

An Identification Key to the *Acmaeodera*



Online version: This is a low resolution version to enable downloading from our website. If you would like the high resolution version contact Josh Vlach at joshua.vlach@oda.oregon.gov

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of North America North of Mexico

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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.

ODA: Use of the imaging system, the entomology museum, and general support.

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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 is 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.

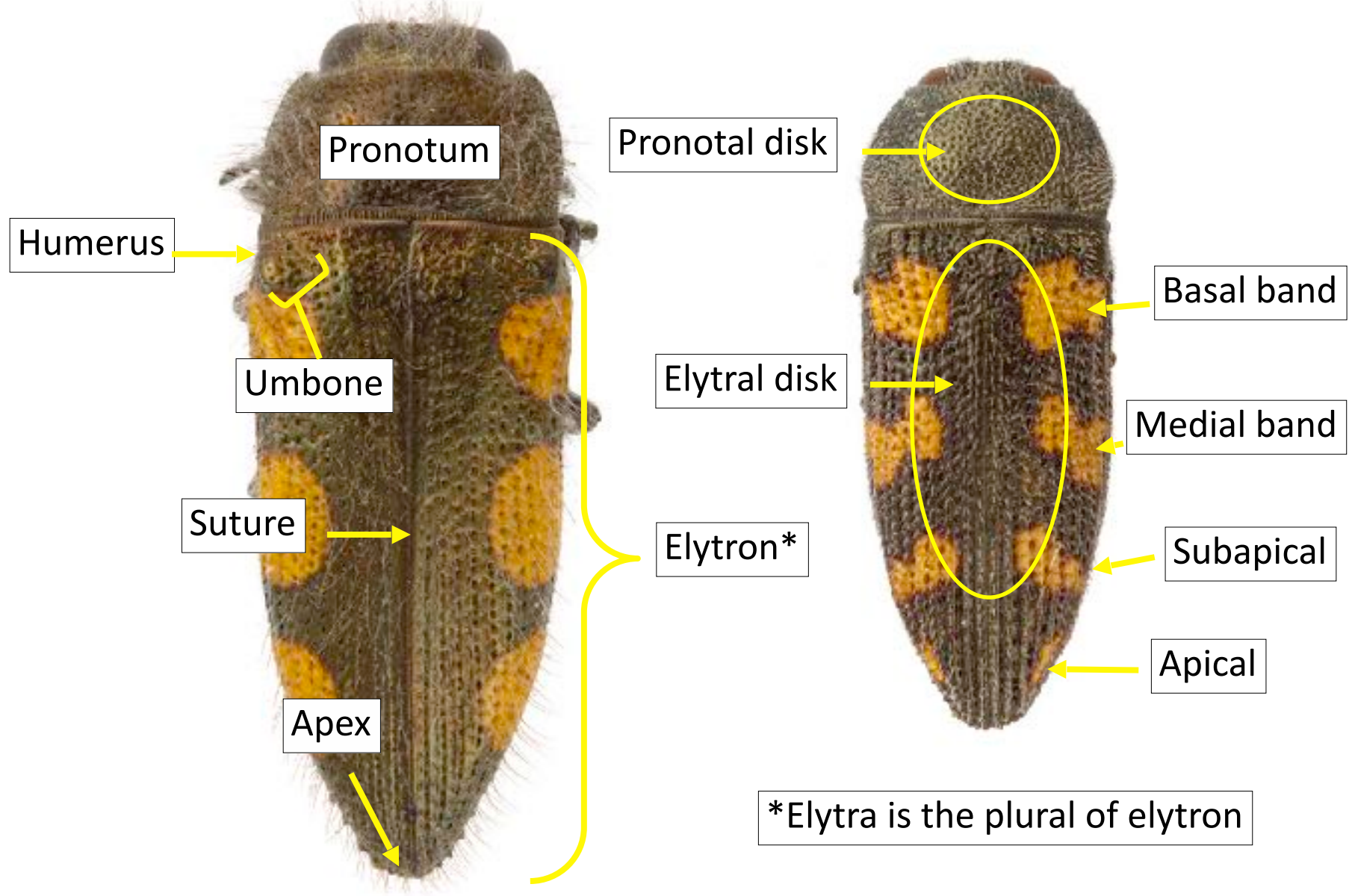
If there are more images than can fit on a single slide, the multiple slides for the couplet are indicated by “part 1”, “part 2”, etc., following the couplet number at the top of the slide.

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.

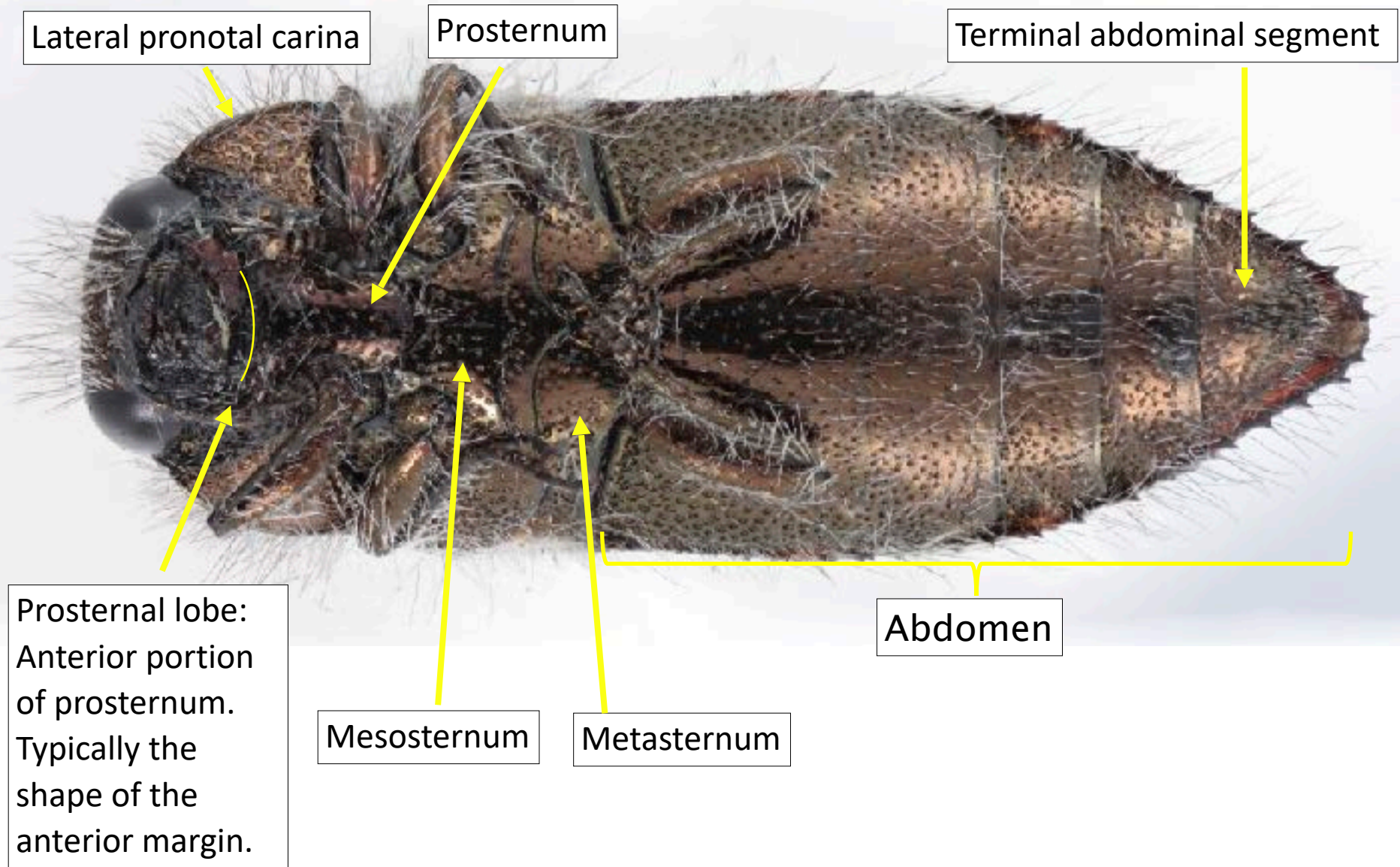
Range can be a useful way to differentiate between species, but this guide is intended to assist in the identification of species without that information. In recent decades we've seen many species moved around North America. We want to enable the recognition of changes in distribution.

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.

