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Notes and descriptions on North American Desmiphorini (Coleoptera, Cerambycidae, Lamiinae)

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Abstract

The differences between *Estoloides* Breuning, 1940, *Tigrinestola* Breuning, 1949, and *Pseudestoloides* Breuning & Heyrovsky, 1961 are discussed. A lectotype for *Lypsimena tigrina* Skinner, 1905 is designated. A new genus and two new species are described from Mexico: *Tigrinestola nearnsi* **sp. nov.**, and *Allotigrinestola sundbergi*, gen. nov., **sp. nov.** A key to the four genera treated in this work, as well as to species of *Tigrinestola* are presented.

Key words: Desmiphorini, key, Mexico, taxonomy

Introduction

American Desmiphorini includes several genera that are frequently difficult to recognize and characterize. Although some of these genera appear well delimited, the features used to describe them are completely useless.

During the process of identification of a species from Mexico we encountered some of these problems in an attempt to allocate the species. Herein, we try to clarify the limits and features of three genera described by Stephan Breuning in the 20th century.

Materials and methods

Photographs of the new species were taken with a Canon EOS Rebel T3i DSLR camera, Canon MP-E 65mm f/2.8 1–5X macro lens, controlled by Zerene Stacker AutoMontage software. Measurements were taken in ‘‘mm’’ using a micrometer ocular Hensoldt/Wetzlar - Mess 10 in the Leica MZ6 stereomicroscope, also used in the study of the specimens.

The collection acronyms used in this study are as follows:

ANSP	Academy of Natural Sciences, Philadelphia, PA, USA
DHCO	Daniel Heffern Collection, Houston, TX, USA
DSCO	Dan Sundberg Collection, San Antonio, TX, USA
EBC	Estación de Biología Chamela, San Patricio, Jalisco, Mexico
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA
MZSP	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
USNM	National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA

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Results

On *Estoloides* Breuning, 1940, *Tigrinestola* Breuning, 1949, and *Pseudestoloides* Breuning & Heyrovsky, 1961

Linsley (1942) questioned the inclusion of *Lypsimena tigrina* Skinner, 1905 in *Estola* Fairmaire and Germain, 1859 by Schaeffer (1906): "This species belongs in a different group from the two preceding [*Estoloides sordida* LeConte, 1873, and *Estoloides sparsa* Linsley, 1942], characterized by the more elongate, less robust form, narrow lower lobe of the eyes, and the less sloping mesosternum. Its assignment to *Estola*, however, needs further confirmation.

Breuning (1940) described *Estoloides* as follows (translation): Elongate, antennae longer than body, with ventral side fringed, the first segment short, thick, strongly clavate, the antennomere IV distinctly longer than V. Antennal tubercles wide apart. Eyes coarsely facetted, strongly emarginate, the lower lobes transverse. Frons transverse. Pronotum transverse, arched, finely and transversely sulcate near base and apex, with long lateral spine at midpoint of sides. Elytra long, slightly wider than pronotum, slightly arched, apex rounded. Head not retractable. Prosternal process lower than the coxae, evenly rounded. Mesosternal process gradually inclined toward anterior edge. Mesocoxal cavities open [closed according to Breuning 1974], the legs moderately long, femora claviform, mesotibiae dorsally sulcate, claws closed. Throughout with sparse setae, including the scape.

Later, Breuning (1949) described *Tigrinestola* (translation): *Estola tigrina* Skinner (1905, Ent. News, XVI, p. 291) is to be excluded from the genus *Estola* Fairmaire and Germain. This species is close to those of the genus *Estoloides* Breuning, but differs not only by the general appearance but also by the absence of erect setae on the elytra, as well as the lateral tubercle of the pronotum which is obtuse. These characters are enough to create a new genus for this species. I propose the name of *Tigrinestola*.

Finally, Breuning and Heyrovsky (1961) described *Pseudestoloides* (translation): "Elongated. Antennae slender, slightly longer than body, fringed beneath with short setae, the scape slightly long and very strong, the antennomere III slightly longer than IV, much longer than scape, the antennomere IV much longer than remaining antennomeres. Antennal tubercles separated and slightly noticeable. Eyes coarsely faceted and strongly notched. Gena very short. Frons transverse. Pronotum transverse, tri-lobed at base and with very long and slender lateral spine, slightly curved. Scutellum pentagonal. Elytra long, slightly wider than pronotum, widely truncate at apex and with rows of punctures. Head not retractile. Prosternal process slightly wide, a little lower than coxae and rounded. Mesosternal process with rounded tubercle. Metasternum with normal length. Mesocoxal cavities open. Legs of medium length, the femora slightly claviform, the mesotibiae with slightly dorsal sulcus, the claws divaricated. Nearly all these characters are not useful to separate *Pseudestoloides* from some other genera of Desmiphorini, mainly because some of the characters are specific or tribal features.

