Insect systematics A journal of world insect systematics TOTAL VIOLENTIAL TOTAL TO

0854

A brief review of the New World *Xestipyge* Marseul (Coleoptera: Histeridae: Dendrophilinae: Paromalini) with description of a new species from the southwestern USA

William B. Warner 1345 W. Gila Lane Chandler, Arizona 85224 USA

Date of issue: February 26, 2021

Warner WB. 2021. A brief review of the New World *Xestipyge* Marseul (Coleoptera: Histeridae: Dendrophilinae: Paromalini) with description of a new species from the southwestern USA. Insecta Mundi 0854: 1–12.

Published on February 26, 2021 by Center for Systematic Entomology, Inc. P.O. Box 141874 Gainesville, FL 32614-1874 USA http://centerforsystematicentomology.org/

INSECTA MUNDI is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. Insecta Mundi will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. Insecta Mundi publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

Insecta Mundi is referenced or abstracted by several sources, including the Zoological Record and CAB Abstracts. Insecta Mundi is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Guidelines and requirements for the preparation of manuscripts are available on the Insecta Mundi website at http://centerforsystematicentomology.org/insectamundi/

Chief Editor: David Plotkin, insectamundi@gmail.com **Assistant Editor:** Paul E. Skelley, insectamundi@gmail.com

Layout Editor: Robert G. Forsyth

Editorial Board: Davide Dal Pos, Oliver Keller, M. J. Paulsen

Founding Editors: Ross H. Arnett, Jr., J. H. Frank, Virendra Gupta, John B. Heppner, Lionel A. Stange, Michael

C. Thomas, Robert E. Woodruff

Review Editors: Listed on the Insecta Mundi webpage

Printed copies (ISSN 0749-6737) annually deposited in libraries

Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA The Natural History Museum, London, UK National Museum of Natural History, Smithsonian Institution, Washington, DC, USA Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (Online ISSN 1942-1354) in PDF format

Archived digitally by Portico
Florida Virtual Campus: http://purl.fcla.edu/fcla/insectamundi
University of Nebraska-Lincoln, Digital Commons: http://digitalcommons.unl.edu/insectamundi/
Goethe-Universität, Frankfurt am Main: http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240

Copyright held by the author(s). This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. http://creativecommons.org/licenses/by-nc/3.0/

A brief review of the New World *Xestipyge* Marseul (Coleoptera: Histeridae: Dendrophilinae: Paromalini) with description of a new species from the southwestern USA

William B. Warner

1345 W. Gila Lane Chandler, Arizona 85224 USA wbwarnergm1@gmail.com

Abstract. New World species of the histerid beetle genus *Xestipyge* Marseul (Coleoptera: Histeridae: Dendrophilinae: Paromalini) are reviewed, and *X. skelleyi*, **new species**, is described. A dichotomous key and illustrations are provided as identification means for the now five included species from the Western Hemisphere.

Key words. Key, taxonomy, clown beetle, inquiline.

ZooBank registration. urn:lsid:zoobank.org:pub:966EA115-4F25-4B34-996F-FB0DF51E609D

Introduction

Xestipyge was erected by Marseul (1862) as a monotypic subgenus of his genus Carcinops for "Carcinops radula Marseul" because of its unusual elytral striae, with fourth dorsal stria arched over the fifth dorsal stria and connecting to the sutural (= sixth dorsal) stria. Lewis elevated Xestipyge to generic status in 1905. In addition to the different elytral strial arrangement, most Xestipyge species (including all those known from the New World) have unusual ground punctures consisting of mostly transverse groups of 2–5 (usually 3) micropunctures (e.g., Fig. 4), and males have the ventral protarsal setae enlarged and spatulate somewhat similar to males of many Saprininae histerids. The unusual microsculpture of Xestipyge adults is shared by specimens of Carcinops subgenus Carcinopsida Casey, currently comprising four described species of which two were considered valid by Reese and Swanson (2017); however, C. (Carcinopsida) species lack the elytral strial and male protarsal characters of Xestipyge species. Microsculpture in the several dozen species forming the much larger nominate subgenus Carcinops consists of discrete, single micropunctures.

