

SOME SPINTURNICIDAE (ACARINA: MESOSTIGMATA) FROM SURINAM BATS. PARASITIC MITES OF SURINAM IX.*)

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Abstract. Three species of the family Spinturnicidae are reported from Surinam bats: *Periglischrus iheringi* Oudemans, 1902 from *Artibeus lituratus fallax* Peters, *Periglischrus caligus* Kol., 1857 from *Glossophaga soricina soricina* (Pallas) and *Spinturnix surinamensis* n. sp. from *Eptesicus melanopterus* (Jentink). The description and figures of female, male and protonymph of the new species are given.

Although Kolenati as long ago as 1857 designated Surinam and Brasil as type localities of *Periglischrus caligus* Kol., 1857, no other spinturnicid mites have been reported up to now from Surinam. In the present paper we mention two additional species of these bat parasites from the material collected by the junior author during his investigation carried out for several months in 1969–1970. One of them is described as a new species.

***Periglischrus iheringi* Oudemans, 1902**

Material examined: 2 males, 11 females, 1 male deutonymph, 1 female deutonymph and 1 protonymph from *Artibeus lituratus fallax* Peters, Meerzorg, March 1, 1970; 1 male and 1 female from the same host, Lelydorp, January 1, 1970; 1 male and 3 females from the same host and locality, January 25, 1970 — all lgt. F. Lukoschus.

A widespread species in Central and South America, including Antilles, between the tropics of Cancer and of Capricorn. From Surinam it has not been reported yet. It parasitizes hosts of the family Phyllostomatidae, of the subfamily Stenodermatinae. No essential morphological differences were found between the specimens from Surinam collected from *Artibeus lituratus* Licht. and specimens from *Artibeus jamaicensis* Leach from Cuba and Venezuela, although in the material from Venezuela the small ontero-basal seta on femur II appears to be somewhat longer (compare with Furman 1966).

***Periglischrus caligus* Kolenati, 1857**

Material examined: 1 male from *Glossophaga soricina soricina* (Pallas), Lelydorp, December 12, 1969; 1 male from the same host, Leonsberg, February 3, 1970; 11 females and 2 protonymphs from the same host, Brownsweg, February 9, 1970 — all lgt. F. Lukoschus.

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The species was recently re-described by Furman (1966) after specimens collected from the type host, *Glossophaga soricina* (Pallas) in Panama and Trinidad. Our specimens from the same host, collected in Surinam, i.e. in the type locality, fully agree with this re-description and also with specimen of *Periglischrus setosus* Machado-Allison, 1964 from Venezuela, which must be therefore synonymized with *Periglischrus caligus* Kol., 1857 as proposed already by Furman (loc. cit.). The Furman's re-description can be completed by the fact, that on the distal antero-ventral margin of coxa III three distinct teeth are developed in females both from Surinam and Venezuela, while in males and protonymphs there are only some fine protuberances. In males distinct coxal ridges on coxa III and IV are strongly developed. In protonymphs from Surinam there are only four pairs of dorsal propodosomal setae similarly as in protonymphs of other species of the genus *Periglischrus*, which fact is not mentioned by Machado - Allison (1965) in his protonymphal characterization.

***Spinturnix surinamensis* n. sp.**

Type host: *Eptesicus melanopterus* (Jentink). Type locality: Lelydorp, Surinam, February 24, 1970, lgt. F. Lukoschus.

Material examined: 2 males and 2 females of the same data as holotype; 2 females from type host and locality, February 25, 1970; 2 females and one protonymph from type host and locality, February 27, 1970; 2 females from type host, Meerzorg, March 3, 1970 — all lgt. F. Lukoschus. Holotype (female), allotype (male) and paratype (protonymph) are deposited in the Rijksmuseum van Natuurlijke Historie, Leiden. Some paratypes are deposited in the National Collection of Surinam, Paramaribo, in the Institute of Parasitology of the Czechoslovak Academy of Sciences, Prague and in the Faculteit der Wiskunde en Natuurwetenschappen, Katholieke Universiteit, Nijmegen.

Female (Holotype): Body length 1296 (1176—1656 in paratypes), width 930 (862—1104). (All measurements in microns).

