

An Identification Key to the *Acmaeodera*



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of North America North of Mexico



Contributions and Acknowledgements

Joshua Vlach, ODA (Oregon Department of Agriculture): Design of key.

Joshua B. Dunlap, ODA. Image capture and editing. All images by Josh unless otherwise stated.

Richard Westcott, ODA (retired): Specimens, taxonomic advice, review of key.

Daniel Clark, ODA: Review and testing.

Corwin Parker, ODA: Review and testing.

Thomas Valente, ODA: Review and testing.

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Introduction

The genus *Acmaeodera* hasn't been given much attention. This is the first attempt at an identification guide for the *Acmaeodera* of North America since Fall's publication in 1899. This isn't too surprising considering there are no economically important pests known, but it is surprising considering that they are commonly encountered, attractive beetles. Regardless, history should have taught us that predicting new pests is difficult. We've had groups dismissed as non-pests only to later realize, once it was too late, that they could become pests once moved to a new area. Our hope is that this will help better recognize native species and, in turn, help us recognize new introduced species.

This an image based key to the 147 species of *Acmaeodera* (Buprestidae, flat-headed or metallic woodborers) found in the continental United States. Four of those species have subspecies identified (total of 10 subspecies). For identification of genera, please refer to Clark, *et al.*, 2016.

Side by side image comparison: There are 10 pages of dorsal images of *Acmaeodera* species preceding the key. Images are artificially grouped based on coarse similarities in color pattern to better enable species comparison and identification. Keep in mind all variation is not represented. [Click here](#).

Using this Key and Screening Aid

The key and screening aid function much like traditional dichotomous keys with couplets. However, use of PowerPoint navigational features, such as buttons linking non-sequential couplets and enabling return to the originating couplet  , have been utilized. Images on the left side of the screen illustrate the first half of each couplet while the right side of the screen illustrates the second half (unless stated otherwise). There are some portions that utilize a flow-chart format. This enables assessment of multiple species at the same time.

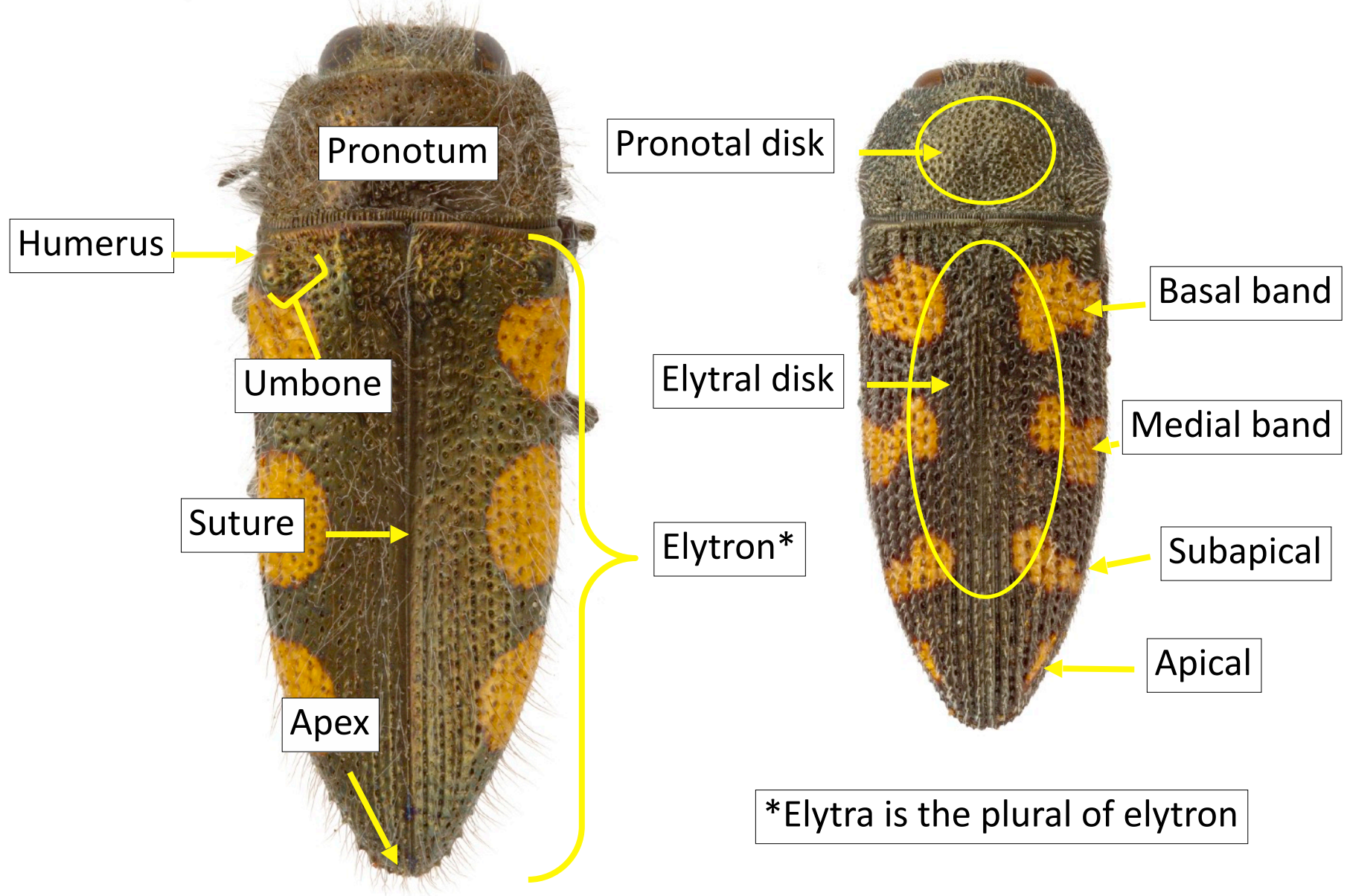
If there are more images than can fit on a single slide, the multiple slides for the couplet are indicated by “part 1”, “part 2”, etc., following the couplet number at the top of the slide.

Host, range, and size were included when possible. In many cases, the host is listed as unknown. This is because only verified larval hosts were included.

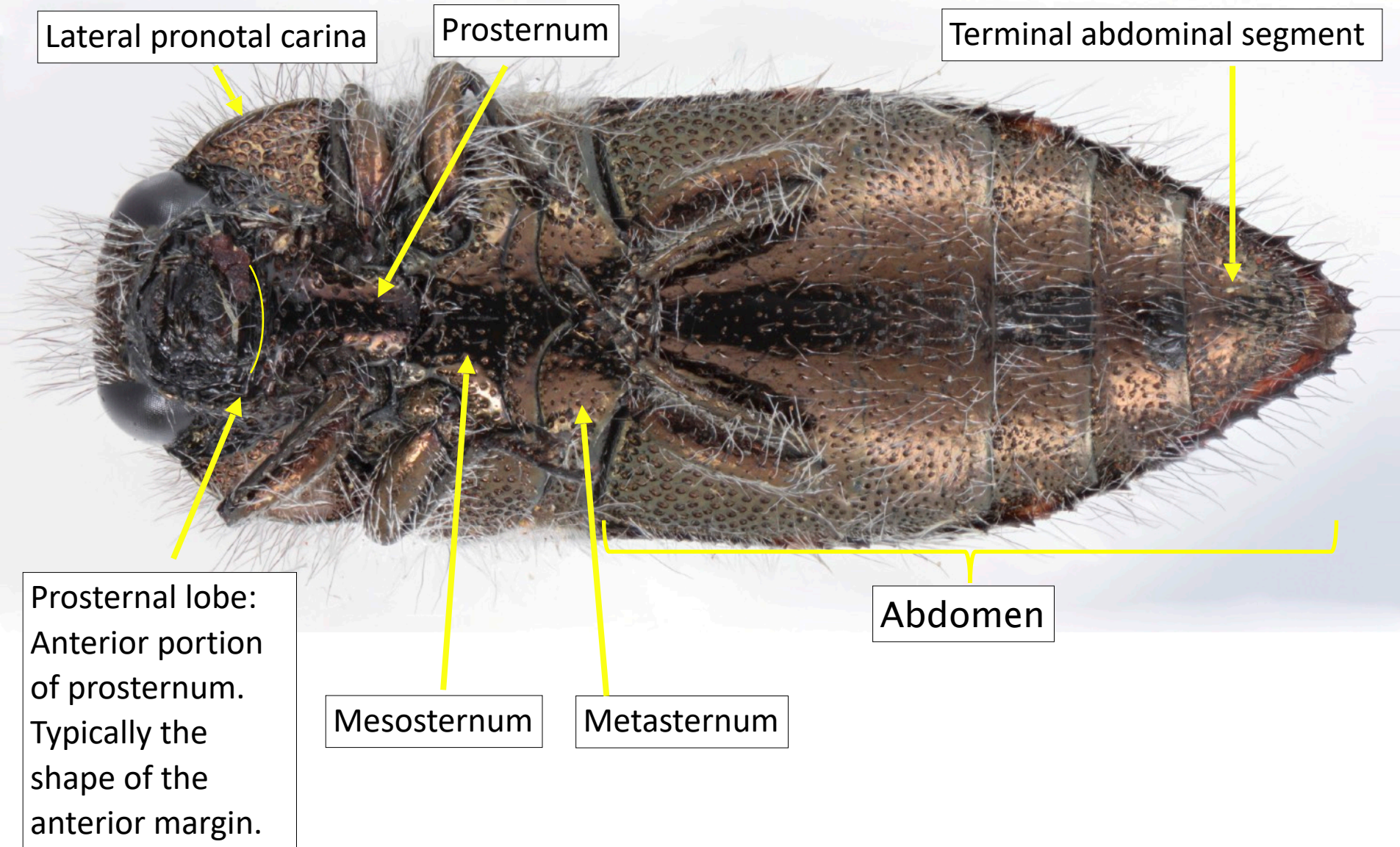
Range can be a useful way to differentiate between species, but this guide is intended to assist in the identification of species without that information. In recent decades we've seen many species moved around North America. We want to enable the recognition of changes in distribution.

Most terms and character states are explained via the images and associated labels. The first several slides following the introduction illustrate the basic body parts of buprestids and the terms applied.

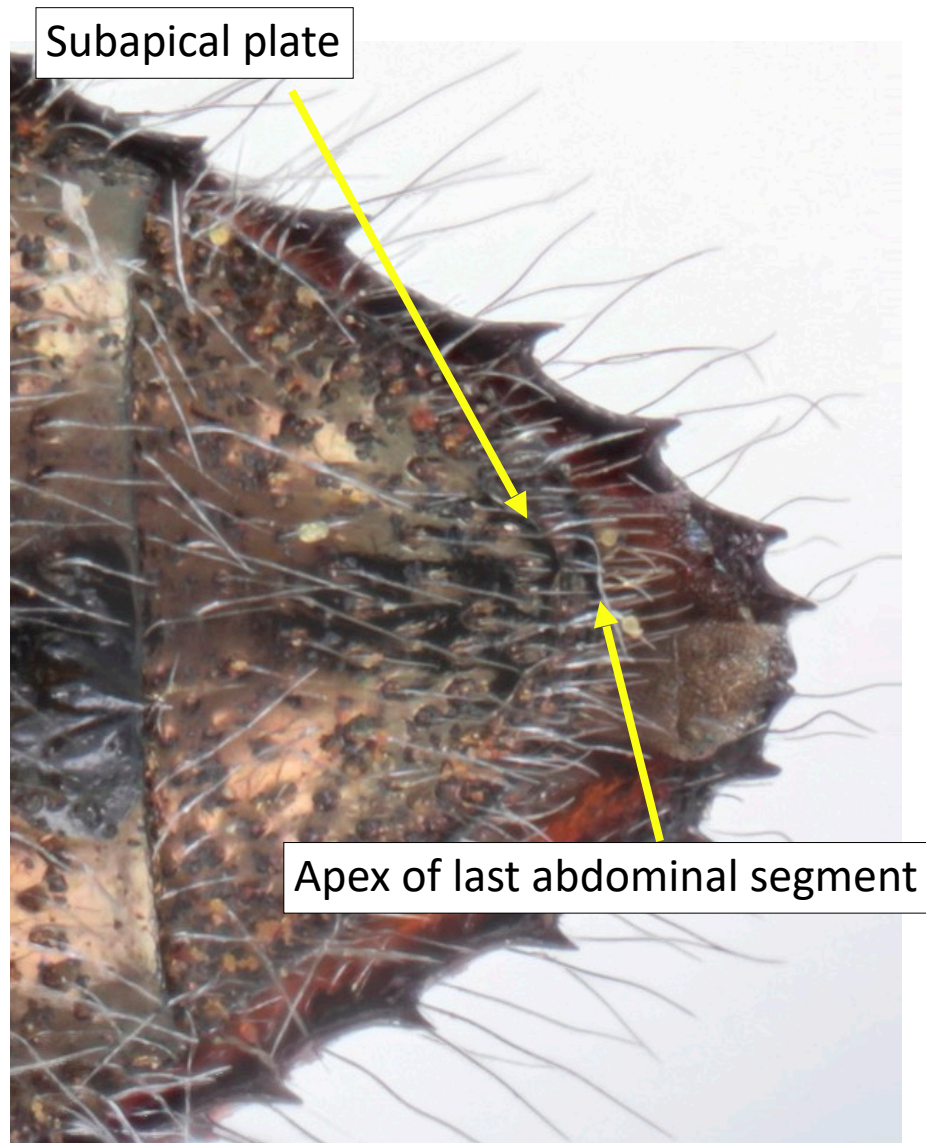
BASIC BODY PARTS OF BUPRESTIDS: I



BASIC BODY PARTS OF BUPRESTIDS: II

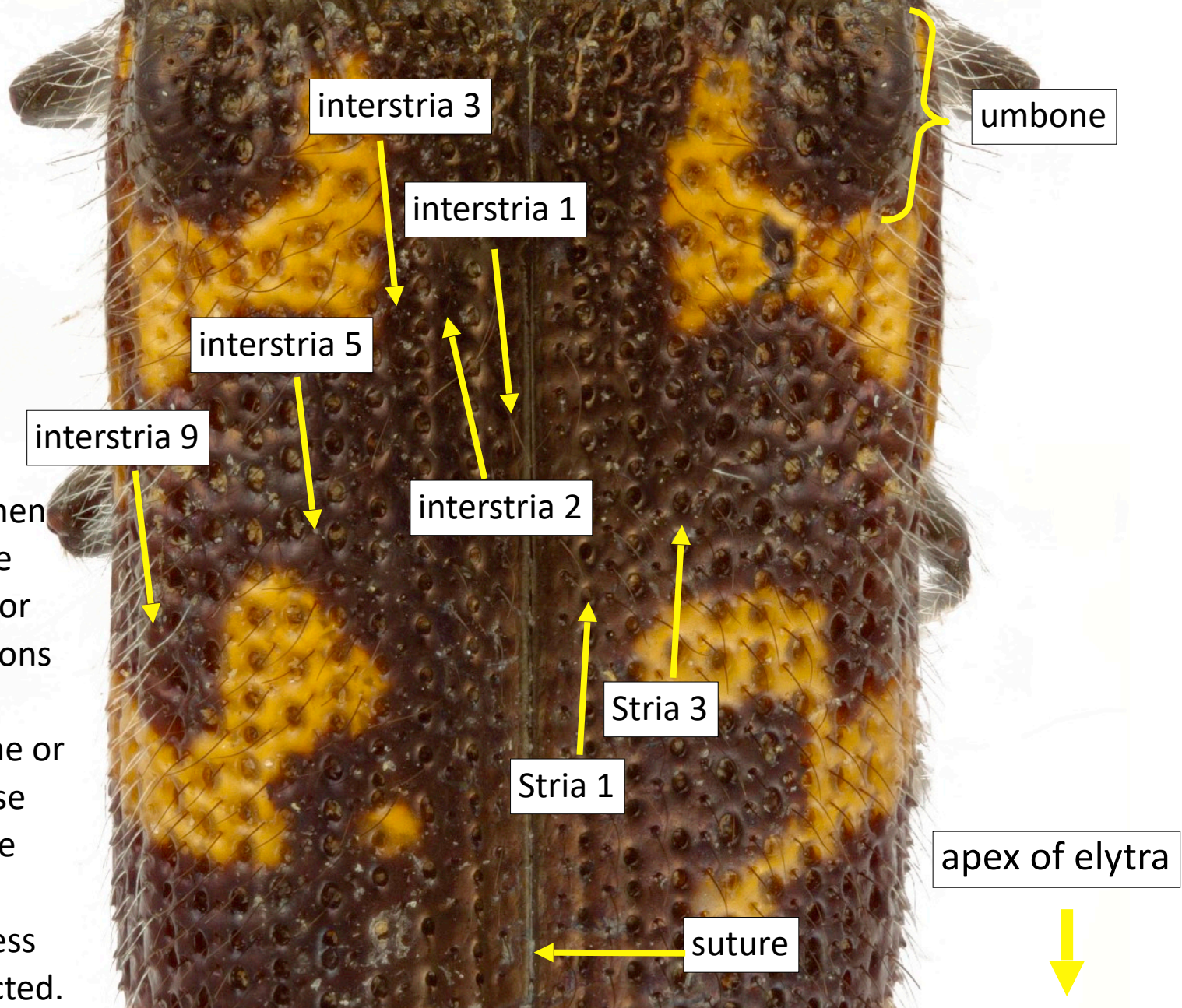


BASIC BODY PARTS OF BUPRESTIDS: III

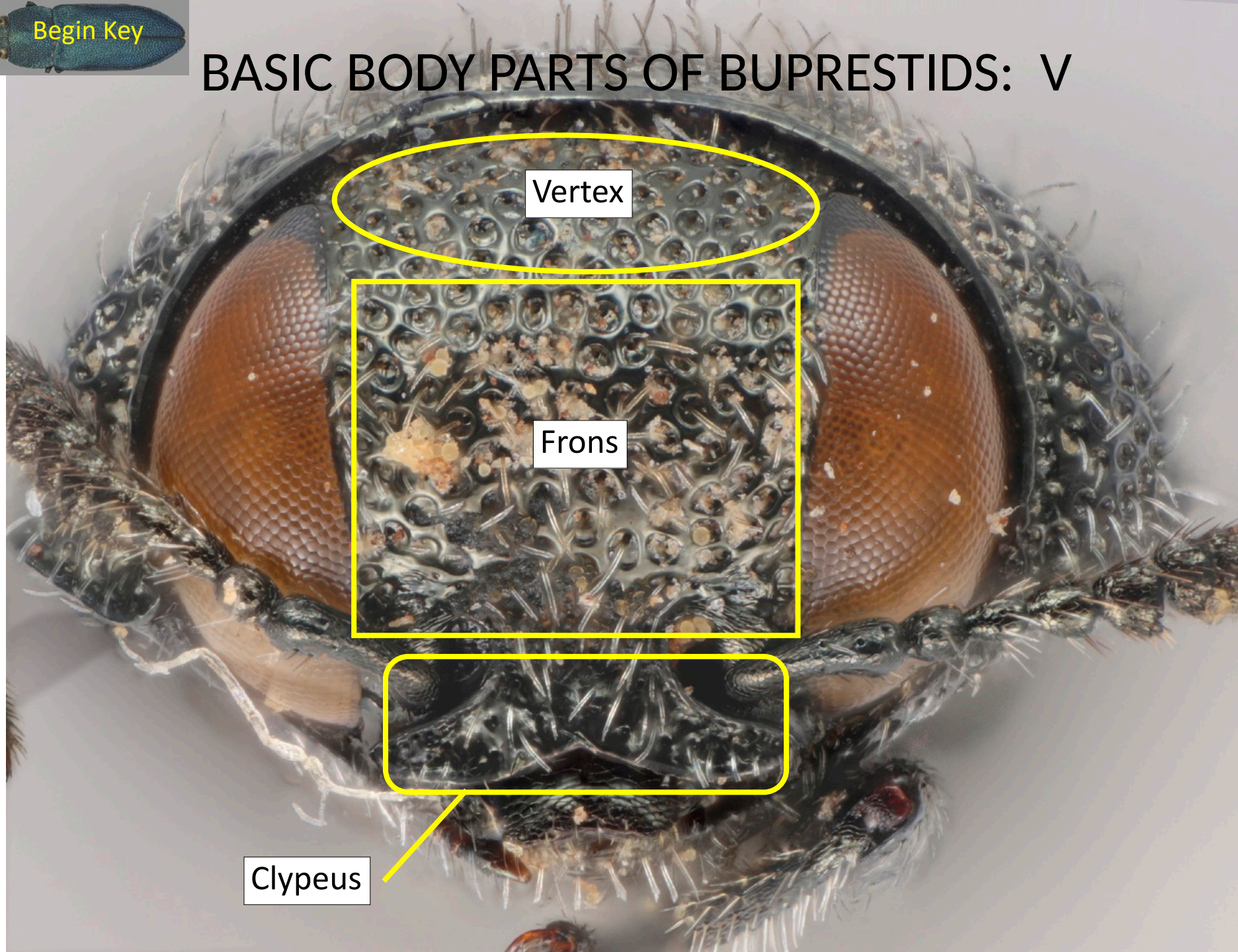


BASIC BODY PARTS OF BUPRESTIDS: IV

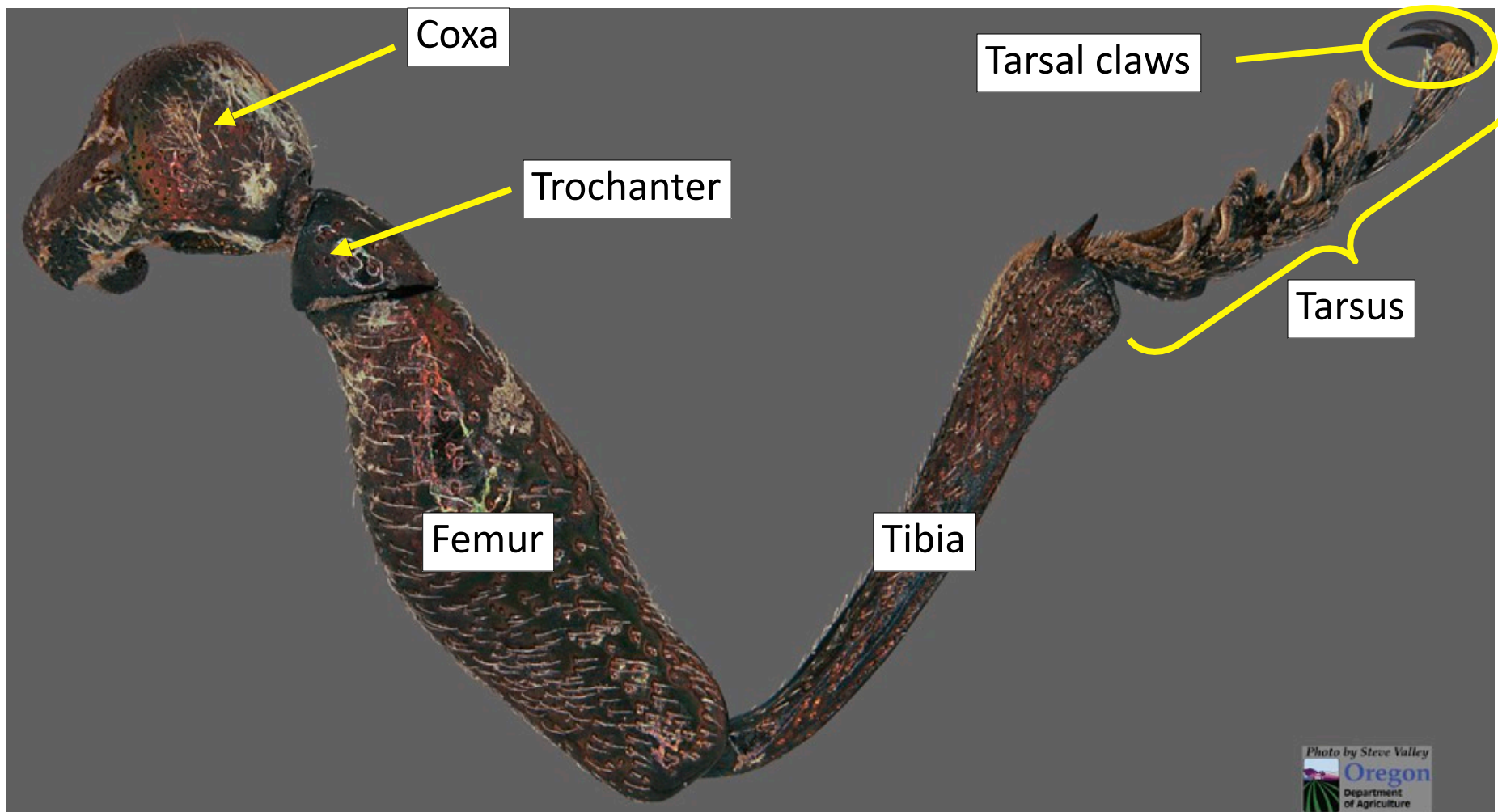
Middle of the elytral disk. When you count striae and interstriae or make comparisons between punctures, striae or interstriae, these are made in the middle of the elytral disk unless otherwise directed.



BASIC BODY PARTS OF BUPRESTIDS: V



BASIC BODY PARTS OF BUPRESTIDS: VI



A Few Technical Terms

Acuminate: strongly and abruptly tapered to a narrow apex

Arcuate: arched

Carina: an elevated ridge (plural is “Carinae”)

Cribrate: punctures on pronotum large and touching. Giving the impression of a sieve.

