

## A REVISION OF THE GENUS *CYPHOTHORAX* (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

CHARLES L. BELLAMY\*

### RESUMEN

Se revisa por primera vez el género agrilino neotropical *Cyphothorax* Waterhouse, en el que se reconocen seis especies: *C. palleolatus* (Chevrolat), de México, *C. gibbicollis* (Kerremans) del norte de Sudamérica, *C. gibber* (Gory) (= *C. argentinensis* Cobos, nueva sinonimia) del sur de Sudamérica, y tres nuevas especies mexicanas: *C. mexicanus*, *C. oaxacensis* y *C. yucatanensis*. Se incluye una clave para separar a las seis especies, y se discuten las relaciones genéricas. Cada especie está ilustrada y en un mapa de distribución se delimitan los ámbitos de estos taxones.

Palabras clave: Coleoptera, Buprestidae, Agrilinae, *Cyphothorax*, neotropical.

### ABSTRACT

The Neotropical agriline genus *Cyphothorax* Waterhouse is revised for the first time. Six species are recognized: *C. palleolatus* (Chevrolat) from Mexico, *C. gibbicollis* (Kerremans) from northern South America, *C. gibber* (Gory) (= *C. argentinensis* Cobos syn. nov.) from southern South America, and three new species from Mexico: *C. mexicanus*, *C. oaxacensis* and *C. yucatanensis*. A key is presented to separate the six species, and generic relationships are discussed. The species are illustrated and a distribution map summarizes the ranges of these taxa.

Key words. Coleoptera, Buprestidae, Agrilinae, *Cyphothorax*, Neotropical.

### INTRODUCTION

The richness of the fauna of Neotropical Buprestidae is becoming well known, from recent descriptions of new taxa (e.g. Bellamy & Westcott, 1995a, 1996; Nel-

\* Coleoptera Department, Transvaal Museum, P. O. 413, Pretoria 0001, South Africa. Email: bellamy@tm.up.ac.za

son, 1994) as well as publications providing distribution and host association records (e.g. Bellamy & Westcott, 1995b; Hespenheide 1996; Westcott *et al.* 1979, 1989). Attempts to better understand the Neotropical membership of the largest buprestid subtribe *Coraebina* Bedel (Agrilinae) are found in the publications of Cobos (1956, 1959, 1961, 1972a, 1972b, 1974, 1990) and Bellamy (1991, 1997 "in press"). The most recent outline of the subtribal classification and generic membership for the Neotropical Agrilinae was presented by Bellamy & Westcott (1995a).

A revision of the genus *Cyphothorax* Waterhouse has been considered necessary for many years. The collection of a new species in Oaxaca by J. Cope in 1982 and the discovery of a second new species in the collections of the American Museum of Natural History by H. A. Hespenheide first presented him with the opportunity to undertake the revision. However, he was gracious enough to turn these specimens over to me in 1994 and the chance collection of an additional new species during a trip I took with two colleagues from the Instituto de Biología, UNAM during late June and early July of 1996, prompted the completion of this study.

## MATERIALS AND METHODS

Type and other specimens borrowed for this study are deposited in the following collections. These abbreviations are based on the system found in Arnett, *et al.* (1993). The name of the curator is placed after the institutional address.

- AMNH - American Museum of Natural History, New York, U. S. A., (L. Herman)
- CASC - California Academy of Sciences, San Francisco, California, U.S.A., (D. Kavanaugh)
- GIES - E. F. Giesbert collection, Beverly Hills, California, U.S.A.
- GHNC - G. H. Nelson collection, Pomona, California, U. S. A.
- HAHC - H. and A. Howden collection, Ottawa, Canada
- JWCP - J. Wappes collection, Bulverde, Texas, U. S. A.
- MNHN - Museum National d'Histoire Naturelle, Paris, France, (J. Menier)
- MNMS - Museo Nacional de Ciencias Naturales, Madrid, Spain, (M. Zarazaga)
- NMPC - Narodni Museum, Kunratice, Prague, Czech Republic, (S. Bílý)
- PBCF - P. Bleuzen collection, Briis sous Forges, France
- RHMP - R. B. Holyński collection, Milanówek, Poland
- RLWE - R.L. Westcott collection, Salem, Oregon, U. S. A.
- TMSA - Transvaal Museum, Pretoria, South Africa
- TNHM - The Natural History Museum, London, England, (M. Kerley)

UNAM- Instituto de Biología, Universidad Nacional Autónoma de México, México City, D.F., México (H. Brailovsky).