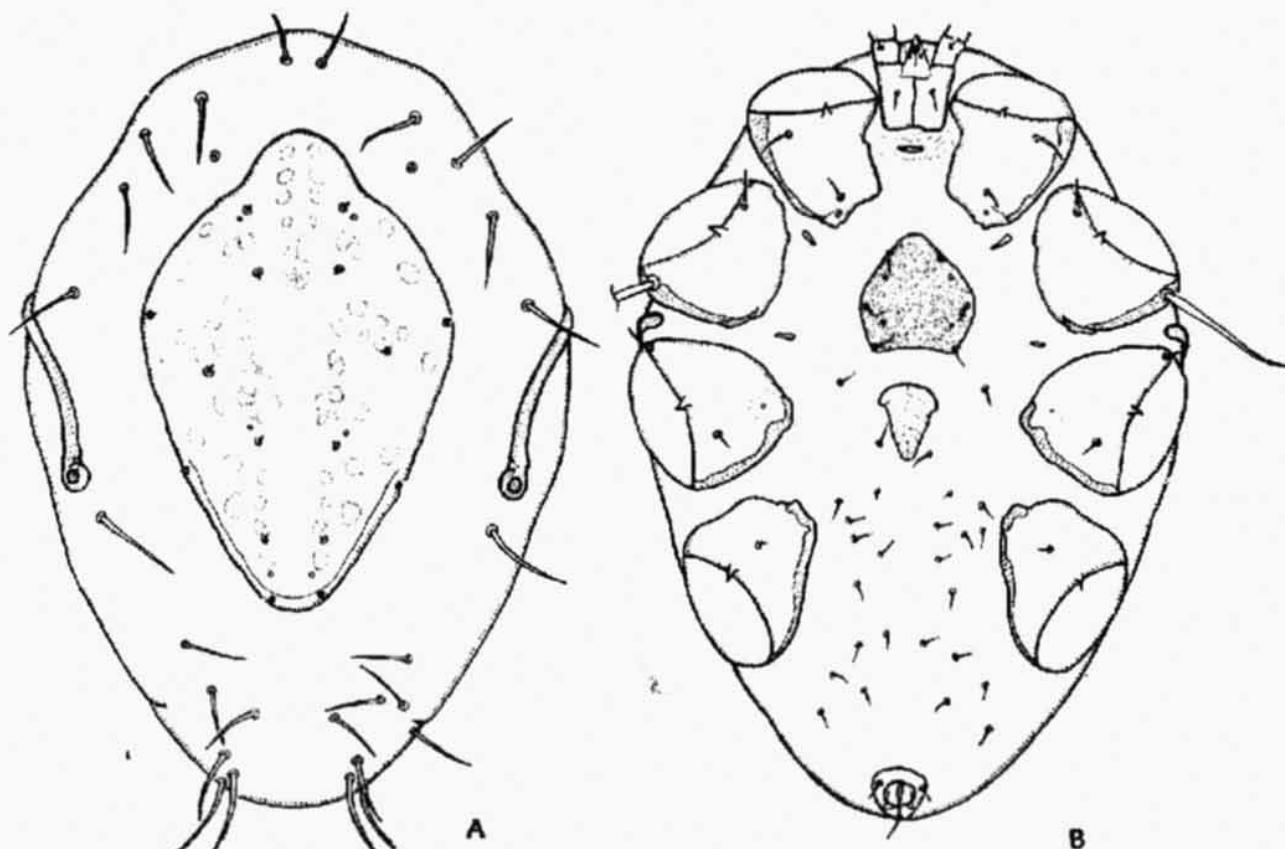


Fig. 1. *Spinturnix surinamensis* n. sp., female. A — dorsal view, B — ventral view.

