

## A new species of *Xenocylapus* Bergroth, 1922, from Surinam (Heteroptera: Miridae, Cylapinae)

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ABSTRACT. — *Xenocylapus boogertorum* spec. nov. (Cylapinae, Fulviini) is described from Surinam. Second segment of the rostrum is very long, has a tracheiform structure and an extra (spurious) joint, features suggesting an increased flexibility of the rostrum probably in connection with the feeding habits.

### Introduction

During the author's stay in Surinam, South America, he collected some specimens of a remarkable mirid which prove to belong to a new species of the genus *Xenocylapus* Bergroth, 1922, being smaller than the single species of the genus so far known: *X. nervosus* Bergroth, 1922. All the specimens but one were collected by the author in the garden of our dear friends, Mr. and Mrs. F. L. N. Boogert, now in Paramaribo, whose generous hospitality and help during several excursions of the author is here gratefully acknowledged and memorialised by naming the new species after them.

### *Xenocylapus boogertorum* spec. nov.

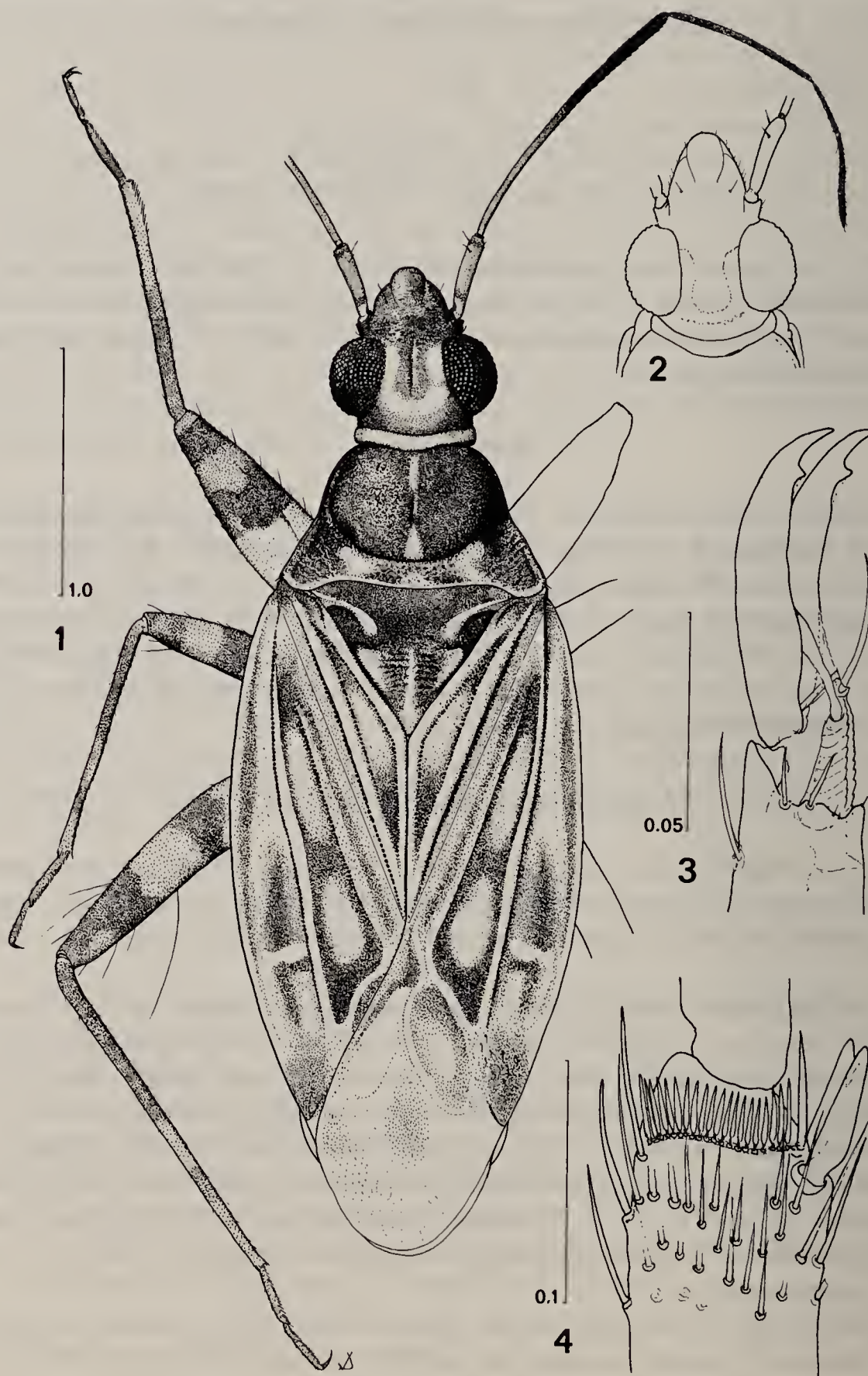
Female (fig. 1). Small species, 4 mm, oblong ovate with large, prominent eyes, long slender antennae and rostrum, and with thickened fore and hind femora; ground colour dark brown, spotted with yellow and white, rather shiny, and sparsely set with small, white subadpressed hairs.

