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Notes on Taiwanese Chrysomelidae, III

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Synopsis Eight new species and a new subspecies of the subfamily Alticinae, *Aphthona taiwana*, *Hemipyxis fulvoculata*, *Sphaeroderma alishanensis*, *S. varicolor*, *S. nigroapicalis*, *Trachyaphthona brevicornis*, *T. formosana*, *Zipangia recticollis* and *Psylliodes subrugosa taiwana* from Taiwan and another new species, *Zipangia okinawana* from Ryukyu Archipelago are described. *Aphthona opaca* ALLARD, *Altica himalayensis japonica* OHNO, *Longitarsus warchalowskii* SCHERER and *Liprus nuchalis* GRESSITT et KIMOTO are recorded from Taiwan for the first time. Host plants are given for 27 species of the subfamily in Taiwan.

Psylliodes balyi JACOBY, 1884

Notes Leiden Mus. 6: 30 (Sumatra)–SCHERER, 1969, Pacif. Ins. Monogr., 22: 237.

Psylliodes punctifrons: KIMOTO, 1965, J. Fac. Agr., Kyushu Univ., 13: 408 (in part).

As stated by SCHERER, this species is not synonymous with *P. punctifrons* BALY. The aedeagi of both species are shown in Fig. 1.

Distribution. N. Vietnam, China, Taiwan, Sumatra, Philippines.

Specimens examined. 2 ♂♂, 4 ♀♀, Mt. Alishan, Chiayi Hsien, 7–8–VII–1977, H. TAKIZAWA leg.; 3 ♂♂, 5 ♀♀, Taipei, Taipei Hsien, 1–XI–1913, K. SATO leg. [on *Solanum melongena* L. (Solana-ceae)].

Psylliodes subrugosa taiwana n. ssp.

Body long oval; blackish blue with weak greenish tinge; antenna dark brownish with basal 2 segments light brown; legs dark brown with femora blackish blue and tarsi light brown. Vertex shining, sparsely punctate; frontal tubercle absent. Pronotum weakly convergent anteriorly; disc densely covered with distinct punctures; interstices smooth and shining. Elytron with rather weak punctures, of which diameter is distinctly less than their interspaces, arranged in 11 regular rows; interstices flat with a row of fine punctures; aedeagus rather robust (Fig. 1).

Size. 2.0–2.1 mm in length, 1.0–1.1 mm in breadth (both sexes).

Specimens examined. 1 ♂ (holotype, 7–8–VII–1977: EHU*), 2 ♀♀, Mt. Alishan, Chiayi Hsien, 4–5–VII–1975, 7–8–VII–1977, H. TAKIZAWA leg.

This new subspecies is distinguished from the nominate one occurring widely in Japan by: Pronotum strongly punctate, with interstices smooth and shining; elytron rather weakly punctate-striate; male aedeagus robust.

* The holotype and a series of paratypes are preserved in the collection of the Entomological Institute, Hokkaido University in Sapporo.

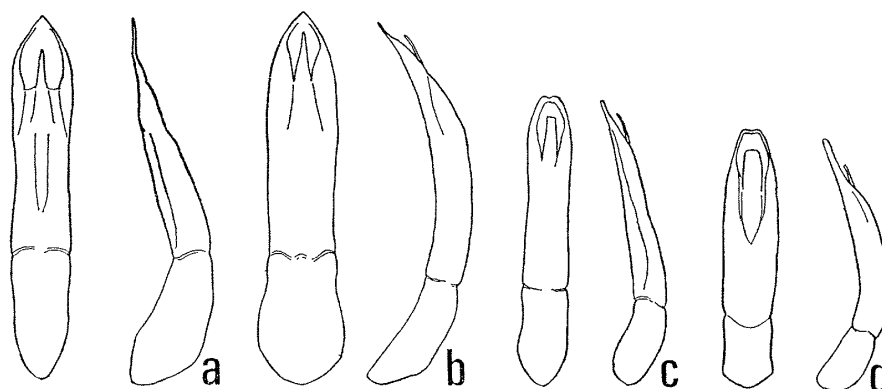


Fig. 1. Aedeagus (left; dorsal view, right; lateral view) of: a, *Psylliodes balyi* JACOBY (from Mt. Alishan); b, *P. punctifrons* BALY (from Sapporo, Hokkaido: Japan); c, *P. subrugosa subrugosa* JACOBY (from Mt. Hiko-san, Kyushu: Japan); d, *P. subrugosa taiwana* n. ssp. (from Mt. Alishan).

Lipromorpha shirozui KIMOTO, 1970

Kontyû, 38: 210-211 (Taiwan)

This species was described on a form which was largely dark brownish to blackish. Three among the 6 examined specimens are entirely yellowish brown and the rest are more or less darkened on the elytra and abdomen.

Specimens examined. 2 ♂♂, 2 ♀♀, Tongpu, Nantou Hsien, 5-10-VII-1977; 1 ♂, Kuanzuling, Tainan Hsien, 2-3-VII-1975; 1 ♀, Shuangchi, Taipei Hsien 3-VII-1977, H. TAKIZAWA leg.

Liprus nuchalis GRESSITT et KIMOTO, 1963

Pacif. Ins. Monogr. 1B: 878-879 (SE China).

This species is recorded here for the first time from Taiwan.

Specimens examined. 1 ♂, Mt. Alishan, Chiayi Hsien, 4-5-VII-1975; 1 ♀, Tongpu, Nantou Hsien, 5-10-VII-1977, H. TAKIZAWA leg.

