

Cantharid Beetles of the Genus *Habronychus*
(Coleoptera, Cantharidae) from Taiwan,
with Description of a New Subgenus

Yûichi OKUSHIMA

Kurashiki Museum of Natural History,
Chûô 2–6–1, Kurashiki-shi, Okayama Pref., 710–0046 Japan

and

Masataka SATÔ

Laboratory of Nature Conservation, Graduate School of Nagoya Women's University,
Mizuho-ku, Nagoya, 467–8610 Japan

Abstract Two new species of the genus *Habronychus* are described and illustrated from Taiwan under the names *H. longicornis* and *H. lalashanensis*. Two species, *Stenothemus furcatus* and *Athemellus intermixtus*, are transferred to the genus *Habronychus*. All the four species belong to the new subgenus *Monohabronychus*. A key is provided to all the *Habronychus* species from Taiwan on the basis of males.

WITTMER (1981) applied the generic name *Habronychus* to *Anolis rubicundus* CHAMPION, 1926, from Burma (Myanmar) with a preliminary description. At the same time, he erected the subgenus *Macrohabronychus* for some Himalayan species, which are distinguished from the nominotypical subgenus by morphological difference in hind claws. After that, the same author (1982) carefully dealt with the Taiwanese species of the genus, transferred *Malthinus sauteri* PIC, 1934, to it, and described two new species, *Habronychus nantouanus* and *H. kurosawai*.

Following to him, ISHIDA (1986) and SATÔ (1986) recorded from Japan three *Habronychus* species in total including two new species, all belonging to *Habronychus* (s. str.).

Recently, we reexamined the collections of ours and of some other institutions in Japan, and were fortunate to find two additional species of the genus from Taiwan. After a careful examination, it has become clear that they are new to science, as will be described in the present paper. *Stenothemus furcatus* WITTMER, 1986 and *Athemellus intermixtus* (WITTMER, 1954) should also belong to the same genus. However, these four species share a character state of claws not found in the nominotypical subgenus and *Macrohabronychus*, and seem to form a new subgenus, which will be called

Monohabronychus.

All the seven species of the genus *Habronychus* hitherto known from Taiwan, including the two new species, are summarized in a key based on their males.

We wish to express our hearty thanks to the late Dr. Walter WITTMER of the Naturhistorisches Museum Basel for permitting us loan or reexamination of some type specimens, and to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his critical reading of the original manuscript and constant guidance. Our thanks are also due to Drs. Yasuaki WATANABE, Yutaka ARITA, Mamoru OWADA, Masaaki TOMOKUNI, Akihiko SHINOHARA, Shûhei NOMURA, Masahiro SAKAI, Akiko SAITO, Toshio SENOH, Kouichi MATSUMOTO and Toshio KISHIMOTO, the late Dr. Kintaro BABA, and Messrs. Tôru SHIMOMURA, Shusei SAITO, Hiroaki HIRAMATSU, Michiaki HASEGAWA, Yoshiyasu KUSAKABE, Masaaki KIMURA, Chun-Lin LI and Rikiô MATSUMOTO for their kind support of invaluable materials.

The specimens examined in the present study, including the type series of new species, are deposited in the following institutions to be referred to by abbreviations in the text: CBM: Natural History Museum and Institute, Chiba; KURA: Kurashiki Museum of Natural History; NHMB: Naturhistorisches Museum Basel; NSMT: National Science Museum (Nat. Hist.), Tokyo; NWU: Nagoya Women's University; TUA: Tokyo University of Agriculture, and EUM: Ehime University, Matsuyama.

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Genus *Habronychus* WITTMER

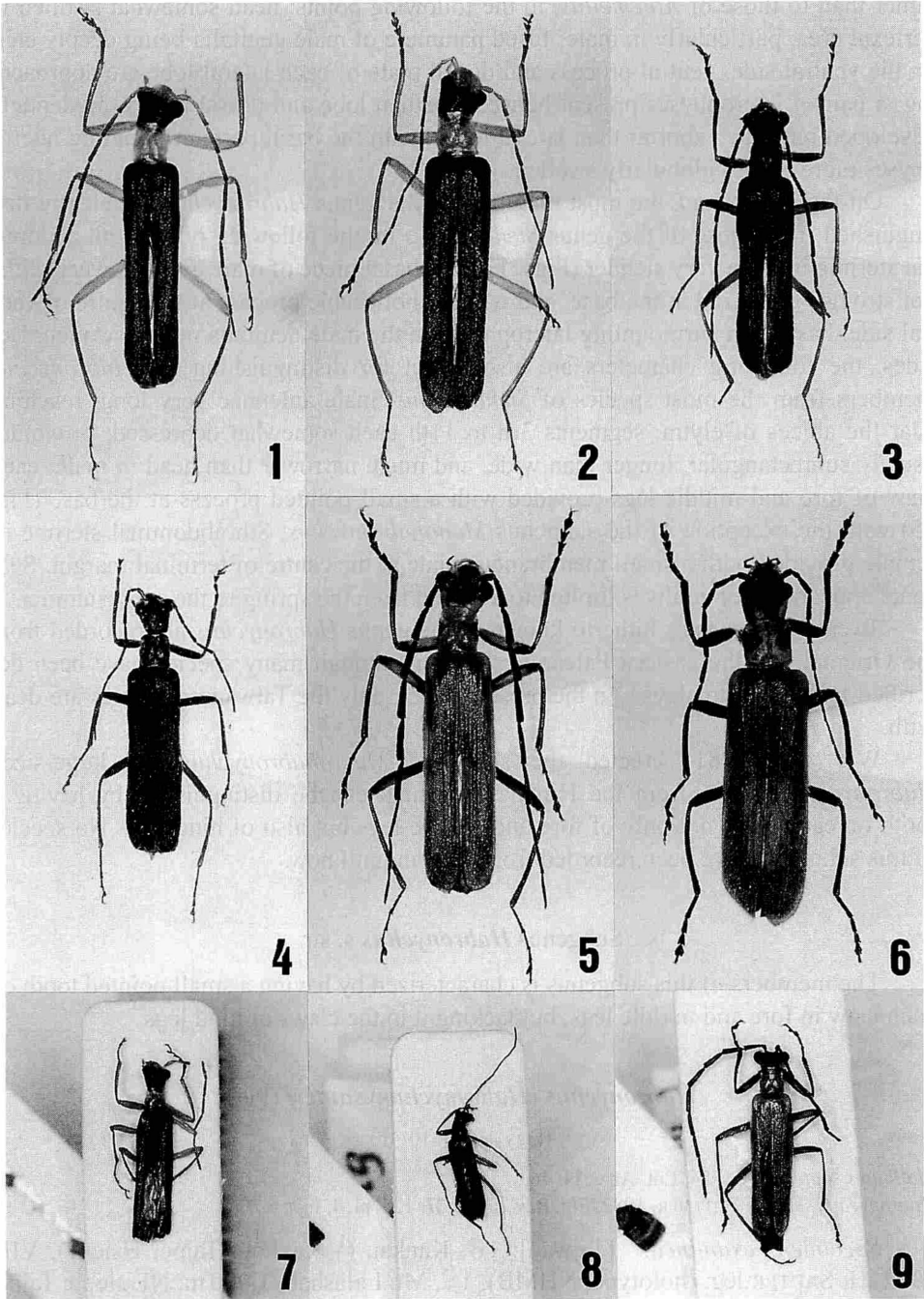
Habronychus WITTMER, 1981, Ent. basil., **6**: 399 (preliminary description); 1982, Ent. Rev. Japan, **37**: 124.
— ISHIDA, 1986, Trans. Shikoku ent. Soc., **17**: 215.