Head (figs. 1, 2, 6) rather broad, posterior part including eyes almost spherical, anterior part obtusely conical, anterior margin of prominent eyes somewhat excavated near antenniferous tubercles; interocular space as broad as one eye; tylus broad, sides weakly rounded; antennae (fig. 6) very long and slender, first segment as long as the length of one eye as seen from above, extending beyond apex of tylus by  $\frac{1}{3}$  of its length, thicker than the other segments. Second segment about four times as long as first, third and fourth each about twice as long as first, so segmental ratio is roughly 1 : 4 : 2 : 2. Buccula narrower and shorter than first rostral segment, tapered posteriorly. Labrum lanceolate, almost eight times longer than wide, a little longer than first rostral segment.

Rostrum (labium) (fig. 6) long and slender, quasi five segmented, reaching to middle of the squama; first segment thickest, reaching beyond level of anterior margin of the eye when viewed laterally; second segment very long,  $\frac{5}{6}$  as long as first segment, the first  $\frac{2}{3}$  of its length with a tracheiform structure and with an extra (spurious) joint at about  $\frac{1}{9}$  from its apex; third and fourth segments each as long as first, the fourth (fig. 7) provided with small recurved setae; segmental ratio of rostrum is about 7 : (33 + 4) : 7 : 7.

