

# Notes on the genus *Deroplatys* Westwood, with description of a new species from Vietnam (Mantodea: Mantidae: Deroplatyinae)

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A new species of the genus *Deroplatys* from South Vietnam is described. This is the first record of the genus from Vietnam. A drawing of the male genitalia is given for *D. denticata* Westwood, the type species of the genus.

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## Introduction

The species of the genus *Deroplatys* show a peculiar habitus apparently associated with imitation of dead foliage (Beier, 1935, 1964). The genus is recorded here from Vietnam for the first time. In terminology of the male genitalia, the author follows Milledge (1990). The examined material is kept in the collection of the Zoological Institute, St. Petersburg.

Family MANTIDAE Burmeister, 1838

Subfamily DEROPLATYINAE Giglio-Tos, 1919

Genus *Deroplatys* Westwood, 1838

Type species *Deroplatys denticata* Westwood, 1838, Malacca.

**Diagnosis.** Macropterous in both sexes. Outer margin of eye rounded; frontal shield subrectangular (Figs 2, 4); pronotum enlarged. Sexual dimorphism sharply defined: pronotum rhomboidal in male and more or less bell-shaped in female (Figs 1, 10). In female, costal area of tegmina expanded and apex of wings usually produced into more or less long process. Middle and hind femora with apical lobe-like outgrowths and genicular spine. Male genitalia (Figs 12-21): distal process of ventral phallomere with more or

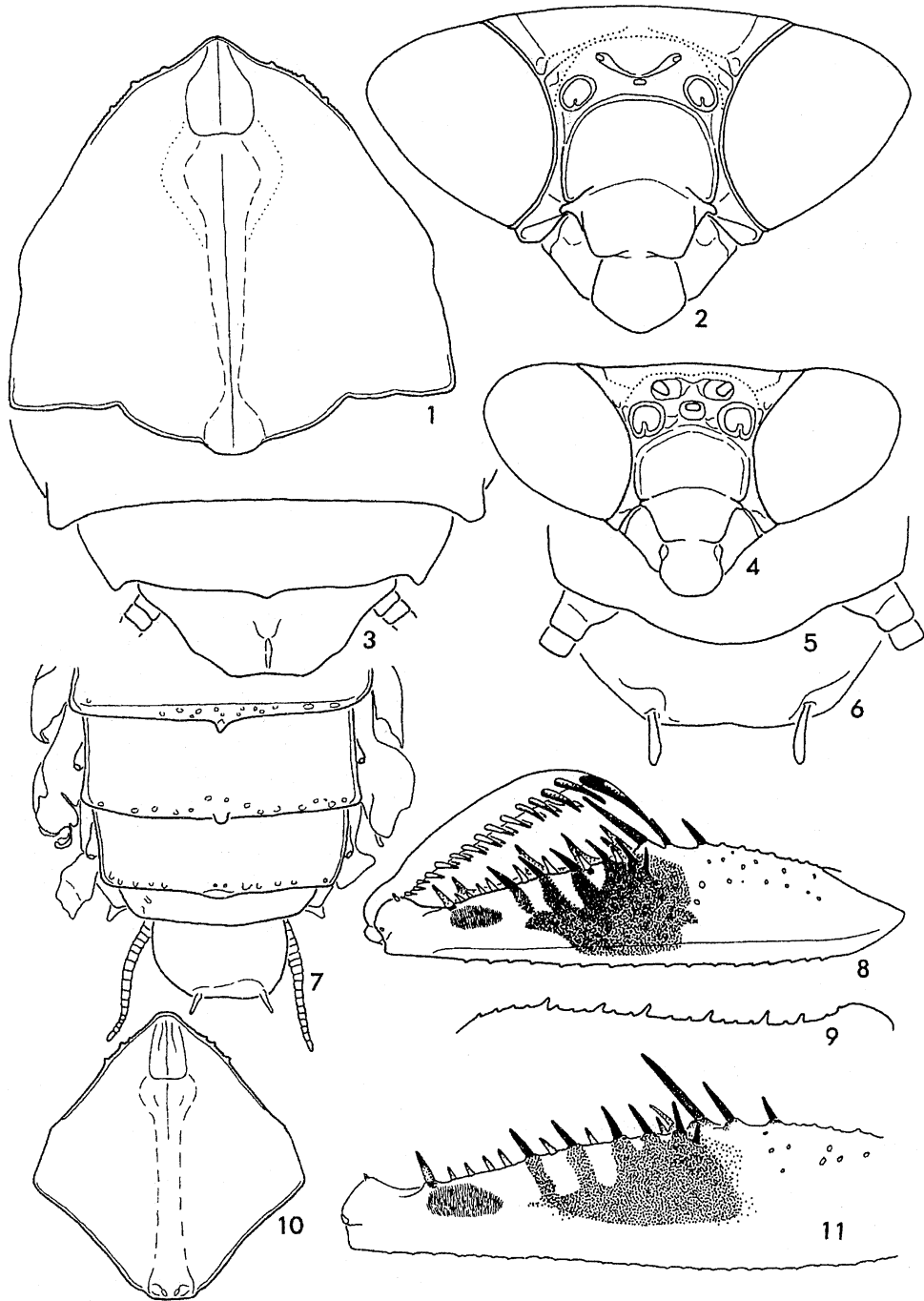
less distinct sclerotized hook; apical process of left phallomere curved and tapering to rounded tip; phalloid apophysis of left phallomere and ventral sclerotized process of right phallomere strongly sclerotized.