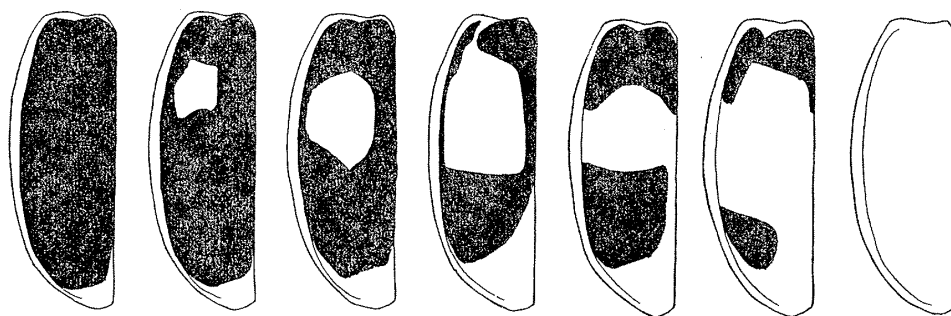


Fig. 2. Elytral patterns of *Hemipyxis balyi* (BATES).

Hemipyxis balyi balyi (BATES, 1886)

Proc. Zool. Soc. Lond., 1886: 355 (Taiwan).

The nominate subspecies from Taiwan shows a wide variety of the elytral coloration from a largely black to wholly yellowish white form as shown in Fig. 2. While subspecies *yaeyamana* KIMOTO from Ryukyu Is. seems to possess only one type of the elytral marking. My previous (1975) record of *H. quadripustulata* (BALY) from Ryukyu Is. should be corrected as *H. balyi yaeyamana* KIMOTO.

Hemipyxis fulvoculata n. sp.

Male. Body yellowish brown with eye black, antenna on apical segments darkened. Vertex shining with 2 foveae along eye; the fovea situated behind frontal tubercle deep and large, so that vertex is carinate between them; another shallow but distinct fovea situated postero-laterally to the former; inter-ocular area as broad as transverse diameter of eye which is strongly convex; frontal tubercle subquadrate, contiguous to each other, with surface weakly shagreened; fronto-clypeus distinctly depressed as in *H. nigricornis* (BALY) antenna slightly shorter than body, thickly pubescent except for on basal 2 segments; 1st segment clubate, twice as long as 2nd; 4th slightly less than 3 times as long as the 2nd; relative length of antennal segments as: $4\text{th} \div 5\text{th} \div 6\text{th} \div 7\text{th} > 1\text{st} \div 3\text{rd} \div 11\text{th} > 8\text{th} \div 9\text{th} > 10\text{th} > 2\text{nd}$. Pronotum transverse, $2 \frac{2}{3}$ as broad as long at mesal line, gently emarginate at anterior margin, broadest behind middle of lateral margin, thence roundly narrowed anteriorly, weakly narrowed posteriorly, gently produced at posterior margin; anterior angle thickened, the posterior hardly produced; disc flattened and reflexed at lateral-most, and shallowly depressed laterally behind anterior margin and before scutellum; disc weakly but densely punctate, with interstices shining. Scutellum trigonate and shining. Elytron 3 times as long as broad, broadest near middle, thence roundly narrowed to both ends, explanate and reflexed along lateral and apical margins; disc weakly depressed behind scutellum, weakly but densely punctate with interstices weakly alutaceous; secondary sexual characters as in *H. nigricornis*.

Female. Fronto-clypeus rather obscurely depressed; inter-ocular area broader than transverse diameter of eye; antenna $\frac{2}{3}$ as long as body.

Size. 4.0 (male), 4.5–4.8 mm (female) in length, 2.4 (male), 2.7–3.0 mm (female) in breadth.

Specimens examined. 1 ♂ (holotype, 5–10–VII–1977: EHU), 3 ♀♀, Tongpu, Nantou Hsien,

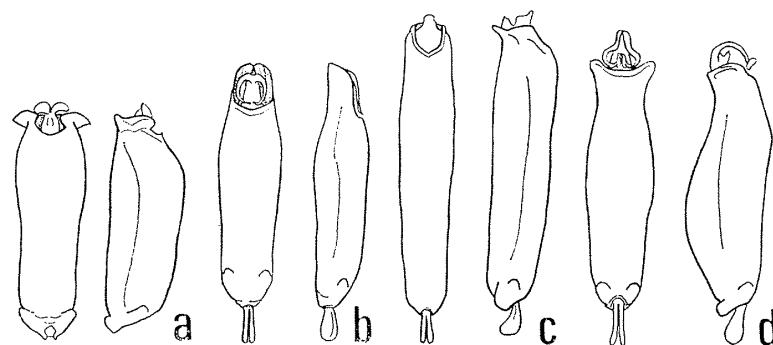


Fig. 3. Aedeagus (left; dorsal view, right; lateral view) of: a, *Hemipyxis shirakii* NAKANE et KIMOTO (from Is. Ishigaki: Ryukyu); b, *H. nigricornis* (BALY) (from Kuanzuling); c, *H. foveolata* (CHŪJŌ) (from Is. Amami-oshima: Ryukyu); d, *H. fulvoculata* n. sp. (from Tongpu).

5-10-VII-1977, 14-17-VII-1976, H. TAKIZAWA *leg.*

This new species is similar to *nigricornis* (BALY), *foveolata* (CHÛJÔ), and *shirakii* NAKANE et KIMOTO from Ryukyu Is. in appearance. However, the combination of the head with narrow inter-ocular area, the vertex with 2 foveae along eye, and the elytron which is entirely yellowish brown and finely alutaceous on the interstices *etc.* is sufficient to distinguish this new species. The shape of male aedeagus is entirely different as shown in Fig. 3.

