

THE FEMALE OF *ADELPHOCORIS INSIGNIS* HORVÁTH, 1898 (HETEROPTERA, MIRIDAE)

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The species *Adelphocoris insignis* Horváth, 1898 (*Miridae*, *Mirinae*, *Mirini*) has up to now been known only from one male specimen from Ak-Palanka in Serbia (Yugoslavia). I possess two females of *Adelphocoris* from Bulgaria, which apparently belong to this species, since they cannot be identified with any known Palaearctic *Adelphocoris*-species and they fit well Horváth's [1898] description. Some ascertained discrepancies (small colour differences, the larger size of Horváth's male) may be ascribed to individual variability.

In this paper I describe the females of *Adelphocoris insignis* Horv. and make some remarks as to the identification of this species. Considering that the females were found in a place rather remote from the terra typica and that subspecific differences between the holotype and the described females may exist, I do not designate any of the described females as an allotype.

Description

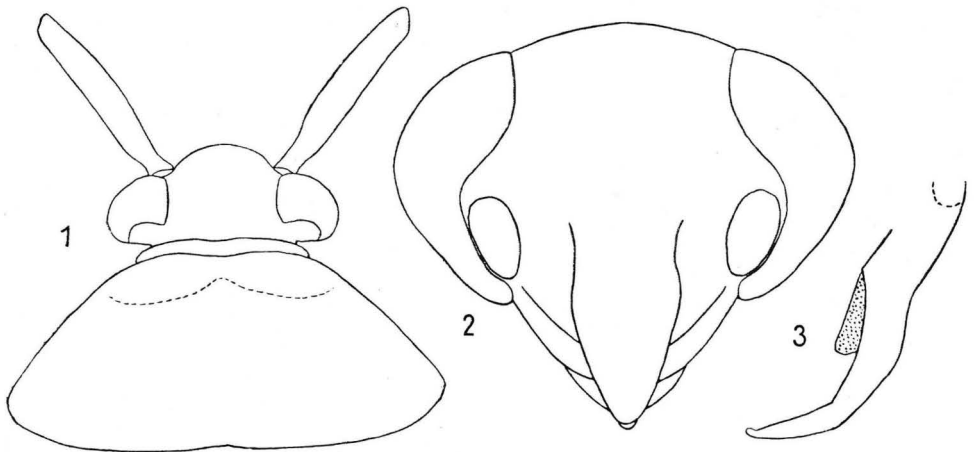
Material: 2 ♀♀, coastal Bulgaria, Varna, 16. 8. 1958, lgt. Auer, coll. Štys.

Measurements [all lengths given in mm]: total length 7.85; maximal width 2.88; lengths of the antennal segments: I 0.90—1.03, II 2.79, III 1.90—2.00, IV 1.15—1.18; width of the head across the eyes 1.19—1.21; width of the synthlipsis 0.51—0.54; basal width of the pronotum 2.33—2.36; width of the pronotum across the collar 0.84—0.90; length of the pronotum (in horizontal projection) 1.12—1.18; length of the hind tibia 4.73—5.00; lengths of the hind tarsal segments: I 0.21, II 0.36, III 0.33.

Head red-brown, in the frontal view broader than high, sparsely clothed with short adpressed yellowish hairs. Antennae inserted in the lower third of the eyes; the dorsal and dorso-external margin of antennal sockets very distant from the inner eye margins. The ocular index 1.52—1.64.

The 1st antennal segment orange-brown, 0.77—0.85 times as long as the width of head across the eyes, with some stout brown-black bristles; its dense adpressed pubescence orange-brown, not contrasting with the ground colour of the segment. The 2nd antennal segment proximally

orange-brown, in the distal half gradually and not very contrastingly darkened; 2.71—3.05 times as long as the segment I; 1.18—1.19 times as long as the basal width of the pronotum; stick-shaped, distally a little thickened and 1.5 times thicker than at the base. The 3rd and 4th antennal segment light red-brown, with well developed proximal whitish rings. The 3rd segment 0.68—0.71 times as long as the 2nd, the 4th segment 0.59—0.60 times as long as the 3rd.



Adelphocoris insignis Horv., female. Fig. 1. Head and pronotum, dorsal view. Fig. 2. Head, frontal view. Fig. 3. Claw of the hind tarsus, lateral view.

Rostrum reaching the base or the second third of the middle coxae. The proximal segments orange-brown, the last segment black.

