

NOTES ON BIOLOGY AND DISTRIBUTION OF MEXICAN  
AND CENTRAL AMERICAN SCOLYTIDAE  
(COLEOPTERA). II. SCOLYTINAE:  
CRYPHALINI AND CORTHYLINI<sup>1</sup>

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ABSTRACT

New biological and/or geographical distribution data are given for 93 species of Scolytidae in the following genera, principally from Mexico: *Stegomerus*, *Scolytogenes*, *Hypocryphalus*, *Trypophloeus*, *Hypothenemus*, *Cryptocarenum*, *Dendroterus*, *Araptus*, *Pseudopityophthorus*, *Conophthorus*, *Pityophthorus*, *Gnathotrichus*, *Tricolus*, *Amphicranus*, *Monarthrum*, *Microcorthylus*, *Corthylocorus*, and *Corthylus*. The genus *Trypophloeus* is reported from Mexico for the first time.

For the past five years we have been extensively collecting bark and ambrosia beetles from a wide variety of habitats, mostly in central Mexico. Most of this effort has been directed towards faunistic and ecological studies in selected areas which are being treated separately (Equihua and Atkinson 1985; Atkinson and Equihua 1985a). None the less we have made many collections in other areas and a large number of records have been obtained which are of interest due to range extensions, new host associations, or new observations on the biology and ecology of these species. These are being published now to permit their inclusion in a projected catalog of the Mexican Scolytidae. Due to the large number of records involved, those for the subfamily Hylesininae and the Scolytinae (excluding the Cryphalini and Corthylini) have been treated elsewhere (Atkinson and Equihua 1985b).

New host plants and new state or country distribution records are indicated. New host plants of extremely polyphagous species of the Cryphalini (*Hypothenemus* and *Cryptocarenum*) are not specifically indicated nor are species of *Pinus* for pine-inhabiting species. Observations are grouped by country, state, and locality; these data are not repeated in subsequent records; records are separated by semicolons. Abbreviations of Mexican state names are those in common use in Mexico (CHIH = Chihuahua, CHIS = Chiapas, COAH = Coahuila, DGO = Durango, GRO = Guerrero, GTO = Guanajuato, HGO = Hidalgo, JAL = Jalisco, MEX = México, MICH = Michoacán, NAY = Nayarit, NL = Nuevo León, OAX = Oaxaca, PUE = Puebla, QRO = Querétaro, QR = Quintana Roo, SLP = San Luis Potosi, TAB = Tabasco, TAMPS = Tamaulipas, TLAX = Tlaxcala, VER = Veracruz). Collection numbers are listed where given with a letter prefix (S = Scolytidae, Colegio de Postgraduados; UACHB = Depto. de Bosques, Universidad Autónoma Chapingo; SM = Scolytidae of Morelos, Universidad Autónoma del Estado de Morelos; AB = Armando Bur-

<sup>1</sup> Part I. Hylesininae, Scolytinae except Cryphalini and Corthylini (see Atkinson and Equihua 1985b).

gos S.). Detailed collection data are filed on cards in the UACHB, or in notebooks in the insect collection of the Colegio de Postgraduados (all other prefixes). The names of the authors (THA, AEM) are abbreviated when given as collectors. All material cited is deposited in the insect collection of the Centro de Entomología y Acarología, Colegio de Postgraduados (CP). Duplicates of some series are deposited in the Stephen L. Wood collection (SLWC), the Canadian National Collection (CNC), or the Florida State Collection of Arthropods (FSCA). These are indicated in parentheses at the end of collection records.

#### SUBFAMILY SCOLYTINAE

##### Tribe Cryphalini

*Stegomerus pygmaeus* Wood. MEXICO: **GRO** (new state): Palo Blanco (near Chilpancingo), 22-II-82, 1,200 m, in vine, S-568, A. Burgos S. This species makes small transverse galleries in the bark of an unidentified vine.

*Stegomerus mexicanus* Wood. MEXICO: **MICH**: Taretan, 2-XI-80, 1,100 m, in vine, S-152, THA & AEM (CP, FSCA).

*Scolytogenes rusticus* (Wood). MEXICO: **MICH**: Tiripetio, 31-X-80, 2,000 m, *Ipomoea* sp. (new host), S-128, THA & AEM (CP, FSCA, CNC); **GRO** (new state): Taxco, 22-II-82, 1,900 m, *Ipomoea* sp., S-327, THA & AEM. This species breeds in branches and trunks of arborescent species of *Ipomoea* in areas of tropical deciduous forest.