Xestipyge species are not numerous, and Mazur (2011) lists only four species from the New World. Compared to many other Paromalini groups, Xestipyge species are relatively distinctive from one another, differing both in external sculpture and in the shape of the male genitalia, especially the parameres in males. This brief review provides a description of a new species from the southwestern USA, along with illustrations of it and the other four described species from the Western Hemisphere.

Materials and Methods

Terminology except as described below follows Bousquet and Laplante (2006). As is the standard for histerids, elytral striae are numbered in ascending order from the humerus to the suture, rather than from the suture towards the outside as is used in most other beetles. Measurements are rounded to the nearest 0.1 mm. "Length" is defined by the dorsal distance between the anterior edge of the pronotum to the posterior edge of the elytra. "Total length" is defined as the distance between the visibly anterior-most point of the body (usually head) to the visible posterior-most point on the body (usually pygidium), both measurements being exclusive of appendages. (Where fewer than 10 specimens were measured, the number is given following the size range.) "Ground punctures" means the underlying micropunctural surface sculpture, not the much larger punctures visible to the naked eye or under low magnification. Ground punctures in *Xestipyge* are grouped micropunctures (usually groups of 3) and are generally not mentioned in diagnoses as they are present on most body surfaces on all species. The

2 · February 26, 2021 WARNER

groupings are generally more or less transverse, but on the more heavily punctured lateral pronotal portions can become nearly longitudinal and tend to form channels between the micropunctures, and may appear subaciculate. Elytral "pseudostriae" are elongate striaform elements between the dorsal stria, generally of much shorter length than striae themselves and often discontinuous. Those species lacking elytral pseudostriae often have similar, though finer, aciculations on the apical elytral declivity, each scratch-like mark ending in a puncture at the top of the declivity and not extending far onto the elytral disc as with pseudostriae. Males may be separated from females by the structure of the protarsal setae (Bousquet and LaPlante 2006): Males have the ventral setae flattened and broader (narrowly subfoliate), whereas females have these setae simple and usually shorter. Synonymies do not include mere mention in checklists or other publications without taxonomic acts, (re)descriptions, or keys. In distribution information, USA state and Canadian provincial codes are those used by the postal services of those countries. Collection codes are as follows: ASUT: Arizona State University, Tempe; CASC: California Academy of Sciences, San Francisco; CMNH: Carnegie Museum of Natural History, Pittsburgh; CSCA: California State Collection of Arthropods (California Department of Food & Agriculture), Sacramento; CSUC: Colorado State University, Ft. Collins; DMNS: Denver Museum of Nature and Science, Denver; FMNH: Field Museum of Natural History, Chicago; FSCA: Florida State Collection of Arthropods, Gainesville; MCZC: Museum of Comparative Zoology, Harvard University, Cambridge; MNHN: Museum Nacional Histoire Naturelle, Paris; TAMU: Texas A & M University, College Station; UAIC: University of Arizona, Tucson; USNM: National Museum of Natural History, Washington D.C.

Key to the New World Xestipyge

key to the New World Aestipyge	
1.	Elytron with dorsal intervals with 1 or more pseudostriae in about apical half or more (Fig. 6–9); mostly neotropical
_	Elytron dorsal intervals lacking pseudostriae, but may have strong aciculations beginning in punctures at base of elytral apical declivity and extending apically down declivity (e.g., Fig. 1–5); mostly Nearctic
2.	Elytron with pseudostriae on dorsal intervals in the form of 1 or 2 straight and mostly continuous channels that may break up basally into punctures or coalescent groups of punctures (Fig. 9); male with parameres widest at about apical tenth (Fig. 16); Mexico and Central America in <i>Atta</i> Fabricius ant nest detritus
_	Elytron with pseudostriae on dorsal intervals formed by discontinuous and undulating vermiform segments (Fig. 7); male with parameres widest at about apical third (Fig. 15); Mexico to Brazil
3.	East of Rocky Mountains; elytron with sutural stria usually effaced in basal quarter or third, outer subhumeral stria usually obsolescent or lacking and inner subhumeral stria noticeably weaker than dorsal striae and usually effaced in basal quarter or more; female pygidium various, but often with weak impression to incised chevron in apical half of disc; male with tegmen less elongate (Fig. 17, 19)
_	West of Rocky Mountains (Arizona, California); elytron with sutural stria usually complete to arch with 4 th dorsal stria (occasionally narrowly broken or continued by irregular punctures at base), inner subhumeral stria usually about as coarse and complete as dorsal striae (may be weaker or effaced briefly over humeral umbone), outer subhumeral stria usually distinct at least in middle section; female pygidium convex, lacking any indication incised chevron or shallow depression on apical half of disc; male tegmen very elongate (Fig. 18)
4.	Metasternum lateral to lateral stria usually with scattered punctures (some may be subcontiguous) mostly separated by half or more of their own diameters; elytron with dorsal intervals usually flat to slightly convex, behind sutural strial arch mostly lacking coarse punctures anterior to apical quarter or so (Fig. 4); female pygidium usually with distinct incised chevron in apical half (Fig. 3); male with

