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Central American *Temnocerus* Thunberg, 1815
(Coleoptera: Rhynchitidae)

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Abstract. Twenty eight species of *Temnocerus* Thunberg, 1815 are recognized from Central America (Mexico to Panama) with eight previously described species and 20 **new species** as follows: *T. abdominalis* (Voss), *T. chiapensis* n. sp., *T. chiriquensis* (Sharp), *T. confertus* (Sharp), *T. cyaneus* n. sp., *T. ellus* n. sp., *T. giganteus* n. sp., *T. guatemalensis* (Sharp), *T. guerrensis* n. sp., *T. herediensis* n. sp., *T. mexicanus* n. sp., *T. michoacensis* n. sp., *T. minutus* n. sp., *T. niger* n. sp., *T. oaxacensis* n. sp., *T. obrieni*, n. sp., *T. oculus* (Sharp), *T. potosi* n. sp., *T. pseudoaeratus* n. sp., *T. pueblensis* n. sp., *T. pusillus* (Sharp), *T. regularis* (Sharp), *T. rostralis* n. sp., *T. rugosus* n. sp., *T. salvensis* n. sp., *T. tamaulipensis* n. sp., *T. thesaurus* (Sharp) and *T. yucateensis* n. sp. *Rhynchites debilis* Sharp is placed in **synonymy** with *Temnocerus guatemalensis* (Sharp) and *Pselaphorhynchites lindae* Hamilton is placed in **synonymy** with *Temnocerus regularis* (Sharp). A key to species based on external characters and male genitalia is provided as well as digital images, aedeagus drawings, and map distributions.

Introduction

This group of weevils was previously in the genus *Pselaphorhynchites* Schilsky, 1903. Alonso-Zarazaga and Lyal (1999) listed *Pselaphorhynchites* as a synonym of *Temnocerus* Thunberg, 1815. This paper covers only the species of *Temnocerus* in Central America from Mexico to Panama with the main purpose of species identification and distribution. Before this paper only nine species in this group had been described from Central America with eight of them described by Sharp (1889) and one described by Voss (1932).

The species of *Temnocerus* are worldwide in distribution (Legalov 2006). Their overall morphological similarity and variable metallic luster make many of the species difficult to separate. Characters useful in identification include coloration, thoracic shape, punctation, rostral shape and length, eye protuberance, setosity, microstructure of head and pronotal interspaces, and specific characters of the aedeagus. Aedeagal characteristics include the shape of the median lobe's tectum and especially the shape of the pedon apex. In addition, the form and setosity of the tegminal cap-piece is useful in the separation of some species. A sclerotized transfer apparatus at the junction of the vas deferens and the endophallus is not present in these *Temnocerus* species although a pair of sclerotized bands usually occurs along the endophallic sac. These bands probably function in the positioning of the endophallus as it is everted into the female's genital chamber during copulation.

The biology and host plant association of most species is unknown. Some species are "tip cutters" in that the female oviposits in young terminal plant growth and then cuts off the terminal with her mandibles. The larvae develop in the dead and decaying terminal tissue and eventually pupate in the ground. Hamilton (1983) reported this female cutting behavior for *T. perplexus* Blatchley on the sweet fern, *Comptonia peregrina* L., in the eastern U.S.A. Females of other species are known to oviposit in terminal buds or shoots without excising them (Dieckman 1974, Hamilton 1994). It is probable that all species develop in cut or punctured terminal growth of their host plants. They are of no known economic importance although some species are being evaluated as biocontrol agents of invasive plants (Heard and Segura, unpublished research report, CISRO, Australia).

Hamilton (1971) revised the North American species and recognized 14 species.

Legalov (2003) placed the world species of *Temnocerus* into the following three subgenera: *T.* (*Temnocerus* s. str.), *T.* (*Pseudotemnocerus*), and *T.* (*Paratemnocerus*). Legalov (2006) provided a key and supporting figures for the three subgenera and nine palaeartic species in the nominotypical subgenus.

Methods

Over seven hundred specimens were examined. Specimens were borrowed from the following institutions and private collections: The Natural History Museum, London (**BMNH**, Sharp type material), California Academy of Science (**CASC**), Canadian Museum of Nature (**CMNC**), Commonwealth Scientific & Industrial Research Organization, Australian National Insect Collection, Australia (**CSIRO**, **ANIC**), Instituto Nacional de Biodiversidad, Costa Rica (**INBio**, **INBC**), Texas A&M University (**TAMU**), United States National Museum (**USNM**); Henry A. Hespeneheide collection (**CHAH**), Charles W. O'Brien collection (**CWOB**), Ronald D. Cave collection (**RDCC**), Robert W. Hamilton collection (**RWHC**). The type of *T. abdominalis* (Voss) was examined at the Zoologisches Institut und Zoologisches Museum (**ZMUH**) in Hamburg, Germany in the Eduard Voss collection. Length measurements were taken by summing individual dorsal midline measurements for the three body regions (head, pronotum and elytra). Head measurements do not include the rostrum since its length is sexually dimorphic. The width was measured across the elytra at the widest point (usually just behind the middle).

The descriptions are of the males. Males can usually be identified by the weakly concave more setose abdominal ventrites. Females are similar but are usually larger in overall body size and have narrower heads, longer rostra, smaller and less protuberant eyes, and more convex and less setose abdominal ventrites. Brackets in the specimen label data indicate clarifications or physical descriptions of the labels associated with type specimens. The specimen label data are, in the main, recorded as originally written and therefore may vary in style from specimen to specimen. The key to species is a practical one for identification although some evolutionary relationships are inherent.

Examination of the male genitalia is necessary for the identification of a number of these species. Aedeagal illustrations (Fig. 68-86) were drawn using a Leitz stereoscopic microscope with an ocular grid. Digital images (Fig. 1-58) were taken with a Q imaging camera (Retiga 2000R) mounted on an Olympus SZX12 stereoscopic microscope using Image Pro software.

Key to adults of Central American species of *Temnocerus*

1. Larger adults, usually 3.0 mm or more in length; body bluish black; elytral intervals minutely rugose, with one or two rows of setigerous punctures **2**
- Smaller adults, usually under 3.0 mm in length; body variable in color, usually with variable metallic luster; elytral intervals usually smooth, shiny, with single row of setigerous punctures **3**

- 2(1). Eyes moderately protuberant; width across eyes subequal to widest width of head (Fig. 15, 16) elytral intervals with double row of setigerous punctures; cap piece of aedeagal tegmen wide; apex broadly rounded, with long wavy marginal setae; pedon sides strongly and straightly narrowed toward apex; apex narrowly truncate (Fig. 65) ***T. giganteus*, n. sp.**
- Eyes strongly protuberant; width across eyes wider than widest width of head (Fig. 31, 32); elytral intervals with single row of setigerous punctures; cap piece of aedeagal tegmen wide; apex broadly rounded, with long straight marginal setae; pedon sides weakly constricted near middle, strongly narrowed from constriction to apex; apex very narrowly truncate; (Fig. 73) .
..... ***T. oaxacensis*, n. sp.**

- 3(1). Rostrum in lateral view straight or only slightly arcuate, distinctly and gradually tapered from antennal insertions to apex, appearing “needle nosed”, wide at base; dorsal base grading into flattened frons (Fig. 1) **4**
- Rostrum in lateral view distinctly arcuate, not appearing “needle nosed”, variably depressed apically, narrow at base; dorsal base grading into variably convex frons (Fig. 2) **5**

- 4(3). Body entirely bluish black or pronotum bluish black and elytra bluish black with rosy bronze luster; aedeagus large, elongate; pedon sides subparallel, apex broadly truncate; endophallic

- bands prominent, basal portion of each band crescent shaped (Fig. 80) ***T. regularis* (Sharp)**
- Body bronzed with brassy luster; aedeagus short, wide; pedon sides narrowed from base to apex, weakly arched out; apex truncate; endophallic bands short, linear (Fig. 76) ***T. potosi*, n. sp.**
- 5(3). Male rostrum minutely granulose from base to apical 1/3, with distinct dorso-apical smooth, shiny area (Fig. 47); female rostrum smooth and shiny from antennal insertions to apex (Fig. 48) ***T. rostralis*, n. sp.**
- Male rostrum not minutely granulose from base to apical 1/3, without distinct dorso-apical smooth shiny area; female rostrum not smooth and shiny from antennal insertions to apex **6**
- 6(5). Head, pronotum and elytra with strong coppery metallic luster; pedon apex broadly truncate (Fig. 77) ***T. pseudoaeratus*, n. sp.**
- Head, pronotum and elytra without strong coppery metallic luster; pedon apex not broadly truncate **7**
- 7(6). Head, pronotum and elytra with greenish brassy luster; eyes strongly protuberant; pronotum very densely punctured; pedon apex narrowly truncate; endophallic bands moderately long, linear (Fig. 75) ***T. oculatus* (Sharp)**
- Head, pronotum and elytra without greenish brassy luster; eyes less protuberant; pronotal punctures moderately dense; pedon apex not narrowly truncate, variable; endophallic bands short, linear **8**
- 8(7). Rostral width at apex distinctly wider than rostral width at antennal insertion **9**
- Rostral width at apex subequal to rostral width at antennal insertion or only slightly wider .. **12**
- 9(8). Rostrum strongly arcuate, width at apex twice as wide as width at antennal insertions (Fig. 23, 24); apex of aedeagal pedon weakly nozzle-like (Fig. 69) ***T. mexicanus*, n. sp.**
- Rostrum weakly to moderately arcuate, width at apex not twice as wide as width at antennal insertions; apex of aedeagal pedon not nozzle-like **10**
- 10(9). Rostrum short, paddle-like, distinctly widened toward apex; apical width twice as wide as width at base (Fig. 41, 42); aedeagus short; pedon apex blade-like (Fig. 78) ***T. pueblensis*, n. sp.**
- Rostrum not short, wide and paddle-like, weakly to moderately widened at apex; aedeagus not short, pedon apex variable **11**
- 11(10). Head with very dense setigerous punctures; interspaces rugose (Fig. 49, 50) ***T. rugosus*, n. sp.**
- Head without very dense setigerous punctures; interspaces not rugose **12**
- 12(8,11). Body with strong greenish black or bluish black luster **13**
- Body without strong greenish black or bluish black luster; can have faint bluish, greenish, brassy or coppery luster **16**
- 13(12). Body with greenish black luster, sparsely punctured; punctures small widely spaced; interspaces smooth, wide, shiny; very small species, 2 mm or less ***T. chiriquensis* (Sharp)**
- Body with bluish-black luster, moderately to densely punctured; larger species, usually over 2.00 mm **14**
- 14(13). Pronotum densely punctured; punctures coarse, deep ***T. confertus* (Sharp)**
- Pronotum not densely punctured; punctures smaller, rounded, shallow **15**

- 15(14). Small adults, 2.1 mm or less; body with faint bluish luster; head punctures very small, nearly indistinct; rostrum narrow (Fig. 27, 28) ***T. minutus*, n. sp.**
 — Larger adults, 2.1 mm or more; body with strong bluish luster; head punctures somewhat larger, distinct; rostrum wider (Fig. 11, 12) ***T. cyaneus*, n. sp.**
- 16(12). Head with very small punctures, punctures widely separated; distance between punctures much greater than diameter of punctures; interspaces with numerous minute granulations; granulations silky in appearance (Fig. 17, 18, 33, 34) **17**
 — Head with larger punctures; punctures separated by a distance less than, subequal to, or slightly more than puncture diameter; interspaces granulose; granules larger, not silky in appearance (Fig. 19-22, 33, 34, 51-58) **18**
- 17(16). Pronotum not densely punctured; rostrum long, about twice as long as head (Fig. 17, 18)
 ***T. guatemalensis* (Sharp)**
 — Pronotum densely punctured; rostrum shorter, about .33 times longer than head (Fig. 43, 44) .
 ***T. pusillus* (Sharp)**
- 18(16). Punctures of frons separated by distance less than diameter of puncture (Fig. 13, 14)
 ***T. ellus*, n. sp.**
 — Punctures of frons separated by distance subequal to or greater than diameter of puncture **19**
- 19(18). Punctures of frons separated by distance subequal to or slightly greater than diameter of puncture **20**
 — Punctures of frons separated by distance distinctly greater than diameter of puncture **28**
- 20(19). Frons with numerous reclinate setae (Fig. 3, 4, 53, 54); rostral base without mid-dorsal channel; apex of tegminal cap-piece with long setae (Fig. 59, 84) **21**
 — Frons without numerous reclinate setae or with only a few setae at inner anterior margin of eye; rostral base with mid-dorsal channel; tegminal cap-piece with very short setae (Fig. 74, 85, 86) **22**
- 21(20). Abdominal ventrites with numerous uniformly aligned setose punctures; elytra striae rounded, shallowly impressed ***T. abdominalis* (Voss)**
 — Abdominal ventrites with irregularly set setose punctures; setae not aligned; elytral striae subquadrate, more deeply impressed ***T. tamaulipensis*, n. sp.**
- 22(20). Pronotum black with greenish luster; elytra black with bluish luster; pronotum in dorsal view, distinctly arched out laterally, greatest width just behind middle, central punctures separated by two rows of minute round granulations ***T. michoacensis*, n. sp.**
 — Pronotum and elytra not colored as above; pronotum in dorsal view not distinctly arched out laterally, subcylindrical, slightly wider behind middle, central punctures not separated by rows of minute granulations **23**
- 23(22). Head, pronotum and elytra with distinct shiny brassy coppery luster; junction of rostrum and frons with small median cup like depression (Fig. 55, 56) ***T. thesaurus* (Sharp)**
 — Head, pronotum and elytra without shiny brassy coppery luster; junction of rostrum and frons without cuplike depression **24**
- 24(23). Body black throughout ***T. niger*, n. sp.**
 — Body black with variable metallic luster **25**
- 25(24). Body black with a faint bluish luster **26**
 — Body black with a brassy luster **27**

- 26(25). Head punctures large, coarse (Fig. 57, 58); aedeagal pedon with narrowly pointed apex; cap-piece narrow with very short marginal setae (Fig. 86) *T. yucateensis*, n. sp.
 — Head punctures moderate in size, not coarse (Fig. 21, 22); aedeagal pedon with widely truncate apex; tegminal cap-piece subquadrate with short marginal setae (Fig. 68)
 *T. herediensis*, n. sp.
- 27(25). Body black with brassy luster; luster more pronounced on pronotum; aedeagal pedon tapered to blade like apex (Fig. 60); male sternites with median bordered channel
 *T. chiapensis*, n. sp.
 — Body black with greenish brassy luster; aedeagal pedon gradually narrowed to rounded apex (Fig. 74); male sternites with longitudinal median channel bordered on each side by line like carina
 *T. obrieni*, n. sp.
- 28(19). Body black with faint brassy luster above; frons moderately convex; aedeagus not elongate; pedon apex narrowly rounded; tegminal cap-piece narrow, with minute apical setae; aedeagal endophallic bands forming two parentheses like crescents (Fig. 67) *T. guerrensis*, n. sp.
 — Body black with faint purplish luster; frons distinctly convex; aedeagus elongate; pedon apex narrowly truncate; tegminal cap-piece large, subrectangular; apex slightly wider than base, with short marginal setae; endophallic bands very short, weakly defined (Fig. 83)
 *T. salvensis*, n. sp.

***Temnocerus abdominalis* (Voss 1932)**

(Fig. 2, 3, 4, 59, 87)

Type locality. Mexico**Type depository.** Zoologisches Institut und Zoologisches Museum (ZMUH). Eduard Voss collection.

Specimens examined. Holotype male with the following data: Mexico, Hoge, Cotype, *Coenorhynchus (Pselaphorhynchites) abdominalis* n. sp. **HONDURAS:** 1 male and 1 female, Honduras, La Ceiba, i-30-1978, G.V. Manley (CWOB). **MEXICO:** 12 males and 10 females, Oaxaca, 11 km SE Mitla, 22 Aug 1982, Clark and Cave; 1 female, Oaxaca, 22 km S Oaxaca, 20 Aug 1982, Clark & Cave; 1 male, Pue [Puebla], 2.7 km NW Petlacingo Hwy 190, 7-vii-1992, N 18° 04' W 97° 58', 1570 m, C.L. Bellamy; 1 male, Puebla, 6 km S Acatepec, 19 Aug 1982, Clark & Cave; 1 female, Chiapas, 30 km NW La Angostura, 14 Sept 1981, Clark & Coe; 1 female, Puebla, 3 mi NW Petlacingo, iii-4-72, F Parker & D Miller; 1 female, Oaxaca, 22 km S Oaxaca, 20 Aug 1982, Clark & Cave; 1 male, Pue [Puebla], 14 mi SE Petlacingo, vi-1-1974, 5,800', O'Brien & Marshall; 1 female, Oax. [Oaxaca], 18 mi SE Tlalcolula, vi-2-1974, 6, 300', O'Brien & Marshall; 1 female, Mor. [Morelos], 11 mi NW Cocoyoc, Aug 14, 1974, 4500', CW O'Brien & L Marshall; 1 male and 3 females, Yucatan, ca. 5 km S Progreso, 26 October 1984, W.E. Clark (CWOB). 1 female, Oaxaca, Monte Alban, 2-vii-1969, H. A. Hespeneheide (CHAH). 5 males and 3 females, Oaxaca, 5.5 mi. northeast Huajuapán de León, July 14, 1974, Clark, Murray, Ashe, Schaffner; 1 male, Oaxaca, 16.1 mi. nw. Totolapan, July 21, 1974, Clark, Murray, Ashe, Schaffner; 2 females, Oaxaca, 14 mi. n. Miahuatlan, July 16, 1974, Clark, Murray, Ashe, Schaffner; 2 males and 4 females, Oaxaca, 10 mi. n. Miltepec, July 26, 1974, Clark, Murray, Ashe, Schaffner; 3 males and 3 females, Oaxaca, 10 mi. n. Miltepec, July 15-16, 1971, Clark, Murray, Ashe, Schaffner; 1 female, Mexico, Hidalgo, 2 mi. n. Zimapan, March 18, 1975, Clark & Schaffner; 2 males and 5 females, Mexico, Puebla, 5.1 mi. sw. Tehuacan, July 27, 1974, Clark, Murray, Ashe, Schaffner; 3 males and 2 females, Mexico, Puebla, 11.8 mi. nw. Izucar de Matamoros, July 13, 1974, Clark, Murray, Ashe, Schaffner; 1 female, Mexico, Puebla, 13.3 mi. ne. Tehuiztzingo, July 13-14, 1974, Clark, Murray, Ashe, Schaffner (TAMU).

Description. Color and pubescence: Body brownish-black with rosy bronze luster. Pubescence consists of short reclinate pale brownish to brownish-white setae. **Size:** Male (n = 34) 1.5 × 0.5 mm to 2.0 × 0.8 mm; Female (n = 38) 1.6 × 0.7 mm to 2.2 × 1.0 mm. **Head** quadrate, moderately punctured; punctures



Figure 1-2. *Temnocerus* species, lateral habitus. **1)** *T. potosi* n.sp. **2)** *T. abdominalis* (Voss).

small, round; interspaces minutely granulose; frons wide, about twice as wide as width of rostrum at base; eyes sub-circular, strongly protuberant. **Rostrum** short, only slightly longer than head, apical 1/3 only slightly depressed, moderately punctured; sides sub-parallel, slightly widened apically; mid-dorsal apical area smooth, shiny; dorsal base weakly striate and minutely granulose. **Antenna** inserted near basal 1/3; scape and funicular segment 1 ovoglobose; funicular segment 1 more robust than scape; funicular segments 2-4 narrowed, weakly clavate; segment 2 slightly longer than 3 or 4; segments 5-7 short, subequal, bead-like; club abrupt, basal segment and middle segment subequal in length; basal segment narrowed basally; middle segment transversely rectangular; terminal segment slightly longer and slightly more robust than basal and middle segments, broadly rounded at apex. **Pronotum** longer than wide, widest just behind middle, densely punctured; interspaces smooth, shiny. **Scutellum** small, rectangular, about twice as wide as long. **Elytra** about twice as long as pronotum, widest just behind middle; striae moderately impressed, distinct throughout, only slightly diminishing in size beyond middle; intervals flat, smooth, shiny, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** densely punctured; punctures coarse. **Abdominal ventrites** densely punctured; punctures round, setigerous; setae more or less forming uniform transverse rows.

Distribution. Specimens of *T. abdominalis* have been taken in Honduras and the Mexican states of Chiapas, Hidalgo, Morelos and Oaxaca (Fig. 87).

Comments. Adults are small with a rosy bronze luster and are easily confused with *T. thesaurus*. The short nearly parallel-sided rostrum, numerous uniformly aligned abdominal punctures and the strongly protuberant eyes of the male serve to distinguish it. The aedeagus (Fig. 59) has a short weakly tapered median lobe with the pedon apex broadly rounded. The tectum is spatulate in shape. The cap piece of the tegmen is short and lobe-like with a small pigmented apex bearing long terminal setae. Endophallic bands are absent or only weakly defined. The aedeagus is very similar to that of *T. tamaulipensis* (Fig. 84).

