

Studies on the genus *Atheta* THOMSOM and its allies

(Coleoptera, Staphylinidae)

III: Japanese Species described by the previous Authors

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After the taxonomic stands of Athetae had been critically reviewed in the foregoing papers it has been tried to revise and evaluate all the Japanese species of Athetae established by the previous authors. About 70 species were described from Japan under the name of *Atheta* or *Homalota* before the author had begun his studies of Athetae in the year of 1970. In almost all cases the type specimen of each species was inspected either by comparing it with the new examples and, in critical cases, by dissecting it in a proper way, so that the taxonomic characters and peculiarities of them may be clearly understood. The results may be as listed below after the chronological order to each of which their proper name after the present conception is attached. About one half of them were already treated in the previous reports and those in thick letters are redescribed herewith in later pages.

There is no large amendment in the conception of genera and subgenera of Athetae in the species treated. What has to be noted are as follows:

1. The genus *Tomoglossa* is, in contrast to the previous conception, not the near relative of *Aloconota* of the *Liogluta* series, but a distinct genus nearly related to *Hydrosmecta* as already suspected in YOSII et K. SAWADA, 1976, p. 139. Two Japanese species referred to *Tomoglossa* must be consequently placed in *Aloconota*.
2. *Tachyusa* series are not very distinctive from other groups, but nearly related to *Atheta* (s. lat.). Chaetotaxy of abdominal tergites may vary within one genus just as within *Atheta* (s. lat.). Both *Gnypeta aokii* K. S. and *Amischa niponensis* (SH.) indicate this.

SHARP, D. 1874: Trans. Ent. Soc. London 1874: 1-101

Homalota transfuga SH..... *Atheta* (*Atheta*) *transfuga* (SH.)

Homalota melanaria GYLL..... *Acrotona* (*Nehemitropia*) *sordida* (MARSH.)

Homalota lewisa SH..... *Coenonica lewisa* (SH.) after Cameron 1950

Homalota distans SH..... ***Liogluta disans*** (SH.)

Homalota vivida SH ***Atheta* (*Xenota*) *vivida*** (SH.)

WEISE, J. 1877: Deut. Ent. Zeit., 21: 88-97

Homalota clara WEISE *Brachida crassiuscula* (KR.) after Fenyès 1914

Homalota variolosa WEISE *Emplenota variolosa* (WEISE)

Homalota hilleri WEISE..... *Atheta* (*Psammotiba*) *hilleri* (WEISE)

SHARP, D. 1888: Ann. Mag. Nat. Hist. 6(2): 277-377

Homalota niponensis SH ***Amischa niponensis*** (SH.)

- Homalota lutulenta* SH..... ***Acrotona (Acrotona) lutulenta*** (SH.)
Homalota oligotinuia SH..... ***Phymatura oligotinuia*** (SH.)
Homalota gyrophaenula SH..... ***Omoplandria gyrophaenula*** (SH.)
 BERNHAUER, M. 1907: Verh. zool. bot. Ges. Wien 57: 371-414
Tomoglossa luteicornis ER..... *Tomoglossa* sp.
Atheta (Bessobia) erichsoni BH..... *Atheta (Bessobia) occulta* (ER.)
Atheta (Acrotona) aterrima GYLL..... *Acrotona* sp.
Atheta (Acrotona) parva SAHLB..... *Atheta* sp.
Atheta (Plataraea) brunnea FAB..... *Atheta* sp.
Atheta (Datomica) crenulicauda BH..... ***Phymatura oligotinuia*** (SH.)
Atheta (Datomica) kanagawana BH..... *Atheta (Badura) kanagawana* BH.
Atheta (Chaetida) subasperata BH..... *Atheta (Chaetida) subasperata* BH.
Atheta (Dimetrota) atramentaria GYLL..... *Atheta (Atheta) atramentaria* (GYLL.)
Atheta (Halobrectha) madida BH..... ***Atheta (Halostiba) madida*** BH.
Atheta (Microdota) formicetorum BH..... *Atheta (Amidobia) formicetorum* BH.
Atheta (Microdota) denticauda BH..... ***Atheta (Datostiba) dentiventris*** BH.
Atheta (Microdota) spiniventris BH..... *Atheta (Microdota) spiniventris* BH.
Atheta (Microdota) granulipennis BH..... ***Geostiba exasperata*** (KR.)
Atheta (Microdota) subcrenolata BH..... *Atheta (Microdota) subcrenolata* BH.
Atheta (Microdota) spinicauda BH..... *Atheta (Microdota) spiniventris* BH.
Atheta (Microdota) vagans BH..... *Atheta (Microdota) vagans* BH.
Atheta (Microdota) sublaevigata BH..... *Atheta (Microdota) subcrenolata* BH.
Atheta (Microdota) silvatica BH..... *Atheta (Microdota) silvatica* BH.
Atheta (Microdota) ocyusina BH..... ***Caenogluta ocyusina*** (BH.) ***g.n.***
Atheta (Philhygra) palustris KIES..... *Atheta (Philhygra) palustris* (KIES.)
Atheta (s. str.) euryptera japonica BH..... *Atheta (Atheta) japonica* BH.
Atheta (s. str.) sauteri BH..... *Atheta (Notothecta) reitteriana* BH.
Atheta (s. str.) weisei BH..... *Atheta (Dimetrota) weisei* BH.
Atheta (Liogluta) iturupensis BH..... ***Atheta (Atheta) iturupensis*** BH.
Atheta (Liogluta) unica BH..... ***Aloconota unica*** (BH.)
Atheta (Metaxya) yokkaichiana BH..... ***Atheta (Philhygra) yokkaichiana*** BH.
Atheta (Metaxya) sparsa BH..... ***Atheta (Philhygra) sparsa*** BH.
Atheta (Metaxya) pseudoelongatula BH..... ***Atheta (Philhygra) pseudoelongatula*** BH.
Atheta (Metaxya) dentiventris BH..... ***Atheta (Datostiba) dentiventris*** BH.
Atheta (Metaxya) maritima MANN..... ***Atheta (Psammotiba) sp.***
 BERNHAUER, M. 1914: Münchner Kol. Zeits. 4: 39
Atheta (Liogluta) ocyamensis BH..... ***Geostiba ocyamensis*** (BH.)
 CAMERON, M. 1933: Ent. Monthl. Mag. 1933: 208-219
Atheta (Metaxya) unzensis CAM..... ***Atheta (Philhygra) yokkaichiana*** BH.
Atheta (Metaxya) lucidula CAM..... ***Atheta (Philhygra) sparsa*** BH.
Atheta (Metaxya?) vacillator CAM..... ***Geostiba vacillator*** (CAM.)
Atheta (Microdota) kobensis CAM..... *Atheta (Microdota) kobensis* CAM.

- Atheta* (*Microdota*) *bichuensis* CAM *Atheta* (*Microdota*) *vagans* BH.
Atheta (*Microdota*) *oishiensis* CAM.....*Atheta* (*Microdota*) *vagans* BH.
Atheta (*s. str.*) *settsuensis* CAM.....*Atheta* (*Amidobia*) *formicetorum* BH.
Atheta (*Liogluta*) *luchuensis* CAM ***Geostiba luchuensis* (CAM.)**
Atheta (*Dimetrota*) *sulputrida* CAM.....***Atheta* (*Atheta*) *atramentaria* (GYLL.)**
Atheta (*Datomicra*) *lewisiana* CAM.....*Atheta* (*Datostiba*) *lewisiana* CAM.
Atheta (*Chaetida*) *subantennata* CAM.....***Atheta* (*Chaetida*) *subantennata* CAM.**
Atheta (*Coprothassa*) *pseudotenera* CAM.....*Acrotona* (*Colpodota*) *pseudotenera* (CAM.)
Atheta (*Acrotona*) *neglecta* CAM ***Acrotona* (*Colpodota*) *neglecta* (CAM.)**
Atheta (*Acrotona*) *pseudoparens* CAM.....***Acrotona* (*Acrotona*) *taedia* (CAM.)**
Atheta (*Acrotona*) *taedia* CAM ***Acrotona* (*Acrotona*) *taedia* (CAM.)**
Atheta (*Acrotona*) *pseudorphana* CAM ***Taxicera pseudorphana* (CAM.)**
Atheta (*Acrotona*) *grata* CAM *Atheta* (*Xenota*) *grata* CAM.
BERNHAEUER, M. 1936: Pubb. Mus. Ent. Pietro Rossi 1: 315
Atheta (*Suensonia*) *obsoletepunctata* BH.....*species inquirenda*
BERNHAEUER, M. 1938: Ent. Nachrichtenbl., 12: 108-109
Atheta (*Microdota*) *flavonitescens* BH.....***Geostiba flavonitescens* (BH.)**
Atheta (*Acrotona*) *reitteriana* BH.....*Atheta* (*Notothecta*) *reitteriana* BH.
BERNHAEUER, M. 1938: Ent. Nachrichtenbl., 12: 145-158
Atheta (*Coprothassa*) *chinkiangensis* BH ***Atheta* (*Notothecta* ?) *chinkiangensis* BH.**
BERNHAEUER, M. 1943: Mitt. Münchner Ent. Ges. 33: 184-187
Atheta (*Anopleta*) *magnipennis* BH *Atheta* (*Halostiba*) *magnipennis* BH.
Atheta (*s. str.*) *kubotai* BH.....*Atheta* (*Atheta*) *transfuga* (SH.)
BRUNDIN, L. 1944: Acta Univ. Lundensis, N. F. 54: 22
Atheta (*Panalota*) *jessoensis* BR.....*Atheta* (*Psammotiba*) *jessoensis* BR.
SCHEERPELTZ, O. 1960: Ent. Arb. Mus. Frey 11: 599-626
Atheta (*Ceritaxa*) *kanagawaensis* SCHEERP.....*species inquirenda*

***Atheta* (*Datostiba*) *dentiventris* BERNHAUER, 1907**

Fig. 1

Atheta (*Metaxya*) *dentiventris* BERNH., 1907*Atheta* (*s. str.*) *dentiventris* BH.; BRUNDIN 1944syn. nov. *Atheta* (*Microdota*) *denticauda* BERNH., 1907

Male: Ground colour is brown; head and abdomen are nearly black towards the extremity. Shining and shortly pubescent in the foreparts. Head is gently convex above and lightly flat in the middle. Eyes small. Postgena long, rounded. Integument is very finely granulate and sculptured. Antenna is short, with ratio of segments as I 7 × 3.5 : II 6 × 3.2 : III 5 × 3 : IV 3 × 3.4 - X 4 × 5 : XI 14 × 5. Labrum (Fig. A) is broadly emarginate in the anterior margin; seta *p*-1 is placed posterior to the level of *m*-1; the medial row is short and subequal to the distal row in length; secondary setae are 2+2 in number. *a*-sensilla of labral margin (Fig. B) is long and setaceous; *b* is obtuse at apex; *c* is small. Chaetotaxy of labial palpus (Fig. C) is nearly as in *A. lewisiana* CAMERON, 1933; *γ* is short, on the level of seta *b*; *δ* is anterior to the

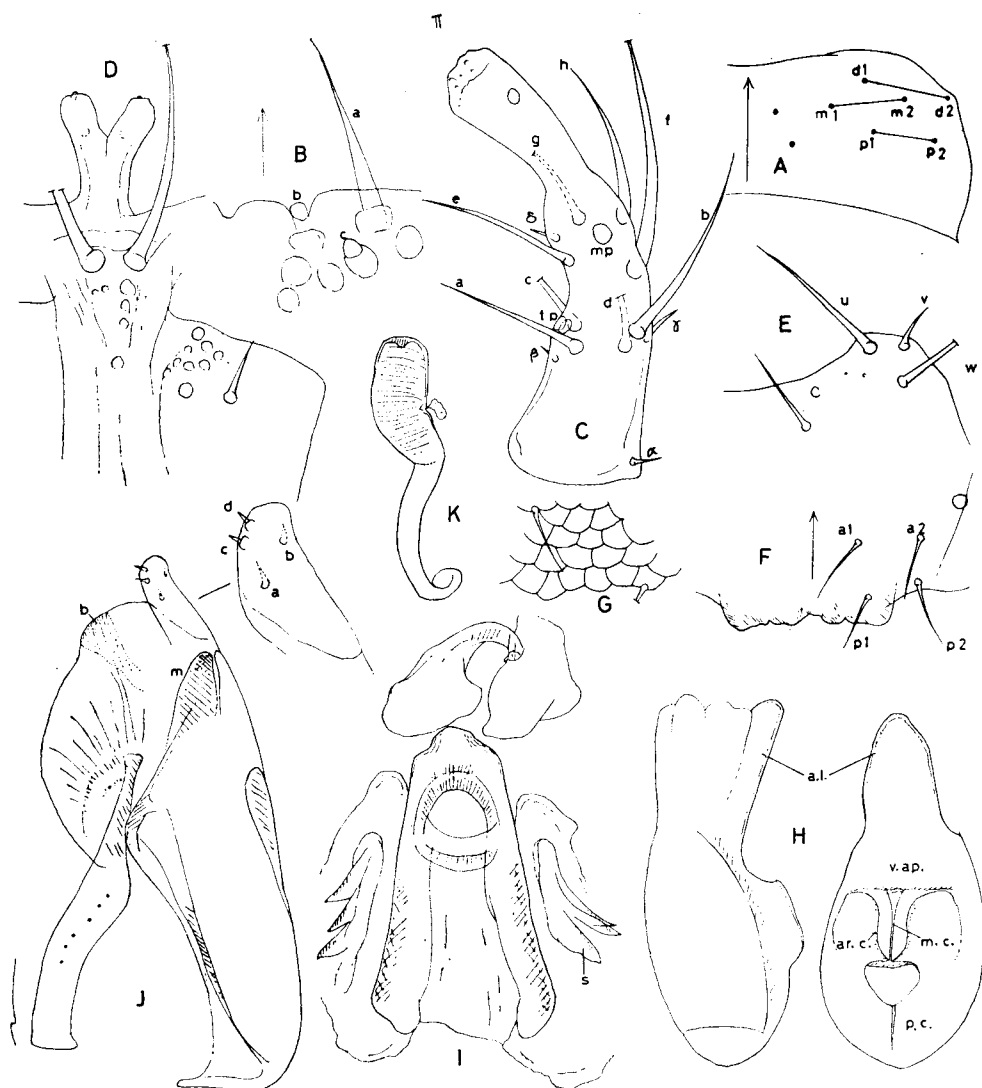


Fig. 1. *Atheta (Datostiba) dentiventris* BERNHAUER from Ikoma, Pref. Nara. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♂ terg. VIII & its microsculpture. H: Median lobe. I: Inner armature of aedeagus. J: Lateral lobe. K: Spermatheca.

level of *e*; *g* is on the same level with *h*. Glossa (Fig. D) is broad, bifurcate from the anterior one-third to two short arms and obtuse at their apices. The median area of prementum (Fig. D) is broad, with about 5 large and small pseudopores. *v*-setula of mentum (Fig. E) is normally long and on the same level with *u*. Pronotum is gently convex above and with a shallow sulcus along the middle near the base and its surface is more roughly granulated than on the head. The lateral erecting setae normally

long. Elytron is not emarginate postero-externally. Abdomen is smooth distally. Macrochaetal arrangement is as 02-03-23-23-23-33-. Terg. VIII (Fig. F) is truncate along the posterior margin where there are irregular notches, they are rather variable in form, but the middle notch is often deeper and the large process on each side is sometimes present. From 4+4 major setae *a*-2 is remote from the stigma; microsculpture (Fig. G) is isodiametric reticular type. Median lobe of aedeagus (Fig. H) is 0.28 mm. long; apical lobe is lightly constricted basally, gradually narrowed distally and ending in an obtuse apex. Costa *ar. c.* feebly approximate and recurved; *v. ap.* is indistinct, whiel *m. c.* is bifurcate at apex. Copulatory piece (Fig. I) is elongate, more or less dilated posteriorly and with a short obtuse apical process; annellus is large and situated anteriorly. A pair of tridentate sclerites are very distinct. Distal apodemes are mostly membranous. Lateral lobe (Fig. J) has the proximal segment slightly narrowed in the middle and with an elongate apical process; middle apodeme (*m*) is broad and with a pigmentary band on the large vellum. Distal segment is elongate and rounded apically; setae *a, b* are strongly reduced to minute setulae; *c, d* are similarly short and close together.

Length. 2.4 mm (Head long 0.40 mm $\times$ wide 0.40 mm; pronotum 0.38 mm $\times$ 0.46 mm; elytra 0.42 mm $\times$ 0.60 mm).

Female: Posterior margin of terg. VIII is truncate and slightly emarginate in the middle. Stern. VIII is fairly short and with inconspicuous marginal setae. Spermatheca (Fig. K) is nearly straight and terminating in a narrow coil; bursa is large, lightly twisted and with a small umbilicus.

Specimens examined: IWATE: Iwaizumi, 2 ♂, 1 ♀ (16. VI 1971, R. YOSHI). OSAKA: Izumi-Katsuragi, 3 ♂, 4 ♀ (3. III 1973, K. SAWADA). NARA: Ikoma, 2 ♂, 6 ♀ (24. IV 1973, K. SAWADA). FUKUOKA: Kurume, 5 ♂, 4 ♀ (15. IV 1972, R. YOSHI).

The type of this species is a male from Kanagawa, which coincides well with our examples and with the description of BRUNDIN 1944. As the suspensorium is distinctly tridentate and four setae of the distal segment of lateral lobe are very minute, the species is very characteristic and from the chaetal arrangement it is to be placed in *Datostiba*. The type of *A. denticauda* BH. is a male from Kanagawa, which shows every characters concordant with this species. It falls, therefore, to the new synonym of this species.

***Atheta* (*Xenota*) *vivida* (SHARP, 1874)**

Fig. 2

Homalota vivida SHARP, 1874

Male: Ground colour pale reddish brown and with short setae on the foreparts. Head is fairly infuscate, while pronotum is yellowish red; elytra are reddish brown; abdomen is rather reddish leaving infuscate segm. VI, VIII. Body is slender, fairly narrowed behind. Head is rounded and gently convex above; integument bears some coarse punctures and distinct sculpture. Eyes large, subequal to the postgena in length. Antenna is short; ratio of segments as I 7 $\times$ 4 : II 6 $\times$ 3 : III 5 $\times$ 3 : IV

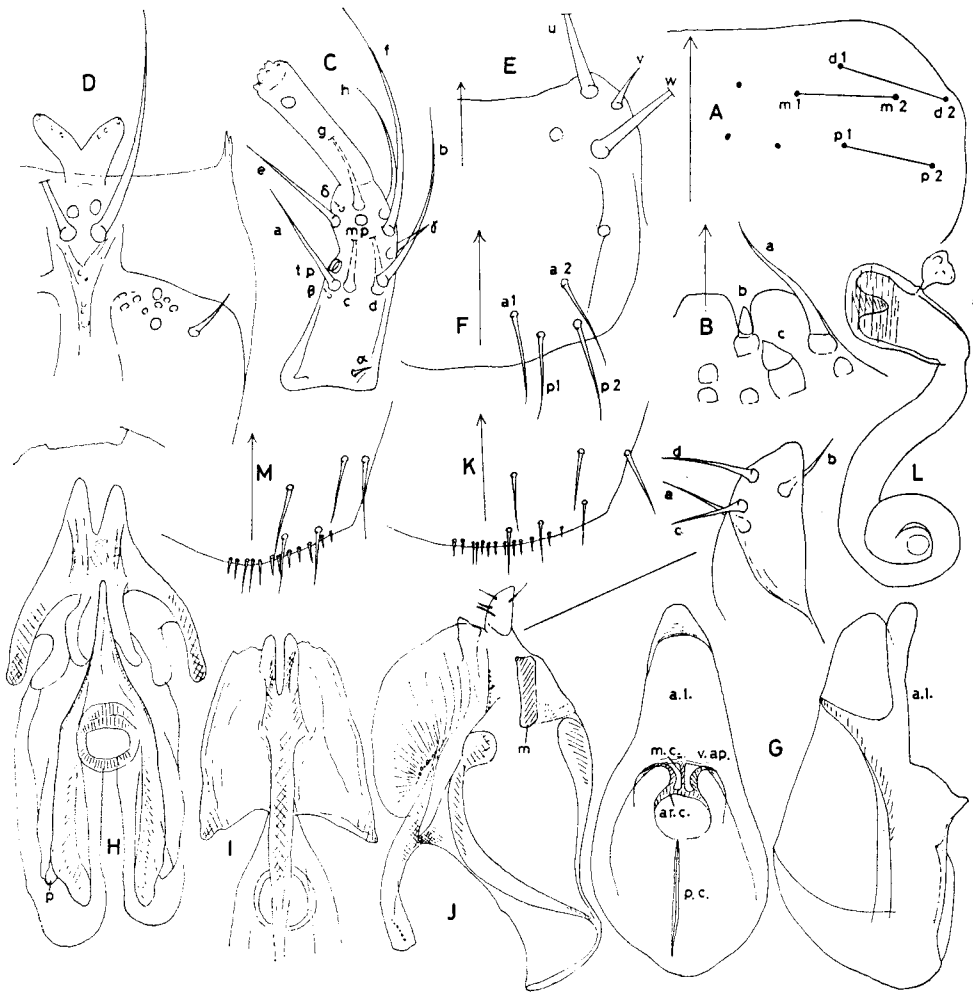


Fig. 2. *Atheta (Xenota) vivida* (SHARP) from Hase, Pref. Nara. **A**: Labral chaetotaxy. **B**: Labral margin. **C**: Labial palpus. **D**: Glossa & prementum. **E**: Mentum. **F**: ♂ terg. VIII. **G**: Median lobe. **H, I**: Inner armature of aedeagus & its ventral plate. **J**: Lateral lobe. **K**: ♀ stern. VIII. **L**: Spermatheca.