Chemsak & Linsley (1966) reported: "The present paper is intended to demonstrate that the genus *Tigrinestola*, as defined by Breuning, has geographical and taxonomic validity, even though it is not possible with the material presently available to characterize more than two species which might be assigned to it. Nevertheless, *Tigrinestola* was not redescribed in their work.

Breuning (1974) separated *Tigrinestola* from *Estoloides* in his key to genera of American Rhodopinini (translation):

39. Pronotum with a lateral tubercle obtuse [conducting to *Tigrinestola*]
- Pronotum with a lateral spine [conducting to *Estoloides* and *Pseudestoloides*].

Linsley & Chemsak (1984) presented a description of *Tigrinestola*, and pointed out: "The gray and black appressed pubescence, broadly tuberculate sides of the pronotum and relatively short antennae will distinguish this genus. In the same work, when writing on *Estoloides*, they recorded: "This genus is readily separated from *Tigrinestola* by the longer antennae, acute lateral tubercles of the pronotum and concolorous pubescence.

The descriptions and statements listed above encompass problems and mistakes. The description of *Tigrinestola howdeni* Chemsak & Linsley, 1966, simply made the original description of the genus, based only on the general appearance, absence of erect setae on elytra, and shape of lateral tubercle of the prothorax completely inappropriate. *Tigrinestola howdeni*, as pointed out in the original description, has "very few longer recurved hairs present at base and apex. Actually, we examined specimens in which the erect setae are sparse, but not "very few

and not restricted to the base. Furthermore, the lectotype of *Lypsimena tigrina* also has a few erect setae on the basal area of the elytra. Thus, we believe that Chemsak & Linsley (1966) could not affirm that *Tigrinestola* "as defined by Breuning had taxonomic validity. Our conclusion is supported by the following: the main features pointed out by Breuning (1949) as distinctive of *Tigrinestola* actually are not useful to separate *Tigrinestola* from *Estoloides*, and were invalidated by the description of *T. howdeni*, the presence of erect setae on the elytra and, also: "Pronotum lateral tubercles broadly acute [male]; "Pronotum with lateral tubercle more acute [female]. Also, Breuning (1954) described *Estoloides* (*Spinestoloides*) in which the elytra do not have erect setae.

In the same way, the key from Breuning (1974) is not useful, because although usually the lateral tubercle of the prothorax is somewhat obtuse in *T. tigrina* and *T. howdeni*, it can also be more acute apically. Furthermore, there are species placed in *Estoloides* with a very similar lateral tubercle as, for example, *E. longicornis* Breuning, 1940, and *E. paralboscutellaris* Breuning, 1971. Thus, this character is absolutely useless to separate *Tigrinestola* from *Estoloides*. It is curious that Breuning (1974) invalidated his key to genera when he provided the key to species of *Tigrinestola* (translated):

1. Third article of the antennae slightly longer than scape, pronotum with obtuse lateral tubercle . . . . . *tigrina* Skinn.
- Third article of the antennae as long as scape, pronotum with lateral tubercle rather acute. . . . . *howdeni* Chems. & Linsl.

Also, the comment by Linsley and Chemsak (1984) on the different lengths of the antennae between *Tigrinestola* and *Estoloides* could, eventually, be true only when males are considered. Actually, the antennae in females of some species of *Estoloides* are not very different from females of *Tigrinestola*.

Breuning (1974) separated *Pseudestoloides* from *Tigrinestola* and *Estoloides* in the key (translated):

30. Mesotibiae notched [conducting to *Tigrinestola* and *Estoloides*]
- Mesotibiae with a slightly dorsal sulcus. [conducting to *Pseudestoloides*].

This feature is quite questionable, since there is a large gradient between these two kinds of sulci on mesotibiae in Desmiphorini. This makes it almost impossible to be confident about where to include some species. Also according to Breuning (1974), *Estoloides* (except *E.* (*Spinestoloides*)) has erect setae on elytra, while they are absent in *Pseudestoloides*. However, as seen before, this character seems quite questionable to us, since it is variable in the species of *Tigrinestola*. This suggests that this feature is more specific than generic.

Actually, a better difference between *Pseudestoloides* and *Estoloides* and *Tigrinestola* is the presence of a small tubercle on the mesosternal process. This tubercle is present in *Pseudestoloides* and absent from the other two.