Plant association. Unknown

***Temnocerus chiapensis*, new species**

(Fig. 5, 6, 60, 87)

Type locality. Mexico, Chiapas, 10 km NW Chicoasen

Type depository. Canadian Museum of Nature, Ottawa, Canada (CMNC)

Type specimens. Holotype male with the following data: Chiapas, Mex. (190 m), 10 km NW Chicoasen, 15 SEP 1990, ex *Haematoxylon brasiletto*, 532 W, T. Eager, P.G. da Silva (**CMNC**); Allotype with same data as holotype except (200 m), 7 km NW Chicoasen, 16 SEP 1990, 548N. Paratype data as follows: **MEXICO:** 1 male, Chiapas, 15 km W Ocozocoautla, 18 JUL 1990, (800 m), 318 AN, ex *Haematoxylon brasiletto*, P.G. da Silva & T. Eager; 1 male, Chiapas, 15 km W Ocozocoautla, 18 JUN 1990, (800 m), 142 E, ex *Haematoxylon brasiletto*, T. Eager & P.G. da Silva; 1 female, Chiapas, 15 km W Ocozocoautla, 20 AUG 1990, (800m), 427 AA, ex *Haematoxylon brasiletto*, T. Eager & P.G. da Silva; 1 female, Chiapas, 10 km NW Chicoasen, 23 AUG 1990, (190 m), 445Q, ex *Haematoxylon brasiletto*, T. Eager & P.G. da Silva; 1 female, Chiapas, 15 km W Ocozocoautla, 20 AUG 1990, (800 m), 427 W, ex *Haematoxylon brasiletto*, 1 female, Chiapas, 7 km NW Chicoasen, 22 AUG 1990, (200 m), 436 R, ex *Haematoxylon brasiletto*, P.G. da Silva & T. Eager; 1 female, Chiapas, 15 km NW Ocozocoautla, 14 Sep 1990, (800 m), ex *Haematoxylon brasiletto*, P.G. da Silva & T. Eager (**CMNC**). 1 female, Chis [Chiapas], 13 mi W Tuxtla Gutierrez, Aug. 1, 1974, 3,300', O'Brien & Marshall; 1 female, Chiapas, Hwy 190, 8 km E. Tuxtla Gutierrez, Aug 9, 1975, 410 m, A.N. Garcia-Aldrete & B. Garcia Gonzalez (**CWOB**).

Description. Color and pubescence: Body blackish throughout; pronotum with faint brassy luster. Pubescence inconspicuous, composed of short fine reclinate setae. **Size:** Male (n = 3) 1.5 × 0.6 mm to 1.8 × 0.8 mm; Female (n = 8) 1.6 × 0.7 mm to 1.8 × 0.8 mm. **Head** quadrate, as long as wide, moderately punctured; punctures round, moderately impressed; interspaces minutely granulose eyes large, oval, moderately protuberant. **Rostrum** short, only as long as the head, only slightly widened beyond antennal insertions, moderately to densely punctured, in lateral view apically depressed, with distinct median dorsal channel in basal 1/3; channel minutely granulose. **Antennae** distinctly longer than rostrum, inserted near basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-4 narrow, cylindrical; segments 5-7 shorter more robust; 7 and 8 bead-like; club segments subequal; terminal segment bluntly acuminate. **Pronotum** longer than wide, widest near base, densely punctured; interspaces minutely granulose. **Scutellum** quadrate, as long as wide, minutely punctured. **Elytra** about twice as long as pronotum, widest at apical 1/3; humeri simple; striae distinct throughout, moderately impressed; intervals weakly raised, with single row setigerous punctures; striae interspaces with single setigerous puncture. **Thoracic pleura and sterna** with dense setigerous punctures. **Abdominal ventrites** weakly concave through middle, with sparse to moderately set small round setigerous punctures.

Distribution. All specimens examined are from Chiapas, Mexico (Fig. 87).

Etymology. The specific epithet is in reference to the Mexican state of Chiapas.

Comments. The adults are small, blackish, and with a faint brassy luster above. They have a distinct dorsal channel in the basal 1/3 of the rostrum and a densely punctured head and pronotum. The aedeagus (Fig. 60) has a short median lobe with a narrowly pointed blade-like pedon and a narrowly pointed tectum. The tegminal cap piece is narrow and finger-like with the small pigmented apex bearing a cluster of very short setae. The tectum is spearhead-shaped. Endophallic bands are short, linear and weakly defined. The aedeagus of this species and that of *T. pueblensis* indicate a close relationship.

Plant association. Adults have been collected on *Haematoxylon brasiletto* Karsten (Caesalpiniaceae).

***Temnocerus chiriquensis* (Sharp 1889)**

(Fig. 7, 8, 61, 87)

Type locality. Panama, Volcan de Chiriqui, 4000-6000 ft.

Type depository. The Natural History Museum, London, England (**BMNH**)

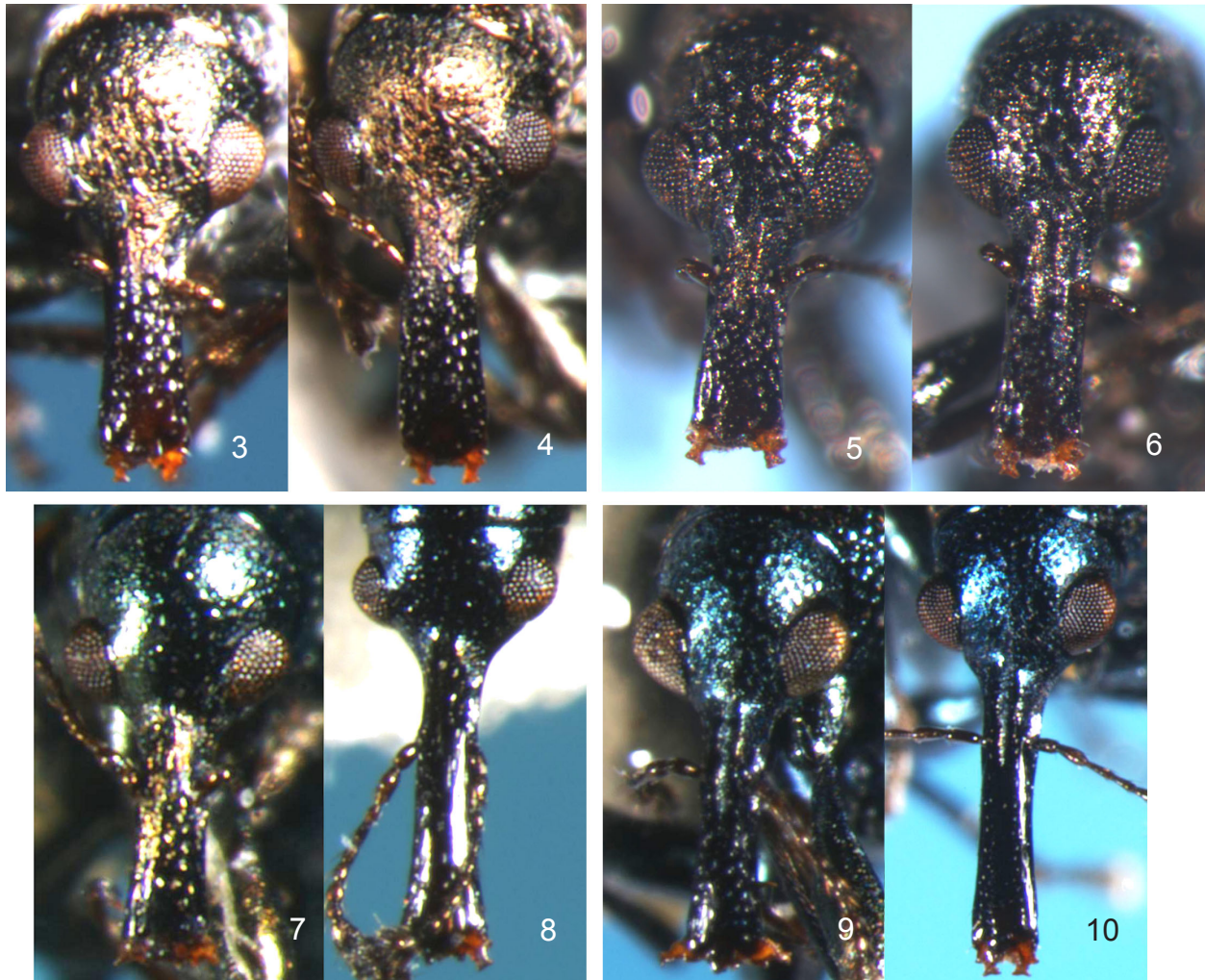


Figure 3-10. Heads of *Temnocerus* species, frontal view, male left and female right. **3-4)** *T. abdominalis* (Voss). **5-6)** *T. chiapensis* n.sp., holotype and allotype. **7-8)** *T. chiriquensis* (Sharp). **9-10)** *T. confertus* (Sharp).

Specimens examined. PANAMA: Holotype [sex female?] with the following data: V. de Chiriqui 4-6000 ft. *Rhynchites chiriquensis* Type D. S. [hand written on card with specimen]; Type [circular label with red margin]; V. de Chiriqui 4000-6000 ft. Champion; B.C.A. Col. iv.3 *Rhynchites chiriquensis* Sharp. **HONDURAS:** 1 male, Olancho, P.N. La Muralla, 1 June 1995, R. Turnbow; 1 male, [same as previous except 27 May 1995], 1 female, [same as previous except 28 Nov. 1995] (**CWOB**). **NICARAGUA:** 1 male, Matagalpa Dept., 6 km N. Matagalpa, Selva Negra, 18-22-v-02, N 12° 59.9' W 85° 54.6', 1250 m, Forest GFITS, S. Peck (**CMNC**).

Description. Color and pubescence: Color shiny bluish to greenish black throughout. Pubescence absent above except for some very small semi-erect setae on lateral aspect of pronotum and elytra. **Size:** Male (n = 3) 1.5 × 0.6 mm to 2.0 × 0.7 mm; Female (n = 1) 1.8 × 0.6 mm. **Head** quadrate, about as long as wide, sparsely punctured; punctures small and weakly impressed; interspaces shiny, minutely and weakly granulate; frons about twice as wide as rostral base. Eyes large, round, moderately protuberant. **Rostrum** short, only slightly longer than head, nearly parallel sided, widened only slightly at apex, moderately punctured; basi-dorsal 1/2 minutely granulate. **Antennae** longer than rostrum, inserted just before basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2 and 3 narrow, cylindrical; segments 4-6 subequal, slightly more robust than 2 and 3; segment 7 shorter, bead-like, more setose; club elongate, segments subequal in length; terminal club segment smaller, apically

narrowed and apically rounded. **Pronotum** slightly longer than wide, widest at basal 1/3, moderately punctured; interspaces smooth, shiny. **Scutellum** rectangular, twice as wide as long, with minute punctures. **Elytra** twice as long as pronotum, widest near middle; humeri simple; striae distinct throughout, weakly impressed; becoming smaller and more weakly impressed posteriorly; interspaces flat, smooth, shiny, with minute punctures on bridge pieces between striae and rowed along interspaces. **Thoracic pleura and sterna** with coarse moderate to dense punctures. **Abdominal ventrites** distinctly concave; ventrites 1 and 2 moderately and minutely punctured; ventrites 3-5 more densely punctured and with longer median setosity.

Distribution. Specimens are recorded from Panama, Honduras and Nicaragua (Fig. 87).

Comments. The small size, greenish-black to bluish-black color, sparse punctation and wide smooth and shiny interspaces identify the adults of this species. The aedeagus of *T. chiriquensis* (Fig. 61) has a narrowly tapered median lobe with the pedon apex narrowly truncate. The tectum is narrowly spatulate. The tegminal cap piece is broadly finger like with the small pigmented apex bearing divergent clusters of terminal setae on each side. Endophallic bands are short, linear and distinct.

Plant association. Unknown

***Temnocerus confertus* (Sharp 1889)**

(Fig. 9, 10, 62, 88)

Type locality. Panama, Volcan de Chiriqui, 4,000-6000 ft.

Type depository. The Natural History Museum, London, England (**BMNH**)

Specimens examined. Holotype [sex male?] with the following label data: V. [Volcan] de Chiriqui, *Rhynchites confertus* type D. S. [hand written on card with specimen]; TYPE [circular label with red margin]; V. de Chiriqui, 4000-6000 ft., Champion; B.C.A. col. iv-3, *Rhynchites confertus* Sharp; Sharp coll. 1905-313 [upside down on pin] (**BMNH**). **COSTA RICA:** 1 male, Puntarenas, 6 km S San Vito, 08° 42' N 83° 00' W, 12-iii-1968, H. Hespenheide; 1 male, Puntarenas Prov., Parque Nacional Corcovado, Est. Sirena, 8° 28-31' N 83° 36' W, 22-iii-1981 H.A. Hespenheide (**CHAH**). 1 male [dissected], Prov. Heredia, 18 km SSE La Virgen, 10° 16' N 84° 05' W, 21 Marzo 2001, 1050-1150 m, INBio-OET, INB0003220542, 11/M/15/055, ALAS transect (**INBC**). 1 male, Alajuela, Penas Blancas, 9-v-1987, E. Cruz MT; 1 female, (same as previous except 2-iii-1987) (**CMNC**). **PANAMA:** 1 female, Pan., Cerro Jefe, 9° 15' N 79° 21' W, 8 March 1980, 900 m, 1100, 2392, K. Joplin; 1 male, Chiriqui, Alto Lino near Boquete, May 15, 1978, O'Brien & Marshall; 1 male, Chiriqui, Alto Lino near Boquete, June 27, 1978, UV trap, 1300 m, H. Wolda; 1 male, (same as previous except 6 Nov. 1977) (**CWOB**). 1 female, Panama, Colon Pr., Fort Sherman, 7 Oct., 2001, 9° 17' N 79° 59' W, on *Inga cocleensis*, leg. F. Odegaard; 1 male and 2 females, (same as previous except 26 Oct., 2001) (**RWHC**).

Description. Color and pubescence: Body distinctly bluish-black with extremities brownish black. Pubescence inconspicuous, consisting of short brownish reclinate setae. **Size:** Male (n = 5) 2.2 × 0.8 mm to 2.3 × 0.9 mm; Female (n = 5) 2.4 × 0.9 mm to 2.7 × 1.2 mm. **Head** quadrate, moderately punctured; punctures small round; interspaces minutely granulose; frons about twice as wide as width of rostral base; eyes large sub-circular, strongly protuberant. **Rostrum** about 1.5 times longer than head; sides sub-parallel, only slightly widened apically. **Antenna** inserted near basal 2/5 of rostrum; scape and funicular segment 1 narrowly oval, subequal; funicular segments 2-4 sub-equal, narrowed; segment 5 like 2-4 but shorter; segments 6-7 ovoglobose, subequal in length to segments 2-4 but more robust; club abrupt; basal and middle segment subequal; terminal segment slightly longer than basal and middle segments, weakly acuminate. **Pronotum** longer than wide, widest just behind middle, densely set with setigerous punctures; interspaces around punctures with single row of minute granulations. **Scutellum** small, rectangular, twice as wide as long. **Elytra** about twice as long as pronotum, widest just behind



Figure 11-22. Heads of *Temnocerus* species, frontal view, male left and female right. **11-12)** *T. cyaneus* n.sp., holotype and allotype. **13-14)** *T. ellus* n.sp., holotype and allotype. **15-16)** *T. giganteus* n.sp., holotype and allotype. **17-18)** *T. guatemalensis* (Sharp). **19-20)** *T. guerrerensis* n.sp., holotype and allotype. **21-22)** *T. herediensis* n.sp., holotype and allotype.

middle; humeri simple; striae moderately impressed, rounded, similar throughout; intervals weakly raised, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with dense coarse setigerous punctures. **Abdominal ventrites** distinctly concave, sparsely punctured, minutely granulose laterally, with numerous short erect and semi-erect setae through middle.

Distribution. Specimens are recorded from Costa Rica and Panama (Fig. 88).

Comments. Adults of this species are strongly bluish-black with a densely punctured pronotum. The aedeagus (Fig. 62) has a parallel-sided median lobe with the pedon apex weakly widened and 3-sided. The tectum is elongate, parallel-sided and apically narrowed to a point. The tegminal cap piece is finger-like with a distinct knob-like pigmented apex bearing numerous short setae. Endophallic bands are linear, moderately long and distinctly pigmented.

Plant association. A single female is recorded from *Inga cocleensis* Pittier (Fabaceae-Mimosoideae) in Panama.

***Temnocerus cyaneus*, new species**

(Fig. 11, 12, 63, 92)

Type locality. Costa Rica, Heredia, 16 km SSE La Virgen

Type depository. National Institute of Biodiversity, Costa Rica (INBC)

Type specimens. Holotype male with the following data: **COSTA RICA:** Prov. Heredia, 16 km SSE La Virgen, 10° 16' N 84° 05' W, 21 Marzo 2001, 1050-1150 m, 11/M/03/043, ALAS transect [Malaise], Project ALAS INB0003220553, INBio-OET (INBC). Allotype with the following data: **PANAMA:** 1 female, Chiriqui Prov., 2 km W Cerro Punta, 8° 51' N 82° 36' W, 25-29.v.77, 1720 m, H & A Howden (CMNC). Paratype as follows: 1 female, Chiriqui Prov., 5 km NW Hornito, 08°41'08"N 82°15'17"W, el 3160 ft, 7-viii-1999, JB Woolley 99/088 (TAMU).

Description. Color and pubescence: Body distinctly shiny bluish-black throughout; antennae and extremities brownish-black. Pubescence composed of inconspicuous sparse, very short, reclinate brownish setae. Head and pronotum with few or no obvious setae. **Size:** male (n = 1) 2.3 × 0.8 mm; female (n = 1) 2.5 × 1.0 mm. **Head** sub-quadrate, about as long as wide; punctures small, round, widely spaced; interspaces minutely granulose; frons about twice as wide as width of rostral base; eyes large, oval, moderately protuberant. **Rostrum** about .33 times longer than head, gradually widened from antennal insertions to apex, moderately punctured, with shallow minutely granulate channel at mid-dorsal base; width at apex about 3/4 as wide as frons. **Antenna** inserted just in front of basal 1/4 of rostrum, about 1/3 longer than rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-3 narrow, sub-equal, weakly clavate; segments 4-7 subequal, like 2 and 3 but slightly shorter; club abrupt, basal & middle club segments subequal, narrowed basally; terminal segment slightly longer and narrower than basal or middle segment, acuminate. **Pronotum** longer than wide, widest just behind middle, with weak anterior constriction, moderately punctured; punctures small, round, shallowly impressed; interspaces minutely granulose. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae rounded, moderately impressed, becoming somewhat smaller posteriorly; interspaces between striae with single small setigerous or non-setigerous puncture; intervals smooth, shiny, with a single row of very small punctures; some punctures with setae. **Thoracic pleura and sterna** moderately punctured; punctures round, medium sized. **Abdominal ventrites** moderately to densely punctured; punctures small, round; lateral interspaces minutely strigate & granulate.

Distribution. The holotype is from Costa Rica and the allotype from Panama (Fig. 91).

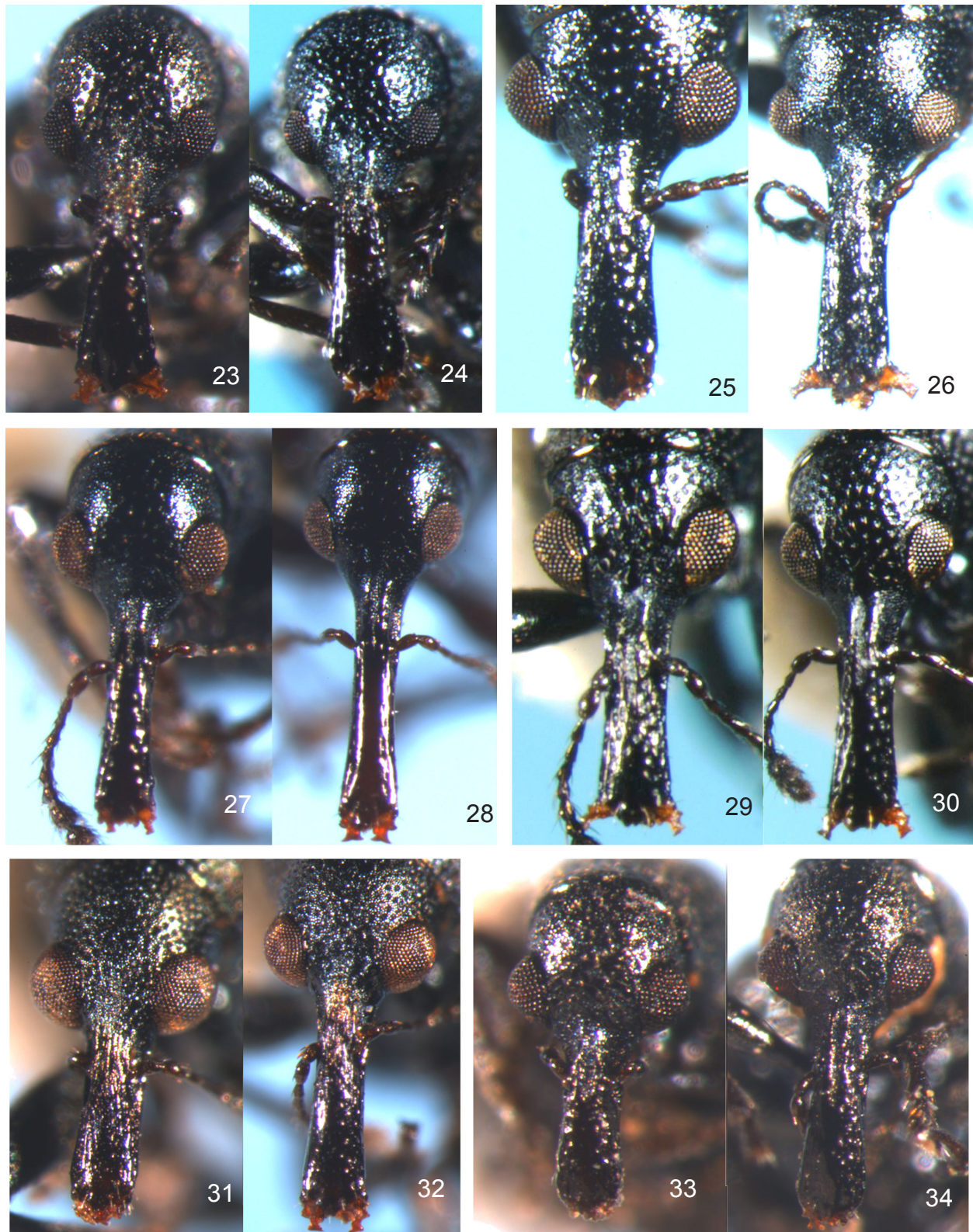


Figure 23-34. Heads of *Temnocerus* species, frontal view, male left and female right. 23-24) *T. mexicanus* n.sp., holotype and allotype. 25-26) *T. michoacensis* n.sp., holotype and allotype. 27-28) *T. minutus* n.sp., holotype and allotype. 29-30) *T. niger* n.sp., holotype and allotype. 31-32) *T. oaxacensis* n.sp., holotype and allotype. 33-34) *T. obrieni* n.sp., holotype and allotype.

