

A brief note on the morphology and systematic position of *Ectemnostega quadrata* (SIGN.) (Heteroptera, Corixidae).

By

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In 1885 SIGNORET¹ has described under the name *Corixa quadrata* a new species of *Corixidae* from Fireland. In this description, although fairly long, the most important structural characters of this interesting boatman were practically not mentioned at all. The species has been redescribed in 1897 by BREDDIN², who mentions both the macropterous and brachypterous forms of this waterbug, while SIGNORET knew evidently only (1 specimen?) the latter. The description of BREDDIN is accompanied by 3 figures and it completes the first description of SIGNORET with several important details.

In 1912 ENDERLEIN³ established for the species here in question a separate genus *Ectemnostega* based upon the peculiar structure of the hemielytra, as well as upon several other characters, which are, however, met with also in other genera of *Corixidae*, and seem to be therefore of less importance.

Owing to the exceptional kindness of Prof. Dr. Y. SJÖSTEDT (Stockholm), to whom I wish to express herewith my deep and sincere thanks, I have received for study 3 specimens (1 ♂, 2 ♀♀) of *E. quadrata* (SIGN.) from the collections of the Swedish Antarctic Expedition (Fireland, Ushuaia, 1902). I was allowed also to dissect the ♂ in order to examine its genital armature and other details of structure.

I am able thus to complete now the description of this waterbug in the following way.

¹ Ann. Soc. Ent. Fr., Paris; 1885; pp. 68—69.

² Hemiptera in »Erg. Hamb. Magalh. Sammelreise», Hamburg; 1897; pp. 13—14.

³ K. Sv. Vet.-Akad. Handl., Stockholm; 48/3, 1912; pp. 115—116.

Ectemnostega quadrata* (SIGN.), 1885.Corixa quadrata* SIGNORET, 1885.¹

Elongated elliptical, resembling somewhat in shape the larger species of the palaeartic genus *Cymatia* FLOR. viz.: *C. bonsdorffi* (C. SAHLB.) or *C. rogenhoferi* (FIEB.).

Ground-colour of the pronotal disk and of the hemielytra brown; head, underside and legs yellow; posterior edge of the head and ends of intermediate tarsi darkened. In the ♂ the underside, especially so the ventral side of the abdomen, is somewhat darker than in the ♀. Eyes blackish-brown.

Head almost equally shaped in both sexes. Frontal arch in

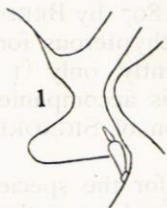


Fig. 1.



Fig. 2.

both sexes distinctly, although not exactly strongly, prominent between the eyes, forming a somewhat flattened, softly convex line. Vertex rather wide, wider than an eye. The space between the posterior margins of the eyes and the posterior edge of the head wide, similarly as in the palaeartic genera *Cymatia* FLOR. and *Glaenocoris* THOMS. Face concave in the ♂, flattened in the ♀, in both sexes densely covered with long hairs. Front surface of the rostrum transversely sulcated. Third antennal joint twice as long as the fourth.

Head, when seen from above, nearly equal in length with the pronotal disk; this last about twice as wide as long. Lateral angles of the pronotal disk more or less rounded (fig. 1). Lateral lobes of the prothorax resembling much those of the palaeartic

¹ The complete synonymy is given by ENDERLEIN, l. c.

species *G. cavifrons* THOMS., wide at their base, gradually tapering and rounded at the end (fig. 1). Pronotal keel very undistinct. On the pronotal disk 8—9 rather irregular, furcated and anastomosing pale transverse lines.

Rastration of the pronotal disk and of the hemielytra rather undistinct. Embolium, excepting a small apical part, strongly emarginated exteriorly. Pale pattern of the hemielytra almost as extended as the brown ground-colour (fig. 2). The pale transverse lines are at the base of the clavus more regular and slightly widened; on the remaining portion of the clavus, as well as on the corium the lines are less regular, zigzag-like, here and there broken up or furcated; on the membrane the lines are somewhat narrowed, on its margins arranged more or less radially. Membranal suture unmarked. About the inner angle of the corium the dark ground-colour is somewhat more developed. Marginal area pale, posteriorly from its end the margin of the hemielytron with fully developed pattern, as in the representatives of the genus *Corixa* GEOFFR. Membrane of the left hemielytron slightly paler than that of the right one. Hemielytra covered remotely by delicate hairs. Both macropterous and brachypterous specimens are known.

Metasternal xiphus rather short, almost equilaterally triangular.

