

## A NEW GENUS AND TWO NEW SPECIES OF CARPOCORINI (HETEROPTERA: PENTATOMIDAE) FROM PAKISTAN\*

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A new genus to accommodate a new species from Manor, Gilgit in northern areas and a new species of the genus *Mormidella* Horvath from the above locality and Baluchistan are described with special reference to their metathoracic scent gland ostioles and male and female genitalia. This is the first record of the genus *Mormidella* from Pakistan.

### INTRODUCTION

The genus *Mormidella* was described by Horvath [1] to accommodate his new species *pauli* from Kashmir. Later Distant [2], Kirkaldy [3], Stichel [4], Kiritshenko [5], Puchkov [6] and Ahmad *et al.* [7] described, recorded or catalogued the type species and other species *phalerata* (Jak.) and *corallifera* Kir. but male and female genitalia of any species remained undescribed in the literature to-date and there is no record of the genus from Pakistan.

During various expeditions to northern areas of Pakistan from 1967 to 1978, two specimens were collected on *Medicago sativa* L. and on a wild bush from Manor in Gilgit and from Quetta (Hunna) in Baluchistan respectively, certainly representing the genus *Mormidella* as is apparent from the description and dorsal view diagram but are at least twice in size of *M. pauli*. These are here described as *M. magnanimus* new species with special reference to characters of metathoracic scent gland ostioles and female genitalia. An aberrant male specimen was also collected from the former locality in the northern areas and was found isolated in the entire tribe Carporini in the characters noted in the comparative note of the genus. For the dissection of male and female genitalia and for measurements and diagrams the conventional procedures specially those of the present authors [8] have generally been followed. All the measurements are in mm.

### *Manoriana* New Genus

**Head.** Broader than long; eyes large and bulging; basal antennal segments almost reaching head apex, 2nd shorter than 3rd; labium passing hind coxae.

**Thorax.** Pronotum more than twice broader than long, lateral margins entire; scutellum triangular with distinct

apical lobe; mesosternum distinctly carinate; metathoracic scent gland ostioles large having remarkably elongated peritremes with bulging apex, evaporatoria with well-defined ridges.

**Abdomen.** Convex beneath, unarmed and unsulcated, longer than wide; connexiva distinctly exposed at repose, reflexed and recurved.

**Male Genitalia.** Pygophore broader than long; proctiger semisclerotized; parameres simple with substraight blades; in the inflated aedeagus dorsal membranous conjunctival appendage elongated, ventral membranous conjunctival appendage greatly reduced, vesica elongated.

**Comparative Note.** The genus appears isolated in the entire tribe Carporini in having head distinctly broader than long with eyes much larger and bulging, peritreme remarkably elongated with apex bulging and parameres with simple substraight blade without any process.

Type species: *Manoriana maculatus* new species

*Manoriana maculatus* new species

(Figs. 1 - 7)

**Colouration.** Body plae, dorsally with dense brownish black punctures; eyes with brownish tinge; ocelli reddish brown; anterior half of pronotum with shining patterns; connexiva orange with proximal and distal joints blackish; membrane of hemelytra smoky and transparent.

**Head.** Shorter than pronotum; outer margin of paraclypei medially concave, equal to clypeus; anterior region slightly shorter than posterior including eyes; antennae with 3rd segments slightly longer than  $2\frac{1}{2} \times$  basal, length of segments, I 0.6, II 1.3, III 1.55, IV and V mutilated; labium reaching 3rd abdominal venter with basal segment slightly passing bucculae, 3rd segment distinctly shorter than 2nd and slightly longer than  $1\frac{1}{2} \times$  basal, length of segments, I 0.9, II 1.65, III 1.4, IV 1.0, labial formula  $1 < 4 < 3 < 2$ ; length antecular region 1.0; length posterior of