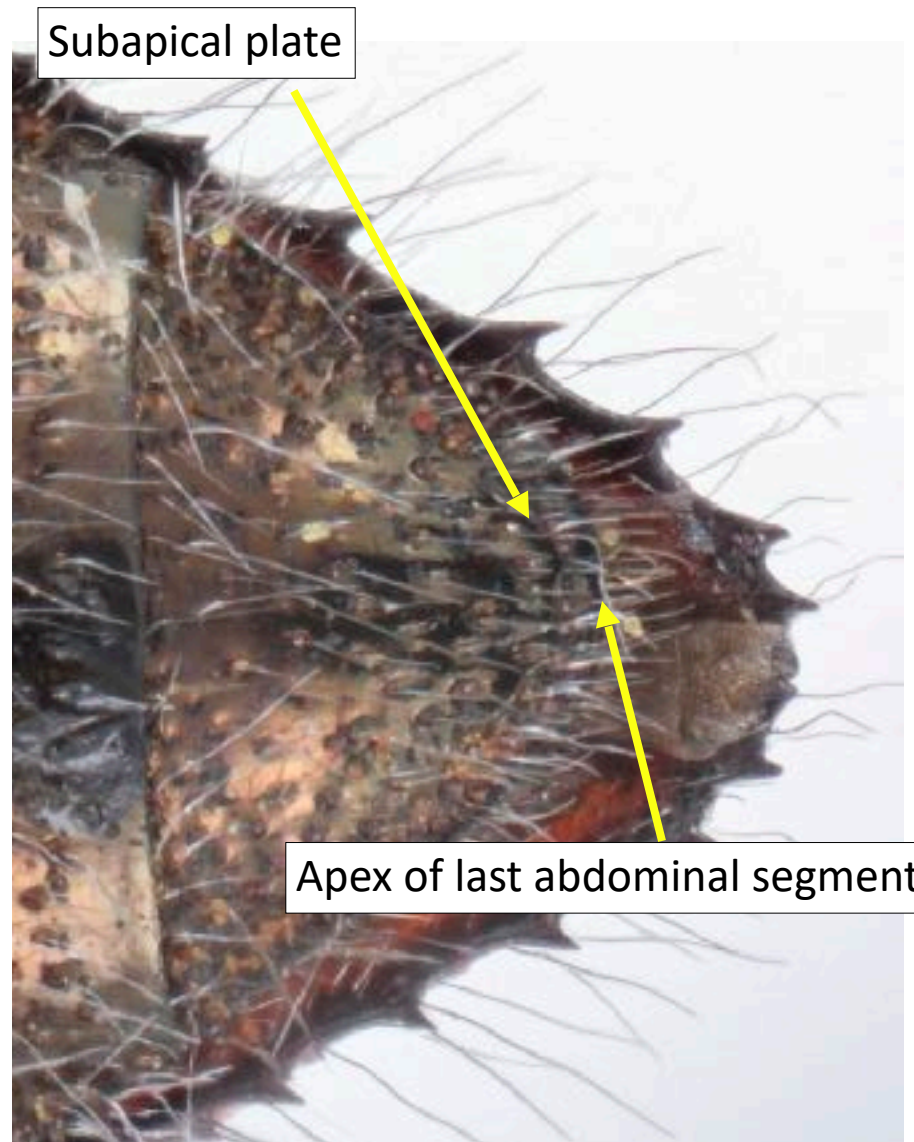
BASIC BODY PARTS OF BUPRESTIDS: I



BASIC BODY PARTS OF BUPRESTIDS: II

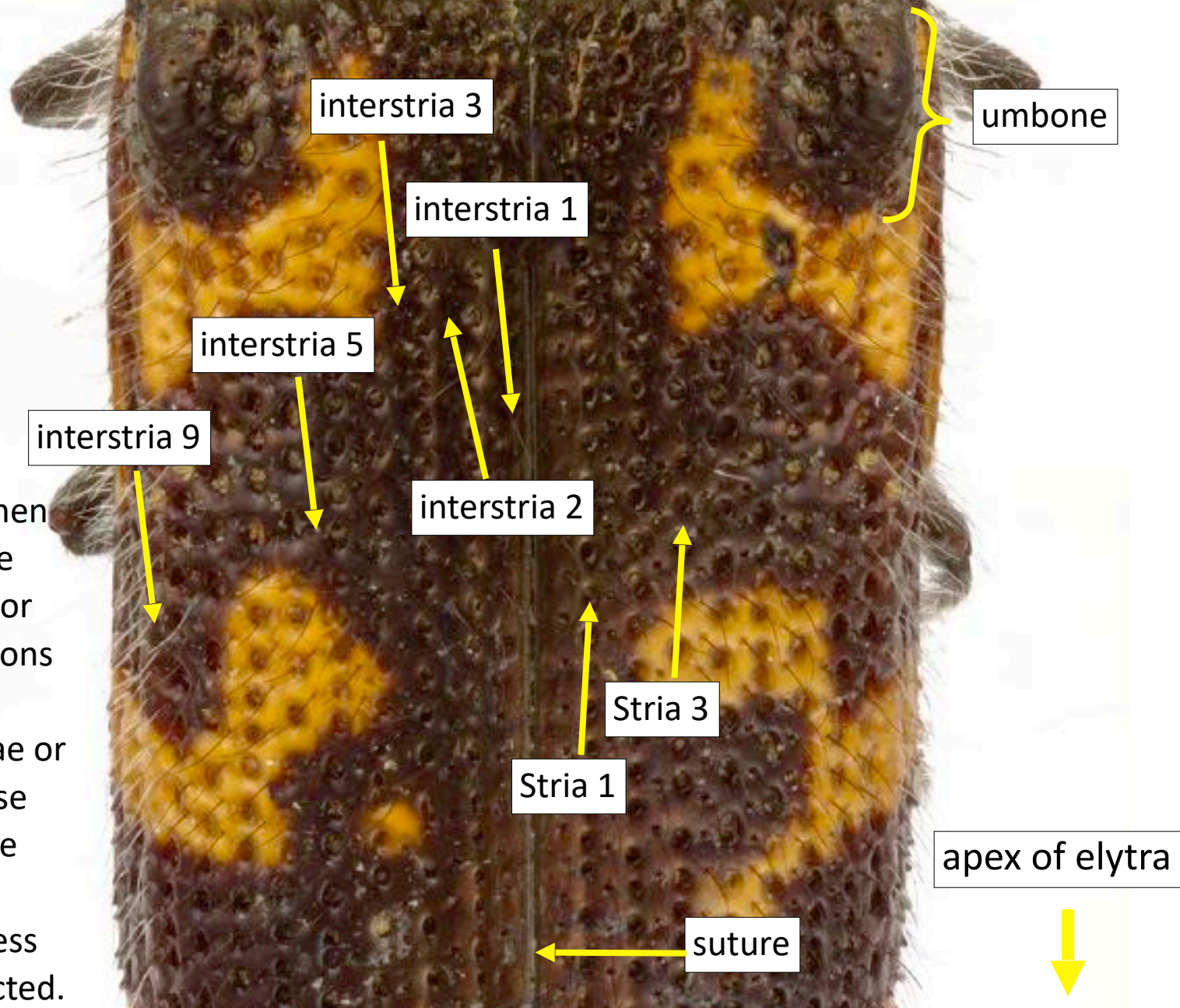


BASIC BODY PARTS OF BUPRESTIDS: III

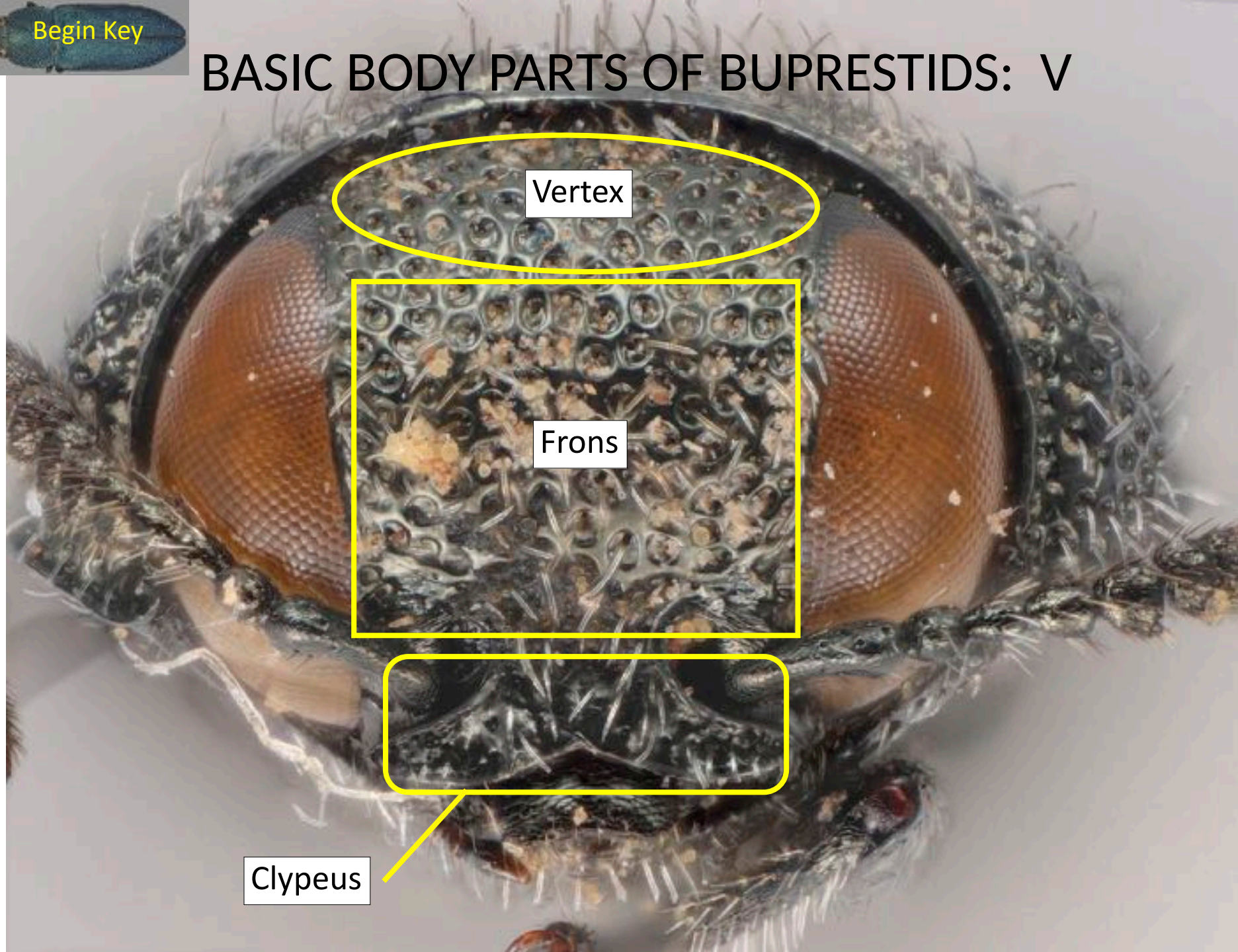


BASIC BODY PARTS OF BUPRESTIDS: IV

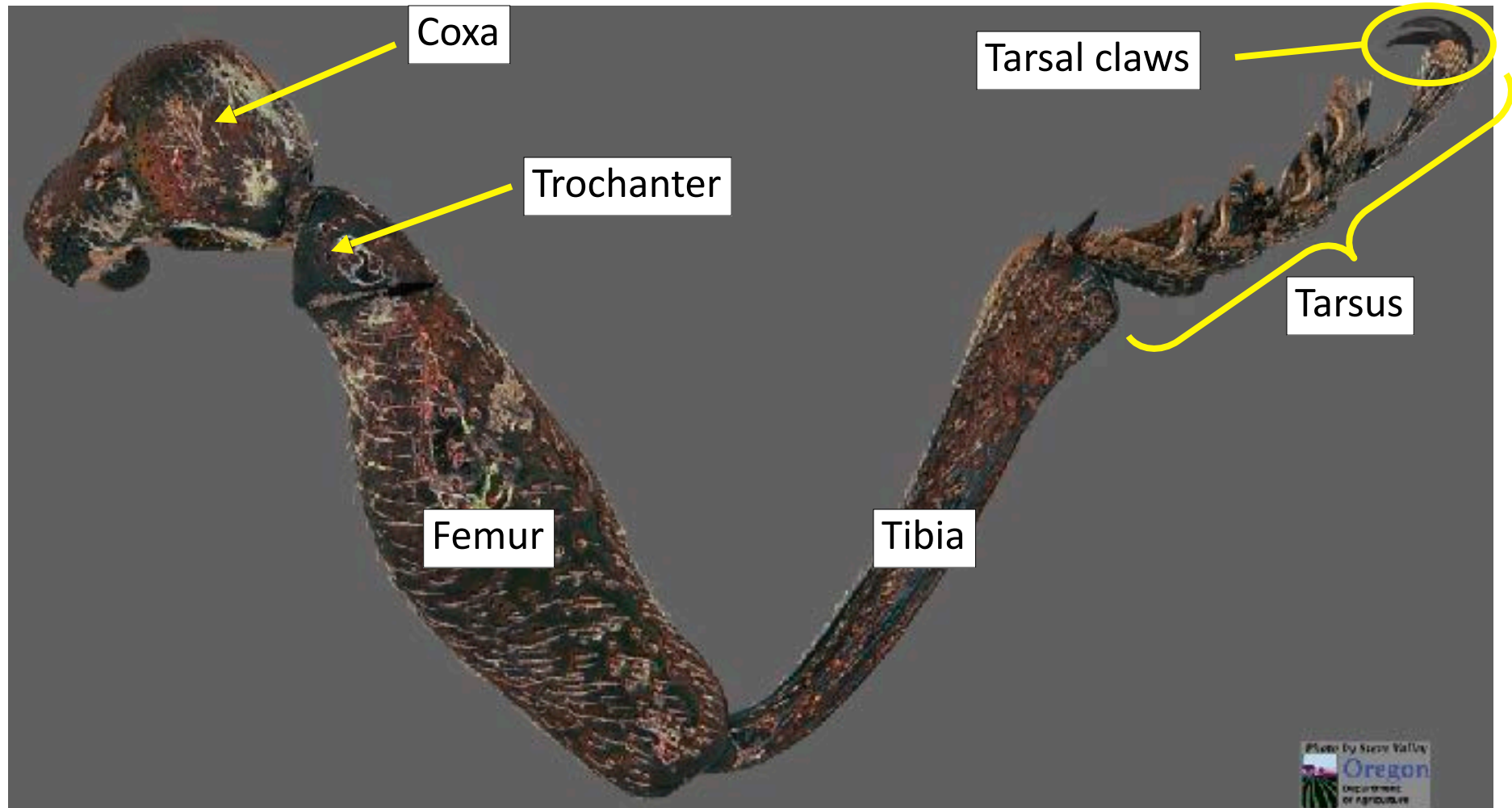
Middle of the elytral disk. When you count striae and interstriae or make comparisons between punctures, striae or interstriae, these are made in the middle of the elytral disk unless otherwise directed.



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

Image by Joshua Basham



sinuata sinuata



natlovei



sinuata sinuata



robigo



chuckbellamyi



neoneglecta



discalis



*latiflava
lineipicta*



neoneglecta



*pubiventris
lanata*



nigrovittata



neglecta



sabinae



conoidea



*tildenorum**



raschkoi



ligulata



parkeri



riograndei



*pubiventris
lanata*



quadrivittata



cazieri



quadrivittatoides



quadrivittata



*Latiflava
latiflava*



princeps

* Image by
Jason
Hansen

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



mojavel

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



knallorum



davidsoni



acanthicola



bivulnera



Mariposa mariposa



Mariposa dohrni



rubrocuprea



plagiaticauda



mimicata



ceanothae

Species images organized by pattern: 4 of 10



rubronotata

ornatoïdes

angelica

angelica

angelica

tenebricosa

dolorosa

nexa

knowltoni



bishopiana

bishopiana

bishopiana

dolorosa

neglecta

rubronotata

plagiaticauda

plagiaticauda



bishopiana

acuta

acuta

neoneglecta

neoneglecta

neglecta

retifera

neglecta

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



quadriseiata



pinalorum



delumbis



flavopicta



