

A Taxonomic Review of the Taiwanese Skippers Described by Shonen Matsumura (Lepidoptera: Hesperiiidae)

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Yu-Feng Hsu, Hideyuki Chiba, Ying-Chuan Yang, Hiroshi Tsukiyama, Ping-Shih Yang, and Shou-Ming Wang (2006) A taxonomic review of the Taiwanese skippers described by Shonen Matsumura (Lepidoptera: Hesperiiidae). *Zoological Studies* 45(3): 322-338. The type series of 23 skipper taxa described by Matsumura, housed in the Matsumura collection at the Systematic Entomology Laboratory, Faculty of Agriculture, Hokkaido Univ. (SEHU), Japan, were examined. As a result, a number of taxonomic and nomenclatural changes are proposed: lectotypes are designated for the nominal taxa *Notocrypta kawakamii* Matsumura, 1907; *Satarupa formosana*, Matsumura, 1910; *Suastus nigroguttatus* Matsumura, 1910; *Daimio niitakana* Matsumura, 1907; *Daimio sinica* var. *taiwana* Matsumura, 1919; *Ampittia myakei* Matsumura, 1910; *Halpe horishana* Matsumura, 1910; *Augiades dara* var. *angustata* Matsumura, 1910; *Parnara kuyaniana* Matsumura, 1919; *Parnara eltola* var. *taiwana* Matsumura, 1919; and *Parnara giranna* Matsumura, 1919. A change in status for 5 taxa is proposed, including the introduction of new synonymy. Two currently recognized valid names are rendered invalid due to the new synonymy, and are replaced by available names: the taxa currently known as *Ochlodes formosanus* (Matsumura) and *Polytremis lubricans taiwana* (Matsumura) are replaced by *Ochlodes niitakanus* (Sonan) and *Polytremis lubricans kuyaniana* (Matsumura), respectively. As a direct result of these changes, the combination *Polytremis zina taiwana* Murayama, formerly considered a junior secondary homonym, is reinstated. <http://zoolstud.sinica.edu.tw/Journals/45.3/322.pdf>

Key words: Type series, New synonymy, Status change, Name change, Nomenclatural stability.

The Japanese entomologist Dr. Shonen Matsumura (1872-1960) is considered a pioneer of entomological research in East Asia (Issiki 1961, Wu 1996). He lived at a time when most research into the East Asian insect fauna was being carried out by European naturalists, mainly British and German. His entomological career began towards the end of the 19th century, at a time when there were no other trained Asian entomologists. In 1898, Matsumura published the first Japanese entomology textbook in the Japanese language,

and this was followed by a series of books, monographs, and taxonomic notes (Hasegawa 1967, Chu 2005). He worked on a diverse range of taxa, encompassing many orders of the Hexapoda (Hasegawa 1967), but his primary research interests included the Lepidoptera, Hemiptera (Homoptera), Hymenoptera, Diptera, and Coleoptera (Wu 1996). He also made a significant contribution to research in applied entomology, notably on the subject of agricultural pests (Hasegawa 1967, Wu 1996, Chu 2005). His com-

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bined contributions earned him the distinction of being considered “the father of Japanese entomology” (Issiki 1961, D’Abrera 1986).

Matsumura investigated insects not only from modern-day Japan, but also from those areas previously occupied or controlled by the Japanese Empire through World War II. In fact, he engaged in fierce competition with European naturalists in describing new taxa of butterflies and skippers from those areas in the first few decades of the 20th century (Shirôzu 1986). An excellent example is provided by the swallowtail butterfly *Byasa impediens febanus* (Fruhstorfer, 1908) (see D’Abrera 1982, Shirôzu 1992), which was described by Fruhstorfer, Rothschild, and Matsumura as “*Papilio febanus*”, “*Papilio jonasi*”, and “*Papilio koannania*”, respectively, each with a publication date within the same 2 wk period (Shirôzu 1986). Many of Matsumura’s works involved the fauna of Taiwan (formerly known as Formosa), which was under Japanese occupation from 1895 to 1945. Matsumura visited Taiwan in 1906, 1907, and 1928 (Wu 1996, Chu 2005), and some type material of taxa subsequently described by him appears to have been collected during those visits. In checklists compiled by Chiba et al. (1992), Shirôzu (1992), and Shirôzu and Ueda (1992a-e), 156 species-group names of Taiwan butterflies and skippers were recognized as originating from Matsumura’s works; of these, 130 were considered available, and 58 valid. These figures illustrate the importance of Matsumura’s contribution to the taxonomy of butterflies and skippers inhabiting Taiwan. As there are approximately 400 species of butterflies and skippers presently known to occur in Taiwan (Chen 1974), Matsumura’s names relate to at least 1/7 of the known species.

Acceptance of some of Matsumura’s names, however, has caused some nomenclatural problems due to homonymy, synonymy, misspelling, and *nomina nuda*. For instance, Haugum and Low (1985) pointed out that the subspecific name *sonani* given to the population of an endangered birdwing butterfly, *Troides magellanus* Felder, 1862, on *Lanyu* (Orchid Is.), an island off the southeastern coast of Taiwan (Yen and Yang 2001), was published by Matsumura twice, with the 1st one (Matsumura 1931a) being invalid, but the 2nd one (Matsumura 1932) valid. In a paper suggesting that the name *Papilio hopponis* Matsumura, 1907, rather than the commonly used *P. hoppo* Matsumura, 1907, should be regarded as the valid name for a swallowtail butterfly endemic

to Taiwan, Yoshimoto (1999) pointed out that on a number of occasions, Matsumura proposed the same names in different papers, and several of these names were *nomina nuda*. Inomata et al. (2000) reviewed and commented on some of Matsumura’s names published in 1907 and 1929, and proposed suppressing 2 names and synonymizing 3 others. Hsu and Lu (2005) found that the taxa *Zephyrus hecale niitakana* Matsumura, 1929 and *Zephyrus yugaii* Kano, 1928 appear to be based on the same type specimen. Most of these taxonomic accounts, however, were based on a study of the literature rather than examination of the type specimens themselves, which clearly has the potential to provide more-precise clarifications of Matsumura’s names in cases of dispute. Yen (2004) provided an excellent example in the case of *Eterusia aedea* (Linnaeus, 1763), an occasional pest of tea trees, by showing the importance of examining the type material in order to elucidate the taxonomic status and maintain nomenclatural stability.

Beginning in 2001, and sponsored by the Council of Agriculture, Taiwan, R.O.C., the authors have compiled a database documenting the types of butterflies and skippers which occur in Taiwan. During the period of this survey, it was established that the Fruhstorfer Collection in the Natural History Museum, London, and the Matsumura Collection at the University of Hokkaido, Sapporo, represented the 2 most important collections of type material relating to Taiwanese butterflies and skippers. Unexpectedly, while most of the types of Taiwanese butterflies in Matsumura’s collection agree with the current concept of the taxa represented by the specimens, it was found that several “types” of skippers do not agree with the current concepts of those taxa. As a result, names of skippers require verification and revision using these types. In this paper, we treated taxa following the sequence of Chiba et al. (1992), rather than chronologically by publication dates, in order to facilitate incorporation of our results directly into the current systematic arrangement of skippers.

MATERIALS AND METHODS

During the process of locating type materials of taxa described by Matsumura, we established that type materials of practically all Taiwan skippers described by him were in the collection of the Systematic Entomology Laboratory, Faculty of Agriculture, Hokkaido Univ. (SEHU), Japan. Type

series were verified using features specified in the original descriptions, associated illustrations, and collecting data both on the labels and in the text of the original descriptions, plus taxonomic notes published subsequently by various authors. Types of Taiwanese skippers deposited in the following collections were also examined to verify the taxonomic status of Matsumura's skipper types: The Natural History Museum, London (BMNH); the Taiwan Agriculture Research Institute (TARI), Taichung, Taiwan; National Taiwan Normal University (NTNU), Taipei, Taiwan; and the Hiroshi Tsukiyama Collection (HTC), Japan.

On more than one occasion, when it was discovered that multiple species were involved in the type series of a taxon described by Matsumura, a lectotype was formally designated in order to avoid subsequent confusion. Additionally, lectotypes were designated in the case of taxa present in syntypic series, using information available in the original descriptions.

