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THE GENUS *TIBILIS* STÅL IN MEXICO (HETEROPTERA: PENTATOMIDAE)

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Abstract.—The genus *Tibilis* Stål is reported from Mexico for the first time with a provenance of the Lacandon Jungle of Chiapas. *Tibilis* is a South American genus with one species extending into Panama and Costa Rica. The Chiapanecan species is described as new, differentiated primarily by the male and female genitalia.

Key Words.—Insecta, Pentatomidae, stinkbug, taxonomy, Mexico, *Tibilis*

The pentatomine genus *Tibilis* Stål (1858 [1860]) contains ten nominal species all from South America with one species, *Tibilis parva* (Distant 1893), extending into Panama and Costa Rica. *Tibilis* belongs to section 3 of the tribe Pentatomini, possessing an elevated metasternum apposed by a basal abdominal spine. A key to this group of genera was provided by Rolston et al. (1980).

Tibilis has not been reviewed or revised, thus there are no keys or modern descriptions for any of the species except *T. parva.* Ruckes (1960) redescribed *T. parva,* which he transferred to *Tibilis* (from *Brachystethus* Laporte), when he described a new genus and species, *Paratibilis confusus,* from Mexico. *Paratibilis* is closely related to *Tibilis,* differing by the metasternum that is obtusely carinate rather than flat-topped and pentagonal. Other differences described by Ruckes (1960), and later by Grazia & Barcellos (1991), are the bucculae that are uniform in height in *Paratibilis,* but elevated anteriorly in *Tibilis,* and the juga that are convergent before the tylus in *Tibilis,* whereas in *Paratibilis,* the juga do not surpass the tylus. Grazia & Barcellos (1991) redescribed *Paratibilis confusus* Ruckes, comparing it to *Tibilis subconspersa* Stål, the type of the genus.

The most recently named species of *Tibilis* were described by Bergroth (1914) and Breddin (1903, 1914). Bergroth stated that the differences between his new species (*T. compascens* Bergroth and *T. laeviventris* Bergroth) and the type species, *Tibilis subconspersa* Stål, were the relative lengths and coloration of the antennal segments. Breddin did not compare his new species to any of those previously described. Neither Breddin nor Bergroth made mention of the genitalia. Our examination of material representing *Tibilis parva* and two other South American species, one of which we believe to be *T. subconspersa,* indicates that the critical differences between species in this genus are found to be in the genitalia. We do not consider differences in coloration or the proportions of the antennal segments to be dependable for the separation of species in the Pentatomidae.

In the absence of a revisionary study and review of the types, it is not possible to determine South American specimens with certainty. However, in the collection of the Universidad Nacional Autonoma Mexico (UNAM), there is a long series