Elytra: hardened wing covers

Elytral: of or on an elytron or the elytra

Pubescence: short, fine, closely set hair-like structures

Pubescent: covered with pubescence

Punctate: with punctures

Serrate: with notched edges like the teeth of a saw

Seta: relatively long, stiff hair-like structures (plural is “Setae”)

Setose: covered with setae

Sinuate: referring to a structure or the margin of a structure is wavy

Transverse: running across the longitudinal axis at right angles

Umbone: Swollen area at the base of the elytra adjacent to the humerus

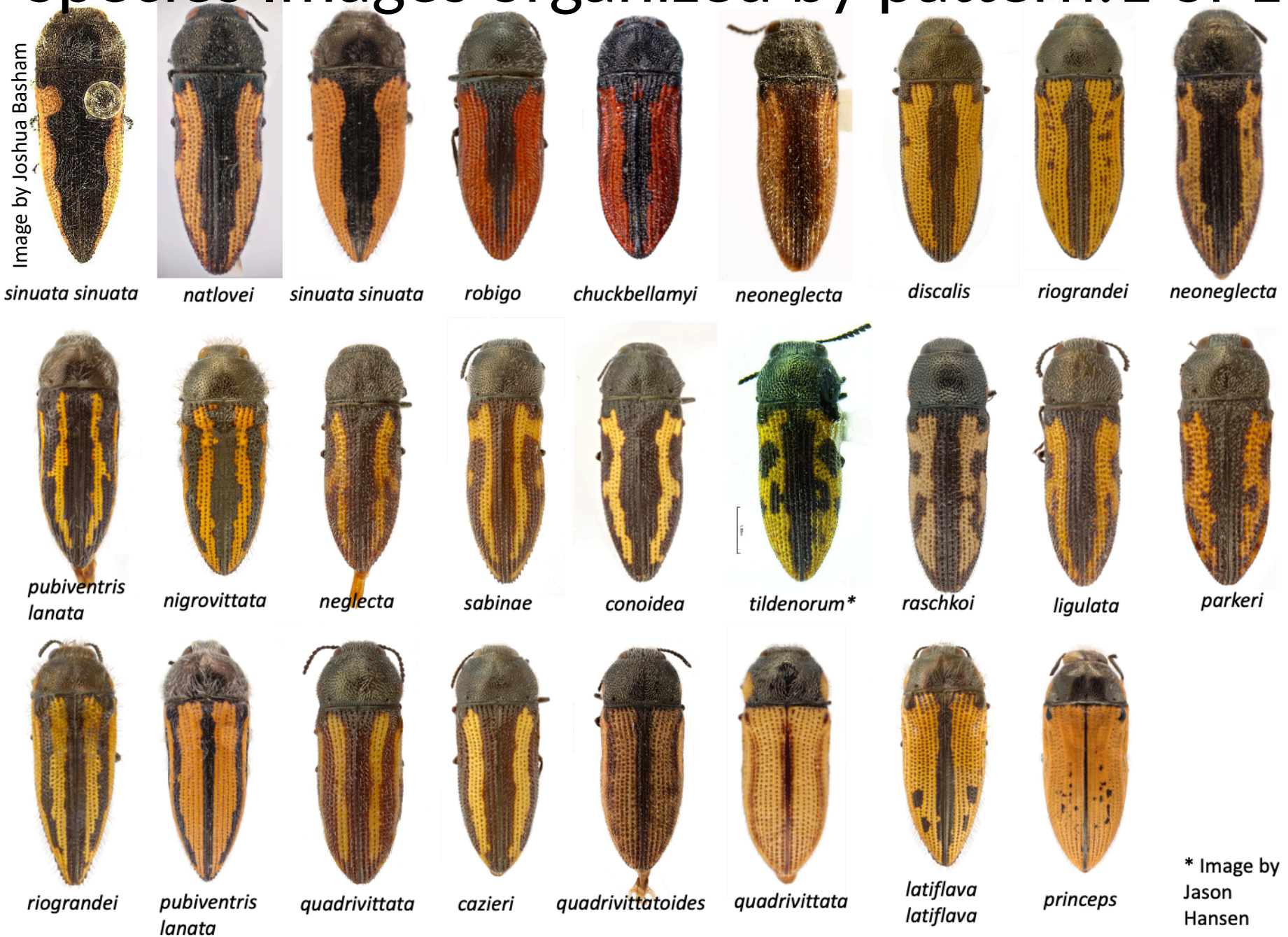
Truncate: squared off

Venter: underside. “Ventral” = on venter.

Species of *Acmaeodera* in North America North of Mexico

<i>species subspecies</i> Author			
<i>acanthicola</i> Barr	<i>davidsoni</i> Barr	<i>mariposa mariposa</i> Horn	<i>recticollis</i> Fall
<i>acuta</i> LeConte	<i>decipiens</i> LeConte	<i>miliaris</i> Horn	<i>recticolloides</i> Westcott
<i>adenostomae</i> Cazier	<i>delumbis</i> Horn	<i>mimicata</i> Knull	<i>reflexa</i> Barr
<i>adenostomensis</i> Knull	<i>depressa</i> Barr	<i>mixta</i> Horn	<i>resplendens</i> Van Dyke
<i>alacris</i> Horn	<i>deviata</i> Barr	<i>mojavei</i> Westcott	<i>retifera</i> LeConte
<i>alicia</i> Fall	<i>diffusa</i> Barr	<i>morbosa</i> Fall	<i>riograndei</i> Nelson
<i>alpina</i> Barr	<i>discalis</i> Cazier	<i>natlovei</i> Hansen	<i>robigo</i> Knull
<i>amabilis</i> Horn	<i>dolorosa</i> Fall	<i>navajo</i> Nelson and Westcott	<i>robusta</i> Horn
<i>amplicollis</i> LeConte	<i>ephedrae</i> Barr	<i>neglecta</i> Fall	<i>rubrocuprea</i> Westcott and Nelson
<i>angelica</i> Fall	<i>errans</i> Barr	<i>nelsoni</i> Barr	<i>rubronotata</i> Laporte and Gory
<i>atactospilota</i> Westcott	<i>fattigi</i> Knull	<i>neoneglecta</i> Fisher	<i>sabinae</i> Knull
<i>audreyae</i> Westcott	<i>fenyesi</i> Fall	<i>nevadica</i> Barr	<i>scalaris</i> Mannerheim
<i>auritincta</i> Fall	<i>flavomarginata</i> (Gray)	<i>nexa</i> Fall	<i>serena</i> Fall
<i>aurora</i> Fall	<i>flavopicta</i> Waterhouse	<i>nigrovittata</i> Van Dyke	<i>simulata</i> Van Dyke
<i>bacchariphaga</i> Westcott and Verity	<i>gibbula</i> LeConte	<i>obtusa</i> Horn	<i>sinuata sexnotata</i> VanD.
<i>barri</i> Cazier	<i>gillespiensis</i> Knull	<i>opacula</i> LeConte	<i>sinuata sinuata</i> Van Dyke
<i>bishopiana</i> Fall	<i>griffithi</i> Fall	<i>opuntiae</i> Knull	<i>solitaria</i> Kerr
<i>bivulnera</i> Horn	<i>haemorrhoea</i> LeConte	<i>ornata</i> (Fabricius)	<i>sphaeralceae</i> Barr
<i>bowditchi</i> Fall	<i>hepburnii</i> LeConte	<i>ornatoides</i> Barr	<i>starrae</i> Knull
<i>bryanti</i> Van Dyke	<i>holsteni</i> White	<i>panamintensis</i> Westcott	<i>tenebricosa</i> Fall
<i>carlota</i> Fall	<i>horni</i> Fall	<i>paradisjuncta</i> Knull	<i>texana</i> LeConte
<i>cazieri</i> Knull	<i>idahoensis</i> Barr	<i>parkeri</i> Cazier	<i>tildenorum</i> Nelson and Westcott
<i>ceanothae</i> Nelson	<i>immaculata</i> Horn	<i>perlanosa</i> Timberlake	<i>tiquilia</i> Westcott and Barr
<i>chiricahuae</i> Barr	<i>inopinata</i> Barr	<i>pinalorum</i> Knull	<i>tubulus</i> (Fabricius)
<i>chuckbellamyi</i> Macrae	<i>inyoensis</i> Cazier	<i>plagiaticauda</i> Horn	<i>tuta</i> Horn
<i>comata</i> LeConte	<i>jocosa</i> Fall	<i>pletura</i> Barr	<i>uvaldensis</i> Knull
<i>condita</i> Barr	<i>knowltoni</i> Barr	<i>princeps</i> Kerremans	<i>vanduzeei</i> Van Dyke
<i>connexa</i> LeConte	<i>knollorum</i> Barr	<i>prorsa</i> Fall	<i>vandykei</i> Fall
<i>conoidea</i> Fall	<i>labyrinthica</i> Fall	<i>pubiventris lanata</i> Horn	<i>variegata</i> LeConte
<i>consors</i> Fall	<i>lanata</i> Horn	<i>pubiventris panocheae</i> Westcott	<i>verityi</i> Westcott
<i>constricticollis</i> (Knull)	<i>latiflava latiflava</i> Fall	<i>pubiventris pubiventris</i> Horn	<i>vernalis</i> Barr
<i>constrictinotum</i> Westcott and Nelson	<i>latiflava lineipicta</i> Fall	<i>pubiventris yumae</i> Knull	<i>vulterei</i> Knull
<i>convicta</i> Fall	<i>ligulata</i> Cazier	<i>pulchella</i> (Herbst)	<i>wenzeli</i> Van Dyke
<i>coquilletti</i> Fall	<i>linsleyi</i> Van Dyke	<i>pullata</i> Cazier	<i>wheeleri</i> Van Dyke
<i>cribricollis</i> Horn	<i>lupinae</i> Nelson	<i>purshiae</i> Fisher	<i>wickenburgana</i> Knull
<i>cuneata</i> Fall	<i>macra</i> Horn	<i>quadriseriata</i> Fall	<i>xanthosticta</i> Laporte and Gory
<i>curtilata</i> Knull	<i>maculifera</i> Horn	<i>quadrivittata</i> Horn	<i>yuccavora</i> Knull
	<i>marginenotata</i> Chevrolat	<i>quadrivittatoides</i> Nelson and Westcott	
	<i>mariposa dohrni</i> Horn	<i>raschkoi</i> Westcott	

Species Images organized by pattern:1 of 10



Species images organized by pattern: 2 of 10



aurora



starrae



ephedrae



immaculata



navajo



*pubiventris
yumae*



vanduzeei



barri



curtilata



vandykei



tubulus



neoneglecta



bryanti



parkeri



resplendens



morbosa



deviata



perlanosa



knowltoni



knowltoni



errans



nexa



angelica



knowltoni



rubronotata



verityi



mojavei

Species images organized by pattern: 3 of 10



sinuata
sexnotata



horni



flavomarginata



chiracahuae



prorsa



nelsoni



holsteni



coquilletti



simulata



adenostomensis



amabilis



amabilis



pulchella



pulchella



scalaris



constrictinotum



wenzeli



knullorum



davidsoni



acanthicola



bivulnera



Mariposa mariposa



Mariposa dohrni



rubrocuprea



plagiaticauda

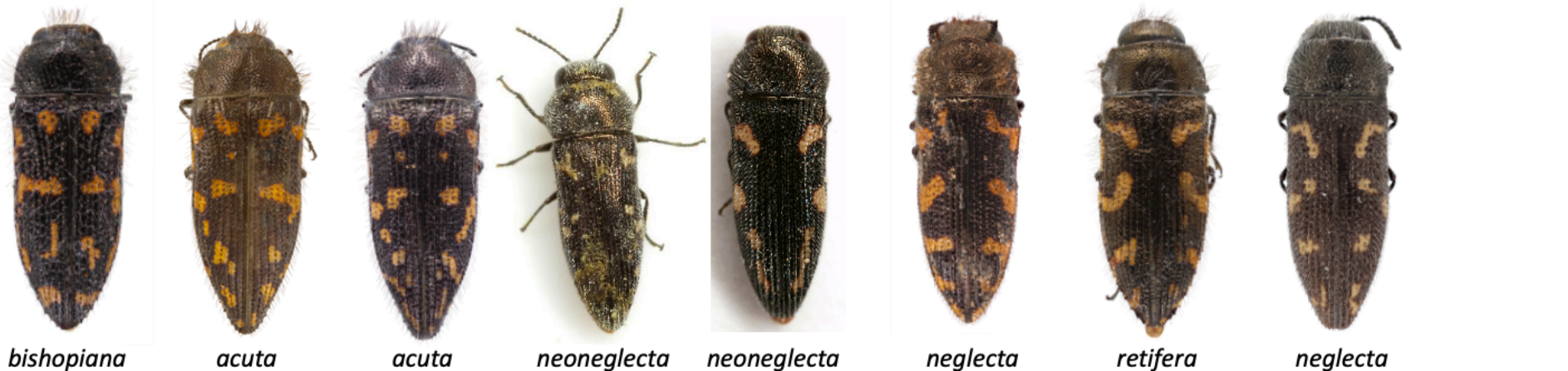
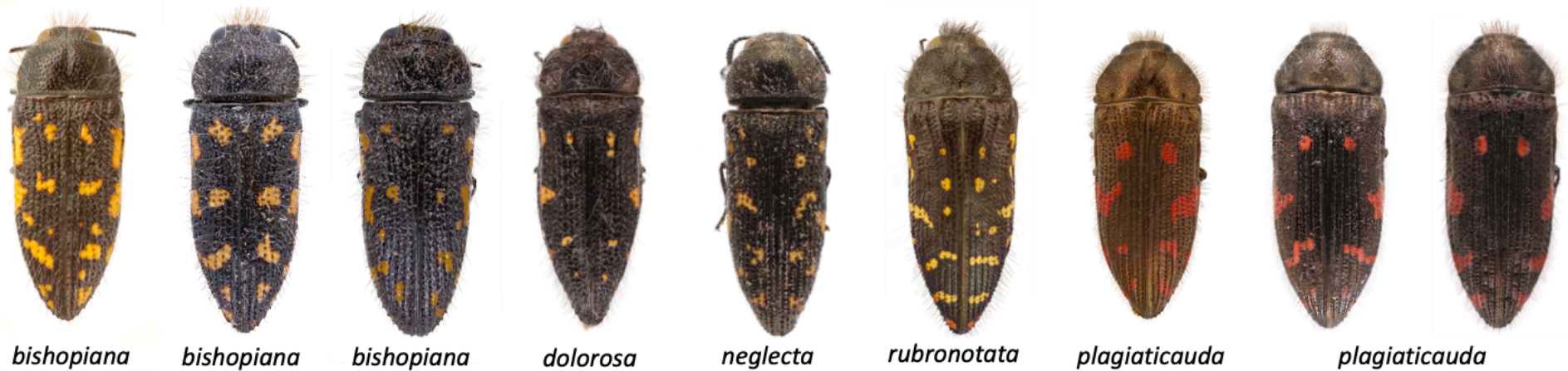
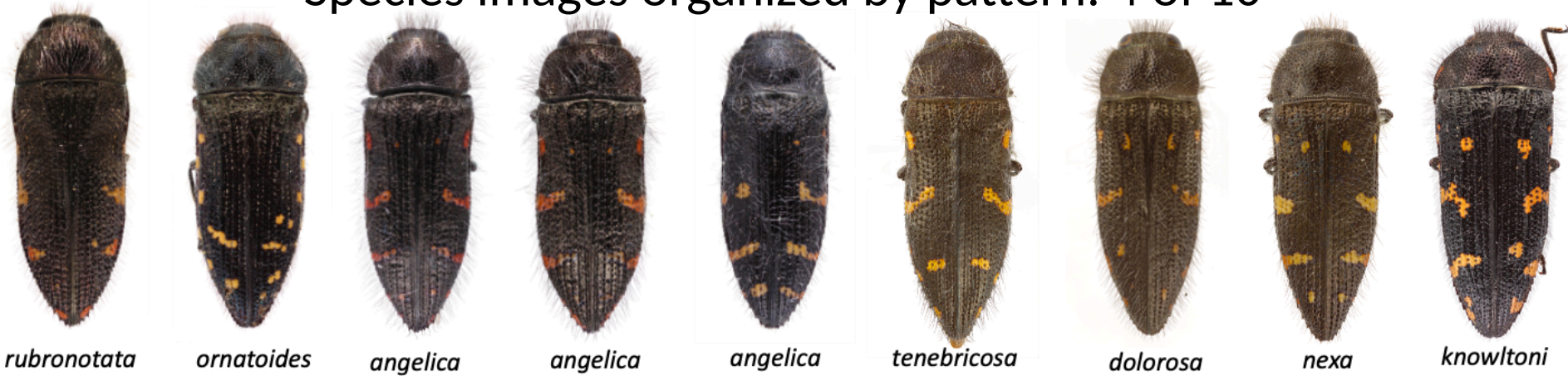


mimicata



ceanothae

Species images organized by pattern: 4 of 10



Species images organized by pattern: 5 of 10



lupinae



fenyesi



nexa



tenebricosa



dolorosa



rubronotata



panamintensis



depressa



fattigi



inopinata



pletura



comata



uvaldensis



fattigi



audreyae



dolorosa



ornatoides



audreyae



quadriseriata



pinalorum



delumbis



flavopicta



miliaris



haemorrhhoa



griffithi

Species images organized by pattern: 6 of 10



retifera



consors



consors



connexa



bacchariphaga



cuneata



atactospilota



acuta



acuta



carlota



diffusa



connexa



connexa



labyrinthica



labyrinthica



labyrinthica



retifera



acuta



hepburnii



mixta

Species images organized by pattern: 7 of 10



mixta



lupinae



gillespensis



linsleyi



nevadica



variegata



texana



tildenorum



neoneglecta



*tuta**



natlovei



immaculata



purshiae



idahoensis



idahoensis



condita



verityi



carlota



reflexa



retifera



gibbula



opacula



gibbula



gibbula



inyoensis



bowditchi



macra

* Image by John L. Richards

Species images organized by pattern: 8 of 10



vernalis



pullata



alicia



solitaria



yuccavorae



tuta



diffusa



robusta



convicta



jacosa



adenostomae



tuta



pubiventris
pubiventris



recticollis



gibbula



alpinus



mixta



purshiae



disjuncta



paradisjuncta



serena



recticolloides



tubulus



wheeleri



xanthosticta



obtusa

Species images organized by pattern: 9 of 10



adenostomensis



amabilis



amabilis



pulchella



pulchella



scalaris



ampicollis



*pubiventris
panocheae*



mojavei



neglecta



sphaeralceae



opuntiae



mojavei



vulturei



flavopicta



connexa



alacris



connexa



connexa



griffithi



haemorrhhoa



miliaris

Species images organized by pattern: 10 of 10



mixta



decipiens



maculifera



princeps



mixta



mixta



constricticollis



vanduzeei



cribricollis



wickenburgana



marginenotata



tilquilia



mixta



auritincta



mixta



immaculata



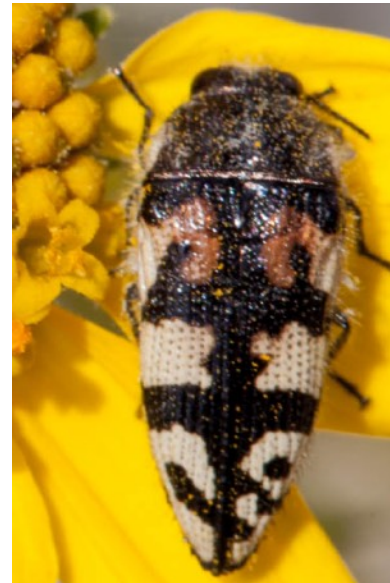
variegata

Acmaeodera color

Color. Most of the images in this guide are of preserved specimens. Please note that coloration varies considerably between live and dead specimens. Live specimens can be pale straw colored to yellow (aside from the specimens that are truly orange or red), but when they die, they tend to darken to yellow, burnt orange, to orange.



Dead *A. tuta*



Live *A. tuta*

Image by John L. Richards, <https://bugguide.net/node/view/897091/bgimage>

Start of Key: 1

1. Scales or plumose setae on ventral body; serrate antennal club often nearly round in cross section (challenging character to interpret). Species of the Southwest. Based in part on Nelson 1996 2

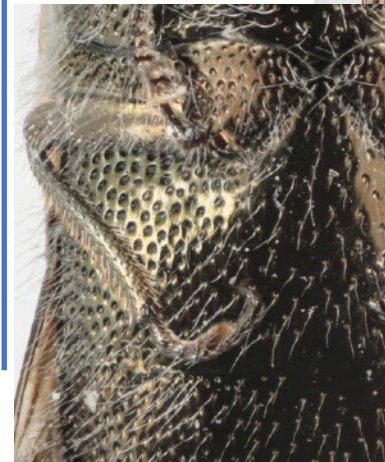
Simple setae on ventral body, plumose setae or scales rarely present and few if so; antennal club usually flattened7



Each seta is made up of multiple filaments.



Example: *A. fattigi*



2(1)

2. Elytral setae hairlike. 3

Elytral setae scale-like or palmate 6



Setae parallel sided or tapering to apex.



Setae at least broader apically.



3(2)

Elytral base color pale 4

Elytral base color black. AZ, CA, NV, and UT. Host: *Ephedra viridis* ***atactospilota*** Westcott (not natural part of this group)

Background color pale



Acmaeodera atactospilota

4(3)

Pronotum wider than base of elytra; elytra with maculations or not 5

Pronotum narrower than base of elytra; always with maculations. AZ and CA. Host: *Atriplex canescens*. ***constricticollis*** (Knull)



Acmaeodera constricticollis

5(4) part 1

Pronotal punctation normal and no lateral spot; thick strongly bent elytral setae and rows of plumose setae in outer two or more interstriae. AZ and CA. Hosts: *Palafoxia arida* and *Psorothamnus* spp. ***ephedrae*** Barr

Alveolate punctures on pronotum, Maculation variable, thin slightly bent elytral setae; plumose setae not in rows on elytra, at most sparse. AZ, CA, NV and MX. Hosts: *Argythamnia bandegeei*, *Atriplex lentiformis*, *Cercidium microphyllum*, *Eriogonum inflatum*, and mallow ***vanduzeei*** Van Dyke



***Acmaeodera
ephedrae***



Acmaeodera vanduzeei



5(4) part 2

Pronotum without lateral spot. Elytra with long hair-like setae, mostly semi-erect; metacoxa usually distinctly broadened laterally. AZ and CA. Hosts: *Palafoxia arida* and *Psorothamnus* spp. ***ephedrae*** Barr

Pronotum usually with lateral spot; elytra with moderately short hair-like setae curved posteriorly; metacoxal weakly broadened laterally. AZ, CA, NV and MX. Hosts: *Argythamnia bandedgei*, *Atriplex lentiformis*, *Cercidium microphyllum*, *Eriogonum inflatum*, and mallow ***vanduzeei*** Van Dyke
(Nelson 1996)



Acmaeodera ephedrae



Acmaeodera vanduzeei



6(2)



Base elytral color black; palmate setae dorsally, especially lateral elytral and ventrally..... **11** (not a natural part of this group)



Pale dorsally; pale, scale-like setae dorsally. AZ, CA, and MX. Host: *Psorothamnus spinosa*. **barri** Cazier



Example: *A. fattigi*



Acmaeodera barri

7(1)



Solid pale, elytral disk dark, dark suture without maculations reaching $\frac{1}{2}$ way across disk at any point, or with longitudinal stripes 15



Various maculations, not solid or longitudinal stripes only 8



8(7)

Distinct pattern: Three semicircular spots along elytral margins. 7.1-9.2mm. CA, OR. Host: *Ceanothus cuneatus*.....
..... *sinuata sexnotata* Van Dyke

Pattern other than 3 semicircles. 9



Acmaeodera sinuata sexnotata



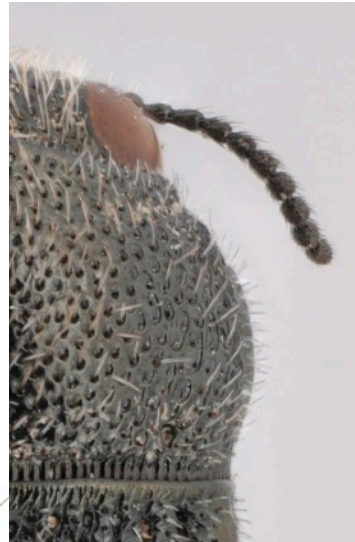
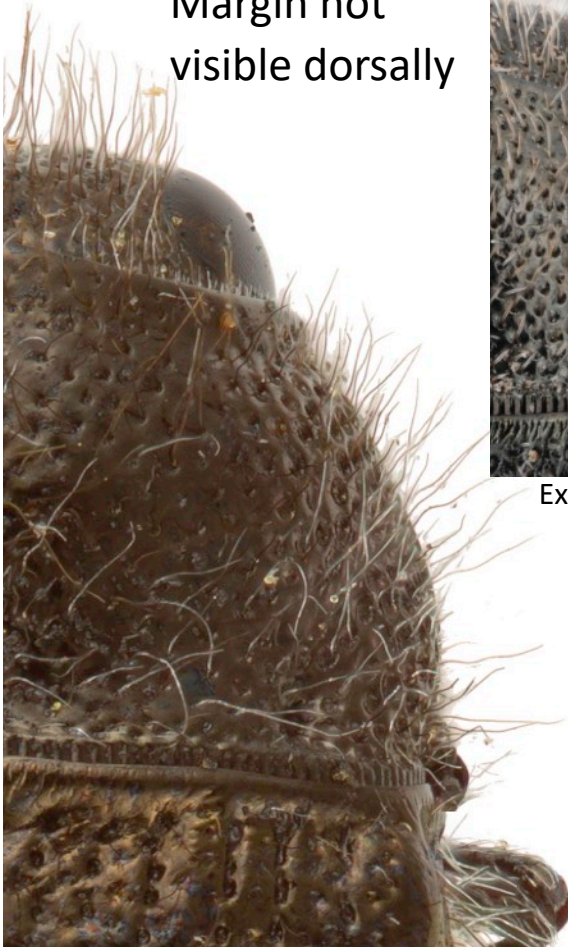
9(8)

Pronotal margin not explanate: may be shelf-like but not visible or only partially from dorsal perspective..... 10

Pronotal margin explanate: visible base to apex from dorsal perspective, shelf like for entire length (sometimes pinched at posterior corners) 40



Margin not
visible dorsally



Example: *A. natlovei*

Explanate: Flat
and expanded



10(9) part 1 of 2

Ventral setae variable in color, not thoroughly obscuring the surface of abdomen laterally 12



Dense, long, pale setae ventrally, obscuring surface, particularly on lateral abdominal segments. AZ, CA, NV and UT. Host: *Ephedra viridis* ***atactospilota*** Westcott



Example: *A. fenyesi*



Example: *A. nexa*



Acmaeodera atactospilota

10(9) part 2 of 2

Ventral setae variable in color, not thoroughly obscuring the surface of abdomen laterally 12

