

# Japanese Mycetophilidae (Diptera) VII\*

## Genus *Boletina* Staeger

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**Summary** : Seventeen Japanese species of *Boletina* are recorded, 13 of which are described as new. A key is provided to the 21 species from Japan.

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Up to the present time, there have been recorded only four species of the genus *Boletina* from Japan : *B. flaviventris* Strobl, *trivittata* (Meigen), *groenlandica* Staeger and *lundbecki* Lundström (Sasakawa, 1961). Thirteen new species are described and four unrecorded species redescribed newly, and figured in the present paper.

The whole group, with a few exceptions, is extremely homogeneous, and in some cases the species are very difficult to separate without the examination of the male terminalia.

We wish to express our appreciation to the following individuals and institutions for providing us with study material. The abbreviations enclosed in parentheses represent the deposition of specimens as cited in this paper : Dr. S. Takagi, Hokkaidô University (HU); Mr. N. Fukuhara, National Institute of Agricultural Sciences (NIA); Dr. K. Baba, Kurokawa, Niigata Pref.; Dr. T. Ishihara, Ehime University (EU); Dr. Y. Hirashima, Kyûshû University (KU). Specimens deposited in the Kyôto Prefectural University are designated by KPU.

### Genus *Boletina* Staeger

*Boletina* Staeger, 1840, Naturhist. Tidsskr. **3** : 233. Type-species : *Leia trivittata* Meigen.

Medium-sized fungus gnats; 3 ocelli in extremely obtuse triangle or almost on line, median ocellus small; antenna 2+14-segmented, palpus 4-segmented; metapleuron hairy on posterior half or bare; wing with costa usually extending beyond apex of vein  $R_5$ , subcosta terminated in costa,  $Sc_2$  absent or situated at middle of cell R,  $R_4$  absent, forking point of cubitus mostly at or slightly beyond base of stem of media; hind tibia with 2 or 4 rows of short bristles. Male terminalia : epandrium usually with a pair of subcircular and spinose surstyli posteriorly, basistylus with posterior margin incised or cleft by membrane, dististylus variable in shape and structure, parameres well-developed,

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aedeagus with apex usually directed ventrally.

Evolutionary development within the *Boletina* is clearly seen in the changes in the structures of the male terminalia. In primitive species, the surstylus is not separated from the epandrium by membrane, the basistylus is dorsally united with posterior bridge, the dististylus is long, densely spinose or furcated apically, and the parameres are simple. In more recently evolved species, the surstylus is projected posteriorly and provided with denticular rows of spines dorsally, the basistylus is ventrally separated by median membranous cleft in various depth, projected posteriorly and forming a pair of processes, the dististylus is short, lobate and only projected at apex, and the parameres produce a pair of distinct dorsal processes.

#### Key to Japanese species of *Boletina*

1. Metapleuron bare ..... 2  
Metapleuron hairy ..... 11
2. Costa extending only to apex of  $R_5$ , cross-vein r-m long and horizontal with  $R_5$  .....  
..... *trivittata* (Meigen)  
Costa extending beyond tip of  $R_5$  ..... 3
3. Costa extending slightly beyond tip of  $R_5$  ..... 4  
Costa extending midway between apices of  $R_5$  and  $M_{1+2}$  ..... 8
4. Thoracic pleura yellow except metapleuron and postnotum; hind tibia with 2 rows of bristles dorsally; dististylus with a patch of numerous spines ..... 5  
Pleura entirely black or slightly brown-tinged; hind tibia with 4 rows of bristles; dististylus with a spine on tip of ventral process ..... 6
5. Mesonotum entirely brownish black; wing distinctly fuscous on apical one-third ..... *katoi* n. sp.  
Mesonotum with anterior margin broadly yellow, extending posteriorly between lines of dorsocentral setae; wing without distinct cloud ..... *lagena* n. sp.
6. Coxae entirely yellow; antenna with flagellar segments 1—2 yellow; palpus entirely yellow .....  
..... *borealis* Zetterstedt  
Hind coxa dark brown; antenna entirely brown; palpus brown or yellowish distally ..... 7
7. Mid coxa narrowly ( $\delta$ ) or broadly ( $\varphi$ ) brown at base; tibial spurs yellow; palpus entirely dark brown ..... *groenlandica* Staeger  
Mid coxa brown on basal three-fourths ( $\delta$   $\varphi$ ); spurs brown; palpus with segment 4 yellow .....  
..... *hymenophalloides* n. sp.
8. Coxae entirely yellow; mesonotum sparsely gray-dusted, with vittae indistinct ..... 9  
Mid and hind coxae broadly brown at base; mesonotum moderately gray-dusted, with 3 vittae distinctly shining ..... 10
9. Antenna entirely brown; epandrium with surstylus bearing spines sparsely on dorsal side, dististylus quadrate, parameres with apical part of dorsal processes directed up and backward ..... *nigricans* Dziedzicki  
Antenna with flagellar segment 1 yellow; surstylus with 3 rows of spines dorsally, dististylus suboval, parameres with apical part of processes directed down and forward .....  
..... *takagii* n. sp.
10. Basistylus with V-shaped incision ventrally; dorsal processes of parameres bifurcated at base .....  
..... *bifurcata* n. sp.

- Basistylus with U-shaped membranous part ventrally and a pair of papillae at middle ;  
 parameres with processes simple and sinuate ..... *babai* n. sp.
11. Costa extending slightly beyond tip of  $R_5$  ; dististylus bifurcated at base .....12  
 Costa extending almost midway between apices of  $R_5$  and  $M_{1+2}$  ; dististylus only projected  
 ventrally near apex .....18
12. Thoracic pleura black, slightly brown-tinged ; posterior apices of dorsal processes of parameres  
 dorsally united with those of ventral posteromedian processes of basistylus .....13  
 Pleura partly yellow ; dorsal processes of parameres free at posterior ends .....14
13. Epistoma with long horn in male ..... *lundbecki* Lundström  
 Epistoma without horn ; antenna with flagellar segments 1—2 yellow ..... *conjuncta* n. sp.
14. Propleuron yellow .....15  
 Propleuron brownish black .....17
15.  $Sc_2$  present ; dististylus with ventral process bifurcated apically ..... *hirtilobula* n. sp.  
 $Sc_2$  absent ; dististylus with ventral process narrowing apically .....16
16. Mesonotum with setae and bristles yellow, pteropleuron yellow ; wing hyaline .....  
 ..... *flaviventris* Strobl  
 Mesonotum with setae and bristles dark brown, pteropleuron dark brown ; wing distinctly  
 fuscous on apical one-fourth ..... *pseudoventralis* n. sp.
17. Only metasternum with ventral margin yellow ; ventral process of dististylus with 2 minute  
 spines before apex ; aedeagus normal in length ..... *curta* n. sp.  
 Pteropleuron and metasternum brownish yellow ; ventral process of dististylus curved dorsally  
 before apex and bearing a long spine on tip ; aedeagus extremely long .....  
 ..... *meniscophalloides* n. sp.
18. Palpus brown excepting segments 3—4 ; surstylus with more than 20 spines on tip .....19  
 Palpus yellow ; surstylus with about 10 spines on tip .....20
19. Abdominal tergites 2—4 narrowly yellow on posterolateral corners ..... *prolata* n. sp.  
 Abdomen entirely dark brown ..... *bidenticulata* n. sp.
20. Antenna brown ; dististylus knob-like ..... *nitida* Grzegorzek  
 Antenna with flagellar segments 1—2 yellow ; dististylus triangular in lateral view .....  
 ..... *dispecta* Dziedzicki

### 1. *Boletina trivittata* (Meigen) Fig. 1

*Leia trivittata* Meigen, 1818, Syst. Besch. bekannt. europ. zweifl. Insekt. 1 : 258.

*Boletina trivittata* (Meigen) : Winnertz, 1863, Verh. Zool.-bot. Ges. Wien 13 : 773.

This is a large black species ; the mesonotum is densely gray-dusted and provided with three shining black vittae ; the costa terminates in the apex of vein  $R_5$ . The specimens examined are slightly different from the European typical form in the colouration of the coxa and abdomen, but identical clearly with *trivittata* by the wing venation and structures of the male terminalia.

The main characteristics of this species are : antenna blackish brown, about twice as long as thorax ; palpus brown, with segments 3—4 yellow ; vein  $Sc$  terminated distinctly or slightly before  $R_5$ ,  $Sc_2$  situated before middle of cell  $R$ , stem  $M$  slightly longer than  $r-m$  which is long and almost horizontal, forking point of  $Cu$  slightly before or on level of  $R_5$  ; legs yellow, coxae entirely yellow (♀) or brownish basally (♂), trochanters brown, femora slightly brownish on

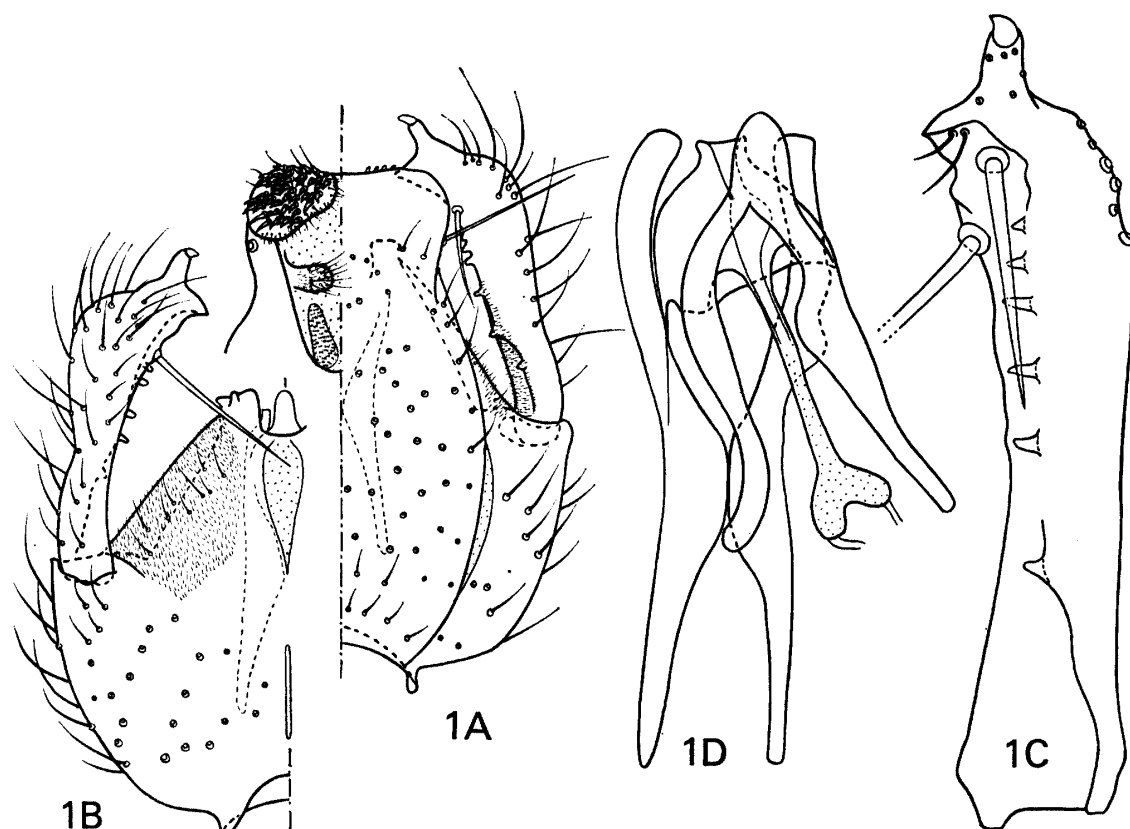


Fig. 1. Male terminalia of *Boletina trivittata* (Meigen).