Type species: *Anolis rubicundus* CHAMPION, 1926, by monotypy.

WITTMER (1982) designated *Malthinus sauteri* as the type species of the genus *Habronychus*, but one year before, he (1981) used *Habronychus* for *Anolis rubicundus* with a preliminary description. *Anolis rubicundus* should therefore be regarded as the type of the genus *Habronychus*. ISHIDA (1986) pointed this out, but did not propose change of type species.

WITTMER (1982) stated that the genus *Habronychus* was related to the genus *Athemellus* WITTMER, 1972 (downgraded by WITTMER (1995) to a subgenus of the genus *Athemus*). However, according to our recent observation, almost all the species of *Habronychus* are similar to the members of the genus *Stenothemus* BOURGEOIS, 1907,

Figs. 1–9. *Habronychus* (*Habronychus*) spp. from Taiwan. — 1–2, 7, *H. (H.) sauteri* (PIC); 1, ♂ from Mt. Lalashan; 2, ♀ from Meifeng; 7, ♂ (holotype) from Kankau. — 3–4, 8, *H. (H.) nantouanus* WITTMER; 3, ♂ from Meishan – Tien Chi; 4, ♀ from Tien Chi; 8, ♂ (holotype) from Meifeng. — 5–6, 9, *H. (H.) kurosawai* WITTMER; 5, ♂ from Mt. Lalashan; 6, ♀ from Nanshanchi; 9, ♂ (holotype) from Pilu-Shenmu.



rather than to those of *Athemellus*, in the following points: head somewhat swollen in vertexal area, particularly in male; fused paramere of male genitalia being deeply cleft on the ventral side, ventral process and dorsal plate of each lateral lobe are approaching; a pair of laterophyses present between median lobe and dorsal plates, moderately developed but much shorter than lateral lobes, with the basal part surmounting laterophyses more or less globularly swollen.

On the other hand, the most members of the genus *Habronychus* are clearly distinguished from those of the genus *Stenothemus* by the following points: 9th abdominal sternite in male very slender (Figs. 13, 27); basal piece of male genitalia very wide, not strongly squeezed at the base, and without noticeable process at the centre of ventral side; basal part surmounting laterophyses in the male genitalia not so swollen. Besides, the following characters are also useful for distinguishing the *Habronychus* members from the most species of *Stenothemus*: male antennae very long, reaching near the apices of elytra, segments 3rd to 11th each somewhat depressed; pronotum usually subrectangular, longer than wide, and much narrower than head in male; each claw of fore and middle legs provided with a small pointed process at the base (Fig. 15) with the exception of the subgenus *Monohabronychus*; 8th abdominal sternite of female provided with a small membranous plate at the centre of terminal margin. Seasonal appearance of adults is limited to a period from the spring to the early summer.

Twenty-two species hitherto known of the genus *Habronychus* are recorded from the Oriental and the eastern Palearctic Regions, though many species have been described from the Himalayas. In the present paper, only the Taiwanese species are dealt with.

WITTMER (1981) erected the subgenus *Macrohabronychus* for large-sized *Habronychus* species from the Himalayas, which can be distinguished by having a tooth on each claw, not only of fore and middle legs but also of hind legs. No species of this subgenus have been recorded from Taiwan until now.

Subgenus *Habronychus* s. str.

The members of this subgenus is characterized by having a small pointed tooth on each claw in fore and middle legs, but lacking it in the claws of hind legs.

Habronychus (Habronychus) sauteri (PIC)

(Figs. 1–2, 7, 10–15)

Malthinus sauteri PIC, 1934, Ent. Anz., **14**: 46.

Habronychus sauteri: WITTMER, 1982, Ent. Rev. Japan, **37**: 125, pl. 4, figs. 6–7.

Specimens examined. [Taiwan]: 1 ♂, Kankau (=Kankou, Taipei Hsien?), VII–1912, H. SAUTER leg. (holotype, NHMB); 1 ♀, Mt. Lalashan, 1,900 m, NE slope, Taipei Hsien, 7–IV–1981, T. SHIMOMURA leg. (NSMT); 1 ♂, Mt. Lalashan, Taoyuan Hsien, 4–IV–1991, Y. OKUSHIMA leg. (KURA); 2 ♂♂, Mao-mu Shan (Pa-san-ling Lin-tao), alt.

2,550–2,600 m, Jen-ai Hsiang, Nantou Hsien, 22–V–1991, A. SAITO leg. (CBM–ZI 29279, 29281); 1 ♀, Meifeng, Nantou Hsien, 12–V–1994, T. KISHIMOTO leg. (KURA); 1 ♀, Pulu, Hualien Hsien, 24–V–1999, M. SATÔ leg. (NWU).

Distribution. Northern to central Taiwan.

Notes. The antennae of this species are thin, filiform and moderately long, attaining to apical fifth of the elytra in the male, or attaining to the middle of the elytra in the female, and it is hardly depressed in each segment in both the sexes. WITTMER (1982) illustrated the male genitalia of this species only in ventral view without detailed description. Detailed morphological data of the male genitalia and of the 8th abdominal sternite of the female will be given below for the first time.