 New World Xestipyge Insecta Mundi $0854 \cdot 3$

..... X. geminatum (LeConte)

Xestipyge conjuctum (Say)

Figures 1, 3-4, 17

Hister conjunctus Say 1825: 38. Type locality: USA circa 1825 (based on article title).

Paromalus conjunctus: J.E. LeConte 1845: 68; Horn 1873: 306.

Carcinops conjunctus: Marseul 1855: 89.

Xestipyge conjunctum: Lewis 1905: 37; Downie and Arnett 1996: 614; Bousquet and Laplante 2006: 219.

Diagnosis. Head weakly convex; disc mostly lacking coarse punctures. Pronotum with coarse punctures mostly restricted to lateral thirds and mostly single row along basal margin, row widening to about 2–4 punctures deep anterior to scutellum. Elytron with inner subhumeral weak and normally present in apical half only, occasionally extending to and sometimes fusing with humeral stria but lacking on humerus; outer subhumeral stria obsolete to sometimes represented medially by irregular puncture line, occasionally present near apex as well; dorsal intervals usually flat to weakly convex, sutural stria usually effaced in basal quarter to third, intervals between second dorsal and sutural stria usually with scattered punctures only in about apical third or less, declivity usually



Figures 1–2. Dorsal habitus of Xestipyge species. 1) X. conjunctum, SC, USA. 2) X. geminatum, NC, USA.



Figures 3–5. *Xestipyge* species. **3)** *X. conjunctum*, SC, USA, female pygidium. **4)** *X. conjunctum*, right elytron. **5)** *X. geminatum*, NC, USA, right elytron.

with distinct aciculations emanating from punctures at edge of declivity. Metasternum lateral to stria with coarse punctures scattered, mostly separated by half to two times their diameters with few subcontiguous, occasionally with coarse punctures denser, lateral metasternal stria variable: complete to metatrochanter to effaced in posterior quarter or third. In male: tegmen with parameres slightly shorter than basal piece, slowly triangularly expanding to widest width at apical ½9, width slightly more than ½ length (Fig. 17). Female with distinct chevronshaped incision on pygidial disc vaguely following free margin in apical half (Fig. 3).

Length: 1.8–2.3 mm; total length: 2.0–2.8 mm; widest width: 1.0–1.9 mm.

Range. Extreme southeastern Canada to Florida and west to Texas (Bousquet and Laplante 2006; Mazur 2011). I have examined specimens from the following states: USA: AR, IL, LA, MO, OH, NC, OK, SC, TX, WI.

Habits. Bousquet and Laplante (2006) list collections from tree hollows and cow manure. I have examined specimens collected in those habitats as well as wood chips, rodent (woodchuck and *Neotoma* sp.) nests, horse manure, stable sweepings, Berlese of flood debris, and in Lindgren funnel traps.

Remarks. *Xestipyge conjunctum* is similar to *X. geminatum*, and is mostly sympatric with that species; characters to differentiate those two species are given under *X. geminatum*. On first appearance *X. conjunctum* is even more similar to *X. skelleyi*, but specimens of the latter are easily differentiated by their western distribution, (usually) complete (to arch) elytral sutural stria, much more elongate tegmen in males, and lack of any indication of an incised chevron on pygidium in females.

New World Xestipyge Insecta Mundi $0854 \cdot 5$



Figures 6-7. Xestipyge garbigliettii, Durango, Mexico. 6) Dorsal habitus. 7) Close-up of elytral sculpture.