Tigrinestola differs from *Estoloides* by the antennae in the male surpassing the elytral apex, at most, by the last three antennomeres, and the distal third of the abdominal ventrite in the female without a central depression. In *Estoloides*, the antennae in the male surpasses the elytral apex by more than three antennomeres and the abdominal ventrite V in the female, which has a distinct depression in the center of the distal third. Additionally, the three known species of *Tigrinestola* have three areas with the integument distinctly exposed, contrasting with the pubescence around them.

The key below allows separating the four genera treated in this work:

1. Mesosternal process with small tubercle. . . . . *Pseudestoloides*
- Mesosternal process without tubercle 2
2(1). Antenna in both sexes not reaching distal third of elytra . . . . . *Allotigrinestola* **gen. nov.**
- Antenna in both sexes, at least, almost reaching elytral apex 3
3(2). Antennae in male surpassing elytral apex, at most, by the last three antennomeres; abdominal ventrite V in female without depression on center of distal third . . . . . *Tigrinestola*
- Antennae in male surpassing elytral apex by more than three antennomeres; abdominal ventrite V in female with depression on center of distal third. . . . . *Estoloides*

***Tigrinestola tigrina* (Skinner, 1905)**
(Figs 1–4, 23)

Skinner (1905) described *Lypsimena tigrina* based on two specimens: "one specimen from Carr Canyon, Huachuca Mountains, Arizona, and one in the Horn collection from Southern Texas.

The syntype from Carr Canyon is currently deposited at ANSP. However, we did not search for the syntype from southern Texas. The former collection of Horn is currently housed at the MCZ collection. There are no other known specimens of this species from Texas, and the label is undoubtedly in error.

Schaeffer (1906) proposed a questionable new species: "The size and markings of my insect agree with the Doctor's [Skinner] description, and I have no doubt that this is the species, but in case it should prove different I propose the name of *Estola picta* for it. The description by Schaeffer (1906) actually agrees very well with *L. tigrina*, and it is currently maintained as a synonym. The former collection of Schaeffer is currently deposited at USNM. Lingafelter *et al.* (2014) did not list the type (syntypes) of *Estola picta* at USNM collection. However, it is very probable that Schaeffer did not indicate the specimen(s) as type(s). Thus, if they are at USNM, it(they) could simply have a label identifying it(them) as *E. picta*, *E. tigrina*, or *L. tigrina*.

After the original description of *L. tigrina*, we could not find a citation affirming that the types of *T. tigrina* were examined. We designate as lectotype the female (Figs 1, 2) belonging to ANSP, with the following labels (Fig. 3):

White (Printed): Carr Canyon / Huachuca Mts. / Cochise Co. Ariz.
White (Printed): H. Skinner / August 1905
Light salmon: COTYPTE [Printed] / S. tigrina [Handwritten] / Skinner [Handwritten]
Red: TYPE [Printed] 8107 [Handwritten] / Lypsimena tigrina Skin. [Handwritten].
Red (Printed), added by us: LECTOTYPE

***Tigrinestola nearnsi*, sp. nov.**
(Figs 5–13)

Description. **Holotype male**. Head, pronotum, antennae, legs dark brown; sides of prothorax dark brown, gradually reddish toward prosternum; prosternum reddish-brown laterally and close to head, yellowish-brown on remaining surface; ventral side of mesothorax brown laterally and on margin around procoxae and mesosternal process, yellowish-brown on wide central area of mesosternal process, reddish-brown on remaining surface; metasternum yellowish-brown on basal third, laterally gradually dark brown toward midlength, and remaining surface dark brown (more dark reddish-brown centrally); apex of abdominal ventrites I–IV pale yellow; abdominal ventrite I light reddish-brown at about basal half, brown interspersed with dark reddish-brown areas on distal half; abdominal ventrite II with narrow reddish-brown area on base, brown on remaining surface; abdominal ventrites III–V brown; elytra dark brown except the following yellowish-brown areas: wide, slightly oblique, zig-zag band on basal fifth, from humerus to suture (reddish-brown close to suture); large macula laterally from apex of basal 1/9 to almost midlength, from epipleura to almost center of disc; moderately small, elongate macula on center of disc before midlength; narrow dark reddish-brown macula along suture, gradually lighter toward apex, from before midlength to distal macula, distinctly projected toward center of disc at about apex of central third (somewhat ax-shaped); irregular macula on distal third, partially fused to ax-shaped macula, narrowly fused with distal macula; entire distal sixth (anterior margin of this area irregular, covering about distal fifth centrally); entire epipleural area. Pubescence yellowish-white (whiter depending on angle of light); erect setae dark brown, except those between upper eye lobes.