Pronotum yellow-brown, collar, the area behind calli and basal margin lighter than the other parts. The whole pronotum dull, scarcely shining, the disc sparsely and finely punctured, sparsely clothed with adpressed yellowish hairs. Pronotum proximally strongly widened, the basal width 2.6—2.75 as long as the width across the collar, and 1.92—1.95 times as long as the width of the head across the eyes. The red-brown scutellum is of the same colour as the head, and is distinctly darker than the pronotum and hemelytrae. The whole scutellum is finely transversely wrinkled. Xyphus yellowish. The basalar plate brightly orange-red. Mesepisternum anteriorly and posteriorly blackish, dorsally brown, in the middle yellowish, or dorsally brown, the other parts orange to yellow. Mesepimeron anteriorly blackish, the other parts yellow. Metapleura dorsally black-brown, ventrally orange-red or the whole metapleura brown. The ostiolar peritreme yellow.

All coxae orange-red. Femora dimly reddish-orange, the middle and hind femora with longitudinal rows of brown spots. The long setae on the distal halves of the femora arising from very small black spots. The hind femur about 3 times wider (in the middle) than the hind tibia. Tibiae

yellowish, darkened at the very apex, the spines black and arising from small black spot. The adpressed pubescence of the fore and middle tibiae light brown, not too contrasting with the ground colour; this pubescence black on the hind tibia. All tarsi darkened distally and mostly also proximally. The shape of the claws as in figure 3.

Hemelytrae yellow-brown, the costal margin black. The portion of the corium on the inner side of the vein R+M with red-brown marking. The hind margin of cuneus and its inner half, or the whole cuneus excepting its lateral margin, red. This red portion is not sharply separated from the outer yellowish one. The very apex of cuneus indistinctly darkened. Membrane grey-brown; the veins yellow-brown, distally slightly red-brownish. Corium, clavus and cuneus sparsely clothed (rubbed specimens!) with yellowish adpressed hairs.

The ground colour of the ventrites is yellow-brown, all ventrites proximally in the middle dark brown and laterally brown—thus the venter has the broad marginal dark bands and a medial dark band interrupted on all segments. Squama and the medial line of the genital segments very dark brown. The dorsal laterotergites reddish proximally, brown distally.

Comparative remarks

Adelphocoris insignis Horváth, 1898 is allied to *A. detritus* (Fieb., 1861) and *A. ticinensis* (Mey.-D., 1843); *Adelphocoris bimaculicollis* Lindberg, 1948, known only from Cyprus and Syria, is—according to the Lindberg's (1948) description—more allied to *A. lineolatus* (Goeze) and differs from our species at the first sight by the presence of 2 black spots on the pronotum. *Adelphocoris insignis* Horv. differs from *A. detritus* (Fieb.) by a greater extent of red markings on the cuneus and by no sharp external demarcation of these markings, by wider and duller pronotum, by shorter rostrum, by more lightly coloured adpressed pubescence of the antennae, by generally more reddish appearance and by larger size; from *A. ticinensis* (Mey.-D.) by stouter and somewhat thickened 2nd antennal segment, by the presence of the whitish rings on the bases of the antennal segments III and IV, by larger size and generally by a less reddish appearance. *Adelphocoris insignis* Horv. is allied to both mentioned species, and its characters are to a certain extent intermediate. This species shares the colour and structure of the antennae with *Adelphocoris detritus* (Fieb.), and the extensive red colouring, short rostrum and non-contrasting colour of the adpressed pubescence of the 1st antennal segment with *A. ticinensis* (Mey.-D.). (The rostrum of the latter species may, however, reach the tips of the hind coxae similarly to *A. detritus* (Fieb.), in spite of many descriptions stating that the rostrum of *A. ticinensis* (Mey.-D.) reaches only the tips of the middle coxae.)

Adelphocoris insignis Horv. is actually known only from Yugoslavia and Bulgaria, and must be regarded as a Balkan endemic species. This species has been included in the keys by Wagner (1942) and Stichel (1957), but it has not been clearly distinguished from *Adelphocoris detri-*

tus (Fieb.). The distinguishing characters, as they were formulated by both authors (cuneus red, membranal veins red and corium with some red markings in *Adelphocoris insignis* Horv., no red colour in these places in *A. detritus* [Fieb.]), are misleading, because all mentioned places may also be a little red in *Adelphocoris detritus* (Fieb.), and the membranal veins may be even more reddish than in *Adelphocoris insignis* Horv. Below I am giving a key to the European *Adelphocoris*-species, somewhat modified in the mentioned respect. The distinguishing characters of *Adelphocoris insignis* Horv. are based on females, but none of them contradict the description of the male.

