

A Survey of Jewel Beetles (Coleoptera, Buprestidae) in the Southern Area of Taiwan

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Abstract Fifty two species of buprestid beetles were recorded from the southern area of Taiwan, in particular from the Kenting National Park. Four species, *Mastogenius insperatus* KUROSAWA, 1972, *Pachyscelus bedeli* OBENBERGER, 1921, *Agrilus foramenifer* JENDEK, 2011 and *Habroloma (Parahabroloma) asahinai* KUROSAWA, 1959 are first records from Taiwan, with *M. insperatus* and *P. bedeli*, being the first record of this genus in Taiwan.

Key words: Buprestidae, Taiwan, Kenting National Park, Insect fauna

Introduction

Taiwan is located in the sub-tropical region, and has a diverse and beautiful tropical-subtropical insect fauna. Contributing to the diversity is the range of climatic zones arising from the presence of a high mountainous area in the center of this island. A consequence of the central high mountainous area is that Taiwan exhibits an insect fauna that is partly but deeply related with that of Japan and continental China. The fauna is also deeply related with that of the Philippine islands. Thus this blending of insects from such diverse locations makes Taiwan of great interest to entomologists. The headquarters of the Kenting National Park started a series of research projects involving insect fauna surveys from 2010 to 2014. These projects offer the opportunity to invite taxonomists to collaborate to record the biodiversity of insects in the Kenting National Park and southern Taiwan.

Jewel beetles (Buprestidae) from Taiwan have been studied since 1912. Included in these studies are those by KERREMANS (1912, 1913, 1914), MIWA and CHÛJÔ (1936, 1940), OBENBERGER (1929, 1936, 1944), KUROSAWA (1954, 1957, 1976), AKIYAMA (1988, 1989), AKIYAMA and OHMOMO (1993), OHMOMO and AKIYAMA (1989), BILY (1989), JENDEK (1995), TÔYAMA (1985), HATTORI (1991, 1996, 2014), OHMOMO (2005) and JENDEK and GREBENNIKOV (2011). Among them, MIWA (1931) published a catalogue of the Taiwanese buprestid beetles and summarized 63 species in his catalogue. Recently, MÛHLE (2003) reviewed Taiwanese buprestid beetles and considered 159 taxa with those present in Japan, China, the Philippines and Vietnam.

We had an opportunity to survey insects in the southern area of Taiwan (Taitung Co., Hualien Co. and Pingtung Co.) from 2012 to 2014 under the project research fund from the Kenting National Park (project Nos. 525-100-03, 525-102-01-528, 525-102-01) and the University of Kang Ning. In this paper, we report a list of the buprestid beetles of 52 species with collected data. This paper is a preliminary report of the buprestid beetles in Taiwanese fauna with a detailed report becomes available.

Results

In this survey, we identified four subfamilies, nine tribes, 14 genera, and 52 species of buprestid beetles in the southern area of Taiwan. These species are summarized in the Appendix list with five

distribution patterns as follow: Pattern I (also present in China and in Japan including Ryukyu Islands), II (also present in China), III (also present in Japan including the Ryukyu Islands), IV (also present in the Philippines) and V (present only in Taiwan). The taxa number belonging to each pattern are summarized in Table 1. The 28 species among 52 taxa that are included in the distribution pattern V, comprised 53.9 % of species surveyed and the 11 species are in the distribution pattern III. The distribution pattern I includes six species, the pattern II includes three species and pattern IV unexpectedly includes only four species. There were 38 species identified in the Kenting National Park (Table 1 and list). There were two new genera, four new species and six rare species recognized (Table 2).

