

## A Revision of *Pyrrhocoris* species (Hemiptera : Pyrrhocoridae) from east of Palaearctic Region (Turkey, Iraq, Iran and Pakistan) with redescription of *P. marginatus* Kolenati\*

Imtiaz AHMAD\*\*

Rokhsana PERVEEN\*\*

### Summary

A key is given to *Pyrrhocoris* fauna of Turkey, Iraq, Iran and Pakistan and *P. marginatus* Kolenati is described in detail with special reference to its metathoracic scent gland complex and male and female genitalia and in this light the relationships of the included taxa are also briefly discussed.

### Introduction

During a revision of *Pyrrhocoris* group Ahmad and Abbas 1986 the present authors got an opportunity to examine a series of specimens from Turkey identified as *P. marginatus* Kolenati and *P. niger* Reuter in the collection of Professor Dr. N. Lodos of Ege University, Izmir, Turkey. As the latter species has not been recorded from Turkey in the literature (Hussey 1929, Hoberlandt 1955, Stichel 1960-62) and its genitalia were found identical with *P. marginatus*, it is presently held that only three species i.e. *P. apterus* (Linn.), *P. pseudoapterus* Ahmad and Rokhsana 1986 and *P. marginatus* constitute the *Pyrrhocoris* fauna of Turkey, Iraq, Iran and Pakistan (Baluchistan).

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\*\* Department of Zoology - Entomology, University of Karachi, Karachi - 32, Pakistan.

As only external features of *P. marginatus* are known in the literature, presently it is re-described in detail with special reference to its metathoracic scent gland ostiole and male and female genitalia. A key is also given to all the three species found in the above areas in the east of Palaearctic region. In the light of the above characters the relationship of the included taxa is also briefly discussed. For dissection, measurements and diagrams conventional procedures especially those used by the present authors (1986) were generally followed. All the measurements are given in millimeter.

#### Genus *Pyrrhocoris* Fallén

*Pyrrhocoris* Fallén, 1814, *Spec. Nov. Meth. Dispon. Hem.* : 9; 1829, *Hem. Suec., Cimic.* 1 : 45; Latereille, 1825, *Fam. Nat. Regn. Anim.* : 421; Dufour, 1833, *Mem. Savant. Etrang.* 4 : 42; Curtis, 1833, *Brit. Ent.* 10 : 465; Westwood, 1840, An introduction to the modern classification of insects. 2: 122; Amyot et Serville, 1843, *Hem.*:267; Flor, 1860, *Rhynch. Livl.* 1 : 10; Fieber, 1860, *Europ. Hem.* : 4; 1861, *Europ. Hem.* 16; Stål, 1861, *D.V.A.F.* 18 : 196; 1866, *Hem. Afr.* 3 : 4; 1870, *Enum. Hem.* 1 : 103 & 115; 1872, *Ofvers. K. svenska. Vetensk. Akad. Fourth.* 24 : 62; Vollenhoven, 1869, *Tijder, Ent.* 12 : 72; Walker, 1872, *Cat. Het.* 5 : 65 and 167; Distant, 1883, *Biol. Centr. Am. Rhynch.* 1 : 228; Distant 1904, *Fauna British India, Rhynchota*, Taylor and Francis, London 2 : 166; Reuter, 1885, *Rev. d'Ent.* 4 : 231; Van Duzee, 1914, *Can. Ent.* 46 : 3883; Hussey, 1929, *Gen. Cat. Hem.* : 71; Stichel, 1960-62, *Illustrierte Bestimmungstabellen der Wanzen. II Europa*, 4 (10) : 293; 2nd Annual Report FG-Pa-361 (PK-SEA-155) : 30-31 (Diagnostic characters); Ahmad & Abbas, 1986, *Türk. bitki kor. derg.*, 10 (2) : 67.

*Platynotus* Schilling, 1829, *Beitr. Ent.* 1 : 37; Hahn, 1833, *Wanz. Ins.* 2 : 9; Kolenati, 1845, *Melet, Ent.* 1 : 68.

*Meganotus* Laporte, 1832, *Essai Class. Hem.* : 38.

*Phylocoris* Laporte, 1832, *Essai Class. Hem.* : 83.

*Astemma* Spinola, 1837, *Essai, Ins. Hem.* : 78; 1850, *Tavol. Sinot.* : 83; Kirkaldy, 1909, *Can. Ent.* 12 : 31.

*Platycoris* Gistel, 1848, *Naturg. Thierr.* : 39.