Localities and label data are presented verbatim as recorded either from the label itself or from the published information. In some places where primary (i.e. country, state) locality information is missing from the labels, I have added this in parentheses. The data are grouped according to country and or state names to eliminate retyping these names consecutively.

The distribution map (Fig. 18) was created using a graphics software program with the locality coordinates determined by using the recently available U.S. Geological Survey National Mapping Information database on the Internet (<http://www-nmd.usgs.gov/www/gnis/>). For localities where no matching record was found, I have indicated the country or state with an open symbol, where the record is listed in the text.

#### *Cyphothorax* Waterhouse

*Cyphothorax* Waterhouse 1887: 180; 1889: 49; Kerremans 1892: 242; 1893: 117; 1903: 258; Obenberger 1935: 912; Blackwelder 1944: 323; Bellamy 1985: 426; Cobos 1990: 542; Hespeneheide 1996 :421.

Type-species: *Stenogaster palleolatus* Chevrolat 1835:134 (original designation).

**Summary description.** Small, elongate ovoid, subcylindrical; surface punctate, elytra transversely rugose; head with deep longitudinal groove on front from vertex to near distal clypeal margin; frontoclypeus compressed between antennal toruli; antennae short in proportion, serrate from antennomere 5; pronotum wider than long, disk with median gibbosity, sometimes strongly elevated; lateral carina present; elytra uniformly flattened on disk, no indication of carina; tarsal claws bifid; male genitalia with parameres having latero-apical translucent lobes; ovipositor with ventral setal brushes.

**Remarks.** *Cyphothorax* was placed by Cobos (1990) within a new subtribe, Dismorphina, together with the Neotropical genera *Dismorpha* Gistel (= *Stenogaster* Solier), *Eudiadora* Obenberger, *Trypantius* Waterhouse, and the Australian genera *Ethon* Gory & Laporte and *Meliboeithon* Obenberger. Unfortunately, this tribe cannot be considered to be monophyletic. While there is possible relationship of some of these genera, the comments by Volkovitsh & Hawkeswood (1990) regarding putative relationships for *Ethon* suggest placement far removed from this subtribe for that genus. Surprisingly, Cobos was either unaware of or chose to ignore several earlier works that touched on several of the genera discussed in his paper. Velten and Bellamy (1987) discussed the relationships of *Lepismadora* Velten and speculated that it came nearest to *Eudiadora*. Bellamy (1988) demonstrated phylogenetically that, with regard to the Australian corobines, the character state of a deep longitudinal groove on the frontovertex was not synapomorphic and did not

result in a monophyletic grouping of Australian genera. Later (Bellamy, 1991), the same character state was discussed in supporting the putative relationship of the South American coroebine *Eudiadora* Obenberger to *Cyphothorax* Waterhouse and *Lepismadora* Velten. Therefore, as listed by Bellamy & Westcott (1995a), the Dismorphina is a group of five Neotropical genera and includes *Dismorpha*, *Cyphothorax*, *Trypantius*, *Eudiadora* and *Lepismadora*.

#### KEY TO THE SPECIES OF *CYPHOTHORAX*

1. Color with either strong cupreous or aeneous reflection; hypomeron with distinct sinuate carina extending more or less parallel to lateral margin... (México: Oaxaca) .....2  
Color dark, either black or with greenish hue; hypomeron without distinct carinae, although possibly with irregular and very feeble indication of such .....3
2. Small, less than 6 mm in length; color iridescent cupreous; male genitalia as in Fig. 16... (N. E. Oaxaca) .....*C. oaxacensis* sp. nov.  
Size larger, greater than 7 mm in length; color with aeneous reflection; male genitalia as in Fig. 17... (S. W. Oaxaca) .....*C. mexicana* sp. nov.
3. Elytra with transverse setal concentrations or fasciae (Figs. 1, 2) .....4  
Elytral vestiture entire, uniform, not with fasciae (Figs. 3, 4) ..... 5
4. Setal concentrations on elytra in basal depression and three discal fasciae (Fig.2)..... (Brasil) .....*C. gibbicollis* (Kerremans)  
Setal concentrations restricted to two fasciae in apical half of elytra (Fig.1) (México).....*C. palleolatus* (Chevrolat)
5. Small, less than 7 mm in length; color black; pronotal gibbosity moderately convex, feebly elevated (Fig. 10)... (México: Yucatan) .....*C. yucatanensis* sp. nov.  
Larger, longer than 8 mm; dorsal color with pronotum dark cupreous, elytra with greenish hue; pronotal gibbosity subacute, strongly elevated (Fig.9)..... (South America: Venezuela-Argentina) ..... *C. gibber* (Gory)

