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NOTES ON MATSUMURA'S TYPE SPECIMENS OF ORTHOPTERA

By ITO GEN and AKIHIKO ICHIKAWA

Abstract


Original label data associated with all extant known types of 28 Orthoptera species described by Shônen Matsumura are recorded. All the specimens examined are preserved in the Laboratory of Systematic Entomology, Faculty of Agriculture, Hokkaido University, Sapporo, Japan (SEHU) except four syntypes of four species preserved in the Department of Plant Pathology and Entomology, National Taiwan University, Taipei, Taiwan (ENTU). Xiphidium sasakiri Matsumura, 1904 and X. dimidiatum Matsumura et Shiraki, 1908 are synonymized with Conocephalus japonica (Redtenbacher, 1891) and C. maculatus (Le Guillou, 1841), respectively. Phaneroptera grandis Matsumura et Shiraki, 1908 is transferred to Elimaea. Conocephalus luteus Matsumura et Shiraki, 1908, recognized in Ruspolia by Baily (1975) is transferred to Palaeograecia.

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INTRODUCTION

Shônen Matsumura (1872–1960) is the founder of entomology in Japan. He described a large number of new taxa belonging to almost all orders of insects, mainly from Japan, Taiwan, and Sakhalin. He worked on order Orthoptera in his early publications, mainly in “Matsumura (1904)” and “Matsumura and Shiraki (1908)”, 35 species being described by him. In most of his papers, new species were described without designation of types, because most entomologists had no idea of typification at that time. A common difficulty in studying Matsumura’s type specimens is that some other specimens have been arranged in same cabinets with Matsumura’s types after the publication. It has often caused difficulty in distinguishing which are true type specimens. There is another difficulty in examining Orthoptera specimens. Before the World War II, T. Shiraki brought many specimens of Orthoptera including types of some species from Japan to Taiwan. After the War, most of them were left in Taiwan. And some type specimens were missing and still unknown. In order to decrease these difficulties, we aimed to provide information of Matsumura’s type specimens.

We have examined all extant known type specimens of 28 species described by Matsumura and deposited in the Laboratory of Systematic Entomology, Faculty of Agriculture, Hokkaido University (SEHU) and the Department of Plant Pathology and Entomology, National Taiwan University, Taipei, Taiwan (ENTU). But any representatives of the type series of the following species have not yet been found:


Gryllacrididae: Gryllacris japonica Matsumura et Shiraki, 1908: 70; Gryllacris subrectis Matsumura et Shiraki, 1908: 71; Eremus testaceus Matsumura et Shiraki, 1908: 74.

Tomokuni (1994) wrote the context of labeling on Matsumura’s specimens. His paper was useful for us in sorting out syntypes. A new type label is attached to each type specimen. When we concluded that a species was described based on a single specimen, the specimen is regarded as the holotype of the species. If not so, other specimens should be treated as syntypes. After sorting out types, a new type label is attached to each type specimen.

FORMAT OF THE LIST

This list is arranged in sequence of date and pages in the original description for each family. Each name is followed by the author, date, and page reference. The genus name of each species in the original description is shown. If genus name was changed, current or new genus name is recorded. The sequence of labels on the pin are indicated as (1), (2), (3), ... from top to bottom. Translations or transliterations from Japanese are presented in brackets []. The handwriting identification is enclosed by double quotation marks " " . Supplements to the original data are given in parentheses ( ). Some notes on type specimens or Matsumura’s species are given when it is necessary. All specimens examined are deposited in SEHU, except four syntypes in ENTU marked with *. 

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Xiphidium sasakiri Matsumura, 1904: 129. (Figs. 5, 10, 11)

1 ♀ – (1) [Tokyo] 11.12; (2) 23; (3) Xiphidium n. sp.; (4) "X. sasakiri Mats".

New status: Conocephalus japonica (Redtenbacher, 1891), syn. nov.

Notes: This specimen almost agrees with the original description of Conocephalus japonica in the following characters: Fastigium of vertex (Fig. 10) narrow, almost straight in anterior view; prosternum bispinose; tegmina obtuse apically; hind femora with several spines on ventral outer margin in apical half; ovipositor straight and long; female subgenital plate (Fig. 11) emarginate in posterior margin. Therefore, we synonymize X. sasakiri with C. japonica.

