

New and poorly known Dermaptera from South-East Asia

L.N. Anisyutkin

Anisyutkin, L.N. 1997. New and poorly known Dermaptera from South-East Asia. *Zoosystematica Rossica*, 6(1/2): 37-44.

Four new species of earwigs from South-East Asia belonging to the families Pygidicranidae, Diplatyidae and Labiduridae are described. New data on the geographical distribution of *Diplatys fallax* Borelli and *D. degerholiae* Ramamuthi are given. For *Brachilabis punctata* Dubrony, a drawing of the male genitalia is given, based on a specimen from Thailand.

L.N. Anisyutkin, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St.Petersburg 199034, Russia.

Introduction

The material described below was gathered in different regions of South-East Asia and is kept in the Zoological Institute, St.Petersburg. A part of this material was obtained from the Institute of Evolutionary Morphology and Ecology of Animals, Moscow.

Family **PYGIDICRANIDAE** Verhoeff, 1902

Subfamily **PYGIDICRANINAE** Verhoeff, 1902

Genus **Cranopygia** Burr, 1908

Cranopygia corymbifera sp. n.
(Figs 1-6)

Holotype. ♂, **Malaysia**, state Pahang, Kuala Tahan near river Tembeling, environs of National Park "Taman negara", primary tropical forest, 12-16.VII.1996 (A. Gorochov).

Paratypes. 1 ♀, 1 larva, same data as holotype.

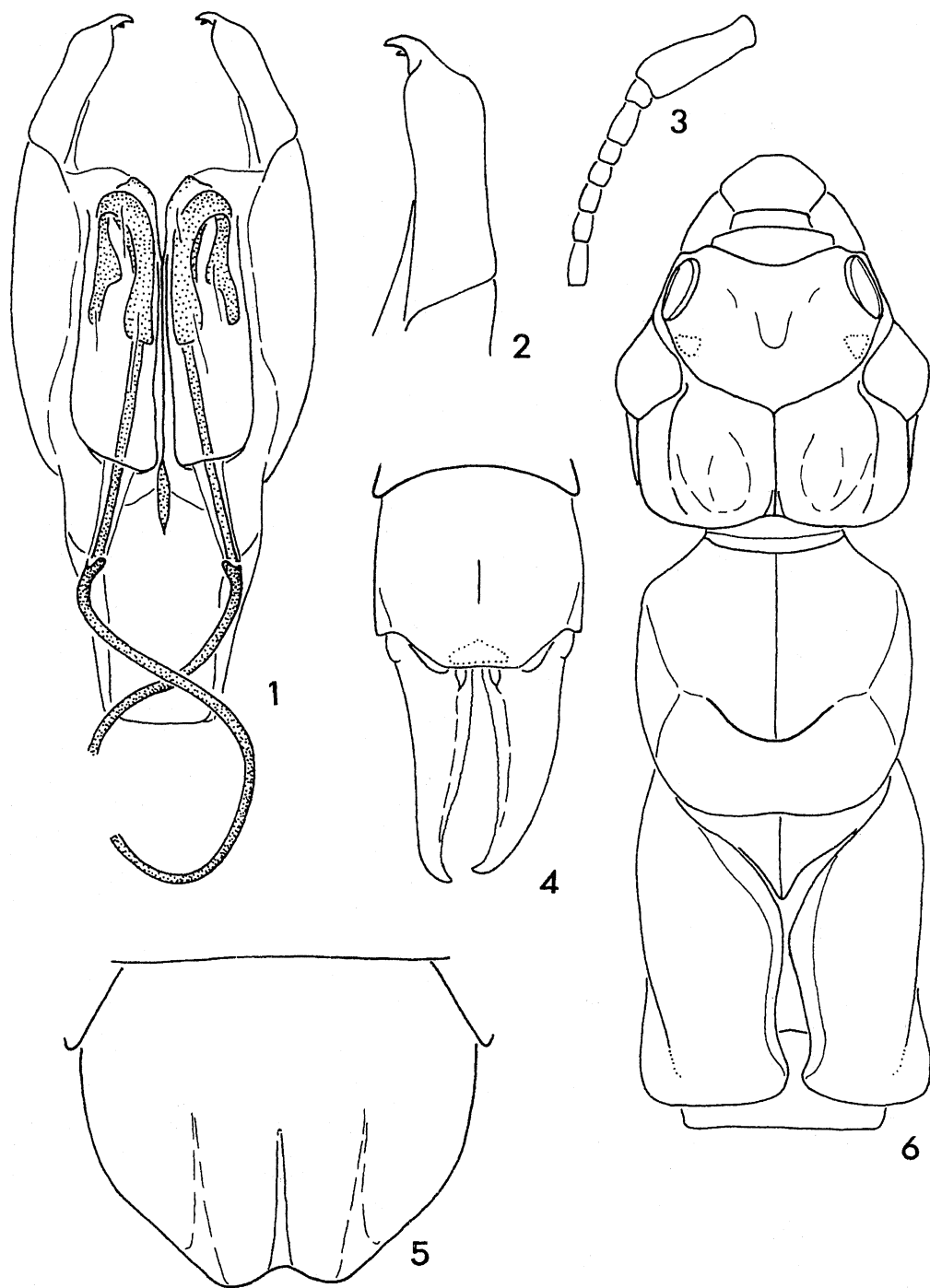
Description. Male (holotype). General colour yellowish dark brown; head, tegmina and proximal part of antennae nearly black; pronotum, except darkened anterior margin, scutellum and thoracic sternites yellow; legs uniformly yellow; distal part of antennae and abdomen brown; cerci reddish brown. Head longer than broad (Fig. 6); surface dull; genae longer than eyes; postocular carina weak; frons convex; occiput feebly depressed; epicranial sutures visible; hind margin of head slightly emarginate in middle.