All taxonomic decisions were made in accordance with the 4th edition of the *International Code of Zoological Nomenclature* (ICZN IV) published by the International Commission on Zoological Nomenclature (1999).

RESULTS

TAXONOMIC ACCOUNTS

Bibacis argenteola Matsumura, 1940

Insecta Matsumurana 15: 1, fig. 1.

Only one ♂ specimen [holotype] was included in Matsumura's (1940) original description of this taxon. This holotype (Figs. 1-3) was located in the Matsumura collection at SEHU and bore labels reading "*Bibacis argenteola* Mats. Type [red label] | Hori Matsumura | June 1940." There is no doubt that it is the true type as it well agrees with the figures (Figs. 67, 68) provided by Matsumura.

Shirôzu (1947) synonymized this taxon with *Epargyreus tityrus* (Fabricius), correctly known (Miller and Brown 1981) as *E. clarus* (Cramer, [1775]) (*tityrus* is an unavailable name due to homonymy), pointing out that this North American species is unlikely to occur in Taiwan. Shirôzu's viewpoint has been widely accepted, and this taxon was not included in any checklist of Taiwanese butterflies published subsequently (e.g., Shirôzu 1960, Hamano 1986, Chiba et al., 1992). The type of this taxon is considered likely

to have originated from a mislabeled specimen.

Notocrypta kawakamii Matsumura, 1907

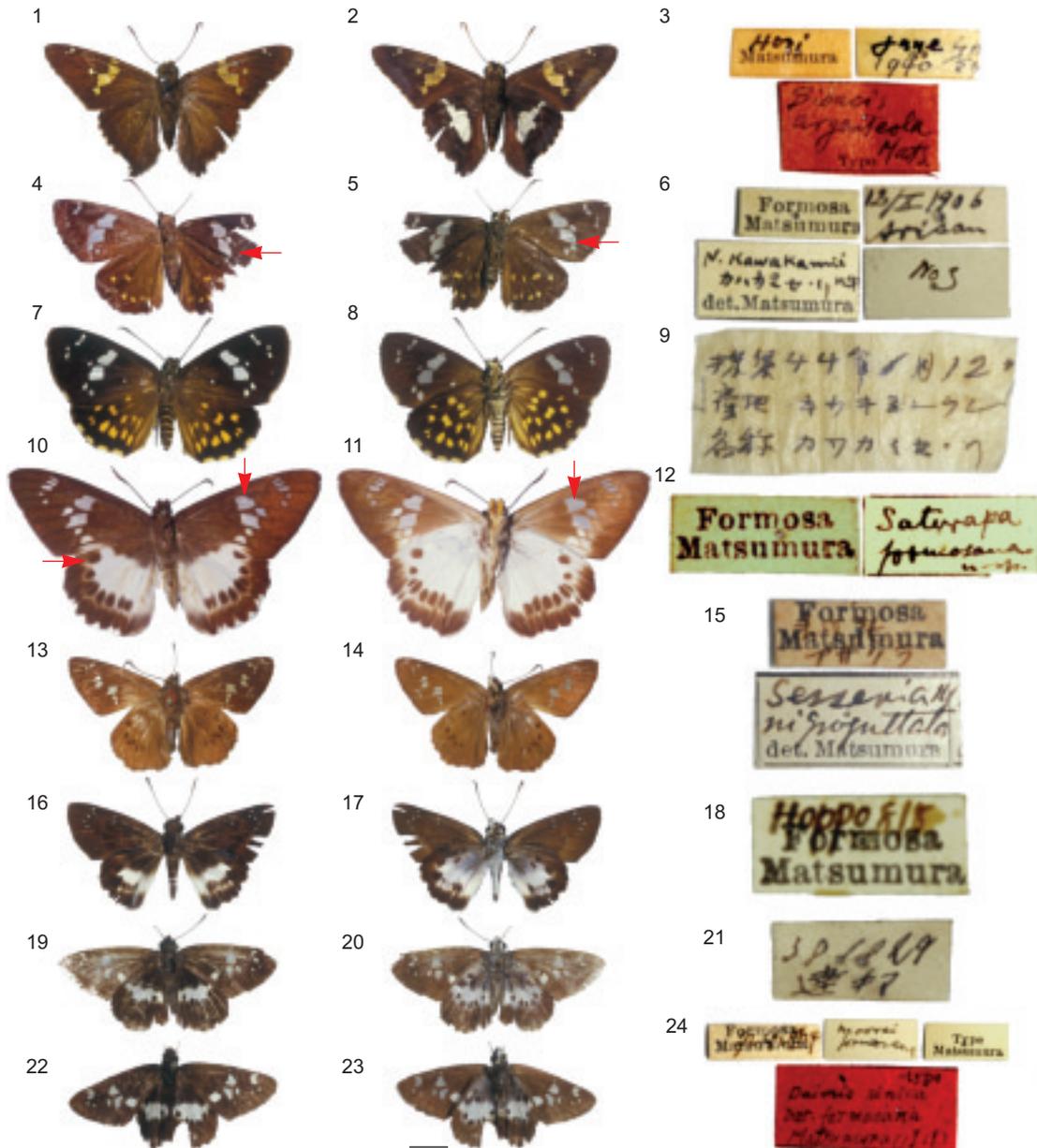
Insect World 11: 50. [no figure]

Notocrypta kawakamii Matsumura was described from an unspecified number of specimens from "Tappan [in Japanese]" (Matsumura 1907a). Two specimens bearing labels reading "Kawakamiseseri [meaning Kawakami's skipper in Japanese]" were found in the Matsumura collection at SEHU, but only one of these specimens was collected before 1907. However, the data label attached to this specimen specifies the collecting locality as "Arisan," not "Tappan." We still consider this specimen to be a legitimate syntype because it bears a label in Matsumura's handwriting reading "n. sp." The specimen is designated here as a lectotype. It bears a label reading "Formosa Matsumura | 18/X 1906 Arisan | *N. kawakamii* n. sp. Kawakamiseseri [in Japanese] det. Matsumura | No. 3." This type (Figs. 4-6) appears to be a ♀ of what is now called *Celaenorrhinus ratna* Fruhstorfer, 1909, as the posterior edge of the white spot in cell CuA1 of the specimen is longer than the inner edge (Figs. 4, 5), a diagnostic character of *Ce. ratna* (Shirôzu 1960). In addition, *Ce. ratna* is the only known *Celaenorrhinus* species that flies in the autumn months in Taiwan (HTC and NTNU specimens, $n = 23$), and its type is given as "Kagi," (Fruhstorfer 1908) a county where Arisan or Tappan is located. An additional specimen, bearing a label reading "Kawakamiseseri" may be the type of *Ce. taiwanus* Matsumura, 1919 (see next section).

Inomata et al. (2000) proposed suppression of *N. kawakamii* in favor of *Celaenorrhinus ratna* Fruhstorfer or the other congeneric species in Taiwan, because this name has not been used since its description, evidently intending to cite Article 23.9 of ICZN IV (1999) for reversal of precedence. However, according to Article 23.9.1 of the Code, 2 conditions need to be met before suppressing the older name: in 23.9.1.1, "the senior synonym or homonym has not been used as a valid name after 1899", and 23.9.1.2 "the junior synonym or homonym has been used for a particular taxon, as its presumed valid name, in at least 25 works, published by at least 10 authors in the immediately preceding 50 yrs and encompassing a span of not less than 10 yrs." As *N. kawakamii* was described after 1899 (i.e., in 1907), the condition specified by 23.9.1.1 is not met. According to Article 23.9.3, if the conditions of

23.9.1 are not met, but an author considers that the senior synonym would threaten the stability of the junior one and the use of the junior synonym should be maintained, he/she must refer the matter to the Commission for ruling under the plenary power. While the case is under consideration, use of the junior name is to be maintained. Based on

these articles (23.9.1, 23.9.2, and 23.9.3), the action by Inomata et al. (2000) will be legitimate only after a ruling by the International Commission of Zoological Nomenclature; thus the precedence of *Celaenorrhinus ratna* Fruhstorfer, 1908 over *Notocrypta kawakamii* Matsumura, 1907 is yet to be formally established. When Inomata et al.