#### *Cyphothorax palleolatus* (Chevrolat)

(Figs. 1, 7,13)

*Stenogaster palleolatus* Chevrolat 1835:134; Gemminger & von Harold 1869:1435; Saunders 1871:112. *Cyphothorax palleolatus*: Waterhouse 1887:180; 1889: 49, Kerremans 1892: 242; 1903: 258; Obenberger 1935:912; Blackwelder 1944:323; Cobos 1972a: 345, Hespeneide 1990:202.

**Summary description.** 7.8-9.8 x 2.3-3.0 mm; pronotum less than 1.4 x wider than long, strongly gibbose medially (Fig. 7); black with faint cupreous reflections when viewed from above; median portion of thoracic and abdominal sterna nitid black; elytra irregularly transversely rugose; dorsal and ventral surfaces with irregular vestiture of white adpressed setae; elytra with setae concentrated into basal depression and two transverse fasciae in apical third. Male genitalia as in figure 13.

**Specimens examined.** Holotype, ♂ (TNHM): Type (p)/*palleolatus* Chevr. (h)/

Saunders 74 y 18. (p)/Type (p, within red circle); MEXICO, CAMPECHE, 1 ex. (RLWE) 10 km W Xpujil, Chicanna, 12-14.VII.83, 300m, M. Kaulbara; 1♂ (UNAM) Escarcega-Champoton, 14.VI.1985, H. Velasco; CHIAPAS, 16 ex. (JWCP, GHNC, TMSA, UNAM) 17 km W Tuxtla Grtz, June 21-25 1987, J. E. Wappes; 1 ex. (RLWE) Pq. Nac. Sumidero, Coyota Mirador, 1700m, 15.VI.1989, H. Howden; 1 ex. (RLWE) Sumidero Nat Pk, 17.VI.1989, E. B. Lago, S. Testa; 1 ex. (GHNC) Parque Nacional "El Sumidero", 17.VI.1990/between Mirador "La Corba" and Mirador "Los Chiapas"/R.A. Cunningham; 1 ex. (TMSA) Parque Nacional "El Sumidero", 23.VI.1990/ W. B. Warner; 1 ex. (GHNC) 1100m, N. Tsla. Gutierrez, 6-7km N. Parque Nat. Canon del Sumidero, vicinity Mirador/El Coyota, 21.VI.1991, R. A. Cunningham, tropical deciduous forest; 3 ex. (GIES, TMSA) 17 km W Tuxtla Gutierrez, 3300', June 21-25 1987, E. Giesbert; JALISCO, 1♂, Estación de Biología Chamela, 24.VII.1986, M. Sánchez; VERACRUZ, 1♂ (PBCF) Sotepan, 500m, VIII.1991; YUCATAN, 1 ex., vic. Chitzin Itza, 13-14.VI.1993, J. E. Wappes; 1 ex. (RHMP) Mexico?; 1 ex. (TMSA) BRAZIL, MINAS GERAIS, Pedra Azul, F.M. Oliveira.

**Remarks.** This is the largest and most variable species of the genus. With most specimens coming from southern Mexico, it will not be surprising to find that it occurs in similar habitats in Central America and northern South America. This distribution is not unlike that of *Omochyseus omocyrius* (Thomson) discussed earlier by Bellamy & Westcott (1995a). *Cyphothorax palleolatus* is immediately recognizable due to the pronotal gibbosity and the irregular small setal patches of the elytra. Although the specimen from Estación de Biología Chamela, recorded by Hespeneheide (1990) is from well outside of the apparent range of this species, I have examined the specimen and confirm Hespeneheide's determination. The specimen from Brazil was sent to me in exchange by Antonio Cobos many years ago but compares very favorably with the holotype and additional specimens from Mexico.

*Cyphothorax gibbicollis* (Kerremans)

(Figs. 2, 8)

*Amorphosoma gibbicolle* Kerremans 1897:52.

*Diadora gibbicollis* Kerremans 1903:248; Obenberger 1935:790; Cobos 1972a:344.