Antennae with more than 25 segments (apical segments broken); 1st segment slightly shorter than distance between antennal bases; 2nd subquadrate; next segments as in Fig. 3; distal segments fusiform. Pronotum slightly transverse (Fig. 6), slightly contracted posteriorly; sides strongly rounded; posterior margin slightly emarginate; prozona moderately raised, separated from convex metazona; median sulcus present only on prozona. Tegmina abbreviated (Fig. 6), exposing a large triangular scutellum; inner side of each tegmen slightly curved. Wings absent. Abdomen gradually expanded to ultimate tergite; ultimate tergite large and convex (Fig. 4); lateral carina absent; median sulcus weak; triangular area at the posterior margin present. Cerci (Fig. 4) of *anisolabis*-type. Penultimate sternite (Fig. 5) broad and emarginate, a faint median impressed line present. Male genitalia (Fig. 1) similar to those of representatives of *vietnamensis* species-group; metaparameres practically without outer tooth, inner tooth curved, its tip bifid (Fig. 2); virga tubular, long, well sclerotized (its apex broken in the holotype).

Female. Similar to male but more robust; pronotum slightly longer than broad; cerci and penultimate sternite simple.

Length (mm): head ♂ 3.8; ♀ 4.4; pronotum ♂ 2.5; ♀ 3.3; tegmina ♂ 3.3; ♀ 3.8; cerci ♂ 5; ♀ 6.3. Width (mm): head ♂ 3.3; ♀ 3.8; pronotum ♂ 2.8; ♀ 3.1.

Comparison. This species belongs to the *vietnamensis* species-group (Gorochov & Anisyutkin, 1993). *C. corymbifera* differs from



Figs 1-6. *Cranopygia corymbifera* sp. n., ♂ (holotype): 1, male genitalia from above; 2, metaparamere; 3, proximal part of left antenna; 4, ultimate tergite of abdomen and cerci from above; 5, penultimate sternite from below; 6, head and thorax from above.

other species of the group in the structure of the male genitalia, especially in the shape of virga and metaparameres, shape of the pronotum and tegmina, and in the large scutellum.

Note. Representatives of the *vietnamensis* species-group described by Gorochov & Anisyutkin (1993) are similar to *Cranopygia cumingi* (Dohrn), the type species of the genus, in the structure of the male genitalia (shape of the metaparamere; long, comparatively simple virga; peculiar shape of the accessory sclerites (Fig. 1); asymmetrical, *anisolabis*-like cerci of male), comparatively large scutellum, and characteristically abbreviated tegmina.