Figs. 1-24. Types of taxa described by Matsumura. 1. Holotype of *Bibacis argenteola*, upperside; 2. ditto, underside; 3. ditto, labels; 4. lectotype of *Notocrypta kawakamii*, upperside; 5. ditto, underside; 6. ditto, labels; 7. holotype of *Celaenorrhinus taiwanus*, upperside; 8. ditto, underside; 9. ditto, labels; 10. lectotype of *Satarupa formosana*, upperside; 11. ditto, underside; 12. ditto, labels; 13. lectotype of *Suastus nigroguttatus*, upperside; 14. ditto, underside; 15. labels; 16. holotype of *Tagiades menaka* var. *formosana*, upperside; 17. ditto, underside; 18. ditto, labels; 19. lectotype of *Daimio niitakana*, upperside; 20. ditto, underside; 21. ditto, labels; 22. lectotype of *Daimio sinica* var. *formosana* / *Daimio sinica* var. *taiwana*, upperside; 23. ditto, underside; 24. ditto, labels. Arrows indicate diagnostic characters. Scale bar = 1 mm.

(2000) proposed suppression of *Notocrypta kawakamii*, they clearly intended to protect *Celaenorrhinus ratna*, citing Matsumura's (1919) work, in which "*Celaenorrhinus consanguinea* var. *ratna*" was presumed to represent *Notocrypta kawakamii*, although they did not examine the type of *kawakamii*. The present study provides support for both Matsumura (1919) and Inomata et al. (2000), in considering *Notocrypta kawakamii* as being conspecific with *Celaenorrhinus ratna*. Formal suppression of *Notocrypta kawakamii* Matsumura, 1907, to protect *Celaenorrhinus sumitra ratna* Fruhstorfer, 1908, will be proposed to the Commission in the near future.

***Celaenorrhinus taiwanus* Matsumura, 1919**

Thousand Insects of Japan (Additamenta) 3: 686, pl. L, fig. 22.

Although no mention of the number of specimens available was made in the original description of this taxon, Matsumura (1919: p. 686) mentioned "... 1 female, with wingspread of 1.6 inches, was collected from Horisha of Taiwan [translated from the Japanese]..." No specimen labeled as the type of this taxon was located in the Matsumura collection at SEHU, but 1 ♀ specimen (Figs. 7-9) conforms both with the figure in Matsumura (1919) (Fig. 69) and with the original description, and bears a data label with a collecting date prior to the original description. This specimen probably represents the holotype of this taxon, which bears a label reading "Collecting [date] VI. 12. 1911 [Meiji 44 Nen], Locality Kiukyoran, Name kawakamis-*eseri* [all in Japanese]."

The name *taiwana* has been treated as a subspecific name for Taiwan populations of *Celaenorrhinus maculosa* (Felder and Felder, [1867]) since Evans (1949).

***Satarupa formosana* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.

The name *Satarupa formosana* was first proposed by Matsumura (1909), but was treated as a *nomen nudum* by Inomata et al. (2000) as no description was given. The name was published again a year later (1910), with a description, but no illustration was provided until Matsumura (1919: pl. LIII, fig. 11). Four ♂♂ were specified as [syn]types when this taxon was described. In total, 6 *Satarupa* specimens were found by the present authors in the Matsumura collection at SEHU; of

these, 5 bear data suggesting they may be part of Matsumura's type series, i.e., collected from "Horisha" and/or prior to 1910. However, only 2 ♂♂ conform to the current concept of *S. formosibia*, which may be distinguished by a prominent, white discoidal spot on the forewing and a prominent, elongated, dark-brown Sc + R1 spot on the hindwing upperside (Shirôzu 1960) (Figs. 10, 11). The other 3 were specimens of *S. majasra*, thus necessitating designation of a lectotype in order to avoid further confusion. As one of these 2 ♂♂ agreed with the figure provided for *S. formosana* by Matsumura (1919) (Fig. 69), we hereby designate the specimen illustrated (Figs. 10-12) as the lectotype. It bears labels stating "Formosa Matsumura | Horisha [in Japanese] | *Satarupa formosana* n. sp."

This taxon was considered a primary homonym of *Satarupa formosana* Fruhstorfer, 1909 (Strand 1927, Matsumura 1929b), which has been placed with *Seseria* since Evans (1949). Subsequently, the replacement name, *S. formosibia* Strand (1927), was proposed, and *S. gopala formosicola* by Matsumura (1929b). The latter became a junior subjective synonym of the former. Shirôzu (1953) pointed out that this taxon was frequently confused with a sympatric species, *S. majasra* Fruhstorfer 1909, prompting Evans' (1932) decision to synonymize *formosana* with *majasra*. Shirôzu's (1953) view was accepted by Evans (1956) and followed by all subsequent authors (e.g., Chiba et al. 1992, Hsu 2002).

***Suastus nigroguttatus* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.

No precise number of specimens was specified when Matsumura (1910) described *Suastus nigroguttatus*. No illustration was given for this taxon until Matsumura (1919: pl. L, fig. 20). Nine ♂♂ were present in the Matsumura collection at SEHU, four of which were collected after 1910. We herewith selected as lectotype a ♂ specimen (Figs. 13-15), bearing labels reading "Formosa Matsumura Horisha [in Japanese] Asakura [in Japanese] | *Seseria nigroguttata* n. det. Matsumura," as the labels had relatively more information, and it matched the figure provided by Matsumura (1919) (Fig. 71).

Evans (1949) synonymized *nigroguttatus* with *Satarupa formosana* Fruhstorfer, 1909, which he recognized as a *Seseria* species endemic to Taiwan.

***Tagiades menaka* var. *formosana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 689, pl. L, fig. 26.

Only 1 specimen (♂ nec ♀; Figs. 16-18) was specified in the original description of *Tagiades menaka* var. *formosana* by Matsumura (1919) (Fig. 72). A specimen with data matching this holotype was recognized from the Matsumura collection at SEHU, bearing a label reading "Hoppon 8/5 Formosa Matsumura".

Evans (1949) synonymized *formosana* with *Tagiades cohaerens* Mabille, 1914.

***Daimio niitakana* Matsumura, 1907**

Insect World 11: 50. [no figure]

Matsumura (1907a) specified no precise number of specimens in describing *Daimio niitakana*, but in the original description, he noted that the taxon was "found ... from Tappansan the year before last year...and now collected again from Arisan [translated from the Japanese]," so accumulated specimens from these 2 localities may be considered syntypes of this taxon. However, only 1 ♂ specimen (Figs. 19-21) with data conforming to the above description was located in the Matsumura collection at SEHU, bearing a label marked "38 10 29 Tappan [in Japanese]." The date on the label may mean Oct., 29th of the year 38 in the Meiji period (= 1905 AD) of Japan, suggesting that collecting data agreed with the information given in the original description. This specimen is herewith designated as the lectotype of this taxon.

Shirôzu (1960) regarded this taxon as a [junior subjective] synonym of *Daimio tethys moor[e]i* (Mabille, 1876), a decision accepted by Tsukiyama et al. (1997), whereas Chiba et al. (1992) retained *niitakana* as a subspecific name for the population of *D. tethys* (Ménétrières, 1857) in Taiwan.

***Daimio sinica* var. *formosana* Matsumura, 1919/
Daimio sinica var. *taiwana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 688, pl. L, fig. 25.

When first described, 2 names were provided for this taxon in the same work: one was *Daimio sinica* var. *formosana* in the text (Matsumura 1919: p. 688) and the other *Daimio sinica* var. *taiwana* in the legend (Matsumura 1919; pl. L., fig. 25)

accompanying figure 73. Matsumura's original description included 1 ♂ and 2 ♀♀ [syntypes] from "Formosa (Tappan)," collected by Matsumura himself. However, we recognized just 1 ♂ and 1 ♀ with appropriate data in the Matsumura collection at SEHU. The single ♂ specimen (Figs. 22-24) bearing labels reading "-type *Daimio sinica* var. *formosana* Matsumura (1919) [red label] | Formosa Matsumura Tappan [in Japanese] 4/24 | Type Matsumura | *moorei formosana*" is herewith designated as the lectotype.