A : half of epandrium, B : half of basistylus, C : dististylus,  
D : parameres and aedeagus.

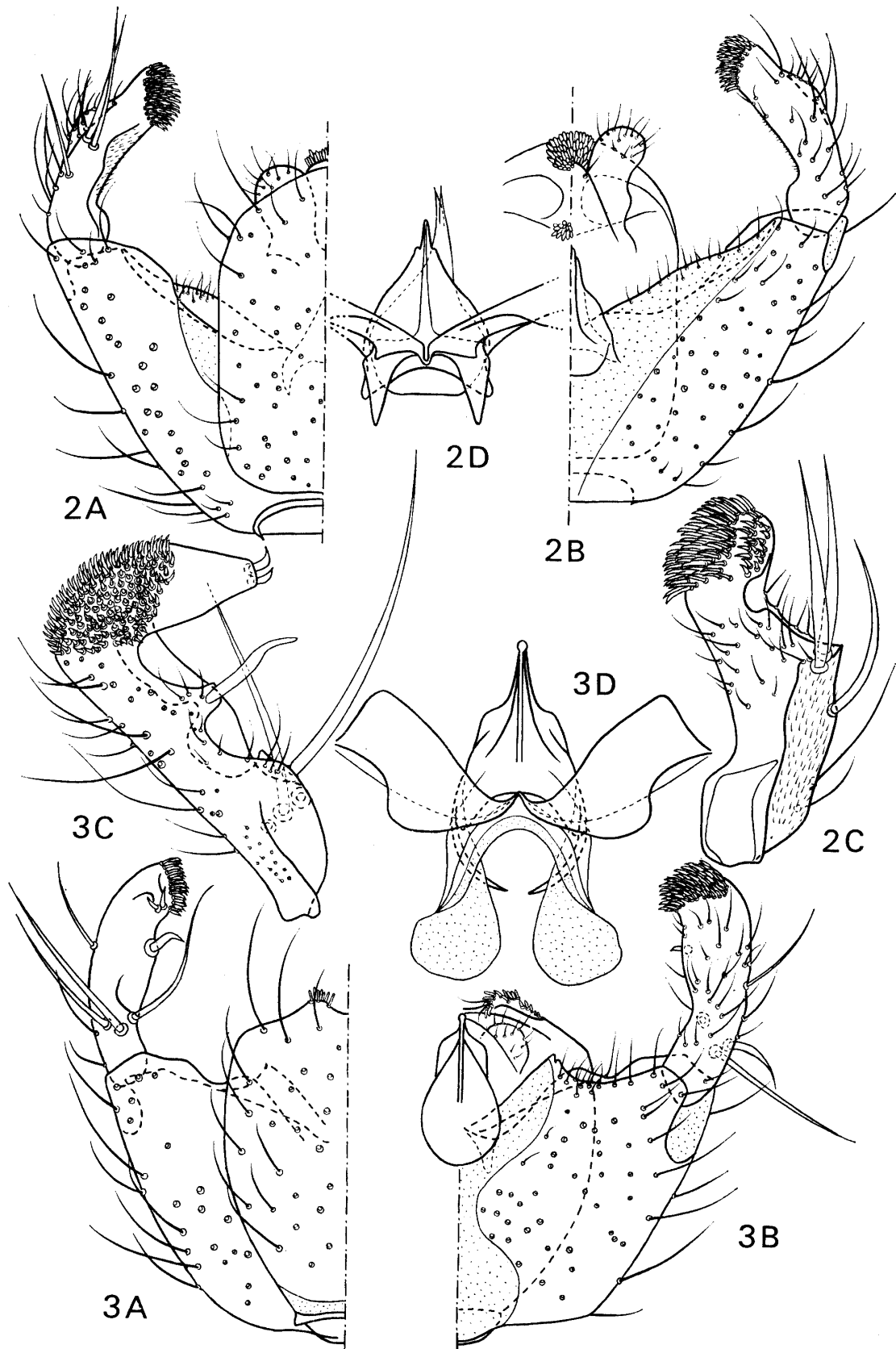
apices, tibiae brownish yellow, tarsi brown, spurs brown; fore metatarsus  $\frac{3}{5}$  length of tibia; abdomen entirely black, sparsely gray-dusted. Terminalia: epandrium 1.8 times as long as broad, with lateral margins slightly depressed at posterior  $\frac{1}{5}$  and bearing a pair of long bristles, posteriorly with tongue-like, incurved membranous process, bearing about 50 spines on each laterobasal tubercle (surstylus) and many setulae on a pair of apical tubercles; basistylus chestnut-shaped, ventrally with median cleft short; dististylus somewhat broadened distally and weakly bifurcated at apex, with 6 small cuticular processes on inner side and a short but stout process on apex; parameres with a pair of dorsal sclerites strongly chitinized anteriorly, ventral ones V-shaped, weakly chitinized; aedeagus  $170\mu$  long, ejaculatory apodeme cotyledonous and membranous. Length: Body 5.3–5.5 mm, wing 5.1–6.2 mm.

Distribution: Europe and Japan (Hokkaidô).

Specimens examined: 1 ♂, Sôunkyô, Hokkaidô, 1. XI. 1942, M. Tokunaga; 1 ♀, Mt. Akadake, Hokkaidô, 20. VII. 1959, S. Takagi.

## 2. *Boletina katoi* n. sp. Fig. 2

♂. Head brownish black, clypeus yellowish brown; antenna brown but basal 5 segments yellow, palpus yellow. Mesonotum and scutellum shiny, brownish black; pleura yellow excepting metapleuron and postnotum. Wing faintly tinged with brown, distinctly fuscous on apical  $\frac{1}{3}$ ; halter yellow. Legs yellow; trochanters slightly brownish ventrally, hind femur slightly brownish apically, tibiae brownish yellow, tarsi brown, and spurs yellow but fore tibial



Figs. 2—3. Male terminalia of *Boletina katoi* n. sp. (2A—D) and *B. lagena* n. sp. (3A—D).

spur brown. Abdomen brownish black but tergites 2-4 with posterolateral corners yellow triangularly.

Antenna about twice as long as thorax, pedicel and flagellar segments 1-3 in proportion of 1.0:2.0:1.7:1.3. Mesonotum with setae and bristles brown; metapleuron bare; scutellum with a pair of black and long subapical bristles. Costa extending slightly beyond tip of  $R_5$ ,  $Sc$  terminated on apical 1/4 of cell  $R$ ,  $Sc_2$  distinguishable faintly, situated slightly before middle of cell  $R$ , stem  $M$  twice as long as  $r-m$ , forking point of  $Cu$  situated very slightly before base of stem  $M$ . Hind tibia with 2 rows of short bristles; fore metatarsus slightly longer than 1/2 of tibial length. Abdomen densely covered with black setae. Terminalia: epandrium subtrapezoid, somewhat projected posteriorly and curved inward, longer than broad, with a pair of spinous tubercles, apical one smaller; basistylus broadly membranous on ventromedian area and with dorsal bridge connected with each other at ends, dististylus with numerous short spines on apex and 3 strong bristles dorsally; parameres subtriangular dorsally and with ventral process bifurcated distally; aedeagus  $160\mu$  long. Length: Body 3.3 mm, wing 3.0 mm. ♀. Unknown.

Distribution: Japan (Kyûshû).

Holotype ♂ (NIA), Ashidake, Miyazaki Pref., 29. V. 1950, S. Kato.

This species is similar to the European *B. anderschi* (Stannius) in the colouration of mesonotum and wing, but is characteristic in having the thoracic pleura yellow anteriorly, the bristles on the mesonotum and scutellum black, the coxae entirely yellow and the abdominal tergites 2-4 broadly yellow on posterolateral corners.

### 3. *Boletina lagena* n. sp. Fig. 3

♂. Head brownish black excepting clypeus and mouth parts yellow; antenna brown but basal 4-5 segments yellow. Mesonotum shiny black, anteriorly with yellow T-shaped marking, median stripe about 1/3 as wide as notum and ending before middle of notum; pleura yellow excepting metapleuron and postnotum pale brown; scutellum dark brown. Wing faintly tinged with brown; halter yellow. Legs yellow; trochanters brownish ventrally, tibiae slightly brownish, tarsi brown, spurs yellow but fore tibial ones brownish yellow. Abdomen black, tergites 2-3 each with large yellow triangles on posterolateral corners, tergite 4 yellow excepting dorsocentral spot, tergite 5 with large yellow triangle on each anterolateral corner; terminalia brownish black.

Clypeus with setae yellow; antenna about 2.5 times as long as thorax, pedicel and flagellar segments 1-3 in proportion of 1.0:2.0:1.5:1.5. Mesonotum with bristles yellow; metapleuron bare. Costa extending slightly beyond tip of  $R_5$ ,  $Sc$  terminated on apical 1/3 of cell  $R$ ,  $Sc_2$  situated at middle of cell  $R$ , stem  $M$  slightly longer than thrice as long as  $r-m$ , forking point of  $Cu$  situated slightly before base of stem  $M$ . Hind tibia with 2 rows of short bristles; fore metatarsus 3/5 length of tibia. Abdomen covered with yellow setae. Terminalia: epandrium suboval, with a pair of spinous tubercles (surstyli) projected ventrally; basistylus ventrally separated broadly by membrane, dorsally with posterior bridge distinctly broadened before end and touching with each other; dististylus with 5 strong bristles, of which dorsodistal one short, isolated and directed dorsad, and 2 claw-like spines on tip and a patch of numerous spines before tip; parameres somewhat flask-shaped, well-chitinized; aedeagus  $130\mu$  long, ejaculatory apodeme large, cotyledonous and membranous. Length: Body 4.2 mm, wing 3.6 mm. ♀. Unknown.

Distribution: Japan (Honshû).

Holotype ♂ (NIA), Hatomachi-tôge, Oze, 7. VII. 1951, H. Hasegawa.

This species is highly specific in the colouration of mesonotum and pleura. The structure of male terminalia shows a close relationship with *B. katoi* n. sp. in general appearance. But, there are quite differences in the shape of dististylus and parameres between them.

#### 4. *Boletina borealis* Zetterstedt Fig. 4

*Boletina borealis* Zetterstedt, 1852, Dipt. Scand. 2: 4160.

This species closely resembles *B. trivittata* (Meig.) in the colouration, but can be distinguished by the following points:

Antenna with flagellar segments 1 and base of 2 yellow, 2.2–2.6 times as long as thorax; palpus yellow except brown segment 1. Costa extends slightly beyond tip of  $R_s$ ,  $Sc$  terminated at or slightly before  $R_s$ ,  $Sc_2$  at middle of cell  $R$ , stem  $M$  subequal or slightly shorter than  $r-m$ , forking point of  $Cu$  slightly before base of stem  $M$ . Terminalia: epandrium about twice as long as broad, with a pair of subcircular surstyli, each bearing 14–15 long spines on tip and many short spines arranged in 3–4 irregular rows dorsally; basistylus ventrally with median membranous cleft deep and posteriorly with a pair of long processes; dististylus densely covered with long setae, with a long process at middle and directed posterodorsally, bearing 1 spine and 2 setae on tip; parameres well-developed, with a pair of long dorsal processes curved and apically directed outwards, ventrodiscal sclerite U-shaped and bended forward on posterior apices; aedeagus  $230\ \mu$  long, ejaculatory apodeme chitinized. Length: Body 5.0 mm, wing 4.6–4.8 mm.