Family **DIPLATYIDAE** Verhoeff, 1902

Subfamily **DIPLATYINAE** Verhoeff, 1902

Genus **Diplatys** Serville, 1831

Diplatys kabakovi sp. n.
(Figs 7-11)

Holotype. ♂, Vietnam, prov. Thanh Hoa, Lang-Chanh, 17-18.IV. 1963 (O. Kabakov).

Description. Male (holotype). Colour dark brown with lighter markings; head and abdomen nearly black; prozona of pronotum, tegmina and first segment of antennae brown; metazona of pronotum and antennae, except 1st segment, pale yellowish; cerci yellow; legs yellow; fore legs with femora and tibiae, except small area on the top, black; middle legs missing; middle part of hind femora black. Head broad (Fig. 9); eyes prominent, longer than genae; postocular carina weak; frons slightly tumid, gradually passing into depressed occiput; epicranial sutures obsolete, only posterior part of sutura coronalis present. Antennae with more than 10 segments (apical segments broken); 1st segment shorter than the distance between antennal bases; 2nd subquadrate; 3rd and 4th subequal, but 4th more robust, next segments progressively lengthening. Pronotum about as long as broad (Fig. 9); sides strongly rounded; slightly contracted posteriorly; posterior margin rounded; prozona separated from metazona; median sulcus weak. Tegmina and wings present, exposing a triangular scutellum. Abdomen slender, cylindrical; glands of tergites 3 and 4 present; ultimate tergite elongate and tumid

(Fig. 10); posterior margin slightly concave mesad; median sulcus obsolete. Cerci simple, subcontiguous, tapering, straight and crenulate. Penultimate sternite (Fig. 11) roundly emarginate; median depression near the posterior margin sub-rugosely sculptured. Male genitalia (Fig. 7) similar to those of representatives of the *yunnaneus* species-group, membranous; metaparameres comparatively short and robust; complex of the virga and the accessory sclerites (Fig. 8) peculiar: virga very faintly sclerotized, large, well sclerotized, denticulate lobe present.

Female unknown.

Length (mm): head ♂ 1.1; pronotum ♂ 1; tegmina ♂ 2.5; cerci ♂ 1. Width (mm): head ♂ 1.4; pronotum ♂ 1.

Comparison. This species belongs to the *yunnaneus* species-group (Gorochov & Anisyutkin, 1994). It may be differentiated from other representatives of this group by the shape of the virga with accessory structure and comparatively robust and short metaparameres.

Etymology. This species is named in honour of the well-known investigator of the fauna of Vietnam Dr. O.N. Kabakov.

Diplatys fallax Borelli, 1926

Material. Thailand: 2 ♂, 1 larva, prov. Surat Thani, 40 km WSW of Phanom, environs of National Park "Khao Soc", at light, 28.X-19.XI.1995 (M. Mostovski).

This species was described from Sumatra. The holotype was illustrated by Hincks (1955, p. 106), who also recorded this species from the Malacca peninsula (without exact locality).