miliaris



haemorrhoea



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

Species images organized by pattern: 8 of 10



vernalis



pullata



alicia



solitaria



yuccavorae



tuta



diffusa



robusta



convicta



jacosa



adenostomae



tuta



pubiventris
pubiventris



recticollis



gibbola



alpinus



mixta



obtusa



disjuncta



paradisjuncta



serena



recticolloides



tubulus



wheeleri



xanthosticta

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



millaris

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*



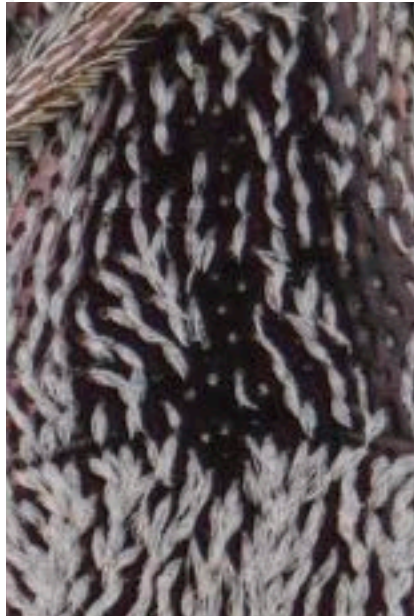
Live *A. tuta*

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

Normal setae, plumose setae or scales not majority of vestiture; 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*. **A. constricticollis** (Knull)



Acmaeodera constricticollis

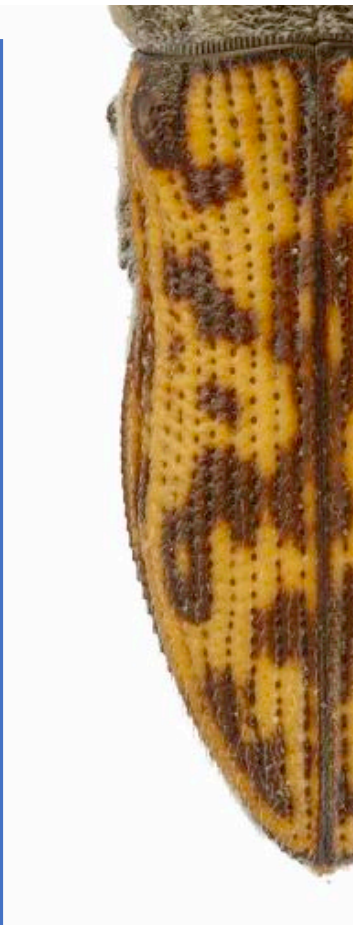
5(4) part 1

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. ***A. ephedrae*** Barr

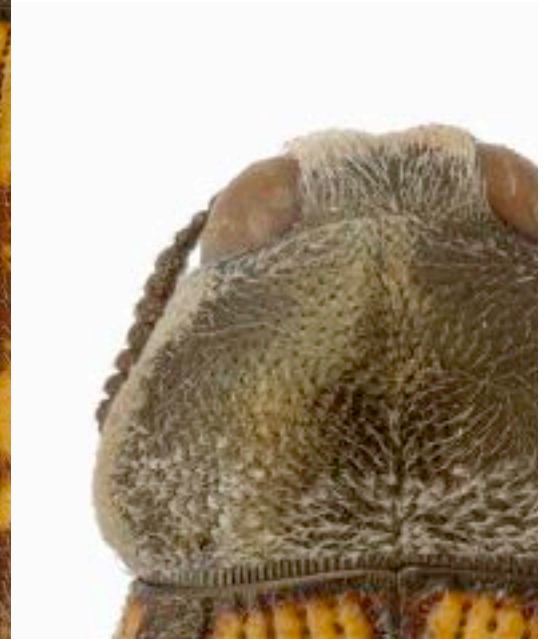
Alveolate punctures on pronotum, Maculation variable, thin slightly bent elytral setae; plumose setae not in rows on elytra, at most sparse. AZ, CA, NV and MX. Hosts: *Argythamnia bandegeei*, *Atriplex lentiformis*, *Cercidium microphyllum*, *Eriogonum inflatum*, and mallow ***A. vanduzeei*** Van Dyke



***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. ***A. 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 bandedgeei*, *Atriplex lentiformis*, *Cercidium microphyllum*, *Eriogonum inflatum*, and mallow ***A. 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*. **A. 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 V1



Various maculations, not solid or longitudinal stripes only 8



8(7)