Schenklingia miwai (CHÛJÔ, 1937)

Trans. Nat. Hist. Soc. Formosa, 27: 52-53 (Taiwan).

A lot of specimens collected at Shihtoushan, Hsinchu Hsien are characterized by the pronotum which has a small black spot basally on each side of the median line.

Specimens examined. 5 ♂♂, 12 ♀♀, Yangmingshan, Taipei Hsien, 28-29-VI, 10-VII-1975, 10-11-VII-1976; 1 ♂, Wulai, Taipei Hsien, 11-VII-1975; 14 ♂♂, 13 ♀♀, Shihtoushan, Hsinchu Hsien, 30-VI, 1-VII-1975, H. TAKIZAWA *leg.*

Sphaeroderma varicolor n. sp.

Male. Body long oval and robust; color variable: 1, Reddish brown, with eye and antenna excepting basal 3 segments black, and tibiae infuscate; 2, Head excepting dark brownish mouth-parts, prothorax, meso- and metathorax ventrally and elytron on basal 1/3 black; elytron on apical 2/3 and abdomen reddish brown; antenna black with basal 3 segments partly reddish brown; legs largely black with tarsi reddish brown; 3, Body reddish brown; prothorax black; blackish tinge on the rest of body surface faded and contracted in various degrees. Vertex shining and impunctate, with a distinct furrow along upper inner margin of eye; frontal tubercle round, feebly convex and hardly delimited behind; surface shining and impunctate; inter-antennal area weakly raised; antenna 3/5 as long as body, densely pubescent except for on basal 3 segments; 1st segment robust and clubate, almost twice as long as 2nd, and less than 3 times as long as 3rd; relative length of antennal segments as: $11th > 1st > 5th \div 7th \div 8th > 9th \div 10th > 6th \div 2nd \div 4th > 3rd$. Pronotum $1 \frac{4}{5}$ as broad as long, convex dorsally and narrowly reflexed at lateral margin, gently emarginate at anterior margin, sinuately and broadly produced posteriorly, broadest at base, thence roundly narrowed anteriorly; anterior angle thickened and produced forwardly; disc sparsely impressed with weak punctures, with interstices shining. Scutellum roundly trigonate, with surface impunctate. Elytron $2 \frac{1}{2}$ as long as wide, subparallel-sided between basal 1/4 to middle, thence roundly narrowed to apex, where is produced posteriorly; disc evenly convex with weak depression interiorly to humerus, with 11 to 12 rows of weak punctures; 4 inner rows including short scutellar one more or less irregularly arranged; punctures on posterior half much finer; interstices smooth and shining; epipleuron broadest at basal 1/5, thence gradually narrowed to apex; surface convex and impunctate. Underside covered with yellowish pubescence; last visible abdominal sternite truncate at apex; tarsi with 1st segment moderately dilated; aedeagus robust with a deep depression laterally near apical 1/3 of ventrad (Fig. 4).

Size. 3.2-3.6 mm in length, 2.2-2.5 mm in breadth (both sexes).

Specimens examined. 1 ♂ (holotype: EHU), 1 ♀, Mt. Alishan, Chiyai Hsien, 7-8-VII-1977; 1 ♀, Kuanzuling, Tainan Hsien, 2-5-VII-1975; 1 ♂, Yangmingshan, Taipei Hsien, 1-2-VII-1977, H. TAKIZAWA *leg.*

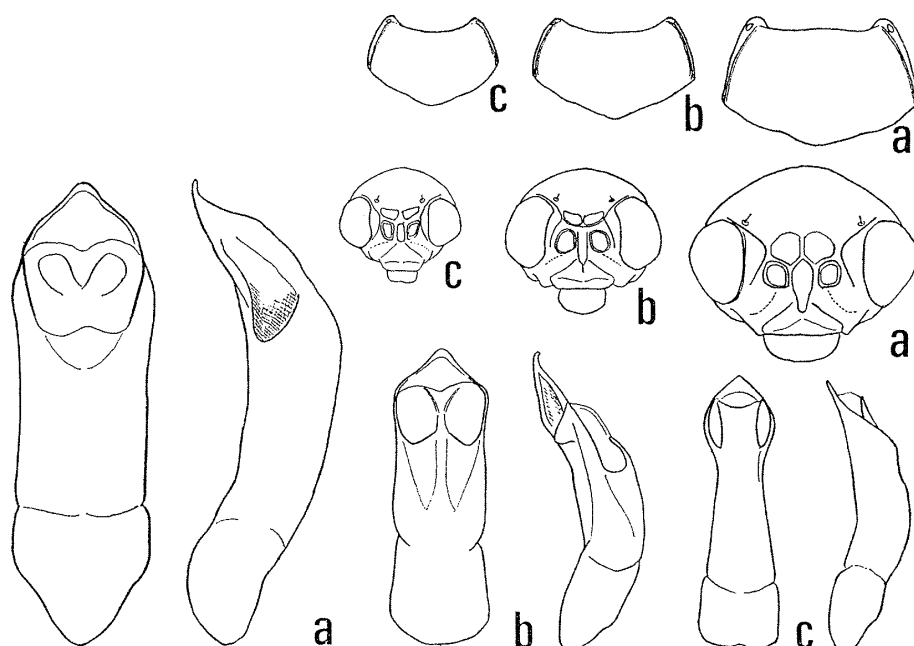


Fig. 4. Head, pronotum and aedeagus (left; dorsal view, right; lateral view) of: a, *Sphaeroderma varicolor* n. sp. (from Yangmingshan); b, *S. alishanensis* n. sp. (from Mt. Alishan); c, *S. nigroapicalis* n. sp. (from Tongpu).