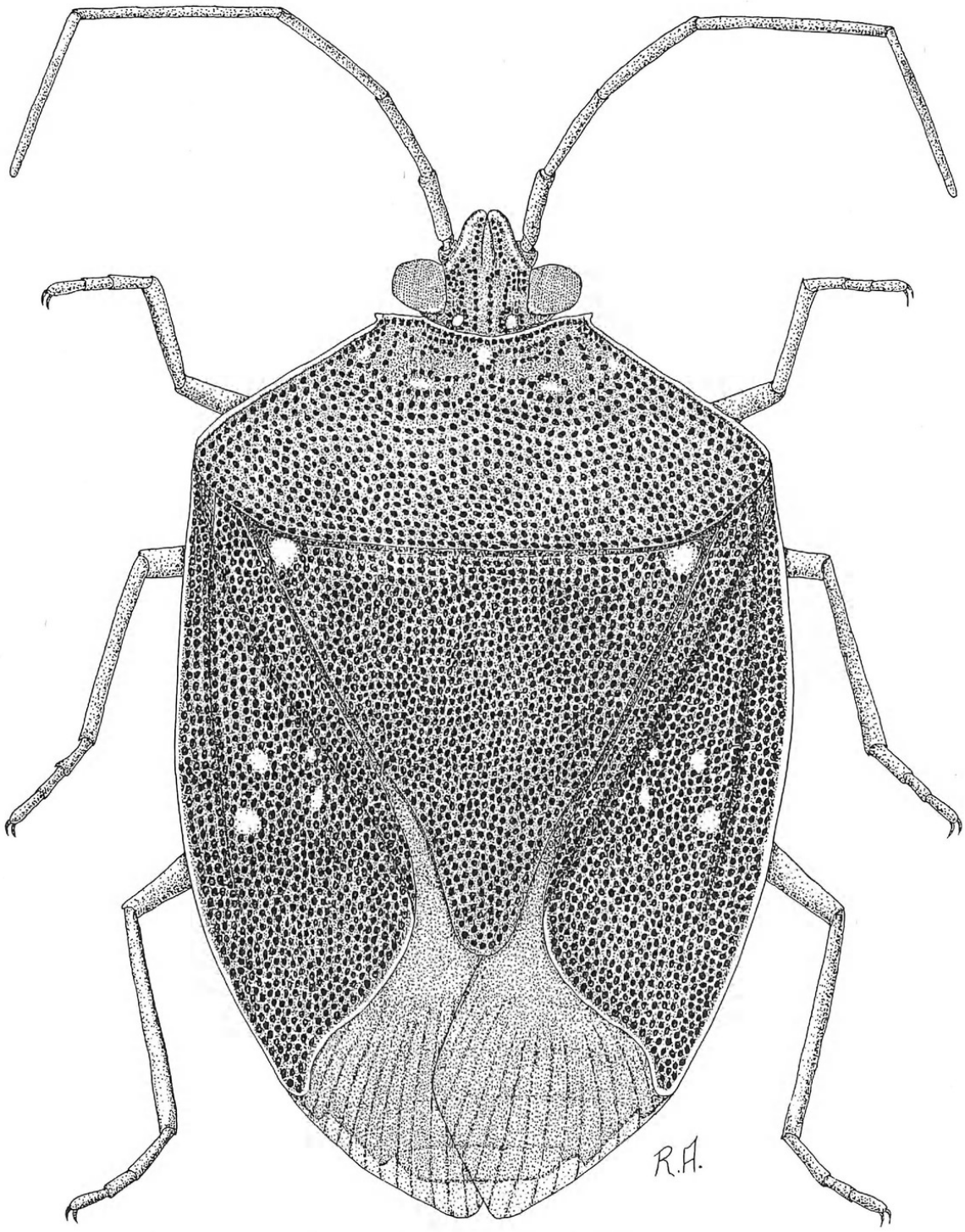
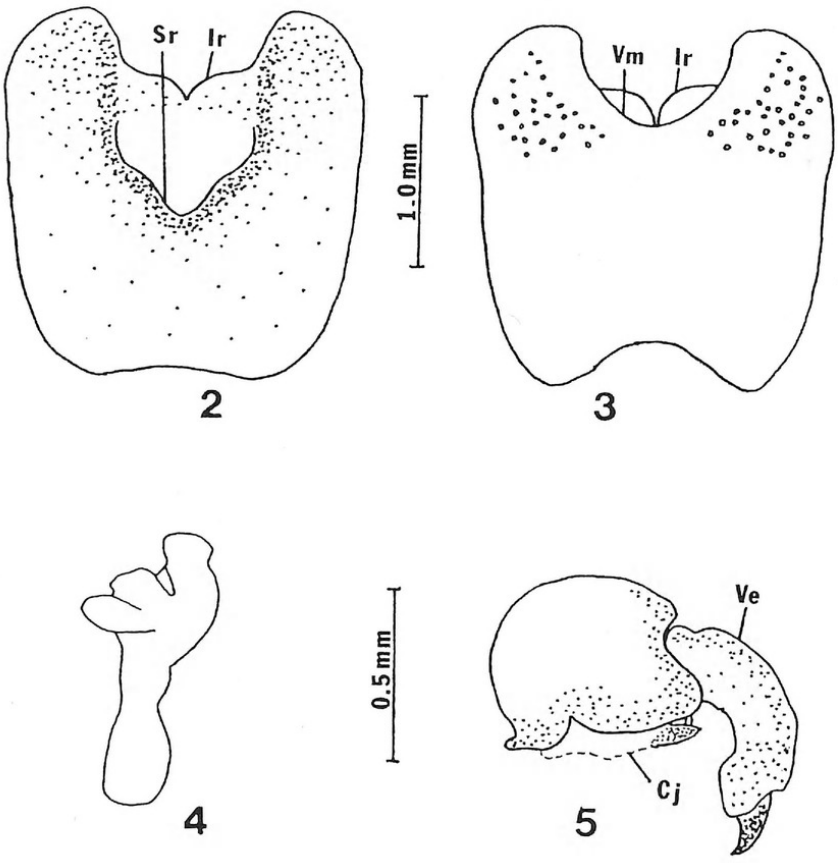


Figure 1. *Tibilis chiapensis* Thomas & Brailovksy, NEW SPECIES.

of specimens from the Lacandon Jungle of Chiapas, Mexico. The presence of this genus in Mexico is of considerable interest, because the North American pentatomine fauna is quite well known. An examination of the genitalia of these specimens indicates that they are quite distinct from *Tibilis parva* and from the South American specimens available to us. For these reasons, and because of its disjunct distribution, we describe the Chiapas species as new.