*Scolytogenes knabi* (Hopkins). MEXICO: **MICH** (new state): La Gallina, 1-XI-80, 800 m, in vine, S-145, THA & AEM (CP, FSCA); Carr. Patzcuaro—Ario de Rosales, Km 32, 31-X-80, 2,360 m, *Psittacanthus* sp., S-138, THA & AEM. This species is most commonly collected in herbaceous plants, particularly vines.

*Hypocryphalus mangiferae* (Stebbing). PANAMA (new country): Cd. Panama, 19-XII-80, 15 m, *Mangifera indica*, S-164, THA.

*Trypophloeus populi* Hopkins. MEXICO (new country): **COAH**: San Antonio de las Alazanas, 6-V-81, 2,400 m, *Populus tremuloides*, D. Cibrian T. This the first record of this genus in Mexico.

*Hypothenemus rotundicollis* (Eichhoff). MEXICO: **NL** (new state): Monterrey, 30-I-80, S-24, THA, (CP, FSCA); **MICH**: Lombardia, 1-XI-80, 650 m, *Mangifera indica*, S-142, THA & AEM; **PUE** (new state): Tepexco, 1-X-82, 1,200 m, cucurbit vine, AB-66, A. Burgos S.; **VER** (new state): Rancho Tepetates (near Paso de Ovejas), 12-III-80, *Mangifera indica*, S-45, THA.

*Hypothenemus erectus* LeConte. MEXICO: **NL**: Cerro Chipinque, 30-I-80, 1,300 m, *Quercus* sp., S-23, THA (CP, FSCA); **JAL**: Puerto Vallarta, 6-III-82, 10 m, legume, S-386, AEM; El Tuito, 28-V-82, 1,050 m, *Phoradendron* sp., S-703, THA & AEM; **MICH** (new state): Patuan, 1-XI-80, 1,300 m, *Spondias mombin*, S-147, THA & AEM; **PUE**: Camino Cuetzalan—Paso del Jardin, 5-V-81, 550 m, S-224, THA & AEM; **VER**: Rancho Tepetates, 12-III-80, 50 m, *Guazuma ulmifolia*, S-41, THA & AEM; Mandinga, 12-III-80, sea level, *Rhizophora mangle*, S-46, THA & AEM.

*Hypothenemus birmanus* (Eichhoff). MEXICO: **JAL**: El Tuito, 28-V-82, 640 m, *Inga* sp., S-711, THA & AEM; 28-V-82, 640 m, Lauraceae, S-706, THA & AEM; **VER** (new state): Rancho Tepetates, 12-III-80, 50 m, *Mangifera indica*, S-45, THA & AEM; (CP, FSCA); Mandinga, 12-III-80, sea level, *Laguncularia racemosa*, S-47, THA & AEM. PANAMA: Los Santos, Cerro Canajagua, 4-I-81, 800 m, S-167, THA.

*Hypothenemus interstitialis* (Hopkins). MEXICO: **VER**: Moro de la Mancha,

19-VII-83, *Nectandra* sp., S-922, THA & AEM; 19-VII-83, legume, S-924, THA & AEM.

*Hypothenemus hampei* (Ferrari). MEXICO: **CHIS**: Cacaohoatan, 19-X-81, 600 m, fruit of *Coffea arabica*, N. Bautista M. (CP, FSCA); Rosario Izapa, V-83, P. Baker.

*Hypothenemus squamosus* Hopkins. MEXICO: **VER**: Moro de las Mancha, 19-VII-83, legume, S-924, THA & AEM (CP, FSCA); 19-VII-83, *Nectandra* sp., S-922, THA & AEM.

*Hypothenemus crudiae* (Panzer). MEXICO: **JAL**: Puerto Vallarta, 6-III-82, 10 m, legume, S-386, AEM; **MICH**: Lombardia, 1-XI-80, 650 m, *Mangifera indica*, S-142, THA & AEM; **VER**: Rancho Tepetates, 12-III-80, S-41, THA & AEM; **CHIS**: Rosario Izapa, V-83, P. Baker.