Dense, long, pale setae ventrally, obscuring surface, particularly on lateral abdominal segments. AZ, CA, NV and UT. Host: *Ephedra viridis* ***atactospilota*** Westcott



Example: *A. fenyesei*



Example: *A. nexa*



Acmaeodera atactospilota

11(6)



Red spot at or near apex of elytra. CA. Host: *Acacia greggii*. ***fattigi*** Knull

No elytral red spots. AZ, CA and MX. Host: *Celtis ehrenbergia*. ***mimicata*** Knull



Red markings present

Acmaeodera fattigi



Acmaeodera mimicata

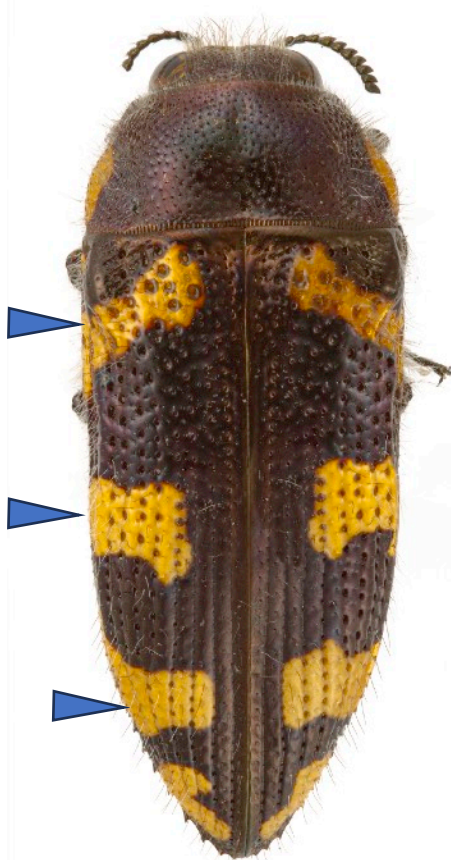
12(10)



Elytral maculations usually 3 bold, blocky bands plus pale apical maculation; pronotum trapezoidal, widest at base and deeply impressed in the middle of the base, usually bronzed with large, irregular lateral spot, variable species. 6.9-9.5mm. AZ, CA, NV and UT. Host: *Psorothamnus schotti* **tuta** Horn

Without 3 blocky bands on elytra, if with 3 pairs of blocky bands then without trapezoidal pronotum. 13

Image by John L. Richards, <https://bugguide.net/node/view/897091/bgimage>



Acmaeodera tuta



Image by Aaron Schusteff, <https://bugguide.net/node/view/306499/bgimage>



13(12)

Elytral markings typically from middle of elytra to apex..... 53

Elytral markings over entire surface to some extent 14



Markings generally absent from base of elytral disk

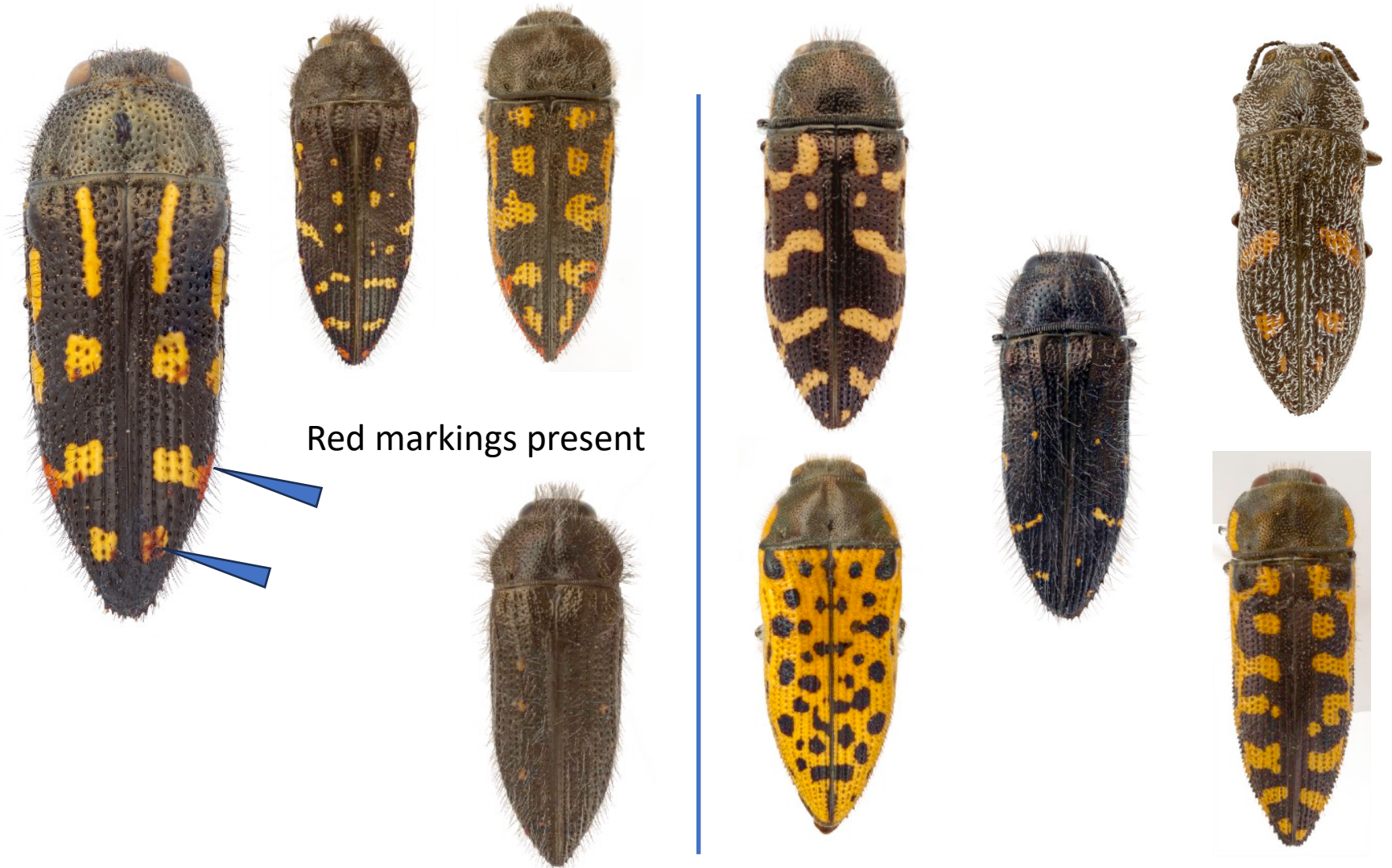


14(13)

With red markings 115



Without red markings..... 70

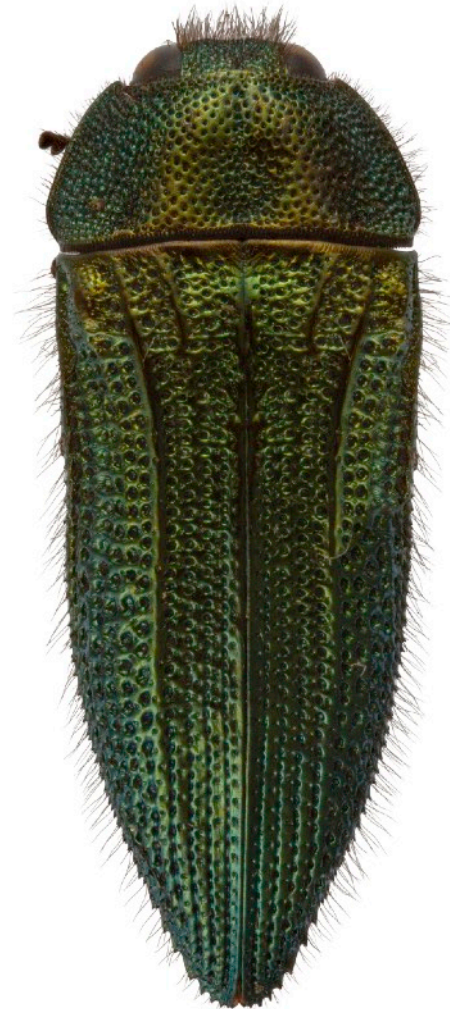


15(7)



Elytra testaceous to black, red, yellow or orange, sometimes with metallic reflections 16

Elytra metallic green. Host: unknown. AZ and MX. *resplendens* Van Dyke



Acmaeodera resplendens

16(15)

Elytra almost entirely pale, immaculate and dark suture not spreading onto disk, may have dark umbones 17

Elytra with at least some significant dark maculations on elytral disk or entirely dark 19



17(16)

Elytral apical margin without red 18

Apical elytral margin red. Host: unknown. CA and MX. *aurora* Fall



Acmaeodera aurora

18(17) part 1 of 4

Elytral margin without red.

Large pale markings not visible dorsally on pronotum.



Setae long.



Acmaeodera pubiventris yumae

7.9-14.1mm

Host: *Ephedra trifurca*

Range: AZ, CA and MX

Large pale markings on lateral pronotum visible dorsally (covering about ½ distance between eye and base); immaculate form.



***Acmaeodera
immaculata*** (in part)

4.7-10.5mm

Host: *Krascheninnikovia lanata*

Range: AZ, CA, CO, ID, MT, NV,
SD, UT, WY and T

Setae short.



Pronotum black. Setae
not obscuring surface.



Pronotum with brassy reflections.
Dense pale setae on pronotum.



Acmaeodera ephedrae

Host: *Palafoxia arida* and
Psorothamnus spp.

Range: AZ and CA

Elytra subparallel for
2/3. Elytral apex acute.



Acmaeodera starrae

(less common form)

Host: *Baccharis neglecta*

Range: TX

Elytra subparallel for ¾
length. Elytral apex rounded.



Acmaeodera navajo

3.8-6.5mm

Host: unknown

Range: AZ and UT

18(17) part 2 of 4



***Acmaeodera ephedrae* Barr**

Host: *Palafoxia arida* and
Psorothamnus spp.
Range: AZ and CA



***Acmaeodera immaculata* Horn**

4.7-10.5mm
Range: AZ, CA, CO, ID, MT, NV,
SD, UT, WY and T
Host: *Krascheninnikovia lanata*

18(17) part 3 of 4



Acmaeodera navajo Nelson and Westcott

3.8-6.5mm

Host: unknown

Range: AZ and UT



Acmaeodera pubiventris yumae Knull

7.9-14.1mm

Host: *Ephedra trifurca*

Range: AZ, CA and MX



Acmaeodera starrae Knull

(less common form)

Host: *Baccharis neglecta*

Range: TX



Convex pronotum with no sign of medial impression (only 3 basal impressions present) and with large, uniseriate punctures laterally. Dorsal elytra setae pale-clear and "stiff"; femoral setae shorter than femoral width; Interstriae 2-3x strial punctures. Pronotal margin visible entirely. No pronotal spot. Small (4.2-6.2mm) Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX ***neoneglecta*** Fisher (in part)

At least one of first 5 characters does not match 20

Forms of *A. neoneglecta* keying here



Other forms keying elsewhere



Elytral disk dark, immaculate 21

Elytral disk striped or with dark sutural stripe 23



21(20) part 1 of 4

From elytra disk dark

Completely dark



To 22

With maculations



With long setae; elytral markings other than single large red and lateral

Distinct pattern: Bold white/yellow maculations interconnected along margin



Acmaeodera horni

Host: *Quercus arizonicus*
Range: AZ

Maculations smaller and narrower, not as bold



Maculations pale yellow; dorsal surface black



Acmaeodera deviata

Host: *Juniperus californica*
Range: CA and MX

Metallic lustre



Acmaeodera acanthicola

Host: *Celtis ehrenbergia*
Range: AZ, CA and MX

No metallic lustre



Acmaeodera davidsoni

Host: unknown
Range: AZ, NM, TX and MX

Maculations red; dorsal surface bronzy red sheen



Acmaeodera rubrocuprea

Host: *Cercocarpus betuloides*
Range: CA and MX

21(20) part 2 of 4



***Acmaeodera acanthicola* Barr**

Host: *Celtis ehrenbergia*

Range: AZ, CA and MX



***Acmaeodera davidsoni* Barr**

Host: unknown

Range: AZ, NM, TX and MX



Acmaeodera devciata Barr

Host: *Juniperus californica*

Range: CA and MX



Acmaeodera rubrocuprea Westcott and Nelson

Host: *Cercocarpus betuloides*

Range: CA and MX



Acmaeodera horni Fall

Host: *Quercus arizonicus*

Range: AZ

22(21) part 1 of 4

From completely dark

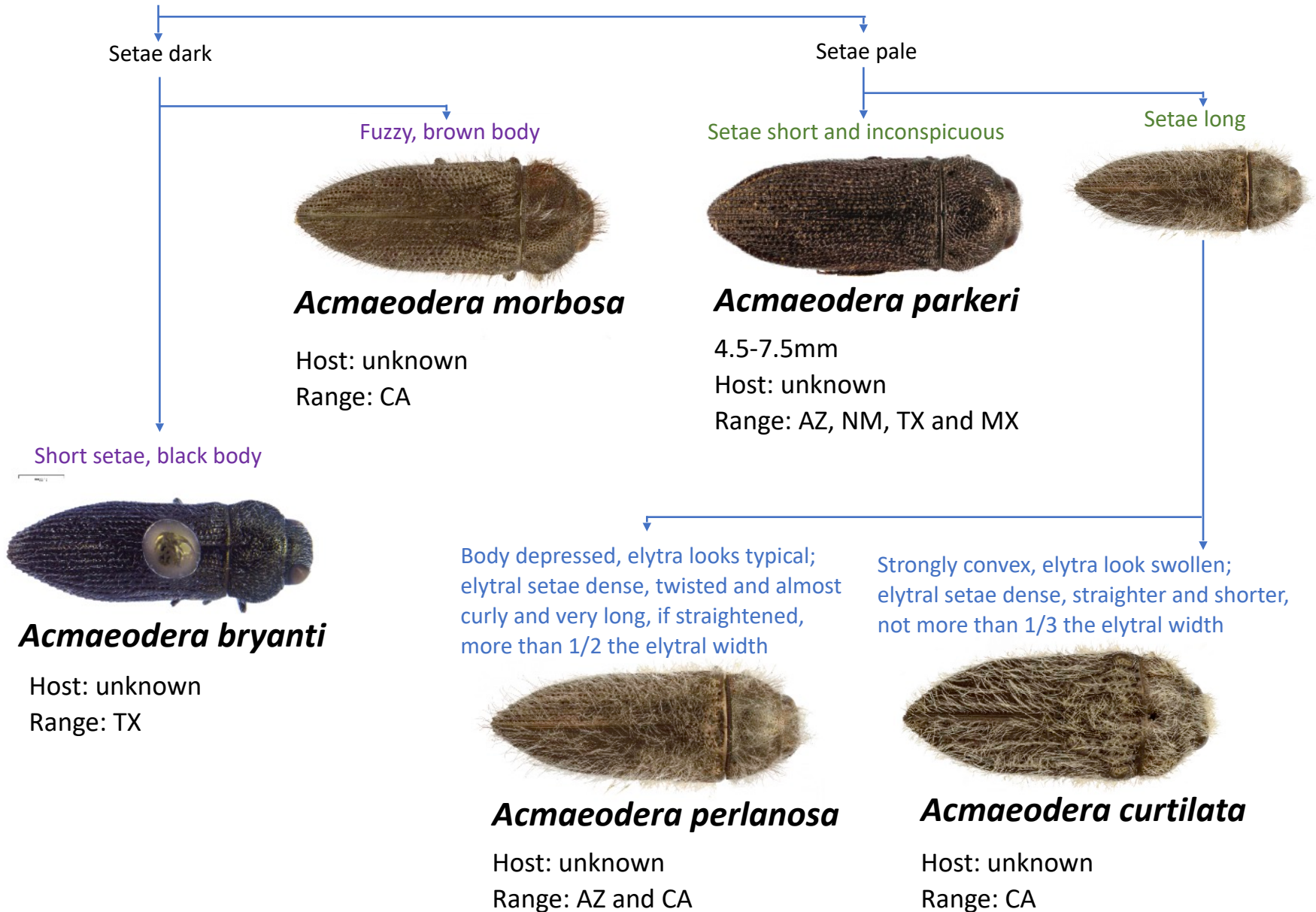


Image by J. Hansen

1.00mm



Acmaeodera bryanti Van Dyke

Host: unknown

Range: TX



Acmaeodera curtilata Knull

Host: unknown

Range: CA

22(21) part 3 of 4



Acmaeodera morbosa Fall

Host: unknown

Range: CA



Acmaeodera parkeri Cazier

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX



Acmaeodera perlanosa Timberlake

Host: unknown

Range: AZ and CA

23(20)



Elytral disk with dark sutural stripe; may have lateral, irregular dark maculations 24

Distinct dark sutural band bordered by uninterrupted (and fairly regular) pale bands 27



24(23)

Elytral disk with dark sutural stripe with irregular lateral dark maculations 25

Dark sutural stripe with mostly blank pale lateral areas 31



25(24)

Lateral elytra maculations not usually discrete spots, if present then only on one elytron, setae short and pale 26

With one or two distinct spots on the pale areas of each elytron; elytral setae long and dark 32



26(25) part 1 of 3

From elytra widest at base,
weakly serrate apically

Lateral pronotal margin
not visible dorsally.

Pale markings not as
wide as central dark area
or not near elytral base



Acmaeodera parkeri
(in part)

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX

Base of pale bands about as
wide as dark central area



Acmaeodera discalis

Host: unknown

Range: AZ

Lateral pronotal margin visible
dorsally for most of length.

Pronotal spot absent.

With small pronotal spot.



Acmaeodera raschkoi

4.2-5mm

Host: unknown

Range: NV

Subapical plate present.



Acmaeodera ligulata

Host: *Quercus* spp.

Range: AZ, NM, NV and UT

Subapical plate absent (species
difficult to differentiate!).



Go to 35



26(25) part 2 of 3



Acmaeodera discalis Cazier

Host: unknown

Range: AZ



Acmaeodera ligulata Cazier

Host: *Quercus* spp.

Range: AZ, NM, NV and UT

26(25) part 3 of 3



Acmaeodera parkeri (Cazier)

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX



***Acmaeodera*
*raschkoi*** Westcott

4.2-5mm

Host: unknown

Range: NV





With elytra bands more or less regular, elytral setae variable 28

With irregular or disrupted elytra bands, short, stiff, pale elytral and pronotal setae; femoral setae shorter or subequal to femoral width 33



With lateral pale bands..... 29

Without lateral pale bands. Host: unknown. AZ *cazieri* Knull



Acmaeodera cazieri

29(28)

With short pale setae; femoral setae shorter than femoral width..... 30

With long setae; femoral setae longer 34



*Comparison of the female genitalia is necessary for determination (Nelson and Westcott 1995).

30(29)

3.3-6mm. Host: unknown. AZ, CA, NM, NV, TX, UT and MX. *quadrivittatoides* Nelson and Westcott

4.5-5.5mm. Host: yucca. CA, NV, UT and MX. *quadrivittata* Horn



Acmaeodera quadrivittatoides



Acmaeodera quadrivittata



Dark suture only



Long, dark and pale setae on the elytra.



Acmaeodera sinuata
sinuata Van Dyke

Host: unknown
Range: CA

*Image by Joshua Basham 2011
<https://bugguide.net/node/view/483552>

Short, pale setae on the elytra.



Pale areas of elytra reddish

9th interval not as dramatically raised and doesn't make the elytra appear wider.



Acmaeodera robigo

Host: *Dalea formosa*
Range: OK and TX

Elytra pale yellow to orange
(sutural band can be wider)



Acmaeodera starrae
Host: *Baccharis neglecta*
Range: TX



9th elytral interval strongly expanded from the base of the umbone giving the apical third a wider appearance.



Acmaeodera chuckbellamyi

Known from a single specimen.
Image from Macrae 2014.
Length: 7.15mm
Host: unknown
Range: AZ

31(24) part 2 of 3



Acmaeodera robigo Knull

Host: *Dalea formosa*

Range: OK and TX



Acmaeodera chuckbellamyi Macrae

Image from Macrae 2014.

Length: 7.15mm

Host: unknown

Range: AZ

31(24) part 3 of 3



*

Acmaeodera sinuata sinuata Van Dyke

Host: unknown

Range: CA

*Image by Joshua Basham 2011 <https://bugguide.net/node/view/483552>



Acmaeodera starrae Knull

Host: *Baccharis neglecta*

Range: TX

32(24)



Lateral maculations consisting of tiny, irregular splotches scattered parallel to the suture; elytral setae short, pale.....
..... *riograndei* Nelson

With one or two distinct spots on the apical 1/3 of each elytron; elytral setae long and light and dark
..... *latiflava latiflava* Fall



Acmaeodera riograndei



Acmaeodera latiflava latiflava



Elytra subparallel on basal 2/3, weakly serrate apically; when lateral pale bands present, not reaching lateral margin. 3.0–7.5mm.
Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK, NM and TX. ***neglecta*** Fall (in part)

Elytra strongly sinuate, widest about behind middle, strongly serrate apically, with pale band extending to medial pale band from lateral margin just behind umbone. Host: *Prosopis glandulosa*. AZ, CA and MX. ***sabinae*** Knull



Acmaeodera neglecta

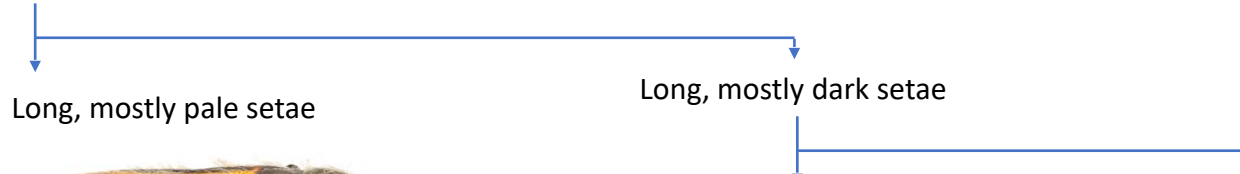


Acmaeodera sabinae

34(29) part 1 of 3



With long setae



Acmaeodera pubiventris lanata

(in part- there are forms with disrupted medial pale bands)

6.3-12.6mm

Host: *Ephedra* spp.

Range: AZ, CA, NV, UT and MX

With pronotal spots visible dorsally



Acmaeodera latiflava lineipicta

Host: *Dasyilirion wheeleri*

Range: AZ

With pronotal spots not visible dorsally



Acmaeodera nigrovittata

Hosts: *Atriplex polycarpa* and *Suaeda moquinii*

Range: CA



Acmaeodera latiflava lineipicta Fall

Host: *Dasytirion wheeleri*

Range: AZ



Acmaeodera nigrovittata Van Dyke

Hosts: *Atriplex polycarpa* and *Suaeda moquinii*

Range: CA



Acmaeodera pubiventris lanata

6.3-12.6mm

Host: *Ephedra* spp.

Range: AZ, CA, NV, UT and MX



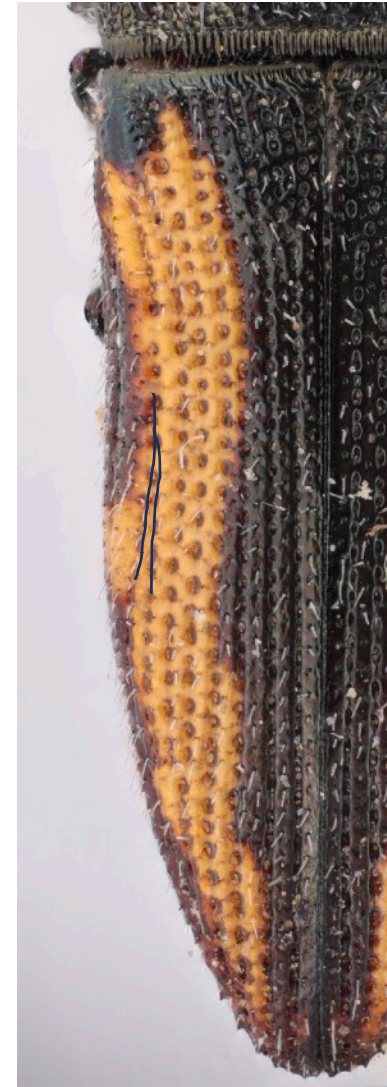
7th stria split near umbone or independent (starts 0–5 punctures from umbone) 36

7th stria split within basal third (starts ≥ 6 punctures from umbone) 37

(Adapted from Hansen 2023)



Example: *A. neglecta*



Example: *A. natlovei*

36(35)



Interstriae often narrower than striae on disk, elytra clothed with wide setae, 3.0–5.5mm. Hosts: *Karwinskia humboldtiana* and *Parkinsonia texana*. TX..... ***opuntiae*** Knull (in part)

Interstriae equal to or slightly wider than striae, elytra clothed with narrow setae, 3.0-7.6mm 38



Acmaeodera opuntiae



Acmaeodera neglecta



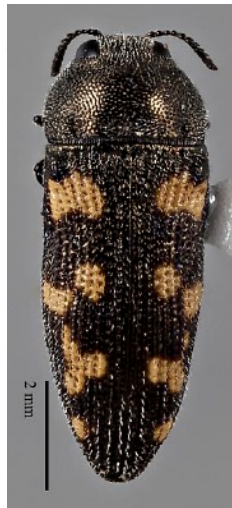
37(36)



Difficult to separate!