This new species is distinguished from known congeners by the combination of characters: Body comparatively large; head with frontal tubercles weakly delimited behind; antenna with 3rd segment shorter than 2nd; pronotum sparsely impressed with fine punctures; elytron weakly punctate-striate, with inner striae irregularly impressed; male aedeagus robust, with a deep depression laterally on ventrad of apical 1/3 etc.

Sphaeroderma alishanensis n. sp.

Male. Body oval to oblong, lustrous reddish brown, with head above antennal insertion, antenna on apical 7 segments, pronotum and posterior femur black; meso- and metathorax, 4th antennal segment, anterior 2 femora more or less darkened. Head with vertex impunctate and shining; frontal tubercle distinct, transverse and delimited behind by a shallow depression; surface weakly granulate; inter-antennal area narrowly carinate; antenna 4/5 as long as body, densely pubescent except for on basal 4 segments; 1st segment robust and clubate; 2nd robust than 3rd; 11th 1 1/2 as long as 5th, pointed at apex; relative length of antennal segments as: 11th > 1st ÷ 8th ÷ 10th > 5th ÷ 6th ÷ 7th ÷ 9th > 2nd ÷ 3rd > 4th. Pronotum slightly longer than half the breadth, gently emarginate at anterior margin, broadest at base, thence roundly narrowed anteriorly, narrowly reflexed at lateral margin, broadly produced posteriorly; anterior angle weakly thickened; disc convex, rather sparsely covered with distinct small punctures; interstices smooth and shining. Scutellum roundly narrowed at apex, with surface shining. Elytron 1/2 as broad as long, broadest at anterior 3/10 to middle, densely and confusedly punctate, the punctures arranged in irregular longitudinal rows laterally; interstices almost smooth and shining; epipleuron subparallel-sided

for basal $2/5$, thence gradually narrowed to apex. Underside covered with yellowish white pubescence; tarsi with 1st segment dilated; aedeagus medially elevated on dorsal side and broadly produced apically, on ventral side strongly keeled medially near apex, with a lateral ridge starting from the base of median keel, so that the apical portion is deeply depressed between these ridges.

Size. 2.2 mm in length, 1.3 mm in breadth.

Specimens examined. 2 ♂♂, Mt. Alishan, Chiayi Hsien, 4-5-VII-1975, 7-8-VII-1977 (holotype: EHU), H. TAKIZAWA leg.

This new species is somewhat similar to *S. atrithorax* CHEN from N. Vietnam and China, but is distinguished by the shape of the aedeagus which is robust and lacks apical prolongation, and is characterized: Body reddish brown with head and pronotum black; frontal tubercle transverse; pronotum distinctly punctate, with anterior angle weakly thickened; elytron confusedly punctate; aedeagus with a broadly triforked ridge on ventrad.

Sphaeroderma nigroapicalis n. sp.

Male. Body oblong oval, somewhat produced posteriorly; lustrous reddish brown, with head above antennal insertion, pronotum and elytron on apical $1/6$ black; prothorax ventrally and femora darkened; antenna wholly and labrum yellowish brown. Head with vertex distinctly raised, impunctate and shining; frontal tubercle transverse, delimited behind by a deep groove; inter-antennal area weakly raised; antenna robust and short, slightly longer than half the body length, densely pubescent except for on basal 4 segments; 1st segment clubate, twice as long as 3rd; 7th to 10th, each as long as broad; relative length of antennal segments as: $1st \div 11th > 9th > 2nd \div 5th \div 7th \div 8th > 3rd \div 4th \div 6th \div 10th$. Pronotum $3/5$ as long as broad, broadest near base, thence roundly narrowed anteriorly, narrowly reflexed at lateral margin, gently emarginate at anterior margin, broadly produced posteriorly; anterior angle thickened; disc rather densely punctate, with interstices shining and smooth. Scutellum roundly trigonate, smooth and shining. Elytron $2\frac{1}{4}$ as long as broad, broadest near basal $1/3$, and produced posteriorly; disc densely and distinctly punctate, and irregularly punctate-striate laterally; interstices smooth and shining; epipleuron smooth, gently narrowed to apex; aedeagus broadened subapically; tarsi with 1st segment dilated.

Size. 2.2 mm in length, 1.6 mm in breadth.

Specimens examined. 2 ♂♂, Tongpu, Nantou Hsien, 14-17-VII-1976 (holotype: EHU), 5-10-VII-1977, H. TAKIZAWA leg.

This species is characterized: Body reddish brown with head, pronotum and elytron on apical $1/6$ black; antenna short and robust, half as long as body, and wholly yellowish brown; aedeagus broadened subapically. Though this new species is somewhat related to *S. luteipenne* WEISE from N. Vietnam and India, the latter is distinguished by largely blackish antenna and by wholly reddish brown elytra which have punctures on the lateral area arranged in somewhat geminate rows.

Luperomorpha saigusai KIMOTO, 1970

Kontyû, 38: 303 (Taiwan).

Seven specimens collected at Tongpu are different in the coloration: Scutellum with brownish tinge; elytron with humerus reddish brown; legs reddish brown with

femora slightly darkened. The female is similar to the male except that the post-humeral area is not modified, tarsi have the 1st segment not dilated and that the last visible abdominal sternite is simply produced posteriorly.

Longitarsus warchalowskii SCHERER, 1969

Pacif. Ins. Monogr. 22: 68 (India).