3×3.4 – X 3.5×5 : XI 9×5. Proximal row of labral setae (Fig. A) is as long as the medial row and with 3+3 secondary setae. *a*-sensilla of labral margin (Fig. B) is setaceous and converged; *b* is pointed and placed in the deep emargination. Mandibles are short, briefly hooked; the right mandible is with a molar tooth at the middle of the inner margin. γ of labial palpus (Fig. C) is between *b* and *f*; *a* is posterior to the level of *b*; *e* is on the same level with *mp*. Glossa (Fig. D) is short, forked from the middle to two short widely separating arms. Median area of prementum (Fig. D) is narrow and with a few pseudopores, which are often confluent together; lateral area

has some 7 pseudopores together with 2 real and 1 setal pores. *v*-setula of mentum (Fig. E) is short, close to the level of *u*. Pronotum is evenly convex above, with a faint median depression at the base; the sides are uniformly arcuate in their full length and with minute lateral erecting setae; small setae along the middle are directed posteriorly. Mesosternum is pointed and without median carina. Elytron is deeply emarginate postero-externally. Macrochaetal arrangement as 01-02-12-13-13-34-. The posterior margin of terg. VIII (Fig. F) is not modified but merely truncate and faintly emerginate in the middle; from 4+4 long major setae *a*-2 is clearly remote from the stigma; *p*-1 is close to the level of *p*-2. Microsculpture is quite obsolete but perhaps imbricate in type. Median lobe of aedeagus (Fig. G) is ca. 0.20 mm. long; apical lobe is nearly straight and dilated apically in lateral view. Costa *ar. c.* is separating from each other and recurved distally; *m. c.* is entire; *v. ap.* is weak, whereas *p. c.* has a long projection. Copulatory piece (Fig. H) is narrowly elongate and with long apical process and with a pair of short process (*p*) near base; annellus is at the middle of the corpus; suspensorium is mostly membranous. Distal apodeme guarding the corpus is a large triangular lobe, whose apex is deeply incised; the base of the lobe is produced to form a narrow process on each side; under the corpus there is a narrow ventral plate (Fig. I) terminating in the apical incision of the distal apodeme. From the lateral lobe of aedeagus (Fig. J) the middle apodeme (*m*) is rectangular; vellum is developed; proximal segment has a narrow distal process anterior to the articulation; the anterior margin of the medial segment is markedly sinuate before the base. Distal segment (Fig. J) is short; *a* is lateral in position and *b* is on the level of *d*.

Length. 2.20 mm (Head long 0.38 mm $\times$ wide 0.28 mm; pronotum 0.45 mm $\times$ 0.62 mm; elytra 0.44 mm $\times$ 0.75 mm).

Female: Terg. VIII is nearly as in the male. Stern. VIII (Fig. K) is broadly rounded behind and nearly truncate at the middle of the margin. Spermatheca (Fig. L) is coiled and with a robust bursa bearing a spinous umbilicus within.

Specimens examined: IWATE: Iwaizumi, 1♀ (25. VII 1974, K. SAWADA). YAMAGATA: Tobishima, 1♂, 1♀ (15. IX 1971, G. IMADATE). KYOTO: Higashiyama, 2♂, 3♀ (11. V 1971, R. YOSHII); Yoshidayama, 10♂, 9♀ (30. VI 1971, K. SAWADA). NARA: Kasugayama, 4♂, 5♀ (10. VI 1972, K. SAWADA); Hase, 1♂ 3♀ (7. VIII 1973, K. SAWADA). WAKAYAMA: Shirahama, 1♀ (13. VII 1973, M. TANAKA). FUKUOKA: Dazaifu, 1♀ (17. IV 1972, R. YOSHII).

As far as the external features are concerned our specimens agree well with the type specimen from Japan (no further notes). From the Japanese *A. grata* CAM. it is easily distinguished by different shape of the inner armature of aedeagus. Besides, terg. VIII in male is without dentition in the present species. Stern. VIII in female is much broader than that of *A. grata*.

***Atheta* (*Philhygra*) *yokkaichiana* BERNHAUER, 1907**

Fig. 3

Atheta (*Metaxya*) *yokkaichiana* BERNHAUER, 1907

Atheta (*Hygroecia*) *yokkaichiana* BERNH.; BRUNDIN, 1942

syn. nov. *Atheta (Metaxya) unzensis* CAMERON, 1933

Male: Body brown and shining; abdomen scarcely paler towards the base; antennae uniformly brown and legs a little paler. Head is nearly rounded and gently flat above; microsculpture is distinct and without punctures. Eyes normal in size and convex laterally; postgena is well developed. Antenna is not dilated distally; ratio of segments as I 10×4.2 : II 7×3.8 : III 6×3.5 : IV 4.3×4 - X 5.6×6.0 : XI 10×6.0 . Labrum (Fig. A) slightly emarginate in front; seta *d*-2 is slightly anterior to the level of *m*-2, which is separating from the distal row of setae; 2+2 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is setaceous and rather short; *b* is truncate at apex;

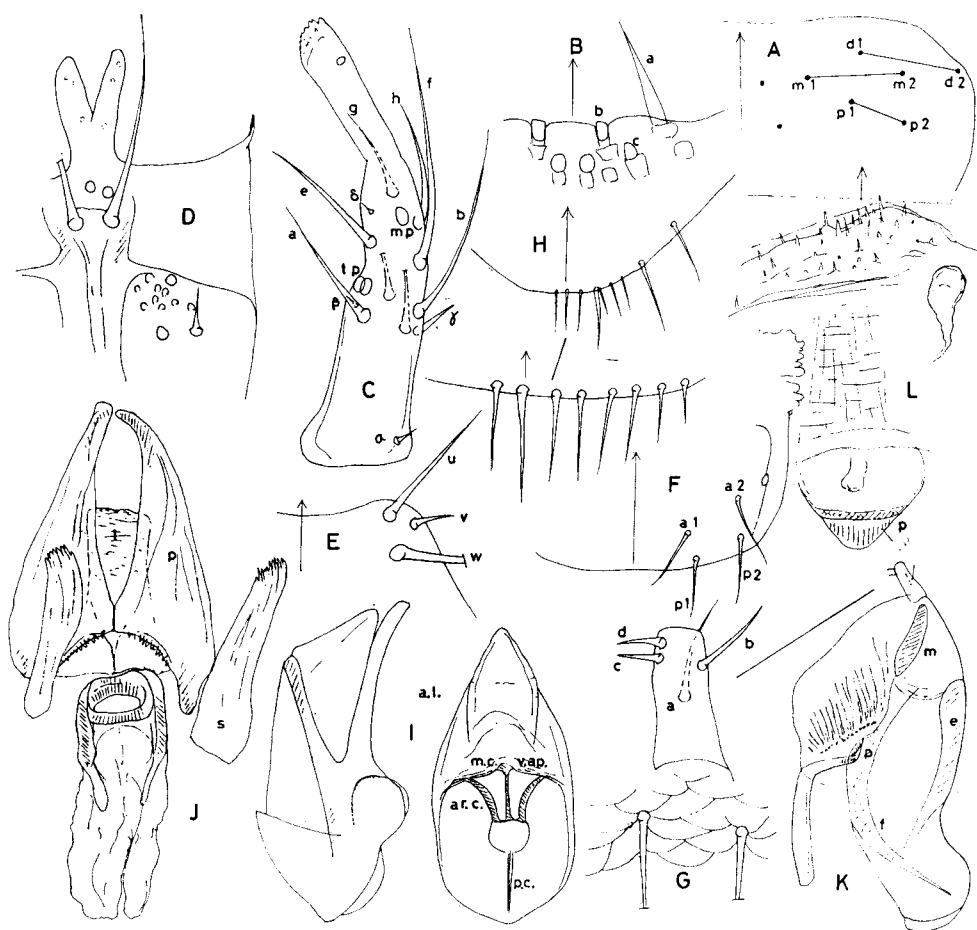


Fig. 3. *Atheta (Philhygra) yokkaichiana* BERNHAUER from Yoshidayama, Kyoto. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♂ terg. VIII & its microsculpture. H: ♂ stern. VIII showing its interior setae. I: Median lobe. J: Inner armature of aedeagus. K: Lateral lobe. L: ♀ genitalia.

c is small. γ of labial palpus (Fig. C) is posterior to the level of *b*; whereas *a* is on the same level with *b*; *e* is anterior to the level of *f*. Labial segm. I is subequal to III in length. Glossa (Fig. D) is forked from the middle. Median area of prementum is normal and without pseudopores. 2 real, 1 setal and some 9 small pseudopores are present in the lateral area. *v*-setula of mentum (Fig. E) is short and close to *u*. Pronotum is gently convex above and slightly depressed to the base along the middle; the sides are weakly narrowed posteriorly and with a faint sinuation before the base; among several erecting setae of the lateral margin the median seta is longer than others; integument is similar to the head, but provided with many fine granules all over; the setae along the middle are directed anteriorly. Elytron is faintly emarginate behind and with very short major setae on it. Macrochaetal arrangement as 01-02-12-13-13-34-. Posterior margin of terg. VIII (Fig. F) is truncate in its full length and faintly emarginate in the middle; among 4+4 major setae *a*-2 is nearer to the stigma than to *a*-1. Microsculpture (Fig. G) of terg. VIII is transversely imbricate. Marginal setae of stern. VIII (Fig. H) are normally long, while the interior row of setae is short. Median lobe of aedeagus (Fig. I) is normal; apical lobe is evenly bent downwards in lateral view. *ar. c.* is widely separating and recurvate distally; *m. c.* is entire, while *v. ap.* is weak; *p. c.* has a low projection. Copulatory piece (Fig. J) is elongate and broadly truncate at apex and with a large annellus; lateral to the courps there is a pair of elongate lobe (*s*) whose apex is finely spinulated. Distal apodeme of the inner armature is composed of large unciform sclerites standing side by side and a short rectangular lobe (*l*) situated under these sclerites. From the lateral lobe (Fig. K) the proximal segment is suddenly curved before the middle and without long distal process anterior to the articulation; vellum and the middle apodeme (*m*) are present. The inner costa of the medial segment (*f*) is not bifurcate but simply pointed distally, while the outer costa (*e*) is separating from the margin having a deep basal constriction. Distal segment is rectangular; *a* is proximal and slightly longer than *b*, the latter seta is close to the level of *c*.

Length. 2.44 mm (Head long 0.32 mm $\times$ wide 0.42 mm; pronotum 0.42 mm $\times$ 0.48 mm; elytra 0.48 mm $\times$ 0.70 mm).

Female: Terg. VIII is alike to that of the male. The posterior margin of stern. VIII is very broadly rounded in its full length. Genital segment (Fig. L) is composed of a small median piece (*p*) and the anterior membrane, where there are many long and short spinules. Spermatheca is rudimentary.

Specimens examined: KYOTO: Yoshidayama, 1♂, 2♀ (24. V 1971, R. YOSII); Hirosawano-ike, 1♀ (16. VI 1972, K. SAWADA); Otokoyama, 1♂ (1. II 1973, R. YOSII). SHIGA: Manohama, 1♀ (13. V 1973, R. YOSII).

BERNHAEUER's type of the present species is a male from Yokkaichi, Pref. Mie and our specimens coincide well with the type and with the description of BRUNDIN 1942. The species may be placed in the group of *A. palustris* (KIESW.) by the absence of pseudopores in the median area of prementum. *Atheta unzensis* CAM. is a junior synonym of this species. The type in the British Museum is a female from Unzen, Pref. Nagasaki

and being concordant with the female of *A. yokkaichiana* BH.

***Atheta (Philhygra) sparsa* BERNHAUER, 1907**

Fig. 4

Atheta (Metaxya) sparsa BERNHAUER, 1907

Atheta (Hygroecia) sparsa BH.; BRUNDIN 1942

syn. nov. *Atheta (Metaxya) lucidula* CAMERON, 1933

Male: Body brown in ground colour and shining; head and abdomen are intensively pigmented; antennae are a little paler proximally; legs totally paler. Head is sub-orbicular in outline, nearly flat above and often with a faint depression in the middle; the surface is almost smooth and with rather coarse punctures scattered. Eyes normal. Postgena is a little shorter than the diameter of eye. Antenna is not dilated distally; ratio of segments as I 6×3 : II 5×2.3 : III 4×2.3 : IV 3×2.1 - X 3×3.5 : XI 7.2×3.2 . Labrum (Fig. A) is strongly transverse; $d-2$ is on the level of $m-2$; proximal row is longer than the medial row and nearly horizontal; $2+2$ secondary setae are present. a -sensilla of labral margin (Fig. B) is reduced to a short seta, while b is normal and truncate; c is small. γ of labial palpus (Fig. C) is very close to b ; δ is on the same level with h ; a is close to the level of b . Segm. I is apparently shorter than III, which is lightly dilated distally. Glossa (Fig. D) is forked from the basal one-third to two obtuse arms. Median area of prementum (Fig. D) is broad and with some 5 pseudopores; 2 real, 1 setal and ca. 8 small pseudopores are present in the lateral area. v -setula of mentum (Fig. E) is long and located on the same level with u , whereas w is remote from the margin. Mandibles are broad and shortly pointed at apex; the right mandible has a minute molar tooth. Pronotum is narrowed behind and convex above; a shallow median depression is present near base; the lateral erecting setae are long; the setae along the middle are directed anteriorly on anterior half and posteriorly on posterior half. (cf. BRUNDIN, 1942). Elytron is not emarginate behind; among several major setae only a humeral seta is longer than others. Mesosternum is without median carina. Macrochaetal arrangement of abdomen as 01-02-12-12-13-34-. Terg. VIII (Fig. F) is truncate along the posterior margin and faintly emarginate in the middle; $a-2$ is widely separating to the stigma; microsculpture (Fig. G) is transversely imbricate. Marginal macrosetae of stern. VIII are long, while the interior row (Fig. H) is reduced to short setulae. Median lobe of aedeagus (Fig. I) is narrowly elongate and with prolonged narrow apical lobe, which is fairly bent downward in lateral view. $ar. c.$ are short and completely fused to each other distally; $m. c.$ is short; $p. c.$ is indistinct. Copulatory piece (Fig. J) is short and with completely rounded apical process; the middle part is laterally expanded and becoming narrowly sclerotized along the margin; annellus is large and apical in position; Suspensorium is inconspicuous, while the distal apodeme is converted to a pair of large lobate median thickening (t) standing side by side and spreading posteriorly to a thin plate whose inner and posterior margin are fairly raised to form a marginal thickening (m), whose posterior margin is finely roughened. Beneath the thin plate there is a long lateral process (p) on each side extending to the middle of the corpus. Distally a large fusiform

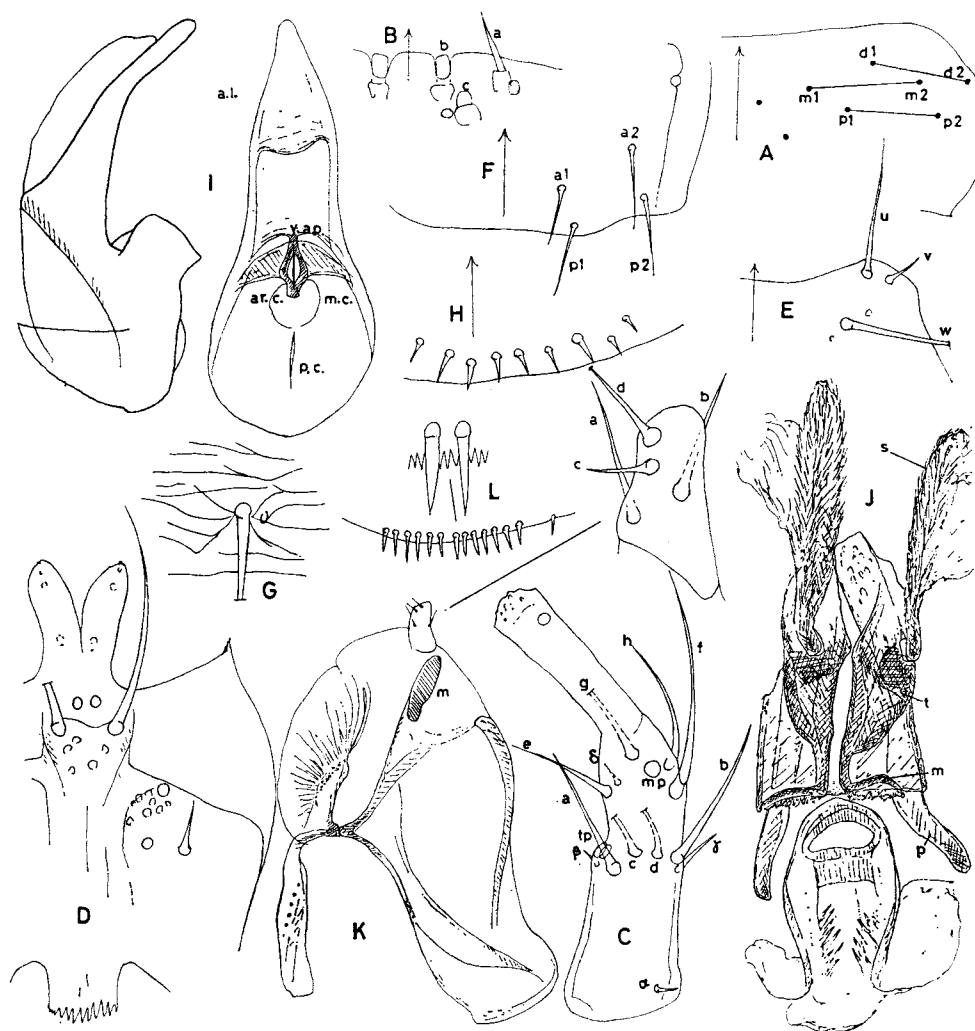


Fig. 4. *Atheta (Philhygra) sparsa* BERNHAUER from Midorogaike, Kyoto. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♂ terg. VIII & its microsculpture. H: Interior setae of ♂ stern. VIII. I: Median lobe. J: Inner armature of aedeagus. K: Lateral lobe. L: ♀ stern. VIII.

bundle of spines (*s*) is present which is attached to the median thickening by the articulation of the sclerite. From the lateral lobe of aedeagus (Fig. K) proximal segment is long and with a deep constriction behind the articulation. Anterior to it a short distal process is present. Middle apodeme (*m*) is broad; outer costa (*e*) is separating to the margin at the end, where it is deeply emarginate to form a basal constriction of the segment. Vellum is large, while the distal segment is short and oblong; seta *b* is similarly long to *a* and placed posterior to the level of *c*.

Length. ca. 2.60 mm (Head long 0.36 mm $\times$ wide 0.44 mm; pronotum 0.46 mm $\times$ 0.52 mm; elytra 0.46 mm $\times$ 0.68 mm).

Female: Terg. VIII is nearly as in the male. Stern. VIII (Fig. L) is short and completely rounded behind. Genital segment is quite membranous.

Specimens examined: HOKKAIDO: Aoi, 3♂, 4♀ (1. VIII 1971, R. YOSII); Furenai, 23♂, 28♀ (3. VII 1971, R. YOSII). SHIGA: Imazu, 1♀ (13. VI 1973, R. YOSII). KYOTO: Midorogaike, 12♂, 14♀ (22. X 1971, R. YOSII et K. SAWADA); Kitashirakawa, 11♂, 10♀ (19. X 1971, R. YOSII et K. SAWADA). NARA: Kasugayama, 2♂ (29. VII 1972, K. SAWADA). OSAKA: Takatsuki, 2♂, 3♀ (6. VI 1971, K. SAWADA); Osaka Port, 1♂, 1♀ (20. X 1970, K. SAWADA); Minoo, 2♀ (4. VI 1973, R. YOSII); Mt. Kongo, 3♂, 3♀ (14. X 1972, K. SAWADA); Mt. Inunaki, 1♀ (10. X 1973, R. YOSII). KOCHI: Muroto, 3♂, 4♀ (6. IV 1973, R. YOSII).

As far as the external features are concerned our specimens agree well with the type from Kanagawa (♂) and with the description of BRUNDIN 1942. The shape of the inner armature of aedeagus and short interior setae of stern. VIII of male are characters peculiar to the present species. The presence of pseudopores of the median area of prementum is also remarkable for *Philhygra*. The type of *A. lucidula* CAM. from Kagoshima is a male, which is concordant with this species and it may fall in synonym of *A. sparsa*.