Clypeus broadly shallowly emarginate. 5.7-7.6mm. Hosts: *Celtis laevigata*, *Juglans* spp., and *Ulmus crassifolia*. AZ, NM, TX
 **conoidea** Fall (in part)

Clypeus narrowly, deeply emarginate. 3.0-7.5mm. Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK, NM and TX **neglecta** Fall (in part)



Acmaeodera conoidea

Joel DuBois 2019 <https://bugguide.net/node/view/1726363/bgpage>



Acmaeodera neglecta



Each elytron usually with 6–8 small yellow spots that occasionally coalesce, rarely reduced. 4-7mm. Hosts: *Betula nigra*, *Carya* spp., *Celtis occidentalis*, *Cercis canadensis*, *Crataegus* spp., *Gleditsia triacanthos*, *Juglans nigra* and *Ulmus* spp. AL, AR, CT, DC, DE, FL GA, IA, IL, IN, KS, KY, LA, MA, MD, MI, MO, NC, NE, NJ, NY, OH, OK, PA, SC, TN, TX and VA **tubulus** (Fabricius)

Each elytron with vittae or larger irregular yellow markings or fewer and larger yellow spots 39

(Adapted from Hansen 2023)



Acmaeodera tubulus



39(38)

Pronotum black. Elytral markings variable but always with maculation on apical third combined into one elongate maculation; pronotum black. 5-7mm. Hosts: *Celtis laevigata* and *Juglans macrocarpa*. AZ, NM and TX. ***natlovei*** Hansen (in part)

Pronotum black bronze (often vague). Elytral markings extremely variable, sometimes with narrow irregular vittae, less commonly wide vittae, rarely immaculate. 4.2-6.2mm. Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX. ***neoneglecta*** Fisher (in part)

(Adapted from Hansen 2023)



Acmaeodera natlovei



Acmaeodera neoneglecta

40(9)



Pronotum with lateral spots; black or bronzed dorsally 41

Pronotum immaculate; blue reflections dorsally. Host: unknown. AZ, NM, TX and MX. *flavopicta* Waterhouse



Acmaeodera flavopicta

41(40)

Not 4 elytral bands or if in 4 rows, then at least some diminished to spots; pronotal spots typically elongate and parallel to margin 42

4 rows of distinct elytral bands; pronotal spots more than just a line along margin. 7.5-11mm. Host: unknown. OK and TX.
..... **macra** Horn



Acmaeodera macra

42(41)

Maculations variable, but not typically three pale bands 43

Maculations of 3 strong bands reaching toward the suture..... 50



43(42)

With basal 2/3 of disk immaculate with lateral bands and apical bands 44

With some maculations within basal 2/3 45



Disk without
markings in
basal 2/3

Markings on
disk in basal
half



44(43)

Apical band not usually broken by suture, often with dark spots within. 8-12.5mm. *Acacia rigidula*, *Diospyros texana*, and *Prosopis glandulosa*. AZ, TX and MX. ***flavomarginata*** (Gray)

Apical band broken by suture, dark spots not apparent (because it is dark between the bands!). Host: unknown. AZ.
..... ***chiracahuae*** Barr



Acmaeodera flavomarginata



Acmaeodera chiracahuae

45(43)



With lateral pronotal markings 46

Without lateral pronotal markings 67



46(45)

Maculations elaborate and distinctive; pronotal spots large and distinct 47

Maculations smaller, varying from spots to irregular maculations; pronotal spot (rarely present) small. 8.5-12.5mm. Host: unknown. AZ, ID, NV, and UT. *knowltoni* Barr



Acmaeodera knowltoni

47(46)

With red markings 48

Without red markings 51



48(47)

Lateral stripe from base to about middle usually broken; apical bands both marked with red; Basal elytra with spots in rows; 9th elytral interval variable; 49

Lateral stripe from base to about middle usually not broken; one or both apical bands marked with red broken by suture; Basal elytra with a stripe or elongate dot sometimes reduced to small dots or absent; 9th elytral interval not more convex than second or fourth at apical third; 8-11mm. Host: *Alnus incana*. AZ, CO, NM and TX. ***amabilis*** Horn



Lateral band broken



Both apical bands always with red

Example: *Acmaeodera opacula*



Lateral band intact until at least half elytral length



Salvador Viana, Ph.D.

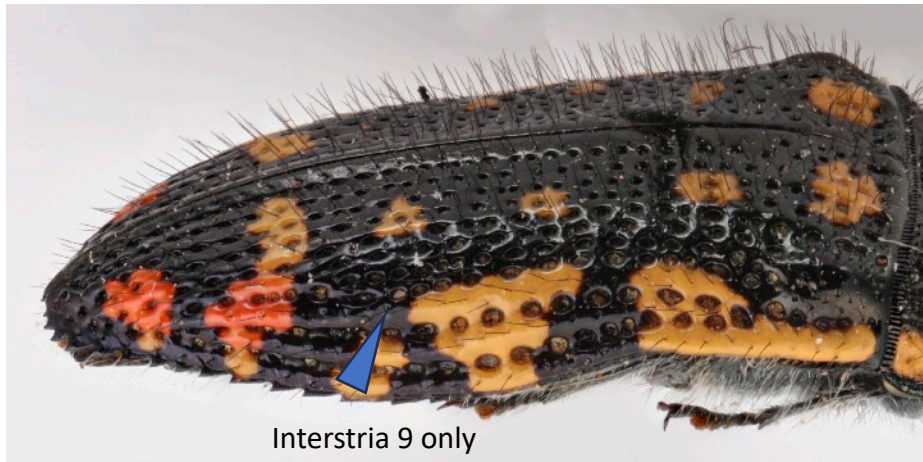


Acmaeodera amabilis

49(48) part 1 of 2

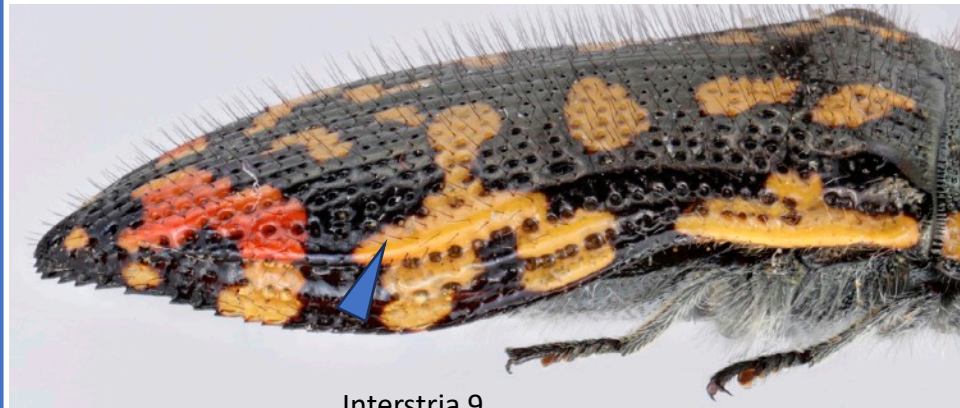
9th interstria only somewhat larger than 8 and 10 behind middle. 9-12mm. Host: *Fouguieria splendens*. AZ, NM and TX.
..... ***opacula*** LeConte (= *disjuncta*)

9th interstria abruptly larger than 8 and 10 behind middle. Host: *Dasyllirion wheeleri*. NM, TX and MX. ***paradisjuncta*** Knull
(Adapted from Hansen 2023)



Interstria 9 only
slightly larger
than 8 and 10

Acmaeodera opacula



Interstria 9
abruptly larger
than 8 and 10
behind middle

Acmaeodera paradisjuncta

49(48) part 2 of 2

9th interstria only somewhat larger than 8 and 10 behind middle. 9-12mm. Host: *Fougueria splendens*. AZ, NM and TX.
..... ***opacula*** LeConte (= *disjuncta*)

9th interstria abruptly larger than 8 and 10 behind middle. Host: *Dasyilirion wheeleri*. NM, TX and MX. ***paradisjuncta*** Knull
(Hansen 2023)



Acmaeodera opacula



Acmaeodera paradisjuncta

50(42)



Pronotum usually bronzed; elytral pattern highly variable. 8-9.5mm. Host: *Psorothamnus schotti*. AZ, CA, NV, UT. **tuta** Horn (common morph)

Pronotum black without bronzing; elytral pattern consistent: 3 strong bands reaching toward the suture. 10-11mm. Host: unknown. CA. **robusta** Horn

Image by John L. Richards, <https://bugguide.net/node/view/397091/bgimage>



Image by Aaron Schusteff, <https://bugguide.net/node/view/306499/bgimage>



Acmaeodera tuta



Acmaeodera robusta

51(47)



Elytra with basomedial longitudinal bands 52

Elytral markings irregular spots. Host: unknown. NM and MX. *reflexa* Barr (in part)



Longitudinal
basal band



Acmaeodera reflexa

52(51)

Distinct pattern with two dark oval spots apically (crossing the suture) and two round black dots; Finer, shallower elytral punctures. 9.5-11mm. Host: unknown. AZ, NM, TX and MX *scalaris* Mannerheim

Distinct pattern but without ovals or round spots; elytral punctures coarse and deep. 9-13mm. Host: unknown. AZ, NM and MX.
..... *amplicollis* LeConte



Acmaeodera scalaris



Acmaeodera amplicollis



Elytral maculations variable, at least some more than small spots 54

Elytral maculations consisting of small obscure spots, not as wide as 2 interstriae. 8-11mm. CA and MX. Host: *Lotus scoparius* *fenyesi* Fall



Forms with no spots in anterior half of elytral disk occur.



Acmaeodera fenyesi

54(53)

Elytral maculations white, yellow, or orange, never completely red 55

Elytral maculations almost entirely or entirely red 61



55(54)

Elytral maculations dominated by a large subapical band 63



Elytral maculations not primarily a large apical band, although they may have a strong medial band 56



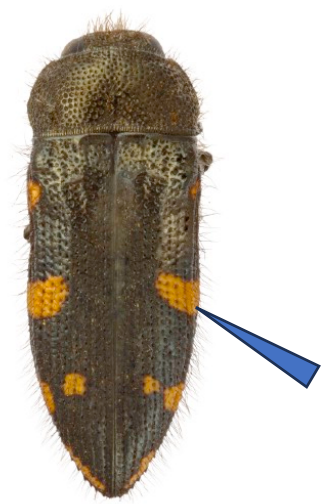
56(55)

Elytral maculations shorter than half the disk width 57

Elytral maculations reaching halfway or more across the elytron 64 



Maculation reaching
across $\frac{1}{2}$ elytron but
broken into spots

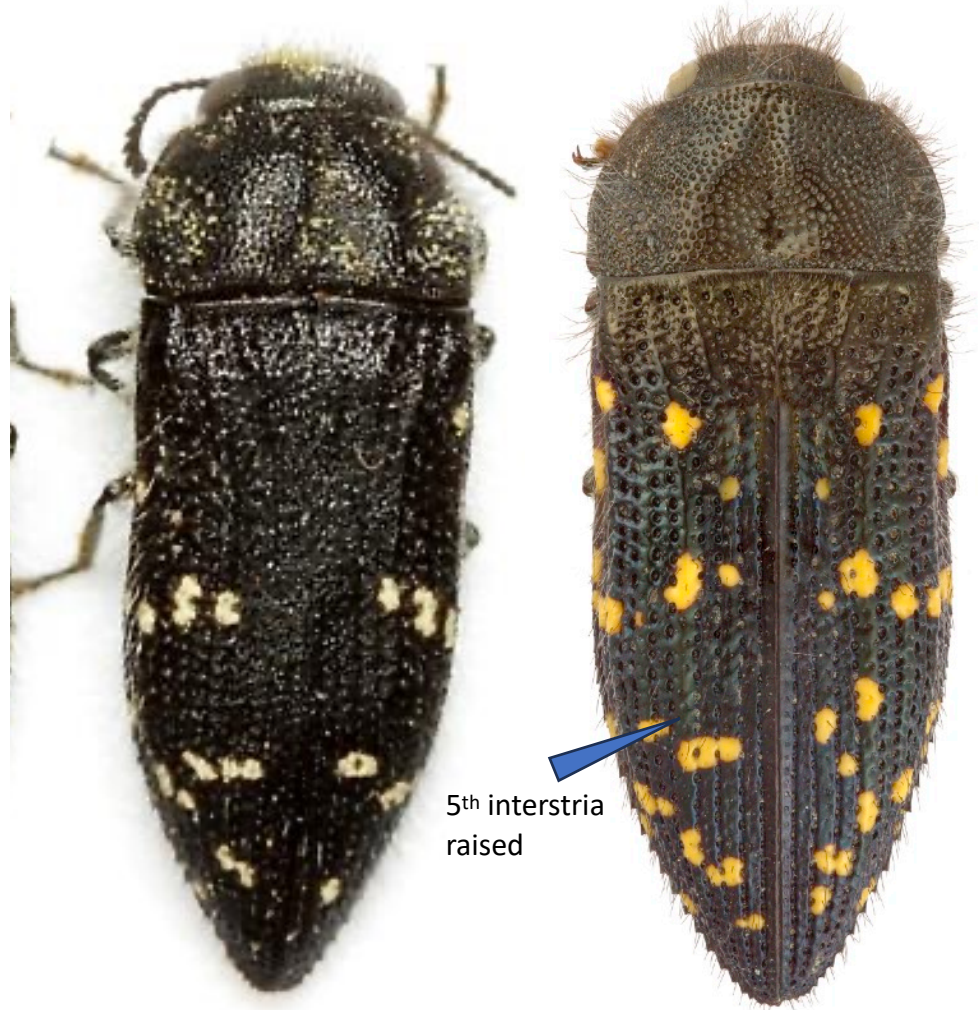
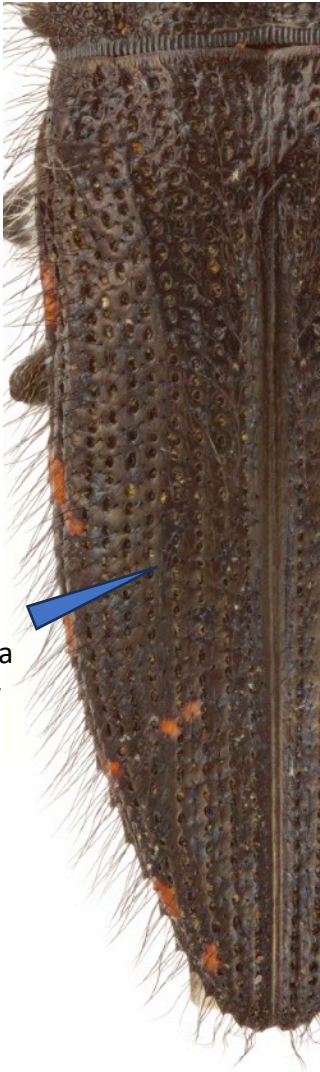


57(56)

Raised portion of 5th interstriae not reaching half length of elytra 58

5th interstriae distinctly raised for $\frac{3}{4}$ or more of elytral length. Host: unknown. OK, TX, NM. *ornatoides* Barr (in part)

5th interstria
flat apically



5th interstria
raised

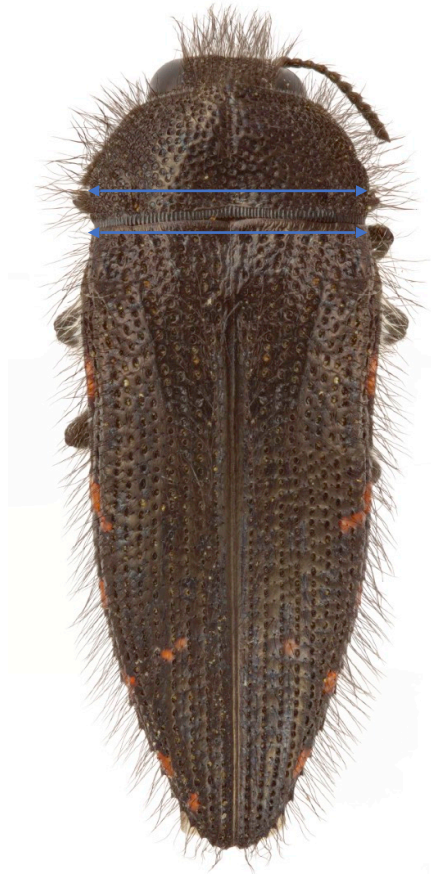
Acmaeodera ornatoides

58(57)

Pronotum wider than base of elytra; pronotum widest anterior to base 59



Widest part of the pronotum and base of elytra subequal; pronotum widest at the base and tapering to apex ; rare color morph. 8.1-12.8mm. AZ, CO, ID, NM, NV, TX, UT and MX. Host: *Quercus* spp. ***rubronotata*** Laporte and Gory



Acmaeodera rubronotata



Elytral setae mixture of pale and dark setae 60

Elytral setae all dark or nearly so. 8-12mm. CA, ID, NV, OR and WA. Hosts: *Ceanothus* spp. and *Quercus wislizenii*
 ***vandykei*** Fall



Example: *Acmaeodera nexa*



Acmaeodera vandykei

60(59)

Larger species; blue metallic reflections; rare color morph 8.8-10.8mm. CA and OR. Host: *Arctostaphylos* spp.....
..... ***plagiaticauda*** Horn

Small species; no blue reflections; rarer form without red. 5.8-7mm. CA and OR. Host: *Cercocarpus betuloides* ***nexa*** Fall



Acmaeodera plagiaticauda



Acmaeodera nexa

61(54): Part 1 of 2



At least one pair of maculation band-like; femoral setae longer than femoral width..... 62

Maculations are not bands; femoral setae shorter than femoral width. 6.2-7.5mm. Host: *Krameria grayi*. AZ, CA, NM and MX **bivulnera** Horn



***Acmaeodera bivulnera* Horn**

62. 2 pairs of markings. 6.7-9.8mm. Hosts: *Ceanothus* spp., *Cercis occidentalis*, *Cercocarpus* spp., *Heteromelas arbutifolia*, *Rhamnus californica*, and *Toxicodendron diversilobum*; range: CA and OR **mariposa mariposa** Horn



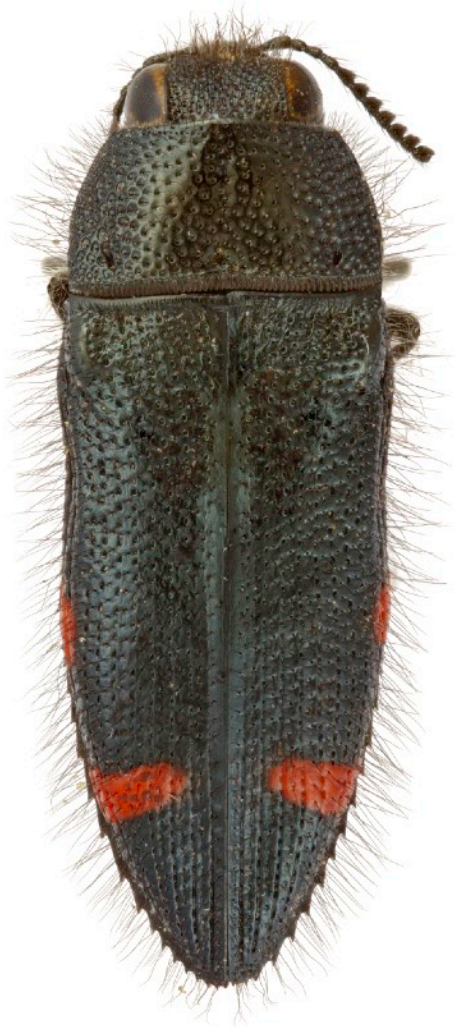
***Acmaeodera mariposa mariposa* Horn**

3 pairs of markings. Host unknown. CA **mariposa dohrni** Horn



***Acmaeodera mariposa dohrni* Horn**

61(54): Part 2 of 2



Acmaeodera mariposa mariposa



Acmaeodera mariposa dohrni



Acmaeodera bivulnera

63(55)



Various rare forms:



Acmaeodera
mojavei



Acmaeodera verityi



Acmaeodera
ornatoides



Acmaeodera
rubronotata

64(56): Part 1 of 4



Middle band
strongly oblique

From markings reaching halfway or more
across elytral disk

Middle band not
clearly oblique



Go to 65



Acmaeodera wenzeli

Apical
maculation does
not touch margin

Medial band thick (at
least two interstriae
wide) and relatively
symmetrical



Medial band narrow and
irregular or broken into spots



*Acmaeodera
angelica* (in part)

5.8-9mm.

Hosts: *Ceanothus* spp., *Quercus*
spp. and *Toxicodendrum*
californicum.

AZ, CA, NV, OR, UT and MX



Acmaeodera simulata

Distinct serrations along
entire posterior margin of
elytra starting at middle

Serrations limited
to apical 1/4

Apical maculation
touches margin

Pronotum
widest at base



Pronotum widest
at middle



Apical markings closer to
subapical spot than apex
(does not work)



Acmaeodera nelsoni

Apical markings closer to apex than
subapical spot



*Acmaeodera
constrictinotum*



Acmaeodera knullorum

64(56): Part 2 of 4



Length: 7-9mm
Range: CA and OR
Host: *Quercus* spp.

Acmaeodera simulata Van Dyke



Range: CA
Host: unknown

Acmaeodera knullorum Barr

64(56): Part 3 of 4



Acmaeodera wenzeli Van Dyke

Range: TX

Host: *Acacia constricta*

Size: 5.8-9mm

Range: AZ, CA, NV, OR, UT
and MX

Hosts: *Ceanothus* spp.,
Quercus spp., and
Toxicodendrum
californicum



***Acmaeodera*
*angelica*** Fall (in
part)

64(56): Part 4 of 4



Range: CA
Host: unknown

Acmaeodera nelsoni Barr

Range: CA and NV
Host: unknown



Acmaeodera constrictinotum
Westcott and Nelson

65(64): Part 1 of 3



65. Elytral setae sort. Host unknown. CA and OR ***ceanothae*** Nelson



Acmaeodera ceanothae

Elytral setae long 66

66. Pronotal punctures large, touching or almost touching. Host *Fremontodendron californicum*. AZ ***tenebricosa*** Fall



Acmaeodera tenebricosa

Pronotal punctures small, one or more diameters apart. 5.8-9mm. Hosts: *Ceanothus* spp., *Quercus* spp. and *Toxicodendron californicum*. AZ, CA, NV, OR, UT and MX ***angelica*** Fall (in part)



Acmaeodera angelica

65(64): Part 2 of 3



Size: 5.8-9mm

Range: AZ, CA, NV, OR, UT
and MX

Hosts: *Ceanothus* spp.,
Quercus spp., and
Toxicodendrum
californicum

***Acmaeodera angelica* Fall**

65(64): Part 3 of 3



Acmaeodera tenebricosa Fall

Range: AZ

Host: *Fremontodendron californicum*



Acmaeodera ceanothae Nelson

Range: AZ

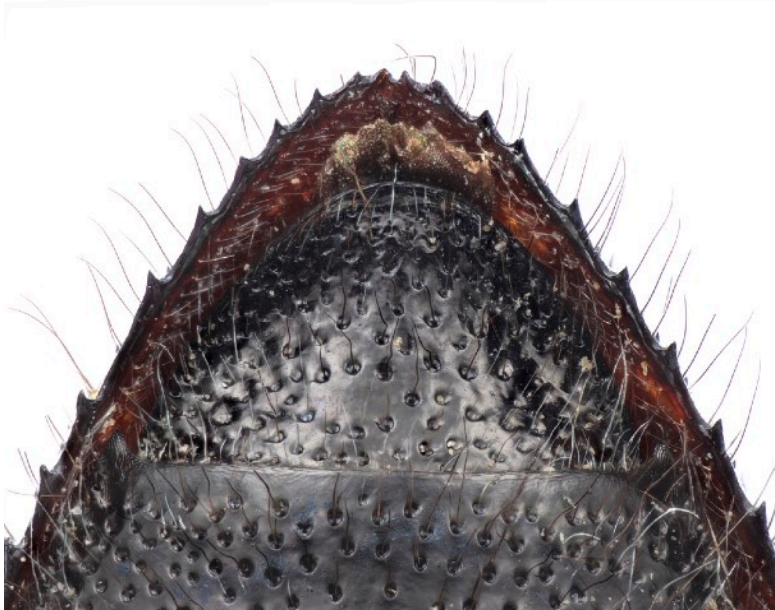
Host: unknown

67(45)



Apical plate absent 68

Apical plate present 69



Example: *A. errans*



Subapical
plate
present

68(67)

Elytral pattern consistent, four pairs of maculations, the medial and postmedial largest and extending towards disk. 6.5-11mm.
Host: unknown. CA. *prorsa* Fall

Elytral maculations made up of small, indistinct spots. Host: unknown. NV and UT. *errans* Barr



Medial and
postmedial
larger

Acmaeodera prorsa



Acmaeodera errans

69(67)



Elytral pattern consistent, always with a spot behind umbone and without red. Host: unknown. NV. *condita* Barr

Elytral pattern variable, sometimes with a spot behind umbone and/or with red. 8.5-12.5mm. Host: unknown. AZ, ID, NV, and UT.
..... *knowltoni* Barr



Acmaeodera condita



Acmaeodera knowltoni



70(14)



Not cribrate..... 71

Pronotal punctures cribrate (on disk) or with less than half a puncture diameter separating them 133



Cribrate



Near cribrate



"Normal" punctures

71(70)

If elongate then without 2 subbasal pale spots or 4 lateral bands largely connected laterally; more typical *Acmaeodera* than a yellow jacket abdomen 72

Elongate with 2 basal spots and at least 4 lateral bands largely connected laterally; pattern is very “yellow jacket” abdomen. AZ, CA and MX. Host: unknown. ***solitaria*** Kerr