This species is here recorded from Taiwan for the first time.

Specimens examined. 2 ♂♂, 1 ♀, Tongpu, Nantou Hsien, 5-10-VII-1977, 14-17-VII-1976; 1 ♀, Chitou, Chushan Hsien, 6-7-VII-1975, H. TAKIZAWA leg.

Aphthona opaca ALLARD, 1889

Ann. Soc. Ent. Fr., Ser. 6, 9: 305 (Cambodia).

This species is here recorded from Taiwan for the first time. My previous record (1975, Ent. Rev. Japan, 28: 62) of a *Luperomorpha* species from Ryukyu Is. should be corrected to the present species.

Specimens examined. 1 ♂, Tongpu, Nantou Hsien, 5-10-VII-1977, H. TAKIZAWA leg.; 1 ♂, 1 ♀, Enamiko in Formosa, 10-VI-1907; 1 ♀, Ako in Formosa, 4-VI-1907; 1 ♀, Shinka (Hsinhua, Tainan Hsien) in Formosa, 30-V-1926, S. Matsumura leg.

Aphthona taiwana n. sp.

Male. Body slightly widened posteriorly; blackish blue with greenish tinge on elytron; antenna brown, with basal 4 or 5 segments light brown; legs light brown with femora dark brown to piceous; sometimes antenna and anterior 2 legs wholly light brown. Head with vertex impunctate, finely alutaceous or wrinkled; frontal tubercle round to oval, delimited behind by a distinct furrow; surface shining; antenna almost $4/5$ as long as body, densely pubescent except for on basal 3 segments; 11th pointed, twice as long as 9th; relative length of antennal segments as: $11th > 1st \div 4th \div 5th \div 6th \div 7th \div 8th > 9th \div 10th > 2nd \div 3rd$. Pronotum rounded rectangular, $1 \frac{3}{5}$ as broad as long, broadest at middle, almost straight at anterior margin, gently produced posteriorly; anterior angle thickened, obliquely truncate; posterior angle obtuse; disc convex, sparsely impressed with fine punctures, with interstices shining. Scutellum roundly trigonate, distinctly granulate on basal $1/2$, shining and impunctate on apical $1/2$. Elytron about 3 times as long as broad, broadest posteriorly to middle, thence roundly narrowed to apex; disc convex, weakly depressed posteriorly to scutellum, densely impressed with distinct punctures, of which diameter is almost as wide as their interspaces on basal half; epipleuron almost subparallel-sided for basal $1/3$, thence gradually narrowed and tapered out before apex; surface finely granulate; last visible abdominal sternite truncate at apex, with a pair of slight notches; anterior 2 legs with 1st tarsal segment weakly dilated; posterior tarsus with 1st segment strongly dilated (Fig. 5); aedeagus abruptly widened subapically (Fig. 5).

Size. 1.8-2.2 mm in length, 1.0-1.2 mm in breadth (both sexes).

Specimens examined. 2 ♂♂ (one the holotype, 10-11-VII-1976: EHU), 4 ♀♀, Yangmingshan, Taipei Hsien, 28-29-VI-1975, 10-11-VII-1976, 1-2-VII-1977; 1 ♂, Mt. Alishan, Chiayi Hsien, 4-5-VII-1975, H. TAKIZAWA leg.

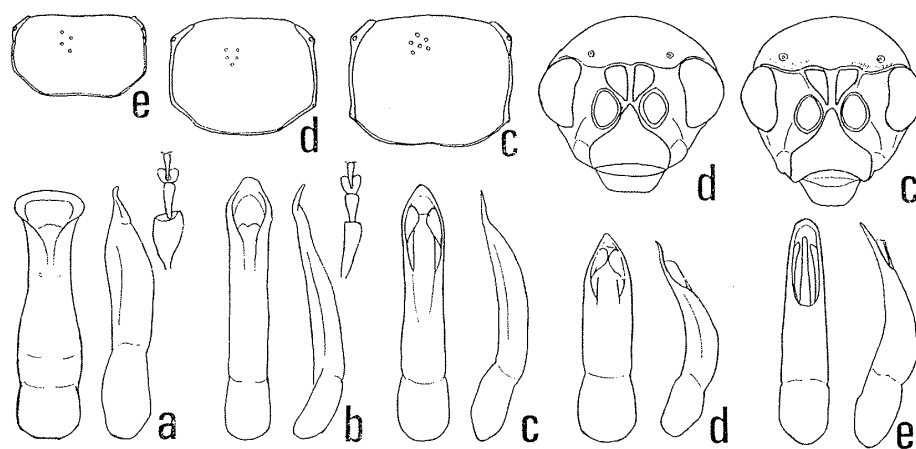


Fig. 5. Aedeagus (left; dorsal view, right; lateral view) and posterior tarsus of: a, *Apthona taiwana* n. sp. (from Mt. Alishan); b, *A. perminuta* BALY (from Mt. Hiko-san, Kyushu: Japan). Head, pronotum and aedeagus of: c, *Trachyaphthona formosana* n. sp. (from Chitou); d, *T. brevicornis* n. sp. (from Yangmingshan); e, *T. sordida* (BALY) (from Hatano, Honshu: Japan).

This new species very closely resembles *A. perminuta* BALY from Japan in appearance, but is distinguished in the male by the shape of the posterior tarsus which has the 1st segment peculiarly dilated (Fig. 5). Further the pronotum is much finely and sparsely punctate than on the elytron in both sexes. The records of *perminuta* from Taiwan by authors may require further verification.