#### Key to the species of the genus *Pyrrhocoris* Fallén

1. Generally red and black colour predominant ... .. 2
- Generally black or brownish black colour predominant ... *marginatus*

2. Ventro-posterior margin of pygophore convex, apically sickle-shaped vesical support small in size (Fig. 25 of Ahmad and Abbas 1986) ...  
 ..... apterus
- Ventro-posterior margin of pygophore medially notched prominently, apically sickle-shaped, vesical support large in size (Fig. 7 b. Ahmad and Rokhsana 1986) ..... pseudoapterus

*Pyrrhocoris marginatus* (Kolenati)

(Fig. 1)

*Platygaster marginatus* Kolenati, 1845, *Melet. Ent.* 2 : 86, pl.10, Fig. 2; Hussey, 1929, *Gen. Cat. Hem.* : 77 (detailed synonymy); Stichel, 1960-62; *Illustrierte Bestimmungstabellen der Wanzen. II Europa*, 4 (10) : 293.

*Colour*; entire head, antennae, pronotum (sometime partially), scutellum, pro, meso and metasterna, dorsal and ventral of abdomen, connexiva and femora black; lateral and anterior margins of pronotum, lateral margins of prosternum, corium, tibiae yellowish; dorsally thickly punctate except anterior lobe of pronotum.

*Structure*; antecular region slightly longer than postocular region including eyes, length antecular region 0.65; length posterior of head including eyes 0.55; interocular distance 0.8; length of head slightly shorter than width, length head 1.2; width 1.3; length of antennal segments I 0.8, II 1.0, III 0.6, fourth mutilated; length of labial segments I 0.8, II 0.7, III 0.5, IV 0.4, labial formula  $4 < 3 < 2 < 1$ , labium reaching or reaching beyond 2nd coxae; pronotum with anteriolateral margins very slightly reflexed, width slightly less than twice, length of pronotum 1.3; width 2.2; scent gland ostiole (Fig. 2) eye-shaped, short, depressed, peritreme without evaporatoria; scutellum distinctly broader than long, length scutellum 1.0; width 1.2; length apex-scutellum to apex abdomen 3.4; abdomen with connexiva well exposed. Total length ♂ 6.8, ♀ 7.4.

*Male genitalia*; (Figs. 3-8) pygophore slightly broader than long, ventro-posterior margin concave; paramere with sinuated outer margin and thumblike blade comparatively small, straight having truncated apex; aedeagus with pairs of dorsal membranous conjunctival appendages, one pair near apex, one pair near base of vesica, one pair of sclerotized dorsal appendages more or less square-shaped with sinuated apical margin, one pair of elongated ventrolateral sclerotized appendages with subrounded lateral margins having latero-inner apex acute, pea-shaped vesical support present.

Female genitalia; (Fig. 9, 10) first gonocoxae broad, inner margins sinuated with substraight posterior margins having subacute inner angles, spermatheca with rounded bulb having a small duct.

Material; 2 ♂♂, 2 ♀♀ Turkey : «Kınık» «Erciyes» 1-2.9.1973, 28.6.1980 lodged at N. Lodos collection at Ege University, Izmir, Turkey.

*Comments.* It is most closely related to *niger* Reuter, but can easily be separated on the basis of colour (Stichel 1960 - 62) and other distinguishing characters as noted under discussion.

### Relationships of the Included Taxa

The characters of *marginatus* and *niger* are illustrated and differentiated by Stichel (1960 - 62). *P. marginatus* appears to be a smaller species according to the above author (5.5 - 7.4 as compared to *P. niger* 8.0), in *niger* basal antennal is equal in length to that of head but in *marginatus* basal antennal is shorter. *P. niger* also appears to be pre - dominantly black with yellowish brown border whereas *marginatus* has lighter border *P. niger* has also never been recorded from any part of the areas presently included and it appears a case of mis - identification. Their male genitalia the measurements and even the general colourations all agree in detail with those of *marginatus*.

The present study now reveals altogether three species viz. *apterus*, *pseudoapterus* and *marginatus* from the areas of Pakistan (Baluchistan), Iran, Iraq and Turkey. *P. marginatus* and *P. apterus* have earlier been recorded from Turkey (Hussey 1929, Hoberlandt 1955, Stichel 1960-62).

The type species *apterus* and *pseudoapterus* of the genus *Pyrrhocoris* appear more primitive with larger body (size ranging from 7.2 - 9.9) and red and black colour predominant but the presence of both apterous fully developed forms and the broad sickle - shaped vesica in the inflated aedeagus are probably some of their specialized traits to suit some special habits. *P. apterus* with wide distribution in Palaearctic and Oriental region appears more primitive in having pygophore without any notch in contrast to that of *pseudoapterus* only known from Palaearctic region (Iran and Iraq) with ventroposterior margin significantly notched and the vesica of the inflated aedeagus remarkably broad.