Acmaeodera solitaria

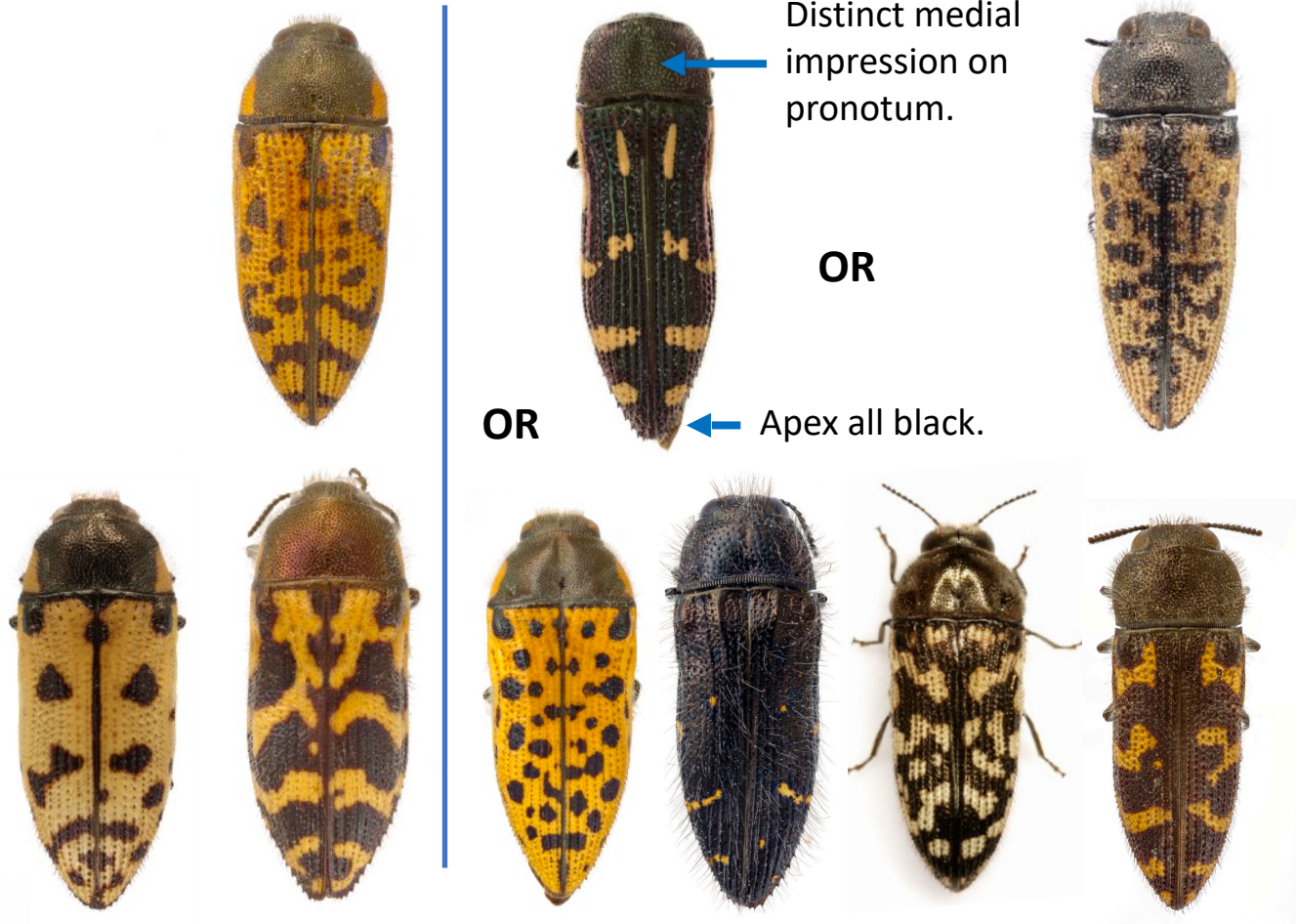
72(71): Part 1 of 2

Yellow and black at elytral apex (not always present, but usually); pronotum convex typically with a bronze luster, median impression weak to absent, pronotal margin sharp, distinct edge, lateral pronotal spot present; subapical plate present (except in pale forms); Supplemental characters: interstriae not distinctly raised except right near base; pronotum widest at base; humeral maculation 1.25x or greater length of umbone; fine erect elytra setae; highly variable species. 6.5-13mm. AZ, CO, KS, NE, NM, OK, TX, UT and MX. Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp., and *Prosopis* spp. ***mixta*** Horn (in part)

Without yellow and black elytral apex OR pronotum with distinct median impression OR pronotum without distinct raised lateral margin OR subapical plate absent (in dark forms); bronze luster variable. 73



Acmaeodera mixta

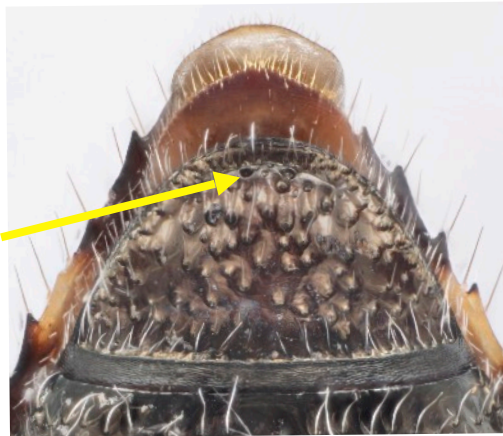


72(71): Part 2 of 2

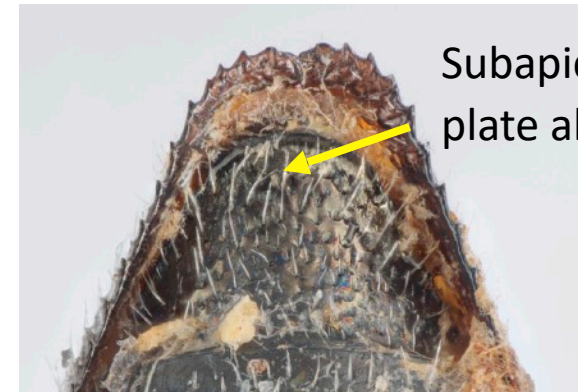
Yellow and black at elytral apex (not always present, but usually); pronotum convex typically with a bronze luster and widest at base, median impression weak to absent, Pronotal margin sharp, distinct edge, lateral pronotal spot present; subapical plate present (except in pale forms); Supplemental characters: interstriae not distinctly raised except right near base; humeral maculation 1.25x or greater length of umbone; fine erect elytra setae; highly variable species. 6.5-13mm. AZ, CO, KS, NE, NM, OK, TX, UT and MX. Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp., and *Prosopis* spp. ***mixta*** Horn (in part)

Without yellow and black elytral apex **OR** pronotum with distinct median impression **OR** pronotum without distinct raised lateral margin **OR** subapical plate present (in dark forms) 73

Subapical plate



Subapical plate absent.



OR

Lateral margin rounded



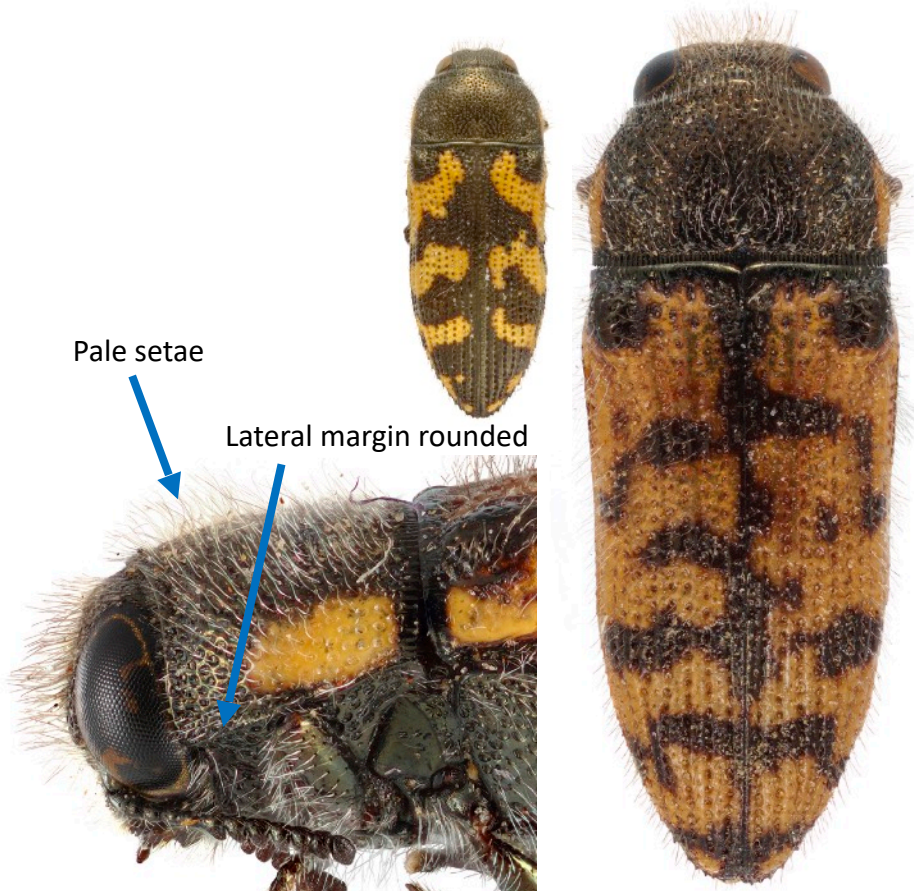
Pronotal margin sharp



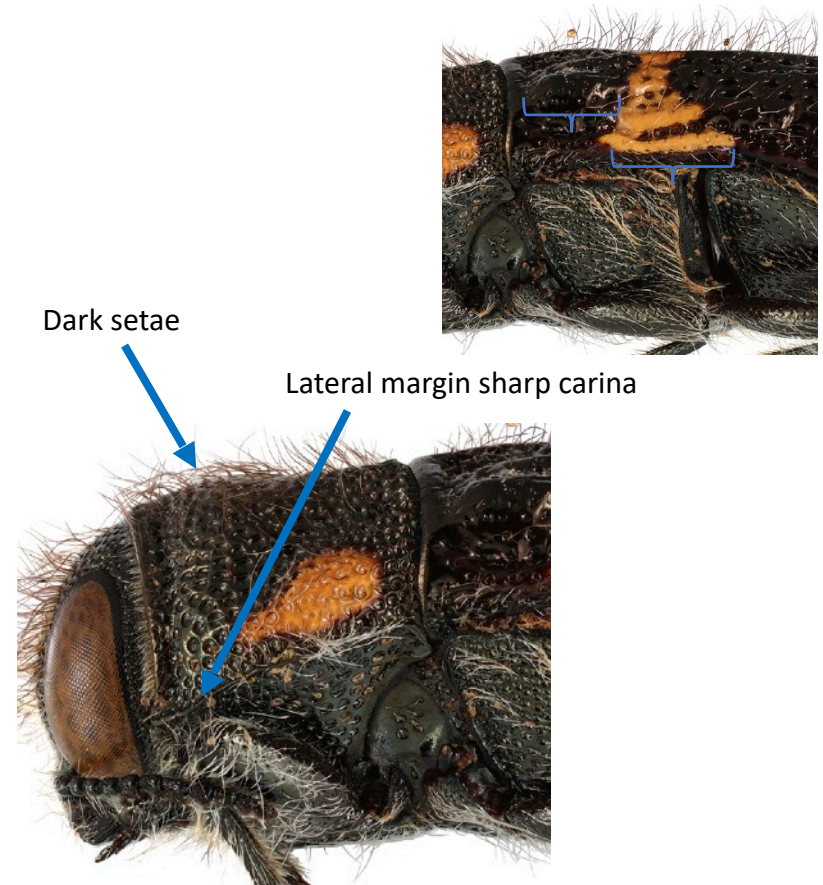
73(72) part 1 of 2

Pronotal margin edge rounded; lateral pronotal spot present and visible dorsally; humeral maculation 2x or greater length of umbone (unless immaculate); elytral setae white to pale brown; subapical plate present; Supplemental characters: pronotum convex typically with a bronze luster; highly variable species ranges from immaculate to "typically" maculate. 4.7-10.5mm. AZ, CA, CO, ID, MT, NV, SD, UT, WY and TX. Host: *Krascheninnikovia lanata* ***immaculata*** Horn (in part)

Pronotal margin carinate **OR** pronotal spot absent **OR** elytral setae dark **OR** subapical plate absent **OR** humeral maculation 1.5x or less umbone length (ignore this character if immaculate) 74



Acmaeodera immaculata

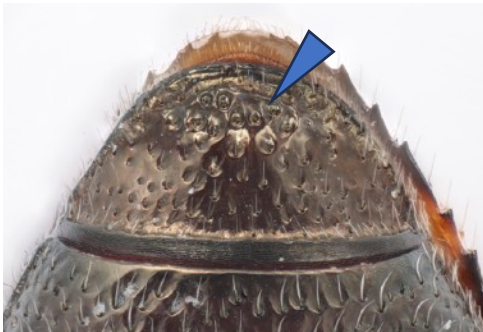
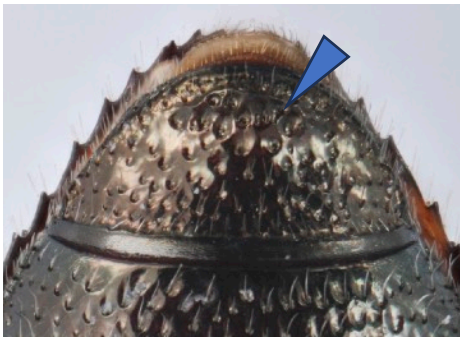


Example: *Acmaeodera bowditchi*

73(72) part 2 of 2

Pronotal margin edge rounded; lateral pronotal spot present and visible dorsally; humeral maculation 2x or greater length of umbone (unless immaculate); elytral setae white to pale brown; subapical plate present; Supplemental characters: pronotum convex typically with a bronze luster; highly variable species ranges from immaculate to "typically" maculate. 4.7-10.5mm. AZ, CA, CO, ID, MT, NV, SD, UT, WY and TX. Host: *Krascheninnikovia lanata* ***immaculata*** Horn (in part)

Pronotal margin carinate **OR** pronotal spot absent **OR** elytral setae dark **OR** subapical plate absent **OR** humeral maculation 1.5x or less umbone length (ignore this character if immaculate) 74



Acmaeodera immaculata



Example: *A. audreyae*

Subapical plate may be present, but one of the other characters must match.

74(73)

Elytral base color dark or approximately 50/50 light and dark 75

Elytral base color pale 141



75(74)

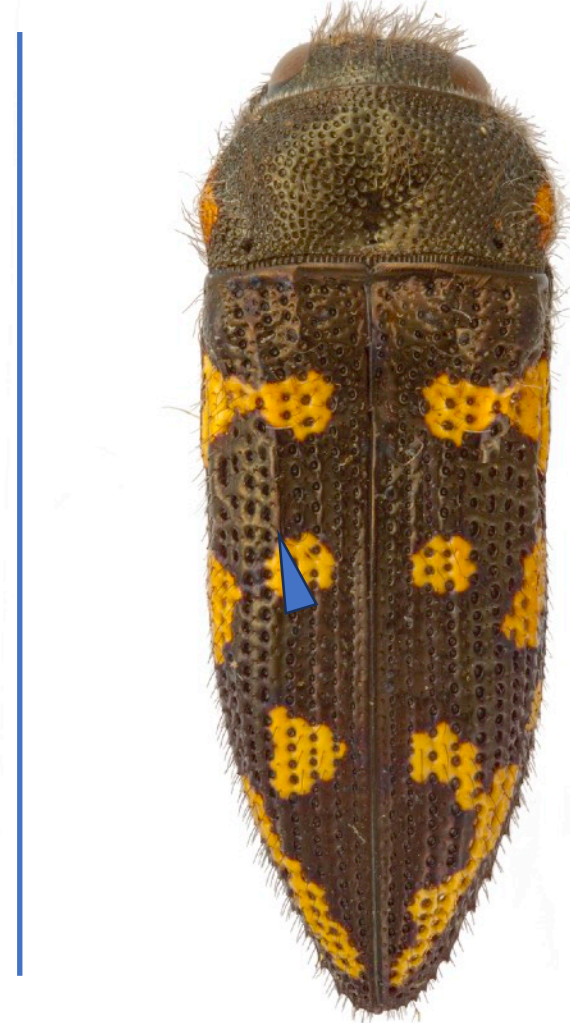
Alternate interstriae distinctly raised for at least $\frac{1}{4}$ of their length (at least starting at the base of interstria 3) 102



Interstriae more or less at the same level or only a few distinctly raised 76



Alternate interstriae raised



Only some interstriae raised

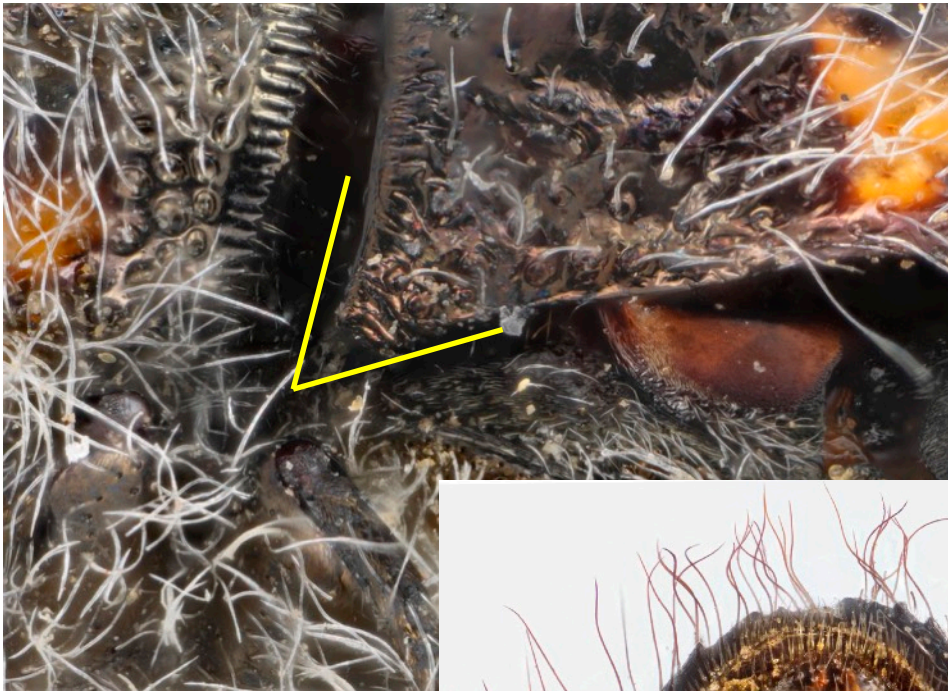
76(75)



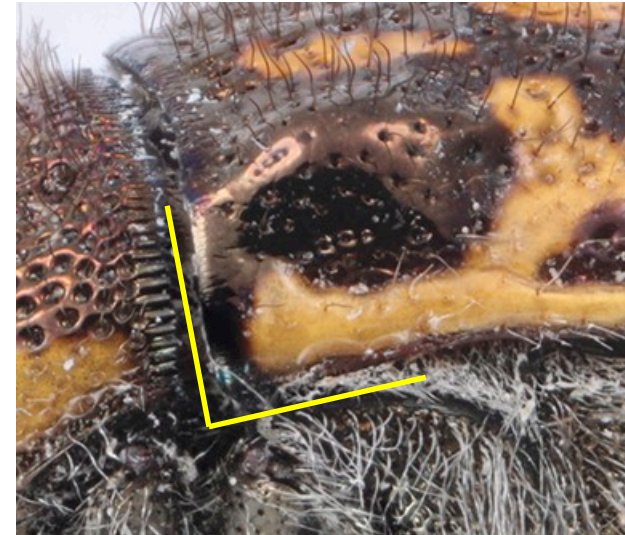
Base of lateral humerus directed anteriorly and acute (from Barr); subapical plate present. 151



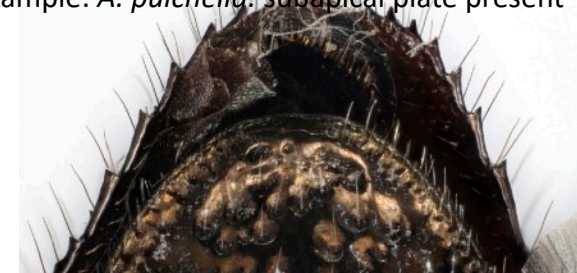
Base of lateral humerus typical, obtuse; subapical plate present or absent. 77



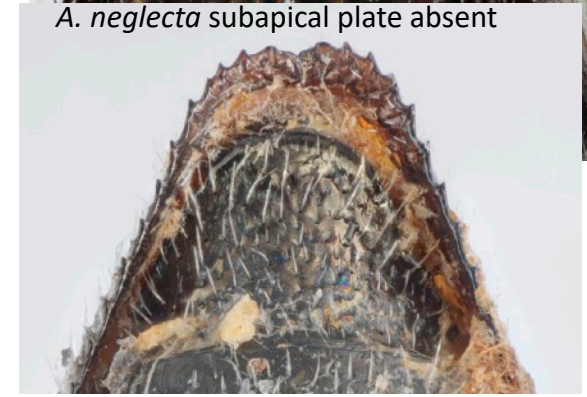
Example: *A. mojavei*



Example: *A. pulchella*: subapical plate present



A. neglecta subapical plate absent



77(76)

Species with thicker maculations, only small spots, or more extensive or complex markings. With metallic sheen OR **at least some maculations wider** than two elytral discal intervals. 78

Species with small, narrow markings that are not branched and relatively straight. Maculations narrower than or equal to two elytral discal intervals except sometimes medial band; Black, shiny species without a metallic sheen 155



78(77) part 1 of 2

Distinct pattern. With two parallel longitudinal pale lines at the elytral base, the middle one darker or fainter (rarely absent).

Supporting characters: Prosternal plate almost straight without teeth; pronotal margin not produced (height equal or less than width) and no lateral spot; elytral sheen bronze (when visible); humerus pale 2 times or more length of umbone.

5-13mm. AL, AR, FL, GA, IA, IL, IN, KS, KY, LA, MD, MI, MO, MT, NC, ND, NJ, OH, PA, SC, SD, TN, WI, WY and Canada. Hosts:

Crataegus spp., *Gleditsia triacanthos*, and *Taxodium distichum* ***pulchella*** (Herbst)

Without a fainter or darker medial band parallel to the lateral pale band. If parallel basal lines present at base then middle band not darker or fainter than lateral one. Supporting characters vary 79

Medial band darker or more faint than lateral band.

Lateral band



Medial band and lateral band the same color or intensity.



Acmaeodera pulchella



78(77) part 2 of 2

Distinct pattern. With two parallel longitudinal pale lines at the elytral base, the middle one darker or fainter (rarely absent).

Supporting characters: Prosternal plate almost straight without teeth; pronotal margin not produced (height equal or less than width) and no lateral spot; elytral sheen bronze (when visible); humerus pale 2 times or more length of umbone.

5-13mm. AL, AR, FL, GA, IA, IL, IN, KS, KY, LA, MD, MI, MO, MT, NC, ND, NJ, OH, PA, SC, SD, TN, WI, WY and Canada. Hosts:

Crataegus spp., *Gleditsia triacanthos*, and *Taxodium distichum* ***pulchella*** (Herbst)

Without a fainter or darker medial band parallel to the lateral pale band. If parallel basal lines present at base then middle band not darker or fainter than lateral one. Supporting characters vary 79



Acmaeodera pulchella



Example: *A. scalaris*

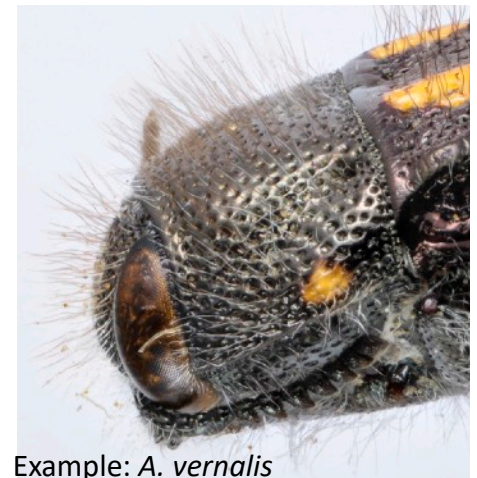
Subbasal elytral maculation transverse extending from sides, not greatly enlarged apically, and without basal spots; pronotum with lateral impressions deep and extending more than half pronotal length; pronotal margin produced (height greater than width); Supporting characters: elytral sheen bronze (when visible); humerus dark sometimes with a pale bar behind umbone; Prosternal margin weakly concave with a reflexed margin laterally; 7th interval raised to 1/3 elytral length; variable species. AZ, NM, NV and TX. Host: *Quercus pungens* ***bowditchi*** Fall (in part)

Basal bands not symmetrical and perpendicular to lateral margin or with basal spots; lateral pronotal impressions shallow, OR pronotal margin not carinate 80

Lateral impression long



Acmaeodera bowditchi



Example: *A. vernalis*

80(79) part 1 of 2

Subapical plate pronounced and last ventrite coarsely punctured, looks cratered; setae on front of head short, about half the width of the eye; Femoral setae shorter than femoral width; pronotum convex, medial impression absent or very weak.

Southeastern US to TX. ***texana* LeConte**

Subapical plate present or absent, if present then last ventrite not coarsely punctured; setae on front of head variable; femoral setal length variable; pronotum variable 81



Acmaeodera texana



80(79) part 2 of 2

Subapical plate pronounced and last ventrite coarsely punctured, looks cratered; setae on front of head short, about half the width of the eye; Femoral setae shorter than femoral width; pronotum convex, medial impression absent or very weak. Southeastern US to TX. ***texana* LeConte**

Subapical plate present or absent, if present then last ventrite not coarsely punctured; setae on front of head variable; femoral setal length variable; pronotum variable 81



Acmaeodera texana



Example: *A. retifera*

81(80)

Mid and subapical bands large and extend from margin (or at least appear to from dorsal view) 161



Other maculations 82



82(81)

With elongate basal maculation near suture. May be irregular but not connected to others laterally (at least in basal 3rd) ... 178



No elongate basal maculations or if present, attached to other basal maculations 83



83(82)

No elongate basal maculations or, if present, attached to other basal maculations. **Note: 4 choices!**

“typical” *Acmaeodera*. May have a couple of small bands, but generally with moderate size maculations over most of the elytral surface.



To 84

Small, denser spots.



To 184

Large maculations, roughly circular, arranged in a row medially.



To 185

Large, interconnected, irregular maculations.