Inomata et al. (2000) pointed out that *formosana* should be considered an invalid name because Matsumura (1929b) used *taiwana* for the taxon, and this action may be regarded as having been carried out by the 1st reviser. Inomata et al.'s (2000) action evidently intended to invoke Article 24.2 of ICZN IV (1999).

Evans (1949) synonymized *taiwana* with *Daimio tethys moori* (Mabille, 1876), and he regarded *formosana* as a [junior secondary] homonym of *Satarupa formosana* Fruhstorfer, 1909. However, Inomata et al. (2000) pointed out that as no replacement name was provided, Matsumura's *formosana* should not be rejected, and remains available.

***Ampittia myakei* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.
[no figure]

Matsumura (1910) listed 3 ♂♂ and 1 ♀ [syntypes] collected from "Formosa...Horisha [= Puli], Taihok [= Taipei], Arisan [= Alishan]." This taxon was not illustrated until Matsumura (1919: pl. LI, fig. 13). The present authors found 9 ♂♂ and 3 ♀♀ in the Matsumura collection at SEHU, of which 5 ♂♂ and 1 ♀ were collected before 1910. Judging from the data accompanying these specimens, only 2 ♂♂ and 1 ♀ are potential syntypes as the other 3 ♂♂ were not from localities specified by Matsumura (1910). We selected the ♀ (Figs. 25-27) bearing labels reading "Formosa Matsumura | Arishan [in Japanese] 21/IV. '07 | *A. myakei* n. sp.", which conforms to the illustration of this taxon shown in Matsumura (1919) (Fig. 74), as the lectotype.

Although there seems little doubt that Matsumura intended to name this taxon in honor of Tsunekata Miyake, who was probably the collector of the type series, he gave the specific name as "*myakei*" rather than "*miyakei*." Although Matsumura was evidently aware of this typographical error, using the name "*miyakei*" for this taxon

in later publications (e.g., Matsumura 1919 1929b 1931a), he appears never to have made a formal correction. Thus, the name *myakei* cannot be considered an “incorrect original spelling” or be a justified emendation according to Article 32 of ICZN IV (1999). Because Matsumura (1910) specified that the taxon was named after “T. Myake”, the

“presumably correct” *myakei* is considered an “incorrect subsequent spelling” (Article 33, ICZN IV, 1999). Moreover, although the name *Ampittia myakei* Matsumura was first proposed in 1909 (Matsumura 1909), it is a *nomen nudum*, as no description was provided.

Evans (1949) treated *myakei* as a subspecific



Figs. 25-45. Types of taxa described by Matsumura. 25. Lectotype of *Ampittia myakei*, upperside; 26. ditto, underside; 27. ditto, labels; 28. holotype of *Ampittia arisana*, upperside; 29. ditto, underside; 30. ditto, labels; 31. holotype of *Aeromachus inachus* f. *formosanus*, upperside; 32. ditto, underside; 33. ditto, labels; 34. holotype of *Ampittia takeuchii*, upperside; 35. ditto, underside; 36. ditto, labels; 37. lectotype of *Halpe horishana*, upperside; 38. ditto, underside; 39. ditto, labels; 40. holotype of *Halpe aokii*, upperside; 41. ditto, underside; 42. ditto, labels; 43. holotype of *Augiades sylvanus* var. *formosana*, upperside; 44. ditto, underside; 45. ditto, labels. Arrows indicate diagnostic characters. Scale bar = 0.5 mm.

name for the population of *A. virgata* (Leech, 1890) in Taiwan; this was followed by all subsequent authors (e.g., Shirôzu 1960, Chiba et al. 1992).

***Ampittia arisana* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.
[no figure]

One ♂ was specified as the type [holotype] when *Ampittia arisana* was described by Matsumura (1910), with no illustration available; however, we found a ♀ that otherwise perfectly matched the data and description given by Matsumura (1910), which evidently involved misidentification of the sex of this specimen. We believe this ♀ specimen (Figs. 28-30), labeled “Formosa Matsumura Arisan [in Japanese] 4/20 | *A. arisana* n. sp.”, is the holotype.

Evans (1949) treated *arisana* as a subspecific name for the population of *Onryza maga* Leech (1890) in Taiwan, but Shirôzu (1960) pointed out that the forewing characters suggested that it was a female *Ampittia virgata m[yl]yakei*, and should be regarded as a [junior subjective] synonym of *Ampittia myakei* Matsumura. This view was subsequently widely accepted (e.g., Chiba et al. 1992), including by the present authors.

The name *Ampittia arisana* Matsumura was actually first proposed in 1909 (Matsumura 1909), but was a *nomen nudum* as no description was given.

***Aeromachus inachus f. formosanus*
Matsumura, 1931**

Insecta Matsumurana 6: 44. [no figure]

A single ♂ [holo]type was included in the original description of this taxon (Matsumura 1931b) without an illustration. This holotype (Figs. 31-33) was identified in the Matsumura collection at SEHU, bearing labels reading “Type Matsumura [red label] | *A. inachus f. formosanus* Mats. det. Matsumura | Formosa Uchida | Naihompô 15/VII [19]25. Evans (1943) treated *formosanus* as a subspecific name for the population of *Aeromachus inachus* (Ménétrières, 1859) inhabiting Taiwan.

The name *formosana* was first seen in a list by Matsumura (1929b) as *Aeromachus inachus* subsp. *formosanus*, which is a *nomen nudum* as no description was given.

***Ampittia takeuchii* Matsumura, 1929**
Insecta Matsumurana 3: 107. [no figure]

No illustration was provided by Matsumura (1929a) when describing this taxon, but a figure was later published in Matsumura (1931a: p. 579, fig. 425) (Fig. 75). Although Matsumura (1929a) mentioned collection of 3 ♂♂ in the original description of this taxon, he apparently had access to only 1 ♂ when *Ampittia takeuchii* was described. Thus the ♂ (Figs. 34-36) in the Matsumura collection at SEHU is evidently the holotype. Furthermore, wing markings of this ♂ conform with those of the figure provided by Matsumura (1931a). This holotype carries labels reading “Type Matsumura [red label] | v. 9. 1922 Arisan Mori [red label] | *Amphitia takeuchii* n. sp. det. Matsumura.”

Evans (1949) synonymized *takeuchii* with “*Onryza maga arisana* Matsumura” but, as discussed under *Ampittia arisana* Matsumura, above, *arisana* should be considered synonymous with *Ampittia myakei* Matsumura (Shirôzu 1960). Shirôzu (1960) accepted *takeuchii* Matsumura as the subspecific name for the race of *Onryza maga* (Leech, 1890) in Taiwan.

***Halpe horishana* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.
[no figure]

No indication of the number of specimens studied was provided when Matsumura (1910) described *Halpe horishana*, and no illustration of this taxon was available until Matsumura (1931a: p. 581, fig. 435) (Figs. 76, 77). Eleven ♂♂ and 1 ♀ potential syntypes were identified in the Matsumura collection at SEHU. We herewith designate a ♂ specimen (Figs. 37-39) bearing the labels “Formosa Matsumura | Horisha VI 08 | *H. horishana* n. sp.” as the lectotype.

The name *horishana* [misspelled as *horishama*] was considered a subspecies of “*Halpe submacula* Leech” [*Thoressa submacula* Leech, 1890] by Evans (1932), who also later recognized *horishana* as a *Thoressa* species endemic to Taiwan (Evans 1949). Tsukiyama et al. (1997) regarded it as a subspecies of *T. varia* (Murray, 1876).