Head. Frons minutely, abundantly punctate, interspersed with fine punctures; pubescence not obscuring integument, interspersed with long, erect setae. Antennal tubercles and area between them with sculpture and pubescence as on frons (sparser near coronal suture); base of antennal tubercles with long, erect, sparse setae. Area between upper eye lobes smooth, glabrous centrally toward antennal tubercles, finely, abundantly punctate and pubescent toward posterior edge; with long erect, sparse setae close to eyes. Area of vertex close to eyes finely, abundantly punctate, minutely, abundantly punctate toward prothoracic margin; pubescence partially obscuring integument, except glabrous central area close to prothoracic margin. Area behind eyes minutely, abundantly

punctate behind upper eye lobes, subsmooth on tumid area behind lower eye lobes, finely, moderately abundantly punctate on area behind lower eye lobes close to prothoracic margin; pubescence partially obscuring integument, except glabrous area behind lower eye lobes close to prothoracic margin; with long, erect, sparse setae, mainly on tumid area behind lower eye lobes. Genae about as long as width of lower eye lobe; pubescence almost obscuring integument, except on glabrous, narrow distal area. Postclypeus with distal margin flap-shaped; sculpture, pubescence and setae as on frons, except smooth flap-shaped area, with erect setae longer than on remaining surface. Labrum coplanar with anteclypeus on basal half, inclined on distal half; with long, erect, moderately abundant setae on basal half. Distance between upper eye lobes 0.35 times length of scape; distance between lower eye lobes in frontal view 0.95 times length of scape. Antennae (left antenna missing antennomeres X–XI; right antenna missing antennomere XI) 1.4 times elytral length, reaching elytral apex at distal quarter of antennomere X; scape strongly widened at inner side after basal quarter, with long, erect, sparse setae, mainly dorsally; pedicel and antennomere III with long, erect setae ventrally and apex of dorsal surface; antennomeres IV–X with long, erect setae ventrally, gradually sparser toward X; pubescence obscuring integument at about basal third of antennomeres; antennal formula (ratio) based on length of antennomere III: scape = 1.02; pedicel = 0.30; IV = 1.10; V = 1.00; VI = 0.96; VII = 0.92; VIII = 0.86; IX = 0.75; X = 0.71.

Thorax. Prothorax 1.25 times wider than long (including lateral tubercles); lateral tubercles large, triangular with subacute apex. Pronotum coarsely, moderately abundantly punctate throughout (punctures slightly coarser and denser toward base); pubescence distinctly exposing integument on three large areas: one circular on each side of basal half (with another small, less distinct circular area laterally); one elliptical on central area. Remaining pronotal surface with pubescence partially obscuring integument, sparser on center of basal third and close to distal margin; with long, erect, sparse setae, primarily laterally. Sides of prothorax coarsely, moderately abundantly punctate, with pubescence partially obscuring integument, interspersed with long, erect setae. Prosternum with coarse and finer, sparse punctures; pubescence not obscuring integument. Mesosternum minutely punctate, denser on mesosternal process; pubescence exposing integument, mainly on central area. Mesepimeron and mesepisternum finely, sparsely punctate; with pubescence partially obscuring integument. Metepisternum with pubescence partially obscuring integument. Metasternum coarsely, sparsely punctate laterally, gradually smoother toward center; pubescence not obscuring integument, mainly toward central area. Scutellum almost glabrous on base, with dense pubescence distally. **Elytra**. Coarsely, moderately abundantly punctate on basal third, gradually finer, sparser toward apex; apex subrounded; pubescence not obscuring integument, slightly denser on lighter areas; with long, erect, moderately abundant setae throughout. **Legs**. Femora with pubescence partially obscuring integument. Tibiae with pubescence partially obscuring integument, interspersed with long, erect setae; dorsal side of mesotibiae notched after midlength. Metatarsomere I about as long as II–III together.

Abdomen. Ventrites I–IV finely, sparsely punctate; pubescence not obscuring integument, mainly centrally, interspersed with long, erect setae, mainly on distal half (gradually more abundant from I to IV); ventrite V with pubescence partially obscuring integument, interspersed with long, abundant erect setae, mainly on distal half; distal margin of ventrite V widely concave.

Female. Antennae 1.15 times elytral length, reaching at about distal 1/7 of elytra; abdominal ventrite V, longer than in male, with distal margin slightly rounded.