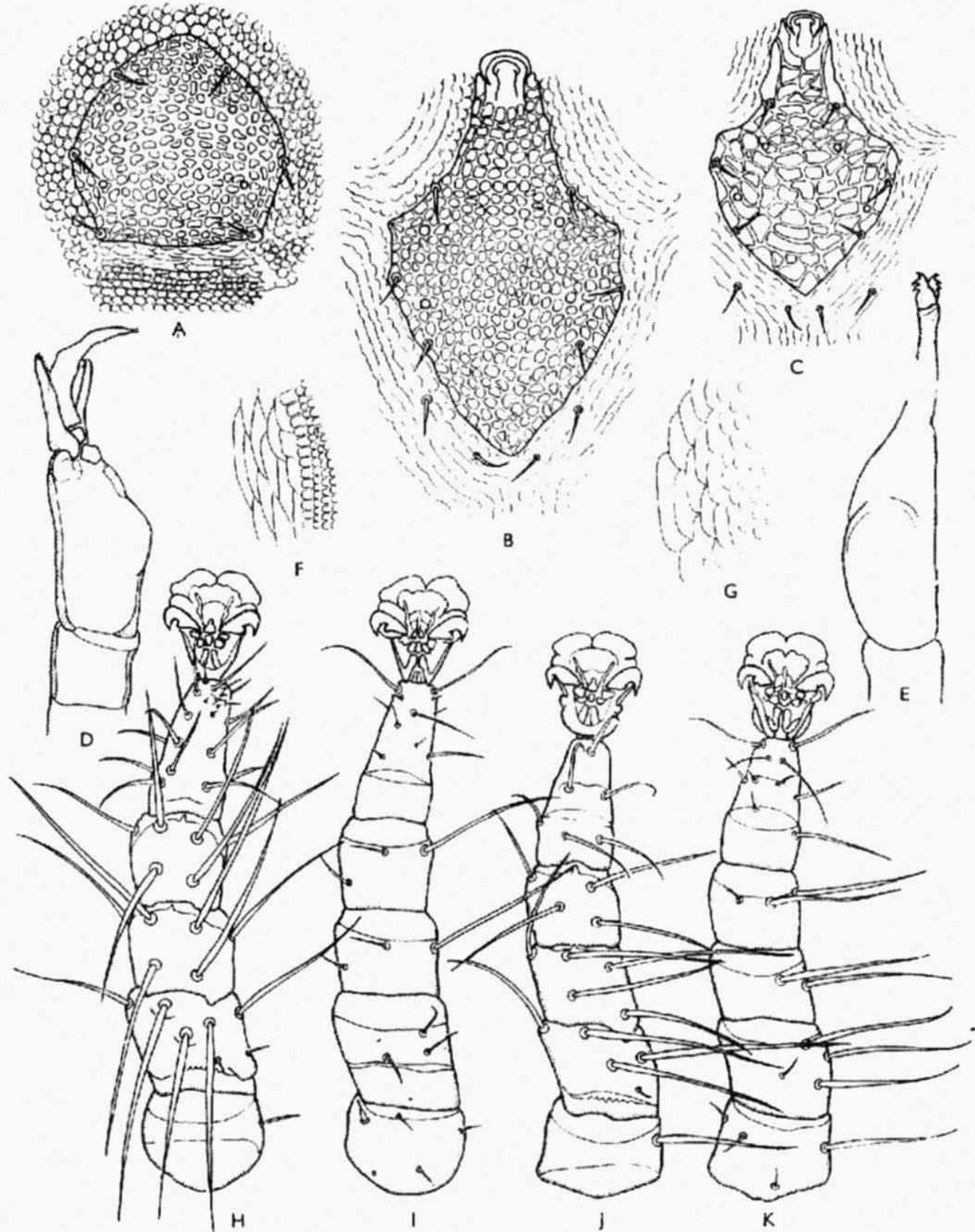


Fig. 2. *Spinturnix surinamensis* n. sp. A — sternal plate of female with ventral integumentation pattern, B — male genito-ventral plate with ventral integumentation pattern, C — the same of *Spinturnix orri* Rudnick, 1960, D — male chelicera, E — female chelicera, F — dorsal integumentation pattern in female propodosoma, G — dorsal integumentation pattern in female opisthosoma, H — leg I of female dorsally, I — leg I of female ventrally, J — leg II of female dorsally, K — leg II of female ventrally.

Dorsum (Fig. 1 A): Dorsal plate of lanceolate form with rounded apex projecting somewhat from broad anterior margin, without discernible pattern, 804 (784—804) long, 542 (523—552) wide. There are 8 pairs of micro-setae and 3 pairs of small circular pores situated on the plate. The surface of the plate is covered with some oval shallow depressions as figured. Integument surrounding the dorsal plate with fine integumentation pattern (Fig. 2F, G) and with a pair of circular propodosomal pores between the third pair of propodosomal setae and the plate. Five pairs of rough propodosomal setae measure 94—114, the pair of setae in the vicinity of stigmata somewhat longer (137). Opisthosoma with 14 rough setae (in paratypes their number vary between 9—12), from which the two last caudally situated setae measure 141—148. Stigmata at the level of posterior margin of coxa III, the dorsal portion of peritreme measure 310, the ventral portion 31 only. Venter (Fig. 1B): Tritosternal plate very small, 12 (8—16) long, 25 (24—27) wide, of irregular boat-like form. Sternal plate 180 (180—196) long, 164 (164—196) wide, blunt anteriorly and straight posteriorly, with characteristic sculpturing pattern (Fig. 2A). There are 3 pairs of short sternal setae (29—35) and 2 pairs of circular pores on the plate. Genital plate elongated, anteriorly enlarged, finely sculptured, 121 (121—152) long, 86 (86—109) wide; genital setae (31—35) situated outside of the plate. Two pairs of small intercoxal platelets between coxa I—II and II—III. Metasternal setae measure 28—31. Posteriorly to the genital plate 20—24 short setae (27—35) are developed. Anal plate 98×98, anal setae 23, postanal seta 35. Ventral integument with punctate pattern as shown in figure 2A. **Gnathosoma:** Base of gnathosoma relatively narrow (145), gnathosomal setae 27 long, hypostomal setae shorter. Distal segment of chelicerae 121 long, bulbously dilated basally, both chelae 11 long, with three distinct teeth (Fig. 2E). **Legs (Fig. 2H—K):** Coxal setae very short (31—55) excluding long posterior seta on coxa II (270). The shortest are the proximal seta on coxa I and the seta on coxa IV. Dorsal setae, postero-ventral setae mainly on legs II and antero-ventral setae on legs III long, rough to dentate, ventral setae mostly short and some with a barb. Only one proximal dorsal seta on femur I and II tiny. Some setae of sensory field on tarsus I pedicillate. **Chaetotaxy of legs I and II** is shown in figures. The length of legs as follows: I 969 (930—969), II 862 (804—862), III 862 (804—862), IV 1008 (939—1008), the length of tarsus I 208 (204 až 208), II 208 (194—208), III 208 (196—208), IV 240 (213—240).