***Atheta (Philhygra) pseudoelongatula* BERNHAUER, 1907**

Fig. 5

Atheta (Metaxya) pseudoelongatula BERNHAUER, 1907

Atheta (Hygroecia) pseudoelongatula BH.; BRUNDIN 1942

Male: Body is brown in ground colour and subopaque in foreparts; head is more infuscate than other parts; abdomen is paler basally; antennae are dark brown, the basal segments are slightly paler; legs paler. Head is depressed on the middle; punctures are coarse. Eyes large and postgena is clearly arcuate and a little shorter than the diameter of eye. Antenna is weakly dilated distally; ratio of segments as I 7 $\times$ 3.2 : II 6 $\times$ 2.5 : III 4.5 $\times$ 3.0 : IV 3 $\times$ 3 - X 3.3 $\times$ 4 : XI 8 $\times$ 4. Labrum (Fig. A) is transverse; *p*-2 is posterior to the level of *p*-1; *m*-2 is separating from the distal row; 2+2 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is strongly reduced to a short setula, whereas *b* is normal in size and truncate; *c* is small. The right mandible (Fig. C) has a large tooth at the middle. γ of labial palpus (Fig. D) is close to seta *b* which is on the same level with *a*; *e* is on the level of *f*. Segm. III is apparently longer than I. Glossa (Fig. E) is broad, forked from the middle; Median area of prementum (Fig. E) is broad and with 6 pseudopores. Lateral area has a setal pore close to the real pore together with ca. 8 pseudopores. *v*-setula of mentum (Fig. F) is posterior to the level of *u*; *w* is remote from margin. Pronotum is narrowed behind; the sides are almost straight and with some 3 long erecting setae along the margin; a median depression is present before the base; integument is rather coarse by the presence of minute granules and sculpture. The median setae of pronotum are directed anteriorly on anterior half and posteriorly on posterior half as in the preceding species. Elytron

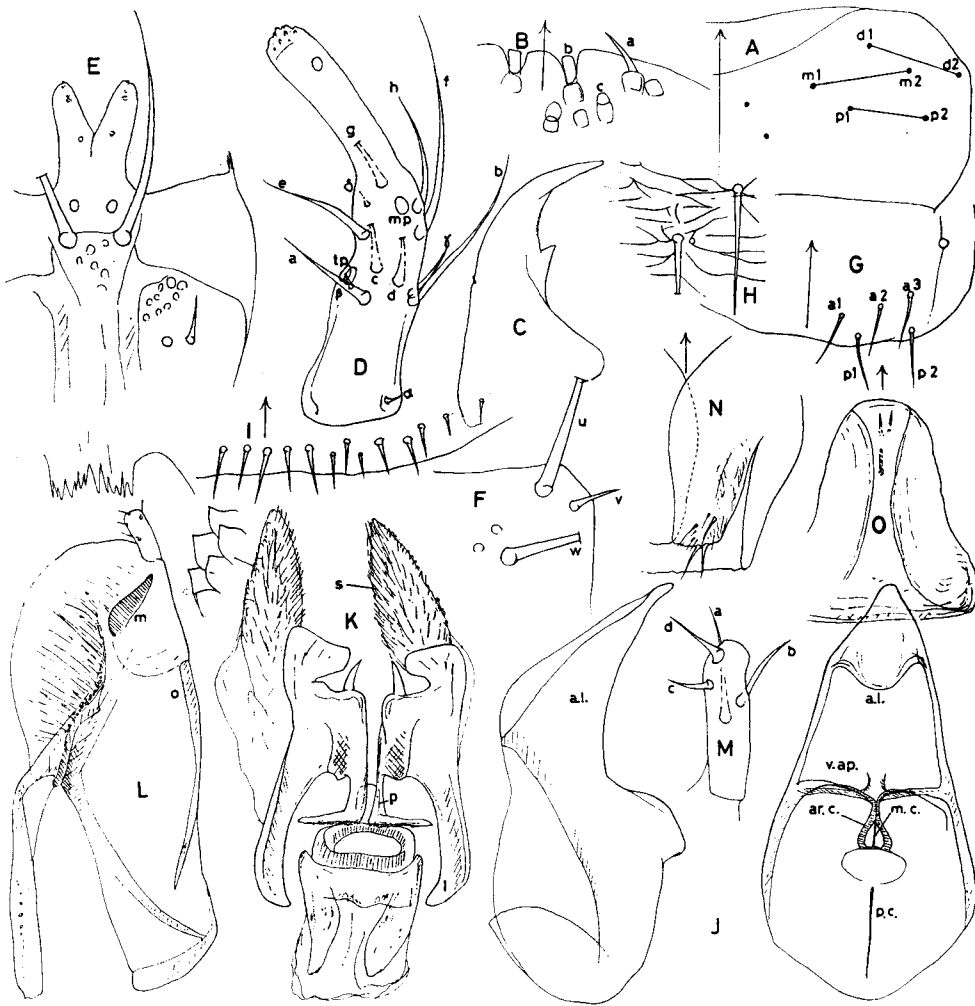


Fig. 5. *Atheta (Philhygra) pseudoelongatula* BERNHAUER from Fushimi, Kyoto. A: Labral chaetotaxy. B: Labral margin. C: Right mandible. D: Labial palpus. E: Glossa & prementum. F: Mentum. G, H: ♂ terg. VIII & its microsculpture. I: Interior setae of ♂ stern. VIII. J: Median lobe. K: Inner armature of aedeagus. L, M: Lateral lobe & its distal segment. N: ♀ terg. IX in ventral view. O: ♀ genital segment.

is not emarginate behind; the surface is densely punctured and more roughly sculptured than in the pronotum; on the humeral corner a long major seta is present. Abdomen is coarsely punctured. Macrochaetal arrangement is as 01-12-12-12-13-34-. Posterior margin of terg. VIII (Fig. G) is nearly truncate and slightly emarginate in the middle; 5+5 (3, 2) major setae are present; microsculpture (Fig. H) is transversely imbricate. Stern. VIII (Fig. I) is broadly rounded behind and with a row of the interior setae, which are rather variable in arrangement and length. Median lobe of

aedeagus (Fig. J) is triangular in form and fairly dilated behind; apical lobe is abruptly bent downward from the base and briefly pointed at apex in lateral view. *ar. c.* are weakly differentiated. Inner armature of aedeagus (Fig. K) is conspicuous in that the copulatory piece is short and with a large annellus at the end; suspensorium is reduced to a short membrane. Distal apodeme (Fig. K) is developed into a pair of large sclerites standing side by side. Each sclerite is deeply incised in the inner margin near the apex, where there is a sharp spine. Posteriorly the sclerite is produced to a narrow process (*p*), which is abruptly turned outwards just before the annellus. The sclerite is also prolonged to form a long unciform lobe (*l*) on each side and extending beyond the annellus to the niveau of the middle of corpus. Moreover, large fusiform and ciliate elements (*s*) are present in front of the sclerite. Proximal segment of lateral lobe (Fig. L) is long, constricted and with a distal process before the articulation. Middle apodeme (*m*) is narrowed distally, while the vellum is large. Outer apodeme of medial segment is separating from the margin at the end. Distal segment (Fig. M) is elongate; *a* is medial and longer than *b*.

Length. ca. 3.0 mm (Head long 0.45 mm $\times$ wide 0.50 mm; pronotum 0.49 mm $\times$ 0.61 mm; elytra 0.49 mm $\times$ 0.77 mm).

Female: Terg. VIII is nearly as in the male. Terg. IX (Fig. N) bears large lateral lobes whose apex is shortly setose. Genital segment (Fig. O) has a broad vaginal pouch and not sclerotized.

Specimens examined: SHIZUOKA: Ito, 1♂ (13. VI 1969, T. OHRI). KYOTO: Fushimi-Inari, 1♂, 1♀ (22. V 1973, R. YOSHII).

Our specimens coincide well with the type from Kanagawa and the description of BRUNDIN 1942 in all respects. From *A. sparsa* BERNH. the present species is easily distinguished by different shape of aedeagus. Besides, the body is not shining by the presence of dense microsculpture.

***Atheta* (*Notothecta* ?) *chinkiangensis* BERNHAUER, 1938**

Fig. 6

Atheta (*Coprothassa*) *chinkiangensis* BERNH., 1938

Male: Body brown; head darker; pronotum narrowly paler along margins; elytra are similarly coloured, but the middle area from the humeral region to the postero-internal portion is lightly paler; abdomen dark leaving 3 reddish basal segments; antennae brown, paler basally; legs brown, but tibiae are infusate. Body large and rather flat, weakly shining in the foreparts and distinctly pubescent. Head is gently convex above and broadly flat in the middle; integument is covered with fine granules and sculpture throughout. Eyes large and postgena is shorter than the diameter of eye. Antenna stout; ratio of segments as I 7 $\times$ 4 : II 5.5 $\times$ 3 : III 6 $\times$ 3.2 : IV 4 $\times$ 3.5 -X 4 $\times$ 4.5 : XI 10 $\times$ 4. Labrum (Fig. A) is strongly transverse; *p*-2 is posterior to the level of *p*-1; the distal row is apparently longer than the medial row and with 5+5 secondary setae. *a*-sensilla of labral margin (Fig. B) is setaceous and long, whereas *b* is very small; *c* is normal in size. 4-segmented maxillary palpus (Fig. C) is more slender than usual and with segm. IV fairly long in relation to III.

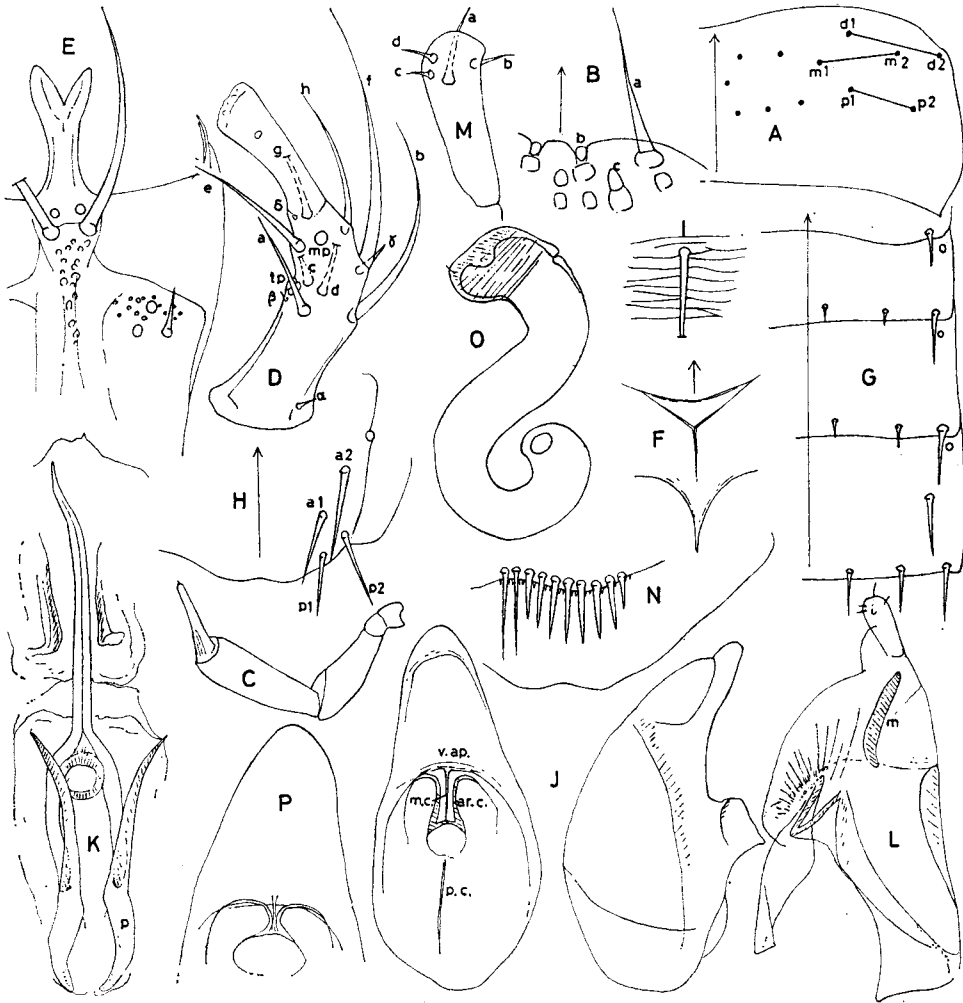


Fig. 6. *Atheta* (*Notothecta* ?) *chinjiangensis* BERNHAUER, type. A: Labral chaetotaxy. B: Labral margin. C: Maxillary palpus. D: Labial palpus. E: Glossa & prementum. F: Mesosternum. G: Terg. III, IV, V. H, I: ♂ terg. VIII & its microsculpture. J: Median lobe. K: Inner armature of aedeagus. L, M: Lateral lobe & its distal segment. N: Margin of ♀ stern. VIII. O: Spermatheca. P: Costae of median lobe from Ohita.

Chaetotaxy of labial palpus (Fig. D) is alike to that in *A. (N.) reitteriana* BERNH.; Segm. III is fairly long and constricted; β is very close to tp and γ is on the same level with f ; δ is strongly reduced and anterior to the level of e . Glossa (Fig. E) is long, narrow and forked from the anterior one-third; median area of prementum is broad and with ca. 18 pseudopores; lateral area has some 14 pseudopores which are smaller than the real pores. v -setula of mentum is normal. Pronotum is broad, gently convex

above and with a faint depression in the middle near the base; the sides are uniformly arcuate in full length and with reduced lateral erecting setae; integument is covered with very fine granules and microsculpture. Elytron is flat above and its posterior margin is fairly sinuate so that the postero-external corner is somewhat projecting behind. Mesosternum (Fig. F) has a fine median carina, fully reaching the middle. Meso- and metatibiae are each with a black, short seta. Abdomen is finely punctured. Macrochaetal arrangement as 01-03-03-13-13-34-. Among these setae of terg. III, IV the intermediate ones (Fig. G) are particularly short compared to the lateral seta. Also it is a little advanced in locus. Terg. VIII (Fig. H) has broadly rounded posterior margin where there is a shallow emargination in the middle. Microsculpture in the middle (Fig. I) is of transverse. Median lobe of aedeagus (Fig. J) is 0.52 mm. long; apical lobe is rather abruptly narrowed to an obtuse apex in ventral view and gradually bent in lateral view. *ar. c.* are slightly approximate and recurvate distally; *m. c.* is present; *v. ap.* is obscure; *p. c.* has a low projection. Inner armature of aedeagus (Fig. K) is peculiar in form; the copulatory piece is elongate and with a very long, spinose apical process and bent distally. On the corpus there is a pair of long pointed dorsal picks (*p*), which are far surpassing the end of the corpus and articulated to it basally. The distal apodeme is mostly membranous leaving the narrow pigmented portion guarding the apical process. Proximal segment of lateral lobe (Fig. L) is dilated and with a narrow distal process anterior to the articulation. The middle apodeme (*m*) is present, while the vellum is not pigmented; the distal segment is elongate and dilated distally (Fig. M); *a* is distal, *b* is shorter than *a* and close to it.

Length. 3.8 mm (Head long 0.40 mm $\times$ wide 0.60 mm; pronotum 0.65 mm $\times$ 0.95 mm; elytra 0.60 mm $\times$ 1.10 mm).

Female: Terg. VIII is rounded and emarginate nearly as in the male. Stern. VIII (Fig. N) is gradually retracted behind and ending in an obtuse, shallow apical emargination, where there is a row of long and short marginal setae; Spermatheca (Fig. O) is very small for the body (ca. 0.20 mm in diameter); the duct is short and half coiled distally; bursa is reversely twisted and with a flat umbilicus.

Specimens examined: CHINA: Chinkiang, 4♂, 1♀. JAPAN: Oita, 1♂, 1♀ (Coll. REITTER).

The type series of *A. chiankiangensis* BERNHAUER from N. W. China and Japan (Oita) are concordant in almost all respects, but costae *ar. c.* (Fig. P) in the Japanese specimen are much more approximate than in the Chinese examples. The species would represent a special subgenus of *Atheta* by its peculiar chaetal arrangement, which shows the unique pattern of 0-0-0. For the moment it is placed tentatively in *Notothecta* by the similarity of the inner armature with that of *A. reitteriana* BH. and *A. longisetosa* (K. S.). The presence of the median carina of mesosternum and the form of maxillary palpus are very characteristic.

Distribution: China, Japan.

***Atheta (Chaetida) subantennata* CAMERON, 1933**

Fig. 7

Atheta (Chaetida) subantennata CAMERON, 1933

Male: unknown.

Female: Brown in ground colour and shining. Head, pronotum and abdomen are intensively pigmented, while elytra are brown with infusate scutellar region. Antennae are dark brown and legs paler. Head is orbicular in outline and fairly narrower than the pronotum. Eyes normal in size, while postgena is long and arcuate. Antenna is nearly as in *A. longicornis*; segm. V to X are clearly longer than wide. From labial palpus (Fig. A) β is close to tp , while γ is on the same level with b , which is posterior to a ; e is on the level of mp and is fairly anterior to the level of f . Segm. I is as long as III, whose distal portion is abruptly dilated compared to the basal portion. Glossa (Fig. B) is narrow and long, forked from the middle to the narrow arms. Median area of prementum (Fig. B) is normally broad, with some 8 pseudopores, whereas lateral area has 2 real, 1 setal and ca. 6 pseudopores. The real pore is very close to the border of the median area. v -setula of mentum (Fig. C) is long and posterior to the level of u ; w is remote from the lateral margin. Each corner of mentum is fairly produced from the anterior margin. Pronotum is slightly broader than long; the sides are evenly arcuate and with very long lateral erecting setae. Elytron is not emarginate behind and slightly longer than the pronotum along the suture. Abdomen is finely granulate. Macrochaetal arrangement as 01-12-13-13-13-33-. Terg. VIII (Fig. D) is broadly truncate behind and lightly emarginate in the middle; microsculpture is transverse. Terg. IX (Fig. E) is clearly prolonged behind on each side, where some long setae are present. Paired median setae (m) are long and standing side by side. Stern. VIII (Fig. F) is short and neither incised nor emarginate at apex and with a row of similarly long marginal setae. Spermatheca (Fig. G) is long and briefly coiled at the apex; bursa is short and with a low umbilicus.

The type is a female from Unzen, Pref. Nagasaki (Brit. Mus. coll.), which is different from *A. longicornis* by narrower glossa, broader spermatheca and rounded stern. VIII. In the female of *A. longicornis* stern. VIII is lightly emarginate posteriorly at the middle (Fig. H), which is not the present case. Feature of terg. IX is also different.

***Atheta (Atheta) atramentaria* (GYLLENHAL, 1810)**syn. nov. *Atheta (Dimetrota) sulputrida* CAMERON, 1933

The type of *A. sulputrida* CAM. is a male from Kagoshima in the collection of the British Museum, which coincides quite well with the male of the cosmopolitan *A. atramentaria* (GYLL.).

***Atheta (Atheta) iturupensis* BERNHAUER, 1907**

Fig. 7

Atheta (Liogluta) iturupensis BERNHAUER, 1907

Male: Ground colour is dark brown and shining; head and pronotum similarly pigmented, while the elytra are brown with reddish tinge; abdomen is nearly black;

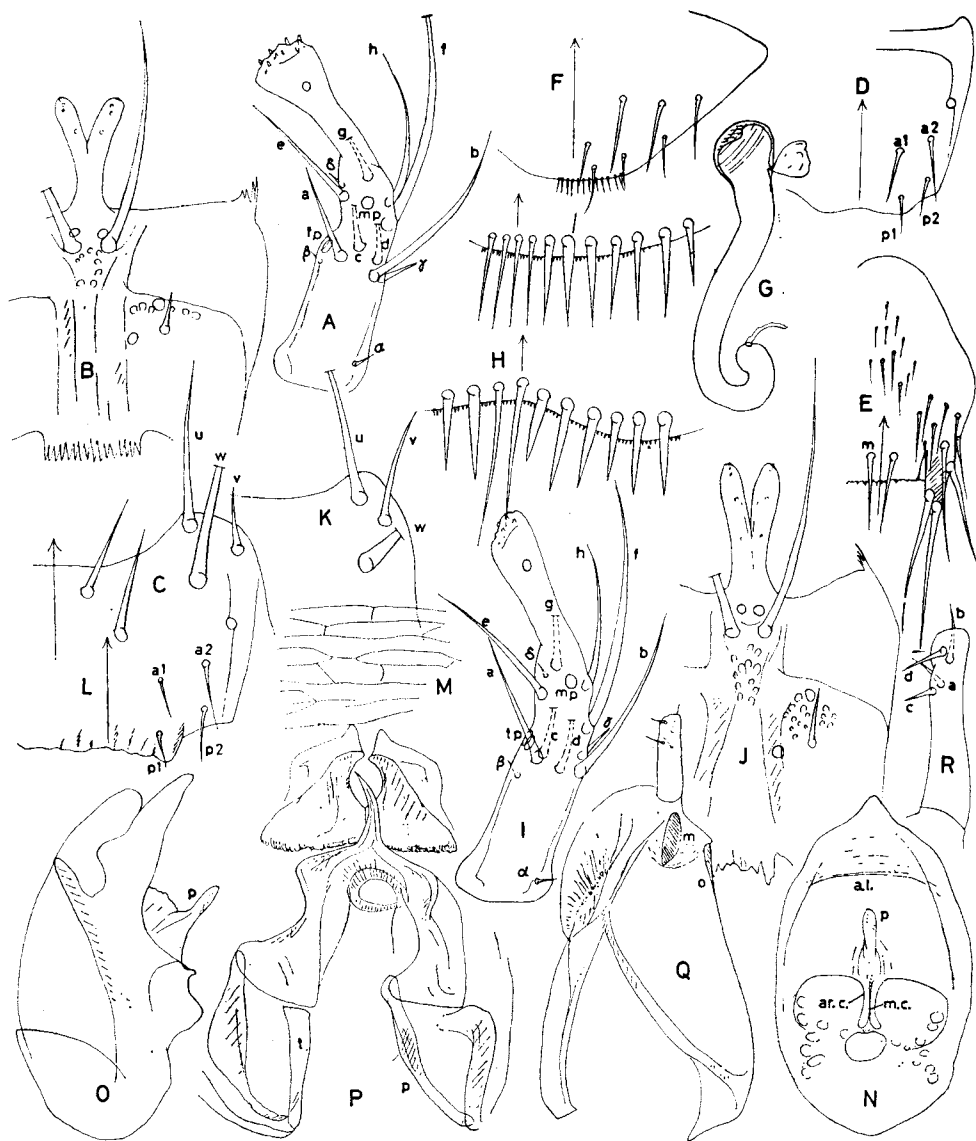


Fig. 7. *Atheta* (*Chaetida*) *subantennata* CAMERON, type. A: Labial palpus. B: Glossa & prementum. C: Mentum. D: ♀ terg. VIII. E: ♀ terg. IX. F: ♀ stern. VIII. G: Spermatheca. A.

Atheta (*Chaetida*) *longicornis* (Grav.) from Corsica. H: margin of ♀ stern. VIII.

Atheta (*Atheta*) *iturupensis* BERNHAUER, type. I: Labial palpus. J: Glossa & prementum. K: Mentum. L, M: ♂ terg. VIII & its microsculpture. N, O: Median lobe. P: Inner armature of aedeagus. Q, R: Lateral lobe & its distal segment.

antennae reddish brown, scarcely infusate distally; legs totally brown. Body robust. Head with a faint depression on the vertex. Eyes normal and postgena is fairly rounded and with dense secondary setae. Antenna is long and robust; segm. III is apparently longer than II; IV is longer than wide; XI is narrowly elongate. On labial palpus (Fig. I) β is separating from tp ; γ is anterior to b , which is on the level of a ; δ is fairly anterior to the level of e ; mp is on the same level with h . Segm. I is long compared to III. Glossa (Fig. J) is long, narrow and forked from the middle to two long arms; median area of prementum (Fig. J) is fairly dilated behind and with ca. 13 large and small pseudopores, while lateral area has some 15 small pseudopores. The real pore is placed just on the border of the median area. v -setula of mentum (Fig. K) is unusually long, and is posterior to the level of u . Pronotum is evenly convex above and with a broad median depression near the base; the sides are feebly narrowed behind; Prosternum has a median carina, which is obsolete behind. Mesosternum is prolonged behind forming an acute process. Elytron is broad for the body and clearly emarginate postero-externally; the area behind the scutellum is somewhat depressed where it is more rugose. Abdomen is very shining, but the punctures are coarse. Macrochaetal arrangement as 02-13-13-23-23-33-. Terg. VIII (Fig. L) has a broadly truncate, obsoletely crenulate posterior margin and $a-2$ of the segment is remote from the stigma and longer than $a-1$; microsculpture (Fig. M) is transverse. Median lobe of aedeagus (Fig. N, O) is 0.54 mm long and nearly ovate in ventral view; peculiarly there is a conspicuous median ridge (p) whose apical part is produced to a narrow process. Besides, the several fenestrate markings are present near the median foramen. Inner armature of aedeagus (Fig. P) is essentially as in *A. atramentaria* by the presence of the paired sclerites (p, t), they are completely articulated to each other and to the corpus. Copulatory piece (Fig. P) is strongly constricted in the middle and very abruptly pointed apically. Distal apodeme is a pair of triangular short lobes, whose apex is uncinat and with a rough posterior margin; anteriorly the distal apodeme is with a hyaline membrane. Lateral lobe of aedeagus (Fig. Q) has the middle apodeme (m); the vellum is rather reduced and distal segment is elongate and rectangular. Four major setae are similarly short and confined to the distal portion.