Xestipyge garbigliettii (Marseul)

Figures 6–7, 15

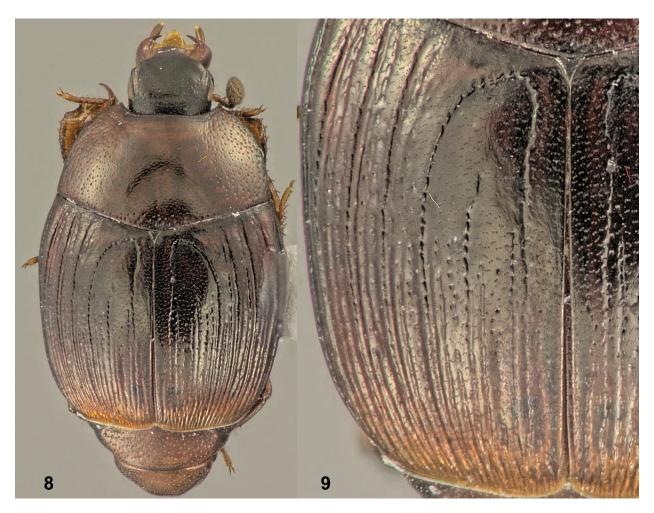
Carcinops (*Xestipyge*) *garbigliettii* Marseul 1867: 55. Type locality: Brazil; Lewis, 1888: 209. *Xestipyge garbigliettii*: Lewis 1905: 37.

Diagnosis. Head with vertex moderately cribrately punctate at each side, punctures abruptly much sparser on front, mostly lacking along midline and on clypeus; pronotum coarsely and densely punctate in about lateral thirds and in narrow band about 3 punctures deep along posterior margin, leaving roughly triangular middle portion subimpunctate. Elytron with outer subhumeral distinct medially, obsolete to obsolescent basally and apically, inner subhumeral complete behind humerus, not reaching elytral base, dorsal striae complete except for 5th reaching about basal quarter beneath sutural arch which is complete (sutural stria not effaced basally), all dorsals with strial punctures contiguous to separated by up to approximately twice their own diameters, punctures distinctly crenulating strial channels, dorsal intervals 2–4 in about apical ½ to ¾ each with both scattered coarse punctures and 2 to 3 pseudostriae formed by irregularly discontinuous and wavy vermiform line segments, these incised nearly as deeply as striae but much narrower and not crenulated, pseudostriae nearly reaching base in first and second intervals. Tegmen with basal piece nearly twice as long as parameres; parameres gradually triangularly expanded at about apical third, widest width slightly less than ½ length (Fig. 15).

Length: 2.1 mm; total length: 2.3–3.0 mm; widest width: 1.5–1.9 mm (3 specimens measured).

Range. "Brazil, Mexico" (Lewis 1888). I have examined specimens from the Mexican states of Durango and Veracruz.

6 · February 26, 2021 WARNER



Figures 8-9. Xestipyge multistriatum, Veracruz, Mexico. 8) Dorsal habitus. 9) Close-up of elytral sculpture.

Habits. Apparently attracted to excrement: one specimen examined was labelled "oak-madroño-pine woodland, at dung trap (human)," and another "cow dung."

Remarks. This species can only be confused with *X. multistriatum* amongst the New World *Xestipyge* but differs in having the elytral pseudostriae broken into sinuous segments vs. straight and more continuous in *X. multistriatum*.

The above diagnosis is sensu Lewis (1888), and was made from Mexican specimens. I have examined photographs of Marseul's type, which indeed appears very similar to Mexican specimens though differing very slightly in some sculptural details. Without confirmation via examination of tegmen shape of the type nor Brazilian specimens of *X. garbigliettii*, assignment of Mexican specimens to that taxon should be considered provisional.

Xestipyge geminatum (LeConte)

Figures 2, 5, 19

Carcinops geminatus J.E. LeConte 1859: 314. Type locality: New York; Marseul 1862: 18.

Paromalus geminatus: Horn 1873: 306; Blatchley 1910: 616.

Xestipyge geminatum: Lewis 1905: 37; Downie and Arnett 1996: 614; Bousquet and Laplante 2006: 220.