Trachyaphthona formosana n. sp.

Male. Body lustrous dark brown with head except for vertex, scutellum, antenna and legs light brown; posterior femur darkened. Vertex shining, but depressed and granulate behind frontal tubercle; frontal tubercle longitudinally triangular, with apex extending into inter-antennal area, delimited medially and posteriorly by distinct groove; surface weakly granulate; inter-antennal area narrowly carinate; fronto-clypeus triangular, with surface granulate; antenna 5/7 as long as body, densely pubescent except for on basal 4 segments, with apical 4 segments each weakly dilated; 1st segment robust, $1\frac{1}{3}$ as long as 2nd; 2nd robust, but shorter than 3rd; relative length of antennal segments as: $11th > 1st > 9th \div 10th > 3rd \div 4th \div 5th \div 6th \div 7th \div 8th > 2nd$. Pronotum subquadrate, $1\frac{1}{5}$ as broad as long, almost straight at anterior margin, gently and broadly produced posteriorly, slightly rounded at lateral margin; anterior angle obliquely produced and thickened; posterior angle slightly produced; disc rather strongly convex dorsally, densely punctate. Scutellum roundly produced posteriorly, with surface finely granulate. Elytron subparallel-sided for middle 1/3, 3 times as long as broad, broadest anteriorly to middle, thence gradually narrowed posteriorly, broadly depressed behind sub-basal convexity; humerus well developed; disc densely covered with large punctures, of which diameter is larger than their interspace on at least basal half; interstices shining; epipleuron subparallel-sided for basal 1/3, thence gradually narrowed and disappeared before apex; surface convex and impunctate; last visible abdominal sternite truncate at apex; anterior 2 tarsi with 1st segment dilated; aedeagus gradually narrowed to apex, with median plate which covers the orifice, rather broad (Fig. 5).

Female. Body slightly larger; pronotum shorter, 1 1/2 as broad as long; last visible abdominal sternite produced posteriorly; tarsi with 1st segment not dilated.

Size. 2.2–2.8 mm in length, 1.1–1.6 mm in breadth (both sexes).

Specimens examined. 7 ♂♂ (one the holotype: EHU), 11 ♀♀, Chitou, Chushan Hsien, 6–7–VII–1975; 1 ♀, Wushe, Nantou Hsien, 8–VII–1975; 3 ♂♂, 7 ♀♀, Mt. Alishan, Chiayi Hsien, 4–5–VII–1975, 7–8–VII–1977, H. TAKIZAWA leg.

The genus *Trachyaphthona* HEIKERTINGER, so far, is based on a single species, *T. sordida* (BALY), from Japan. This new species is clearly distinguished from *sordida* by: Body larger and lustrous dark brown; antenna shorter; pronotum longer and heavily punctate; aedeagus round at apex, with the median plate covering the orifice much broader, etc.

Trachyaphthona brevicornis n. sp.

Male. Body light brown to dark brown. Head with frontal tubercle somewhat rounded, with apex extending into inter-antennal area; antenna 7/10 as long as body; relative length of antennal segments as: 11th > 1st > 5th ÷ 6th ÷ 7th ÷ 8th ÷ 9th ÷ 10th > 2nd ÷ 3rd ÷ 4th. Pronotum subquadrate, 1 3/10 as broad as long; disc distinctly covered with small punctures. Elytron slightly less than 3 times as long as broad, broadest posteriorly to middle, thence gently narrowed anteriorly, rather abruptly narrowed posteriorly; disc distinctly covered with large, distinct punctures; aedeagus robust, bluntly pointed at apex (Fig. 5).

Size. 2.0–2.4 mm in length, 1.2–1.4 mm in breadth (both sexes).

Specimens examined. 17 ♂♂ (one the holotype, 28–29–VI–1975: EHU), 8 ♀♀, Yangmingshan, Taipei Hsien, 28–29–VI, 10–VII–1975, 10–11–VII–1976, 1–2–VII–1977, H. TAKIZAWA leg.

This new species is very similar to the preceding species on account of a similar body shape with shorter antennae and brownish coloration, but is distinguished from it by: Head with frontal tubercle somewhat rounded; pronotum weakly punctate; elytron less than 3 times as long as broad, broadened posteriorly and broadest posteriorly to middle; aedeagus robust. *T. sordida* (BALY) from Japan has the antenna almost as long as the body in the male.

Batophila acutangula HEIKERTINGER, 1921

Kol. Rundsch. 9: 91, 96 (Ussuri, Amur).

This species is known segregating into 3 geographical races in Japan, which are characterized by the shape of the pronotum and male aedeagus. Specimens from Taiwan also show likewise differentiation in the shape of the male aedeagus as shown in Fig. 6.

Zipangia recticollis n. sp.

Male. Body yellowish brown. Head with vertex shining and impunctate, with a distinct groove posteriorly to eye and frontal tubercle; frontal tubercle separated from each other by a deep median groove, distinctly raised and roundly triangular with apex extending into inter-antennal