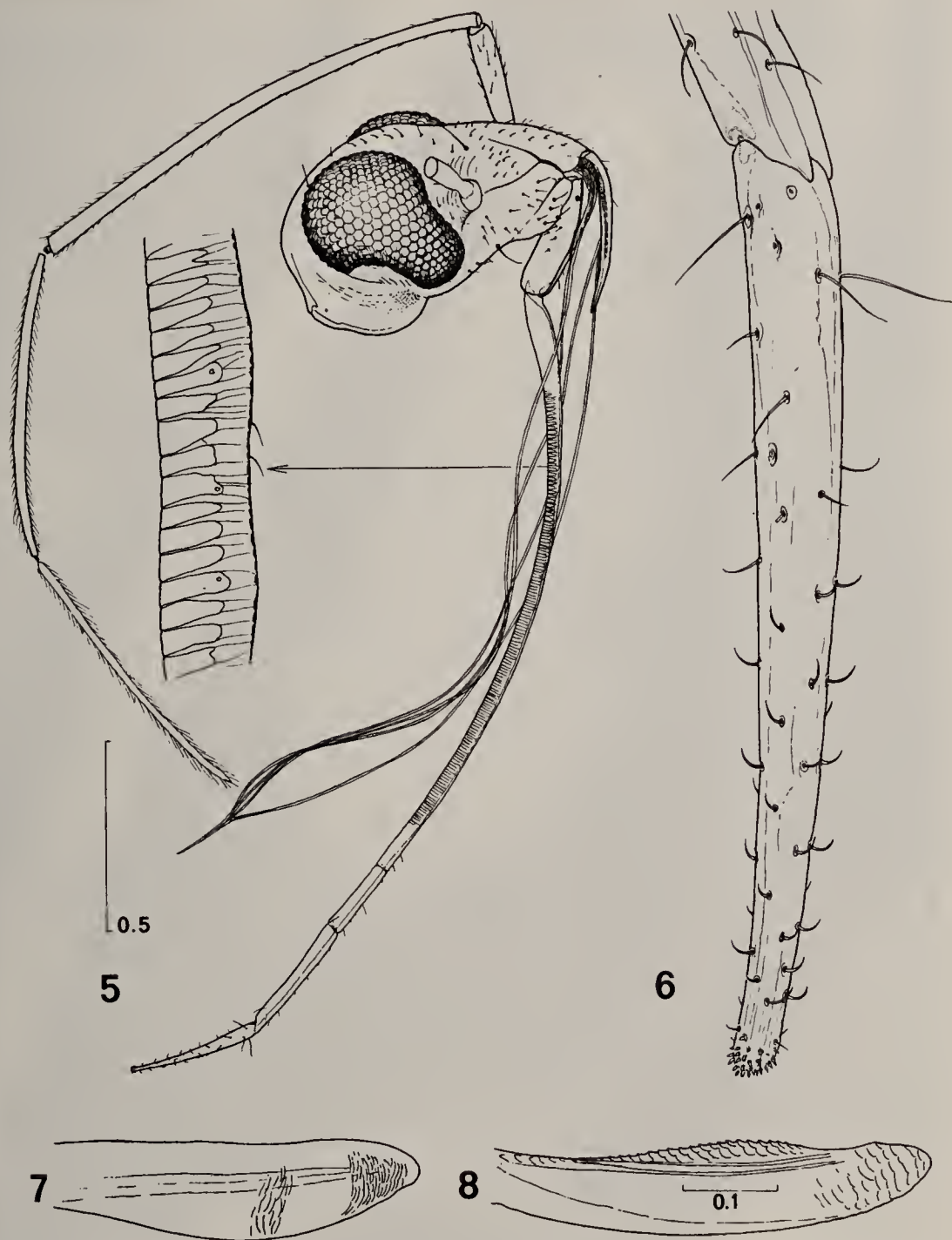
Thorax. Pronotum broader than long (about 3 : 2), trapezoidal, hind margin more than twice as broad as the anterior margin (7 : 3), sides margined, anterior part (disc) almost spherical, anteriorly slightly concavely truncated and sharply separated from the well developed collar, posteriorly separated from the rather short posterior part (lobe) by a deep transverse groove; posterior margin bisinuate, largely exposing the mesoscutum; lateral margin with anterior part convex, posterior half straight; posterior propleural margin deeply excavate to receive base of forwing wing, propleural flanges pressed down to base of fore coxae. Mesoscutum broadly exposed with curved, oblique carina on each side; scutellum triangular, separated from mesoscutum by a short, transverse sulcus laterally. Fore wings moderately long, passing tip of





Figs 1-4. *Xenocylapus boogertorum* n. sp., female, paratype. 1, dorsal aspect. 2, Head of the same in exact dorsal view. 3, Pretarsal segment of the hind leg. 4, Tip of the left fore tibia. Scales in mm.

abdomen, with five deeply punctured grooves bordering the veins, without a trace of a cuneal fracture. Legs: fore coxae very large, conically prolonged; fore femora large, spindle shaped, somewhat flattened; fore tibiae stout, apically with strong spurs and provided with a well-developed pecten of about 20 teeth (fig. 4); tarsi slender, first segment a little longer than 2nd and 3rd together; claws (fig. 3) slightly curved and with a small subapical tooth. Middle and hind coxae much smaller and shorter, middle femora shorter and more slender, posterior femora longest and moderately thickened; middle and posterior tibiae and tarsi slender. Prosternum slightly saddle shaped, mostly membranaceous, sclerotised part restricted to the anterior trian-



Figs 5-8. *Xenocylapus boogertorum* n. sp., female, paratype. 5, Head in semi-lateral view after clearing in KOH, showing the tracheiform texture and the spurious joint in the second rostral segment. 6, Last rostral segment showing its setation. 7, 8, Distal parts of the 1st and 2nd valvulae (respectively) of the ovipositor. Scale in mm.

gular part pointing between the fore coxae. Mesosternum large, with a median sulcus, coxal cavities widely separated; metasternum smaller, broader than long, antero-laterally indented to receive the mesocoxae.