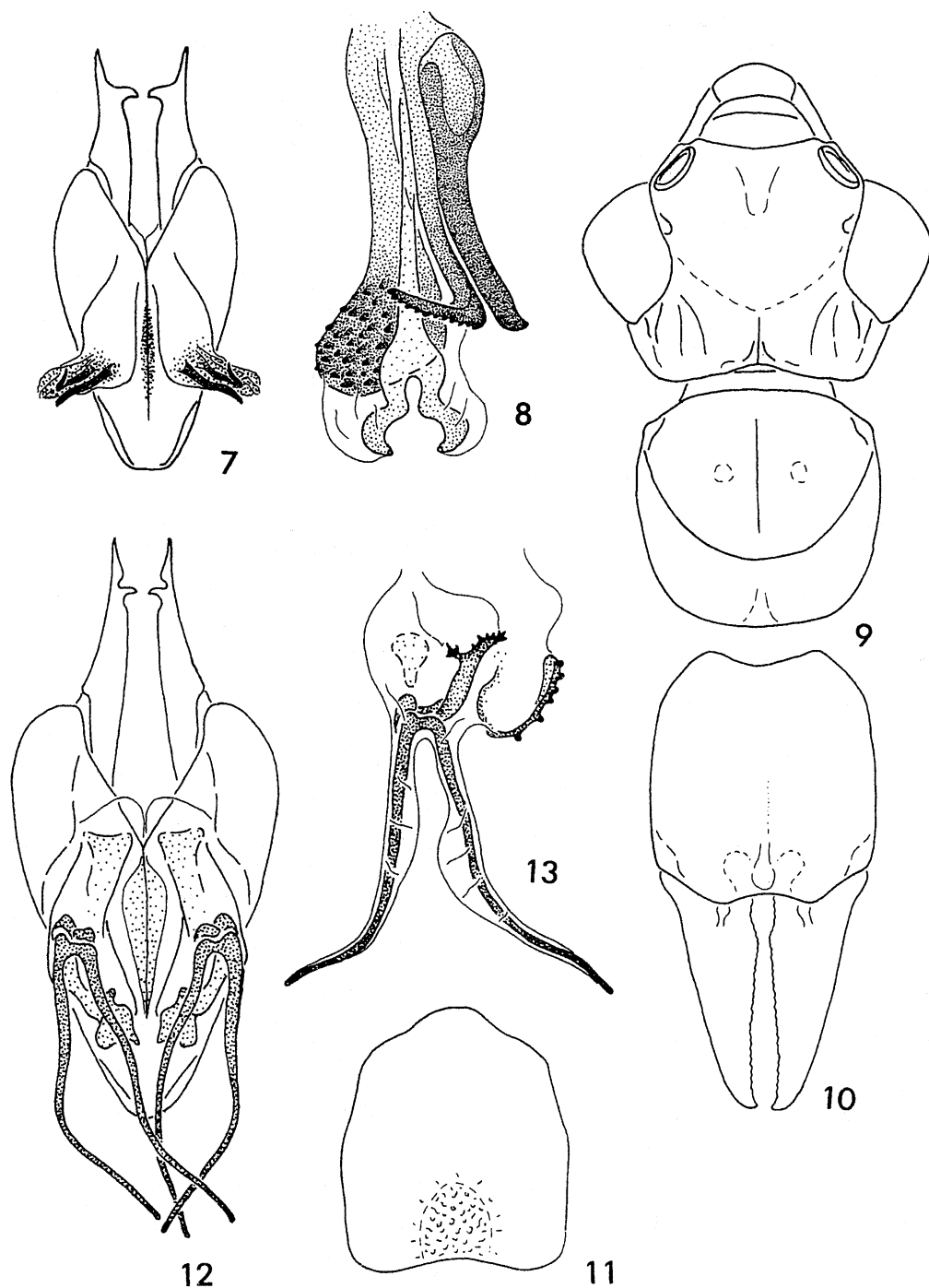
Note. One specimen, the smaller one, has fairly asymmetrical cerci, the right cercus longer than the left one.

Length (mm): head ♂ 1.6-1.5; pronotum ♂ 1.3-1.2; tegmina ♂ 2.8; cerci ♂ 1.5. Width (mm): head ♂ 1.7-1.6; pronotum ♂ 1.2.