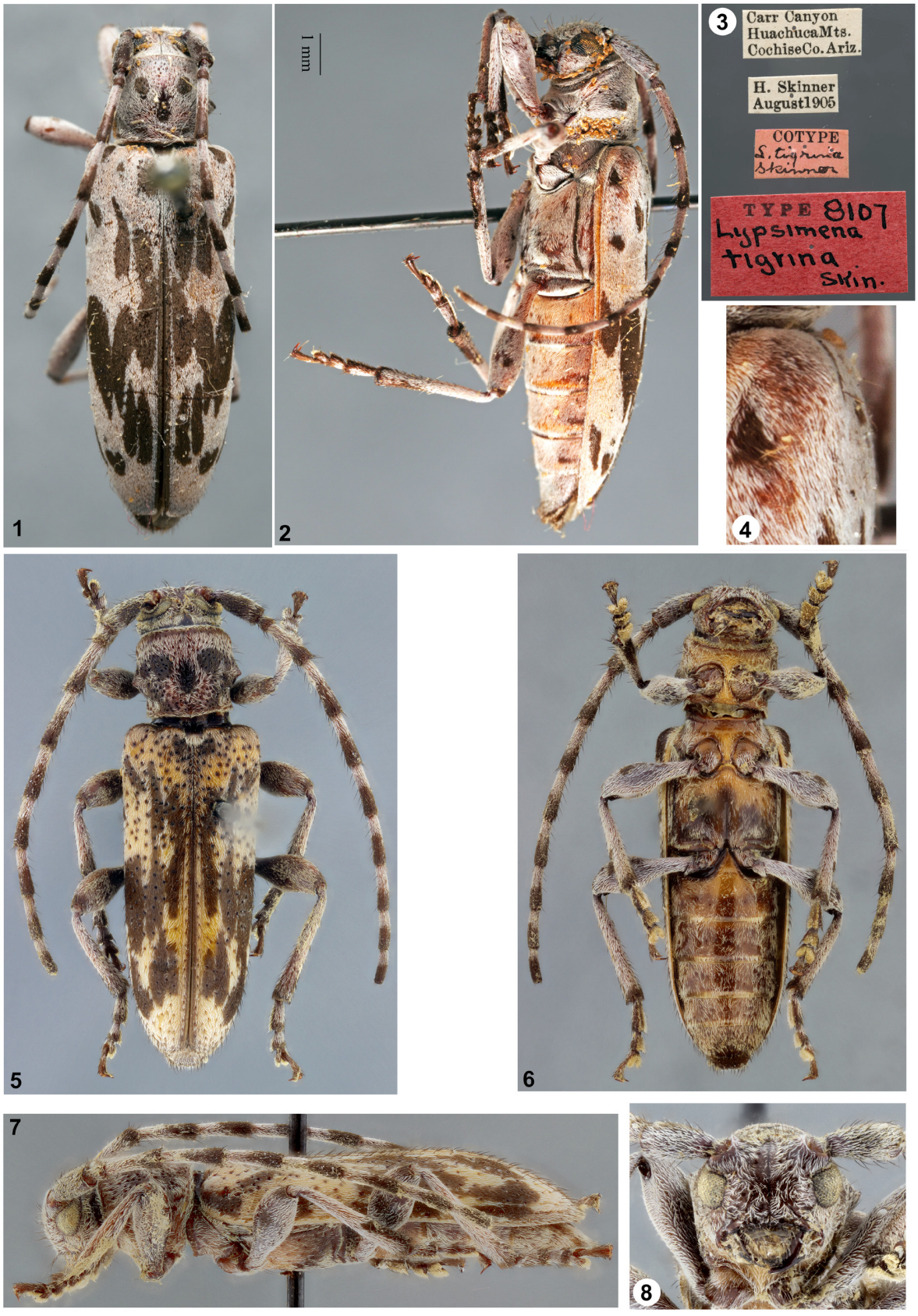
Variation of female paratype. Integument almost entirely dark brown, with lighter areas on elytra less distinct.

Dimensions (holotype male/ paratype females). Total length, 10.25/13.25–15.00; prothorax: length, 1.95/ 2.35–2.45; anterior width, 2.05/2.50–2.70; posterior width, 1.90/2.45–2.80; largest prothoracic width, 2.40/3.00–3.35; humeral width, 2.90/3.85–4.20; elytral length, 7.15/10.05–10.95.