Discussion

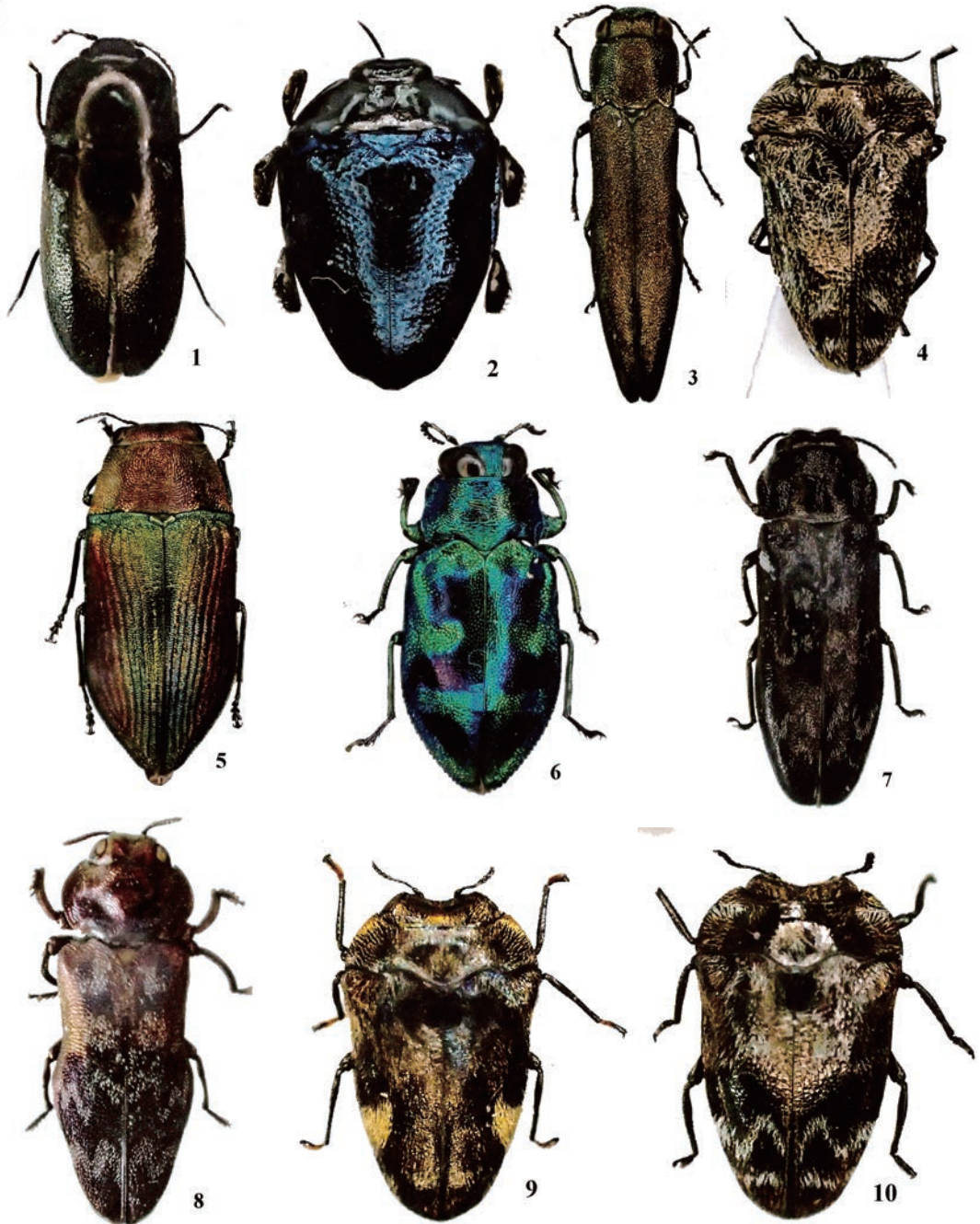
In the revision by MÜHLE (2003), 159 taxa of buprestid beetles were recognized in Taiwan, and it was suggested that an even larger number of species would be present. Compared with his revision, our number of species recorded was small. However, we recorded two species that were not reviewed by MÜHLE. The species are *Mastogenius insperatus* KUROSAWA, 1972 (Fig. 1) and *Pachyscelus bedeli* OBENBERGER, 1921 (Fig. 2). Of course, both genera are unexpectedly the first record from Taiwan. *Mastogenius insperatus* was originally described from Japan, including from the Ryukyu Islands. The genus *Mastogenius* is distributed throughout the world with the exception of Australasia. Two species, *M. insperatus* distributed in Japan and *M. taoi* (TÔYAMA, 1983) distributed in Thailand, are previously known in Asia. *Pachyscelus bedeli* is originally described from Vietnam (Annam and Tonkin). The genus *Pachyscelus* is distributed mainly in North and South America with a few species being present in the Southeast Asian area, with six species being present from Indonesia and Indochina. We also recorded two species, *Agrilus foramenifer* JENDEK, 2011 (Fig. 3) and *Habroloma (Parahabroloma) asahinai* KUROSAWA, 1959 (Fig. 4), new to Taiwan.