Isotima japonica Matsumura et Shiraki, 1908: 10.

1 ♂ – (1) 9/VII 190? [a character unable to read] Hagi.
1 ♀ – (1) 8/9 [Hagi].


Notes: This species was once transferred to the genus Anisotima by Bey-Bienko (1954), then transferred to the genus Shirakisotima by Furukawa (1963).


1 ♂ – (1) VII/1905 Okinawa; (2)166; (3) "Holochlora daitoensis Mats.”.
1 ♀ – (1) Hachijo Takahashi.
1 ♂* – (1) Formosa Matsumura; (underside) Koshun 7/7; (2) “Phauloidia daitoensis”.


Phauloidia gracilis Matsumura et Shiraki, 1908: 14.

1 ♂ – (1) Formosa Matsumura; (underside) Hokuto 7/30.
1 ♀ – (1) Formosa Matsumura; (underside) Hokuto 7/30.
1 ♂* – (1) Formosa Matsumura; (underside) 30/VII 1906 Hokuto; (2) “Phauloidia gracilis”.


Holochlora nawae Matsumura et Shiraki, 1908: 17.

1 ♂ – (1) 4/IX 1906 Kumamoto.
1 ♂ – (1) Formosa Matsumura; (underside) Taikokan 8/18.
1 ♂ – (1) 8/IX 1906 Kumamoto; (2) [Ookudamakidamashi].


Holochlora longifissa Matsumura et Shiraki, 1908: 18.

Holotype (by monotypy) ♂ – (1) [middle] VIII 1906 [Yamaguchi].
Current status: Holochlora longifissa Matsumura et Shiraki.
Phaneroptera grandis Matsumura et Shiraki, 1908: 23. (Figs. 1, 2, 6, 7)
1 ♀ – (1) Formosa Matsumura; (underside) 23/VII 1906 Shinsha.
1 ♂ – (1) Formosa Matsumura; (underside) 7/23 [Shin].
2 ♂ – (1) Formosa Matsumura; (underside) Taikokan 7/16.
New status: Elimaea grandis (Matsumura et Shiraki), comb. nov.
Notes: This species is considered to be a member of Elimaea (Elimaea), having the following diagnostic characters of the genus given by Ingrisch (1998b): Fore femora in basal area compressed and curved; tibial tympanal organs (Fig. 6) covered by a conchate fold on both sides; tegmina with radius vein branching before the middle length of tegmina; male subgenital plate (Fig. 7) without styli.

Phaneroptera tympanalis Matsumura et Shiraki, 1908: 25.
1 ♂* – (1) Formosa Matsumura; (underside) 7/24 [Phaneroptera tympanalis Shir.]; (2) "Phaneroptera tympanalis Shir."

Togona unicolor Matsumura et Shiraki, 1908: 30.
1 ♀ – (1) Formosa Matsumura; (underside) Shinsha 7/23; (2) [2].
1 ♀* – (1) Formosa Matsumura; (underside) 23/VII 1906 Shinsha.
Current status: Togona unicolor Matsumura et Shiraki.

Pyrgocorypha formosana Matsumura et Shiraki, 1908: 35.
1 ♂ – (1) Formosa Matsumura [Hoppo]. (Head missing).
1 ♀ – (1) Formosa Matsumura [Hoppo]; (2) [10] (using red ink).
Current status: Pyrgocorypha formosana Matsumura et Shiraki.

Conocephalus platynotum Matsumura et Shiraki, 1908: 39.
1 ♀ – (1) Formosa Matsumura; (underside) 24/IV – 1907 Tappansha.
Current status: Xestophrys horvathi (Bolivar, 1905).
Notes: This species was once transferred to Euconocephalus by Karny (1912b), and then synonymized with X. horvathi by Fukuhara (1983).

Conocephalus formosanus Matsumura et Shiraki, 1908: 42.
1 ♀ – (1) Formosa Matsumura; (underside) 22/XI 1906 Giran.
Current status: Euconocephalus formosanus (Matsumura et Shiraki). Transferred by Karny (1912b).

