

**DISCOVERY OF THE TYPES OF
PLATISTUS SPINICEPS (HERRICH-SCHÄFFER, 1840) AND
AGROECUS SCABRICORNIS (HERRICH-SCHÄFFER, 1844),
 WITH A REDESCRIPTION OF *PLATISTUS* AND ITS
 ONLY INCLUDED SPECIES, *P. SPINICEPS*
 (HETEROPTERA: PENTATOMIDAE)**

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Abstract.—Evidence is given to support the discovery of type material for *Aelia spiniceps* Herrich-Schäffer, 1840 and *Pentatoma scabricorne* Herrich-Schäffer, 1844. A lectotype designation is made for *Aelia spiniceps*. *Platistus* and *P. spiniceps* are redescribed.

Pentatomids sent by the Museum für Naturkunde der Humboldt-Universität zu Berlin for identification included a very distinctive specimen that exactly matches the description and figures of *Aelia spiniceps* Herrich-Schäffer, 1840. Since the label data also match that given in the original description, this specimen appears to be the type specimen for the species. In 1853, Herrich-Schäffer proposed *Platistus* as a new genus name to house the single species, *A. spiniceps*. Inasmuch as the original description of *Platistus spiniceps* is meager, and so far only the type specimen is known, the genus and species are redescribed herein. The only literature records are the original description and several references citing the original description.

Another specimen in this lot of pentatomids matches the description and figure for *Pentatoma scabricorne* Herrich-Schäffer, 1844, and once again the label data match that given in the original description. This specimen is surely the type specimen for *P. scabricorne*. Known now as *Agroecus scabricornis*, this species has been diagnosed in a recent generic revision (Rider and Rolston, 1987).

Where label data are presented in the text, each letter in parentheses represents a separate label with (a) being closest to the specimen. Type label data are quoted exactly as they appear on the label.

Platistus Herrich-Schäffer, 1853

Platistus Herrich-Schäffer, 1853:167 (not described); Stål, 1872:65 (not described); Kirkaldy, 1909:238.

Description. Juga longer than tylus and contiguous anteriorly, produced into spines distally, each with prominent anteocular spine. Antennal segment I distinctly surpassing apex of head. Bucculae relatively short, lobately produced anteroventrad, curving medially and meeting posteriorly. Beak relatively short, reaching only to mesocoxae, first segment reaching only slightly beyond posterior margins of bucculae.

Anterolateral margins of pronotum carinate, becoming slightly crenulate anteriorly; humeral angle somewhat prominent. Scutellum much longer than wide; scutellar

tongue very long and narrow. Prosternum and mesosternum narrow, flat to broadly tumid, mesosternum slightly elevated medially at anterior and posterior margins [metasternum destroyed by pin in unique specimen]. Ostiolar rugae long, acuminate apically, each reaching two-thirds distance from mesial margin of ostiole to lateral metapleural margin. Tarsi 3-segmented. Base of abdomen apparently roundly tumid [also damaged in unique specimen].

Posterolateral angles of genital capsule horn-like, produced posteriorly; genital capsule broadly and roundly excavated in ventral view. Parameres very small, reduced; proctiger prominent, produced caudad and then angled ventrad, angled area somewhat bulbous. Female unknown.

Comments. The tribal and subfamilial affinities of this genus are difficult to discern. The exposed spiracles on the second abdominal segment are characteristic of the Tessaratomidae, but the male genitalia are unlike that of any tessaratomid I have examined. The shape of the bucculae is similar to that found in the Tessaratomidae, Dinidoridae, Edessinae, and several genera placed in section 3 of the Pentatominae (*sensu* Rolston, McDonald and Thomas, 1980). *Platistus* is tentatively placed in the Pentatomini near *Tibilis* Stål, *Lopadusa* Stål, and *Brachystethus* Laporte, but all of these genera may actually be more closely related to the edessines than previously thought.

Herrich-Schäffer did not formally describe the genus name *Platistus* in his 1853 publication. This publication is, however, an index to all of the previous volumes of the Wanzenartigen Insecten, which is the publication in which the original description of *A. spiniceps* first appeared. So, the original use of the genus name, *Platistus*, was in an index which refers back to a valid species description in the same publication. According to the rules of zoological nomenclature this should serve as an "indication" sufficient to validate the genus name. Stål (1872) also referred to the genus and species name, but did not provide descriptions of either. Kirkaldy (1909) first published a description of the genus name, but apparently based this description on Herrich-Schäffer's original species description and illustrations.