Pattern other than 3 semicircles. 9

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



Acmaeodera sinuata sexnotata

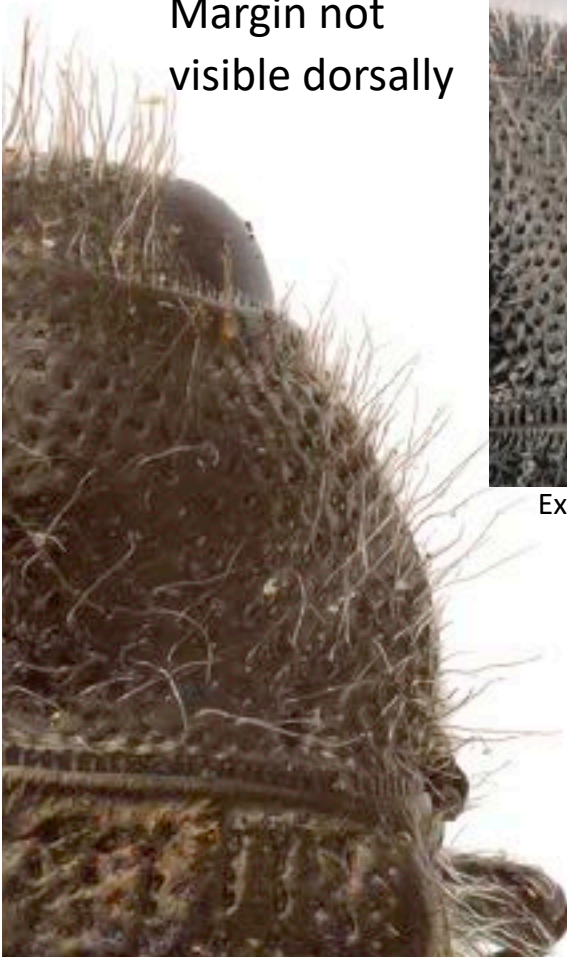
9(8)

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) E1

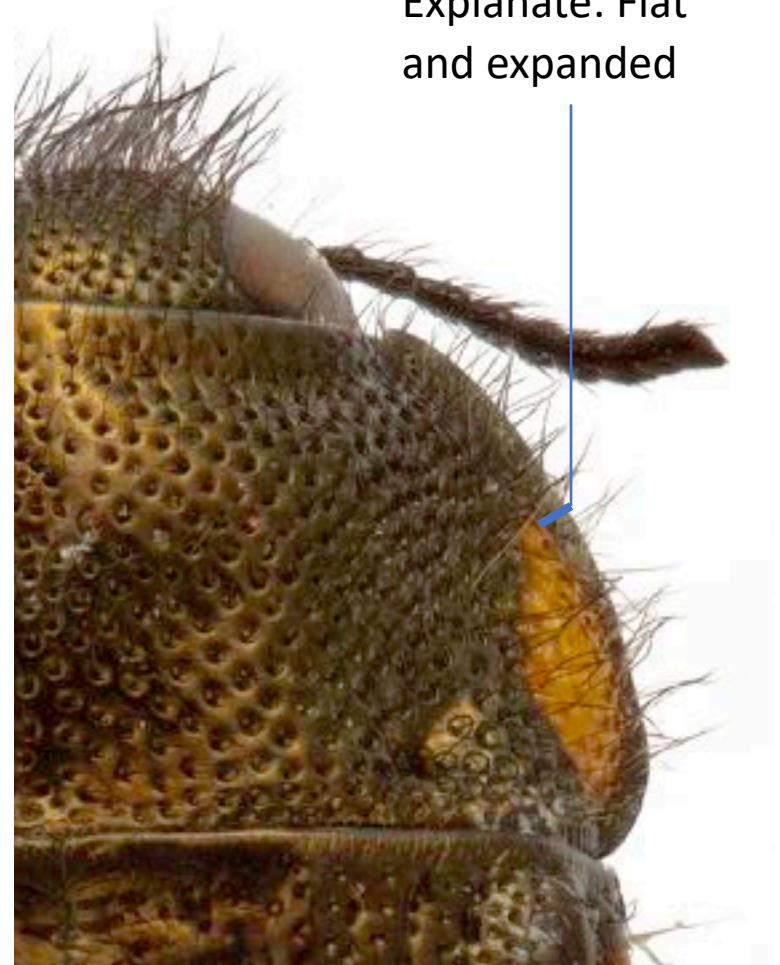


Margin not
visible dorsally



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* ***A. 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* ***A. atactospilota*** Westcott



Example: *A. fenyesi*



Example: *A. nexa*



Acmaeodera atactospilota

11(6)



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

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



Red markings present

Acmaeodera fattigi



Acmaeodera mimicata

12(10)



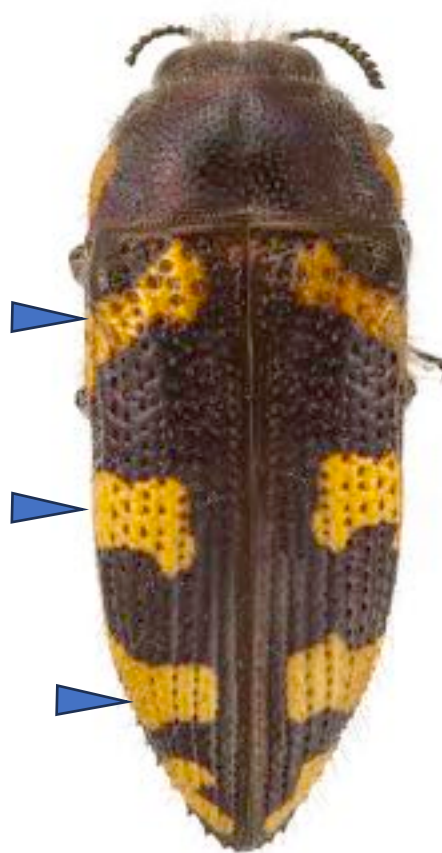
If with 3 pairs of blocky bands on elytra, then without trapezoidal pronotum. 13

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* ***A. tuta*** Horn

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



Example: *A. natlovei*



Acmaeodera tuta

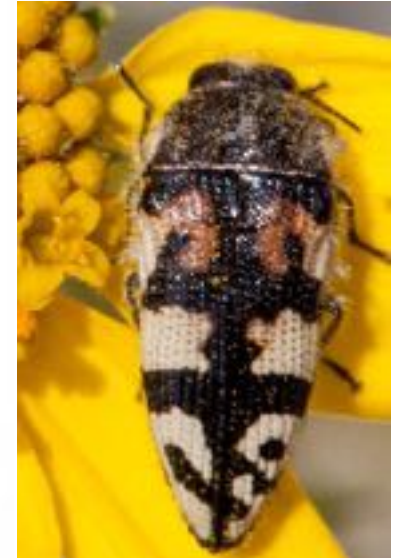


Image by Aaron Schusteff, <https://bugguide.net/node/view/306499/bgimage>

13(12)

Elytral markings typically from middle of elytra to apex..... B1

Elytral markings over entire surface to some extent 14



Markings generally absent from elytral disk

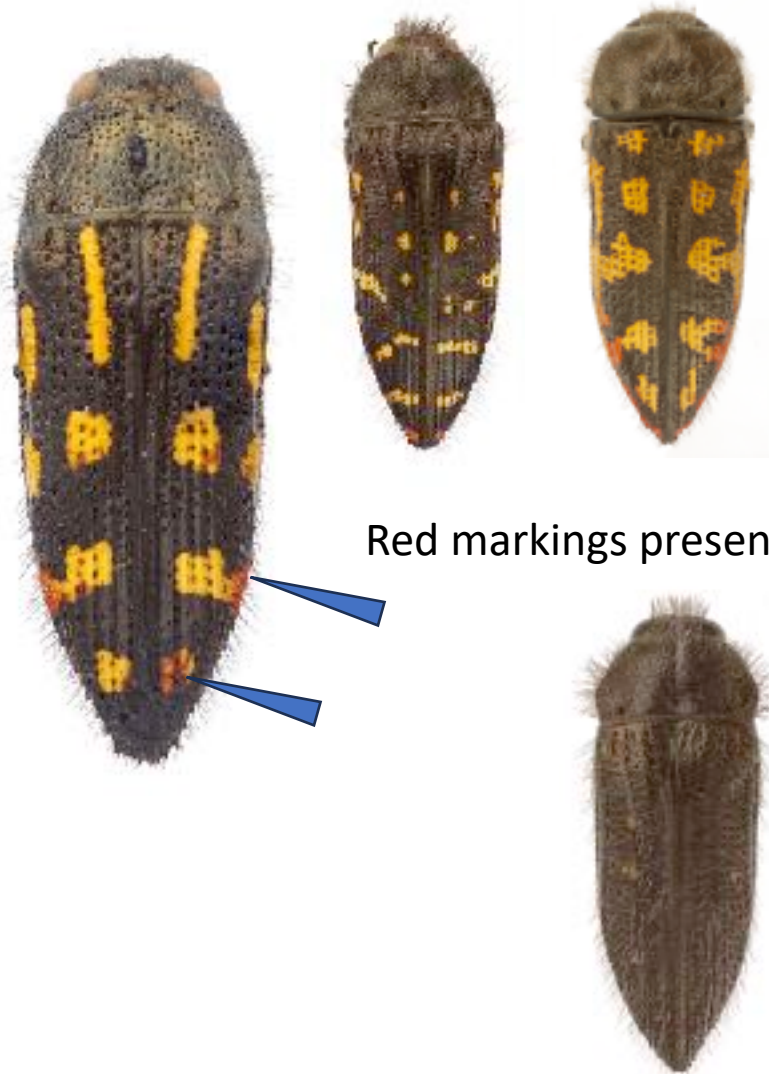


14(13)

With red markings R1



Without red markings..... C1



Red markings present



B1(13)