Distribution: Europe and Japan (Hokkaidô). New to Japan.

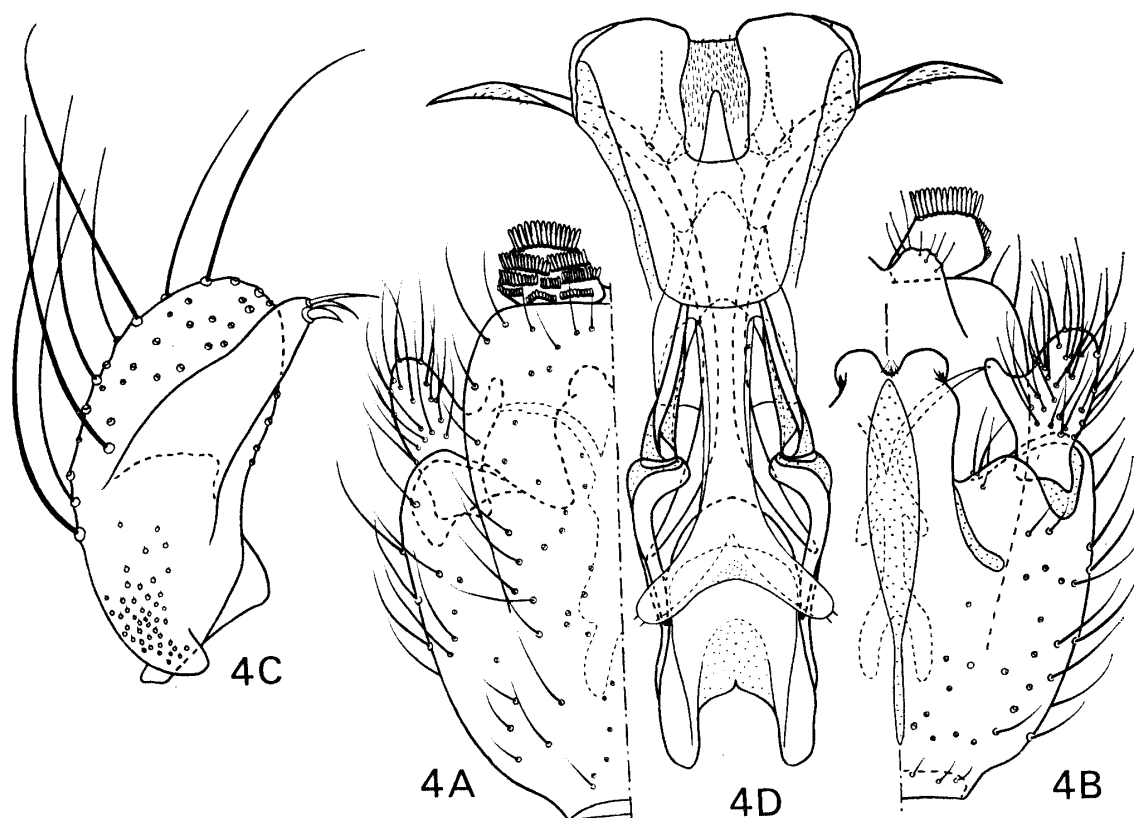


Fig. 4. Male terminalia of *Boletina borealis* Zetterstedt.

Specimens examined : 2♂♂, Mt. Akadake, Hokkaidô, 9. VII. 1960, S. Takagi.

### 5. *Boletina groenlandica* Staeger Fig. 5

*Boletina groenlandica* Staeger, 1845, Naturh. Tidsskr. n. ser. 1:356.

This species resembles *B. hymenophalloides* n. sp. in having the mesonotum trivittate, the hind coxa brown, the wing with the stem of media subequal to length of r-m, and the dististylus with process projected. It differs from the allied species in the following points :

Head with palpus entirely dark brown, antennal flagellar segment 1 of female narrowly yellow at base ; mid coxa brown narrowly at base in male but broadly in female, hind femur with apex brownish, spurs yellow. Terminalia : epandrium about 1.8 times as long as broad, with posterior margin slightly depressed and surstylus semicircular, bearing 3—4 dense rows of short spines dorsally ; basistylus ventrally with a pair of long, halbert-like processes, each bearing a spinose tubercle on dorsal base and provided with sensillae near dorsal tip ; dististylus with a process ventrally, directed dorsad and bearing 1 spine and 2 setae on tip ; parameres with a pair of dorsal processes hooked on posterior apices, ventrally largely membranous ; aedeagus 105  $\mu$  long, with ejaculatory apodeme weakly chitinized. Length : Body 4.3—5.5 mm, wing 5.0—5.4 mm.

Distribution : Europe, Japan, U. S. A., Canada, Greenland.

Specimens examined : 2♀♀, Sôunkyô, Hokkaidô, 1. XI. 1942, M. Tokunaga ; 2♀♀, Ashiribetsu, Hokkaidô, 3. VI. 1960, S. Takagi ; 1♂, Sôunkyô, Hokkaidô, 16. VI. 1960, S. Takagi ; 1♀, Daisetsu-zan, Hokkaidô, 9. VII. 1960, H. Hasegawa.

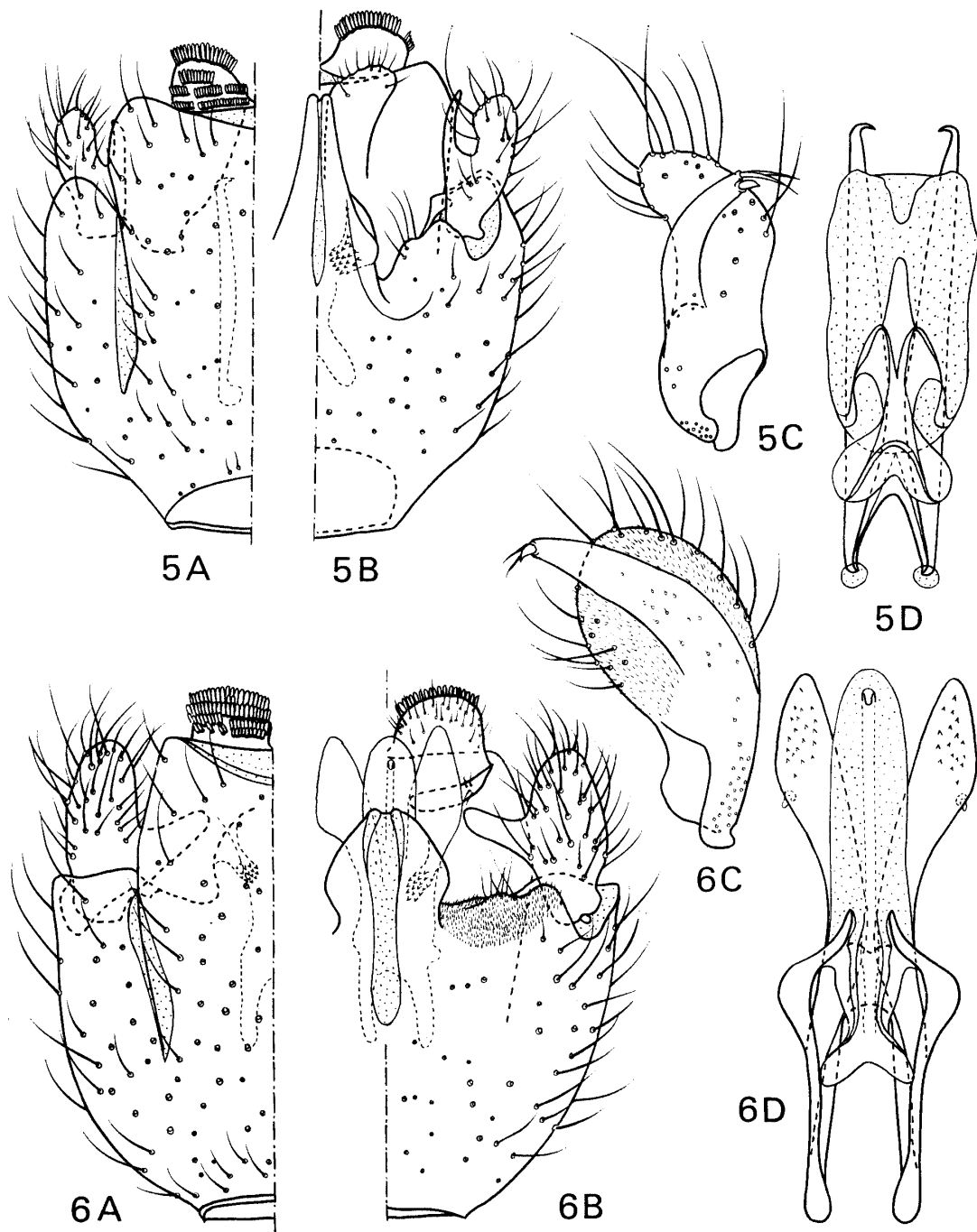
### 6. *Boletina hymenophalloides* n. sp. Fig. 6

♂. Head black ; antenna and palpus brown, the latter with terminal segment yellow and segment 3 yellowish brown. Thorax black ; mesonotum densely gray-dusted, with 3 vittae shining, pleura slightly tinged with brown. Wing hyaline, slightly fuscous on anteroapical margin, extending posteriorly at middle of cell  $R_5$  ; halter yellow. Legs yellow ; fore coxa with base narrowly, mid coxa with basal 3/4 and hind coxa entirely brown, trochanters brown, tibiae brownish yellow, tarsi brown ; spurs brown. Abdomen entirely brownish black.

Antenna 2—2.5 times as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0 : 3.1 : 2.7 : 2.6. Mesonotum with setae and bristles yellow, scutellum with a pair of subapical bristles long, metapleuron bare. Costa extending slightly beyond tip of  $R_5$ ,  $Sc$  terminated at or slightly before level of  $R_5$ ,  $Sc_2$  situated at or slightly beyond middle of cell  $R$ , stem  $M$  about 0.8 as long as length of r-m, forking point of  $Cu$  situated at or slightly beyond base of stem  $M$ . Hind tibia with 4 rows of many short bristles ; fore metatarsus 4/5 length of tibia. Abdomen covered with yellow setae. Terminalia : epandrium about twice as long as broad, with posterior margin slightly depressed, surstylus subquadrate, bearing about 4 rows of many spines dorsally ; basistylus with a pair of ventral processes chestnut-shaped in outline, separated by median membranous cleft and moreover a pair of spinose tubercles at middle of dorsolateral parts of ventral processes ; dististylus with a long process projected dorsally at middle of ventral side, bearing 1 spine and 2 setae on tip ; parameres with a pair of weakly chitinized dorsal processes ; aedeagus surrounded broadly by membrane, 150  $\mu$  long, with ejaculatory apodeme chitinized. Length : Body 4.6—5.5 mm, 4.3—4.8 mm.

♀. Similar to male ; antenna 1.3 times as long as thorax ; abdominal segments 2—7 with





Figs. 5—6. Male terminalia of *Boletina groenlandica* Staeger (5A—D) and *B. hymenophalloides* n. sp. (6A—D).

posterior margins yellow; ovipositor yellowish brown. Length: Body 5.0 mm, wing 4.8—5.2 mm.  
Distribution: Japan (Shikoku)

Holotype ♂ (EU), allotype ♀ and paratypes 3 ♂♂, 1 ♀, Omogo, Iyo, 25. IV. 1953, T. Edashige.

