

A Revision of the Genus *Cryptotympana* (Homoptera, Cicadidae)

Part II*

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Abstract The cicadas of the genus *Cryptotympana* STÅL are revised. In this part, the remaining 23 species are described and illustrated; 22 species under 6 groups, including 9 new species, i.e., *albolineata*, *sibuyana*, *socialis* and *viridicostalis* (from the Philippines), *distanti*, *pelengensis* and *ventralis* (from Sulawesi), *auripilosa* (from Burma), and *dohertyi* (from Enggano), and 1 species incertae sedis.

The *accipiter* group

The species belonging to this group are homogeneous and very similar to each other; it is rather difficult to find out specific characteristics in most cases. In this paper, I recognize 10 species in the group; 7 species from the Philippines and 3 from Sulawesi (Indonesia).

Cryptotympana accipiter (WALKER, 1850)

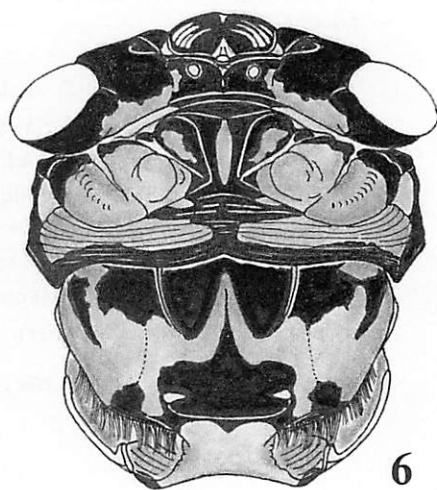
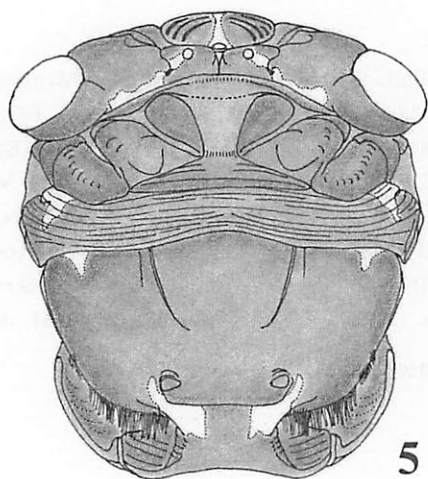
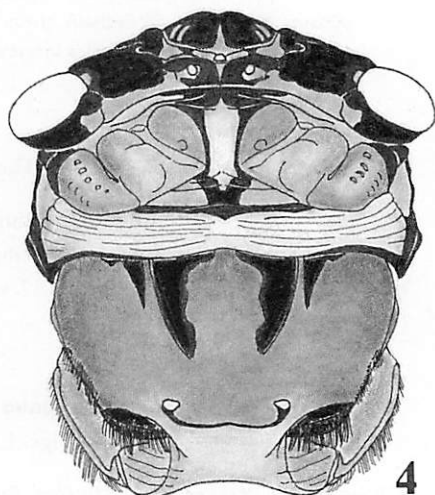
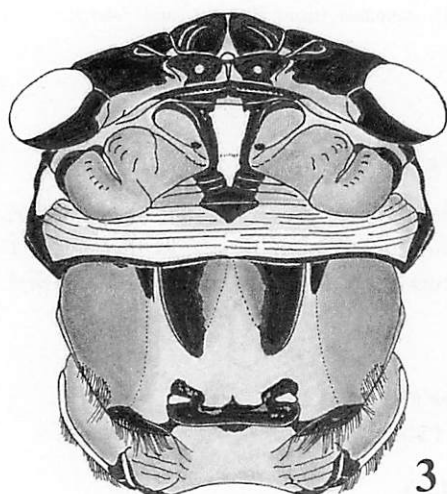
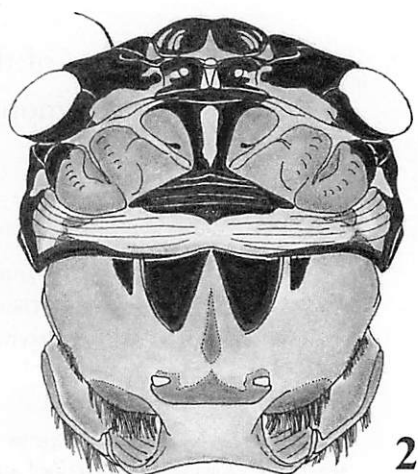
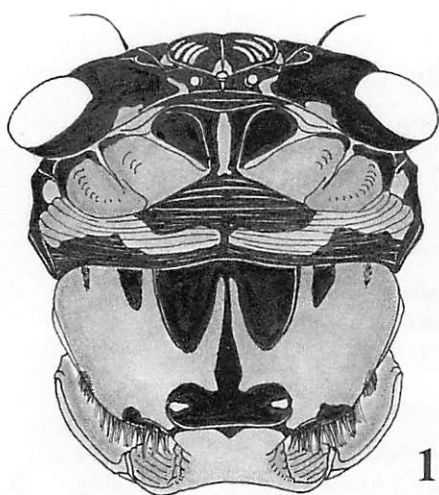
(Figs. 1, 11-12, 15-22, 58)

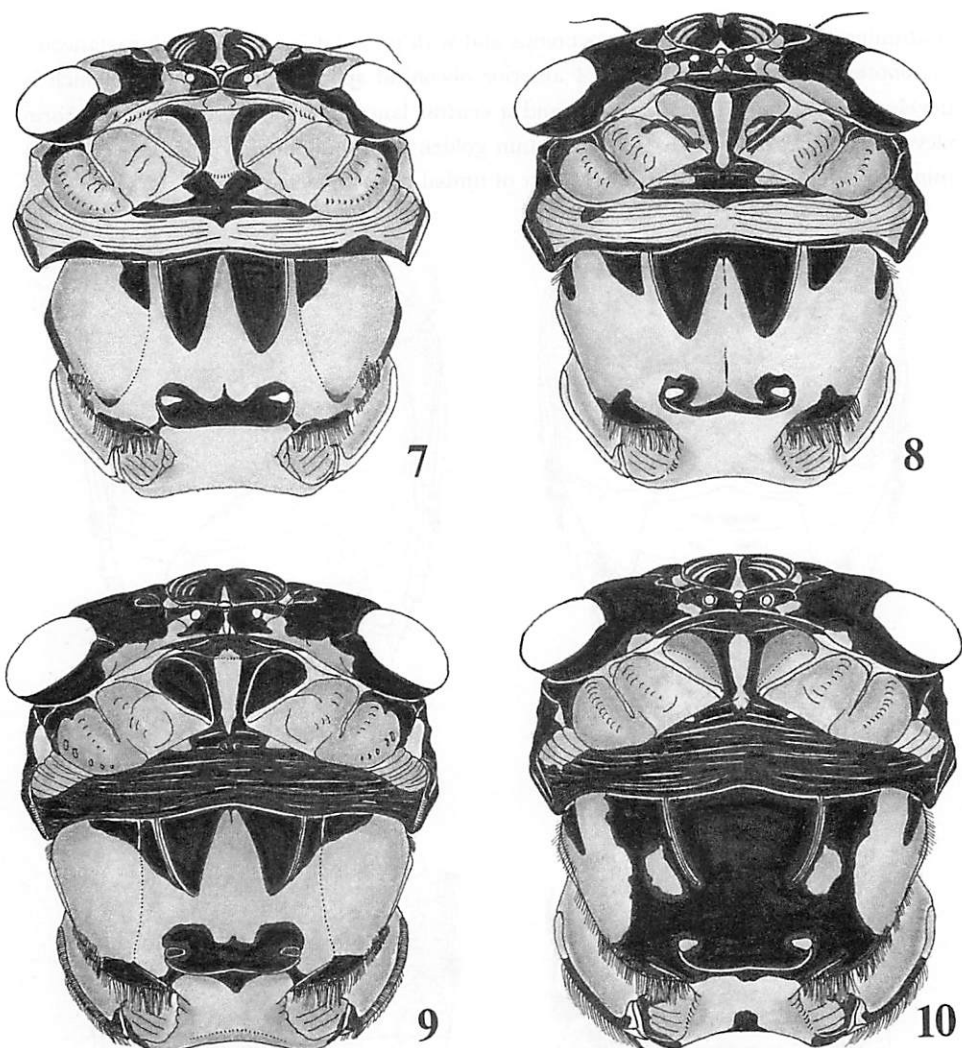
Fidicina accipiter WALKER, 1850, *List Hom. Brit. Mus.*, 1: 83.

Cryptotympana accipiter: STÅL, 1862, *Öfv. K. Vet.-Akad. Förh.*, 19: 483; DISTANT, 1891, *Monogr. Orient. Cicad.*, p. 84.

Specimens examined. 1 ♂ (holotype), Phil. Isls., WALKER det. (handwriting) "*Fidicina accipiter* W. type" (BM); 3 ♂♂ 2 ♀♀, Mauo~Samar, Philippines, 8. IV. 1932, Prince LÉOPOLD, "Dr. V. Lallemand det., 1934: *Cryptotympana accipiter* Walk." (ISNB); 2 ♂♂, Mauo~Rivière, Samar, Philippines, 9. IV. 1932, Prince LÉOPOLD, "Dr. V. Lallemand det.: *Cryptotympana accipiter* Walk." (ISNB); 2 ♂♂ 1 ♀, St. Bernard, Leyte Is., Philippines, 20-26. IV. 1968, C. PLATEROS (EUM); 2 ♂♂ 1 ♀, St. Bernard, So. Leyte, Philippines, V-VI. 1968, M. MEDICIELS (MH); 3 ♂♂ 1 ♀, Island Samar, BAKER (NMNH); 1 ♀, Catbalogan (Samar), Philippin. (BM); 1 ♀, same locality, "P. C. M. de

* Part I: *Bull. Kitakyushu Mus. nat. Hist.*, (6): 119-212 (1987).





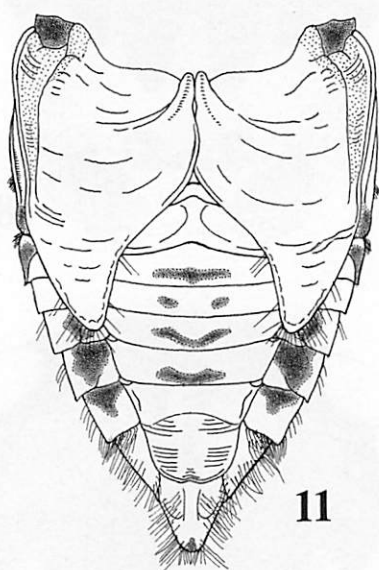
Figs. 1-10. Head and thoracic nota of the *accipiter* group. 1, *C. accipiter*; 2, *albolineata* sp. nov.; 3, *sibuyana* sp. nov.; 4, *socialis* sp. nov.; 5, *viridicostalis* sp. nov.; 6, *consanguinea*; 7, *suluensis*; 8, *distanti* sp. nov.; 9, *pelengensis* sp. nov.; 10, *ventralis* sp. nov. Hairs on postocular area are removed (also in the following figures).

Greeve det., 1964: *Cryptotympana* spec.", Coll. Zoölogisch Museum Amsterdam (ZMA); 4♀♀, Camarines Norte, S. Luzon, Philippines, III. 1978 (NSMT); 2♂♂, Philippines (NSMT).

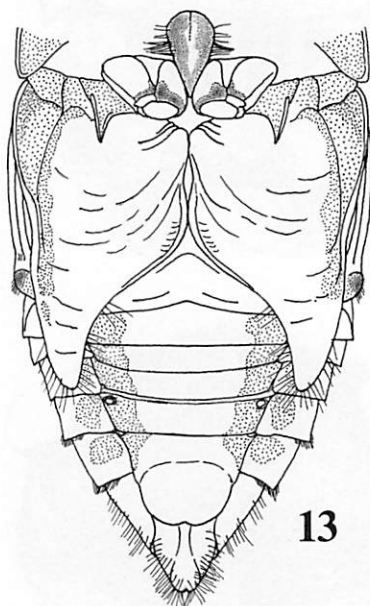
Body black and dark brown; markings and spots very variable both in shape and size by individuals.

Head and pronotum black with a central small spot on tylus, a central longitudinal fascia on pronotum and transverse waved stripe on pronotal outer area (collar),

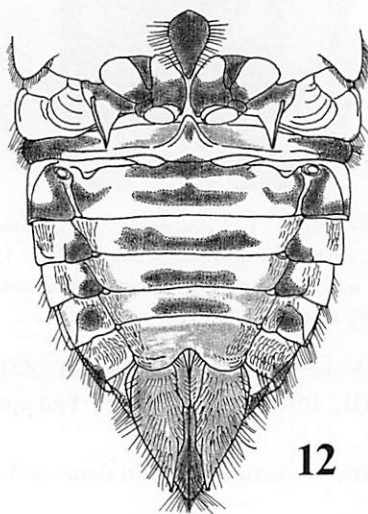
continuing to the anterior corner ochreous and with pronotal inner area dark castaneous; mesonotum dark castaneous with 4 anterior obconical spots, a central pair of which is developed along parapsidal sutures, and a central lanceolate spot just before cruciform elevation, black; lateral part of mesonotum golden pilose; abdomen black, covered with minute golden hairs laterally; lateral part of timbal covering ochreous.



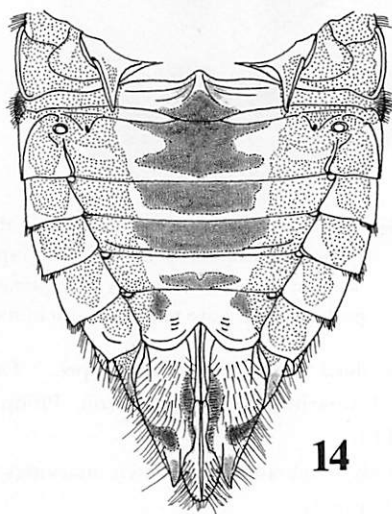
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Figs. 11-14. Abdomen (w/ opercula; also in most of the following figures) in ventral view of the *accipiter* group. 11-12, *C. accipiter*; 13-14, *albolineata* sp. nov.

Venter of thorax, covered with white pollinosity, ochreous with mesoprepisternum, central metaprepisternal process and metameron (basal part of meracanthus) black; ♂ operculum bright orange; fore leg black with coxa and outer surface of femur dark castaneous; mid and hind legs dark castaneous with distal part of coxa, trochanter, mid femur, tip of tibia, tarsus and claw infuscated or black; abdomen almost entirely ochreous tinged with reddish orange, clothed with golden hairs; central part of sternum (especially in ♀♀) often infuscated by individuals; lateral part of ♀ abdomen (pleuron and lateral part of sternum) covered with white pollinosity; inner margin of ♀ 9th tergum and ovipositor sheath (lat. valvula) sometimes infuscated.

Wings hyaline and orange ochreous (to stramineous) before nodal line, and hyaline at the rest with the apical part dimly smoky; veins orange ochreous in basal 1/2, sometimes tinged with green, and fuscous in the rest; basal cell more or less infuscated and bronzy; areas along cross veins R_3-R_{4+5} and $R_{4+5}-M_1$ of forewing moderately infuscated.

Head wider than pronotum, hardly swollen anteriad, with deep sulcation along transfrontal suture; frontoclypeus wider, $0.95-0.98\times$ as long as wide, with 7-8 transverse striations on the surface; labium extending to the middle of central metaprepisternal process; pronotum nearly parallel-sided, more or less sinuate; posterior pronotal collar comparatively wide; mesonotum proper* slightly longer than pronotum in median length; abdomen slightly longer than distance between head and cruciform elevation in ♂♂, while shorter in ♀♀; ♂ operculum triangular, extending to 4th or 5th abdominal segment, and with the tip acute and curved inwards; caudal margin of 7th abdominal sternum evenly curved in ♂♂, and widely and triangularly emarginate in ♀♀; ♀ 9th tergum short and wide, ca $1.06\times$ as long as wide; stalk of veins 1M and 2M of forewing more basal, distinctly shorter than vein 1M before nodal line; vein CuP of forewing well separated from vein 1A in basal 4/5.

Male genitalia (Figs. 17-21). Pygofer, similar to that of *acuta*, oval, ca $1.9\times$ as long as wide; caudal beak of pygofer raised; ventral pygoferal lobes short; uncus lobe evenly curved inwards, at least not widened at the apex; theca cylindrical, without any projection at the apex; vesica short, possessing a very short saccate process apically, directing

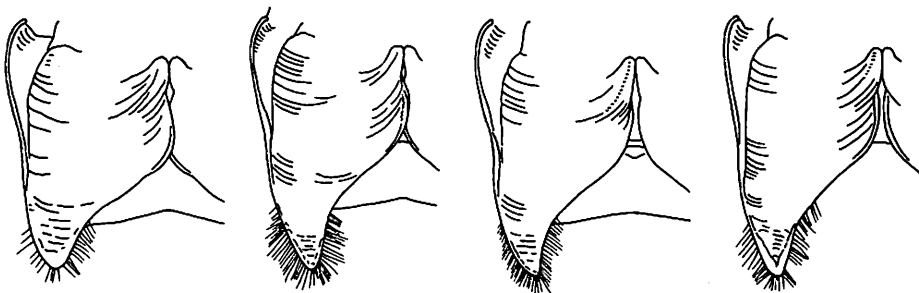


Fig. 15. Variation of ♂ operculum in *C. accipiter*.

* Mesonotum proper: mesonotum excluding cruciform elevation (scutellum); mesonotal scutum.

vertically.

This species shows some individual variations in the coloration and markings on thoracic nota, the hue of wings, the shape of ♂ operculum (Fig. 15), etc. The holotype seems to be a nigrescent individual as follows (Fig. 22): Markings and spots on head and thoracic nota rather dark brown; ♂ operculum entirely dark orange ochreous; legs black

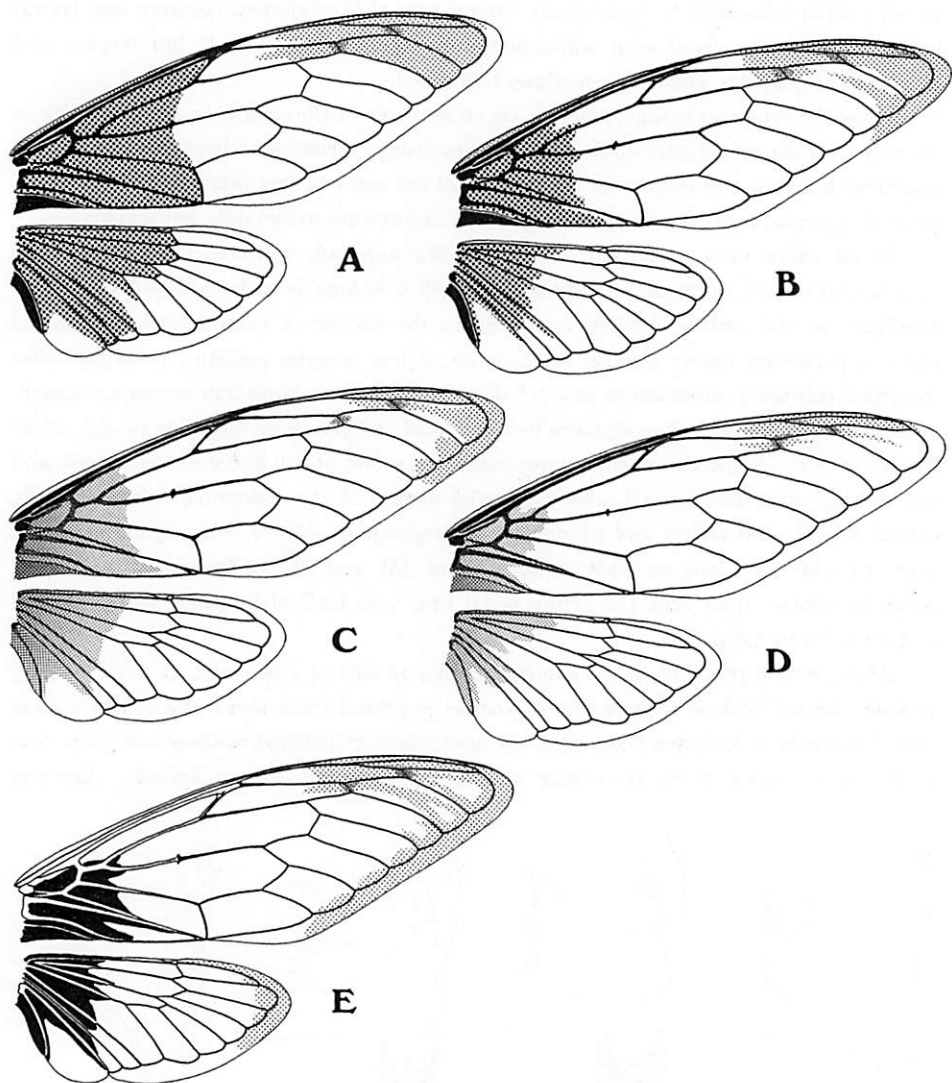
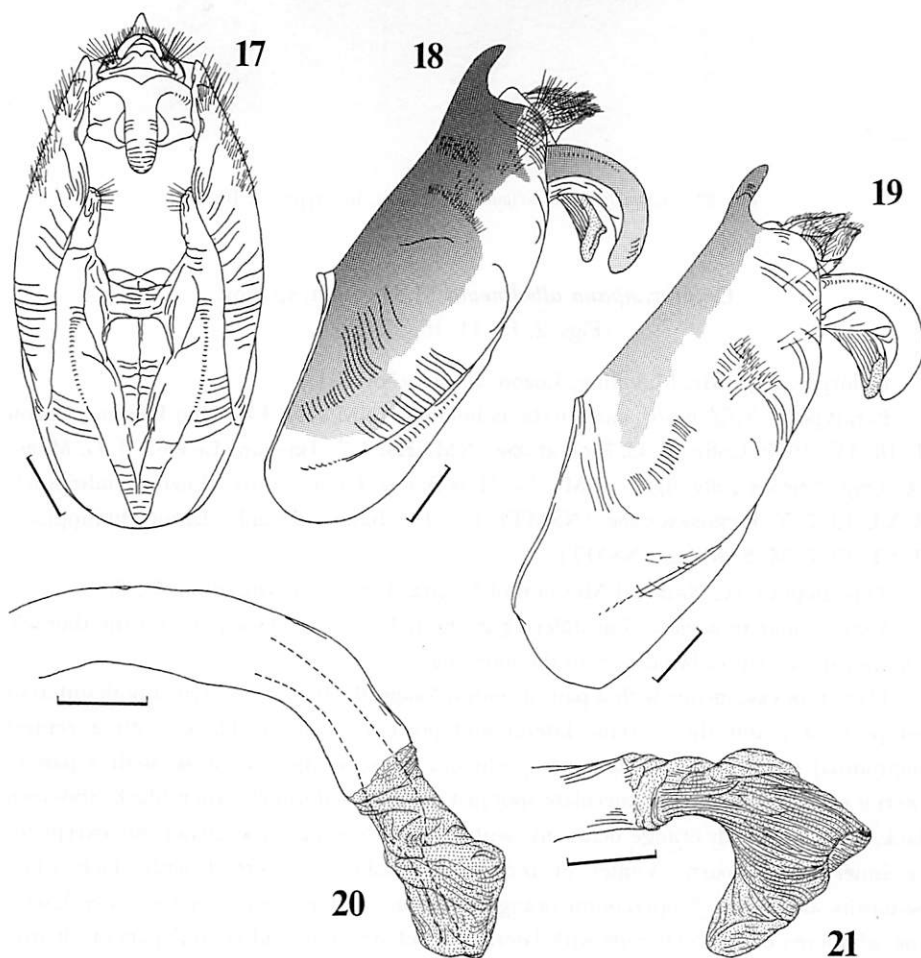


Fig. 16. Semischematic figures of wing colour-pattern of the *accipiter* group. *C. accipiter*, A; *albolineata* sp. nov., C-D; *sibuyana* sp. nov., B; *socialis* sp. nov., C; *viridicostalis* sp. nov., E; *consanguinea*, B-C; *suluensis*, D; *distanti* sp. nov., B-D; *pelengensis* sp. nov., C-D; *ventralis* sp. nov., C.

with outer part of coxa, a spot on the underside of mid and hind femora dark ochreous; wings strongly bronzy basally and hyaline apically, and the apical parts prominently smoky.

Body length: ♂ 38–45 mm (mean 41.9 mm), ♀ 36–40 mm (mean 38.2 mm).
 —Total length*: 58–64 mm (mean 61.4 mm). —Expanse of forewings; 111–125 mm.

Distribution. Philippines: Samar, Leyte and S Luzon (Camarines Norte) (Fig. 57).



Figs. 17–21. Male genitalia of *C. accipiter*. 17–19: Pygofer in ventral (17) and lateral (18, 19) views (19: holotype, BM). — 20, 21: Apical part of theca in lateral (20) and obliquely ventral (21) views. Shaded area of lateral view shows black or fuscous part (also in the following figures of ♂ genitalia of the *accipiter* group). Scales; 1 mm (17–19), 0.5 mm (20–21).

* Total length: the distance from tip of head to apical end of forewing folded.

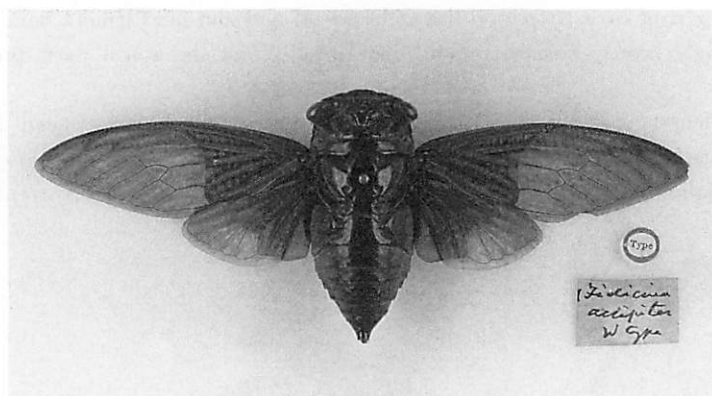


Fig. 22. *Cryptotympana accipiter* (WALKER), holotype ♂ (BM).

***Cryptotympana albolineata* M. HAYASHI, sp. nov.**

(Figs. 2, 13–14, 16, 23–25)

Holotype: ♂, Mt. Makilling, Luzon, BAKER (NMNH).

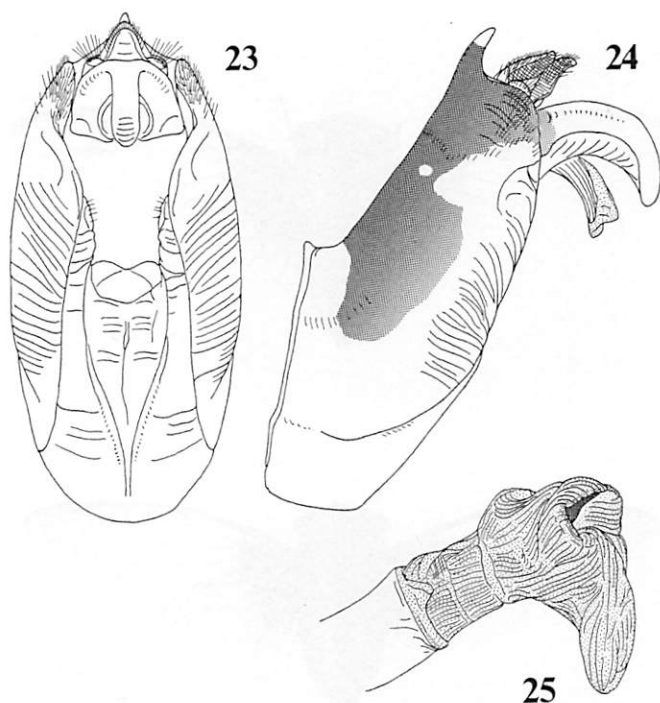
Paratypes: 3 ♂♂ 6 ♀♀, same data as holotype (NMNH); 1 ♀, Ube Laguna, Luzon PI, 16. IV. 1930, Colln. R. C. MCGREGOR (NMNH); 1 ♂, Imugan, Luzon, "J. G. Myers det.: *Cryptotympana acuta* Sign." (BM); 1 ♀, Los Baños, Laguna Prov., Luzon, Philippines, 18. VI. 1977, Y. KUROSAWA leg. (NSMT); 1 ♂, Los Baños~Manila, Luzon, Philippines, 19. VI. 1977, M. SATO leg. (NSMT).

Type depository: National Museum of Natural History, Washington, D. C.

Very similar to *accipiter*, but differing in the reduction of black parts on the thoracic nota and the extent of basal hue on the forewing.

Pronotum castaneous with a pair of central longitudinal fascia, widened both anteriorly and posteriorly, and the extreme lateral and posterior margins black, with a central longitudinal fascia and the outer area ochreous; mesonotum castaneous with a pair of anterior oblong spots and a lanceolate spot just before cruciform elevation black; abdomen black, margined with orange ochreous, with timbal covering dark castaneous except for the inner lateral part. Venter of thorax pale ochreous, clothed with thick white pollinosity laterally; ♂ operculum orange ochreous, and pollinose on the outer lateral part; abdomen orange ochreous with lateral part of sternum, and central part of pleuron covered with thick white pollinosity, forming a pair of longitudinal white stripes on abdomen; central part of ♀ 9th sternum often infuscated. Wings hyaline with basal 1/5–1/4 of forewing and basal 1/3 of hindwing dimly or faintly stained stramineous to yellow; veins pale orange ochreous basally; 1st and 2nd cross veins of forewing obscurely maculate.

Head slightly wider than pronotum; frontoclypeus about as long as wide; ♂ opercula inwardly hooked apicad, extending beyond 4th abdominal segment, with the outer



Figs. 23–25. Male genitalia of *C. albolineata* sp. nov. 23, 24: Pygofer in ventral (23) and lateral (24) views. — 25: Apex of theca with vesica everted.

margins concavely sinuate and the inner margins almost always contiguous to each other; caudal margin of ♀ 7th sternum widely but sharply notched.

Male genitalia (Figs. 23–25). Pygofer oblong, ca $2.0\times$ as long as wide; uncus lobe rather short, gently curved inwards; vesica everted short, more or less expanded near the middle, with a fat saccate process shorter than vesical shaft.

Body length: ♂ 39–45 mm, ♀ 32–42 mm. — Total length: 54–63 mm. — Expanse of forewings: 108–122 mm.

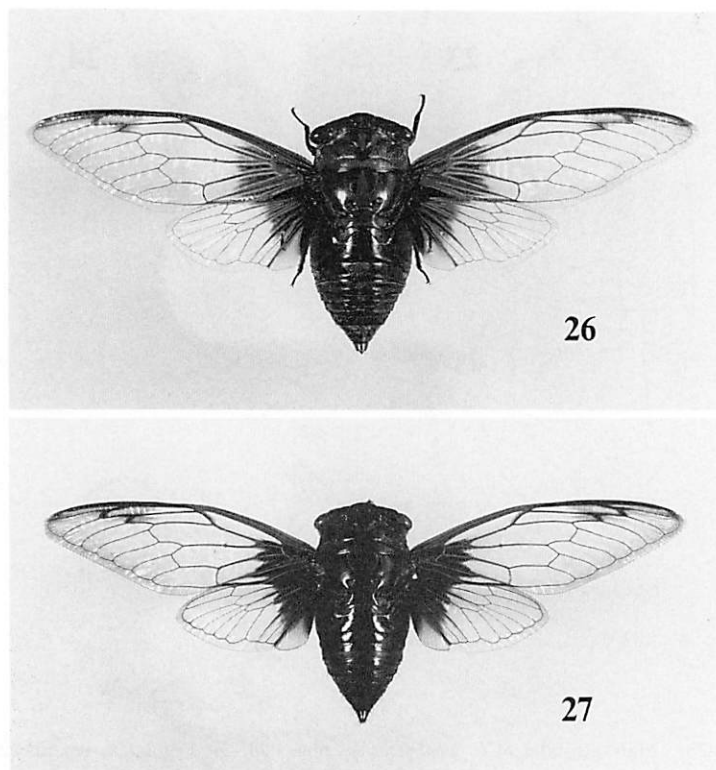
Distribution. Philippines: Luzon (Fig. 57).

***Cryptotympana sibuyana* M. HAYASHI, sp. nov.**

(Figs. 3, 16, 26, 28–29, 31–34, 37)

Holotype: ♂, Island Sibuyan, BAKER (NMNH).

Paratypes: 2♀♀, same data as holotype (NMNH); 3♂♂ 4♀♀, España, Sibuyan Is., VII. 1984 (MH); 2♂♂ 9♀♀, Romblon, Philippines (MH); 1♂, San Andres Reforestation Project, Marigondon Sur, San Andres, Tablas Is., Romblon Prov., Philippines, 27. III. 1981 (MH).



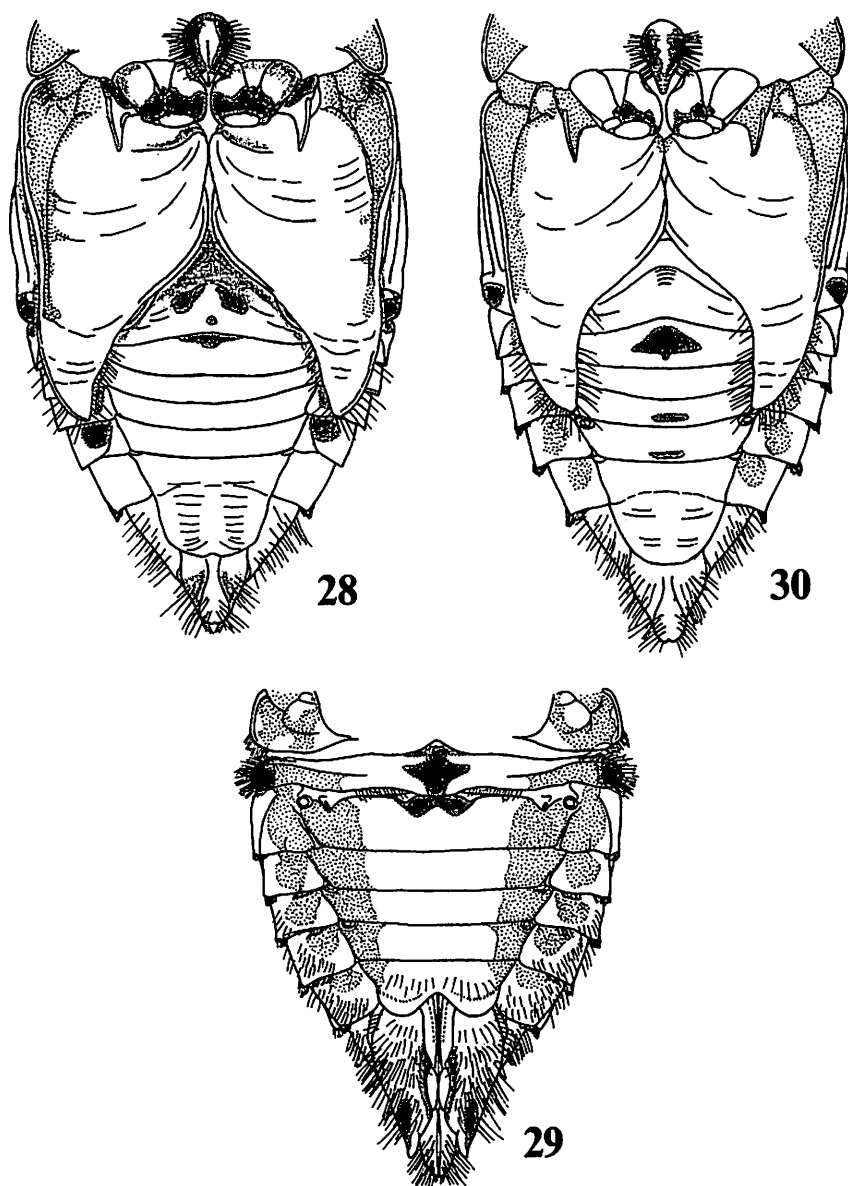
Figs. 26-27. 26: *Cryptotympana sibuyana* sp. nov. (paratype from Romblon). — 27: *C. viridicostalis* sp. nov. (paratype from Palawan).

Type depository: National Museum of Natural History, Washington, D. C.

Further specimen examined. 1 ♀, without locality, Collected by R. McGREGOR, "Acc. Nor. 1950, Lot, Govt. Lab. Coll." (BM).

Similar to *accipiter*, but larger and more glossy. Pronotum ochreous with a pair of central longitudinal fasciae, much widened anteriorly and fused to each other posteriorly, the extreme lateral and posterior margins black, and the inner area more or less tinged with brown; mesonotum castaneous, paler and ochreous centrally, with 2 pairs of anterior obconical or falcate spots, the outer pair very small, a discal spot just before cruciform elevation, and a narrow band across basal arm of cruciform elevation, black or much infuscated; abdomen black and greyishly pilose, with timbal covering except for the inner lateral part, a pair of spots on 2nd tergum (not always), caudal and central (not always) parts of ♂ 8th tergum, and central part of ♀ 9th tergum, ochreous to castaneous; a pair of white pollinose spots sometimes appearing on ♂ 3rd tergum.

Venter of thorax dull ochreous, clothed with sparse white pollinosity, with lateral part of central metaprepisternal process black and with ♂ operculum ochreous orange and pollinose laterally; legs also very similar to those of *accipiter*, but ochreous parts darker;



Figs. 28-30. Abdomen in ventral view. 28-29, *C. sibuyana* sp. nov.; 30, *socialis* sp. nov.

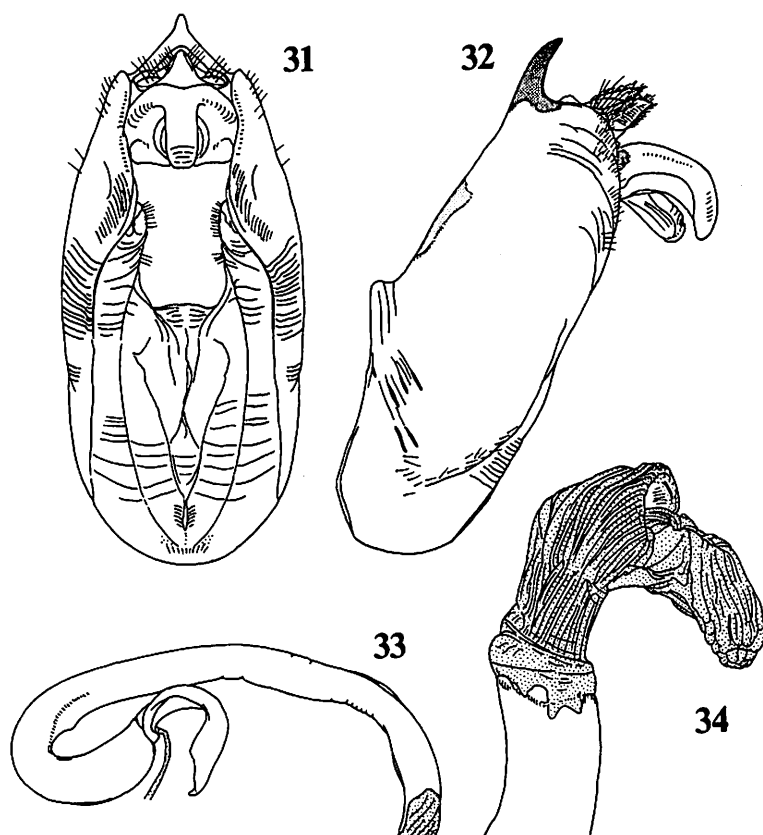
abdomen ochreous orange with auditory capsule, a pair of small spots on 2nd sternum and a central discal spot on anterior part of 3rd sternum black (black spots also appearing on 3rd-5th pleura, by individuals); lateral part of ♀ abdomen almost always clothed with white pollinosity.

Wings hyaline, with basal $1/5-1/4$ of forewing and basal $1/3$ of hindwing stained

stramineous and bronzy; areas on and near 1st and 2nd cross veins of forewing infuscated, forming a faint zigzag marking.

Head slightly wider than pronotum; frontoclypeus rather globose, with 7–10 transverse striations on the surface; pronotum rather trapezoidal, with the lateral margin hardly sinuate; ♂ opercula triangular with the inwardly hooked apices, reaching 5th or 6th abdominal segment; posterior margin of ♀ operculum somewhat expanded; ♂ 8th sternum rather angulate caudad; ♀ 9th tergum slender and the ovipositor slightly protruding.

Male genitalia (Figs. 31–34, 37). Pygofer ovate, ca $2.0\times$ as long as wide, with caudoventral margin strongly sinuate; uncus lobe short, much more curved at the subapex, with the dorsal base widely and triangularly concave; theca long, slightly bent near the middle and distinctly curved at the subapex; vesical saccate process long, about



Figs. 31–34. Male genitalia of *C. sibuyana* sp. nov. 31, 32: Pygofer in ventral (31) and lateral (32) views. — 33: Theca in lateral view. — 34: Apex of theca with vesica everted in obliquely ventral view.

as long as the shaft.

Body length: ♂ 45–49 mm, ♀ 42–45 mm. —Total length: 65–74 mm. —
Expanse of forewings: 125–133 mm.

Distribution. Philippines: Sibuyan, Romblon and Tablas (Fig. 57).

***Cryptotympana socialis* M. HAYASHI, sp. nov.**

(Figs. 4, 16, 30, 35–37)

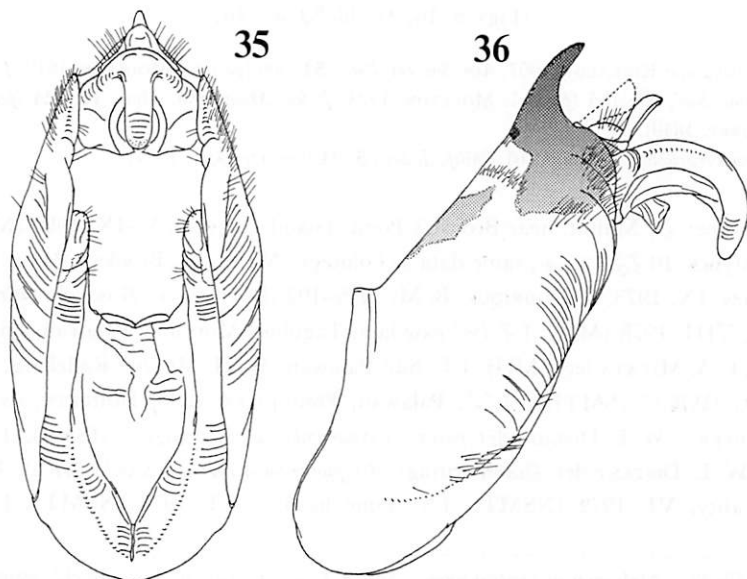
Holotype: ♂, Antique, Isl. Panay (NMNH).

Paratypes: 1 ♂, Camp 7, Cebu Is., Philippines, 13. V. 1980, N. KASHIWAI (MH);
1 ♂, Mambucal, Murcia, Negros Occidental, Negros Is., Philippines, 26. IV. 1980, N.
KASHIWAI (MH).

Type depository: National Museum of Natural History, Washington, D. C.

Very similar in general appearance to the preceding species, *sibuyana*, but differing as follows:

Black parts on head and thoracic nota more reduced; timbal covering ochreous with the inner lateral part widely (1/3 the width) fuscous brown; a pair of white pollinose spots always appearing on 3rd abdominal tergum; legs paler, and the ochreous area much developed; mid femur and tibia ochreous to castaneous except for the ends black; central parts of 3rd–7th abdominal pleura clothed with sparse white pollinosity; outer lateral margin of ♂ operculum oblique, hardly sinuate; basal hue of wings not tinged with bronze.



Figs. 35–36. Male genitalia of *C. socialis* sp. nov. in ventral (35) and lateral (36) views.

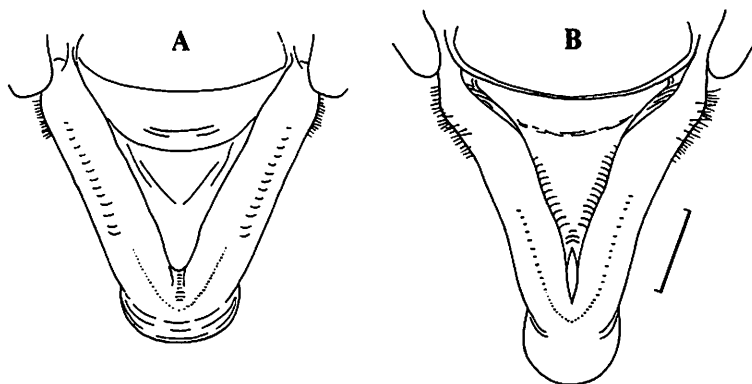


Fig. 37. Base of uncus in caudal view. A, *C. sibuyana* sp. nov.; B, *socialis* sp. nov. Scale, 0.5 mm.

Male genitalia (Figs. 35–37). Very similar to those of *sibuyana*; pygofer ca 2× as long as wide, with the caudal beak long, the caudoventral margin not so sinuate and the ventral lobes more widely apart from each other; base of uncus narrowly and triangularly concave; uncus lobe long, evenly curved inwards, with the tip rounded.

Body length (♂): 46 mm. —Total length (♂): 64–65 mm. —Expanse of forewings (♂): 124–127 mm.

Distribution. Philippines: Panay, Cebu and Negros (Fig. 57).