Elytral maculations variable, at least some more than small spots B2

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



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



Acmaeodera fenyese

B2(B1)

Elytral maculations white, yellow, or orange, never completely red B3

Elytral maculations almost entirely or entirely red B9



B3(B2)

Elytral maculations dominated by a large subapical band B4

Elytral maculations not primarily a large apical band, although they may have a strong medial band B5



B4(B3)

Various rare forms:



Acmaeodera
mojavei



Acmaeodera verityi



Acmaeodera
ornatoides



Acmaeodera
rubronotata

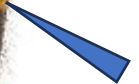
B5(B3)

Elytral maculations shorter than half the disk B6

Elytral maculations reaching halfway or more across the elytron B8



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

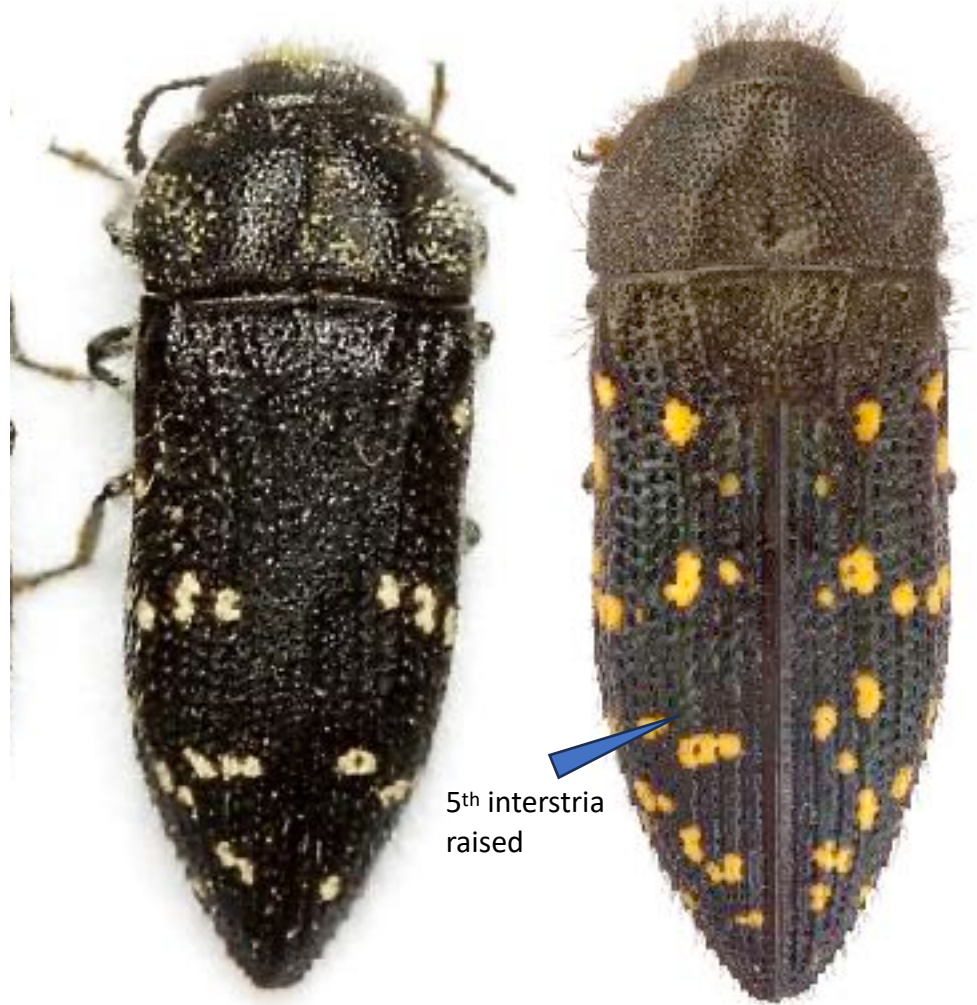
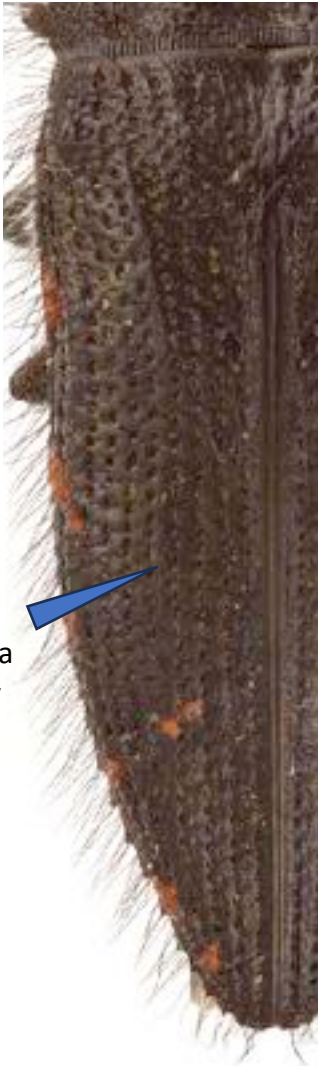


B6(B5)

Raised portion of 5th interstriae not reaching half length of elytra B7

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

5th interstria
flat apically



5th interstria
raised

Acmaeodera ornatoides

B7(B6)

Pronotum wider than base of elytra; pronotum widest anterior to base B10

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. ***A. rubronotata*** Laporte and Gory



Acmaeodera rubronotata

B8(B5): Part 1 of 4



From markings reaching halfway or more across elytral disk

Middle band strongly oblique

Apical maculation does not touch margin

Middle band not clearly oblique



Go to B12



Acmaeodera wenzeli

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

Medial band narrow and irregular or broken into spots or absent.



Acmaeodera angelica (in part)

Apical maculation touches margin

Pronotum widest at middle



Distinct serrations along entire posterior margin of elytra starting at middle



Acmaeodera simulata

Pronotum widest at base

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

Serrations limited to apical 1/4



Acmaeodera knullorum



Acmaeodera nelsoni

Apical markings closer to apex than subapical spot



Acmaeodera constrictinotum

5.8-9mm.
Hosts: *Ceanothus* spp.,
Quercus spp. and
Toxicodendrum californicum.
AZ, CA, NV, OR, UT and
MX

B8(B5): 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

B8(B5): 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)



B8(B5): Part 4 of 4



Range: CA
Host: unknown

Acmaeodera nelsoni Barr

Range: CA and NV
Host: unknown



Acmaeodera constrictinotum
Westcott and Nelson

B9(B2) Apically red: Part 1 of 2

At least one pair maculations
band-like; femoral setae longer

Maculations are not
bands; femoral setae
shorter than femoral
width

3 pairs of markings

2 pairs of
markings



***Acmaeodera bivulnera* Horn**

Size: 6.2-7.5mm

Range: AZ, CA, NM and MX

Host: *Krameria grayi*



***Acmaeodera mariposa dohrni* Horn**

Range: CA

Host: unknown



***Acmaeodera mariposa mariposa* Horn**

Size: 6.7-9.8mm

Range: CA, OR

Hosts: *Ceanothus* spp., *Cercis occidentalis*, *Cercocarpus* spp., *Heteromelas arbutifolia*, *Rhamnus californica*, and *Toxicodendron diversilobum*

B9(B2) Apically red: Part 2 of 2



Acmaeodera mariposa mariposa



Acmaeodera mariposa dohrni



Acmaeodera bivulnera

B10(B7)



Elytral setae mixture of pale and dark setae B11

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



Example: *Acmaeodera nexa*



Acmaeodera vandykei

B11(B10)

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

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



Acmaeodera plagiaticauda



Acmaeodera nexa

B12(B8): Part 1 of 3

Middle band strongly oblique



Acmaeodera ceanothae

Range: AZ

Host: unknown

Setae short.



Setae long.



Pronotal punctures large, touching or almost touching.



Acmaeodera tenebricosa

Range: AZ

Host: *Fremontodendron californicum*

Pronotal punctures small, one or more diameters apart.



Acmaeodera angelica (in part)

5.8-9mm.

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

AZ, CA, NV, OR, UT and MX

B12(B8): 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**

B12(B8): Part 3 of 3



Acmaeodera tenebricosa Fall

Range: AZ

Host: *Fremontodendron californicum*



Acmaeodera ceanothae Nelson

Range: AZ

Host: unknown

C1(14)

Not cribrate..... C2

Pronotal punctures cribrate (on disk) or with less than half a puncture diameter separating them P1



Cribrate



Near cribrate



“Normal” punctures



C2(C1)

If elongate then without 2 subbasal pale spots and at 4 lateral bands largely connected laterally; more like *Acmaeodera* than a yellow jacket abdomen C3

