

ON THE GENUS *STRONGYLOCORIS* BLANCHARD, 1840  
(HEMIPTERA, HETEROPTERA, MIRIDAE)

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The genus *Strongylocoris* Blanchard hitherto has been regarded as Holarctic. There have been recorded 10 species from the Old World and about 12 from America. The American species, however, are not congeneric with the Palaearctic ones. The first to point out this fact was Slater (1950). After having examined the female genitalia of *S. stygicus* (Say) and *S. leucocephalus* (L.), he wrote: "It is interesting to discover that the type species of the genus, *leucocephalus*, is apparently not congeneric with the North American *stygicus*." He concluded from this fact that it seemed to be necessary to ascertain the actual generic limits. The following paper is an essay to show these limits.

FEMALE GENITALIA

In his excellent work Slater (1950) showed the differences between *S. leucocephalus* (L.) and *stygicus* (Say) in the structure of the bursa copulatrix. The sclerotized rings of *S. stygicus* were found to have the typical Orthotylinae infolding of the lateral margin and were very similar to those of *Orthotylus modestus* Van Duzee. The posterior wall is composed of an L- and two J- structures, shows a very distinct K-structure and is suggestive of *O. ornatus* Van Duzee. *S. leucocephalus* has a very complicated form of the sclerotized rings. The posterior wall could not be studied by Slater.

The author has examined the female genitalia of several Nearctic and Palaearctic species. The American species proved to be very similar to *S. stygicus* and showed the Orthotylinae type. The European species, however, were quite different from them. The bursa copulatrix in any case was much smaller. The sclerotized rings showed the same complicated form as those of *S. leucocephalus*. The posterior wall was scarcely half as wide in the European species and showed distinct structures that seemed to be A-structures, E-structures and a B-structure. As Slater states, they appear to approach the Capsinae type.

The examination of some species of *Heterocordylus* Latr. showed a great resemblance to the American species of *Strongylocoris*. These facts seem to be a very good reason to separate the American species from those of Europe.

MALE GENITALIA

The genital segment is conical in the Palaearctic species. It is very broad at its base and the sides converge strongly (figs. 1 and 2). The genital opening is small. With the Nearctic species the genital segment is trapezoidal, broad at its apex and the sides converge slightly (fig. 3). The genital opening is very wide and bears on its left side a blunt process.

The right paramere is of a very unique type in all Palaearctic species (figs. 5 and 6). It is spoon-shaped, its basal part very long and straight. In the Nearctic species (figs. 7 and 8) the right paramere is of different shape. It is toothed and branched, the basal part being quite small.

The left paramere (figs. 10-15) does not show great differences between the American and European species.

The aedeagus, however, is very different. In the Palaearctic species (fig. 16) it is thick and short, suddenly narrowed in its middle. The vesica has only membranous appendages and lacks any chitinized parts. In the Nearctic species (fig. 17) the aedeagus is more slender and pointed at its apex. The vesica has no membranous appendages, but consists of two chitinized bands, which are toothed and somewhat branched. *Heterocordylus* (fig. 18) shows the same shape of aedeagus as the American species.

Much stress is here placed on the structure of the vesica. The differences shown above are sufficient reason to separate Nearctic and Palaearctic species and to constitute a new genus for those of the Nearctic.

#### HEAD

The head of the Palaearctic species (figs. 19 and 20) is, when seen from above, very short and broad. The antennal fossa is well separated from the margin of the eye, the minimal space between the two is greater than the diameter of the antennal fossa. Seen from the side (figs. 23 and 24), the vertex is almost adpressed to the pronotum and somewhat covering its anterior margin. The space between the eye and the apex of the clypeus is at least as great as the height of the eye. The first segment of the rostrum is nearly as thick as the eye is broad. In the Nearctic species (fig. 21) the antennal fossa almost touches the eye. The front has two ocellus-like spots. The vertex is well separated from the pronotum (fig. 25). The distance between the eye and the apex of clypeus is less than the height of eye. The first segment of rostrum is much narrower than the breadth of eye.