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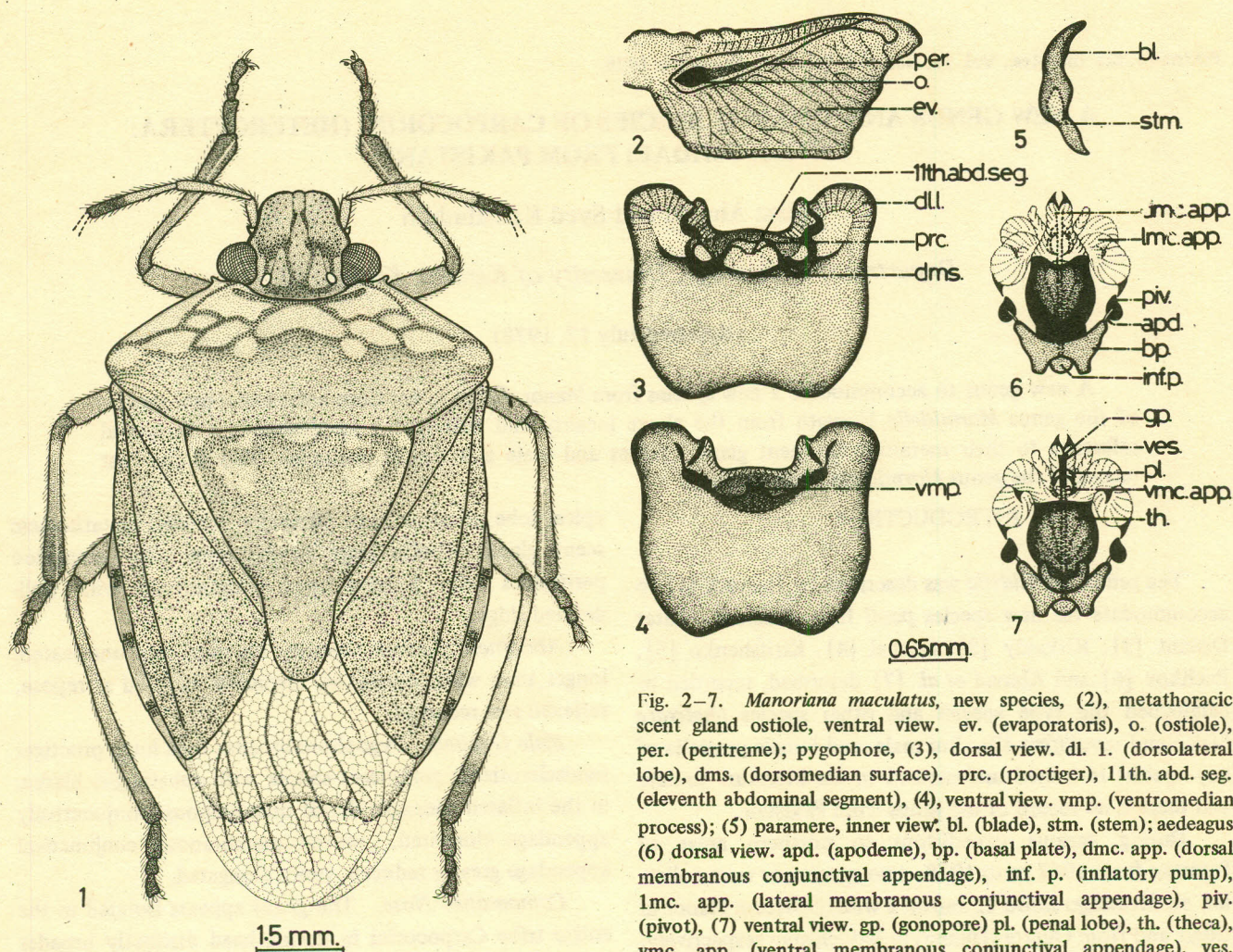


Fig. 1. *Manoriana maculatus*, new species, male, dorsal view.

head including eyes 1.2; width 2.75; interocular distance 1.45; interocellar distance 1.0.

**Thorax.** Pronotal length distinctly more than  $2\frac{1}{2} \times$  width, anterior angles toothed, directed anterolaterad, humeral angles, prominent but rounded, lateral margins substraight and recurved, length of pronotum 2.4, width 6.4; scutellum distinctly longer than broad, slightly more than  $2 \times$  head length with apical lobe distinct apex rounded, length of scutellum 4.5, width 4.0; mesosternum distinctly carinate; metathoracic scent gland ostioles (Fig. 2) large, ovate, peritreme elongated tapering laterad, apically bulging, evaporatoria distinct; membrane of hemelytra longer than abdomen; distance base scutellum — apex clavus 3.1; apex clavus — apex corium 2.9; apex corium — apex membrane 2.9; apex scutellum — apex abdomen including membrane 4.5.