**Included species:** the type species, *D. shelfordi* Kirby, 1903, *D. truncata* Guérin-Méneville, 1843, *D. trigonodera* Westwood, 1889, *D. moultoni* Giglio-Tos, 1917, *D. lobata* Guérin-Méneville, 1838, *D. rhombica* Haan, 1842, *D. angustata* Westwood, 1841, *D. sarawaka* Westwood, 1889, *D. philippinica* Werner, 1922, *D. gorochovi* sp. n.

***Deroplatys denticata* Westwood, 1839**  
(Figs 3, 7, 16, 17, 20, 21)

**Material examined.** 1 ♂, without exact locality, labelled only: "Coll. A. Semenov-Tian-Shansky"; 1 ♂, "Java occident. Mons Gede, 4000", 1898, H. Fruhstorfer", "*Deroplatys palliata* Hagenb."; 1 ♀, "Sumatra, Sablang, Poelo, O.D. Chernik".

**Description. Male.** Comparatively large and robust insect. Colour dead-leaf brownish, eyes reddish; inner surfaces of fore femora with spots and several teeth black; tegmina and wings opaque; tegmina brownish, with indistinct spots; wings blackish, except anterior and apical parts. Head transverse, compressed antero-posteriorly; apical margin of head nearly straight; eyes large, prominent and rounded. Pronotum rhomboidal, longer than broad; its lateral margin distinctly crenulate in prozona and metazona; median keel of pronotum present, but



Figs 1-11. 1, 2, 4-6, 8-11, *Deroplatys gorochovi* sp. n. (1, 2, 8, 9, ♀, paratype; 4-6, 10, 11, ♂, holotype): 1, 10, pronotum; 2, 4, head; 5, outline of ultimate tergite and proximal segments of cerci; 6, outline of ultimate sternite; 8, 11, fore tibia and femur, inside; 9, outline of anterior margin of fore coxa. 3, 7, *D. dessicata* Westwood, ♂: 3, outline of ultimate tergite and proximal segments of cerci; 7, posterior part of abdomen from below.

weak. Anterior margin of fore coxa with 19-21 teeth of different sizes; fore femur with 4 outer and 15 inner spines; discoidal spines 4: 1st and 4th subequal in length, 2nd slightly larger than 1st, 3rd largest (about twice larger than 2nd); fore tibia with 14 inner and 8-9 outer spines. Abdomen elongate, with large lateral folds (Fig. 7); ultimate tergite with posterior margin slightly emarginate (Fig. 3); cerci fusiform (Fig. 7).

Male genitalia comparatively broad (Figs 16, 17). Left phallomere convex, well sclerotized; its phalloid apophysis with two indistinct teeth (Figs 20, 21). Apical process of ventral phallomere curved; its distal process with small tooth.

*Variation.* The specimen examined from Java has more rounded ultimate tergite. Its male genitalia have the phalloid apophysis with 2 distinct teeth and the right phallomere with anterior apodeme more sclerotized.

*Female.* Habitus unlike that of male owing to sexual dimorphism; more robust than male. Colour similar to that of male; wings with dark spots. Pronotum bell-shaped, longer than broad, regularly curved and expanded backwards to its greatest breadth, with a pair of outgrowths directed backwards; hind border curving backwards; median keel weak. Apical process of wings small and indistinct. Abdomen comparatively broad.