Male genitalia:— Ventral process of each lateral lobe short and stout, dorsal plate of each lateral lobe deeply emarginate at the inner side, and the basal side somewhat triangular with rounded corner. A pair of laterophyses mostly parallel to each other, each laterophysis somewhat slender, apex not reaching the terminal margin of dorsal plate, with pointed apex dorsad, basal part surmounting laterophyses globular but not so swollen. Inner sac lengthened posteriad, as long as tegmen. Basal piece not so broad, slightly squeezed at the base, with a minute process at the centre of ventral side (Figs. 10–12).

Eighth abdominal sternite in female:— Terminal margin largely and roundly projected at both sides, middle lobe somewhat membranous and more projected than those on both sides (Fig. 14).

Ninth abdominal tergite and sternite (Fig. 13) and claws of left fore leg (Fig. 15) in male are as illustrated.

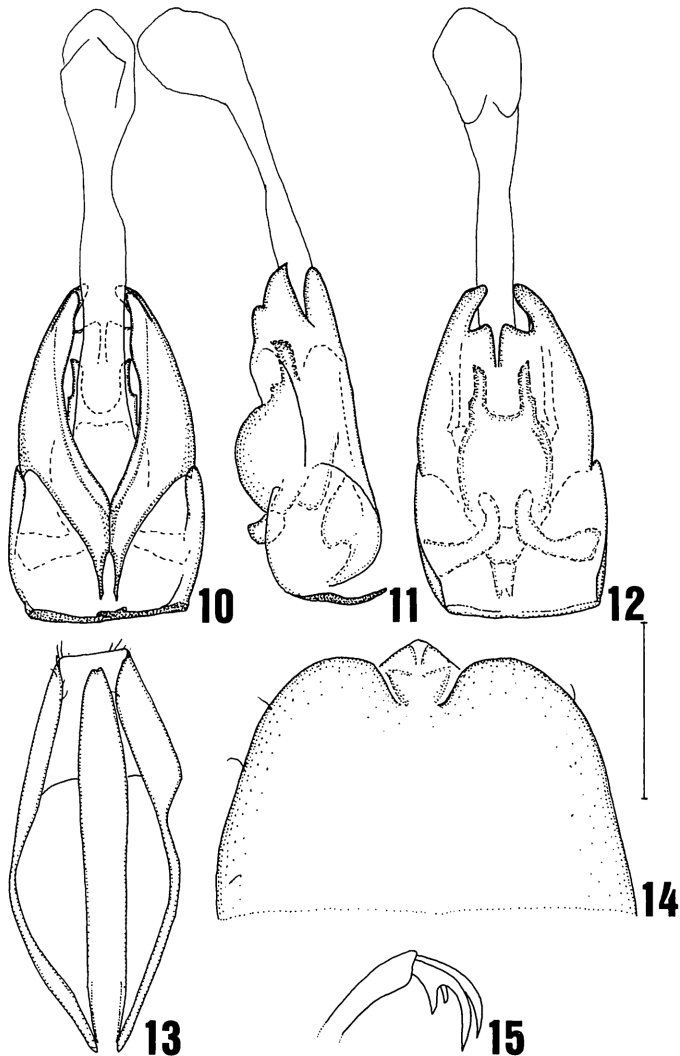
This species was originally described by PIC (1934) from “Kankau, Formosa” (=Kankou, Taipei Hsien?). After that, WITTMER (1982) recorded some specimens from Alishan, Palin, Meifeng, Mt. Lalashan, and nr. Chihtuan.

Habronychus (Habronychus) nantouanus WITTMER

(Figs. 3–4, 8, 16)

Habronychus nantouanus WITTMER, 1982, Ent. Rev. Japan, **37**: 125, pl. 4, fig. 8.

Specimens examined. [Taiwan]: 1 ♂, Meifeng, Nantou Hsien, 26–VI–1977, S. & J. KLAPPERICH leg. (holotype, NHMB); 1 ♀, Alishan, alt. 2,300 m, Nantou Hsien, 5–6–VII–1965, T. NAKANE leg. (paratype, NSMT); 1 ♀, Yushih, alt. 1,900 m, Nantou Hsien, 4–VII–1986, K. BABA leg. (NWU); 1 ♀, Sungkang – Meifeng, Nantou Hsien, 20–VI–1994, K. MATSUMOTO leg. (KURA); 1 ♂, 1 ♀, Shyk Shan, nr. Liukuei, Kaohsiung Hsien, 17–VI–1986, K. BABA leg. (NWU); 1 ♀, Thu Yun Shan, nr. Liukuei, Kaohsiung Hsien, 17–VI–1986, K. BABA leg. (NWU); 2 ♀♀, Shi Nan Shan, Kaohsiung Hsien, 22–VI–1986, K. BABA leg. (NWU); 1 ♀, Shyk Shan, nr. Liukuei, Kaohsiung Hsien, 28–VI–1986, K. BABA leg. (NWU); 1 ♂, Meishan – Tien Chi, alt. 800–2,300 m, Kaohsiung Hsien, 29–VI–1986, K. BABA leg. (NWU); 2 ♀♀, Tien Chi, alt. 2,200 m,



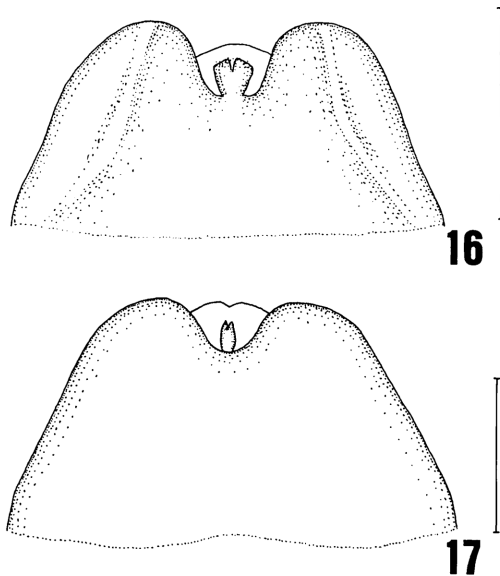
Figs. 10–15. *Habronychus (Habronychus) sauteri* (Pic). — 10–12, Male genitalia (10, ventral view; 11, lateral view; 12, dorsal view); 13, ventral view of 9th abdominal tergite and sternite in male; 14, 8th abdominal sternite in female; 15, claws of left fore leg in male. (Scale: 0.5 mm for 10–14, 0.4 mm for 15.)