Diagnosis. Head with disc weakly depressed, with scattered fine punctures in addition to ground punctuation. Pronotum with coarse punctures scattered throughout, though less densely so towards middle; basal marginal puncture row present but subconfused with other coarse punctuation. Elytron with inner subhumeral noticeably

New World Xestipyge Insecta Mundi $0854 \cdot 7$

weaker than dorsal striae, normally extending to and sometimes fusing with humeral stria, but usually lacking on humerus; outer subhumeral stria obsolete to sometimes represented medially by irregular puncture line, occasionally present near apex as well; dorsal intervals usually noticeably weakly concave, intervals between second dorsal and sutural stria usually with scattered punctures in about apical half (less commonly coarser punctures only extending to apical quarter or so), apical declivity with aciculations variably present, often lacking entirely; sutural stria usually effaced in basal quarter or third, sometimes more or less continuous represented in that area as irregular line of punctures without strial depression. Metasternum lateral to stria with coarse punctures dense (often subcontiguous), mostly separated by less than half their own widths; lateral metasternal stria variable: complete to metatrochanter or variably effaced in posterior quarter or third. In male: tegmen with parameres about as long as basal piece, apical angular prominence obtuse and only slightly expanded just before shortly (nearly) rounded apex leaving parameral outline nearly parallel-sided, width about ½ length. Female pygidium often with vague and shallow chevron-shaped depression in apical half, but usually lacking incised chevron on disc, incised chevron when rarely present usually incomplete or weakly impressed.

Length: 1.9-2.5 mm; total length: 2.1-3.3 mm; widest width: 1.6-2.0 mm.

Range. Mazur (2011), and Bousquet and Laplante (2006) list the distribution as USA: New York, eastern N America from Quebec and Ontario to Texas and Florida. I have examined specimens from AR, IN, LA, MA, MO, NE, OH, OK, PA, TX, WI.

Habits. Bousquet and Laplante (2006) mention collections from tree hollows, sifting leaves, and in carrion; in addition to those habitats, I have seen specimens with ecological data including cow dung, under bark of logs, Berleses of flood debris and deciduous litter, and others from cross vane panel traps, flight intercept traps and Lindgren funnel traps.

Remarks. *Xestipyge geminatum* shares with *X. conjunctum* general facies including (usually) effacement of a portion of the elytral sutural stria, as well as similar distribution. However, females of *X. conjunctum* have a distinctly incised chevron on the pygidial disc that is nearly always lacking in *X. geminatum*. Male *X. geminatum* have nearly parallel-sided parameres, lacking the apical expansion present if parameres of other New World species, and both sexes of *X. geminatum* differ by having the lateral metasternal faces more densely punctate, the elytral dorsal intervals weakly but (usually) noticeably concave and the inner subhumeral stria usually complete from apex to the humeral umbone (vs. usually effaced in the basal half in *X. conjunctum*).

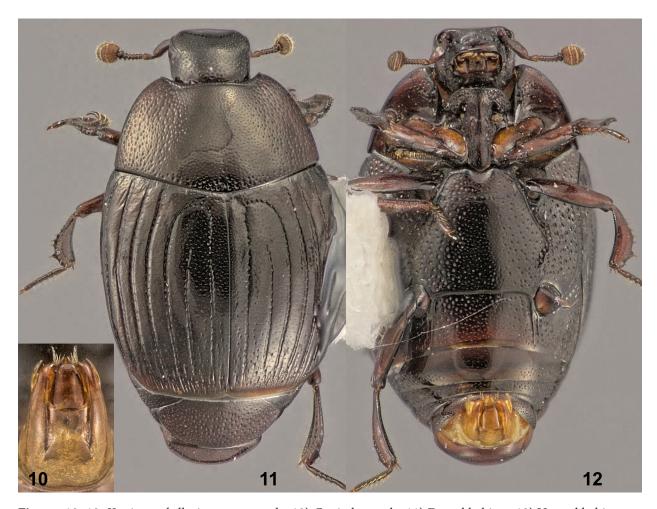
Xestipyge multistriatum (Lewis)

Figures 8-9, 16

Carcinops (Xestipyge) multistriata Lewis 1888: 209. Type locality: Mexico: Guanajuato, Mexico City, Atlisco. *Xestipyge multistriatum*: Lewis 1905: 37.