Conocephalus luteus Matsumura et Shiraki, 1908: 45. (Figs. 3, 8)
1 ♀ – (1) [6, IX, 1902. Locality: Kasada, Kawashima-Town/Village. ?? (two characters unable to read)]; (underside) 55a [Hashima-Gun, Kasada elementary school grade 2 student, K. Tanaka leg.].
New status: Palaeoagraecia lutea (Matsumura et Shiraki), comb. nov.
Notes: This species was transferred to Homorocoryphus by Karny (1912b), and to Ruspolia by Baily (1975), both genera belonging to Copiphorini. It, however, does not belong to this tribe, but to the tribe Agraeciini and to the genus Palaeoagraecia. According to Ingrisch (1998a), Agraeciini is characterized as follows: vertex and top of frons are connected by a thin keel (Fig. 8); ovipositor curved dorsally; vertex without ventral tooth;
and width of fastigium is narrower than width of scapus, and *Palaeoagraecia* as: pronotum somewhat flattened dorsally; without spines or tubercles; prosternum with two spines; fore femora with spines of subequal length on inner and outer ventral margins; tegmina rounded apically; ovipositor long, compressed and blade-shaped. The present Matsumura’s species has all of these characters.

*Xiphidium dimidiatum* Matsumura et Shiraki, 1908: 56. (Figs. 4, 9)

Holotype ♀ (by monotypy) – (1) Akasi 11/5. (Head missing).

New status: *Conocephalus maculatus* (Le Guillou, 1841), syn. nov.

Notes: This species was transferred to *Conocephalus* by Karny (1912a), and we consider the species a junior synonym of *C. maculatus* on the basis of the following characters agreeing with a diagnoses of *C. maculatus* given by Pitkin (1980): Prosternum bispinose; no markings in costal and precostal areas of tegmina; hind femora with no spines ventrally; cerci (Fig. 9) with one internal spine. In this specimen tegminal pigmentation is pale, but this condition is sometimes observed in *C. maculatus*, and the specimen agrees with the species also in other characters.

*Xiphidium formosanum* Matsumura et Shiraki, 1908: 59.

Holotype ♂ (by monotypy) – (1) Formosa Matsumura; (underside) 20/XI-1906 Heirinbi.

Current status: *Conocephalus formosanus* (Matumura et Shiraki). Transferred by Karny (1912a).

*Xiphidium gigantium* Matsumura et Shiraki, 1908: 60.

1 ♂ – (1) Formosa Matsumura; (underside) 23/VII-1906 Shinsha; (2) [3](using red ink).


*Xiphidium divergentum* Matsumura et Shiraki, 1908: 61.

Holotype ♀ (by monotypy) – (1) Formosa Matsumura [Shinsha] 7/24.


Holotype ♀ (by monotypy) – (1) Formosa Matsumura [Hoppo]; (2) [8](using red ink).

Current status: *Hexacentrus fuscipes* Matsumura et Shiraki.

**Family Gryllidae**


1 ♂ – (1) Japan [Sahoro (=Sapporo)] Matsumura; (2) “*N. nigrofasciatus* det. Dr. Matsumura”.

Current status: *Dianemobius nigrofasciatus* (Matsumura).

Notes: This species was once synonymized with *Pteronemobius fascipes* (Walker, 1869) by Uvarov (1926) and *P. fascipes* was transferred to the genus *Dianemobius* by Vickery (1973). Gorochov (1983) regarded the Matsumura’s taxon as a subspecies of *D. fascipes*, but Masaki and Nagase (1992) revived it as a distinct species.
Oecanthus longicauda Matsumura, 1904: 136.
1 ♂ – (1) 10.12 Sapporo Matsum.
1 ♀ – (1) Sapporo Matsum.
Current status: Oecanthus longicauda Matsumura, 1904.

Anaxiphus pallidulus Matsumura, 1910: 10.
1 ♂ – (1) Formosa Matsumura; (underside) [Rinkiho] 29/IV '07 (=1907); (2) [Pest of sugarcane].
Current status: Natula pallidula (Matsumura). Transferred by Ichikawa et al. (2000).

Gryllodes guttula Matsumura, 1913: 36.
Holotype ♀ (by monotypy) – (1) “Gryllodes guttulus det. Matsumura” (2) [12] (using red ink).
Current status: Cardiodactylus guttulus (Matsumura).
Notes: This species was once transferred to the genus Gryllopsis by Chopard (1967), then to the genus Cardiodactylus by Ichikawa (1999).