Etymology. The specific epithet is in reference to the distinct bluish black body of this species.

Comments. Adults of this species are similar to adults of *T. confertus* (Sharp). Both are strongly bluish black and similar in size. However, they differ in punctuation. The head punctures in *T. cyaneus* are very small and more widely spaced than those in *T. confertus* and the pronotal punctures are small, round and not dense while in *T. confertus* they are larger, more deeply impressed and dense. The female rostrum is long and mostly smooth and shiny in both species but it is more widened apically in *T. cyaneus*. The aedeagus (Fig. 63) has a short tapered median lobe with the pedon apex truncated and thinly rebordered. The tectum is broadly spearhead-shaped and bluntly pointed. The tegminal cap piece is finger-like with a distinctly pigmented knob-like apex bearing a cluster of short setae. Endophallic bands are short and linear.

Plant association. Unknown. The holotype was taken in a Malaise trap along an ALAS project transect in Costa Rica.

***Temnocerus ellus*, new species**

(Fig. 13, 14, 64, 88)

Type locality. Mexico, Chiapas, 4.8 km SE Trinitaria

Type depository. Charles W. O'Brien collection (CWOB)

Type specimens. Holotype male and allotype with the following data: Mexico, Chiapas, 4.8 km SE Trinitaria, 19 Sep 1981, Clark & Coe (CWOB). Paratypes as follows: **GUATEMALA:** 1 female, Baja Verapaz, 16 km N. Salami on Pantin Rd., 31-v-1991, 1550m, 136-11, H & A Howden (CMNC). **HONDURAS:** 1 female, Feo. [Francisco], Morazan Tequicigalpa, La Tigra [Parque Nacional], 30 July 1992, 29 [?], R. Cordero (RDCC). **MEXICO:** 3 males, Mich., 4 km N Dr. Miguel Silva, 25-8-2002, 1718 m gps, N19 11.363°, W101 43.911°, 800, C.L. Bellamy; 2 males, Chiapas, 27 km SE Teopisca, 22-sep-1981, Clark & Coe; 1 male, Chiapas, Ocozocoautla, 7 Sep 1981, Clark & Coe; 3 males, Chiapas, Ocozocoautla, 26 Aug 1982, Clark & Cave; 2 males, Chiapas, 2 mi. e Jct. Hwy # 190 & # 195 (e. of Chiapa de Corzo), 22.vi.1985, Askevold & Heffern; 1 males and 2 females, Chiapas, 4.8 km SE Trinitaria, 19 Sep 1981, Clark & Coe; 1 male and 1 female, 5 km S. La Trinitaria, 28 Aug. 1982, W. Clark & R. Cave; 1 male and 1 female, 7 mi. SW Ocozocoautla, 2500', Aug. 1, 1974, O'Brien & Marshall; 1 female, Chiapas, Comitán, 18 Sep 1981, Clark & Coe; 1 male, Chis. [Chiapas], 2 mi SE Teopisca, vii-31-1974, 5,900', C & L O'Brien & Marshall; 1 female, Chiapas, 4.8 km SE Trinitaria, 21 Sept 1981, Clark & Coe; 1 female, Chis. [Chiapas], 13 mi NE Cintalapa, Aug 1, 1974, 2000', C.W. & L. O'Brien & Marshall; 1 female, Oaxaca, 22 km S Oaxaca, 20 Aug 1982, Clark & Cave; 1 female, Oaxaca, km 40 Guelatao Oaxaca, 20-ix-1989, E. Barrera (CWOB). 1 female, Oaxaca, 8.3 mi. SE El Cameron, July 24, 1974, Clark, Murray, Ashe, Schaffner (TAMU). 1 male, Veracruz, Koebele Collection (CASC). 1 male, Chiapas, Pq. Nac. Sumidero, 25.v.-13.vi. 1990, 1000 m, malaise trap, H & A Howden; 1 female, Oax. [Oaxaca], 12.4 km. SE El Cameron, 16-vii-87, 1219 m, dry oak/pine forest, 87-23, R. Anderson; 1 female, Chiapas, Pq. Nac. Sumidero, Coyote Mirador, 10-vi-1989, 1700 m, H. Howden; 2 males, Chiapas, Pq. Nac. Sumidero, 29-v-1990, 1000 m, H & A Howden; 1 male, Chiapas, San Cristobal, 11-vi-1990, 2,200 m, H & A Howden (CMNC).

Description. Color and pubescence: Body brownish-black throughout with faint greenish and brassy luster on pronotum. Pubescence composed of short fine brownish reclinate setae; frons with sparse long fine setae. **Size:** Male (n = 19) 1.6 × 0.7 mm to 2.0 × 0.8 mm; Female (n = 13) 2.1 × 0.8 mm to 2.6 × 1.1 mm. **Head** quadrate, as long as wide, moderate to densely punctured; interspaces minutely granulose; eyes large, oval, weakly conical, strongly protuberant. **Rostrum** short, only as long as head, weakly arcuate, apically flattened, subequal in length to head, distinctly widened from antennal insertions to apex; with mid-dorsal basal channel, moderately punctured on sides; mid-dorsal area in apical 1/2 smooth, shiny. **Antenna** longer than rostrum, inserted at basal 1/3; scape and funicular segment 1 subequal in length; funicular segment 1 more robust; segments 2-4 subequal, oval, narrowed; segments 5-7 subequal,

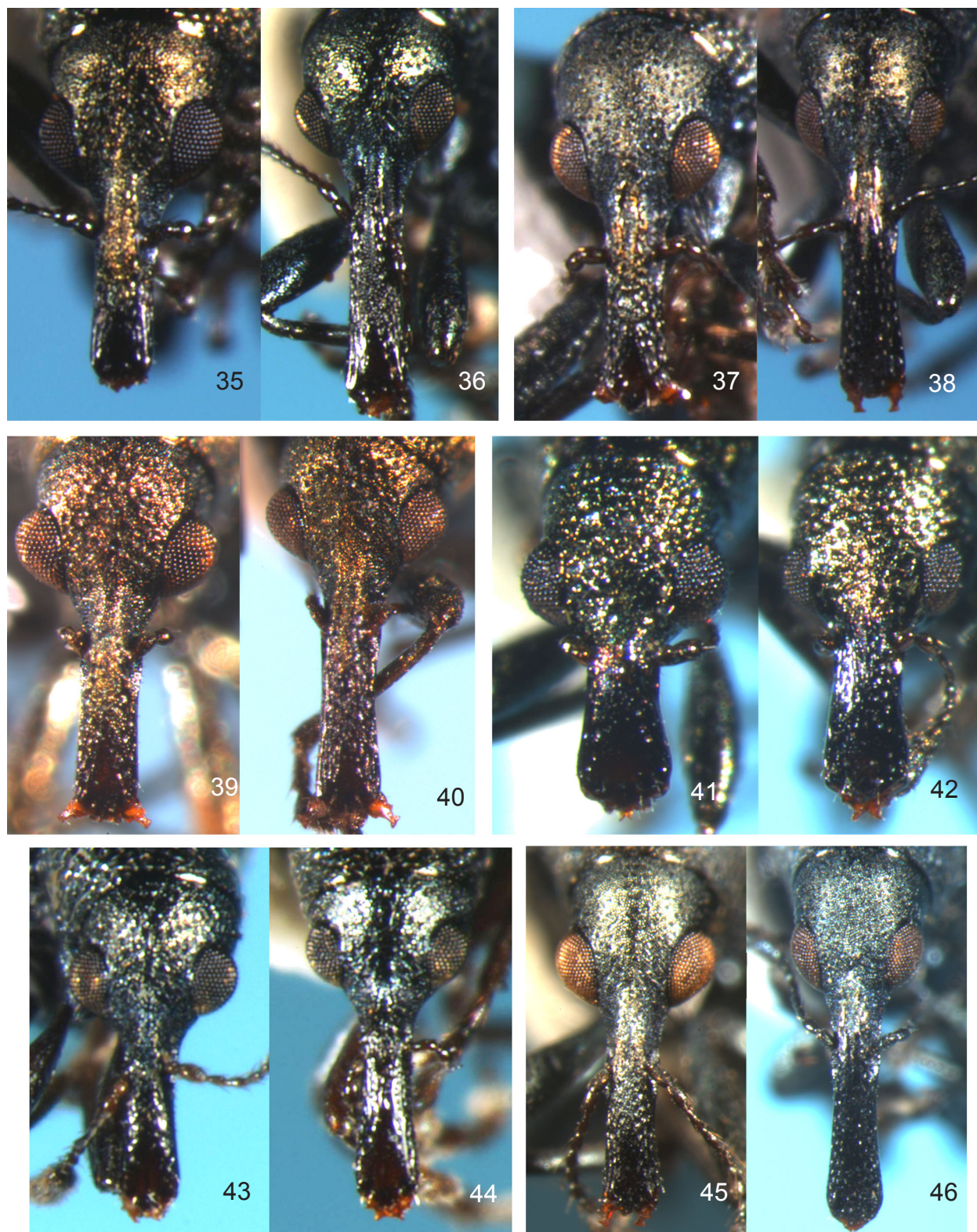


Figure 35-46. Heads of *Temnocerus* species, frontal view, male left and female right. **35-36)** *T. oculatus* (Sharp). **37-38)** *T. potosi* n.sp., holotype and allotype. **39-40)** *T. pseudaeeratus* n.sp., holotype and allotype. **41-42)** *T. pueblensis* n.sp., holotype and allotype. **43-44)** *T. pusillus* (Sharp). **45-46)** *T. regularis* (Sharp).

bead-like; club abrupt; basal and middle segment subequal in length; basal segment narrowed at base; apical segment slightly longer than basal or middle segment, apically acuminate. **Pronotum** slightly longer than wide; densely punctured; interspaces smooth, shiny. **Scutellum** small, rectangular, wider than long, punctured. **Elytra** about twice as long as pronotum, widest near middle; humeri simple; striae becoming smaller beyond middle; interspaces weakly raised, with single row setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** densely punctured; punctures coarse, with longer more whitish setae. **Abdominal ventrites** distinctly concave, with moderately set small setigerous punctures; setae more numerous through middle.

Distribution. Adults of this species are recorded from Guatemala, Honduras and the Mexican states of Michoacan, Chiapas, Oaxaca, and Veracruz (Fig. 88).

Etymology. The specific epithet is derived from the Latin ending “ell” and is in reference to the small size of this species.

Comments. Adults of this small species have large and strongly protuberant eyes (especially in males). The male rostrum is short, nearly straight and distinctly flattened apically. This species is easily confused with *T. abdominalis* but the punctures of the abdominal ventrites are not as uniformly placed and dense as in that species. The shape of the pedon apex and the setosity of the tegminal cap-piece are also different in these two species. The aedeagus (Fig. 64) has a short strongly narrowed median lobe with the pedon apex narrowly truncate. The tectum is spatulate with a narrow base. The tegminal cap piece is narrowly finger-like with the small pigmented apex bearing a cluster of very short setae. Endophallic bands are short, linear and weakly defined. The aedeagus of this species and that of *T. obrieni* and *T. thesaurus* are very similar and probably form a natural group.

Plant association. Unknown.

Temnocerus giganteus, new species

(Fig. 15, 16, 65, 88)

Type locality. Mexico, Puebla, 4.4 mi SW Acatepec

Type depository. Texas A & M University, College Station, Texas (TAMU)

Type specimens. Holotype male and allotype with the following data: Mexico, Puebla, 4.4 mi sw Acatepec, July 9, 1977, JC Schaffner (TAMU). Paratype data as follows: **MEXICO:** 4 females, Mexico, Guerrero, 7 km SW Xochipala, 5-vii-87, 1753 m, Acacia-Oak woodland, R Anderson (CMNC); 1 female, Mexico, Mexico, 3 mi S Ixtapande La Sal, vii-18-1974, RL Mangan & DS Chandler; 1 female, Mexico, Guerrero, Hwy 95, 8 km S Mazatlan, 29-vi-1992, 1130 m, CL Bellamy (CWOB); 1 female, Mexico, Puebla, 4.4 mi sw Acatepec, July 9, 1977, JC Schaffner; 1 female, Mexico, Puebla, 4.3 mi sw Acatepec, July 16, 1971, Clark, Murray, Hart, Schaffner; 1 female, Mexico, Guer. 10.7 km SW Xochipala, 5-vii-87, 1,753 m, Acacia-Oak woodland, R Anderson; 1 male and 1 female, Mexico, Oaxaca, 6 miles ne Mitla, July 20, 1985, Jones, Schaffner; 1 female, Mexico, Oaxaca, 10 mi. n Miltepec, July 26, 1974, Clark, Murray, Ashe, Schaffner; 4 males and 1 female, Mexico, Oaxaca, 1.3 mi. ne Chazumba, July 16, 1971, Clark, Murray, Hart, Schaffner; 1 male, Mexico, Morelos, 4.4 mi e Cuernavaca, July 6-8, 1974, Clark, Murray, Ashe, Schaffner (TAMU).

Description. Color and pubescence: Body dark bluish-black throughout with a faint bronze luster to the pronotum. Pubescence consists of numerous fine appressed brownish setae. **Size:** Male (n = 7) 2.8 × 1.2 mm to 3.4 × 1.4 mm; Female (n = 13) 2.9 × 1.2 mm to 4.2 × 1.6 mm. **Head** quadrate, slightly wider at base, moderately punctured; punctures round, evenly spaced; frons with fewer punctures; interspaces minutely granulose, silky in appearance; eyes moderately protuberant. **Rostrum** distinctly longer than head, straight, only slightly widened at apex, apically flattened; smooth, shiny, with few punctures, lightly strigate at dorsal base. **Antennae** inserted at basal 1/5 of rostrum, longer than rostrum; scape

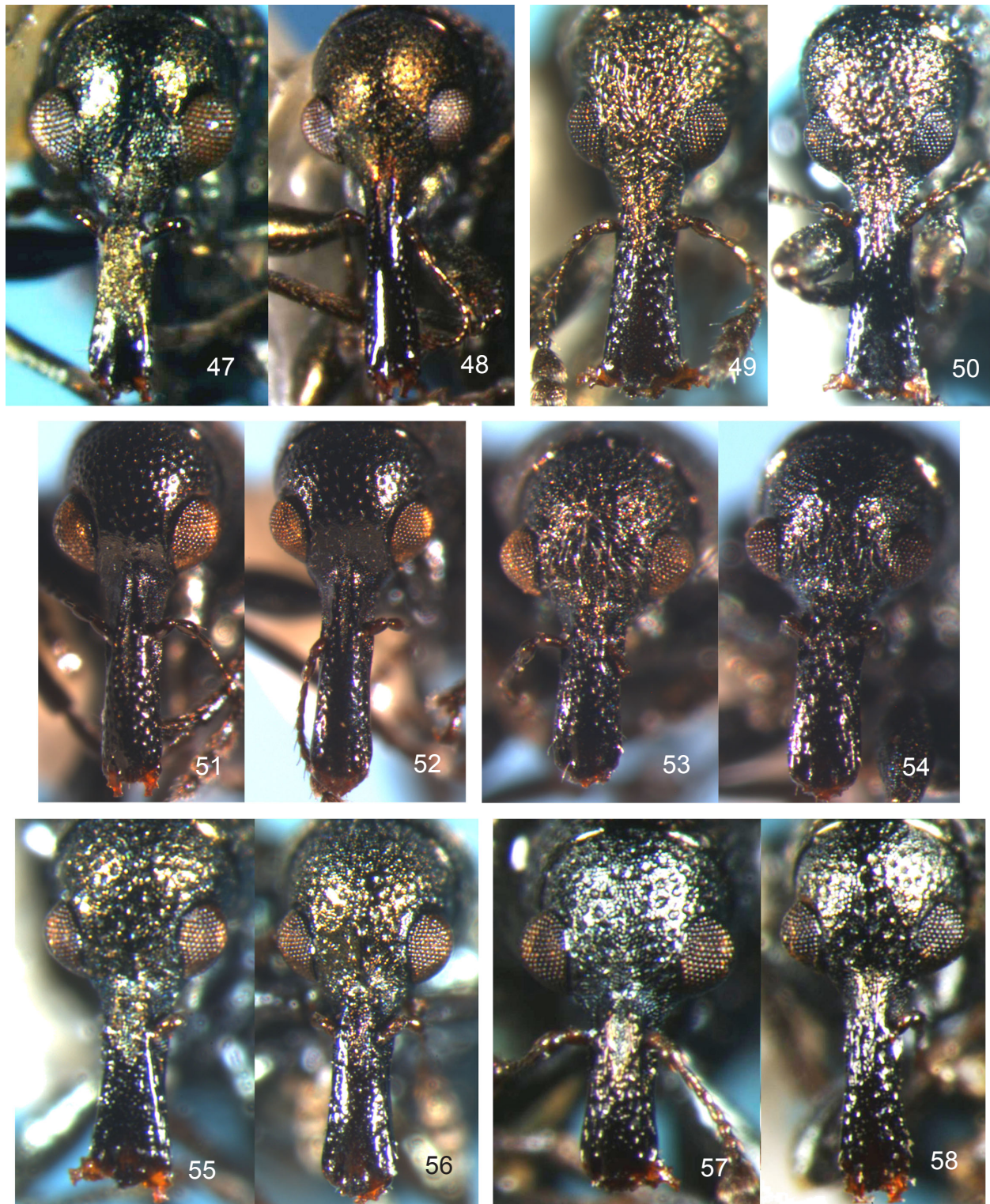


Figure 47-58. Heads of *Temnocerus* species, frontal view, male left and female right. **47-48)** *T. rostralis* n.sp., holotype and allotype. **49-50)** *T. rugosus* n.sp., holotype and allotype. **51-52)** *T. salvensis* n.sp., holotype and allotype; **53-54)** *T. tamaulipensis* n.sp., holotype and allotype. **55-56)** *T. thesaurus* (Sharp). **57-58)** *T. yucatensis* n.sp., holotype and allotype.

and funicular segment 1 ovoglobose, subequal; funicular segments 2 and 3 cylindrical, shorter than segment 1; segments 4 and 5 clavate, subequal to segments 2 and 3 in length; segments 6 and 7 bead-like; club compact; basal segment cone-shaped, longer than middle and terminal segments; middle and terminal segments subequal in length; terminal segment weakly acuminate. **Pronotum** wider than long, distinctly arched out laterally, widest behind middle, distinctly narrowed at base; densely punctured; interspaces minutely granulose. **Scutellum** small, rectangular, twice as wide as long. **Elytra** elongate, nearly twice as long as wide, widest just beyond middle; humeri simple, stria punctures moderately to weakly defined; interspaces between striae with setigerous puncture; intervals transversely rugose, densely set with numerous small irregularly rowed setigerous punctures. **Thoracic pleura and sterna** moderately to densely punctured. **Abdominal ventrites** smooth, shiny, with few punctures.

Distribution. Adults are recorded from the Mexican states of Guerrero, Mexico, Morelos, Oaxaca and Puebla (Fig. 88).

Etymology. The specific epithet is in reference to the relatively large size of this species.

Comments. *Temnocerus giganteus* is easily recognized by its large size and bluish-black color. The female has an elongate rostrum that is smooth and shiny from the antennal insertions to the apex. The rostrum of the male is shorter, wider and more punctate (Fig. 15, 16). The aedeagus (Fig. 65) has a distinctly tapered median lobe with the pedon apex narrowly truncate. The tectum is spearhead-shaped and distinctly pointed. The tegminal cap piece is wide at the base, narrowed through the middle and widened again into a broadly rounded apex bearing numerous very long terminal setae. Endophallic bands are long and distinctly pigmented. The aedeagus of this species and that of *T. oaxacensis* (Fig. 73) are similar and indicate a close relationship.

Plant association. Unknown.