Diagnosis. Head with scattered moderate punctures on vertex at each side, punctures (other than ground punctures) lacking along midline and on clypeus; pronotum with scattered moderate punctures in about lateral thirds and in narrow band about 3 punctures deep in medial quarter along posterior margin reduced to single line at each side before lateral dense area, leaving trapezoidal middle portion subimpunctate. Elytron with epipleuron wide, outer subhumeral stria complete in middle third or more, "crowded by" and more or less merging with epipleural stria, inner subhumeral complete to base, dorsal striae complete except for 5th reaching nearly basal quarter beneath sutural arch, dorsals with strial punctures variable in density, mostly separated by about 1 to 3 times their own diameters, but with some stretches without punctures (especially on sutural and striae 1-3), punctures distinctly crenulating strial channels of 4th, 5th and sutural arch, much less so on dorsal striae 1–3; dorsal intervals 1-5 with 2 pseudostriae that are somewhat shorter, narrower and less deeply impressed than dorsal striae, in intervals 1-2 outer pseudostriae nearly reaching base, inner striae of all dorsal intervals and outer pseudostriae of intervals 3-5 extending from apex to about basal third or half, variably tending to break up into puncture lines in their basal portions, sutural interval with 1 pseudostria disappearing in basal half. Pygidium apically submarginally rather broadly sulcate, sulcus narrowly interrupted at midpoint. Tegmen with basal piece about as long as parameres; parameres rather narrowly (i.e., in about apical fourth) triangularly expanded to about apical tenth, widest width about 1/3 length (Fig. 16).

Length: 2.1–2.5 mm; total length: 2.7–3.0 mm; widest width: 1.7–1.9 mm (3 specimens measured).



Figures 10–12. Xestipyge skelleyi, paratype male. 10) Genital capsule. 11) Dorsal habitus. 12) Ventral habitus.

Range. Mexico. Lewis (1888) mentions localities in the states of Guanajuato, D.F., and Puebla. Additionally, I have examined specimens from the Mexican states of Sonora and Veracruz. Also, see "remarks" section below.

Habits. Label data indicate this species has been collected in association with *Atta* species ant refuse piles, primarily those of *Atta mexicana* (Smith), and occasionally at lights.

Remarks. This species is likely to be confused only with *X. garbigliettii*; however, that species has the elytral pseudostriae broken into sinuate segments rather than being straight and mostly complete. The male tegmen is also very different, with the parameres thicker and more strongly and more apically triangularly expanded; in males of *X. garbigliettii* the parameres are more delicate, with the subapical expansion more gradual and less apical. I have seen a few Central American specimens collected from *Atta* nests that are slightly smaller and less distinctly sculptured than the Mexican specimen figured here; those specimens may represent an undescribed but closely related species.

Xestipyge skelleyi Warner, new species

Figures 10–14, 18

Type material. Holotype male and allotype female (both deposited at ASUT) labeled: USA:AZ:Pima Co.; Forest Rd.62, 2.8mi. W of Hwy.83, N end of Santa Rita Mtns., 31°48′43″N, 110°44′04″; xii.14.2007; *Neotoma* nest// P.E.Skelley & W.B.Warner, ex *Neotoma* nest Berlese samples.

New World Xestipyge Insecta Mundi 0854 · 9



Figures 13-14. Xestipyge skelleyi, male. 13) Pygidia and elytral apices, apicodorsal view. 14) Lateral habitus.

Diagnosis. Body relatively elongate-elliptical for genus; elytra without pseudostriae except in apical ninth or less, inner subhumeral stria similar coarseness to dorsal striae and complete or nearly so, 4^{th} dorsal stria forming complete loop with sutural stria, 5^{th} dorsal stria enclosed within loop and ending free at about basal third or fourth; female pygidium without incised chevron; male with tegmen very elongate, parameres with distinct triangular expansion at about apical $\frac{4}{5}$ (Fig. 18).