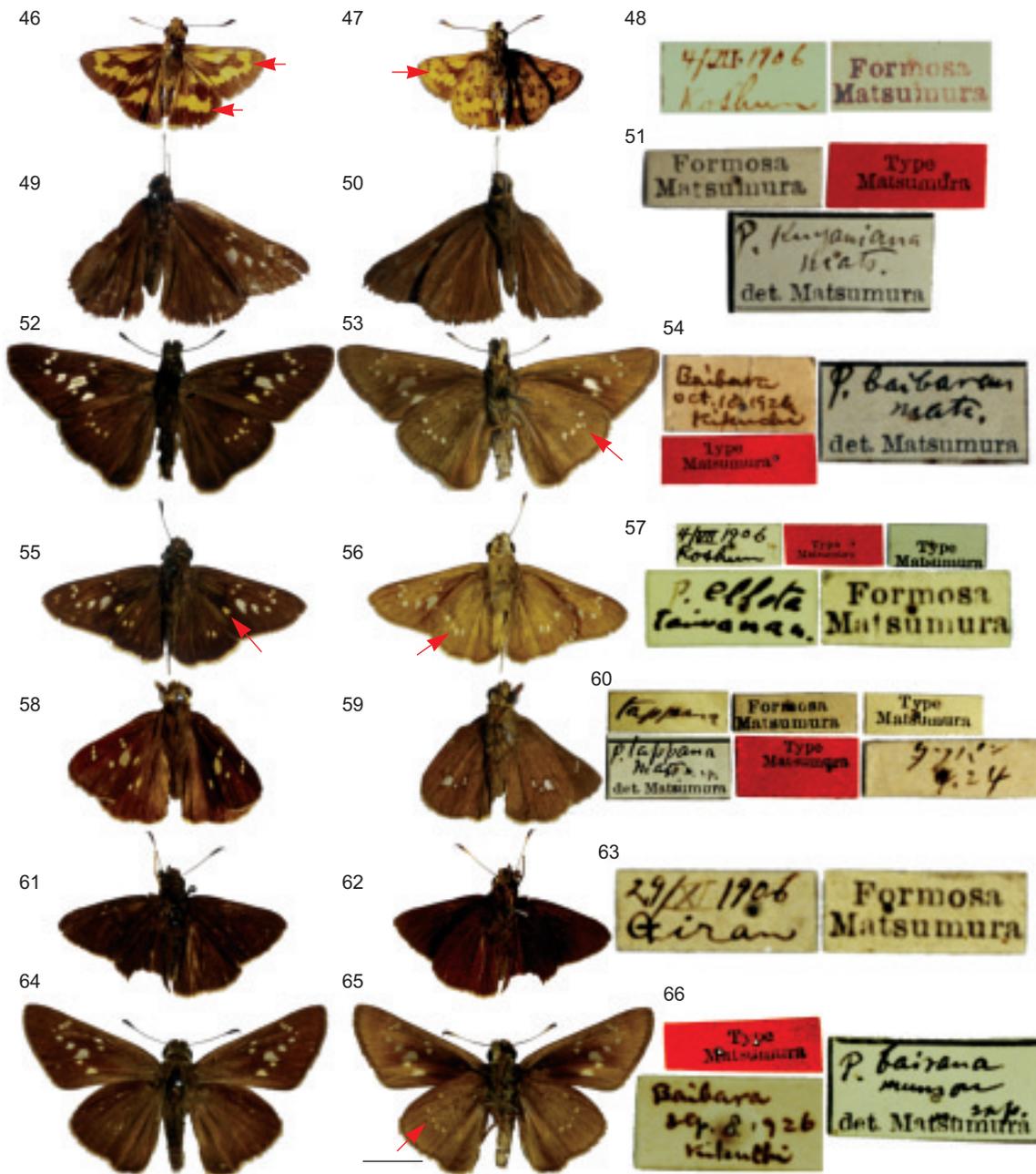
The name *Halpe horishana* Matsumura was actually first proposed in 1909 (Matsumura 1909), but was a *nomen nudum* as no description was given.

***Halpe aokii* Matsumura, 1934**
Insecta Matsumurana 8: 105, fig. 1.

Matsumura (1934) specified a ♀ specimen [holotype] which he described and illustrated as *Halpe aokii* (Fig. 78). The holotype (Figs. 40-42) was seen in the Matsumura collection at SEHU. It bore labels reading “Type Matsumura [red label] |

Rokuro Aoki Formosa Hori [in Japanese] | *Halpe aokii* n. det. Matsumura.”

Evans (1949) treated *aokii* as a [junior subjective] synonym of *Thoressa horishana* Matsumura, 1910.



Figs. 46-66. Types of taxa described by Matsumura. 46. Lectotype of *Augiades dara* var. *angustata*, upperside; 47. ditto, underside; 48. ditto, labels; 49. lectotype of *Pamara kuyaniana*, upperside; 50. ditto, underside; 51. ditto, labels; 52. holotype of *Pamara baibarana*, upperside; 53. ditto, underside; 54. ditto, labels; 55. lectotype of *Pamara eltola* var. *taiwana*, upperside; 56. ditto, underside; 57. ditto, labels; 58. holotype of *Pamara tappana*, upperside; 59. ditto, underside; 60. ditto, labels; 61. lectotype of *Pamara giranna*, upperside; 62. ditto, underside; 63. ditto, labels; 64. holotype of *Pamara baibarana mumon*, upperside; 65. ditto, underside; 66. ditto, labels. Arrows indicate diagnostic characters. Scale bar = 1 mm.

***Augiades sylvanus* var. *formosana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 737.
[no figure]

The situation with Matsumura's name "*formosana*" is potentially confusing. In proposing the name, the author specified that he had in his possession only a solitary female specimen from Taiwan (Matsumura 1919: p. 737), which he did not illustrate, referring instead to illustrations of both sexes of "*Augiades sylvanus*" published 12 yrs earlier (Matsumura 1907b: pl. 75, figs. 12, 19). However, Taiwan was not included in the range of *A. sylvanus* in that work (Matsumura 1907b: p. 129), and the specimens figured then can reasonably be assumed to have originated from somewhere other than Taiwan, possibly Japan. The holotype of *Augiades sylvanus* var. *formosana* has, so far as the authors are aware, never been illustrated. The holotype of *Augiades sylvanus* var. *formosana* (Figs. 43-45) is correctly identified here for the 1st time as a female *Ochlodes venata* (Bremer and Grey, 1853), since both fore and hindwing maculation (Figs. 43, 44) is characteristic of this species (see Kawazoé and Wakabayashi 1976, Chiba and Tsukiyama 1996). Chiba and Tsukiyama (1996) pointed out that members of the *bouddha*-group share a common feature by having spots only in cells M1, M3, and CuA1 on the hindwings, but the holotype of *formosana* has prominent spots in all cells from Sc + R1 to CuA2 (Figs. 43, 44). Thus, *formosana* syn. nov., is a junior subjective synonym of *O. venata*, and is clearly not a member of the *bouddha*-group as currently recognized.

Evans (1949) recognized *formosana* as the subspecific name for the Taiwanese population of *Ochlodes subhyalina* (Bremer and Grey, 1853), but Fujioka and Chiba (1988) pointed out that genitalia of "*Ochlodes subhyalina formosana*" in Taiwan differ considerably from that of *O. subhyalina* and are similar to that of *O. crataeis* (Leech, 1894) from western China. Subsequently, Chiba et al. (1992) used the combination "*Ochlodes crataeis formosana*", while Chiba and Tsukiyama (1996) raised *formosana* to species status, and considered it a species endemic to Taiwan. However, as the type of *formosana* is shown here to be a synonym of *O. venata*, the name *niitakanus* (Sonan, 1936) [type deposited in TARI, examined], treated as a subspecies of *O. siva* (Moore, 1878) by Evans (1949) and as a junior subjective synonym of *formosana* by Shirôzu (1960), should be resur-

rected in the combination *Ochlodes niitakanus* comb. nov.

***Augiades dara* var. *angustata* Matsumura, 1910**

Entomologische Zeitschrift (Stuttgart) 23: 181.
[no figure]

Matsumura (1910) did not specify the number of specimens in the type series when he described *Augiades dara* var. *angustata*, which is considered a *Potanthus* in all the recent literature (e.g., Shirôzu 1960, Hamano 1986, Hsu et al. 1989, Chiba et al. 1992). He made a conscious decision not to publish an illustration of this taxon, as he considered it conspecific with "*Augiades dara* Kollar, 1848" [*recte Potanthus flavus* Murray, 1875] from Japan and the Asian continent (Matsumura 1919 1931b). Only *Pot. flavus* was illustrated in his publications.

A considerable number of *Potanthus* specimens from Taiwan are present in the Matsumura collection at SEHU; of those with collecting data prior to 1910, two ♀♀ specimens were placed under a drawer identification label marked "*Padraona moesoides* var. *angustipennis*," while 15 ♂♂ and 1 ♀ were placed with "*Padraona dara*". All these specimens are recognized as potential syntypes of *angustata*.