***Temnocerus guatemalensis* (Sharp 1889)**

(Fig. 17, 18, 66, 89)

Rhynchites debilis Sharp, 1889, **new synonymy**

Type locality. Guatemala, Chiacaman

Type depository. The Natural History Museum, London, England (**BMNH**)

Specimens examined. **GUATEMALA:** Holotype male with the following data: Chiacaman, Guat., *Rhynchites guatemalensis*, type D.S. [on card with mounted specimen]; Type [circular label with red margin]; Chiacam [sic], Guatemala; B.C.A. Col. iv-3, *Rhynchites guatemalensis* Sharp; Sharp Coll. 1905-313 [upside down on pin]. 2 females, Guatemala, Sta. Catarina Pinula, 1800 m, ii.vi.1991, H & A Howden; 1 male, Baja Verapaz, 6.6 km W. Chilasco, 1880 m., 26.v.1991, H & A Howden; 1 female, km 127-129 on Rd to Coban, 1250 m. Baja Verapaz, 20.v.1991, H & A Howden (**CMNC**). 1 male, 8 mi. E Chimaltenango, vi-7-1974, 6400', O'Briens & Marshall (**CWOB**). **BELIZE:** 1 male and 2 females, S.C., Mile 20 Southern Highway, Aug. 19, 1977, CW & L O'Brien & Marshall; 1 male, Cayo, St. Augustine, Aug. 21, 1977, CW & L O'Brien & Marshall; 1 male, Orange Walk Distr. Rio Bravo Conservat. Area Vic. La Milpa Field Station, vii.8-13.1996, W.B. Warner, J. Shuey, P. Kovarik, and O'Brien; 1 female, Cayo, 22 mi. SE. Belmopan, Aug. 18, 1977, CW & L O'Brien & Marshall (**CWOB**). **HONDURAS:** 1 male, El Paraiso, El Barro, Danli, 14 November, 1988, R.D. Cave Collr.; 1 male, Fco. Morazan, Tegucigalpa, Mateo, 3 Sep 1989, *Cordia curassavica*, Floracion, R. Cordero .14 rcol. (**RDCC**). 1 female, Olancho, 22 km S La Union, 30-Nov. 1995, R. Turnbow; 1 female, Fra., 34 mi. N. Talanga, vi-12-1974, 2400', CW & L O'Brien & Marshall; 2 females, Com., Lago Yojoa, July 19, 1974, CW & LB O'Brien & Marshall; 2 males, Cho., 982 m. 1 km W San Marcos de Colon, July 24, 1977, O'Briens & Marshall; 1 male, Atl., 6 km SW Tela, Aug. 6, 1977, CW & LB O'Brien & Marshall; 1 male, Ola., 5 mi. SE. Catacamas, vi-14-1974, C.W. & L.

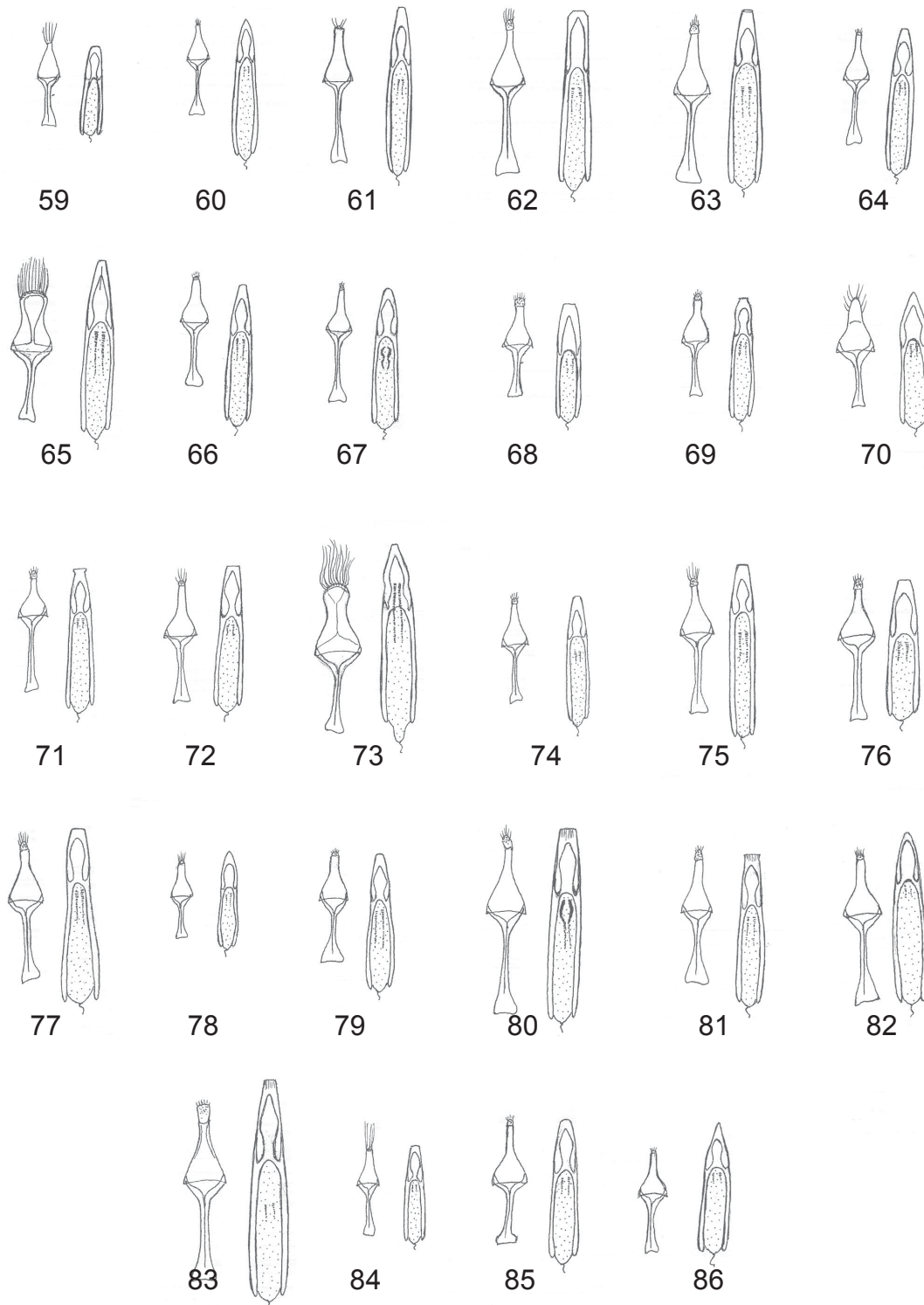


Figure 59-86. Aedeagal tegmen and median lobe of *Temnocerus* species, dorsal view, 64X. **59)** *T. abdominalis* (Voss). **60)** *T. chiapensis* n. sp. **61)** *T. chiriquensis* (Sharp). **62)** *T. confertus* (Sharp). **63)** *T. cyaneus* n. sp. **64)** *T. ellus* n. sp. **65)** *T. giganteus* n. sp.; **66)** *T. guatemalensis* (Sharp). **67)** *T. guerrerensis* n. sp. **68)** *T. herediensis* n. sp. **69)** *T. mexicanus* n. sp. **70)** *T. michoacensis* n. sp. **71)** *T. minutus* n. sp. **72)** *T. niger* n. sp. **73)** *T. oaxacensis* n. sp. **74)** *T. obrieni* n. sp. **75)** *T. oculatus* (Sharp). **76)** *T. potosi* n. sp. **77)** *T. pseudoaratus* n. sp. **78)** *T. pueblensis* n. sp. **79)** *T. pusillus* (Sharp). **80)** *T. regularis* (Sharp). **81)** *T. rostralis* n. sp. **82)** *T. rugosus* n. sp. **83)** *T. salvensis* n. sp. **84)** *T. tamaulipensis* n. sp. **85)** *T. thesaurus* (Sharp) **86)** *T. yucateensis* n. sp.

O'Brien; 2 males, Cop., 2 mi. S Nueva Arcadia, vii-24-1974, 2000', O'Briens & Marshall; 1 male and 2 females, Francisco Morazan, Cerro Uyuca, 15 July 2001, 4500', R. Turnbow; 1 female, Com., 21 km NW. Siguatepeque Ch. 5 Rd., Aug. 1, 1977, O'Briens & Marshall, 1 male, Atl., 10 km W. La Ceiba, Aug. 6, 1977, CW & L O'Brien & Marshall (**CWOB**). 1 male, Chamelecon, Cortes, 1. ix.1993, *Mimosa pigra* var. *pigra*, M. Martinez (**ANIC**). **MEXICO**: 1 female, Chiapas, Hwy 199, 3.5 km S Rio Tulija, 29-v-1987, DA Rider & E.G. & T.J. Riley; 1 male and 1 female, Veracruz, 8 km S Santecoma [Santacomapan], 7 Sep 1982, Clark & Cave; 1 male, Chiapas, 8 km NE Rizo de Oro, 23 Aug 1982, Clark & Cave; 1 male, Ver. 5 mi. SE. Montepio, 23 Aug. 1982, 50', C.W. & L. O'Brien & G. Wibmer; 1 male, Ver., Los Tuxtlas, Biol. Sta. UNAM, 23 Aug. 1982, 250', C & L. O'Brien & Wibmer; 1 male, Chiapas, 12.5 mi. S. Palenque, 23.vi.1985, Askevold & Heffern; 1 female, Chiapas, Romulo Calzada, 6-iii-1988, R. Barba, E. Barrera, A. Cadena; 1 female, Chiapas, 3.5 n. Ocosingo, Hwy #199, 23.vi.1985, Askevold & Heffern (**CWOB**). 2 male, Oaxaca, 11 mi. n. Matias Romero, July 6, 1971, Clark, Murray, Hart, Schaffner; 1 female, Oaxaca, 32.8 mi. northwest Jalapa del Marques, July 13, 1971, Clark, Murray, Hart, Schaffner; 1 male and 1 female, Oaxaca, 3 mi. se. Rio Hondo, July 17, 1981, Bogar, Schaffner, Friedlander; 1 male and 4 females, Chis. [Chiapas], 3 mi. S. Solusuchiapa, vi-15-65, Burke, Meyer, Schaffner (**TAMU**). 1 male, Oaxaca, 17 mi. SW. Valle Nacional, 24. vi. 83, 3700', S & J Peck; 4 males and 1 female, Oax., 13 km. S. Tuxtepec, 60m, 26.vi.83, Kaulbars; 1 male, Q. Roo, Kohunlich Ruins, 30 mi. E. Chetumal, 15.vii.1983, 350' mix palm forest, Anderson (**CMNC**). 3 males and 2 females, Veracruz State, Tlalixcoyan, 18-19 Aug. 2003, on *Mimosa pigra*, R. Segura, M. Martinez, T. Heard; 4 males and 6 females, Ver., Alvarado, 16-iii-86, ex. *Sida acuta*, KLS Harley; 2 male and 1 female, Veracruz, Boca del Rio, 18/04/91, on flower *Mimosa pigra* var. *pigra*, R. Segura & M. Martinez (**ANIC**); 1 male and 3 females, Veracruz, 12 Feb 2007, from *Mimosa pigra*, ex. quarantine colony, tested for control of *M. pigra*, M. Segura & M. Martinez, Brisbane Australia; 2 males and 2 females [same as previous except 8 Dec. 2003]; 2 males and 3 females [same as previous except 4 May 2004]; 4 males and 1 female [same as previous except El Nanche, 7 June 2005]; 2 males and 3 females [same as previous except 26 July 2005]; 3 males and 2 females, [same as previous except 19 October 2005]; 2 males and 3 females [same as previous except 19 Dec 2005]; 3 males and 2 females [same as previous except 23 Dec 2007]; 2 males and 3 females [same as previous except 21 Aug 2008]; 2 males and 3 females, Guerrero, 30 Aug 2005 (**RWHC**). **PANAMA**: 1 male, P. Panama, Santa Rita, Cerro Cama, 7-xii-1975, S. Martinez (**CWOB**).

Description. Color and pubescence: Body black throughout with faint bluish or brassy luster. Pubescence composed of short reclinate pale brownish setae; abdominal ventrites with more numerous erect to semi-erect setae through middle. **Size:** Male (n = 44) 2.1 × 0.9 mm to 2.3 × 0.9 mm; Female (n = 32) 2.1 × 0.9 to 2.4 × 1.1 mm. **Head** quadrate about as wide as long, moderately punctured; punctures small round; interspaces minutely granulose; eyes large, oval, moderately protuberant; frons about twice as wide as rostral base. **Rostrum** distinctly longer than head, subequal in length to pronotum, with weak median basal channel, densely punctured from base to near apex, distinctly widened at apex, arcuate in lateral view, only slightly flattened apically. **Antenna** inserted at basal 1/3; scape and funicular segment 1 ovoglobose, subequal in length; funicular segment 1 more clavate and robust; segments 2-4 subequal, narrowly clavate; segments 5-7 shorter, bead-like; club abruptly widened; basal and middle segments subequal; terminal segment smaller, weakly acuminate. **Pronotum** slightly longer than wide, widest just behind middle, densely punctured; interspaces minutely granulose. **Elytra** about twice as long as pronotum, widest behind middle; humeri simple; striae quadrate, moderately impressed, becoming smaller posteriorly; intervals weakly raised, with row setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with dense, coarse, setigerous punctures. **Abdominal ventrites** moderately set with setigerous punctures; punctures small; some interspaces minutely granulate.

Distribution. Adults of this species are recorded from Mexico, Belize, Guatemala, Honduras and Panama (Fig. 89). The type locality given by Sharp (1889) is Chiacam, Guatemala which is now known as Chiajan.

Comments. *Temnocerus guatemalensis* is recognized by the small, round, rather widely spaced head punctures and the minutely granulose interspaces that have a silky appearance (Fig. 17, 18). *Temnocerus guatemalensis* is closely related to *T. pusillus* but the dense pronotal punctures of that species differ from

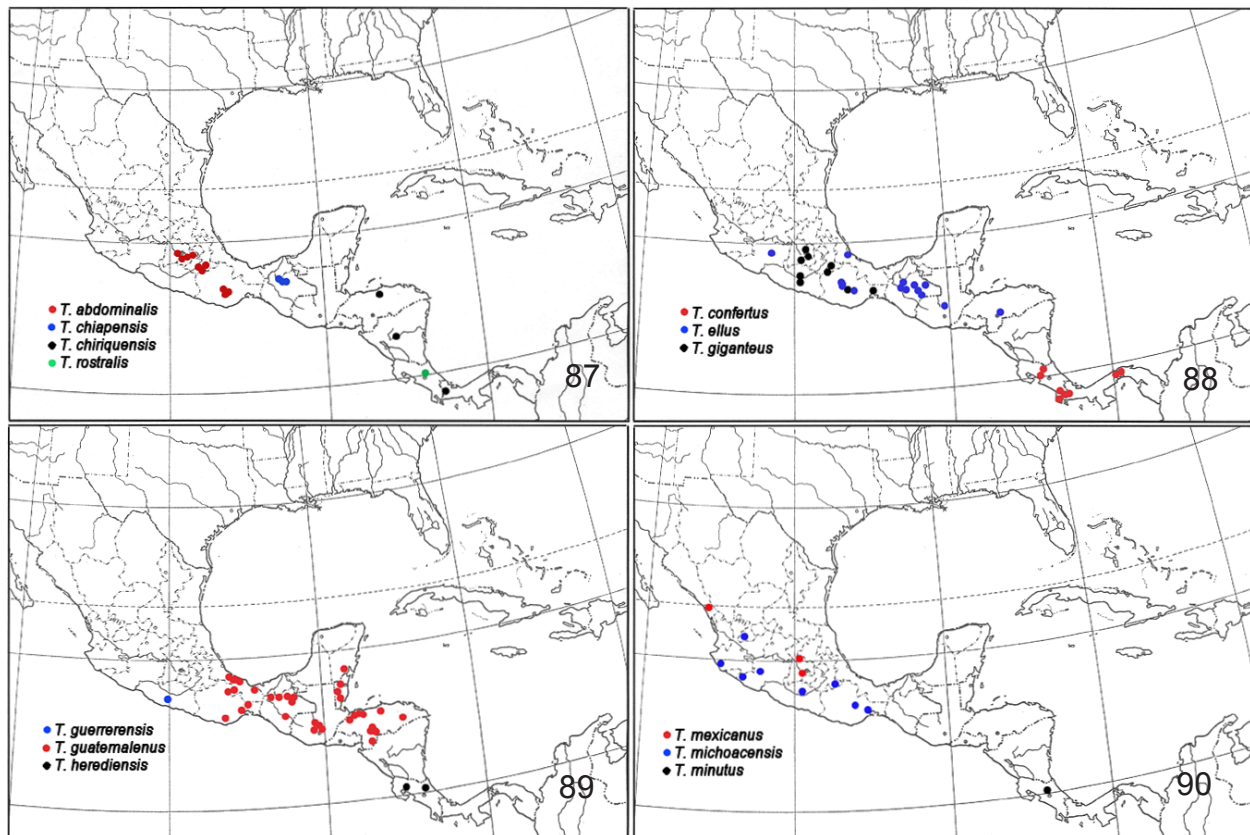


Figure 87-90. Distribution of *Temnocerus* species. **87)** *T. abdominalis*, red; *T. chiapensis*, blue; *T. chiriquensis*, black; *T. rostralis*, green. **88)** *T. confertus*, red; *T. ellus*, blue; *T. giganteus*, black. **89)** *T. guerrerensis*, blue; *T. guatemalensis*, red; *T. herediensis*, black. **90)** *T. mexicanus*, red; *T. michoacensis*, blue; *T. minutus*, black.

the moderately punctured pronotum of *T. guatemalensis*. The bluish luster mentioned by Sharp in the original description is very faint in all specimens examined. The aedeagus (Fig. 66) has the median lobe distinctly narrowed with the pedon apex narrowly truncate. The tectum is spearhead-shaped. The tegminal cap piece is finger-like with the small pigmented apex bearing a cluster of very short setae. The endophallic bands are short, linear and weakly defined. The aedeagus is very similar to that of *T. pusillus* (Fig. 79) and supports a close relationship for these two species. In this paper, specimens described as *T. debilis* by Sharp are conditionally grouped here with *T. guatemalensis* and seem to differ only in having a more brassy luster to the upper surface.

Plant association. Adult specimens have been associated with *Mimosa pigra* (L.) in the family Fabaceae. In a host specificity study, females oviposited only in *M. pigra* (Tim Heard, ANIC, 2005 communication). Single records from *Sida acuta* (Burm.) in the Malvaceae and *Cordia curassavica* (Jacq.) in the Boraginaceae are most likely not hosts.

***Temnocerus guerrerensis*, new species**

(Fig. 19, 20, 67, 89)

Type locality. Mexico, Guerrero, El Carrizal

Type depository. United States National Museum, Washington, D.C. (USNM)

Type specimens. Holotype male and allotype with the following data: **MEXICO**, Guerrero, El Carrizal, 28-iii-86, J. Gillett, ex. *Mimosa pigra* (L.). Paratypes: 5 males and 12 females with same data as primary types.

Description. Color and pubescence: Body black throughout with faint brassy luster. Pubescence composed of short appressed brownish-white setae; setae longer on metathoracic pleura. **Size:** Male (n=6) 1.9×0.8 mm to 2.3×1.0 mm; Female (n=13) 1.8×0.8 to 2.5×1.0 mm. **Head** quadrate, moderately punctured; interspaces minutely granulose; eyes strongly protuberant; frons wide, about twice as wide as rostral base. **Rostrum** more than twice as long as head, with distinct mid-dorsal channel in basal 1/2, widened from antennal insertions to apex; apex more than .50 times width of frons; dorsally beyond antennal insertions smooth, shiny, with lateral punctures. **Antenna** inserted near basal 1/3 of rostrum; scape and funicular segment 1 narrowly oval, subequal; funicular segments 2-4 shorter than segment 1, weakly clavate; segments 5-7 shorter, progressively more bead-like; club abrupt; basal and middle club segments subequal in length; basal segment subtriangular; middle segment subrectangular; apical segment slightly longer than basal and middle segments and weakly acuminate. **Pronotum** slightly longer than wide, widest just behind middle, densely punctured; interspaces minutely granulose. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae distinct throughout; strial interspaces with single setigerous puncture; intervals about as wide as striae, weakly raised, with row of setigerous punctures. **Thoracic pleura and sterna** with larger more dense punctures. **Abdominal ventrites** moderately punctured, weakly concave through middle.

Distribution. Adults of this species are known only from the type locality in Guerrero, Mexico (Fig. 89).

Etymology. The specific epithet is derived from the Mexican state of Guerrero.

Comments. *Temnocerus guerrerensis* is black with a distinctly widened rostral apex and a prominent basi-rostral channel. The aedeagus (Fig. 67) has a distinctly tapered median lobe with the pedon apex narrowly rounded. The tectum is spearhead-shaped. The tegminal cap piece is narrow and finger-like with the small pigmented apex bearing a cluster of very short setae. Endophallic bands are distinctly pigmented and together form a “double parentheses” shape.

Plant association. All specimens examined were labeled by J. Gillett (ANIC) as taken from *Mimosa pigra* (L.) in the family Fabaceae. This species has been evaluated as a possible biological control agent for *Mimosa pigra* (L.) in Australia.

***Temnocerus herediensis*, new species**

(Fig. 21, 22, 68, 89)

Type locality. Costa Rica, Heredia, La Selva Biological Station

Type depository. National Institute of Biodiversity, Costa Rica (**INBC**)

Type specimens. Holotype male with the following label data: Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, $10^{\circ}26' N$ $84^{\circ}01' W$, May 1993, INBio-OET, 5 Mayo, 1993, *Conceveiba pleiostemona*, FOT/04/23, INBIO, CR1001,227898 [bar code]. Allotype with same data as holotype except FOT/04/17, INBIO, CR1002,069080 [bar code]. The paratypes are as follows: 1 male, Costa Rica, Prov. Heredia, F La Selva, 3 km S Pto. Viejo, $10^{\circ}26' N$ $84^{\circ}01' W$, 25-iii-1980, H. A. Hespenheide (**CHAH**); 1 female, Costa Rica, Heredia, Est. Biol. La Selva, 50-150, $10^{\circ}26' N$ $84^{\circ}01' W$, Jul 1993, INBio-OET, *Pentaclethra macroloba*, FPM/08/26, 4 de Julio, 1983, INBIOCR1002260405 (**INBC**); 1 female, Costa Rica, Guan. [Guanacaste], Latoboga For. Res., 9 km SW Canas, 20-21 May 1987, W. L. Rubink, M. T. (**CWOB**).