Male (Allotype): Body length 969 (935 in paratype), width 766 (736).

Dorsum (Fig. 3A): Dorsal plate of rhombic form, 828 (843) long, 610 (620) wide, without discernible pattern. It bears 10 pairs of short micro-setae (the propodosomal pores are substituted by a pair of micro-setae and located on the plate) and 2 pairs of small circular pores. The fourth pair of small pores situated outside of plate near the stigmata. The surface of the plate with shallow depressions as in female. Five pairs of propodosomal setae (98—114), one pair of setae near the stigmata (132) and only one pair of dorsal opisthosomal setae (125). Dorsal integumentation pattern similar to the ventral one (Fig. 2B). Dorsal part of peritreme measures 274, ventral part 43 only. **Venter (Fig. 3B):** Tritosternal plate as in female, 13 (8) long and 47 (31) wide. Genito-ventral plate 351 (333) long, 221 (203) wide, with characteristic pattern (Fig. 2B), bearing 3 pairs of setae (25—32) and 2 pairs of circular pores. Two pairs of intercoxal and a pair of metasternal platelets present. There are two pairs of longer (32—35) and one pair of shorter (13) setae in metasternal region and three pairs of setae between coxae IV. Anal and postanal setae somewhat shorter than in female. Ventral integumentation pattern is shown in figure 2B. **Gnathosoma:** Base of gnathosoma 156 wide, gnathosomal setae measure 31, hypostomal setae shorter. Distal segment of palps 106 long, with bulbous dilatation. Digitus fixus 59 long, with two subapical teeth, digitus mobilis 63 long, with ten smaller

teeth. Spermatodactyl strongly chitinized, about twice as long as chelae (Fig. 2D). Legs: The leg chaetotaxy similar as in female. The length of legs as follows: I 910 (891), II 814 (794), III 809 (784), IV 901 (915); the length of tarsus I 196 (200), II 188 (188), III 196 (196), IV 215 (227).

Protonymph (Fig. 3C, D): Body length 912, width 673. Dorsal plate divided into a large podonotal plate with 6 pairs of micro-setae and 2 pairs of circular pores, and smaller pygidial plate with 2 pairs of micro-setae and a pair of pores, and two mesonotal platelets situated between them. The common length of all these plates is 707, the width of podonotal plate 445. Five pairs of propodosomal setae (114—121), one pair of setae near the stigmata and only one pair of dorsal opisthosomal setae, both 137 long. All peritreme situated dorsally, stigmata together with a part of peritreme covered by integument.