This species resembles the European *B. nigricoxa* Staeger but is readily distinguishable by the broadly yellow fore coxa and the dististylus projected at middle of the inner ventral side. The distinctive characters of male terminalia of this new species are the membranous aedeagus and spinulose dorsal processes of parameres.

7. *Boletina nigricans* Dziedzicki Fig. 7

*Boletina nigricans* Dziedzicki, 1885, Pamietnik Fizyograf. 5 : 11.

Medium-sized, black species ; mesonotum gray-dusted, with 3 vittae scantily visible. The quadrate dististylus, sparsely spinose surstylus of the epandrium and long dorsal processes of parameres are the very definite characters of male terminalia. The colouration of the tibial spurs shows the considerable variation among the specimens. Therefore, it is not such a good character as described by Landrock (1926).

Antenna brown, slightly longer (♀) than or 2.5—3.0 times (♂) as long as thorax ; palpus brown. Mesonotum with bristles whitish yellow. Legs yellow ; dorsal bases of coxae sometimes narrowly brownish, ventral bases of mid and hind femora brownish, spurs brownish yellow to brown. Terminalia : epandrium oblong, 1.5 times as long as broad, with surstylus circular, bearing 22—23 scattered spines ; basistylus ventrally with membranous cleft extremely long and a pair of long processes rounded at apices ; dististylus subquadrate, with 1 long spine and 2 stout setae on dorsobasal process and 2 strong spines on dorsodistal apex ; parameres with a pair of dorsal processes directed dorsad before posterior ends and a pair of hairy, clavate processes at middle ; aedeagus 125 μ long. Length : Body 3.3—3.9 mm, wing 3.4—4.0 mm.

Distribution : Europe and Japan (Hokkaidô, Honshû and Kyûshû). New to Japan.

Specimens examined : 1 ♂ ; Sapporo, Hokkaidô, 24. V. 1960, S. Takagi ; 1 ♂, Kurokawa, Echigo, 12. IV. 1955, K. Baba ; 4 ♂♂, Kii-Ôshima I., 3. IV. 1962, M. Sasakawa ; 1 ♂ 1 ♀, Ooe, Kyôto, 11. V. 1974, T. Kimura ; 1 ♂ ; Magarifuchi, Chikuzen, 10. IV. 1932, Hori & Fujino ; 1 ♂ 1 ♀, Ropponmatsu, Hakata, Chikuzen, 2. IV. 1954, M. Sasakawa.

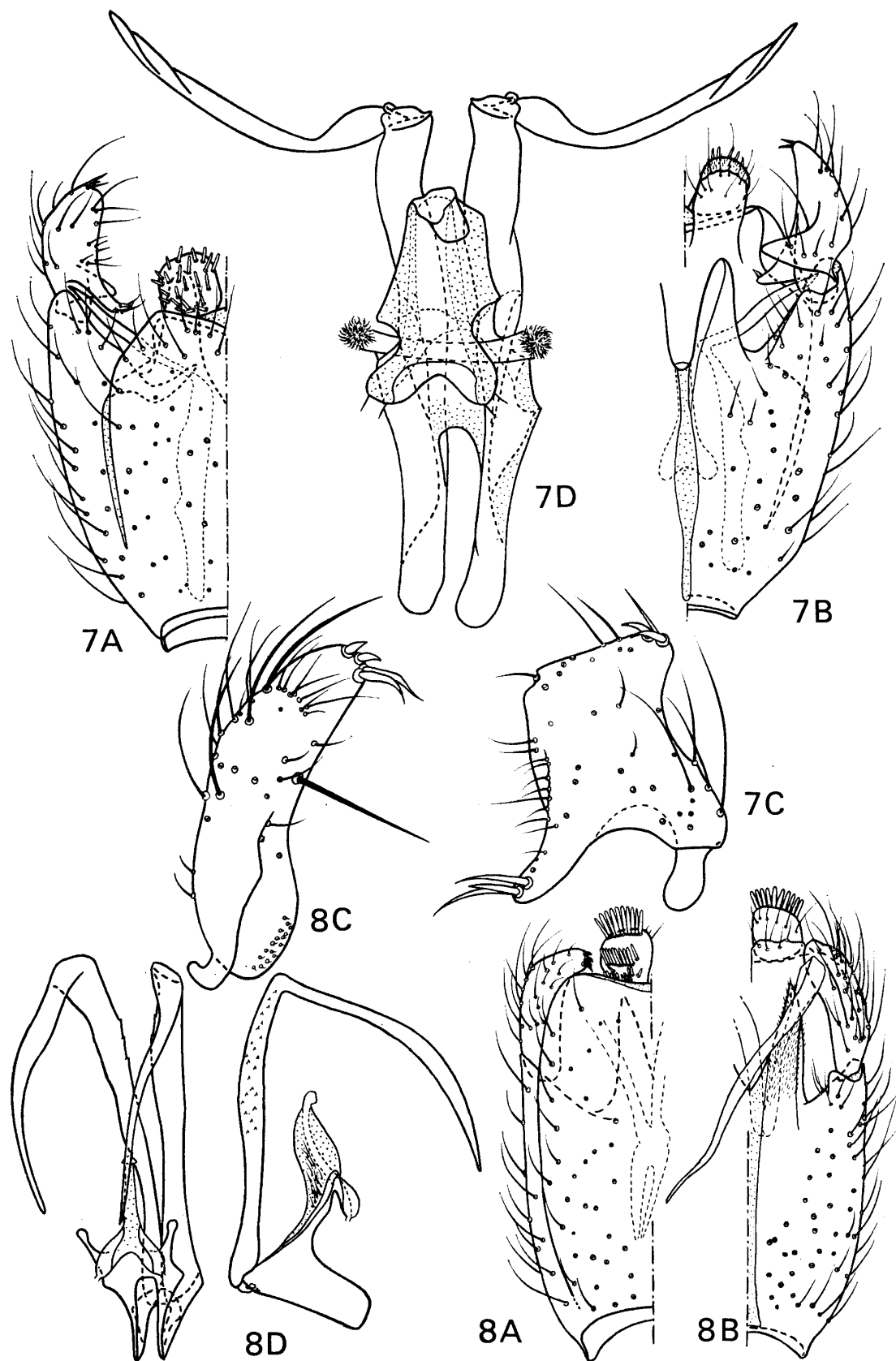
8. *Boletina takagii* n. sp. Fig. 8

♂. Head and thorax black ; antenna brown but flagellar segment 1 yellow, 2 sometimes slightly yellowish ; palpus yellow ; mesonotum subshiny, sparsely gray-dusted, with vittae indistinct. Wing hyaline, very faintly tinged with brown ; halter yellow. Legs yellow ; trochanters pale brown, tibiae brownish yellow, tarsi brownish, spurs yellow. Abdomen and terminalia dark brown.

Antenna about thrice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0 : 3.0—3.3 : 3.2—3.5 : 3.3—3.5. Mesonotum with setae and bristles yellow, metapleuron bare. Costa extending midway between apices of  $R_5$  and  $M_{1+2}$ ,  $Sc$  terminated at level of  $R_5$ ,  $Sc_2$  situated at middle of cell  $R$ , stem  $M$  about 1.5 times as long as  $r-m$ , forking point of  $Cu$  situated at level of base of stem  $M$ . Hind tibia with 4 rows of short bristles ; fore metatarsus about 4/5 length of tibia. Abdomen covered with yellow setae. Terminalia : epandrium quadrate, 1.7 times as long as broad, with surstylus suborbicular and membranous, bearing about 40 spines in 3 rows dorsally ; basistylus ventrally with median membranous cleft very deep and with a pair of acute membranous processes ; dististylus with 2 spines and 2 setae on tip ; parameres with a pair of dorsal processes long, projected downward in form of knee ; aedeagus hooked and chitinized apically, 160 μ long, ejaculatory apodeme cotyledonous. Length : Body 3.9—4.3 mm, wing 3.9—4.2 mm. ♀. Unknown.

Distribution : Japan (Hokkaidô).

Holotype ♂ (HU), Sapporo, Hokkaidô, 19. X. 1959, S. Takagi. Paratypes 2 ♂♂, same locality and date as holotype ; 1 ♂, Moiway, Sapporo, 20. IX. 1961, S. Takagi.

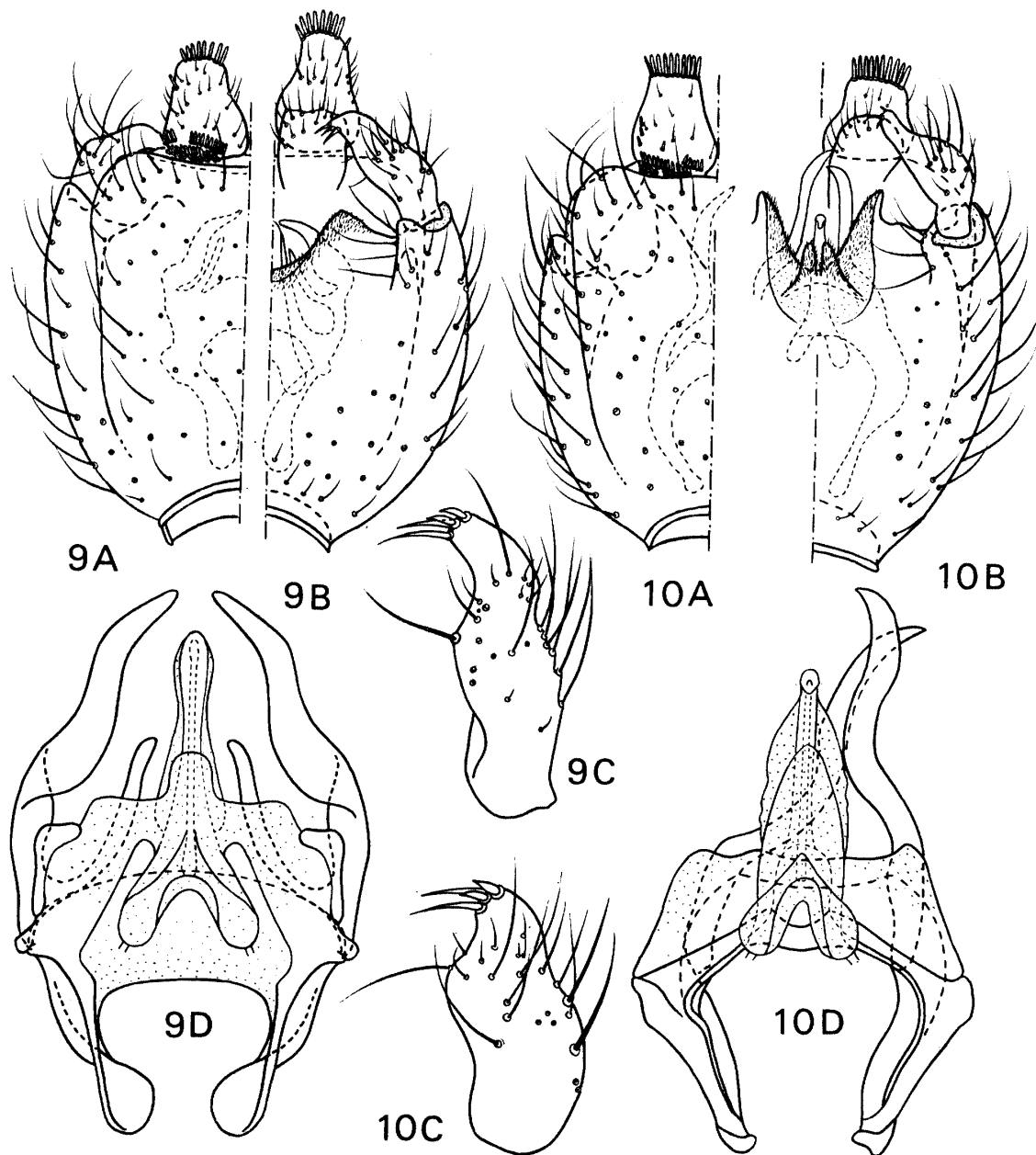


Figs. 7--8. Male terminalia of *Boletina nigricans* Dziedzicki (7A--D) and *B. takagii* n. sp. (8A--D).