Length. up to 4.0 mm (Head long 0.53 mm $\times$ wide 0.56 mm; pronotum 0.63 mm $\times$ 0.78 mm; elytra 0.63 mm $\times$ 0.98 mm).

As the female is not available, it is uncertain whether the species is *Atheta* (*s. str.*) or *Dimetrota*, but to judge after the inner armature of the genital tract it is likely to be a kind of *Atheta* (*s. str.*). The species is characteristic with its median lobe having a ventral process, but the possible affinity with *A. marcida* ER. is not assured.

***Atheta* (*Psammotiba*) sp.**

Atheta (*Metaxya*) *maritima* MANNERHEIM: BERNHAUER, 1907

Atheta (*Panalota*) *maritima* MANNERH.; BRUNDIN, 1943

The specimen determined by BERNHAUER to *A. maritima* MANN. is a male from Itrup, Kuril Is. which is in the Field Mus. collection. In inspecting it is revealed that

it is a kind of *Psammotiba* but not belonging to any of the known Japanese species. However, as the true feature of *A. maritima* of Alaska is unknown, its determination is retained.

***Atheta (Halostiba) madida* BERNHAUER, 1907**

Fig. 8

Atheta (Halobrecta) madida BERNHAUER, 1907

Male: Ground colour is dark brown and opaque in foreparts; antennae brown; head and pronotum are intensively pigmented, while elytra are yellowish brown; legs uniformly brown. Head is gently convex above and nearly flat in the middle and without median fovea; the surface is quite coriaceous by the presence of the microsculpture and scattered some coarse punctures. Eyes convex and shorter than the rounded postgena. Antenna is short; ratio of segments as I 5×3.3 : II 3.5×2 : III 2.8×2 : IV 2×2.5 : X 2.3×3 : XI 5×3.2 . *m*-2 of labrum (Fig. A) is beyond the distal row; proximal row is much shorter than the medial row and nearly horizontal. *a*-sensilla of labral margin (Fig. B) is long and setaceous, while *b* is short and obtuse; *c* is longer than *b* and pointed. On labial palpus (Fig. C) *β* is separating from *tp*; *γ* is close to the level of *b*; *e* is posterior to *mp* and on the same level with *f*, which is far remote from *b*. Segm. III is narrowed proximally and dilated distally. Glossa (Fig. D) is broad, forked from the middle to short arms. Median area of prementum (Fig. D) is fairly broad and with ca. 7 large and small pseudopores and lateral area has 1 setal, 2 real and some 6 pseudopores. Mentum (Fig. E) lightly emarginate in front; *v* is normally long and on the same level with *u*. Pronotum is distinctly narrowed behind, rather broadly flat medially and with a shallow median fovea near the base; the sides are nearly straight and with a faint sinuation before the base; erecting lateral setae are short; the surface is very finely punctured and similarly sculptured as on the head; secondary setae of the middle are directed anteriorly. Prosternum is obtusely carinate. Mesosternum is without carina and shortly pointed behind. Elytron is not emarginate behind. Abdomen is finely granulated. Macrochaetal arrangement as 02-13-23-23-23-234-. Terg. VIII (Fig. F) is broadly truncate behind, where the margin is weakly emarginate in its full length. When closely observed the margin is faintly crenulated and with a row of marginal setulae, which are in accordance with the crenulation. Microsculpture is seemingly imbricate. Stern. VIII (Fig. G) is completely rounded behind, where there is a row of up to 11+11 interior marginal setulae from which some middle setulae are longer than others and deeply bifurcate into 2 remarkably long subequal arms. Median lobe of aedeagus (Fig. H) is oblong; apical lobe is nearly straight and with a broad apex; *ar. c.* are clearly separating from each other and recurvate distally; *v. ap.* is normally developed, while *p. c.* is short. Copulatory piece (Fig. I) is elongate and with a short apical process; posterior to the large annellus the lateral margins have a thickening (*t*) well pigmented. Distal apodeme is composed of a pair of short lobes guarding the corpus, whose basal margin is roughly chitinized. Lateral lobe of aedeagus (Fig. J) is narrow and with a small vellum; middle apodeme (*m*) is very nar-

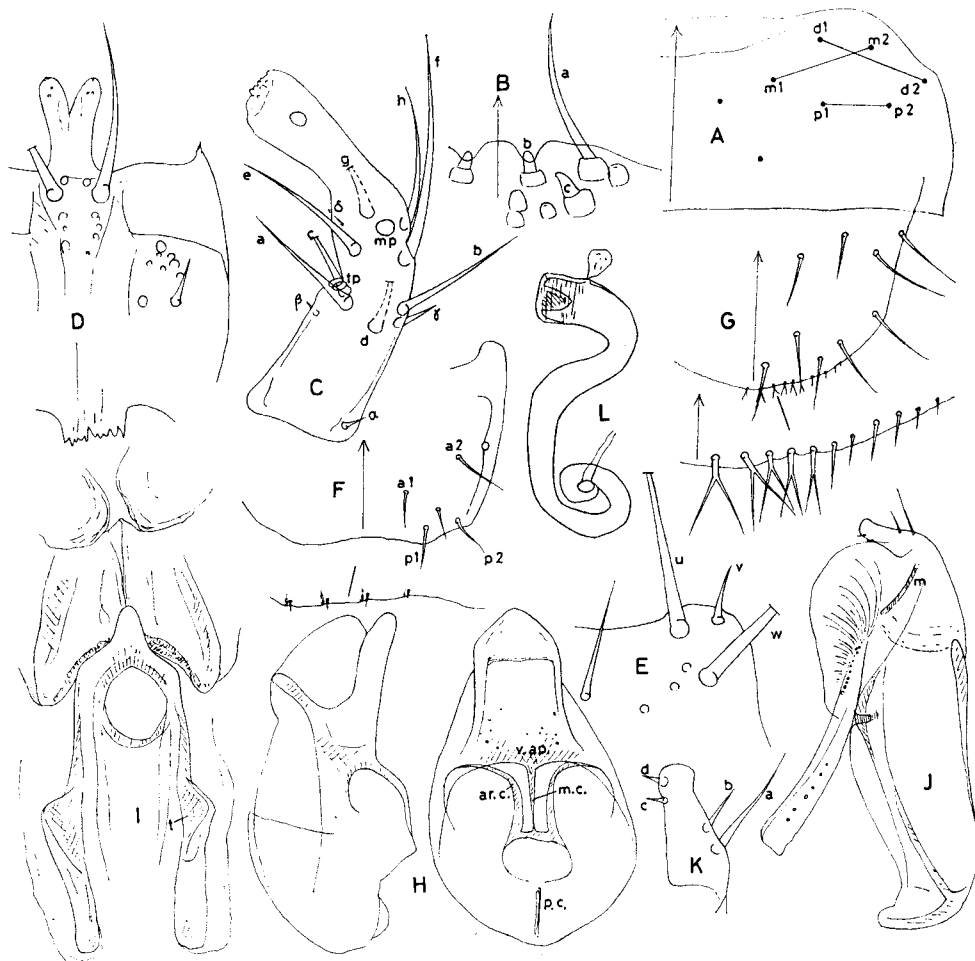


Fig. 8. *Atheta (Halostiba) madida* BERNHAUER from Karatsu, Pref. Saga. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F: ♂ terg. VIII. G: ♂ stern. VIII showing its bifurcate interior setae. H: Median lobe. I: Inner armature of aedeagus. J, K: Lateral lobe & its distal segment. L: Spermatheca.

row; distal segment (Fig. K) is short, gradually narrowed distally and with a constriction behind the apex; among 4 major setae *a*, *b* are basal and different in length, while *c*, *d* are similarly short.

Length. ca. 2.0 mm (Head long 0.24 mm × wide 0.30 mm; pronotum 0.32 mm × 0.40 mm; elytra 0.32 mm × 0.48 mm).

Female: Terg. VIII is not modified as in the male. Stern. VIII has no interior setulae. Spermatheca (Fig. L) is coiled at the end; duct is suddenly twisted behind the bursa, which is elongate and with a robust uniliculus.

Specimens examined: SAGA: Sea shore at Karatsu, 1♂, 1♀ (14. IV 1972, R.

YOSII)

As far as the external features are concerned our specimens agree well with BERNHAUER's type (♂) from Kamakura, Pref. Kanagawa. From *A. (H.) magnipennis* BERNH. this species is different by the presence of lateral thickening of copulatory piece, narrow distal segment of lateral lobe and deep bifurcated interior row of setae of stern. VIII in male. Besides, the bursa of spermatheca is fairly longer than in the cited species. However, they are very nearly related species without doubt.

***Tomoglossa* KRAATZ, 1856**

Typus: *Homalota luteicornis* ERICHSON, 1837

The genus is peculiar in many respects. In contrast to usual *Athetae* *a*-sensilla of labral margin is smaller than *b* (Fig. C). Head bears many setae directed medially and its basis is with a crescent depression (Fig. A). Mandible (Fig. D) is peculiarly slender and the left one is with a basal notch as in *Hydrosmeeta*. Mentum and submentum are not divided, but fused to one plate (Fig. H). Macrochaetal arrangement of abdomen is of *Tachyusa* type. Referring these characters the genus may be assumed to be placed between *Hydrosmeeta* and *Tachyusa* in contrast to the previous conception of YOSII et K. SAWADA, 1976.

***Tomoglossa luteicornis* ERICHSON, 1837**

Fig. 9

Male: Body is parallel and convex above in foreparts. Head is rugose with many setae directed upwards and with peculiar crescent depression at the basis (Fig. A). Eyes remarkably small. Labrum (Fig. B) is extremely transverse; proximal, medial and distal rows of setae are similarly long and confined to the middle; *p*-1 is internally. *a*-sensilla of labral margin (Fig. C) is much smaller than *b*, the latter is a large spine clearly protruded beyond the anterior margin. Mandibles (Fig. D) are long and curvate distally; the right one has a well defined molar tooth, while the left one is with a shallow notch basally. On labial palpus (Fig. E) β is completely reduced; γ , δ are similarly long; *a* is on the same level with *b*; *f* is on the level of *e* and widely separating from *b*. Segm. I has a few pseudopores and much broader than III. The arms of the glossa (Fig. F) are separate to each other and standing almost parallel. Median area of prementum (Fig. F) has some 5 pseudopores and lateral area has only 4 pseudopores in addition to 2 real and 1 setal pores. Mentum (Fig. G) is emarginate in front; *v* is reduced to a minute spinula with the socket of normal size; *u* is marginal in position. Peculiarly the mentum is devoid of the suture delimiting it from the submentum (Fig. H), so that the two parts are confluent to one plate. Pronotum is feebly retracted behind and with a well-marked posterior corner; the sides are straight with very short lateral erecting setae; along the middle the setae are directed posteriorly. Elytron is not emarginate behind. Mesosternum is briefly pointed behind and without median carina. Abdomen is parallel and with coarse punctures; terg. VII is much longer than VI. Macrochaetal arrangement as 01-02-02-02-02-33-. Terg. VIII (Fig. I) is

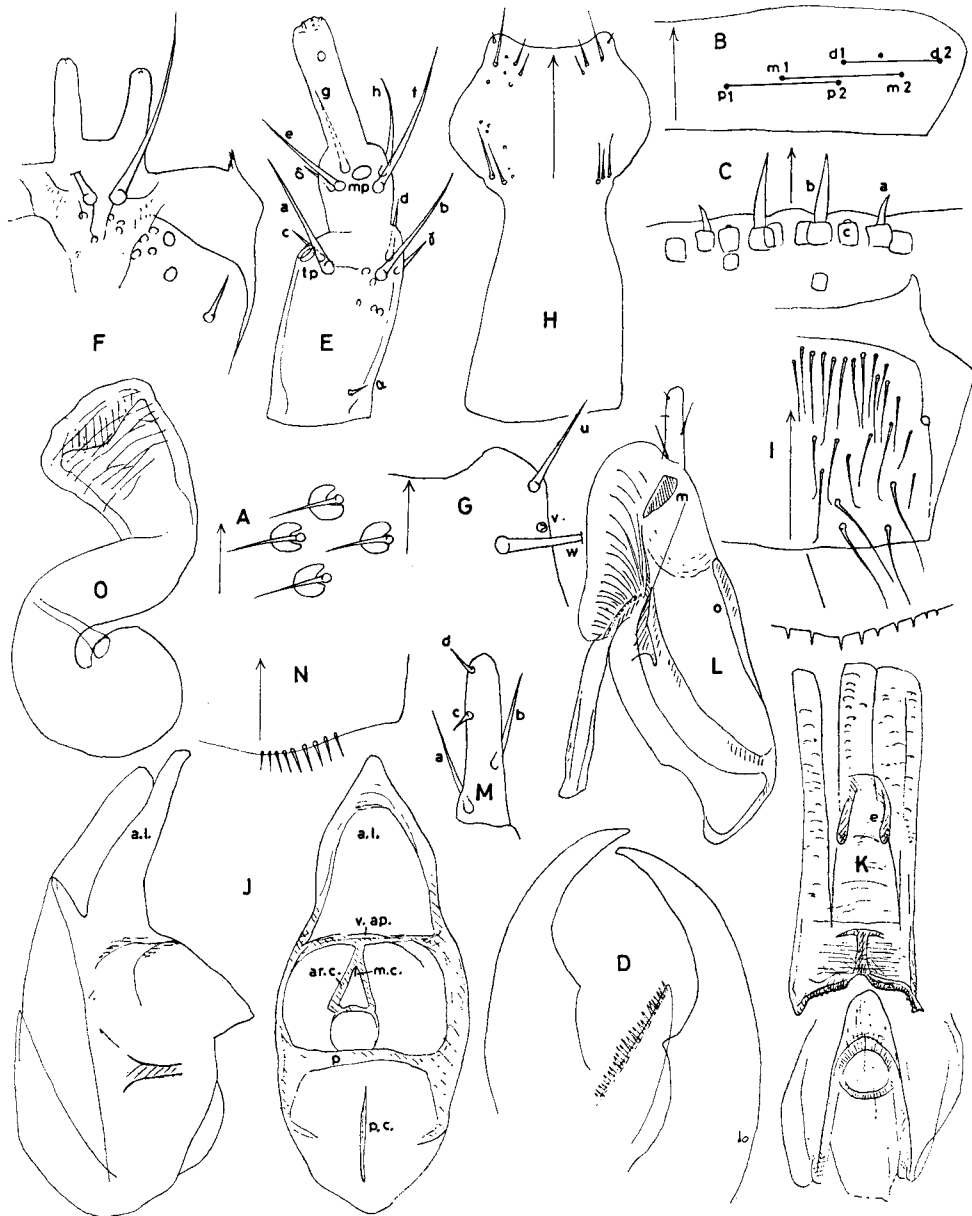


Fig. 9. *Tomoglossa luteicornis* ERICHSON from Neusiedler See, Austria. A: Crescent depressions of head. B: Labral chaetotaxy. C: Labral margin. D: Mandibles. E: Labial palpus. F: Glossa & prementum. G: Mentum. H: Confluent mental region. I: ♂ terg. VIII. J: Median lobe. K: Inner armature of aedeagus. L, M: Lateral lobe & its distal segment. N: ♀ stern. VIII. O: Spermatheca.

entirely truncate behind and the margin bears serrulation discernible in high magnification; among 4+4 major setae *a*-2 is separating from the stigma; long secondary setae (Fig. I) are confined to the anterior part, some of which are curled distally. Microsculpture is imbricate type. Median lobe of aedeagus (Fig. J) is ca. 0.20 mm long. It is produced in the middle to a pointed apex; the apical lobe is pointed and with constricted base in ventral view. *ar. c.* are nearly straight and confluent at apex, while *m. c.* is reduced; *v. ap.* is narrow. A transverse costa (*p*) occurs behind the ventral orifice. From the inner armature of aedeagus (Fig. K) the copulatory piece is comparatively short and simple; apical process is quite obtuse at apex; annellus is large. Distal apodeme (Fig. K) is composed of a pair of the basal lobes, whose interior margins are confluent together and continuing to the basal margin, which is sclerotized and rough in its full length; there is a pair of narrow sclerites (*e*) anteriorly. Lateral lobe (Fig. L) is narrow; middle apodeme (*m*) is short, while outer apodeme (*o*) is long and posterior in position; the vellum is reduced; distal segment (Fig. M) is narrowly elongate; *a* is long and placed basally; *b* is similarly long; *c*, *d* are short and remote from each other.

Body length. ca. 2.0 mm.

Female: Terg. VIII is nearly as in the male. Posterior margin of stern. VIII (Fig. N) is arcuately produced in the middle, where there is a row of marginal setae. Spermatheca (Fig. O) is S-shaped; bursa is very stout and bears a low umbilicus within.

Specimens examined: AUSTRIA: 1 ♂, 1 ♀ (Neusiedler See, det. BERNHAUER).

The Japanese specimen determined to this species in BERNHAUER 1907 is a female from Takakiyama in the collection of the Field Museum. Whether this specimen is really *T. luteicornis* is not decided until male examples are available.

Two Japanese species referred to *Tomoglossa* by the author must be regarded to belong to *Aloconota*, since the generic conception is changed as above (cf. YOSHII et SAWADA 1976, p. 139. Postscript by K. SAWADA).

***Acrotona (Colpodota) neglecta* (CAMERON, 1933)**

Fig. 10

Atheta (Acrotona) neglecta CAMERON, 1933

Male: unknown.

Female: Ground colour is dark brown and shining; elytra are reddish brown. Head is evenly rounded on postgena. Eyes moderately large. Segm. III of antenna is subequal to II in length. On labial palpus (Fig. A) *γ* is fairly long and on the level of *b*; *δ* is short; *e* is close to the level of *mp*; *f* is much longer than others. Segm. III is nearly parallel and apparently shorter than I. Glossa (Fig. B) is long, forked to two narrow arms and with normally separating basal pores. Median area of prementum is dilated behind and with some 10 pseudopores confined to the anterior part, while the pseudopores of the lateral area are fairly reduced in number and going to arrange in a transverse row. Mentum (Fig. C) is emarginate in front; *v* is long and placed posterior to the level of *u*. Pronotum is broader than long; the sides are a little dilated behind and broadly rounded in their full length; erecting lateral setae are short. Elytron is slightly

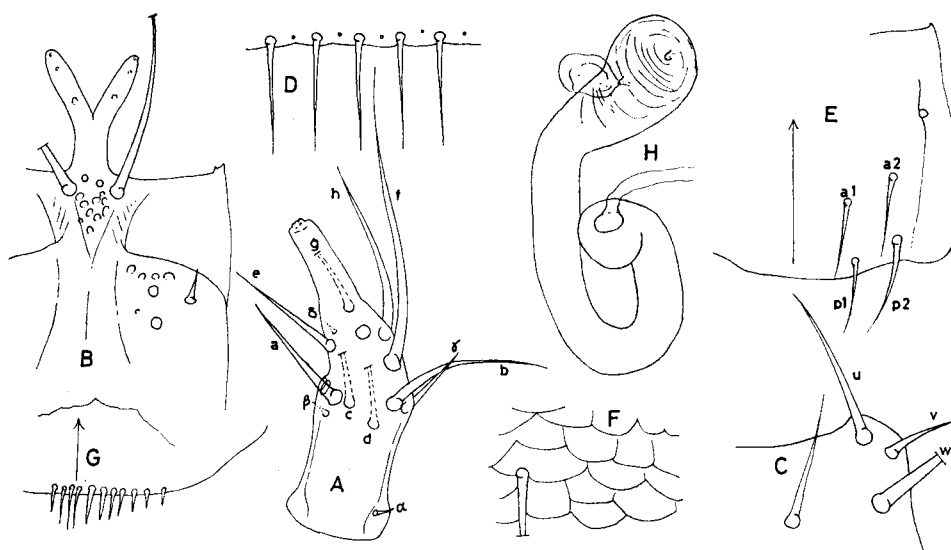


Fig. 10. *Acrotona (Colpodota) neglecta* (CAMERON), type. A: Labial palpus. B: Glossa & prementum. C: Mentum. D: Margin of terg. VI. E, F: ♀ terg. VIII & its microsculpture. G: Margin of ♀ stern. VIII. H: Spermatheca.

emarginate behind. Mesosternum is normally acuminate behind, pointed at apex and without median carina. Macrochaetal arrangement of abdomen as 01-02-13-13-13-33-. Posterior margin of terg. VI (Fig. D) is indistinctly crenulated. Terg. VIII (Fig. E) is nearly truncate at the middle of the posterior margin; *a*-2 is rather separating from the stigma; microsculpture on the middle (Fig. F) is imbricate. Posterior margin of stern. VIII (Fig. G) is flat in the middle and with a row of marginal setae gradually diminishing towards the end. Spermatheca (Fig. H) is broadly coiled; bursa is broader and with a very small umbilicus.

The type from Kagoshima (♀) is examined. With its short third segment of labial palpus, peculiar arrangement of pseudopores on prementum and by the shape of spermatheca this species is characteristic. No further materials are collected.

