawa. We have 7 species in the Japan-Empire.

- 22. Melitaea F.—A palaearctic genus, not common in Japan, being found also in the northern part of Saghalien, but not yet known in Hokkaido. In the Japan-Empire we have 5 species.
- 23. Neptis F.—In the Palaearctic and Oriental Regions this genus is widely distributed, being found in the mountainous part of Formosa, represented by 13 species.
- 24. Pantoporia HB. An oriental genus, being found in Okinawa and Formosa, represented by 5 species.
- 25. Penthema West.—This genus is known from Formosa, being found in the mountainous part, represented by only a single species.
- 26. Polygonia HB.—A palaearctic genus, being found especially in the mountainous part of the central Japan, being less in Formosa. We have 3 species represented in the Japan-Empire.
- 27. Precis HB. (Junonia HB.)—This genus is known from the subtropical and tropical regions, being found in Okinawa, Formosa and the Polynesian Islands. We have 6 species represented in the Japan-Empire and our mandate Polynesian Region.
- 28. Pyrameis HB.—A cosmopolitan genus, being widely distributed in the Japan-Empire, represented by 2 species.
- 29. Rahinda Moor.—An oriental genus, only one species being known from Formosa, restricted in the mountainous part.
- 30. Sasakia Moor.—This genus is widely distributed in the Japan-Empire, being represented by 2 species, known also from Hokkaido and Korea.
- 31. Sephisa Moor.—This is an oriental and palaearctic genus, having few representatives in Korea and Formosa. We have 2 species in the Japan-Empire.
- 32. Symbrenthia HB.—An oriental genus, only known from Formosa, being represented by 2 species.
- 33. *Timelaea* Luc.—This is also an oriental species, being known from Formosa, represented by a single species.
- 34. Vanessa F.—A common palaearctic genus, being rarely found in the mountainous part of Formosa. In the Japan-Empire we have 5 species.
- 35. Yoma Don.—This is distributed in the mountainous part of Formosa, being represented by a single species.

9. Fam. Libytheidae

We have only one genus of Libytheidae in the Japan-Empire.

1. Libytheia F.—This is a cosmopolitan genus, being known from Hokkaido, Honshu, Shikoku, Kiushu and Formosa, represented by 2 species.

10. Fam. Nemobiidae (Riodinidae)

In the Japan-Empire this is only represented in Formosa and Okinawa, having the following 2 genera:

- I. Abisara Feld.—This oriental genus is only distributed in the alpine region of Formosa and Okinawa, being relatively difficult to capture.
- 2. Dodona Hew.—This is locally distributed in Formosa, being represented by a single species, found in certain localities as Torin, Hori, Karenko, etc.

11. Fam. Lycaenidae

This is a cosmopolitan family, being represented by 37 genera in the Palaearctic and Oriental Regions.

- 1. Amblypodia Horsf. (Arhopala Bsp.)—This is known from the Palaearctic as well as the Oriental Region, being not found in Hokkaido. We have 6 species represented in the Japan-Empire.
- 2. Aphnaeus HB.—This is also known from the Palaearctic and Oriental Regions, being common in Formosa, but rare in the central Japan, represented altogether by 5 species.
- 3. Bindahara Dist.—This genus is widely distributed in the Polynesian Region, being found in Ponape, represented by a single species.
- 4. Callophrys BILD.—This is known from Saghalien, being represented by a single species.
- 5. Camena Hew.—This is an oriental genus, being distributed in the mountainous part of Formosa, represented by a single species.
- 6. Castalius HB. (Taraka Nic.)—This genus is known from the whole Japan except Saghalien, being rare in Formosa.
- 7. Catachrysops Bsp.—One representative is known from Formosa, being widely distributed also in China and India.
- 8. Catapoecilma Butl.—This genus is known from Formosa, being represented by a single species.
- 9. Chilades Moor.—This is an oriental genus, being represented by 2 species in Formosa.
- 10. Chliaria Moor.—An oriental genus, known from Formosa, represented in the alpine region.
- 11. Chrysophanus HB.—This is a palaearctic genus, being widely distributed in the whole Japan and Korea, represented by 3 species.
- 12. Curetis HB.—This is distributed in the Palaearctic and Oriental Regions, but rare in the northern part of Japan, represented by 2 species.
 - 13. Cyaniriodes MATS.—An insular genus, being restricted only in the

Bonin Islands, represented by a single species.