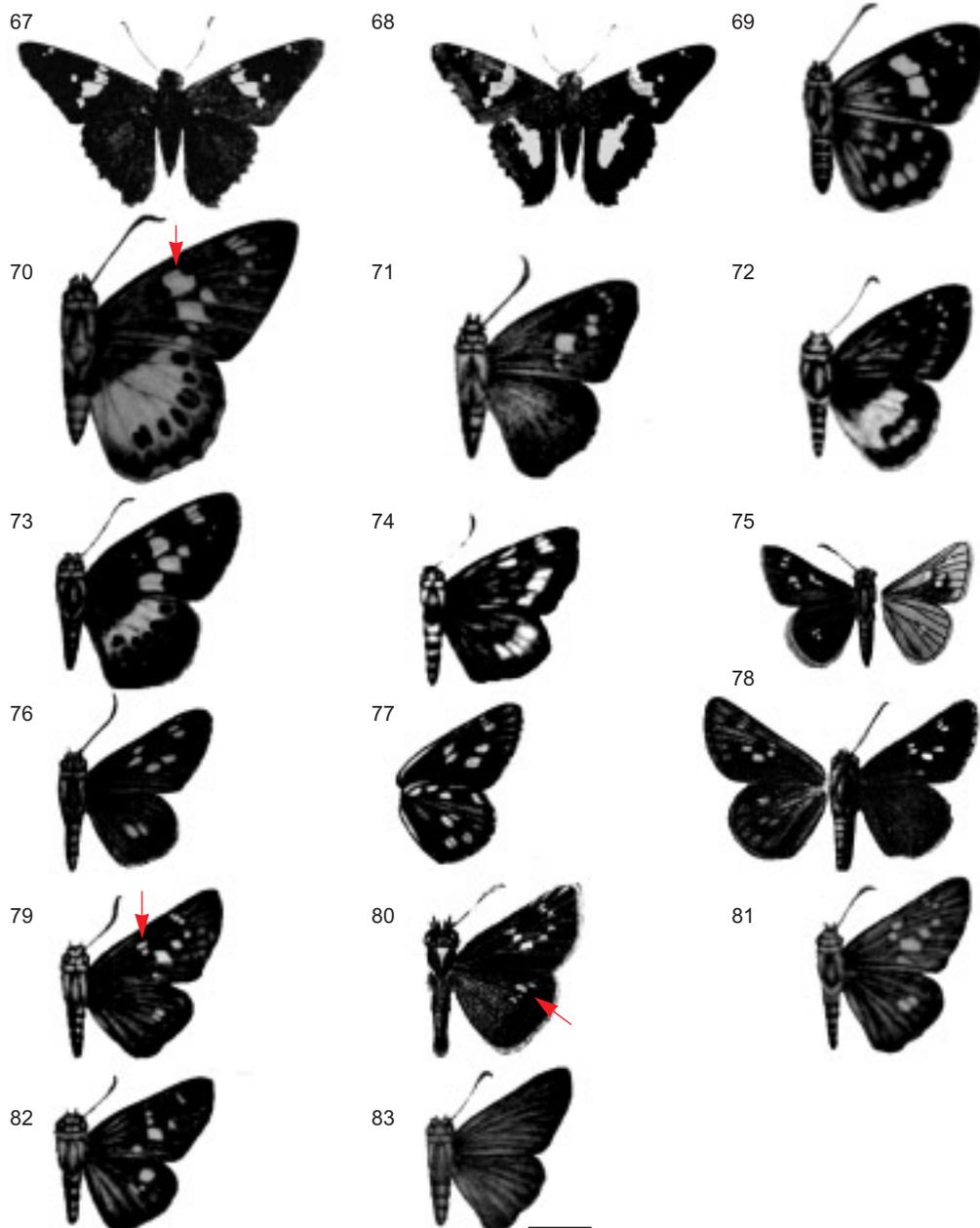
The name *angustata* was applied to a population of *Potanthus confucius* (Felder and Felder, 1862) by Evans (1949), and this treatment was followed by all subsequent authors (e.g., Shirôzu 1960, Hamano 1986, Hsu et al. 1989, Chiba et al. 1992). However, species of *Potanthus* are notoriously difficult to identify using wing markings (Tsukiyama 1983, Eliot 1992), and potential types in the Matsumura collection include at least 2 currently recognized species, viz. *Potanthus confucius* and *Pot. motzui* Hsu, Li and Li, 1990. It is clear that Matsumura was unaware that there was more than 1 species involved in this series.

One of the 2 specimens under "*Padraona moesoides* var. *angustipennis*" appears to be *Pot. confucius*, while the other is tentatively identified as *P. motzui*. As for those placed under "*Padraona dara*," 11 ♂♂ and 1 ♀ are *Pot. confucius* whereas 4 ♂♂ are *Pot. motzui*. Unfortunately, the specimen that closely resembles *Pot. motzui* bears Matsumura's handwritten label reading "*A. dara angustata* det. Matsumura," and designating it as the lectotype may jeopardize longstanding stable classification. In order to preserve the historical use of this name (it is clear to us that Matsumura considered all his *Potanthus*

material as conspecific) (see Matsumura 1919 1929b 1931b), we have decided to designate a specimen (Figs. 46-48) that is clearly *P. confucius* as the lectotype of *Augiades dara* var. *angustata*, following Articles 73 and 74 of ICZN IV (1999). *Potanthus confucius* is characterized by veins crossing yellow/orange bands not overlaid with dark brown scaling on the hindwing upperside.

The ♂ has subapical spots continuous with the discal band on the forewing upperside (Figs. 46, 47), as suggested by Hsu et al. (2005). This lectotype bears a label marked "Formosa Matsumura | 4/VII 1906 Koshun."

The name *angustata* was frequently misspelled as *angusta* (e.g., Shirôzu 1960, Yamanaka 1980) as pointed out by Hsu et al. (1990), and the



Figs. 67-83. Illustrations by S. Matsumura. 67. *Bibacis argenteola*, upperside; 68. ditto, underside; 69. *Celaenorrhinus taiwanus*; 70. *Satarupa formosana*; 71. *Suastus nigroguttatus*; 72. *Tagiades menaka* var. *formosana*; 73. *Daimio sinica* var. *taiwana*; 74. *Ampittia myakei*; 75. *Ampittia takeuchii*; 76. *Halpe horishana*, upperside; 77. *Halpe horishana*, underside; 78. *Halpe aokii*; 79. *Parnara kuyaniana*; 80. *Parnara baibarana*; 81. *Parnara eltola* var. *taiwana*; 82. *Parnara tappana*; 83. *Parnara giranna*. Scale bar = 1 mm.

name *angusta* should be regarded as an “incorrect subsequent spelling” according to Article 33 of ICZN IV (1999).

***Parnara kuyaniana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 677, pl. LI, fig. 21.

Matsumura's (1919) original description of *Parnara kuyaniana* included 1 ♂ and 2 ♀♀ [syntypes], but only 2 ♀♀ were found, each of which conformed to the original description and illustration (Matsumura 1919: pl. 51, fig. 21) (Fig. 79). We designate herewith the ♀ specimen (Figs. 49-51), bearing labels reading “Type Matsumura [red label] | Formosa Matsumura | Kuyaniya [in Japanese] 4/25 | *P. kuyaniana* Mats. det. Matsumura” as the lectotype.

Parnara kuyaniana was considered a [junior subjective] synonym of *Borbo cinnara* (Wallace, 1866) by Shirôzu (1960), but wing patterns of specimens in the type series (Figs. 49, 50), and Matsumura's (1919) illustration (Fig. 79), both demonstrate that *kuyaniana* is conspecific with *Polytremis lubricans* (Herrich-Schäffer, 1869) as the types possess yellowish-brown scaling on the wings and 2 prominent discoidal spots on the forewing, neither of which feature is found in *B. cinnara*, but are commonly present in *Pol. lubricans*, according to Shirôzu (1960). This solution was suggested by Evans (1949), who synonymized *kuyaniana* with *taiwana* Matsumura and considered the latter as the valid subspecific name for *Pol. lubricans* inhabiting Taiwan and southern China. This view is not supported by the present study (see paragraphs for *taiwana* Matsumura). We consider *kuyaniana* (stat. rev.) as the valid subspecific name for the *Pol. lubricans* population in Taiwan and southern China.