*Eudiadora gibbicollis*: Cobos 1974:80.

*Cyphothorax gibbicollis*: Hespeneheide 1979:111.

**Summary description.** 7.0 x 2.0 mm; pronotum 1.6 x wider than long, moderately gibbose medially (Fig. 7); black with bluish reflections when viewed laterally, depressed areas of dorsal rugosity and visible pleura with dark cupreous reflections; median portion of thoracic and abdominal sterna cupreous; elytra irregularly transversely rugose; dorsal and ventral surfaces with irregular vestiture of white adpressed setae; elytra with setae concentrated into basal depression and three subarcuate discal fasciae in apical half. Male unknown.

**Specimens examined.** Holotype, ♀(TNHM), (BRAZIL), PERNAMBUCO, Serra de Communaty, E. Gounelle.

**Remarks.** The lack of specimens additional to the holotype makes it impossible to comment on variation in this species or its distribution. As indicated in the key, *C. gibbicollis* comes nearest to *C. palleolatus*, but differs as discussed in the key.

*Cyphothorax gibber* (Gory), comb. nov.  
(Figs. 3, 9, 14)

*Stenogaster gibber* Gory 1841:205; Gemminger & von Harold 1869:1435; Waterhouse 1889:49 (syn. of *palleolatus*); Kerremans 1892:242; 1903:258; Obenberger 1935:912; Blackwelder 1944:323.

*Cyphothorax argentiniensis* Cobos 1972a:345. New synonymy.

**Summary description.** 8.7 - 9.2 x 2.5 - 2.7 mm; pronotum slightly more than 1.6 x wider than long, strongly gibbose medially (Fig. 9); head and pronotum black with strong red-cupreous tint; elytra black with green-aeneous tint; median portion of thoracic and abdominal sterna nitid black, but with faint cupreous reflection; elytra irregularly transversely rugose; dorsal and ventral surfaces with irregular vestiture of white adpressed setae; elytra with setae irregular but coalescing into irregularly-spaced groups and more dense in apical third. Male genitalia as in figure 14.

**Specimens examined.** Holotype of *gibber*, ♀ (MNHN) "Brazil"; holotype, ♂, and allotype, ♀, of *argentiniensis* (MNMS) ARGENTINA, TUCUMAN, El Cadillal; 1 ♀ (NMPC), Depto. Trancas (h)/San Pedro de Calalao, I.1953; 1 ex (GHNC) SALTA, XI.1959, S. Lorenze, A. Martinez leg.; 1 ex. (CASC) SALTA, Tab?il?as (letters faded), XII.32-IX.33/W.C.Harrington; 2 ex. (MNHN) BRAZIL, BAHIA, Villa Victoria, Ch. Pujol 1890; 1 ♂ (MNMS) PARAGUAY, Depto. s. PEDRO, Carumb, 10.II.1973, R. Golbach; 1 ex. (USNM) VENEZUELA, Guarico, Mato Masaguaral (44 km 5 Calabozo) 11-19.V.1985, Menke & Carpenter; 1 ♀ (PBCF) Maracay, Cuyagua, 7.VII.1989.

**Remarks.** I find it strange that this synonymy was not discovered previously and that this species was not considered by Cobos (1990) during his investigation into *Dismorpha*. This species is easily recognized by the red-cupreous coloration of the head and pronotum and the greenish cast of the elytral integument. The distribution of this species from Venezuela to northwestern Argentina suggests a preference for habitat along the eastern flank of the Andres range and possibly in more arid plant communities.

*Cyphothorax yucatanensis* sp. nov.  
(Figs. 4, 10, 15)

**Holotype.** Male; length 6.5 mm, width 1.8 mm; elongate, subcylindrical; head deeply, longitudinally cleft between eyes; pronotum with central gibbosity; elytra

flattened; integument black with slight aeneous reflection, especially on small elytral callosities; upper surface irregular; pronotum with concentric imbrication, especially discally; elytra finely calloused; entire body with irregular covering of short, stout, white adpressed setae.

*Head.* With deep, narrow, longitudinal furrow extending from fronto-vertex to bifurcate apex dorsad fronto-clypeal plate; fronto-clypeus compressed between antennal toruli dorsally, widening ventrally, arcuately emarginate distally; gena depressed beneath eye for reception of basal antennomeres in repose, margin angle acute; eyes of moderate size relative to head, inner margins diverging dorsally, ocular groove extends only along inner dorsal margin, from above inner half to just beyond dorsal apex; antennae short, extending to about apical 1/3 of pronotum when laid along side; antennomeres compact, 2 subequal to 1, 3+4 together subequal to 2; serrate from 4; 11 oblong; 4-11 each with a few adpressed, apparently translucent sensory setae.