Of the buprestid beetles recorded, *Philanthaxia sauteri* KERREMANS, 1913 (Fig. 5), *Chrysobothris sauteri* KERREMANS, 1912 (Fig. 6), *Coraebus taiwanus* AKIYAMA, 1988 (Fig. 7), *Toxoscelus sugiurui* HATTORI, 2014 (Fig. 8), *Trachys ohbayashii* KUROSAWA, 1954 (Fig. 9) and *Habroloma (Parahabroloma) miwai* (OBENBERGER, 1929) (Fig. 10) are rare species making the new finding during our surveys of importance. Three of the four newly recorded species were found in the Kenting National Park (Table 2) and this indicates a high possibility of further surveys obtaining more new records.

The relationship in the distribution pattern between Taiwan and the Philippines was unexpectedly poor (pattern IV: only four in 52 species). In contrast, the relationship between Taiwan and continental China and Japan (pattern I+II+III) was 20 in 52 species, which comprised about 38.5% of the species surveyed. These survey findings indicate that Taiwan is one of an important component to constitute the Chinese continental fauna of buprestid beetles. The pattern V, species endemic to Taiwan, is the richest (28 in 52 species) among the distribution patterns as shown in the Table 1. And 22 taxa that were found in the Kenting National Park are in the pattern V. This is evidence that the insect fauna of Taiwan is typical of a diverse range of endemic insect that evolve in island ecosystems.

Acknowledgement

Firstly we would like to express our cordial thanks to the head-quarters and staffs of the Kenting National Park and their financial support (project Nos. 525-100-03, 525-102-01-528, 525-102-01) from 2012-2014. We are also respectfully acknowledged for the team of these projects in the arrangement of permission to survey beetles in the area. Many thanks also due to Dr. Keiichi TAKAHASHI,



Figs. 1–10. Buprestid beetles collected in the southern area of Taiwan. — 1, *Mastogenius insperatus* KUROSAWA, 1972; 2, *Pachyscelus bedeli* OBENBERGER, 1921; 3, *Agrilus foramenifer* JENDEK, 2011; 4, *Habroloma asahinai* KUROSAWA, 1959; 5, *Philanthaxia sauteri* KERREMANS, 1912; 6, *Chrysobothris sauteri* KERREMANS, 1912; 7, *Coraeus taiwanus* AKIYAMA, 1988; 8, *Toxoscelus sugiurui* HATTORI, 2014; 9, *Trachys ohbayashii* KUROSAWA, 1972; 10, *Habroloma miwai* (OBENBERGER, 1929).

Table 1. Distribution pattern of buprestid beetles recognized by survey in the southern area of Taiwan during 2012–2014

Pattern	Area	Species ¹	
		Number	% in Total number
I	China continental – Taiwan – Japan	6 (5)	11.5 (9.6)
II	China continental – Taiwan	3 (1)	5.8 (1.9)
III	Taiwan – Japan	11 (6)	21.2 (11.5)
IV	Taiwan – Philippines	4 (4)	7.7 (7.7)
V	Taiwan only	28 (22)	53.9 (42.3)

¹: Number in parentheses represents the data found in the Kenting National Park.