Platistus spiniceps (Herrich-Schäffer, 1840)

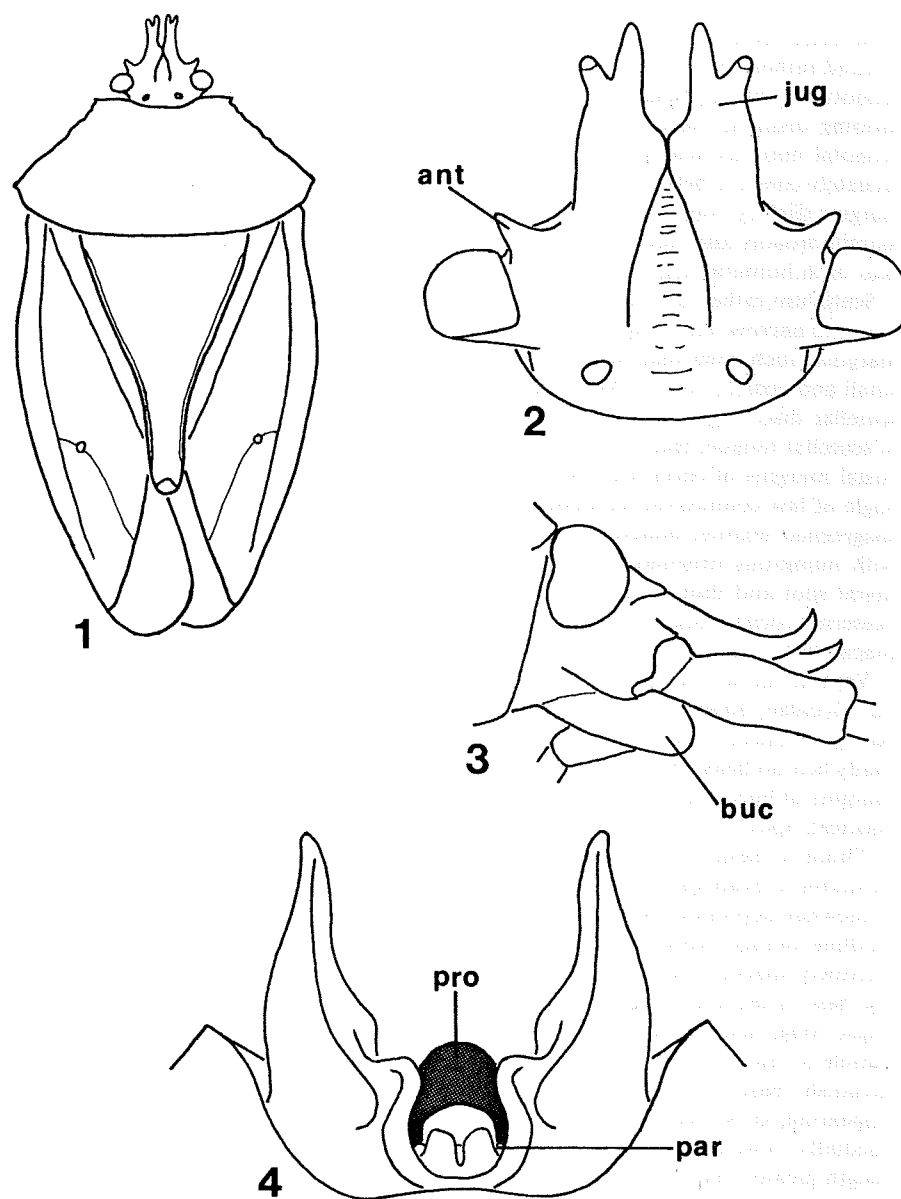
Figs. 1-4

Aelia spiniceps Herrich-Schäffer, 1840:72, figs. 517A-E.

Platistus spiniceps: Herrich-Schäffer, 1853:167, Stål, 1872:65; Kirkaldy, 1909:238.