**Abdomen.** Longer than broad; connexiva exposed at repose, 7th abdominal sternum longer than the length of rest of sternites; posterior margin concave with lateral angles subrounded. Total length 13.6.

**Male Genitalia.** Pygophore (Figs. 3, 4) with dorso-

median surface concave, dorsolateral lobes rounded, ventroposterior margin medially slightly convex, ventromedially with a distinct raised process and laterally with a pair of distinct dentations; parameres (Fig. 5) with blade slightly curved, outer margin convex, inner margin sinuated, apex narrowed and rounded; aedeagus (Figs. 6, 7) with postero-dorsal margin medially concave, dorsal membranous conjunctival appendage elongated, apically bilobed, and sclerotized, longer than vesica, 3 pairs of lateral membranous conjunctival appendages, all fused at base, 2 spherical with spine-like sclerotizations, 3rd pair tubular, thumb-like, ventral membranous conjunctival appendage bilobed and greatly reduced, penial lobes reduced.

**Material Examined.** Holotype ♂, Northern areas, Gilgit: Manor on *Medicago sativa* L., July 1974, leg. A.A. Khan, in Natural History Museum, Department of Zoology-Entomology, University of Karachi.

*Mormidella magnanimus*, new species (Figs. 8 – 11)

**Colouration.** Body pale with dense black punctures except light yellow portion on middle of clypeus, posterior



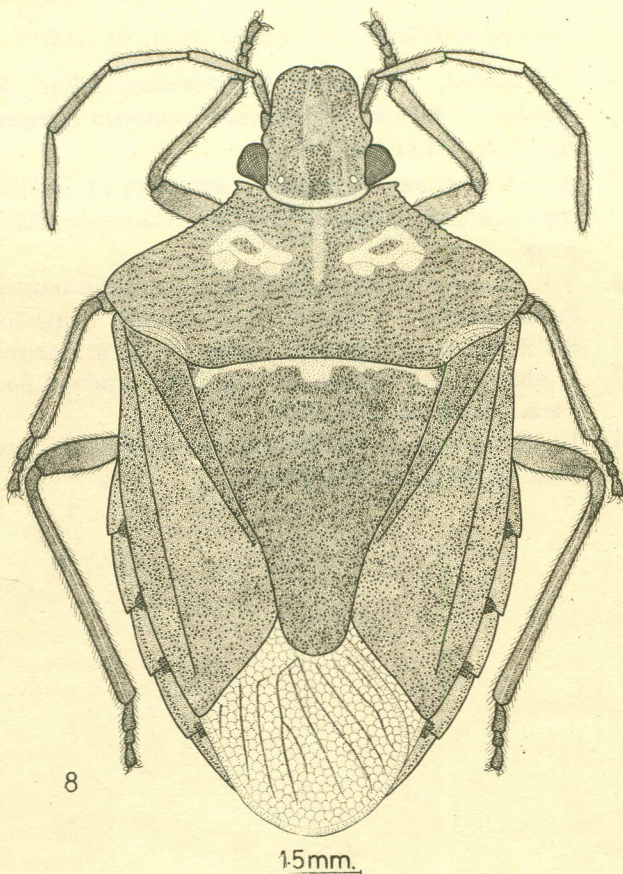


Fig. 8. *Mormidella magnanimus*, new species, female, dorsal view. margin of head, median half of vertical line, 2 pairs of spots adjacent to callosities and callocities on pronotum, 3 basal spots fused with basal horizontal line on scutellum, connexiva with proximal and distal medially black portions, red eyes with brownish tinge; pinkish ocelli, smoky membrane of hemelytra.

**Head.** Slightly shorter than pronotum, outer margin of paraclypei medially slightly concave, equal to clypeus; antennae with 3rd segments equal to 2nd and slightly shorter than  $2\times$  basal, length of segments, I 0.7, II 1.35, III 1.35, IV 1.6, V 1.2, antennal formula  $1 < 5 < 2 = 3 < 4$ ; labium reaching hind coxae with basal segment slightly shorter than bucculae, 3rd segment distinctly shorter than 2nd and slightly longer than basal, length of segments, I 1.1, II 1.7, III 1.2, IV 0.9, labial formula  $4 < 1 < 3 < 2$ ; length anteocular region 1.35; length of posterior of head including eyes 1.25, width 2.95; interocular distance 1.8; interocellar distance 1.7.