Description. Color and pubescence: Body black throughout with faint bluish luster. Pubescence composed of inconspicuous short, brownish, reclinate setae. **Size:** Male (n = 2) 2.3×0.8 mm; Female (n =

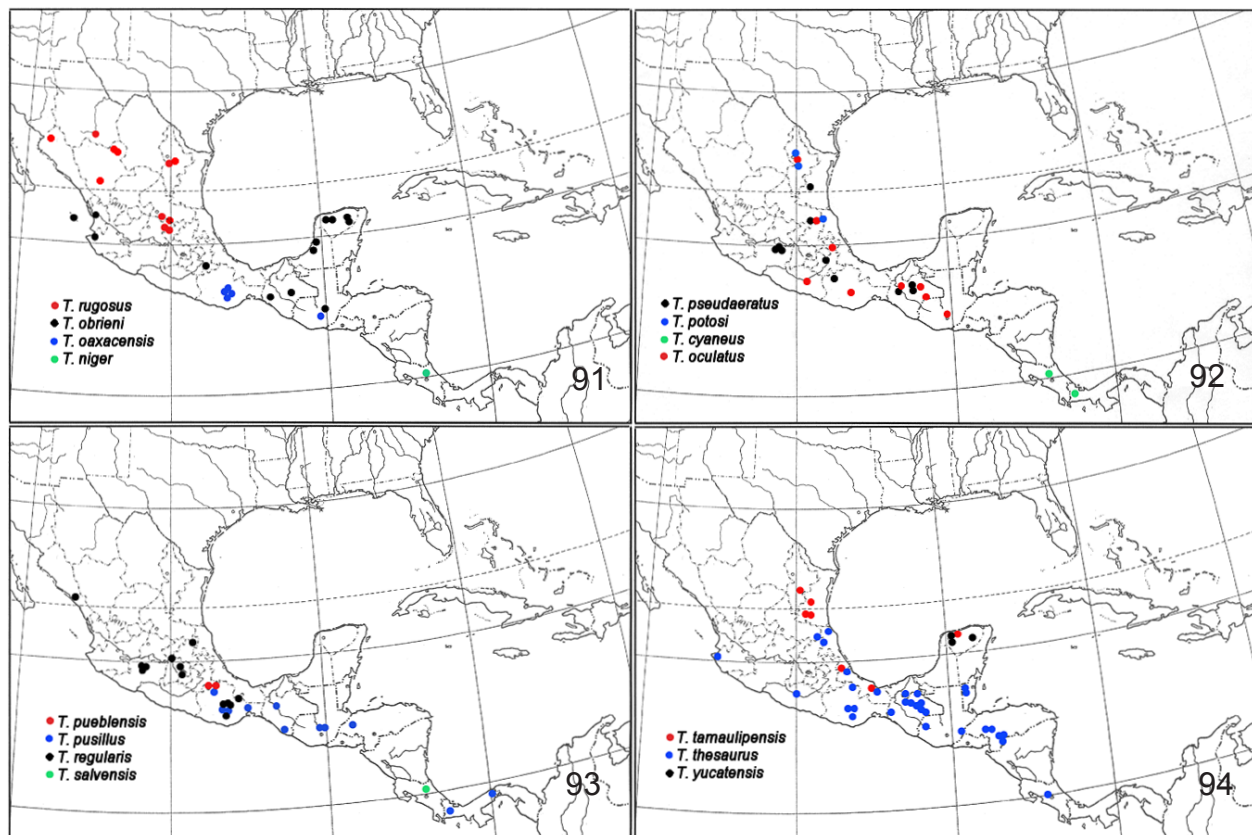


Figure 91-94. Distribution of *Temnocerus* species. **91)** *T. rugosus*, red; *T. obrieni*, black; *T. oaxacensis*, blue; *T. niger*, green. **92)** *T. pseudoaeratus*, black; *T. potosi*, blue; *T. cyaneus*, green; *T. oculatus*, red. **93)** *T. pueblensis*, red; *T. pusillus*, blue; *T. regularis*, black; *T. salvensis*, green. **94)** *T. tamaulipensis*, red; *T. thesaurus*, blue; *T. yucatanensis*, black.

3) 1.9×0.6 mm to 2.0×0.8 mm. **Head** quadrate, as long as wide; punctures round, moderately dense; interspaces minutely granulose; frons about twice as wide as width of rostral base; eyes large, strongly protuberant, weakly conical. **Rostrum** short, only slightly longer than head, with mid-dorsal channel from base to middle of rostrum; in lateral view weakly arcuate and slightly flattened apically; moderately punctured except for smooth dorso-apical area; juncture of rostrum and head weakly concave. **Antenna** inserted near basal 1/3; scape and funicular segment 1 ovoglobose, subequal in length; funicular segment 1 slightly more robust; funicular segments 2-4 narrow, subequal; segments 5-7 shorter, bead-like; segments 6 and 7 more robust than 5. Club abrupt, basal and middle segment subequal in length; apical segment slightly longer; basal segment narrowed basally; apical segment acuminate. **Pronotum** longer than wide; widest at middle, densely punctured; punctures large; interspaces minutely granulose. **Scutellum** small, subquadrate. **Elytra** twice as long as pronotum, widest near middle; humeri simple; striae deeply impressed, becoming slightly smaller posteriorly; intervals narrow, weakly raised, with single row setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** densely punctured; punctures, large, setigerous. **Abdominal ventrites** moderately punctured; punctures small, setigerous.

Distribution. Four specimens of *T. herediensis* are from the Costa Rican province of Heredia and a single specimen is from the northwest province of Guanacaste (Fig. 89).

Etymology. The specific epithet is derived from the Costa Rican province of Heredia.

Comments. Adults of this species are dark and faintly bluish-black species with large dense pronotal punctures. The elytral punctures are slightly diminished in size posteriorly beyond the middle. The aedeagus is unique in this species (Fig. 68). The median lobe has a wide pedon that narrows only slightly into a sharply truncate apex. The tectum is blade-like with a wide base evenly tapered to a pointed apex. The tegminal cap piece is finger-like with a relatively large pigmented sub-quadrate apex bearing a cluster of short setae. Endophallic bands are short and weakly defined.

Plant association. The primary type specimens were fogged from *Conceveiba pleiostemona* Donn. Sm. (Euphorbiaceae). A single female specimen was fogged from *Pentaclethra macroloba* Willd. (Fabaceae).

***Temnocerus mexicanus*, new species**

(Fig. 23, 24, 69, 90)

Type locality. Mexico, Mexico, 13 mi. N. Acambay

Type depository. Charles W. O'Brien collection (CWOB).

Type specimens. Holotype male and allotype with the following data: MEXICO: Mex. 13 mi. N. Acambay, 8,400', Aug. 15, 1974, C & L O'Brien & Marshall (CWOB). Paratype data as follows: 2 males and 1 female with same data as primary types; 1 male and 1 female, Sinaloa, 6.5 mi. E. Potrerillos, viii-21-1964, P.A. Rauch; 1 female, Mex., La Mirasol, 7 km SW Santiago de Tianguistengo, xi-2-1973, 2,800 m, CW O'Brien (CWOB).

Description. Color and pubescence: Body black throughout, extremities brownish-black; pronotum with faint brassy luster. Pubescence of short, fine, reclinate, whitish setae. **Size:** Male (n = 4) 2.0 × 0.7 mm to 2.2 × 0.8 mm; Female (n = 4) 1.9 × 0.7 mm to 2.3 × 0.8 mm. **Head** quadrate, moderately punctured; interspaces minutely granulose; frons wide, twice as wide as rostral base; eyes moderately protuberant. **Rostrum** about .33 times longer than head, moderately punctured laterally and mid-dorsally at base; mid-dorsal base to antennal insertions minutely granulose; mid-dorsally from antennal insertions to apex smooth, shiny; apex distinctly widened, width at apex nearly twice as wide as width at base; in lateral view distinctly arcuate; apex only slightly flattened. **Antenna** shorter than rostrum, inserted at basal 1/4 of rostrum; scape and funicular segment 1 ovoglobose, subequal in length; funicular segment 1 more robust; funicular segments 2-4 subequal, narrow, weakly clavate; segments 5-7 subequal, short, bead-like; club abrupt; basal and middle segment subequal in length; basal segment tapered at base; middle segment transversely subrectangular; terminal segment slightly longer than basal or middle segment, roundly acuminate. **Pronotum** as long as wide, distinctly widened and rounded out just behind middle, densely punctured; interspaces smooth, shiny. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae punctures distinct and similar throughout, deeply impressed; intervals weakly convex, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** moderately to densely punctured; punctures coarse. **Abdominal ventrites** weakly concave through middle, moderately punctured; punctures small round; with longer more numerous erect and semi-erect setae through middle.

Distribution. Adults have been collected in the Mexican states of Mexico and Sinaloa (Fig. 90).

Etmology. The specific epithet is derived from the country name of Mexico

Comments. *Temnocerus mexicanus* can be distinguished by the rostrum. It is mid-dorsally smooth and shiny from the antennal insertions to the apex, strongly arcuate, distinctly widened and only slightly depressed apically. The female is very similar but the rostrum is longer and the abdominal ventrites more convex and lacking the median setosity. The aedeagus (Fig. 69) has a median lobe with the sides weakly narrowed through the middle. The pedon is weakly constricted just before the truncate apex. The tectum

is spatulate with a broadly rounded apex. The tegminal cap piece is broadly finger-like with the pigmented apex bearing a cluster of very short setae. Endophallic bands are linear and weakly defined.

Plant association. Unknown.

***Temnocerus michoacensis*, new species**

(Fig. 25, 26, 70, 90)

Type locality. Mexico, Michoacan, 14.3 km S. Uruapan

Type depository. Canadian Museum of Nature (CMNC)

Type specimens. Holotype male and allotype with the following data: Mexico, Mich. [Michoacan], 14.3 km. S. Uruapan, 29.vii.88, 1370-1465 m, oak-acacia woodland, 88-10, R. S. Anderson (CMNC). Paratype data as follows: **MEXICO:** 1 male and 4 females with same data as primary types; 1 female, Guer.[Guerrero], 10.7 km sw Xochipala, 5.vii.87, 1753m, 87-7, Oak-Acacia woodland, R. Anderson; 1 female, Zac. [Zacatecas], 39.7 km. S. Juchipala, 6-viii-88, 1524 m, acacia-thorn scrub, 88-26, R. S. Anderson (CMNC). 1 female, Oaxaca, 6 mi. NE Mitla, vi-20-1985, Woolley & Zolnerowich; 1 female, Oaxaca, La Ventosa, 48 mi. E., vii-21-63, J. Doyan collector; 1 female, Guer., 10.7 km SW. Xochipala, 5-vii-87, 1753m, 87-7, Acacia/oak Woodland, R. Anderson; 1 female, Michoacan, 49 mi. SE Aguila, July 13, 1984, 84/031, J. B. Woolley; 1 female, Michoacan, 10.6 mi S Uruapan, July 24, 1983, Kovarik, Harrison, Schaffner; 1 female, Jalisco, 6.1 mi. N Autlan, 7 mi W at San Francisco microwave tower, vii-31-1996, 4680', W. Godwin (TAMU).

Description. Color and pubescence: Body blackish throughout; pronotum with brassy luster; elytra bluish-black with faint purplish luster. Pubescence inconspicuous; composed of short appressed brownish setae. **Size:** Male (n = 2) 2.2 × 0.8 mm to 2.7 × 1.2 mm; Female (n = 14) 2.1 × 0.8 mm to 3.0 × 1.3 mm. **Head** quadrate, punctures small, widely spaced; interspaces minutely granulose, frons wide, .50 times wider than rostral base; eyes strongly protuberant. **Rostrum** .25 times longer than head, coarsely punctured; sides subparallel in dorsal view, only slightly widened and depressed beyond antennal insertions. **Antennae** shorter than rostrum; inserted at basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal in length; funicular segments 2-5 narrow, weakly clavate; segments 6-7 short, bead-like; club segments subequal in length; middle club segment slightly shorter; terminal segment broadly rounded. **Pronotum** slightly wider than long, widest just behind middle, densely punctured, interspaces minutely granulose. **Scutellum** small, subquadrate, minutely punctured. **Elytra** elongate, more than twice as long as pronotum, widest behind middle, humeri simple; striae punctures moderately impressed, distinct throughout; intervals flat, with row setigerous punctures along each side of striae. **Thoracic pleura & sterna** moderately punctured. **Abdominal ventrites** smooth, shiny, sparsely and minutely punctured.

Distribution. Adults have been taken in the Mexican states of Guerrero, Jalisco, Michoacan, Oaxaca, and Zacatecas (Fig. 90).

Etymology. The specific epithet is derived from the Mexican state of Michoacan.

Comments. *Temnocerus michoacensis* is recognized by the wide brassy pronotum and the bluish-black elytra with a faint purplish luster. The aedeagus (Fig. 70) has a short wide median lobe with the pedon strongly tapered to a bluntly pointed apex. The tectum is broadly spearhead-shaped. The tegminal cap piece is wide, broadly rounded at the apex and with long widely spaced marginal setae. Endophallic bands are short and weakly defined.

Plant association. The primary types were taken in oak-acacia woodland but specific hosts are unknown.

***Temnocerus minutus*, new species**

(Fig. 27, 28, 71, 90)

Type locality. Costa Rica, Heredia, La Selva Biological Station**Type depository.** National Institute of Biodiversity, Costa Rica (INBC)

Type specimens. Holotype male with the following data: Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10° 26'N 84°01'W, 2 June 1993, INBio-OET, M/15/121. Allotype with same data as holotype except 15 March 1994, M/09/379 (INBC). Paratypes as follows: 1 male, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10° 26'N 84° 01'W, Apr. 1993, INBio-OET; 1 male, same data as holotype ; 2 females, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10° 26'N 84°01'W, 4 Apr 1994, M/09/387, INBio-OET; 1 female, 1 female, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10° 26'N 84°01'W, 14 Sept 1995, M/09/454, INBio-OET; 1 female, Costa Rica, Heredia Pr: La Selva Biol. Sta., 3 km S Pto.Viejo, 10° 26'N 84°01'W, 16 Abril 1993, Bosque Secundario, M/15/ 078, INBio CR1; 1 male, Costa Rica, Heredia Pr: La Selva Biol. Sta., 3 km S Pto.Viejo, 10°26'N 84°01'W, 15 Abril, Bosque Secundario, M/09/072, INBio CR1; 1 male, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10°26'N 84°01'W, Oct. 1993, Octubre 1993, Bosque Secundario, M/09/227, INBio-OET; 1 male, Costa Rica, Heredia, Esst. Biol. La Selva, 50-150 m, 10°26'N 84°01', 03 Mayo 1993, Bosque Secundario, M/15/094, INBio-OET, Proy. ALAS; 1 female, 1 female, Costa Rica, Heredia, Est. Biol. La Selva, July 1993, 3 Julio, 1993, 50-150 m, 10°26'N 84°01'W, FOT/07/37, *Goethalsia meiantha*, INBio CR1002, 068837; 1 female, Costa Rica, Heredia, Est. Biol. La Selva, Jan. 1994, 5 Enero 1994, FOT/16/15, *Vitex cooperi*, INBio CR1002, 068792; 1 male, same as previous except FOT/16/34, INBio CR1001, 269149 (INBC). 1 male, Costa Rica, Heredia Pr., La Selva Biol. Sta., 3 km S Pto.Viejo, ii-iv-1993, 10° 26'N 84°01'W, Malaise trap, R. Hanson (CHAH).

Description. Color and pubescence: Body black throughout with faint bluish luster; extremities brownish black. Pubescence inconspicuous; consisting of short pale reclinate to semi-erect setae. **Size:** Male (n = 8) 1.6 × 0.6 mm to 2.1 × 0.8 mm; Female (n = 7) 1.5 × 0.6 mm to 2.1 × 0.8 mm. **Head** subquadrate, about as wide as long, sparsely punctured; punctures small, round, shallowly impressed; interspaces minutely granulose; frons about twice as wide as rostral base, eyes large, oval, moderately protuberant. **Rostrum** almost twice as long as head, narrow slightly arcuate, slightly depressed apically, slightly widened apically, with scattered lateral punctures, dorsally smooth and shiny from antennal insertions to apex; mid-dorsal base with shallow channel; channel extending from base to antennal insertions. **Antenna** slightly longer than rostrum, inserted near basal 1/4 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-4 subequal, narrowed, weakly clavate; segments 5-7 shorter, more robust; club abrupt, segments subequal in length; basal segment narrowed to base; terminal segment broadly acuminate. **Pronotum** longer than wide, subcylindrical, moderately punctured; sides only slightly arched out; interspaces minutely granulose. **Scutellum** small, rectangular, wider than long, with setigerous punctures. **Elytra** twice as long as pronotum, widest near middle, humeri simple; striae punctures distinct throughout, posteriorly beyond middle becoming smaller and shallower; intervals only slightly raised, with a single row of setigerous punctures; striae interspaces with single setigerous puncture. **Thoracic pleura and sterna** with coarse setigerous punctures. **Abdominal ventrites** concave, with small sparse setigerous punctures.

Distribution. All specimens examined are from the La Selva Biological Station in the Costa Rican province of Heredia (Fig. 90).

Etymology. The specific epithet is in reference to the small size of this species.

Comments. These small black adults have been taken mainly by tree fogging and malaise trapping. They have fine, widely spaced head punctures and slender rostra (Fig. 27, 28). The aedeagus (Fig. 71) has a short tapered median lobe with the “nozzle-like” pedon apex distinctly constricted and truncate. The tectum is spearhead-shaped. The tegminal cap piece is narrowly finger-like and the knob-like pigmented apex bears a cluster of short setae. Endophallic bands are short and weakly defined.

Plant association. Unknown. It has been fogged from *Goethalsia meiantha* (Donn. Sm., Burret) in the family Malvaceae and from *Vitex cooperi* (Verbenaceae).

***Temnocerus niger*, new species**

(Fig. 29, 30, 72, 91)

Type locality. Costa Rica, Heredia, La Selva Biological Station.

Type depository. National Institute of Biodiversity, Costa Rica (INBC)

Type specimens. Holotype male and allotype with the following label data: Costa Rica, Heredia Pr: La Selva Biol. Sta., 3 km S. Pto. Viejo, 10° 26'N 84° 01'W, 25-vii-1996, *Mimosa pigra*, H. A. Hespeneide.

Description. Color and pubescence: Body black throughout. Pubescence consisting of inconspicuous short, fine, reclinate brownish setae. **Size:** Male (n=1) 2.3 × 0.8 mm; Female (n=1) 2.5 × 0.9 mm. **Head** subquadrate, about as long as wide, moderately punctured; interspaces minutely granulose; frons twice as wide as rostral base; eyes large, strongly protuberant. **Rostrum** .33 times longer than head, slightly arcuate, apically depressed, laterally punctured, slightly widened apically; mid-dorsal apex smooth, shiny; mid-dorsal base with short shallow channel; **Antenna** longer than rostrum, inserted at basal 1/4 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-5 narrowed, more cylindrical, subequal; segments 6 and 7 shorter more robust than 2-5; club abrupt, basal club segment longer than middle or terminal segment, narrowed to base; middle segment rectangular, wider than long; terminal segment bluntly acuminate. **Pronotum** longer than wide, subcylindrical, densely punctured; interspaces smooth, shiny, faintly granulose. **Scutellum** small, subrectangular, wider than long, with setigerous punctures. **Elytra** twice as long as pronotum, widest near middle; humeri simple, striae punctures deeply impressed, distinct throughout, only becoming slightly smaller beyond middle; intervals slightly raised, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with densely set with coarse setigerous punctures. **Abdominal ventrites** moderately set with setigerous punctures.

Distribution. Specimens have been collected only at the La Selva Biological Station in the Costa Rican province of Heredia (Fig. 91).

Etymology. The specific epithet is in reference to the overall black color of this species.

Comments. Only a single male and female of this species were found in the study material. They are distinguished by the overall black color and short basi-rostral channel. The aedeagus (Fig. 72) has a nearly parallel-sided median lobe with the pedon apex sharply truncate. The tectum is spearhead-shaped. The tegminal cap piece is narrowly finger-like with the pigmented knob-like apex bearing a cluster of divergent setae. Endophallic bands are short and weakly crescent shaped.

Plant association. The two specimens were collected by H. A. Hespeneide on *Mimosa pigra* L. (Fabaceae).

***Temnocerus oaxacensis*, new species**

(Fig. 31, 32, 73, 91)

Type locality. Mexico, Oaxaca, 4 km W Capulalpan

Type depository. Canadian Museum of Nature, Ottawa, Canada (CMNC)

Type specimens. Holotype male and allotype with the following data: Mexico, Oaxaca, Hwy 175, 4 km W Capulalpan, 2000 m, 13.vi.1979, H & A Howden (CMNC). Paratype data as follows: **GUATEMALA:**

1 female, Guat. [Guatemala], Guatemala City, 1511 m, 10.vi.1991, H & A Howden; 1 female, Guat., Guatemala City, Univ. Del Valle, 1400 m, 10-vi-1991, R Anderson, oak/pine/*Mimosa* forest; **MEXICO**: 1 female with same data as primary types; 1 female, Mex. Oax. 12-13 km S Miahuatlan, 6-viii-1986, H & A Howden; 1 female, Mexico, Oaxaca, 12.5 km SW Gueletao, 27-ii-1992, 1900 m, oak scrub, RS Anderson; 1 female, Mexico, Oaxaca, 5 km N Oaxaca, 11-vi-1979, 1700 m, H & A Howden (**CMNC**). 1 male, Oaxaca, 6 mi. ne Mitla, July 20, 1985, Jones, Schaffner (**TAMU**).