The species is quite specific in having the conspicuously long dorsal processes of the parameres, differing from the known species of this genus. This is allied to *B. digitata* Lundström and *nigricans* Dziedzick in the general colouration and wing venation, but can be distinguished by the above-mentioned character and the larger size.

9. *Boletina bifurcata* n. sp. Fig. 9

♂. Head black, vertex gray-dusted; antenna brown, apex and base of each flagellar segment linearly darker; palpus pale brown. Thorax black, pleura and scutellum brown-tinged; mesonotum gray-dusted, with 3 shining vittae. Wing very faintly tinged with brown; halter yellow. Legs yellow; fore coxa brownish basally, mid coxa brown on basal 1/2 and hind on basal 2/3, trochanters brown, femora narrowly brownish on ventroproximal margins, tibiae brownish yellow,



Figs. 9-10. Male terminalia of *Boletina bifurcata* n. sp. (9A-D) and *B. babai* n. sp. (10A-D).

tarsi brown, spurs yellow. Abdomen entirely dark brown.

Antenna about 2.5 times as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:2.5:2.6:2.5. Mesonotum with bristles and setae yellow, metapleuron bare; scutellum with a pair of subapical bristles long. Costa extending midway between apices of  $R_5$  and  $M_{1+2}$ ,  $Sc$  terminated at level of  $R_s$ ,  $Sc_2$  situated on apical 1/3 of cell  $R$ , stem  $M$  about 1.8 times as long as  $r-m$ , forking point of  $Cu$  situated between basal 1/3 and 1/2 of stem  $M$ . Hind tibia with 4 rows of many short bristles; fore metatarsus 4/5 length of tibia. Abdomen densely covered with yellow setae. Terminalia: epandrium subtrapezoid, slightly longer than broad, with a pair of tumbler-shaped surstyli which are provided dorsally with many short spines in 4 rows; basistylus ventrally with posterior margin incised triangularly; dististylus with 2 spines and 2 setae on tip; parameres with dorsal sclerites separated at middle, anterior one U-shaped, posterior one bifurcated on each lateral base, ventral sclerite largely membranous and only sclerotized laterally as a pair of arms; aedeagus almost membranous,  $130\mu$  long, ejaculatory apodeme cotyledonous and membranous. Length: Body 2.8—4.1 mm, wing 2.7—3.8 mm. ♀. Unknown.

Distribution: Japan (Honshû).

Holotype ♂ (KPU 194), Kurokawa, Niigata Pref., 7. IV. 1955, K. Baba. Paratopotypes 4♂♂, 12. IV. 1955; K. Baba.

This species very much resembles *B. gripha* Dzied. in the colouration of the abdomen and hind coxa, but can be easily separated by having the simple dististylus and well-developed parameres. The mesonotum of *bifurcata* is dusted more sparsely with gray pollen than that of *trivittata*, and three vittae are distinct.

#### 10. *Boletina babai* n. sp. Fig. 10

In the external appearance, this new species is extremely similar to *B. bifurcata* n. sp. It may be, however, drawn distinctions from the allied species by the characters of male terminalia as follows:

Epandrium with surstylus bearing 10 spines on tip and 2 irregular rows of minute spines at dorsal base; basistylus ventrally with posterior margin incised and provided with 2 pairs of median papillae and short lateral processes; parameres with a pair of long and sinuate processes dorsolaterally, dorsal and ventral transverse plates membranous, the latter with suboval, membranous plate projected posteriorly; aedeagus hooked dorsally and chitinized on tip,  $120\mu$  long. Length: Body 3.2—3.5 mm, wing 3.2—3.4 mm. ♀. Unknown.

Distribution: Japan (Honshû).

Holotype ♂ (KPU 195), paratopotypes 2♂♂, Kurokawa, Niigata Pref., 12. IV. 1955, K. Baba.

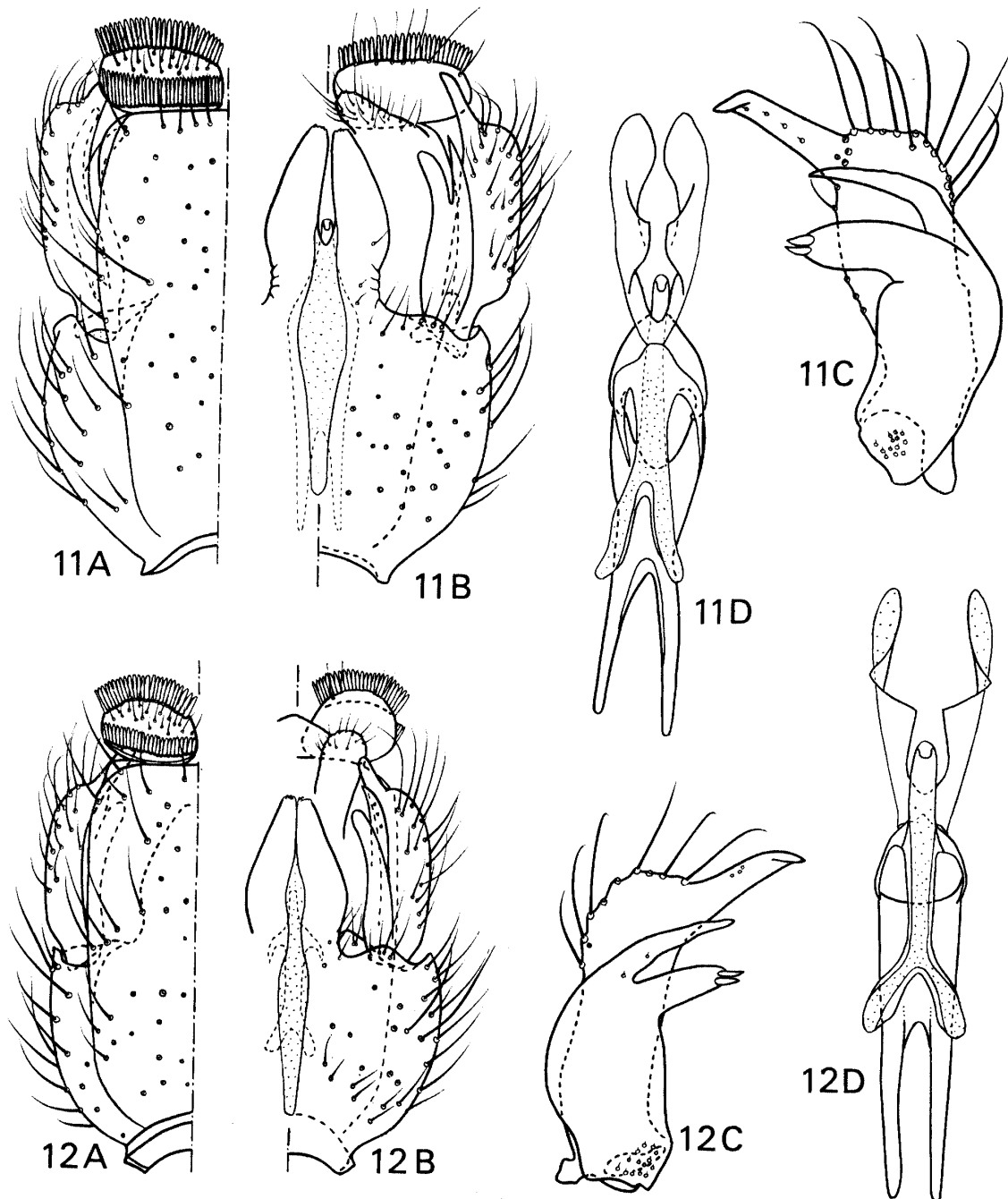
#### 11. *Boletina lundbecki* Lundström Fig. 11

*Boletina lundbecki* Lundström, 1912, Acta Soc. pro Fauna et Flora Fenn. 36: 20.

This is highly specific in having a long horn on the anterior margin of epistoma in the male.

Black; antenna brown, flagellar segment 1 entirely or with basal 1/2 yellow, rarely pedicel and base of flagellar segment 2 yellowish, subequal (♀) or 1.3—2.0 times (♂) as long as thorax; palpus yellow. Thorax densely gray-dusted, mesonotum with or without vittae, setae and bristles yellow. Wing with costa extending beyond tip of  $R_5$ ,  $Sc$  terminated at level of  $R_s$ ,  $Sc_2$  situated

beyond middle of cell R, stem M very slightly longer than r-m, forking point of Cu slightly before level of base of stem M. Legs yellow, coxae sometimes brownish proximally, femora each with brownish stripe ventroproximally, spurs yellow. Abdomen entirely brownish black. Terminalia: epandrium slightly broadened distally, about 1.8 times as long as broad, with surstylus elliptical, bearing 2 dense rows of long spines dorsally; basistylus ventrally with median membranous cleft deep, posteriorly with a pair of long processes; dististylus consisted of 2 lobes, ventral one bifurcated distally, of which dorsal one with 2 spines on tip, dorsal one projected ventrally; parameres with dorsal sclerites largely membranous except anterior forked-process, posterior arms united with apices of ventral processes of basistylus; aedeagus  $140\mu$  long, ejaculatory apodeme



Figs. 11—12. Male terminalia of *Boletina lundbecki* Lundström (11A—D) and *B. conjuncta* n. sp. (12A—D).

membranous. Length : Body 3.8—5.3 mm, wing 3.6—5.0 mm.

Distribution : Europe and Japan (Honshû).

Specimens examined : 1 ♂, Ashiu, Kyôto, 27. IV. 1952, M. Tokunaga ; 19♂♂ 1♀, Kurokawa, Echigo, 29. III.—8. IV. 1955, K. Baba.

## 12. *Boletina conjuncta* n. sp. Fig. 12

♂. Black ; antenna brown but flagellar segments 1—2 entirely, 3 basally yellow, palpus yellow. Thorax densely gray-dusted, mesonotum with vittae subshining but indistinct, pleura slightly brown-tinged. Wing hyaline, very faintly tinged with brown ; halter yellow. Legs yellow ; trochanters brown, tibiae brownish yellow, tarsi brown, spurs brownish yellow. Abdomen entirely black ; terminalia brownish black.

Antenna about twice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0 : 2.2 : 2.2 : 2.4. Mesonotum with setae and bristles yellow, metapleuron hairy ; scutellum with a pair of subapical bristles long. Costa extending distinctly beyond tip of  $R_5$ ,  $Sc$  terminated at level of  $R_s$ ,  $Sc_2$  at middle of cell  $R$ , stem  $M$  equal to length of  $r-m$ , forking point of  $Cu$  situated at level of base of stem  $M$ . Hind tibia with 4 rows of short bristles, fore metatarsus 5/6 to only slightly shorter than tibia. Abdomen covered with yellow setae. Terminalia : epandrium about 1.6 times as long as broad, with surstylus suboval, bearing 2 rows of spines dorsally ; basistylus ventrally with membranous cleft deep and a pair of processes spinulate on dorsal apices ; dististylus consisted of 2 lobes, ventral one bifurcated apically, of which dorsal process with 2 spines on tip, dorsal one projected ventrally ; parameres with dorsal sclerites largely membranous ; aedeagus  $140\mu$  long, ejaculatory apodeme membranous. Length : Body 5.0 mm, wing 4.0 mm. ♀. Unknown.