*Hypothenemus seriatus* (Eichhoff). MEXICO: **JAL**: Puerto Vallarta, 6-III-82, 10 m, S-358, S-386, S-387, S-389, AEM; El Tuito, 28-V-82, 640 m, *Smilax* sp., S-707, THA & AEM (CP, FSCA); 28-V-82, 640 m, *Ficus* sp., S-708, THA & AEM; **MICH** (new state): Jiquilpan, 26-V-82, 1,550 m, seeds of *Phoenix canariensis*, S-466, THA & AEM; Taretan, 2-XI-80, 1,110 m, petioles of *Cecropia obtusifolia*, S-151, THA & AEM; **VER**: Mandinga, 12-III-80, sea level, *Rhizophora mangle*, THA & AEM, S-46; Rancho Tepetates, 12-III-80, 50 m, *Mangifera indica*, S-45, THA & AEM; 12-III-80, 50 m, *Phoradendron* sp., S-40, THA & AEM; **TAB** (new state): Boquiapa, 30-VI-82; dry fruits of *Theobroma cacao*, J. A. Morales; **CHIS**: Tapachula, 20-IV-83, 100 m, SM-140, E. Saucedo C. & E. Martinez F.; 3-XII-82, *Theobroma cacao*; **QR** (new state): Chetumal, 10-VII-82, 20 m, SM-20, E. Martinez F.

*Hypothenemus californicus* Hopkins. MEXICO: **MICH**: La Gallina, 1-XI-80, 580 m, seeds of *Sabal pumos*, S-144, THA & AEM.

*Hypothenemus eruditus* Westwood. MEXICO: **JAL**: Puerto Vallarta, 6-III-82, 10 m, *Ficus* sp., S-385, AEM; 6-III-82, 10 m, *Mangifera indica*, S-389, AEM; El Tuito, 28-V-82, 640 m, Lauraceae, S-706, THA & AEM; Carr. Melaque—Puerto Vallarta, Km 156 (Mpio. Tomatlan), 6-III-82, *Hura polyandra*, S-383, AEM (CP, FSCA); **VER**: Veracruz, 2-V-82, *Luffa acutangula*, F. Duran; **CHIS**: Palenque ruins, 7-VII-82, 200 m, SM-16, E. Martinez F.; **TAB**: Boquiapa, 28-V-82, *Theobroma cacao*, J. A. Morales. PANAMA: Cd. Panama, 19-XII-80, 15 m, *Bixa orellana*, S-161, THA; 19-XII-80, 15 m, petioles of *Cecropia* sp., S-165, THA; 19-XII-80, 15 m, *Spondias mombin*, S-159, THA.

*Hypothenemus gossypii* Hopkins. MEXICO: **HGO**: El Cardonal, 27-III-81, 2,250 m, dry leaves of *Agave lechugilla*, S-208, THA & AEM.

*Hypothenemus arecae* (Hornung). MEXICO (new country): **TAB**: Cunducan, 15-III-82, *Hibiscus rosa-sinensis*, A. Peralta T.; Boquiapa, 28-V-82, dry fruits of *Theobroma cacao*, J. A. Morales; **CHIS**: 3-XII-82, *Theobroma cacao*. PANAMA: Cd. Panama, 19-XII-80, 15 m, petioles of *Cecropia* sp., S-165, THA.

*Hypothenemus columbi* Hopkins. MEXICO: **JAL**: El Tuito, 28-V-82, 640 m, *Smilax* sp., S-707, THA & AEM (CP, FSCA).

*Hypothenemus javanus* (Eggers). MEXICO: **VER** (new state): Rancho Tepetates, 12-III-80, 50 m, *Mangifera indica*, S-45, THA & AEM; Moro de la Mancha, 19-VII-83, *Nectandra* sp., THA & AEM. PANAMA: Cd. Panama, 19-XII-80, 15 m, *Tamarindus indicus*, S-160, THA (CP, FSCA).

*Hypothenemus brunneus* (Hopkins). MEXICO: **JAL**: El Tuito, 28-V-82, 640 m, *Smilax* sp., S-707, THA & AEM; Carr. Melaque—Puerto Vallarta (Mpio. Tomatlan), 6-III-82, 300 m, *Hura polyandra*, S-383, AEM; **VER**: Rancho Tepetates, 12-III-80, 50 m, *Phoradendron* sp., S-40, THA & AEM; Moro de la Mancha, 19-VII-83, legume, S-924, THA & AEM. PANAMA: Cd. Panama, 19-XII-80, 15 m, *Tamarindus indicus*, S-160, THA.

*Cryptocarenum lepidus* Wood. MEXICO: VER: Moro de la Mancha, 19-VII-83, legume, S-924, THA & AEM.

*Cryptocarenum seriatus* (Eggers). MEXICO: VER (new state): Moro de la Mancha, 19-VII-83, *Nectandra* sp., S-922, THA & AEM.

*Cryptocarenum heveae* (Hagedorn). MEXICO: QR (new state): Campo Experimental Forestal San Felipe Bacalar, 22-I-81.