To 187



84(83)

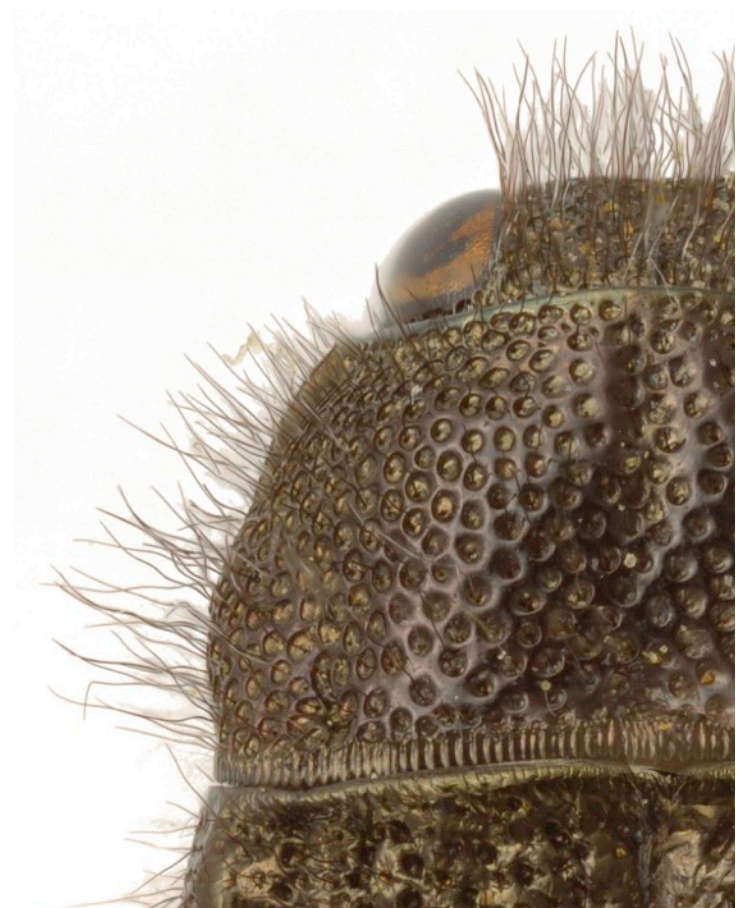
Pronotal impression visible apex to base; brassy luster dorsally; pronotal punctures large and in even, arcing rows often giving the impression of rows of ridges just outside of pronotal disk; dorsal setae variable- white to black, highly variable species. 5.5-9.5mm. Host: *Quercus* spp. CA and OR. ***retifera*** LeConte

Pronotal medial impression either absent, weak or interrupted medially, if medial impression present then not brassy; pronotal punctures not creating rows of ridges. 85

Areas between punctures connect to form lines



Acmaeodera retifera



85(84)

Dorsally clothed with short or long setae of various colors, apex of setae freestanding, not contacting dorsum 86

Dorsally clothed with long, white, recumbent setae, apex of setae contacting dorsum 104



Example: *A. dolorosa*



Example: *A. pinalorum*

86(85)

Last abdominal segment as long or longer than wide with strong lateral carinae bent ventrally 105



Last abdominal segment variable but if longer than wide, lateral carinae not distinctly carinate and bent ventrally ... 87



Narrow edge turned ventrally



Edge not flattened nor turned ventrally,
more or less in the same plane as the
ventral surface of the segment

87(86)

Lateral prenatal impressions deep, reaching at least half the length of pronotum, Pronotal punctures moderate, 0.5-1 diameters apart. 6.2-11mm. Larval host unknown. CA, CO, NV and UT. Highly variable species. ***lupinae*** Nelson

If present, lateral pronotal impressions deep only at base, Pronotal punctures variable. 88



Acmaeodera lupinae



88(87)

Pronotum with orange spot laterally; elytra with seven orange spots arranged longitudinally in two rows, occasionally coalescing.
South Florida, Brazil and Columbia. *xanthosticta* Laporte and Gory
(Hansen 2023)

Pronotum with yellow spot laterally or immaculate; elytra with yellow or red maculations 89



Acmaeodera xanthosticta



Femora with setae often sinuous or curved and not flattened in shape, usually longer than width of femur 90

Femora with setae straight and flattened in shape, equal to or shorter than width of femur 191
(Hansen 2023)



Example: *A. gillespiensis*



Example: *A. neglecta*

90(89)

Elytral setae longer than 2 stria and interstriae and longer than $\frac{1}{2}$ eye width; pronotal spot variable 91

Elytral setae short, about 2 stria and interstitial widths and narrower than half the eye width; large pronotal spot usually longer than wide.106



91(90)



Ventral pubescence usually brown to black (sometimes pale in southern part of its range per Barr 1969); last abdominal ventrite broadly rounded apically; 7-12.7mm; Hosts: *Celtis occidentalis*, *Cercocarpus ledifolius*, *Crataegus douglasii*, and *Quercus garryana*; CA, ID, MT, NV, OR, UT, WA, WY and BC ***idahoensis*** Barr (in part)

Ventral pubescence typically pale; if dark then apical ventrite narrowly rounded 92



Acmaeodera idahoensis

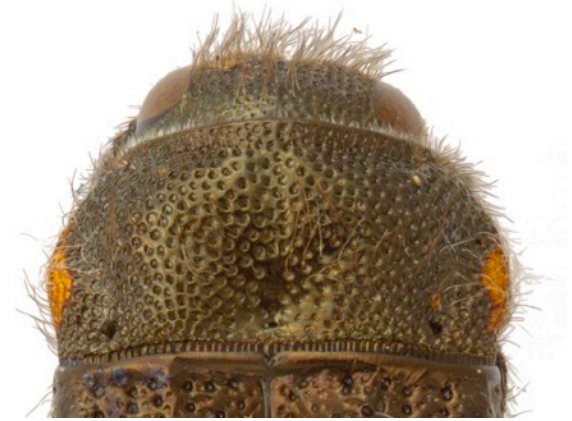


92(91)

Pronotum black (sometimes with bluish reflections) 93

Pronotum dark bronzed to brassy 107

(Hansen 2023)



93(92) part 1 of 2

Ventral setae pale or dark, if pale not obscuring surface; prosternal lobe not trisinuate..... 94

Ventrally with long white setae, dense and obscuring the surface on metasternum and apical abdomen; prosternal lobe trisinuate with teeth. 7.3-11mm. Host: *Ephedra nevadensis*. CA. ***pubiventris pubiventris*** Horn



Acmaeodera pubiventris pubiventris

93(92) part 2 of 2

Ventral setae pale or dark, if pale not obscuring surface; prosternal lobe not trisinuate..... 94

Ventrally with long white setae, dense and obscuring the surface on metasternum and apical abdomen; prosternal lobe trisinuate with teeth. 7.3-11mm. Host: *Ephedra nevadensis*. CA. ***pubiventris pubiventris*** Horn



Acmaeodera pubiventris pubiventris

94(93)

Apex of elytra more or less evenly rounded and sutural area not notably raised, elytral setae mix of light and dark or all dark 95

Apex of elytra with apical area around suture raised and projecting posteriorly, elytral setal pale or light brown. Host: *Ephedra viridis*. CA and NV. ***panamintensis*** Westcott



Acmaeodera panamintensis

95(94)

Pronotal punctures well defined; more dark setae than pale; pronotal luster not usually purple; without empty rectangle.

..... 96

Pronotal punctures shallow and poorly defined (subtle character- very difficult to interpret); pronotum with purple luster (extremely weak in specimens we have!!!); markings forming an empty rectangle at elytral base; 5.8-7.8mm; Host: *Atriplex* spp. CA, ID, NV and OR. Barr ***bishopiana*** Fall (in part)



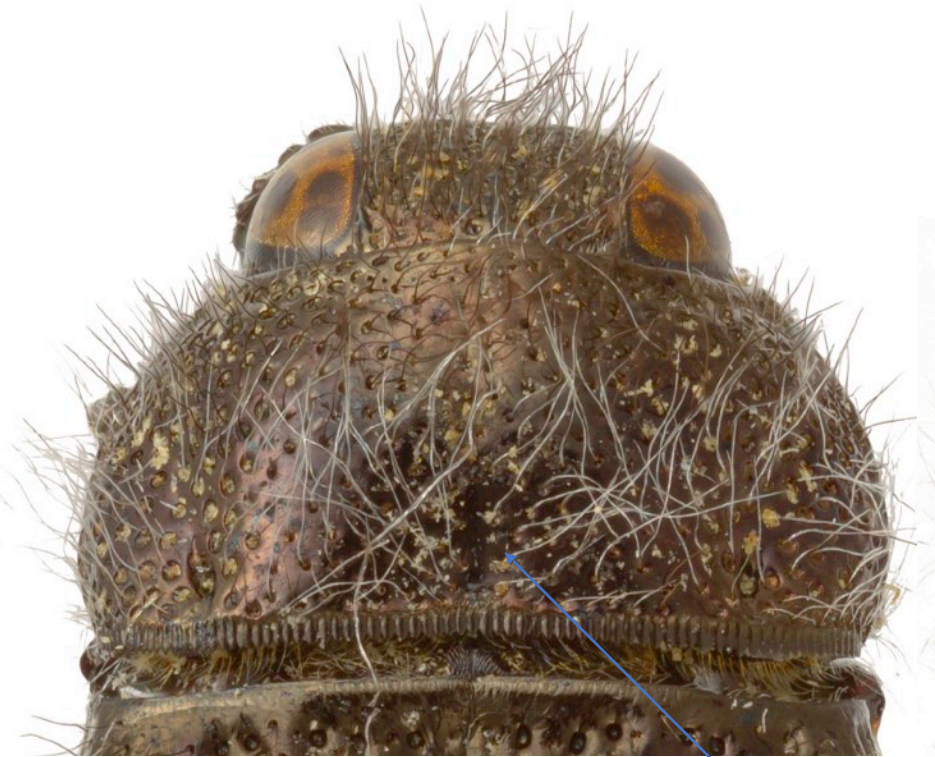
Acmaeodera bishopiana

96(95)

Pronotum moderately to deeply depressed basomedially. 97

Pronotum lightly depressed or uniformly convex basomedially 108

(Hansen 2023)



Example: *A. depressa*

Impressed area

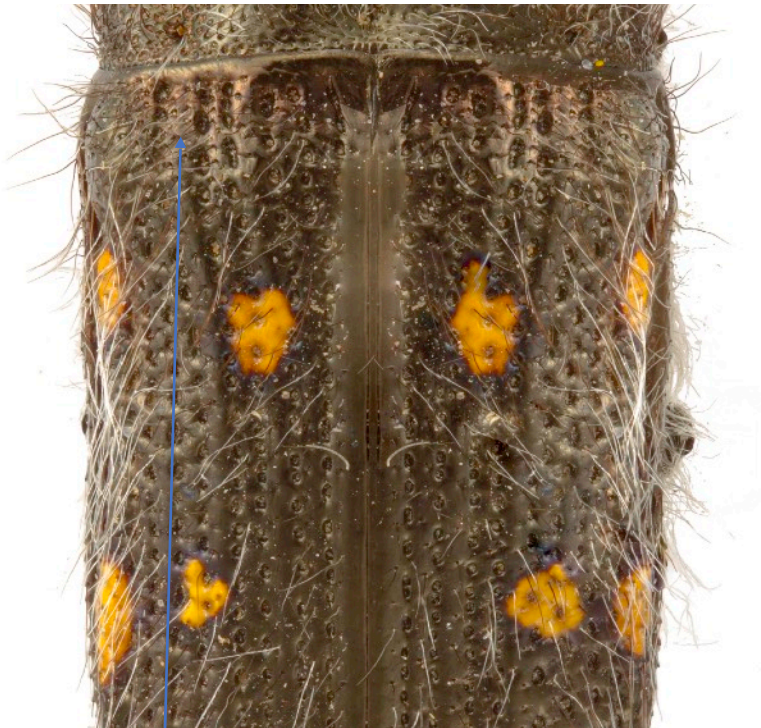


Example: *A. verityi*

97(96)

Elytra black 98

Elytra with blue sheen (usually best observed near humeral angles) 109



Blue sheen absent, although base
does appear brassy

Example: *Acmaeodera inopinata*



Blue sheen

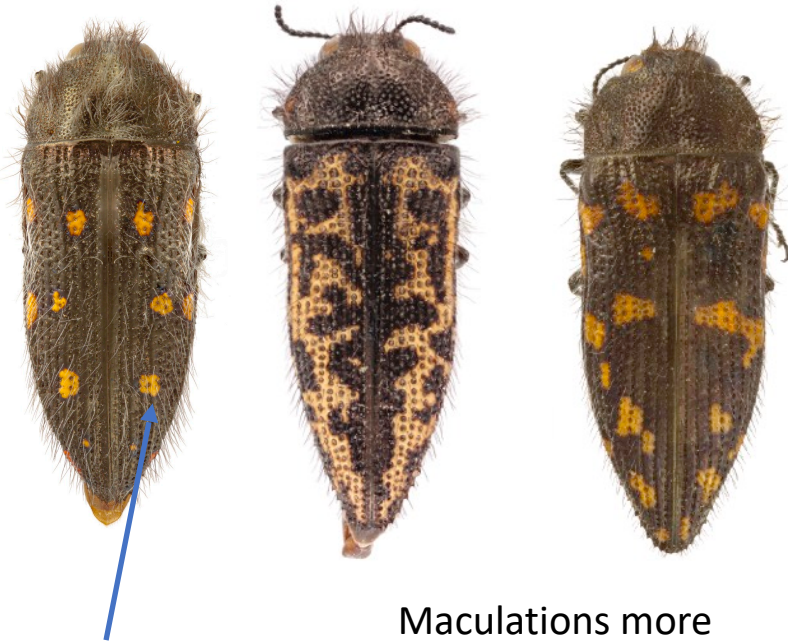
Example: *Acmaeodera depressa*



Maculations irregular and extensive, if not extensive then longitudinal and aligned 112



Maculations simple and extending from margins or unaligned spots 99



Similar sized
spots forming
longitudinal rows

Maculations more
complex than
spots or bands
reaching from
lateral margins.



Simple maculations at
most extending from
margins. Example:
Acmaeodera bowditchi

Simple spots not
organized into
longitudinal rows

99(98)



Maculations mostly as small spots, median band weakly connected if present100

Maculations larger, with at least a broad median band. Host: unknown. CA and MX. ***vernalis*** Barr (in part)

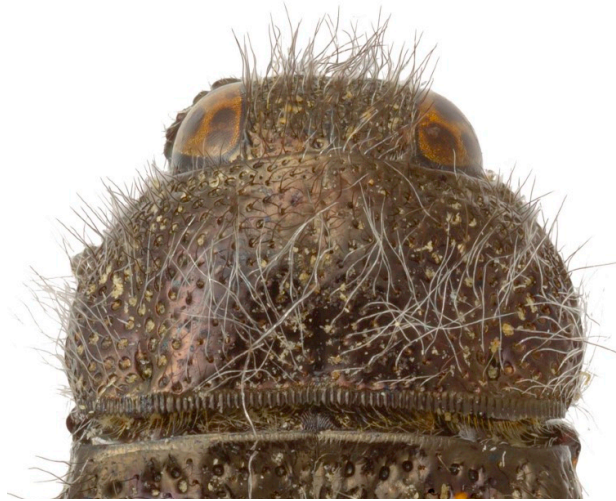
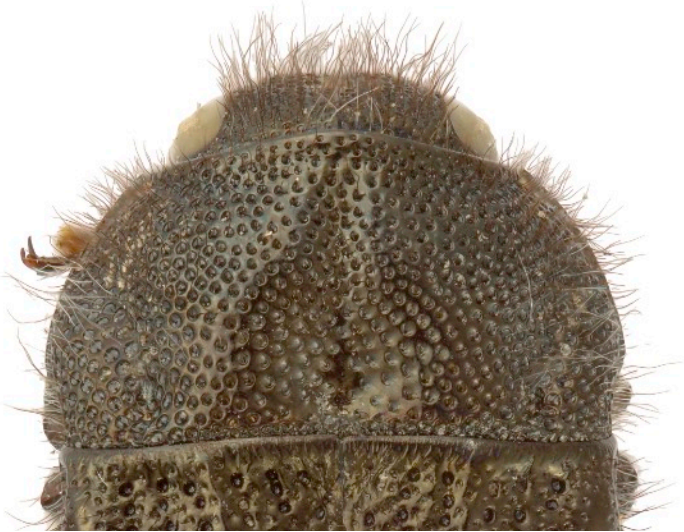


Acmaeodera vernalis

100(99)

Medial impression well developed, reaching to or near anterior border. 101

Medial impression on basal half, weak to absent anteriorly. Hosts: *Bursera microphylla*, *Fouquieria splendens*, and *Hyptis emoryi*.
AZ, CA, NV and UT. ***depressa*** Barr (in part)



Acmaeodera depressa

101(100)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... *ornatoides* Barr (in part)

Posthumeral yellow spot long and slightly curved; dorsum without blue reflections. 8-11mm. Host: unknown. AL, AR, DC, FL, GA, IN, KY, MO, NC, NJ, OH, OK, PA, SC, TN, TX, VA and WV *ornata* (Fabricius) (in part)
(32024)



Acmaeodera ornatoides



Spot long and curved.



Spot short and straight.



Acmaeodera ornata

102(75)



Alternate interstriae distinctly raised for entire length. Interstriae 9 and 11 touch or divided by a narrow line near umbone.... 103

Alternate interstriae distinctly raised for at least $\frac{1}{4}$ elytra length. Interstriae 9 and 11 do not touch near umbone. 5.8-8.9mm. CA.
Host: unknown. *audreyae* Westcott and Barr



9 and 11 divided
by a narrow line.



Acmaeodera audreyae

103(102)

Elytral maculations usually elongate spots. AZ, CA, NM, and MX. Host: *Prosopis glandulosa*. ***comata*** LeConte

Elytral maculations include basal elongate stripes and usually apical bands. CA and MX. Host: unknown. ***alacris*** Horn



Range: AZ, CA, NM and
MX
Host: *Prosopis
glandulosa*

Acmaeodera comata LeConte



Range: CA and MX
Host: unknown

Acmaeodera alacris Horn

104(85)

Elytra with two red spots on apical third. TX and MX. *uvaldensis* Knull

Elytra without red spots on the apical third. AZ, CA, NM, TX and MX. *pinalorum* Knull



Acmaeodera uvaldensis



Acmaeodera pinalorum

105(86)

Substantial bold markings reaching medially from lateral margin. Host: *Quercus berberidifolia*. CA ***linsleyi*** Van Dyke

Tenuous markings where, even at their boldest, rarely more than the medial bands reaching from lateral margin. 6-10mm.

Arctostaphylos viscida, *Prunus fasciculata*, and *Simmondsia chinensis*. AZ, CA, NV and OR. ***dolorosa*** Fall



Acmaeodera linsleyi



Acmaeodera dolorosa

106(90)

Pronotum deep blue or with a blue green sheen; pronotal spot usually longer than wide but can vary to a small spot. 8-10mm.
Host: unknown. OK and TX. ***obtusa*** Horn (in part)

Pronotum black/dark brown; large pronotal spot longer than wide; larger species. 7-10mm. Host: *Quercus* spp. CA, OR and MX
..... ***gillespiensis*** Knull



Acmaeodera obtusa



Acmaeodera gillespiensis

107(92)



Pronotum coarsely punctate, not shiny; elytra often with 4 transverse bands broken at suture. Host: *Quercus pungens*. AZ, NM, NV and TX. ***bowditchi*** Fall (in part)

Pronotum less coarsely punctate, shiny; elytra with irregular transverse bands and yellow markings. Host: unknown. TX.
..... ***consors*** Horn (in part)
(Adapted from Hansen 2023)



Acmaeodera bowditchi



Acmaeodera consors

108(96)

Pronotal punctures large and close (<1 diameter between). Host: unknown. AZ, NV and UT. *pletura* Barr

Pronotal punctures small and widely spaced (~2 diameters between). Host: unknown. CA. *verityi* Westcott



Acmaeodera pletura



Acmaeodera verityi



109(97)

Medial impression well developed, reaching to or near anterior border. 110

Medial impression on basal half, weak to absent anteriorly. Hosts: *Bursera microphylla*, *Fouquieria splendens*, and *Hyptis emoryi*.
AZ, CA, NV and UT. ***depressa*** Barr (in part)



Acmaeodera depressa

110(109)

Pronotal setae long, as long as eye width; pronotal margin rounded; elytral pattern other. 111



Pronotal setae short, about $\frac{1}{2}$ width of eye; Pronotum with sides gradually converging from base to apex, widest at base; pattern distinct: elytra with 5 yellow spots arranged longitudinally on the disk, three yellow spots on basal $\frac{2}{3}$, centered on the third lateral interspace, and three to four yellow spots along the costal edge.. Hosts: *Prosopis glandulosa* and *Acacia constricta*. AZ, NM, TX and MX ***delumbis*** Horn (in part)

(Adapted from Hansen 2023)



Acmaeodera delumbis

111(110)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... *ornatoides* Barr (in part)

Posthumeral yellow spot long and slightly curved; dorsum without blue reflections. 8-11mm. Host: unknown. AL, AR, DC, FL, GA, IN, KY, MO, NC, NJ, OH, OK, PA, SC, TN, TX, VA and WV *ornata* (Fabricius) (in part)
(Adapted from Hansen 2023)



Acmaeodera ornatoides



Spot short and straight.



Spot long and curved.



Acmaeodera ornata

112(98)

Markings more irregular, denser, may have basal spots, if empty rectangle present on disk then medial bands do not reach to sides or the sides of the rectangle pass through the medial maculation; pronotal punctures about 1 diameter apart

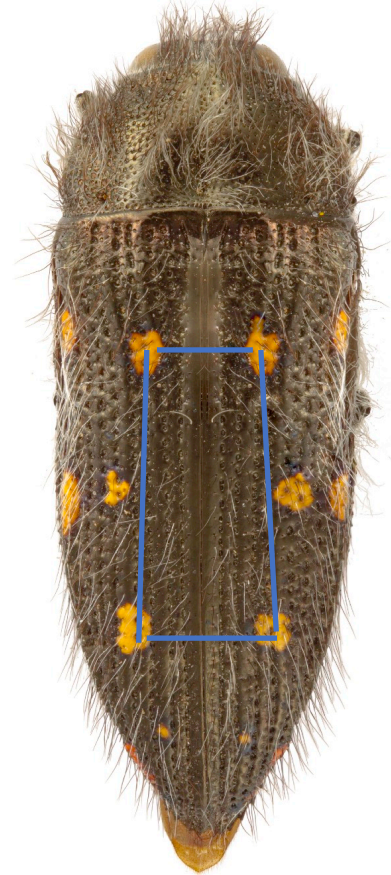
113

Markings sparse and small, mostly small spots or lines without spots in basal $\frac{1}{4}$ and with an empty rectangle in the middle of disk, the sides just within the medial maculations; pronotal punctures 2-3 diameters apart. Host: *Ericameria pinifolia*. CA.

inopinata Barr (in part)



Image by Joel DuBois 2023, <https://bugguide.net/node/view/2268104/bgimage>



Acmaeodera inopinata

113(112)

*Difficult species to differentiate!!!

Upper head usually flat or convex; body more acute; flatter species; adult hosts variable but uncommonly lupine ... 114



Upper head usually depressed; body more obtuse from dorsal view; more convex; adults often found on lupine. 6.2-11mm. Larval host unknown. CA, CO, NV and UT. Highly variable species. *lupinae* Nelson



Posterior
margins of
elytra straighter
and appear
more acute.



Posterior
margins of
elytra curved
and appear
more obtuse.

Acmaeodera lupinae

114(113)

Markings a little narrower, edges following the contours of the punctures. 8-10mm. Host: *Alnus incana*. AZ, NV and TX
 ***cuneata*** Fall

Markings a little wider, pale color bleeds away from the punctures and doesn't follow their contours closely. 8.8-11.5mm. Host:
 unknown. CA, ID, NV and OR ***acuta*** LeConte



Acmaeodera cuneata



Acmaeodera acuta



115(14)



Background dark or 50/50116

Background pale. Host: *Ephedra aspera*. TX. ***tiquilia*** Westcott and Barr (in part)



Acmaeodera tiquilia

116(115)

With no basal markings or nonlinear basal markings 117

With basal markings linear. Host: unknown. CA and MX. *adenostomensis* Knull



Acmaeodera adenostomensis

117(116)

Maculations small and dense 124



Maculations may be small and sparse or large 118



118(117)



With 3 red lateral markings along the length of elytra 126



With other than 3 red lateral markings or red markings apical 119





119. Maculations not consisting of a row of spots down the middle of the elytra 120

With a row of spots down median elytra 127



120. With lateral markings (extending from margin) narrow or small spots less than 2 interstitial widths 121



Lateral maculations wider than two interstriae 129



121(120)

Ventral setae single and long; femoral setae longer than femoral width 122

Ventral setae branched, particularly on lateral abdomen; femoral setae shorter than width of femora. Host: unknown. AZ, CA, NM, TX and MX *pinalorum* Knull



Example: *A. fenyesi*



Acmaeodera pinalorum

122(121) part 1 of 2

Maculations rarely only small spots; pronotum subequal or narrower than elytra; Ventral setae may be long and pale but not dense (*A. angelica* can have very dense setae). 123

Maculations always small spots; pronotum wider than elytra; Long dense pale ventral setae (*A. angelica* may have dense setae, too, but not obscuring lateral surface of abdomen); 8-11mm. Host: *Lotus scoparius*. CA and MX. ***fenyese*** Fall (in part)



Acmaeodera fenyese

122(121) part 2 of 2

Ventral setae may be long and pale but not dense; maculations variable but usually with some bands; pronotum variable 123

Long dense pale ventral setae; maculations always small spots; pronotum widest anterior to base. 8-11mm. Host: *Lotus scoparius*. CA and MX. *fenyesi* Fall (in part)



Example: *A. angelica*



Acmaeodera fenyesi

123(122)

Pronotum widest anterior to base; elytra with at most medial bands, if bands present postmedially then usually one is incomplete, may also have only spots. 6-10mm. Hosts: *Arctostaphylos viscida*, *Prunus fasciculata*, and *Simmondsia chinensis*. AZ, CA, NV and OR. ***dolorosa*** Fall (in part)

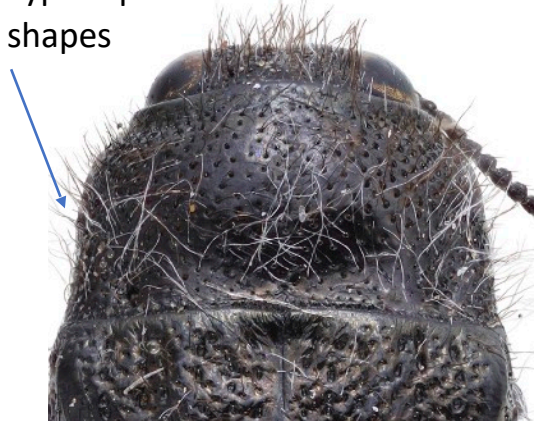
Pronotum usually widest at base and subparallel towards head; elytra most often with postmedial bands, but may have many combinations including medial and apical or only spots. and bands in other 5.8-9mm. Hosts: *Ceanothus* spp., *Quercus* spp. and *Toxicodendrum californicum*. AZ, CA, NV, OR, UT and MX ***angelica*** Fall (in part)



Acmaeodera dolorosa



Typical pronotal
shapes



Acmaeodera angelica

124(117)

Red markings concentrated apically; apical margin of elytra curved, apex more broadly rounded 125

Red markings along most of elytral length; Apical 3rd of elytral margin straight, apex narrowly rounded. Host: unknown. AZ.
..... *griffithi* Fall (in part)



Acmaeodera griffithi

125(124)

2nd interstria 4-5x stria width; 2.5-3x as long as wide. 8-10.5mm. Host: unknown. TX and MX. ... ***miliaris*** Horn (in part)

2nd interstria 3x stria width; 3.5x as long as wide. Host: unknown. TX and MX. ***haemorrhoea*** LeConte (in part)



Acmaeodera miliaris



Acmaeodera haemorrhoea

126(118) part 1 of 2

Lateral sternites with dense, white, appressed setae; larger. 10-12mm. Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*. AZ, CA, NM, TX, UT and MX ***gibbula*** LeConte (in part)

Lateral sternites with sparse setae, not appressed; smaller. 7.5-8.8mm. Hosts: *Purshia tridentata*. CA, ID, NV, OR and UT.
..... ***purshiae*** Fisher



Acmaeodera gibbula



Acmaeodera purshiae

126(118) part 2 of 2

Lateral sternites with dense, white, appressed setae; larger. 10-12mm. Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*. AZ, CA, NM, TX, UT and MX ***gibbula*** LeConte (in part)

Lateral sternites with sparse setae, not appressed; smaller. 7.5-8.8mm. Hosts: *Purshia tridentata*. CA, ID, NV, OR and UT.
..... ***purshiae*** Fisher



Acmaeodera gibbula



Acmaeodera purshiae

127(119)



Pronotum widest basally, base of pronotum subequal to base of elytra. Setae long 128

Pronotum widest just behind middle, base of pronotum narrower than elytra; setae short. Host: unknown. TX and MX.