Kaohsiung Hsien, 29–VI–1986, K. BABA leg. (NWU).

Distribution. Central to southern Taiwan.

Notes. Detailed morphological data of the 8th abdominal sternites of the female are given below for the first time.

Eighth abdominal sternite in female:— Terminal margin widely and roundly pro-



Figs. 16–17. Eighth abdominal sternites in female of *Habronychus* (*Habronychus*) spp. — 16, *H. (H.) nantouanus* WITTMER; 17, *H. (H.) kurosawai* WITTMER. (Scales: 0.5 mm.)

jected at both sides and deeply emarginate at the middle, with a small subrhombic sclerite connected to terminal margin in the notch, and surrounded by membrane. Disc provided with a longitudinal hollow on each side, from the apex of rounded projection to the basal side (Fig. 16).

This species was described from Meifeng, and recorded by WITTMER (1982) from two other localities, Hohuanchi – Sungchuankang and Alishan. At present, it is also recorded from southern Taiwan.

Habronychus (*Habronychus*) *kurosawai* WITTMER

(Figs. 5–6, 9, 17)

Habronychus kurosawai WITTMER, 1982, Ent. Rev. Japan, **37**: 126, pl. 4, fig. 9.

Specimens examined. [Taiwan]: 1 ♂, Pilu-Shenmu, Hualien Hsien, 18 or 24–V–1978, T. SHIMOMURA leg. (holotype, NHMB); 1 ♀, Mt. Lalashan, Taoyuan Hsien, 2–V–1981, S. TSUYUKI leg. (NWU); 1 ♀, Mt. Lalashan, Taoyuan Hsien, 4–V–1981, S. TSUYUKI leg. (NWU); 1 ♀, nr. Mt. Lalashan, Taoyuan Hsien, 5–V–1983, M. HASEGAWA leg. (KURA); 2 ♂♂, Mt. Lalashan, N. Taiwan, 2–V–1988, M. KIMURA leg. (NWU); 1 ♂, Mt. Lalashan, Taoyuan Hsien, 4–IV–1991, Y. OKUSHIMA leg. (KURA); 1 ♂, Suling (Ssuleng?) – Chihtuan, Taoyuan Hsien, 14–IV–1984, Y. KUSAKABE leg. (KURA); 1 ♂, Mt. Lalashan, Taoyuan Hsien, 13 or 16–IV–1984, Y. KUSAKABE leg. (KURA); 1 ♂, Nanshanchi, Nantou Hsien, 25–III–1977, Y. NOTSU leg. (paratype, NWU); 1 ♂, 1 ♀,

Nanshanchi, Nantou Hsien, 27-III-1981, H. YOSHIMOTO leg. (KURA); 1 ♀, Kuantashan, Nantou Hsien, 5-IV-1984, Y. KUSAKABE leg. (KURA); 1 ♂, Lienhuachih, Nantou Hsien, 23-III-1983, Y. KUSAKABE leg. (KURA); 1 ♀, Shi Nan Shan, alt. 2,000 m, Kaohsiung Hsien, 29-IV-1986, K. BABA leg. (NWU).

Distribution. Taiwan.

Notes. This species is furnished with black markings at the centre of head and at the median parts of pronotal lateral sides, though the blackish areas are variable and sometimes spread with individuals. The pronotum and elytra are almost orange yellow in most specimens including the holotype, but the pronotum is more blackish and the elytra more reddish in the two males from Mt. Lalashan, collected by M. KIMURA on 2-V-1988.

Detailed morphological data of the 8th abdominal sternites of the female will be given below for the first time.

Eighth abdominal sternite in female:— Terminal margin widely and roundly projected at both sides and roundly emarginate at the middle, provided with membrane in the notch and a small longitudinal sclerite on it (Fig. 17).

This species was originally described from Pilu-Shenmu, and recorded by WITTMER (1982) also from Mt. Lalashan, Nanshanchi and nr. Chihtuan. At present, it is also recorded from southern Taiwan (Shi Nan Shan).

Subgenus *Monohabronychus* OKUSHIMA et M. SATÔ, nov.

Type species: *Podabrinus intermixtus* WITTMER, 1954, by present designation.

Male. Head somewhat swollen in vertexal area; antenna very long and filiform; eyes globular and strongly projected. Pronotum subquadrate or subrectangular, much narrower than width of head; legs slender; all claws simple (Fig. 29). Ninth abdominal sternite very slender (Fig. 27); genitalia stout, dorsal plate of each lateral lobe broad, basal part surmounting laterophyses globular but not so swollen, inner sac shorter than tegmen, basal piece wide, without clear process on the ventral side.

Female. Similar to male, but different from it in the following points: antenna much shorter; eyes smaller; pronotum and elytra broader; 8th abdominal sternite with a small sclerite at apical centre.