***Cryptotympana viridicostalis* M. HAYASHI, sp. nov.**

(Figs. 5, 16, 27, 38–39, 43–46)

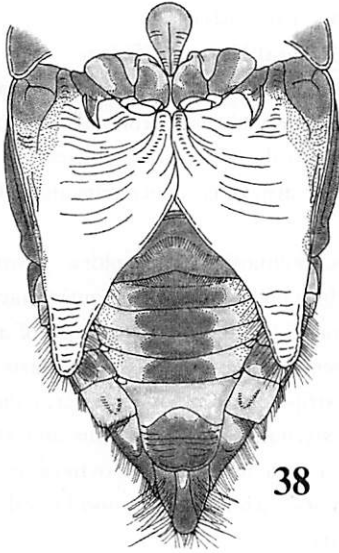
Cryptotympana acuta: KIRKALDY, 1907, *Ann. Soc. ent. Belg.*, 51: 306 (*partim*); MOULTON, 1912, *J. Straits Br. R. Asiat. Soc.*, 57: 155 (*partim*); MOULTON, 1923, *J. fed. Malay Stat. Mus.*, 11: 134 (*partim*) (nec SIGNORET, 1849).

Cryptotympana varicolor: BANKS, 1910, *Philip. J. Sci.*, 5: 34 (nec DISTANT, 1904).

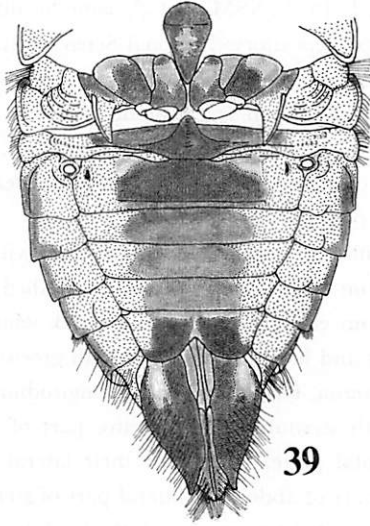
Holotype: ♂, Mainit, near Brooke's Point, Island Palawan, V–IX. 1980 (MH).

Paratypes: 10 ♂♂ 13 ♀♀, same data as holotype (MH); 1 ♀, Brooke's Point, Palawan, Philippines, IX. 1973, R. RODRIQUE, B. M. 1975–193 (BM); 5 ♀♀, Brooke's Point, Minit, Palawan, VIII. 1978 (MH); 1 ♂ (w/ exuviae), Taguliat, Montible, Palawan, Philippines, 3. II. 1971, A. MIYATA leg. (MH); 1 ♀, Süd-Palawan (W. H. MUCHE, Radeberg, Ankauf), det. "*recta* (Wlk.)" (SMTD); 2 ♂♂, Palawan, Philippines, 1898, DOHERTY, ex coll. H. FRUHSTORFER, "W. L. Distant détermin.: *Cryptotympana acuta* Sign." (ISNB); 1 ♀, same locality, W. L. DISTANT det. (handwriting) "*Cryptotympana epithesia* var." (NRS); 3 ♂♂ 1 ♀, same locality, VI. 1972 (NSMT); 1 ♀, same locality, VI. 1973 (NSMT); 1 ♀, same

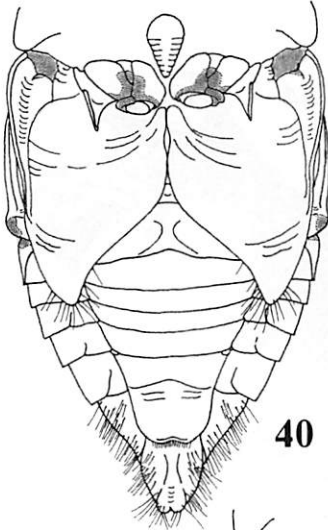
Figs. 38–42. Abdomen in ventral view. 38–39, *C. viridicostalis* sp. nov.; 40–42, *consanguinea* (41: holotype from Mindanao, BM).



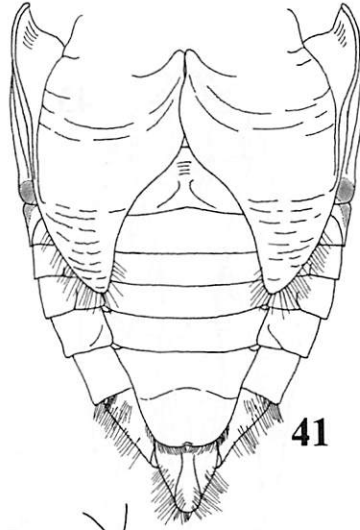
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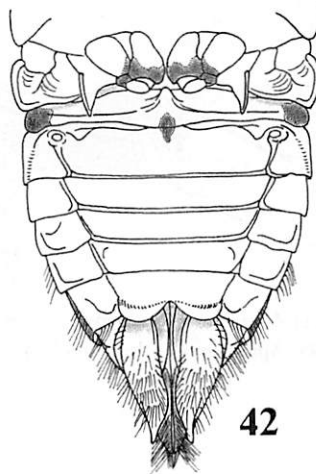
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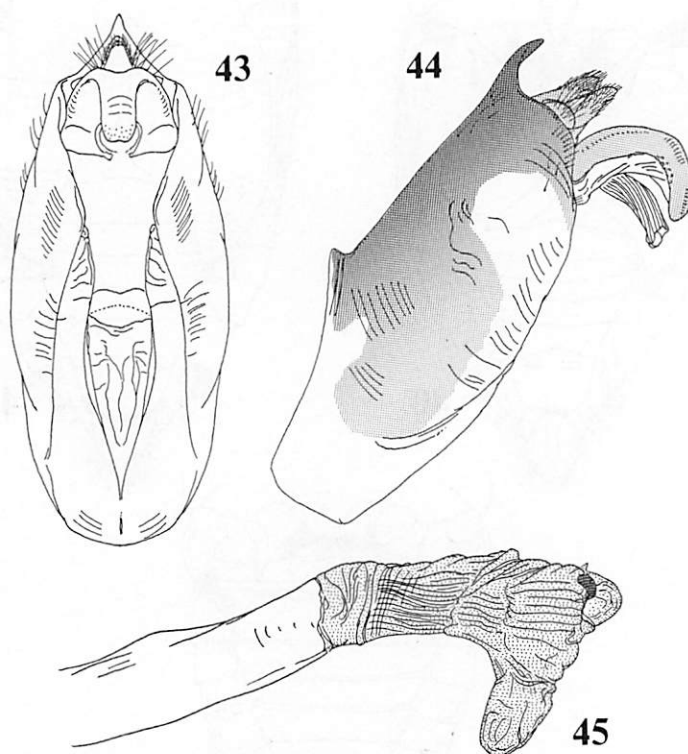
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locality, I. 1973 (NSMT); 1 ♂, same locality, X-XI. 1977 (MH).

Type depository: National Science Museum (Natural History), Tokyo.

Body pitchy black, partly clothed with golden hairs; head, thorax and abdomen black with a longitudinal fascia along centre of frontoclypeus, labrum, pronotal inner area, a spot on posterolateral corner of pronotum, adjacent to the inner area, a fascia on lateral margin of mesonotum and a spot on or near anterior arm of cruciform elevation, fuscous or dark ochreous.

Venter of thorax black covered with white pollinosity and golden pilosity; ♂ operculum bright orange in colour, clothed with white pollinosity on the outer margin; ♀ operculum entirely clothed with thick white pollinosity; legs similar to those of *accipiter*, but mid and hind tibiae tinged with green; abdomen olivaceous with central parts of 2nd to 6th sterna, forming a central longitudinal wide stripe on abdominal venter, caudal 1/2 of ♂ 7th sternum, almost entire part of ♀ 7th sternum, ♂ 8th tergum and sternum (subgenital plate) except for their lateral bases, ♀ 9th tergum, and ovipositor, black; lateral part of abdomen (lateral part of sternum in ♂♂, while pleuron and lateral part of sternum in ♀♀) covered with thick white pollinosity.



Figs. 43-45. Male genitalia of *C. viridicostalis* sp. nov. 43, 44: Pygofer in ventral (43) and lateral (44) views. — 45: Apical part of theca in obliquely ventral view.

Wings hyaline with basal cell, extreme bases of cells M and CuA₁ of forewing, basal 1/2 of cell 1A, outer membrane from vein 2A of forewing, basal 1/4 of hindwing and vannus (cell 2A) excepting the central part, opaque and black; areas along and near cross veins R₃-R₄₊₅ and R₄₊₅-M₁ of forewing markedly infuscated; apical marginal area of forewing smoky; veins, especially costal ones, fresh green in basal 1/2 (before nodal line) and black or fuscous in the rest in forewing, while black with veins CuA and 1A olivaceous green in hindwing.

Body short in proportion to wing length; head as wide as pronotum, not swollen anteriorly; frontoclypeus not so swollen either, rather depressed in dorsal view, about as long as wide in full view, with 7-9 transverse striations; labium extending to middle of central metaprepisternal process; mesonotum proper distinctly longer than pronotum in median length; abdomen almost as long as distance from head to cruciform elevation in ♂♂, while shorter in ♀♀; ♂ operculum similar in shape to that of *acuta* but differing in the apex almost always not curved inwards; ♂ 7th sternum truncate caudally; ♀ 7th sternum deeply incised at the middle caudally; ♀ 9th segment (tergum) ca 1.16× as long as wide; forewing slender, elongated in the apical 1/2, with the pointed apex and straight outer margin; stalk of veins 1M and 2M of forewing very short; vein CuP of forewing well

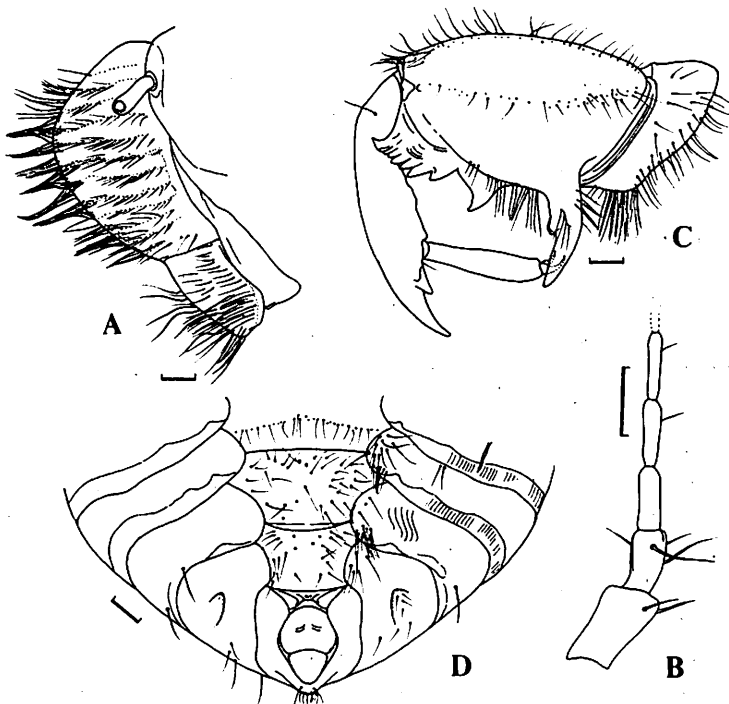


Fig. 46. Exuviae of *C. viridicostalis* sp. nov. A, Frontoclypeus and clypeus in lateral view; B, right antenna (basal 5 segments); C, left fore leg; D, apical part of abdomen (♂) in ventral view. Scales, 1 mm.

separated from vein 1A in basal 3/5.

Male genitalia (Figs. 43–45). Similar to those of *accipiter*; pygofer slender and oblong, ca $2.13\times$ as long as wide; uncus lobe strongly curved at the subapex; theca without projection at the tip; vesica longer with a saccate process at the apex, and the process longer than wide.

Body length: ♂ 38–44 mm (mean 41.3 mm), ♀ 38–42 mm (mean 39.8 mm).

—Total length: ♂ 58–66 mm (mean 62.1 mm), ♀ 61–69 mm (mean 64.3 mm).

—Expanse of forewings: 112–128 mm.

Exuviae (Fig. 46). ♂. Body glossy pale ochreous with legs darkened; frontoclypeus furnished with 12 transverse rows of long hairs; clypeus (anteclypeus) small, ca 1/2 the length of frontoclypeus; antenna examined on basal 5 segments, with the ratio of each segmental length about 10: 8: 8: 8: 9; anterior comb of fore femur 8-toothed, and the 8th tooth very short and small; fore femoral posterior spike nearly straight in the apical 1/2; 10th abdominal segment distinctly wider than long. Body length: 32.8–34.7 mm, head width: 12.3–12.4 mm. Exuviae examined: 1 ♂, Taguliat, Montible, Palawan, Philippines, 3. II. 1971, A. MIYATA leg. (MH); 1 ♂, Matalangao (ca. 300 m), ca. 15 km W from Roxas, N. Palawan, 20. XI. 1978, S. NAGAI leg. (MH).

Distribution. Philippines: Palawan (Fig. 57).

Cryptotympana consanguinea DISTANT, 1916

(Figs. 6, 16, 40–42, 47–51)

Cryptotympana consanguinea DISTANT, 1916, *Entomologist*, 49: 203.

Specimens examined. 1 ♂ (holotype), Davao, Mindanao, BAKER, 6540, DISTANT-Coll. 1911–383, DISTANT det. (handwriting) “*Cryptotympana consanguinea* Dist. type” (BM); 1 ♂, same data, det. “*Cryptotympana consanguinea* Dist.” (NMNH); 4 ♂♂, same data, “J. P. Duffels det.: *Cryptotympana* spec.” (NMNH); 2 ♂♂ 1 ♀, Tangcolan, Bukidnon (Mindanao), BAKER (NMNH); 1 ♀, Kelapo River, San Jose near Kibongay, City of Davao, Mindanao, Philippines, 13. III. 1978, N. KASHIWAI leg. (MH); 4 ♂♂ 8 ♀♀, Dapitan, Mindanao, BAKER (NMNH); 2 ♂♂ 1 ♀, Mt. Apo, S. Mindanao, Philippines, 1982 (MH); 1 ♂, Maco, Masala, Mindanao Is., Philippines, 13. III. 1978, J. ASAHİ (MH); 2 ♂♂, Dinagat, Philippines, V. 1978 (collection of Mr K. HASHIMOTO, Tokyo); 5 ♂♂ 1 ♀, same locality, I. 1984 (MH); 1 ♂, Bazilan, Philippines, II–III. 1898, DOHERTY, DISTANT-Coll. 1911–383 (BM); 1 ♀ same data, MELICHAR coll. (IPK); 1 ♀, same data, “Détermin W. L. Distant: *Cryptotympana acuta* Sign.” (ISNB); 1 ♀, same data, ex. coll. H. FRUHSTORFER (H. FRUHSTORFER, vend. 15. I. 1902), “Prof. Dr. A. Jacobi determ., 1931: *Cryptotympana consanguinea* Dist.” (ZMH); 1 ♀, Maloong, Bazilan, Philipp., VII–VIII. 1932, K. KUWASIMA (KUF); 1 ♂ 1 ♀, Philippines, 907, coll. A. JACOBI, Staatl. Museum für Tierkunde, Dresden, sp. 22 (indet.) (SMTD); 1 ♂, Philippine Is., E. M. LEDYARD, B. M. 1925–491 (BM); 1 ♂, without locality, Coll. Zoologisch Museum Amsterdam, “P. C. M. de Greeve

det., 1964: *Cryptotympana consanguinea* Dist." (ZMA); 1 ♀, without locality, Coll. Zoölogisch Museum Amsterdam, "P. C. M. de Greeve det., 1964: *Cryptotympana* spec." (ZMA).

Very similar to *accipiter* in general appearance. Head black with a central spot on tylus, sometimes developed along transfrontal suture, and a pair of spots on posterior part of vertex, situated on outer area of basal ocelli, ochreous; markings of pronotum very similar to and almost same as those of *accipiter*; 2 pairs of anterior obconical spots on mesonotum fused with each other; abdomen black with the lateral margin ochreous and golden pilose; timbal covering ochreous in the outer 1/2 and brownish even in the rest; lateral parts of 3rd and 4th terga clothed with white pollinosity, forming 2 pairs of white discal spots on abdominal dorsum.

Venter of body pale ochreous, covered with sparse white pollinosity; thorax pale ochreous with outer lateral margin of pronotal paranotum, mesoprepisternum and central part of metaprepisternum except for the process, black; legs pale ochreous with inner surface of fore coxa, central parts of mid and hind coxae, base of trochanter, fore and mid femora, fore tibia, apex of mid tibia, fore and mid tarsi, and claw, fuscous or black; abdomen uniformly pale ochreous frequently tinged with orange, with auditory capsule, a small linear spot on ♀ 2nd and 3rd sterna, valvifer 2 and lateral valvula (ovipositor sheath) black.

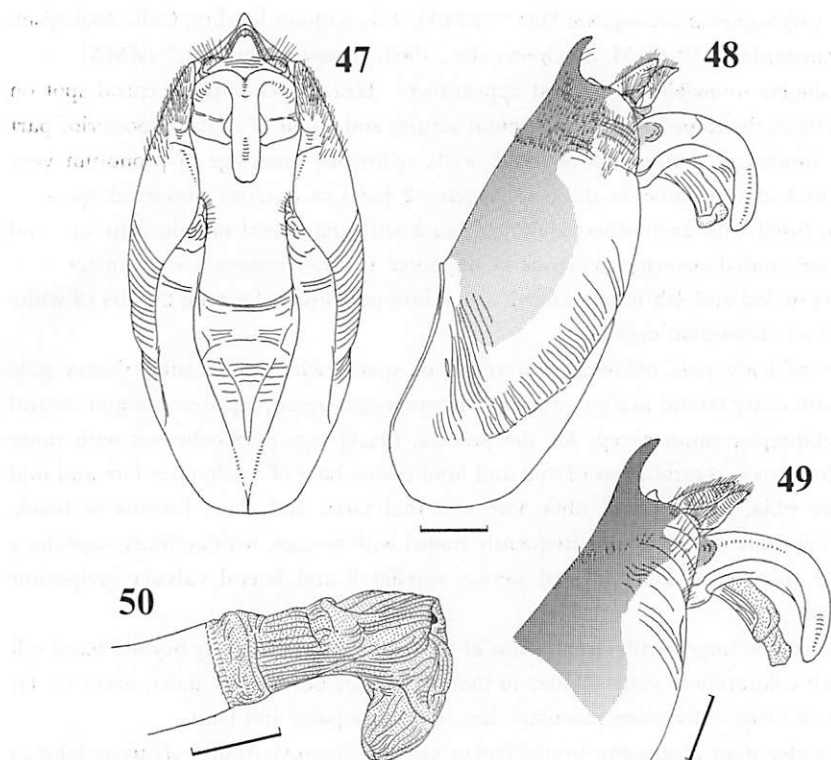
Wings hyaline tinged with stramineous at the extreme base (slightly beyond basal cell in forewing); coloration of veins similar to that of *accipiter*, but usually paler; areas on 1st and 2nd cross veins of forewing maculate, but somewhat paler and faint.

Head wider than pronotum; frontoclypeus swollen anteroventrally, about as long as wide, with 7–9 transverse striations on the surface; labium extending near the middle of central metaprepisternal process; pronotum parallel-sided, slightly shorter than mesonotum proper in median length; abdomen longer than distance between head and cruciform elevation in ♂♂, while shorter in ♀♀; ♂ operculum, similar in shape to that of *accipiter*, with the inner and outer margins less sinuate and with the tip more acute; ♂ 7th sternum slender with the caudal margin rounded and slightly emarginate at the middle; ♀ 7th sternum widened apically, with the caudal margin triangularly incised at the middle; ♀ 9th tergum slender, ca $1.24\times$ as long as wide (cf. ca $1.06\times$ in *accipiter*); vein CuP of forewing separated from vein 1A in basal 2/3.

Male genitalia (Figs. 47–50). Pygofer oval, ca $1.9\times$ as long as wide, widened near the middle, with the ventrolateral surface wrinkled; uncus lobe very long, especially lengthened apicad, inwardly and obtusely bent at the subapex; vesica totally narrower than thecal shaft, with an apical saccate process distinctly shorter than vesica itself.

Body length: ♂ 37–46 mm (mean 42.0 mm), ♀ 34–41 mm (mean 37.1 mm). —Total length: 56–70 mm (mean 62.3 mm). —Expanse of forewings: 111–128 mm.

Exuviae (Fig. 51). Body uniformly ochreous and lustrous, with fore femoral processes and fore tibia towards the apex darkened to black; frontoclypeus spherical, bearing 11–12 transverse rows of hairs; antenna 8-segmented, about 10: 8: 6: 5: 8: 6: 3: 3 in the ratio of each segmental length, and the 8th segment distinctly constricted at the apical 3/7;



Figs. 47–50. Male genitalia of *C. consanguinea* (49, from Mindanao; others from Basilan).

47–49: Pygofer in ventral (47) and lateral (48, 49) views. — 50: Apex of theca in obliquely ventral view. Scales: 1 mm (47–49), 0.5 mm (50).

anterior comb of fore femur composed of 6–7 teeth, and the last tooth smaller; an intermediate spike of fore femur more or less hooked apically, situated near the middle of the under margin, and the posterior spike rather short, evenly but weakly curved; ♂ 10th abdominal segment slightly longer than wide; rudiment of ovipositor (valvula 2) ca $1.6\times$ as long as wide. Body length: 30.9–34.2 mm, head width: 11.7–12.3 mm. Exuviae examined: 4 ♂♂ 1 ♀, Kelapo River, San Jose near Kibongay, City of Davao, Mindanao, Philippines, 13. III. 1978, N. KASHIWAI leg. (MH).

Distribution. Philippines: Mindanao, Basilan and Dinagat (Fig. 57).

According to Mr KASHIWAI's observations in the vicinities of Davao, Mindanao, in March of 1978 (pers. comm.), this species mainly inhabits secondary forests ca 500 m in altitude, frequently sings in chorus (but not synchronized) towards 0900h and again 1500h, and aggregates on certain trees.

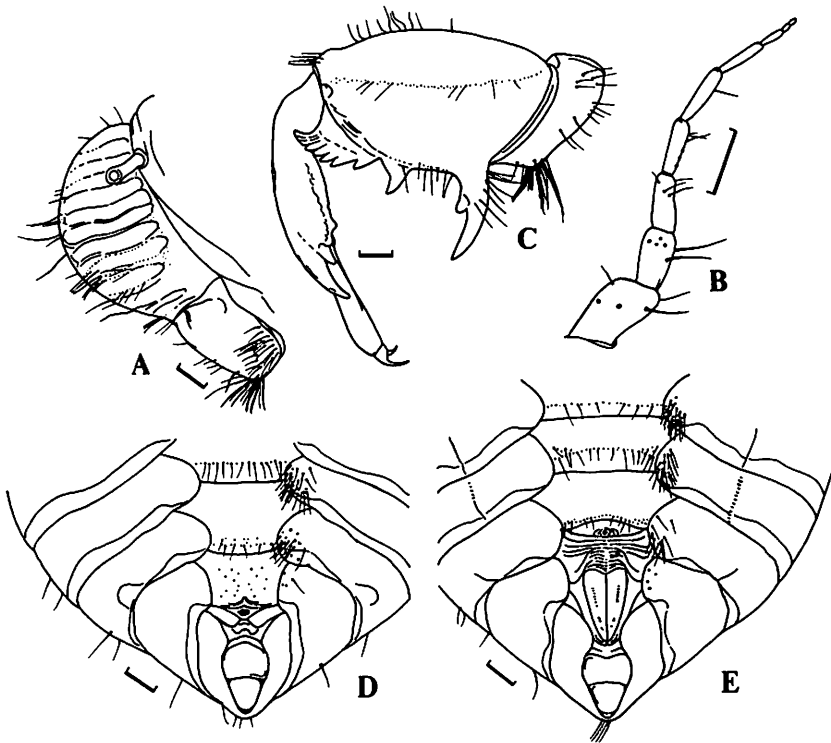


Fig. 51. Exuviae of *C. consanguinea*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales, 1 mm.

***Cryptotympana suluensis* DISTANT, 1906**

(Figs. 7, 16, 52-56)

Cryptotympana suluensis DISTANT, 1906, *Ann. Soc. ent. Belg.*, 50: 148.

Specimens examined. 1 ♂ (holotype), Arch. de Jolo, MONTANO & REY 1880, DISTANT-Coll. 1911-383, DISTANT det. (handwriting) "*Cryptotympana suluensis* Dist." (BM); 1 ♀, Jolo, DISTANT-Coll. 1911-383 (BM).

Closely similar to *accipiter* and *consanguinea* in coloration and markings. Head black with anterior margin of vertex, continuing to lateral oblique spots, and a pair of central spots on posterior surface of vertex, situated on outer part of basal ocellus, widely ochreous; gena almost entirely ochreous; lateral part of frontoclypeus castaneous; a pair of central black fasciae on pronotum very narrow, widened and oblique anteriorly; mesonotum dark castaneous with 4 central anterior obconical spots and the outer pair very short and transformed to a diagonal wedge; abdomen black with outer lateral 2/3 of timbal covering and extreme lateral margins of 3rd-8th terga ochreous.

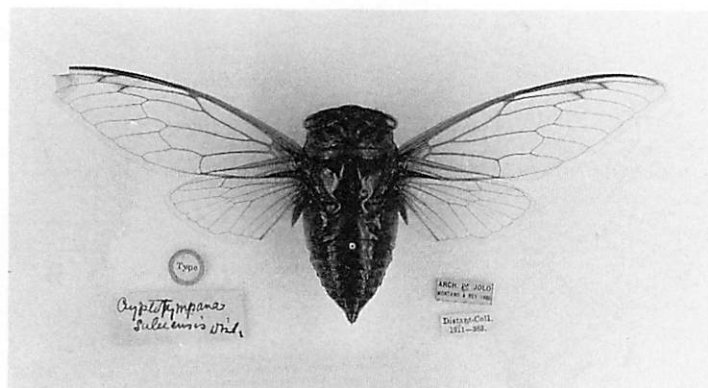
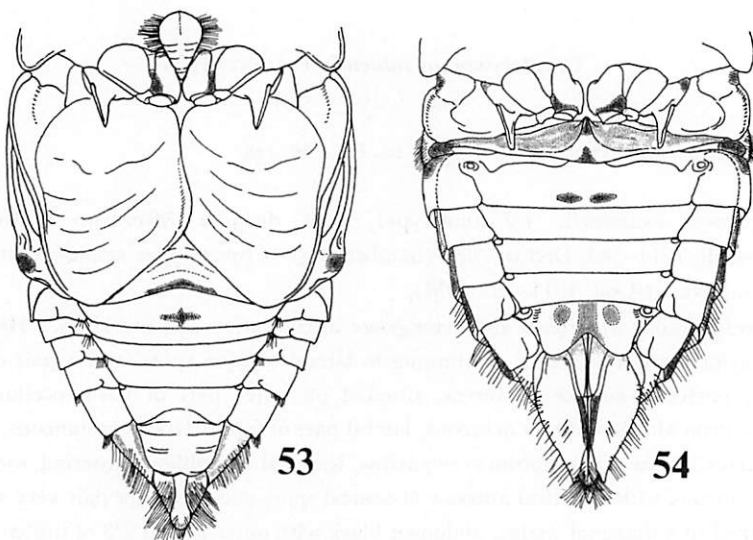


Fig. 52. *Cryptotympana suluensis* DISTANT, holotype ♂ (BM).

Venter of thorax pale ochreous with mesobasisternum and central metaprepisternal process infuscated; coloration of legs almost same as that of *consanguinea*, but inner 1/2 of mid and hind coxae infuscated; ♂ operculum orange in colour; abdomen ochreous tinged with orange, clothed with golden pilosity, with auditory capsule, a central wide discal or triangular spot on 2nd sternum and 1 or 2 central small linear spots on 3rd sternum, a central and a pair of lateral spots on ♀ 7th sternum and extreme inner margin of ♀ 9th tergum near the middle, black or fuscous.

Wings hyaline with basal cell and basal 1/2 of cell 1A of forewing semiopaquely stramineous; coloration of veins very similar to that of *accipiter* and *consanguinea*, but basal veins of forewing paler; infuscation along cross veins R_3-R_{4+5} and $R_{4+5}-M_1$ of forewing



Figs. 53-54. Abdomen of *C. suluensis* in ventral view.

dimly appearing as shown in *consanguinea*.

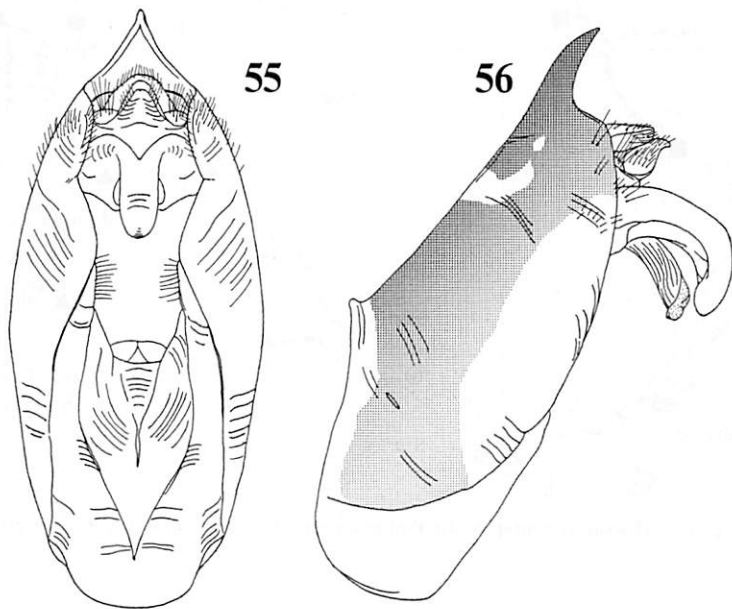
Head wide in proportion to body size, almost as wide as pronotum; frontoclypeus narrow, depressed anteriorly, furnished with 8–9 undulating transverse striations; labium extending to middle of metaprepisternal process; lateral dilatation of mesepimeron with rounded apex; ♂ opercula short and oblique, somewhat angulate towards the apices (as in *niasana* of the *acuta* group), with the outer margin oblique and slightly emarginate and with the inner margins overlapping each other at the bases and obliquely straight apically; caudal margin of ♀ 7th abdominal sternum widely and triangularly incised; ♀ 9th tergum slender, ca $1.3\times$ as long as wide, narrower than anterior margin of 7th sternum; forewing also very similar to that of *accipiter*, *consanguinea*, etc. of the *accipiter* group, but cell CuA shorter and wider; hindwing comparatively short with cell 1A slightly wider than CuP at the apex; vannus (cell 2A) evenly rounded towards the apex.

Male genitalia (Figs. 55–56). Pygofer oval, ca $2.1\times$ as long as wide with the caudal beak very long and wide and the ventral lobes apically concealed under the ventrolateral margin; anal stylus short; uncus lobe comparatively wide, obtusely bent at the subapex, with the apical part hardly lengthened.

Body length: 41 mm. —Expanse of forewings: 118–126 mm.

Distribution. Philippines: Jolo (Sulu Isls.) (Fig. 57).

DISTANT (1906c) included South Sulawesi (Celebes) as one of the type localities of this species, but specimens from this area can be identified with an independent new species (*vide infra*); *suluensis* is, therefore, probably endemic to the Sulu Islands (Jolo) of the Philippines.



Figs. 55–56. Male genitalia (pygofer) of *C. suluensis* in ventral (55) and lateral (56) views.

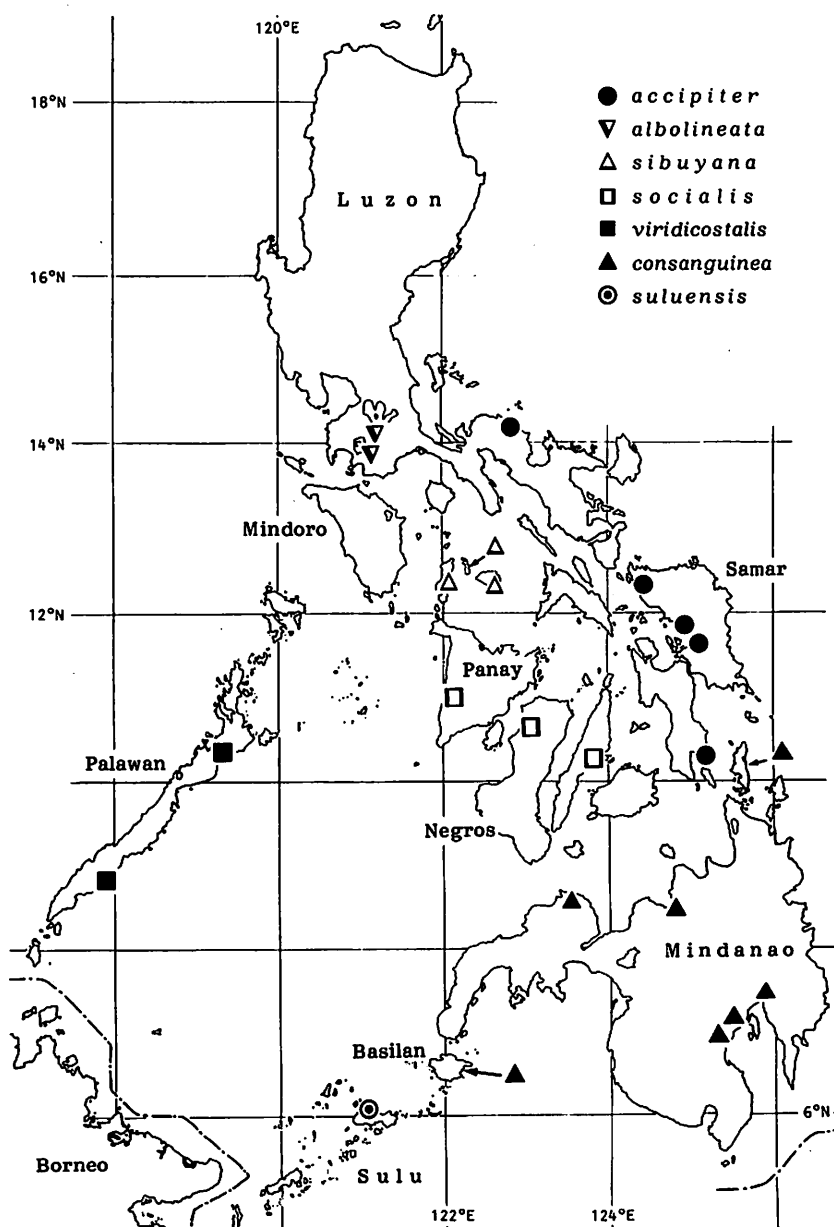


Fig. 57. Distribution map of the Philippine species belonging to the *accipiter* group.

***Cryptotympana distanti* M. HAYASHI, sp. nov.**

(Figs. 8, 16, 58–61, 65–71)

Cryptotympana suluensis DISTANT, 1906, *Ann. Soc. ent. Belg.*, **50**: 148 (*partim*).

Holotype: ♂, Bonthain, Celebes, RIBBE 82 (=1882), DISTANT det. (handwriting) "*Cryptotympana suluensis* Dist.", Riksmuseum Stockholm (NRS).

Paratypes: 1 ♀, same data as holotype (NRS); 1 ♀, same locality, 1882, C. RIBBE, Coll. NOUALHIER (MNP); 1 ♂, Bantimulung, S. Celebes, 10. XII. 1972, Y. GUNJI (NSMT); 1 ♂, same locality, 17. VIII. 1974, S. IGARASHI (NSMT); 24 ♂♂ 28 ♀♀, Bontotene (ca. 900 m), near Malino, South Celebes, Indonesia, 1. VIII. 1984, Y. UÉMURA & S. OKAJIMA leg. (MH); 1 ♂, Loewoek (=Luwuk), O. Celebes, XI. 1919, M. KAUDERN, "P. C. M. de Greeve det., 1964: *Cryptotympana* spec." (RML); 1 ♂, Kayulangi, C. Sulawesi, 4. XI. 1985, S. NAGAI leg. (MH); 1 ♀, Celebes (500 ft) (BM).

Type depository: Naturhistoriska Riksmuseet, Stockholm.

Further specimens examined. 13 ♂♂ 12 ♀♀, Bontotene (ca. 900 m), near Malino, South Celebes, Indonesia, 1. VIII. 1984, Y. UÉMURA & S. OKAJIMA leg. (MH).

Similar in coloration and markings to *accipiter*, *consanguinea*, etc. from the Philippines, but the black parts are generally reduced.

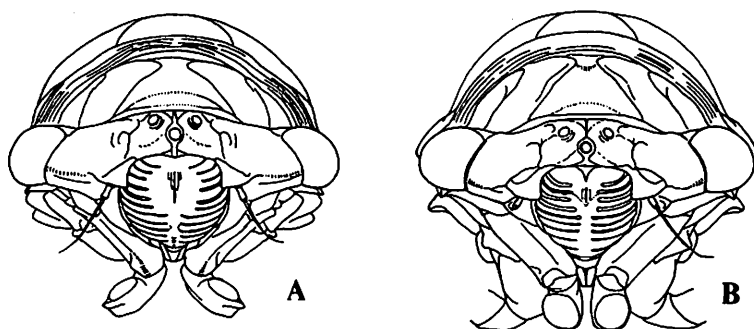


Fig. 58. *Cryptotympana accipiter* (A) and *C. distanti* sp. nov. (B) in frontal view. Note and compare the expansion of thoracic nota.

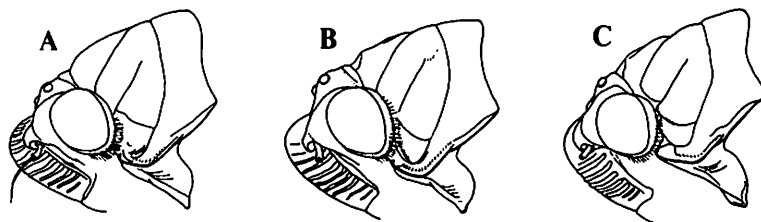
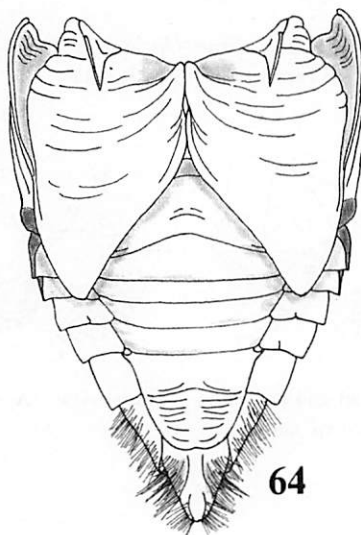
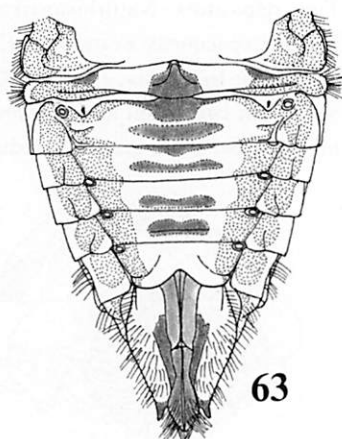
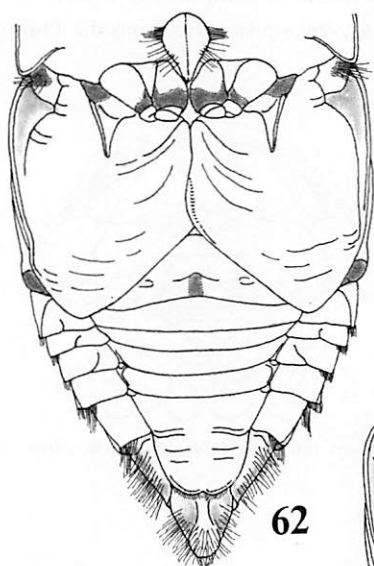
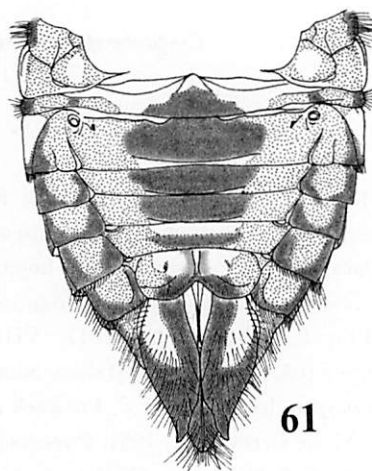
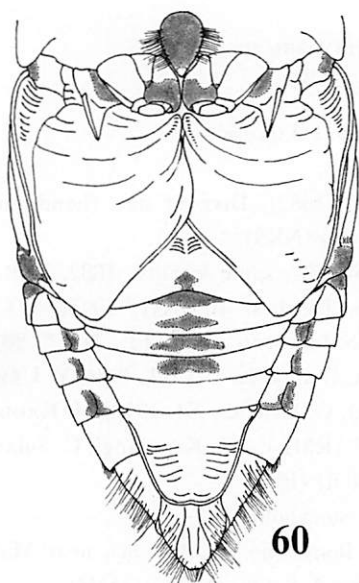


Fig. 59. Head and pronotum in lateral view. A, *C. distanti* sp. nov.; B, *C. pelengensis* sp. nov.; C, *C. ventralis* sp. nov.



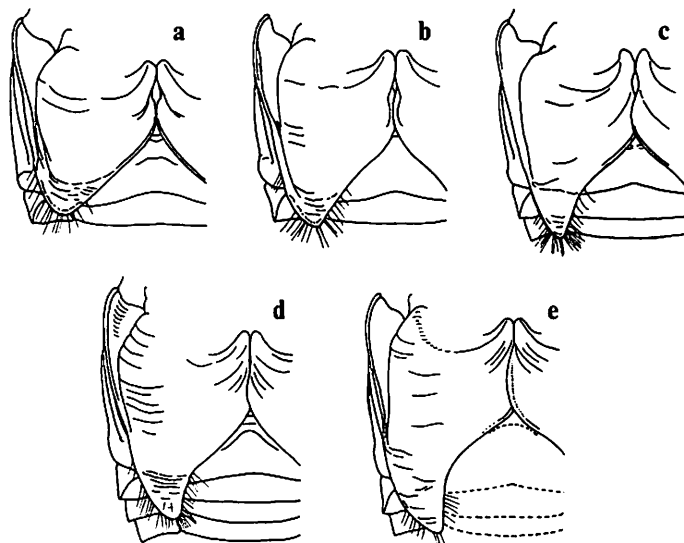
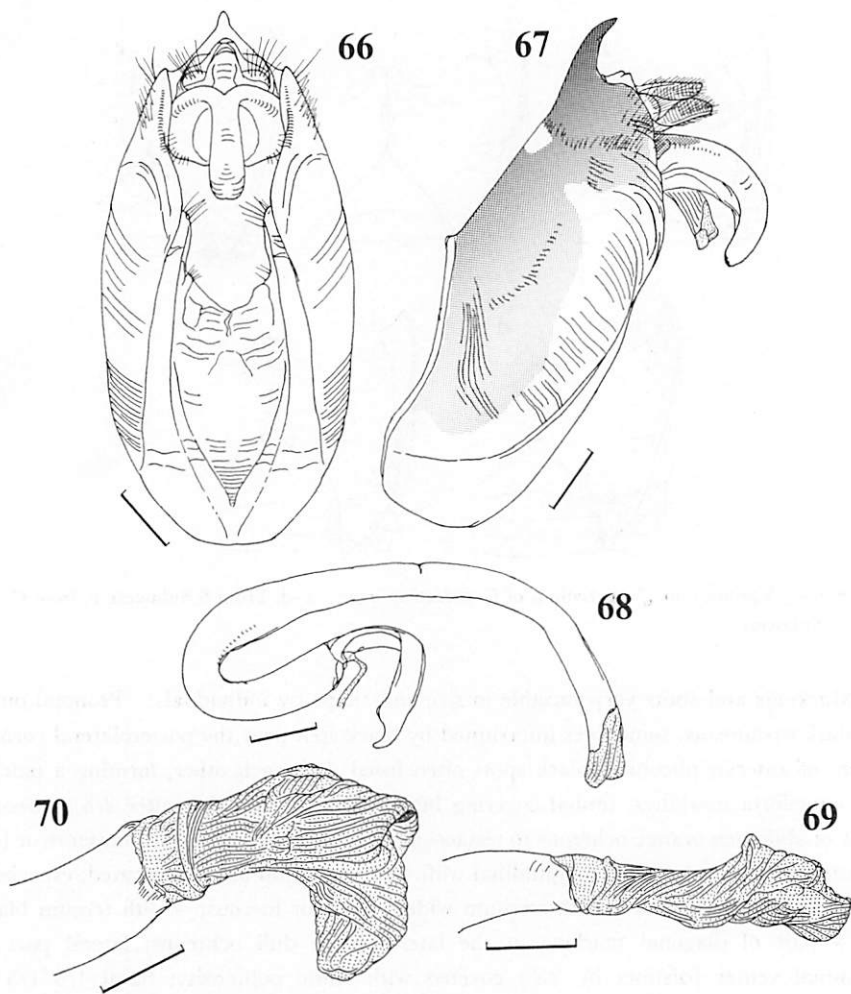


Fig. 65. Variation of ♂ operculum of *C. distanti* sp. nov. a-d, From S Sulawesi; e, from C Sulawesi.