Table 2. The new record species of buprestid beetles collected by survey in the southern area of Taiwan during 2012–2014

Figs. No.	Species	Area pattern	Note ^{1,2}
1.	<i>Mastogenius insperatus</i> KUROSAWA, 1972	III	NRS, NRG: K
2.	<i>Pachyscelus bedeli</i> OBENBERGER, 1921	II	NRS, NRG: T
3.	<i>Agrilus foramenifer</i> JENDEK, 2011	V	NRS: K
4.	<i>Habroloma asahinai</i> KUROSAWA, 1959	V	NRS: K
5.	<i>Philanthaxia sauteri</i> KERREMANS, 1912	V	RS: T
6.	<i>Chrysobothris sauteri</i> KERREMANS, 1912	V	RS: K
7.	<i>Coraebus taiwanus</i> AKIYAMA, 1988	II	RS: K
8.	<i>Toxoscelus sugiurai</i> HATTORI, 2014	V	RS: K, T
9.	<i>Trachys ohbayashii</i> KUROSAWA, 1972	III	RS: T, P
10.	<i>Habroloma miwai</i> (OBENBERGER, 1929)	V	RS: K

¹: NRS (new record species); NRG (new record genus); RS (rare species).

²: Species collected location K (Kenting National Park); T: (Taitung Co.); P (Pingtung Co.).

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要 約

Yen-Chiu LAN・大桃定洋：台湾南部地域におけるタマムシ科甲虫の探索(鞘翅目)。——— 墾丁公園を中心とする台湾南部地域においてタマムシ科甲虫類を探索し、4亜科9族14属52種を確認した。これらの中には台湾から属として初記録となる *Mastogenius insperatus* KUROSAWA, 1972 および *Pachyscelus bedeli* OBENBERGER, 1921 が含まれ、他にも *Agrilus foramenifer* JENDEK, 2011 と *Habroloma asahinai* KUROSAWA, 1959 を台湾から初めて記録した。また、全52種についてその分布パターンを考察した。

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Appendix

List of Buprestid Beetles Collected in the Southern Area of Taiwan During 2012 to 2014

Subfamily **Polycestinae** LACORDAIRE, 1857

1) Tribe **Haprostethini** LECONTE, 1861

Genus **Mastogenius** SOLIER, 1849

1. *Mastogenius insperatus* Y. KUROSAWA, 1972 (Pattern III) (Fig. 1)

1 ex., 9.IV.2012 & 2 exs., 8.V.2014, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.

Subfamily **Chrysochroinae** LAPORTE, 1835

1) Tribe **Chrysochroini** LAPORTE, 1835

Genus **Chrysodema** LAPORTE et GORY, 1835

1. *Chrysodema* (s. str.) *dalmanni* (ESCHSCHOLTZ, 1837) (Pattern III+IV)

2 exs., 8–10.V.2014, Shedding Park, Kending, Pingtung Co., S. LAN leg.

Subfamily **Buprestinae** LEACH, 1815

1) Tribe **Thomassetiini** BELLAMY, 1987

Genus **Philanthaxia** DEYROLLE, 1864

1. *Philanthaxia sauteri* KERREMANS, 1913 (Pattern V) (Fig. 5)

1 ex., 10–11.VI.2013, Kenting Park, Kending, Pingtung Co., K. TAKAHASHI leg.

2) Tribe **Anthaxini** GORY et LAPORTE, 1838

Genus **Anthaxia** ESCHSCHELOTZ, 1829

1. *Anthaxia* (*Haplantaxia*) *aeneocuprea* KERREMANS, 1914 (Pattern IV)

1 ex., 9.IV.2012, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.; 2 exs., 10–11.VI.2013, Kenting Park, Kending, Pingtung Co., K. TAKAHASHI leg.