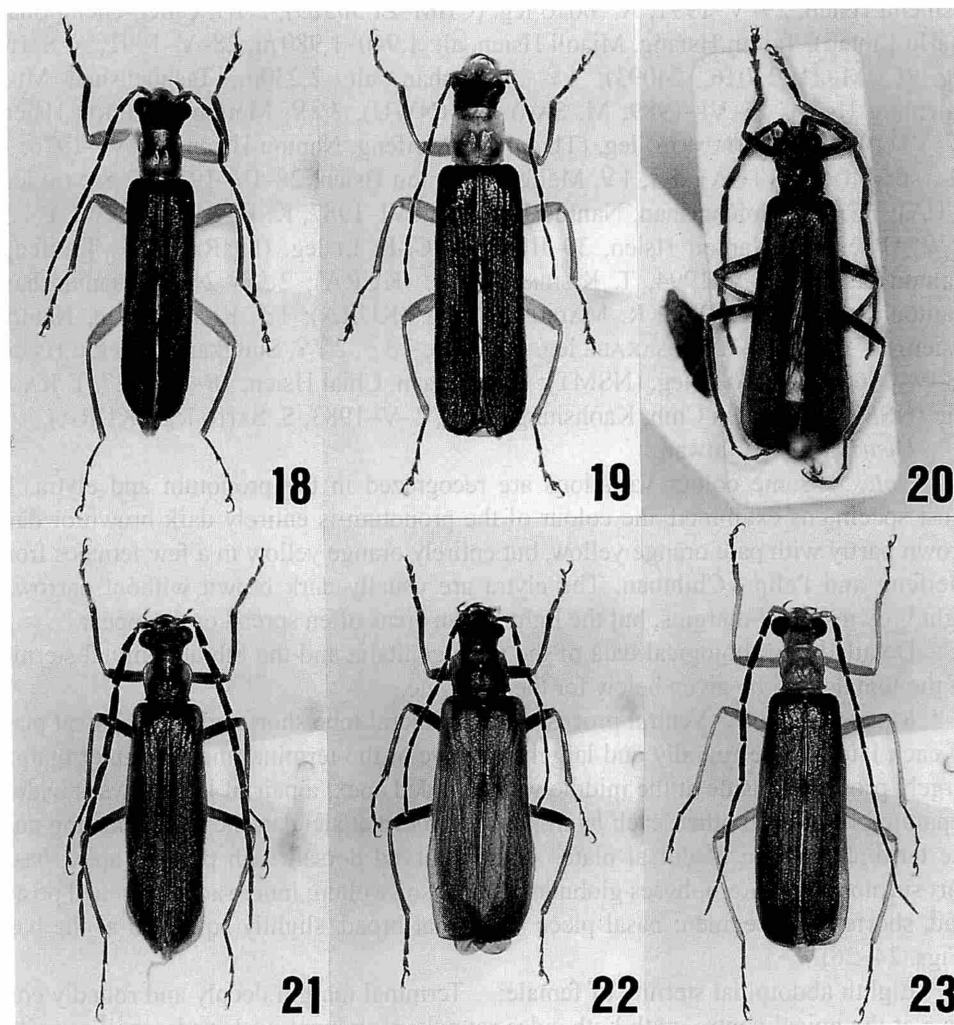
Notes. This new subgenus is similar to the nominotypical subgenus and the subgenus *Macrohabronychus* in the structure of head, antenna, pronotum, the 9th abdominal sternite in the male and the 8th abdominal sternite in the female, but is clearly distinguished from them by the fact that all the claws are simple in both the sexes.

Habronychus (Monohabronychus) intermixtus (WITTMER), comb. nov.

(Figs. 18-19, 24-29)

Podabrinus intermixtus WITTMER, 1954, *Revue suisse Zool.*, **61**: 275.

Athemellus intermixtus: WITTMER, 1972, *Ent. Arb. Mus. Frey*, **23**: 124; 1983, *Ent. Rev. Japan*, **38**: 168.



Figs. 18–23. *Habronychus* (*Monohabronychus*) spp. from Taiwan. — 18–19, *H. (M.) intermixtus* (WITTMER); 18, ♂ from Kuantaoshan; 19, ♀ from Kuantaoshan. — 20, *H. (M.) furcatus* (WITTMER); ♂ (holotype) from Alishan. — 21–22, *H. (M.) longicornis* OKUSHIMA et M. SATŌ, sp. nov.; 21, ♂ (holotype) from Fushan Botanical Garden; 22, ♀ (allotype) from Fushan Botanical Garden. — 23, *H. (M.) lalashanensis* OKUSHIMA et M. SATŌ, sp. nov., ♂ (holotype) from Mt. Lalashan.

Specimens examined. [Taiwan]: 1♂, Wulai, Taipei Hsien, 27–III–1968, T. KUNOU leg. (NWU); 1♂, 17–24 km SE of Taipei, Taipei Hsien, 16–IV–1965, Y. HIRASHIMA leg. Japan–U. S. Co-op. Sci. Programme (NSMT); 1♀, Palin–Chihtuan, Taoyuan Hsien, 27–IV–1978, N. YASHIRO leg. (EUM); 3♀♀, nr. Mt. Lalashan, Taoyuan Hsien, 5–V–1983, M. HASEGAWA leg. (KURA); 1♂, nr. Hsileng, Taoyuan Hsien, 14–V–1983, M. HASEGAWA leg. (KURA); 1♂, Kuanwu, alt. 2,000 m, Wu-feng Hsiang,

Hsinchu Hsien, 29-V-1991, A. SAITO leg. (CBM-ZI 30525); 2♂♂, Chieh-cheng Shan (Ta-lu Lintao), Tai-an Hsiang, Miaoli Hsien, alt. 1,940–1,980 m, 28-V-1991, A. SAITO leg. (CBM-ZI 24016, 24093); 1♀, Anmashan, alt. 2,230m, Tashuehshan Mts., Taichung Hsien, 15-VI-1989, M. SATÔ leg. (NWU); 3♀♀, Meifeng, Nantou Hsien, 17-VI-1976, T. MATSUMOTO leg. (TUA); 1♀, Meifeng, Nantou Hsien, 18-VI-1976, T. MATSUMOTO leg. (TUA); 1♂, 1♀, Meifeng, Nantou Hsien, 28-IV-1978, T. SENOH leg. (TUA); 1♂, Mt. Hohuanshan, Nantou Hsien, 10-VI-1987, K. BABA leg. (NWU); 1♂, 2♀♀, Hwei-sun, Nantou Hsien, 30-III-1990, C.-L. LI leg. (KURA); 1♂, Tsuifeng, Nantou Hsien, 14-V-1994, T. KISHIMOTO leg. (KURA); 2♂♂, 2♀♀, Kuantaoshan, Nantou Hsien, 9-IV-1996, R. MATSUMOTO leg. (KURA); 1♂, Kuantaoshan, Nantou Hsien, 24-IV-1984, Y. KUSAKABE leg. (KURA); 7♂♂, 2♀♀, Sungkang, Nantou Hsien, 18-V-1965, T. SHIRÔZU leg. (NSMT); 1♀, Alishan, Chiai Hsien, 18-V-1927, T. KANO leg. (NSMT); 1♂, Tien Chih, Kaohsiung Hsien, 2-V-1983, S. SAITO leg. (KURA).

Distribution. Taiwan.

Notes. Some colour variations are recognized in the pronotum and elytra. In most specimens examined, the colour of the pronotum is entirely dark brown or dark brown partly with pale orange yellow, but entirely orange yellow in a few females from Meifeng and Palin – Chihtuan. The elytra are usually dark brown without narrowly light brown sutural margins, but the light brown areas often spread or disappear.

Detailed morphological data of the male genitalia and the 8th abdominal sternite of the female will be given below for the first time.