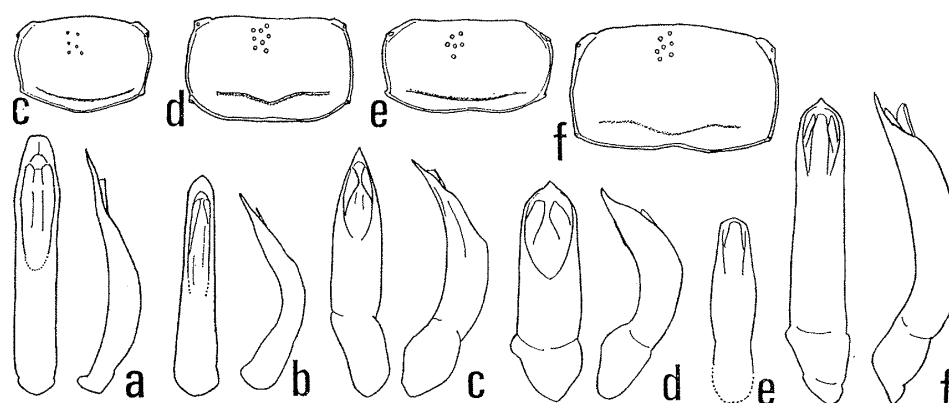


Fig. 6. Aedeagus (left; dorsal view, right; lateral view) and pronotum of: a & b, *Batophila acutangula* HEIKERTINGER (a from Chitou, b from Wulai); c, *Zipangia lewisi* (JACOBY) (from Tongpu); d, *Z. recticollis* n. sp. (from Chitou); e, *Z. amamiana* (OHNO) (from Is. Amami-oshima: Ryukyu); f, *Z. okinawana* n. sp. (from Yona, Is. Okinawa; Ryukyu). Scale for the pronotum of *amamiana* is 1.6 times as large as the scale for the other species.

area; surface smooth and shining; fronto-clypeus triangularly raised, distinctly broader than long; antenna rather robust, $5/7$ as long as body, densely pubescent except for on basal 2 or 3 segments; 1st segment robust, longer than the 2nd; 2nd shorter but distinctly robust than the 3rd; apical 6 segments robust than each of 3rd to 5th; 11th twice as long as 2nd; relative length of antennal segments as: $11\text{th} > 1\text{st} \div 7\text{th} > 3\text{rd} \div 5\text{th} \div 8\text{th} \div 9\text{th} \div 10\text{th} > 4\text{th} \div 6\text{th} > 2\text{nd}$. Pronotum distinctly narrower than elytra, subquadrate, about $1\frac{3}{5}$ as broad as long, broadest near middle, almost straight or slightly concave at anterior margin, slightly rounded at lateral margin, gently produced posteriorly; anterior angle obliquely truncate and thickened; posterior angle distinctly angulate; disc with a distinct sinuate depression parallel to basal margin, rather broadly depressed anteriorly to scutellum, densely covered with large punctures. Scutellum broadly triangular, with surface weakly granulate. Elytron subparallel-sided, 3 times as long as broad, broadest anteriorly to middle; humerus well raised; disc convex subbasally and depressed behind scutellum, weakly reflexed at lateral margin, densely covered with large punctures of which diameter is larger than their interspace; epipleuron broad, subparallel-sided for basal $2/5$, thence gradually narrowed to apex; surface flat and impunctate; last visible abdominal sternite weakly truncate and with a pair of notches at apex; tarsi with 1st segment dilated; aedeagus robust, roundly narrowed and with a triangular projection at apex.

Size. 2.8–3.2 mm in length, 1.4–1.6 mm in breadth (both sexes).

Specimens examined. 4 ♂♂ (one the holotype: EHU), 4 ♀♀, Chitou, Chushan Hsien, 6–7–VII–1975, H. TAKIZAWA leg.

This new species is very similar to *Z. lewisi* (JACOBY) from Japan in the shape and coloration of the body, but is characterized by the smooth fronto-clypeus, the prosternum which is narrower between coxae and by the robust aedeagus. In *amamiana* (OHNO) from Ryukyu Is., the fronto-clypeus is granulate; frontal tubercles are elongate triangular and situated much closely to each other; elytron feebly costate behind humerus.

Zipangia okinawana n. sp.

Zipangia amamiana: KIMOTO and GRESSITT, 1966, Pacif. Ins., 8: 486, 564–565.

Male. Body entirely light brown. Vertex shining and very minutely wrinkled, with a distinct transverse groove anteriorly; frontal tubercle raised, broadly triangular with apex extending into inter-antennal area, which is broadly carinate; surface smooth; fronto-clypeus triangularly raised, broader than long; surface minutely granulate; antenna 7/10 as long as body, densely pubescent except for on basal 4 segments; each segment more or less dilated apically; 1st segment strongly clubate, almost twice as long as 2nd; relative length of antennal segments as: $1st > 11th > 3rd \div 4th \div 5th \div 6th \div 7th > 8th \div 9th \div 10th > 2nd$. Pronotum subquadrate, about $1\frac{3}{5}$ as broad as long, broadest near middle, weakly rounded on lateral margin, almost straight at anterior margin, sinuately produced posteriorly; anterior angle obliquely truncate and thickened; posterior angle slightly produced; disc with a weak sinuate depression basally, densely covered with large punctures of which diameter is slightly narrower than their interspace. Scutellum broadly triangular, with surface weakly granulate. Elytron nearly $\frac{1}{3}$ as broad as long, subparallel-sided for basal $\frac{1}{2}$, thence gently narrowed to apex; humerus distinctly raised; disc raised subbasally, weakly costate behind humerus for basal $\frac{1}{3}$ or $\frac{1}{2}$ and longitudinally depressed inside the costa, densely covered with large punctures, of which diameter is distinctly larger than their interspace; epipleuron narrow basally, subparallel-sided from basal $\frac{1}{4}$ to $\frac{2}{3}$, thence gradually narrowed and tapered out before apex; femora strongly incrassate; tarsi with 1st segment dilated, as broad as 3rd segment; aedeagus roundly narrowed and with a triangular projection at apex.