***Parnara baibarana* Matsumura, 1929**

Insecta Matsumurana 3: 107. [no figure]

Parnara baibarana was described from a solitary ♀ specimen by Matsumura (1929a), but was not illustrated until Matsumura (1931a: p. 584, fig. 452). A difficulty arose when we located the presumed type (Figs. 52-54) of this taxon in the Matsumura collection at SEHU, because although the morphology and data of the specimen agreed with the original description, it differed significantly from the published description and illustration provided by Matsumura (1931a) (Fig. 80). This probably represents a misidentification by Matsumura

himself. The markings of the specimen illustrated by Matsumura (1931a), which has a characteristic zigzag pattern on the hindwing, suggest it might be *Polytremis pellucida* (Murray, 1875), a species not found in Taiwan according to Chiba et al. (1992) (see also Kawazoè and Wakabayashi 1976). Data of the presumed holotype is as follows: “Type Matsumura [red label] Baibara Oct. 16. 1926 Kikuchi | *P. baibara* Mast.”

Evans (1949) synonymized *baibarana* with *Polytremis lubricans* (Herrich-Schäffer, 1869) but Shirôzu (1960) continued to consider it a distinct species [as *Pelopidas baibarana*]. The type of *Parnara baibarana* agrees with the female of the current concept of *Pelopidas agna* (Moore, [1866]) as listed by Chiba et al. (1992) (confirmed synonymy).

***Parnara eltola* var. *taiwana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 676, pl. LI, fig. 19.

Matsumura's (1919: p. 676) original description of *Parnara eltola* var. *taiwana* included 1 ♂ and 3 ♀♀ [syntypes] and an illustration (Fig. 81), but only 1 ♂ and 2 ♀♀ that conformed to the data in the original description were found in the Matsumura collection at SEHU. We hereby designate the ♀ specimen (Figs. 55-57), bearing labels reading “Type Matsumura [red label] | Formosa Matsumura | 4/VII 1906 Koshun | Type Matsumura | *P. eltola taiwana* n.” as the lectotype.

Evans (1932) regarded this taxon as a subspecies of “*Baoris discreta* (Elwes and Edwards, 1897) [= *Polytremis discreta* (Elwes and Edwards)]”, but later considered *taiwana* as the valid subspecific name of *Polytremis lubricans* (Herrich-Schäffer, 1869) in Taiwan and southern China (Evans 1949); subsequent authors have since followed this treatment (e.g., Shirôzu 1960, Hamano 1986, Bascombe et al. 1999, Hsu 2002). However, all of the specimens in the type series are *Borbo cinnara* (Wallace, 1866) rather than *Pol. lubricans* as they possess a prominent yellowish-white spot in cell CuA2 on the forewing upperside, and a series of prominent white spots on the hindwing underside, both characteristic of *B. cinnara*, not *Pol. lubricans* according to Shirôzu (1960). Thus we consider *taiwana* Matsumura to be a junior subjective synonym of *B. cinnara* (syn. nov. and stat. rev.). Moreover, *Polytremis zina taiwana* Murayama, 1981 was considered preoccupied by *taiwana* Matsumura on the grounds that *taiwana* Matsumura was an infraspecific name within

Polytremis, rendering *taiwana* Murayama a junior secondary homonym (Chiba et al. 1992). However, as *taiwana* Matsumura is currently placed as an infraspecific name in the genus *Borbo* rather than *Polytremis*, the name *taiwana* Murayama is no longer preoccupied and is resurrected here (stat. rev.).

***Parnara tappana* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 679, pl. LI, fig. 20.

The original description of *Parnara tappana* Matsumura contained only 1 ♂ [the holotype] from “Formosa (Tappan),” and an illustration was provided (Fig. 82). The [holo]type (Figs. 58-60) in the Matsumura collection at SEHU bears labels reading “Type Matsumura [red label] | Formosa Matsumura | Formosa Matsumura | Tappan [in Japanese] 4. 24 | *P. tappana* Mats. n. sp. det. Matsumura | Type Matsumura | *tappana*.”

Evans (1937) considered *tappana* Matsumura as a valid subspecific name for the population of *Polytremis eltola* (Hewitson, 1869) in Taiwan. Our examination of the holotype confirms this view.

***Parnara giranna* Matsumura, 1919**

Thousand Insects Jpn. (Additamenta) 3: 673, pl. LI, fig. 22.

Matsumura’s (1919: p. 673) original description of *Parnara giranna* included 2 ♂♂ and 1 ♀ [syntypes] from “Formosa (Giran, Kanshirei),” and an illustration (Fig. 83). Three specimens with type data were recognized in the Matsumura collection at SEHU: 1 ♂, 1 ♀ from “Giran”, and 1 ♂ from “Kanshi[rei]” [in Japanese]. We hereby designate the ♂ specimen (Figs. 61-63) bearing labels reading “Formosa Matsumura | 29/XI 1906 Giran” as the lectotype. The ♂ specimen from “Kanshi[rei]” bears a red label reading “Type Matsumura”, but was not selected as the lectotype because a specimen from “Giran” is more appropriate to the specific name of the taxon.

Evans (1937) synonymized *giranna* Matsumura with *Caltoris bromus yanuca* (Fruhstorfer, 1911); his treatment has been followed by subsequent authors (e.g., Shirōzu 1960, Chiba et al. 1992, Hsu and Wang 2005).

The name *Parnara giranna* Matsumura was actually first proposed in 1909 (Matsumura 1909), but it was a *nomen nudum* as no description was given.

***Parnara baibarana mumon* Matsumura, 1929**

Insecta Matsumurana 3: 107. [no figure]

The description of *Parnara baibarana mumon* was based on a single ♀ specimen [holotype] by Matsumura (1929a), but not illustrated. A specimen (Figs. 64-66) that agrees with both the collecting data and the original description was located in the Matsumura collection at SEHU, and we consider it to be the holotype. This presumed holotype bears labels reading “Type Matsumura [red label] | Baibara Sept. 8. 1926 Kikuchi | *P. bairana mumon* n. sp. det. Matsumura.”

Evans (1937) synonymized *mumon* Matsumura with *Caltoris bromus yanuca* (Fruhstorfer, 1911), a decision followed by some subsequent authors (e.g., Shirozu 1960). However, examination of the presumed holotype of *mumon*, suggests it accords closely with the female of the current concept of *Pelopidas agna* (Moore, [1866]), indicated by a curved series of white spots on the hindwing underside (Figs 64, 65), a feature characteristic of *Pe. agna* but not *Ca. bromus yanuca* according to Shirōzu (1960). The term “mumon,” meaning “spotless” in Japanese, actually refers to the spotless condition found on the hindwing upperside of the type when compared with the type of “*Parnara baibarana*” [*Pe. agna*] (Matsumura 1929a) (Figs. 52-54), not the spotless condition found in some individuals of *Ca. b. yanuca* as generally interpreted. The markings on the hindwing uppersides of *Pe. agna* are considerably variable (Kawazoé and Wakabayashi 1976); thus both the spotted condition found in the type of *Pa. baibarana*, and the spotless condition in the type of *Pa. b. mumon* fall within the range of variation of *Pe. agna*. Consequently *mumon* is here considered a junior subjective synonym of *Pe. agna* (syn. nov. and stat. rev.). Sonan (1938) pointed out that *mumon* should not be regarded as a synonym of *yanuca* as suggested by Evans (1937), but this was overlooked by subsequent authors (e.g., Evans 1949, Shirōzu 1960).

DISCUSSION

During the process of the present research, it became clear that the Matsumura collection at SEHU possesses nearly all the type series or putative types of the 23 names of Taiwan skippers described by Matsumura. The designation of lectotypes was performed for 11 taxa because syntypic series were found to include more than 1

specimen, and also in the case of 2 taxa, namely, *Satarupa formosana* Matsumura, 1910 and *Augiades dara* var. *angustata* Matsumura, 1910, because the potential types of these taxa appeared to include more than 1 species. In 5 cases, examination of the type series established that type material did not conform to the current concept of the taxa they presumably represented, and thus 4 new synonymies were necessary. Two names currently in wide use are rendered invalid due to this new synonymy, and are replaced by other available names: 1) the taxon currently referred to as *Ochlodes formosanus* (Matsumura) should be replaced by *Ochlodes niitakanus* (Sonan), and 2) *Polytremis lubricans taiwana* (Matsumura) should be replaced by *Polytremis lubricans kuyaniana* (Matsumura). *Polytremis zina taiwana* described by Murayama (1981) was not considered a junior secondary homonym and is reinstated herein due to this taxonomic change.