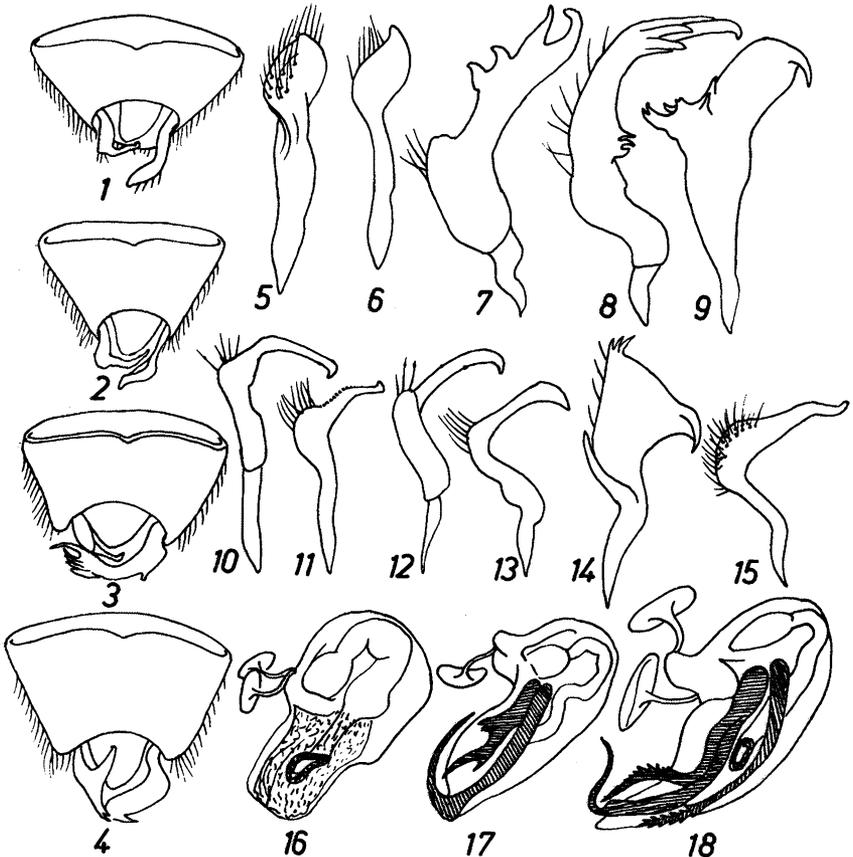
#### CLAWS

In the Nearctic species (fig. 29) the arolia as well as the pseudarolia are well developed and membranous; in the Palaearctic species (fig. 27 and 28) the arolia are also well developed and membranous; the pseudarolia, however, are replaced by a pair of straight bristles.

#### CONCLUSIONS

The differences shown above make it evident that the Nearctic species of *Strongylocoris* are not congeneric with the Palaearctic ones. The differences in the form of the female genitalia and those of the aedeagus of the male without any doubt are of generic value. But as there are also external differences, the genera are easily sep-

arated without reference to genitalic characters. Therefore it is necessary to make two genera of the genus hitherto treated as *Strongylocoris* Blanchard. The genotype of this genus, *S. leucocephalus* (L.), belongs to the Palaearctic genus. Therefore the name *Strongylocoris* Blanchard must remain with this genus. The Nearctic genus, on the other hand, must have a new name. As there is no name available for it, I propose to name the genus in honor of Dr. James A. Slater who first called attention to the difference between the females of the Nearctic and Palaearctic species.



Figs. 1-18, male genitalia. Figs. 1-4, genital segment from above (22.5X); figs. 5-9, right paramere (47.5X); figs. 10-15, left paramere (47.5X); figs. 16-18, aedeagus (47.5X). Figs. 1, 5, 10, 16, *Strongylocoris leucocephalus* (L.); fig. 2, *S. atrocoeruleus* (Fieb.); figs. 3, 8, *Slaterocoris stygicus* (Say); figs. 4, 14, *Heterocordylus erythrocephalus* (Hhn.); figs. 6, 11, *Strongylocoris niger* (H.-S.); figs. 7, 12, 17, *Slaterocoris pallipes* (Kn.); fig. 13, *Slaterocoris atritibialis* (Kn.); fig. 9, *Heterocordylus flavipes* E. Wgn.; fig. 15, *Pseudoloxops coccinea* (M. D.); fig. 18, *Heterocordylus tibialis* (Hhn.).

**Slaterocoris**, novum genus  
(Type species: *Capsus stygicus* Say)

*Generic description.*—Body almost glabrous, sometimes covered with a fine semierect pubescence, but without scale-like hairs. Form oval. Always macropterous. Head strongly inclined. Posterior margin of vertex not adpressed to the pronotum and not having a ridge from eye to eye.