Size. 2.5–3.2 mm in length, 1.2–1.6 mm in breadth (both sexes).

Hosts. *Viburnum japonica* SPRENG. (Caprifoliaceae) (at Yona).

Specimens examined. 19 ♂♂ (one the holotype: EHU), 5 ♀♀, Yona, Okinawa Is., Ryukyu Is., 1–3–V–1976; 2 ♂♂, 2 ♀♀, Hyakuna, Okinawa Is., 29–VI–1976; 1 ♂, 1 ♀, Nago, Okinawa Is., 4–5–V–1976, H. TAKIZAWA leg.; 1 ♀, Naha, Okinawa Is., 24–III–1975, T. KOCHA leg.

This new species is closely related to *lewisi* (JACOBY) from Japan and *recticollis* n. sp. from Taiwan, but is easily distinguished by: Head with fronto-clypeus weakly granulate, whereas in *recticollis* smooth and impunctate; antenna with 1st segment almost twice as long as 2nd, in *recticollis* and *lewisi* shorter than twice the 2nd; pronotum densely impressed with large punctures, in *lewisi* punctures small and sparse; elytron more or less distinctly costate behind humerus and depressed along costa; aedeagus differently shaped (Fig. 6). This species was erroneously treated by KIMOTO and GRESSITT as *Z. amamiana* (OHNO) which was originally described as a subspecies of *Z. lewisi* (JACOBY) (as belonging to *Trachyaphthona*) from Amami-oshima Is. *Amamiana* is, however, somewhat smaller and generally black to piceous, with elytron only feebly costate and with a robust antenna, of which the 2nd segment is as long as the 3rd.

Altica himalayensis japonica OHNO, 1960

Bull. Dept. Lib. Arts, Toyo Univ., 1: 92 (Japan).

This species is here recorded for the first time from Taiwan.

Specimens examined. 2 ♂♂, 1 ♀, Yangmingshan, Taipei Hsein, 10–11–VII–1976, H. TAKIZAWA leg.

Host plants*

- Psylliodes difficilis* BALY—*Solanum nigrum* LINN., Y; *Solanum* sp., (Solanaceae), C.
Psylliodes angusticollis BALY—*Solanum* sp. (Solanaceae), C.
Chaetocnema tonkinensis CHEN—Gramineae weed, Y.
Chaetocnema discreta (BALY)—*Rubus* sp. (Rosaceae), Y.
Lipromina minuta (JACOBY)—*Rhus* sp. (Anacardiaceae), T.
Lipromorpha montana (CHÛJÔ)—*Vitis* sp. (Vitaceae), Y.
Lipromorpha shirozui KIMOTO—*Vitis* sp. (Vitaceae), T.
Podontia lutea (OLIVIER)—*Rhus succedanea* LINN. (Anacardiaceae), T, Y. (adult and larva).
Nisotra orbiculata (MOTSCHULSKY)—*Gonostegia hirta* MIQ., *Bohemeria nivea* GANDICH. (Urticae), K, C.
Neorthaea nisotroides CHEN—*Gonostegia hirta* MIQ., *Bohemeria nivea* GANDICH. (Urticae), K, C.
Neorthaea flavicornis CHEN—*Gonostegia hirta* MIQ., *Bohemeria nivea* GANDICH. (Urticae), K, C.
Sinocrepis micans CHEN—*Urena lobata* LINN. (Malvaceae), Ku, Y.
Hemipyxis flaviabdominalis CHÛJÔ—*Fraxinus* sp. (Oleaceae), H; *Buddleia asiatica* (LOUR.) (Loganiaceae), C.
Hemipyxis balyi balyi (BATES)—*Clerodendron trichotomum* THUNB. (Verbenaceae), T.
Hemipyxis quadripustulata (BALY)—*Callicarpa* sp. (Verbenaceae), Y; *Buddleia asiatica* (LOUR.) (Loganiaceae), C.
Hemipyxis nigricornis (BALY)—*Buddleia asiatica* (LOUR.) (Loganiaceae), K.
Schenklingia miwai (CHÛJÔ)—*Thelypteris acuminata* MORTON (Aspidiaceae), S.
Sphaeroderma postnigrum CHÛJÔ—Gramineae weed, Y.
Hespera lomasa MAULIK—*Pueraria lobata* (WILLD.) OHWI (Leguminosae), *Carpinus kawakamii* MIQ. (Betulaceae), T.
Longitarsus flavicornis CHÛJÔ—*Paraphlomis rugosa* PLAIN (Labiatae), K.
Longitarsus lewisii (BALY)—*Plantago* sp. (Plantaginaceae), Y, A.
Longitarsus walterhorni CSIKI=(*L. horni* CHEN, 1934 nec JACOBY, 1897)—*Eupatorium formosanum* HAY. (Compositae), Ku.
Aphthona formosana CHEN—*Mallotus* sp. (Euphorbiaceae), S, K.
Batophila acutangula HEIKERTINGER—*Rubus* sp. (Rosaceae), Y, A.
Manobia nigrita CHÛJÔ—a kind of fern, T.
Altica birmensis (JACOBY)—*Polygonum* sp. (Polygonaceae), Y, K, C, W, T, A, H (adult and larva).
Zipangia lewisi (JACOBY)—*Hydrangea chinensis* MAXIM. (Saxifragaceae), T.

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* Observed by myself in July, 1975–1977; abbreviations for observed localities are: A—Alishan, C—Chitou, H—Hotsu, K—Kuanzuling, Ku—Kuangyinshan, S—Shihtoushan, T—Tongpu, Y—Yangmingshan.