Description. Medium-sized, somewhat elongate oval, depressed and flattened above. Overall color pale yellow (may have been green when alive); punctures concolorous.

Head relatively flat above, especially vertex. Juga much longer than and meeting in front of tylus; each divided apically into two strong, dorsad-curving spines, leaving deep U-shaped sinus in front of head; lateral margin of each jugum armed with stout denticle just anterior to each eye (Fig. 2, ant). Tylus relatively broad basally. Compound eyes appearing slightly stalked; ocelli remote, distance from each ocellus to adjacent eye 3-4 times diameter of ocellus. Antenniferous tubercles clearly visible from above; antennal segment I pale yellow, reaching beyond apex of head; antennal segments II-III pale green (segments IV-V missing), segment II one-third longer than III; segment II with numerous relatively stout, short bristles; segment III with shorter, more appressed hairs.



Figs. 1-4. *Platistus spiniceps*. 1. Habitus. 2. Head, dorsal view. 3. Head, lateral view. 4. Pygophore, ventral view. Symbols: ant, anteoocular process; buc, buccula; jug, jugs; par, paramere; pro, proctiger.

Anterior pronotal disc large and relatively flattened; posterior disc narrow, curving ventrad rather abruptly to level of scutellum, paler than anterior disc. Punctures on pronotum relatively sparse, becoming more dense cephalad and laterad of cicatrices, forming distinct, diagonal, rugose lines along anterolateral margins. Anterolateral pronotal margins nearly straight, slightly crenulate towards head; anterior margin arcuately concave behind head; humeral angles prominent, rectilinear, posterolateral margins slightly concave, giving humeral angles slight hooked appearance; posterior margin broadly and shallowly convex; a small, obtuse, submarginal tubercle located near each humeral angle.

Scutellum rather sharply triangular, much longer than wide; scutellar tongue very long and narrow, reaching slightly beyond inner distal angles of coria. Narrow lateral margins much paler than scutellar disc, apex with small ivory spot; punctures rather small and sparse, concolorous; a few pale brown, forming weak transverse lines on scutellar disc; vague longitudinal raised line running from scutellar base onto base of scutellar tongue. Hemelytra with leathery portion large, membrane reduced; basal costal margins of coria narrowly pale, apex of each reaching beyond posterolateral angle of last connexival segment. Surface of each corium and clavus with matte or shagreened texture, punctures relatively small and sparse; wing membrane hyaline with numerous irregular wrinkles, veins indistinct. Each corium with small, pale, discal spot and thin, pale, venule running from R+M vein through discal spot to posterior corial margin. Posterior margin of corium nearly straight. Connexiva immaculate.

Ventral surface of head yellow; lacking punctures except for few weak punctures on bucculae; antenniferous tubercles large, appearing inflated. Bucculae short, lobately produced anteroventrad (Fig. 3), posterior margins curving and meeting medially behind beak. Rostrum short, segment I reaching only slightly beyond posterior margins of bucculae, segment II as long as segments III and IV together, segment IV shortest, apex dark brown, reaching to anterior margins of mesocoxae.

Thoracic pleura sparsely punctate except around coxae, near humeral angles, and posterior to evaporative area more punctate. Prosternum relatively flat, very narrow, somewhat depressed between procoxae; mesosternum broadly transversely tumid, midline orange-brown, slightly raised anteriorly and posteriorly, mesocoxae also narrowly spaced. [Insect pin has obliterated all characters of the metasternum and the base of the abdomen.] Ostiole relatively large and transversely elongate; ostiolar rugae long, acuminate apically, reaching two-thirds distance from mesial margin ostiole to lateral metapleural margin. Legs pale yellow, tarsi and apices of tibiae pale greenish. Base of third (second visible) abdominal segment damaged by pin, but appearing to be bluntly produced. Abdominal segments III-IV curving cephalad medially; posterior margin of segment VII convexly produced posteriorly, medial length greater than length of segments V and VI taken together. Spiracles pale.

Posterolateral angles of pygophore hornlike, strongly produced posterodorsad; from ventral view pygophore deeply and broadly excavated; excavation rounded with margins distinctly reflexed ventrally, within excavation two flattened, apically truncate projections located one on each side of middle; proctiger bulbous, distinctly and obtusely produced caudad, then oriented ventrad, clearly visible from ventral view (Fig. 4). Parameres very small, situated near ventrolateral margins of proctiger. Female unknown.