Distribution : Japan (Hokkaidô and Honshû).

Holotype ♂ (KPU 196), Kibune, Yamashiro, 27. IV. 1953, M. Sasakawa. Paratype ♂, Katsurazawa-dam, Hokkaidô, 24. V. 1954, T. Kumata.

This species is closely allied to *B. lundbecki* Lundstöröm but can be easily distinguished by the lack of epistomal horn. The primitive male terminalia of this species is quite similar to that of *lundbecki*.

## 13. *Boletina hirtilobula* n. sp. Fig. 13

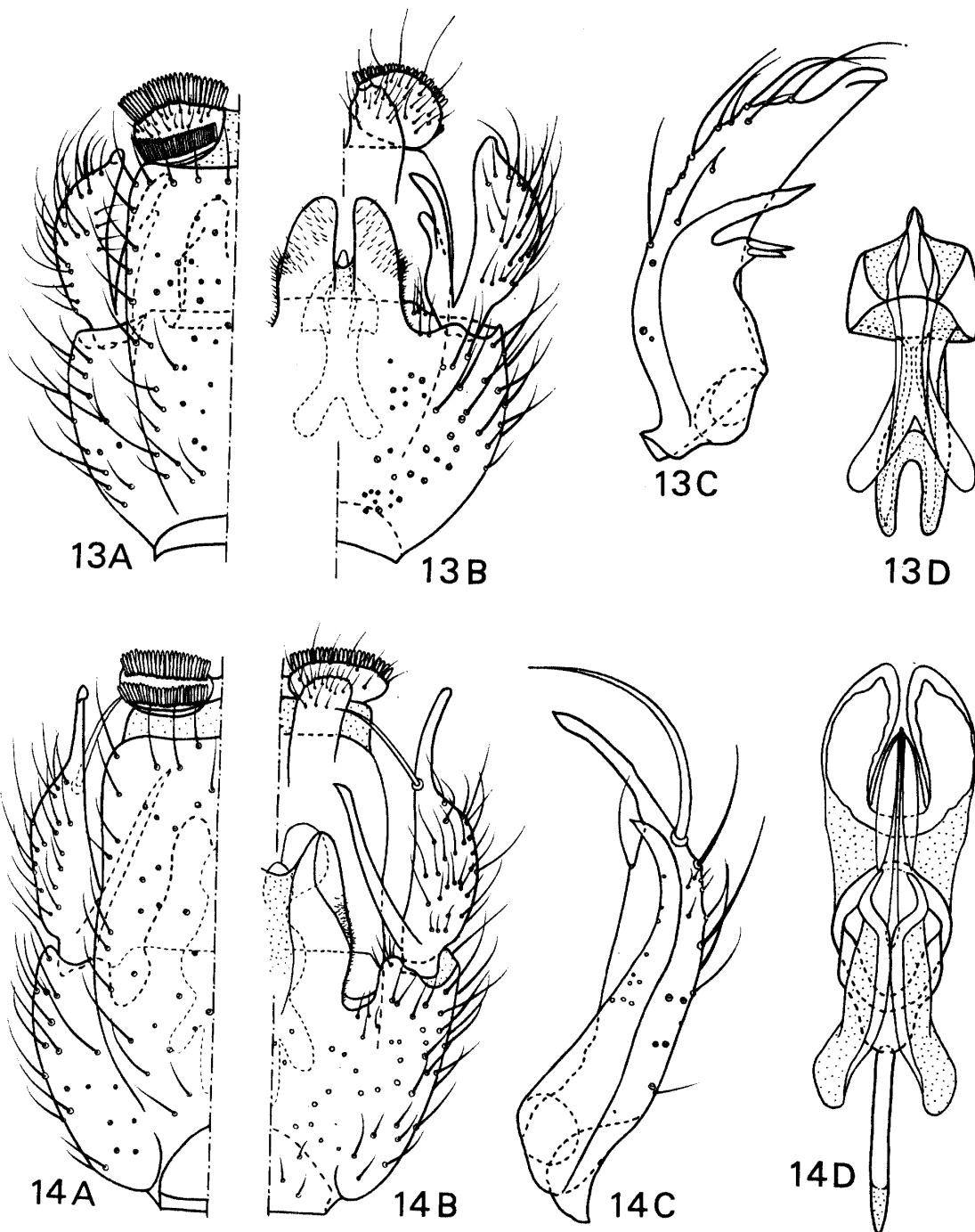
♂. Head black ; antenna brown but scape, pedicel and flagellar segments 1—3 yellow, scape rarely darker, base of flagellar segment 4 yellowish ; palpus yellow. Thorax shiny black, pollinose scantily ; pronotum, propleuron, pteropleuron and ventral part of metasternum yellow. Wing faintly tinged with brown, usually darkened on apical 1/2 ; halter yellow. Legs yellow ; trochanters brown, hind femur with apical ring narrowly, tibiae brownish yellow, tarsi brown, spurs dark brown. Abdomen brownish black, tergites 1—4 each with a pair of yellow triangles on posterolateral corners.

Antenna about twice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0 : 3.5 : 2.8 : 2.5. Mesonotum with setae and bristles yellow, metapleuron hairy. Costa extending distinctly beyond tip of  $R_5$ ,  $Sc$  terminated at or distinctly before level of  $R_s$ ,  $Sc_2$  at apical 2/5 of cell  $R$ , stem  $M$  subequal to  $r-m$ , forking point of  $Cu$  situated almost at middle of stem  $M$ . Hind tibia with 4 rows of many short bristles, fore metatarsus slightly shorter than tibia. Abdomen covered with yellow setae. Terminalia : epandrium narrowing basally, 1.8 times as long as broad,

with surstylus semicircular, bearing 2 rows of spines dorsally and short spines sparsely on ventral side; basistylus with a pair of long and hairy processes; dististylus consisted of 2 lobes, ventral one bifurcated apically and dorsal process with 2 apical spines, dorsal one projected apically; parameres with 2 pairs of ventral and dorsal processes; aedeagus 140  $\mu$  long, with ejaculatory apodeme membranous. Length: Body 4.6–4.7 mm, wing 4.2–4.3 mm. ♀. Unknown.

Distribution: Japan (Honshû).

Holotype ♂ (KPU 197), Kibune, Yamashiro, 27. IV. 1953, M. Sasakawa. Paratypes: 1 ♂, Oze, 22. IX. 1959, H. Hasegawa; 1 ♂, Botanical Garden of Tôhoku Univ., Miyagi



Figs. 13–14. Male terminalia of *Boletina hirtilobula* n. s. (13A–D) and *B. pseudoventralis* n. sp. (14A–D).



Pref., 29. IX. 1973, T. Kimura.

This new species resembles *B. pseudoventralis* n. sp. in the colouration of antenna and propleuron, and *conjuncta* n. sp. in the shape of dististylus. But, it can be readily distinguished by the dark mesopleuron and trifurcate dististylus from the first allied species, and by the pale pleura and shallow membranous cleft on the ventroposterior part of basistylus from the second allied species.

14. ***Boletina pseudoventralis*** n. sp. Fig. 14

♂. Head black; antenna brown but scape, pedicel and flagellar segments 1—3 yellow, 4 brownish yellow; palpus yellow. Mesonotum shiny, brownish black, slightly pollinose, with posterolateral corners narrowly yellow; pleura yellow except black pteropleuron and postnotum. Wing hyaline, faintly brown-tinged and rather distinctly fuscous on apical 1/4; halter yellow. Legs yellow; trochanters brown, tibia yellowish brown, tarsi brown, spurs dark brown. Abdomen black but tergites 1—4 with posterolateral corners broadly yellow, 2—3 with posterior margins broadly yellow; terminalia yellow but brownish dorsodistally.

Antenna about twice as long as length of thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:3.3:3.1:3.1. Mesonotum with setae and bristles dark brown; pteropleuron with setae dark brown. Costa extending distinctly beyond tip of  $R_s$ ,  $Sc$  terminated at level of  $R_s$ ,  $Sc_2$  absent,  $R_s$  almost straight, stem  $M$  1.3 times as long as  $r-m$ , forking point of  $Cu$  situated at or beyond middle of stem  $M$ . Hind tibia with 4 rows of many short bristles, fore metatarsus almost as long as length of tibia. Abdomen covered with brown setae. Terminalia: epandrium 1.6 times as long as broad, with surstylus oval, bearing 2 rows of 20—26 spines dorsally, sparsely setose at middle ventrally; basistylus ventrally with median membranous cleft and a pair of long processes posteriorly; dististylus bifurcated at ventral base, narrowing apically and bearing a strong bristle before ventral tip of dorsal process; parameres with dorsoposterior processes short, dorsobasal ring distinct and provided with a simple bar anteriorly; aedeagus  $160\mu$  long. Length: Body 4.5 mm, wing 3.8 mm.

♀. Similar to male, antenna only slightly longer than thorax, abdominal tergites 2—4 with posterior margins broadly, 5 narrowly yellow; ovipositor brownish yellow. Length: Body 4.6 mm, wing 4.0 mm.

Distribution: Japan (Honshū).

Holotype ♂ (KPU 198), allotype ♀, Koza, Wakayama Pref., 5. IV. 1962, M. Sasakawa.

This is a distinctive species with the largely yellow thoracic pleura, apically fuscous wing and straight vein  $R_s$ . It differs from *B. flaviventris* Strobl by the dark pteropleuron and dark setae on the thorax and abdomen.

15. ***Boletina curta*** n. sp. Fig. 15

♂. Head black; antenna brown but scape yellow to yellowish brown, pedicel and flagellar segment 1 yellow, segment 2 brownish yellow or only yellowish at base; palpus yellow. Thorax black; mesonotum subshiny, gray-dusted; pleura slightly tinged with brown, metasternum with ventral margin yellow. Wing hyaline, slightly or distinctly fuscous on apical 1/5; halter yellow. Legs yellow; trochanters brown, tibiae brownish yellow, tarsi brown, spurs dark brown. Abdomen black, tergites 2—4 each with posterolateral corners yellow triangularly, 5 rarely with narrow

spots on posterolateral corners; terminalia black but brown on ventral side.

Antenna a little longer than twice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:3.3—4.0:2.5—3.2:2.4—3.0. Mesonotum with setae and bristles yellow, metapleuron hairy. Costa extending distinctly beyond tip of  $R_s$ ,  $Sc$  terminated on or slightly before level of  $R_s$ ,  $Sc_2$  absent, stem M subequal to length of r-m, forking point of Cu slightly beyond base or at middle of stem M. Hind tibia with 4 rows of many short bristles, fore metatarsus slightly shorter than tibia. Abdomen covered with yellow setae. Terminalia: epandrium about 1.8 times as long as broad, slightly broadened distally, with surstylus oval, bearing 2 dense rows of spines dorsally; basistylus ventrally with a pair of halbert-shaped, membranous processes distally; dististylus consisted of 2 lobes, ventral one narrowing apically and with 2 short spines before apex, dorsal knob-like, projected apically; parameres with dorsobasal sclerite curved ventrally before both posterior ends and accompanying with ring-like process ventrally, dorsodistal one U-shaped in ventral view; aedeagus  $100\mu$  long, ejaculatory apodeme membranous. Length: Body 5.0—6.0 mm, wing 4.4—5.5 mm.