***Acrotona (Acrotona) lutulenta* (SHARP, 1888)**

Fig. 11

Homalota lutulenta SHARP, 1888

Male: Reddish brown in ground colour and shining; head and abdomen are intensively pigmented; antennae usually paler in basal segments. Head is rounded, neither depressed nor foveolate in the middle; the surface is nearly smooth and with very fine punctures. Eyes normal and not produced from the head. Antenna is somewhat dilated distally; ratio of segments as I 6×3 : II 5×3 : III 4.7×2.8 : IV 3×3 - X 3×4.5 : XI 8.8×4.3 . On labrum (Fig. A) *m*-2 is clearly anterior to the level of *d*-2 and very close to the distal row; *m*-1 is on the level of *d*-2; distal row is longer than the medial row. *a*-sensilla of labral margin (Fig. B) is acicular, while *b* is obtuse; *c* is acuminate at apex. Right mandible (Fig. C) has a well-defined molar tooth at the middle

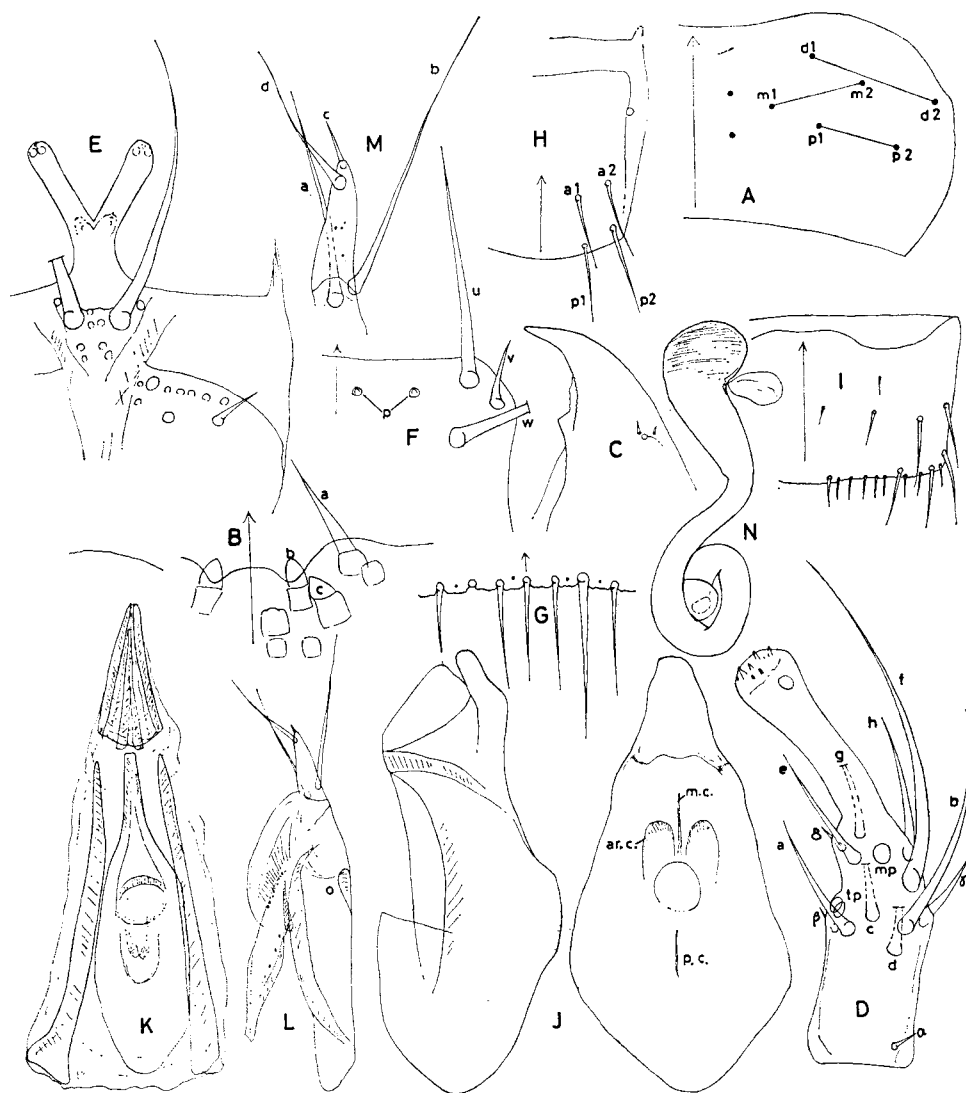


Fig. 11. *Acrotona* (*Acrotona*) *lutulenta* (SHARP) from Hase, Pref. Nara. A: Labral chaetotaxy. B: Labral margin. C: Right mandible. D: Labial palpus. E: Glossa & prementum. F: Mentum. G: Margin of terg. VI. H, I: ♂ terg. VIII & stern. VII. J: Median lobe. K: Inner armature of aedeagus. L, M: Lateral lobe & its distal segment. N: Spermatheca.

of the inner margin. From labial palpus (Fig. D) γ is long, while δ is short; a is on the level of f , which is much longer than others. Segm. III is longer than I and lightly constricted in the middle. Glossa (Fig. E) is long, deeply forked and with widely separating basal pores. The median area of prementum (Fig. E) is narrowed behind

and with some 8 pseudopores; the lateral area bears 7 pseudopores arranged in transverse row near the margin. Mentum (Fig. F) is truncate in front; *v*-setula is normally long and close to *u*; some secondary setae of the anterior part are nearly reduced to a faint projection. Pronotum is evenly convex above and without median depression; the sides are arcuate in their full length and without basal sinuation; setae along the middle are directed posteriorly. Mesosternum is acute behind and without median carina. Elytron is fairly emarginate behind; the surface is much more rugose than on the pronotum. Abdomen is narrowed behind, finely punctured and with black erecting setae. Macrochaetal arrangement as 01-12-13-13-13-33-. Posterior margin of each tergite (Fig. G) is strongly crenulated. Terg. VIII (Fig. H) is simply rounded on its posterior margin; *a*-2 is far remote from the stigma, which is at the anterior one-third of the tergite; microsculpture is very obscure. On stern. VII the anterior intersegmental area is strongly sinuate on each side (Fig. I), which is straight in usual cases of *Athetae*. Median lobe of aedeagus (Fig. J) is ovate in outline, acute distally and with a truncate apex; in lateral view it is fairly produced behind the apex and sinuate behind. Inner armature of aedeagus (Fig. K) is narrowly elongate and firmly embedded in the muscles. Copulatory piece is long and acuminate to an elongate apical process; annellus is medial in position. Dorsal to the corpus there is a pair of long, straight suspensoria, whose apices are subulate. Distal apodeme (Fig. K) is triangular in shape consisting of paired narrow sclerites and the connecting membrane between them. Lateral lobe (Fig. L) is narrow, the middle apodeme is not differentiated, but the outer apodeme (*o*) is fairly short; vellum is reduced in size; distal segment (Fig. M) is narrowly triangular; *a*, *b* are unusually long and basal, while *c* is apically placed; *d* is much longer than *c*.

Length. ca. 2.1 mm (Head long 0.20 mm × wide 0.36 mm; pronotum 0.36 mm × 0.52 mm; elytra 0.38 mm × 0.58 mm).

Female: Terg. VIII is merely rounded. Stern. VIII is with a row of short marginal setae as usual. Spermatheca (Fig. N) is coiled, but bursa is fairly elongate and without any trace of umbilicus.

Specimens examined: IWATE: Iwaizumi, 3♂, 5♀ (27. VII 1974, K. SAWADA). NAGANO: Shiga-Heights, 2♂ (8. VII 1972, K. SAWADA). SHIGA: Mt. Ibuki, 2♀ (5. VII 1973, R. YOSHII). KYOTO: Hanase, 3♂, 2♀ (31. X 1972, R. YOSHII). Mt. Hiei, 4♂, 4♀ (10. VI 1971, K. SAWADA), Fushimi-Inari, 1♂, 2♀ (9. XII 1972, R. YOSHII). NARA: Kasugayama, 3♂ (10. VI 1972, K. SAWADA), Hase, 1♂, 2♀ (7. VIII 1973, K. SAWADA). OSAKA: Nose, 1♂ (3. XI 1970, K. SAWADA), Takatsuki, 1♀ (23. IX 1970, K. SAWADA). HYOGO: Mt. Mayasan, 4♂, 2♀ (14. X 1972, R. YOSHII). KOCHI: Muroto, 1♂, 1♀ (6. IV 1973, R. YOSHII).

The type specimen (♂) from Kanagawa is quite concordant with these examples. It is allied to *A. (A.) aterrima* (GRAV.) in many characters, but in this species the body is mostly ferrugineous, lateral lobe is narrower and inner armature is quite different. With its peculiar structure of stern. VII the species would represent a special group within *Acrotoma* (*s. str.*).

Acrotona (Acrotona) taedia (CAMERON, 1933)

Fig. 12

Atheta (Acrotona) taedia CAMERON, 1933syn. nov. *Atheta (Acrotona) pseudoparens* CAMERON, 1933

Male: Dark brown in ground colour and shining. Head is evenly convex above and without median depression. Eyes large and slightly longer than the postgena. Antenna is feebly dilated distally; ratio of segments as I 20×10 : II 15×8 : III 14×8 : IV 9×9 -X 9×12 : XI 28×12.5 . Labrum (Fig. A) is feebly emarginate in front; $m-2$ is nearly on the level of $m-1$ and $d-2$; all rows of setae are subequally long. a -sensilla of labral margin (Fig. B) is rather short and setaceous; b , c are similarly oblong. On labial palpus (Fig. C) β is close to tp , while γ is anterior to the level of b ; d is medial and much posterior from c ; mp in on the same level with e and h . Segm. III is apparently longer than I. Glossa (Fig. D) is deeply forked and with widely separating basal pores. Median area of prementum (Fig. D) is narrow and with ca. 6 pseudopores; lateral area has 2 real pores widely separating from the border of the median area together with some 10 small pseudopores arranged almost transversely. v -setula of mentum (Fig. E) is short and posterior to the level of u . Pronotum is uniformly convex above and without median depression; the sides are a little narrower towards the head than to the elytra and with very short lateral erecting setae; the setae along the middle are posteriorly directed. Elytron is not emarginate behind; the surface is more coarsely granulated than on the pronotum. Abdomen is finely punctured. Macrochaetal arrangement as 01-12-13-13-13-33-. Terg. VIII (Fig. F) is truncate behind and among 4+4 major setae $a-2$ is far remote from the stigma, which is fairly reduced in size; microsculpture (Fig. G) is transversely imbricate. Peculiarly the posterior margin of stern. VIII (Fig. H) is provided with a row of 5+5 black conspicuous macrosetae. Median lobe of aedeagus (Fig. I) is elongate and acuminate to form a pointed apical lobe, which is gradually bent down and with a shallow dorsal hook at apex. Ventral orifice is small for the corpus. $ar. c.$ are completely fused to form a raised plate; $v. ap.$ is narrow; $p. c.$ is long with a low projection. Inner armature of aedeagus (Fig. J) is complicated: Copulatory piece is short and with an obtuse short apical process; 2 long well-sclerotized spines are situated on each side of the corpus. When closely observed a large rounded membrane (m) is present over the corpus. Distal apodeme (Fig. J) is narrow, distally truncate and with an ear-like process distally. Lateral lobe (Fig. K) has the proximal segment fairly short for the corpus and with a curved sclerite (s) of the articulation; middle apodeme (m) is broad and semi-circular in outline together with a small process (p) in the vellum, whereas the outer apodeme (o) is unusually large and long, fully reaching the end of the medial segment. Distal segment is triangular and suddenly acuminate at apex; a is long and basal; b is shorter and apical in position and c is much shorter than d .

Length. 2.35 mm (Head long 0.35 mm $\times$ wide 0.41 mm; pronotum 0.41 mm $\times$ 0.58 mm; elytra 0.50 mm $\times$ 0.69 mm).

Female: Terg. VIII is not modified as in the male. Stern. VIII is devoid of the terminal black macrosetae. Spermatheca (Fig. L) is elongate and normally coiled up;

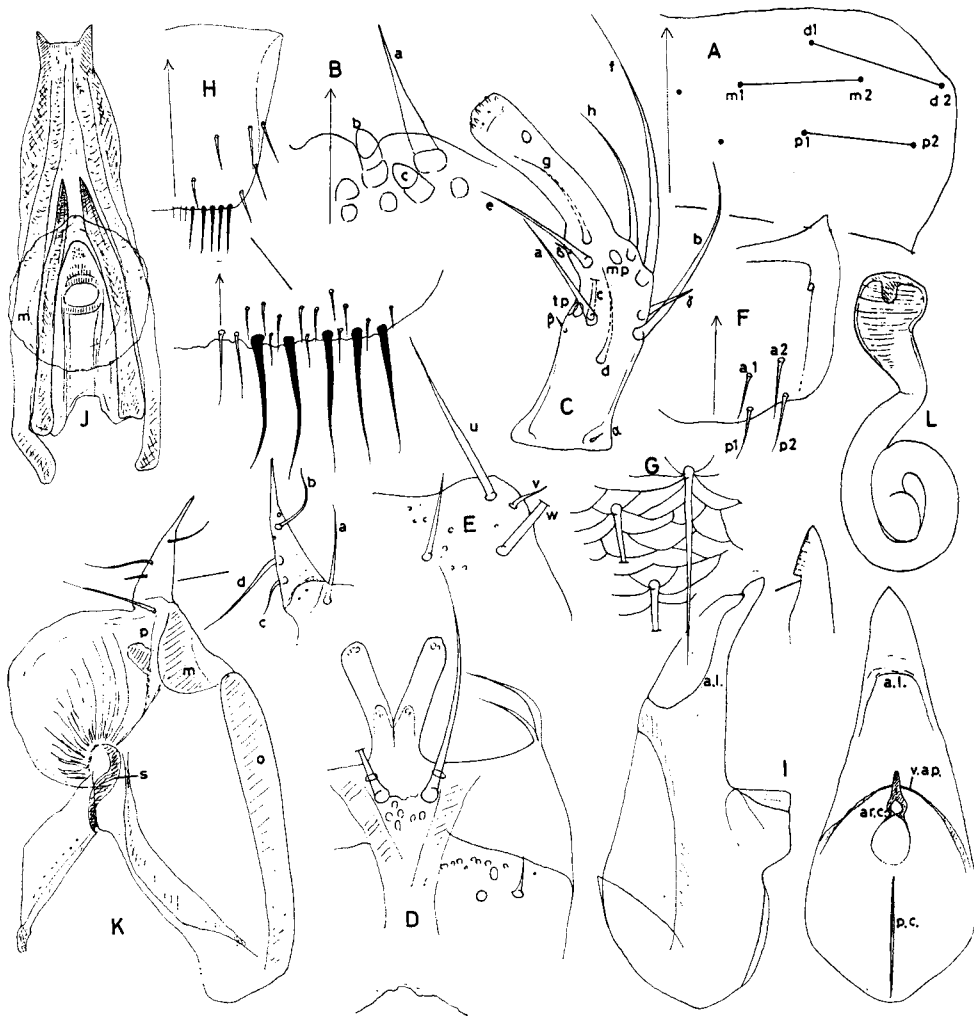


Fig. 12. *Acrotona (Acrotona) taedia* (CAMERON) from Midorogaike, Kyoto. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♂ terg. VIII & its microsculpture. H: ♂ stern. VIII. I: Median lobe. J: Inner armature of aedeagus. K: Lateral lobe. L: Spermatheca.

bursa is elongate and with bulbous head, where there is an obtuse umbilicus within.

Specimens examined: IWATE: Iwaizumi, 1♂ (23. X 1967, K. SAWADA). NIIGATA: Maikomi-Daira nr. Itoigawa, 1♂ (15. X 1970, R. YOSHII). SHIGA: Wani, 4♂, 3♀ (21. X 1971, K. SAWADA). KYOTO: Midorogaike, 4♂ 4♀ (3. X 1970, R. YOSHII), Syokokuji, 3♂, 2♀ (24. VII 1971, R. YOSHII). OSAKA: Takatsuki, 8♂, 10♀ (15. VII 1971, K. SAWADA). HYOGO: Takarazuka, 1♀ (8. VII 1974, M. TANAKA). KAGOSHIMA: Sata-misaki, 3♂, 2♀ (22. V 1955, K. SAWADA).

Our specimens agree well with the type (♂) from Harada in Kobe. In labial

palpus and prementum this species is near relative of *A. aterrima* (GRAV.) and *A. lutulenta* (SH.), but differs by the shape of aedeagus and spermatheca. The presence of marginal macrosetae of stern. VIII in male is very peculiar. The type specimen of *A. pseudoparens* CAMERON (♂) from Kobe is apparently larger than *A. taedia* and with dark colouration of body. But in these crucial characters it is concordant with *A. taedia*.

***Liogluta distans* (SHARP, 1874) comb. nov.**

Fig. 13

Homalota distans SHARP, 1874

Male: Ground colour dark brown and fairly shining. Head is nearly black; elytra are brown and tinged with yellow; antennae are a little darker distally; legs uniformly paler. Head is weakly convex above and with moderately coarse punctures. Eyes large and produced laterally. Antenna is short; ratio of segments as I 7×3 : II 5×2.5 : III 4.6×2.8 : IV 3.1×3—X3×4.2 : XI 8.5×4.3. *p*-1 of labrum (Fig. A) is nearly on the level of *p*-2, while *m*-2 separating from the distal row; proximal row is long and subequal to the medial row; 3+3 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is short and arcuate; *b* is very small. Mandibles (Fig. C) are rather narrow and with briefly hooked apex; the right one has a small molar tooth; the left is with a basal notch of the inner margin. On labial palpus (Fig. D) *β* is close to *tp*; *γ* is close to the level of *b*; *δ* is posterior to the level of *h*; *c*, *d* are close to each other and *e* is fairly anterior to the level of *f*. Segm. III is nearly parallel and much shorter than I. Glossa (Fig. E) is long, forked from the base to two narrowly ovate arms and with the basal pores in usual position. Median area of prementum (Fig. E) is broad and with some 9 pseudopores, while in lateral area no pseudopores are present excepting 2 real and 1 setal pores. *v*-setula of mentum (Fig. F) is short, stout and placed close to the level of *w*. Pronotum is gently convex above, broadly depressed behind the middle and with a median fovea near the base; the sides are weakly retracted behind and with a straight margin; lateral erecting setae are fairly long; the setae along the middle are directed posteriorly. Mesosternum is without median carina. Elytron is more coarsely punctured than on the pronotum and faintly emarginate behind. Macrochaetal arrangement of abdomen as 01-13-13-13-13-34-. Terg. VIII (Fig. G) is short and with many coarse granules; the posterior margin is nearly truncate and with an obsolete crenulation, the truncate part is shortly produced behind; microsculpture on the middle (Fig. H) is isodiametrically imbricate; among 4+4 macrosetae *a*-1 is located anterior to the level of *a*-2. Median lobe of aedeagus (Fig. I) is narrowly triangular and abruptly acuminate apically. *ar. c.* are completely fused together forming a raised plate bearing some fenestrate markings; *v. ap.* is completely effaced. Copulatory piece (Fig. J) is elongate and with a short, abruptly narrowed apical process, whose apex is faintly incised; annellus is large. Distal apodeme is mostly membraneous and with a pair of narrow elements distally. On lateral lobe (Fig. K) the proximal segment is fairly dilated and with an elongate apical process; middle apodeme (*m*)

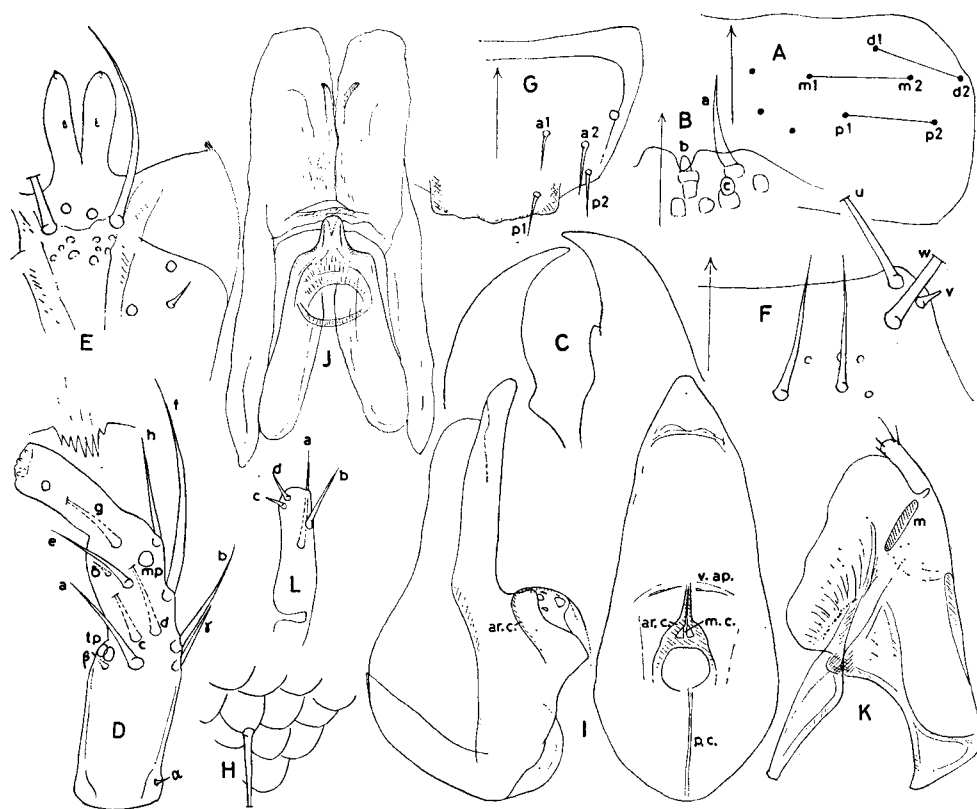


Fig. 13. *Liogluta distans* (SHARP) from Takatsuki, Pref. Osaka. A: Labral chaetotaxy. B: Labral margin; C: Mandibles. D: Labial palpus. E: Glossa & prementum. F: Mentum. G, H: ♂ terg. VIII & its microsculpture. I: Median lobe. J: Inner armature of aedeagus. K, L: Lateral lobe & its distal segment.

is narrowly elongate; vellum is normal. Distal segment (Fig. L) is subparallel; *a* is at the middle of the segment and longer than *b*; *c*, *d* are subequally short and apically placed.

Length. 2.2 mm (Head long 0.40 mm × wide 0.45 mm; pronotum 0.45 mm × 0.50 mm; elytra 0.50 mm × 0.60 mm).

Specimen examined: OSAKA: Kabusanji in Takatsuki, 1 ♂, (1. XI 1970, K. SAWADA).

Above specimen coincides well with the type specimen from Japan (no further notes) preserved in the British Museum. This species is near the European *L. longiuscula* (GRAV.), but different in chaetotaxy of labial palpus. Besides the body is smaller and the antennal segments are shorter. In *L. longiuscula* the aedeagus is broader and terg. VIII of male is fairly crenulated behind (after LOHSE 1974 p. 121, fig. 187: 4).

***Caenogluta* gen. nov.**

Typus: *Atheta* (*Microdota*) *ocyusina* BERNHAUER, 1907

With its broadly separated glossa and anterior setae of prementum the genus seems to be nearly related to *Liogluta* series, but in contrast to all other members of the series its lateral area of prementum is with some small pseudopores. Besides β - and δ -setulae of labial palpus are converted to very long setae, macrochaetal arrangement is of 01-02- type and apical lobe of aedeagus is deeply split in a pair of distal processes. The taxonomic status of this new genus is problematic, it would be a direct descendant from some genus of the 5,5,5 group of Aleocharinae.