Measurements. Total length 9.76; maximum width 5.02; medial length of pronotum 2.21. Medial length of scutellum 4.43; basal width 2.96; width at distal end of frena 0.84; medial length from distal end of frena to apex 1.54. Length of head from apex to imaginary line drawn through posterior margins of ocelli 1.46; width 1.97; intraocular width 1.26; intraocellar width 0.51; ocellar diameter 0.11; distance from ocellus to adjacent eye 0.32. Length of segments I-III of antennae 0.75, 3.15, and 2.26 respectively. Length of segments II-IV of rostrum 1.11, 0.59, and 0.38, respectively.

Type. Although it is generally accepted that most type specimens of Herrich-Schäffer's species were destroyed during the first and second World Wars, I am convinced that this is the specimen Herrich-Schäffer used to describe *Aelia spiniceps*. In his original description he states that this species is "Aus Brasilien; von Herrn Germar." Both Brasil and Coll. Germar appear on the label accompanying this specimen. The species is very distinct, and as far as I know this is the only known specimen of the species.

Herrich-Schäffer (1840) did not state how many specimens he had to make his description, so this single specimen must be considered a syntype. It is here designated lectotype and has the following label data: a) "8007" b) "spiniceps Herr. Schffr. Brasil. Coll. Germ." and c) "Z.M.B. Hem."

The type specimen is in remarkably good condition considering its history. It is missing all but segment I of the left antenna and all but segments I-III of the right antenna. All three left legs and the right front leg are in good condition, but the right middle and hind legs have only the coxae present. The left wing is slightly ajar and the right wing has broken loose, but has been reglued close to its original position. As mentioned above, the specimen has been pinned twice, resulting in the destruction of the characters of the metasternum and the base of the abdomen.

Comments. Both the juga and the genitalia of this species are distinctive.

Perhaps this description and figures will help locate more specimens in various museums. The proper placement of this species will undoubtedly depend on the dissection and examination of the genitalia of both male and female specimens. Since some of Herrich-Schäffer's type specimens that were presumed lost have been found, additional unrecognized type material may still exist in other collections.

Agroecus scabricornis (Herrich-Schäffer, 1844)

Pentatoma scabricorne Herrich-Schäffer, 1844:98-99, fig. 762; Stål, 1872:65.

Euschistus scabricornis: Stål, 1860:19; Walker, 1867:248.

Lycipta scabricornis: Stål, 1862:58.

Agroecus scabricornis: Lethierry & Severin, 1893:126; Kirkaldy, 1909:63; Jensen-Haarup, 1937:171; Buckup, 1957:9, 15-16, pl. 1 fig. 4, pl. 2 fig. 4; Buckup, 1961:9; Rolston, 1982:281; Rider & Rolston, 1987:429, 434, 436, figs. 7, 10, 15, 22, 28, 32.

The genus *Agroecus* has been revised recently (Rider and Rolston, 1987) including a diagnosis and figures of *A. scabricornis* (Herrich-Schäffer). A redescription is not included here. This species can be recognized by the clearly defined, impunctate, transhumeral fascia and by the widely spaced pronotal denticles. This species is known only from southeastern Brazil.

Type. Herrich-Schäffer (1844) stated that he described this species from one female specimen from Brazil. He also stated that the specimen was from Germar's collection. Once again, I am convinced that this is the specimen that Herrich-Schäffer used to produce his description of *Pentatoma scabricorne*. It is a female specimen with the following label data: a) "7983" b) "scabricornis Herr. Schffr. Brasil. Coll. Germ." c) "Z.M.B. Hem." Herrich-Schäffer stated that he had just one female specimen; therefore this specimen is recognized as the holotype and a label has been added to designate this status.

The holotype is in remarkably good condition. Both antennae are complete; all three right legs and the left hind leg are complete, while the left front leg is missing the last two tarsal segments and the left middle leg is missing all tarsal segments. The rest of the specimen is in good condition.

Comments. This is a fairly distinctive species in the genus and has been correctly identified in all recent publications.

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