Description of male. Body elliptical; color piceous to dark reddish brown; "ground punctuation" with micropuncture groupings longitudinally separated by about their own widths, slightly denser on pronotum. Head with vertex and front finely and relatively evenly punctate, punctures mostly separated by 1–3× their own diameters; pronotum coarsely and densely punctate in about lateral thirds and in narrow band about 3 punctures deep along posterior margin in middle third, leaving roughly triangular middle portion subimpunctate (i.e. only with microsculpture). Elytron with outer subhumeral distinctly indicated at least in middle third or more, inner subhumeral stria complete or nearly so, nearly as coarse as dorsal striae, dorsal striae complete except for 5th extending anteriorly to about basal quarter beneath sutural arch, all dorsals with strial punctures separated by about 2–4× their own diameters, punctures finely crenulating strial channels, interval between 5th dorsal and suture with scattered coarse punctures in apical half or less, outer intervals impunctate or with sparse coarse punctures in apical quarter or less; all intervals with short apical pseudostriae on and near apical declivity. Propygidium with disc coarsely and moderately densely punctate, punctures similar in size to coarse punctures on elytral apices; pygidium moderately densely punctate, but punctures fine (mostly ¼ or less size of propygidial punctures) and evenly distributed. Prosternum with broadened apical section anterior to antennal club fossae roughly punctate,



Figures 15–19. *Xestipyge* species tegmena, dorsal view. **15)** *X. garbigliettii*, Durango, Mexico. **16)** *X. multistriatum*, Veracruz, Mexico. **17)** *X. conjunctum*, SC, USA. **18)** *X. skelleyi*, holotype. **19)** *X. geminatum*, NC, USA.

carinal striae distinct and subparallel in posterior two thirds, their anterior apices slightly (abruptly) converging and ending free; mesosternum with anterior marginal third nearly semicircularly emarginated to receive apex of prosternum, margins lateral to emargination more strongly beaded, bead continuous with lateral metasternal stria, meso-metasternal suture evident; metasternum slightly more than $3\times$ as long as mesosternum, lateral stria ending near middle, lateral section continuous with middle section in posterior half; first abdominal sternite in middle ½ slightly depressed within basal suture and longitudinal lateral stria at each side forming rectangular

New World Xestipyge Insecta Mundi 0854 · 11

area, lateral striae laterally with approximate weaker second stria for much of their length; medial sections of meso- and metasternum and first abdominal sternites forming area of similar sculpture throughout: punctures sparser and smaller medially, in lateral sections punctures coarser and denser. Protarsi with ventral setae flattened and broadened (elongate subfoliate). Genital capsule with 8th tergite trilobed: medial lobe about ½ shorter than lateral lobes and concavely truncated, external subapex of lateral lobes with laminar hyaline lobe, lateral lobes abruptly converging, narrowing and extended medially before apices of these lamina, lateral apices of lobes with several setae extending perpendicularly (i.e. apically in line with long axis of genitalia); tegmen very elongate, parameres slightly shorter than basal piece, expanded to nearly right-triangular "arrowhead" slightly apical to apical ½, expansion width about ¼ parameral length (dorsal view of combined parameres).

Length: 1.8-2.3 mm; total length: 2.4-2.9 mm; widest width: 1.7-1.8 mm.

Female. Externally nearly identical to male except protarsi with setae simple; pygidium evenly convex without hint of incised chevron or vague depression in apical half. Length: 1.9–2.2 mm; total length: 2.3–2.8 mm; widest width: 1.5–1.9 mm.

Variation. Specimens in the type series are fairly uniform, with minor variation in sculpture and size. Four paratypes have a short (2–3 puncture widths) break at base of sutural stria, one of these also has a longer break in sutural arch at the base of the fourth dorsal on the left elytron.

The California specimens mentioned below have very similar body form and essentially identical genitalia to the holotype, and apparently belong with this species. However, all the California specimens seen consistently differ from the Arizona specimens in having the lateral metasternal stria complete to the metatrochanter, mesosternal marginal bead in anteromedial concavity more strongly incised than laterally, prosternum with strial loop in posterior ¾ narrower, femora slightly wider, uniformly more pronounced/deeper surface sculpture, with coarse punctures along lateral stria of 1st abdominal sternite invading deeper towards midline along its basal margin, elytron with sutural stria basally more often tending to be discontinuous in variably short lengths. Additional data (e.g., genetic sequencing) may demonstrate that the California populations represent a distinct specific or subspecific taxon, so they are not included in the paratype series.

Paratypes (5 males, 9 females): same data as holotype (14). Other specimens examined (CASC, USNM): Cal., C.W.Leng collection (1); Cal.: Marin Co., Aug, A. Koebele (1); California: Sonoma County, 1.5 mi.W of Bloomfield, 29.IX.1970, ex cow pat (16); Cal., Mendocino Co., vi-20-20, E.S.Ross collection (1); Cal. Los Angeles Co., Van Dyke Collection; Cal., Alameda, i-17-1935, Van Dyke Collection (1). Paratypes are deposited at CASC, CMNH, CSCA, FMNH, FSCA, UAIC, and the private collections of N. Degallier, P.Kovarik, T. Lackner, and the author.