*P. marginatus* ranging from 5.5 - 7.4 with black and brownish black colour predominant and small pea - shaped vesical support appears more specialized among *Pyrrhocoris* species from the above region (Ahmad and Abbas 1986, Ahmad and Rokhsana 1986).

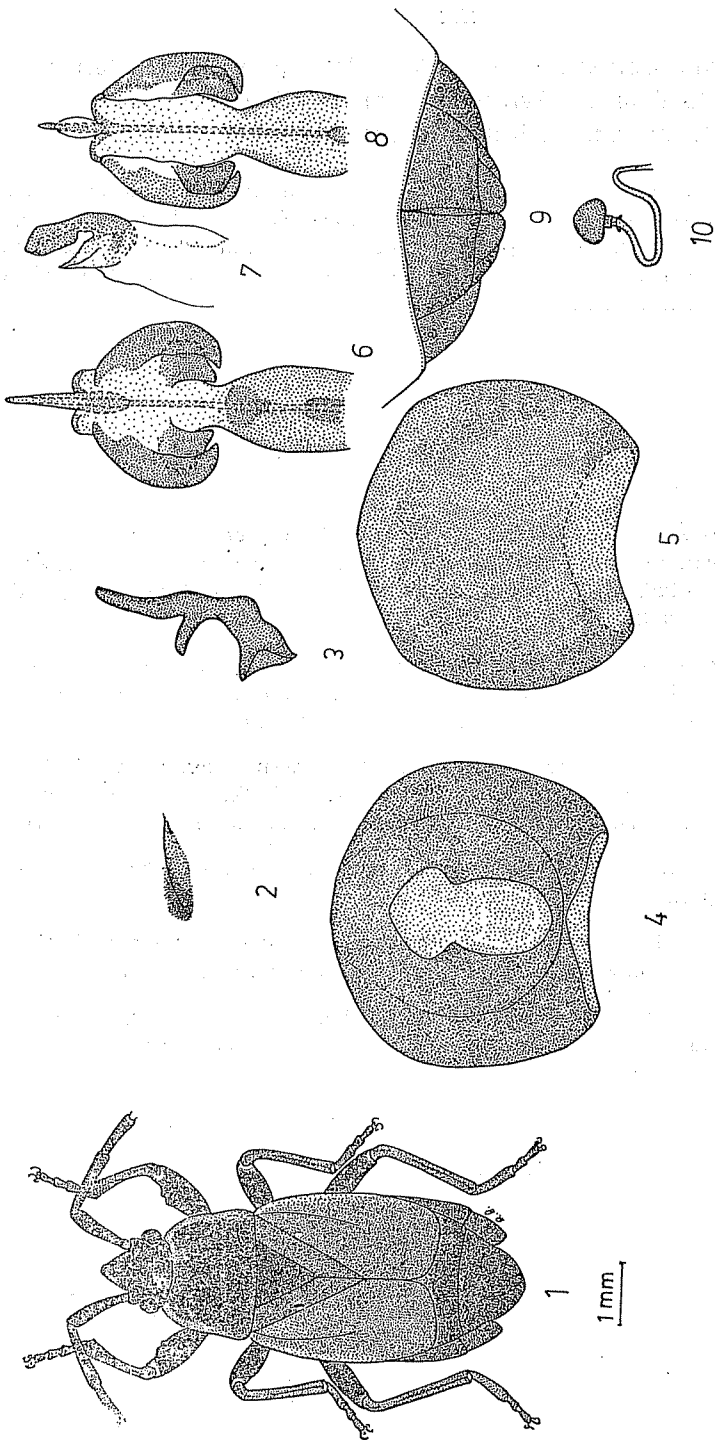
## Özet

### Doğu Palearktik Bölgesine ait (Türkiye, Irak, İran ve Pakistan) **Pyrrhocoris** (Hemiptera : Pyrrhocoridae) türlerinin revizyonu ve **P. marginatus** Kol.'un redeskripsiyonu

Bu çalışmada Türkiye, Irak, İran ve Pakistan'da bulunan **Pyrrhocoris** türlerinin teşhis anahtarı verilmekte ayrıca **P. marginatus** Kol.'un erkek ve dişi genital organları ve metathorax'a ait pis koku bezleri ele alınarak deskripsiyonu yapılmaktadır. Bundan ayrı olarak bu cinse bağlı türlerin birbiriyle olan yakınlıkları da kısaca incelenmektedir.

## References

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### Illustration of Figures

Figures 1-10 : 1. *Pyrrhocoris marginatus*, dorsal view; 2. scent gland ostiole, ventral view; 3. paramere, lateral view; 4. pygophore, dorsal view; 5. pygophore, ventral view; 6. inflated aedeagus, ventral view; 7. vesical support, lateral view; 8. inflated aedeagus, dorsal view; 9. female terminalia, ventral view; 10. spermatheca.