*Pronotum.* Wider than long, width 1.28 times length, widest at about middle; anterior margin nearly evenly transverse; posterior margin strongly bisinuate, on either side of narrow transverse median lobe anterior to scutellum; lateral margin widening from postero-lateral angles, arcuate medially before narrowing to anterior margin; marginal carina entire laterally, carina extending gradually ventrad from posterior margin toward head; disk with convex median gibbosity anterior to middle; two short, flattened acuminate costae extend anterior from posterior margin, one on either side of middle; one sinuate pre-lateral carina on either side extending from posterior margin to just beyond anterior 1/3; scutellum triangular, longer than wider, posterior sides acuminate.

*Elytra.* Widest opposite humeri, as wide as pronotum; disk flattened; lateral margins very gradually narrowing beyond humeri to about midpoint, then gradually widening to about apical 1/3 before narrowing attenuately to separate round, serrate apices; epipleuron separated by fine carina, extending and gradually narrowing to beyond apical 1/5.

*Ventral surface.* Prosternum with anterior margin entire, evenly transverse; disk narrowing into acuminate process; anterior projection of abdominal sternum 1 covering extreme lateral portion of metacoxal plate and entire mesepimeron; abdomen with sternum 1 slightly longer than 2, 2 > 3, 3 > 4, 5 subequal to 3+4; 5 with margin rounded laterally, truncate distally; a deep premarginal groove extends along entire margin.

*Legs.* Femora flattened, subfusiform; tibiae slightly longer, more slender than femora, slightly expanded distally; tarsi short, 1st tarsomere slightly longer than 2, 2 > 3, 3 > 4, 5 slender, longer than 2+3+4, 4 with expanded ventral pulvillus; 5 with claws bifid.

*Genitalia.* As in figure 15.

**Specimens examined.** Holotype ♂ (AMNH) MEXICO, YUCATAN, Chuminopolis, 28.VI.1952, J. & D. Pallister/C.R. Vose Fund, Explorers Club, A.M.N.H. Exped.

**Remarks.** This unique specimen can be separated from its congeners as indica-

ted in the key. Although *C. palleolatus* has been taken from Yucatan near Chichén Itzá, these two species are separated by differences in size, dorsal vestiture, configuration of the pronotal gibbosity and the aedeagus.

*Cyphothorax oaxacensis* sp. nov.  
(Figs. 5, 11, 16)

**Holotype.** Male; length 5.6 mm, width 1.5 mm; elongate, subcylindrical; head deeply, longitudinally cleft between eyes; pronotum with central gibbosity; elytra flattened; integument with somber cupreous reflection, especially laterally non dorsal surface, ventral surface uniformly dark cupreous; upper surface irregular; pronotum with concentric imbrication, especially discally; elytra rugose; entire body with irregular covering of short, stout, white adpressed setae.

*Head.* With deep, narrow, longitudinal furrow extending from fronto-vertex to bifurcate apex dorsad fronto-clypeal plate; fronto-clypeus compressed between antennal toruli dorsally, widening ventrally, arcuately emarginate distally; gena depressed beneath eye for reception of basal antennomeres in repose, margin angle acute; eyes of moderate size relative to head, inner margins diverging dorsally, ocular groove extends only along inner dorsal margin, from above inner half to just beyond dorsal apex; antennae short, extending to about apical 1/3 of pronotum when laid along side; antennomeres compact, 2 subequal to 1, 3+4 together subequal to 2; serrate from 4; 1 loblong; 4-11 each with a few adpressed, apparently translucent sensory setae.

*Pronotum.* Wider than long, width 1.33 times length, widest at about middle; anterior margin nearly evenly transverse, but with angulate midpoint; posterior margin strongly bisinuate, on either side of narrow transverse median lobe anterior to scutellum; lateral margin widening from postero-lateral angles, arcuate medially before narrowing to anterior margin; marginal carina entire laterally, carina extending gradually ventrad from posterior margin toward head; disk with convex median gibbosity anterior to middle; two short, flattened acuminate costae extend anterior from posterior margin, one on either side of middle; one sinuate pre-lateral carina on either side extending from posterior margin to just beyond anterior 1/3; scutellum triangular, longer than wider, posterior sides acuminate.