Length (mm): head ♂ 6; ♀ 8; pronotum ♂ 20-23.8; ♀ 26.5; tegmina ♂ 55-56; ♀ 36; fore coxa ♂ 15-17.9; ♀ 20; fore femur ♂ 17-18.7; ♀ 25.5; fore tibia ♂ 8-9; ♀ 10. Width (mm): head ♂ 9-9.8; ♀ 11.4; pronotum ♂ 17.3-21.3; ♀ 23.

*Comparison.* This species is readily distinguished from other species of the genus by the characteristic shape of the male pronotum (Westwood, 1838, 1841-1843). The shape of the female pronotum is somewhat similar to that of *D. trigonodera* Westwood (Westwood, 1889).

### *Deroplatys gorochovi* sp. n. (Figs 1, 2, 4-6, 8-15, 18, 19)

*Holotype.* ♂, Vietnam, prov. Gia Lai, 20 km N of Kannack, Buon Luoi, 22-31.III.1995 (A. Gorochov).

*Paratypes:* 1 ♂, same locality, 3-11.XI.1993; 1 ♀, same data, "collected as last instar nymph, moulted to imago in laboratory in beginning of January 1994" (A. Gorochov).

*Description.* *Male* (holotype). Dead-leaf brownish, more or less unicolourous; eyes black; inner surface of fore femora yellow-

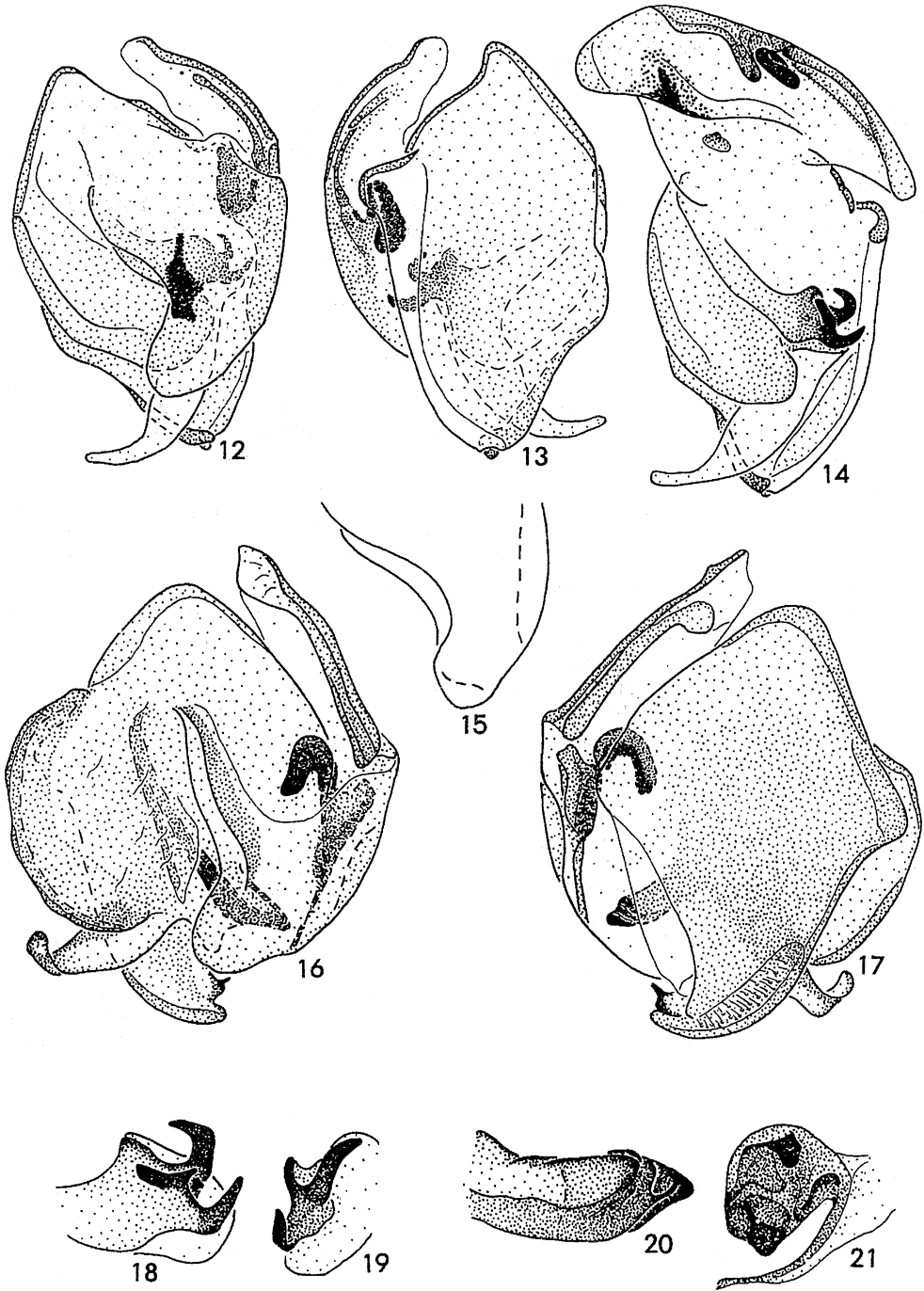
ish, with spots and several teeth black (Fig. 11); tegmina opaque, brownish, without markings; wings subhyaline, with anterior margin and apex somewhat darkened. Head transverse (Fig. 4), compressed antero-posteriorly, with almost straight apical margin; eyes large, prominent; their outer margin rounded; upper margin of frontal shield curved; antennae about same length as pronotum. Pronotum rhomboidal (Fig. 10), slightly longer than broad; its lateral margin distinctly crenulate in prozona; median keel present only on anterior half. Anterior margin of fore coxa with 6 teeth and several smaller tubercles (Fig. 9 – for female); fore femur with 4 outer and 14-17 inner spines; discoidal spines 4: 1st and 4th subequal in length, 2nd slightly larger than 1st, 3rd largest (about twice larger than 2nd) (Fig. 11); fore tibia with 14 inner and 9 outer spines. Middle and hind femora with a lobe at postero-lateral corner. Abdomen slender, elongate, without lateral folds; ultimate tergite with posterior margin rounded (Fig. 5); posterior margin of ultimate sternite very slightly emarginate (Fig. 6); cerci fusiform, with 1st segment enlarged (Fig 5); this segment may be hidden (in paratype) under ultimate tergite.