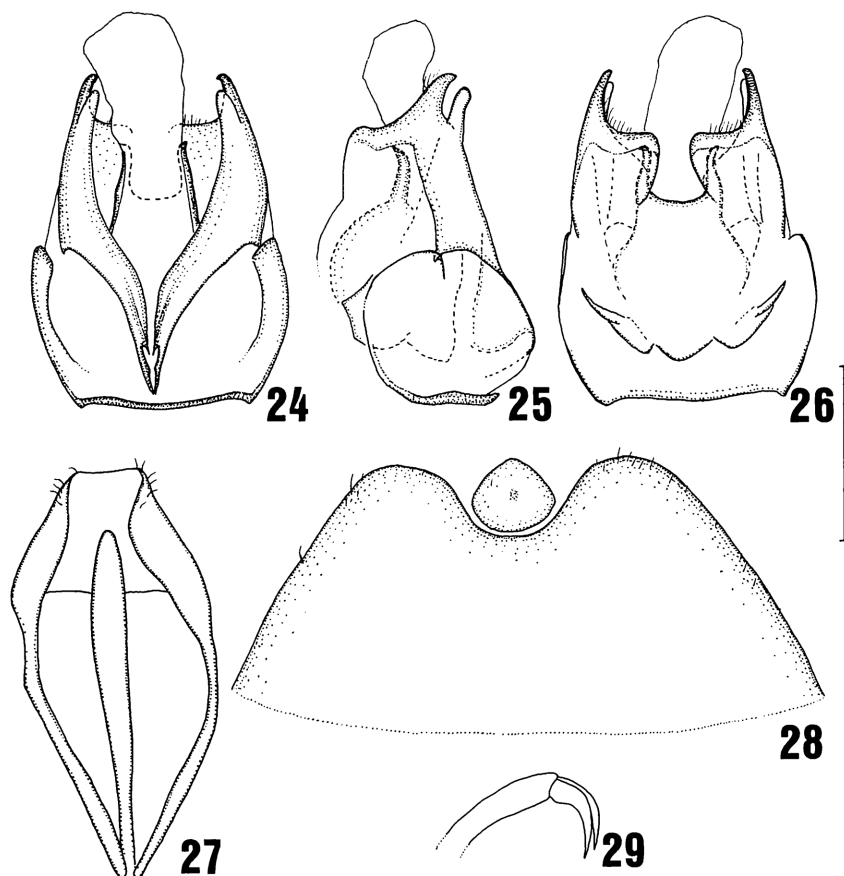
Male genitalia:— Ventral process of each lateral lobe short and stout; dorsal plate of each lateral lobe roundly and largely concave at the terminal margin, inner margin largely projected inside at the middle with rounded apex; a pair of laterophyses widely separated from each other, each laterophysis somewhat slender, the apex reaching near the terminal margin of dorsal plate, slightly curved dorsad with pointed apex; basal part surmounting laterophyses globular, but not so swollen; inner sac lengthened posteriad, shorter than tegmen; basal piece somewhat broad, slightly squeezed at the base (Figs. 24–26).

Eighth abdominal sternite of female:— Terminal margin deeply and roundly concave at the apical centre, with both sides roundly prominent posteriad; small roundish and triangular sclerite present behind the centre of terminal margin (Fig. 28).

Ninth abdominal tergite and sternite (Figs. 27) and claws of left fore leg (Fig. 29) in male are as illustrated.

WITTMER (1972; 1983) regarded this species as a member of the genus *Athemellus*, but it clearly belongs to the genus *Habronychus* in view of very slender 9th abdominal sternite in the male, the globular basal part surmounting laterophyses in the male genitalia, and the 8th abdominal sternite with a small sclerite in the female. It should belong to the new subgenus *Monohabronychus* because of simple claws of all the legs.

This species was described by WITTMER (1954) from Alishan. Later, he (1983) recorded it from many localities except the southern part of Taiwan. It is recorded



Figs. 24–29. *Habronychus (Monohabronychus) intermixtus* (WITTMER). — 24–26, Male genitalia (24, ventral view; 25, lateral view; 26, dorsal view); 27, ventral view of 9th abdominal tergite and sternite in male; 28, 8th abdominal sternite in female; 29, claws of left fore leg in male. (Scale: 0.5 mm for 24–28, 0.4 mm for 29.)

herewith from Tien Chih in southern Taiwan.

***Habronychus (Monohabronychus) furcatus* (WITTMER), comb. nov.**

(Fig. 20)

Stenothemus furcatus WITTMER, 1986, Ent. Rev. Japan, **41**: 131, fig. 1.

Specimens examined. 2♂♂, Alishan, Chiayi Hsien, alt. 2,200 m, Taiwan, 24–III–1982, T. SHIMOMURA leg. (holotype and paratype, NHMB).

Distribution. Central Taiwan.

Notes. The habitus of the holotype is as shown in Fig. 20. This species was de-

scribed by WITTMER (1986) as a member of *Stenothemus*, but should be regarded as a member of the genus *Habronychus*, as was already pointed out (OKUSHIMA & SATÔ, 1999), because of the following reasons: male antennae very long, segments 3rd to 11th each somewhat depressed; 9th abdominal sternite of male very slender; male genitalia stout, with its basal piece broad. It should be placed in the new subgenus *Monohabronychus* because of simple claws of all the legs.

This species has never been recorded again since originally described from Ali-shan.

***Habronychus (Monohabronychus) longicornis* OKUSHIMA et M. SATÔ, sp. nov.**

(Figs. 21–22, 30–33)