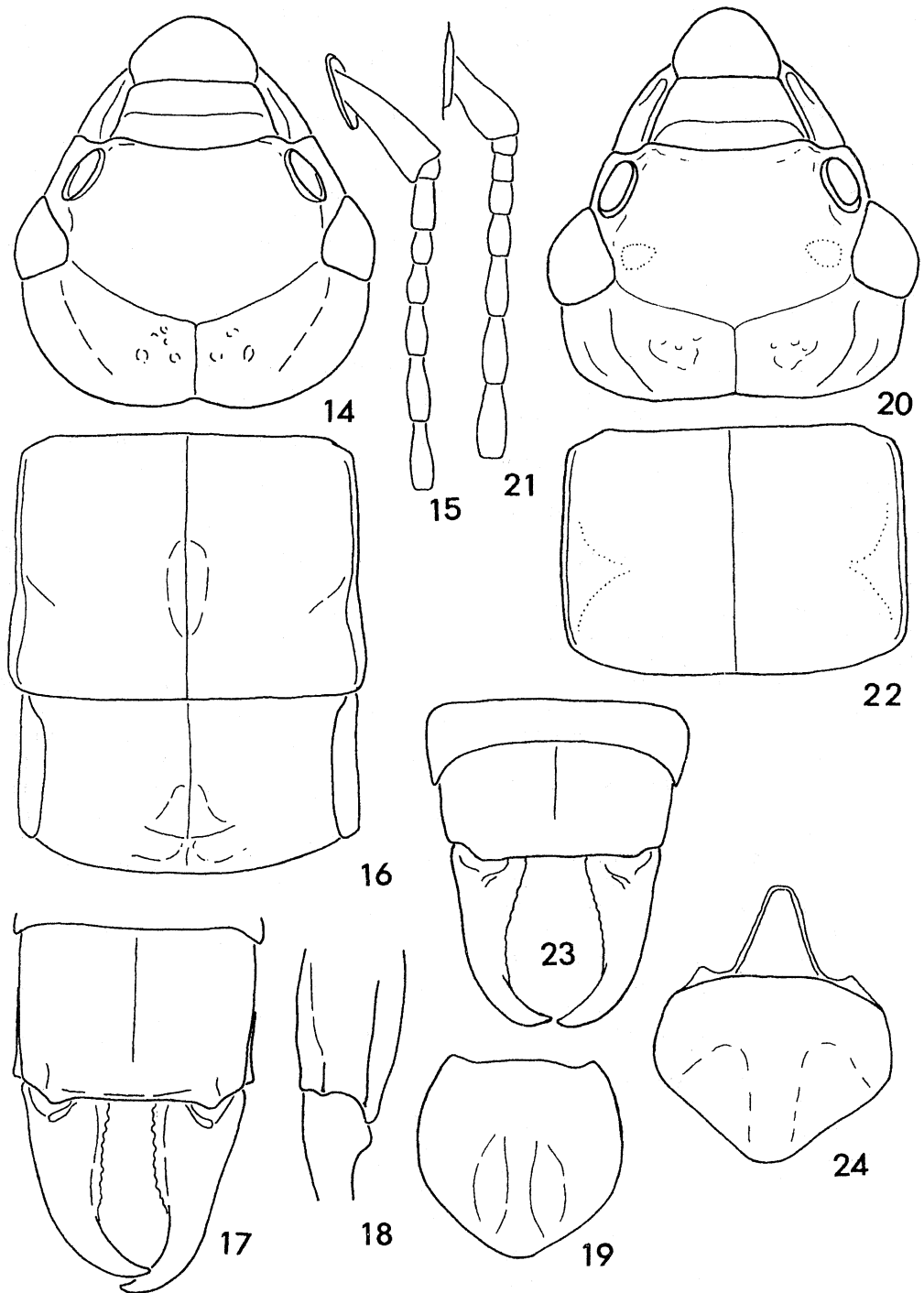
Diplatys degerboliae Ramamurthi, 1973
(Figs 12-13)

Material. Thailand: 1 ♂, prov. Phetchaburi (in the north of Malay Peninsula), 50 km SW of Phetchaburi, environs of National Park "Kaeng Krachan", 400 m, 30.VII-1.VIII.1996, secondary tropical forest near reservoir (A. Gorochov).

This species was described from Doi Suthep, NE. Thailand (Ramamurthi, 1973). The specimen examined was collected much southwards, in the northern part of Malay Peninsula.



Figs 7-13. Diplatysinae. 7-11, *Diplatys kabakovi* sp. n., ♂ (holotype): 7, male genitalia from above; 8, virga and accessory sclerites; 9, head and pronotum from above; 10, ultimate tergite of abdomen and cerci from above; 11, penultimate sternite from below. 12-13, *D. degerboliae* Ramamuthi: 12, male genitalia from above; 13, virga and accessory sclerites in everted condition.



Figs 14-24. Allostethinae. 14-19, *Allostethella insularis* sp. n., ♂ (holotype): 14, head; 15, proximal part of right antenna; 16, pro- and mesonotum with tegmina; 17, 18, ultimate tergite of abdomen and cerci from above and from the side; 19, penultimate sternite from below. 20-24, *Gonolabidura extima* sp. n., ♂ (holotype): 20, head; 21, proximal part of right antenna; 22, pronotum; 23, ultimate tergite of abdomen and cerci from above; 24, penultimate sternite from below.