**Thorax.** Pronotal length distinctly more than  $2\frac{1}{2}\times$  width, anterior angles toothed, directed anterolaterad, humeral angles prominent but rounded, anterolateral margins obsolete serrated, length of pronotum 3.0 (2.9 – 3.0), width 7.7, (7.5 – 7.7); scutellum distinctly longer than broad, distinctly more than  $2\times$  head length, with apical lobe distinct, apex rounded, length of scutellum

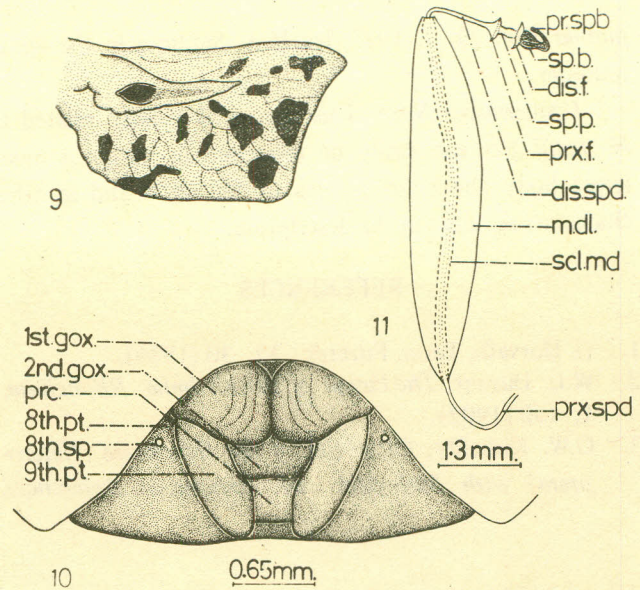


Fig. 9–11. *Mormidella magnanimus*, new species, (9) metathoracic scent gland ostiole; (10) Female terminalia, 1st. gox. (first gonocoxa), 2nd gox. (second gonocoxa), 8th pt. (eight paratergite), 8th. spr. (eight spiracle), 9th. pt. (ninth paratergite), prc. (proctiger); (11) spermatheca, dis. f. (distal flange), dis. spd. (distal spermathecal duct), m.dl. (median dilation), pr. spb. (process of spermathecal bulb), prx. spd. (proximal spermathecal duct), prx.f. (proximal flange), scl.md. (sclerotized median duct), sp.b. (spermathecal bulb), sp.p. (spermathecal pump).

5.6 (5.2 – 5.6), width 4.6 (4.2 – 4.6); mesosternum slightly carinate; metathoracic scent gland ostioles (Fig. 9) large, ovate, peritreme elongated tapering laterad, apex subacute, evaporatoria distinct; membrane of hemelytra longer than abdomen; distance base scutellum–apex clavus 3.5; apex clavus–apex corium 3.2 (3.0–3.2); apex corium – apex membrane (2.5 – 2.8); apex scutellum – apex abdomen including membrane 4.0 (4.0 – 4.1).

**Abdomen.** Longer than broad; connexiva distinctly exposed at repose; posterior margin of 7th ♀ abdominal venter medially deeply concave, lateral angles rounded. Total length 15.2 (14.8 – 15.2).

**Female Genitalia.** (Fig. 10) 8th paratergites fused, medially slightly concave, much longer than 1st gonocoxae, latter plate-like, posterior margin sinuated; 9th paratergites lobe-like, elongated, reaching to posterior margin of fused 8th paratergites; spermatheca (Fig. 11) with median dilation balloon-like, pump region bilobed, shorter than bulb, latter elongated, proximally dilated with two finger-like elongated processes, median sclerotized duct distally dilated, proximal spermathecal duct longer than distal spermathecal duct.

**Material Examined.** Holotype ♀ northern areas, Gilgit: Manor on *Medicago sativa* L., July 1974, leg. A.A. Khan, in Natural History Museum, Department of Zoology–Entomology, University of Karachi.

**Paratype.** 1 ♀, Baluchistan. Quetta (Hunna) on *Malus*



*pumila* Mill. 29. 7. 1975, leg M.A. Siddiqui in the above museum.

*Comparative Note.* This species is closely related to *M. pauli* but can easily be separated in having a much larger body about 2× in size of the latter and in other characters as noted in the description.

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