Markings and spots very variable in size and shape by individuals. Pronotal outer area dark castaneous, sometimes interrupted by black spot near the posterolateral corner; 2 pairs of anterior obconical black spots often fused with each other, forming a pair of wide cuneiform markings; timbal covering fuscous brown with the outer 2/3 ochreous; venter of abdomen orange ochreous to testaceous with central part of sternum more or less infuscated, forming a central longitudinal wide stripe; pleuron often infuscated, especially in ♀♀; caudal margin of ♀ 7th sternum widely black or fuscous; ♀ 9th tergum black with a pair of diagonal marking at the lateral bases dull ochreous; lateral part of abdominal venter (distinct in ♀♀) covered with white pollinosity; basal 1/6–1/5 of forewing coloured stramineous and sometimes bronzy (on the basal cell and base of cell 1A); costal veins of forewing olivaceous green in fresh specimens.

Head as wide as or slightly narrower than pronotum; frontoclypeus narrow, slightly narrower than 1/3 the width of head, bearing 10–11 transverse striations; basal ocellar area gently raised; labium extending towards middle of central metaprepisternal process; central part of pronotum swollen anteriorly; mesonotum globose dorsally, longer than pronotum in median length; ♂ operculum generally short and triangular (as in *suluensis*), with the inner margin nearly straight and the apex subacute or angulate; shape and length of ♂ operculum variable, with the apex from widely rounded to inwardly curved; ♀ 7th sternum rounded caudally, with the caudal margin emarginate at the middle; ♀ 9th

Figs. 60–64. Abdomen of the *accipiter* group from Sulawesi in ventral view. 60–61, *C. distanti* sp. nov.; 62–63, *pelengensis* sp. nov.; 64, *ventralis* sp. nov.



Figs. 66–70. Male genitalia of *C. distanti* sp. nov. 66, 67: Pygofer in ventral (66) and lateral (67) views. — 68: Theca in lateral view. — 69, 70: Apex of theca with vesica everted in lateral (69) and obliquely ventral (70) views. Scales; 1 mm (66–68), 0.5 mm (69–70).

tergum narrow, ca $1.2\times$ as long as wide.

Male genitalia (Figs. 66–70). Also very similar to those of *accipiter*; pygofer oblong, $1.9\text{--}2.2\times$ as long as wide, with numerous diagonal wrinkles on the lateral surface; shape and curvature of uncus lobe similar to that of *accipiter*; apical part of the lobe slightly widened; theca somewhat flattened dorsoventrally, without any projections at the tip, gently curved in the apical $1/3$; vesica narrower dorsoventrally, with a short but wide saccate process at the apex.

Body length: ♂ 38–45 mm (mean 41.9 mm), ♀ 36–41 mm (mean 38.3 mm).

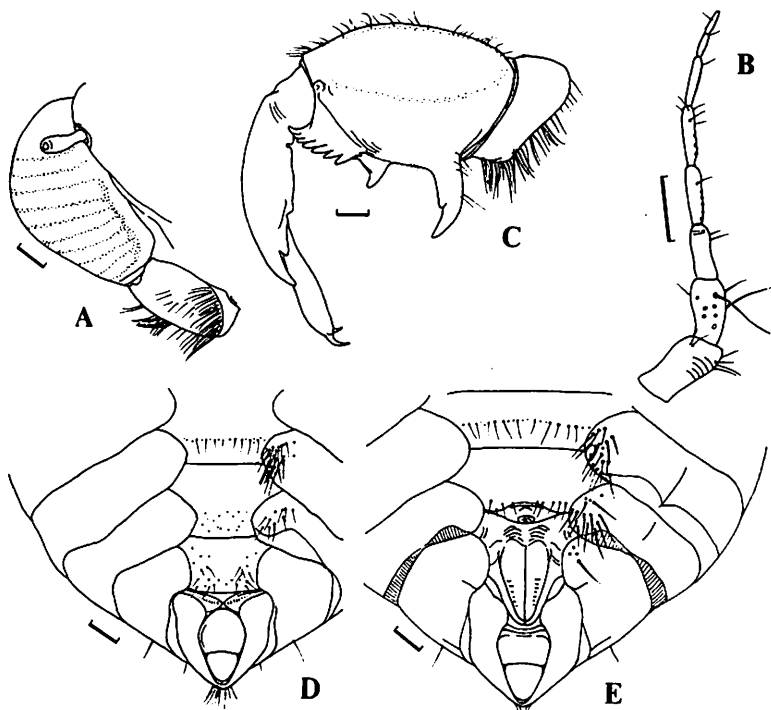


Fig. 71. Exuviae of *C. distorta* sp. nov. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales, 1 mm.

—Total length: 57–68 mm (mean 63.2 mm). —Expanse of forewings: 114–123 mm.

Exuviae (Fig. 71). Body dull ochreous to castaneous; frontoclypeus not so swollen, with 10–11 transverse rows of hairs; antenna 8-segmented, about 10: 9: 8: 8: 9: 7: 4: 4 in the ratio of each segmental length; fore femur furnished with 7-toothed anterior comb, apically hooked intermediate spike and rather short and gently curved posterior spike, on the under margin; ♂ 10th abdominal segment spherical, as long as wide; rudiment of ovipositor ca 1.7× as long as wide, with the apex acute. Body length: 32.8–39.0 mm, head width: 12.0–13.0 mm. Exuviae examined: 9 ♂♂ 4 ♀♀, Bontotene (ca. 900 m), near Malino, South Celebes, Indonesia, 1. VIII. 1984, Y. UÉMURA & S. OKAJIMA leg. (MH); 2 ♂♂ 1 ♀, Maros~Camba (ca. 350 m), South Celebes, 5–6. VIII. 1984, Y. UÉMURA leg. (MH).

Distribution. S & C Sulawesi (Celebes).

This species was primarily identified with *suluensis*, due to the similarity of the ♂ operculum and basal hue of forewing (DISTANT 1906c).

According to Mr UÉMURA's observations at Bontotene (ca 900 m in altitude), S Sulawesi, in 1984 (pers. comm.), the cicadas live and aggregate on twigs or branches (4–

10 m high or higher) of purple coral trees (dadap: *Erythrina fusca* LOUR., Leguminosae), singing in a slow tempo mostly in the morning and flying away immediately after a short suffix, and on the contrary, the nymphs probably feed on coffee trees because many exuviae were found on the tree trunks within the plantation.

***Cryptotympana pelengensis* M. HAYASHI, sp. nov.**

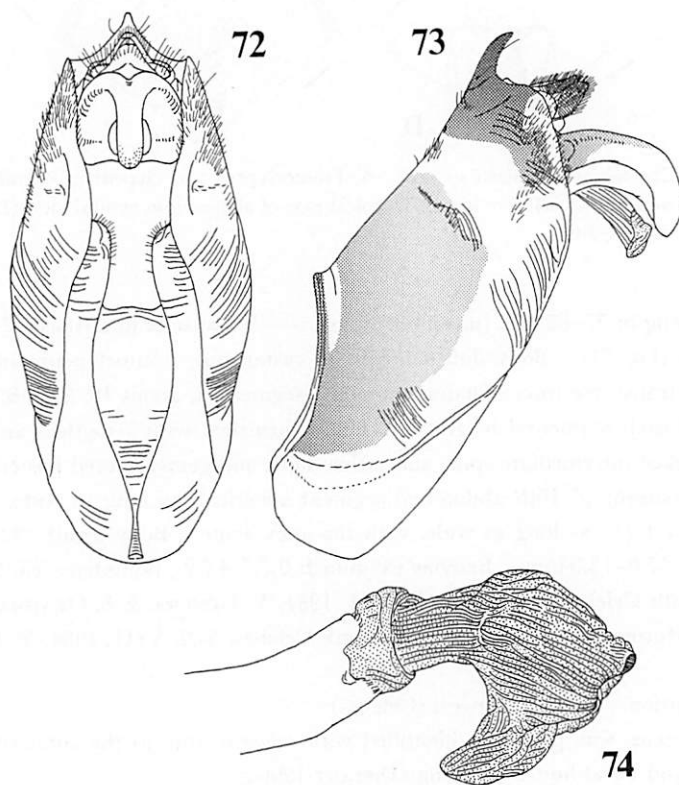
(Figs. 9, 16, 59, 62-63, 72-75)

Holotype: ♂, Ambelang, Peleng Is., nr. Sulawesi, Indonesia, 7. X. 1975, Y. UÉMURA leg. (MH).

Paratype: 1 ♀, Luksag (ca. 300 m), Peleng Is., C. Sulawesi, Indonesia, 24. II./4. III. 1986, S. NAGAI leg. (MH).

Type depository: National Institute of Agro-Environmental Sciences, Tsukuba.

Distinguishable from *distanti* by the following points: Head slightly wider than pronotum; basal ocellar area more raised; central part of pronotum not swollen anteriorly;



Figs. 72-74. Male genitalia of *C. pelengensis* sp. nov. 72, 73: Pygofer in ventral (72) and lateral (73) views. — 74: Apex of theca in obliquely ventral view.

pronotal outer area almost entirely black; ♂ operculum wide, about as wide as long, extending slightly beyond 2nd abdominal segment, with the apex obtuse; abdominal pleuron without black or fuscous part; caudal margin of ♀ 7th sternum widely but not deeply notched; ♀ 9th tergum conical, ca $1.2\times$ as long as wide; vein R_3 of forewing very short before cross vein (distinctly longer than in *distanti*).

Male genitalia (Figs. 72–74). Similar to those of *distanti*; pygofer oblong, ca $2.1\times$ as long as wide, with the ventrolateral margin somewhat convex and the ventral lobes close to each other; uncus lobe short, evenly curved inwards; vesica narrower at the base than theca, but wider apicad, with a short saccate process, widened basally and directed backwards.

Body length: ♂ 42 mm, ♀ 36 mm. —Total length: ♂ 65 mm, ♀ 59 mm. —Expanse of forewings (♂): ca 124 mm.

Exuviae (Fig. 75). ♂. Body uniformly castaneous brown; frontoclypeus bearing 13 transverse rows of hairs; antenna composed of 8 segments, with the ratio of each segmental length about 10: 8: 8: 8: 8: 6: 3: 3; fore femur rather slender with the anterior comb 6-toothed, the intermediate spike short and the posterior spike lengthened apicad; 10th abdominal segment wider than long. Body length: 34.6 mm, head width: 13.3 mm. Exuviae examined: 1 ♂, Ambelang, Peleng Is., nr. Sulawesi, Indonesia, 7. X. 1975, Y. UÉMURA leg. (MH).

Distribution. Peleng Is. (C Sulawesi).

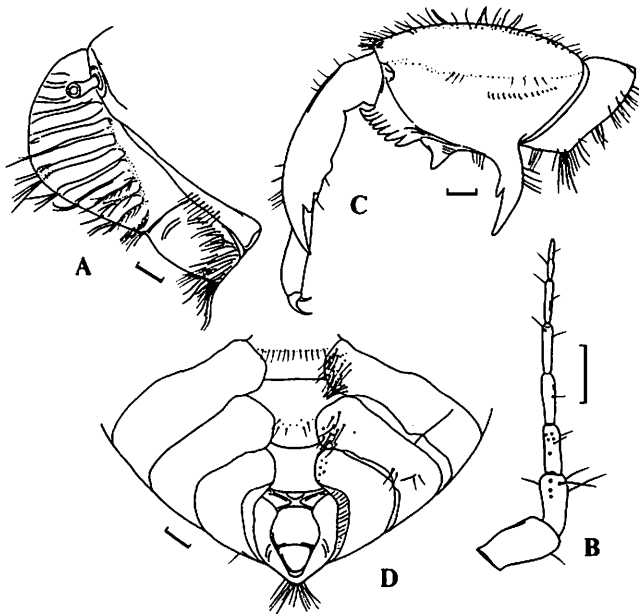


Fig. 75. Exuviae of *C. pelengensis* sp. nov. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D, apical part of abdomen (♂) in ventral view. Scales, 1 mm.

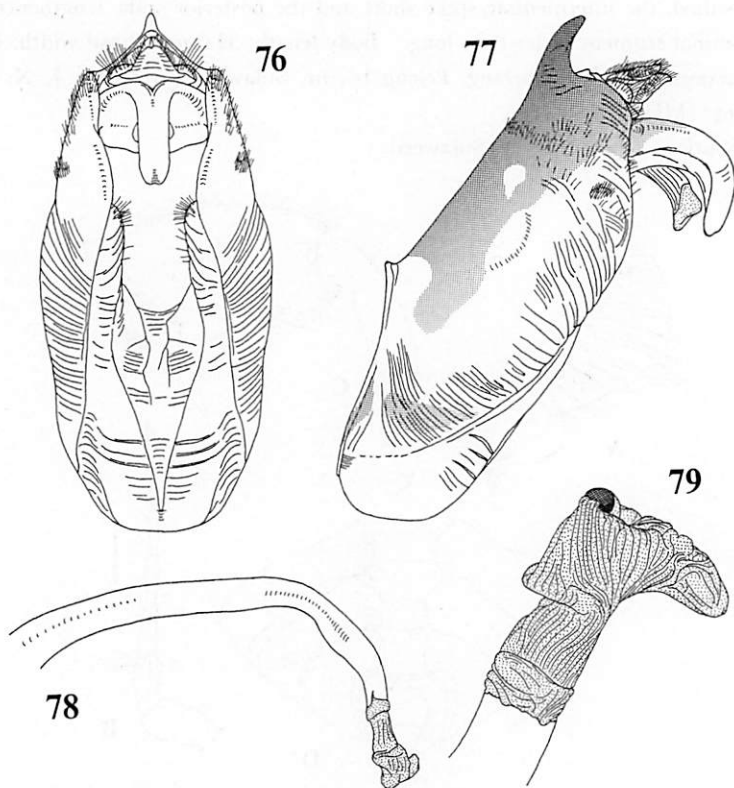
***Cryptotympana ventralis* M. HAYASHI, sp. nov.**

(Figs. 10, 16, 59, 64, 76-79)

Holotype: ♂, Tanggarie Menado, N. Cel. (N. Celebes), 16. IV. 1926 (16. 4. 26), TOCKHORN vend., "Edm. Schmidt determ., 1931: *Cryptotympana acuta* Sign. ♂" (IPK).

Type depository: Institut für Pflanzenschutzforschung Kleinmachnow, Eberswalde.

Similar to *distanti*; dorsal part of body much strengthened by black; head and thoracic nota black with a central longitudinal fascia on pronotum, and a spot on posterolateral corner of pronotal outer area, connected with the inner area, ochreous and with pronotal inner area, a pair of small spots on mesonotum, situated on outer surface of parapsidal suture, and cruciform elevation (except for the anterior arm) dark castaneous; abdomen black with outer 3/4 of timbal covering and lateral part of 3rd tergum widely tawny with dense golden pilosity; ventral part of abdomen, on the contrary, entirely pale and orange ochreous without any black or fuscous parts.



Figs. 76-79. Male genitalia of *C. ventralis* sp. nov. 76, 77: Pygofer in ventral (76) and lateral (77) views. — 78: Apical 2/3 of theca in lateral view. — 79: Apex of theca with vesica everted in obliquely ventral view.

Head slightly wider than pronotum; basal ocellar area gibbously convex; lateral margin of pronotum at about the same level as lower margin of eye in lateral view; ♂ operculum triangular and elongated, reaching basal margin of 5th abdominal segment, with the inner margin nearly straight and not overlapping at the base, the tip being acute.

Male genitalia (Figs. 76–79). Pygofer similar to that of *distanti*, but with rather wide apex, widened near the middle, ca 2× as long as wide, and much more wrinkled on the lateral surface; uncus lobe long, especially elongated towards the apex; vesica cylindrical, not narrowed towards the base, with very small saccate process, perpendicularly protruding to vesica itself.

Body length (♂): 44 mm. —Total length (♂): 65 mm. —Expanse of forewings (♂): ca 122 mm.

Distribution. N Sulawesi.

The *atrata* group

Cryptotympana atrata (FABRICIUS, 1775)

(Figs. 80, 85–90, 95–101)

Tettigonia atrata FABRICIUS, 1775, *Syst. Ent.*, *Ryng.*: 681.

Cicada atrata: GOEZE, 1778, *Ent. Beytr. Linn. Nat.*, 2: 149; OLIVIER, 1790, *Enc. méth. Hist. nat. Ins.*, 5: 750.

Cicada atra (!): SIGNORET, 1849, *Rev. Mag. Zool.*, 1: 406.

Fidicina atrata: WALKER, 1850, *List Hom. Brit. Mus.*, 1: 89.

Cryptotympana atrata: STÅL, 1861, *Ann. Soc. ent. Fr.*, (4), 1: 613.

Tettigonia pustulata FABRICIUS, 1787, *Mant. Ins.*, *Ryng.*, 2: 266; GERMAR, 1830, *Arch. Thon's Ent.*, 2: 41 (*Cicada*); STÅL, 1869, *Handl. Svensk. Vet. Akad.*, 8: 6 (*Cryptotympana*); DISTANT, 1891, *Monogr. Orient. Cicad.*: 86; MATSUMURA, 1898, *Annot. zool. japon.*, 2: 12; OSHANIN, 1906, *Ann. Mus. Zool. St. Pétersb.*, 11: 4; MATSUMURA, 1917, *Trans. Sapporo nat. Hist. Soc.*, 6: 191; KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 10; KATO, 1932, *Monogr. Cicad.*: 257; CHEN, 1933, *Ent. Phytopathol.*, 1 (Suppl.): 10.

Cicada nigra OLIVIER, 1790, *Enc. méth. Hist. nat. Ins.*, 5: 750; STÅL, 1869, *Handl. Svensk. Vet. Akad.*, 8: 6 (*Cryptotympana*); GODING & FROGGATT, 1904, *Proc. Linn. Soc. N. S. W.*, 29: 565.

Fidicina bubo WALKER, 1850, *List Hom. Brit. Mus.*, 1: 82; STÅL, 1862, *Öfö. K. Vet.-Akad. Förh.*, 19: 483; ATKINSON, 1886, *J. Asiat. Soc. Bengal*, 55: 185.

Cryptotympana sinensis DISTANT, 1887, *Ann. Mag. nat. Hist.*, (5), 20: 415. (syn. nov.)

Cryptotympana dubia HAUPT, 1917, *Wien. ent. Ztg.*, 36: 229. (syn. nov.)

Cryptotympana coreana KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 13 (*C. coreanus* !). (syn. nov.)

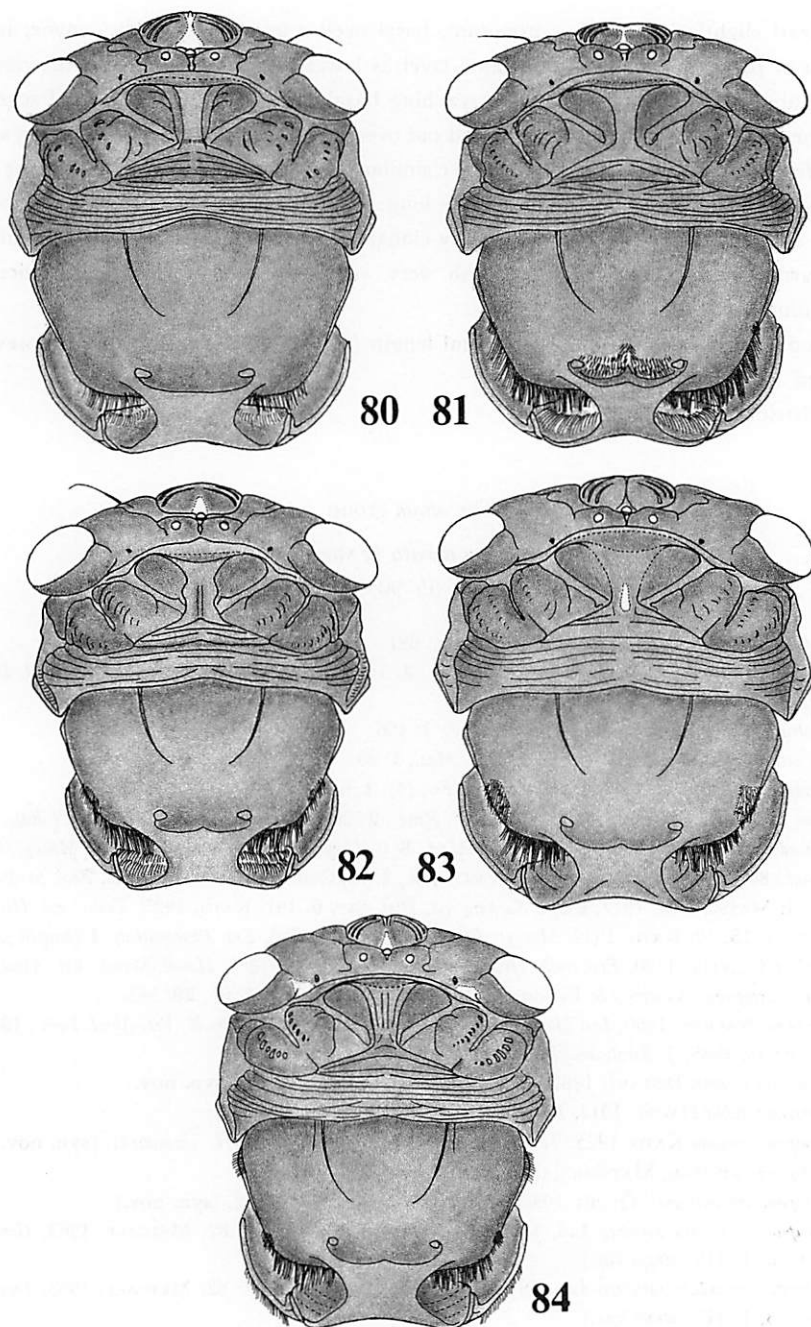
Cryptotympana santoshonis MATSUMURA, 1927, *Ins. Mats.*, 2: 49.

Cryptotympana wenchewensis OUCHI, 1938, *J. Shanghai Sci. Inst.*, (3), 4: 82. (syn. nov.)

Cryptotympana pustulata castanea LIU, 1940, *Bull. Mus. comp. Zool.*, 87: 82; METCALF, 1963, *Gen. Cat. Hom.*, 8, 1: 345 (*atrata* var.).

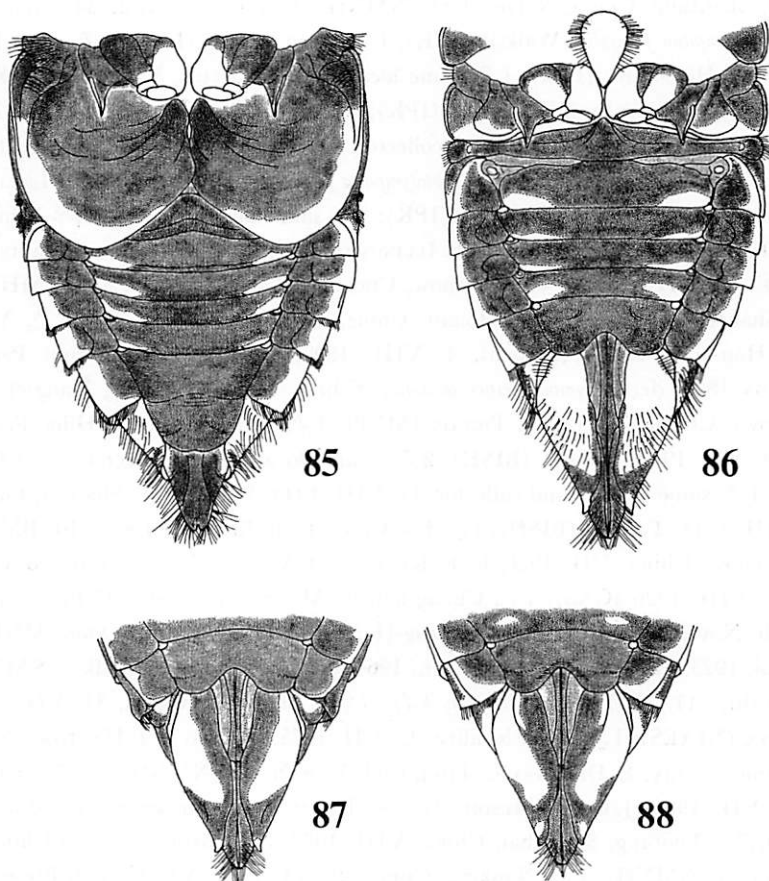
Cryptotympana pustulata fukiensis LIU, 1940, *Bull. Mus. comp. Zool.*, 87: 82; METCALF, 1963, *Gen. Cat. Hom.*, 8, 1: 345 (*atrata* var.).

Specimens examined. CHINA: 1 ♂, China, 22. T. 118, STOLL, Museum Natura Artis Magistra, det. "*atrata* Fab." (ZMA); 1 ♂, China, "*atrata* Fab. 678; Museum Natura



Figs. 80-84. Head and thoracic nota. 80: *C. atrata* of the *atrata* group. — 81-83: *C. facialis* (81), *takasagona* (82) and *auripilosa* sp. nov. (83) of the *facialis* group. — 84: *C. intermedia* of the *intermedia* group.

Argis Magistra" (ZMA); 2 ♀♀, China, 1938, don. J. J. de Vos tot Nederveen Cappel, coll. Dr. M. Ver Loren van Themaat— ex coll. A. J. Van Eyndhoven (Stoll, XXII fig. 168) (ZMA); 3 ♂♂ 3 ♀♀, Chine, Coll. R. I. Sc. N. B. (ISNB); 1 ♀, Chine, Coll. CAMILLE, Van Voixem. (ISNB); 1 ♂ 1 ♀, Chine, De Looz, "R. J. Izzard det., 1951: *Cryptotympana pustulata* Fabr." (ISNB); 1 ♂, Chine, det. "Nigra-Oliv." (MNP); 2 ♂♂, Chine (MNP); 1 ♂, Chine, Coll. NOUALHIER (MNP); 1 ♂, China, 698, "Cic. intermedia Signoret. Rev. & Mag. de Zool. 1849, p. 407" (BM); 1 ♂, China, WALKER Coll. 92-196, 8404 (BM); 1 ♂, E. China, Comdr. Metaxa., Box. 4 (BM); 1 ♂, China (NMNH); 1 ♀, Manchoukuo, S. MATSUMURA & H. KÔNO (HUS): 1 ♀, Mont Gnes au nord de Pékin, A. DAVID 80-63 (MNP); 1 ♂ 1 ♀, Peking, N. China, VIII. 1962, CHIN (NSMT); 1 ♀, Tientsien (=Tientsin nr. Peking), 25. VI. 1885, Dr. FISCHEN, det. "sinensis" (ZMH); 1 ♂, Beijing (=Peking), China, 12. VII. 1975, N. OHO & I. HATTORI, "Nat. Inst. Agr. Sc., Nishigahara Tokyo" (NIAES); 1 ♂,



Figs. 85-88. Ventral part of abdomen of *C. atrata*. 85, ♂; 86-88, ♀. 85-86, From China; 87, from Taiwan; 88, from Korea.

Peking, China, 21. IX. 1923, Presented by E. C. VAN DYKE (CAS); 1 ♂ 1 ♀, same locality, VIII. 1979, M. NISHIDA leg. (MH); 1 ♂, Pékin, Chine, 15. VIII. (août) 1986, Ph. TAQUET rec., Muséum Paris, "Michel Boulard det. 1986: *Cryptotympana pustulata* (F.)" (MNP); 1 ♂, Badaling (=Pataling nr. Peking), China, 13. VII. 1975, N. OHO & I. HATTORI (NIAES); 1 ♂ (holotype of *sinensis*), Shantung, N. China, DISTANT-Coll. 1911-383, DISTANT det. (handwriting) "*sinensis* Dist." (BM); 1 ♂ (type of *santoshonis*), Shantung, China, VIII. 1907, Type Matsumura, MATSUMURA det. (handwriting) "*C. santoshonis* n." (HUS); 1 ♂, Yentaishan, Chefoo, China (Shantung), 1933, A. YAMAGUCHI, don. G. KAGEI (labelled in Chinese letters) (KUF); 1 ♀, Tsinan, Shantung, 8. VII. 1922, A. P. JACOT (NMNH); 2 ♂♂, Chao Yang (=Chaoyuan?), China, 5. VIII. 1921, A. P. JACOT, "W. L. McAtee det.: *Cryptotympana facialis* Walk." (NMNH); 1 ♂, same locality, 16. VII. 1921, A. P. JACOT, det. "*Cryptotympana (pustulata* Fabr.) *sinensis* not *intermedia*" (NMNH); 1 ♀, same locality and collector, 26. VIII. 1921 (NMNH); 1 ♂, Hwang Hsi Ho, ft. of Mt. Taishan, Shantung, China, N. GIST GEE (NMNH); 1 ♀, Tsintau, coll. BREDDIN, "Jacobi det.: *Cryptotympana facialis* (Walk.)" (IPK); 1 ♀, same locality (IPK); 1 ♂, same locality, III. (März), HOFFMANN (IPK); 1 ♂, same locality and collector, VII. (Juli) (IPK); 1 ♂, same locality, 7. VII., Prof. HOFFMANN (IPK); 2 ♂♂, same locality and collector, 22. VII. (IPK); 1 ♂ 3 ♀♀, same locality and collector, VIII. (IPK); 2 ♀♀, same locality and collector, 7. VIII., "A. Jacobi det.: *Cryptotympana facialis* Walk." (IPK); 1 ♂, Lazarettgarten, Tsintau, 22. VI., Prof. HOFFMANN (IPK); 1 ♂, same locality (IPK); 4 ♀♀, Chinkiang, China (Kiangsu), 19. VII. 1924, J. F. ILLINGWORTH (BISH); 1 ♀, same locality, M. L. McDADE (NMNH); 4 ♂♂ 1 ♀, Wenchow, Chekiang, China, V-VII. 1982 (MH); 4 ♂♂ 2 ♀♀, Shanckow (=Shanchow), Honan, Chine, Dr. RENUARD (ISNB); 1 ♂, Yangtsé-Kiang, Han-kow, Chine (Hupeh), 4. VIII. 1898, L. LAGIAIZE, Museum Paris, M. MAINDRON 1899, det. "*Tympanoterpes pustulata* Fabr." (MNP); 1 ♂ 1 ♀, Hangtcheou (=Hangchow), Chekiang, 1925, A. PICHON (MNP); 1 ♂, Chungan Bohea Hills, Fukien, S. China, 3. VII. 1939, T. MAA (BISH); 2 ♂♂, same locality and collector, 15. VII. 1939 (BISH); 1 ♂, same locality and collector, 11. VIII. 1939 (BISH); 1 ♂, Shaowu, Fukien, S. China, III. 1944, T. MAA (BISH); 1 ♂, Foo Chow, C. B. RICHETT, 1901-310 (BM); 2 ♂♂ 1 ♀, Foochow, China, VII. 1926, C. R. KELLOGG (CAS); 3 ♂♂ 6 ♀♀, same locality and collector, VIII. 1926 (CAS); 1 ♀, Chang-hai, de MONTIGNY, 9-54 (MNP); 2 ♂♂, same data, coll. NOUALHIER (MNP); 1 ♂, Chang-Hai, Chine, 1904, J. de JOANNIS (MNP); 1 ♀, Changhai, 1923, "P. C. M. de Greeve det., 1964: *Cryptotympana corvus* Walk." (RML); 1 ♀, same locality, 11. VIII. 1893 (ISNB); 4 ♂♂ 7 ♀♀, Shanghai, China, 31. VII. 1927, S. KINOSHITA (NIAES); 1 ♂, same locality, 29. VII. 1975, N. OHO & I. HATTORI (NIAES); 2 ♂♂, same locality, E. DESCHAMPS, From Coll. U. S. N. M. (NMNH); 3 ♂♂ 2 ♀♀, same locality, VII. 1906, J. C. THOMPSON, "1 ♀.— Dèt v. D.: *Cryptotympana pustulata* Fabr." (CAS); 6 ♂♂, Pootung, Shanghai, China, VIII. 1922, Nat. Geog. Soc. cen China Exp., F. R. WULSIN (NMNH); 1 ♂, Nanking, China, 21. VI. 1923 (VI. 21. 23), Presented by E. C. VAN DYKE (CAS); 1 ♀, same locality, 25. VI. 1923 (VI. 25. 23), Presented by E. C. VAN DYKE (CAS); 5 ♂♂ 2 ♀♀, same locality, 19. VII. 1923 (7. 19. 23), Presented by E. C.

VAN DYKE (CAS); 1 ♀, same locality, V-VI. 1905, Frau Dr. KNAPPE (Shanghai), "Melichar det.: *Cryptotympana mandarina* Dist.— v. Sydow commut." (IPK); 3 ♂♂ 2 ♀♀, Nanking (3000 ft), Chine, 8. VI. 1924, J. F. ILLINGWORTH (BISH); 5 ♂♂ 1 ♀, Bébé Bez., Chungking, 22. VII., Sz'Tchwan, FRIEDRICH 1929-31, "Jacobi det.: *Cryptotympana sinensis* Dist." (IPK); 1 ♂, Szechwan, China, VI. 1912, TAKANO (HUS); 1 ♀, Szechwan (6,300-7,000 ft), China, VIII. 1938, D. C. GRAHAM (NMNH); 2 ♀♀, Shin Kai Si, Mt. Omei (4,400 ft), Szechwan, China, 10-15. VII. 1934, D. C. GRAHAM (NMNH); 1 ♀, same locality (4,400-5,000 ft), 20-26. VIII. 1934, D. C. GRAHAM (NMNH); 1 ♀, bet Kiating and Suifu (1-1,500 ft), Szechwan, China, 26. VI./1. VII. 1930, D. C. GRAHAM (NMNH); 1 ♂, bet Yachow and Suifu (1-2,200 ft), Szechwan, China, 27. VI./4. VII. 1930, D. C. GRAHAM (NMNH); 8 ♂♂ 16 ♀♀, Chiengtu, Szechwan, China, 27. VII. 1980, K. OHARA, N. KODA & T. GOTÔ leg. (MH); 1 ♂ 3 ♀♀, same locality and collector, 31. VII. 1980 (MH); 16 ♂♂ 20 ♀♀, Kangting, Szechwan, VIII. 1980, KMNH IR 100,235-270 (KMNH); 1 ♂ 1 ♀, same data (MH); 1 ♂, Canton, China, "Melichar det.: *Cryptotympana mandarina* Dist." (IPK); 1 ♀, Canton, Chine, "Indica Nigra. La Cig.: Chinoise noire de Canton en Chine", det. "*Cryptotympana facialis* Walk." (ISNB); 1 ♀, Macao, China, I. 1907 (BISH); 1 ♂, Pingshiang, Süd-China (Kwangsi), KREYENBERG, Coll. BREDDIN (IPK); 1 ♂ 1 ♀, Ngan Hoi, Chine, Coll. NOUALHIER (MNP). ——— K O R E A : 1 ♂, Korea, X. 1951, T. W. WIDDERSHOVEN (ZMA); 1 ♂ 1 ♀, Corea, M. NAKAHARA (KUF); 1 ♂, same locality, 28. VII. 1971 (KUF); 1 ♂, Pyongyang, N. Korea (labelled in Chinese letters), T. MIYAKE (NIAES); 1 ♀, Seoul, Korea, 1. VIII. 2603, H. IMAI, ded. K. TSUNEKI (NSMT); 2 ♀♀, Pusan, Korea, 5. VIII. 1938, H. KAMEYAMA, det. (in Japanese) "*Cryptotympana coreana* Kato" (KUF); 2 ♀♀, Tai-Cou, Corée (ISNB); 1 ♂, Kan Kô, Corée, 25. VIII. 1938 (ISNB); 1 ♂ 1 ♀, Taikyû (=Taegu), Korea, 6. VIII. 1966, C. E. LEE (KUF); 1 ♂, same locality and collector, 10. VIII. 1972 (KUF); 1 ♀, same locality and collector, 18. VIII. 1970 (KUF); 1 ♂ 1 ♀, same locality, 15. VIII. 1972, PARK & CHOI (KUF); 2 ♂♂, same locality and collector, 16-18. VIII. 1972 (KUF); 1 ♂, Tong-chon, Korea, 10. VIII. 1970, C. E. LEE (KUF); 1 ♀, Kyongsan, Korea, 10. VIII. 1970, C. E. LEE (KUF); 1 ♂ 1 ♀, Mt. Sudosan (400 m), Kyongsangpuk-do, Korea, 17-18. VII. 1971, K. YAMAGISHI leg. (MH); 1 ♀, same locality (550 m), 2. VIII. 1977, K. YAMAGISHI leg. (MH); 1 ♂ 1 ♀, Cheonjiyeon, Jeju-Do (Cheju Is.), Korea, 11. VIII. 1979, A. URATA leg. (MH). ——— T A I W A N : 5 ♂♂ 4 ♀♀, Anping, Formosa, 7. VII., H. SAUTER (IPK); 1 ♂, Kagi (= Chiayi), Formosa, 26. VIII. 1907, H. SAUTER, "F. Schumacher & Sia... (unable to decipher!) det.: *Cryptotympana pustulata* F." (IPK); 3 ♂♂ 3 ♀♀, Taihorin, Formosa, 7. VIII. 1911, H. SAUTER (IPK); 1 ♀, Formose (ISNB); 1 ♂, Formose, "Vyane vend.: *Cryptotympana pustulata*" (ISNB); 2 ♂♂ 1 ♀, San-chih, Taipei Hsien, Formosa, 10. VI. 1961, S. UENO leg. (EUM); 1 ♀, Tainan, Formosa, M. MAKI (KUF); 5 ♂♂ 3 ♀♀, Kôseki, Formosa, 24. VI. 1965, Y. KUROSAWA leg., Japan-U. S. Co-op. Sci. Programme (NSMT); 1 ♂, Peng-lai, Miaoli Prov., Taiwan, 18. VII. 1968, S. HASHIMOTO (HF); 1 ♂ 3 ♀♀, Tou-fen, Miaoli Prov., Taiwan, 20. VII. 1968, H. FUKUDA (HF); 1 ♂, Wushe, C. Formosa, 15-16. VII. 1964, H. INOUE (NIAES). ——— Other localities: 2 ♂♂

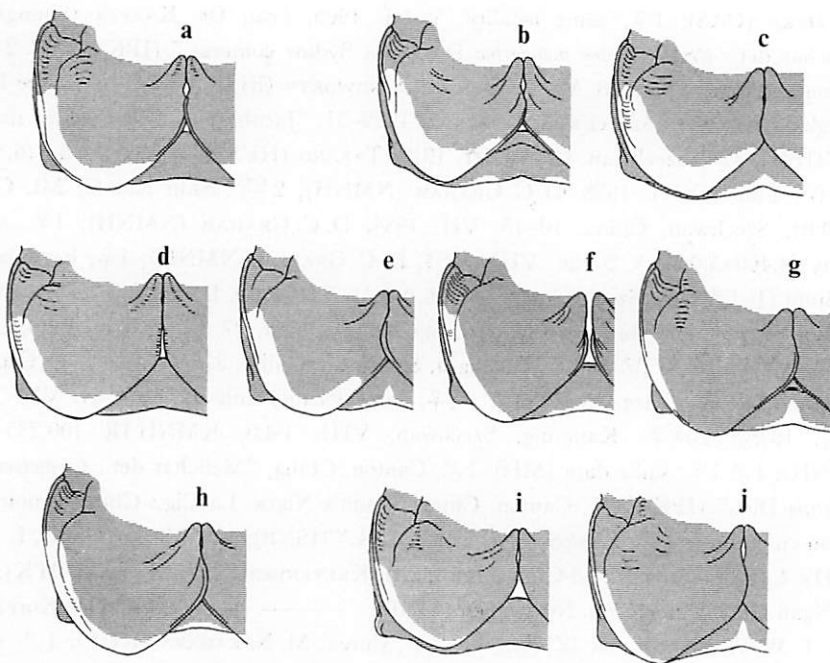
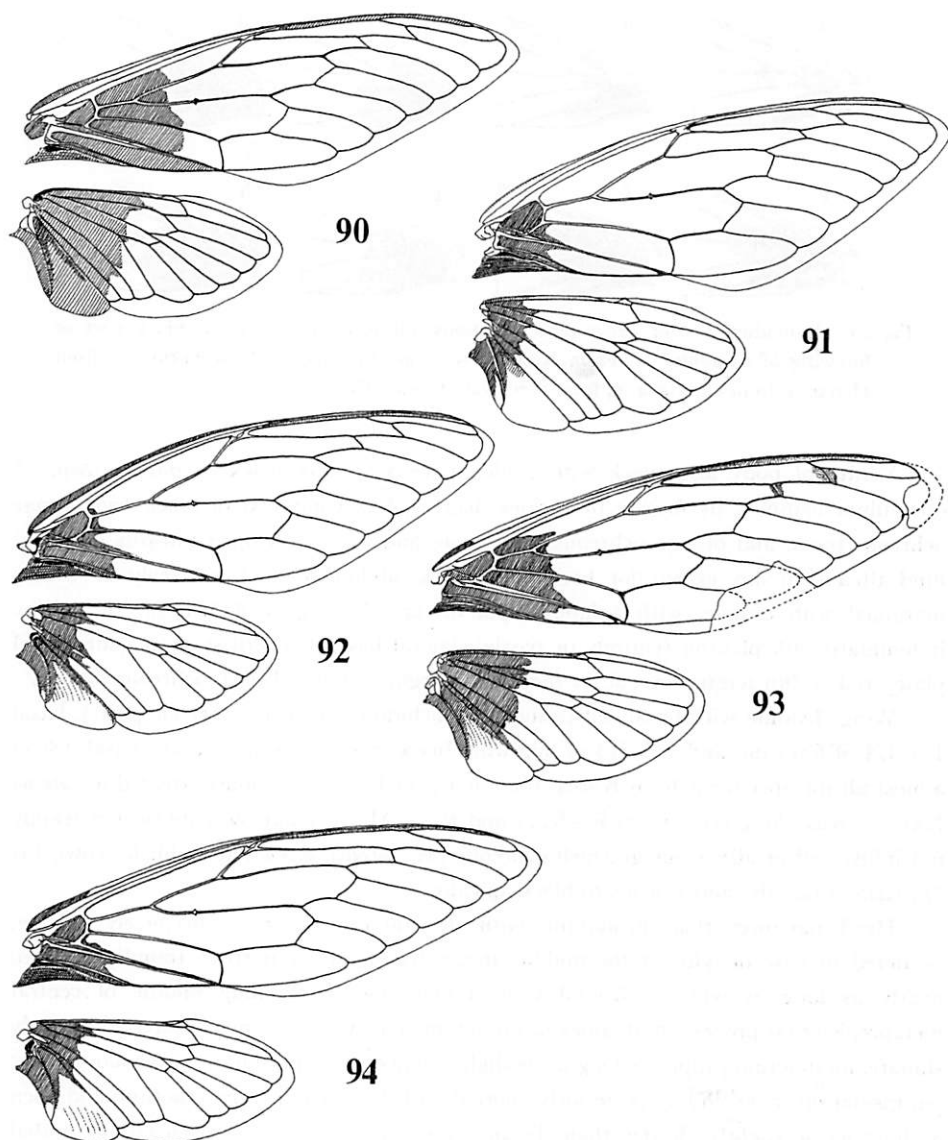


Fig. 89. Variation of ♂ operculum of *C. atrata*. a, From Korea; b-c, from Honan (China); d, from Tsingtao (China); e, from Szechwan (China); f, from Chekiang (China); g, from Nanking (China); h, from Fukien (China); i-j, from Taiwan.

2 ♀♀, Tonkin (ISNB); 1 ♂ 1 ♀, Annam, Vietnam (ISNB); 1 ♂, Japon, 7. VIII., "Vyane vënd: *Cryptotympana fascialis*! Dst." (ISNB); 1 ♀, Yubari, Hokkaido, Japon, 3. VI. 1934, M. SATO (ISNB); 1 ♀, from Japan, Dr. MARTIN, From Coll. U. S. N. M. (NMNH); 1 ♂, Ile Palawan, Philippines (ISNB); 1 ♀, Tenasserim, 44-24, "as *intermedia*, sec. W.; det.: *atrata* Fabr. (damaged specimen)" (BM); 1 ♀, Singapour, Malaisie (ISNB); 1 ♀, Juselu, Sunda, det. "*pustulata*?" (NMB); 1 ♀, Archipelago ind. orient., coll. Dr. D. MACGILLAVRY, "McGill det.: *Cryptotympana pustulata* F." (ZMA); 1 ♀, Indes, coll. NOUALHIER (MNP); 1 ♀, Katmandu, Nepal, 1864, Bequeathed by L. M. OLDFIELD, B. M. 1949-102 (BM).
 — Without locality: 4 ♀♀, Museum Natura Artis Magistra, Patria ignota (ZMA); 1 ♂ (MNP); 1 ♂ 1 ♀ (KUF); 1 ♀, U. S. N. M. Acc. 11262 (NMNH); 1 ♀, C. R. KELLOGG (CAS); 6 ♂♂ 3 ♀♀, From Coll. U. S. N. M. (NMNH); 1 ♂ 1 ♀ (NIAES).