#### Tribe Corthylini

*Dendroterus mexicanus* Blandford. MEXICO: MICH (new state): Patuan, 1-XI-80, 1,300 m, *Spondias mombin* (new host), S-147, THA & AEM. This species is normally found on species of *Bursera*; there were a few attacks on *S. mombin*.

*Araptus speciosus* Wood. MEXICO: JAL: Puerto Vallarta, 6-III-80, 10 m, *Ficus* sp., S-385, S-387, AEM (CP, FSCA); El Tuito, 28-V-82, 640 m, *Ficus* sp., S-708, THA & AEM. This polygynous bark beetle is found in small diameter branches of *Ficus* spp.

*Araptus consobrinus* Wood. MEXICO: JAL: El Tuito, 28-V-82, 640 m, *Ficus* sp., S-708, THA & AEM (CP, FSCA, CNC).

*Araptus placentulus* Wood. MEXICO: MICH: Uruapan, 1-XI-80, 1,600 m, seed of *Persea americana*, S-149, THA & AEM.

*Araptus schwarzii* (Blackman). MEXICO: MICH: Uruapan, 30-V-66, *Persea liebmanni*; 1-XI-80, 1,600 m, seed of *P. americana*, S-149, THA & AEM; GTO: Guanajuato, VIII-58, *P. americana*; TAB: Teapa, 28-VI-66, A. Ortiz (CP, FSCA).

*Araptus trepidus* Wood. MEXICO (new country): PUE: Apulco, 5-V-81, 1,470 m, *Cnidoscylus* sp. (new host), S-227, THA & AEM. This polygynous bark beetle is found in recently cut branches ranging in diameter from 5–10 cm.

*Araptus aztecus* Wood. MEXICO: VER (new state): Moro de la Mancha, 19-VII-83, *Nectandra* sp. (new host), S-925, THA & AEM (CP, FSCA).

*Pseudopityophthorus declivis* Wood. MEXICO: NAY: La Yerba, Tepic, 14-II-81, *Quercus* sp., A. Garcia (CP, FSCA); Tepic, I-81, *Quercus* sp., C. Pineda & M. E. Guerrero; JAL (new state): La Nueva Providencia, El Tuito, 6-III-82, 1,100 m, *Quercus* sp., S-384, AEM.

*Pseudopityophthorus denticulatus* Wood. MEXICO (new country): GRO: Chilapa, 23-II-82, 2,040 m, *Quercus* sp., S-333, THA & AEM (CP, FSCA). This species was previously known only from southern Texas.

*Pseudopityophthorus virilis* Wood. MEXICO: HGO: Zacualtipan, 16-X-80, 2,050 m, *Quercus* sp., S-174, THA (CP, FSCA, CNC); 7-XI-80, 1,800 m, *Quercus* sp., AEM.

*Pseudopityophthorus singularis* Wood. MEXICO: PUE (new state): Zaca-poaxtla, 6-V-81, 2,150 m, *Quercus* sp., S-229, THA & AEM (CP, FSCA).

*Pseudopityophthorus limbatus* Eggers. MEXICO: MEX (new state): Carr. Toluca—Morelia, Km 49, 30-X-80, 2,620 m, *Quercus* sp., S-122, THA & AEM; GRO (new state): Chilapa, 23-II-82, 2,040 m, *Quercus* sp., S-333, THA & AEM. This is the largest species of this genus known from Mexico. It is most commonly found in large diameter limbs.

*Pseudopityophthorus squamosus* Bright. MEXICO: MEX (new state): Mexicapa, 18-III-82, 2,190 m, *Alnus* sp. (new host), S-593, A. Burgos S. & E. Saucedo C.

*Pseudopityophthorus pruinosis* (Eichhoff). MEXICO: NL (new state): Cerro Chipinque, 30-I-80, 1,350 m, *Quercus* sp., S-22, THA (CP, FSCA); 30-I-80, 1,300 m, *Persea* sp. (new host), S-20, THA; GRO (new state): Chilapa, 23-II-82, 2,040 m, *Quercus* sp., S-333, THA & AEM.

*Pseudopityophthorus opacicollis* Blackman. MEXICO: **MICH** (new state): Carr. Toluca—Zitacuaro, Km 80, 30-X-80, 2,560 m, *Alnus acuminata*, S-126, THA & AEM; Carr. Patzcuaro—Ario de Rosales, Km 34, 31-X-80, 2,340 m, *Quercus* sp., S-136, THA & AEM; **MEX**: Chapa de Mota, 7-I-82, 2,880 m, *Quercus laurina*, S-257, THA & AEM; 7-I-82, 2,880 m, *Prunus serotina* (new host), S-256, THA & AEM. This species is probably the most widely distributed species of the genus in Mexico and has been collected in all of the major mountain systems in northern and central Mexico. Although it is occasionally collected in other hard wood species, it is predominantly associated with oaks. It is most commonly found at higher altitudes and is replaced by other species at lower elevations.