*Elytra.* Widest opposite humeri, as wide as pronotum; disk flattened; lateral margins very gradually narrowing beyond humeri to about midpoint, then gradually widening to about apical 1/3 before narrowing attenuately to separate round, serrate apices; epipleuron separated by fine carina, extending and gradually narrowing to beyond apical 1/5.

*Ventral surface.* Prosternum with anterior margin entire, evenly transverse; disk narrowing into acuminate process; hypomeron with oblique irregularly sinuate carina on disk; anterior projection of abdominal sternum 1 covering extreme lateral portion of metacoxal plate and entire mesepimeron; abdomen with sternum 1



slightly longer than 2,  $2 > 3$ ,  $3 > 4$ , 5 subequal to 3+4; 5 with margin rounded laterally, truncate distally; a deep premarginal groove extends along entire margin.

*Legs.* Femora flattened, subfusiform; tibiae slightly longer, more slender than femora, slightly expanded distally; tarsi short, 1st tarsomere slightly longer than 2,  $2 > 3$ ,  $3 > 4$ , 5 slender, longer than 2+3+4, 4 with expanded ventral pulvillus; 5 with claws bifid.

*Genitalia.* As in figure 16.

**Specimens examined.** Holotype (UNAM) MEXICO, OAXACA, 17 km S Matias Romero 12.VII.1982, J. Cope.

**Remarks.** This new species differs from all its congeners by the small size, iridescent coloration, and the relatively reduced pronotal gibbosity. The unique specimen comes from my research collection, given to me by the collector many years ago, and is now donated to UNAM.

*Cyphothorax mexicanus* sp. nov.

(Figs. 6, 12, 17)

**Holotype.** Male; length 7.6 mm, width 2.1 mm; elongate, subcylindrical; head deeply, longitudinally cleft between eyes; pronotum with central gibbosity; elytra flattened; integument with aeneous reflection; upper surface irregular; pronotum with concentric imbrication, especially discally; elytra rugose; entire body with irregular covering of short, stout, white adpressed setae, more densely concentrated on lateral portion of pronotum.

*Head.* With deep, narrow, longitudinal furrow extending from fronto-vertex to bifurcate apex dorsad fronto-clypeal plate; fronto-clypeus compressed between antennal toruli dorsally, widening ventrally, arcuately emarginate distally; gena depressed beneath eye for reception of basal antennomeres in repose, marginal angle acute; eyes of moderate size relative to head, ovoid, inner margins diverging dorsally, ocular groove extends only along inner dorsal margin, from above inner half to just beyond dorsal apex; antennae short, extending to about apical 1/3 of pronotum when laid along side; antennomeres compact, 2 subequal to 1, 3+4 together subequal to 2; serrate from 4; 11 oblong; 4-11 each with a few adpressed, apparently translucent sensory setae.

*Pronotum.* Wider than long, width 1.31 times length, widest at about middle; anterior margin nearly evenly transverse; posterior margin strongly bisinuate, on either side of narrow transverse median lobe anterior to scutellum; lateral margin widening from postero-lateral angles, arcuate medially before narrowing to anterior margin; marginal carina entire laterally, carina extending gradually ventrad from posterior margin toward head; disk with convex median gibbosity anterior to middle; two short, flattened acuminate costae extend anterior from posterior margin, one on either side of middle; one sinuate pre-lateral carina on either side extending from posterior margin to just beyond anterior 1/3; scutellum triangular, longer than wider, posterior sides acuminate.

*Elytra.* Widest opposite humeri, as wide as pronotum; disk flattened; lateral margins very gradually narrowing beyond humeri to about midpoint, then gradually widening to about apical 1/3 before narrowing attenuately to separate round, serrate apices; epipleuron separated by fine carina, extending and gradually narrowing to beyond apical 1/5.

*Ventral surface.* Prosternum with anterior margin entire, evenly transverse; disk narrowing into acuminate process; hypomeron with oblique irregularly sinuate carina on disk; anterior projection of abdominal sternum 1 covering extreme lateral portion of metacoxal plate and entire mesepimeron; abdomen with sternum 1 slightly longer than 2, 2 > 3, 3 > 4, 5 subequal to 3+4; 5 with margin rounded laterally, truncate distally; a deep pre-marginal groove extends along entire margin.