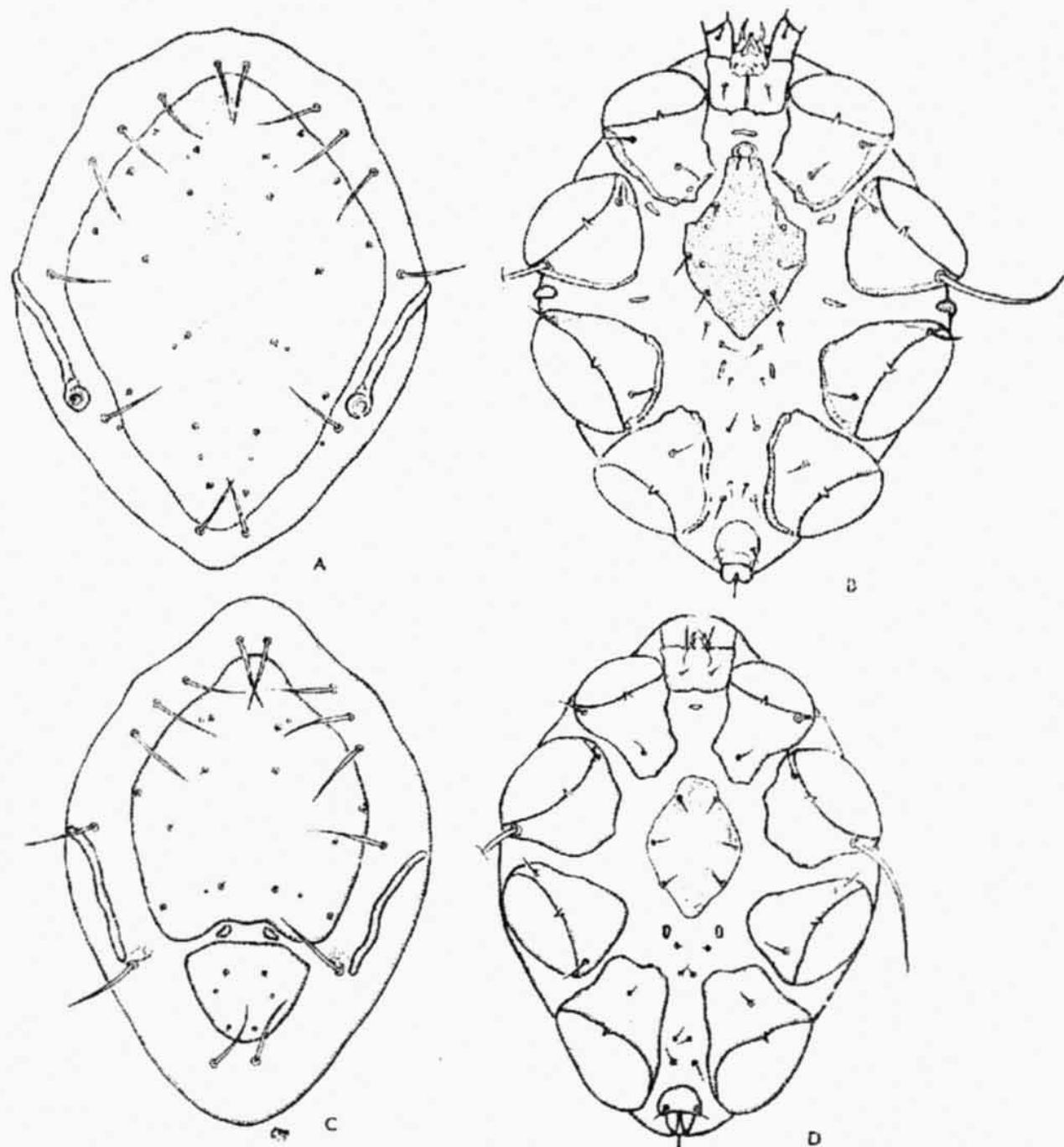


Fig. 3. *Spinturnix surinamensis* n. sp. A — male, dorsal view, B — male, ventral view, C — protonymph, dorsal view, D — protonymph, ventral view.

Tritosternal plate developed, very small. Sternal plate 221 long, 172 wide, with 3 pairs of short setae (19—23). A pair of metasternal platelets and a pair of very fine genital setae. Three pairs of short setae between coxae IV. The leg chaetotaxy differs from chaetotaxy of adults by absence of some setae, especially on tarsus I and in sensory field.

The new species belongs to the second group of species after Rudnick (1960), which includes *Spinturnix orri* Rudnick, 1960, *S. bakeri* Rudnick, 1960 and *S. mexicanus* Rudnick, 1960 and is characterized mainly by presence of only one tiny proximal dorsal seta on femur I and II and by presence of long postero-ventral setae on legs II and long antero-ventral setae on legs III. The presence of 9—14 dorsal opisthosomal setae in female makes the species *S. surinamensis* n. sp. stand between *S. orri* (8—9 setae) and *S. mexicanus* (14—18 setae); but the characteristic form of dorsal plate with anterior rounded apex is sufficient for distinguishing them. Apart from these features the female of the new species differs from *S. orri* in greater length of dorsal, especially of propodosomal setae and from *S. mexicanus* in the form and structure of sternal and tritosternal plates. In the presence of only one pair of dorsal opisthosomal setae the male of *S. surinamensis* n. sp. resembles *S. orri* from which it differs in greater length of body plates and of propodosomal setae and in different form and sculpture of genito-ventral plate (Fig. 2B, C).

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