*Conophthorus cembroides* Wood. MEXICO: **SLP** (new state): Villa de Zaragoza, 16-VII-83, 2,440 m, *Pinus cembroides*, R. Riviera G. (CP, FSCA); **TLAX**: Santa Maria de las Cuevas, 28-I-82, 2,560 m, *Pinus cembroides* var. *orizabensis*, S-313, E. Lott & T. Wendt.

*Conophthorus conicolens* Wood. MEXICO: **MICH** (new state): Las Cocinas, 20-II-80, 2,200 m, *Pinus montezumae*, S-29, THA (CP, FSCA, CNC).

*Pityophthorus coronarius* Blackman. MEXICO: **GRO** (new state): Chilapa, 23-II-82, 1,800 m, *Senecio* sp. (new host), S-572, A. Burgos S.

*Pityophthorus oclusus* Bright. MEXICO: **GRO** (new state): Chilapa, 23-II-82, 2,040 m, *Pinus* sp., S-332, THA & AEM.

*Pityophthorus paulus* Wood. MEXICO: **MEX**: Carr. Toluca—Morelia, Km 49, 30-X-80, 2,620 m, *Senecio salignus* (new host), S-123, THA & AEM; Presa Danxho, 7-I-82, 2,480 m, *Senecio* sp., S-255, THA & AEM (CP, FSCA). This common polygynous species is found in the bark of woody composite shrubs of the genus *Senecio*. Later stage larvae develop within the wood, probably due to the thin bark and phloem of the host. This species is able to successfully invade live host tissue and is most commonly found in the basal portions of stems of live shrubs; virtually any host of large size contains dead branches with galleries of this insect. Wood (1982) reports this species from shrubs of the genus *Baccharus*; this is apparently an error since we have always collected it from *Senecio* and have never found it in *Baccharus* in spite of numerous examinations of that plant.

*Pityophthorus schwerdtfegeri* Schedl. MEXICO: **GRO** (new state): Taxco, 22-II-82, 1,900 m, *Pinus* sp., S-325, THA & AEM; Chilapa, 23-II-82, 2,040 m, *P. oocarpa*, S-332, THA & AEM. This species is found in pith of terminals of different pine species. It has been collected from slash and also from dead branches on live trees; this suggests it may be a potential pest. It seems to be replaced ecologically by *P. aztecus* Bright, a close relative, at higher altitudes in central Mexico.

*Pityophthorus alni* Blackman. MEXICO: **HGO**: 7 km west of Tlahuelumpá, 16-X-80, 2,050 m, *Alnus* sp., S-115, THA (CP, FSCA); Zacualtipán, 16-X-80, 1,800 m, *Alnus* sp., AEM; **PUE** (new state): Apulco, 4-V-81, 1,480 m, *Alnus acuminata* (new host), S-219, THA & AEM. This polygynous species is found in bark of alders and is apparently restricted to the Sierra Madre Oriental because in extensive collecting in the same host in the central Mexican highlands it has never been found. In this area, *Gymnochilus alni* is commonly found, but it has never been collected in the same areas as *P. alni* suggesting that these 2 species have different ecological requirements.

*Pityophthorus cristatus* Wood. MEXICO: **MEX**: Villa del Carbon, 7-I-82, 2,490 m, *Pinus teocote*, S-296, THA & AEM. This polygynous species is found in shaded branches on a live tree. It is not present in a dead tree or fallen branches of the same host in the same area.

*Pityophthorus leiophylla* Blackman. MEXICO: PUE: Puebla, 15-VII-61, H. Bravo M.

*Pityophthorus speculum* Bright. MEXICO: VER (new state): Cofre de Perote, 8-VI-83, 3,250 m, *Abies religiosa*, S-887, THA & AEM (CP, FSCA). This species is apparently bigynous, which is unusual for a species of this genus. Most galleries contained 1 male and 2 females, each in a horizontal egg gallery starting from the nuptial chamber. The egg galleries were well developed; the larvae had hatched in some cases, implying that these gallery systems were not observed in early stages of attack. In one case a third egg gallery was observed, parallel to one of the others, but only 2 females were present.

*Pityophthorus solus* Blackman. MEXICO: PUE: Puebla, 15-VII-61, H. Bravo M.