Length (mm): head ♂ 1.4; pronotum ♂ 1.2; tegmina ♂ 2.9; cerci ♂ 1.1. Width (mm): head ♂ 1.5; pronotum ♂ 1.1.

Family **LABIDURIDAE** Verhoeff, 1902

Subfamily **ALLOSTETHINAE** Verhoeff, 1904

Genus **Allostethella** Zacher, 1910

Allostethella insularis sp. n.

(Figs 14-19, 28)

Holotype. ♂, Vietnam, southern part of Con Dao island, 6.IV.1987 (V. Janushev).

Paratypes. 1 ♀, same locality, dry secondary forest, 4.IV.1987 (V. Janushev), 1 larva, same data as holotype.

Description. Male (holotype). General colour reddish brown; underside of head and thorax brown; posterior part of abdomen and cerci reddish; antennae brownish grey, last segments pale; legs pale yellow, proximal half of femora reddish brown. Head a little longer than broad (Fig. 14), smooth; genae longer than eyes; postocular carina very weak, fragmentary; epicranial sutures visible but weak; hind margin of head rounded, very feebly emarginate in middle. Antennae 14-segmented; 1st segment shorter than the distance between antennal bases; 2nd subquadrate; next segments as in Fig. 15; distal segments fusiform. Pronotum transverse (Fig. 16); sides nearly straight, slightly widened posteriorly; posterior margin straight; pro- and metazona not separated; pro-, meso- and metanotum with median sulcus; pro- and metanotum with median depression. Tegmina reduced to lateral scales (Fig. 16). Wings absent. Abdomen gradually dilated to ultimate tergite, flattened, punctate; ultimate tergite transverse (Fig. 17), strongly punctulate; lateral carina strong (Fig. 18); median sulcus weak; posterior margin straight in middle. Cerci remote at base (Fig. 17), curved apically, slightly asymmetrical; internal margin crenulate in proximal half. Penultimate sternite (Fig. 19) pentagonal, rounded posteriorly, with a pair of depressions. Male genitalia (Fig. 28) strongly elongated; metaparameres acuminate; virga robust, dilated, with sinuate apex; two well visible accessory sclerites present.

Female. Similar to male but more robust and darker: upperside of head and thorax nearly black. Antennae of female with more than 16 segments (broken apically).

Length (mm): head ♂ 2.3; ♀ 2.8; pronotum ♂ 1.7; ♀ 2.1; tegmina ♂ 0.8; ♀ 1.1; cerci ♂ 2.3; ♀ 3. Width (mm): head ♂ 2.2; ♀ 2.5; pronotum ♂ 2.3; 2.8.

Comparison. This species has somewhat isolated position in the genus due unusual complex of features: lack of wings, scale-like tegmina, and shape of the pronotum and cerci. The shape of the pronotum reminds that of the representatives of the genus *Allostethus*.