- 14. Deudorix Hew.—An oriental genus, being known from the alpine region of Formosa, represented by 3 species.
- 15. Euchrysops Butl.—This is also an oriental genus, only two species being known from Okinawa and Formosa.
- 16. Everes HB.—A widely distributed genus in the Palaearctic and Oriental Regions, being represented by 3 species.
- 17. Horaga Moor.—This is known from Formosa, represented by a single species.
- 18. *Ilerda* DBL.—This genus is known from Formosa, being widely distributed in the Oriental Region, represented by a single species.
- 19. Jamides HB.—In Formosa only one species of this genus is known, which is widely distributed in the Oriental, Australian and Polynesian Regions.
- 20. Lampides HB.—This is widely distributed in the Oriental Region, but less in the temperate part of the Palaearctic, being represented by 3 species.
- 21. Lycaena F.—This is a cosmopolitan genus, being widely distributed in the Palaearctic Region, represented by 19 species.
- 22. Lycaenopsis Feld.—This is known from the Palaearctic and Oriental Regions, being represented by 11 species.
- 23. Mahathala Hew.—An oriental genus, known from Formosa, being represented by a single species.
- 24. Megisba Moor.—This is known from Okinawa and Formosa, having only one representative of this genus.
- 25. Nacaduba Moor.—This is an oriental and Polynesian genus, known from Okinawa, Formosa and Ponape, represented by 6 species.
- 26. Niphanda Moor.—A palaearctic genus, known from the southern part of Japan and Korea, represented by a single species.
- 27. Pithecopis Horsf.—An oriental genus, known from Formosa, represented by 2 species.
- 28. Rapala Moor.—This genus known from the Palaearctic and Oriental Regions, represented by 9 species.
- 29. Satsuma Murr.—This is a palaearctic genus, being widely distributed in the whole Japan, found mostly at the mountainous region.
- 30. Shijimia MATS.—This is an oriental genus, being known from Formosa, represented by a single species.
- 31. Spalgis Moor.—An oriental genus of a small size, being represented by a single species in Formosa.
- 32. Tajuria Moor.—Two species of this genus are represented in Formosa, all being alpine Lycaenids.

- 33. Tarucus Moor. This is an oriental genus, having one representative in Formosa.
- 34. Thecla F.—This genus is known from the Palaearctic and Oriental Regions, being represented by 10 species.
- 35. Una Nic.—(Orthomiella Nic.)—This is known from the alpine part of Formosa, being locally distributed, represented by a single species.
- 36. Zephyrus Dalm.—This is also a widely distributed palaearctic genus, being found also in the alpine region of Formosa, represented by 27 species.
- 37. Zizera Moor.—A palaearctic genus, widely distributed through the whole Japan, represented by 3 species.

12. Fam. Hesperidae

In the Japan-Empire we have 27 genera, being mostly palaearctic.

- I. Abraximorpha Nic.—This is an oriental genus, being found only in the alpine part of Formosa, represented by a single species.
- 2. Adopoea Bild.—This genus is know from the Palaearctic Region, distributed all over the Japan, Korea and Saghalien, and 3 species are known in the Japan-Empire.
- 3. Aeromachus Nic.—This is restricted in the Palaearctic Region and the mountainous part of Formosa, being represented by a single species.
- 4. Ampittia Moor.—In Formosa this is represented by 3 species, being found in the table-land as well as in the alpine part of Formosa.
- 5. Augiades HB.—A palaearctic genus, 3 species being known from the Japan-Empire, but yet unknown from Formosa.
- 6. Badamia Moor.—A common genus found in Formosa, represented by a single species, widely distributed also in China and India.
- 7. Celaenorrhinus HB.—This is an oriental genus, being represented by 4 species, locally distributed in Kiushu, Okinawa and Formosa.
- 8. Erynnis Schrk.—A palaearctic genus, distributed in Saghalien, Honshu, Shikoku, Kiushu; only 2 species are known from the Japan-Empire.
- 9. Halpe Moor.—This is distributed in the Palaearctic and Oriental Regions, being found in Saghalien, Hokkaido, Shikoku, Kiushu, Korea and Formosa, represented by 3 species.
- 10. Hasora Moor.—An oriental genus, being distributed in Okinawa and Formosa, represented by 3 species.
- 11. Hesperia LATR.—This genus is known from the Palaearctic Region, being distributed in Honshu and Korea, having 2 representatives.
- 12. Heteropterus Dam.—This is only known from Korea, by one species being represented.

- 13. Ismene Swains.—This genus is known from the Palaearctic and Oriental Regions, represented by 2 species.
- 14. Isoteinon FELD.—A palaearctic genus, being distributed also in the mountainous part of Formosa, but unknown from Hokkaido, represented by one species.
- 15. Leptalina MAB.—A palaearctic genus, being widely distributed, but locally in Hokkaido, represented by a single species.
- 16. Lobocla Moor.—A palaearctic genus, being known only from Korea, represented by a single species.
- 17. Notocrypta Nic.—This is distributed in the Oriental Region, being known from Kiushu, Okinawa and Formosa, represented by one species.
- 18. Pamphila F.—This is known only from the Palaearctic Region, being quite common in Saghalien, Hokkaido and the mountainous part of Japan, represented by 2 species.
- 19. Parnara Moor.—This genus is widely distributed in the Palaearctic and Oriental Regions, being represented by 14 species.
- 20. Rhopalocampta Waller.—This is an oriental genus, being distributed in the temperate part of Japan, as well as in Okinawa and Formosa; we have only one representative in the Japan-Empire.
- 21. Satarupa Moor.—A widely distributed genus, being unknown in Hokkaido, rare in the northern part of Japan, represented by 4 species.
- 22. Seseria MATS.—This is known only from Formosa, represented by a single species.
- 23. Suastus Moor.—An oriental genus, being only known from Formosa, represented by a single species.
- 24. Tagiades HB.—This genus is known from the mountainous part of Formosa, being represented by a single species.
- 25. Telicota Moor.—This is known from the Oriental Region, being found in Okinawa and Formosa; we have only 2 representives in the Japan-Empire.
- 26. Thanaos Bsp.—A palaearctic genus, being widely distributed throughout Japan and Korea, represented by a single species.
- 27. Udaspes Moor.—An oriental genus, being also widely distributed in Formosa, represented by a single species.