*Pityophthorus tuberculatus* Eichhoff. MEXICO: CHIH (new state): Ejido El Largo, Cd. Madera, 23-VIII-80, 2,300 m, *Pinus arizonica*, O. Estrada M.; COAH: Sierra Zapaliname, 17-VI-82, *P. halapensis*, J. Flores F. (CP, FSCA).

*Pityophthorus cortezi* Bright. MEXICO: VER (new state): Cofre de Perote, 8-VI-83, 3,650 m, *Pinus hartwegii*, S-896, THA & AEM (CP, FSCA); Cofre de Perote, 8-VI-83, 3,950 m, *P. hartwegii*, S-894, THA & AEM. This polygynous species is found in the bark of small diameter twigs (1-3 cm) of dead branches on live trees and in fallen branches. In one case it was collected at tree line (3,950 m) in dwarfed pines.

*Pityophthorus infulatus* Blackman. MEXICO (new country): GRO: Taxco, 22-II-82, 1,930 m, *Pinus* sp., S-565, A. Burgos S.

*Pityophthorus sapineus* Bright. MEXICO: GRO (new state): Taxco, 22-II-82, 1,900 m, *Pinus oocarpa*, S-325, THA & AEM. Bright (1981) lists the type locality as Atenquique, Puebla; this is in error because Atenquique is in Jalisco.

*Pityophthorus segnis subopacus* Blackman. MEXICO: MICH: Las Cocinas, 20-II-80, *Pinus montezumae*, S-31, THA.

*Pityophthorus blandulus* Schedl. MEXICO: HGO (new state): 7 km west of Tlahuelumpa, 1-VII-80, 2,050 m, *Pinus patula*, S-74, THA.

*Pityophthorus brevis* Blackman. MEXICO: CHIH (new state): El Vergel, Mpio. Balleza, 14-VIII-80, 2,650 m, *Pinus arizonica*, J. Castro C.; HGO (new state): El Cardonal, 27-III-81, 2,250 m, *P. gregii*, S-205, THA.

*Pityophthorus ciliatus* Blackman. MEXICO: VER: Las Vigas, 11-VI-79, *Pinus patula*, THA. This species is found in small diameter, fallen branches (3 cm) in a very humid area.

*Pityophthorus scabridus* Schedl. MEXICO: MEX: Villa del Carbon, 7-I-82, 2,490 m, *Pinus teocote*, S-296, THA & AEM; MICH: Las Cocinas, 20-II-80, *P. montezumae*, S-31, THA.

*Pityophthorus confusus* Blandford. MEXICO: MEX (new state): Villa del Carbon, 7-I-82, 2,490 m, *Pinus teocote*, S-296, THA & AEM; GRO (new state): Chilapa, 23-II-82, 2,040 m, *Pinus* sp., S-332, THA & AEM (CP, FSCA); CHIS: Altamirano, 12-XI-80, 1,200 m, *P. oocarpa*, L. Gomez.

*Pityophthorus spadix* Blackman. MEXICO: TLAX (new state): La Malinche, *Pinus* sp., R. Campos; GRO (new state): Chilapa, 23-II-82, 2,040 m, *Pinus oocarpa*, S-352, THA & AEM. Bright (1981) lists a collection from Texcoco, Veracruz, for this species; although Texcoco is in the state of Mexico, the specimens were actually taken about 1 km east of the border in the state of Veracruz (near Texcoco).

*Pityophthorus cacuminatus* Blandford. MEXICO: MICH: Ario de Rosales, 31-X-80, 1,640 m, *Pinus pseudostrabus*, S-140, THA & AEM (CP, FSCA); HGO (new state): Zacualtipan, VII-80, 1,900 m, *P. patula*, M. E. Guerrero & C. Pineda; El Cardonal, 27-III-81, 2,250 m, *P. gregii*, S-205, THA; GRO:

Taxco, 22-II-82, 1,900 m, *Pinus* sp., S-325, THA & AEM. This species is widely distributed in central Mexico at intermediate altitudes, but is absent in cooler and higher areas.

*Pityophthorus confertus* Swaine. MEXICO: HGO: El Cardonal, 27-III-81, 2,250 m, *Pinus gregii*, S-205, THA; 27-III-81, 2,250 m, *P. cembroides*, S-206, THA.

*Gnathotrichus nitidifrons* Hopkins. MEXICO: HGO: Zacualtipan, 16-X-80, 1,800 m, *Pinus patula*, S-177, AEM.