Etymology. I take pride in naming this new species for Paul E. Skelley, coleopterist extraordinaire, excellent collector and field companion, who did the bulk of the field labor sifting the dusty *Neotoma* Say and Ord mound sample that held most of the type series while I mostly slouched limply in the truck cab coughing and sneezing with a bad cold and fever.

Remarks. Amongst the New World *Xestipyge*, *X. skelleyi* appears closest in appearance to *X. conjunctum*, but, the different range, elytron with stronger subhumerals and complete (or nearly so) 4th dorsal to sutural strial loop, male tegmen shape, and lack of an incised chevron on the pygidium of females will immediately separate specimens of *X. skelleyi*.

Acknowledgments

I thank Paul Skelley for his help in the field during collection of the Berlese sample that yielded part of the *X. skelleyi* type series. Douglas VanGundy is gratefully acknowledged for allowing me to use the Central Life Sciences' Keyence imaging system to generate the figure images. The following people graciously loaned or provided access to specimens under their care: B. Hays (private collection), S. M. Lee and N. Franz (ASUT); C. C. Grinter (CASC); R. Androw (CMNH); A. Cline (CSCA); B. C. Kondratieff (CSUC); F. T. Krell (DMNS); C. A. Maier (FMNH); P.E. Skelley (FSCA); P. D. Perkins (MCZC); A. Taghavian-Azari (MNHN); E. G. Riley and K. Wright (TAMU); W. E. Hall (UAIC); F. Shockley (USNM). Alexey Tishechkin and Peter Kovarik kindly reviewed the manuscript and offered suggestions for improvement.

Literature Cited

Blatchley WS. 1910. An illustrated descriptive catalog of the Coleoptera or beetles (exclusive of the Rhynchophora) known to occur in Indiana. The Nature Publishing Company; Indianapolis, IN. 1386 p.

Bousquet Y, Laplante S. 2006. The insects and arachnids of Canada, part 24, Coleoptera: Histeridae. NCR Research Press; Ottawa, ON. 485 p.

Downie NM, Arnett RH Jr. 1996. The beetles of northeastern North America. Sandhill Crane Press; Gainesville, FL. 1721 p. **Horn GH. 1873.** Synopsis of the Histeridae of the United States. Proceedings of the American Philosophical Society 13: 273–360.

LeConte JE. 1845. A monography of the North American histeroides. Boston Journal of Natural History 1: 32-86.

LeConte JE. 1859. Descriptions of new species of the coleopterous family Histeridae. Proceedings of the Academy of Natural Sciences of Philadelphia 11: 310–317.

Lewis G. 1888. Histeridae. p. 182–244. In: Sharp D, Matthews A, Lewis G (eds.). Biologia Centrali-Americana. Insecta, Coleoptera, Vol. II, Part 1. Taylor & Francis; London, UK. 717 p.

Lewis G. 1905. A systematic catalogue of Histeridae. Taylor and Francis; London, UK. 81 p.

Marseul SA. 1855. Essai monographique sur la famille des histérides. Annales de la Société Entomologique de France 3(3): 83–165.

Marseul SA. 1862. Supplément a la monographie des histérides. Annales de la Société Entomologique de France 4(2): 5–48. Marseul SA. 1867. Description d'especes nouvelles de Buprestides et d'un histéride du genre *Carcinops*. Annales de la Société Entomologique de France 7: 47–56.

Mazur S. 2011. A concise catalogue of the Histeridae (Insecta: Coleoptera). WULS – SGGW Press; Warsaw, Poland. 331 p. Reese EM, Swanson AP. 2017. A review of the cactophilic *Carcinops* Marseul (Coleoptera: Histeridae) of the Sonoran Desert region, with descriptions of six new species. The Coleopterists Bulletin 71(1): 159–190.

Say T. 1825. Description of new species of *Hister* and *Hololepta*, inhabiting the United States. Journal of the Academy of Natural Sciences of Philadelphia 5: 32–47.

Received November 13, 2020; accepted January 20, 2021. Review editor Oliver Keller.