3) Tribe **Chrysobothrini** GORY et LAPORTE, 1837

Genus **Chrysobothris** ESCHSCHOLTZ, 1829

1. *Chrysobothris sauteri* KERREMANS, 1912 (Pattern V) (Fig. 6)

1 ex., 12–13.IV.2013, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.

Subfamily **Agrilinae** LAPORTE, 1835

1) Tribe **Coraebini** BEDEL, 1921

Genus **Coraebus** GORY et LAPORTE, 1839

1. *Coraebus insulicolus* KERREMANS, 1912 (Pattern II)

2 exs., 4–5.VI.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co., K. TAKAHASHI leg.

2. *Coraebus taiwanus* AKIYAMA, 1988 (Pattern V) (Fig. 7)

1 ex., 8–9.IV.2013, Daren alt. ca. 500 m, Taittung Co., S. OHMOMO leg.

Genus *Nalanda* THERY, 1904

1. *Nalanda formosana* (OBENBERGER, 1944) (Pattern V)

1 ex., 4–7.IV.2012, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

2. *Nalanda lagerstraemia* OHMOMO et AKIYAMA, 1989 (Pattern III)

1 ex., 8–10.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.

3. *Nalanda rutilicolli* (OBENBERGER, 1914) (Pattern III)

1 ex., 7–8.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., Yen-Chiu LAN leg.

Genus *Toxoscelus* DEYROLLE, 1865

1. *Toxoscelus sugiurai* HATTORI, 2014 (Pattern V) (Fig. 8)

26 exs., 8–10.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.; 3 exs., 8–10.V.2014, Sheding Park, Kending, Pingtung Co., Y.-Chiu LAN leg.

2. *Toxoscelus yokoyamai* KUROSAWA, 1977 (Pattern V)

1 ex., 12–13.IV.2013 & 11 exs., 8–10.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.

2) Tribe *Agrilini* LAPORTE, 1835

Genus *Sambus* DEYROLLE, 1865

1. *Sambus quadricolor* ssp. *argenteus* KERREMANS, 1914 (Pattern III)

1 ex., 29.III.2011, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., Yen-Chiu LAN leg.; 1 ex., 9–11.IV.2013, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

2. *Sambus quinquefasciatus* MIWA et CHÛJÔ, 1935 (Pattern V)

1 ex., 24.VI.2012, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., WANG Chieh Chih leg.

Genus *Agrilus* CURTIS, 1825

1. *Agrilus acastus* KERREMANS, 1912 (= *horni* KERREMANS, 1914, synonymized by JENDEK, 2000; = *ohbayashii* TÔYAMA, 1987, synonymized by JENDEK, 2005) (Pattern V)

1 ex., 14.IV.2013, Kenting Park, Keding, Pingtung Co., S. OHMOMO leg.

2. *Agrilus arisanus* MIWA et CHÛJÔ, 1940 (Pattern V)

6 exs., 12–13.IV.2013 & 1 ex., 7–11.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.

3. *Agrilus auroapicalis* KUROSAWA, 1957 (Pattern III)

1 ex., 9.IV.2013, Shouka Pass, Oingtung Co., S. OHMOMO leg.

4. *Agrilus bacchus* KERREMANS, 1913 (Pattern V)

3 exs., 12–13.IV.2013, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

5. *Agrilus ctesias* KERREMANS, 1913 (Pattern V)

12 exs., 9.IV.2012, 16 exs., 12–13.IV.2013, & 5 exs., 7–11.V.2014, Sheding Park, Kending, Pingtung Co.