It is interesting that in a preface to bibliographical notes on Taiwan butterflies and skippers, Shirôzu (1986) said "Taxonomy of Taiwan skippers still has many unsolved problems, particularly on *Potanthus*, *Telicota*, *Pelopidas*, *Polytremis*, *Baoris* and the other brown Hesperinae species...". In the present study, the type series of *Augiades dara* var. *angustata* Matsumura (currently classified as a subspecies of *Potanthus confucius*) was recognized to contain multiple species. Revised statuses involve taxa within *Pelopidas*, *Polytremis*, and *Borbo*, which all belong to the so-called "swifts". Evidently Shirôzu (1986) was well aware that confusion still existed among the skippers of Taiwan, despite research on the butterfly and skipper fauna for over a century (Hsu and Chou 1999). As 5 of 23 names examined here required changes in taxonomic status, it seems likely to expect a similar situation in other groups of the Lepidoptera described by Matsumura. For example, Yen et al. (2003) reported that a sphingid moth, *Rhagstis trilineata* Matsumura, 1921, was described from a single specimen from Taiwan, but this type was probably a mislabeled specimen collected in Japan, and thus should be omitted from the faunistic list of Taiwan. Reexamination of the type series of the other moth groups will be necessary to avoid confusion and to stabilize classification of these groups.

The taxonomic treatment and appropriate status of the 23 skipper taxa examined in the present study is given as follows.

A Synopsis of the Taxonomy and Proposed

Nomenclatural Changes for the Taiwanese Skipper Taxa Described by S. Matsumura

Bibacis argenteola Matsumura, 1940

Argenteola Matsumura, 1940 should be considered a junior subjective synonym of *Epargyreus clarus* (Cramer, [1775]), mislabeling?

Notocrypta kawakamii Matsumura, 1907

Inomata et al. (2000) proposed treating this taxon as a *nomen oblitum* of *Celaenorrhinus sumitra ratna* Fruhstorfer, 1908 or the other Taiwan *Celaenorrhinus* species. The present study considers it a senior subjective synonym of *Celaenorrhinus sumitra ratna* Fruhstorfer, 1908. However, the precedence of *Celaenorrhinus sumitra ratna* Fruhstorfer, 1908 over *Notocrypta kawakamii* Matsumura, 1907 is yet to be established following a ruling by the Commission on Zoological Nomenclature.

Celaenorrhinus taiwanus Matsumura, 1919

Evans (1949) recognized this taxon as a subspecific name for the population of *Celaenorrhinus maculosa* (Felder and Felder, [1867]) in Taiwan.

Satarupa formosana, Matsumura, 1910

Strand (1927) recognized this taxon as a primary homonym of *Satarupa formosana* Fruhstorfer, 1909, and provided a valid replacement name, *Satarupa formosibia*.

Suastus nigroguttatus, Matsumura, 1910

Evans (1949) synonymized this taxon with *Seseria formosana* (Fruhstorfer, 1909).

Tagiades menaka var. *formosana* Matsumura, 1919

Evans (1949) synonymized *formosana* Matsumura, 1919 with *Tagiades cohaerens* Mabille, 1914.

Daimio niitakana Matsumura, 1907

Shirôzu (1960) synonymized *niitakana* Matsumura, 1907 with *Daimio tethys moori* (Mabille, 1876), whereas Chiba et al. (1992) retained *niitakana* as a subspecific name for *D.*

tethys (Ménétrières, 1857) in Taiwan.

***Daimio sinica* var. *formosana* Matsumura, 1919/
Daimio sinica var. *taiwana* Matsumura, 1919**

Inomata et al. (2000) considered *formosana* Matsumura, 1919 a subjective synonym of *taiwana* Matsumura, 1919, invoking the 1st reviser principle. Evans (1949) synonymized *taiwana* with *Daimio tethys moori* (Mabille, 1876).

***Ampittia myakei* Matsumura, 1910**

Evans (1949) treated *myakei* Matsumura, 1910 as a subspecific name for the population of *A. virgata* (Leech, 1890) in Taiwan. *Ampittia myakei* Matsumura, 1909 is recognized as a *nomen nudum*.

***Ampittia arisana* Matsumura, 1910**

Shirôzu (1960) regarded *arisana* Matsumura, 1910 as a [junior subjective] synonym of *Ampittia virgata m[i]yakei* Matsumura, 1910. *Ampittia arisana* Matsumura, 1909 is recognized as a *nomen nudum*.

***Aeromachus inachus* f. *formosanus*
Matsumura, 1931**

Evans (1943) treated this taxon as a subspecific name for *Aeromachus inachus* (Ménétrières, 1859) in Taiwan. *Aeromachus inachus* subsp. *formosanus* Matsumura, 1929 is considered a *nomen nudum*.

***Ampittia takeuchii* Matsumura, 1929**

Shirôzu (1960) recognized *takeuchii* Matsumura, 1929 as the subspecific name for *Onryza maga* (Leech, 1890) in Taiwan.

***Halpe horishana* Matsumura, 1910**

Evans (1949) recognized *horishana* Matsumura, 1910 as a *Thoressa* species endemic to Taiwan. Tsukiyama et al. (1997) regarded the taxon as a subspecies of *T. varia* (Murray, 1876). *Halpe horishana* Matsumura, 1909 is recognized as a *nomen nudum*.

***Halpe aokii* Matsumura, 1934**

Evans (1949) treated this taxon as a [junior

subjective] synonym of *Thoressa horishana* Matsumura, 1910.

***Augiades sylvanus* var. *formosana* Matsumura,
1919**

Augiades sylvanus var. *formosana* Matsumura, 1919 represents a junior subjective synonym of *Ochlodes venata* (Bremer and Grey, 1853), syn. nov., stat. rev., and mislabeling. The species currently known as *Ochlodes subhyalina formosana* or *Ochlodes formosanus* should be referred to as *Ochlodes niitakana* (Sonan, 1936), comb. nov. and stat. rev.

***Augiades dara* var. *angustata* Matsumura, 1910**

Evans (1949) treated *angustata* Matsumura, 1910 as a subspecific name for the population of *Potanthus confucius* (Felder and Felder, 1862) in Taiwan.

***Parnara kuyaniana* Matsumura, 1919**

The name *kuyaniana* Matsumura, 1919, instead of *taiwana* Matsumura, 1919, should be regarded as the valid subspecific name for *P. lubricans* (Herrich-Schäffer, 1869) in Taiwan and southern China, stat. rev.

***Parnara baibarana* Matsumura, 1929**

Chiba et al. (1992) regarded this taxon as a [junior subjective] synonym of *Pelopidas agna* (Moore, [1866]).

***Parnara eltola* var. *taiwana* Matsumura, 1919**

The name *taiwana* Matsumura, 1919 should be regarded as a junior subjective synonym of *Borbo cinnara* (Wallace, 1866), syn. nov. and stat. rev. *Polytremis zina taiwana* Murayama, 1981 is no longer considered a homonym because *taiwana* Matsumura is placed with *Borbo*, not *Polytremis*, stat. rev.

***Parnara tappana* Matsumura, 1919**

Evans (1949) considered this taxon to be a valid subspecific name for *Polytremis eltola* (Hewitson, 1869) in Taiwan.

***Parnara giranna* Matsumura, 1919**

Evans (1949) synonymized *giranna* Matsumura, 1919 with *Caltoris bromus yanuca* (Fruhstorfer, 1911). *Parnara giranna* Matsumura, 1909 is recognized as a *nomen nudum*.

***Parnara baibarana mumon* Matsumura, 1929**

Parnara baibarana mumon Matsumura, 1929 should be regarded as a junior subjective synonym of *Pelopidas agna* (Moore, [1866]), syn. nov. and stat. rev.

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