Body almost entirely black with golden pilosity; markings and spots very variable in size, shape and colour. Head, thorax and abdomen shining black (sometimes blackish brown) with a lateral spot along anterior margin of vertex, a central longitudinal fascia on frontoclypeus, often developed towards both ends, a lateral spot at posterior angle of vertex, a spot near pronotal posterolateral corner (variable in size, and sometimes diminished), a pair of diagonal fasciae along parapsidal sutures on mesonotum (by individuals), sometimes widened and fused to form a W-shaped marking, and 2 spots on



Figs. 90-94. Right wings. 90, *C. atrata* (from Taiwan); 91, *facialis*; 92, *takasagona*; 93, *auripilosa* sp. nov.; 94, *intermedia*.

lateral surface of mesonotum (sometimes diminished), ochreous; cruciform elevation partly or entirely dark brown including some ochreous spots; lateral part of abdomen margined with orange; extreme apical margins of 6th and 7th abdominal terga rarely ochreous orange at the middle; lateral margin of ♂ 1st tergum clothed with white pollinosity.

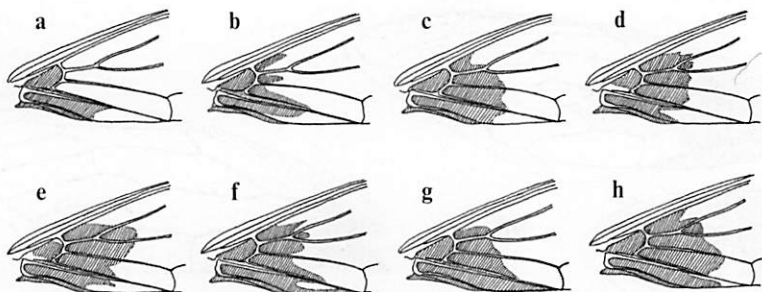


Fig. 95. Individual and/or geographic variations appearing in the basal black part of forewing of *C. atrata*. a, From Korea; b-c, from Tsingtao; d, from Peking; e, from Honan; f, from Chekiang; g, from Szechwan; h, from Cantung.

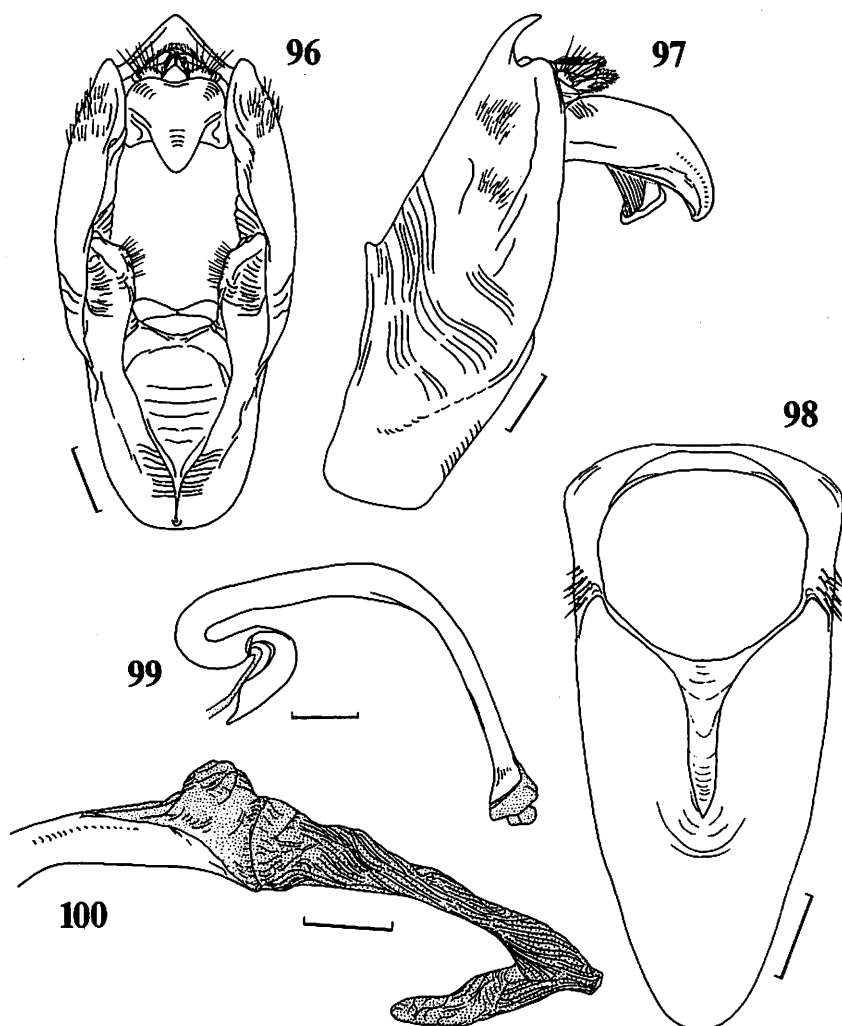
Venter of body also black with golden pilosity; thorax black or dark brown; ♂ operculum hemmed by orange in various degrees; legs composed of black and orange ochreous parts, and orange ochreous parts more and more developed towards hind leg; hind tibia ochreous except for both ends black; abdomen black narrowly or widely margined with orange, with a lateral spot on apical margins of 3rd-6th sterna (by individuals), 8th pleuron (entirely or partly), lateral base of ♂ 8th sternum (subgenital plate) and ♀ 9th tergum except for the inner margin and apical part, ochreous orange.

Wings hyaline with basal cell (sometimes including opaquely ochreous parts), basal $1/5-1/4$ of forewing and $1/4-1/3$ of hindwing black (not extending beyond basal cell in almost all the specimens from Korea; these individuals were previously treated as *coreana* KATO); areas along cross veins R_3-R_{4+5} and $R_{4+5}-M_1$ very narrowly infuscated (rarely not infuscated at all); veins greenish ochreous (as "*coreana*, *dubia*") to reddish brown (as "*pustulata*") basally, and fuscous to black apically.

Head narrower than pronotum, with the anterior margin transversely sulcate, bordered to base of tylus at the middle; frontoclypeus rather narrow, roundly swollen, nearly as long as wide in frontal view; labium nearly reaching middle of central metaprepisternal process; both sides of pronotum somewhat divergent posteriad, slightly sinuate; mesonotum proper as long as or slightly longer than pronotum in median length; parapsidal suture extending posteriorly, more than $1/2$ the length of mesonotum; abdomen as long as or slightly shorter than distance from head to cruciform elevation; timbal covering rather small; lateral part of mesepimeron a little dilated with truncate apex; ♂ operculum short and rotundate in shape, not reaching or extending a little beyond apical margin of 2nd abdominal segment, with the outer margin obliquely and not emarginate and the inner margin overlapping or contiguous to the opposite basally; apex of ♂ operculum variable in shape, widely rounded to angulate; ♂ 7th sternum with the truncate apex, sometimes emarginate at the middle; ♀ 9th tergum long and obconical, ca $1.2\times$ as long as wide; ovipositor slightly beyond 9th tergum; forewing rather slender, especially elongated at the distal part behind node, with the apical margin straight; stalk

of veins 1M and 2M short, distinctly shorter than vein 1M before nodal line; vein CuP of forewing well separated from vein 1A in basal 2/3; cell 1A of hindwing wider than cell 2A, measured at their apices.

This species is very variable in such external characters as the ochreous marking or spot on mesonotum, relative length of ♂ operculum and width of ochreous orange part on the apical margin, basal black part of wings, etc. (Figs. 89, 95). These are, however, regarded as geographic and/or individual variations within *atrata*.



Figs. 96–100. Male genitalia of *C. atrata*. 96, 97: Pygofer in ventral (96) and lateral (97) views. — 98: Uncus lobe in full caudal view. — 99, 100: Theca (99) and its apex with vesica everted (100) in lateral view. Scales; 1 mm (96–97, 99), 0.5 mm (98, 100).

DISTANT (1887) described *sinensis* on the basis of 1 ♂ specimen from China; this has been characterized by the totally pale coloured body. So far as my investigation on the holotype goes, "*sinensis*" is doubtless an immature and not tinted individual of *atrata*; *sinensis* is, therefore, regarded as a synonym of *atrata*.

Male genitalia (Figs. 96–100). Pygofer oblong, widened near the middle and narrowed towards the base, $1.86\text{--}1.91\times$ as long as wide in ventral view, with the caudoventral corners widely apart from each other, and the caudal beak wide and triangular; uncus very thick, long, stout and thick beak-like, gradually narrowed towards the apex, and hardly curved inwards even in the apical part; theca narrowed and curved in apical 1/2, with the tip more or less widened; a membranous protuberance appearing on upper side of thecal apex; vesica everted rather long and thin, bearing a long saccate process projecting from the underside a little before vesical tip and directing backwards.

Body length: 36–46 mm (mean 41.7 mm). —Total length: 56–69 mm (mean 63.9 mm). —Expanse of forewings: 113–128 mm.

OUCHI (1938) described *wenchewensis* on the basis of 1 ♂ 1 ♀ specimens collected from Shanghai and Wenchow, Chekiang. Judging from his description, any morphological differences from *atrata* cannot be detected except for the body size, ♂ 47.5 mm and ♀ 47 mm, being beyond the extent of *atrata*. His measurement seems, however, not to be so exact since he measured 1 ♀ from Korea ("*coreana*") to be 45.4 mm; ♀♀ from Korea are

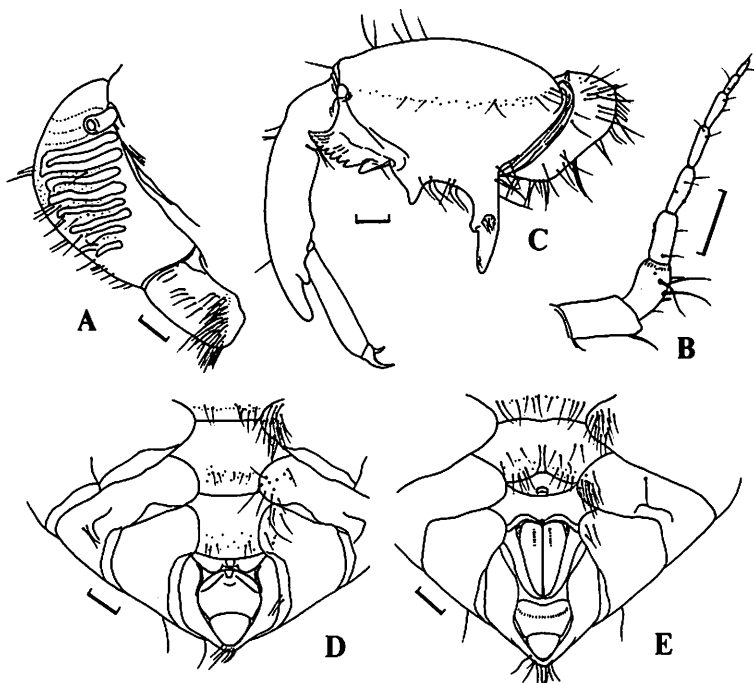


Fig. 101. Exuviae of *C. atrata* (from Korea except for E from Kiangsu, China). A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D–E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales, 1 mm.

within the range of 39–42 mm in my measurement. Under this situation, I have decided that *wenchewensis* should be treated as a synonym of *atrata*.

Exuviae (Fig. 101). KATO (1932) described the exuviae of this species (as *pustulata* and *coreana*), but he merely referred to the shape of antenna and fore femur.

Body uniformly ochreous with fore femoral processes and apical part of fore tibia infuscated to black; frontoclypeus evenly swollen, bearing 11–13 transverse rows of hairs; clypeus ca 1/2 the length of frontoclypeus; antenna 8-segmented, about 10: 8: 7: 7: 5: 4: 4 in the ratio of each segmental length; fore femur bearing 8-toothed anterior comb, a wide and triangular intermediate spike and a posterior spike protruding straight; ♂ 10th abdominal segment wider than long, with the anterior angle raised at the middle; rudiment of ovipositor of elongated triangle in shape, ca 1.6× as long as wide; anterior angle of ♀ 10th segment widely concave. Body length: 31.9–35.6 mm, head width: 11.0–12.0 mm. Exuviae examined: 1 ♂, Beijing, China, 12. VII. 1975, N. OHO & I. HATTORI, "Nat. Inst. Agr. Sc., Nishigahara Tokyo" (NIAES); 1 ♂, Zhengzhou, China, 22. VII. 1975, N. OHO & I. HATTORI (NIAES); 2 ♀♀, same locality and collector, 23. VII. 1975 (NIAES); 1 ♂, Shangkow, Honan, Chine, Dr. RENUARD (ISNB); 1 ♀, Shanghai, China, 29. VII. 1975, N. OHO & I. HATTORI (NIAES); 1 ♂ 2 ♀♀, Chiengtzu, Szechwan, China, 27. VII. 1980, K. ÔHARA, N. KÔDA & T. GOTÔ leg. (MH); 2 ♂♂, Omei, Szechwan, China, 29. VII. 1980, K. ÔHARA leg. (MH); 2 ♂♂, Mt. Sudosan (400 m), Kyongsangpuk-do, Korea, 17–18. VII. 1971, K. YAMAGISHI leg. (MH).

Distribution. China (incl. Hainan), Taiwan, Korea (incl. Cheju-do Is.), Indo-China (northern part).

Other localities, i.e., Philippines, Java, Malaya, Australia, etc., seem to be erroneous caused by mislabelling and/or misidentification.

Some biological notes, including life history, are reported by KATO & SUGANUMA (1931), LEE & KWON (1979) and so on.

The *facialis* group

Cryptotympana facialis (WALKER, 1858)

(Figs. 81, 91, 102–103, 109–116)

Cicada facialis WALKER, 1858, *List Hom. Brit. Mus., Suppl.*, 1858: 30.

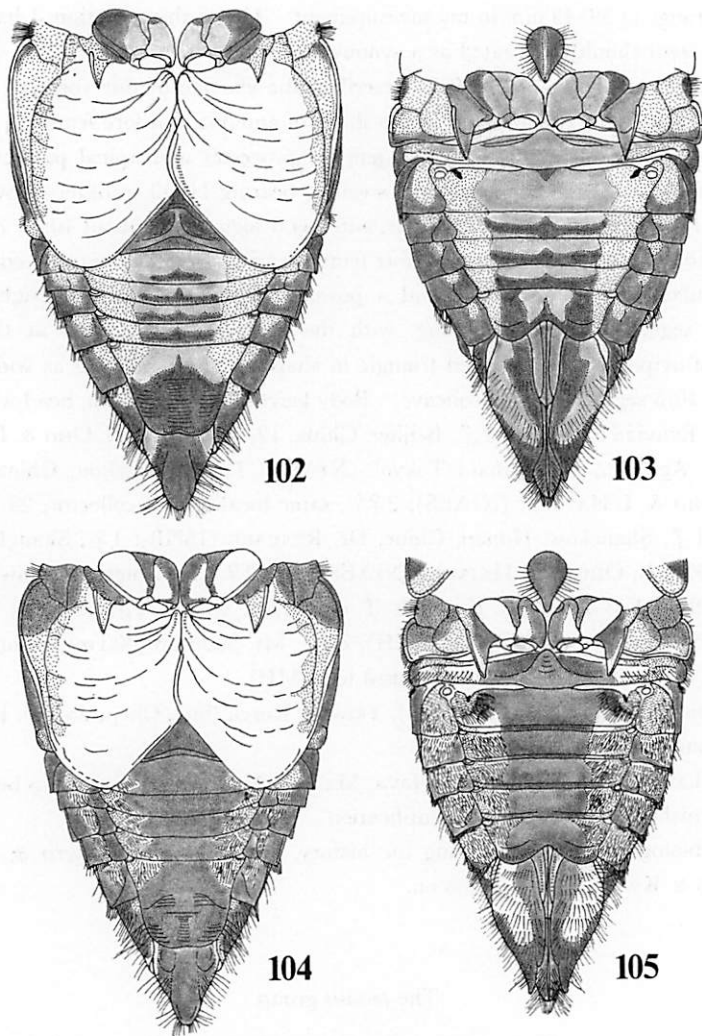
Cryptotympana facialis: STÅL, 1862, *Öf. K. Vet.-Akad. Förh.*, 19: 483; MATSUMURA, 1898, *Annot. zool. japon.*, 2: 11 (*facialis*!); KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 10; LIU, 1939, *Notes Ent. chin.*, 6: 153; LIU, 1940, *Bull. Mus. comp. Zool.*, 87: 81.

Cryptotympana facialis var. *formosana* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 11.

Cryptotympana pustulata: UHLER, 1896, *Proc. U. S. natl. Mus.*, 19: 276; MATSUMURA, 1898, *Annot. zool. japon.*, 2: 12; MATSUMURA, 1907, *ibid.*, 6: 100; MATSUMURA, 1917, *Trans. Sapporo nat. Hist. Soc.*, 6: 192 (nec FABRICIUS, 1787).

Cryptotympana intermedia: MATSUMURA, 1907, *Annot. zool. japon.*, 6: 100; MATSUMURA, 1917, *Trans. Sapporo nat. Hist. Soc.*, 6: 210 (nec SIGNORET, 1849).

Cryptotympana japonensis KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 11.



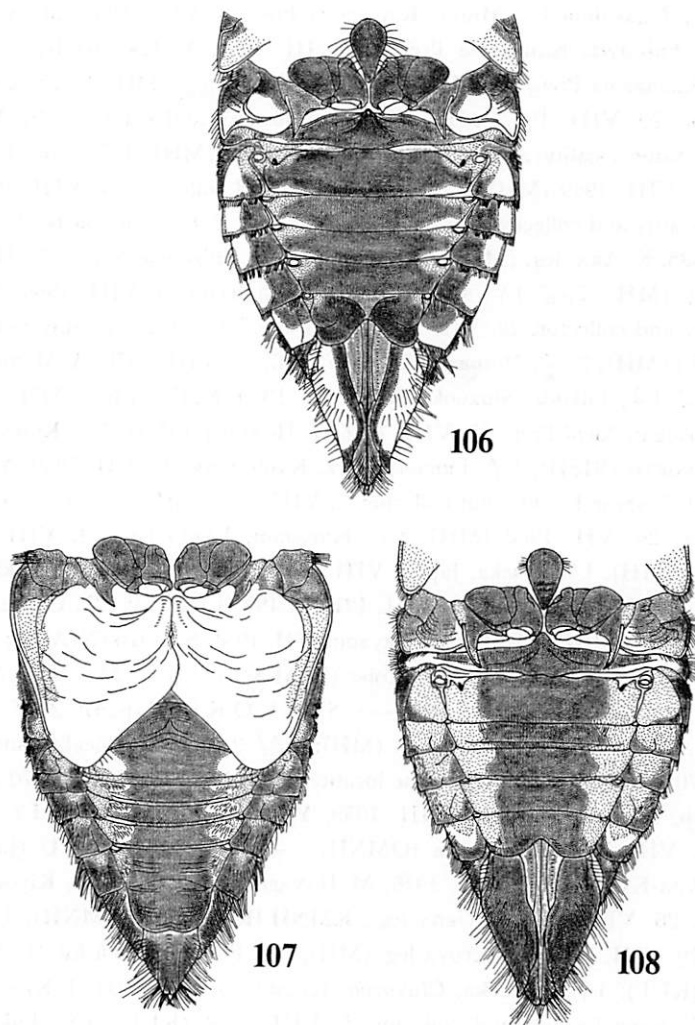
Figs. 102–105. Venter of abdomen. 102–103, *C. facialis*; 104–105, *takasagona*.

Cryptotympana japonensis var. *riukiensis* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, **15**: 11.

Cryptotympana okinawana MATSUMURA, 1927, *Ins. Mats.*, **2**: 48; KATO, 1954, *Shin-Konchû, Tokyo*, **7**(8): 44 (*facialis* var.); ISHIHARA, 1968, *Trans. Shikoku ent. Soc.*, **9**: 133 (*facialis* subsp.). (**syn. nov.**)

Cryptotympana facialis yonakunina ISHIHARA, 1968, *Trans. Shikoku ent. Soc.*, **9**: 133. (**syn. nov.**)

WALKER (1858) described this species on the basis of 3 ♂♂ from Siam. According to Dr KNIGHT and Mr WEBB (BM), the British Museum has only 1 ♂ specimen bearing "Type" label (in a green circle) and WALKER's determination (handwriting). In the course of this study, I have never succeeded in finding out where other 2 ♂♂ syntypes of



Figs. 106-108. Venter of abdomen. 106, *C. auripilosa* sp. nov. (♀) of the *facialis* group; 107-108, *C. intermedia* of the *intermedia* group.

facialis are deposited. Since these 2 specimens were probably lost, I designate herewith the 1 ♂ specimen in BM as the lectotype.

LECTOTYPE: ♂, Siam, 56 113, Type (in a green circle), WALKER det. (handwriting) "*facialis* W. type" (BM).

Specimens examined. JAPAN: 1 ♂ 1 ♀, Japon, DISTANT det. "*Cryptotympana facialis* Walk." (ISNB); 1 ♀, Japon, 1898, NOUALHIER (MNP); 22 ♂♂ 23 ♀♀, Yubari, Hokkaido (!), Japon, 3. VI. 1934, M. SATO (ISNB). ——— HONSHU (Japan): 1 ♀, Yokohama, Japan, P. L. JONY, Accession 13360, From Coll. U. S. N. M. (NMNH);

13 ♂♂ 6 ♀♀, Jôgashima Is., Miura, Kanagawa Pref., 8. VIII. 1983, M. HAYASHI leg. (MH); 1 ♂, Fujisawa, Kanagawa Pref., 26. VIII. 1966, M. KANEDA leg. (MH); 1 ♂, Chigasaki, Kanagawa Pref., 29. VIII. 1965, M. HAYASHI leg. (MH); 2 ♂♂, same locality and collector, 20. VIII. 1967 (MH); 1 ♂, same locality and collector, 16. VIII. 1968 (MH); 1 ♂, same locality and collector, 9. VIII. 1969 (MH); 1 ♂, same locality and collector, 21. VIII. 1969 (MH); 1 ♂, same locality and collector, 27. VIII. 1980 (MH); 1 ♂, same locality and collector, 10. VIII. 1981 (MH); 1 ♂ 1 ♀, Niiijima Is., Izu Is., 23–24. VIII. 1985, K. ARAI leg. (MH); 1 ♂, Shimoda, Izu, Shizuoka Pref., 2. VIII. 1965, M. HAYASHI leg. (MH); 2 ♂♂ 1 ♀, same locality and collector, 5. VIII. 1966 (MH); 1 ♂, same locality and collector, 28. VII. 1969 (MH); 3 ♂♂ 1 ♀, same locality and collector, 27. VII. 1970 (MH); 2 ♂♂, Numazu, Shizuoka Pref., 22. VIII. 1970, A. MATSUMOTO leg. (NSMT); 1 ♂ 1 ♀, Fukude, Shizuoka Pref., VII. 1980, K. KATô leg. (MH); 5 ♂♂ 1 ♀, Daisenji, Kasugai, Aichi Pref., 18. VIII. 1986, Y. HORI leg. (MH); 1 ♀, Kioto, IX. 1923, J. F. ILLINGWORTH (BISH); 1 ♂, Funaoka Park, Kyoto City, 27. VII. 1959, M. HAYASHI leg. (MH); 1 ♂, same locality and collector, 2. VIII. 1959 (MH); 1 ♂ 1 ♀, same locality and collector, 26. VII. 1960 (MH); 1 ♀, Kurodani, Kyoto City, 4. VIII. 1964, M. HAYASHI leg. (MH); 1 ♀, Osaka, Japon, VIII. 1935 (ISNB); 3 ♂♂ 1 ♀, Ôsaka, Honshû, Teiso ESaki (KUF); 1 ♀, Osaka, 7. VIII. 1916, A 192 G (KUF); 1 ♀, Osaka, 13. VIII. 1940, M. HIGASHINO (NIAES); 1 ♂, Wakayama, VII. 1954, S. GOTO (NIAES); 1 ♀, Kobe, 22. VII. 1911, HARADA (CAS); 1 ♂, Kobe (NIAES); 1 ♂ 1 ♀, Mt. Noro (Hiroshima Pref.), 10. VIII. 1936 (KUF). ——— SHIKOKU (Japan): 2 ♂♂, Uwajima, Ehime Pref., 4. VIII. 1967, G. OKA leg. (MH); 6 ♂♂ 2 ♀♀, same locality and collector, 28. VII. 1970 (MH); 10 ♂♂ 2 ♀♀, same locality and collector, 1. VIII. 1970 (MH); 1 ♂ 1 ♀, Zentsûji, Kagawa Pref., 14. VIII. 1959, Y. MIYATAKE (OMNH); 1 ♀, Nangoku, Kôchi Pref., VIII. 1965, K. KOJIMA (OMNH). ——— KYUSHU (Japan): 1 ♀, Kurosaki, Kita-Kyushu, 11. VIII. 1976, M. HAYASHI leg. (MH); 1 ♂, Kiyota, Yahata, Kitakyushu, 26. VII. 1979, K. UEDA leg., KMNH IR 100,271 (KMNH); 1 ♀, Beppu, Ôita Pref., 19. VIII. 1977, K. SETOYA leg. (MH); 1 ♀, Fukuoka, Kyûshû, 20. VIII. 1929, M. FUJINO (KUF); 1 ♀, Fukuoka, Chikuzen, Kyûshû, 3. VII. 1934, I. KAWAHARA leg. (KUF); 1 ♂, same locality and collector, 5. VIII. 1934 (KUF); 1 ♀, Fukuoka City, Kyushu, 24. VIII. 1972, M. YAMANAKA leg. (MH); 3 ♂♂, same locality, 6. VIII. 1974, Y. YONEDA leg. (MH); 1 ♂ 1 ♀, same locality, 5–6. VIII. 1974, M. HAYASHI leg. (MH); 1 ♀, same locality and collector, 7. IX. 1974 (MH); 1 ♀, same locality and collector, 14. IX. 1974 (MH); 1 ♀, same locality and collector, 23. VII. 1975 (MH); 1 ♂, same locality, 2. VIII. 1976, C. OKUMA leg. (MH); 2 ♀♀, same locality, 25. VIII. 1976, Y. YONEDA leg. (MH); 1 ♂, same locality, 29. VIII. 1976, S. HASHIMOTO leg. (MH); 1 ♀, same locality, 15. IX. 1976, K. SETOYA leg. (MH); 1 ♀, same locality, 25. VIII. 1977, K. ÔHARA leg. (MH); 8 ♂♂ 4 ♀♀, same locality, 28. VII. 1977, M. HAYASHI & N. KÔDA leg. (MH); 1 ♂ (w/exuviae), Okinoshima (Is.), Chikuzen, Kyushu, 25–28. VII. 1958, HIRASHIMA, MURAKAMI & Y. MIYATAKE (KUF); 1 ♂, Hirashima, Sakido, Nagasaki Pref., 3. VIII. 1978, K. OGATA leg. (MH); 1 ♀, Narutaki, Nagasaki City, 1. VIII. 1977, T. MIZUKUBO

leg. (MH); 12 ♂♂ 6 ♀♀, Gônoura, Iki Is., Nagasaki Pref., VII. 1979, T. URAKAWA leg. (MH); 14 ♂♂ 5 ♀♀, Komoda, Tsushima, 28. VII. 1930, HORI & CHÔ (KUF); 1 ♂ 1 ♀, Izuhara, Tsushima Is., 11. VIII. 1968, Coll. Akio URATA (MH); 1 ♀, Tamanoura, Fukuejima Is., Goto Is., Nagasaki Pref., 7. IX. 1974, Y. YOSHIYASU leg. (MH); 1 ♂, Fukue, Fukueshima, 28. VII. 1933, T. SHIRÔZU (KUF); 1 ♂, Tomioka, Amakusa, 16. VIII. 1931, H. OHSHIMA (KUF); 1 ♂, Ushibuka, Amakusa, Kumamoto Pref., 2. VIII. 1977, T. MIZUKUBO leg. (MH); 3 ♂♂, Teuchi, Shimo-Koshiki Is., Koshiki Is., Kyushu, 5–6. VIII. 1975, Y. YOSHIYASU & H. MAKIHARA leg. (MH); 1 ♂ 2 ♀♀, Katanoura, Shimo-Koshiki-jima, 18–19. VIII. 1966, H. TANAKA (HF); 1 ♀, Kawaminami (Miyazaki; labelled in Japanese), Etô (KUF); 2 ♂♂, Kiyotaki, Miyazaki Pref., 11. VII. 1956, T. HIDAHA (KUF); 1 ♂, Noma-misaki Cape, Kasasa, Kawanabe, Kagoshima Pref., 25. VII. 1963, H. FUKUDA (HF); 1 ♂, Noma-ike, Kasasa, Kawanabe, 4. VIII. 1965, M. TANIYAMA (HF); 1 ♂ 1 ♀, Birô-jima, Sata, Ôsumi, 14. VIII. 1963, H. FUKUDA & K. KUKINO (HF); 1 ♀, Ôwa-jima, Cape Sata, 14. VIII. 1963, H. TANAKA (HF); 1 ♂ 4 ♀♀, Cape Sata, Ôsumi, Kagoshima Pref., 29. VIII. 1970, M. HAYASHI leg. (MH); 9 ♂♂, same locality, 11. VIII. 1983 (MH). ——— Ô S U M I Group (Kyushu): 1 ♂, Kuroshima Is., Mishima-son, Kagoshima Pref., 23. VII. 1975, H. MAKIHARA leg. (MH); 1 ♂ 1 ♀, Kusagaki-jima Is., Kagoshima Pref., 9–20. VIII. 19??, S. SAKO (MH); 41 ♂♂ 12 ♀♀, Hamatsuwaki, Tanegashima Is., 25. VIII. 1965 (HF); 2 ♂♂ 2 ♀♀, Nishino'omote, Tanegashima Is., 31. VIII. 1980, Y. OGATA (MH); 2 ♀♀, Ambô~Funayuki, Yakushima, 7. VIII. 1929, Hiroshi HORI (KUF); 1 ♂, Ambô, Yakushima, 28. VII. 1929, H. HORI (KUF); 4 ♂♂ 1 ♀, same locality and collector, 4–8. VIII. 1929 (KUF); 6 ♂♂ 1 ♀, Miyanoura, Yakushima Is., 1–2. VIII. 1974, M. HAYASHI leg. (MH); 3 ♂♂, Yudomari, Yakushima Is., 29. VII. 1967, A. TANAKA (HF); 2 ♂♂ 2 ♀♀, Honson, Kuchinoerabu-jima Is., 22. VIII. 1967, S. WAKAMATSU (HF). ——— T O K A R A Group: 1 ♂, Nakanoshima Is., Tokara, 24. VII. 1964, A. TANAKA (HF); 3 ♂♂ 1 ♀, same locality, 25–26. VII. 1964, S. ÔGA (HF); 9 ♂♂ 13 ♀♀, same locality, 27. VII. 1964, A. T(ANAKA) *et al.* (HF); 1 ♂, same locality, 26. VI. 1973, H. MAKIHARA leg. (MH); 4 ♂♂ 3 ♀♀, same locality, 30. VII. 1975, T. Gorô leg. (MH); 2 ♂♂ 1 ♀, same locality, 11. VIII. 1974, J. AOYAMA leg. (MH); 4 ♂♂ 2 ♀♀, same locality, 19–20. VII. 1975, H. MAKIHARA leg. (MH); 1 ♂ 1 ♀, same locality and collector, 10. VIII. 1975 (MH); 1 ♂, same locality and collector, 22–26. VI. 1976 (MH); 3 ♂♂, same locality, 13–14. VII. 1982, M. ÔHARA leg. (MH); 2 ♀♀, Suwanose-jima Is., Tokara Is., 28. VII. 1974 (LT), K. KUSAMA leg. (MH); 7 ♂♂ 4 ♀♀, same locality, 8–9. VIII. 1976, Y. YASUDA & Y. WATANABE (OMNH); 1 ♂ 1 ♀, Akuseki-jima Is., Tokara Is., 26. VII. 1974 (LT), K. KUSAMA leg. (MH); 2 ♂♂, Akuseki-jima Is., Tokara, Kagoshima Pref., 23. VII/2. VIII. 1982, M. ÔHARA leg. (MH); 4 ♂♂, Takarashima Is., Tokara Islands, 13–14. VII. 1964, Akira TANAKA (HF); 1 ♂ 1 ♀, same locality 15. VII. 1964, S. ÔGA & H. SHIMA (HF); 2 ♂♂ 1 ♀, same locality, 20–21. VII. 1964, S. ÔGA & A. TANAKA (HF); 4 ♂♂ 1 ♀, same locality and collector, 24–26. VII. 1964 (HF); 1 ♂ 1 ♀, Takarajima Is., Tokara Is., 3. VIII. 1973 (MH); 1 ♂, same locality, 13. VII. 1982, H. FUJITA leg. (MH). ——— A M A M I Group (Ryukyus): 2 ♂♂, Asato, Amami-Oshima Is., 21.

VII. (HF); 1 ♂, Okinoerabu, VII–VIII. 1959, A. YAMASHITA (HF); 1 ♀, Okinoerabujima Is., Ryukyus, 31. VII./2. VIII. 1969, H. MAKIHARA leg. (MH); 1 ♂ 1 ♀, Ôyama, Okinoerabujima Is., 1. VIII. 1970, J. USUKURA leg. (MH); 1 ♂ 1 ♀, same locality, 3–4. VII. 1974, H. MAKIHARA leg. (MH); 2 ♂♂ 2 ♀♀, China, Okinoerabujima Is., 19. VII. 1958, R. KANO leg. (MH); 2 ♂♂ 5 ♀♀, Sena, Okinoerabujima Is., 9. IX. 1970, M. HAYASHI leg. (MH); 1 ♂, Chabana, Yoron Is., Ryukyus, 14. VIII. 1965, K. YANO et F. ICHINOHE (KUF). ——— O K I N A W A Group (Ryukyus): 4 ♂♂ 1 ♀, Okinawa Id., 13. VII. 1945, F. N. YOUNG (No. 81) (NMNH); 1 ♀, same locality and collector, 14. VII. 1945 (No. 81) (NMNH); 1 ♂, same locality and collector, 18. VII. 1945 (No. 90) (NMNH); 4 ♂♂, same locality and collector, 5. VII. 1945 (No. 72) (NMNH); 1 ♂, same locality and collector, 16. VII. 1945 (No. 87) (NMNH); 9 ♂♂ 1 ♀, same locality, 7. VII. 1945, W. D. FIELD (No. 18) (NMNH); 6 ♂♂ 1 ♀, same locality and collector, 5. VII. 1945 (No. 18) (NMNH); 2 ♂♂, same locality and collector, 6. VII. 1945 (No. 18) (NMNH); 1 ♂ 2 ♀♀, same locality and collector, 15. VII. 1945 (No. 18) (NMNH); 2 ♀♀, same locality and collector, 17. VII. 1945 (No. 18) (NMNH); 2 ♀♀, same locality and collector, 19. VII. 1945 (No. 5) (NMNH); 1 ♂, Okinawa, 20. VI. 1945, R. J. DONAHUE, H-4/USNM 170976—Lot 45 17977, "J. S. Caldwell det., 1945: *Cryptotympana* near *pustulata* (F.)." (NMNH); 2 ♂♂, Okinawa, 10. VII. 1938, Coll. Hiroshi INOUE (NIAES); 1 ♂ 1 ♀, Chizuka, Okinawa I., VII–IX., R. L. INGRAM (NMNH); 1 ♂, Yona, Okinawa Is., 17. VI. 1971, M. HAYASHI leg. (MH); 2 ♀♀, Hentona, Okinawa Is., 21. VII. 1971, M. HAYASHI leg. (MH); 1 ♂, Kawada, Higashi-son, Okinawa Is., 20. VI. 1972, Y. UÉMURA leg. (MH); 2 ♀♀, Nago, Okinawa, 25. VI. 1956, Kôsei IHA (NIAES); 1 ♀, same locality, 20. VII. 1971, I. HATTORI (NIAES); 3 ♂♂ 3 ♀♀, same locality, 7. VII. 1972, M. HAYASHI leg. (MH); 1 ♀, same locality and collector, 1. VIII. 1973 (MH); 2 ♂♂ 3 ♀♀, Izumi, Okinawa Is., 21. VII. 1971, M. HAYASHI leg. (MH); 1 ♂, same locality and collector, 7. VII. 1972 (MH); 1 ♂ 1 ♀, same locality, 23–26. VI. 1972, Y. UÉMURA leg. (MH); 1 ♂ 3 ♀♀, Nakijin, Okinawa Is., 3. VIII. 1971, M. HAYASHI leg. (MH); 2 ♂♂ 2 ♀♀, Kin, Okinawa Is., 6–7. VII. 1972, M. HAYASHI leg. (MH); 1 ♀, Kadena, Okinawa, 21. VII. 1938, T. ISHIHARA (KUF); 1 ♀, Kadena A. F. B., Okinawa, 21. VII. 1962, S. M. FULLER (LACM); 4 ♀♀, Nakagusuku Park, Okinawa Is., 27. VII. 1971, M. HAYASHI leg. (MH); 1 ♂, Naha, Okinawa, Ryukyus, 11. VII. 1968, K. YAMAMOTO (HF); 1 ♂, same locality, 20. VII. 1972, T. AGATA (MH); 7 ♂♂ 14 ♀♀, Shuri, Naha, Okinawa Is., Ryukyus, 13. VII. 1977, M. KINJÔ leg. (MH); 1 ♀, same locality, 8. VII. 1972, M. HAYASHI leg. (MH); 2 ♂♂, same locality, 2. VII. 1976, H. MAKIHARA leg. (MH); 1 ♂, Ôsato, Okinawa Is., 7. X. 1972, M. HAYASHI leg. (MH); 7 ♂♂ 2 ♀♀, Kudeken, Chinen, Okinawa Is., 7–8. VII. 1971, M. HAYASHI leg. (MH); 1 ♂ 9 ♀♀, same locality and collector, 18–20. VII. 1971 (MH); 1 ♂, same locality and collector, 4. VIII. 1971 (MH); 1 ♂, same locality, 1. VII. 1976, H. MAKIHARA leg. (MH); 4 ♀♀, Hyakuna, Okinawa Is., 19. VII. 1971, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, Itoman, Okinawa Is., 26. VI. 1974, M. HAYASHI leg. (MH); 3 ♂♂, same locality and collector, 28. VI. 1974 (MH); 1 ♂, Kume-jima Is. (labelled in Chinese letter), 24. VII. 1933, T. ISHII (NIAES); 17 ♂♂ 14 ♀♀, Uesu, Gushikawa, Kumejima Is., 10–12.

VII. 1971, M. HAYASHI leg. (MH); 1 ♀, Hiyajō, Nakazato, Kumejima Is., 11. VII. 1971, M. HAYASHI leg. (MH). ——— MIYAKO Group (Ryukyus): 4 ♂♂ 1 ♀, Miyako Is., Ryukyus, 13. VII. 1968, H. FUKUDA (HF); 2 ♂♂ 1 ♀, Gusukube, Miyako Is., 20. VI. 1971, M. HAYASHI leg. (MH); 14 ♂♂ 9 ♀♀, same locality and collector, 5–6. VII. 1971 (MH); 1 ♂, same locality and collector, 14. VI. 1974 (MH); 4 ♂♂ 1 ♀, same locality, 26. VI. 1974, S. KIMOTO leg. (MH); 1 ♀, Uimpiya (Gusukube), Miyako Is., 6. VII. 1977, H. MAKIHARA leg. (MH); 3 ♂♂ 2 ♀♀, Hirara, Miyako Is., 12–13. VII. 1968, S. Y. (HF); 2 ♂♂, same locality, 14. VI. 1972, M. HAYASHI leg. (MH); 3 ♂♂ 1 ♀, Hirara Botanical Garden, Miyako Is., 29. VI. 1974, S. KIMOTO leg. (MH); 1 ♂, Karimata, Miyako Is., 27. VI. 1974, S. KIMOTO leg. (MH); 1 ♂, Irabujima Is., Miyako, 10. VII. 1974, M. NAGAHAMA leg. (MH); 1 ♀, Tarama Is., Ryukyus, 3. VII. 1975, Y. Itō leg. (MH). ——— YAEYAMA Group (Ryukyus): 3 ♂♂ 3 ♀♀, Ishigakizima, VII. 1933, OHSHIMA & IKEDA (KUF); 1 ♂ 3 ♀♀, same locality, 23. VII. 1938, T. ISHIHARA (KUF); 1 ♂, Ishigaki Is., Ryukyus, 27. VII. 1962, Coll. R. AOKI (NIAES); 1 ♂, Ōhama, Ishigaki Is., 25. VII. 1954, R. KANO (NIAES); 1 ♂, Ishigaki City, 30. VI. 1975, G. & E. OKA leg. (MH); 2 ♂♂, Mt. Banna-dake, Ishigaki Is., 20–22. VI. 1970, H. MAKIHARA leg. (MH); 4 ♂♂ 4 ♀♀, same locality, 21–27. VI. 1971, M. HAYASHI leg. (MH); 1 ♀, same locality and collector, 27. VII. 1973 (MH); 6 ♂♂ 3 ♀♀, same locality and collector, 29. VI. /2. VII. 1974 (MH); 1 ♂, same locality, 18. VI. 1974, H. MAKIHARA leg. (MH); 1 ♀, same locality, 17. VII. 1978, T. MIZUKUBO leg. (MH); 1 ♂ 2 ♀♀, Mt. Kawara (=Banna-dake), Ishigaki Is., 25. VII. 1962, Coll. R. AOKI (NIAES); 1 ♂ 1 ♀, Omoto, Ishigaki Is., 4. VII. 1971, M. HAYASHI leg. (MH); 4 ♀♀, same locality and collector, 29. VII. 1971 (MH); 6 ♂♂ 1 ♀, Mt. Yamaateyama, Hirakubo, Ishigaki Is., 2. VII. 1972, M. HAYASHI leg. (MH); 1 ♂ 3 ♀♀, Mt. Omoto-dake, Ishigaki Is., 27. VI. 1972, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, Sakieda, Ishigaki Is., 30. VI. 1974, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, same locality and collector, 7. VII. 1974 (MH); 15 ♂♂ 2 ♀♀, Kabira, Ishigaki Is., 22. VI. 1971, M. HAYASHI leg. (MH); 5 ♂♂, same locality and collector, 16. VI. 1972 (MH); 1 ♂, same locality, 7. VI. 1971, AOKI (MH); 1 ♂, Arakawa, Ishigaki Is., 18. VI. 1972, T. MIZUKUBO leg. (MH); 1 ♀, Yonehara, Ishigaki Is., 22. VI. 1971, M. HAYASHI leg. (MH); 2 ♀♀, same locality and collector, 1. VIII. 1971 (MH); 9 ♂♂ 2 ♀♀, same locality and collector, 18–28. VI. 1972 (MH); 1 ♂, same locality and collector, 3. VII. 1974 (MH); 1 ♀, same locality, 18. VII. 1978, T. MIZUKUBO leg. (MH); 1 ♀, Ohara (Iriomote Is.), 17. VIII. 1962, M. T. CHŪJŌ leg., SESKU (KUF); 9 ♂♂, Ōhara, Iriomote Is., 30. VII. /1. VIII. 1971, M. HAYASHI leg. (MH); 2 ♀♀, same locality and collector, 15. X. 1972 (MH); 1 ♂, Ōtomi, Iriomote Is., 24. VII. 1962, Coll. R. AOKI (NIAES); 1 ♂ 1 ♀, same locality, 29. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, Toyohara~Haimi, Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH); 6 ♂♂ 3 ♀♀, Funaura, Iriomote Is., 27–30. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂, Hoshidate, Iriomote Is., 30. VIII. 1985 (at light), M. HAYASHI leg. (MH); 2 ♂♂ 2 ♀♀, Mt. Ushiku-mori (Shirahama For. Rd.), Iriomote Is., 28. VIII. 1985, M. HAYASHI leg. (MH); 2 ♂♂ 1 ♀, Taketomi Is., Yaeyama Isls., 19–20. VI. 1972, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, same locality and collector, 30. VI. 1972 (MH); 3 ♂♂

2♀♀, Hateruma Is., Yaeyama Isls., 8–15. VIII. 1983, R. KISHI leg. (MH); 1♂ (paratype of *facialis yonakunina*), Kubura, Is. Yonaguni, Ryukyus, 6. VII. 1965, K. HATTA leg., T. ISHIHARA det. (handwriting) "*Cryptotympana facialis yonakunina* Ishihara 1968", ex Coll. EUM (MH); 2♂♂, Sonai, Yonaguni Is., Ryukyus, 6–8. VII. 1970, H. MAKIHARA leg. (MH); 16♂♂ 8♀♀, same locality, 28–30. VI. 1971, M. HAYASHI leg. (MH); 7♂♂ 6♀♀, same locality and collector, 1–3. VII. 1971 (MH); 29♂♂ 29♀♀, same locality and collector, 8. VII. 1974 (MH); 2♂♂ 1♀, Higawa, Yonaguni Is., 28. VI. 1971, M. HAYASHI leg. (MH); 1♀ (paratype of *facialis yonakunina*), Mt. Urabu-dake, Is. Yonaguni, Ryukyus, 10. VII. 1964, N. OHBAYASHI, T. ISHIHARA det. (handwriting) "*Cryptotympana facialis yonakunina* Ishihara 1968", ex Coll. EUM (MH); 1♂ (paratype of *facialis yonakunina*), same data, 4. VII. 1965, Y. HORI leg., ex Coll. EUM (MH); 13♂♂ 4♀♀, Mt. Urabuyama, Yonaguni Is., 29. VI. 1971, M. HAYASHI leg. (MH); 7♂♂ 15♀♀, same locality and collector, 9. VII. 1974 (MH). ——— Other localities: 1♀, Centr. Formosa (ISNB); 1♂, Wonsan, Corea, VIII. 1910, J. C. THOMPSON (CAS). ——— Without locality: 1♀, 9. VIII., T. NAKAMURA (KUF); 1♂ 1♀ (KUF); 3♂♂ 2♀♀, "From Coll. U. S. N. M." (NMNH); 1♀, "M. Kato det.: *Cryptotympana santoshonis* Mats." (NIAES); 2♂♂ 3♀♀, VII. 1933, T. ISHII (NIAES).