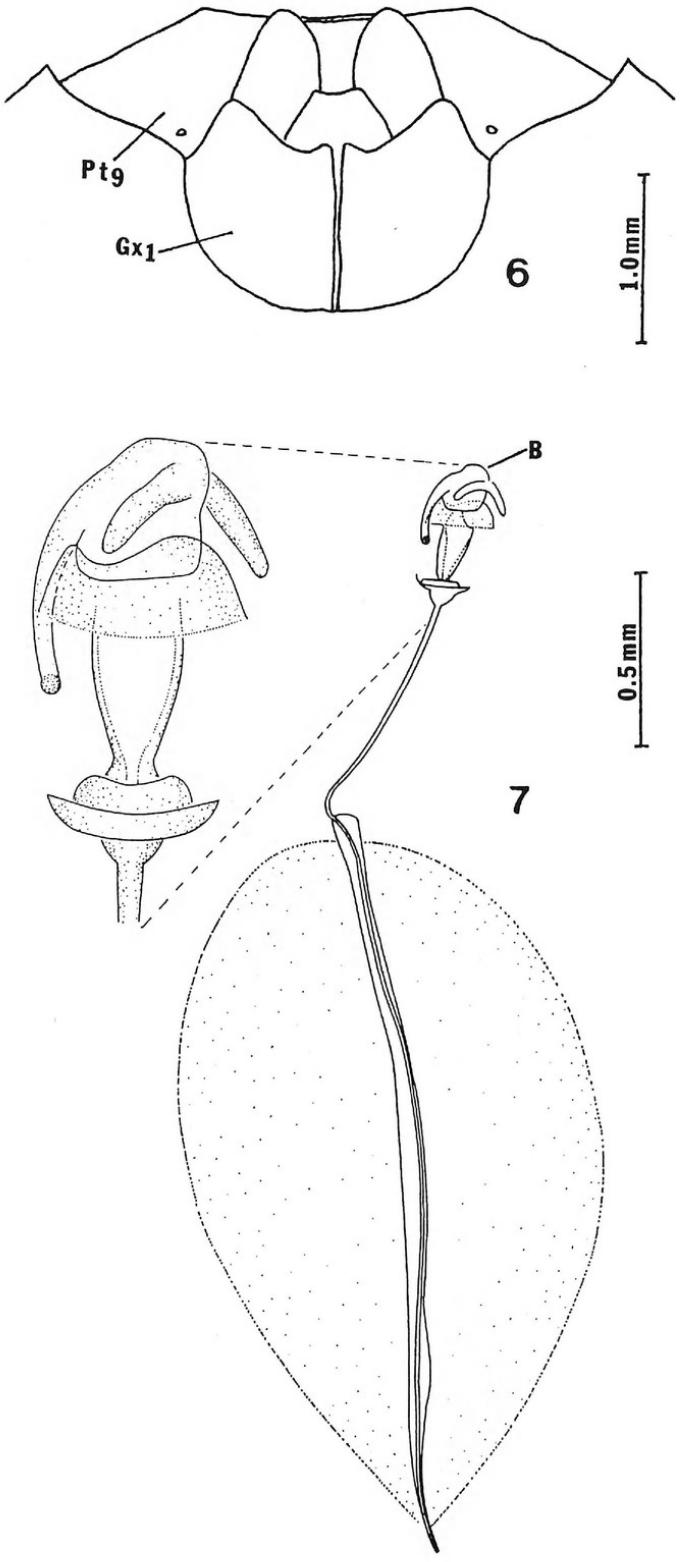


Figures 2–5. Male genitalia of *Tibilis chiapensis.* Figure 2. Pygophore, dorsal view. Figure 3. Pygophore, ventral view. Figure 4. Left Paramere, mesial view. Figure 5. Aedeagus, lateral view. Abbreviations: Ir = inferior ridge, Sr = superior ridge, Vm = ventral margin.