Fore legs of the ♂. Femur scarcely armed with short spines and hairs; about the centre of its front surface a more dense group of short spines, obliquely extended. Tibia distinctly swollen towards the apex and somewhat twisted there, overlapping exteriorly the base of the pala (fig. 3). Pala rather narrow (fig. 3); its outer margin with a strong tubercle at the base, further forming a somewhat irregular arch. Inner palar margin convex with about 16 rather remotely inserted bristles. End of the pala armed with a thick, bristle-like claw. The disposition of stridulatory teeth very peculiar. There seem to be two distinct rows. The outer one is very short, showing only 7 teeth on the examined pala; it runs parallel to the apical portion of the outer palar margin. The inner row is longer, it extends just along the limit between the inner hairy and the outer glabrous part of the inner palar surface. The basal part of this row is formed not by teeth but by ordinary thin bristles; the teeth occupy the larger apical portion of this row, becoming, however, again almost bristle-like towards the end of the pala. The number of teeth in the inner row was found to be 17. The pala is three-edged.

Fore tibiae of the ♀ are simple. The palae resemble in shape those of the ♂, being, of course, deprived of stridulatory teeth. The bristles on the inner palar margin are inserted remotely, similarly as in the ♂.

Relative length of the various parts of the intermediate and

posterior legs, expressed in % of the length of the corresponding femora, is as follows:

	Femur	Tibia	Tarsus	Claws
Int. legs	100	53,6	40,6	42
	Femur	Tibia	Tarsus 1	Tarsus 2
Post. legs	100	105,4	121,6	62,2

Intermediate claws slightly longer than the tarsi. On the upper surface of the posterior femora an elongated group of about 30 short spines. Genital armature of the ♂ directed rightwards.

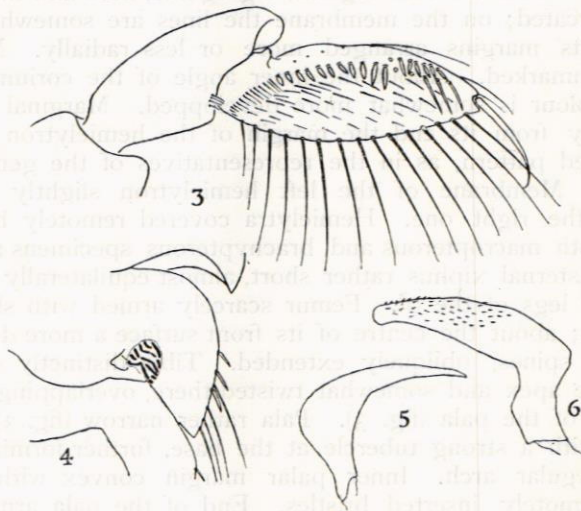


Fig. 3-6.

Strigil (fig. 4) comparatively small, with about 6 rather irregular combs.

Right forceps (fig. 5) falciform, wide on the curvature, sharply pointed at the apex.

Left forceps (fig. 6) bluntly rounded at the end, covered in its apical part with short, recurved spines.

Inner sheath of the penis simply terminated.

Legth 6,5 mm.

E. quadrata (SIGN.) seems to occupy a completely isolated position among the other *Corixidae* of the Neotropical Region. Its generic distinctness appears to be sufficiently justified by the peculiar structure of the hemielytra, as well as by the presence of certain characters which approach it to the palaeartic genera *Cymatia* FLOR. and *Glaenocoris* THOMS.; such are the wide post-

ocular space of the head, the flattened face of the ♀, the hairs on the face in both sexes, the short fourth antennal joint, the shape of the lateral lobe of the prothorax, the relatively long posterior tibiae and tarsi, the remotely inserted bristles on the inner edge of the pala, finally the stridulatory teeth on the pala of the ♂, which are not yet quite separated from ordinary bristles. By comparing the structural characters of *E. quadrata* (SIGN.) with those of the two above genera it can be seen that the genus *Ectemnostega* END. is without any doubt more closely allied with *Glaenocoris* THOMS. than with *Cymatia* FLOR. having in common with the former the transverse sulcation of the anterior rostral surface, the presence of stridulatory teeth, the presence of a strigil and the structure of the genital armature and abdominal asymmetry of the ♂♂. Similarly as *Glaenocoris* THOMS., *Ectemnostega* END. seems to be a primitive genus of *Corixidae*.

Explanation of figures.

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| Fig. 1. | <i>E. quadrata</i> (SIGN.). | Side-view of the prothorax. × 33. |
| » 2. | » | Hemelytron. × 15. |
| » 3. | » | ♂. Tibia and pala. × 60. |
| » 4. | » | » Strigil. × 60. |
| » 5. | » | » Right forceps. × 60. |
| » 6. | » | » Left forceps. × 60. |