- & 1 ex., 3–4.V.2014, Daren alt. ca. 500 m, Taitung Co., S. OHMOMO leg.
6. *Agrilus decoloratus* KERREMANS, 1892 (= *ajax* KERREMANS, 1912, synonymized by JENDEK, 1995; *pyrrhus* KERREMANS, 1913, synonymized by JENDEK, 2000) (Pattern I)
1 ex., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.
7. *Agrilus foramenifer* JENDEK, 2011 (Pattern II) (Fig. 3)
1 ex., 12–13.IV.2013, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co. & 2 exs., 9.IV.2012, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.
8. *Agrilus hornianus* KERREMANS, 1912 (Pattern V)
1 ex., 8–9.IV.2013, Daren alt. ca. 500 m, Taitung Co./ 2 exs., 9–11. IV.2013, 3 exs., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co./ 8 exs., 9.IV.2012 & 5 exs., 7–11.V.2014, Sheding Park, Kending, Pingtung Co. & 1 ex., 12.IV.2013, Manzhou, Pingtung Co., S. OHMOMO leg.; 1 ex., 13.III.2012, 2 exs., 9. IV.2012 & 1 ex., 7–8.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co. & 1 ex., 10.V.2014, Sheding Park, Kending, Pingtung Co., Yen-Chiu LAN leg.; 1 ex., 27.III. 2010, Sheding Park, Kending, Pingtung Co., Jing-Fu TSAI leg.
9. *Agrilus intrusus* KERREMANS, 1914 (Pattern V)
5 exs., 7–11.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.
10. *Agrilus niisatoi* TÔYAMA, 1985 (Pattern V)
2 exs., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.
11. *Agrilus nishiyamai* TÔYAMA, 1985 (Pattern V)
1 ex., 7–11.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.
12. *Agrilus obnotatus* KERREMANS, 1912 (Pattern V)
1 ex., 13.V.2010, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co. & 1 ex., 10.V.2014, Kenting Park, Keding, Pingtung Co, Yen-Chui LAN leg.; 7 exs., 9.IV.2012, 31 exs., 12–13.IV.2013 & 31 exs., 7–11.V. 2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.; 1 ex., 10–11.VI.2013, Kenting Park, Keding, Pingtung Co., K. TAKAHASHI leg.
13. *Agrilus ornatus* DEYROLLE, 1864 (Pattern IV)
1 ex., 10.V.2014, Kenting Park, Keding, Pingtung Co, Yen-Chui LAN leg.
14. *Agrilus plasoni* ssp. *dichrosomus* OBENBERGER, 1924 (Pattern V)
3 exs., 9.IV.2012, 4 exs., 12–13.IV.2013 & 4 exs., 7–11.V.2014, Sheding Park, Kending, Pingtung Co. & 1 ex., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.; 1 ex., 4–5.VI. 2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co., K. TAKAHASHI leg.
15. *Agrilus priamus* KERREMANS, 1912 (Pattern V)
1 ex., 9.IV.2012, 3 exs., 12–13.IV.2013 & 1 ex. 7–11.V.2014, Sheding Park, Kending, Pingtung Co., S. OHMOMO leg.; 1 ex., 4–5.VI.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co., K. TAKAHASHI leg.
16. *Agrilus radiolus* KERREMANS, 1913 (Pattern V)

1 ex., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.; 1 ex., 9.VI.2014, Kenting Park, Keding, Pingtung Co., K. TAKAHASHI leg.

17. *Agrilus senohi* TÔYAMA, 1988 (Pattern V)

1 ex., 2–3.IV.2012, Dulan Shan alt. ca. 260 m, Dulan, Taitung Co., S. OHMOMO leg.

18. *Agrilus tyndarus* KERREMANS, 1913 (= *omissulus* OBENBERGER, 1935, replacement name of *omissus* KERREMANS, 1914) (Pattern V)

1 ex., 6–7.IV.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co./ 2 exs., 4–7.IV.2012, 2 exs., 10–11.IV.2013 & 2 exs., 5–6.V.2014, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co./ 4 exs., 12–13.IV. 2013 & 8 exs., 7–11.V.2014, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.; 2 exs., 9.VI.2014, Kenting Park, Keding, Pingtung Co., K. TAKAHASHI leg.; 1 ex., 27.III.2011 & 1 ex., 9.IV.2012, Kenting Park, Keding, Pingtung Co, Yen-Chui LAN leg.