*Legs.* Femora flattened, subfusiform; tibiae slightly longer, more slender than femora, slightly expanded distally; tarsi short, 1st tarsomere slightly longer than 2, 2 > 3, 3 > 4, 5 slender, longer than 2+3+4, 4 with expanded ventral pulvillus; 5 with claws bifid.

*Genitalia.* As in figure 17.

**Specimens examined.** Holotype ♂ (UNAM) MEXICO, OAXACA, 5.6 km NW San Bartolo, 16°28'N 95°52'W, 1.VII.96, H. Brailovsky.

**Remarks.** This new species comes very near *C. oaxacensis* with which it shares the character state of the hypomeral carina. They are very close on first inspection but differ significantly in size, coloring, and shape of the male genitalia. They are the only two species, each represented by a single specimen, from Oaxaca and thus most likely to have a more recent common ancestor. These two species can be distinguished from the other Mexican species, *C. palleolatus*, by their smaller size, more iridescent color, the reduced pronotal gibbosity, the lack of the irregularly transverse setal fasciae and the shape and structure of the male genitalia.

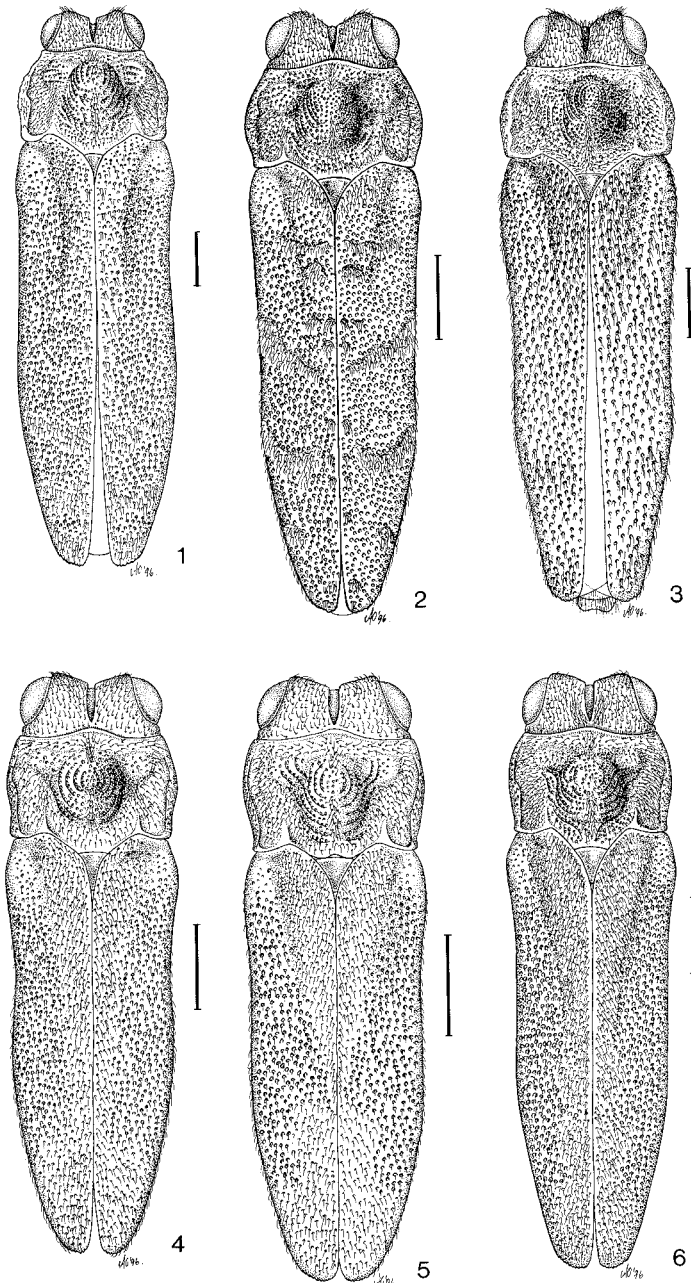