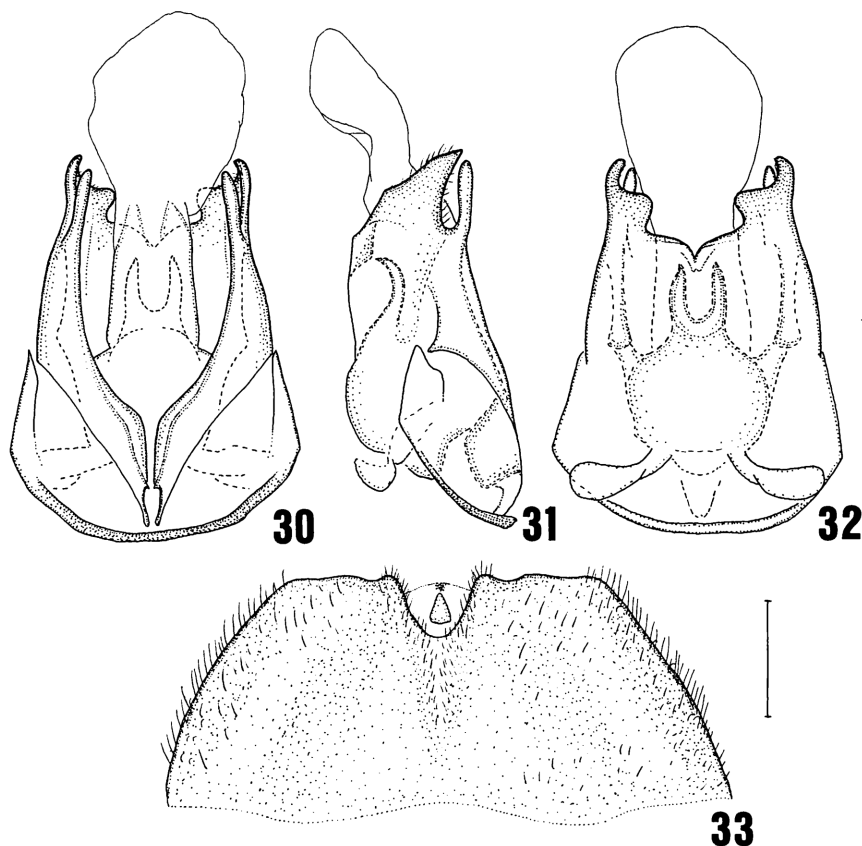
Male. Colour almost dark brown; basal two segments of antennae, antero-lateral areas of pronotum, humeri and articulations of legs yellowish brown; mandibles and claws reddish brown. Body closely covered with fine pale pubescence; apical margin of clypeus fringed with pale bristles.

Head slightly shorter than wide; disc moderately swollen in vertexal area, depressed along the apical margin of clypeus and in lateral areas before eyes, and lightly depressed along the mesal longitudinal area posteriorly from the middle; surface closely covered with minute grains and indistinctly punctured; apical margin of clypeus arcuate; eyes very large, globular and strongly prominent; antennae attaining to apical tenth of elytra, 1st segment clavate, 2nd short and somewhat triangular, 3rd to 11th subcylindrical, but somewhat depressed and gradually narrowed apically, relative length of each segment as follows:— 5.9 : 2.0 : 5.4 : 8.3 : 8.8 : 8.8 : 8.8 : 8.8 : 8.7 : 7.8 : 8.9.

Pronotum subquadrate, 0.90 times (in the holotype; range 0.78–0.90) as wide as head, 0.89 (0.89–0.98) times as long as wide; anterior margin arcuate, but faintly sinuate at the centre and both sides; posterior margin weakly arcuate, and faintly indented at the centre; lateral margins arcuate, though faintly sinuate behind anterior angles, gradually approaching to each other posteriorly, and somewhat constricted before posterior angles; anterior angles rounded, forming very obtuse angles; posterior angles mostly rectangular; disc moderately swollen, antero-lateral areas hollowed, the convexity extending onto the posterior area, the medio-longitudinal furrow distinct only in central area; surface indistinctly rugose and without lustre. Scutellum triangular with rounded apex.

Elytra conjointly 1.41 (1.41–1.60) times as wide as pronotum, 3.43 (3.30–3.53) times as long as wide at humeri, the sides subparallel, though slightly squeezed at humeri; disc closely and rugosely punctate, the punctures becoming weaker and sparser on basal part; each elytron provided with two vague costae.

Prosternal process concave at the apex. Mesosternum distinctly convex along the median line. Legs very slender; each femur mostly straight; each tibia feebly bent at



Figs. 30–33. *Habronychus (Monohabronychus) longicornis* OKUSHIMA et M. SATÔ, sp. nov. — 30–32, Male genitalia (30, ventral view; 31, lateral view; 32, dorsal view); 33, 8th abdominal sternite in female. (Scales: 0.5 mm.)

the base. Relative lengths of hind tarsal segments as follows:— 3.4 : 2.0 : 1.8 : 1.6 : 1.8. Eighth abdominal sternite roundly concave at the terminal margin; 9th abdominal sternite very slender, pin-shaped, the sides converging posteriad, with pointed tip.

Male genitalia:— Ventral process of each lateral lobe slender; terminal margin of dorsal plate of each lateral lobe strongly sinuate, projected with rounded apex at the middle, and roundly emarginate on both sides; each laterophysis somewhat slender, the apex not reaching the terminal margin of dorsal plate, strongly curved dorsad with pointed apex directed to the inner tubercle of paramere; basal part surmounting laterophyses globular, but not so swollen; inner sac lengthened dorsad and posteriad, shorter than tegmen; basal piece expanded at the base (Figs. 30–32).

Length of body: 11.15 mm (in the holotype; range 8.29–11.15, measured from the anterior margin of clypeus to the apices of elytra); breadth of body: 2.80 (2.20–2.80)

mm; length of hind tibia: 3.41 (2.73–3.41) mm.

Female. Body clearly wider than in the male. Head as long as wide; eyes smaller than in the male; antennae much shorter than in the male, attaining to the middle of elytra and not so depressed as in the male. Pronotum subrectangular, 1.06–1.19 times as wide as head, 0.74–0.83 times as long as wide. Elytra conjointly 1.28–1.46 times as wide as pronotum, 2.81–3.12 times as long as wide at humeri. Eighth abdominal sternite deeply concave at the apical centre, with terminal margin feebly sinuate on both sides of the notch; membrane present and provided with a small triangular sclerite at the centre (Fig. 33).

Length of body: 8.83–11.54 mm (from anterior margin of clypeus to apices of elytra); breadth of body: 2.41–3.56 mm; length of hind tibia: 2.68–3.51 mm.

Type series. Holotype: ♂, Fushan Botanical Garden, Ilan Hsien, Taiwan, 30–III–1998, M. SATÔ leg. (NWU). Allotype: ♀, same data as for the holotype (NWU). Paratypes: [Taiwan]: 1♂, 1♀, same data as for the holotype (KURA); 3♀♀, Fushan Botanical Garden, Ilan Hsien, 29–III–1998, M. SAKAI leg. (NWU); 3♀♀, Chihtuan, Ilan Hsien, 28–III–1980, T. SHIMOMURA leg. (NSMT); 1♂, Ssuleng, alt. 1,300 m, Taoyuan Hsien, 23–III–1991, A. SHINOHARA leg. (NSMT).

Distribution. Northern Taiwan.

Notes. One male from Ssuleng and three females from Chihtuan are somewhat paler than the individuals from Fushan Botanic Garden, the head and pronotum being faintly reddish and the elytra yellowish brown as a whole.