19. *Agrilus uenoi* KUROSAWA, 1963 (Pattern III)

3 exs., 9.IV.2012, 15 exs., 12–13.IV.2013 & 3 exs., 7–11.V.2014, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.

20. *Agrilus viduus* KERREMANS, 1914 (Pattern I)

1 ex., 2–3.IV.2012, Dulan Shan alt. ca. 260 m, Dulan, Taitung Co., S. OHMOMO leg.

3) Tribe **Aphanisticini** JACKUELIN, 1863

Genus *Endelus* DEYROLLE, 1865

1. *Endelus (Endelus) collaris* subsp. *kerremansi* THERY, 1927 (replacement name of *E. parallelus* KERREMANS, 1912) (Pattern V)

1 ex., 3–4.IV.2012, Zhiben, Taitung Co./ 12 exs., 4–7.IV.2012, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co./ 9 exs., 8.IV.2012 & 1 ex., 14.IV.2013, Kenting Park, Keding, Pingtung Co., S. OHMOMO leg.; 1 ex., 28.III.2011, Kenting Park, Keding, Pingtung Co. & 1 ex., 13.III.2012, Nanren Shan, Manzhou, Pingtung Co., Yen-Chui LAN leg.

2. *Endelus (Endelus) sauteri* KERREMANS, 1912 (Pattern V)

1 ex., 1.IV.2012, Chimei, Hualien Co./ 7 exs., 3–4.IV.2012, Zhiben, Taitung Co. & 5 exs., 4–7.IV.2012, Nanren Shan alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

4) Tribe **Trachyini** LAPORTE, 1835

Genus *Trachys* FABRICIUS, 1801

1. *Trachys auricollis* SAUNDERS, 1873 (= *T. sauteri* KERREMANS, 1912) (Pattern I)

6 exs., 1.IV.2012, Shoufeng, Hualien Co./ 6 exs., 3–4.IV.2012, Zhiben, Taitung Co./ 6 exs., 6–7.IV.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co./ 2 exs., 8–9.IV.2013 & 4 exs., 3–4.V.2014, Daren, alt. ca. 500 m, Taitung Co./ 15 exs., 4–7.IV.2012, 1 ex., 9–11.IV.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co./ 2 exs., 12.IV.2013, Manzhou, Pingtung Co./ 4 exs., 8.IV.2012 & 10 exs., 14.IV.2013, Kenting Park, Kending, Pingtung Co./ 21 exs., 9.IV.2012, 5 exs., 12–13.2013 & 1 ex., 7–11.V.2014, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.; 1 ex., 4–5.VI.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co./ 2 exs., 8.VI.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co. & 1 ex., 10–11.VI.2013, Kenting Park, Kending, Pingtung Co., K. TAKAHASHI leg.