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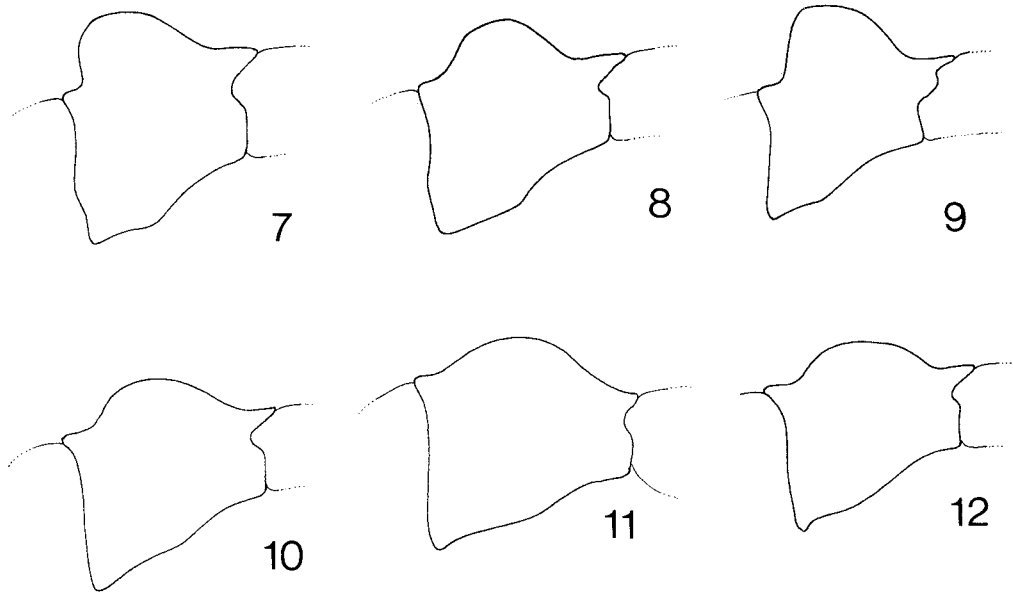
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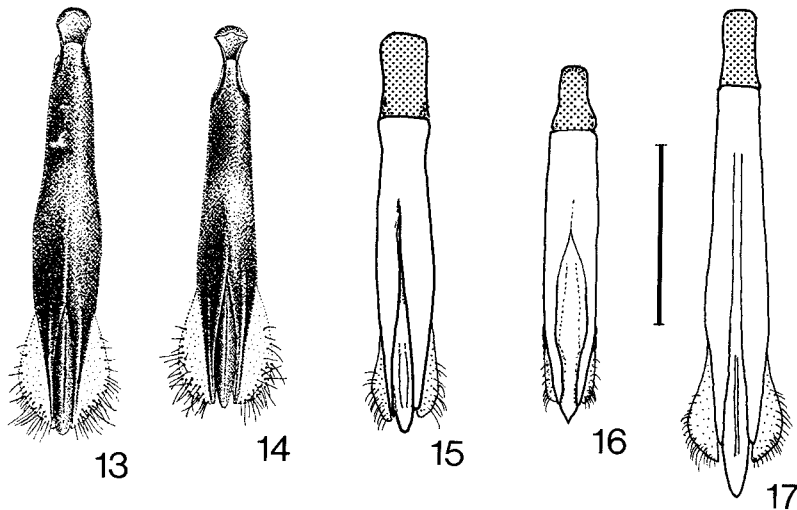
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Figs. 1-6. *Cyphothorax* species, dorsal habitus. 1. *C. palleolatus* (Chevrolat); 2. *C. gibbicollis* (Kerremans); 3. *C. gibber* (Gory); 4. *C. yucatanensis* sp. nov. 5. *C. oaxacensis* sp. nov. 6. *C. mexicanus* sp. nov. Scale bars= 1 mm.



Figs. 7-12. *Cyphothorax* species, pronotum, lateral aspect. 7. *C. palleolatus* (Chevrolat); 8. *C. gibbicollis* (Kerremans); 9. *C. gibber* (Gory); 10. *C. yucatanensis* sp. nov.; 11. *C. oaxacensis* sp. nov.; 12. *C. mexicanus* sp. nov.



Figs. 13-17. *Cyphothorax* species, male genitalia, dorsal aspect. 13. *C. palleolatus* (Chevrolat), del. Cobos 1972:341; 14. *C. gibber* (Gory), del. Cobos 1972:341, Fig. 9 (as *argentiniensis* Cobos); 15. *C. yucatanensis* sp. nov.; 16. *C. oaxacensis* sp. nov.; 17. *C. mexicanus* sp. nov. Scale bar=1 mm for Figs. 15-17.



Fig. 18. Distribution of *Cyphothorax* spp.