♀. Similar to male; antenna 1.5 times as long as thorax, abdominal tergites with posterior margins linearly yellow but broadened laterally on tergites 2—5; ovipositor brown. Length: Body 5.6 mm, wing 5.5 mm.

Distribution: Japan (Honshû).

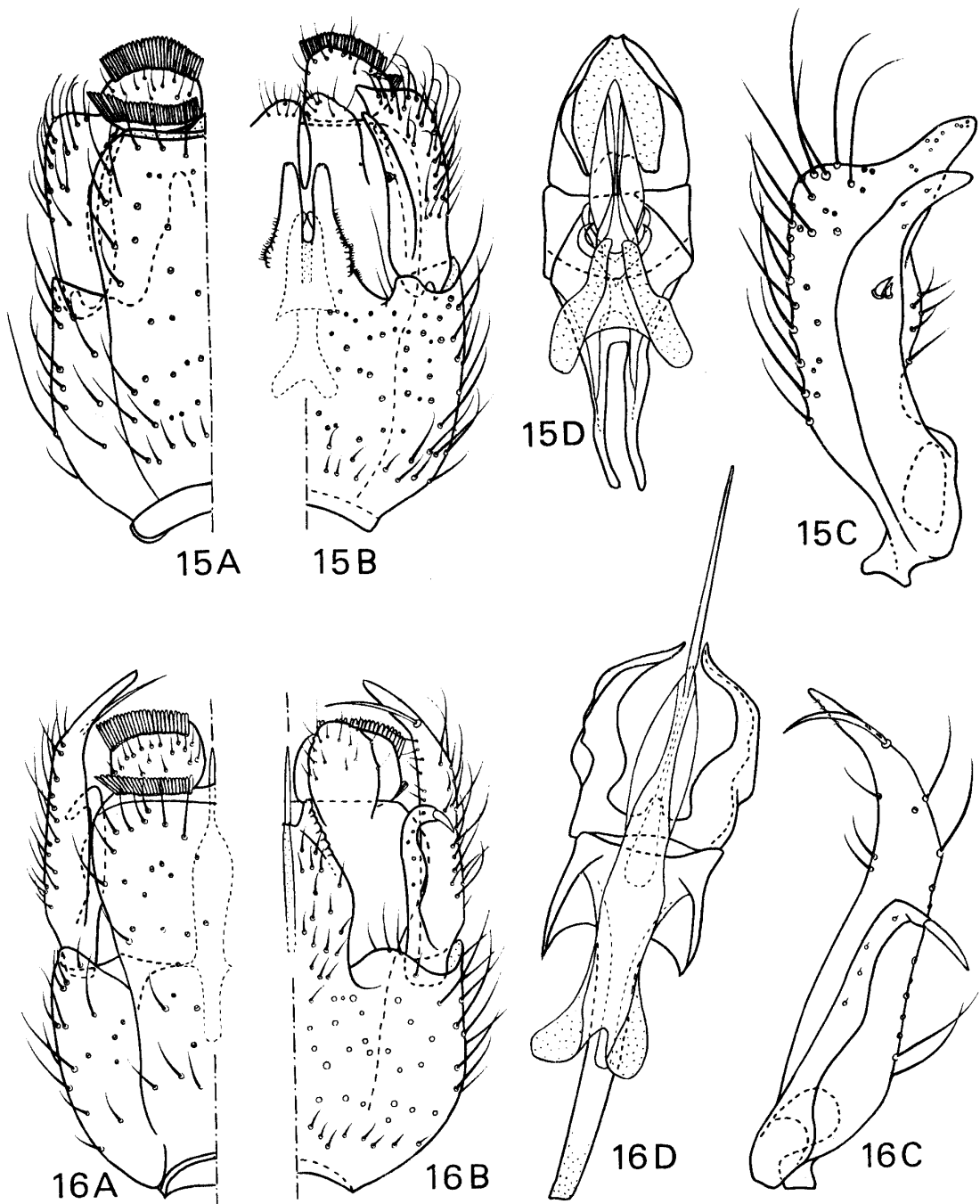
Holotype ♂ (KPU 199), Mt. Hiei, Shiga Pref., 3. V. 1974, T. Kimura. Allotype ♀, Ishiyama, Ootsu, 30. IV. 1973, T. Kimura. Paratypes: 1 ♂, Ashiu, Kyoto, 27. IV. 1952, M. Tokunaga; 2 ♂♂, Masugata, Echigo, 29. IV. 1955, H. Koike; 1 ♂, Kamiishikawa, Echigo, 3. V. 1955, H. Koike; 1 ♂, Yoshino, Nara, 29. X. 1960, M. Sasakawa; 1 ♂, Nanzenji, Kyoto, 25. IV. 1974, T. Kimura.

This species has only the narrowly yellow metasternum and two small spines before apex of the ventral process of the dististylus, differing from *B. flaviventris* and other Japanese species with the pale thoracic pleura.

#### 16. *Boletina meniscophalloides* n. sp. Fig. 16

♂. Head black; antenna brown but pedicel and flagellar segments 1—2 yellow, scape and segments 3—4 brownish yellow; palpus yellow. Mesonotum shiny brownish black, sparsely pollinose, with posterolateral corners yellow; pleura brown, pteropleuron and metasternum brownish yellow. Wing faintly tinged with brown, somewhat darker on anteroapical margin; halter yellow. Legs yellow; trochanters brown, tibiae brownish yellow, tarsi brown, spurs dark brown. Abdomen dark brown, tergite 1 almost entirely yellow, tergites 2—4 each with posterolateral corners yellow triangularly, touching narrowly on dorsal posterior margin, yellow triangles on tergite 5 small; terminalia yellow but brownish dorsodistally.

Antenna twice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:3.3:2.6:2.5. Mesonotum with setae and bristles brown, metapleuron hairy. Costa extending distinctly beyond tip of  $R_s$ ,  $Sc$  terminated at level of  $R_s$ ,  $Sc_2$  absent, stem M as long as r-m, forking point of Cu at middle of stem M. Hind tibia with 4 rows of many short bristles, fore metatarsus slightly shorter than tibia. Abdomen covered with brownish yellow setae. Terminalia: epandrium nearly twice as long as broad, broadened distad from middle, with surstylus suboval, bearing 2 rows of 23—26 spines dorsally; basistylus with a pair of processes loosely serrated apicolaterally; dististylus consisted of 2 lobes, ventral one curved dorsally before apex and with 1 strong spine on tip, dorsal one narrowing distally and curved ventrally, with 1 strong bristle



Figs. 15—16. Male terminalia of *Boletina curta* n. sp. (15A—D) and *B. meniscophalloides* n. sp. (16A—D).

before tip; parameres with a pair of U-shaped processes dorsally; aedeagus somewhat crescent-shaped apically in lateral view, 300  $\mu$  long, ejaculatory apodeme membranous. Length: Body 4.3 mm, wing 3.8 mm. ♀. Unknown.

Distribution: Japan (Honshû).

Holotype ♂ (KPU 200), Koza, Wakayama Pref., 5. IV. 1962, M. Sasakawa.

The distinctive characters of this species are the distinctly elongate aedeagus and forked process on the ventral process of the dististylus. It differs from *B. hirtilobula* n. sp. by the dark propleuron and also from *curta* n. sp. by the pale pteropleuron.

17. *Boletina prolata* n. sp. Fig. 17

♂. Head black; antenna brown, flagellar segment 1 narrowly yellow at base; palpus brown, segment 4 yellowish. Thorax black; mesonotum subshiny, gray-dusted, with vittae indistinct; pleura brown-tinged. Wing hyaline, very faintly tinged with brown; halter yellow. Legs yellow; fore and mid coxae each with brown spot dorsoproximally, trochanters brown, tibiae brownish yellow, tarsi brown, spurs brownish yellow. Abdomen brownish black, tergites 2—4 each with small yellow triangles on posterolateral corners; terminalia black.

Antenna nearly 2.5 times as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:2.3:2.2:2.0. Mesonotum with setae and bristles yellow, metapleuron hairy. Costa extending almost midway between apices of  $R_5$  and  $M_{1+2}$ ,  $Sc$  terminated slightly beyond  $R_5$ ,  $Sc_2$  situated on apical 2/5 of cell  $R$ , stem  $M$  about 1.5 times as long as  $r-m$ , forking point of  $Cu$  situated slightly beyond base of stem  $M$ . Hind tibia with 4 rows of many short bristles, fore metatarsus 4/5 length of tibia. Abdomen covered with yellow setae. Terminalia: epandrium oblong, twice as long as broad, with surstylus elliptical, spinose in 2 rows dorsally; basistylus ventrally with median membranous cleft deep and a pair of processes long; dististylus densely covered with long setae, subtriangular in lateral view but projected ventrally, bearing 3 strong spines and 2 stout setae on tip; parameres with a pair of long dorsal processes, each provided with a minute hook before tip; aedeagus  $190\mu$  long, ejaculatory apodeme subcircular. Length: Body 4.7 mm, wing 4.5 mm. ♀. Unknown.

Distribution: Japan (Hokkaidô).

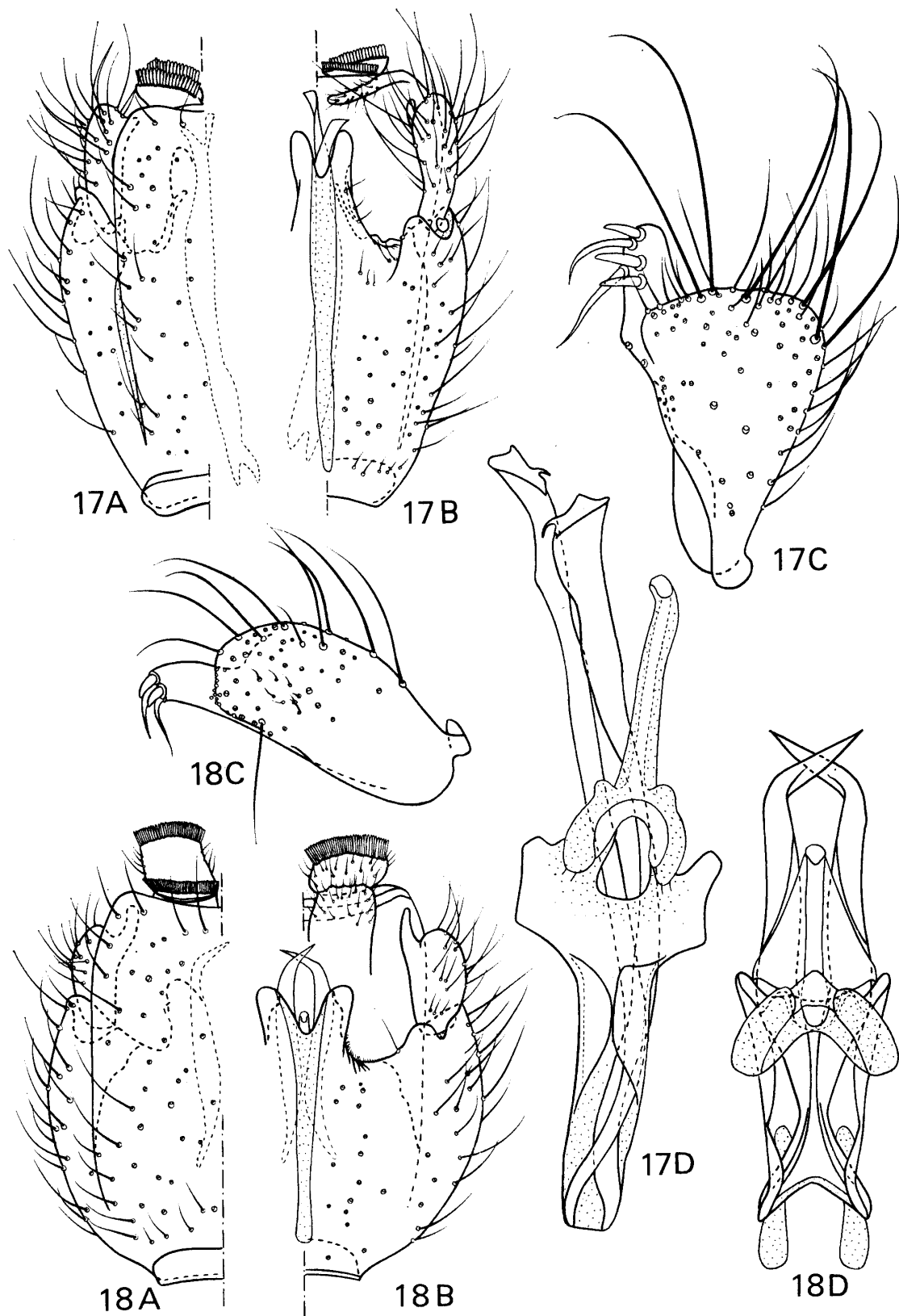
Holotype ♂ (HU), Sapporo, Hokkaidô, 19. X. 1959, S. Takagi.