Body black and glossy clothed with minute gold grey hairs in fresh specimens; head and thorax black with a lateral spot on anterior margin of vertex, a central spot on tip of frontoclypeus, basal part of labium, a central longitudinal fascia on pronotum (by individuals, but rare) and a spot on inner surface of pronotal collar posterolaterally, ochreous; abdomen black with timbal covering more or less brownish; lateral part of 1st tergum covered with white pollinosity, forming a pair of oblique white spots adjacent to inner margin of timbal covering in ♂♂ and a pair of transverse discal spots in ♀♀; ♂ 3rd tergum often clothed with white pollinosity along the basal margin, interrupted at the middle; lateral part of ♀ 2nd (and sometimes 3rd) tergum also covered with white pollinosity; white area on terga variable in size, and sometimes absent.

Venter of body golden tomentose; thorax black with apex of lateral dilatation of mesepimeron ochreous, and clothed with white pollinosity except for pronotal paranotum; operculum orange in colour, covered with white pollinosity laterally; legs ochreous orange with fore coxa, inner part of fore femur, fore and mid trochanters, fore tibia, fore and mid tarsi, basal and outer parts of mid and hind coxae, inner surface of mid femur, mid tibia interrupted by a transverse ochreous band towards the base, a linear spot on hind femur, apex of hind tibia, and base of hind tarsus, black; abdomen black, clothed with white pollinosity laterally, with basal parts of 3rd–7th sterna, lateral base of ♂ 8th sternum and an oblique fascia on ♀ 9th tergum dull ochreous tinged with orange.

Wings clearly hyaline, with basal cell and basal 1/4 of cell 1A of forewing, and extreme base of hindwing black; areas along cross veins R_3 – R_{4+5} and R_{4+5} – M_1 slightly infuscated; veins fresh yellow green basally and fuscous apically in forewing, while almost entirely greenish ochreous except for the marginal vein, vein 2A and vein 3A fuscous or black in hindwing.

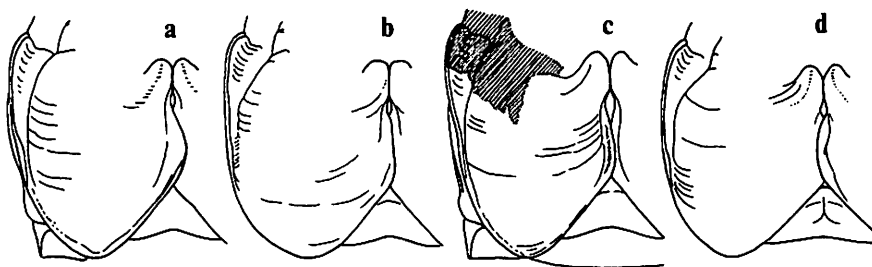


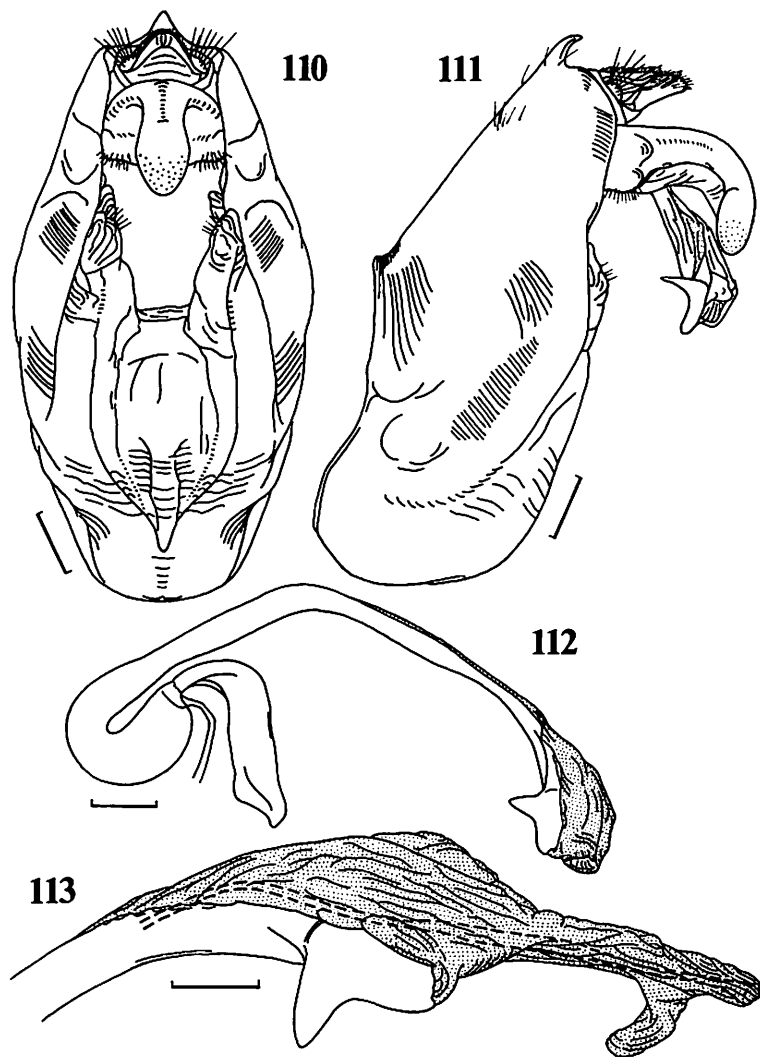
Fig. 109. Individual variation of ♂ operculum of *C. facialis*. a, From Kanagawa (Honshu); b, from Nakanoshima Is. (Tokara); c, from Okinawa Is.; d, from Miyako Is. (Ryukyus).

Head narrower than pronotum; frontoclypeus narrow and not so swollen anteriorly, less than $1/3$ the width of head, and slightly longer than wide in full ventral view; labium extending to near middle of central metaprepisternal process; pronotum nearly trapezoidal, with the lateral margin slightly sinuate; mesonotum globose dorsally, longer than pronotum in median length; cruciform elevation not depressed, and the central part distinctly narrower than basal space between parapsidal sutures; abdomen longer than distance from head to cruciform elevation in ♂♂, while about as long as that in ♀♀; ♂ abdomen conical, widest across 2nd tergum; lateral dilatation of mesepimeron small with truncate apex; ♂ opercula oblong, rounded apically, extending beyond 2nd sternum, with the inner margins overlapping each other towards the bases; shape and relative length of ♂ operculum more or less variable (Fig. 109); pleuron rather narrow; ♂ 7th pleuron longer than wide; caudal margin of 7th sternum widely rounded in ♂♂, while widely and triangularly but not deeply incised at the middle in ♀♀; ♀ 9th tergum long and conical, ca $1/2 \times$ as long as wide; wings wide, and costal veins (C and Sc+R) of forewing wide and stout, gently curved; vein CuP of forewing separated from vein 1A in basal $1/2$; hindwing longer than $1/2$ the length of forewing.

Male genitalia (Figs. 110–113). Pygofer ovate, ca $1.8 \times$ as long as wide, thickened dorsoventrally towards the base, with a short caudal beak and a pair of wide ventral lobes; uncus lobe stick-like, nearly straight in basal $1/2$ and strongly curved near right angle at the apical $1/3$, with the apex rounded and somewhat widened; theca long and narrowed apicad with the tip again widened and bearing a pair of large hooked spines; dorsal part of thecal apex membranous and widely swollen; vesica cylindrical and narrow with a small saccate process ventrally protruding at about apical $1/3$ of the under surface.

Body length: ♂ 42–51 mm (mean 46.1 mm), ♀ 40–46 mm (mean 43.3 mm). —Total length: 60–71 mm (mean 65.7 mm). —Expanse of forewings: 112–134 mm.

Exuviae (Fig. 114). Already described as “*japonensis*” by KATO (1931, 1933c); body ochreous and glossy with fore femoral processes, fore tibia and subapical margin of abdominal tergum darkened or black; frontoclypeus somewhat swollen conically, bearing 11–13 transverse rows of hairs; antenna 8-segmented, about 10: 6.5: 6: 6.5: 5: 3: 3 in the



Figs. 110–113. Male genitalia of *C. facialis*. 110, 111: Pygofer in ventral (110) and lateral (111) views. — 112, 113: Theca (112) and its apex with vesica everted (113) in lateral view. Scales; 1 mm (110–112), 0.5 mm (113).

ratio of each segmental length, and the 8th segment distinctly constricted at the apical $2/5$; anterior comb of fore femur composed of 5–6 teeth with the 5th or 6th (the last) tooth distinctly short, and the intermediate spike somewhat hooked apicad, situated slightly behind middle; anterior angle of ♂ 10th abdominal segment subacutely raised at the middle; rudiment of ovipositor ca $1.5\times$ as long as wide, with the inner part linearly concave. Body length: 31.4–38.8 mm, head width: 12.2–13.0 mm. Exuviae examined: 1 ♂, Jôgashima Is., Miura, Kanagawa Pref., Honshu, 8. VIII. 1983, M. HAYASHI leg.

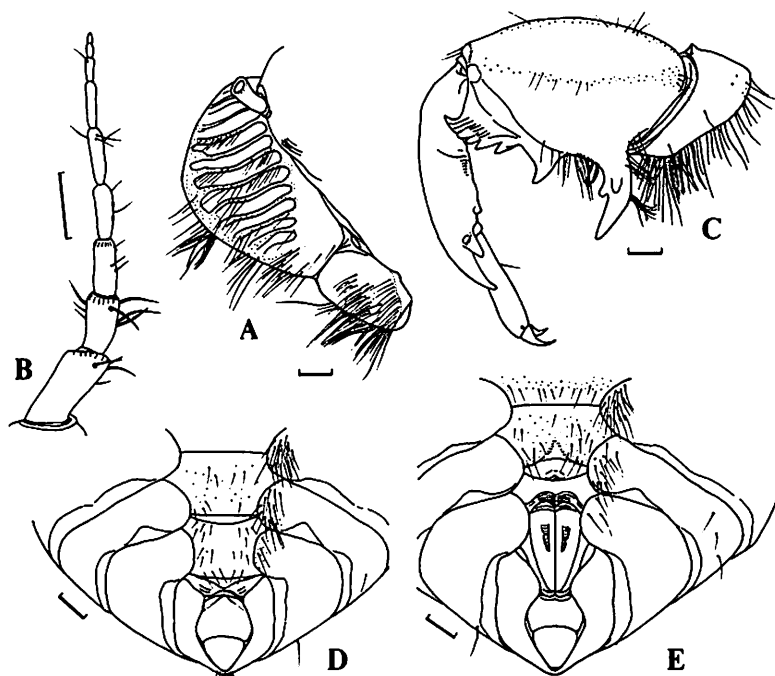


Fig. 114. Exuviae of *C. facialis*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdominal venter (D, ♂; E, ♀). Scales, 1 mm.

(MH); 1 ♀, Fukuoka City, Kyushu, 10. IX. 1974, K. UEDA leg. (MH); 1 ♂, Okinoshima, Chikuzen, Kyushu, 25-28. VII. 1958, HIRASHIMA, MURAKAMI & Y. MIYATAKE (KUF); 1 ♂, Ushibuka, Amakusa, Kumamoto Pref., 2. VIII. 1977, T. MIZUKUBO leg. (MH); 1 ♂, Matsushima, Amakusa, 3. VIII. 1977, T. MIZUKUBO leg. (MH); 1 ♂, Kuroshima Is., Mishima-son, Kagoshima Pref., 23. VII. 1975, H. MAKIHARA leg. (MH); 1 ♀, Miyanoura, Yakushima Is., 24. VII. 1974, H. INOUE (MH); 1 ♂, Kurio, Yakushima Is., 31. VII. 1974, M. HAYASHI leg. (MH); 3 ♂♂ 1 ♀, Nakanoshima Is., Tokara, 19-20. VII. 1975, H. MAKIHARA leg. (MH); 1 ♂, same locality and collector, 22-26. VI. 1976 (MH); 1 ♀, Nishinakama, Amami-Oshima Is., 5. VII. 1976, H. MAKIHARA leg. (MH); 1 ♂ 1 ♀, Izumi, Okinawa Is., 23-26. VI. 1972, Y. UÉMURA leg. (MH); 1 ♂, Azama, Chinen, Okinawa Is., 25. VI. 1974, M. HAYASHI leg. (MH); 1 ♀, Gusukebe, Miyako Is., 5. VII. 1971, M. HAYASHI leg. (MH); 2 ♂♂ 1 ♀, same locality, 26. VI. 1974, S. KIMOTO leg. (MH); 1 ♀, Uimpiya, Miyako Is., 28. VI. 1974, H. MAKIHARA leg. (MH); 1 ♂, Hirara, Miyako Is., 1. VI. 1974, H. MAKIHARA leg. (MH); 1 ♀, Ishigaki City, Ishigaki Is., 16. VII. 1978, T. MIZUKUBO leg. (MH); 1 ♂, Mt. Banna-dake, Ishigaki Is., 21. VI. 1971, M. HAYASHI leg. (MH); 2 ♂♂, same locality and collector, 29. VI. 1974 (MH); 1 ♂, same locality, 26. VI. 1974, H. MAKIHARA leg. (MH); 1 ♂, same locality, 17. VII. 1978, T. MIZUKUBO leg. (MH); 2 ♂♂, Kadir, Ishigaki Is., 26. VI. 1972, O. TADAUCHI leg. (MH);

1 ♂, Yonehara, Ishigaki Is., 1. IX. 1985, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, same locality, 18. VII. 1978, T. MIZUKUBO leg. (MH); 1 ♂, Ōhara, Iriomote Is., 30. VII. 1971, M. HAYASHI leg. (MH); 1 ♀, same locality and collector, 15. X. 1972 (MH); 1 ♂ 1 ♀, Sonai, Iriomote Is., 20. VIII. 1971, M. KINJŌ (MH); 1 ♀, Ushiku-mori (Shirahama For. Rd.), Iriomote Is., 28. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, Sonai, Yonaguni Is., 30. VI. 1971, M. HAYASHI leg. (MH); 2 ♂♂ 2 ♀♀, Mt. Urabuyama, Yonaguni Is., 9. VII. 1974, M. HAYASHI leg. (MH).

Distribution. Japan Proper (Honshu, Shikoku and Kyushu), Tsushima Is., Gotō Is., Koshiki Is., Ōsumi Is. (Tanegashima Is., Yakushima Is., Kuchinoerabujima Is., Kusagakijima Is., etc.), Tokara Is., Ryukyus (Amami, Okinawa, Miyako and Yaeyama groups), Taiwan and China (?).

Although WALKER (1858) recorded 'Siam' as the type area of this species, it is most probable that 'Siam (Thailand)' is out of the distributional range of *facialis*. KATO (1932) figured 1 ♂ of *facialis* from Keelung, N Taiwan; his record as well as others from this territory are somewhat doubtful because of the fact that an allied species *takasagona* occurs throughout Taiwan and that there are no specimens of *facialis* recently collected from this island. Furthermore, the record of *facialis* from China is probably caused by a confusion with "*santoshonis*" (a synonym of *atrata*). In any way, the occurrence of *facialis* in Taiwan or China needs further confirmation.

As regards the northern limit of this species, the distributional range extends as far eastwards as Kanagawa Prefecture (Jōgashima; an islet near the tip of the Miura

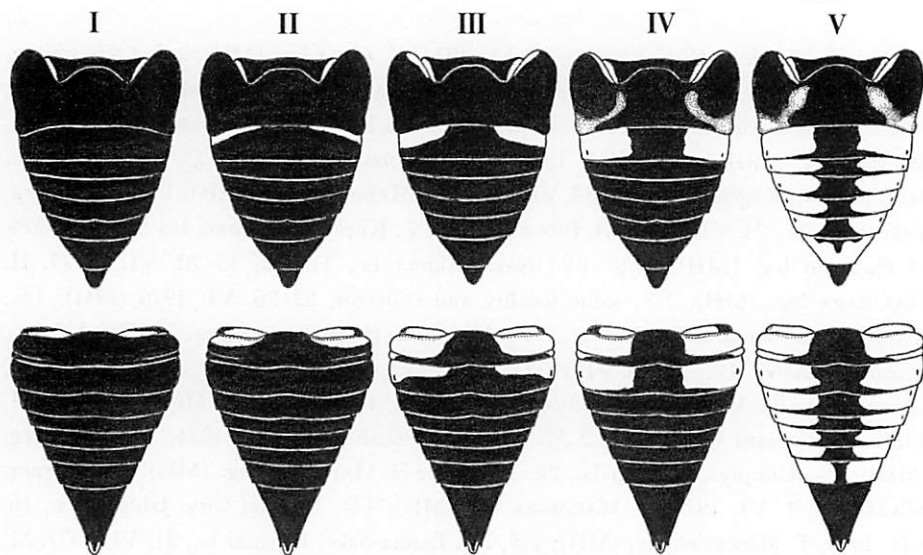


Fig. 115. Diagrammatic figures showing individual and/or geographic variations in the white pollinose area on abdominal terga of *C. facialis* (I-V). Upper row, ♂; lower row, ♀.

Peninsula), southwestern part of the Kantô District, central Honshu, ca 50 km SW of Tokyo.

The variation of the white pollinosity on abdominal terga has been particularly noticed as a geographic variation of *facialis*; this infraspecific variation can be represented by 5 types as shown in Fig. 115. Based on the size of white pollinose area, subspecific classification has been made in *facialis*; the white area is absent or narrowly present as a transverse band along the anterior margin of ♂ 3rd and ♀ 2nd (and 3rd) terga as Type I–III forms (“subsp. *facialis*”; usually known from the wide area from Honshu to Miyako Is.), widely present on ♂ 3rd and ♀ 2nd–3rd terga laterally as Type IV (“subsp. *okinawana* MATSUMURA”; originally from the Yaeyama group except for Yonaguni Is.), and widely spread over lateral part of abdominal terga as Type V (“subsp. *yonakunina* ISHIHARA”; endemic to Yonaguni Is. of the Yaeyama group) (Fig. 116). As the result of my study based on rather sufficient number of specimens from various localities*, this variation certainly appears geographical in some cases, but successive in several localities where some intermediate forms are known. The individuals from Japan Proper show Type I and II forms; Type II is generally more abundant than Type I. In the range of the Ōsumi and Tokara groups, however, Type I–IV are known (cf. FUKUDA 1968), and IV (“subsp. *okinawana*”) always appears in most islands (having the majority in Nakanoshima Is.). In the area south of the Tokaras southwards to Miyako Is., *facialis* is represented only by Type I form.

From the fact mentioned above, the difference in the white area merely represents an individual (or sometimes geographic) variation of *facialis*, and cannot be regarded as a subspecific character. Consequently, 2 subspecies known from the Ryukyus are synony-

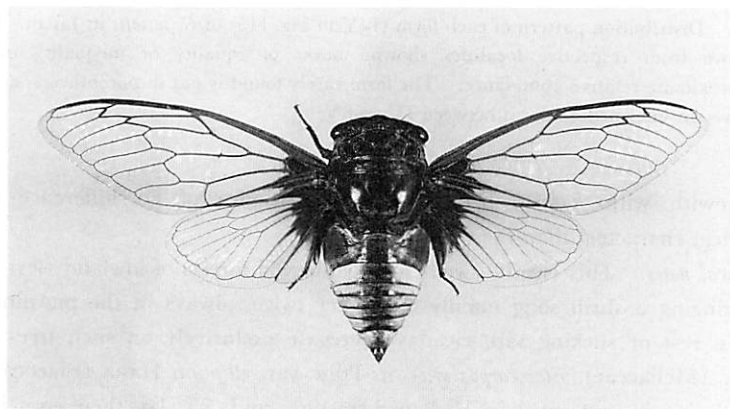


Fig. 116. *Cryptotympana facialis* (WALKER) from Yonaguni Is. of the Ryukyus (Type V form of Fig. 115; hitherto treated as a subspecies *yonakunina* ISHIHARA).

* I am deeply indebted to Prof. K. YANO (Yamaguchi University), Mr S. GOTÔ (Tanabe, Wakayama), Mr S. HISAMATSU (EUM) and Mr H. MURAKAMI (Hiroshima) for their kindness in offering the valuable data on *facialis*.

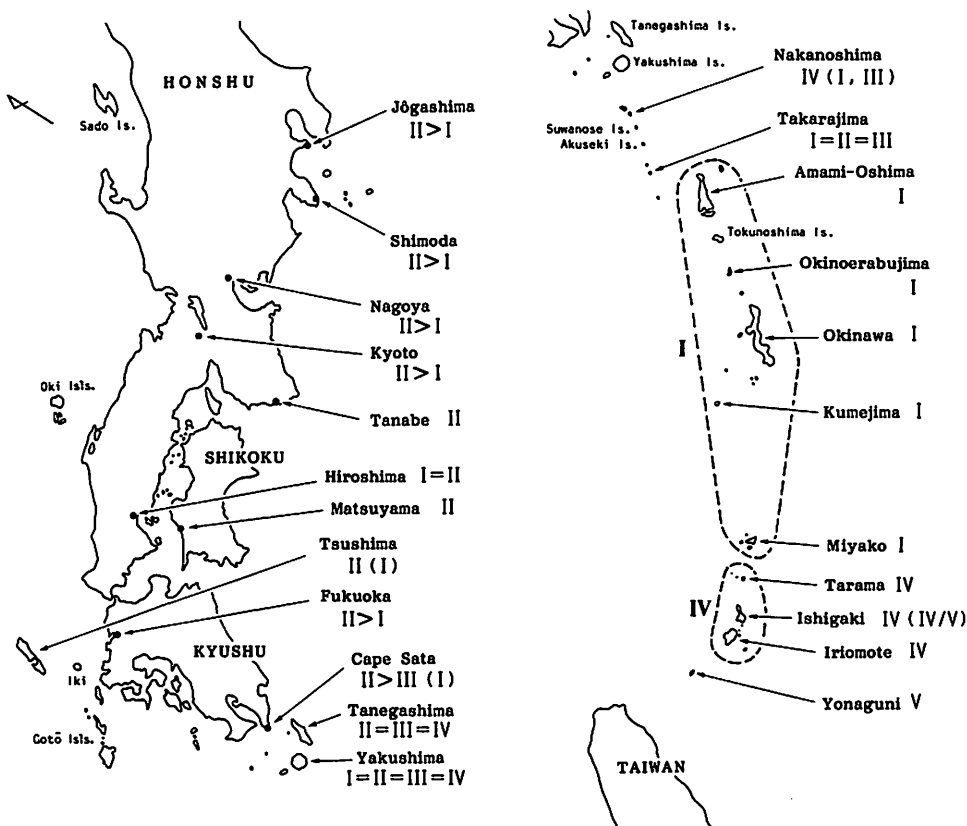


Fig. 117. Distribution pattern of each form (I-V in Fig. 115) of *C. facialis* in Japan. Form(s) known from respective localities shown; marks of equality or inequality indicating approximate relative abundance. The form rarely found is put in parentheses, and IV/V shows an intermediate form between IV and V.

mized herewith with *facialis*, because of the existence of no difference in other morphological characters than the white area.

Biological notes. This cicada dwells in broadleaved forests of lowland (less 300 m in altitude), singing a shrill song mainly on higher twigs, always in the morning (0600-1100h). In rest or sucking sap, cicadas aggregate exclusively on such trees as *Melia azedarach* L. (Meliaceae), *Elaeocarpus sylvestris* POIR. var. *ellipticus* HARA (Elaeocarpaceae), etc. Copulation is performed in V-shaped posture, and ♀♀ lay their eggs into dead twigs or branches standing upright. The duration of appearance is generally from the middle of July to the beginning of September (from the middle of June to the middle of August in the Ryukyus).

***Cryptotympana takasagona* KATO, 1925**

(Figs. 82, 92, 104–105, 118–123)

Cryptotympana intermedia: OSHANIN, 1908, *Ann. Zool. St. Pétersb.*, **13**: 386 (*partim*); SCHUMACHER, 1915, *Mitt. Berlin. zool. Mus.*, **8**: 78; SCHUMACHER, 1915, *Suppl. ent.*, (4): 110 (nec SIGNORET, 1849).*Cryptotympana takasagona* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, **15**: 12.*Cryptotympana argenteus* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, **15**: 13. (**syn. nov.**)

Specimens examined. CHINA: 1 ♂, Yungan, Fukien, S. China, 10. VII. 1942, T. C. MAA (BISH). ——— TAIWAN: 1 ♀, S. Formosa, XI. 193?, J. de la TOUCHE, 99–252 (BM); 2 ♂♂, Taipei (labelled in Chinese letter), VII. 1934 (NIAES); 1 ♀, Taihoku (=Taipei), Formosa, 27. VII. 1934 (NIAES); 1 ♂, same locality, 25. VI. 1938, Coll. Hiroshi INOUE (NIAES); 1 ♂, Yang-ming-shan, Taipei Prov., 15. VII. 1968, H. FUKUDA leg. (HF); 1 ♂, Shinten~Kanko, Taihoku-shû, 4. IX. 1932, Teiso ESAKI (KUF); 1 ♀, Wulai, Taipei Prov., 4. X. 1977, H. ENDO leg. (MH); 7 ♂♂ 7 ♀♀, Tan-shui, Taipei Prov., 16. VII. 1973, M. HAYASHI leg. (MH); 1 ♂, Toufen, Miaoli Prov., 20. VII. 1968, H. FUKUDA leg. (HF); 1 ♀, same locality, 19. VII. 1968, Y. YANOYARA leg. (HF); 2 ♂♂, Peng-lai, Miaoli Prov., 18. VII. 1968, K. YAMAMOTO & S. HASHIMOTO (HF); 2 ♂♂, same locality, 20. VII. 1968, Y. YANOYARA leg. (HF); 1 ♂, same locality, 7. X. 1977, H. ENDO leg. (MH); 3 ♂♂ 6 ♀♀, Mt. Shih-tou-shan, Miaoli Prov., Taiwan, 5–8. VIII. 1983 (LT), I. KANAZAWA leg. (MH); 1 ♂ 1 ♀, Hokuto (NE), Formosa, 10. IX. 1929, K. SATO, "J. P. Duffels det., 1976: *Cryptotympana spec.*" (NMNH); 1 ♂, Paoshihli, Hsinpu (Hsinchu Prov.: labelled in Chinese letter), 3. VIII. 1973, K. KAWASAKI (NIAES); 4 ♂♂ 2 ♀♀, Kukuan, Taichung Prov., 15. VIII. 1974, Y. KISHIDA leg. (MH); 2 ♂♂, Puli, Nantou Prov., 22. VII. 1968, R. MOGI leg. (HF); 1 ♀, Pen-pu Chi, Nantou Prov., 24. VII. 1968, T. TAKAHARA leg. (HF); 2 ♂♂ 2 ♀♀, Chi-chi, 29. VI. 1973, M. HAYASHI leg. (MH); 2 ♂♂ 1 ♀, Nan-shan Chi, Nantou Prov., 28. VII. 1975, S. OKAJIMA leg. (MH); 3 ♂♂ 3 ♀♀, same locality, 1981 (MH); 1 ♂, Lushan Spa, Nantou Prov., 6. VIII. 1974, Y. KISHIDA leg. (MH); 2 ♂♂ 1 ♀, same locality, 26. VI. 1973, M. HAYASHI leg. (MH); 1 ♂, same locality, 16–17. VI. 1974, M. OWADA leg. (MH); 1 ♂, same locality, 15. VI. 1975, K. UEDA & K. SETOYA leg. (MH); 1 ♂, Chun Yan (Alt. 1200 m), near Lo Shan Spa, Nan Tow Hsien, M-Taiwan, 7. X. 1986, Col. K. BABA (MH); 1 ♂, Taihorin (=Talin, Chiai Prov.), Formosa, 7. VIII. 1911, H. SAUTER (IPK); 3 ♂♂ 3 ♀♀, Kuan-tzu Ling, Tainan Prov., 9–10. VIII. 1968, R. MOGI leg. (HF); 1 ♂ 1 ♀, Tainan, Formosa, M. MAKI (KUF); 1 ♂, Kosempo (Kaohsiung Prov.), Formosa, IX. 1909, H. SAUTER (IPK); 2 ♂♂, same locality and collector, X. 1909 (IPK); 4 ♂♂ 2 ♀♀, Liukuei, Kaohsiung Prov., Taiwan, W. L. CHEN (MH); 16 ♂♂ 9 ♀♀, same locality and collector, 25. VI/15. VII. 1974 (MH); 1 ♂, Fa Kuo Shan (Alt. 800 m), near Liu Kui, S-Taiwan, 8. IX. 1986, Col. K. BABA (MH); 1 ♂ 3 ♀♀, Tsai Tie Ku, near Liu Kui, S-Taiwan, 6. X. 1986, Col. K. BABA (MH); 2 ♀♀, Kuraru (Kaohsiung Prov.), Formosa, 11. VIII. 1934, L. GRESSITT Collection (LACM); 3 ♀♀, same data, 10–13. VIII. 1934 (LACM); 1 ♂, Kuraru, Takao-shô (=Kaohsiung

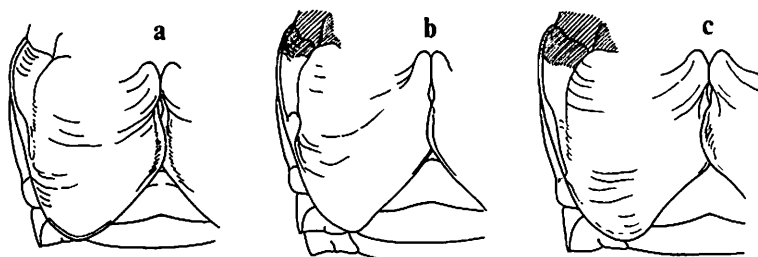
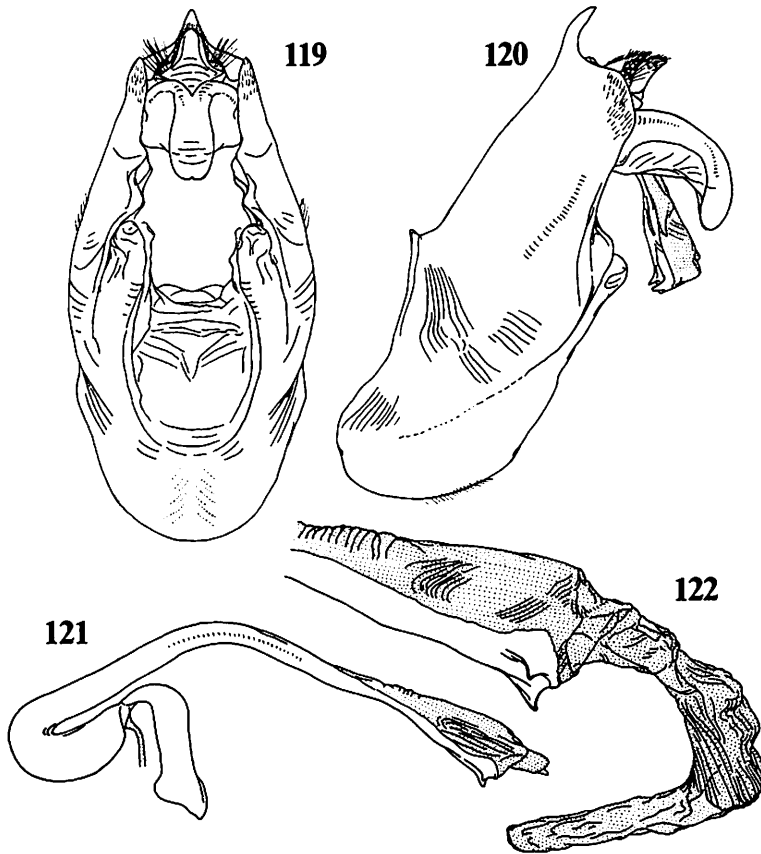


Fig. 118. Variation of ♂ operculum of *C. takasagona*. a-b, From Taiwan; c, from Fukien (China).

Prov.), Formosa, 30. VIII. 1921, Teiso ESAKI (KUF); 1 ♀, same locality and collector, 23. VIII. 1932 (KUF); 1 ♂ 1 ♀, same locality and collector, 26. VIII. 1932 (KUF); 1 ♀, Kankau (Koshun; Pingtung Prov.), Formosa, 7. VIII. 1912 (IPK); 1 ♂ 1 ♀, Kenting Park, Pingtung Prov., Taiwan, 16. VIII. 1968, R. MOGI leg. (HF); 11 ♂♂ 5 ♀♀, same locality, 8-10. VII. 1973, M. HAYASHI leg. (MH); 1 ♀, same locality, 4. VIII. 1972, M. NAGAHAMA leg. (MH); 2 ♂♂, same locality, 28-30. VI. 1974, M. OWADA leg. (MH); 1 ♂ same locality, 22. VI. 1975, K. UEDA & K. SETOYA leg. (MH); 3 ♀♀, same locality, 10. VIII. 1975, S. OKAJIMA leg. (MH); 1 ♂, O-luan Pi, Pingtung Prov., 8. VII. 1973, M. HAYASHI leg. (MH); 1 ♀, Taitung, 15. VIII. 1941, H. HASEGAWA (NIAES); 1 ♂ 1 ♀, Toran (near Taitung), Formosa, 16. VIII. 1941, H. HASAGAWA (NIAES); 3 ♀♀, Pi Shan Spa (Alt. 7-800 m), Tai Tung Hsien, S. E-Taiwan, 3. IX. 1986, Col. K. BABA (MH); 1 ♀, same locality and collector, 3. X. 1986 (MH); 6 ♂♂ 2 ♀♀, Chihpen, Taitung Prov., 29-30. VII. 1968, Y. YANOYARA leg. (HF); 3 ♂♂, same locality, 1. VIII. 1968, H. FUKUDA leg. (HF); 1 ♀, Chipon~Oiwake, Chipongoe (Taitô-chô), Formosa, 9. VIII. 1932, Teiso ESAKI (KUF); 1 ♂, Taitô~Rigyosan (Taitô-chô), Formosa, 5. VIII. 1932, Teiso ESAKI (KUF); 1 ♂, Suzuka~Shinpuro, Kanzangoe (Taitô-chô), Formosa, 10. VIII. 1932, Teiso ESAKI (KUF); 4 ♂♂ 1 ♀, Taihanroku (=Taipan, Taitung Prov.), 2-15. VII. 08 (1908), H. SAUTER, 158, "H. Sauter, Ins. Formosa, acq. 1908 n. 80", "P. C. M. de Greeve det., 1964: *Cryptotympana intermedia* Sign." (RML); 1 ♂, same locality and collector, VII. 1908 (IPK); 2 ♂♂, Batakan~Tabito, Taroko (Karenkô-chô), Formosa, 30. VII. 1932, Teiso ESAKI (KUF); 1 ♀, Juishui, Hualien Prov., Taiwan (MH); 1 ♀. Hung-yeh H. S., Hualien Prov., Taiwan, 12. VII. 1973, M. HAYASHI leg. (MH); 3 ♂♂ 1 ♀, Lu Tao Is., Taiwan (NSMT). ——— Other locality: 1 ♂ 1 ♀, Yubari, Hokkaido, Japon, 3. VI. 1934, M. SATO (ISNB). ——— Without locality: 1 ♀ (NSMT).

Very similar to *facialis* in general appearance and coloration, but differing in the following features:

White pollinose band on abdominal terga absent; ventral part of pronotal paranotum clothed with sparse white pollinosity; mid and hind coxae ochreous orange with a central streak black; ♂ operculum bright orange in colour, with the base black; venter of abdomen densely pilose and black without ochreous part except for lateral part of ♀ 2nd



Figs. 119–122. Male genitalia of *C. takasagona*. 119, 120: Pygofer in ventral (119) and lateral (120) views. — 121, 122: Theca (121) and its apex with vesica everted (122) in lateral view.

sternum sometimes ochreous orange; basal black part of forewing slightly beyond basal cell; infuscation on cross veins often absent; veins dark green basad. Head almost as wide as pronotum; eye comparatively large, more or less prominent laterally; lateral margin of pronotum nearly paralleled anteriad and slightly divergent posteriad; abdomen gradually tapering caudad with the basal margin of ♂ 2nd tergum narrowly and strongly expanded at the middle; ♂ operculum triangularly oblong, wider at the base, with the outer margin more oblique towards the apex; ♀ 9th tergum somewhat shorter, ca $1.1\times$ as long as wide; hindwing rather short, less than $1/2$ the length of forewing.

Male genitalia (Figs. 119–122). Similar to those of *facialis*; pygofer somewhat slender, narrowed apically, ca $1.96\times$ as long as wide, with the ventral margin centrally convex, bearing a pair of rather wide ventral lobes ventrally exposed in lateral view; uncus lobe gently curved, again widened towards the apex; theca long, similar in curvature to that of

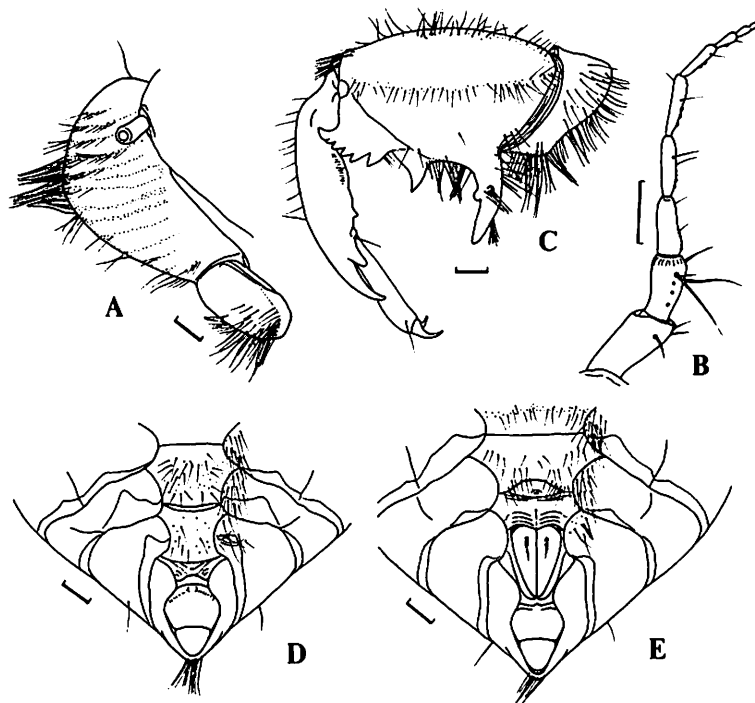


Fig. 123. Exuviae of *C. takasagona*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales, 1 mm.

facialis, with a pair of small projections (spines) on under surface at the apex as in *intermedia* (*vide infra*); vesica rather short, gently widened towards the apex, with a very long stick-like saccate process at the tip, which is longer than vesica itself and protrudes ventrally.

Body length: ♂ 37–47 mm (mean 43.1 mm), ♀ 38–44 mm (mean 40.5 mm).
 —Total length: 59–67 mm (mean 63.9 mm). —Expanse of forewings: 115–127 mm.

Exuviae (Fig. 123). Also similar to those of *facialis*; body dimly shining, totally ochreous tinged with brown; frontoclypeus long and conically swollen, with 13–14 transverse rows of hairs; clypeus very small, shorter than $1/2$ the length of frontoclypeus; antenna 8-segmented, about 10: 9: 9: 8: 8: 6.5: 3: 3 in the ratio of each segmental length, and the 8th segment constricted at the apical $3/7$; fore femur rather slender with 6-toothed anterior comb, a short and acute intermediate spike and a rather narrow posterior spike; abdomen conical and obtusely triangular with 9th segment very narrow; ♂ 10th segment wider, with the anterior angle moderately raised at the middle; rudiment of ovipositor short, ca $1.4\times$ as long as wide. Body length: 31.3–37.5 mm, head width: 11.2–12.5 mm. Exuviae examined: 1 ♂, Taipei, 15. VII. 1968, H. FUKUDA leg. (HF); 3 ♂♂, Tan-shui, Taipei Prov., 16. VII. 1973, M. HAYASHI leg. (MH); 2 ♂♂, Mt. Shih-tou-shan, 10. VI.

1975, K. UEDA & K. SETOYA leg. (MH); 1 ♀, Lien-hua-chih, Nantou Prov., 30. VI. 1973, M. HAYASHI leg. (MH); 1 ♀, Bikei (=Baikui; Meichi, Nantou Prov.), Taiwan, 26. VIII. 1972, H. MAKIHARA leg. (MH); 2 ♂♂, Lushan Spa, Nantou Prov., 26. VI. 1973, M. HAYASHI leg. (MH); 1 ♂, same locality, 13. VI. 1975, K. UEDA & K. SETOYA leg. (MH); 1 ♀, Liukuei, Kaohsiung Prov., Taiwan, 6. VII. 1973, M. HAYASHI leg. (MH); 1 ♀, same locality, 1986, M. ÔHARA (MH); 2 ♂♂ 1 ♀, Kenting Park, Pingtung Prov., 8–9. VII. 1973, M. HAYASHI leg. (MH); 1 ♂, same locality, 28–30. VI. 1974, M. OWADA leg. (MH); 1 ♀, Hung-yeh H. S., Hualien Prov., Taiwan, 12. VI. 1976, H. MAKIHARA leg. (MH). The exuviae of this species was formerly described on the shape of antenna and fore femur (KATO 1932).

Distribution. Taiwan (incl. Lu Tao Is.) and China (Fukien; new record).

This cicada also sings mostly in the morning, sitting on twigs of various trees. Cicadas often aggregate mainly on *Melia azedarach* L. (Meliaceae) and *Acacia confusa* MERR. (Leguminosae) in sucking sap, as is the case with *facialis* of Japan.

***Cryptotympana auripilosa* M. HAYASHI, sp. nov.**

(Figs. 83, 93, 106)

Holotype: ♀, Rangoon, Burma, ARCHBALD Coll., B. M. 1926–391 (BM).

Type depository: British Museum (Natural History), London.

Similar and probably allied to *facialis*; head, thorax and abdomen glossy black clothed with golden minute hairs, with a transverse linear spot on supra-antennal plate, a central narrow fascia on frontoclypeus and a central very small spot on pronotum ochreous.

Ventral part of body also glossy black with lateral margin of frontoclypeus, apical margin of mesepimeron, apical 1/2 of operculum, outer lateral 1/2 of 2nd–6th pleura, lateral and apical parts of 7th pleuron, and a large oblique inner lateral spot on 9th tergum ochreous tinged with orange; legs black with upper part of femur, basal part of mid tibia (black at the extreme base) and most part of hind tibia orange ochreous; thorax and an area around abdominal spiracle covered with white pollinosity; ventral part of pronotal paranotum also covered with white pollinosity; central part of abdomen without golden hairs.

Wings hyaline with basal 1/5 black; veins of forewing yellow green basally (generally basal from nodal line) and fuscous or black apically, while those of hindwing black with veins CuA, CuP and 1A (partly at the subapex) dark greenish ochreous; fuscous spots distinctly appearing on 1st and 2nd cross veins of forewing.

Head slightly narrower than pronotum; frontoclypeus not swollen anteriorly, narrower than 1/3 the width of head, with 7–8 transverse striations on the surface; basal ocelli much more apart from each other than from the anterior one; labium reaching middle of central metaprepisternal process; pronotum almost equal to mesonotum proper in median length; central part of cruciform elevation widely depressed; mesepimeron acute towards the apex; operculum nearly straight laterally and undulating caudally; caudal

margin of 7th sternum widely and deeply notched at the middle; 9th tergum conical, ca $1.1\times$ as long as wide in ventral view; ovipositor not beyond caudal beak of 9th tergum; wings rather slender, with the costal margin gently arched; hindwing longer than $1/2$ the length of forewing.

Body length (♀): 44 mm. —Expanse of forewings (♀): ca 134 mm.

Distribution. Burma.

The *intermedia* group

Cryptotympana intermedia (SIGNORET, 1849)

(Figs. 84, 94, 107–108, 124–128)

Cicada intermedia SIGNORET, 1849, *Rev. Mag. Zool.*, 1: 407.

Cryptotympana intermedia: STÅL, 1861, *Ann. Soc. ent. Fr.*, (4), 1: 613.

Fidicina immaculata: WALKER, 1850, *List Hom. Brit. Mus.*, 1: 90; WALKER, 1852, *ibid.*, *Suppl.*, 4: 1121 (nec OLIVIER, 1790).

Specimens examined. 1♀, Masuri, Brit. Mus. 1931–96 (BM); 4♂♂ 2♀♀, Tombol Bridge (350 m)–Darapani (1,000 m)–Sanguridara Pass (1,350 m)–Churibass (1,000 m)–Dharan (500 m), E. Nepal, 8. VIII. 1963, T. FUJIOKA leg. (TF); 1♂, Phasku Sunkosi, Nepal or., 4. VIII. 1971, S. TAKAGI (NSMT); 1♂, same data, Y. YAMAGATA leg. (MH); 1♂, Leoti (300 m), E. Nepal, 7. IX. 1974, T. AOKI & S. YAMAGUCHI leg. (TASY).