Genus **Gonolabidura** Zacher, 1910

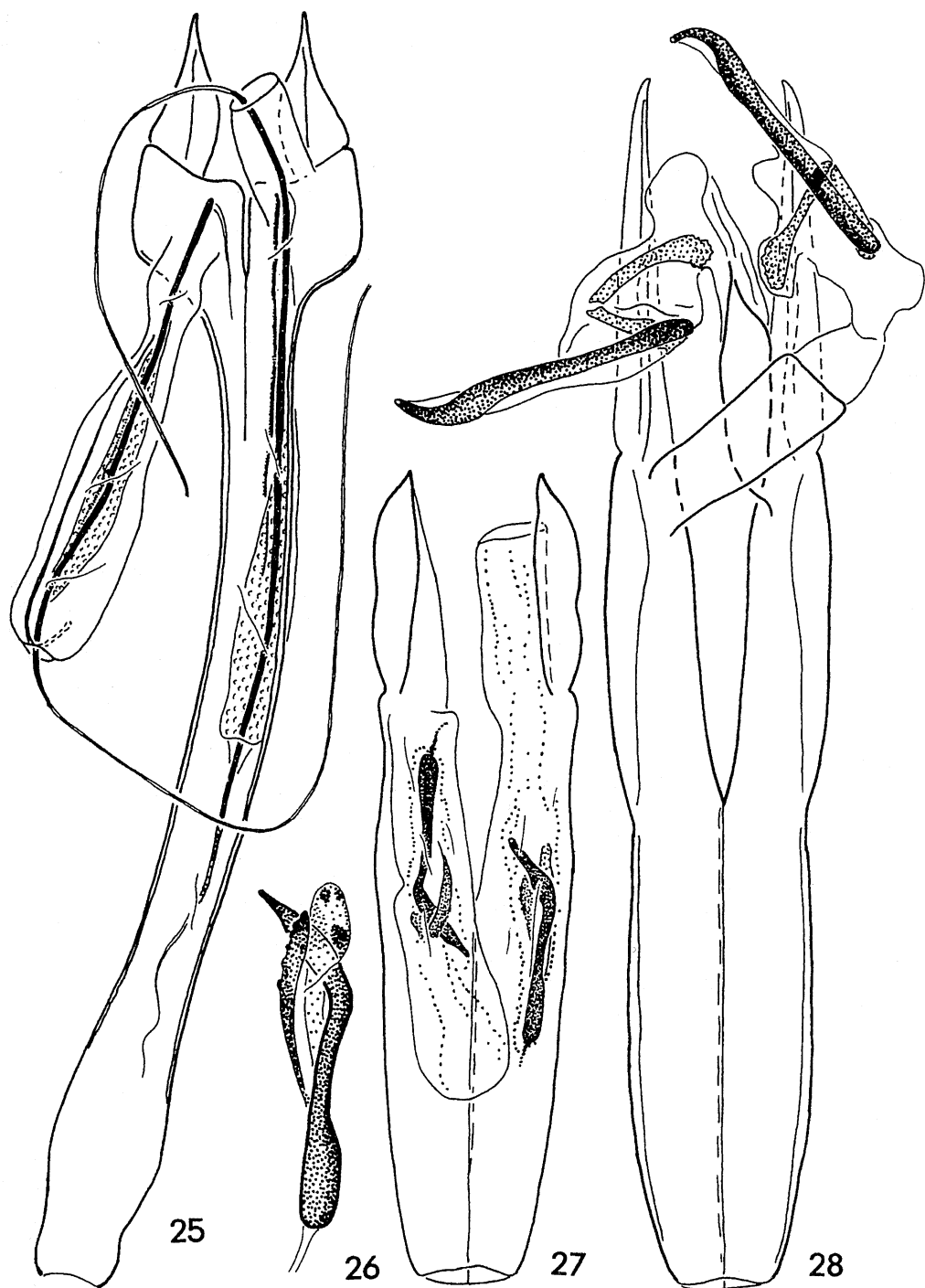
Gonolabidura extima sp. n.

(Figs 20-24, 26,27)

Holotype. ♂, Vietnam, prov. Gia Lai, 20 km N of Kannack, Buon luoi, 1-10.V.1995 (A. Gorochov).

Paratypes. 1 ♀, 1 larva, same locality, 5-8.XI.1993 (A. Gorochov).

Description. Male (holotype). General colour reddish brown; ventral side of head and thorax brown; posterior part of abdomen and cerci reddish; antennae brownish grey, last segments pale; legs pale yellow, proximal half of femora reddish brown. Head about as long as broad (Fig. 20), smooth; genae longer than eyes; postocular carina very weak, fragmentary; epicranial sutures visible but weak; hind margin of head rounded, very feebly emarginate in middle. Antennae with more than 11 segments; 1st segment shorter than the distance between antennal bases; 2nd subquadrate; next segments as in Fig. 21; distal segments fusiform. Pronotum transverse (Fig. 22); sides nearly straight; posterior margin straight; latero-caudal angles very feebly rounded; pro- and metazona not separated; pro- and mesonotum with median sulcus; mesonotum feebly rounded posteriorly; metanotum emarginate posteriorly. Tegmina and wings entirely absent. Abdomen strongly punctured, flattened, widest near the middle of abdomen. Ultimate tergite transverse (Fig. 23), smooth; lateral carina absent; median sulcus present; posterior margin straight. Cerci remote at base (Fig. 23), curved, almost symmetrical. Penultimate sternite (Fig. 24) pentagonal, rounded posteriorly, with a pair of depressions. Genitalia (Fig. 27) elongated; metaparameres acuminate, their outer margins slightly emarginate; virga robust, with proximal and distal parts dilated, middle part somewhat constricted (Fig. 26); accessory sclerites present.