..... *uvaldensis* Knull (in part)



Acmaeodera uvaldensis

128(127)

Anterior half of pronotum with medial impressed line; interstriae 4x width of striae. 8.1-12.8mm. AZ, CO, ID, NM, NV, TX, UT and MX. Host: *Quercus* spp ***rubronotata*** Laporte and Gory

Anterior half of pronotum convex without medial impressed line; interstriae 2-3 times stria width. Host: *Ephedra* spp. AZ, NM, TX and UT. ***recticollis*** Fall



Acmaeodera rubronotata



Acmaeodera recticollis

129(120)



Usually no brassy reflections (except *A. coquilletti*); sides of pronotum variable but if subparallel on basal third not with an abrupt angle 130

With brassy reflections; basal pronotal margin subparallel then abrupt turn toward head. 8.8-10.8mm. Host: *Arctostaphylos* spp. CA and OR. ***plagiaticauda*** Horn (in part)



Acmaeodera plagiaticauda

130(129)

No baso-medial elytral spot 131



Baso-medial spot present 132



Baso-medial spot



131(130)



Setae on head and pronotum pale (some pale gray) and long; setae on frons able to reach the margin of the eye from almost the middle of the face. 7.5-8mm. Host: unknown. CA ***coquilletti*** Fall

Setae on the head pale (whitish) and black; setae on frons reach the margin of the eye from the lateral ¼ of face. Host: unknown. CA. ***knulorum*** Barr (in part)



Acmaeodera coquilletti



Acmaeodera knulorum

132(130)



Spots on basal half of elytra about 2x as large as apical; medial spots about as long as wide. 7-9mm. Host: unknown. CA and MX. *jocosa* Fall

Elytral spots subequal; medial spots wider than long (narrower). Host: unknown. CA. *adenostomae* Cazier (in part)



Acmaeodera jocosa



Acmaeodera adenostomae

Lateral pronotal spots absent or small. 134

Lateral pronotal spots huge. Host: unknown. FL. *marginotata* Chevrolat



Acmaeodera marginotata

134(133)



Edges of elytral maculations well defined. 135

Edges of elytral maculations poorly defined/edges blurred. 8-10mm. Host: *Larrea tridentata*. AZ, NM, NM, TX and MX.
..... *cribricollis* Horn (in part)



Acmaeodera cribricollis

135(134)

Setae long; prenatal punctures largely unaligned (forms without cribrate punctures treated elsewhere) 136

Setae on elytra and pronotum short; pronotal punctures aligned creating longitudinal ridges. 4.8-7.1. Host: unknown. TX and MX.
..... *tildenorum* Nelson and Westcott



Long setae



Short setae



Acmaeodera tildenorum

136(135)

Pronotal spot visible dorsally 137

No pronotal spot visible dorsally 138



Example *A. diffusa*



Example *A. retifera*

137(136)

Femoral setae longer than the width of femur; pronotal spot usually about 1/4 the length of pronotal margin (can be much longer). Host: unknown. AZ, CA, CO, NM, NV and UT ***diffusa*** Barr (in part)

Femoral setae shorter or equal to the width of the femur; pronotal spot usually 1/3 or more of length of pronotal margin. Host: *Quercus pungens*. AZ, NM, NV and TX ***bowditchi*** Fall



Acmaeodera diffusa



Acmaeodera bowditchi

138(136)

Median impression absent. 139

Median impression present 140



139(138)

Moderate size; moderate elytral punctures; often with blue reflections. Host: *Fremontodendron californicum*. CA.
..... ***tenebricosa*** Fall (in part)

Tiny; large deep elytral punctures; without blue reflections. Host: unknown. AZ. ***carlota*** Fall (in part)



Acmaeodera tenebricosa



Acmaeodera carlota

140(138)

Pronotal spot often present, longer, broader, less shiny. Host: unknown. AZ, CA, CO, NM, NV and UT..... *diffusa* Barr (in part)

No pronotal spot; smaller, narrower, shinier (especially on pronotum). 5.5-9.5mm. Host: *Quercus* spp. CA and OR.
..... *retifera* LeConte (in part)



Acmaeodera diffusa



Acmaeodera retifera

141(74)



Dark areas black or dark brown 142

Dark areas metallic green or blue. Host: unknown. NM, TX and MX. *auritincta* Fall



Acmaeodera auritincta

142(141)

Maculations more or less over entire surface 143

Elytral disc without apparent Maculi on basal half except suture And umbones. 6.5-13mm. AZ, CO, KS, NE, NM, OK, TX, UT and MX. Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp., and *Prosopis* spp. ***mixta*** Horn (in part)



Acmaeodera mixta

143(142)

With many maculations that are about as long as wide, usually with large pale spots on lateral pronotum 144

Few or no maculations as long as wide; usually without pale spots on lateral pronotum 149



Example: *Acmaeodera maculifera*



Example: *Acmaeodera decipiens*



144(143)

If pronotum wider than elytra, corners not distinctly prominent 145

Corners of pronotum stick-out beyond base of elytra. 10.5-12. Host: unknown. NM, TX and MX *maculifera* Horn



Acmaeodera maculifera

145(144) part 1 of 2

Lateral margin of pronotum raised but dorsal and ventral surfaces not parallel; pronotum subparallel to narrower than elytral base 146

Lateral margin of pronotum sharp and thin, flattened; pronotum slightly wider than base of elytra. 7.5-10.5mm. Host: unknown. AZ and MX. ***decipiens*** LeConte



Example: *A. scalaris*



Acmaeodera decipiens

145(144) part 2 of 2

Lateral margin of pronotum raised but dorsal and ventral surfaces not parallel; pronotum subparallel to narrower than elytral base 146

Lateral margin of pronotum sharp and thin, flattened; pronotum slightly wider than base of elytra. 7.5-10.5mm. Host: unknown. AZ and MX. *decipiens* LeConte



Acmaeodera decipiens

146(145) part 1 of 2

Base of pronotum not distinctly impressed although it may be flattened; base of interstriae not notably raised; 147

Base of pronotum distinctly impressed; base of some interstriae raised distinctly. Host: *Parkinsonia* spp. TX..... ***princeps*** Kerr



Example: *A. variegata*



Bases of interstriae 3 and 7 distinctly raised



Acmaeodera princeps

146(145) part 2 of 2

Base of pronotum not distinctly impressed although it may be flattened; base of interstriae not notably raised 147

Base of pronotum distinctly impressed; base of some interstriae raised distinctly. Host: *Parkinsonia* spp. TX..... ***princeps*** Kerr



Example: *A. variegata*



Acmaeodera princeps



147(146)

Base of pronotum with punctures at least $\frac{1}{2}$ diameter apart 148

Base of pronotum with punctures Less than $\frac{1}{2}$ diameter apart. 150



Acmaeodera variegata

148(147)

Dorsal setae pale; pronotum without metallic lustre; posterior angles of ventrites square. 4.7-10.5mm. AZ, CA, CO, ID, MT, NV, SD, UT, WY and TX. Host: *Krascheninnikovia lanata* ***immaculata*** Horn (in part)

Dorsal setae a mix of pale and dark or all dark; pronotum often with a bronze lustre; posterior angles of ventrites acute; highly variable species. 6.5-13mm. AZ, CO, KS, NE, NM, OK, TX, UT and MX. Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp., and *Prosopis* spp. ***mixta*** Horn (in part)



Acmaeodera immaculata



Acmaeodera mixta

149(143)



Margins of maculations well defined. Pronotal punctures normal. Femoral setae longer; Strial punctures at base of elytra very large with rows somewhat obscure. May have red margin to apex of elytra. Host: *Ephedra aspera*. TX.

..... *tiqulia* Westcott and Barr (in part)

Margins of maculations poorly defined. Pronotal punctures cribrate. Femoral setae shorter than femoral width; Strial punctures typical size and in clearly defined rows. Without red margin on elytra. 8-10mm. Host: *Larrea tridentata*. AZ, NM, NM, TX and MX.

..... *cribricollis* Horn (in part)



Acmaeodera tiqulia



Acmaeodera cribricollis

150(147)



Posterior lateral corners of abdominal segments produced (acute). 7-10mm. Host: *Quercus* spp. CA, OR and MX
..... ***gillespiensis*** Knull (in part)

Posterior lateral corners of abdominal segments not produced (square). 7.75-10mm. Host: unknown. AZ, CO, NM and TX.
..... ***variegata*** LeConte (in part)



Acmaeodera gillespiensis



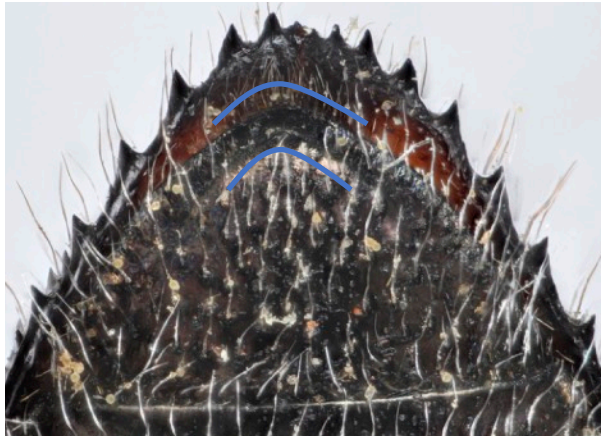
Acmaeodera variegata



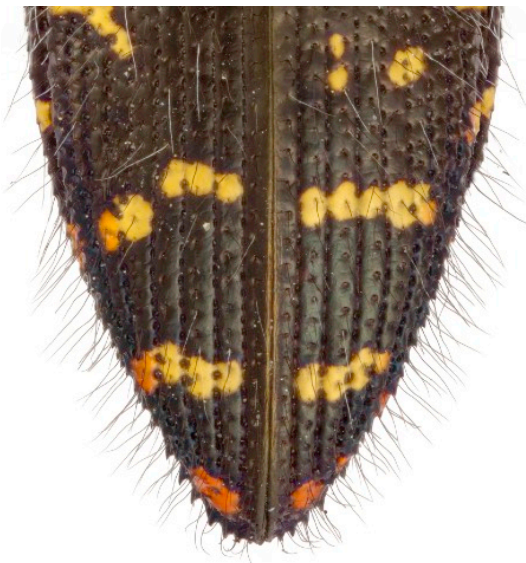
151(76)

Subapical plate large, mostly mirroring apical margin; interstriae variable. D2

Subapical plate small, more narrowly shaped; interstriae flat or weakly convex on apical half. Host: *Lycium cooperi*. AZ, CA, NV and UT ***mojavei*** Westcott (in part)



Example: *A. rubronotata*



Acmaeodera mojavei



152(151)

Short, reclining elytral setae; interstriae variable. 153

Long, erect setae; interstriae flat or weakly convex on apical half. 8.1-12.8mm. AZ, CO, ID, NM, NV, TX, UT and MX. Host: *Quercus* spp ***rubronotata*** Laporte and Gory



Acmaeodera rubronotata

153(152)

Elytral setae short, length up to width of a stria and interstria. 154

Elytral setae long to moderately long, two interstriae widths in length; interstriae 1,3, and 5 not all elevated. Host: *Baccharis sarothroides*. CA and MX. ***bacchariphaga*** Westcott and Verity (in part)



Acmaeodera bacchariphaga

154(153) part 1 of 2

Medial setae on ventrites shorter, uniformly crossing the impunctate apical margin of segments. Hosts: *Prosopis glandulosa* and *Acacia constricta*. AZ, NM, TX and MX. ***delumbis*** Horn (in part)

Medial setae on ventrites longer, not reaching across the entire impunctate margin and when they do, irregularly. 10-12mm. Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*. AZ, CA, NM, TX, UT and MX ***gibbula*** LeConte (in part)



Setae crossing
impunctate margin.

Acmaeodera delumbis



Setae not completely crossing
impunctate margin.

Acmaeodera gibbula

154(153) part 2 of 2

Medial setae on ventrites shorter, uniformly crossing the impunctate apical margin of segments. Hosts: *Prosopis glandulosa* and *Acacia constricta*. AZ, NM, TX and MX. ***delumbis*** Horn (in part)

Medial setae on ventrites longer, not reaching across the entire impunctate margin and when they do, irregularly. 10-12mm. Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*. AZ, CA, NM, TX, UT and MX ***gibbula*** LeConte (in part)



Acmaeodera delumbis



Acmaeodera gibbula

155(77)



Elytral setae mixed dark and white 156

Elytral setae all dark. 8-12mm. Hosts: *Ceanothus* spp. and *Quercus wislizenii*. AZ, CA, NV and MX **vandykei** Fall

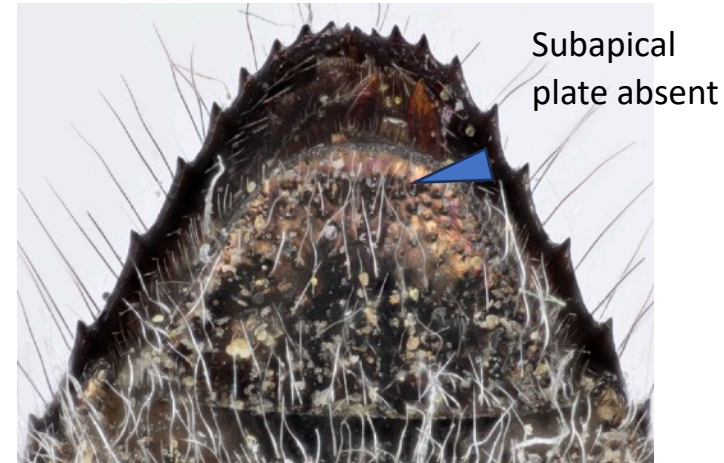
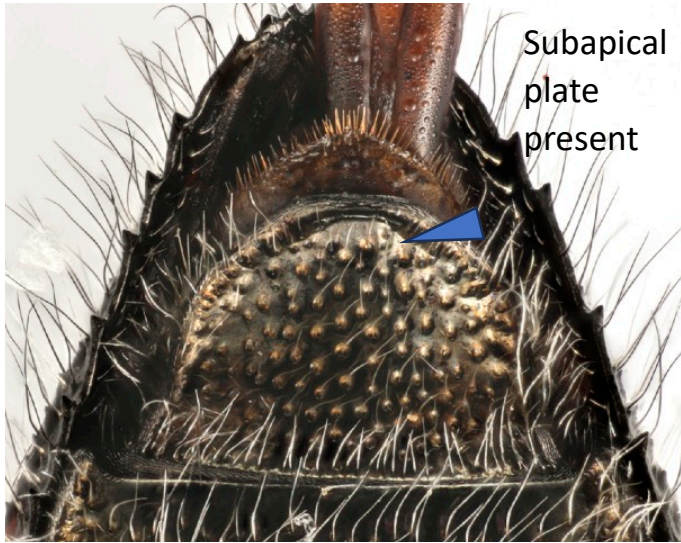


Acmaeodera vandykei

156(155) part 1 of 2

Subapical plate present; Pronotal punctures at least $\frac{1}{2}$ diameter apart; 9 and 11 variable 157

Subapical plate absent; Pronotum with large, confluent punctures; 9 and 11 joined. Host: *Fremontodendron californicum*. CA.
..... ***tenebricosa*** Fall (in part)



Acmaeodera tenebricosa

156(155) part 2 of 2

Subapical plate present; Pronotal punctures at least $\frac{1}{2}$ diameter apart; base of interstria 9 and 11 variable, 157

Subapical plate absent; Pronotum with large, confluent punctures; base of interstria 9 and 11 joined,. Host: *Fremontodendron californicum*. CA. *tenebricosa* Fall (in part)



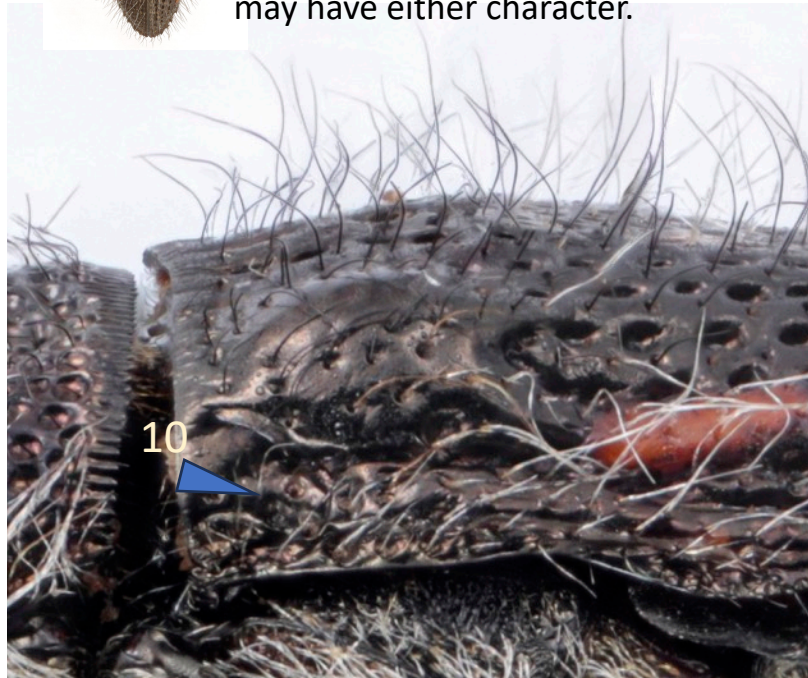
Interstriae 9 and 11 separate at base, 10 continuous to base. Specimens may have either character.



Interstriae 9 and 11 come into contact near umbone. 10 terminates after the umbone.



Acmaeodera tenebricosa



157(156)

Apical abdominal segment margins mostly in the same plane as the disk; pronotal punctures at least 2 diameters apart..... 158

Lateral margins of apical abdominal segment with sides projecting down; pronotal punctures about $\frac{1}{2}$ diameter apart. 6-10mm.

Hosts: *Arctostaphylos viscida*, *Prunus fasciculata*, and *Simmondsia chinensis*. AZ, CA, NV and OR. ***dolorosa*** Fall (in part)



Margins
bent
ventrally



Example: *A. rubronotata*



Acmaeodera dolorosa

158(157)

Subapical plate large, almost the same shape and size as underlying segment, deeply undercut. 8.1-12.8mm.
AZ, CO, ID, NM, NV, TX, UT and MX. Host: *Quercus* spp ***rubronotata*** Laporte and Gory

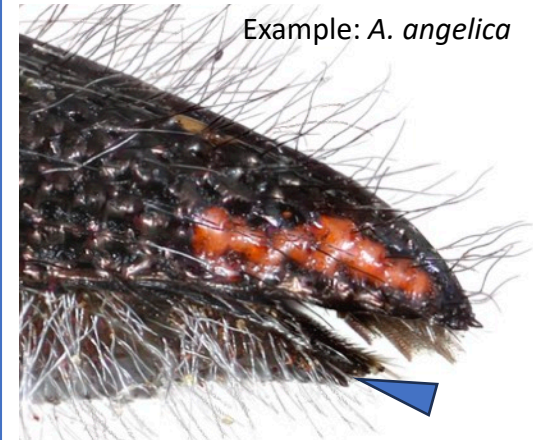
Subapical plate smaller or differently shaped, although it may be undercut 159



Subapical plate deeply undercut



Acmaeodera rubronotata



Example: *A. angelica*

Subapical plate shallowly undercut or not at all

159(158) part 1 of 3

Ventral thoracic setae long, 2x width of metafemur, at least some setae on disk of ventrites 3 and 4 half or more as long as segments; subapical plate usually undercut 160

Ventral thoracic setae moderately long, less than 1½ width of metafemur, setae on disk of abdominal segment 3 and 4 less than half length of segment; subapical plate not normally undercut. 5.8-7mm. CA and OR. Host: *Cercocarpus betuloides* **nexa** Fall



Example: *A. angelica*



Acmaeodera nexa



159(158) part 2 of 3

Ventral thoracic setae long, 2x width of metafemur, at least some setae on disk of ventrites 3 and 4 half or more as long as segments; subapical plate usually undercut 160

Ventral thoracic setae moderately long, less than 1½ width of metafemur, setae on disk of abdominal segment 3 and 4 less than half length of segment; subapical plate not normally undercut. 5.8-7mm. CA and OR. Host: *Cercocarpus betuloides* **nexa** Fall



Example: *A. angelica*



Acmaeodera nexa

159(158) part 3 of 3

Ventral thoracic setae long, 2x width of metafemur, at least some setae on disk of ventrites 3 and 4 half or more as long as segments; subapical plate usually undercut 160

Ventral thoracic setae moderately long, less than $1\frac{1}{2}$ width of metafemur, setae on disk of abdominal segment 3 and 4 less than half length of segment; subapical plate not normally undercut. 5.8-7mm. CA and OR. Host: *Cercocarpus betuloides* **nexa** Fall



Example: *A. inopinata*



Example: *A. angelica*



Acmaeodera nexa



160(159) part 1 of 2

Interstria 5 wider and more convex for at least half its length; maculations thicker and more distinct
..... ***inopinata*** Barr

Interstria 5 similar to adjacent interstriae for most of its length; maculations usually more subtle. 5.8-9mm.
Hosts: *Ceanothus* spp., *Quercus* spp. and *Toxicodendrum californicum*. AZ, CA, NV, OR, UT and MX.....
..... ***angelica*** Fall (in part)



Acmaeodera inopinata



Acmaeodera angelica

160(159) part 2 of 2

Interstria 5 wider and more convex for at least half its length; maculations thicker and more distinct
..... ***inopinata*** Barr

Interstria 5 similar to adjacent interstriae for most of its length; maculations usually more subtle (duller).
5.8-9mm. Hosts: *Ceanothus* spp., *Quercus* spp. and *Toxicodendrum californicum*. AZ, CA, NV, OR, UT and
MX..... ***angelica*** Fall (in part)



Acmaeodera inopinata



Acmaeodera angelica

161(81) Part 1 of 3



Mid and preapical bands
large and extend from margin

No basal spots or irregular.



Go to **162**

Central basal elytral
spots present



Basal elytral spots set
back from basal margin
by $\frac{1}{2}$ their length or more



Basal elytral spots near/
almost touching margin

Go to **173**

Preapical band distinctly red
near margin; large apical spot



***Acmaeodera*
*adenostomae***

Host: unknown

Range: CA

Preapical band without red; apical
spot small and near margin.
These species difficult to discern.

Rare morph. *A. tuta* often has a
red to reddish-brown patch in the
middle of the base of the elytra.



Acmaeodera tuta

6.9-9.5mm.

AZ, CA, NV and UT.

Host: *Psorothamnus schotti*

Typical form. Never with a red to
reddish-brown patch in the middle
of the base of the elytra.



Acmaeodera pullata

Host: unknown

Range: CA

161(81) Part 2 of 3



Host: unknown

Range: CA

Acmaeodera adenostomae Cazier

161(81) Part 3 of 3



Host: unknown
Range: CA

Acmaeodera pullata Cazier



6.9-9.5mm.
AZ, CA, NV and UT.
Host: *Psorothamnus schotti*

Acmaeodera tuta Horn

162(161)

Elytral setae long, longer than width between rows. Moderate to large species 163

Elytral setae short and pale, about as long as width between rows. Small species. Host: *Yucca* spp. AZ. ***yuccavora*** Knull



Acmaeodera yuccavora

163(162)

Elytra with at least some pale setae; subapical plate variable; Anterior margin of basal maculation not distinctly angled posteriorly from side 164

Elytral setae long and dark. Subapical plate absent. Anterior margin of basal maculation angled posteriorly from side. Host: unknown. CA, CO, NV and UT. *alpina* Barr



Acmaeodera alpina

164(163)

Basal elytra markings not symmetrical or reaching forward medially; lateral pronotal spot variable; pronotal setae with dark setae 165

Basal elytral band symmetrical and usually forming an arch curving toward the base of the suture, if not connecting, then clearly with the sutural end nearest the base; lateral pronotal spots elongate about 2/3rd the length of pronotum and clearly visible dorsally; pronotal setae pale. Host: unknown. AZ and MX. ***convicta*** Fall



Acmaeodera convicta

165(164)

Shiny, usually with a blue sheen on elytra (often faint); maculations tend to become elongated longitudinally medially (at least one of the 4 rows); pronotum densely, deeply punctate with punctures almost touching to 1 diameter apart. Host: *Quercus berberidifolia*. CA. *linsleyi* Van Dyke

Not normally shiny with blue sheen (*A. obtusa* can have blue elytra sheen but then the pronotum will be distinctly blue, too); bands variable but if widening medially not usually elongating longitudinally; pronotal punctures variable 166

Maculations elongated along the length of body on both sides or in multiple rows of maculations.