Description. Color and pubescence: Body bluish-black throughout; head and pronotum with a greenish to brassy luster. Pubescence composed of fine brownish reclinate setae; setae sparse on head, pronotum and ventrals; setae more numerous on elytra, legs and antennae. **Size:** Male ($n = 2$) 3.2×1.4 mm; Female ($n = 7$) 3.2×1.4 mm to 3.6×1.4 mm. **Head** quadrate, moderately punctured, interspaces minutely granulose, silky in appearance; eyes large, strongly protuberant. **Rostrum** slightly longer than head, parallel-sided, basal 1/2 minutely strigate dorsally; in lateral view nearly straight, with scattered punctures. **Antennae** inserted near basal 1/5 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segment 2 narrow, weakly clavate, slightly shorter than segment 1; funicular segments 3 and 4 subequal to 2 in length, slightly more robust than 2; segments 5-7 subequal in length to 3 and 4 but bead-like; club abruptly widened; basal segment largest, subtriangular, middle segment transverse, shorter than basal segment; terminal segment smaller than middle segment, rounded, weakly acuminate at apex. **Pronotum** as wide as long; sides distinctly arched out, widest just behind middle, densely punctured; interspaces minutely granulose, silky in appearance. **Scutellum** rectangular, twice as wide as long, punctured. **Elytra** elongate, more than twice as long as pronotum; widest just behind middle; humeri simple; striae moderately to weakly impressed, distinct throughout; with setigerous punctures on interspaces between striae; intervals flat, about as wide as striae, minutely rugose; with rowed setigerous punctures. **Thoracic pleura and sterna** moderately to densely punctured. **Abdominal ventrites** minutely strigate; with minute scattered punctures; with short appressed setae laterally; weakly concave through middle.

Distribution. Specimens were taken in Guatemala near Guatemala City and the Mexican state of Oaxaca (Fig. 91).

Etymology. The specific epithet is in reference to the Mexican state of Oaxaca.

Comments. Relatively large bluish-black adults that are closely related to *T. giganteus*. They can be distinguished from *T. giganteus* by the distinctly shorter rostrum in each sex, the more strongly protuberant eyes and the more strigate rostral base. The aedeagus (Fig. 73) has a wide median lobe that is constricted at the middle and strongly tapered into a narrowly truncated apex. The tectum is spearhead-shaped and sharply pointed. The tegminal cap piece is wide at the base with the sides distinctly narrowed through the middle and widened again into the broadly rounded apex bearing numerous long wavy marginal setae. Endophallic bands are linear, long and distinctly pigmented.

Plant association. Unknown.

***Temnocerus obrieni*, new species**

(Fig. 33, 34, 74, 91)

Type locality. Mexico, Yucatan, 10 km E. Merida

Type depository. Charles W. O'Brien collection (**CWOB**)

Type specimens. Holotype male and allotype with the following data: Mexico, Yuc.[Yucatan], 10 km E. Merida, vii-1-1990, CW & LB O'Brien (**CWOB**). Paratype data as follows: **GUATEMALA**: 1 male, Baja Verapaz, 14.5 km N Salama, 22.v.1991, 1620 m, dry oak/ pine woodland, 91-10, R Anderson (**CMNC**). **MEXICO**: 1 male, Yuc., 45 km SW. Merida, vii-30-1990, CW & LB O'Brien; 5 males and 15 females,

Yuc., 10 km E. Merida, vii-1-1990, CW & LB O'Brien; 1 male, Yuc., 9 km S. Valladolid, vii-28-1990, CW & LB O'Brien; 1 male, Yucatan, Chichen Itza, 18-19-v-1987, collected at mercury vapor & black light, DA Rider, EG & T Riley; 3 males, Jalisco, Puerto Vallarta, 25 Jan 1984, GE Bohart; 1 male and 2 females, Camp. [Campeche], 7 mi E Campeche, Aug. 5, 1974, on *Mimosa hemiendyta*, CW & L O'Brien & Marshall; 1 female, Camp., 6 mi N. Escarcega, Aug. 4, 1974, CW & L O'Brien & Marshall; 1 female, Camp., 22 mi NE Campeche, Aug. 5, 1974; CW & L O'Brien & Marshall; 1 male and 1 female, Nayarit, Is. [Island] Maria Madre, rd Balleto – La Antena, 26-3-1984, Bromeliads in trees, 380 m, AN Garcia Aldrete; 1 male, Nayarit, Is. Maria Madre, rd Balleto – La Antena, 26-3-1984, beating dry branches, AN Garcia Aldrete; 1 male and 1 female, Nay. [Nayarit], S Rosamorada, viii-26-63, CD Johnson (**CWOB**). 1 male, Yucatan, 3 km E. Chichen Itza, 20-vii-1983, 30 m, dry tropical seasonal forest, RS Anderson; 1 male, Chis [Chiapas], El Rincon, Rt. 17, vi-13-14-1969, HF Howden; 1 male, Tamaulipas, Nacimiento del Rio Frio, 5 mi S Gomez Farias, 5-6.vi.83, 400', tropical decide. [deciduous] forest, R Anderson; 1 female, Yucatan, Uxmal Ruins, 21-vii-1983, roadside sweep, RS Anderson (**CMNC**). 1 male, Mexico, Chiapas, 27 km SW Teopisca, 18 Sept. 1981, Clark and Coe; 1 male, Mexico, Puebla, 5.8 mi. SW Tehuacan, July 27, 1974, Clark, Murray, Ashe, Schaffner (**TAMU**).

Description. Color and pubescence: Body black to brownish-black. Pronotum with a faint greenish luster. Pubescence of fine short brownish to whitish appressed setae. **Size:** Male (n= 20) 1.6 × 0.6 mm to 1.9 × 0.7 mm; Female (n= 23) 1.6 × 0.7 mm to 2.1 × 0.9 mm. **Head** subquadrate, about as wide as long, moderately punctured, interspaces minutely granulose, shiny; frons wide, almost twice as wide as rostral base; eyes strongly protuberant, conical. **Rostrum** short nearly parallel-sided in dorsal view, slightly widened in apical 1/3; with scattered punctures; dorsal 1/3 smooth, shiny. **Antennae** inserted near basal 1/3; scape and funicular segment 1 subequal, ovoglobose; funicular segments 2-4 subequal, narrow, weakly clavate; segments 5 and 6 shorter bead like; basal and middle club segments subequal in length; basal segment widest across apical edge; middle subrectangular, wider than long; apical club segment slightly longer than basal and middle segments, apically acuminate. **Pronotum** slightly longer than wide, widest just behind middle; densely punctured, interspaces narrow, minutely granulose. **Scutellum** small, subquadrate, punctured. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae quadrate, not deeply impressed, becoming smaller posteriorly; intervals narrow, not distinctly raised, with single row setigerous punctures, striae interspaces with single setigerous puncture. **Thoracic pleura and sterna** with coarse setigerous punctures; **Abdominal ventrites** weakly concave, with distinct median longitudinal channel on ventrites 1-3; raised sides of channel line like.

Distribution. Specimens are recorded from Guatemala and the Mexican states of Campeche Chiapas, Jalisco, Nayarit, Puebla, Tamaulipas and Yucatan (Fig. 91).

Etymology. The specific epithet is in honor of weevil taxonomist Charles W. O'Brien.

Comments. The adults of this species are small and brownish black. Males have a distinct median longitudinal channel on the first three abdominal ventrites. The channel is delimited on each side by a narrow line-like carina. Males of *Temnocerus aeratoides* (Fall) of western North America also have this type of channel. The aedeagus (Fig. 74) has the short median lobe tapered apically to the narrowly rounded pedon apex. The tectum is narrow and spearhead-shaped. The tegminal cap piece is finger-like with the knob-like pigmented apex bearing a cluster of very short setae. Endophallic bands are short and weakly defined.

Plant association. Specimens are recorded as taken from *Mimosa hemiendyta* (Fabaceae) in Campeche, Mexico.

***Temnocerus oculatus* (Sharp 1889)**

(Fig. 35, 36, 75, 92)

Type locality. Guatemala, Guatemala City

Type depository. The Natural History Museum, London, England (BMNH)

Specimens examined. Holotype male with the following labels: Guatemala City, Champion, *Rhynchites oculatus* type D. S. [on card with specimen]; Type [circular label with red margin]; Guatemala City, 6,000 ft. Champion; B.C.A. Col. iv.a, *Rhynchites oculatus* Sharp; Sharp coll. 1905-313 [upside down label]; **GUATEMALA:** 2 females, Baja Verapaz, 14.5 km N. Salami on Pantin Rd., 01.vi.1991, 1620 m, H & A Howden (CMNC). **MEXICO:** 2 females, Chis., 17 mi W P.N. Montebello, vii-301974, 4,800', O'Brien & Marshall (CWOB); 1 female, Chis., hwy 24, 9 mi SE Teopisca, v.16, 1969, H.F. Howden; 1 female, Oaxaca, 5 km N Oaxaca, 14.vi.1979, 1700 m, H. & A. Howden; 1 female, Chiapas, Laguna Belgica, 16 km NW Ocozocoautla, 31.v.1990, 970 m, H & A Howden; 1 female, Guerrero, 12.0 km SW Xochipala, 14-vii-1992, 1700 m Oak/acacia woodland, on *Quercus*, R. S. Anderson; 1 female, N. L. [Nuevo Leon], Chipinque Mesa nr. Monterrey, vii.8.1963, 5,400', A.T. Howden (CMNC). 1 male, Hidalgo, 6 mi. S. Jacala, March 18, 1975, Clark & Schaffner; 1 male, Puebla, 4.7 mi SW La Cuabre, 5100', vii-23-1987, J. Woolley, & G. Zolnerowich, 8/055(TAMU).

Description. Color and pubescence: Body blackish throughout with a faint rosy and brassy luster above. Pubescence inconspicuous and consisting of short fine brownish reclinate setae. Abdominal ventrites with longer more whitish setae along each side of midline. **Size:** Male (n = 2) 2.3 x 0.9 mm to 2.5 x 1.0 mm; Female (n = 8) 2.2 x 0.8 mm to 2.4 x 0.9 mm. **Head** quadrate, about as long as wide, sparsely punctured; punctures small, round; interspaces minutely granulose; frons wide, about twice as wide as rostral base; eyes large, oval, moderately protuberant. **Rostrum** short, about .33 times longer than head, parallel-sided; in lateral view nearly straight, apically depressed; basi-dorsal 1/2 minutely granulose as in head interspaces; sides moderately punctured; apico-dorsal 1/4 smooth, shiny. **Antenna** inserted at basal 1/4; scape and funicular segment 1 ovoglobose, subequal,; funicular segments 2 and 3 narrow, weakly clavate; segment 2 slightly longer than 3; segments 4-7 shorter, bead-like; segments 6 and 7 slightly more robust; club abrupt; basal and middle club segments subequal, wider than long; terminal segment smaller than basal or middle segment, rounded, bluntly acuminate. **Pronotum** about as long as wide, weakly constricted anteriorly, widest behind middle, very densely punctured; interspaces minutely granulose. **Scutellum** rectangular, slightly wider than long, minutely granulose. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae subquadrate, deeply impressed, similar in size throughout; intervals narrow, raised, with single row of setigerous punctures; strial interspaces with single setigerous puncture. **Thoracic pleura and sterna** densely with moderate to dense coarse setigerous punctures. **Adominal ventrites** distinctly concave, with sparse, small, setigerous punctures; punctures along each side of midline with longer more numerous setae; lateral interspaces minutely granulose.

Distribution. A widespread species with adults recorded from central Mexico south into Guatemala and Honduras (Fig. 92).

Comments. The adults of this species can be recognized by the rostrum that is nearly straight, parallel-sided, distinctly depressed apically ("needle nosed") and with minute granulations in the dorso-basal half. The pronotum is very densely punctured and weakly constricted anteriorly. The aedeagus (Fig. 75) has a short apically tapered median lobe with the pedon apex sharply truncate. The tectum is spearhead-shaped. The tegminal cap piece is finger-like and the knob-like pigmented apex bears a cluster of setae. Endophallic bands are linear, pigmented and elongate. The aedeagus of this species shows affinities with those of *T. potosi* and *T. pseudoaeratus* (Fig. 76 and 77).

Plant association. A single female specimen is recorded from *Quercus* sp. in the Mexican state of Guerrero.

***Temnocerus potosi*, new species**

(Fig. 1, 37, 38, 76, 92)

Type locality. Mexico, San Luis Potosi, Taman

Type depository. Canadian Museum of Nature (CMNC)

Type specimens. Holotype male and allotype with the following label data: MEX: SLP, Taman, 20 km SW Tamazunchale, 11.VI.83, M. Kaulbars (CMNC). Paratype data as follows: **MEXICO:** 1 male, Mexico, N.L. [Nuevo Leon], Sierra de Picachas, 15 km NE Higuera, Aug. 24, 1977, 1300 m, oaks & shrubs, A. N. Garcia (CWOB). 2 females, Mexico, Nuevo Leon, Cerro Potosi n. Galeana, 4-vi-83, 9,500', beating scrub oaks, R. Anderson (CMNC).

Description. Color and pubescence: Body brownish-black with a faint rosy brassy luster above. Pubescence inconspicuous, above with short reclinate brownish setae. Pleura and sterna with longer whitish brown setae. Abdominal ventrite 4 with pair of setal tufts either side of middle. **Size:** Male (n = 2) 2.7 × 1.0 mm to 2.8 × 1.2 mm; Female (n = 3) 2.6 × 1.0 mm to 3.3 × 1.2 mm. **Head** subrectangular, slightly longer than wide, moderately punctured; punctures small, round; interspaces minutely granulose; eyes large, oval, moderately protuberant. **Rostrum** slightly longer than head, parallel-sided, densely punctured except mid-dorsal tip, with distinct mid-dorsal channel extending from rostral base to antennal insertions; interspaces in basal half minutely granulose; in lateral view weakly arcuate; distinctly flattened in apical 1/3. **Antenna** inserted near basal 1/5 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-4 narrow, weakly clavate, becoming slightly shorter; segments 5-7 short, bead-like; club abrupt; basal club segment slightly longer than middle and terminal segment, narrowed at base; middle and terminal segments subequal in length; middle segment subrectangular; terminal segment acuminate. **Pronotum** slightly longer than wide, widest just behind middle; sides distinctly rounded out; densely punctured; interspaces minutely granulose. **Scutellum** subquadrate, about as long as wide, punctured. **Elytra** elongate, more than twice as long as pronotum; widest just behind middle; humeri simple; striae deeply impressed, similar throughout; with single setigerous puncture on interspaces between striae; intervals distinctly raised, smooth, shiny, with single row setigerous punctures. **Thoracic pleura and sterna** moderately to densely punctured. **Abdominal ventrites** moderately to sparsely punctured; ventrite 4 with distinct pair setal tufts each side of middle.

Distribution. Adults of this species are known only from San Luis Potosi and Nuevo Leon, Mexico (Fig. 92).

Etymology. The specific epithet is derived from the Mexican state of San Luis Potosi and is applied as a noun in apposition.

Comments. Adults are moderate in size and have a rosy bronze luster above. The pronotal punctures are deeply impressed and very dense. The elytral striae are deeply impressed and the intervals are distinctly raised. The apical portion of the rostrum (Fig. 1) is distinctly tapered and depressed ("needle-nosed"). The "needle nosed" rostrum is also present in *T. regularis* and *T. pseudaeeratus*. The male has a pair of long setal tufts on abdominal ventrite four. The aedeagus (Fig. 76) has a wide median lobe that tapers gradually to the distinctly truncate pedon apex. The tectum is wide, spatulate and bluntly pointed. The tegminal cap piece is finger-like and the knob-like pigmented apex bears a terminal cluster of very short setae. Endophallic bands are short and linear.

Plant association. Unknown.

***Temnocerus pseudaeeratus*, new species**
(Fig. 39, 40, 77, 92)

Type locality. Mexico, Michoacan, Hwy. 15.8 mi NW Quiroga

Type depository. Charles W. O'Brien collection (CWOB)

Type specimens. Holotype male and Allotype with the following data: Mexico, Mich., Hwy. 15.8 mi NW Quiroga, 7700', 8 Aug. 1982, CW & L O'Brien & G Wibmer (CWOB). Paratype data as follows: **MEXICO:** 2 females, Mich. [Michoacan], Hwy. 15, 21 mi E. Morelia, 15 Aug 1982, 7000', CW & L O'Brien & G. Wibmer; 1 female, Mich., 8 mi W Patzcuaro, 14 Aug. 1982, 7,600', CW & L O'Brien & G. Wibmer; 1 male, Qto. [Queretaro], km 8 Neblina-Agua Zarca, 23-6-1998, G. Ortega, L. Ceruantes; 1 male, Oax., 43 km SE Nochixtlan, Nov. 10, 1977, on pine & oak, A. N. Garcia Andrete; 1 female, Tam. [Tamaulipas], Hwy 101, 14 mi SW Cd. (Ciudad) Victoria, 23 July 1982, 5,000', CW & L O'Brien & G. Wibmer; 1 female, Chis. [Chiapas], SE San Cristobal Las Casas, vi-5-1974, 7,500', CW & L O'Brien & Marshall; 1 female, Chiapas, 2 mi NW Pueblo Nuevo LLU Biol. Sta., vii-13-1965, Collector G.H. Nelson (**CWOB**). 1 male, Mexico, Chiapas, 13 mi n. Ocozocoautla, July 10, 1971, Clark, Murray, Hart, Schaffner; 1 female, Mexico, Puebla, 3 mi SE Izucar de Matamoros, July 20, 1984, JB Woolley (**TAMU**).

Description. Color and pubescence: Body coppery metallic above with a faint rosy luster and bluish-black to blackish below; Pubescence conspicuous, composed of fine whitish reclinate setae; setae long and more conspicuous on metapleura. **Size:** Male (n = 3) 2.2 × 0.8 mm to 2.3 × 0.9 mm; (Female (n = 7) 2.1 × 0.9 mm to 2.5 × 1.0 mm. **Head** quadrate, moderately punctured; punctures small, round, shallowly impressed; interspaces minutely granulose; frons wide, .50 times wider than rostral base; eyes large strongly protuberant. **Rostrum** .33 times longer than head, basal 3/4 minutely granulose; sides parallel in dorsal view, distinctly depressed from antennal insertions to apex. **Antennae** as long as rostrum, inserted at basal 1/4 of rostrum; scape and funicular segment 1 subequal, ovoglobose; funicular segments 2-5 narrow, subequal, weakly clavate; segments 6-8 short, 7 and 8 bead-like; basal and middle club segments subequal; terminal club segment small, rounded at apex. **Pronotum** longer than wide, widest near middle; densely set with large setigerous punctures; interspaces narrow, minutely granulose. **Elytra** elongate, more than twice as long as pronotum, widest just behind middle; humeri simple; striae punctures distinct throughout, deeply impressed; interspaces weakly convex, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** densely and coarsely punctured. **Abdominal ventrites** with moderate to dense setigerous punctures.

Distribution. Specimens are recorded from the following Mexican states of Chiapas, Michoacan, Oaxaca, Puebla, Queretaro and Tamaulipas (Fig. 92).

Etymology. The specific epithet is in reference to the similarity of this species to the North American *Temnocerus aeratus* (Say).

Comments. Adults are easily recognized by the coppery metallic luster, coarse dense punctation and whitish pubescence. The rostrum in lateral view is distinctly tapered and depressed in the apical half ("needle-nosed") in both sexes and the dorso-basal half of the rostrum is minutely granulose as in the interspaces of the head. The aedeagus (Fig. 77) has a nearly parallel-sided median lobe with the sides only slightly narrowed apically. The pedon apex is sharply truncated. The tectum is spatulate in shape. The tegminal cap piece is finger-like with the knob-like pigmented apex bearing a cluster of setae. Endophallic bands are linear, relatively long and distinctly pigmented.

Plant association. Unknown.

***Temnocerus pueblensis*, new species**

(Fig. 41, 42, 78, 93)

Type locality. Mexico, Puebla, 4.4 mi SW Acatepec

Type depository. Texas A& M University, College Station, TX (**TAMU**)

Type specimens. Holotype male and allotype female with the following data: Mexico, Puebla, 4.4 mi SW Acatepec, July 26 1974, Clark, Murray, Ashe, Schaffner. Paratypes as follows: 8 males and 4 females

with same data as primary types; 1 male, Mexico, Puebla, 5.1 mi SW Tehuacan, July 27, 1974, Clark, Murray, Ashe, Schaffner (TAMU).

Description. Color and pubescence: Body blackish throughout with a faint brassy luster. Pubescence inconspicuous, composed of short, fine, reclinate, whitish-brown setae. **Size:** Male (n = 10) 1.7 × 0.7 mm to 1.9 × 0.8 mm; Female (n = 5) 2.0 × 0.7 mm to 2.2 × 0.9 mm. **Head** quadrate, densely punctured; punctures large; interspaces minutely granulose; frons wide, almost twice as wide as width at rostral base; eyes large, oval, moderately protuberant. **Rostrum** short, only slightly longer than head, with sparse to moderate lateral punctures; dorsal base with weak longitudinal strigae; dorsal 1/2 smooth, shiny, with lateral punctures; apex distinctly widened to width subequal to width of frons; in lateral view slightly arcuate and slightly flattened apically. **Antenna** longer than rostrum, inserted just behind basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-4 narrow, oval, subequal; segments 5-7 subequal, short, bead-like; club large, abrupt; basal segment and middle segment subequal in length; basal segment narrowed to base; terminal segment longer than middle or basal segment, acuminate and broadly rounded at apex. **Pronotum** slightly wider than long, widest just behind middle, densely set with large punctures like those of head; interspaces minutely granulose. **Scutellum** small, rectangular, wider than long. **Elytra** elongate, more than twice as long as pronotum; widest just behind middle; humeri simple; striae subquadrate, deeply impressed, similar throughout; intervals narrow, raised, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with dense, coarse, setigerous punctures. **Abdominal ventrites** sparsely set with small punctures; lateral interspaces minutely strigate.