Tibilis chiapensis, Thomas & Brailovsky, new species
Figs. 1–7

Types.—Holotype, male; data: MEXICO. *CHIAPAS:* Bonampak, 23–25 May 1984, Adolfo Ibarra. Holotype deposited in the Universidad Nacional Autonoma Mexico (UNAM), Mexico D.F. Paratypes: 1 male and 1 female with same data as holotype deposited in collection of D. B. Thomas (DBT). Other paratypes: MEXICO. *CHIAPAS:* Bonampak (Ruinas de Bonampak), 2–4 May 1978, H. Brailovsky & E. Barrera, 9 males, 20 females (UNAM); Bonampak (Ruinas de Bonampak), 20–25 May 1984, E. Barrera, M. Garcia & A. Ibarra, 40 males, 56 females (UNAM), 1 male, 1 female (DBT), 1 male, 1 female (L. H. Rolston), 1 male, 1 female (D. A. Rider), 1 male, 1 female (J. E. Eger). Agua Azul, 22 May 1979, L. Rivera, 1 female (UNAM). Agua Azul, 1 May 1978, E. Barrera, 1 female (UNAM).

Description.—Male. Form ovate, depressed. Dorsal color appearing brown, the result of dense, contiguous red-brown punctures. Each basal angle of scutellum with round, yellow callus (Fig. 1). Length 12 mm, width across pronotum 6.5 mm. *Head:* Dorsum tan with red-brown punctures in irregular, longitudinal lines. Juga convergent anteriorly, margins outlined in red-brown. Ocelli large; intraocellar distance approx. 2× width of ocellus. Eyes bulbous, intraocular distance approx. 1.5× width of eye. Apex of antennal segment I extends past tips of juga; segments with minute brown punctures; segment V bicolor, basal one-third yellow, apex tan; segments IV and V longest, subequal in length, segment I shortest, II slightly longer than I. Bucculae apparently uniting though nearly



Figures 6–7. Female genitalia of *Tibilis chiapensis*. Figure 6. External terminalia. Figure 7. Spermatheca and spermathecal pump. Abbreviations: B = bulb of spermathecal pump, Gx1 = first gonocoxite, Pt9 = ninth paratergite.

obsolescent behind. Apex of rostrum attaining only to mesocoxae, segment I not attaining cervix. *Thorax:* Anterolateral pronotal margin subrectilinear with narrow calloused bead. Humeral angles rounded, not produced. Apex of scutellum subacute. Posterior margin of corium arcuate to lateral margin which terminates in short abrupt angle intruding on membrane; latter infuscated. All pleura, including evaporatorium, dark punctate. Scent gland ruga elongate, sinuate, reaching approx. three-fourths distance from ostiole to metapleural margin. Mesosternum with thick, obtusely produced carina projecting anteriorly between procoxae; posteriorly contiguous with elevated pentagonal metasternum. Metasternum deeply notched posteriorly. Femora densely spotted with brown. Tibia prismatic in cross-section. *Abdomen:* Venter yellow-tan with dense brown freckling. Spiracular openings large, margins ringed with dark brown. Sternite III (second visible) with forwardly protruding spine directed into metasternal notch. Connexiva dark brown with mesial spot on outer margin of each segment; angles not produced but minutely black tipped. *Genitalia:* Pygophore with small dorsal opening; superior ridge broadly, sinuately v-shaped (Fig. 2), evanescing laterally and not continuous with inferior ridge or ventral margin; latter broadly, deeply u-shaped in ventral view (Fig. 3); inferior ridge erectly, thinly carinate, with narrow, v-shaped, mesial emargination. Paramere with trilobate head (Fig. 4), lobes folded toward one another. Aedeagus with large, pendulous, sclerotized vesica. Membranous conjunctiva with semisclerotized penial lobes ventral in position with penisfilum short, projecting ventrally between conjunctival lobes (Fig. 5).

Female.—Genitalia. Basal plates (first gonocoxites) with posterior margins sinuately lobed, mesial angles angularly produced; spiracles present on ninth paratergites (Fig. 6). Bulb of spermathecal pump with 2 short and 1 long digitiform appendages (Fig. 7).

Diagnosis.—The new species differs from *T. subconspersa* by having a proportionately smaller head as well as differences in the male and female genitalia. From the other species examined, the only significant differences appear in the genitalia. In *T. parva,* the ventral margin of the male pygophore has a deeply and narrowly u-shaped emargination instead of the open v-shaped margin seen in *T. chiapensis.* The posterior margins of the female basal plates are concavely sinuate in *T. chiapensis,* but the margin is straight or weakly convex in *T. parva.*

Variation.—The type series is quite uniform with only slight differences in size and color. Females are slightly larger (by about 1 mm) than males.

Distribution.—The two localities in the type series are 125 km apart in the state of Chiapas. Both localities are lowland tropical rain-forest.

Etymology.—The species is named for the Mexican state of Chiapas.

Material Examined.—Known only from the type series.

Acknowledgment

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