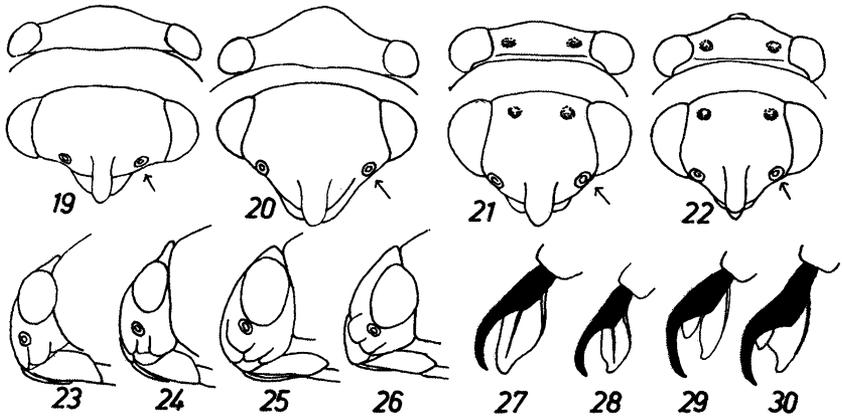
Pronotum and hemelytra shining, densely punctured. Antennae slender, with a very fine pubescence, the second joint as a rule shorter than the two apical joints taken together. Rostrum very short, the second and third joint being thicker at their connection. Legs slender. Tibiae with fine spines. Arolia and pseudarolia of the claws well developed and membranous. Genital segment of male very short and broad, trapezoidal. Genital opening very wide. Right paramere toothed and branched, of different shapes. Left paramere slender, falciform. Aedeagus without membranous parts, with two chitinized bands, which are toothed and branched.

I have examined four species of this new genus (*pallipes* Knight, *stygicus* Say, *atritibialis* Knight, *atratus* Knight). The excellent figures provided by Knight (1941) show that *S. hirtus* Knight, *ambrosiae* Knight and *breviatus* Knight also belong to this genus. It will be necessary to examine the rest of the Nearctic species in order to find out whether they belong to this genus or not. I leave this question to be solved by my American colleagues, who may have access to the material. Of the Palaearctic genus *Strongylocoris* Blanch. I have examined seven species (*niger* H.-S., *atrocoeruleus* Fieb., *leucocephalus* L., *erythroleptus* Costa *luridus* Fall., *obscurus* Rmb., *cicadifrons* Costa).

The genus *Slaterocoris*, nov. gen., does not belong to the tribe Halticini Kirk. It is quite different from this tribe since its aedeagus lacks membranous parts, but has two chitinized bands in the vesica. The female genitalia also differ by having distinct K-structures in the posterior wall of the bursa copulatrix. In addition, the pseudarolia are well developed and membranous. All these facts show that it must be removed to the tribe Orthotylini Van Duzee. Within this tribe it comes very near to the genus *Heterocordylus* Fieber, 1858, and especially its subgenus *Bothrocranum* Reuter, 1876. It agrees with this genus in having ocellus-like spots on the front, the antennal fossa nearly touching the eye, the large eye, the slender first segment of rostrum (figs. 25 and 26), the claws having well-developed pseudarolia (figs. 29 and 30), the posterior wall of the female bursa copulatrix having distinct K-structures and the chitinized bands of the male aedeagus being very similar (figs. 17 and 18), as well as by the form of the genital segment (figs. 3 and 4). It differs, however, from this genus by the rostrum which is very slender in *Heterocordylus*, the second joint of antennae which is longer than the two apical joints taken together, and the absence of scale-like pubescence on the body.

In the case of the genus *Strongylocoris* Blanch., the tribes Orthotylini and Halticini seemed to intergrade. The examination of the

genus, however, showed that there was a mistake in the systematic position of a part of the genus. The correction of this mistake has made both tribes more homogenous. The opinion of Carvalho (1952), p. 34) : "the genitalia alone have been found to be misleading in many respects" may have been based upon similar mistakes in the systematic position of genera and groups. It will be necessary to check all those cases. I suggest that the result will be that the genitalia are a very good criterion, as I could state already with all Palaearctic genera.



Figs. 19-30, Head and claws. Figs. 19-22, head seen from above and from the front (18X); figs. 23-26, head seen from the side (18X); figs. 27-30, claws (135X). Figs. 19, 23, 28, *Strongylocoris niger* (H.-S.); fig. 20, *S. luridus* (Fall.); figs. 21, 25, *Slaterocoris pallipes* (Kn.); figs. 22, 26, 30, *Heterocordylus erythrophthalmus* (Hhn.); figs. 24, 27, *Strongylocoris leucocephalus* (L.); fig. 29, *Slaterocoris atritibialis* (Kn.).

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