Abdomen of normal shape, rather flat; ovipositor occupying about 0.6 times of length of abdomen, basally covered by a well developed ligulate squama which is about 5 times longer than broad, covering ovipositor for about  $1/3$  of its length (11 : 5 : 37). First and second valvulae slender, about 1.1 mm long, their distal parts (figs 7 and 8 respectively) broadened, spatulate, the dorsal edges of the first valvulae smooth, those of the second with a subapical serration.

Texture. Head shining, vertex posteriorly finely granulated; genae, vertex and adjacent part of frons wrinkled, genae along eyes and below antennal peduncle finely shagreened (matt); central part of vertex, anterior part of pronotum, sides and central parts of mesonotum and adjacent parts of scutellum finely rugose. Pleurae of thorax and of sternites 2-5 with silvery semi-matt areas. Posterior part of pronotum antero-laterally impressed and rugose, medially finely transversely wrinkled and finely punctate. Genae, frons, anterior part of pronotum, scutellum and fore wings sparsely provided with small, semiadpressed white hairs; sternites





Fig. 9. *Xenocylapus boogertorum* n. sp., female, paratype. Photomicrograph of a part of the right hemelytra showing punctured grooves, setation, and the microtexture of the surface. Scale in mm.

somewhat more densely set with longer white hairs. Legs finely haired, posterior margin of hind femora with several very long thin hairs.

Colour. Ground colour of body dark brown, anterior part of head reddish brown, genae and gula lighter. A large, U-shaped mark on vertex, pronotum, collar, a centrally interrupted median line on pronotum, a sublateral spot on posterior part of pronotum, carina of mesonotum, a median line and two oblique vittae on scutellum, yellow. Antennae: 1st segment light brown with a white base, first half of second segment reddish brown, rest and other segments dark brown. Rostrum light brown, first segment with a darker base and a subapical white dot. Legs whitish with an anterior streak on coxae, extreme base and two broad annuli on femora and basal half of tibiae brownish; besides, middle and hind tibiae with a faint brownish annulus at 1/4 from their apices. Fore wings white with a brownish pattern as shown in figure 1. Abdomen brown, paratergites darker, but posterior margin of paratergites 3-5 and central parts of ventrites 4-9 yellowish-white.

Measurements (in mm). Holotype: total length 4.0, total body length 3.8; pronotal length



0.63, pronotal width 1.1; length of scutellum 0.35; length of head 0.82, width of head including eyes 0.69, synthlipsis 0.23; length of antennal segment I 0.34, II 1.23, III 0.6, IV 0.6; length of rostral segments I 0.35, II 1.81 (1.60 + 0.20), III 0.34, IV 0.34, total length 2.84. Length of labium 0.43.

Specimens studied. — Holotype ♀, Surinam, Para District, Onverdacht, on dying unidentified tree infested with small wood borers, 20.I.1963; 6 paratypes, all females, same data; 1 ♀ paratype, Surinam, Para district, near Carolina Kreek, under loose bark of a dead log, 7.XII.1962. All specimens were collected by the author and are deposited in the collection of the Leiden Museum.

#### Comparative notes

The new species has been compared with the holotype specimen of *X. nervosus* Bergroth 1922, and with the *nervosus* specimen from Guyana on which China & Carvalho (1951) based their redescription of the genus and species. The most clear differences between the two species are that the new species is much smaller (2/3 to 3/4×), the head less slender, the first antennal segment relatively shorter, the second antennal segment relatively longer (four times the first segment instead of three times), and the head and pronotum much darker.

Some additional measurements (in mm) of the holotype of *X. nervosus* Bergroth: total length of rostrum, 4.0; segmental lengths; I, 0.5, II 2.8 (2.54 + 0.26), III 0.37, IV 0.33; length of squama, 0.34.

The most striking feature of the species is the structure of the rostrum with the tracheiform appearance of its second segment and the extra (false) joint in the same segment, also present in the two studied specimens of *X. nervosus* Bergroth.

This remarkable rostral structure is almost certainly interrelated with the habit of feeding of the species. As the Surinam specimens were caught while being active on bark riddled with small holes of bark borers, it seems probable that they feed on these borers or their larvae in those holes. As these holes are more or less perpendicular to the position of the protruded rostrum, a higher flexibility of it seems to be advantageous. The tracheiform structure of the very long second segment and an extra joint in the same could very well point to that direction.

#### Acknowledgements

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#### LITERATURE

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