Figs 25-28. Male genitalia from above (25, 27, 28) and virga and accessory sclerites (26): 25, *Brachilabis punctata* Dubrony; 26, 27, *Gonolabidura extima* sp. n.; 28, *Allostethella insularis* sp. n.

Female. Similar to male but cerci less curved.

Larva. Similar to male, but darker: head, thorax and anterior part of abdomen nearly black. Right antenna with 12 segments, two last segments pale.

Length (mm): head ♂ 2.2; ♀ 2.5; pronotum ♂ 1.5; ♀ 1.8; cerci ♂ 2.4; ♀ 2.8. Width (mm): head ♂ 2.2; ♀ 2.5; pronotum ♂ 2; ♀ 2.7.

Comparison. This species is similar to *G. astruci* Burr from South India in the shape of the cerci, but differs from the other representatives of the genus *Gonolabidura* (sensu Brindle, 1965) in the transverse pronotum and presence of accessory sclerites within the genital lobe. The shape of metaparameres may characterize this species too.

Family ANISOLABIDIDAE Verhoeff, 1902

Subfamily BRACHILABIDINAE Burr, 1908

Genus *Brachilabis* Dohrn, 1864

Brachilabis punctata Dubrony, 1879

(Fig. 25)

Material. Thailand: 1 ♂, prov. Surat Thani, 40 km WSW of Phanom, environs of National Park "Khao Soc", primary tropical forest, 20-29.VII.1996 (A. Gorochov).

This species was described from Java (Buitenzorg). At present *B. punctata* is considered to be a widely distributed species. Sakai (1996, p. 15) gives the following area for this species: "Oriental region, New Guinea, N. Australia". The original description was based on a female. The holotype was re-described by Srivastava (1983) as *Iso-labis punctata*. The male genitalia have not yet been described. We give here a figure of the genitalia of a male referred by us to this species, but we cannot be sure in its identifi-

cation because the male genitalia of specimens from Java were not described.

Length (mm): head ♂ 1.5; pronotum ♂ 1.8; cerci ♂ 2.4. Width (mm): head ♂ 1.5; pronotum ♂ 2.

Acknowledgements

The author wishes to express his sincere thanks to Dr. A.V. Gorochov and Dr. O.N. Kabakov for their help in preparation of this paper. This investigation was supported by grant from the International Orthopterist's Society for 1996. The work was fulfilled using scientific collections of the Zoological Institute, Russian Academy of Sciences, which obtain financial support from the Science and Technology State Committee of Russian Federation (Reg. No. 97-03-16).

References

- Brindle, A. 1965. A revision of the subfamily Allostethinae (Dermaptera, Labiduridae). *Ann. Mag. nat. Hist.* (13), 8: 575-596.
- Gorochov, A.V. & Anisyutkin, L.N. 1993. Contribution to the knowledge of the earwig subfamily Pygidicraninae (Dermaptera, Pygidicranidae). *Zool. Zh.*, 72(11): 40-49. (In Russian).
- Gorochov, A.V. & Anisyutkin, L.N. 1994. To the knowledge of Vietnam earwigs from the family Diplatyidae (Dermaptera). *Trudy zool. Inst. Ross. Akad. Nauk*, 257: 59-71. (In Russian).
- Hincks, W.D. 1955. *A systematic monograph of the Dermaptera of the world. Pt. 1. Pygidicranidae subfamily Diplatyinae.* 132 p. London (Brit. Mus. Nat. Hist.).
- Ramamurthi, B.N. 1973. Dermaptera from Thailand, with descriptions of three new species (Insecta: Dermaptera). *Steenstrupia*, 3(2): 11-16.
- Sakai, S. 1996. *Dermapterorum catalogus XXXI.* P. 9309-9883. Tokyo.
- Srivastava, G.K. 1983. Notes on Dubrony's (=Bor-mans) some material of Dermaptera (Insecta). *Ann. Mus. civ. Stor. nat. G. Doria*, 84: 373-392.

Received 17 April 1997