Distribution. All specimens of the type material are from the Mexican state of Puebla (fig 93).

Etymology. The specific epithet is derived from the Mexican state of Puebla.

Comments. Adults are small and blackish with a brassy luster above. The rostrum in both sexes is relatively short, wide and dorso-basally strigate (Fig. 41, 42). The dorsal rostral apex is smooth and shiny and distinctly widened to a width sub-equal to the width of the frons. The pronotum is wider than long and densely punctured. The aedeagus (Fig. 78) has a short wide median lobe with the pedon blade-like and pointed. The tectum is spatulate with the apex broadly rounded. The tegminal cap piece is finger-like with the pigmented apex bearing a cluster of setae with a somewhat longer medial pair. Endophallic bands are short, linear and distinct.

Plant association. Unknown.

***Temnocerus pusillus* (Sharp 1889)**

(Fig. 43, 44, 79, 93)

Type locality. Panama, Bugaba

Type depository. The Natural History Museum, London, England (BMNH)

Specimens examined. Holotype [male?] with the following data: Bugaba, Champion, *Rhynchites pusillus* D. S., Type [on card with specimen]; TYPE [circular label with red margin]; Bugaba, Panama, Champion; B. C. A., col.iv.3, *Rhynchites pusillus* Sharp; Sharp coll. 1905-313 [upside down on pin]. **MEXICO:** 2 males and 2 females, Oaxaca, 7.7 mi. s. Ejutla, July 20, 1974, Clark, Murray, Ashe, Schaffner; 2 males and 1 female, Oaxaca, 16.1 mi. nw. Totolapan, July 21, 1974, Clark, Murray, Ashe, Schaffner; 2 females, Oaxaca, 2.7 mi. nw. El Camaron, July 21-22, 1974, Clark, Murray, Ashe, Schaffner; 1 female, Oaxaca, 3.2 mi. s. Ocotlan, July 20, 1974, Clark, Murray, Ashe, Schaffner; 1 female, Oaxaca, 2.8 mi. e. Matalan [?], July 24, 1974, Clark, Murray, Ashe, Schaffner; 1 male, Oaxaca, 11.3 mi. se. Totolapan, July 21, 1974, Clark, Murray, Ashe, Schaffner; 2 females, Mexico, Puebla, 4.4 mi. SW Acatepec, July 26, 1974, Clark, Murray, Ashe, Schaffner; 1 male and 6 females, Chiapas, 34 mi. SW Cintalapa, July 7, 1971, Clark,

Murray, Hart, Schaffner; 16 males and 11 females, Chiapas, 35 mi SW Cintalapa, July 11, 1971, Clark, Murray, Hart, Schaffner; 1 male, Mex. Oax. La Ventosa, 72 mi. E., vii-21-63, J. Doyen collector (TAMU). 1 female, Puebla, 2 km S Acatepec, 19 Aug. 1982, Clark and Cave; 1 female, 16 km S Ejutla, 21 August 1982, Clark & Cave; 1 female, Chiapas, 11 km S. Sumidero, 25 August 1982, Clark & Cave (CWOB). 2 females, BahaCal. Sur, 57 km SW. Loreto (jct. Rd. To Agua Verde, 12.viii.1992, 360m, H & A Howden (CMNC). **GUATEMALA:** 1 female, Guat., Baja Verapaz, 16 km N. Salama on Pantin Rd., 31-v-1991, 1550 m, H & A Howden (CMNC). 1 female, El Progreso, 15°1' N, 89°55'W, 12 km N Est. La Virgin, 1400m, 7-vi-1991, H. & A. Howden. **HONDURAS:** 1 male, Com., 19 km NE. Siguatepeque, Ch. 5 Rd., Aug. 1, 1977, O'Briens & Marshall; 1 male, Fra. 23 mi. NE Talanga, 1700', vi-16-1974, CW & L O'Brien & Marshall (CWOB). **PANAMA:** 1 male, fort Sherman, 9°17'N 79°59'W, 16 May 2001, on *Vochysia ferruginea*, leg. F. Odegaard (RWHC).

Description. Color and pubescence: Body brownish-black throughout with paler extremities. Pubescence composed of short brownish-white reclinate setae. Setae on thoracic pleura longer and more whitish. **Size:** Male (n = 23) 1.4 × 0.5 mm to 2.1 × 0.9 mm; Female (n = 29) 1.8 × 0.8 mm to 2.4 × 1.0 mm. **Head** quadrate, as long as wide, moderately punctured; punctures small, round; interspaces minutely granulose; granulations silky under light; frons only slightly wider than width of rostrum at base; eyes large sub-circular, strongly protuberant. **Rostrum** weakly arcuate, about 1/3 longer than head, parallel-sided, only slightly widened at apex, moderately punctured; dorso-apical 1/4 smooth, shiny; dorso-basal 1/2 minutely granulose, with weak mid-dorsal channel from base to antennal insertions. **Antenna** inserted near basal 1/4 of rostrum; scape and funicular segment 1 ovoglobose; funicular segment 1 slightly more robust; funicular segments 2-4 narrow, oval, subequal; segments 5 and 6 like 2-4 but slightly shorter; segment 7 shorter than 5 and 6, bead-like; club abrupt; basal and middle segment subequal in length; basal segment narrowed at base; terminal segment slightly narrower than basal and middle segment, acuminate. **Pronotum** slightly longer than wide, widest just behind middle, very densely punctured; interspaces narrow, weakly granulose. **Scutellum** small, about as long as wide. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae deeply impressed, subquadrate, similar in size throughout; intervals weakly raised, with single row setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with moderate to dense, coarse setigerous punctures. **Abdominal ventrites** sparsely to moderately set with small round setigerous punctures.

Distribution. Specimens are recorded from Guatemala, Honduras, Panama and the Mexican states of Puebla, Oaxaca and Chiapas (Fig. 93).

Comments. The adults of this species are very closely related to *T. quatemalensis* but differ from that species in the dense punctation of the pronotum and the shorter rostrum in each sex. The aedeagus (Fig. 79) has the median lobe evenly tapered apically with the pedon apex roundly and narrowly truncated. The tectum is spearhead-shaped. The tegminal cap piece is widely finger-like with the pigmented apex bearing a cluster of very small setae. Endophallic bands are long, linear and distinctly pigmented.

Plant association. A single male specimen was collected on *Vochysia ferruginea* Mart. (Vochysiaceae) in Panama.

***Temnocerus regularis* (Sharp 1889)**

(Fig. 45, 46, 80, 93)

Pselaphorhynchites lindae Hamilton, 1971, **new synonymy**

Type locality. Mexico, Hidalgo, Zacualtipan

Type depository. Natural History Museum, London, England (BMNH)

Specimens examined. MEXICO: Holotype [female?] with the following data: Zacualtipan, Hoge, *Rhynchites regularis* Type [hand written on card with specimen]; Type [circular label with red margin]; Zacualtipan Hidalgo Hoge; B.C.A. Col. Iv.3 *Rhynchites regularis* Sharp; Sharp Coll. 1905-313 [upside down on pin] (**BMNH**). 1 male **and** 1 female, Mich. [Michoacan], 18 mi. W. Patzcuaro, 14 Aug. 1982, 7400', CW & L O'Brien & G. Wibmer; 1 male and 1 female, [same as previous except 4 mi. W Patzcuaro]; 1 male, Mich., 8 mi. W Patzcuaro, 14 Aug. 1982, 7600', CW & L O'Brien & G. Wibmer; 1 male, Mich., Hwy 15, 4 mi. W Zacapu, 8 Aug. 1982, 7700', CW & L O'Brien & G. Wibmer; 1 male, Sin. [Sinaloa], Hwy 40, 6.5 mi. E Potrerillos, viii-21-64, E. I. Schlinger; 1 male and 2 females, Mich., Hwy 15, 8 mi. NW Quiroga, 8 Aug. 1982, 7700', CW & L O'Brien; 1 female, Mex. [Mexico], Hwy 55, 3 mi. N Atlacomulco, 28 July 1982, 8650', CW & L O'Brien; 2 females, Mexico, Oax. Hwy. 175, 66 km, NE Oaxaca, 7800', 29 Aug. 1982, C & L O'Brien & G. Wibmer; 1 female, Mexico, Oaxaca, km 40, Guelatao-Oaxaca, 20-ix-1989, E Barrera (**CWOB**). 1 male, Mex. [Mexico], 3 mi. W Tenancingo, vii-15-66, P.M. & P.K. Wagner; 1 female, Guanajuato, 3.6 mi. NE Guanajuato, July 6, 1985, Woolley & Zolnerowich; 1 female, [same as previous except July 5, 1985]; 1 female, Oaxaca, 10.8 km N Jct., 175/195, 19-vii-87, 1859 m – 87-28,30, Oak-Acacia woodland, R. Anderson; 2 males, Michoacan, Carapan, vii-1-63, J. Doyen collector; 1 male and 1 female, Michoacan, 6 mi. North Cheran, July 23, 1983, Kovarik, Harrison, Schaffner (**TAMU**). 1 male and 1 female, Mexico, Oaxaca, 14 km NW Diaz Ordaz, 260 m, 15.vi.1979, H & A Howden; 1 male and 1 female, Oax., 12-13 km S Miahuatlan, 6.viii.1986, H & A. Howden; 1 male and 2 females, Mex. Oax., Cerezal, 36 km NE Oaxaca, 2300 m, 12.vi.1979, H & A Howden; 2 males and 1 female, [same as primary types]; 2 males, Mex., Oax., 10 km N San Juan del Estado, 7.viii.1986, H & A Howden; 1 male and 1 female, Mexico, Oaxaca, 22 km NE Oaxaca, 2600m, 18.vi.1979, H & A Howden; 1 male, Mex., Hwy 131, 70 km S Oaxaca, Rio de la Y, Km 20 W of jct., 215 km, 17.vi.1979, H & A Howden; 2 males and 2 females, Mex., Oax., 10.8 km N Jct. 175/195, 1859 m, 87-28, 30, 19.vii.87, R Anderson, Oak-Acacia woodland; 1 female, Mexico, Oaxaca, 11 km, NE Oaxaca, 1800 m, 27.vii.1992, RS Anderson, oak/acacia woodland, 92-035; 3 females [same as previous except 29.vii.1992, on *Quercus* sp.] (**CMNC**).

Description. Color and pubescence: Elytra bluish-black to bronzed with brassy luster, all other parts bluish-black; some specimens are bicolored with head and pronotum bluish-black and elytra with bronze metallic luster; pubescence of short fine reclinate brownish setae; ventrites and procoxae with longer whitish setae; ventrite four with long setal tufts each side of middle. **Size:** Male (n = 21) 2.7 × 1.0 mm to 3.1 × 1.3 mm; Female (n = 24) 2.4 × 1.0 mm to 3.5 × 1.5 mm. **Head** rectangular, longer than wide, moderately punctured, interspaces minutely granulose; granulations silky in appearance; frons slightly wider than rostral base; eyes large, oval, moderately protuberant. **Rostrum** long, .33 times longer than head, parallel-sided, moderately punctured, smooth and shiny at dorsal apex; basal 1/2 minutely granulose like interspaces of head, weakly arcuate, distinctly depressed apically. **Antennae** inserted at basal 1/3; scape and funicular segment 1 subequal, ovoglobose; funicular segments 2 and 3 subequal, longer than segment 1, narrow, weakly clavate; segments 4-6 subequal in length; segment 7 more robust; club segments subequal in length but different in shape; basal club segment widest at apex, narrowed to base; middle club segment subrectangular; apical segment widest at base, apically acuminate. **Pronotum** longer than wide, widest at basal 1/3, densely punctured; interspaces minutely granulose. **Scutellum** small, inconspicuous, about as long as wide, minutely punctured. **Elytra** elongate, more than twice as long as pronotum, slightly widened just behind middle; humeri simple; striae deeply impressed throughout, subquadrate; intervals narrow, weakly raised, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** with coarse setose punctures; sterna bulbous. **Abdominal ventrites** moderately punctured, distinctly concave; sternite four with setal tuft each side of middle.

Distribution. Specimens were collected from the Mexican states of Sinaloa, Michoacan, Mexico, Guanajuato, and Oaxaca (Fig. 93).

Comments. The adults of this species are recognized by the small, round, and widely spaced punctures of the head and the silky appearance of the minutely granulose interspaces. The pronotum and elytra are coarsely and densely punctured and the rostrum is relatively long and apically tapered and depressed (“needle-nosed”). Most specimens are bluish-black in color but some specimens are bicolored with the

pronotum bluish-black and the elytra bronzed with a rosy and brassy luster. Males of this species and of *T. potosi* have a pair of long setal tufts on abdominal ventrite four. The aedeagus (Fig. 80) is elongate and has a nearly parallel-sided median lobe that narrows only slightly into the sharply truncate pedon apex. The tectum is spearhead-shaped and elongate. The tegminal cap piece is narrowly finger-like with the knob-like pigmented apex bearing a cluster of numerous short setae. Endophallic bands are elongate, distinctly pigmented, parenthesis shaped at base.

Plant association. *Temnocerus regularis* has been collected on *Quercus* sp. (Fagaceae).

***Temnocerus rostralis*, new species**

(Fig. 47, 48, 81, 87)

Type locality. Costa Rica, Heredia, La Selva Biological Station

Type depository. National Institute of Biodiversity, Costa Rica (INBC)

Type specimens. Holotype male and allotype with the following data: Costa Rica, Heredia, La Selva Biol. Sta., FOT/41/01-40, 28 Dec. '99, *Tachigalis* [sic, *Tachygalia?*] *costaricensis* (CHAH). Paratype data as follows: **COSTA RICA:** 3 males and 6 females, Heredia, La Selva Biol. Sta., 28 Dec. 99, FOT/41/01-40, *Tachigalis costaricensis*; 1 male, Heredia, La Selva Biol. Sta., 29 Dici. 99, FOT/42/01-40, BCC 1300 m; 1 male, Heredia, La Selva Biol. Sta., 28 Dec. 99, FOT/41/01-40, *Tachigalis costaricensis* (CHAH). 1 female, Heredia, Est. Biol. La Selva, 10° 26' N, 84° 01' W, 29 Diciembre 1999, FOT/42/01-40, 50-150 m, *Inga leiocalyoina*, Proy. ALAS, INBio-OET, CR 1002227987 (INBC).

Description. Color and pubescence: Body black throughout with rosy-brassy luster. Pubescence of short brownish appressed setae, some widely spaced setae on interval row erect. **Size:** Male (n = 6) 1.7 × 0.7 mm to 2.2 × 0.8 mm; Female (n = 8) 1.7 × 0.6 mm to 2.3 × 0.8 mm. **Head** subquadrate, punctures small, round, moderately spaced, interspaces minutely and weakly granulose; frons flat; vertex weakly convex; eyes large, moderately protuberant. **Rostrum** .33 times longer than head, parallel-sided; basal 1/2 minutely granulose, dorsal apex smooth, shiny; in lateral view straight, apical 1/2 distinctly depressed, moderately punctured; juncture of rostrum and head weakly concave. **Antenna** inserted laterally near basal 1/4 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2-4 shorter than funicular segment 1, narrower, weakly clavate, subequal; segments 5-7 wider, more oval; basal and middle club segments wide, densely setose, subequal; terminal segment narrower, slightly shorter, weakly acuminate. **Pronotum** longer than wide, widest just behind middle, densely punctured. **Scutellum** small, quadrate. **Elytra** about twice as long as pronotum, widest just behind middle, humeri simple, striae distinct, moderately impressed; intervals with widespread row of setigerous punctures. **Thoracic pleura and sterna** coarsely and densely punctured. **Abdominal ventrites** moderately set with setigerous punctures, weakly concave through middle.

Distribution. All specimens examined were from the La Selva Biological Station in the Costa Rican province of Heredia (Fig. 87).

Etymology. The specific epithet is in reference to the smooth and shiny areas of the rostrum in this species.

Comments. Adults have a rosy and brassy luster above and distinctly protuberant eyes. The female's rostrum is dorsally smooth and shiny from the antennal insertions to the apex and has a distinct mid-dorsal basal channel. The male's rostrum is dorsally granulose from the base to the apical 1/3 and has a weak dorso-basal channel. The aedeagus (Fig. 81) has a nearly parallel-sided median lobe with the apex of the pedon sharply truncated and weakly flared at the sides. The tectum is spearhead-shaped with a roundly pointed apex. The tegminal cap piece is narrowly finger-like with the knob-like pigmented apex bearing a cluster of short setae. Endophallic bands are short, linear and distinctly pigmented.

Plant association. Specimens were fogged from *Tachigalis* [*Tachygalia?*] *costaricensis* (Fabaceae) and recorded from *Inga leiocalyoina* (Fabaceae-Mimosoideae).

***Temnocerus rugosus*, new species**

(Fig. 49, 50, 82, 91)

Type locality. Mexico, Durango, 9 mi NW La Zarca

Type depository. Charles W. O'Brien collection (CWOB)

Type specimens. Holotype male and allotype with the following data: Mex., Dgo. [Durango], 9 mi NW La Zarca, vii-1-1971, 6500', O'Brien & Marshall (CWOB). Paratype data as follows: **MEXICO:** 23 males and 11 females with same data as primary types; 1 female with same data as primary types except 14 mi NW La Zarca; 1 male and 2 females, Mexico, Dgo., 2mi SW Yerbaniis, Aug. 20, 1974, 6500', CW & L O'Brien & Marshall; 7 males and 14 females, Mex., Chi.[Chihuahua], 5 mi NE Hidalgo del Parral, vii-1-1971, 6000', CW O'Brien; 1 male and 4 females, Qro.[Queretaro], 1 mi E Cadereyta, Aug. 15, 1974, 6800, CW & L O'Brien & Marshall; 1 female, Mexico, Qro., Hwy 120, 1 mi N Cadereyta, 27 July 1982, 6800, CW & L O'Brien & Wibmer; 1 female, Queretaro, mpio: Toliman [San Miguel Toliman?], km 46, Carreta Bernal-Toliman, 16-viii-2000, JL Cozar; 1 male and 1 female, N. L. [Nuevo Leon], 40 mi NW Jcn [junction] Hwy 57 & 60, vi-22-1971, CW O'Brien & Marshall; 1 female, SLP [San Luis Potosi], 16 mi S Sta. Maria del Rio, vi-29-1971, 6500', C O'Brien & Marshall; 1 female, Dgo., 5 mi NE Fco.[Francisco] I. Madero, 6600', 8-20-1974, on *Mimosa warnockii*, C & L O'Brien & Marshall (CWOB). 2 males and 3 females, Coah. [Coahuila], 7500', nr. Jame, 33 mi S.E.Salttillo, vii-18-63, A.T. Howden; 1 female, SLP [San Luis Potosi], 11.6 km E. San Luis Potosi, 1,945 m, 3.vii.87, R. Anderson, Acacia-cactus scrub, 87-1; 1 male, San Luis Potosi, 43.8 mi. S. San Luis Potosi, on #57, 5,600', 8-viii-83, Acacia/cactus desert, R. Anderson (CMNC). 1 male, Sin. [Sinaloa], 26 miles west of El Fuerte, viii-17-65, H. Burke & J. Meyer (TAMU).

Description. Color and pubescence: Head, rostral base, pronotum, elytra and legs beyond coxae with rose golden to bronze metallic luster; thoracic and abdominal ventrals bluish-black; antennae reddish-brown. Pubescence of numerous fine appressed grayish setae. **Size:** Male (n=36) 1.9 × 0.7 mm to 2.7 × 1.1 mm; Female (n=36) 2.2 × 0.9 mm to 2.5 × 1.1 mm. **Head** quadrate, slightly wider at base, very densely punctured; interspaces rugose; eyes moderately protuberant. **Rostrum** subequal to head in length, gradually and distinctly widened from antennal insertions to apex; dorsal base rugose; mid-dorsal 2/3 smooth, shiny; lateral 2/3 distinctly punctured; in lateral view only slightly arcuate, depressed in apical 1/3. **Antennae** inserted near basal 1/5 of rostrum; scape and funicular segment 1 ovoglobose, subequal; funicular segments 2 and 3 narrowed, clavate, subequal in length to segment 1; segments 4 and 5 subequal, globose, slightly shorter than 2 and 3; segments 6 and 7 subequal in length to 4 and 5, more robust, bead-like; club abruptly widened; basal segment subtriangular; middle segment slightly shorter than basal segment, transverse; apical segment subequal in length to basal segment, rounded, apex broadly rounded. **Pronotum** longer than wide; sides weakly rounded out; widest just behind middle; with weak anterolateral constriction; very densely punctured; some punctures fused; interspaces rugose and with numerous setigerous punctures. **Scutellum** small, quadrate, punctured. **Elytra** about twice as long as pronotum, widest behind middle; humeri simple; striae distinct throughout; with a single setigerous punctures in interspace between striae; intervals weakly convex; with row of setigerous punctures. **Thoracic pleura and sterna** densely and coarsely punctured. **Abdominal ventrites** moderately punctured, weakly concave.

Distribution. Specimens were collected from the Mexican states of Chiapas, Durango, Nuevo Leon, Queretaro and San Luis Potosi (Fig. 91).

Etymology. The specific epithet is in reference to the dense punctures and rugose interspaces of the head in this species.