Male genitalia (Figs 12-14) comparatively elongate (as compared with *D. dessicata*); left phallomere not convex, less sclerotized than in *D. dessicata*; its phalloid apophyses (Figs 18, 19) with 3 curved teeth: 2 lateral and 1 dorsal; distal process of ventral phallomere with small tooth.

*Variation.* Colour of paratype (male) considerably lighter, nearly pale, may be as consequence of recent moulting.

*Female* (paratype). Habitus unlike that of male owing to sexual dimorphism; larger and more robust than male. Colour similar to that of male, but tegmina with indistinct dark markings and more coriaceous; wings blackish with white transverse veins, except their anterior and apical parts. Head with eyes more acuminate (Fig. 2). Pronotum bell-shaped (Fig. 1), slightly transverse and expanded backwards; lateral borders crenulate in prozona; median keel weak. Wings produced into long process at apex. Structure of fore legs similar to that of male. Abdomen comparatively broad.

Length (mm): head ♂ 3.8 (3.5); ♀ 5.5; pronotum ♂ 15.8 (15.3); ♀ 23; tegmina ♂ 35 (34); ♀ 30; fore coxa ♂ 10 (9.5); ♀ 15.3; fore femur ♂ 11.5 (11); ♀ 17; fore tibia ♂ 5.5 (5.4); ♀ 8. Width (mm): head ♂ 6.6 (6.5); ♀ 8.7; prono-



Figs 12-21. 12-15, 18, 19, *Deroplatys gorochovi* sp. n. (12-14, 18, 19, holotype; 15, paratype); 16, 17, 20, 21, *D. desiccata* Westwood. Male genitalia from above (12, 14, 16), from below (13, 17), with right phallomere raised (14), outline of the right phallomere (15), phalloid apophysis of the left phallomere: from above (18, 20) and from side (19, 21).

tum ♂ 15.3 (13.6); ♀ 25.2. Measurements in parentheses are those of paratype.

*Note.* The right phallomere of the holotype has a damage on its inner side (Figs 12, 14), which was received by the insect during its life. The normal shape of this structure is shown in Fig. 15.

*Comparison.* The new species differs from other species of this genus in the shape of pronotum and colour. The above described species is possibly related to *D. truncata* Guérin-Ménéville, which has a similar shape of the male and female pronotum (Westwood, 1889). The female of *D. gorochovi* readily differs from the female of *D. truncata* in the uneven borders of pronotum. The male of *D. gorochovi* differs from the male of *D. truncata* in the less prominent apex of wings.

*Etymology.* This species is named in honour of Dr. A.V. Gorochov, well-known investigator of the fauna of Vietnam.

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