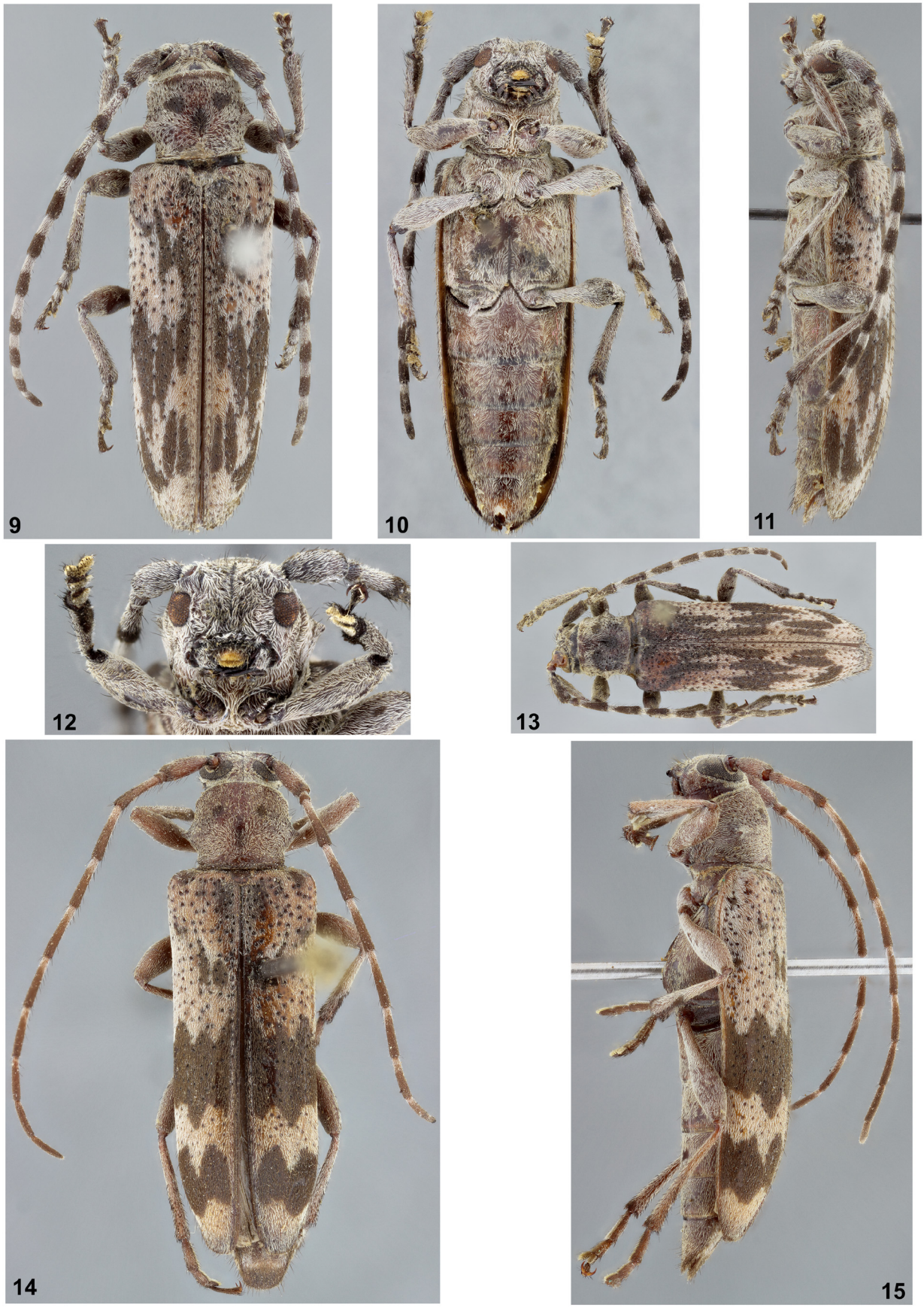
Type material. Holotype male (MZSP), 2 paratypes (both female) (MZSP; DHCO) from MEXICO, S.V. Purpus col., no other data; 2 paratypes (1 male, 1 female) from MEXICO, Oaxaca, 21 Km SSE Cuicatlán, 17°38.064'N / 96°54.825'W, 19.VII.1998, 860 m, light trap, F. A. Noguera, A. Rodríguez col. (EBC); 1 paratype (male), same data as preceding except: 23.VIII.1998, F. A. Noguera, A. Rodríguez, M. A. Morales, A. M. Corona col. (EBC).

Etymology. The new species is name for our friend and colleague Eugenio H. Nearns.

Remarks. *Tigrinestola nearnsi* **sp. nov.** differs from *T. tigrina* and *T. howdeni* by the lower eye lobes about as long as gena, and elytra with abundant, long and erect setae (lower eye lobes about 1.5 times longer than genae and elytra, at most, with sparse erect setae in these species). The specimens from Oaxaca, included as paratypes, were previously listed as *Tigrinestola* sp. (Noguera *et. al.* 2012). (F. Noguera, pers. comm.)



FIGURES 1–8. **1–4**, *Lypsimena tigrina*, lectotype female: **1**, dorsal habitus; **2**, lateral habitus; **3**, labels; **4**, elytral base, lateral view. **5–8**, *Tigrinestola nearnsi* **sp. nov.**, holotype male: **5**, dorsal habitus; **6**, ventral habitus; **7**, lateral habitus, **8**, head, frontal view.