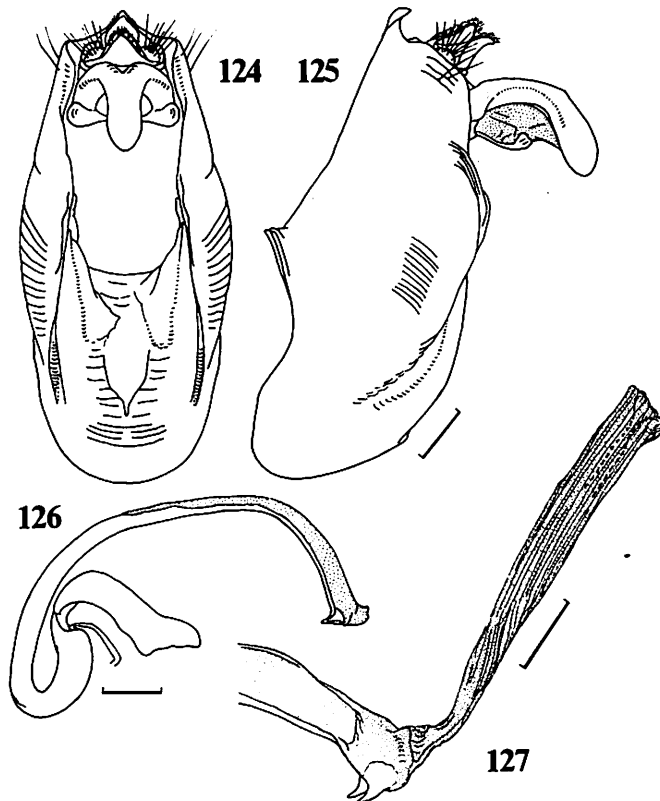
At a glance, similar in general appearance to *takasagona* of the *facialis* group. Body black with amber and golden pilosity, with a central longitudinal narrow fascia on tylus, a lateral spot on anterior margin of vertex; extreme basal margin of clypeus, and labrum dark ochreous; ventral part of head clothed with whitish golden hairs except for transverse striations on frontoclypeus.

Venter of body black with thick white pollinosity; thorax (including coxa) black clothed with thick white pollinosity; ♂ operculum orange in colour with the base black; legs fuscous or black with a longitudinal fascia on upper sides of mid and femora, hind tibia except for the distal tip and 3rd tarsal segment, ochreous; abdomen black with lateral part widely clothed with dense golden pilosity; lateral part of sternum and central part of pleuron (variable in size) covered with white pollinosity (not so dense).

Wings clearly hyaline, very slightly tinged with bronze, with basal cell, basal $1/3$ – $1/2$ of cell 1A of forewing, basal $1/6$ – $1/5$ of hindwing black; black part not extending beyond basal cell of forewing (very slightly beyond the cell by individuals); areas along cross veins R_3 – R_{4+5} and R_{4+5} – M_1 of forewing faintly infuscated; veins olivaceous green (in fresh specimens) basally and fuscous or dull ochreous apically in forewing, while fuscous with veins CuA, CuP and 1A ochreous in hindwing.

Head slightly narrower than pronotum; frontoclypeus more or less globose anteriorly with the tylus narrowly sulcate, almost as long as wide in frontal view, furnished with 7–

10 distinct transverse striations on the surface; labium relatively long, reaching nearly tip of central metaprepisternal process; pronotum slightly longer than mesonotum proper, with relatively wide outer area and the lateral margin hardly sinuate; abdomen longer than distance from head to cruciform elevation in ♂♂, while as long as or slightly shorter than that in ♀♀; lateral dilatation of mesepimeron short with truncate apex; ♂ operculum triangularly oblong, subacute apically, with the outer margin oblique and the inner margin nearly straight or emarginate, overlapping the opposite at the base; caudal margin of 7th sternum widely rounded or truncate (slightly emarginate at the middle) in ♂♂, while widely truncate and triangularly incised at the middle in ♀♀; ♀ 9th tergum long and conical, ca $1.2\times$ as long as wide; ovipositor hardly protruding beyond 9th tergum; wings slender and elongated, and node on forewing situated basal of the middle; cells 1st R_3 , 1st R_5 , 1st M_2 , 1st M_4 and CuA_1 of forewing elongated in particular; vein CuP of forewing separated from vein 1A in about basal $1/2$; hindwing about $1/2$ the length of forewing.



Figs. 124–127. Male genitalia of *C. intermedia*. 124, 125: Pygofer in ventral (124) and lateral (125) views. — 126, 127: Theca (126) and its apex with vesica everted (127) in lateral view. Scales; 1 mm (124–126), 0.5 mm (127).

Male genitalia (Figs. 124–127). Similar to those of *takasagona* at a glance; pygofer barrel-shaped, ca $1.9\times$ as long as wide, not so narrowed even at the apical and basal parts, with the ventral margin expanded near the middle; a pair of pygofoval ventral lobes thin, widely apart from each other; uncus lobe gently curved, nearly straight and dorsoventrally thickened in the apical part; innermost base of membranous lining under uncus lobe centrally sclerotized, forming a central inner support of the lobe; theca very thin, curved at the apical $1/4$, with rather large basal plates, and with a pair of small spines on underside of the apex; apical membranous part of theca suffused to middle of the upper surface; vesica very long, cylindrical, somewhat compressed near the base, protruding upwards and almost perpendicular to thecal apex, without saccate process at the tip (cf. HAYASHI 1978).

Body length: ♂ 42–46 mm, ♀ 36–42 mm. —Total length: 59–68 mm. —Expanse of forewings: 117–129 mm.

Exuviae (Fig. 128). I formerly described the exuviae of this species on the basis of the same material (HAYASHI 1978); here, some additional descriptions are given. Frontoclypeus roundly swollen, with 11 transverse rows of hairs; antenna 8-segmented, about 10: 7.5: 7.5: 7.5: 8: 6: 3: 3 in the ratio of each segmental length, according to the present measurement, and the 8th segment constricted at the apical $3/5$; fore femoral anterior comb composed of 5–6 teeth; caudal margin of ♂ 9th abdominal sternum bigibbous; anterior angle of 10th segment conically raised at the middle. Body length: 33.4–34.2 mm, head width: 12.0–12.3 mm. Exuviae examined: 2 ♂♂, Tombol Bridge~Darapani~

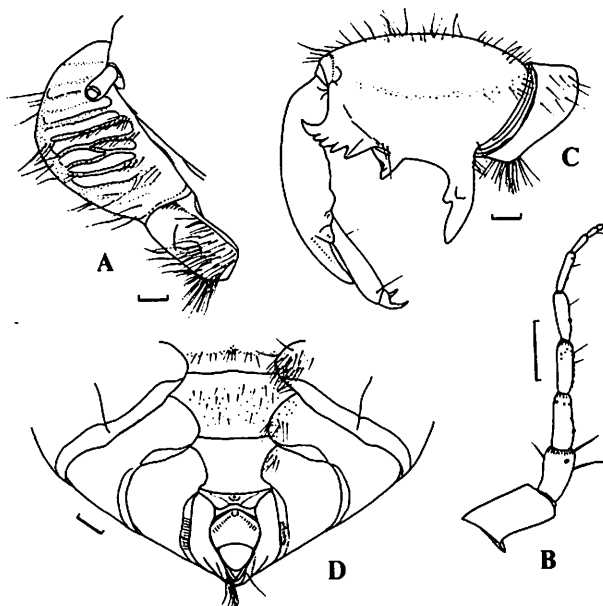


Fig. 128. Exuviae of *C. intermedia*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D, apical part of abdominal venter (♂). Scales, 1 mm.

Sanguridara Pass~Churibass~Dharan, E. Nepal, 8. VIII. 1963, T. FUJIOKA leg. (TF).

Distribution. India (Assam, Bengal, etc.) and Nepal.

The *corvus* group

From such morphological characters as ♂ genitalia, ♂ operculum, etc., the *corvus* group can be divided into 2 subgroups.

1) The *vesta* subgroup. This subgroup is represented by a single species, *vesta*. Male operculum elliptical; uncus lobe of ♂ genitalia wide and relatively flat with truncate apex; a pair of the thecal apical projections obtuse, situated on the lateral surface; basal plates of theca oval and simple in shape; vesica evenly flattened dorsoventrally. Distinct markings appear on thoracic nota.

2) The *corvus* subgroup. Male operculum generally triangular and/or somewhat angulate; pygofer of the ♂ genitalia large in size even in the small-sized species; uncus lobe stick-like, not flattened; theca gently curved, with the apical projections rather distinct, interspecifically variable in shape; vesica gradually narrowed towards the apex. Thoracic nota almost always uniformly black, without distinct markings. This subgroup comprises remaining 5 species.

The *vesta* subgroup

Cryptotympana vesta (Distant, 1904)

(Figs. 129, 131–140)

Cicada vesta DISTANT, 1904, *Trans. R. ent. Soc. Lond.*, 1904: 673.

Cryptotympana vesta: DISTANT, 1906, *Fn. Brit. Ind., Rhych.*, 3: 85.

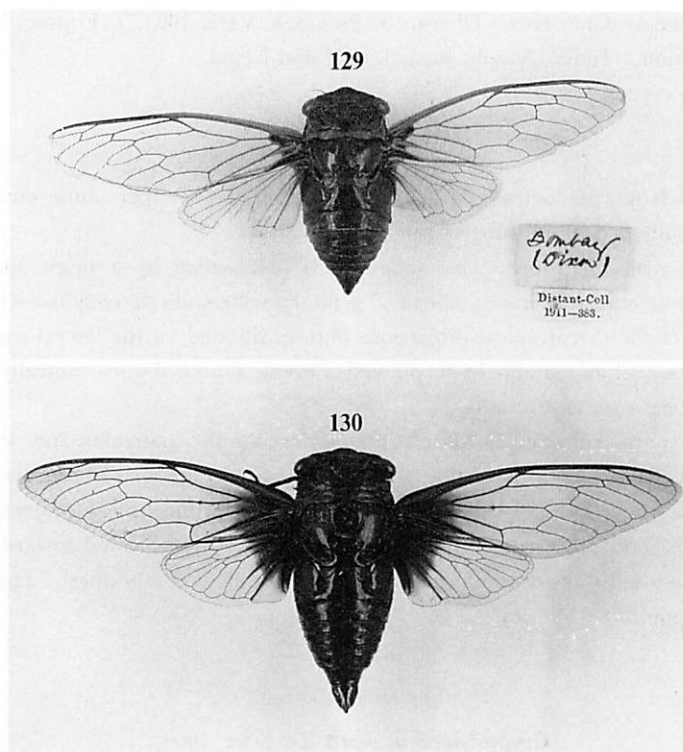
LECTOTYPE: ♂, Type (in a red circle), Bombay, DIXON, DISTANT-Coll. 1911–383, DISTANT det. (handwriting) "*Cicada vesta* Dist." (BM).

PARALECTOTYPES: 1 ♂ 2 ♀♀, sama data as lectotype, DISTANT-Coll. 1911–383. (BM).

Other specimen examined: 1 ♂, Assam, "CROWLEY. bequet; 1901–78" (BM).

Small species. Head and thorax black with a pair of transverse linear spots on anterior margin of head, a small spot on outer part of basal ocellus, a central longitudinal narrow fascia and transverse carinae on frontoclypeus, labrum, a central longitudinal fascia on pronotum, pronotal outer area, a W-shaped spot on mesonotum, continuing to basal arm of cruciform elevation, a central posterior spot on mesonotum, a fascia on lateral surface of mesonotum, narrowed near the middle, and cruciform elevation, ochreous, and with pronotal inner area castaneous; abdomen black with lateral part of timbal covering faintly ochreous and with extreme lateral margins of 3rd–7th terga brightly orange in ♂♂, while orange ochreous in ♀♀.

Venter of thorax covered with dense greyish pilosity, that of abdomen lacking it;

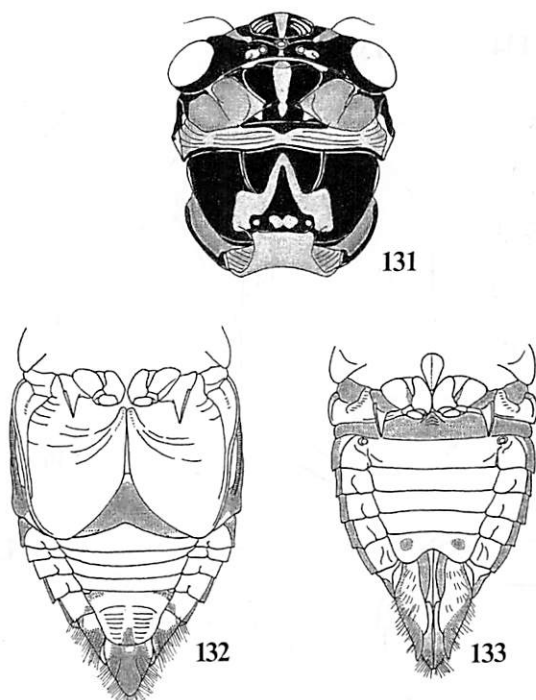


Figs. 129-130. 129: *Cryptotympana vesta* (Distant), paralectotype ♂ (BM). — 130: *C. corvus* (Walker) from Darjeeling (BM).

thorax pale ochreous; operculum brightly orange in ♂♂ and ochreous in ♀♀; abdomen almost entirely bright orange (ochreous in ♀♀) with 2nd sternum and pleuron, a central linear spot on caudal part of ♂ 7th sternum, a pair of spots on ♀ 7th sternum, caudal part of ♂ 8th pleuron, ♂ 8th sternum except for the lateral base, lateral and apical parts of ♀ 9th tergum, and valvifer 2 black or fuscous; legs ochreous with orange tinge, with underside of fore femur, almost entire part of fore tarsus and apical end of mid tibia black.

Wings hyaline with basal cell and basal 1/3 of cell 1A black and the black part never beyond the basal cell in forewing; areas along cross veins R_3-R_{4+5} and $R_{4+5}-M_1$ of forewing very faintly infuscated.

Head about as wide as pronotum; frontoclypeus moderately swollen, $0.83-0.97\times$ as long as wide in frontal view; bearing 7-8 transverse striations; labium reaching middle of central metaprepisternal process; mesonotum proper slightly longer than pronotum in median length; abdomen obconical; ♂ 2nd tergum parallel-sided; lateral dilatation of mesepimeron small and rather rounded; ♂ opercula oval, longer than wide, and not beyond 2nd abdominal segment, with the inner margins not overlapping but contiguous to each other; median length from ♂ 3rd to 7th sterna almost as long as 1/2 of abdomen;



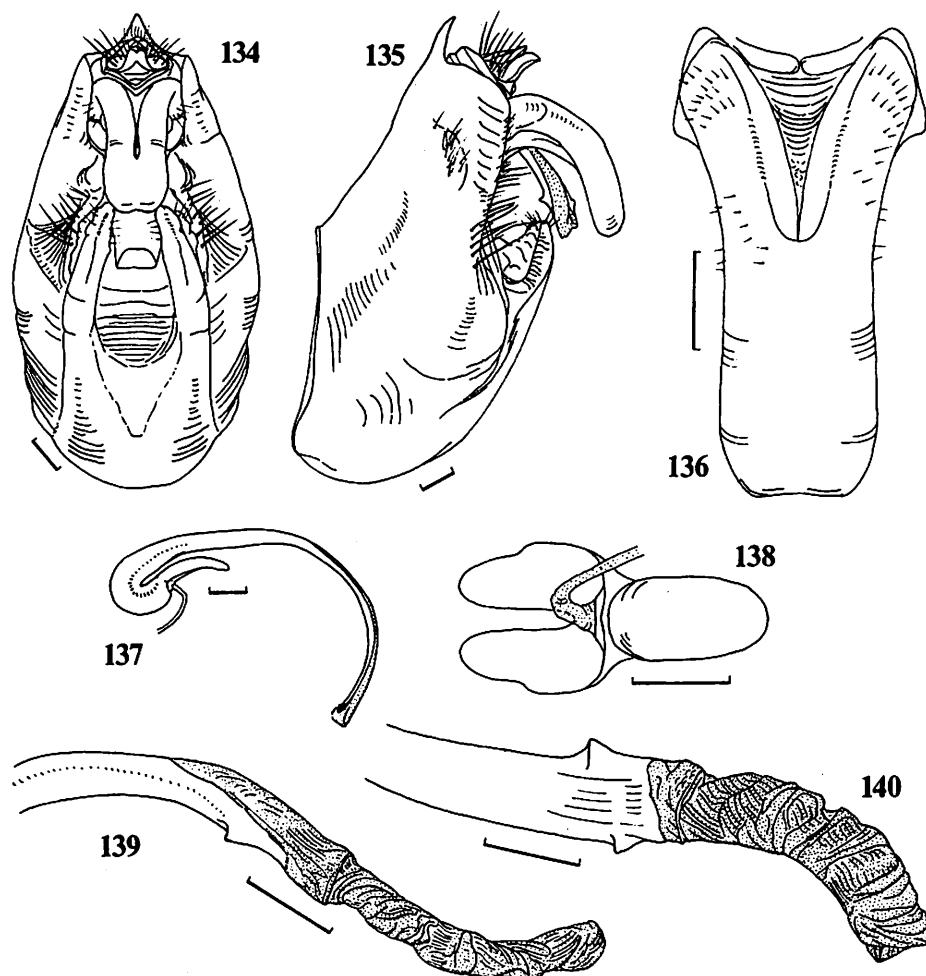
Figs. 131–133. *Cryptotympana vesta* (the *vesta* subgroup of the *corvus* group). 131: Head and thoracic nota. — 132, 133: Venter of abdomen.

caudal margin of 7th sternum widely rounded in ♂♂, and widely and gently emarginate in ♀♀; ♀ 9th tergum rather slender, $1.25\times$ as long as wide; precostal membrane of forewing very narrow; vein CuP of forewing slightly separated from vein 1A in basal $1/3$.

Male genitalia (Figs. 134–140). Pygofer barrel-shaped, widened before the middle, $1.6\text{--}1.8\times$ as long as wide, with apical part of the ventral margin slightly rolled inwards; ventral lobes of pygofer distinct, more or less protruding ventrally; uncus lobe relatively long, more or less flattened dorsoventrally, curved in basal $1/2$ and straight in the apical part, with rather truncate apex; theca long and somewhat flattened dorsoventrally, widened basad and much narrowed apicad, with a pair of apical projections, situated on the lateral surface and hooked backwards; basal plates short, flat and oval in shape; vesica everted long and slightly bent upwards apically, without saccate process.

Body length: ♂ 27–31 mm, ♀ 23 mm. —Expanse of forewings: 72–86 mm.

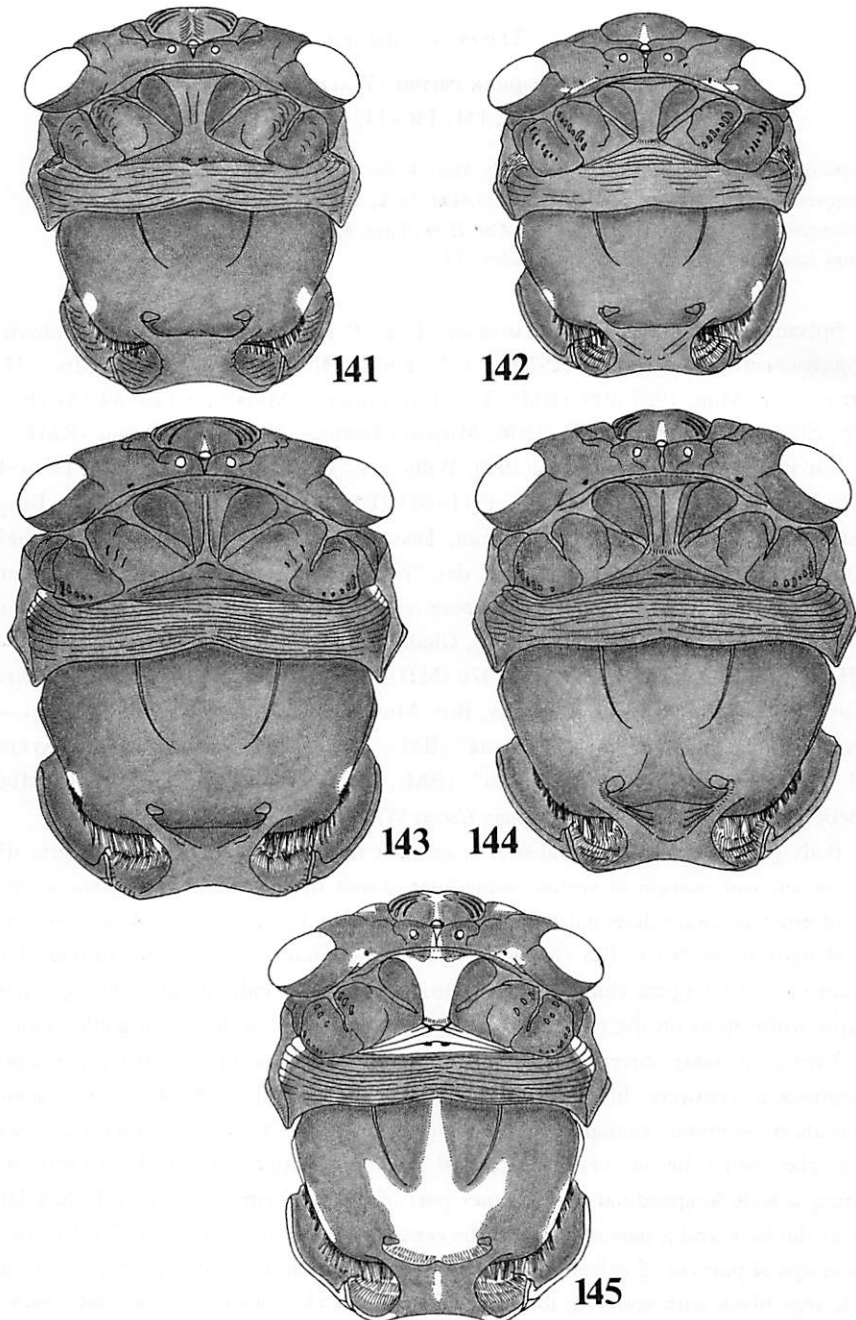
In comparison with the specimens from Bombay, W India, the 1 ♂ from Assam (BM) shows some differences as follows: head wider, not swollen anteriorly; pronotum nearly parallel-sided; pygofer not narrowed basally, etc. In the extent of the present knowledge, however, this individual is considered to represent a geographic variation within *vesta*; detailed study on their relationships has to be reserved until a longer series of the material is available.



Figs. 134–140. Male genitalia of *C. vesta*. 134, 135: Pygofer in ventral (134) and lateral (135) views. — 136: Uncus lobe in full caudal view. — 137: Theca in lateral view. — 138: Base of theca in ventral view, showing basal plates. — 139, 140: Apical part of theca with vesica everted in lateral (139) and ventral (140) views. Scales; 0.5 mm (134–138), 0.2 mm (139–140).

Distribution. India (Bombay and Assam) and Thailand (?).

DISTANT (1906b) added "Siam" to the distributional range of this species. Although I was unable to examine any specimens from Thailand in the course of this study, it is most probable that "*vesta*" from this area can be identified with *gracilis* M. HAYASHI of the *recta* group (cf. Part I of this paper), because of the similarity in facies between the two.



Figs. 141–145. Head and thoracic nota of the *corvus* group (the *corvus* subgroup). 141, *C. corvus*; 142, *mandarina* (from Hong Kong); 143, *holsti*; 144, *kotoshoensis*; 145, *yaeyamana* (from Ishigaki Is., Ryukyus).

The *corvus* subgroup***Cryptotympana corvus* (WALKER, 1850)**

(Figs. 130, 141, 146–147, 150–154)

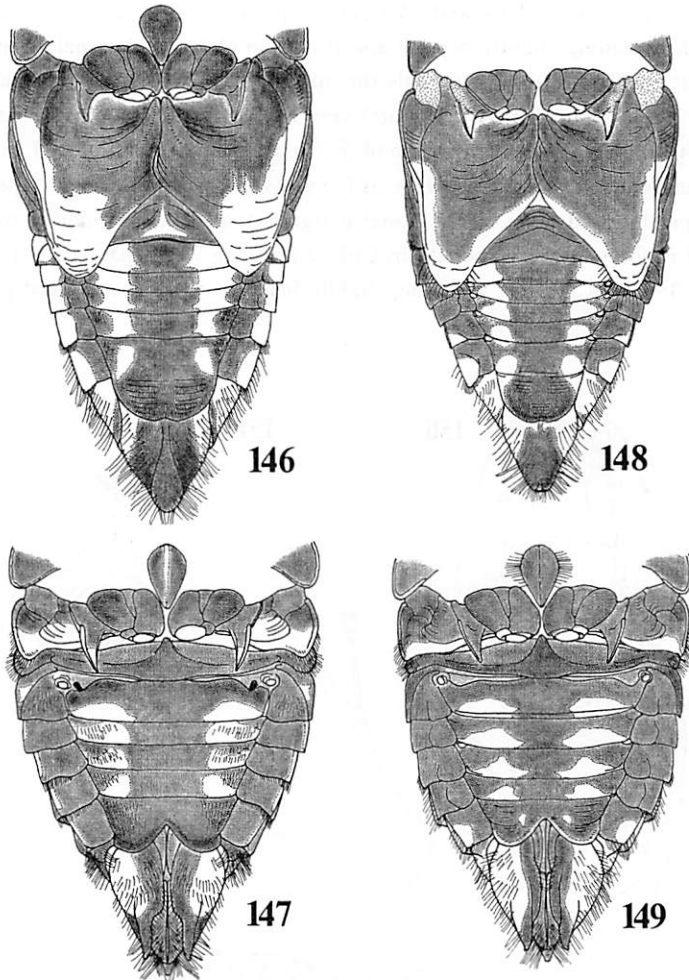
Fidicina corvus WALKER, 1850, *List Hom. Brit. Mus.*, 1: 86.*Cryptotympana corvus*: STÅL, 1862, *Öfv. K. Vet.-Akad. Förh.*, 19: 483.*Cryptotympana corva*: METCALF, 1963, *Gen. Cat. Hom.*, Fasc. 8, 1: 346.*Fidicina invariants* WALKER, 1858, *Ins. saunders.*: 11.

Specimens examined. 1 ♂, Kurseong, Inde, P. KREAT, DISTANT det. (handwriting) "*Cryptotympana corvus* Walk." (ISNB); 1 ♂, Khasi Hills, Assam, 1907, India.—H. M. PARISH, *Brit. Mus.* 1923–247 (BM); 1 ♀, Indes orient., MNISZECH 110–59 (MNP); 1 ♂ 3 ♀♀, Shillong, Assam, 12. III. 1936, Museum Leiden—Morendro Doonai (RML); 1 ♀ (w/ exuviae), Ledo, Assam, VIII. 1945, William L. JELLISON (NMNH); 1 ♂, Darjeeling, VIII. 1886, H. L. A., DISTANT-Coll. 1911–383 (BM); 1 ♂ 1 ♀, Dam Dim (N. Bengal), ATKINSON coll. 92–6 (BM); 1 ♀, Sikkim, DISTANT-Coll. 1911–383 (BM); 1 ♀, Sikkim, STAUDINGER v., Coll. A. JACOBI 1911–5, det. "*corvus* (Wlk.)" (SMTD); 3 ♂♂ 1 ♀, Bhutan, From Coll. U. S. N. M., det. "*Cryptotympana corvus* Walk." (NMNH); 2 ♂♂ 1 ♀, Bhutan, 97–78. (BM); 1 ♀, Arun River (1,300 m), Chainpur, Nepal, 26. VII. 1978, T. HARUTA leg. (MH); 2 ♂♂, same locality, 29. VII. 1978 (MH); 1 ♂, Borneo, "Vyane vend.: *Cryptotympana corvus*" (ISNB); 1 ♂, without locality, *Brit. Mus.* 1962–168, det. "*Cryptotympana* sp.—not *corvus*; opercula differ in shape & colour" (BM); 1 ♂, without locality, 4442/4, ATKINSON Coll. 92–6, det. "*Cryptotympana bubo*" (BM); 1 ♀, without locality (W. H. MUCHE, Radeberg, Ankauf), det. "*Cryptotympana Corvus* Wlk." (SMTD).

Body jet black with a central spot at anterior tip of frontoclypeus, a transverse discal spot on anterior margin of vertex (sometimes absent by individuals), a fascia at central part of inner pronotal diagonal carina, 2 small spots on lateral surface of mesonotum and lateral margins of 3rd to 8th (to 9th in ♀♀) abdominal terga ochreous orange; lateral margin of ♂ 1st tergum clothed with white pollinosity by individuals, forming a pair of oblique white spots on the tergum; lateral part of abdomen clothed with golden hairs.

Venter of body covered with golden pilosity; thorax black with outer part of mesepimeron (entirely black by individuals) and apical part of ♀ metepimeron (operculum) ochreous orange; ♂ operculum orange with basal and inner parts widely black; abdomen ochreous orange with 2nd sternum, central parts of 3rd to 6th sterna, forming a wide longitudinal fascia, inner part of pleuron, 7th sternum, including lateral spot at the base and a pair of spots on the central part (by individuals in ♀♀), central as well as apical parts of ♂ 8th sternum, and inner margin and apical part of ♀ 9th tergum, black; legs black with spots on fore and mid femora, almost all parts of hind femur and tibia except for the ends and basal 2/3 of 3rd hind tarsal segment ochreous orange.

Wings hyaline, slightly smoky, and immaculate on cross veins of forewing; basal black part of forewing extending slightly beyond basal cell (tending to be developed up to

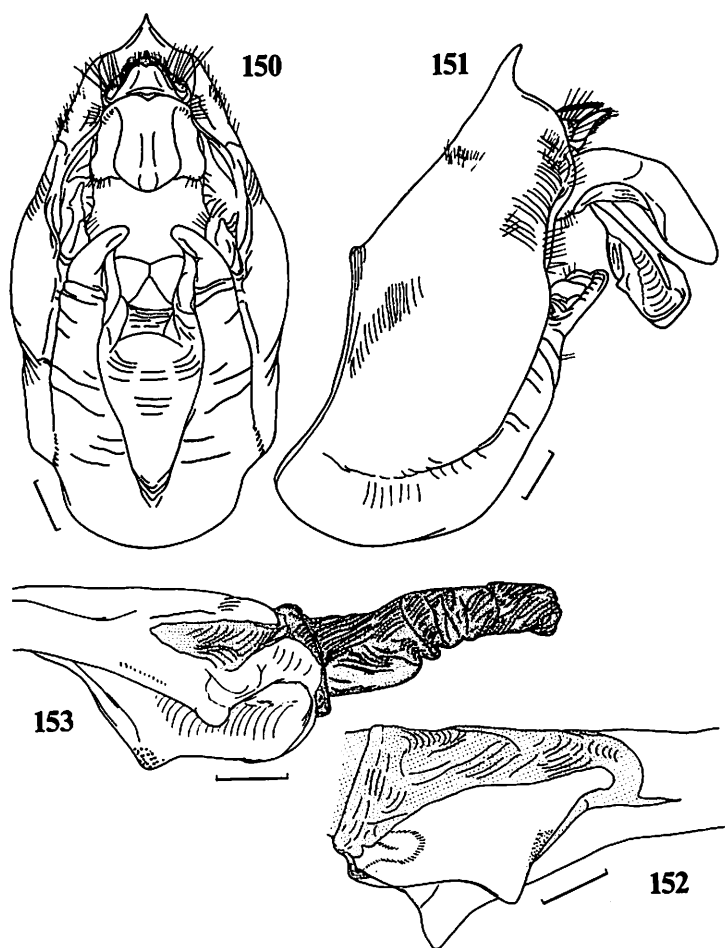


Figs. 146-149. Venter of abdomen. 146-147, *C. corvus*; 148-149, *mandarina* (from Hong Kong).

basal 1/2 of cell Cu and basal 2/3 of cell 1A in ♂♂); veins olivaceous green basally and fuscous or black apically in forewing, while mostly fuscous in hindwing.

Head about as wide as pronotum, more or less swollen anteriorly; frontoclypeus roundly swollen, 0.9-1.0× as long as wide in frontal view, bearing 8-9 transverse striations; labium extending slightly beyond middle of central metaprepisternal process; mesonotum proper about as long as pronotum in median length; abdomen longer than distance between head and cruciform elevation in ♂♂ and distinctly shorter in ♀♀; lateral dilatation of mesepimeron widely rounded apicad; ♂ operculum of an elongated triangle in shape, with the outer margin oblique and slightly sinuate, the inner margin

slightly overlapping at the base and emarginate apicad, and the apex subacute, more or less rounded, extending slightly beyond apical margin of 3rd abdominal sternum; ♂ 7th sternum wide, not so narrowed towards the apical part, with the caudal margin widely rounded; ♂ 8th sternum (subgenital plate) very wide, with the caudal margin somewhat emarginate at the middle; caudal margin of ♀ 7th sternum acutely notched at the middle; ♀ 9th tergum wide and short, ca $0.95\times$ as long as wide, with rather wide apex; forewing elongated apically, and node on the costal margin situated before middle; stalk of veins 1M and 2M in forewing very short; vein CuP of forewing well separated from vein 1A in about basal $3/4$; vein R_{4+5} of hindwing slightly bent upwards in the basal part from 1st cross vein.



Figs. 150–153. Male genitalia of *C. cornus*. 150, 151: Pygofer in ventral (150) and lateral (151) views. — 152, 153: Apical part of theca with vesica everted in lateral view (152, right side view). Scales; 1 mm (150–151), 0.5 mm (152–153).

Male genitalia (Figs. 150–153). Pygofer unusually large, 6–7 mm in length, widened in basal 1/2, ca $1.8\times$ as long as wide, with a pair of distinct ventral lobes inwardly curved towards the apical parts, and with a short caudal beak; uncus lobe wide, rotundate apically, curved inwards near the middle, and the apical part nearly straight; theca long, much widened and thickened apically, with 2 (a pair of) wide triangular dilatations (as obtuse processes) towards the apex; vesica rather short and narrower than thecal apex, without saccate process.

Body length: ♂ 43–47 mm, ♀ 36–40 mm. —Total length: 59–67 mm. —
Expanse of forewings: 108–128 mm.

Exuviae (Fig. 154). ♀. Body dark castaneous, with lateral dilatation of pronotum, wing-pad, anterior 1/2 of abdominal tergum, legs and abdominal sternum, more infuscated; frontoclypeus roundly swollen, with 8 transverse rows of hairs; antenna examined on basal 4 segments, about 10: 6.5: 6: 7.5 in the ratio of each segmental length; fore femur very wide, with 7-toothed anterior comb, and short intermediate and posterior spikes; rudiment of ovipositor rather oblong, ca $1.4\times$ as long as wide; anterior angle of 10th segment slightly concave. Body length: 32.7 mm, head width: 11.2 mm. Exuviae examined: 1 ♀, Ledo, Assam, VIII. 1945, William L. JELLISON (NMNH).

Distribution. Bangladesh (Sylhet), N India (Uttar Pradesh, Assam, Darjeeling and Sikkim), Bhutan and Nepal.

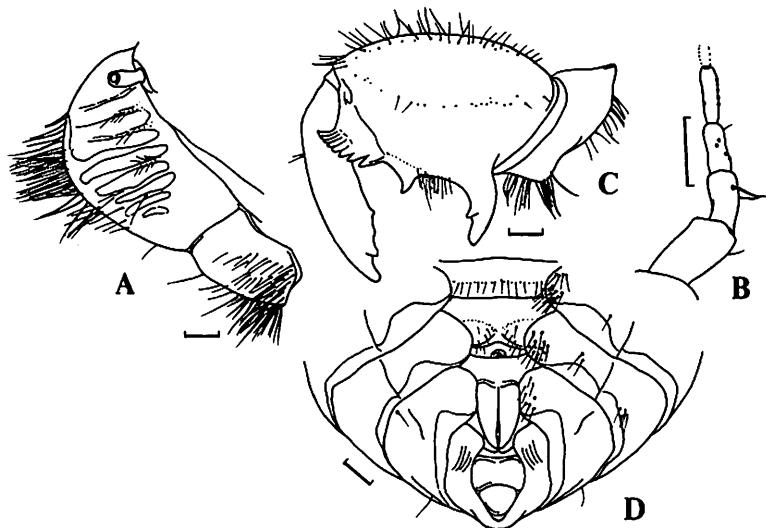


Fig. 154. Exuviae of *C. corvus*. A, Frontoclypeus and clypeus in lateral view; B, right antenna (basal 4 segments); C, left fore leg (w/o tarsus); D, apical part of abdominal venter (♀). Scales, 1 mm.

Cryptotympana mandarina DISTANT, 1891

(Figs. 142, 148–149, 155–160)

Fidicina operculata: WALKER, 1850, *List Hom. Brit. Mus.*, 1: 90; DOHRN, 1859, *Cat. Hem., Hom.*: 73; STÅL, 1862, *Öfv. K. Vet.-Akad. Förh.*, 19: 481 (nom. nud.).

Cryptotympana mandarina DISTANT, 1891, *Monogr. Orient. Cicad.*, p. 86.

Cryptotympana corvus: JACOBI, 1905, *Zool. Jahrb. Syst. Ökol. Geog. Biol. Tiere*, 21: 431 (nec WALKER, 1850).

Cryptotympana mimica DISTANT, 1917, *Ann. Mag. nat. Hist.*, (8), 20: 319. (syn. nov.)

Specimens examined. CHINA: 1 ♂, Chine (ISNB); 1 ♀, Chine, de Looz (ISNB); 1 ♂, Chine, Coll. CAMILLE, Van Voixem. (ISNB); 1 ♀, same data (MNP); 1 ♂, China, STÅL (NRS); 1 ♂, China, Schon'herr...(?), "*Bubo* Walk. 7—*operculata* 19" (NRS); 1 ♂, Canton, China, ROSS DEDIC (IPK); 1 ♀, Ginfū-Shan, Kreis Nandjüan, 22. VII., "Sz'Tschwan: FRIEDRICH 1929–31", "Jacobi det.: *sinensis* Dist." (IPK); 2 ♂♂, Chengtu (1700 ft), Szechwan, China, 1933, D. C. GRAHAM (11–3–5–217) (NMNH); 1 ♀, Szechwan (6,300–7,000 ft), China, VIII. 1938, D. C. GRAHAM (NMNH); 1 ♀, Tseo-jia-Geo (3,000 ft), Szechuen, China, VII. 1934, D. C. GRAHAM (NMNH); 1 ♂, Suifu, Szechuen, China, 1920, D. C. GRAHAM (NMNH); 4 ♂♂ 6 ♀♀, Kangting, Szechwan, China, VIII. 1980, KMNH IR 100,272–281 (KMNH); 1 ♂ 1 ♀, same data (MH); 1 ♀, Chao Tung, Yunnan, Ch(ina), VII–VIII. 1934, D. C. GRAHAM (NMNH); 1 ♂, Hainan Island, DISTANT-Coll. 1911–383 (BM); 6 ♂♂ 6 ♀♀, same locality (MH). — HONG KONG: 1 ♂, Hong Kong (48. 60), "7. *Fidicina bubo*" (BM); 1 ♀, Hong Kong, 1918?, BAKER (BM); 1 ♂ 2 ♀♀, Hongkong, WIELER ded. 13. VII. 1888, aus Alkohol (noch darin vorhanden.) (ZMH); 3 ♂♂, Hong Kong, WIELER ded. 1888 (ZMH); 1 ♂ 1 ♀, Hong Kong, BAKER (NMNH); 1 ♂, Hong Kong, 9049, "W. T. D(avis) det.: *Cryptotympana mimica* Dist." (NMNH); 3 ♂♂ 7 ♀♀, Sheung-shui, Hong Kong, 19. VI. 1973, M. HAYASHI leg. (MH). — INDO-CHINA: 1 ♂ (type of *mimica*), Tonkin, Indo-China, R. V. de SALVAZA, 1917–98, DISTANT det. (handwriting) "*Cryptotympana mimica* Dist." (BM); 1 ♂, Tonkin, VI. 1917, R. V. de SALVAZA (BM); 1 ♂, Ten Bai, Tonkin (ISNB); 1 ♂, Prov. de Lang-Son, Tonkin, Guyon de PONTOURAUDE 322–91 (MNP); 1 ♀, Env. de Tuyen-Quan, Tonkin centr., printemps de 1901, A. WEISS (MNP); 1 ♂, Chapa, Tonkin, LE MOULT vend. via REINBECK, Eing. Nr. 1, 1957, det. "*Cryptotympana corvus* Walk." (ZMH); 1 ♂ 2 ♀♀, Tonkin (ISNB); 1 ♂, Cua Tung, Annam, "P. C. M. de Greeve det., 1964: *Cryptotympana corvus* Walk." (RML); 1 ♂, same locality, 1950, Ch. et J. PRIMOT (MNP); 2 ♀♀, Caleu, Annam (chaîne-annamitique), 1921, M. MAUNIER (MNP); 1 ♀, Ban Van Eue, Vientiane Prov., Laos, 31. VIII. 1965, native collector (BISH); 1 ♀, Tonpheng, Laos, 30. VII. 1966, native collector (BISH); 1 ♀, same locality, 30. X. 1966, J. A. RONDON (BISH); 1 ♀, Khao Yai (ca. 800 m), Nakhon Nayok, Thailand, 16. VI. 1983, KUROKO, MORIUTI, ARITA & YOSHIYASU, "Lepidopt. Exped. to Thai 1983; Coll. Ent. Lab., Univ. Osaka Pref." (UOP); 1 ♂ (w/ exuviae), same locality and collector, 19. VI. 1983 (UOP); 1 ♀, same locality and

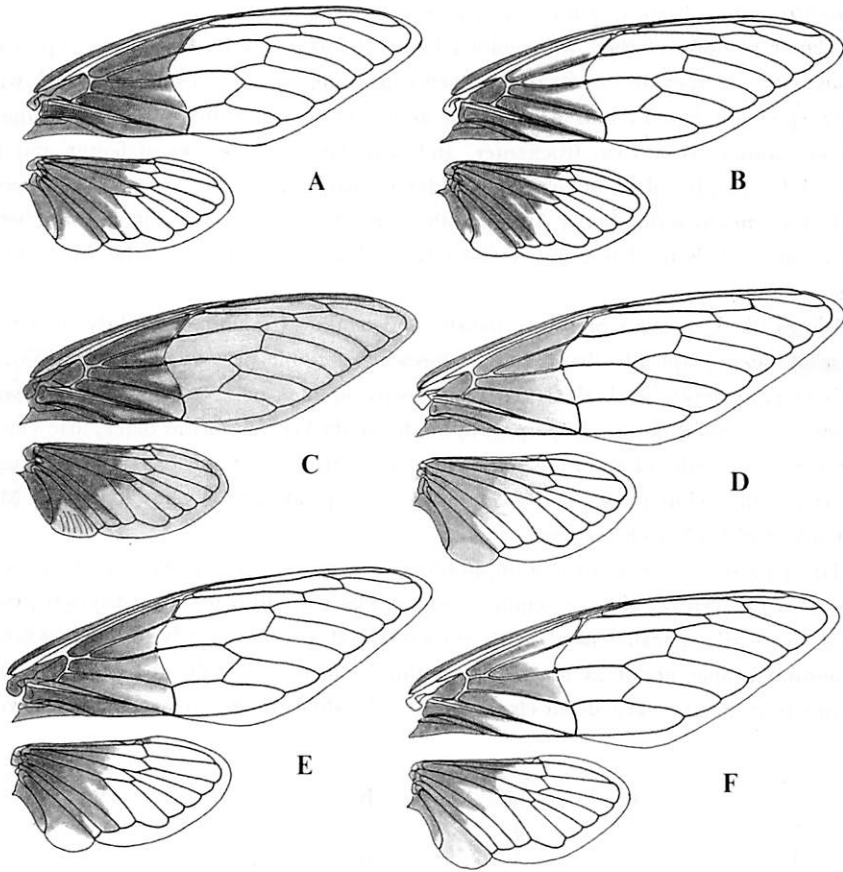


Fig. 155. Variation of wing colour-pattern of *C. mandarina*. A-C, From China; D, from Tonkin; E-F, from Cochin China.

collector, 21. VI. 1983 (UOP); 1 ♂, Kampot, Cambodge (ISNB); 1 ♂, Chapa, Cochin China, X. 1935, S. MASSEYEFF (BM); 1 ♀, Tenasserim, 95-188 (BM). ——— Other localities: 1 ♂ 1 ♀, Lilong (?), Coll. BREDDIN (IPK); 1 ♂, Hill Lands, Sungart Kai (?), Japan, From U. S. N. M. (NMNH). ——— Without locality: 1 ♀, "*Atrata* Fab., *Nigra* Oliv.; Stoll, N° 8", coll. NOUALHIER (MNP); 1 ♂, Mus. Payk, det. "*vicina* Sign." (NRS); 1 ♂, LE MOULT vend. via REINBECK, Eing Nr. 1, 1957 (ZMH); 1 ♀, U. S. N. M. No... (NMNH); 1 ♀, From U. S. N. M. (NMNH); 1 ♂ 1 ♀, 99. 143 (BM); 1 ♂, det. "*C. pustulata* ♂" (BM).