*Gnathotrichus perniciosus* Wood. MEXICO: MICH: Zacan, 20-II-80, 2,600 m, *Pinus leiophylla*, S-32, THA; Ario de Rosales, 31-X-80, *P. pseudostrobus*, S-139, THA & AEM; PUE (new state): Apulco, 9-V-80, 1,390 m, UV light trap, E. Prado & J. Valdez; GRO (new state): Chilapa, 23-II-82, 2,040 m, *P. oocarpa*, S-332, THA & AEM. This common, trunk-infesting species in pines largely replaces *G. sulcatus* at intermediate and lower altitudes (below 2,500 m) in central Mexico.

*Gnathotrichus denticulatus* Blackman. MEXICO: MEX: Carr. Toluca—Zitacuaro, Km 54, 30-X-80, 2,520 m, *Pinus montezumae*, S-124, THA & AEM.

*Gnathotrichus sulcatus* (LeConte). MEXICO: MICH: Zaguas, 26-VII-60, *Pinus* sp.; MEX: Carr. Toluca—Zitacuaro, Km 54, 30-X-80, 2,520 m, *Pinus montezumae*, S-124, THA & AEM; HGO: Zacualtipan, 16-X-80, 1,800 m, *P. patula*, S-177, AEM; PUE: Puebla, 17-I-80, 2,200 m, *P. leiophylla*, S-9, THA; CHIS: San Cristobal de las Casas, 26-IX-61, H. Bravo M. GUATEMALA: Guatemala, 17-XI-77, C. MacVean; Totonicapan, 19-VII-80, 2,900 m, *P. ayacahuite*, E. Franco; 26-VII-80, 2,700 m, *P. pseudostrobus*, F. Jeronimo M.; Chiantla, 8-VII-80, 3,200 m, *P. rudis*, F. Jeronimo M. This is the most common trunk-inhabiting species in pines in Mexico at intermediate to high altitudes (2,500–4,000 m) and is found in all mountain systems in the country.

*Tricolus inornatus* Wood. MEXICO: (new country): GRO: Chilapa, 23-II-82, 1,640 m, *Ardisiadensiflora* (new host), S-345, THA & AEM (CP, CNC). This monogynous species made circular egg galleries in small branches (2 cm diam.) in the crown of a small tree growing in an arroyo.

*Tricolus difodinus* Bright. MEXICO: CHIS: Tapachula, 21-VIII-82, *Coffea canephora* var. *robusta*, E. Aranas.

*Tricolus aciculatus* Wood. MEXICO: PUE: Apulco, 5-V-81, 1,470 m, S-226, THA & AEM. This monogynous species was collected in fallen branches of 3–5 cm diameter. The galleries are circular, following a growth ring on both sides of the entrance tunnel.

*Amphicranus filiformis* Blandford. MEXICO: GRO: Palo Blanco (near Chilpancingo), 22-II-82, 1,200 m, S-330, THA & AEM (SLWC). This species was collected in a fallen branch, 5 cm diam., in heavily wooded, moist arroyo.

*Monarthrum querneum* Wood. MEXICO: MEX (new state): Carr. Toluca—Morelia, Km 49, 30-X-80, 2,620 m, *Quercus* sp., S-122, THA & AEM. Recent attacks were observed on the underside of a wind-thrown oak in a portion of the trunk of 80 cm diam.

*Monarthrum validum* (Ferrari). MEXICO: PUE (new state): Apulco, 9-V-80, 1,390 m, UV light trap, E. Prado & J. Valdez.

*Monarthrum luctuosum* (Blandford). MEXICO: PUE: Apulco, 4-V-81, 1,480 m, S-217, S-218, THA & AEM (CP, FSCA, CNC).

*Monarthrum egenum* (Blandford). MEXICO (new country): PUE: Cuetzalan, 4-V-81, 960 m, *Inga* sp., S-221, THA & AEM (CP, FSCA). Heavy attacks were observed on trunks of felled shade trees in a coffee farm in diameters ranging from 20–40 cm.

*Monarthrum pennatum* (Schedl). MEXICO: NAY: La Yerba, 2-III-81, *Quer-*

*cus* sp. (new host), UACHB—640; **MICH** (new state): Uruapan, 1-XI-80, 1,600 m, *Persea americana* (new host), S-148, THA & AEM.

*Monarthrum conversum* Wood. MEXICO: **MICH** (new state): Uruapan, 1-XI-80, 1,600 m, *Persea americana* (new host), S-148, THA & AEM (CP, FSCA, CNC); **GRO** (new state): Palo Blanco (near Chilpancingo), 22-II-82, 1,200 m, S-330, THA & AEM.

*Monarthrum desum* (Wood). MEXICO: **GRO** (new state): Chilapa, 23-II-82, 2,040 m, *Quercus* sp., S-334, THA & AEM (CP, FSCA, CNC).