***Caenogluta ocyusina* (BERNHAEUER, 1907)**

Fig. 14

Atheta (*Microdota*) *ocyusina* BERNHAUER, 1907

Male: Dark brown in ground colour and strongly shining; head is darker than the rest of the body; pronotum and elytra are similarly pigmented; abdomen is slightly paler towards the base; antennae uniformly coloured and legs paler. Body is fairly narrow and subparallel. Head is convex above and slightly depressed in the middle; the surface is with faint microsculpture. Eyes fairly small, shorter than the postgena, whose margin is nearly straight. Antenna is long; segm. I, II are much broader than others; IV is as long as wide; X is transverse. Labrum (Fig. A) is not emarginate but broadly rounded in front; $m-1$ is fairly posterior to the level of $m-2$, which is placed close to the distal row; proximal row is normally short, nearly horizontal and subparallel to the distal row; 1+1 secondary setae are present. a -sensilla of labral margin (Fig. B) is strongly reduced to a setula; b , c are similarly short. Lacinia (Fig. C) is not dilated but nearly straight along its inner margin, and galea is rather acuminate distally. From labial palpus (Fig. D) β is long; γ is normally long and anterior to the level of b ; δ is strikingly longer than usual; e is on the level of f . Segm. I is seemingly constricted at the middle and subequal to III in length. Glossa (Fig. E) is short and forked from the base to two arms, which are widely separating to each other by broad obtuse incision between them and no basal pores are present. Distal setae of prementum are short, not surpassing the apex of glossa. Median area of prementum (Fig. E) is normally broad and with ca. 7 minute pseudopores. In lateral area some 3 minute pseudopores are mixed with 2 real and 1 setal pores. Mentum (Fig. F) is not emarginate in front and with the lateral corners, which are neither produced nor angulated; v is long and posterior to u . Pronotum is uniformly convex above; the sides are feebly converging behind and with nearly straight lateral margins; lateral erecting setae are long and very fine; the surface is covered with long, sparses, posteriorly directed setae. Elytron is apparently longer than the pronotum and faintly emarginate behind. Abdomen is finely punctured. Macrochaetal arrangement is as 01-02-22-23-33-33-. Terg. VIII (Fig. G) is not modified but broadly rounded behind; 4+4 major setae are subequally short; $a-2$ is close to the stigma and on the same level with $a-1$; microsculpture of the middle (Fig. H) is imbricate. Median lobe of aedeagus (Fig. I) is

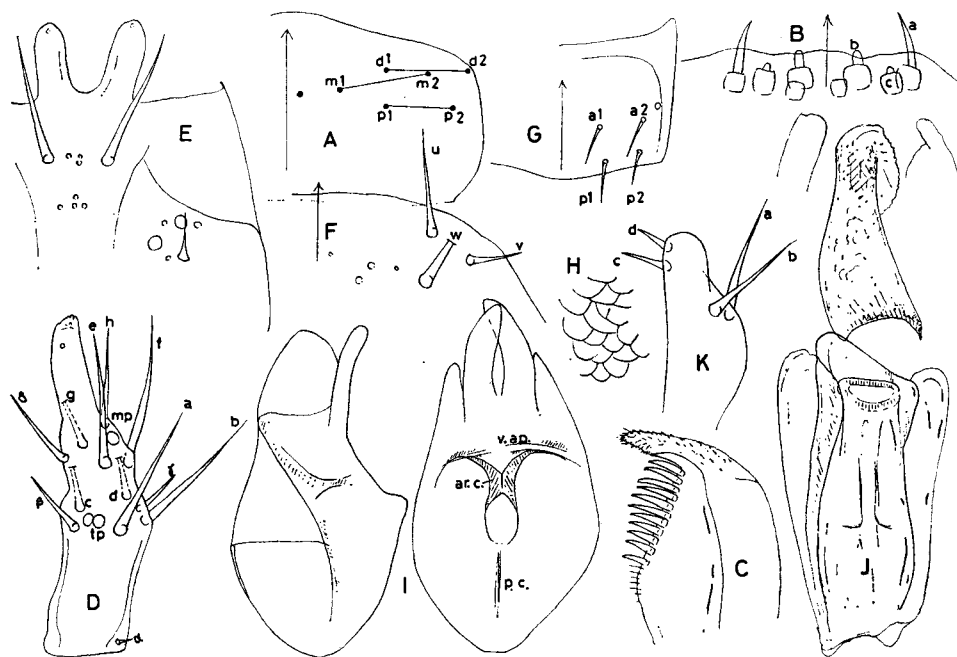


Fig. 14. *Caenogluta ocyusina* (BERNHAEUER), type. A: Labral chaetotaxy. B: Labral margin. C: Lacinia & galea. D: Labial palpus. E: Glossa & prementum. F: Mentum. G, H: ♂ terg. VIII & its microsculpture. I: Median lobe. J: Inner armature of aedeagus. K: Distal segment of lateral lobe.

0.25 mm long; apical lobe is deeply forked from the base into two elongate arms, which are incurved distally and overlapping to each other at apex. *ar. c.* are broad, confluent and recurved distally; *v. ap.* is inconspicuous. Copulatory piece (Fig. J) is elongate and with a short obtuse apical process; annellus is distally located; suspensorium is mostly membraneous. Distal apodeme (Fig. J) is a long median plate which is gradually narrowed distally and fairly emarginate at the basal margin. Distal segment of lateral lobe (Fig. K) is clearly elongate and strongly dilated in the outer margin; *a, b* are similarly long and close together, whereas *c, d.* are short and apical in position.

Body length. ca. 1.80 mm.

Female: unknown.

Only the type specimen (♂) from Okayama is known. The chaetotaxy, the features of prementum, mentum and bifurcate aedeagus are very peculiar to this species.

***Aloconota unica* (BERNHAEUER, 1907) comb. nov.**

Fig. 15

Atheta (*Liogluta*) *unica* BERNHAUER, 1907

Male: Ground colour is dark brown and subopaque in foreparts; pronotum and

elytra are similarly pigmented; abdomen is fairly infusate towards the extremity; antennae uniformly coloured and legs paler. Body is narrow and subparallel as a whole and with very short major setae. Head is nearly flat above and suddenly depressed before the base, where there is the diverging cervical carinae; the surface is clothed with very dense microsculpture throughout. Eyes large and convex laterally; postgena is equal to eye in length. Antenna is rather stout; ratio of segments as I 5.2×3.0 : II 3.1×2.5 : III 3.0×2.8 : IV 2×3 - X 3×4.4 : XI 7.2×4.1 . Labrum (Fig. A) is slightly emarginate at the middle of the anterior margin; $p-2$ is close to the level of $p-1$; $d-1$ is fairly anterior to the level of $d-2$; $m-2$ is separating from the distal row; three rows of setae are subequally short; there are $2+2$ secondary setae. a -sensilla

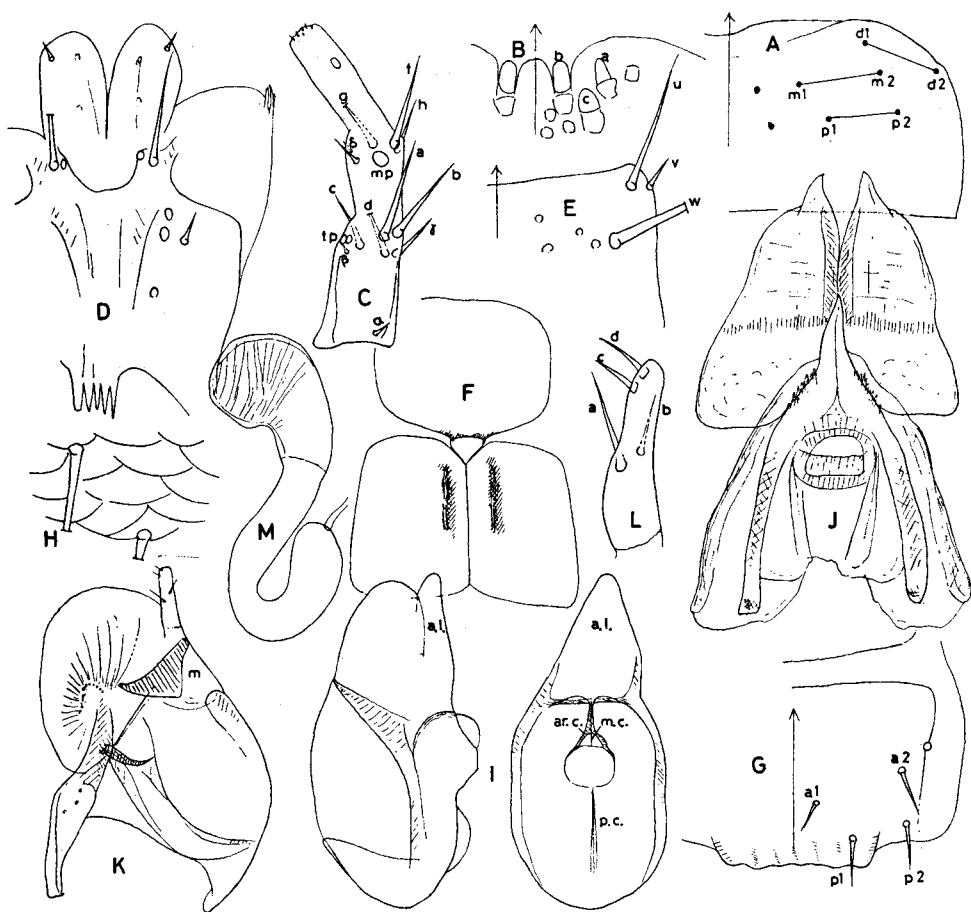


Fig. 15. *Aloconota unica* (BERNHAEUER) from Ashiu, Pref. Kyoto. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F: Pronotum & elytra. G, H: ♂ terg. VIII & its microsculpture. I: Median lobe. J: Inner armature of aedeagus. K, L: Lateral lobe & its distal segment. M: Spermatheca.

of labral margin (Fig. B) is nearly completely reduced to an obtuse projection; *b* is quite obtuse at apex and in the deep incision of the margin; *c* is normal in size. Mandibles are briefly hooked at apex; the right mandible has a small molar tooth at the middle. On labial palpus (Fig. C) β is close to *tp*; γ is posterior to the level of *b*; *a* is close to *b*; *e* is strongly reduced to a short setula and located on the same level with *mp*; *f* is on the level of *h* and far remote from *b*. Segm. III is parallel and apparently longer than I. Glossa (Fig. D) is fairly lobate and forked from the base to two obtuse arms; when closely observed a pair of minute setulae of glossa is detectable. The basal paired pores are fairly small and situated near the socket of each distal seta, which is strongly reduced in length. Both median and lateral areas of prementum (Fig. D) are without pseudopores leaving 1 setal and 3 real pores of the lateral area. Mentum (Fig. E) is truncate in front; *v* is short and on the level of *u*. Pronotum is feebly narrowed behind; the sides are nearly straight and without sinuation before the base; there is a pair of fine prominences (Fig. F) at the middle of the posterior margin; the secondary setae are inconspicuous and are directed posteriorly; the lateral electing setae are similarly short and raised upward from the margin. Mesosternum is clearly truncate at apex and devoid of median carina. Metasternal process is fairly prolonged, so that the mesocoxae are broadly separating to each other. Elytron is not emarginate behind; lateral to the suture a pair of carinae (Fig. F) is present; major setae on it are strongly reduced to the minute setulae. Macrochaetal arrangement of abdomen is as 01-21-21-21-23-23-. Terg. III, IV bear a short median carinula before the posterior margin. Terg. VIII (Fig. G) is broadly truncate behind, where it is shortly produced beyond the end and with obsoletely crenulated hind margin. Along the margin some five short carinulae are present. Among 4+4 major setae *a*-1 is shorter than others and is close to the mid-line, while *a*-2 is close to the stigma; microsculpture on the middle (Fig. H) is of transversely imbricate. Median lobe of aedeagus (Fig. I) is elongate; apical lobe is relatively short and acuminate distally. *ar. c.* are confluent to form a raised plate; *v. ap.* is narrow; *p. c.* has a projection. Copulatory piece (Fig. J) is obtuse with an acuminate apex; annellus is large and medial in position; suspensorium is only sclerotized laterally. Distal apodeme (Fig. J) is consisting of a pair of large elongate lobes standing face to face; inner margin of the lobe is sclerotized and with a hyaline mucro at apex. Lateral lobe of aedeagus (Fig. K) is broad; proximal segment is with a short distal process anterior to the articulation; middle apodeme (*m*) is large and trinagular in shape; vellum is normally developed. Distal segment (Fig. L) is narrowly elongate; *a* is at the middle and close to *b*, which is shorter than *a*; *c*, *d.* are relatively long and located apically.

Length. 2.3 mm (Head long 0.32 mm $\times$ wide 0.44 mm; pronotum 0.46 mm $\times$ 0.54 mm; elytra 0.42 mm $\times$ 0.70 mm).

Female: Pronotum and elytron are not modified. Terg. III, IV, VIII are simple. Stern. VIII is short and with a row of long and short marginal setae as usual. Spermatheca (Fig. M) is not coiled, but deeply twisted and ending in bulbous shape; bursa is large and devoid of umbilicus.

Specimens examined: KYOTO: Ashiu, 2 ♂, 1 ♀ (28. V 1972, R. Yosii), Mt. Hiei, 1 ♂ (27. V 1971, R. Yosii); 1 ♂, 1 ♀ (7. V 1971, R. Yosii et K. SAWADA), Yase, 1 ♂ (13. V 1971, R. Yosii).

The species is to be included in *Aloconota* from its peculiarity of mouth parts and prementum. Macrochaetal formula is 01-21-21—in contrast to the European type species of 01-12-12— or from two Japanese species of 01-23-23—type. BERNHAUER's type (♂) from Ocyama (=Ooyama) has very distinct elytral and abdominal carinulae and is concordant with our male example of Mt. Hiei. In other new examples this carinulae are retarded or quite absent, so that its occurrence is rather variable. However, the presence of small prominence of pronotum is assured in all of these male examples. Absence of pseudopores in the median area of prementum and lobate glossa with a minute apical setula is also very characteristic to the present species.

***Aloconota punctifoveata* (K. SAWADA, 1970) comb. nov.**

Tomoglossa punctifoveata: K. SAWADA, 1970, 1976

***Aloconota cuspidata* (K. SAWADA, 1971) comb. nov.**

Tomoglossa cuspidata: K. SAWADA 1971, 1976

***Geostiba exasperata* (KRAATZ, 1859) comb. nov.**

Fig. 16

Atheta (*Microdota*) *granulipennis* BERNHAUER, 1907

Pelioptera exasperata KRAATZ; CAMERON 1939

Male: Ground colour brown and subopaque in foreparts; head and pronotum uniformly pigmented; abdomen a little rufescent towards the extremity; antennae evenly brown; legs reddish brown. Head densely punctured; microsculpture normal. Eyes moderately large and equal to eye in length. Antenna stout and long; segm. III subequal to II in length; IV is fairly small and transverse; V to X are much broader than long. On labial palpus (Fig. A) β is very close to tp ; γ is proximally removed to the middle of segm. I; δ is short and on the same level with g ; a is widely remote from tp and posterior to the level of b ; mp is on the level of g . Segm. I is shorter than III. Glossa (Fig. B) is broadly lobate and forked from the base. Basal pores of glossa are fairly remote to each other. Median area of prementum is fairly broad and with some 10 minute pseudopores. Distal setae short. Lateral area has no pseudopores. Lateral corner of mentum (Fig. C) is feebly produced in front; v is reduced and placed just posterior to u ; w is within the lateral margin. Galea has long cilia distally and lacinia is densely ciliate along the inner margin and without abrupt dilation. Pronotum is fairly convex above and distinctly narrowed anteriorly; the sides are evenly rounded in their full length and with long lateral erecting setae; integument is covered with many punctures and with long pubescence; setae along the middle are directed posteriorly. Elytron is slightly dilated behind, not emarginate postero-externally and there is a group of granules at the postero-internal corner. Macrochaetal arrangement of abdomen

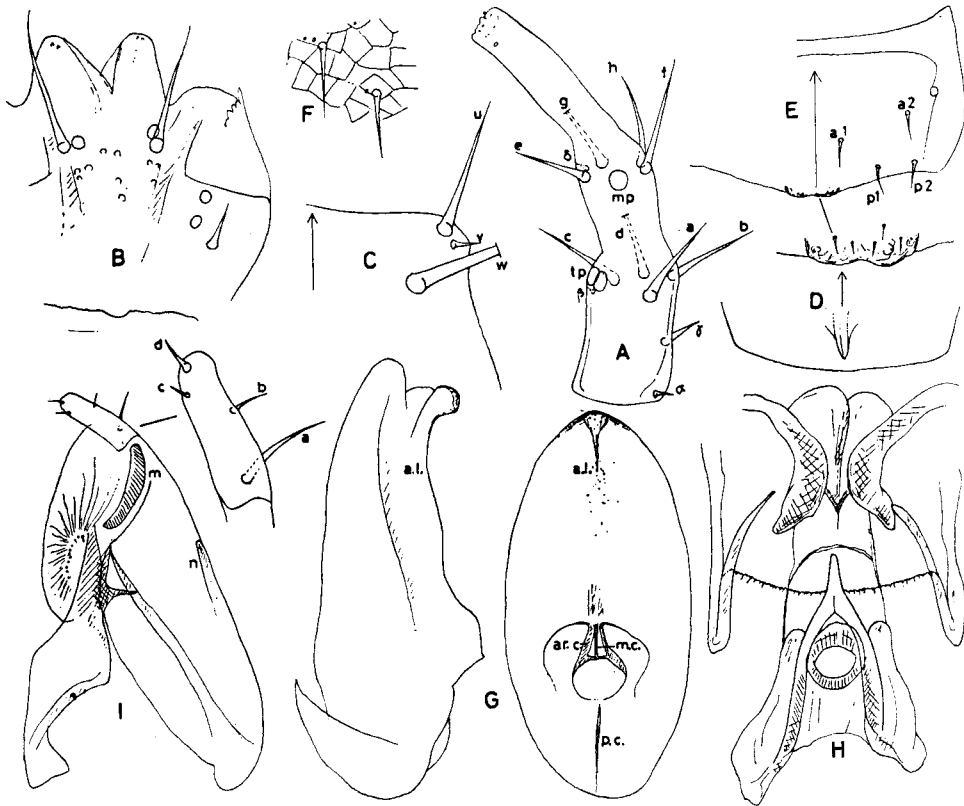


Fig. 16. *Geostiba exasperata* (KRAATZ), type of *Atheta granulpennis* BERNHAUER. A: Labial palpus. B: Glossa & prementum. C: Mentum. D: ♂ terg. VII. E, F: ♂ terg. VIII & its microsculpture. G: Median lobe. H: Inner armature of aedeagus. I: Lateral lobe.

as 01-11-11-11-12-33-. On terg. VII (Fig. D) there is a short median carina before the posterior margin. Terg. VIII (Fig. E) is fairly short; the posterior margin is rounded in its full length and with a small prominence at apex, which is flat above and with some rounded punctiform depressions on it. The posterior margin of the prominence is uneven and with flat emargination in the middle. Microsculpture (Fig. F) is of reticular type. 4+4 major setae are fairly short; *a*-1 is widely separating from *a*-2. Median lobe of aedeagus (Fig. G) is 0.30 mm long and elliptical in ventral view; apical end is terminating in a bulbous thickening which is hooked and producing behind into a fine carina. *ar. c.* are strongly approximate and recurvate distally; *m. c.* is indistinct; *v. ap.* is not differentiated. Copulatory piece (Fig. H) is acuminate and with a short apical process; annellus is normal; suspensolium is mostly membranous. Distal apodeme is a pair of narrow lobes strongly approximate together behind and each with a long subulate lobe. Lateral lobe (Fig. I) is moderately broad; proximal

segment is abruptly dilated and with a distinct process anterior to the articulation where there is a narrow triangular sclerite; middle apodeme (*m*) is elongate, while the marginal apodeme (*n*) is clearly reduced; distal segment is narrow and subparallel; *a* is long and basally placed, while *b* is short and separating from *a*; *c* is much shorter than *b*.

Body length. ca. 2.10 mm.

Female: unknown.

The type specimen (♂) of *A. granulipennis* BH. from Ocyama (=Ooyama) is investigated. In the chaetotaxy of labial palpus, gross feature of copulatory piece and terg. VII with a carina this species is closely related to the European *G. circellaris* (GRAV.), but differs by the shape of prementum and glossa and by the form of median lobe of aedeagus. Besides terg. VIII of male is with a small apical prominence and with 4+4 major setae in this species. The position of *Pelioptera* KRAATZ, 1857 must be discussed with the type species *P. micans* (KR.) in further studies. The identity of *A. granulipennis* BH. with *G. exasperata* (KR.) as cited in CAMERON 1939 is newly assured.

***Geostiba ocyamensis* (BERNHAEUER, 1914) comb. nov.**

Fig. 17

Atheta (*Liogluta*) *ocyamensis* BERNHAUER, 1914

Male: unknown.