2. *Trachys broussonetiae* KUROSAWA, 1985 (Pattern I)
1 ex., 6–7.IV.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co./ 6 exs., 2–3.IV.2012, Dulan Shan alt. ca. 260 m, Dulan, Taitung Co./ 1 ex., 4–7.IV.2012 & 1 ex., 9–11.IV.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co./ 2 exs., 8.IV.2012, Kenting Park, Kending, Pingtung Co./ 6 exs., 9.IV.2012 & 2 exs., 12–13.IV.2013, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg.; 1 ex., 8.VI.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., K. TAKAHASHI leg.; 1 ex., 7–8.V.2014, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., Yen-Chiu LAN leg.
 3. *Trachys dilaticeps* GEBHARDT, 1929 (Pattern I)
1 ex., 9.IV.2013, Shouka Pass, Oingtung Co. & 4 exs., 9–11.IV.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co, S. OHMOMO leg.
 4. *Trachys elvira* OBENBERGER, 1929 (Pattern V)
1 ex., 3–4.V.2014, Daren alt. ca. 500 m, Taitung Co., S. OHMOMO leg.
 5. *Trachys flaviceps* KERREMANS, 1892 (Pattern V)
1 ex., 2–3.IV.2012, Dulan Shan alt. ca. 260 m, Dulan, Taitung Co. & 1 ex., 4.IV.2012, Shouka, Pingtung Co., S. OHMOMO leg
 6. *Trachys formosanus* KERREMANS, 1912 (Pattern IV)
1 ex., 4–7.IV.2012, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.
 7. *Trachys kurosawai* BELLAMY, 2004 (replacement name of *T. mirabilis* KUROSAWA, 1954) (Pattern V)
1 ex., 2–3.IV.2012, Dulan Shan alt. ca. 260 m, Dulan, Taitung Co., S. OHMOMO leg
 8. *Trachys minutus* subsp. *salicis* (LEWIS, 1893) (Pattern III)
1 ex., 1.IV.2012, Chimei, Hualien Co./ 7 exs., 3–4.IV.2012, Zhiben, Taitung Co./ 4 exs., 4–7.IV.2012 & 2 exs., 3–4.V.2014, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.
 9. *Trachys ohbayashii* KUROSAWA, 1954 (Pattern V) (Fig. 9)
2 exs., 8–9.IV.2013, Daren, alt. ca. 500 m, Taitung Co./ 5 exs., 9.IV. 2012 & 2 exs., 12–13.IV.2013, Shedding Park, Kending, Pingtung Co., S. OHMOMO leg
 10. *Trachys reitteri* OBENBERGER, 1930 (Pattern I)
2 exs., 4–7.IV.2012, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.; 1 ex., 9.V.2014, Kenting Park, Kending, Pingtung Co., K. TAKAHASHI leg.
- Genus *Habroloma* (*Parahabroloma*) KUROSAWA, 1959
1. *Habroloma* (*Parahabroloma*) *asahinai* KUROSAWA, 1959 (Pattern III) (Fig. 4)
2 exs., 4.IV.2012, Shouka, Pingtung Co., S. OHMOMO leg.; 1 ex., 6 exs., 6–7.IV.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co., K. TAKAHASHI leg.
 2. *Habroloma* (*Parahabroloma*) *eximium* subsp. *eupotum* (OBENBERGER, 1929) (= *Habroloma eupotum* (OBENBERGER, 1929), synonymized by KUROSAWA, 1976) (Pattern III)
14 exs., 9–11.IV.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

3. *Habroloma (Parahabroloma) griseonigrum* (SAUNDERS, 1873) (= *Habroloma chionochaetum* (OBENBERGER, 1929), synonymized by KUROSAWA, 1976) (Pattern III)
2 exs., 8–9.IV.2013, Daren, alt. ca. 500 m, Taitung Co, S. OHMOMO leg.
4. *Habroloma (Parahabroloma) marginicolle* (FAIRMAIRE, 1888) (Pattern III)
1 ex., 4–5.VI.2013, Dahan Shan alt. ca. 600 m, Fanglian, Pingtung Co., K. TAKAHASHI leg.
5. *Habroloma (Parahabroloma) miwai* (OBENBERGER, 1929) (Pattern V) (Fig. 10)
1 ex., 9–11.IV.2013, Nanren Shan, alt. ca. 260 m, Manzhou, Pingtung Co., S. OHMOMO leg.

Genus *Pachyscelus* SOLIER, 1833

1. *Pachyscelus bedeli* OBENBERGER, 1921 (Pattern II) (Fig. 2)
2 exs., 4.V.2014, Daren, alt. ca. 500 m, Taitung Co., S. OHMOMO leg.

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