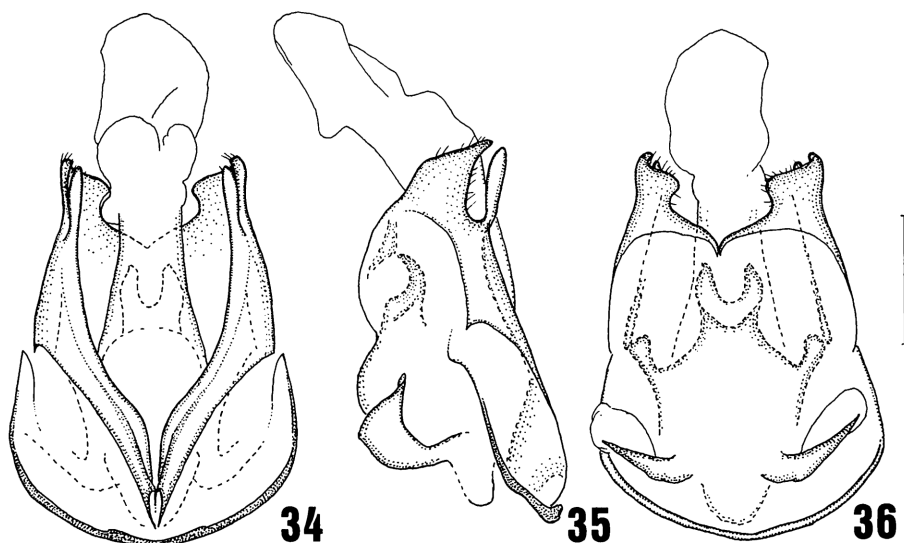
This new species closely resembles *H. (M.) furcatus* (WITTMER, 1986) from Taiwan, but can easily be distinguished from the latter by the pale-coloured basal two segments of the antennae, differently shaped pronotum which is widest in the anterior part, and slightly differently shaped dorsal plates of the male genitalia which are smoothly and roundly emarginate.

***Habronychus (Monohabronychus) lalashanensis* OKUSHIMA et M. SATÔ, sp. nov.**

(Figs. 23, 34–36)

Male. Narrow lateral edges of pronotum, elytra, metasternum, eyes, 3rd to 11th antennal segments, maxillary and labial palpi and tarsi almost dark brown to black; mandibles and claws reddish brown; head, 1st and 2nd antennal segments, pronotum except for narrow lateral edges, scutellum, pro- and mesosterna, legs except for tarsi, and abdominal sternites yellowish brown. Body closely covered with fine yellowish pubescence; 3rd to 11th antennal segments and elytra closely covered with fine brown pubescence; apical margin of clypeus fringed with yellowish bristles.

Head slightly shorter than width; disc moderately swollen in vertexal area, and depressed along the apical margin of clypeus, lateral areas before eyes, longitudinal area between a pair of antennal sockets and basal area; surface closely covered with gross and indistinct grains and devoid of lustre; apical margin of clypeus arcuate; eyes



Figs. 34–36. Male genitalia of *Habronychus (Monohabronychus) lalashanensis* OKUSHIMA et M. SATÔ, sp. nov.; 34, ventral view; 35, lateral view; 36, dorsal view. (Scale: 0.5 mm.)

very large, globular and strongly prominent; antennae attaining to apical tenth of elytra, 1st segment clavate, 2nd short and somewhat triangular, 3rd to 11th subcylindrical, though somewhat depressed, gradually narrowed apicad, relative length of each segment as follows:— 5.0:2.0:4.8:7.5:7.7:8.1:8.5:8.4:7.6:7.0:7.5.

Pronotum subquadrate, 0.83 times as wide as head, 0.97 times as long as wide; anterior margin arcuate, posterior margin weakly arcuate, and feebly indented at the centre; lateral margins clearly sinuate, arcuately constricted before posterior angles; anterior angles obtuse; posterior angles acute; disc swollen, particularly so in the posterior area, the convexity being somewhat uneven, antero-lateral areas and postero-lateral sides hollowed; medio-longitudinal furrow distinct in central area; surface indistinctly punctate and without lustre. Scutellum triangular with rounded apex.

Elytra conjointly 1.90 times as wide as pronotum, 2.80 times as long as wide at humeri, the sides subparallel, though slightly squeezed at humeri; surface closely and rugosely punctate, though weakly and sparsely in basal area; each elytron provided with two vague costae.

Prosternal process concave at the apex. Mesosternum distinctly convex along the median line. Legs very slender, mostly straight, but the fore tibiae are feebly sinuate near the apices. Relative lengths of hind tarsal segments as follows:— 4.3:2.5:2.1:2.0:2.0. Eighth abdominal sternite roundly concave at the terminal margin; 9th abdominal sternite very slender, pin-shaped, the sides subparallel, with pointed tip.

Male genitalia:— Ventral process of each lateral lobe slender, somewhat clavate; terminal margin of dorsal plate of each lateral lobe strongly sinuate, projected with

いた。

今回、台湾産の標本を調べた結果、これまで *Athemellus intermixtus* (WITTMER) および *Stenothemus furcatus* WITTMER として扱われていた2種は、雄の第9腹板、交尾器などの形態からいずれも *Habronychus* 属に含まれるものと判断した。ところが、これらの種はこれまでに知られている *Habronychus* および *Macrohabronychus* のいずれの亜属とも爪の形態が異なるので、新亜属 *Monohabronychus* を設立して、これに所属させた。さらに本亜属に所属する2新種を認め、*Habronychus (Monohabronychus) longicornis* OKUSHIMA et M. SATÔ, sp. nov. および *H. (M.) lalashanensis* OKUSHIMA et M. SATÔ, sp. nov. と命名して記載した。*H. (M.) longicornis* は、すでに台湾から知られている *H. (M.) furcatus* (WITTMER) に近縁だと考えられるが、触角の基部2節が淡色になることと雄交尾器の背板が滑らかにえぐられることで区別できる。*H. (M.) lalashanensis* は *H. (M.) longicornis* に近縁だと考えられるが、頭部、前胸背板および脚が淡色であること、上翅肩部が淡色にならないこと、および雄交尾器の背板と側突起の形態が若干異なることで区別できる。

なお、形態学的な観察の結果、本属はこれまで近縁だと考えられていたクビアカジョウカイ属 *Athemellus* よりも、むしろクリイロジョウカイ属 *Stenothemus* に近縁であることがわかった。

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