Female: Brown in ground colour; head is more intensively pigmented than the rest; elytra uniformly brown and tinged with yellow; abdomen similarly coloured as pronotum and with tergites narrowly rufescent along their posterior margins. Head is evenly convex above and with long pubescence. Eyes moderately large and feebly convex laterally; postgena is weakly arcuate in its full length. Antenna is narrow for the body; segm. III as long as II; IV is broader than long; V is fairly larger than IV; X transverse; XI elongate and acuminate. Labrum (Fig. A) is not emarginate in front; *m*-2 is clearly separating from the distal row, the latter is subequal to the medial row in length; *p*-2 is very close to the level of *p*-1; 2+2 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is converted to a short, spatulate lobe, while *b* is normally oblong and much larger than *c*. On labial palpus (Fig. C) β , δ are vestigial; γ is long and placed on the level of *b*; *a* is absent; *c*, *d* are on the same level; *e* is short and anterior to the level of *mp*; *g* is on the level of *h*. Segm. III is clearly longer than I; II is long in relation to I. Glossa (Fig. D) is broadly lobate and deeply forked from the base to two broad arms; the paired basal pores are widely separating to each other. Paired distal setae of prementum are short; median area is fairly broad and without pseudopores just as in the lateral area, which has 3 longitudinally arranged real pores and 1 setal pore. Mentum (Fig. E) is with nearly effaced antero-external corners; *v* is short and at the front of *u*. Pronotum is a little broader than long and feebly narrowed in front; the sides are evenly rounded and with short lateral erecting setae; setae on the middle are directed posteriorly. Elytron is not emarginate behind. Macrochaetal arrangement of abdomen as 01-12-12-12-12-33-. Terg. VIII (Fig. F) is short; among 4+4 major setae *a*-2 is close to the stigma and widely separating from *a*-1; all major setae

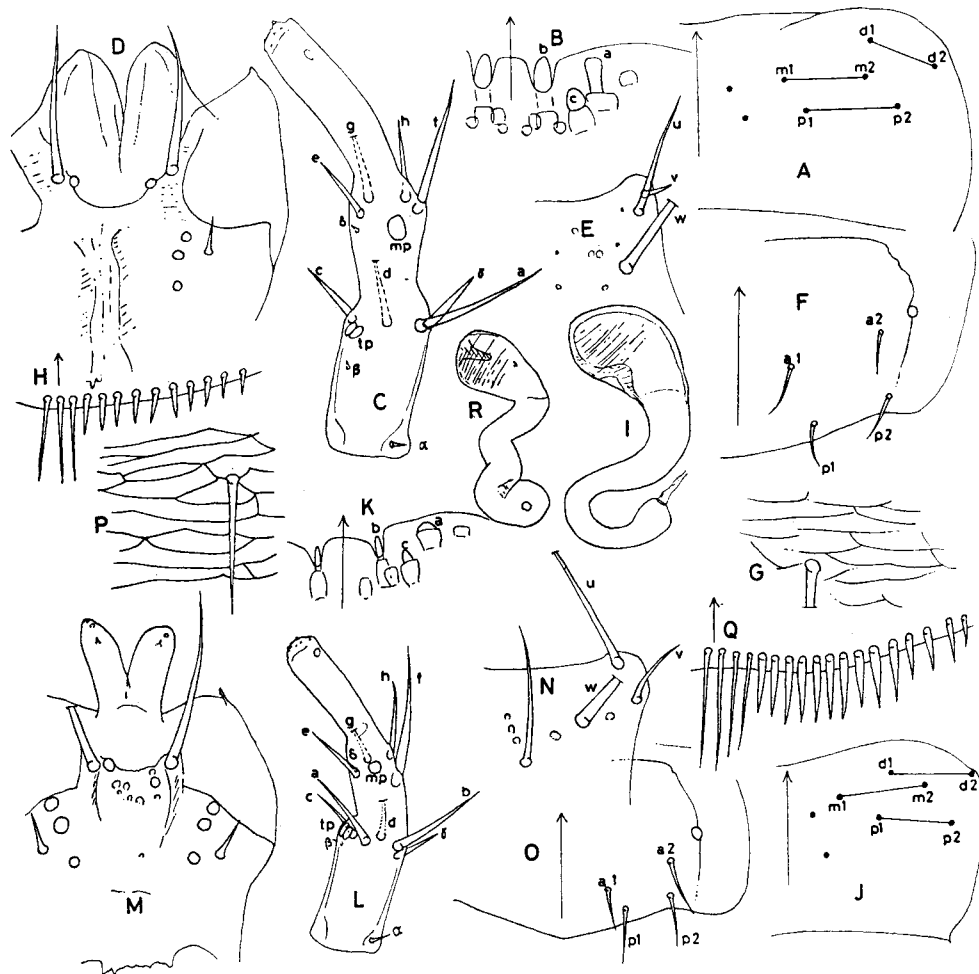


Fig. 17. *Geostiba ocyamensis* (BERNHAEUER), type. A: Labral chaetotaxy. B: Labral margin.

C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♀ terg. VIII & its microsculpture. H: Margin of ♀ stern. VIII. I: Spermatheca.

Geostiba flavonitescens (BERNHAEUER), type. J: Labral chaetotaxy. K: Labral margin. L: Labial palpus. M: Glossa & prementum. N: Mentum. O, P: ♀ terg. VIII & its microsculpture. Q: Margin of ♀ stern. VIII. R: Spermatheca.

are very short and mingled with secondary setae around them; microsculpture (Fig. G) is of transversely imbricate. Stern. VIII (Fig. H) is short and with a row of long and short marginal setae. Spermatheca (Fig. I) is strongly twisted and recurvate distally; bursa is much larger than the duct and umbilicus is sublaterally placed.

Length. 2.70 mm (Head long 0.47 mm × wide 0.47 mm; pronotum 0.52 mm × 0.56 mm; elytra 0.50 mm × 0.75 mm).

The type specimen (♀) from Ocyama (=Ooyama) is examined. The species

is closely related to *G. exasperata* (KR.) with respect to the lobate large glossa, but the median area is without any pseudopores. Besides *a*-sensilla of labral margin is modified and seta *a* of labial palpus is absent (always?).

***Geostiba flavonitescens* (BERNHAEUER, 1938) comb. nov.**

Fig. 17

Atheta (Microdota) flavonitescens BERNHAUER, 1938

Male: unknown.

Female: Ground colour yellowish red and well shining; head is brownish, while the pronotum is yellowish and elytra are infusate towards postero-external corner; abdomen with terg. V, VI fairly infusate; antennae reddish yellow and a little darkened distally leaving a pale terminal segment; legs totally pale yellow. Head is large for the corpus, well convex above and without depression in the middle. Eyes large and projecting from the head. Antenna is stout; segm. III nearly as long as II; IV is a little broader than wide; VII to X are strongly transverse. Labrum (Fig. J) is broadly emarginate in front; *d*-2 is on the level of *d*-1; *m*-2 is separating from the distal row, which is subequal to the medial row in length; *p*-2 is a little posterior to the level of *p*-1; there are 2+2 secondary setae. *a*-sensilla of labral margin (Fig. K) is converted to depressed ovate process, while *b* is unusually narrow and *c* is short. On labial palpus (Fig. L) β , δ are fairly small; γ is normal and very close to *b*; *a* is close to *tp*; *e* is short and on the same level with *mp*; *f* is remote from *b* and similarly short. Segm. III is apparently as long as I. Glossa (Fig. M) is normally broad, deeply forked from the base and its paired basal pores are close to the socket of the distal setae. On prementum the median area is broad and with some 7 small pseudopores and lateral area has 3 real pores and 1 setal pore. *v* of mentum (Fig. N) is fairly long and close to the level of *w*, which is well within the margin. Pronotum is convex above and without depression in the middle; the sides are narrowed behind and with nearly straight margin; lateral erecting setae are similarly short; the median setae along the middle are directed posteriorly; integument is covered with obsolete microsculpture as on the head. Elytron is lightly diverging posteriorly and faintly emarginate behind. Abdomen is parallel and feebly punctured. Macrochaetal arrangement as 01-02-12-22-23-34-. Terg. VIII (Fig. O) is short; the posterior margin is evenly produced to a pointed apex; among 4+4 major setae *a*-2 is more close to the stigma than to *a*-1; microsculpture in the middle (Fig. P) is transverse. Stern. VIII is slightly emarginate at the middle of the posterior margin and with a row of long and short marginal setae as in Fig. Q. Spermatheca (Fig. R) is twisted twice; bursa is rather small and bears a narrowly elongate umbilicus.

Body length. 2.35 mm.

The female type specimen from Unzen, Pref. Nagasaki is investigated. The species is characteristic with its bright body colour, convex foreparts of the body, narrow *b*-sensilla of labral margin and by long *v*-setula of mentum.

***Geostiba luchuensis* (CAMERON, 1933) comb. nov.**

Fig. 18

Atheta (*Liogluta*) *luchuensis* CAMERON, 1933

Male: Head and pronotum well shining. Head large. Eyes also large. Antenna is with slender segments; segm. IV, X are nearly as long as wide, while VIII, IX are a little broader than wide; XI is fairly acuminate. Labrum (Fig. A) is emarginate at the middle in front; *m*-2 is remote from the distal row and close to the level of *d*-2; *p*-1 is clearly separating from *m*-1 and on the level of *p*-2; all rows of setae are subequal in length. *a*-sensilla of labral margin (Fig. B) is reduced to a short ovate process; *b*, *c* are truncate. On labial palpus (Fig. C) β is close to *tp*, while γ is remote from *b*; δ is distal; *a* is very close to *b*; *c*, *d* are on the same level to each other; *f* is far remote from *b*. Segm. II is long; III is much longer than I. Glossa (Fig. D) is broad, deeply forked from base to basally subparallel arms. The median area of prementum (Fig. D) is broader than the lateral area and with ca. 6 pseudopores fairly aggregated to each

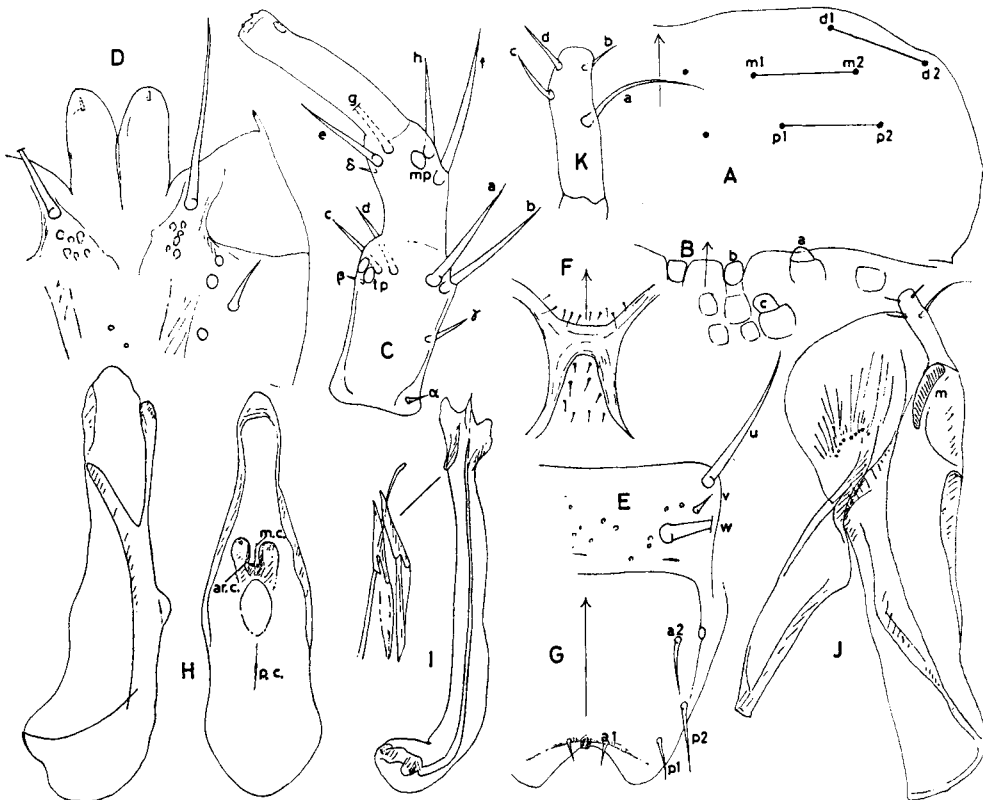


Fig. 18. *Geostiba luchuensis* (CAMERON), type. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F: Meso- and metasternal processes. G: ♂ terg. VIII. H: Median lobe. I: Inner armature of aedeagus. J, K: Lateral lobe & its distal segment.

side. Lateral area has 3 longitudinally arranged real pores and 1 setal pore. Mentum (Fig. E) is with effaced antero-external corner, where there is a very short setula to be noted as *v*; *u* is normally long and fairly anterior to the level of *v*. Lacinia is not abruptly dilated in the inner margin. Galea is densely ciliate distally. Pronotum is with short lateral erecting setae. Elytron is not emarginate behind and subequal to pronotum in length along the suture. Mesoternal process is truncate at apex, while the metasternal process is fairly produced and, therefore, the mesocoxae are distant from one another (Fig. F). Macrochaetal arrangement of abdomen as 01-12-12-12-12-23-. Terg. VII has a fine median protuberance behind the middle. Terg. VIII (Fig. G) is deeply cuspidate behind and whose bottom bears a fine protuberance having a row of arcuate ridge; among 4+4 major setae *a-1* is strongly reduced to a setula close to the protuberance; *a-2* is far remote from *a-1* and close to the stigma; *p-1*, *p-2* are fairly lateral in position; microsculpture in the middle is transverse. Median lobe of aedeagus (Fig. H) is 0.29 mm long and very narrowly elongate; the apical lobe is obtuse at apex and lightly constricted at the middle; in lateral view the lateral margin is nearly straight and with a small projection at about the middle. *ar. c.* are short and strongly recurvate distally forming a thin ventral plate around it; *m. c.* is fine, while *v. ap.* is not differentiated. Inner armature of aedeagus (Fig. I) is remarkably long; copulatory piece is mainly composed by an enormously long filiform apical process protruding beyond the apex of the distal apodeme, which is consisting of a pair of short sagittal sclerites. Lateral lobe (Fig. J) is narrow; proximal segment is long and with a dilation distally; middle apodeme (*m*) is normal in size and vellum is rounded; distal segment (Fig. K) is narrowly elongate; *a* is medial, while *b* is apical and much shorter than *a*; *c*, *d* are subequal to each other. Female: unknown.

The type specimen (♂) from Okinawa is characterized by the striking elongation of aedeagus and deeply notched terg. VIII. The feature of labral margin and chaetotaxy of labial palpus indicate that it is to be placed in *Geostiba*.

***Geostiba vacillator* (CAMERON, 1933) comb. nov.**

Fig. 19

Atheta (*Metaxya*) *vacillator* CAMERON, 1933

Male: unknown.

Female: Head is large for the corpus and densely sculptured throughout. Eyes normal in size and postgena is well developed. Antenna is feebly dilated distally; segm. III is a little shorter than II; IV is longer than wide; VIII to X are as long as wide. Labrum (Fig. A) is truncate in front; *m-2* is on the level of *d-2*; *p-2* is lightly posterior from the level of *p-1*; the medial row are much longer than the proximal row; 2+2 secondary setae are present. *a*-sensilla of margin (Fig. B) is shortly ovate; *b* is truncate at apex and fairly large. On labial palpus (Fig. C) *β* is close to *tp*, whereas *γ* is posterior to the level of *b*; *δ* is vestigial and on the level of *g*; *a* is separating from *b*; *e* is short and on the level of *mp* and anterior to *f*. Segm. III is subparallel and as long as I. Glossa (Fig. D) is bifurcate from base and with paired basal pores are

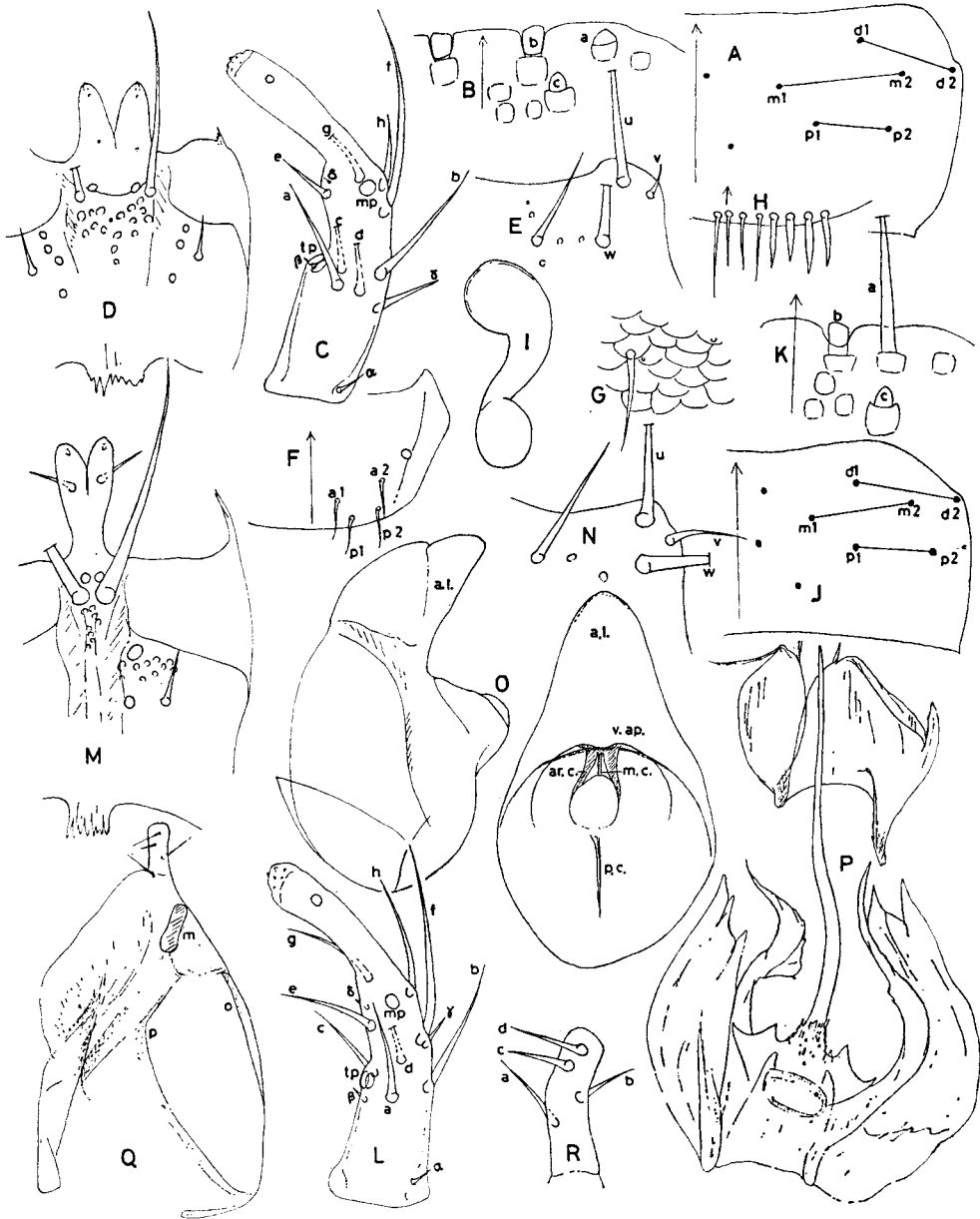


Fig. 19. *Geostiba vacillator* (CAMERON), type. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F, G: ♀ terg. VIII & its microsculpture. H: Margin of ♀ stern. VIII. I: Spermatheca.

Taxicera pseudorphana (CAMERON), type. J: Labral chaetotaxy. K: Labral margin. L: Labial palpus. M: Glossa & prementum. N: Mentum. O: Median lobe. P: Inner armature of aedeagus. Q, R: Lateral lobe & its distal segment.

widely separating, and its arms are conically produced. Median area of prementum (Fig. D) is broad and with many large and small pseudopores; the lateral area has only 3 real and 1 setal pores. Mentum (Fig. E) is emarginate in front; *v* is short, *u* is normally long and a little anterior to *v*. Lacinia has no dilation of the inner margin. Galea has many long and short cilia distally. Pronotum is slightly broader than long and feebly narrowed behind; lateral erecting setae are similarly short. Elytron is longer than the pronotum along the suture and slightly emarginate behind. Abdomen is dilated gradually towards the extremity and finely punctured. Macrochaetal arrangement as 01-12-12-12-12-23-. Terg. VIII (Fig. F) is weakly rounded along the posterior margin; among 4+4 short major setae *a*-2 is remote from the stigma; microsculpture in the middle (Fig. G) is isodiametric. Stern. VIII is short and with a row of long and short marginal setae (Fig. H). Spermatheca (Fig. I) is short and with a bulbous end; bursa is oblong and without umbilicus.

The type specimens (♀) from Katsuji is studied. In appearance the species is closely allied to *G. flavonitescens* BERNH., but differs by the narrow glossa and different shape of spermatheca. Besides the median area of prementum is with many pseudopores and *a* seta of labial palpus is not dislocated in the present species. *A. vacillator* is reviewed in BRUNDIN 1943, p. 23 based on paratypes from Unzen. But apparently it is the different species nearly related to *A. hilleri* (WEISE).

All five species recorded here have been placed in *Geostiba* according to the similarity of their buccal structure. However, they might be grouped in another way. In *G. exasperata* and *ocyamensis* the glossa is very broadly enlarged as in case of *Callicerus obscurus* GR., although the third segment of maxillary palpus is slender in form. If the character of glossa is admitted to be more significant than the form of maxillary palpus, then the two species might be separated from the rest of species which are really belonging to *Geostiba*. On the other hand, *G. exasperata* has only two real pores on the lateral area of prementum, while there are three of them in *obscurus* and *ocyamensis*. If this difference is constant and common with *P. micans* (KR.) of Ceylon, then the genus *Pelioptera* would revive and in resume they may be named as:

Pelioptera exasperata (KRAATZ)

Callicerus ocyamensis (BERNHAEUER)

Geostiba flavonitescens (BERNHAEUER)

Geostiba luchuensis, vacillator (CAMERON)

***Taxicera pseudorhana* (CAMERON, 1933) comb. nov.**

Fig. 19

Atheta (*Acrotona*) *pseudorhana* CAMERON, 1933

Male: Antennal segm. III is a little shorter than II; IV is wider than long; X is moderately transverse. Labrum (Fig. J) is feebly emarginate in front; *d*-2 is on the level of *m*-2; *p*-2 is slightly posterior to the level of *p*-1; proximal row is nearly horizontal and a little shorter than the medial row; 3+3 secondary setae are present. *a*-sensilla of labral margin (Fig. K) is normally setaceous; *b* is broad and truncate at

tip and *c* is rather small. On labial palpus (Fig. L) β is normal in position and size, while γ is fairly short and just behind *f*, which is much posterior to the level of *e*; *a* is posterior to the level of *tp*, and on the level of *b*; *mp* is subequal to *tp* in size and on the same level with *h*. Segm. III is feebly dilated towards the extremity and seemingly longer than I. Glossa (Fig. M) is long, fairly constricted basally and forked from the middle to two oblong arms in which 2 long setae are present; paired basal pore are normal and contiguous together. Median area of prementum is narrow compared to the lateral area and with ca. 8 pseudopores anteriorly. Lateral area has 2 real pores close to the median area, together with 1 setal pore and up to 10 small pseudopores. Mentum (Fig. N) is emarginate in front; *v* is long and at about middle between *u* and *w*. Terg. VIII is damaged and not accurately observed, but there may be seen an irregular incision at the middle of the posterior margin. Macrochaetal arrangement as 01-12-12-13-13-34-. Median lobe of aedeagus (Fig. O) is nearly ovate; the apical lobe is short and quite obtuse at apex in lateral view. *ar. c.* are strongly approximate and fairly recurvate distally; *m.c.* is present; *p. c.* is flat. Inner armature of aedeagus (Fig. P) is highly modified; there is an enormously elongate and filiform apical process, whose basal part bears many spinules and is dilated bilaterally to form a thin plate with sharply dentate apical margin; suspensorium is fairly extensive and mostly membranous. Distal apodeme consists of simple paired plates standing side by side and the suture is narrowly sclerotized. Lateral lobe (Fig. Q) is normal in form; proximal segment is gradually dilated medially; in the medial segment the articulation is separating widely from the junction of costa (*p*); middle apodeme (*m*) is oblong, while the vellum is large. Distal segment (Fig. R) is elongate and subparallel; 4 major setae are subequally short; *a*, *b* are medial, while *c*, *d* are distal, but the latter fairly long. Female: unknown.