Similar to *corvus*; body glossy black, often brownish; head and thorax black with a spot on anterior margin of vertex, a spot on supra-antennal plate, a rounded spot on anterior tip of frontoclypeus, a few spots on diagonal grooves of pronotal inner area, a spot near posterolateral corner of pronotal collar and 2 lateral spots on mesonotum, dark ochreous or orange ochreous; abdomen black with golden pilosity laterally; lateral margin

of 6th–9th terga ochreous, reddish orange or dark testaceous.

Venter of body clothed with golden hairs; thorax black or fuscous; ♂ operculum fuscous with the apex and outer margin ochreous orange; fore and mid legs black with 2 oblong spots on femora and basal band across mid tibia ochreous orange; hind leg ochreous orange with coxa, trochanter, and both bases and apices of femur and tibia black; abdomen also black or fuscous with lateral parts of 3rd–6th sterna, lateral base of ♂ 7th sternum (by individuals), 7th and 8th pleura, lateral part of ♂ 8th sternum widely, often fused towards the base, and ♀ 9th tergum, hemmed by black at the inner margin, ochreous orange.

Wings black, fuscous or tawny basally and hyaline (sometimes slightly tinged with bronze or tawny) apically; basal part of forewing variable in coloration (Fig. 155), i.e., mostly black (rarely), black along veins and tawny on inner parts of cells, mostly tawny or ochreous, etc.; coloration on basal part of hindwing darker, fuscous to black, also variable as in forewing; veins of forewing dark ochreous with green tinge basally and black or fuscous apically, while those of hindwing black with apical parts of veins R_{4+5} , M_1 , M_{2+3} , M_4 , CuA_1 and CuA_2 dull ochreous.

Head about as wide as pronotum; frontoclypeus more or less depressed, about as long as wide in full ventral view, extending near middle of central metaprepisternal process; pronotum nearly parallel-sided with posterolateral corner acutely dilated posteriad; mesonotum proper about as long as pronotum in median length; abdomen as long as distance from head to cruciform elevation in ♂♂, while shorter in ♀♀; timbal covering

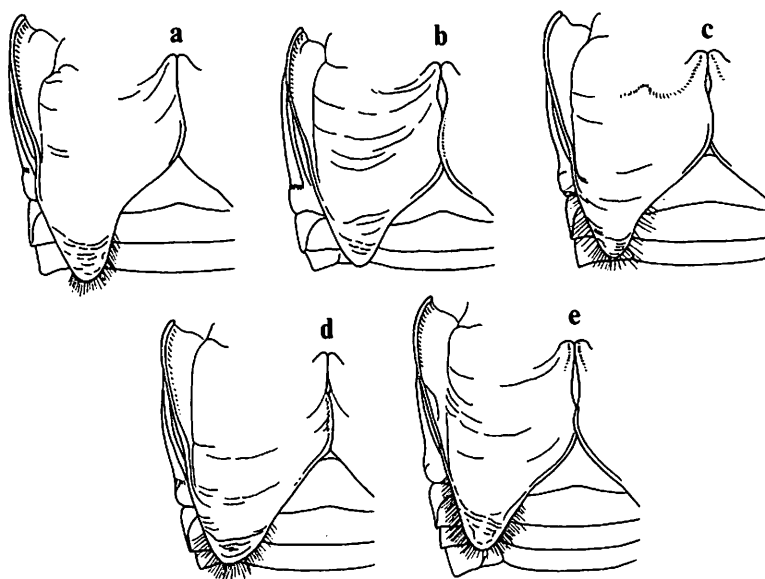
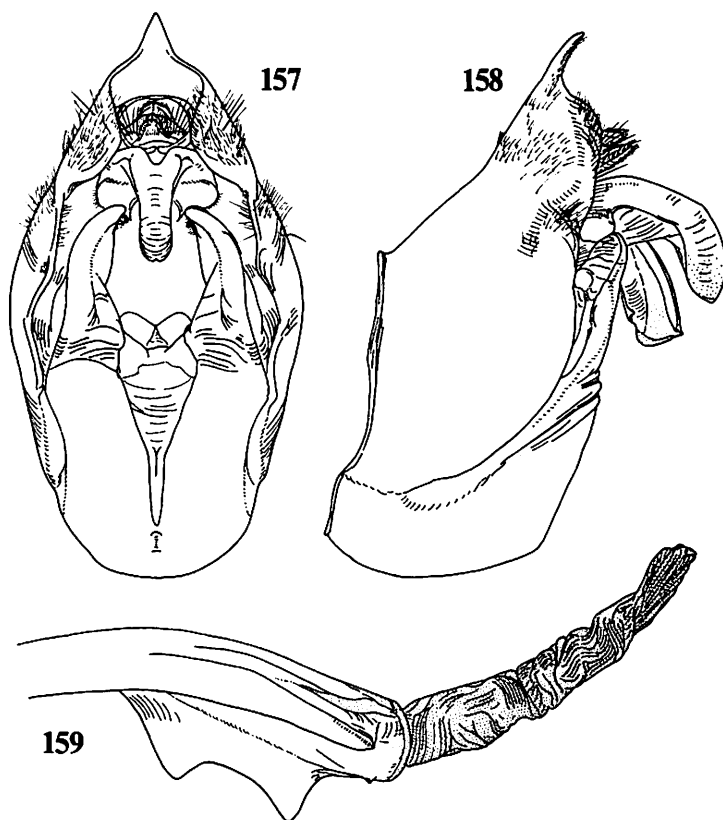


Fig. 156. Variation of ♂ operculum of *C. mandarina*. a, From Hong Kong; b–c, from Tonkin; d–e, from Annam.



Figs. 157–159. Male genitalia of *C. mandarina*. 157, 158: Pygofer in ventral (157) and lateral (158) views. — 159: Apical part of theca with vesica everted in lateral view.

wide, distinctly wider than long; mesepimeron dilated laterally, directing rather outwards; ♂ operculum elongated and triangular with the inner margin overlapping or contiguous to the opposite towards the base, and the apex obtuse, extending beyond 4th abdominal segment; ♂ 7th sternum widely rounded caudad, sometimes truncate; caudal margin of ♀ 7th sternum deeply notched at the middle; ♀ 9th tergum short and wide, ca $0.9\times$ as long as wide; shape of wing and venation very similar to those of *corvus*.

Male genitalia (Figs. 157–159). Similar to those of *corvus*; pygofer widened near the middle, $1.6\text{--}1.7\times$ as long as wide and narrowed apically, with a wide and flat caudal beak; a pair of pygoferal ventral lobes prominent and longer, curved inwards; uncus lobe narrow, angulately and gently curved inwards; theca widened apicad, with 2 triangular dilatations towards the apex, one of which (a right dilatation) is deeply and widely emarginate at the middle as 2 triangular dilatations; vesica longer, gradually tapering, also without saccate process.

Body length: ♂ 39–46 mm (mean 42.6 mm), ♀ 35–39 mm (mean 37.4 mm).

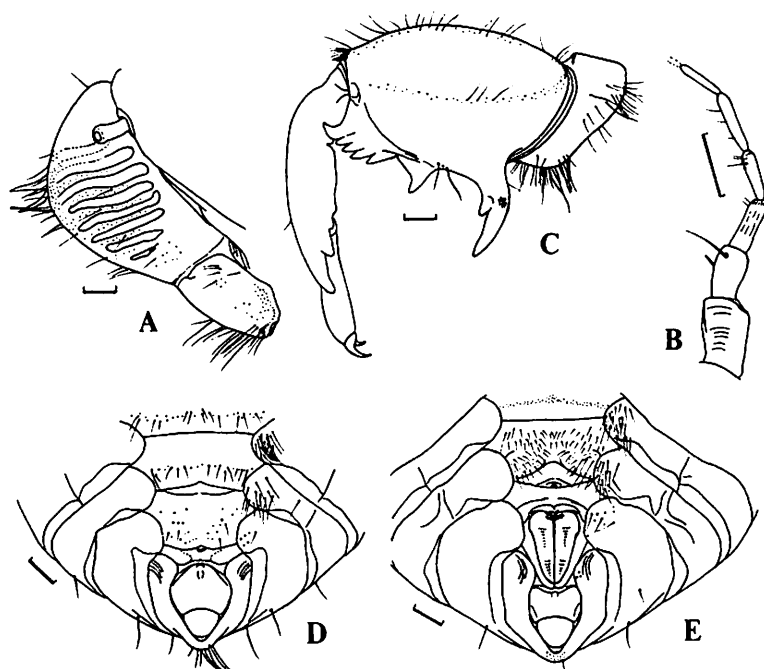


Fig. 160. Exuviae of *C. mandarina* (from N Thailand). A, Frontoclypeus and clypeus in lateral view; B, left antenna (basal 6 segments); C, left fore leg; D-E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales, 1 mm.

—Total length: 56–64 mm (mean 60.6 mm). —Expanse of forewings: 107–121 mm.

Exuviae (Fig. 160). Similar to those of *corvus*; body dark castaneous and well lustrous; frontoclypeus rather conically swollen, with 9 transverse rows of hairs; antenna examined on basal 6 segments, about 10: 7: 8: 7: 9: 6.5 in the ratio of each segmental length; fore femur bearing an anterior comb 5-toothed, an intermediate spike slightly hooked apicad and a posterior spike outwardly arched; anterior angle of ♂ 10th abdominal segment widely raised and further tubercular at the middle; rudiment of ovipositor ca 1.4× as long as wide; lateral surface of ♀ 10th segment somewhat concave. Body length: 29.5–32.5 mm, head width: 11.7–12.3 mm. Exuviae examined: 1 ♀, Khitchakut (ca. 500 m), Chanthaburi, Thailand, 9. VI. 1983, KUROKO, MORIUTI, ARITA & YOSHIYASU, "Lepidopt. Exped. to Thai 1983; Coll. Ent. Lab., Univ. Osaka Pref." (UOP); 1 ♂, Khao Yai (ca. 800 m), Nakhon Nayok, Thailand, 19. VI. 1983, KUROKO, MORIUTI, ARITA & YOSHIYASU (UOP).

Distribution. China (incl. Hainan) and Indo-China (Vietnam, Laos, Thailand and Cambodia).

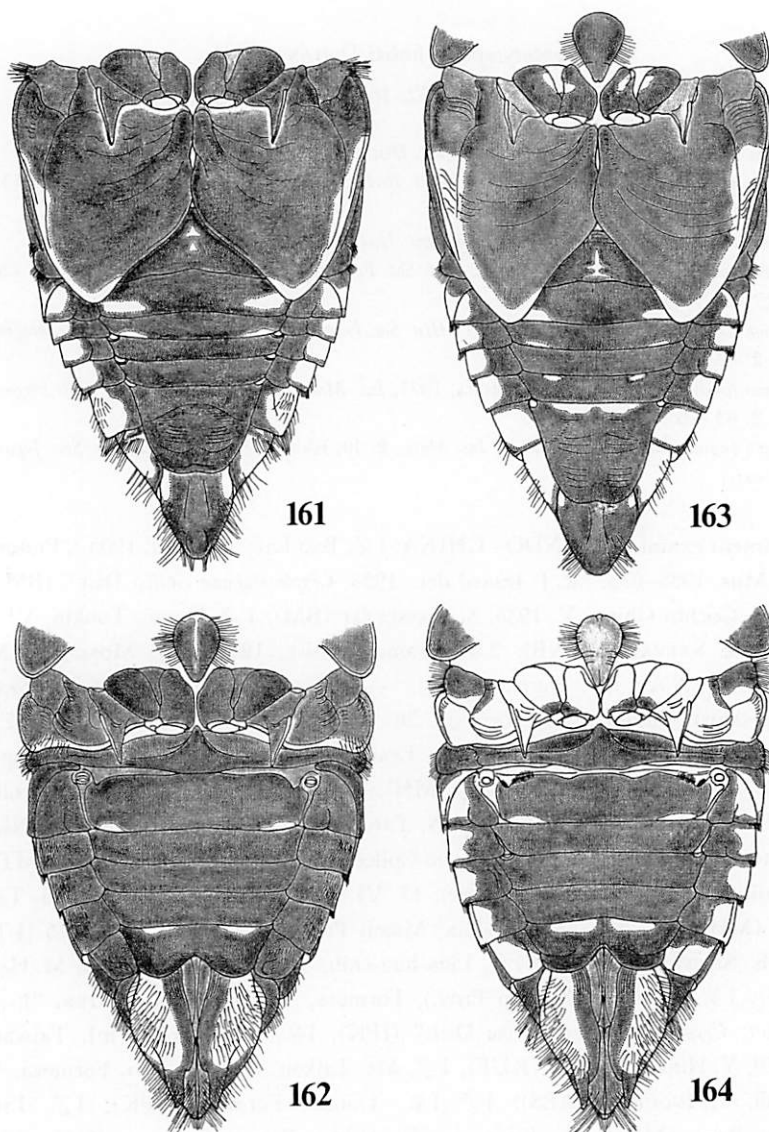
According to my observation at Sheung-shui, Hong Kong (NT) in 1973, this cicada aggregates on *Melia azedarach* L. (Meliaceae), and intermittently sings a chorus (rather synchronized !) on the higher twigs or branches by noon.

***Cryptotympana holsti* DISTANT, 1904**

(Figs. 143, 161–162, 167–170, 173–180)

Cryptotympana holsti DISTANT, 1904, *Ann. Mag. nat. Hist.*, (7), 14: 331.*Cryptotympana mandarina*: SCHUMACHER, 1915, *Mitt. Berlin. zool. Mus.*, 8: 78; SCHUMACHER, 1915, *Suppl. ent.*, (4): 110 (nec DISTANT, 1891).*Cryptotympana vitalisi* DISTANT, 1917, *Ann. Mag. nat. Hist.*, (8), 20: 320. (syn. nov.)*Cryptotympana fusca* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 13; KATO, 1932, *Monogr. Cicad.*, p. 267 (*C. fusa*!). (syn. nov.)*Cryptotympana capillata* KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 15; KATO, 1930, *Bull. biogeogr. Soc. Japan*, 2: 63 (*holsti* var.).*Cryptotympana holsti* var. *inornata* MATSUMURA, 1927, *Ins. Mats.*, 2: 48; KATO, 1930, *Bull. biogeogr. Soc. Japan*, 2: 63 (ab. *inornata*!).*Cryptotympana kagiana* MATSUMURA, 1927, *Ins. Mats.*, 2: 49; KATO, 1930, *Bull. biogeogr. Soc. Japan*, 2: 63 (*holsti* var.).

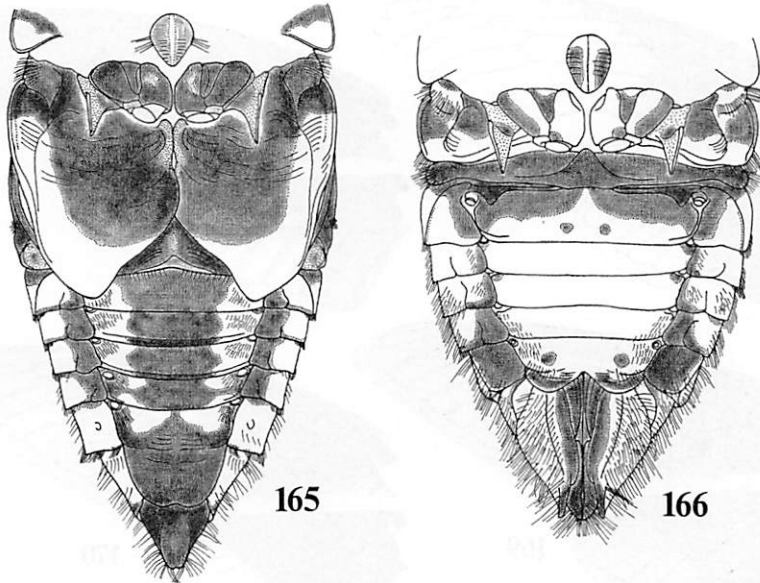
Specimens examined. INDO - CHINA: 1 ♂, Bao Lac, Ton Kin, 1905 ?, PIGIONONISE (?), Brit. Mus. 1933–633, "R. J. Izzard det., 1933: *Cryptotympana vitalisi* Dist." (BM); 1 ♂, Mont Bavi, Cochinchina, V. 1935, S. MASSEYEFF (BM); 1 ♂, Hanoi, Tonkin, VI. 1921, R. Vitalis de SALVAZA (ISNB); 2 ♀♀, same locality, 1911, Adj. MONCEAU (MNP). ——— CHINA: 1 ♀, Hainan (MH). ——— TAIWAN: 3 ♀♀, Sôzan (= Yangming-shan), Taihoku-shû, Formosa, 26. VII. 1938, T. ISHIHARA leg. (KUF); 1 ♂ 1 ♀, same locality, 2. VIII. 1934, Teiso ESAKI (KUF); 9 ♂♂ 2 ♀♀, Yang-ming-shan, Taiwan 23. VI. 1973, M. HAYASHI leg. (MH); 4 ♂♂ 11 ♀♀, same locality and collector, 17. VII. 1973 (MH); 1 ♂, same locality, N. Taiwan, 23. V. 1971, N. FUKUHARA (NIAES); 1 ♂, Shinten (Taiwan), VI. 1936, T. KANO Collection, NSMT-I-He 01 8 06 (NSMT); 1 ♀ same locality (labelled in Chinese letter), 17. VI. 1938 (NIAES); 4 ♂♂, Wulai, Taiwan, VI. 1974 (MH); 1 ♀, Mt. Shihtou-shan, Miaoli Prov., Taiwan, 10. VI. 1975 (LT), K. UEDA & K. SETOYA leg. (MH); 1 ♀, Lien-hua-chih, Taiwan, 30. VI. 1973, M. HAYASHI leg. (MH); 1 ♀, Fuhosho (Nantou Prov.), Formosa, VII. 1909, H. SAUTER, "F. Schumacher det: *Cryptotympana mandarina* Dist." (IPK); 1 ♀, Wushe (1100 m), Taiwan, 16. VIII. 1979, Y. HIRASHIMA leg. (KUF); 1 ♂, Mt. Taikou, near Mt. Ari, Formosa, 4. VI. 1938, Coll. H. INOUE (NIAES); 1 ♂ 1 ♀, Tainan, Formosa (IPK); 1 ♂, Liukuei, Kaohsiung Prov. (MH); 1 ♀, Kosempo (Kaohsiung Prov.), Formosa, VIII. 1909, H. SAUTER (IPK); 1 ♀, Kenting Park, Pingtung Prov., Taiwan, 9. VII. 1973, M. HAYASHI leg. (MH); 2 ♂♂ 2 ♀♀, same locality and collector, 10. VII. 1973 (MH); 2 ♂♂, Kueitien, Taitung Prov., Taiwan, 18. VI. 1976, H. MAKIHARA leg. (MH); 1 ♀, Chih-pen, Taitung Prov., Taiwan, 30. VII. 1968, Y. YANOYARA (HF); 1 ♀, Hueng-yeh H. S., Hualien Prov., Taiwan, 12. VII. 1973, M. HAYASHI leg. (MH); 1 ♂, Tien-siang, Taiwan, 25. V. 1973, Y. YOSHIYASU leg. (MH); 1 ♀, Lara-shan-Hsuao, 11. VIII. 1941, H. HASEGAWA (NIAES); 1 ♀, Formosa, VII. 1967, NSMT-I-He 01 8 00 (NSMT). ——— 1 ♂, Madagascar (!), KRICHENDORFF ded. 1937 (IPK). ——— Without locality: 1 ♂ 1 ♀ (NSMT); 1 ♀



Figs. 161–164. Venter of abdomen. 161–162, *C. holsti*; 163–164, *kotoshoensis*.

(KUF).

Body pitchy black, dimly shining, with lateral and apical parts of ventral surface of frontoclypeus (sometimes diminished), a pair of central small spots on posterior part of pronotal inner area (by individuals), 2 spots on lateral surface of mesonotum, extreme lateral parts of 3rd–7th abdominal terga, often margined with black apicad, lateral part of ♂ 8th tergum and a large lateral spot on ♀ 9th tergum dark castaneous or dark reddish



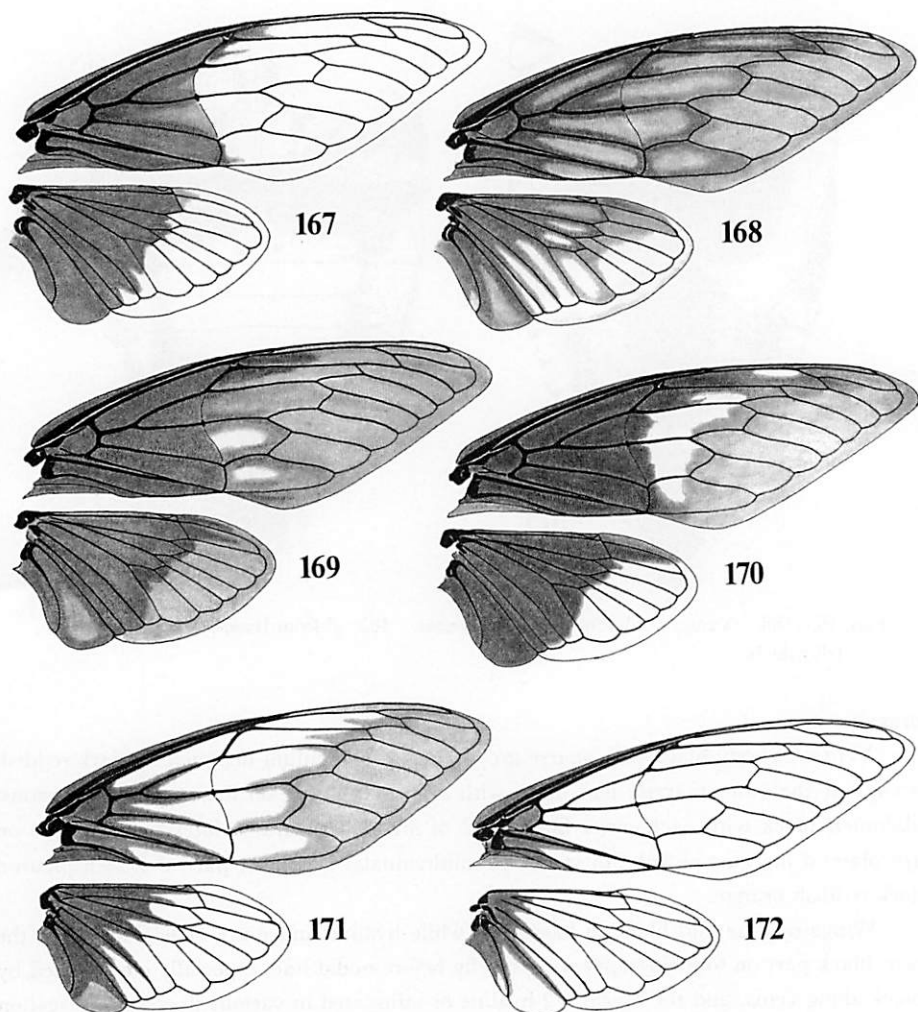
Figs. 165–166. Venter of abdomen of *C. yaeyamana*. 165, ♂ from Iriomote Is.; 166, ♀ from Ishigaki Is.

orange.

Venter of body black with sparse grey hairs; ♂ operculum hemmed by dark reddish orange at the outer margin; legs black with an obscure spot on femur dark castaneous; abdomen black with each outer lateral 1/2 of 3rd–7th pleura, a lateral discal spot on apicolateral margins of 3rd–5th sterna (by individuals) and most part of ♂ 8th pleuron dark reddish orange.

Wings opaque and black in basal 1/2, while hyaline and more or less smoky in the rest; black part on forewing appearing chiefly before nodal line, especially emphasized by black along veins, and the apical 1/2 hyaline or infuscated in various degrees (infuscation strongly appearing before nodal line and again obscurely on the apical area; this type was previously treated as an independent species, *vitalisi* DISTANT); infuscation on wings variable as shown in Figs. 167–170; veins almost entirely black or dark castaneous; basal part of forewing clothed with golden minute pilosity in fresh specimens.

Head slightly narrower than pronotum, with a transverse sulcation at base of tylus; frontoclypeus spherical, $0.8\text{--}1.0\times$ as long as wide in frontal view, with 8–9 transverse striations and a central longitudinal groove on the surface; labium extending to anterior angle of central metaprepisternal process; pronotal outer area more or less dilated posteriad; mesonotum proper as long as or slightly shorter than pronotum in median length; abdomen longer than distance from head to cruciform elevation in ♂♂, while shorter in ♀♀; timbal covering slightly globose laterally, with the inner margin oblique, rather obliquely transverse; lateral dilatation of mesepimeron rounded apically; ♂



Figs. 167-172. Right wings. 167-169, *C. holsti* from Taiwan; 170, *holsti* from Tonkin; 171, *kotoshoensis*; 172, *yaeyamana*.

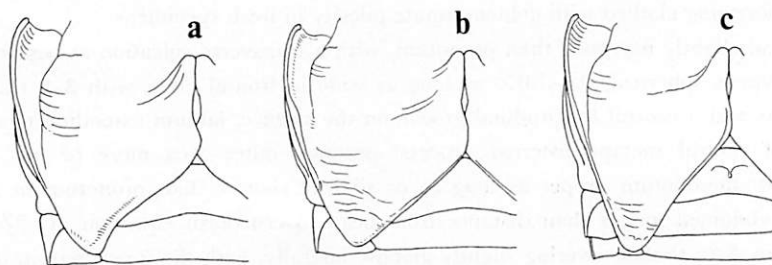
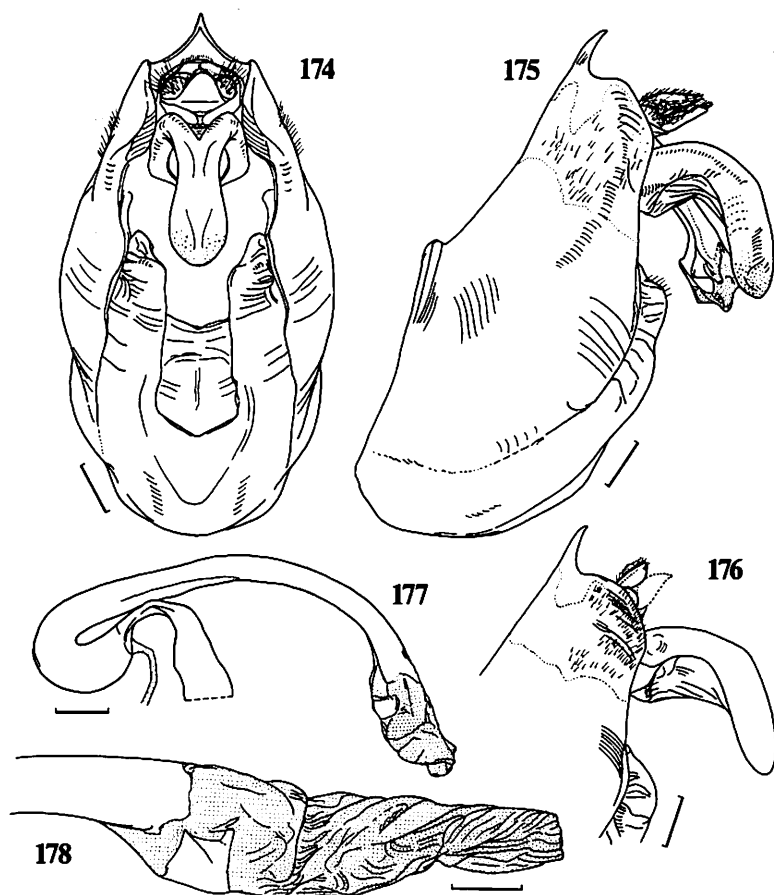


Fig. 173. Variation of ♂ operculum of *C. holsti*. a-b, From Taiwan; c, from Tonkin.

operculum triangular in shape with a rather acute apex extending to near middle of 3rd abdominal segment (sometimes to 4th), with the outer margin oblique and scarcely sinuate, and with the inner margin straight or slightly emarginate towards the apex and slightly overlapping (or sometimes contiguous to) the opposite towards the base; lateral margin of ♂ 7th sternum oblique and nearly straight, and the caudal margin widely rounded; caudal margin of ♀ 7th sternum gently notched at the middle; ♀ 9th tergum short and wide, almost as long as wide; veins C and Sc+R of forewing slightly separated from each other before node; nodal line well defined; stalk of veins 1M and 2M of forewing very short, distinctly shorter than length of vein 1M before nodal line.

Male genitalia (Figs. 174–179). Pygofer large, barrel-shaped, widened near the middle, ca 1.7× as long as wide; uncus lobe narrowed basally and somewhat widened in



Figs. 174–178. Male genitalia of *C. holsti*. 174–176: Pygofer in ventral (174) and lateral (175, 176) views (176, from Cochin China). — 177, 178: Theca (177) and its apex with vesica everted (178) in lateral view. Scales; 1 mm (174–177), 0.5 mm (178).

apical 1/2, and angulately or roundly curved in basal 1/3–1/2; theca thick as a whole, gently curved in apical 1/2, bearing a pair of dilated processes at the apex, the left one possessing a small spine (as in *kotoshoensis* and *yaeyamana*; *vide infra*); vesica rather short, widened at the base and gently narrowed towards the apex, without saccate process.

Body length: ♂ 46–53 mm (mean 50.4 mm), ♀ 44–50 mm (mean 47.0 mm).
—Total length: 65–76 mm (mean 70.8 mm). —Expanse of forewings: 126–140 mm.

Exuviae (Fig. 180). Body dark brown with wing-pad and legs much infuscated; frontoclypeus bearing 13 transverse rows of long hairs; clypeus rather small, about 1/2 the length of frontoclypeus; antenna 9-segmented, about 10: 7: 6: 7: 7.5: 6: 3: 2: 1 in the ratio of each segmental length; anterior comb of fore femur 7-toothed, basally wrinkled; caudal angle of ♂ 9th abdominal sternum widely bigibbous; ♂ 10th segment slightly wider than long, with the anterior angle highly raised at the middle; rudiment of ovipositor elongated and triangular, ca 1.5× as long as wide. Body length: 36.1–41.7 mm, head width: 13.6–14.3 mm. *Exuviae* examined: 1 ♂, Yang-ming-shan, Taiwan, 23. VI. 1973, M. HAYASHI leg. (MH); 1 ♂ 1 ♀, Lien-hua-chih, Taiwan, 30. VI. 1973, M. HAYASHI leg. (MH); 1 ♀, Kuan-tzu Ling, Tainan Prov., Taiwan, 12. VIII. 1968, H. MAKIHARA leg. (HF); 2 ♀♀, Kenting Park, Pingtung Prov., Taiwan, 10. VII. 1973, M. HAYASHI leg. (MH); 1 ♀, Kueitien, Taitung Prov., Taiwan, 18. VI. 1976, H. MAKIHARA leg. (MH); 1 ♂, Hueng-yeh H. S., Hualien Prov., Taiwan, 14. VI. 1976, H. MAKIHARA leg. (MH); 1 ex., without

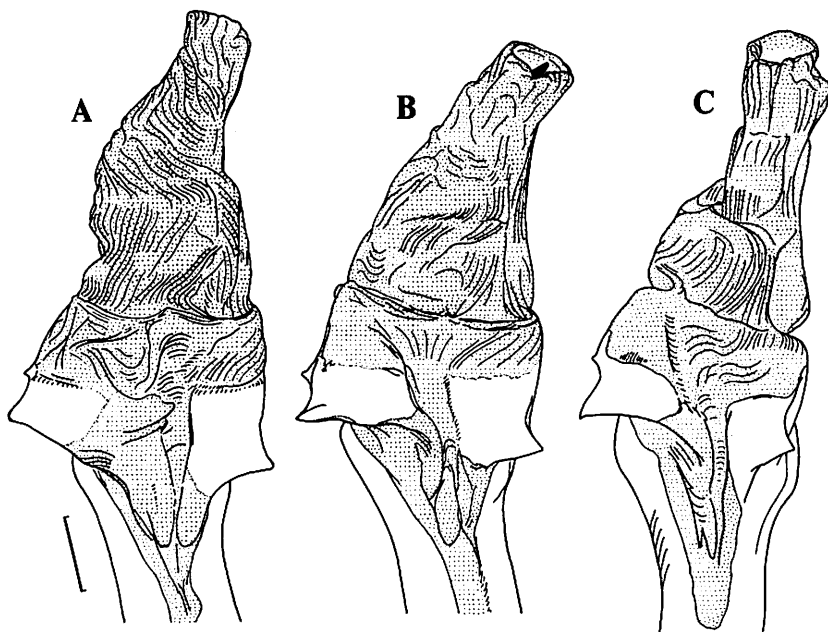


Fig. 179. Apex of theca with vesica everted in ventral view. A, *C. holsti*; B, *kotoshoensis*; C, *yaeyamana*. Scale, 0.5 mm.

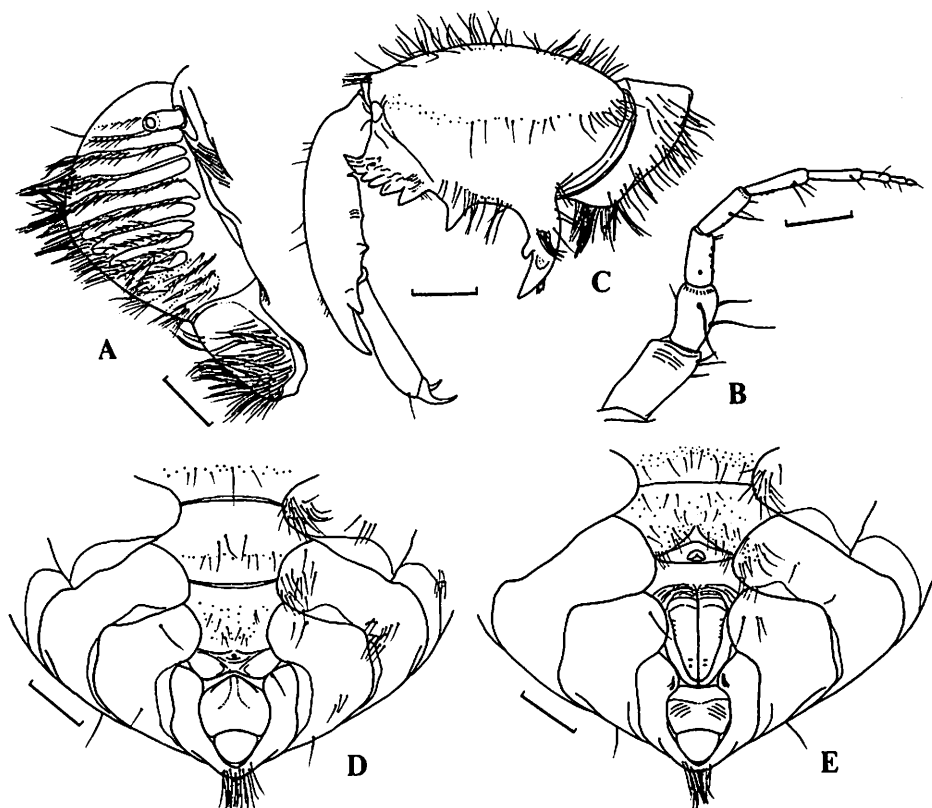


Fig. 180. Exuviae of *C. holsti*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdomen in ventral view (D, ♂; E, ♀). Scales; 2 mm (A, C-E), 1 mm (B).

locality (NSMT). The exuviae of this species were first described by KATO (1932); his description is, however, concentrated on the antenna and fore femur as in those of other species that he described.

Distribution. Taiwan, S China (incl. Hainan), Indo-China (Vietnam, Cambodia, etc.)

This cicada inhabits rather thick forests of lowlands and montane areas, singing in a slow tempo mainly in the morning (about 0800–1100 h), and sometimes attracted to light. This species does not aggregate on certain trees.

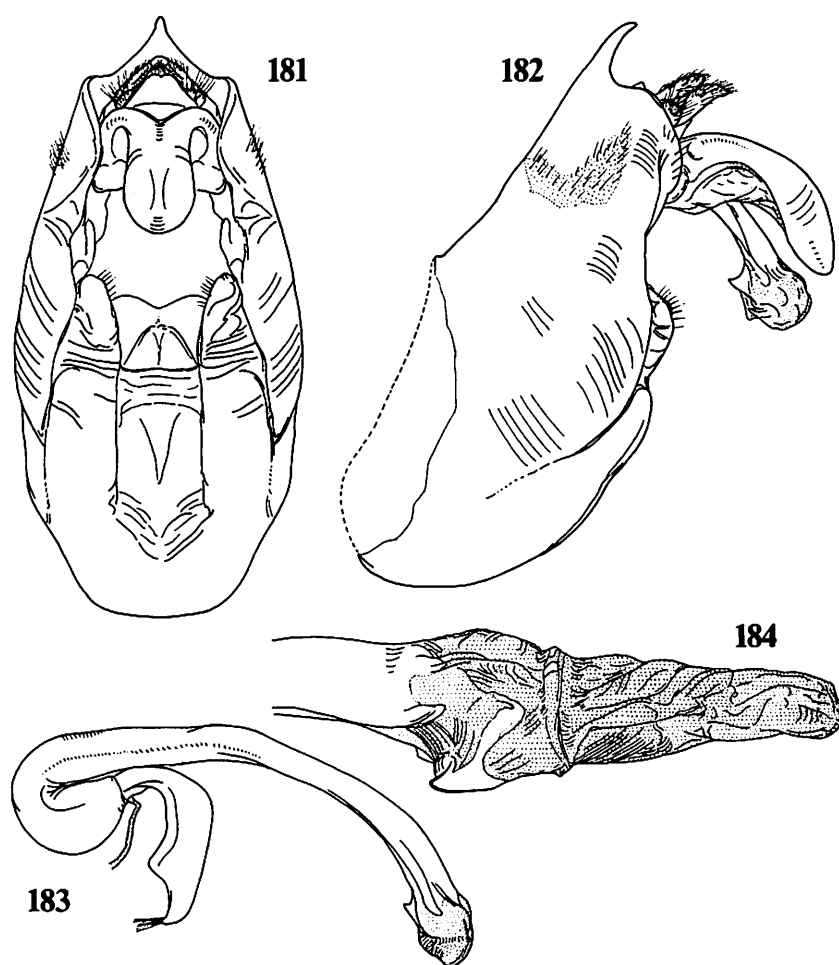
***Cryptotympana kotoshoensis* KATO, 1925**
(Figs. 144, 163–164, 171, 179, 181–184)

Cryptotympana kotoshoensis KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 14.

Cryptotympana shirakii MATSUMURA, 1927, *Ins. Mats.*, 2: 47.

Specimens examined. 1 ♂ (holotype of *shirakii*), Kotosho, 5. VIII. 1912, Type Matsumura, det. "*Cryptotympana shirakii* n." (HUS); 1 ♀, Botel-Tobago I. (=Lan Hsu Is.), Formosa, T. KANO, T. KANO Collection, NSMT-I-He 01 8 07 (NSMT); 5 ♂♂ 1 ♀, same locality and collector, VIII. 1927 (NSMT); 1 ♀, Kôto-shô Is. (=Lan Hsu Is.), Formosa, VIII. 1927, T. KANO (KUF); 3 ♂♂ 2 ♀♀, Lan Hsu, 1974 (MH).

Very similar and probably allied to *holsti*, but differing as follows: Body dark castaneous to much infuscated brown; frontoclypeus long in frontal view, about as long as wide; both lateral sides of pronotum more divergent posteriorly; inner margin of timbal covering longitudinally oblique; ventral part also blackish brown and markings and spots



Figs. 181–184. Male genitalia of *C. kotoshoensis*. 181, 182: Pygofer in ventral (181) and lateral (182) views. — 183, 184: Theca (183) and its apex with vesica everted (184) in lateral view.

very faint; lateral dilatation of mesepimeron expanded outwards apically; apex of ♂ operculum subacute, with the outer margin widely rounded, hardly sinuate; auditory capsule on 2nd abdominal segment globose laterally; lateral margin of ♂ 7th abdominal sternum more or less emarginate basally; ♀ 9th tergum slender, ca $1.1 \times$ as long as wide; wings hyaline, and forewing smoky on the apical part with black part appearing on basal cell and areas along veins before nodal line; veins C and Sc+R of forewing adjacent to each other even before nodal line, and 7th apical cell (cell M_4) of forewing wider in particular.

Male genitalia (Figs. 179, 181–184). Very similar to those of *holsti*; pygofer rather slender, ca $1.9 \times$ as long as wide, not so narrowed even to the apex; uncus lobe wider, with rounded apex (also very similar to that of *corvus*) and roundly curved inwards; theca very gently curved in apical $1/2$, with a pair of apical projections protruding more distinct and acute; vesica shorter.

Body length: ♂ 48–52 mm, ♀ 44–49 mm. —Total length: 69–74 mm. —
Expanse of forewings: 132–138 mm.

Distribution. Taiwan: Lan Hsu Is.

This species, endemic to Lan Hsu Is., is closely allied to *holsti* widely occurring in Taiwan and the Chinese Continent (southern part). Although it is uncertain whether *holsti* and *kotoshoensis* are mutually independent because of the similarity in many morphological characters, the shape of the ♂ genitalia leads *kotoshoensis* to a species different from *holsti*.

Cryptotympana yaeyamana KATO, 1925

(Figs. 145, 165–166, 172, 179, 185–191)

Cryptotympana yaeyamana KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 11.

Cryptotympana yayeyamana: KATO, 1925, *Trans. nat. Hist. Soc. Formosa*, 15: 67 (unjustified emendation).

Cryptotympana ishigakiana MATSUMURA, 1927, *Ins. Mats.*, 2: 48.

Specimens examined. I S H I G A K I Is. (Ryukyus): 1 ♀, Mt. Banna-dake, Ishigaki Is., 29. VIII. 1965, S. ISHIDA (SI); 9 ♂♂ 6 ♀♀, same locality, 6. VIII. 1973, Y. UÉMURA & S. OKAJIMA leg. (MH); 3 ♂♂ 2 ♀♀, same locality, 26. VIII. 1985, M. HAYASHI leg. (MH); 2 ♂♂ 4 ♀♀, same locality and collector, 1. IX. 1985 (MH); 4 ♂♂ 2 ♀♀, same locality and collector, 4. IX. 1985 (MH); 1 ♀, Takeda, Ishigaki Is., 3. IX. 1965, S. ISHIDA (SI); 6 ♂♂ 9 ♀♀, same locality, 4. IX. 1985, M. HAYASHI leg. (MH); 1 ♂, Omoto, Ishigaki Is., 1. IX. 1985, M. HAYASHI leg. (MH); 1 ♀, Omoto Forest Road, Ishigaki Is., 3. IX. 1965, S. ISHIDA (SI); 15 ♂♂ 3 ♀♀, Mt. Omoto-dake, Ishigaki Is., 26–28. VII. 1973, M. HAYASHI leg. (MH); 2 ♂♂ 2 ♀♀, same locality, 7. VIII. 1973, Y. UÉMURA leg. (MH); 8 ♂♂ 14 ♀♀, same locality, 2. IX. 1985, M. HAYASHI, M. FUJITA & H. YAGINUMA leg. (MH); 1 ♂, Mt. Fukai-Omoto-dake, 23. VII. 1973, A. SAKAI (MH); 1 ♂, Sakieda, Ishigaki Is., 30. VI. 1974, M. HAYASHI leg. (MH); 1 ♂, same locality and collector, 7.

VII. 1974 (MH); 2 ♂♂, same locality and collector, 14. VII. 1974 (MH); 1 ♂ 4 ♀♀, Yonehara, Ishigaki Is., 3. IX. 1985, M. HAYASHI leg. (MH); 3 ♂♂, Mt. Yamaateyama, Ishigaki Is., 30. VI. 1964, S. ISHIDA (SI); 1 ♂, same locality, 2. VII. 1972, M. HAYASHI leg. (MH); 1 ♀, Ishigakishima, M. SUZUKI (KUF). ——— IRIOMOTE Is. (Ryukyus): 1 ♂, Shirahama, Iriomote Is., 1. IX. 1969, H. MAKIHARA leg. (MH); 6 ♂♂ 2 ♀♀, Mt. Ushiku-mori (Shirahama For. Rd.), Iriomote Is., 28. VIII. 1985, M. HAYASHI, M. FUJITA & H. YAGINUMA leg. (MH); 2 ♂♂, Inaba, Iriomote Is., 20. VIII. 1971, A. N. & M. O. (MH); 1 ♀, same locality, 16. X. 1971, Y. UÉMURA leg. (MH); 1 ♀, Mt. Sonai-dake, Iriomote Is., 11. VIII. 1973, Y. UÉMURA leg. (MH); 4 ♂♂ 1 ♀, Funaura, Iriomote Is., 23–25. VIII. 1976, M. KINJÔ (MH); 15 ♂♂ 10 ♀♀, same locality, 30–31. VIII. 1985, M. HAYASHI, M. FUJITA & H. YAGINUMA leg. (MH); 1 ♂, ca 13 km E of Funaura, northern coast of Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂, ca 2 km N of Komi, Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂, Mt. Komi (Iriomote Is.), 27. VIII. 1962, M. T. CHÔJÔ, SESKU (KUF); 2 ♂♂ 1 ♀, Maira, Iriomote Is., 7–8. IX. 1965, S. ISHIDA (SI); 3 ♂♂ 1 ♀, Ôtomi, Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂, Toyohara~Haimi, Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH). ——— 1 ♂ 1 ♀, Yaeyama, Ryûkyû, T. MASAKI (KUF).