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. ***A. solitaria*** Kerr

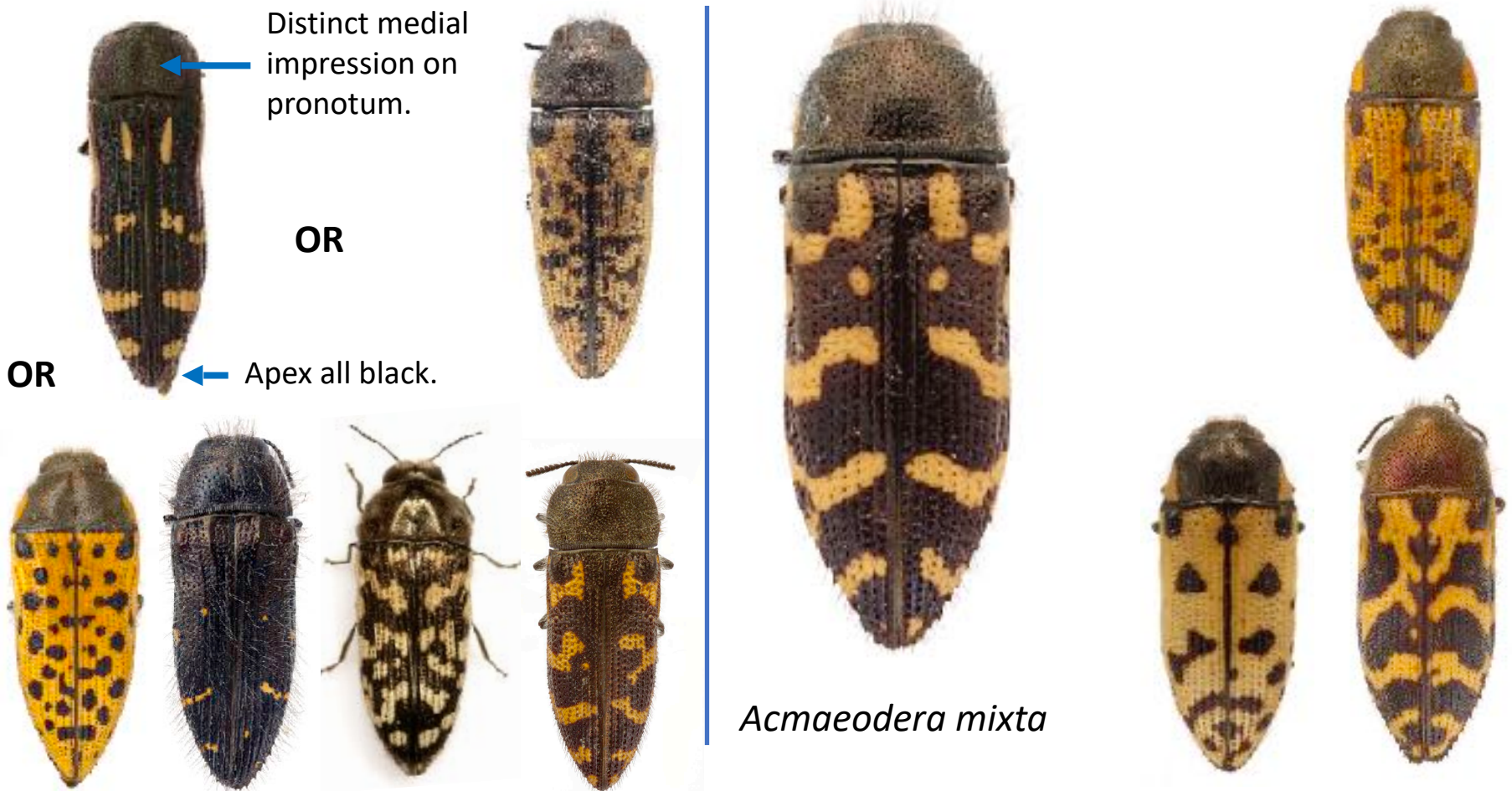


Acmaeodera solitaria

C3(C2): Part 1 of 2

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. C4

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; 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. ***A. mixta*** Horn (in part)



C3(C2): Part 2 of 2

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) C4

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; 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. **A. mixta** Horn (in part)



Subapical
plate absent.

OR

Lateral margin rounded



Subapical plate



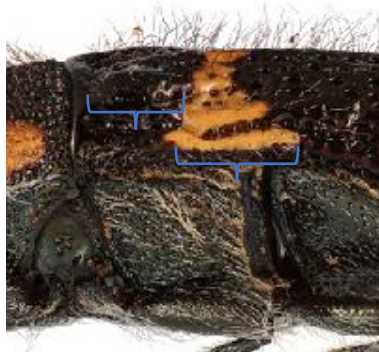
Pronotal
margin sharp



C4(C3) part 1 of 2

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) C5

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* ***A. immaculata*** Horn (in part)

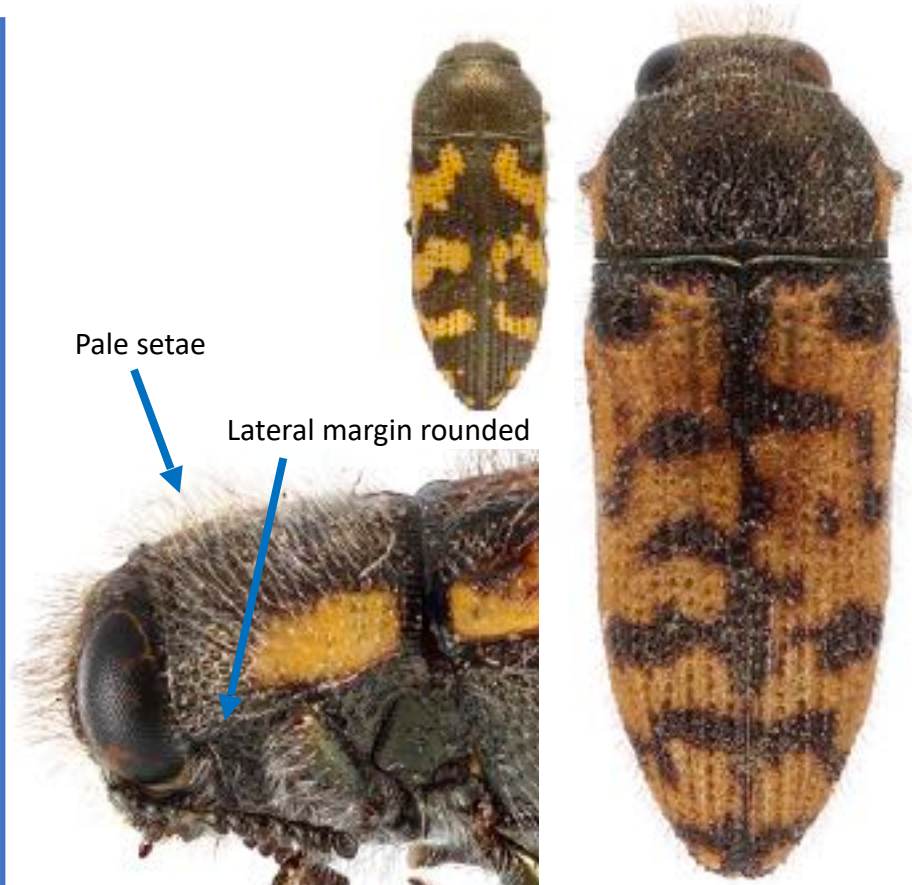


Dark setae

Lateral margin sharp carina



Example: *Acmaeodera bowditchi*



Pale setae

Lateral margin rounded

Acmaeodera immaculata

C4(C3) part 2 of 2

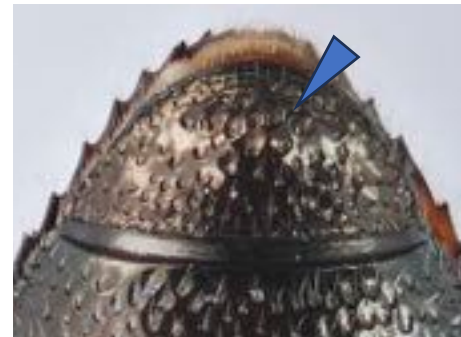
Pronotal margin carinate OR pronotal spot absent OR elytral setae dark OR subapical plate absent OR humeral maculation 1.5x or less umbone length (ignore this character if immaculate) C5

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* ***A. immaculata*** Horn (in part)



Example: *A. audreyae*

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



Acmaeodera immaculata

C5(C4)

Elytral base color pale L1



Elytral base color dark or approximately 50/50 light and dark C6



C6(C5)

Alternate interstriae distinctly raised for at least $\frac{1}{4}$ of their length (at least starting at the base of interstria 3) C7

Interstriae more or less at the same level or only a few distinctly raised C9



Alternate interstriae raised



Only some interstriae raised

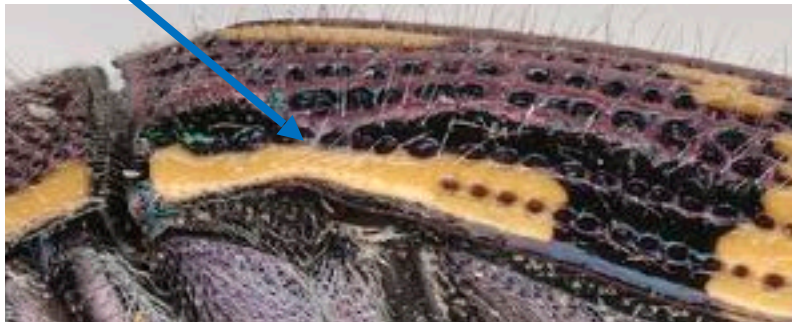
C7(C6)

Alternate interstriae distinctly raised for entire length. Interstriae 9 and 11 touch or divided by a narrow line near umbone.... C8

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. *Acmaeodera audreyae* Westcott and Barr



9 and 11 divided
by a narrow line.