Acmaeodera linsleyi



Maculations elongated along the length of body only on one side.



Example: *A. obtusa*



166(165)

Large punctures covering the entire surface of pronotum, often touching, but can be $\frac{1}{2}$ diameter apart; with 4 fasciae on elytra;
..... 174

Punctures either not large over entire surface or spaced more than $\frac{1}{2}$ diameter apart on pronotum; elytral maculations variable
..... 167



167(166)



Pronotum bronzed or black 168

Pronotum deep blue or with blue-green sheen; Pronotum dark blue with yellow basolateral spots, not explanate, sides not visible from above throughout. 8-10mm. Host: unknown. OK and TX. ***obtusa*** Horn (in part)

(Hansen 2023)



Acmaeodera obtusa

168(167)

Pronotum dark bronzed to brassy 169

Pronotum black 175

(Hansen 2023)



169(168)



Pronotum lightly depressed or uniformly convex basomedially 170

Pronotum moderately to deeply depressed basomedially 177



(Hansen 2023)



170(169)



Pronotum shallowly, finely punctate 171

Pronotum deeply, coarsely punctate 7.75-10mm. Host: unknown. AZ, CO, NM and TX. ***variegata*** LeConte (in part)
(Hansen 2023)

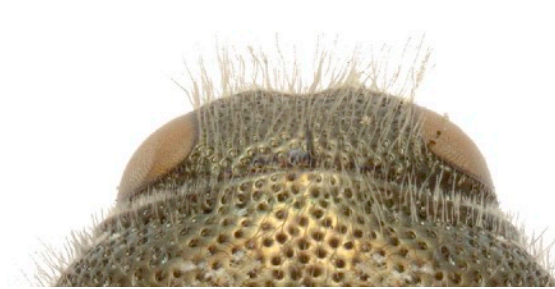


Acmaeodera variegata

171(170)

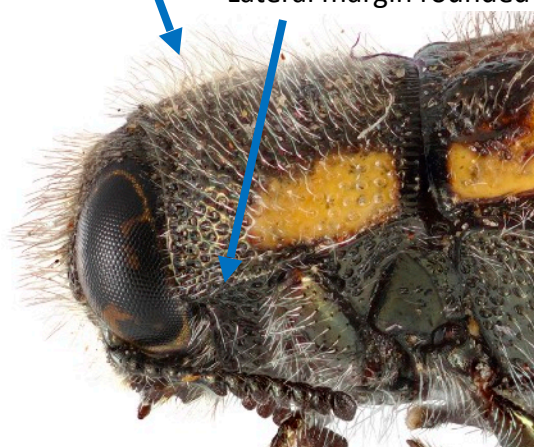
Vestiture of head mostly light brown to brown; lateral margin of pronotum not rounded under. On average larger 6.5–13 mm 172

Vestiture of head pale; lateral margin of pronotum rounded under. 4.7-10.5mm. AZ, CA, CO, ID, MT, NV, SD, UT, WY and TX.
Host: *Krascheninnikovia lanata* ***immaculata*** Horn (in part)
(Hansen 2023)



Pale setae

Lateral margin rounded



Acmaeodera immaculata

172(171)

Elytral apex usually entirely black (occasionally with yellow spots), setae dark brown to black. Humeral spot 2x or more length of umbone. 5-13mm. AL, AR, FL, GA, IA, IL, IN, KS, KY, LA, MD, MI, MO, MT, NC, ND, NJ, OH, PA, SC, SD, TN, WI, WY and Canada. Hosts: *Crataegus* spp., *Gleditsia triacanthos*, and *Taxodium distichum* ***pulchella*** (Herbst)

Elytral apex black with two yellow spots (occasionally all black), setae light brown to brown. Humeral spot 1.25x length of umbone. 6.5-13mm. AZ, CO, KS, NE, NM, OK, and MX. Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp., and *Prosopis* spp. ***mixta*** LeConte

*Likely to occur in far west Texas though no valid records currently exist from the state.

(Adapted from Hansen 2023)



Mike Quinn, TexasEnto.net

Acmaeodera pulchella



Acmaeodera mixta

173(161)



Central basal elytral spots and variable irregular bands- usually three; femoral setae longer; Host unknown; Range: CA and MX *vernalis* Barr

Central basal elytral spots and 4 distinct bands; femoral setae subequal to or shorter than femoral width; Hosts *Acacia willardiana* and *Cercidium floridum*; Range: AZ, CA and MX *alicia* Fall



Acmaeodera vernalis



Acmaeodera alicia

174(166)

Usually cribrate punctured; at least one elytral maculation branching; pronotum with median impression complete; species of southwest. Host: unknown. AZ, CA, CO, NM, NV and UT..... ***diffusa*** Barr (in part)

Punctures “normal;” elytral maculations vary from simple to branching; median impression variable, absent to distinct; species of the Pacific Northwest 7-12.7mm; Hosts: *Celtis occidentalis*, *Cercocarpus ledifolius*, *Crataegus douglasii*, and *Quercus garryana*; CA, ID, MT, NV, OR, UT, WA, WY and BC ***idahoensis*** Barr (in part)(uncommon form)



Acmaeodera diffusa



Acmaeodera idahoensis
(uncommon form)

175(168)

Pronotum immaculate or with small yellow spot basolaterally; elytra with scattered yellow spots and/or irregular, thin, transverse bands 176

Pronotum w/large yellow spot basolaterally; elytra with 3 well defined bands. 10-11mm. Host: unknown. CA. ... **robusta** Horn
(Adapted from Hansen 2023)



Acmaeodera robusta

176(175)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... *ornatoides* Barr (in part)

Posthumeral yellow spot long and slightly curved; dorsum without blue reflections. 8-11mm. Host: unknown. AL, AR, DC, FL, GA,
IN, KY, MO, NC, NJ, OH, OK, PA, SC, TN, TX, VA and WV *ornata* (Fabricius) (in part)
(Adapted from Hansen 2023)



Acmaeodera ornatoides



Acmaeodera ornata

177(169)

Pronotum coarsely punctate, not shiny; elytra often with four transverse bands broken at suture. Host: *Quercus pungens*. AZ, NM, NV and TX. ***bowditchi*** Fall (in part)

Pronotum less coarsely punctate, shiny; elytra with irregular transverse bands and yellow markings Host: unknown. TX.
..... ***consors*** Horn (in part)

(Adapted from Hansen 2023)



Acmaeodera bowditchi



Acmaeodera consors



178(82)



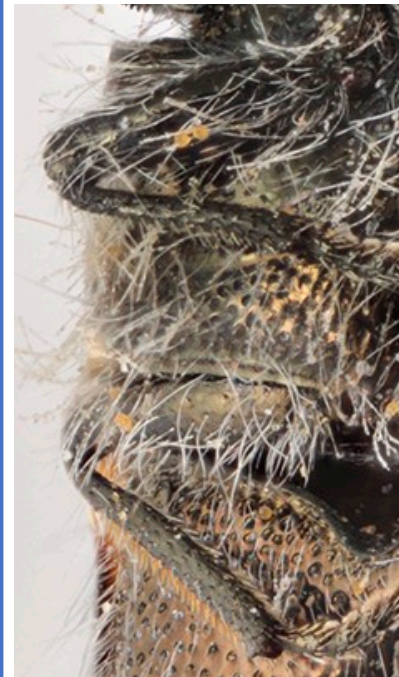
With long pale setae on elytra; femoral setae longer than width 182



If long setae present on elytra, then not all over or pale; setae on femora shorter than or equal to femoral width and flattened 179



Example: *A. mojavei*



Example: *A. sphaeralceae*



179(178) 

If pale, setae not short and spiny; interstriae wider than striae 180

Setae short and spiny, clear to white; Femora with setae straight and flattened in shape, equal to or shorter than width of femur; striae wider than interstriae. 3.0–5.5mm. Hosts: *Karwinskia humboldtiana* and *Parkinsonia texana*. TX..... ***opuntiae*** Knull



Acmaeodera opuntiae

180(179)

Dorsal seta not all white; pronotal setae variable 181

Dorsal setae all white; pronotal setae moderately long and reclining. Host: *Quercus berberidifolia*. AZ and CA. ... **vulturei** Knull



Acmaeodera vulturei

181(180)

Band adjacent to suture faint/darker compared to other maculations, band straight and symmetrical (rare morph). 5-13mm. AL, AR, FL, GA, IA, IL, IN, KS, KY, LA, MD, MI, MO, MT, NC, ND, NJ, OH, PA, SC, SD, TN, WI, WY and Canada. Hosts: *Crataegus* spp., *Gleditsia triacanthos*, and *Taxodium distichum* ***pulchella*** (Herbst)

Band adjacent to suture as bold as other maculations, band usually irregular. Host: unknown. AZ, CA, CO, NM, NV and UT.
..... ***sphaeralceae*** Barr



Mike Quinn, TexasEnto.net

Acmaeodera pulchella

Acmaeodera sphaeralceae

182(178)



Pronotum widest at base; striae punctures larger, at least 2x as large as interstitial punctures. Host: *Ephedra* spp ***pubiventris* ssp.** 183

Pronotum widest at middle; striae punctures small, about the same size as interstitial punctures. Host: *Lycium cooperi*. AZ, CA, NV and UT. ***mojavei*** Westcott (in part)



Acmaeodera mojavei

183(182)

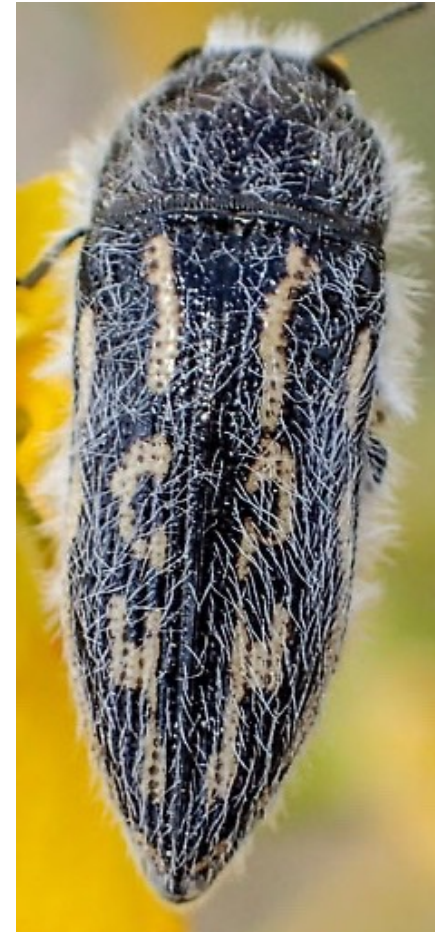
Body black with faint brassy reflections; lateral vittae entire to umbone; humeral spot present; 6.3-10mm; CA; larval host *Ephedra californium* ***pubiventris panocheae*** Westcott

Body black, rarely with blue reflections; lateral vittae variable; humeral spot variable; 6.3-12.6mm; sAZ, sCA, NV, sUT and Baja California; larval host *Ephedra* spp. ***pubiventris lanata*** Horn (Westcott 1999)



Acmaeodera panocheae

Image by K. Schneider 2019 <https://bugguide.net/node/view/1669445/bgimage>



Acmaeodera lanata

184(83) part 1 of 3

Small dense spots.

Lateral red elytral markings only on apical half although some may be on elytral disk.
Elytral apex more broadly rounded.

Lateral red elytral markings reaching near humeri. Elytral apex narrow.



Host: unknown
Range: AZ

Acmaeodera griffithi

Legs and surface ventral meso and metasternal sclerites obscured by long pale hairs.



8-10.5mm
Host: unknown Range:
TX and MX

Acmaeodera miliaris

Legs and surface ventral meso and metasternal sclerites with moderately long hairs but they do not obscure the surface of the thorax.



Host: unknown.
Range: TX and MX

Acmaeodera haemorrhhoa





Acmaeodera haemorrhhoa LeConte

Host: unknown.

Range: TX and MX



Acmaeodera griffithi Fall

Host: unknown

Range: AZ



Acmaeodera miliaris Horn

8-10.5mm

Host: unknown

Range: TX and MX

185(83) part 1 of 3



Large medial spots in a row.

Silhouette typical; Pronotum converging to head or very convex laterally. Head 0.6 or less of base of pronotum. Elytra parallel sided for $\sim 2/3$ of length or less.



With 3 lateral red spots on lateral elytron (total of 6).



Acmaeodera gibbula

10-12mm.

Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*.

AZ, CA, NM, TX, UT and MX

Silhouette slender; Pronotum not quite parallel sided (subparallel). Head about 0.7 of base of pronotum. Elytra parallel sided for $\sim 3/4$ of length



Host: *Celtis ehrenbergia*

Range: AZ and MX

Acmaeodera wheeleri

With 0 lateral red spots on elytra or red spots all on apical half



Pronotal spots, if present, yellow; With four or more maculations of variable lengths as measured across striae 2 and 3. Maculations irregular.

Pronotal spot orange; With four widely spaced, similar length maculations (as measured across striae 2 and 3)



Acmaeodera xanthosticta

Host: unknown

Range: FL

Pale lateral pronotal markings not visible from dorsal view.

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Pale lateral pronotal markings visible from dorsal view.



Acmaeodera serena

9-9.5mm

Host: unknown

Range: AZ, CA and MX

185(83) part 2 of 3



***Acmaeodera gibbula* LeConte**

10-12mm

Hosts: *Acacia greggii*, *Cercidium floridum*,
Olneya tesota, *Parkinsonia aculeata*,
Prosopis glandulosa, and *Salix gooddingii*.

Range: AZ, CA, NM, TX, UT and MX



***Acmaeodera serena* Fall**

9-9.5mm

Host: unknown

Range: AZ, CA and MX



Acmaeodera wheeleri Van Dyke

Host: *Celtis ehrenbergia*

Range: AZ and MX



Acmaeodera xanthosticta Laporte and Gory

Host: unknown

Range: FL

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Pale lateral pronotal markings
not visible from dorsal view

Pronotum lateral margins
rounded; small to moderate sized.

Pronotum trapezoidal; size large

With four rows of spots; small species

With five rows of
spots; moderate in size

Pronotum without median impression.

Acmaeodera quadriseriata

5.5-7mm

Host: unknown

Range: CA and MX

Pronotum with
median impression.



Acmaeodera bishopiana

5.5-7.8mm

Host: *Atriplex* spp.

Range: CA, ID, NV and OR



Dorsal setae short, setae of 3rd
interstria too short to reach suture.



***Acmaeodera
bacchariphaga***

Host: *Baccharis sarothroides*

Range: CA and MX

Dorsal setae longer, setae of
3rd interstria long enough to
reach suture.



***Acmaeodera
delumbis***

Range: AZ, NM, TX and MX

Hosts: *Prosopis glandulosa*
and *Acacia constricta*

Short, reclining setae on elytra.



Acmaeodera pinalorum

Host: unknown

Range: AZ, CA, NM, TX and MX

Long, erect elytral setae.



Acmaeodera recticollides

Host: unknown

Range: CA and MX

186(185) part 2 of 4



Acmaeodera bishopiana Fall

5.5-7.8mm

Host: *Atriplex* spp.

Range: CA, ID, NV and OR



Acmaeodera bacchariphaga

Westcott and Verity

Host: *Baccharis sarothroides*

Range: CA and MX



Acmaeodera delumbis Horn

Range: AZ, NM, TX and MX
Hosts: *Prosopis glandulosa*
and *Acacia constricta*.



Acmaeodera pinalorum Knull

Host: unknown
Range: AZ, CA, NM, TX and MX



Acmaeodera quadriseriata Fall

5.5-7mm

Host: unknown

Range: CA and MX



Acmaeodera recticollis Westcott

Host: unknown

Range: CA and MX

Large, irregular maculations

187(83) 1 of 3



Pronotum with pale areas visible dorsally **or**, if not, pronotum widest anterior to base and abruptly angled toward head



Pronotum without lateral pale areas visible dorsally (rarely a tiny dot on *parkeri*), pronotum widest about at middle, gradually sloping to head



Go to 190



Elytral maculations coarse, as wide 2 or more interstriae. Lateral pronotal maculation absent or present



Lateral pronotal maculation absent



Acmaeodera connexa

7.5-12mm
Host: *Quercus* spp.
Range: CA, NV, OR and WA

Lateral pronotal maculation present



Go to 188



Elytral maculations narrow (about as wide as an interstria and stria) intricate; Lateral pronotal maculation absent

Maculations concentrated basally. Longer with straighter sides.



Acmaeodera connexa

7.5-12mm
Host: *Quercus* spp.
Range: CA, NV, OR and WA

Maculations distributed evenly. Stouter with more evenly rounded elytral margins.



Acmaeodera labrynthica

6.1-10.5mm
Host: *Quercus garryana* and
Umbellularia californica
Range: AZ, CA, NV, OR and UT

187(83) 2 of 3



Acmaeodera connexa LeConte



7.5-12mm

Host: *Quercus* spp.

Range: CA, NV, OR and WA



187(83) 3 of 3



Acmaeodera labrynthica Fall

6.1-10.5mm

Host: *Quercus garryana* and *Umbellularia californica*

Range: AZ, CA, NV, OR and UT

188(187) part 1 of 3



Pronotum with curved lateral margins; head as wide as elytron

Pronotum wider than elytral base

Pronotum equal to or narrower than elytra



Go to 189



Pronotal punctures large, contiguous; elytra wide: length <2 x base.



Acmaeodera gillesi

7-10mm

Host: *Quercus* spp.

Range: TX

Pronotal punctures large, contiguous to 0.5 apart; elytra elongate length 2x width: length ~2 x base. *variegata*



Acmaeodera variegata

7.75-10mm

Host: unknown.

Range: AZ, CO, NM and TX

Pronotal punctures moderate, 1-1.5 diameters apart; elytra moderate: length about 2 x base.



Acmaeodera lupinae

Host: unknown

Range: CA, CO, NV and UT

188(187) part 2 of 3



7-10mm
Host: *Quercus* spp.
Range: TX

Acmaeodera gillespiensis Knull



Host: unknown
CA, CO, NV and UT

Acmaeodera lupinae Nelson



Acmaeodera variegata LeConte

7.75-10mm. Host:
unknown AZ, CO,
NM and TX

189(188) part 1 of 4

Pronotum equal to or narrower than elytra

Pronotal maculation small, less than 1/3 length of pronotum.



Acmaeodera diffusa

Host: unknown

Range: NM, NV and UT

Pronotal maculation about half length of pronotal margin, near or at base



Pronotum trapezoidal with nearly straight lateral margins; head wider than base of an elytron



Acmaeodera wickenburgana

Host: unknown

Range: AZ and MX

Pronotum with curved lateral margins (sometimes only a little); head about as wide as base of elytron (3 choices)

Pronotum subparallel on basal half; elytra gradually rounded to apex; pronotal punctures 1-2x diameter apart.



Acmaeodera nevadica

Host: unknown

Range: CA and NV

Pronotum gradually curving toward head; elytra gradually rounded to apex; pronotal punctures ~1x diameter apart.



Acmaeodera hepburnii

6-12mm

Hosts: *Ceanothus* spp., *Pyrus communis* and *Quercus* spp.

Range: CA, OR and MX

Pronotum gradually curving toward head; elytra gradually more abruptly narrowed to apex at apical 1/3; pronotal punctures <1x diameter apart.



Acmaeodera mixta (in part)

6.5-13mm

Hosts: *Acacia* spp., *Avicennia* spp., *Celtis* spp. and *Prosopis* spp.

Range: AZ, CO, KS, NE, NM, OK, TX, UT and MX

189(188) part 2 of 4



Host: unknown
Range: NM, NV and UT

Acmaeodera diffusa Barr



6-12mm
Hosts: *Ceanothus* spp., *Pyrus*
communis and *Quercus* spp.
Range: CA, OR and MX

Acmaeodera hepburnii LeConte

189(188) part 3 of 4



6.5-13mm
Hosts: *Acacia* spp., *Avicennia* spp.,
Celtis spp. and *Prosopis* spp.
Range: AZ, CO, KS, NE, NM, OK, TX,
UT and MX

Acmaeodera mixta Horn



Host: unknown
Range: CA and NV

Acmaeodera nevadica Barr



Acmaeodera wickenburgana Knull

Host: unknown

Range: AZ and MX

190(187) part 1 of 3



Pronotum not
widest at base

Short, pale setae
(rarely with tiny spot).



Acmaeodera parkeri

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX

Long, dark setae

Elytra tapering from base.
Pronotum trapezoidal.



Acmaeodera lupinae

(no image available for forms
without pronotal spots)

Host: unknown

Range: mCA, CO, NV and UT

Elytra subparallel for basal 2/3.
Pronotum more rectangular or oval.



Acmaeodera carlota

Host: unknown

Range: AZ

190(187) part 2 of 3



Acmaeodera carlota Fall

Host: unknown
Range: AZ



Host: unknown
CA, CO, NV and UT

Acmaeodera lupinae Nelson



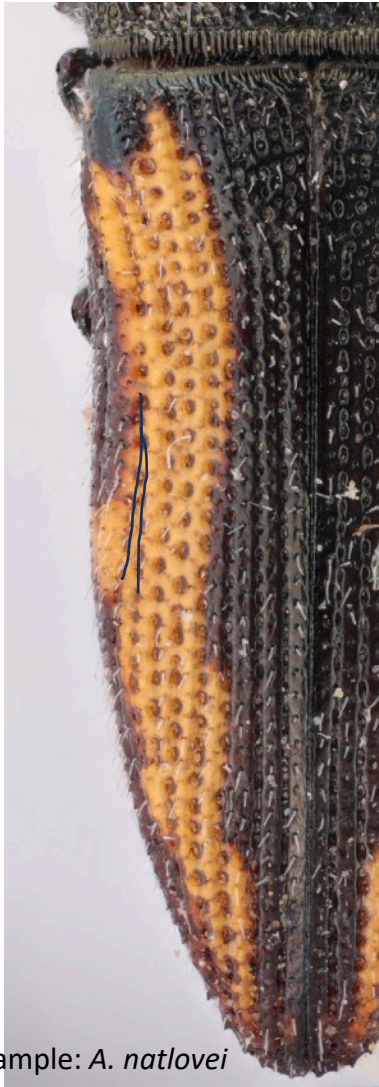
4.5-7.5mm
Host: unknown
Range: AZ, NM, TX and MX

Acmaeodera parkeri Cazier



7th stria split within basal third (≥ 6 punctures) 192

7th stria split near umbone or independent (0–5 punctures) 194
(Adapted from Hansen 2023)



Example: *A. natlovei*



Example: *A. neglecta*



Each elytron with vittae or larger irregular yellow markings or fewer and larger yellow spots 193

Each elytron usually with 6–8 small yellow spots that occasionally coalesce, rarely reduced. 4-7mm. Hosts: *Betula nigra*, *Carya* spp., *Celtis occidentalis*, *Cercis canadensis*, *Crataegus* spp., *Gleditsia triacanthos*, *Juglans nigra* and *Ulmus* spp. AL, AR, CT, DC, DE, FL GA, IA, IL, IN, KS, KY, LA, MA, MD, MI, MO, NC, NE, NJ, NY, OH, OK, PA, SC, TN, TX, VA and **tubulus** (Fabricius)

(Adapted from Hansen 2023)



Acmaeodera tubulus

193(192) part 1 of 2

Pronotum black; clypeal notch variable, Elytral markings variable but usually with maculation on apical third combined into one elongate maculation. 5-7mm. Hosts: *Celtis laevigata* and *Juglans macrocarpa*. AZ, NM and TX. **natlovei** Hansen (in part)

Pronotum black bronze (often vague); clypeus anterior notch angulate; Elytral markings extremely variable, sometimes with narrow irregular vittae, less commonly wide vittae, rarely immaculate. 4.2-6.2mm. Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX....



Acmaeodera natlovei



Acmaeodera neoneglecta

193(192) part 2 of 2

Pronotum black; clypeal notch variable, Elytral markings variable but usually with maculation on apical third combined into one elongate maculation. 5-7mm. Hosts: *Celtis laevigata* and *Juglans macrocarpa*. AZ, NM and TX. ***natlovei*** Hansen (in part)

Pronotum black bronze (often vague); clypeus anterior notch angulate; Elytral markings extremely variable, sometimes with narrow irregular vittae, less commonly wide vittae, rarely immaculate. 4.2-6.2mm. Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX. ***neoneglecta*** Fisher (in part)



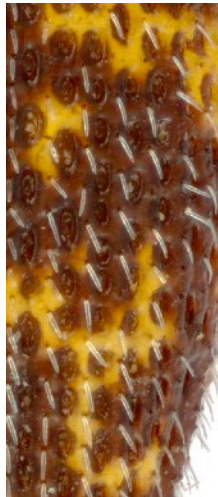
Acmaeodera natlovei



Acmaeodera neoneglecta

Interstriae often narrower than striae on disk, elytra clothed with wide setae, 3.0–5.5mm. Hosts: *Karwinskia humboldtiana* and *Parkinsonia texana*. TX..... *opuntiae* Knull (in part)

Interstriae equal to or slightly wider than striae, elytra clothed with narrow setae, 3.0-7.6mm 38



Example: *Acmaeodera neglecta*

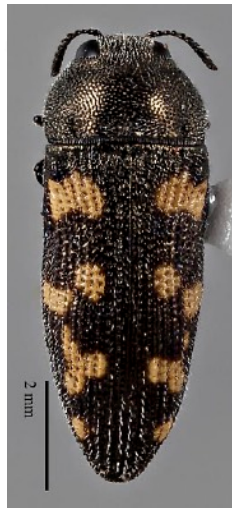
Acmaeodera opuntiae

195(194)

Difficult to separate!

Clypeus broadly, shallowly emarginate. 5.7-7.6mm. Hosts: *Celtis laevigata*, *Juglans* spp., and *Ulmus crassifolia*. AZ, NM, TX
..... **conoidea** Fall (in part)

Clypeus narrowly, deeply emarginate. 3.0-7.5mm. Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK, NM and TX **neglecta** Fall (in part)



Acmaeodera conoidea

Joel DuBois 2019 <https://bugguide.net/node/view/1726363/bgpage>



Acmaeodera neglecta

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