The type specimen (♂) from Harada in Kobe is investigated. In the gross feature of prementum and chaetal arrangement of the labial palpus this species is concordant with *T. academica* K. SAWADA, 1976, but different in the inner armature of aedeagus and medially produced median lobe. Besides the distal segments of antennae are much longer in the cited species.

***Amischa niponensis* (SHARP, 1888) comb. nov.**

Fig. 20

Homalota niponensis SHARP, 1888

Atheta (Philhygra) niponensis SH.; BERNHAUER, 1907

Male: Dark brown to black in ground colour and shining. Body is subparallel and with short setae. Head is large for the corpus and with dense microsculpture all over. Cephalic capsule is constricted behind and cervical carina is not divided (Fig. A). Eyes fairly small, and postgena is well-developed. Antenna long; segm. III is apparently shorter than II; IV is nearly as long as wide; IX, X moderately transverse and XI is short. Labrum (Fig. B) is faintly emarginate in front; *m-2* is remote from the distal row, which is very short. *p-2* is posterior to *p-1*; 1+1 secondary setae are present. Labral margin (Fig. C) is not emarginate but nearly straight; *a* is short and

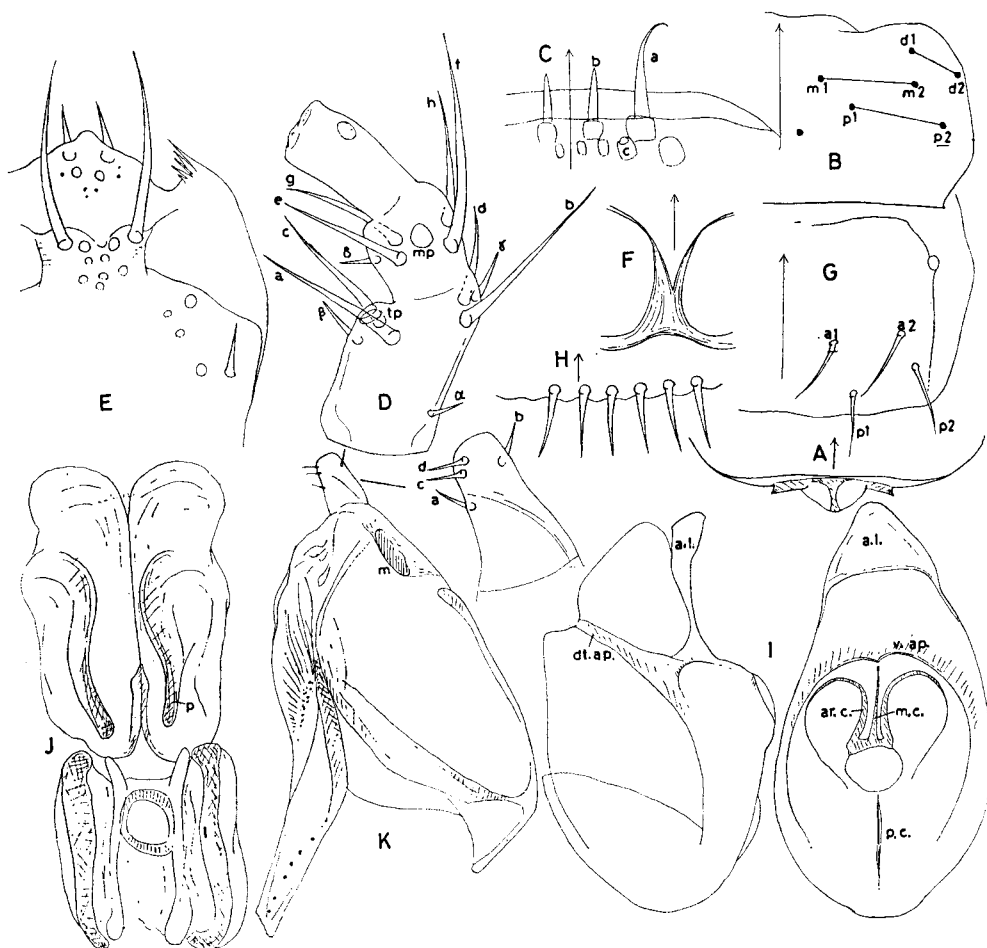


Fig. 20. *Amischa niponensis* (SHARP), type. A: Cervical carina. B: Labral chaetotaxy. C: Labral margin. D: Labial palpus. E: Glossa & prementum. F: Meso- and metasternal processes. G: ♂ terg. VIII. H: Hind margin of ♂ stern. VIII. I: Median lobe. J: Inner armature of aedeagus. K: Lateral lobe.

curled distally; *b* is fairly elongate and acuminate and *c* is insignificant. On labial palpus (Fig. D) *a* is normal; *β* is long and as long as *γ*; *δ* is well-developed and close to *g*; both *a*, *b* and *c*, *d* are separating; *f* is on the same level with *e* and close to the level of *h*. Segm. III is stout and subequal to I. Glossa (Fig. E) is broad and short, roundly produced and with two conspicuous setae; paired basal pores are between the distal setae of prementum. Median area of prementum (Fig. E) is broad and with some 6 pseudopores; Lateral area has 2 real, 1 setal and 2 small pseudopores. Pronotum has the secondary setae fairly reduced in size and number; along the middle they are directed posteriorly and with minute lateral erecting setae. Mesosternal process (Fig. F) is briefly pointed and separated from the rounded apex of metasternum.

Elytron is not emarginate behind. Abdomen is feebly narrowed distally. Macrochaetal arrangement as 01-02-13-13-13-33-. Terg. VIII (Fig. G) is not modified, but faintly emarginate at the middle of the hind margin and with 4+4 similarly short major setae normal in position. Hind margin of stern. VIII (Fig. H) is finely crenulated, with similarly short marginal setae and without interior row of setae. Median lobe of aedeagus (Fig. I) is ovate in ventral view and lightly bent downwards in lateral view; apical lobe is short and distal apodeme is narrowly elongate. *ar. c.* are approximate and fairly recurvate distally; *m. c.* is entire; *p. c.* has a low projection. From inner armature (Fig. J) the copulatory piece is truncate in front and with a short apical process on each side; annellus is large and premedially situated; lateral to the corpus there is a long chitinized lobe (*l*), which may designated as suspensorium. Distal apodeme is broad, mostly membranous and with paired narrow chitinized processes (*p*). Lateral lobe (Fig. K) is broad and with a long, curved proximal segment; middle apodeme (*m*) is small and vellum is reduced. Distal segment is fairly short and with four similarly short setae; *a* is marginal at the middle and *b* is opposite to *a*; *c*, *d* are close together. Body length. up to 2.0 mm.

Female: unknown.

Only the type specimen (♂) from Nagasaki is investigated. From *A. analis* (GRAV.) this species differs by gross feature of labium, chaetotaxy of labrum and unmodified terg. VIII of male. Besides the antennae are thinner distally in the present species.

The species must be placed in *Amischa* without doubt as the glossa is broadly produced as in *A. analis* (GRAV.) of Europe. The macrochaetal formula of *A. niponensis* (SH.) is 01-02-13-13-..., while it is 01-02-02-02-... in the European *A. analis*. According to the chaetal formula of *Amischa* THMS. varies considerably within the genus.

Following two species which has been regarded as *Atheta* do not belong to Athetae.

***Phymatura oligotinula* (SHARP, 1888) comb. nov.**

Fig. 21

Homalota oligotinula SHARP, 1888

syn. nov. *Atheta* (*Datomicra*) *crenulicauda* BERNHAUER, 1907

syn. nov.? *Phymatura japonica* CAMERON, 1933

Male: Ground colour reddish brown and shining. Foreparts fairly convex above. Head is apparently large, subglabrous and without median depression. Eyes large and produced laterally. Antenna is short and distinctly incrassate towards the extremity; segm. III is a little shorter than II; IV is wider than long and much smaller than V; XI is as long as two precedings together. Labrum (Fig. A) is shallowly emarginate in front; *m*-2 is beyond the distal row; *p*-1 is posterior to the level of *p*-2; medial row is parallel to the proximal row; 1+1 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is setaceous; *b* is subtruncate at apex and close to each other; *c* is acuminate. The right mandible has a small molar tooth in the middle. On labial palpus

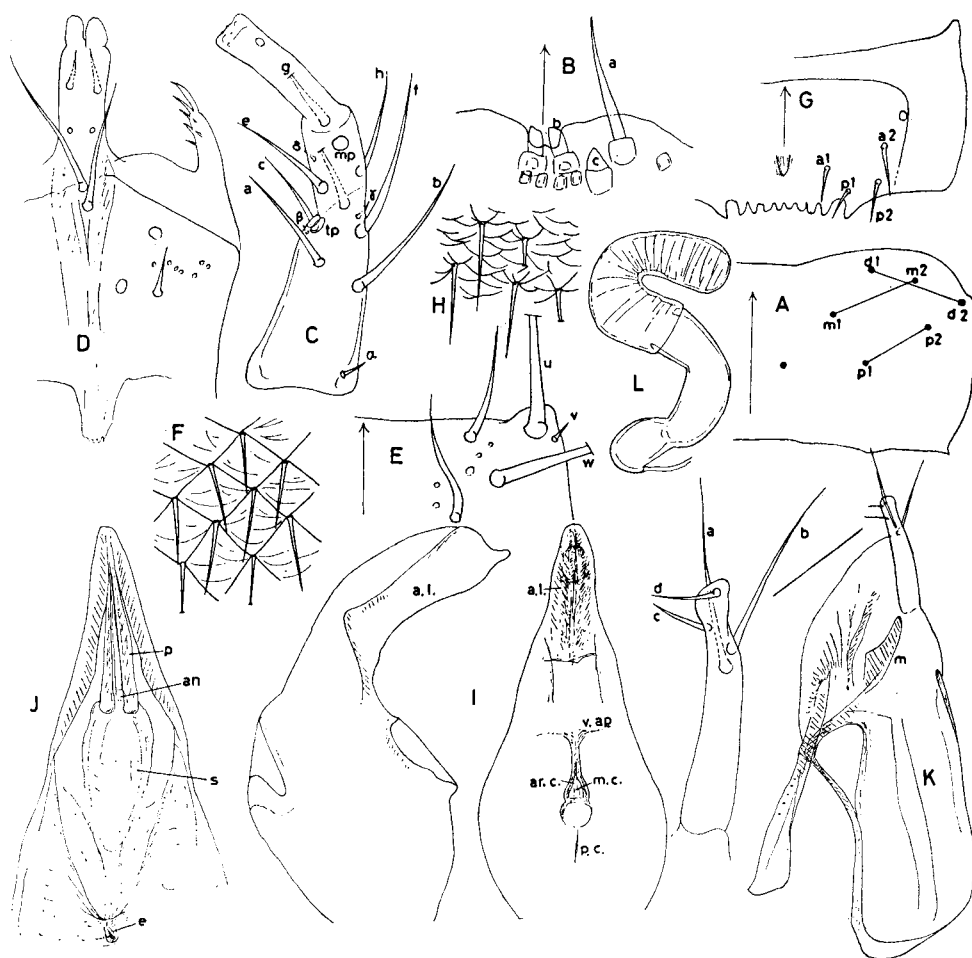


Fig. 21. *Phymatura oligotinula* (SHARP) from Nara. A: Labral chaetotaxy. B: Labral margin. C: Labial palpus. D: Glossa & prementum. E: Mentum. F: Microsculpture of terg. III. G, H: ♂ terg. VIII & its microsculpture. I: Median lobe. J: Inner armature of aedeagus in situ. K: Lateral lobe. L: Spermatheca.

(Fig. C) β -setula is close to tp , which is subequal to mp in size; γ is short and anterior to f ; δ is vestigial and anterior to h ; mp is anterior to h ; a is posterior to tp , and b is more posterior than a . Segm. I is long and narrowed distally; II is long compared to III. Glossa (Fig. D) is elongate, nearly parallel and with a pair of setae on two obtuse distal arms and with 2 small basal pores. Distal setae of prementum (Fig. D) are arranged longitudinally; median area is narrow and without pseudopores and lateral area has 2 real and 1 setal pores together with some 7 strongly reduced pseudopores. Mentum (Fig. E) is truncate in front; u is large and v is minute. Pronotum is evenly convex above and without median depression; the sides are strongly rounded

and with short lateral erecting setae; all setae along the middle are directed posteriorly. Prosternum is highly carinate, but mesosternum is normally pointed behind and without median carina. Elytron is lightly emarginate behind, and the corner is projecting posteriorly. Tarsal formula as 4, 4, 5; the metatarsus has segm. I elongate, fairly longer than II. Abdomen is narrowed behind and coarsely punctured. Macrochaetal arrangement as 01-11-11-12-13-123-. Terg. VII bears a very small median tubercle before the posterior margin. Terg. VIII (Fig. G) is short; the posterior margin is broadly truncate and with a row of marginal crenulation consisting of some 10 minute teeth and with a small median tubercle. 4+4 major setae are subequally short; $a-2$ is remote from $a-1$, and $p-1$ is close to $p-2$; microsculpture in the middle is transversely imbricate (Fig. H), but other body tergites have setigerous rectangular reticulation (Fig. F). Median lobe of aedeagus (Fig. I) is peculiar having a strongly complanate apical lobe, which is fairly bent downward and with a short apical projection protruded beyond the rounded apex. *ar. c.* are mostly confluent together and with a flat projection; *v. ap.* and other costae are weakly represented. Inner armature is difficult to isolate from the capsule the latter being strongly sclerotized and filled with muscles, but the gross feature of it (Fig. J) is: The long filiform apical process (p), a strongly reduced annellus (a), and a large elongate saccule (s) which is narrowly prolonged behind and ending in a solid small element (e). Lateral lobe of aedeagus (Fig. K) is narrow; proximal segment is not dilated, medial segment is with a fairly dilated costae at the articulation; middle apodeme (m) is dilated behind; vellum has a narrow pigmentation. Distal segment is fairly elongate and lightly reflected anteapically, a , b are similarly long and c , d are much shorter and apical in position. Body length. 1.75 mm.

Female: Terg. VIII is not modified, but merely rounded behind. Spermatheca (Fig. L) has a strongly curvate bursa without umbilicus; duct is fairly twisted and with a constriction before the end.

Specimens examined: KYOTO: Yase, 1 ♂ (27. XI 1970, R. YOSII, in fungus); Iwakura, 1 ♀ (10. V 1971, K. SAWADA). NARA: Kasugayama, 1 ♂, 1 ♀ (23. VI 1959, K. SAWADA); 1 ♀ (4. VI 1973, K. SAWADA).

The type from Kumamoto (♀) coincides with these new specimens. Already the tarsal number of 4, 4, 5 indicates it not belonging to the *Atheta*. The buccal structure is alike to *Bolitochara* with its two distal setae near together and the glossa only feebly divided apically, although the presence of two small setae distally on the glossa is peculiar to this species. In contrast to *Bolitochara* the mesosternal carina is not present and body length is relatively small indicating that the species is to be placed in *Phymatura* SAHLBERG.

Type specimen of *Atheta* (*Datomicra*) *crenulicauda* BERNHAUER, 1907 is a male from Bukejii in Yokohama, which coincides well with the male of this species in all respects and the name must be a synonym of this species. Furthermore the description of *Phymatura japonica* CAMERON, 1933 is identical with this species except for the larger body length.

***Omoplandria gyrophaenula* (SHARP, 1888) comb. nov.**

Fig. 22

Homalota gyrophaenula SHARP, 1888

Male: unknown.

Female: Rufotestaceous in ground colour and shining; elytra somewhat infuscate; antennae darker distally; legs uniformly pigmented. Body is convex above and fairly narrowed behind. Head is much narrower than pronotum and without depression in the middle; the surface is covered with fine and dense punctures. Antenna is short and dilated apically; segm. III is much shorter than II as in *Microdota*., but not cup-shaped in outline; IV is lightly transverse and much smaller than V; VII to X are strongly wider than long. Labrum (Fig. A) is bisinuate in front and all major setae are on its distal half; all rows of setae are subequal in length; *d*-2 is on the same level with *m*-2; proximal row is nearly horizontal; 5+5 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is setaceous and *b* is oblong, and *c* is truncate at apex; other sensillae are separating to each other. Mandibles (Fig. C) are briefly hooked apically; the right mandible has 2 large teeth in the middle and the left one has only 1 small tooth. Maxillary palpus (Fig. D) is 5-segmented as segm. IV is

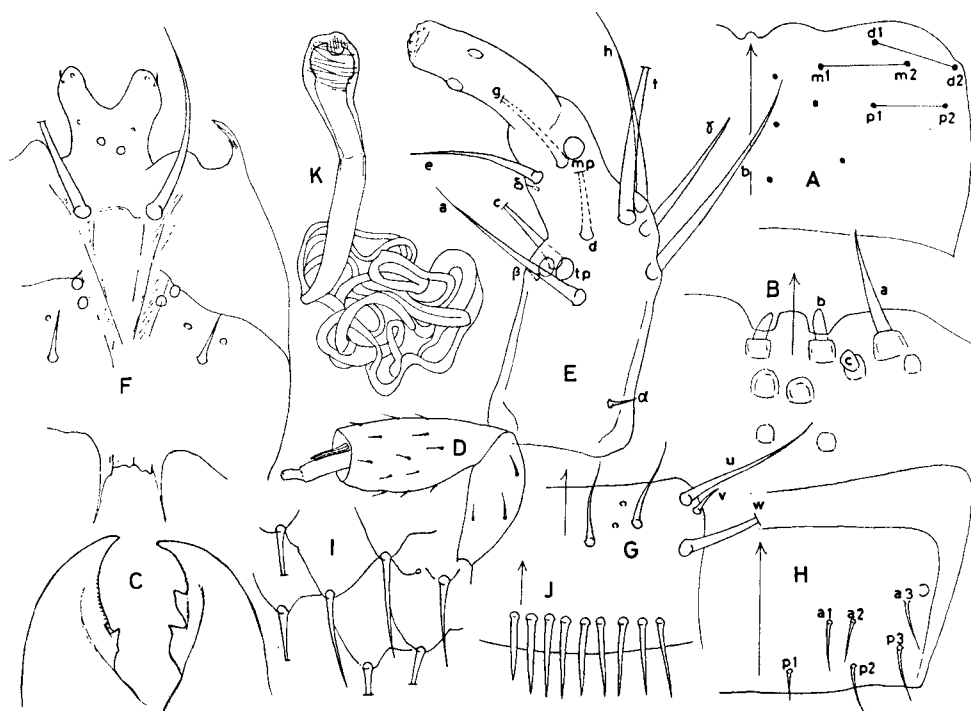


Fig. 22. *Omoplandria gyrophaenula* (SHARP), type. A: Labral chaetotaxy. B: Labral margin. C: Mandibles. D: Maxillary palpus. E: Labial palpus. F: Glossa & prementum. G: Mentum. H, I: ♀ terg. VIII & its microsculpture. J: Margin of ♀ stern. VIII. K: Spermatheca.

subsegmented. Labial palpus (Fig. E) is robust; β -setula is vestigial and close to tp ; γ is unusually long and at the middle between b and f ; β and δ are small; f , h are proximal and remote from mp . Segm. I is broader than II whose lateral margin is produced basally; III is with a faint constriction on distal one-third. Glossa (Fig. F) has a broad stem and forked to two short arms, each with one setula on it; the basal pores are anterior and separating from the distal setae. Median area of prementum is broad in front and narrowed behind and without pseudopores; lateral area has 2 real, 1 setal and some small pseudopores. Mentum (Fig. G) is truncate; v is short and close to u ; w is normally placed. Pronotum is convex above and without median depression; the sides are uniformly arcuate and with short lateral erecting setae; the setae along the middle are directed posteriorly; the surface is finely punctulate throughout and almost without microsculpture. Elytron is longer than pronotum along the suture and shallowly emarginate behind. Tarsal formula as 4, 5, 5; the metatarsus has segm. I fairly shorter than II. Abdomen is fusiform. Macrochaetal arrangement as 01-02-02-03-33-22-. Terg. VIII (Fig. H) is short and completely truncate behind; among 6+6 (always?) primary setae $p-1$ is shorter and separating and $a-2$ is close to $a-1$; microsculpture (Fig. I) is of setigerous rectangular reticulation. Stern. VIII is broadly rounded behind and with a row of similarly short marginal setae (Fig. J). Supermatheca (Fig. K) is complicated; bursa is narrowly elongate and has a blunt umbilicus; duct is strongly coiled and folded many times as in *Atheta* (s. str.). Body length. 1.75 mm.

The type specimen (♀) from Japan (without further notes) indicates that it does not belong to *Athetae* as the maxillary palpus is five-segmented although the tarsal number is decidedly as 4, 5, 5. With its bisinuate labrum, bidentate right mandible and gross feature of labium the species may be placed in *Omoplandria* CAMERON, 1949 of Formosa although the labial palpus is 3-segmented. Relation to *Tinotus japonicus* CAMERON, 1933 must be discussed.

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Postscript: Beside the case of *Tomoglossa* mentioned above there are some amendments of the conception, which must be renovated from the taxonomic definition in YOSHII et SAWADA 1971.

Firstly the conception of Falagriae may be defined by the structure of the cervical extension of the collar-form posterior to the head capsule as already illustrated in l.c. fig. 49A, fig. 51D and fig. 52A. In Falagriae defined as such there may be included *Falagria*, *Xenusa* and *Cordalia* at least and the group may be a derivative from the *Coprothassa*-series.

Secondly the position of *Halobrecta* is not in Athetae but probably in Schistogeniae by which the first segment of labial palpus is short and almost coalescent with the second segment. Besides a pair of distal setae of labium are located close together as in case of Bolitocharae.