Comments. *Temnocerus rugosus* is recognized by the dense punctation of the head and pronotum and the rosy golden and bronze luster of the upper surface. Sexual dimorphism is not as pronounced in this species. The male rostrum is only slightly shorter and slightly wider at the apex than in the female. Also, the eyes of the male are not distinctly larger and more protuberant in this species as they are in most other species of this genus. It is similar to *Temnocerus dilatatoris* (Hamilton) from North America but the apex of the aedeagal pedon and the tegminal cap piece are different. The aedeagus (Fig. 82) has the short median lobe strongly tapered into a bluntly pointed blade-like pedon. The tectum is spatulate in shape. The tegminal cap piece is finger-like and the knob-like pigmented apex bears a cluster of short divergent setae. Endophallic bands are short, linear and weakly defined.

Plant association. A single female specimen is recorded from *Mimosa warnockii* B. L. Turner.

***Temnocerus salvensis*, new species**

(Fig. 51, 52, 83, 93)

Type locality. Costa Rica, Heredia, La Selva Biological Station

Type depository. National Institute of Biodiversity, Costa Rica (INBC)

Type specimens. Holotype male with the following data: Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m 10°26'N, 84°01'W, Jul 1993, INBio-OET, 3 Julio, 1993, *Goethalsia meiantha*, FOT/07/36; Allotype with same data as holotype except FOT/07/04 (INBC). Paratype data as follows: 1 female, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10°26'N, 84°01'W, 2 Nov 1994, INBio-OET, FPM/31/20, *Pentaclethra macroloba*; 1 female, same as previous except FPM/31/23; 1 male, same as previous except 4 Nov 1994, FOT/33/23, *Protium glabrum*; 1 male and 1 female, same as holotype except FOT/07/34 & FOT/07/12; 2 males, Costa Rica, La Selva Biol. Sta., 5 Ene 2000, 1200 m, FOT/46/1-40, *Eugenia*; 3 males, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10° 26'N, 84°01'W, Proy. ALAS, INBio-OET, 30 Diciembre 1999, FOT/43/01-40, *Minuartia guianensis*; 1 male, Costa Rica, Heredia, Est. Biol. La Selva, 50-150 m, 10°26'N, 84°01'W, Jan 1994, INBio-OET, 7 Enero 1994, FVK 17/16, *Virola koschnyi*; 1 male, Costa Rica, Heredia Pr: La Selva Biological Sta., 3 km S Puerto Viejo, 10°26'N, 84°01'W, 1 Abril 1993, bosque primario, M/06/053; 1 female, same as previous except 2 Marzo 1993, M/06/02 (INBC).

Description. Color and pubescence: Body black throughout with a faint purplish luster. Pubescence of short appressed brownish setae. **Size:** Male (n = 10) 2.3 × 0.8 mm to 3.1 × 1.2 mm; Female (n = 5) 2.2 × 1.0 mm to 2.9 × 1.2 mm. **Head** quadrate, punctures small, round, moderately spaced; interspaces minutely granulose; frons convex; eyes strongly protuberant. **Rostrum** about .33 times longer than head; widened at apex, with basal mid-dorsal channel; in lateral view arcuate, slightly flattened apically, moderately punctured throughout except small smooth spot at mid-dorsal apex; juncture of rostrum and head distinctly concave. **Antennae** inserted at basal 1/3, scape and first funicular segment ovoglobose, subequal in length; funicular segments 2-4 narrow, clavate, subequal; segments 5-7 oval, subequal; club segments wide, densely setose, subequal in length; terminal segment acuminate. **Pronotum** longer than wide, widest just behind middle, densely punctured. **Scutellum** small, quadrate, minutely punctured. **Elytra** about twice as long as pronotum, widest just behind middle; humeri simple; striae moderately impressed, larger and deeper in basal 1/2, intervals flat with single row of setigerous punctures; interspace between striae with single setigerous puncture. **Thoracic pleura and sterna** densely punctured; sterna with smooth bulbous ventral areas on each side. **Abdominal ventrites** concave with small scattered punctures.

Distribution. All specimens were collected at the La Selva Biological Station in the Costa Rican province of Heredia. (Fig. 93).

Etymology. The specific epithet is derived from the Spanish word "Selva" meaning forest or jungle and is in reference to the La Selva Biological Station type locality.

Comments. *Temnocerus salvensis* is recognized by the overall black color and faint purplish luster, convex frons, and the distinctly concave junction of the head and rostrum in lateral view. The aedeagus (Fig. 83) has an elongate median lobe that is strongly tapered into the narrowly truncate pedon apex. The tectum is spearhead-shaped, elongate and pointed. The tegminal cap piece is finger-like with a relatively large fingernail-like apex bearing numerous short terminal setae. Endophallic bands are very short, linear and weakly defined.

Plant association. Fogged from the following tree species in Costa Rica: *P. macroloba*, *G. meiantha*, *P. glabrum*, *M. guianensis*, *V. koschnyi* and *Eugenia* sp.

***Temnocerus tamaulipensis*, new species**

(Fig. 53, 54, 84, 94)

Type locality. Mexico, Tamaulipas, 19 mi. NE Tula

Type depository. Charles W. O'Brien collection (CWOB)

Type specimens. Holotype male and allotype with the following data: Mexico, Tam., Hwy. 101, 19 mi. NE Tula, 6200', 23 July 1982, CW & L O'Brien & G. Wibmer. Paratypes as follows: **MEXICO:** 11 males and 6 females, Tam., Hwy. 101, 19 mi. NE Tula, 23 July 1982, 6200', CW & L. O'Brien & G. Wibmer; 2 females, Mexico, Hwy. 101, 18 mi. SW Cd. Victoria, 4300', 22 July 1982, C. W. & L. O'Brien & G. Wibmer; 1 male and 3 females, Yucatan, ca. 5 km S Progreso, 26 October 1984, W.E. Clark; 1 female, Ver [Veracruz], 22 mi SE Jalapa, Dec. 26, 1963, 900', C.W. O'Brien; 1 female, Tamaulipas, along road to Rancho de Cielo. W Gomez Farias, I-2-1981, coll. E.G. Riley; 1 female, Veracruz, 21 mi W Orizaba, 4 Sept. 1974, G. Bohart & W. Hanson (CWOB). 1 female, Nuevo Leon, 23.6 mi. SW Linares, July 3, 1974, Clark, Murray, Ashe, Schaffner (TAMU).

Description. Color and pubescence: The body is blackish throughout with a faint rosy luster. The pubescence is inconspicuous and composed of short, fine reclinate brownish-white setae. **Size:** Male (n = 13) 1.4 × 0.6 mm to 2.0 × 0.8 mm; Female (n = 16) 1.6 × 0.9 mm to 2.1 × 0.8 mm. **Head** subquadrate, about as long as wide, moderately punctured; punctures small, round; interspaces minutely granulose; frons wide, twice as wide as width of rostrum at base, with some long whitish setae; eyes large, strongly protuberant. **Rostrum** short; sides subparallel, widened only slightly at apex, moderately to densely punctured; mid-dorsal 1/3 smooth, shiny. **Antenna** inserted near basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal in length; funicular segment 1 more robust; funicular segments 2-5 narrow, oval; 3-5 subequal in length; segment 2 more clavate, slightly longer than segments 3-5; segments 6-7 subequal, short, bead-like; club abrupt; basal and middle segment subequal in length; middle segment transversely rectangular; basal segment narrowed at base; terminal segment longer than basal or middle segment, apically acuminate, apex broadly rounded. **Pronotum** slightly longer than wide, widest just behind middle, densely punctured; interspaces minutely granulose. **Scutellum** small, inconspicuous, subquadrate. **Elytra** about twice as long as pronotum, widest near middle; humeri simple; striae deeply impressed, subquadrate, similar throughout; intervals narrow, weakly raised, with single row of setigerous punctures; interspaces between striae with single setigerous puncture. **Thoracic pleura and sterna** densely set with setigerous punctures. **Abdominal ventrites** moderately punctured; punctures small, round, setigerous.

Distribution. Specimens were collected from the Mexican states of Nuevo Leon, Tamaulipas, Veracruz and Yucatan (Fig. 94).

Etymology. The specific epithet is derived from the Mexican state of Tamaulipas.

Comments. *Temnocerus tamaulipensis* is closely related to *T. abdominalis*. The rosy luster and less dense punctation of the head, pronotum and abdomen distinguish it from *T. abdominalis*. The tegminal

cap piece of the aedeagus has long setae in both species (Fig. 59 and 84). The aedeagus (Fig. 84) has a short tapered median lobe with a truncate pedon apex. The tectum is spatulate with a narrow base. The tegminal cap piece is finger-like with a terminal cluster of long setae. Endophallic bands are very short and weakly defined.

Plant association. Unknown.

***Temnocerus thesaurus* (Sharp 1889)**

(Fig. 55, 56, 85, 94)

Type locality. Mexico, Tabasco, Teapa

Type depository. The Natural History Museum, London, England (**BMNH**)

Specimens examined. MEXICO: Holotype [male?] with the following data: Teapa, Jan. 1888, Smith, *Rhynchites thesaurus* type D. S. [hand written on card with specimen]; TYPE [circular label with red margin]; Teapa, Tabasco, H. H. S.; B. C. A. Col. iv.3, *Rhynchites thesaurus* Sharp; Sharp coll. 1905-313 [label upside down on pin] (**BMNH**). **BELIZE:** 1 male, Cayo District nr Teakettle Bank Pook's Hill, 9-Jan-2003, sweeping, CR Bartlett; 1 female, Bel. [Belize], Mile 32, Western Highway, Aug. 14, 1977, C.W. & L. O'Brien & Marshall (**CWOB**). **COSTA RICA:** 1 female, S. J. Escazu, 8 Feb 1987, G. E. Bohart (**CWOB**). **GUATEMALA:** 1 male, Zacapa, 7 km S San Lorenzo, 18-vi-1993, 900 m, beating *Quercus*, H & A Howden (**CMNC**). 1 female, Chiq. [Chiquimula], Esquipula, 2 July 1985, W.E. Clark (**CWOB**). **HONDURAS:** 1 female, com., Hwy. 1, 13 km. NW Comayagua, July 26, 1977, C.W. & L.B. O'Brien & Marshall; 1 male, Cho.[Choluteca], 1 km W. San Marcos de Colon, July 24, 1977, 982 m, O'Briens & Marshall, C.W. O'Brien; 1 male, Com.[Comayagua], 13 km N. Comayagua, Hwy. 1, July 18, 1977, O'Briens & Marshall; 1 female, Francisco Morazan, El Rincon, 1 Dec. 1995, R. Turnbow; 1 male, [Francisco Morazan], El Par, 13 km NW. El Zamorano, July 27, 1977, CW & LB O'Brien & Marshall; 1 female, F. Morazan, Dept. 8 Rincon, 15-x-1993, F.W. Skillman, JA.; 2 males, El Par, 13 km NW El Zamorano, July 27, 1977, CW & LB O'Brien & Marshall; 3 males, 1078 m. Com., Siguatepeque, July 13, 1977, CW & LB O'Brien & Marshall; 39 males and 27 females, com., Siguatepeque, July 15, 1977, CW & LB O'Brien & Marshall; 1 male and 4 females, Com., 2 km E. Siguatepeque, July 19, 1977, CW & LB O'Brien & Marshall; 1 male, com., 3 km. SE. Siguatepeque, July 14, 1977, CW & LB O'Brien & Marshall; 1 male, D.C. 6 mi. NW. Tegucigalpa, 4900', vi-10-1974, O'Brien & Marshall; 1 male, com., 13 km. N. Comayagua, Hwy. 1, July 18, 1977, O'Brien & Marshall; 1 female, com., 10 km. E. Siguatepeque, July 19, 1977, CW & LB O'Brien & Marshall; 2 females, com., 7 km. E. Siguatepeque, July 19, 1977, CW & LB O'Brien & Marshall; 1 female, Cho. 982 m. 1 km W. San Marcos de Colon, July 23, 1977, O'Briens & Marshall; 1 female, com., 21 km NW. Siguatepeque Ch. 5 Rd., Aug. 1, 1977, O'Briens & Marshall (**CWOB**). **MEXICO:** 1 male, Oax., Temascal, vi-30-64, C.D. Johnson; 1 female, Nay., Is. Maria Madre, Rd. Balleto-La Antena, 26-3-1984, 210 m, beating dry branches, A.N. Garcia Aldrete; 1 female, Chis., 13 mi W. Tuxtla Gutierrez 3300', Aug. 1, 1974, O'Brien & Marshall; 1 male and 1 female, V.C., Palma Sola, 19-vii-1972, P. Reyes C.; 1 female, Veracruz, 1 km SW Coneja, 7 Sep 1982, Clark & Cave; 1 female, Ver., 29 mi. SE Jalapa 900', Dec. 26, 1963, C.W. O'Brien; 1 female, Oaxaca, Temescal, vii-6-1965, G.H. Nelson & Family; 1 male, S.L.P. [San Luis Potosi], 2.4 mi. N. state border of Hidalgo & S.L.P., Jan-4-81, G. Riley; 1 female, SLP, Hwy. 85, 8 mi. N. Tamazunchale 700', 24 July 1982, CW & L. O'Brien & G. Wibmer; 2 male and 1 female, Hgo., 1000', Hwy. 105, 2 mi. NE. Tehuetlan, 7 May 1983, C.W. & L. O'Brien & GB Marshall; 1 female, Chiapas, 4 mi e Rizo de Oro, Hwy 190, 21-vi-1985, Askevold & Heffern; 1 female, Jalisco, Puerto Vallarta, 25 Jan 1984, G.E. Bohart; 1 female, Chiapas, 4 mi E Rizo de Oro, Hwy. 190, 21-vi-1985, Askevold & Heffern; 5 males and 5 females, Chiapas, S. Cristobal de las casas, 11-11-2001, on *Mimosa* sp., 1-2 m. tall, C.W. O'Brien; 1 male, Chis., 7 mi. SE. Teopisca, 6800', vi-5-1974, C.W. & L. O'Brien & Marshall; 1 male and 2 female, Chiapas, Palenque ruins, 28 February 1985, leg. D. G. Furth; 1 male, Chiapas, Chincultik, 29 Aug 1982, Clark & Cave, C.W. O'Brien; 1 female, Chis., 24 mi NW. Comitán, 7100', vii-31-1974, C & L O'Brien & Marshall; 1 female, Ver., Topilito (nr. Palma Sola), 19-vii-1972, G. Halffler et. al. (**CWOB**). 1 male, Guerrero, 34.6 km S.W. Xochipala, 2030 m, 17.vii.1992, oak pastureland, 92-016, R.S.

Anderson; 1 male, Chiapas, 6 Km SW Ocosingo, 29-vii-1983, 1050 m, R.S. Anderson; 1 male, Chiapas, 6 km SW Ocosingo, 22-ix-1991, 1400 m, wet oak/pine forest litt [litter], 91-116, R. Anderson; 1 male and 1 female, Chiapas, 6 km SW Ocosingo, 29-vii-1983, 1050 m, oak/pine forest, R. S. Anderson (**CMNC**). 1 female, Oaxaca, Oax., vii-20-37, M. A. Embury (**CASC**). 6 females, Oaxaca, 19 mi. S. San Miguel Suchixtepec, vii-17-1985, 85/069, Woolley & Zolnerowich; 1 female, Oaxaca, 6 mi NE Mitla, 20-vii-1985, Woolley & Zolnerowich; 1 female, Oaxaca, 9 mi NE Mitla, 20-vii-1985, 85/079, Woolley & Zolnerowich; 5 males, Oaxaca, 19 mi. S San Miguel Suchixtepec, vii-17-1985, 85/069, Woolley & Zolnerowich; 1 male, Oaxaca, 6 mi. NE Mitla, vii-20-1985, Woolley & Zolnerowich; 1 male, Oaxaca, 9 mi. NE Mitla, 20-vii-1985, 85/079, Woolley & Zolnerowich (**TAMU**).

Description. Color and pubescence: Body brownish black with distinct bronze to brassy luster. Pubescence composed of short fine inconspicuous reclinate setae. **Size:** Male (n = 78) 1.8 × 0.7 mm to 2.4 × 1.0 mm; Female (n = 71) 1.8 × 0.7 mm to 2.3 × 1.0 mm. **Head** subquadrate, slightly wider than long, moderately punctured, interspaces minutely granulose; frons .33 times wider than rostral base; eyes large, oval, moderately protuberant. **Rostrum** longer than head, slightly widened beyond antennal insertions, weakly depressed apically, with median dorsal channel in basal 1/3; channel minutely granulose, with small cup-like depression at junction of rostrum and head, moderately punctured laterally, smooth and shiny mid-dorsally beyond basal channel. **Antennae** longer than rostrum, inserted at basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal, funicular segments 2-4 sub-equal, narrow, weakly clavate; segments 5-7 short bead-like; club segments subequal; terminal segment slightly longer and apically acuminate. **Pronotum** longer than wide, widest just beyond middle, densely punctured; interspaces minutely granulose, with single row of minute round granules. **Scutellum** small, rectangular, slightly wider than long, minutely punctured. **Elytra** about as long as pronotum, widened slightly behind middle; humeri simple; striae subquadrate, distinct throughout, moderately impressed; intervals weakly convex, with single row small setigerous punctures; strial interspaces with single small setigerous puncture. **Thoracic pleura and sterna** with moderately set coarse setigerous punctures. **Abdominal ventrites** weakly concave through middle, moderately set with small setigerous punctures throughout.

Distribution. A widespread species with specimens recorded from Mexico, Belize, Guatemala, Honduras and Costa Rica (Fig. 94).

Comments. *Temnocerus thesaurus* is the most abundant species of *Temnocerus* in Central America based on the specimens available for this study. Adults are identified by their bronze to brassy luster and the following rostral characters: basal mid-dorsal channel, small cup-like depression at the mid-dorsal junction of the rostrum and head and the smooth shiny mid-dorsal strip extending from the end of the basal channel to the rostral apex. The aedeagus (Fig. 85) has a slightly narrowed median lobe with the pedon apex weakly rounded. The tectum is spearhead-shaped and narrowly pointed. The tegminal cap piece is narrowly finger-like with sub-parallel sides and the knob-like pigmented apex bears a cluster of very short setae. Endophallic bands are short, linear and weakly defined.

Plant association. Adults have been collected on *Quercus* and *Mimosa* species.

***Temnocerus yucatensis*, new species**

(Fig. 57, 58, 86, 94)

Type locality. Mexico, Yucatan, 10 km SW Merida

Type depository. Charles W. O'Brien collection (CWOB)

Type specimens. Holotype male (dissected) with the following data: Mexico, Yuc., 10 km SW Merida, vii-30-1990, CW & LB O'Brien. Allotype with same data as holotype except 10 km E Merida, viii-1-1990 (**CWOB**). Paratypes as follows: 1 female, Yucatan, 2.1 mi. E Chichen Itza, 100' Dry trop. Seas. For., 19-

20-vii-83, R. Anderson/W. Maddison; 1 female, Yucatan, Uxmal Ruins, 50 m, 21-vii-1983, roadside sweep, R. S. Anderson (CMNC). 1 female, Yuc., 3 mi E Chichen Itza, Aug. 6, 1974, CW & L O'Brien & Marshall (CWOB).

Description. Color and pubescence: Body black with a faint brassy luster to pronotum and a faint bluish luster to the elytra. Pubescence composed of very short inconspicuous reclinate brownish setae. **Size:** Male (n = 1) 1.8 × 0.8 mm; Female (n = 4) 1.6 × 0.6 mm to 1.7 × 0.7 mm. **Head** quadrate, as long as wide, moderately punctured, punctures coarse, round, moderately impressed; interspaces minutely granulose; eyes large, oval, strongly protuberant. **Rostrum** short, slightly longer than head, gradually widened beyond antennal insertions, moderately to densely punctured, slightly arcuate, slightly flattened apically, with basi-dorsal median channel extending from rostral base to middle of rostrum; channel minutely granulose. **Antenna** distinctly longer than rostrum, inserted near basal 1/3 of rostrum; scape and funicular segment 1 ovoglobose, subequal in length; funicular segment 1 more robust; funicular segments 2-4 narrow, oval; 3 and 4 subequal; segment 2 slightly longer than 3 or 4; segments 5-7 short bead-like, 6 and 7 slightly more robust than 5; club abrupt; basal and middle segment subequal in length; basal segment narrowed at base; middle segment rectangular, wider than long; terminal segment slightly longer than basal or middle segment, bluntly acuminate. **Pronotum** as wide as long, widest just behind middle, densely punctured; interspaces minutely granulose. **Scutellum** subquadrate, about as long as wide, minutely granulose. **Elytra** about as long as pronotum, widest near apical 1/3; humeri simple; striae moderately impressed becoming slightly smaller beyond middle; intervals weakly raised, with single row of setigerous punctures; strial interspaces with single setigerous puncture. **Thoracic pleura and sterna** with moderate to dense coarse setigerous punctures. **Abdominal ventrites** with sparse small punctures; lateral interspaces minutely granulate.

Distribution. All specimens of the type material were collected in the Mexican state of Yucatan (Fig. 94).

Etymology. The specific epithet is derived from the Mexican state of Yucatan.

Comments. The adults of this species are very similar to *T. chiapensis* and *T. herediensis* but can be distinguished by the narrowly pointed aedeagal pedon. The aedeagus (Fig. 86) has a short and basally wide median lobe that narrows abruptly to a pointed pedon apex. The tectum is spatulate. The tegminal cap piece is finger-like with subparallel sides and a small pigmented apex bearing a cluster of very small setae. Endophallic bands are short, linear and weakly defined.

Plant association. Unknown.

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