Key to the European species of *Adelphocoris* Reuter, 1896

(The subspecies are not included.)

- 1 (2) Hemelytrae with black adpressed hairs and some intermixed adpressed light hairs *quadripunctatus* (F.)
- 2 (1) Hemelytrae only with light adpressed hairs.
- 3 (12) Scutellum light (at most brown) or light with 2 dark stripes. (When rarely scutellum blackish, the hemelytrae without extensive black or brown markings.)
- 4 (11) The 2nd antennal segment not darkened distally or darkened for a short distance and not very contrastingly, never blackish or darkly red-brown distally, and at most slightly thickened distally. Pronotum always without a dark subbasal band, at most with isolated dark spots.
- 5 (6) Ground colour of the hemelytrae grey-green or yellowish, often with blackish markings, but always without red or red-brown colour. Scutellum with at least indicated 2 dark stripes (lacking in incompletely sclerotized individuals only) *lineolatus* (Goeze)
- 6 (5) Ground colour yellowish, grey, red-brown etc., rarely greenish, but always with some red colour. Scutellum without dark stripes.
- 7 (8) The 3rd and 4th antennal segments unicolorously red-brown. The 2nd antennal segment not distinctly thickened distally *ticinensis* (Mey.-D.)
- 8 (7) The 3rd and 4th antennal segments red-brown, on the basis always with whitish rings. The 2nd antennal segment slightly, but distinctly thickened distally.
- 9 (10) Cuneus extensively red, the red part not sharply separated from the outer yellowish part. Pronotum \pm dull. Rostrum reaching at most the tips of middle coxae. The dense adpressed pubescence of the 1st antennal segment light brown, not sharply contrasting with the ground colour. Larger species (7,8—9,5 mm) *insignis* Horv.
- 10 (9) Only the innermost anterior lunulate part of the cuneus red-brown; this part sharply contrasting with the whitish lateral part. Pronotum shining. Rostrum reaching nearly the tips of hind coxae. The dense adpressed pubescence of the 1st antennal segment dark brown, sharply contrasting with the ground colour. Smaller species (6,8—7,7 mm) *detritus* (Fieb.)
- 11 (4) The 2nd antennal segment yellow-brown in the proximal half, the distal half very contrastingly black, dark brown or dark red-brown and always strikingly thickened. Pronotum mostly with an extensive black subbasal band *vandalicus* (Rossi)
- 12 (3) Scutellum black, also pronotum mostly extensively black. (When rarely scutellum yellowish, the 2nd antennal segment at least partially black-brown and the hemelytrae with extensive blackish markings.)
- 13 (14) The 1st antennal segment yellow-brown, the 2nd proximally yellow-brown and distally black-brown *reicheli* (Fieb.)
- 14 (13) The 1st and 2nd antennal segments black *seticornis* (F.)

Summary

- 1) The previously unknown females of *Adelphocoris insignis* Horváth, 1898 (Miridae, Mirinae, Mirini) are described, and the distinguishing characters are discussed. *Adelphocoris insignis* Horv. is an endemic Balkan species, actually known from Bulgaria (2 females) and Yugoslavia (1 male).
- 2) A modified key to the European *Adelphocoris*-species is given.

REFERENCES

- Horváth, G., 1898: Capsidae novae vel minus cognitae. *Termész. Füzet.* **21**: 501—505.
- Lindberg, H., 1948: On the insect fauna of Cyprus. Results of the expedition of 1939 by Harald, Håkan and P. H. Lindberg. I.—II. *Comm. Biol.* **10** (7): 1—175.
- Stichel, W., 1957: Illustrierte Bestimmungstabellen der Wanzen. II. Europa. — Vol. I, 21. Heft: 641—672, Berlin.
- Wagner, E., 1942: 21. Familie Miridae Dhn. 1859. — In Gulde: Die Wanzen Mitteleuropas **9**: 1—160, Frankfurt a. M.

Appendix

Recently the holotype of *Adelphocoris insignis* Horv., a male from Ak-Palanka (Horváth's collection, Mus. Budapest), was examined and its conspecificity with described females was proved. It differs from the described females by larger size, brighter and more distributed red colour, and by hemelytra clothed densely with silverish to yellowish adpressed hairs (unrubbed specimen!). Some measurements (given in mm) of the holotype: total length 9,5; lengths of the antennal segments I 0,95, II 2,53, III 2,02, IV 1,05; width of the head across the eyes 1,26; width of the synthlipsis 0,39; basal width of the pronotum 2,53; width of the pronotum across the collar 0,74.