This species may be easily distinguished from *B. nitida* Grzegorzek by the brown palpus and apically broadened dististylus. The parameres of male terminalia are unusual in having the minute, claw-like hooks near apices of dorsolateral processes.

18. *Boletina bidenticulata* n. sp. Fig. 18

♂. Head black; antenna brown, flagellar segment 1 paler at base; palpus dark brown, segments 3—4 yellowish. Thorax black; mesonotum shiny, very sparsely gray-dusted, pleura slightly brown-tinged. Wing faintly tinged with brown; halter yellow. Legs yellow, coxae brownish narrowly on dorsoproximal ends, trochanters brown, fore femur ventrally with brownish stripe on basal 1/2, tibiae brownish yellow, tarsi brown, spurs brownish yellow. Abdomen entirely dark brown; terminalia black.

Antenna nearly twice as long as thorax, pedicel and flagellar segments 1—3 in proportion of 1.0:2.7:2.0:2.2. Mesonotum with setae and bristles yellow, metapleuron hairy; scutellum with a pair of subapical bristles extremely long. Costa extending almost midway between  $R_5$  and  $M_{1+2}$ ,  $Sc$  terminated slightly beyond  $R_5$ ,  $Sc_2$  on apical 2/5 of cell  $R$ , stem  $M$  1.5 times as long as  $r-m$ , forking point of  $Cu$  situated slightly beyond base of stem  $M$ . Hind tibia with 4 rows of short bristles, fore metatarsus 4/5 length of tibia. Abdomen covered with yellow setae. Terminalia: epandrium about 1.4 times as long as broad, with lateral margins weakly depressed at middle, surstylus subquadrate, bearing 2 dense rows of slender spines; basistylus with median membranous cleft deep, projected posteriorly; dististylus with a process near apex, bearing 2 stout spines and 2 setae on tip; parameres with dorsolateral processes directed mesad before ends, dorsal arch weakly sclerotized and sparsely setulose on membrane; aedeagus  $130\mu$  long,



Figs. 17—18. Male terminalia of *Boletina prolata* n. sp. (17A—D) and *B. bidenticulata* n. sp. (18A—D).

ejaculatory apodeme membranous. Length: Body 4.0—4.4 mm, wing 4.0—4.5 mm. ♀. Unknown.  
Distribution: Japan (Hokkaidô).

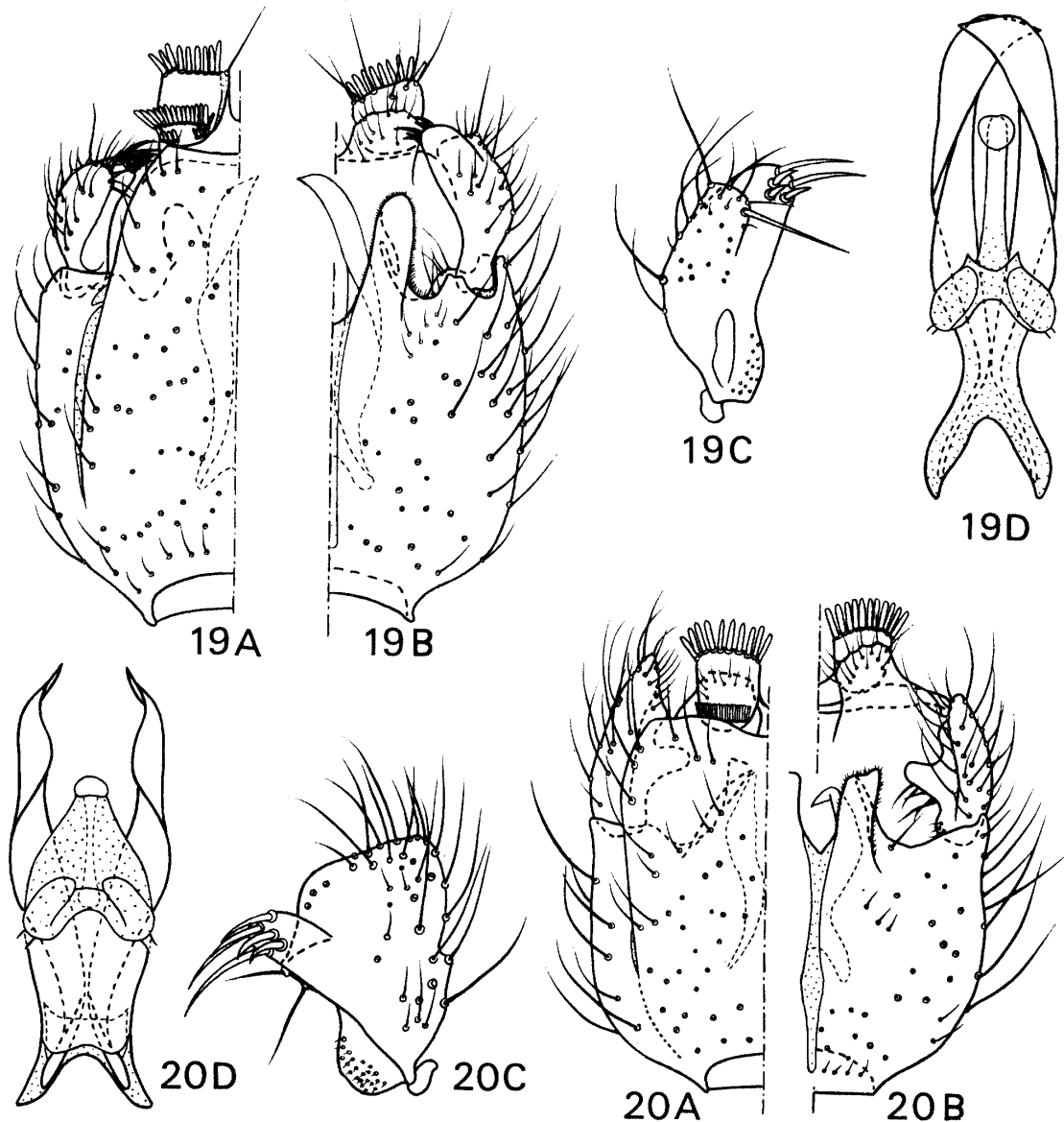
Holotype ♂ (HU), Sapporo, Hokkaidō, 19. X. 1959, S. Takagi. Paratopotype ♂, 19. X. 1959, K. Kamijo.

This species closely resembles *B. prolata* n. sp. but may be distinguished by the entirely dark abdomen, dense rows of slender spines on the surstylus and suboval dististylus.

19. *Boletina nitida* Grzegorzek Fig. 19

*Boletina nitida* Grzegorzek, 1885, Ent. Zeitschr. Berl. 29: 204.

Black; antenna with flagellar segment 1 rarely yellowish, 1.3 (♀) to 1.8 (♂) times as long as thorax; palpus yellow but segment 1 brownish. Thorax shining, mesonotum with setae and bristles yellow. Wing faintly brown-tinged, more or less darker along apical margin; halter yellow; costa ending just before middle between apices of  $R_5$  and  $M_{1+2}$ ,  $Sc$  at level of  $R_5$ ,  $Sc_2$  at



Figs. 19—20. Male terminalia of *Boletina nitida* Grzegorzek (19A—D) and *B. dispecta* Dziedzicki (20A—D).

middle of cell R, stem M 1.3 times as long as r-m, forking point of Cu slightly before middle of stem M. Legs yellow; tibiae brownish yellow, tarsi brown, spurs brownish yellow, fore spur darkened. Abdomen shiny black but tergites 2—4 broadly yellow except anterior margins on lateral sides, covered with yellow setae. Terminalia: epandrium suboval, about 1.3 times as long as broad, with surstylus subquadrate, bearing 9 spines on tip and about 20 spines arranged in 2 rows at dorsal base and several setae on ventral apex; basistylus ventrally with median membranous cleft deep, a pair of knob-like processes distally; dististylus knob-like, with 3—4 spines and 2 stout setae on tip; parameres with dorsal and ventral processes long, dorsal ones curved inwards at posterior ends; aedeagus 100  $\mu$  long, ejaculatory apodeme cotyledonous. Length: Body 3.4 (♀)—3.6 (♂) mm, wing 2.9 (♀)—3.8 (♂) mm.

Distribution: Europe and Japan (Honshû). New to Japan.

Specimens examined: 1♂1♀, Kii-Ôshima, Wakayama Pref., 3. IV. 1962, M. Sasakawa: 1♂, Ishiyama-hiratsu, Shiga Pref., 15. X. 1972, T. Kimura.

## 20. *Boletina dispecta* Dziedzicki Fig. 20

*Boletina dispecta* Dziedzicki, 1885, Pamietnik Fizyjograf. 5: 8.

This species is closely related to *B. nitida* Grzegorzek in the general appearance, but is distinguished by the following characters:

Antenna with flagellar segments 1—2 brownish yellow; palpus entirely yellow; wing with stem M more than 1.3 times as long as r-m, forking point of Cu almost at level of base of stem M; abdominal tergites 2—4 yellow on posterolateral 1/2, sternites 2—4 entirely yellow. Terminalia: epandrium with surstylus subquadrate, bearing about 10 spines on tip and about 20 slender spines at dorsal base; basistylus with posteroventral processes truncated at apices; dististylus subtriangular in lateral view, projected shortly at middle, with 3 spines and 2 long setae on tip; parameres with a pair of dorsolateral processes weakly twisted posteriorly, covered with spinulose membrane at base, ventral plate membranous except anterior bridge; aedeagus chitinized apically, 80  $\mu$  long. Length: Body 2.5—2.9 mm, wing 2.4—2.6 mm.

Distribution: Europe and Japan (Honshû). New to Japan.

Specimens examined; 2♂♂, Mt. Hiei, Shiga Pref., 15. VII. 1973, T. Kimura.

摘要: 日本産 *Boletina* 属キノコバエ20種について分類学的検討を行い, あわせて既知種を含む全種の検索表を作った。種的特徴としての雌生殖器については精細な図と共に詳しく記述した。