Acmaeodera audreyae

C8(C7)

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

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



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

Acmaeodera comata LeConte



Range: CA and MX
Host: unknown

Acmaeodera alacris Horn

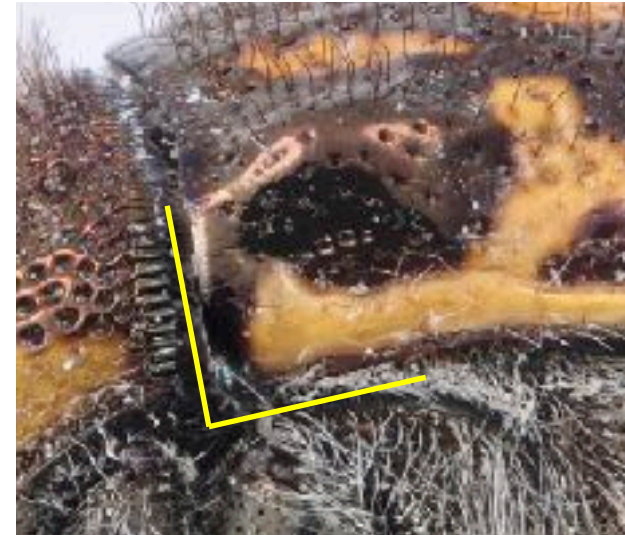
C9(C6)



Base of lateral humerus directed anteriorly and acute (from Barr); subapical plate present. D1



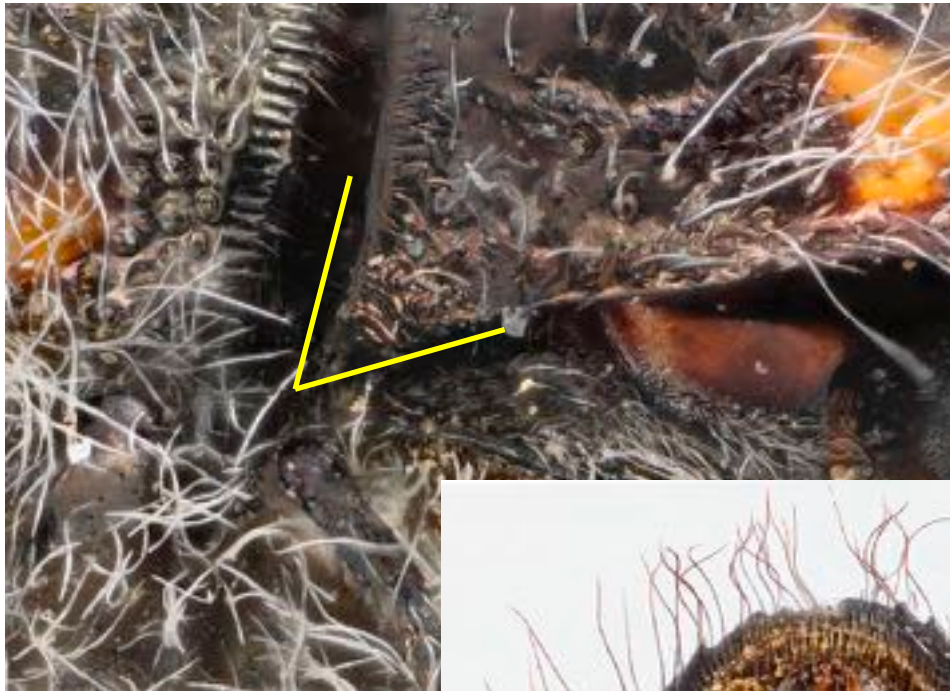
Base of lateral humerus typical, obtuse; subapical plate present or absent. C10



Example: *A. pulchella*: subapical plate present



A. neglecta subapical plate absent



Example: *A. mojavei*



C10(C9)

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. C11

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 N1



C11(C10) part 1 of 2

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 C12

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

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* ***A. pulchella*** (Herbst)

Medial band and lateral band the same color or intensity.



Medial band darker or more faint than lateral band.

Lateral band



Acmaeodera pulchella

C11(C10) part 2 of 2

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 C12

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

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* ***A. pulchella*** (Herbst)



Example: *A. scalaris*



Acmaeodera pulchella

C12(C11)

Basal bands not symmetrical and perpendicular to lateral margin or with basal spots; lateral pronotal impressions shallow, OR pronotal margin not carinate C13

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); pronotal sulcus present but feeble; 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* ***A. bowditchi*** Fall (in part)



Acmaeodera bowditchi

C13(C12) part 1 of 2

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 C14

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. **A. texana** LeConte



Acmaeodera texana

C13(C12) part 2 of 2

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 C14

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. **A. texana** LeConte



Example: *A. retifera*



Acmaeodera texana

C14(C13)

Mid and subapical bands large and extend from margin (or at least appear to from dorsal view) W1



Other maculations C15



C15(C14)

With elongate basal maculation near suture. May be irregular, but not connected to others Laterally (at least in basal 3rd). ... S1



No elongate basal maculations or if present, attached to other basal maculations C16



C16(C15)

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

To T1

Small, denser spots.



To Q1



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



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

To C17



To M1

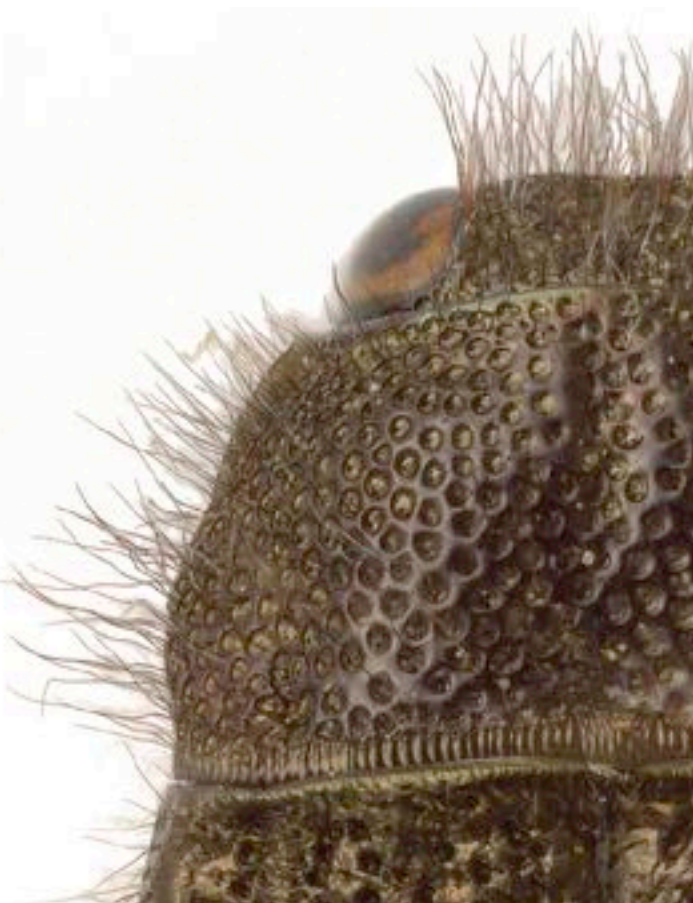
Large, interconnected, irregular maculations.



C17(C16)

Pronotal medial impression either absent, weak or interrupted medially, if medial impression present then not brassy; pronotal punctures not creating rows of ridges. C18

Pronotum 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. ***A. retifera*** LeConte



Areas between punctures connect to form lines



Acmaeodera retifera

C18(C17)

Dorsally clothed with long, white, recumbent setae, apex of setae contacting dorsum C19

Dorsally clothed with short or long setae of various colors, apex of setae freestanding, not contacting dorsum C20



Example: *A. pinalorum*



Example: *A. dolorosa*

C19(C18)

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

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



Acmaeodera uvaldensis



Acmaeodera pinalorum

C20(C18)

Last abdominal segment as long or longer than wide with strong lateral carinae bent ventrally C21

Last abdominal segment variable but if longer than wide, lateral carinae not distinctly carinate and bent ventrally ... C22



Narrow edge turned ventrally



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

C21(C20)

Substantial bold markings reaching medially from lateral margin. Host: *Quercus berberidifolia*. CA **A. 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. **A. dolorosa** Fall



Acmaeodera linsleyi



Acmaeodera dolorosa

C22(C20)

If present, lateral pronotal impressions deep only at base, Pronotal punctures variable. C23

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. ***A. lupinae*** Nelson



Acmaeodera lupinae

C23(C22)

Pronotum with yellow spot laterally or immaculate; elytra with yellow or red maculations C24

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



Acmaeodera xanthosticta

C24(C23)

Femora with setae straight and flattened in shape, equal to or shorter than width of femur F1



Femora with setae often sinuous or curved and not flattened in shape, usually longer than width of femur C25
(Hansen 2024)



Example: *A. neglecta*

Example: *A. gillespiensis*



C25(C24)

Elytral setae short, about 2 stria and interstrial widths and narrower than half the eye width; large pronotal spot usually longer than wide.C26

Elytral setae longer than 2 stria and interstriae and longer than $\frac{1}{2}$ eye width; pronotal spot variable C27



C26(C25)

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. ***A. 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
..... ***A. gillespiensis*** Knull



Acmaeodera obtusa



Acmaeodera gillespiensis

C27(C25)

Ventral pubescence typically pale; if dark then apical ventrite narrowly rounded C28

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 ***A. idahoensis*** Barr (in part)



Acmaeodera idahoensis

C28(C27)

Pronotum black (sometimes with bluish reflections) C29

Pronotum dark bronzed to brassy C44

(Hansen 2024)



C29(C28) part 1 of 2

Ventral setae pale or dark, if pale not obscuring surface; prosternal lobe not trisinate..... C30

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



Acmaeodera pubiventris pubiventris

C29(C28) part 2 of 2

Ventral setae pale or dark, if pale not obscuring surface; prosternal lobe not trisinuate..... C30

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. **A. *pubiventris pubiventris*** Horn



Acmaeodera pubiventris pubiventris

C30(C29)

Apex of elytra more or less evenly rounded and sutural area not notably raised, elytral setae mix of light and dark or all dark C31

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



Acmaeodera panamintensis

C31(C30)

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

..... C32

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 ***A. bishopiana*** Fall (in part)



Acmaeodera bishopiana

C32(C31)

Pronotum moderately to deeply depressed basomedially. C33

Pronotum lightly depressed or uniformly convex basomedially C43

(Hansen 2024)



Example: *A. depressa*



Example: *A. verityi*

C33(C32)