Body pitchy black, golden pilose; head black with a central anterior spot on tylus, a spot on supra-antennal plate and a spot on inner posterolateral surface of vertex castaneous (these spots almost always disappearing in the individuals from Iriomote Is.); thoracic nota also black with a central longitudinal stripe on pronotum, much widened posteriorly, an inner spot on posterolateral angle of pronotal collar, and a central long rhombate marking on mesonotum, widened posteriorly and hooked anterolaterally (these spots or markings also diminished or absent rarely in the specimens from Ishigaki Is. and always in those from Iriomote Is.); abdomen margined with dark castaneous part, with caudal 1/3–1/2 generally castaneous in the individuals from Ishigaki.

Venter of body black with lateral part of frontoclypeus (widely), mesepimeron, outer and apical parts of ♂ operculum, lateral parts of 3rd–7th abdominal sterna, outer lateral parts of 3rd–6th pleura, ♂ 7th pleuron, most part of 8th pleuron, and ♀ 9th tergum except for the extreme inner margin, castaneous (3rd–7th sterna almost entirely castaneous in the individuals from Ishigaki); castaneous parts variable in size, generally developed in Ishigaki individuals and diminished in Iriomote ones (Fig. 185); legs dark castaneous, with coxa, tarsus (hind tarsus often castaneous on the subapex), and fore tibia black.

Wings hyaline, very slightly smoky basad, with the extreme bases black; basal black part not beyond basal cell and 1/2 the cell 1A in forewing; veins always black, partly much infuscated brown.

Head slightly narrower than pronotum; frontoclypeus somewhat globose; lateral margin of pronotum emarginate; mesonotum proper longer than pronotum in median length; central part of cruciform elevation narrower than anterior space between both parapsidal sutures; abdomen longer than distance between head and cruciform elevation

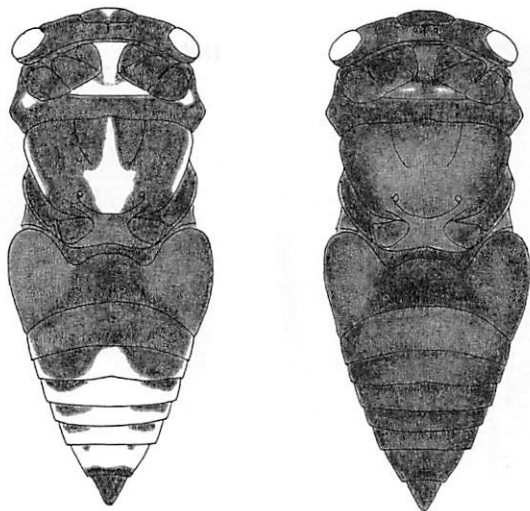


Fig. 185. *Cryptotympana yaeyamana*, showing a geographic variation in marking-pattern on dorsum. Shaded area indicates black part, and open area castaneous. Left: From Ishigaki Is. — Right: From Iriomote Is. (Ryukyus, Japan).

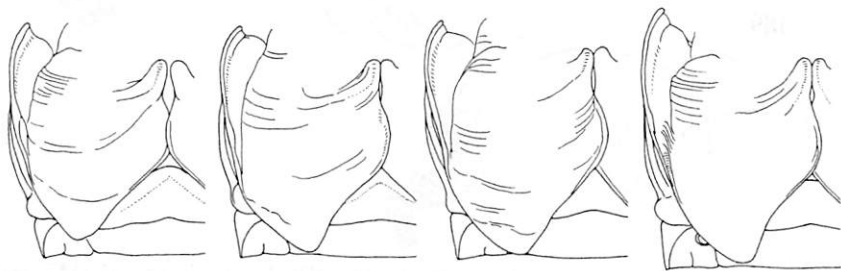
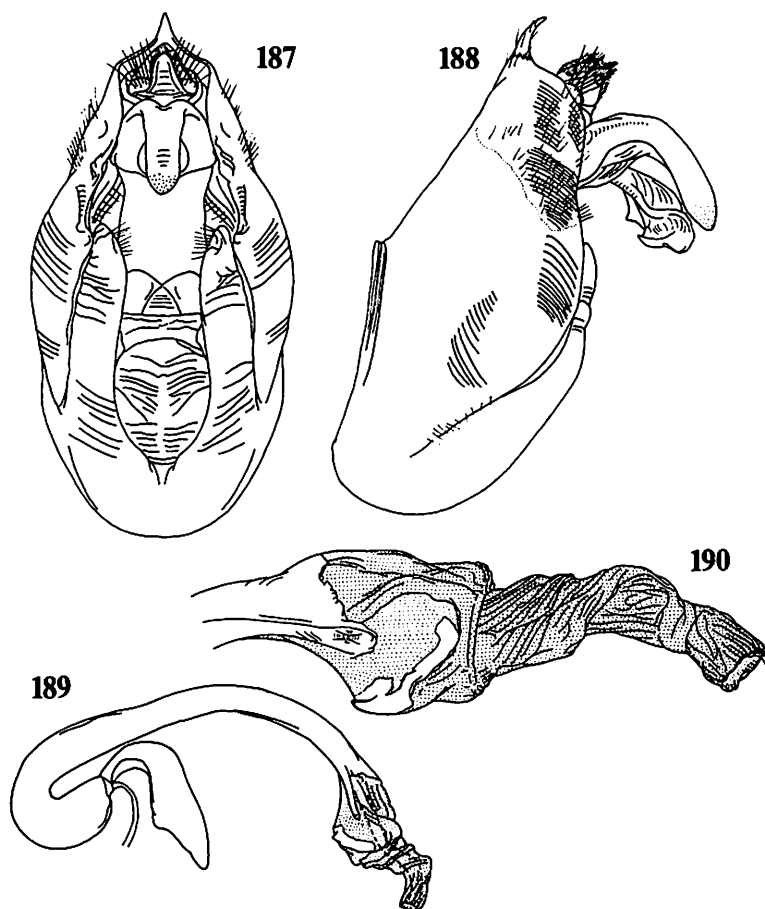


Fig. 186. Variation of ♂ operculum of *C. yaeyamana*. a-b, From Ishigaki Is.; c-d, from Iriomote Is. (Ryukyus).

in ♂♂, while shorter in ♀♀; central metaprepisternal process roundish, not developed posteriorly; ♂ operculum, similar in shape to that of *holsti*, triangular, more or less angulate towards the apex, with the outer margin oblique and the inner margin emarginate or straight; shape and relative length of ♂ operculum more or less variable (Fig. 186); ♂ 7th abdominal sternum large, gently tapering caudad, with the caudal margin concave at the middle; caudal margin of ♀ 7th sternum widely and triangularly incised at the middle; ♀ 9th tergum short and conical, $0.9\times$ as long as wide; forewing triangular, with the costal margin a little arched and the apical margin nearly straight; nodal line well defined; vein M of forewing distinctly shorter than vein IM before nodal line, and the vein CuP well separated from vein 1A in basal $2/3$.

Male genitalia (Figs. 179, 187–190). Similar to those of *holsti*; pygofer ca $1.3\times$ as long



Figs. 187–190. Male genitalia of *C. yaeyamana*. 187, 188: Pygofer in ventral (187) and lateral (188) views. — 189, 190: Theca (189) and its apex with vesica everted (190) in lateral view.

as wide, with the ventral lobes narrower; uncus lobe slender, not widened towards the apex; apical part of theca expanded laterally, with a pair of dilated processes (similar to those of *kotoshoensis*); vesica rather long, with the base narrower than thecal apex, in lateral view.

Body length: ♂ 42–52 mm (mean 48.4 mm), ♀ 39–47 mm (mean 43.3 mm). — Total length: 62–73 mm (mean 68.2 mm). — Expanse of forewings: 118–135 mm.

Exuviae (Fig. 191). Very similar in general shape and coloration to those of *holsti*; frontoclypeus furnished with 12 transverse rows of hairs; clypeus slightly longer than 1/2 the length of frontoclypeus; antenna 9-segmented, about 10: 8: 6: 7: 7: 6: 3: 2: 2 in the ratio of each segmental length; anterior comb of fore femur 6-toothed; anterior angle of ♂ 10th abdominal segment roundly raised at the middle; rudiment of ovipositor relatively small,

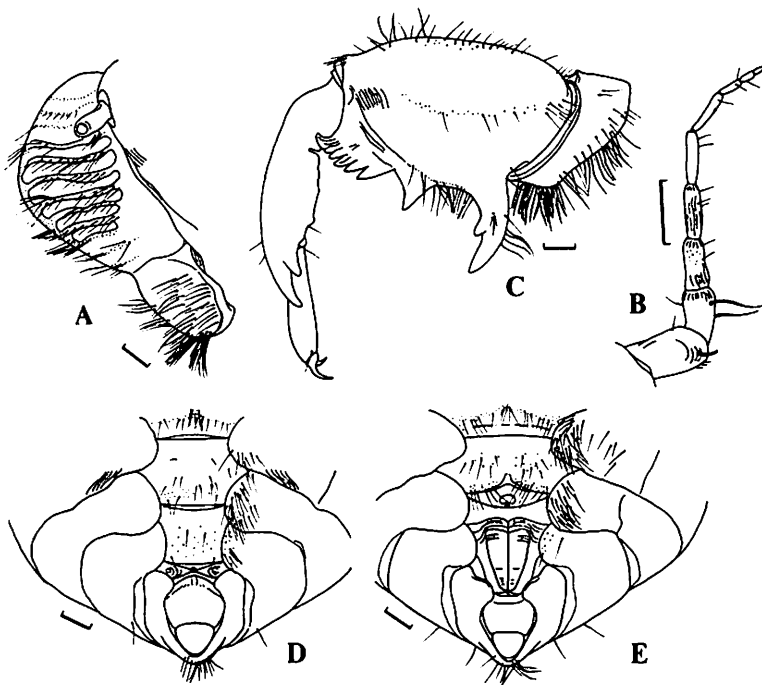


Fig. 191. Exuviae of *C. yaeyamana*. A, Frontoclypeus and clypeus in lateral view; B, right antenna; C, left fore leg; D-E, apical part of abdominal venter (D, ♂; E, ♀). Scales, 1 mm.

ca 1.5× as long as wide. The fore femur and antenna of the exuviae are also described by MIYAMOTO and MIYATAKE (1963) and KINJÔ (1985). Body length: 33.5–37.4 mm, head width: 12.4–13.0 mm. Exuviae examined: 1 ♀, Mt. Omoto-dake, Ishigaki Is., 28. VII. 1973, M. HAYASHI leg. (MH); 1 ♀, same locality, 22. VIII. 1973, Y. UÉMURA leg. (MH); 1 ♂, Inaba, Iriomote Is., 21. VIII. 1971, M. KINJÔ (MH); 1 ♂, ca 13 km E of Funaura, northern coast of Iriomote Is., 29. VIII. 1985, M. HAYASHI leg. (MH); 1 ♂, Komi-Ôtomi, Iriomote Is., T. TERUYA (MH); 1 ♀, Ôtomi, Iriomote Is., 14. X. 1972, M. HAYASHI leg. (MH); 1 ♂, Iriomote Is., VIII. 1962, M. T. CHÔJÔ, SESKU (KUF).

Distribution. Japan: Ryukyus (Ishigaki Is. and Iriomote Is.).

This species is closely allied to *holsti*, and seems to be its replacement in the Yaeyama group of the Ryukyus. As mentioned above, this species shows some infraspecific variations in the coloration and markings; this is recognized as a geographic variation between the 2 populations from Ishigaki and Iriomote (Figs. 165–166, 185).

Biological notes. This cicada begins to appear at the end of June and becomes abundant in the first half of August on Ishigaki Is. (about one or half month later on Iriomote Is.). Cicadas inhabit peripheries of thick forests or jungles mainly in montane areas (also in lowlands in Iriomote Is. where raised coral reefs are not formed) and live

exclusively on *Fagara ailanthoides* ENGL. (Rutaceae) (also on *Rhus succedanea* L. of the Anacardiaceae on Ishigaki Is.), singing in a slow tempo mostly in 0800–1100 h. It was first observed by my research made in 1985 that ♀♀ lay mainly into ‘live’ twigs of *Mallotus japonicus* MUELL. ARG. (Euphorbiaceae) and partly into those of *Macaranga tanarius* MUELL. ARG. of the Euphorbiaceae (HAYASHI 1987).

The *exalbida* group

***Cryptotympana exalbida* DISTANT, 1891**

(Figs. 192, 194–196, 198–202)

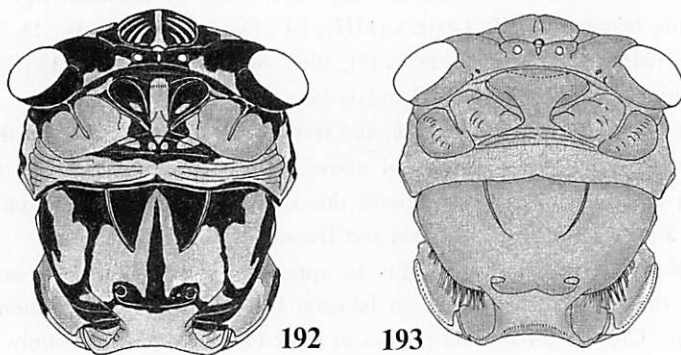
Cryptotympana exalbida DISTANT, 1891, *Monogr. Orient. Cicad.*, p. 92

LECTOTYPE: ♀, Type (in a red circle), Nilgiri, n. slopes (3,500 ft), 26. V. 1888, DISTANT det. (handwriting) “*exalbida* Dist.” (BM)

PARALECTOTYPES: 2 ♀♀, same locality as lectotype, 25. V. 1888 (BM); 1 ♀, N. slopes Nilgiris (5,000 ft), 17. V. 1888, ATKINSON coll. 92–5 (BM).

Other specimens examined. 1 ♂, Karwar, S. India, V. 1915 (BM); 1 ♂, Shembaganur, Indes angl., 1929, Coll. R. I. Sc. N. B. (ISNB); 1 ♂, Dambulla, Ceylon, W. HORN, “Melichar det.: *Cryptotympana varicolor* Dist.” (IPK); 1 ♂ (type of “*varicolor*”), Ceylon, GREEN, DISTANT-Coll. 1911–383, DISTANT det. (handwriting) “*varicolor* Dist.” (BM); 1 ♂, without locality, “P. C. M. de Greeve det., 1964: *Cryptotympana vesta* (Distant)” (RML); 1 ♂, without locality, Brit. Mus. 1962–168 (BM).

Head black with transverse fascia on supra-antennal plate, a central transverse stripe on tylus and a spot on outer part of basal ocellus dark ochreous and with transverse striations on frontoclypeus castaneous; thorax dark ochreous or castaneous with a pair of central longitudinal fasciae on pronotum, much widened anteriorly, 2 pairs of obconical spots on mesonotum (the outer pair longer and reaching the posterolateral corner), a central hastate spot on mesonotum and lateral surface of mesonotum, black (black spots

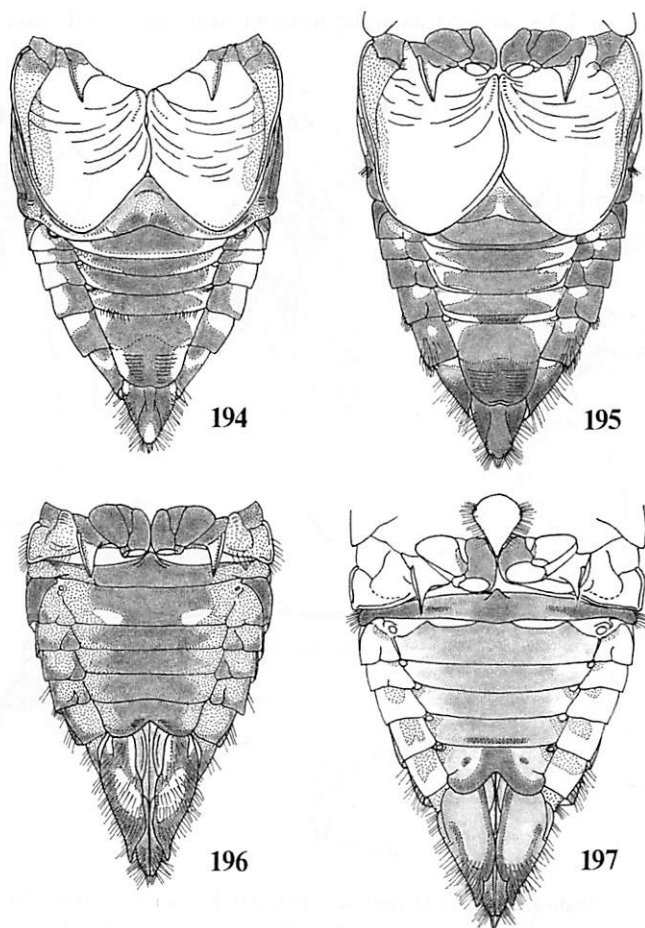


Figs. 192–193. Head and thoracic nota of *C. exalbida* (192) and *C. dohertyi* sp. nov. (193).

on mesonotum often fused with each other); abdomen black, not so lustrous, clothed with minute greyish hairs laterally, with the outer lateral part of timbal covering dark ochreous; lateral margin of ♂ 1st tergum narrowly clothed with white pollinosity.

Venter of body except for the central part of abdominal sterna covered with white pollinosity; thorax ochreous with meso- and metaprepisterna fuscous; ♂ operculum ochreous orange, more or less lustrous; abdomen black with lateral part of sternum and outer lateral part of pleuron dark castaneous, and with an obliquely oblong spot near margin of ♀ 9th tergum ochreous; legs dark brown or black with a band across basal part of mid tarsus ochreous.

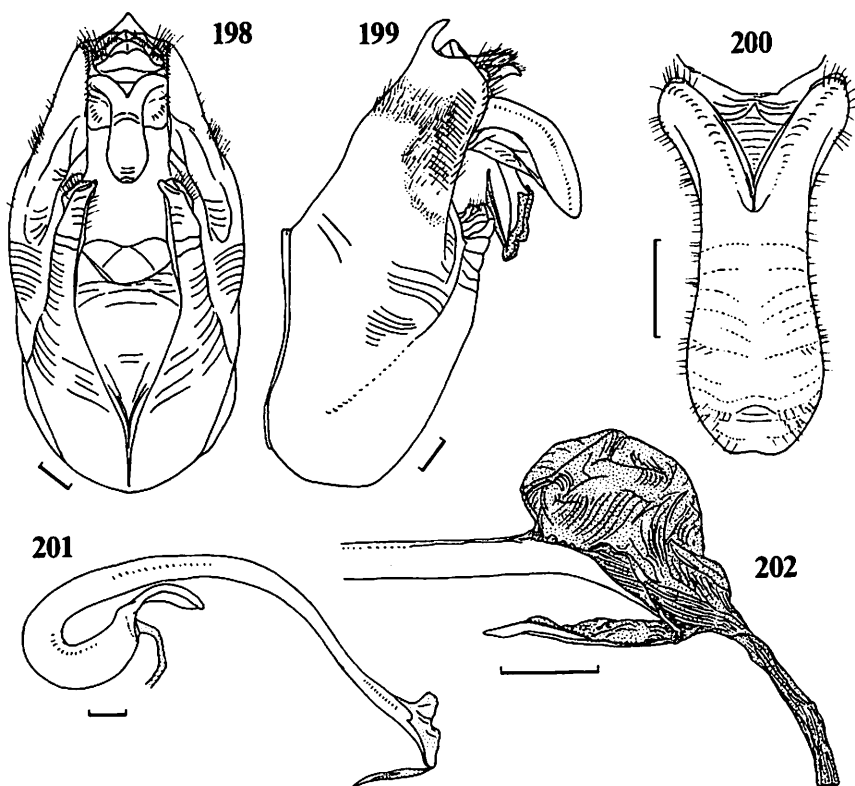
Wings hyaline and immaculate, with basal cell (almost always), basal part of cell 1A in forewing and base of cell CuA in hindwing black; black area of forewing not beyond the basal cell; cell 2A (vannus) of hindwing hyaline with areas along veins 2A and 3A



Figs. 194–197. Abdomen in ventral view. 194–196, *C. exalbida*; 197, *dohertyi* sp. nov.

opaquely grey; veins ochreous in basal 1/2 of wings and fuscous in the rest; veins C, Sc+R, M, Cu and 1A of forewing moss green in fresh specimens.

Head large, slightly wider than pronotum; eye prominent laterally; frontoclypeus swollen anteriorly, spherical in frontal view, $0.9-1.0\times$ as long as wide, possessing 12-14 transverse striations on the surface, and the tylus distinctly longer than vertex in median length; labium extending slightly beyond middle of central metaprepisternal process; mesonotum proper longer than pronotum in median length; abdomen as long as or slightly longer than distance between head and cruciform elevation; lateral dilatation of mesepimeron short and roundly triangular; ♂ operculum oval, extending not or a little beyond 2nd abdominal segment, with the inner margin overlapping the opposite at the base and the outer margin oblique, concavely sinuate by individuals; ♂ 7th sternum rather triangular with moderately truncate caudal margin; ♀ 7th sternum comparatively wide, with the caudal margin widely but not deeply emarginate at the middle; ♀ 9th tergum slender, ca $1.3\times$ as long as wide; forewing with the costal margin evenly and



Figs. 198-202. Male genitalia of *C. exalbida*. 198, 199: Pygofer in ventral (198) and lateral (199) views. — 200: Uncus lobe in full caudal view. — 201, 202: Theca (201) and its apical part with vesica everted (202) in lateral view. Scales, 0.5 mm.

slightly arched and the apical margin nearly straight; vein 2A of forewing upwardly bent basad; vein Cup of forewing slightly separated from vein 1A in basal 1/2.

Male genitalia (Figs. 198–202). Pygofer almost entirely similar to that of *vesta*, but more slender, ca $1.9\times$ as long as wide in ventral view; a pair of pygofoval ventral lobes long, hardly curved inwards to the apex; uncus lobe again spatulately widened in the apical part with the tip truncate at the middle, and the lobe gently curved inwards with rather acute apex in lateral view; theca wide at the base with the basal plate oblong and rather flattened, and the apex possessing flattened lanceolate membranous process on the underside, extending backwards and bearing a linear sclerite free from thecal apex (sclerotized part); upside of thecal apex with large spherical membranous upheaval; vesica very narrow, evenly cylindrical, without saccate process towards the apex.

Body length: ♂ 35–39 mm, ♀ 32–33 mm. —Total length: 53–54 mm. —
Expanse of forewings: 95–115 mm.

Specimens (♂♂) from Sri Lanka have some differences in the morphological characters from S Indian ones as follows: Head and pronotum more emphasized by black, especially posterior ochreous pronotal margin widely interrupted by black spots at the middle and at the posterolateral corner; ♂ operculum nearly reaching apical margin of 3rd abdominal sternum, with the outer margin emarginate and with the tip more rounded; white pollinosity on abdominal sterna and terga very sparse; frontoclypeus more swollen anteriorly; black part on cell 1A of forewing appearing on basal 1/2; pygofer of ♂ genitalia widened at the middle and narrowed towards the apex, viz. wholly rhombate in shape; base of uncus lobe widened, as wide as the lobe; thecal apex not so much raised upwards, and bearing not so flattened process on the underside with a smaller and shorter free sclerite to the tip; etc. Detailed comparative study of them will be needed when a sufficient number of specimens is submitted to the study.

Distribution. S India and Sri Lanka.

DISTANT (1906a) added Sikkim to the distributional range of this species. Although I was unable to examine the specimen(s) from this locality, the occurrence of *exalbida* in Sikkim is dubious and needs confirmation. Here, I take the locality away from the distribution of *exalbida*.

In BM, there is a ♂ specimen of *varicolor* collected from Ceylon, bearing the “Type” label and DISTANT’s determination; this is not identical with *varicolor* DISTANT but with *exalbida*, as discussed in the Part I of this paper.

Species incertae sedis

Cryptotympana dohertyi M. HAYASHI, sp. nov.

(Figs. 193, 197)

Holotype: ♀, Engano, DOHERTY, DISTANT-Coll. 1911–383 (BM).

Type depository: British Museum (Natural History), London.

Coloration and markings very similar to those of *insularis* from the Andamans; head and thorax castaneous brown with supra-antennal plate, pronotal inner area and a central hastate obscure marking on mesonotum paler; abdomen dark castaneous, with 2nd and 3rd terga clothed with white pollinosity on the lateral parts; lateral margin of 8th tergum also pollinose towards the basal margin.

Venter of body castaneous brown without distinct markings or spots; meso-katepisternum, apical margin of 7th abdominal sternum, inner margin of 9th segment and apex of tibia more or less infuscated, and on the contrary, metaprepisternal process paler; inner part of abdominal pleuron and lateral margin of sternum clothed with white pollinosity.

Wings hyaline, very slightly suffused to tawny towards the base; veins pale ochreous basally (except for the vein Sc+R fuscous) and fuscous apically; basal cell and base of cell 1A translucently ochreous; narrow fascia appearing along veins CuP, 2A and 3A of hindwing fuscous; fuscous round spots on 1st and 2nd cross veins of forewing rather faint.

Head slightly wider than pronotum; eye large, nearly 1/2 the width of vertex; frontoclypeus roundly swollen anteriad; pronotum nearly trapezoidal, with the lateral margin hardly sinuate; mesonotum convex dorsally; cruciform elevation widely depressed; abdomen conical, shorter than distance between head and cruciform elevation; a central caudal beak of 9th abdominal tergum long and acutely lengthened and narrowed towards the apex; mesepimeron small and triangular; caudal margin of 7th abdominal sternum deeply notched at the middle; 9th tergum rather short and conical, ca 2× as long as wide; veins 1M and 2M of hindwing fused in basal 1/4; cell CuP distinctly wider than cell 1A in hindwing; hindwing rather evenly rounded, ca 1/2 the length of forewing.

Body length (♀): 33 mm. —Expanse of forewings (♀): 103 mm.

Distribution. Indonesia: Enggano.

This species is represented only by 1♀ specimen; in spite of a new species, it is impossible to determine the species-group to which it belongs.

Key to the species of the genus *Cryptotympana*

1. Forewing with basal 1/2 black or much infuscated, extending to or slightly beyond nopal line 2
- Forewing with black (or fuscous) and/or opaque parts (black part not spread to nodal line), or without them 6
2. Black part on forewing also appearing along the costal margin towards the apex; venter of abdomen as well as ♂ operculum almost entirely reddish orange 3
- Black part on forewing not appearing along the costal margin, and apical 1/2 hyaline, sometimes much smoky; venter of abdomen (w/ ♂ operculum) mostly black 4

3. Dorsum black with large brownish parts; fore and mid legs black with reddish ochreous parts; ♂ operculum elongated with the inner margin rather oblique and with the apex generally extending caudad..... *aquila* (WALKER)
- Dorsum uniformly jet black without any brownish parts; fore and mid legs also entirely black; ♂ operculum with the inner margin emarginate and with the apex more or less curved inwards..... *praeclara* M. HAYASHI, sp. nov. (♂)
4. Abdomen as well as operculum almost entirely ochreous orange; black part on cell CuA of forewing not reaching apex of the cell; Annam
- *nitidula* M. HAYASHI, sp. nov. (♂)
- Abdomen as well as operculum black with some dark ochreous parts; cell CuA of forewing entirely black or fuscous..... 5
5. Head narrower than pronotum; body large, ca 50 mm in average; basal 1/2 of forewing uniformly black..... *holsti* DISTANT
- Head about as wide as pronotum; body small, ca 43 mm in average; basal 1/2 of forewing much infuscated, becoming black towards the base.....
- *mandarina* DISTANT (in part)
6. Apical parts of wings more or less infuscated as a whole or along veins (especially along marginal veins)..... 7
- Apical parts of wings almost entirely hyaline, sometimes with slight tinge along apical veins 11
7. Basal part of forewing hyaline or pale coloured..... 8
- Basal part of forewing black or fuscous, mainly along the veins..... 9
8. Basal 1/2 of forewing opaque and yellowish green; abdominal venter and operculum concolorous, dark brown or black; white pollinosity on abdominal terga absent..... *fumipennis* (WALKER)
- Basal 1/2 of forewing hyaline, slightly tinged with green; venter of abdomen ochreous orange with a central wide black stripe; white pollinosity present on lateral part of 3rd to 4th (sometimes to 6th) abdominal terga
- *acuta* (SIGNORET)
9. Basal part of forewing smoky, much infuscated along the veins; dorsum black with dark olivaceous markings on thoracic nota; ♂ operculum short and rounded, with the apical margin obtusely angulate..... *niasana* DISTANT
- Basal black part of forewing appearing along the veins; dorsum uniformly black, not so glossy; ♂ operculum of elongated triangle in shape..... 10
10. Wing cells much infuscated..... *holsti* DISTANT (in part)
- Wing cells less infuscated except for the apical ones; Lan Hsu, Taiwan
- *kotoshoensis* KATO
11. Basal part of forewing, except for cell 1A, hyaline, without black part, and basal cell also not black but hyaline or opaquely coloured..... 12
- Basal part of wing with black and/or tawny (sometimes bronzy) part..... 22
12. White pollinosity on abdominal terga present..... 13

- White pollinosity on abdominal terga absent.....17
- 13. White pollinosity appearing on 1st abdominal tergum.....14
 - White pollinosity appearing mainly on lateral surface of 3rd abdominal tergum15
- 14. White pollinosity narrowly appearing on lateral part of 1st tergum, as a pair of small spots; Lombok and Sumbawa *lombokensis* DISTANT (♂)
 - White pollinosity appearing on 1st tergum entirely and sometimes on 3rd tergum laterally; thoracic nota blackish with pronotal outer area pale ochreous; Flores and Solor *ochromelas* M. HAYASHI, sp. nov. (♂)
- 15. White pollinosity present widely on lateral parts of 2nd (posteriorly) and 3rd (and sometimes 4th basally) abdominal terga; caudal and/or central parts of 7th sternum infuscated; ♂ operculum inwardly curved apicad, with the outer lateral part clothed with white pollinosity; lateral part of ♀ abdominal venter covered with thick white pollinosity; Timor *timorica* (WALKER)
 - White pollinose spot present only on 3rd abdominal tergum laterally16
- 16. White pollinose spot large, developed to lateral margin of 3rd tergum; abdominal venter with a central longitudinal wide black stripe; Alor
 - *alorensis* M. HAYASHI, sp. nov. (♂)
 - White pollinose spot small; abdominal sterna entirely dark castaneous except for the 2nd sternum mostly black; Wetar *wetarensis* M. HAYASHI, sp. nov. (♂)
- 17. Basal part of cell 1A of forewing black; basal cell opaquely green; forewing clearly hyaline with the 1st and 2nd cross veins very obscurely infuscated; ♂ operculum triangular, inwardly hooked apicad, reaching apical margin of 3rd abdominal sternum; abdominal venter (w/ operculum) orange ochreous with 2nd (centrally) and 7th (caudally) sterna black; SW India *edwardsi* KIRKALDY
 - Basal part of cell 1A of forewing not black but opaquely ochreous (sometimes tinged with green) or brown.....18
- 18. Dorsum dimly brownish with ochreous and castaneous parts, without distinct markings.....19
 - Dorsum with distinct markings20
- 19. Head narrower than pronotum; ♂ abdomen very wide, especially across 2nd segment, distinctly wider than pronotum; ♀ abdomen rather cuspidate, and the 9th segment narrower than basal margin of 7th sternum in ventral view; Andamans..... *insularis* DISTANT
 - Head slightly wider than pronotum; ♀ abdomen conical, and the 9th segment as wide as basal margin of 7th sternum in ventral view; Enggano.....
 - *dohertyi* M. HAYASHI, sp. nov. (♀)
- 20. Mesonotum dark brown with ochreous markings; basal cell of forewing ochreous; pronotal outer area pale ochreous; Flores and Solor
 - *ochromelas* M. HAYASHI, sp. nov. (♀)
 - Mesonotum black with greenish markings; basal cell of forewing ochreous tinged with green; pronotal outer area olivaceous green.....21

21. Head narrower than pronotum; pronotal inner area mostly black; ♀ 9th segment very long and ovipositor extending beyond the segment; Lombok and Sumbawa *lombokensis* DISTANT (♀)
 - Head slightly wider than pronotum; pronotal inner area mostly greenish ochreous with some black spots; ♂ operculum very long, extending slightly beyond 7th abdominal segment; Sumba *izzardii* LALLEMAND et SYNAVE (♂)
22. Basal area of forewing black, sometimes much infuscated brown23
 - Basal area of forewing tawny, stramineous or brown; basal cell sometimes black46
23. Infuscation on 1st and 2nd cross veins of forewing developed, forming a zigzag stripe; cells R₂ and 1st R₃ (apically) of forewing more or less smoky24
 - Forewing immaculate or maculate on 1st and 2nd cross veins26
24. Dorsum almost entirely dark castaneous or brown with some black parts on head and pronotum; basal black part of forewing not or slightly beyond the basal cell; Simeulue *brunnea* M. HAYASHI, sp. nov. (♂)
 - Dorsum almost entirely glossy black (rarely much infuscated brown); basal black part of forewing extending beyond basal cell25
25. Cell 1A of forewing entirely or mostly black or dark brown; basal black part of forewing more developed, far beyond the basal cell, spread to basal 1/4–1/3 of forewing; venter of abdomen uniformly black with dense golden pilosity laterally; ♂ operculum orange in colour with the inner base widely black and the apical margin obtusely angulate; Sumatra *karnyi* MOULTON
 - Black part on cell 1A of forewing covering less than basal 1/2; venter of abdomen black with the lateral part ochreous and with white pollinosity laterally in ♀♀; ♂ operculum long and triangular, gradually narrowed towards the apex; Palawan *viridicostalis* M. HAYASHI, sp. nov.
26. Cell 1A of forewing entirely or mostly black; basal black part on forewing extending far beyond basal cell27
 - Cell 1A of forewing black basally and hyaline apically29
27. Dorsum almost entirely shining black; abdomen hemmed by ochreous orange; ♂ operculum short and rounded, about as long as wide, with the orange ochreous marginal band towards the apex *atrata* (FABRICIUS) (in part)
 - Dorsum black with large brown or castaneous markings on head and thoracic nota; abdomen entirely black, not hemmed by ochreous28
28. Legs entirely pale ochreous *robinsoni* MOULTON (♂)
 - Legs black with some ochreous parts *moultoni* M. HAYASHI, sp. nov. (♂)
29. Costal veins of forewing black or much infuscated brown; basal black part on forewing not beyond basal cell; thoracic nota often with a wide longitudinal castaneous fascia; operculum and abdominal sterna concolorous; ♀ 9th abdominal segment (tergum) short and wide; Japan (Ryukyus) *yaeyamana* KATO
 - Costal veins of forewing not black but ochreous, reddish ochreous, olivaceous

- green or yellowish green, basally30
30. Thoracic nota pitchy black with some small ochreous spots; mesonotum very rarely furnished with an ochreous marking mainly along the parapsidal sutures31
- Thoracic nota black with distinct ochreous, brown or green markings.....37
31. Dorsum of abdomen hemmed by reddish ochreous laterally32
- Dorsum of abdomen entirely black, not hemmed by ochreous33
32. Male operculum short and rounded, about as long as wide, with orange ochreous marginal band towards the apex and with widely rounded apical margin; ♀ 9th abdominal segment (tergum) slightly longer than wide in ventral view; coxae with ochreous parts *atrata* (FABRICIUS)
- Male operculum elongated and triangular, distinctly longer than wide, with ochreous orange apical part; ♀ 9th abdominal segment (tergum) shorter than wide with relatively wide apex in ventral view; coxae entirely black *corvus* (WALKER)
33. Mid and hind coxae entirely black or much infuscated34
- Mid and hind coxae almost entirely orange ochreous, sometimes with the central fasciae fuscous; ♀ 9th abdominal segment (tergum) black with a pair of wide diagonal ochreous stripes on the ventral surface36
34. Venter uniformly black, without white pollinosity; ♂ operculum ochreous, elongated and triangular with acute apex; basal black part on forewing extending beyond the basal cell..... *recta* (WALKER)
- Venter mostly black, clothed with white pollinosity35
35. Basal black part of forewing spread far beyond the basal cell; ventral side of ♀ 9th tergum orange ochreous with the inner margin and apex black..... *auripilosa* M. HAYASHI, sp. nov. (♀)
- Basal black part of forewing hardly beyond the basal cell; ♂ operculum orange in colour; ventral side of ♀ 9th tergum entirely black *intermedia* (SIGNORET)
36. Ventral side of pronotal paranotum not covered with white pollinosity; head narrower than pronotum; central part of cruciform elevation not depressed; ♂ operculum oblong with the apical margin widely rounded; abdominal sterna bicoloured, ochreous and black *facialis* (WALKER)
- Ventral side of pronotal paranotum more or less covered with white pollinosity; head about as wide as pronotum; cruciform elevation depressed, and the central part even-surfaced; basal margin of ♂ 2nd abdominal tergum sharply expanded anteriad; ♂ operculum nearly oblong with the apical margin obtusely angulate; abdominal sterna unicoloured, black *takasagona* KATO
37. Forewing immaculate38
- Forewing maculate on or infuscated along 1st and 2nd cross veins.....40
38. Abdominal sterna uniformly ochreous orange except for the 2nd sternum black

- and concolorous with operculum; ♂ opercula not overlapping but contiguous to each other at the inner bases; frontoclypeus somewhat conically swollen.....
- *vesta* (DISTANT)
- Abdominal sterna mostly black or fuscous, not concolorous with operculum; frontoclypeus much swollen, and the tylus distinctly longer than vertex39
39. Coxae black or much infuscated; ♂ opercula orange in colour, overlapping each other at the inner bases; lateral part of abdominal venter more or less covered with white pollinosity; S India and Sri Lanka.....*exalbida* DISTANT
- Coxae mostly dark castaneous; ♂ opercula bright orange in colour, contiguous to each other, with the apical parts roundly triangular; abdominal venter hardly covered with white pollinosity; N Thailand*gracilis* M. HAYASHI, sp. nov.
40. Thoracic nota black with large dark olivaceous or castaneous markings; head including tylus almost entirely black and about as wide as or slightly narrower than pronotum; vein 2A of forewing a little emarginate; abdominal sterna entirely black or infuscated brown; ♂ operculum rather short, not beyond 4th abdominal sternum41
- Thoracic nota almost entirely olivaceous, sometimes tinged with green, with some black markings and spots; head distinctly wider than pronotum; vein 2A of forewing strongly bent upwards in basal 1/2; abdominal sterna mostly ochreous or testaceous; ♂ operculum elongated, extending far beyond 4th abdominal sternum, not overlapping the opposite at the inner base
- 42 (*diomedea* group)
41. Abdominal terga entirely glossy black; thoracic nota black with large dark olivaceous markings; head slightly narrower than pronotum; ♂ operculum orange in colour, not concolorous with abdominal sterna black, with the apical margin obtusely angulate; hindwing a little longer than 1/2 the length of forewing; Sumbawa*varicolor* DISTANT
- Abdominal terga with central large brown spots; thoracic nota dark castaneous with some black parts; head slightly wider than pronotum; dorsum tomentose; ♂ operculum, concolorous with abdominal sterna, dark castaneous in the outer part and black in the rest, and short and oblong with the apical margin rounded; hindwing very short, clearly shorter than 1/2 the length of forewing; Tenasserim (Burma).....*limborgi* DISTANT (♂)
42. Male operculum not tapering towards the apex, rather parallel-sided, with truncate apex; abdominal sterna reddish castaneous to testaceous; lateral part of abdominal venter not covered with white pollinosity; SW Sumatra.....
- *diomedea* (WALKER)
- Male operculum tapering towards the apex and divergent from the opposite, with rounded apex; abdominal sterna rather ochreous; ♀ abdominal venter covered with white pollinosity laterally43
43. Uncus lobe of ♂ genitalia with a pair of hooked projections on inner surface at

- the apex; Borneo and N Sumatra *epithesia* DISTANT
- Uncus lobe without apical hooked projections 44
44. Male operculum extending far beyond 6th abdominal segment; abdomen slightly longer than distance between head and thorax in dorsal median length; Batu..... *demissitia* DISTANT (♂)
- Male operculum long but not beyond 6th abdominal segment 45
45. Abdomen wide, nearly parallel-sided at basal 3 segments; apex of ♂ operculum subacute; head mostly black; body smaller, 38–40 mm long; Nias...
..... *brevicorpus* M. HAYASHI, sp. nov. (♂)
- Abdomen rather conical; apex of ♂ operculum rounded or obtuse; head olivaceous with a wide band across vertex black; body large, 43–51 mm long; C Smatra and Malay Peninsula *jacobsoni* CHINA
46. Dorsum almost entirely shining black; forewing with brown or tawny tinge towards the base (sometimes extending to nodal line); infuscation on 1st and 2nd cross veins of forewing very faint; ♂ operculum concolorous with abdominal sterna, of elongated triangle in shape with the obtuse apex.....
..... *mandarina* DISTANT
- Dorsum black, with more or less brown and/or ochreous parts 47
47. White pollinose spot appearing on lateral surface of ♂ 3rd and ♀ 3rd–4th abdominal terga 48
- Abdominal terga without white pollinosity..... 49
48. Mesonotum castaneous with a pair of anterior fasciae black; abdominal sterna with a series of small black spots centrally and white pollinosity laterally; Panay, Negros and Cebu *socialis* M. HAYASHI, sp. nov. (♂)
- Mesonotum emphasized by black part; abdominal sterna almost entirely ochreous orange, without white pollinosity; Mindanao, Basilan and Dinagat ...
..... *consanguinea* DISTANT
49. Basal tawny area on forewing developed, often extending to nodal line (basal hue rarely darkened, to bronzy); ♂ operculum ochreous orange with the apex acuminate and slightly curved inwards *accipiter* (WALKER)
- Basal tawny or stamineous part on forewing confined to the basal part, extending to less than 1/4 of forewing..... 50
50. Thoracic nota strengthened by black area; abdominal sterna as well as ♂ operculum entirely pale ochreous; ♂ operculum elongated and triangular with acuminate apex; N Sulawesi..... *ventralis* M. HAYASHI, sp. nov. (♂)
- Mesonotum with broad castaneous area; abdominal sterna orange ochreous, sometimes with a series of central wide black spots, forming a central longitudinal stripe..... 51
51. Abdominal sterna almost entirely orange ochreous, not forming a central longitudinal stripe..... ♂, 52; ♀, 55
- Abdominal sterna black centrally, forming a central longitudinal black stripe;

- lateral part of abdominal venter more or less covered with white pollinosity
 ♂, *distanti* M. HAYASHI, sp. nov. (S & C Sulawesi); ♀, 56
52. Operculum with the inner margin emarginate and acute apex53
 – Operculum with the inner margin nearly straight and the apex more or less rounded54
53. Lateral part of abdominal sterna clothed with white pollinosity; Luzon
 *albolineata* M. HAYASHI, sp. nov. (♂)
 – Lateral part of abdominal sterna not clothed with white pollinosity; Sibuyan, Romblon and Tablas *sibuyana* M. HAYASHI, sp. nov. (♂)
54. Head as wide as pronotum; anterior margin of head ochreous; Jolo (Sulu)
 *suluensis* DISTANT (♂)
 – Head wider than pronotum, mostly black except for the inner posterior margin dark castaneous; Peleng (C Sulawesi) *pelengensis* M. HAYASHI, sp. nov. (♂)
55. Lateral part of abdomen covered with white pollinosity; Sibuyan, Romblon and Tablas *sibuyana* M. HAYASHI, sp. nov. (♀)
 – Lateral part of abdomen not covered with white pollinosity; Jolo (Sulu)
 *suluensis* DISTANT (♀)
56. Seventh abdominal pleuron longer than wide; Peleng (C Sulawesi)
 *pelengensis* M. HAYASHI, sp. nov. (♀)
 – Seventh abdominal pleuron as long as wide57
57. Abdominal pleura entirely orange ochreous; Luzon
 *albolineata* M. HAYASHI, sp. nov. (♀)
 – Abdominal pleura mostly black; S & C Sulawesi
 *distanti* M. HAYASHI, sp. nov. (♀)

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<i>nitidula</i>	M. HAYASHI	[<i>recta</i> group]	I-196
<i>ochromelas</i>	M. HAYASHI	[<i>acuta</i> group]	I-164
<i>pelengensis</i>	M. HAYASHI	[<i>accipiter</i> group]	II-30
<i>praeclara</i>	M. HAYASHI	[<i>aquila</i> group]	I-182
<i>recta</i>	(WALKER)	[<i>recta</i> group]	I-191
<i>robinsoni</i>	MOULTON	[<i>recta</i> group]	I-197
<i>sibuyana</i>	M. HAYASHI	[<i>accipiter</i> group]	II-9
<i>socialis</i>	M. HAYASHI	[<i>accipiter</i> group]	II-13
<i>suluensis</i>	DISTANT	[<i>accipiter</i> group]	II-21
<i>takasagona</i>	KATO	[<i>facialis</i> group]	II-57
<i>timorica</i>	(WALKER)	[<i>acuta</i> group]	I-167
<i>varicolor</i>	DISTANT	[<i>varicolor</i> group]	I-189
<i>ventralis</i>	M. HAYASHI	[<i>accipiter</i> group]	II-32
<i>vesta</i>	(DISTANT)	[<i>corvus</i> group]	II-65
<i>viridicostalis</i>	M. HAYASHI	[<i>accipiter</i> group]	II-14
<i>wetarensis</i>	M. HAYASHI	[<i>acuta</i> group]	I-172
<i>yaeyamana</i>	KATO	[<i>corvus</i> group]	II-87