Anaxiphus vittatipes Matsumura, 1913: 39.
1 ♂ 1 ♀ (specimens are pinned to a polyfoam block) – (1) [Nakano] Japan Matsum; (underside) 8/14; (2) “Cyrtoxiphus vittatipes n. sp. det. Matsumura”.
1 ♂ – (1) Kumamoto H. Kawamura; (underside) IX 12 1907; (2) [15] (using red ink).
1 ♂ – (1) Kumamoto H. Kawamura; (underside) IX 12 1907; (2) [Kinhirari].
Current status: Svistella bifasciata (Shiraki, 1913). Synonymized by Ichikawa et al. (2000).

Madasumma hibinonis Matsumura, 1917: 279.
1 ♂ 2 ♀ – (1) Japan Matsumura; (underside) [Tokyo Azabu 8/1916 Hibino Shin-ichi leg.].
2 ♀ – (1) Japan Matsumura; (underside) [Tokyo, 16/IX 1916 Hibino Shin-ichi leg.].
Current status: Truljalia hibinonis (Matsumura).
Notes: This species was once transferred to the genus Calyptotrypeus by Chopard (1936), then to the genus Truljalia by Gorochov (1985).

FAMILY MOGOPLISTIDAE

Ectatoderus kanetataki Matsumura, 1904: 131.
1 ♂ – (1) (underside of thick paper on which the specimen glued) 25, 10, 0. [Mt. Ibuki] (using green ink) ♂; (2) “det. Ectatoderus kanetataki M. Dr. Matsumura”.
1 ♂ – (1) [early] / X 1903 [Takasago].
Current status: Ornebius kanetataki (Matsumura).
Notes: This species was once transferred to the genus Liphoplus by Shiraki (1930), and then transferred to the genus Ornebius by Chopard (1968).

FAMILY MYRMECOPHILIDAE

2 ♀ – (1) det. Dr. Matsumura “M. japonicus”.
1 ♀ – [sahoro (=Sapporo)] 10/21.
Current status: Myrmecophilus sapporensis Matsumura.
FAMILY GRYLLACRIDIDAE

*Neanias magnus* Matsumura et Shiraki, 1908: 73.

Holotype ♀ (by monotypy) – (1) 7/2 Koshun Coll. T. Kawakami; (2) [5] using red ink.

Notes: Label (1) is paraffin paper folded in small size.

Current status: *Neanias magnus* Matsumura et Shiraki.

FAMILY TRIDACTYLIDAE


1 ♀ – (1) [Rinkiho] 29/IV 07 (=1907); (underside) Formosa Matsumura; (2) [pest of sugar cane]; (3) "*T. flavovittatus* (? unreadable) det. Matsumura"; (4) *Tridactylus flavomaculatus* Matsumura, 1911. Lectotypus: ♀ det. K. K. Günther 1979; (5) Lectotypus (red label); (6) *Xya riparia* (Sauss., 1877) ♀ det. K. K. Günther 1979.


Notes: This species was considered a junior synonym of *Xya riparia* (Saussure) by K. K. Günther when he examined Matsumura specimens in 1979–1980, and he attached lectotype- or paralectotype-labels to the specimens. These taxonomic treatments were not published in Günther's (1980) catalog, and so far as we aware, are not found in his later works. Günther (1980) transferred this species to the genus *Xya* and treated as a distinct species.

FAMILY ACRIDIDAE

*Podisma sachalinensis* Matsumura, 1911: 5.

1 ♂ – (1) 13/VIII 1906 [Pilewo]; (underside) "*Podisma sachalinensis* det. Matsumura".

1 ♂ – (1) 13/VIII 1906 [Pilewo].

Current status: *Prumna primnoa* (Fischer-Waldheim, 1846).

Notes: This species was synonymized with *Prumna primnoa* by Tarbinsky (1932). The genus *Prumna* has been changed its name to *Prumna* Motschulsky, 1859 by Ito (2003).
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Figs. 6–11. Body parts of Matsumura's type specimens. 6: *Elimaea grandis*, tibial tympanal organ; 7: *E. grandis*, male subgenital plate; 8: *Palaeoagraecia lutea*, upper part of head, anterior view; 9: *Xiphidium dimidiatum*, male cercus, ventral view; 10: *X. sasakiri*, upper part of head, anterior view; 11: *X. sasakiri*, female subgenital plate. Scale: 1 mm (6–8, 10–11), 0.25 mm (9).