FIGURES 9–15. **9–13**, *Tigrinestola nearnsi* **sp. nov.**, female paratypes: **9**, dorsal habitus; **10**, ventral habitus; **11**, lateral habitus; **12**, head, frontal view; **13**, dorsal habitus. **14–15**, *Tigrinestola howdeni*, female: **14**, dorsal habitus; **15**, lateral habitus.

FIGURES 16–23. **16–20**, *Allotigrinestola sundbergi* **sp. nov.**, holotype male: **16**, dorsal habitus; **17**, ventral habitus; **18**, lateral habitus; **19**, head, frontal view; **20**, metatibia. **21–22**, *Allotigrinestola sundbergi* **sp. nov.**, paratypes: **21**, male, dorsal habitus; **22**, female, dorsal habitus. **23**, *Tigrinestola tigrina*, male, dorsal habitus.

Key to species of *Tigrinestola*

1. Elytra with abundant long and erect setae throughout. Mexico (Oaxaca). . . . . *T. nearnsi* **sp. nov.**
- Elytra, at most, with sparse erect setae 2
2(1). Elytra without erect setae or with some setae present on basal area; elytral punctures mostly obscured by the pubescence. USA (Arizona, New Mexico), Mexico (Baja California, Sonora). . . . . *T. tigrina*
- Elytra with sparse erect setae, usually throughout; elytral punctures mostly not obscured by the pubescence. Mexico (Chihuahua, Durango, Mexico) . . . . . *T. howdeni*

Allotigrinestola gen. nov.

Type species: *Allotigrinestola sundbergi* **sp. nov.**

Etymology. From the Greek άλλος / *allos* (different, other) and *Tigrinestola*, meaning different from it.

Diagnosis. The combination of antennae distinctly not reaching elytral apex in both sexes, mesosternal process without tubercle, and absence of central depression on distal region of abdominal ventrite V in female distinguish this genus.

Description. Body elongate, moderate size. Head hypognathous; frons transverse. Lower eye lobes distinctly longer than gena; upper eye lobes wide apart; antennae in male reaching, at most, the distal quarter of elytra; antennae in female not reaching distal third of elytra; antennomeres filiform; antennomeres gradually decreasing in length from III to XI. Prothorax in male about as long as wide (excluding lateral tubercles); in females slightly wider than long. Sides with large, spiniform tubercle placed at about midlength. Pronotal disc without tubercles. Mesosternal process without tubercle. Elytra subparallel-sided at basal 2/3; apex rounded at outer angle; surface without erect setae. Legs moderately short; femora subfusiform; mesotibiae notched dorsally; metatarsomere V about as long as I–III together.

Allotigrinestola sundbergi sp. nov.

(Figs 11–22)

Description. **Holotype male**. Integument black except reddish-brown basal region of anteclypeus, distal region of labrum, most of mouthparts, and apex of palpomeres. Pubescence mostly gray.

Head. Frons finely, sparsely punctate; pubescence distinctly not obscuring integument, interspersed with long, erect, sparse, dark setae (mainly close to lower eye lobes); frontoclypeal sulcus slightly marked toward central area of head. Vertex minutely, sparsely punctate; pubescence not obscuring integument, mainly close to prothoracic margin. Antennal tubercles with sculpture and pubescence as on frons, with some long, erect dark setae on basal area. Area behind eyes finely, sparsely punctate and pubescent close to eye, somewhat finely rugose-punctate and glabrous close to prothoracic margin; with long, erect, sparse, dark setae on tumid area close to lower eye lobe. Genae very finely, transversely punctate on central area, subsmooth toward apex; pubescence not obscuring integument, mainly on distal area; with long, erect, sparse dark setae. Postclypeus flap-shaped distally, with small depression centrally close to flap-shaped area; pubescence distinctly not obscuring integument, laterally interspersed with long, erect dark setae on flap-shaped area. Labrum convex and coplanar with anteclypeus on basal half, inclined on distal half; finely, abundantly punctate and with long, erect dark setae on apex of coplanar area; apex of fringe of golden setae. Distance between upper eye lobes 0.45 times length of scape; distance between lower eye lobes in frontal view 0.95 times length of scape. Antennae 1.1 times elytral length, almost reaching distal quarter of elytra; scape and pedicel with long, erect, sparse dark setae throughout; antennomeres III–VII with long, erect setae ventrally (shorter, sparser toward VII); antennomeres III–XI with gray pubescence at about basal third (this area shortened toward XI), with brownish pubescence on remaining surface; antennal formula (ratio) based on length of antennomere III: scape = 1.02; pedicel = 0.40; IV = 1.00; V = 0.80; VI = 0.67; VII = 0.65; VIII = 0.60; IX = 0.55; X = 0.50; XI = 0.45.