*Monarthrum fimbriaticorne* (Blandford). MEXICO: **GRO** (new state): Chilapa, 23-II-82, 1,800 m, S-336, THA & AEM (SLWC).

*Microcorthylus debilis* Wood. MEXICO: (new country): **PUE**: Apulco, 5-V-81, 1,470 m, S-226, THA & AEM; Cuetzalan, 5-V-81, 960 m, *Inga* sp. (new host), S-221, THA & AEM.

*Microcorthylus invalidus* Wood. MEXICO: **GRO** (new state): Chilapa, 23-II-82, 1,800 m, S-336, S-337, THA & AEM (CP, FSCA); Cuauhtenango, 23-II-82, 1,650 m, *Ardisia densiflora* (new host), S-573, A. Burgos S. This species was collected in fallen branches ranging in diameter from 3–5 cm (Chilapa) and in dead branches (2 cm diam.) on a live host (Cuauhtenango).

*Microcorthylus vescus* Wood. MEXICO (new country): **PUE**: Apulco, 4-V-81, 1,480 m, S-220, THA & AEM (CP, CNC).

*Corthylocurus debilis* Wood. MEXICO (new country): **PUE**: Cuetzalan, 5-V-81, 960 m, *Inga* sp. (new host), S-221, THA & AEM.

*Corthylocurus aguacatensis* (Schedl). MEXICO: **MICH**: Patuan, 1-XI-80, 1,300 m, *Spondias mombin*, S-147, THA & AEM (CP, FSCA); **GRO** (new state): Chilapa, 23-II-82, 1,800 m, S-336, S-337, THA & AEM (CP, CNC); Palo Blanco (near Chilpancingo), 22-II-82, 1,200 m, S-330, THA & AEM.

*Corthylocurus mexicanus* (Schedl). MEXICO: **PUE**: Apulco, 9-V-80, 1,390 m, UV light trap, E. Prado & J. Valdez; 5-V-81, 1,470 m, S-227, THA & AEM.

*Corthylocurus barbatus* (Blandford). MEXICO: **PUE**: Apulco, 5-V-81, 1,470 m, S-227, THA & AEM; Cuetzalan, 5-V-81, 960 m, *Inga* sp., S-221, THA & AEM (CP, FSCA, CNC).

*Corthylus comatus* Blandford. MEXICO: **HGO** (new state): 7 km west of Tlahuelumpa, 16-X-80, 2,050 m, *Alnus* sp., S-115, THA & AEM; **PUE**: east of Cuetzalan, 5-V-81, 960 m, *Inga* sp. (new host), S-221, THA & AEM; Apulco, 5-V-81, 1,470 m, S-227, THA & AEM.

*Corthylus fuscus* Blandford. MEXICO: **MEX**: Tepetlixpa, 13-II-54, *Pyrus communis*, J. Soriano R.; **GRO** (new state): Cd. Altamirano, X-79, UV light trap, AEM. This species breeds in live branches of a variety of hardwood species without causing the immediate death of the branch. In central Mexico it is an important pest of certain fruit trees, particularly pear and apple. Its biology was described by Bustamante and Atkinson (1984).

*Corthylus uniseptis* Schedl. MEXICO: **JAL** (new state): El Tuito, 28-V-82, 640 m, S-712, THA & AEM (CP, FSCA). This species was collected in a fallen branch of 4 cm diam. The parental galleries were circular and lying between adjacent growth rings. The larvae were in cradles above and below the gallery.

*Corthylus detrimmentosus* Schedl. MEXICO: **GRO**: Cd. Altamirano, X-79, UV light trap, AEM.

*Corthylus mexicanus* Schedl. MEXICO: **PUE**: Apulco, 5-V-81, 1,470 m, S-227, THA & AEM.

*Corthylus spinifer* Schwarz. MEXICO: **MICH**: Patuan, 1-XI-80, 1,300 m, *Spondias mombin*, S-147, THA & AEM; Uruapan, 1-XI-80, 1,600 m, *Persea americana*, S-148, THA & AEM.



*Corthylus flagellifer* Blandford. MEXICO: PUE (new state): east of Cuetzalan, 5-V-81, 960 m, *Inga* sp. (new host), S-221, THA & AEM; Apulco, 5-V-81, 1,470 m, S-227, THA & AEM; GRO (new state): Chilapa, 1,800 m, S-336; S-337, THA & AEM (CP, FSCA); Palo Blanco (near Chilpancingo), 22-II-82, 1,200 m, S-330, THA & AEM. This species was collected in material ranging in diameter from 5–30 cm.

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