Thorax. Lateral tubercles of prothorax conical, with spiniform apex, slightly curved upward. Pronotum finely, sparsely punctate, slightly coarser and denser laterally on basal third; pubescence partially obscuring integument except on transverse area placed about center of midlength, where the pubescence distinctly exposes integument.

Sides of prothorax with sculpture and pubescence as on pronotum; with long, erect, sparse dark setae between lateral tubercle and anterior margin. Prosternum slightly transversely striate on basal 2/3, distinctly striate on distal third; with elongate, transverse depression laterally close to procoxal cavities; pubescence partially obscuring integument on basal 2/3, sparse on distal third. Procoxal cavities slightly open behind. Pubescence not obscuring integument on mesosternum, slightly denser on mesepisternum and mesepimeron. Metepisternum and metasternum finely, sparsely punctate, with pubescence not obscuring integument, glabrous on triangular central area. Scutellum longitudinally sulcate centrally; pubescence partially obscuring integument. **Elytra**. Moderately coarsely, sparsely punctate on basal quarter, gradually finer, shallower, sparser toward apex; pubescence nearly obscuring integument, except the following regions with brownish pubescence exposing integument: macula on basal inclined area, between humerus and margin of prothorax; one small, subelliptical macula on side of scutellum; one small, subcircular macula on center of disc on basal third; one large, subcircular macula on disc of base of distal half. **Legs**. Pubescence nearly obscuring integument; tibiae with long, erect dark setae, distinctly denser on dorsally on distal half of meso- and metatibiae; pubescence on notched area of mesotibiae golden.

Abdomen. Ventrites I–IV finely, sparsely punctate, except on smooth, narrow, transverse distal area (gradually wider from I to IV); pubescence partially obscuring integument, except on glabrous smooth area; ventrite IV with long, erect, sparse dark setae laterally. Ventrite V finely, moderately abundantly punctate on flat distal half; pubescence partially obscuring integument, but distinctly sparser on flat region; distal half with long, erect, moderately abundant dark setae; apex widely emarginate centrally.

Female. It differs from male primarily by the shorter antennae (0.9 times elytral length, reaching apex of 5/8 of elytra), and by abdominal ventrite V subtruncate at apex.

Variation. Frons more abundantly punctate, mainly laterally in paratype male, slightly coarsely and abundantly punctate in paratype female; frontoclypeal sulcus absent toward central region of head; vertex finely punctate; area behind eyes almost smooth, including region close to prothoracic margin; antennae in paratype male 1.05 times elytral length, slightly surpassing base of distal third; ring of gray pubescence on basal antennomeres covering basal 2/3 in paratypes, gradually shorter toward distal antennomere; distal region of lateral tubercles of prothorax more uniformly narrowed toward apex; transverse area on pronotum of paratypes exposing integument placed slightly after midlength; procoxal cavities closed behind in paratype female; triangular central area of metasternum with pubescence sparser than laterally; elytral macula on each side of scutellum absent in paratypes; macula on distal half of elytra transversely oblique in paratypes (divided in paratype male); distal area of abdominal ventrite V not distinctly flat in paratype male.

Dimensions (Holotype male/ Paratype male/ Paratype female). Total length, 18.9/18.7/17.5; prothoracic length, 3.2/3.1/2.8; anterior prothoracic width, 3.0/2.9/2.8; basal prothoracic width, 3.3/3.3/3.4; widest prothoracic width (between apices of lateral tubercles), 4.3/3.9/4.1; humeral width, 5.4/5.4/5.6; elytral length, 12.6/12.9/13.3.

Type material. Holotype male from MEXICO, *Nuevo Leon*: 20 km E San Roberto, 1.VII.2008, Sundberg & Clifton col. (MZSP). 2 Paratypes as follows – MEXICO, *Tamaulipas*: about 10 km ESE Miquihuana (23.5683ºN / 99.7093ºW; [male] on sotol / side of mtn high desert scrub), VII.2015, D. W. Sundberg col. (DHCO); [female] emerged from dead *Agave* stalk coll'd in 2014, D. W. Sundberg col. (DSCO).

Biology. This species is associated with Asparagaceae, with one specimen reared from a dead stalk of *Agave*, and the other known specimens were collected on the dead stalks of sotol (*Dasylirion* sp.) and *Agave* (D. Sundberg pers. comm.)

Etymology. The new species is named after Dan Sundberg, collector of the holotype and paratypes, and personal friend of the first author.

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