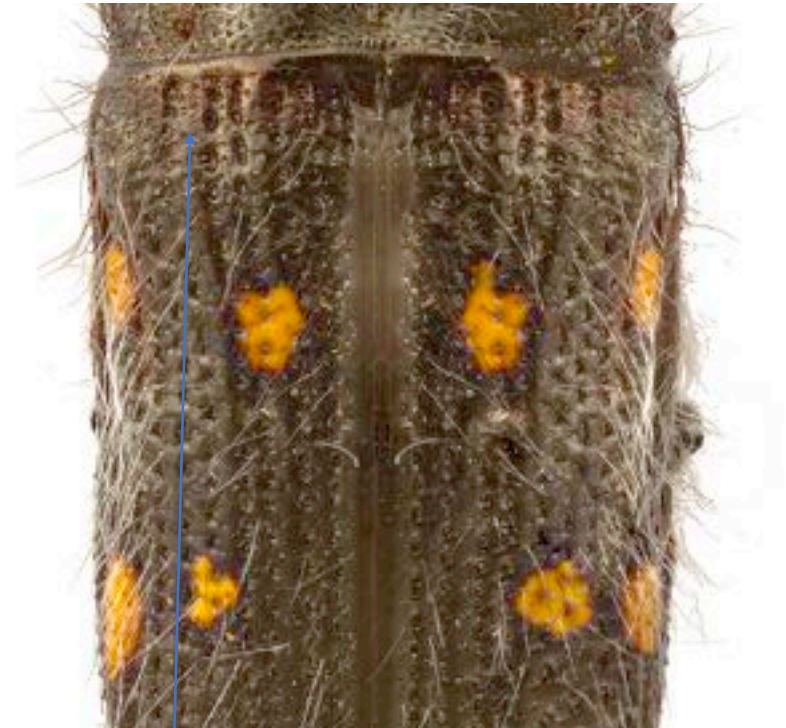
Elytra with blue sheen (usually best observed near humeral angles) C34

Elytra black C36



Blue sheen

Example: *Acmaeodera depressa*



Blue sheen absent, although base does appear brassy

Example: *Acmaeodera inopinata*

C34(C33)

Medial impression well developed, reaching to or near anterior border. C35

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



Acmaeodera depressa

C35(C34)

Pronotal setae long, as long as eye width; pronotal margin rounded; elytral pattern other. C42



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

(Hansen 2023)



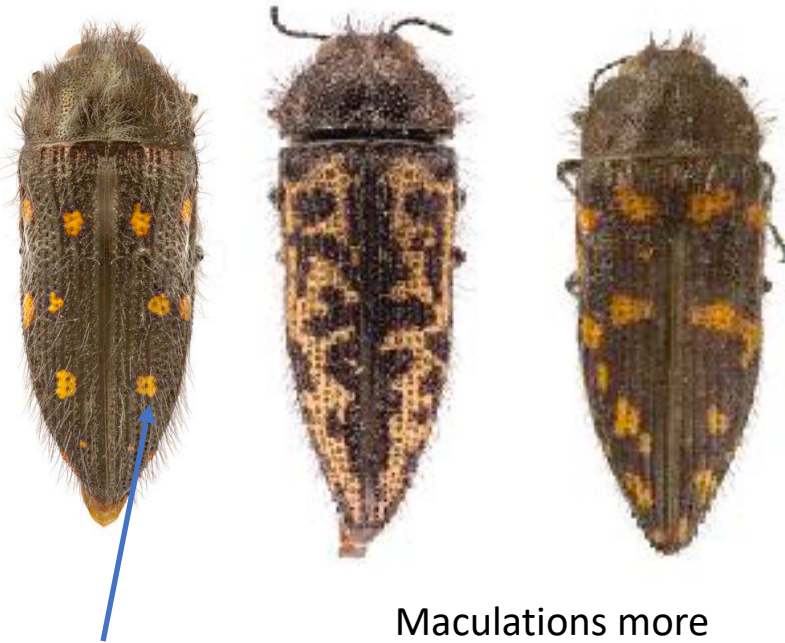
Acmaeodera delumbis



C36(C33)

Maculations irregular and extensive, if not extensive then longitudinal and aligned C37

Maculations simple and extending from margins or unaligned spots C39 



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

C37(C36)

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

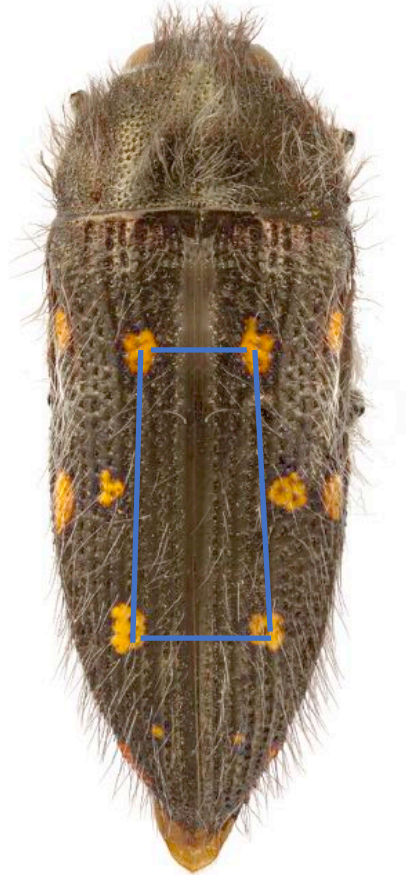
..... C38

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.

..... ***A. inopinata*** Barr (in part)



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



Acmaeodera inopinata

C38(C37)

*Difficult species to differentiate!!!

Upper head usually flat or convex; body more acute; flatter species; adult hosts variable but uncommonly lupine ... C45



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. ***A. lupinae*** Nelson



Posterior
margins of
elytra straighter
and appear
more acute.



Posterior
margins of
elytra curved
and appear
more obtuse.

Acmaeodera lupinae

C39(C36)

Maculations mostly as small spots, median band weakly connected if presentC40

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



Acmaeodera vernalis

C40(C39)

Medial impression well developed, reaching to or near anterior border. C41

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



Acmaeodera depressa

C41(C40)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... ***A. 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 ***A. ornata*** (Fabricius) (in part)
(Hansen 2024)



Acmaeodera ornatoides



Spot short and straight.



Spot long and curved.



Acmaeodera ornata

C42(C35)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... ***A. 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 ***A. ornata*** (Fabricius) (in part)
(Hansen 2023)



Acmaeodera ornatoides



Spot short and straight.



Spot long and curved.



Acmaeodera ornata

C43(C42)

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

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



Acmaeodera pletura



Acmaeodera verityi

C44(C28)

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

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



Acmaeodera bowditchi



Acmaeodera consors

C45(C38)

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



Acmaeodera cuneata



Acmaeodera acuta

D1(C9)

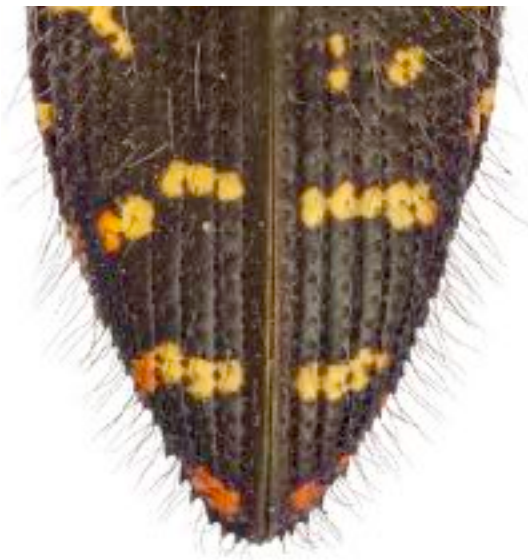


Subapical plate large, mostly mirroring apical margin; interstriae variable. D2

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



Example: *A. rubronotata*



Acmaeodera mojavei



D2(D1)

Short, reclining elytral setae; interstriae variable. D3

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 ***A. rubronotata*** Laporte and Gory



Acmaeodera rubronotata

D3(D2)

Elytral setae short, length up to width of a stria and interstria. D4

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. **A. *bacchariphaga*** Westcott and Verity (in part)



Acmaeodera bacchariphaga

D4(D3) 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. ***A. 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 ***A. gibbula*** LeConte (in part)



Setae crossing
impunctate margin.

Acmaeodera delumbis



Setae not completely crossing
impunctate margin.

Acmaeodera gibbula

D4(D3) 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. ***A. 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 ***A. gibbula*** LeConte (in part)



Acmaeodera delumbis



Acmaeodera gibbula

E1(9)



Pronotum with lateral spots; black or bronzed dorsally E2

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



Acmaeodera flavopicta

E2(E1)

Not 4 elytral bands or if in 4 rows, then at least some diminished to spots; pronotal spots typically elongate and parallel to margin E3

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



Acmaeodera macra

E3(E2)

Maculations variable, but not typically three pale bands E4

Maculations of 3 strong bands reaching toward the suture..... E16



E4(E3)

- With basal 2/3 of disk immaculate with lateral bands and apical bands E5
With some maculations within basal 2/3 E6



Disk without
markings in
basal 2/3

Markings on
disk in basal
half



E5(E4)

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. ***A. flavomarginata*** (Gray)

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



Acmaeodera flavomarginata



Acmaeodera chiracahuae

E6(E4)



With lateral pronotal markings E7

Without lateral pronotal markings E13



E7(E6)

Maculations elaborate and distinctive; pronotal spots large and distinct E8

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



Acmaeodera knowltoni

E8(E7)

With red markings E9

Without red markings E11



E9(E8)

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; E10

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. ***A. amabilis*** Horn



Lateral band broken



Both apical bands always with red

Example: *Acmaeodera opacula*



Lateral band intact until at least half elytral length



Salvador Whitman, Ph.D.



Acmaeodera amabilis

E10(E9) part 1 of 2

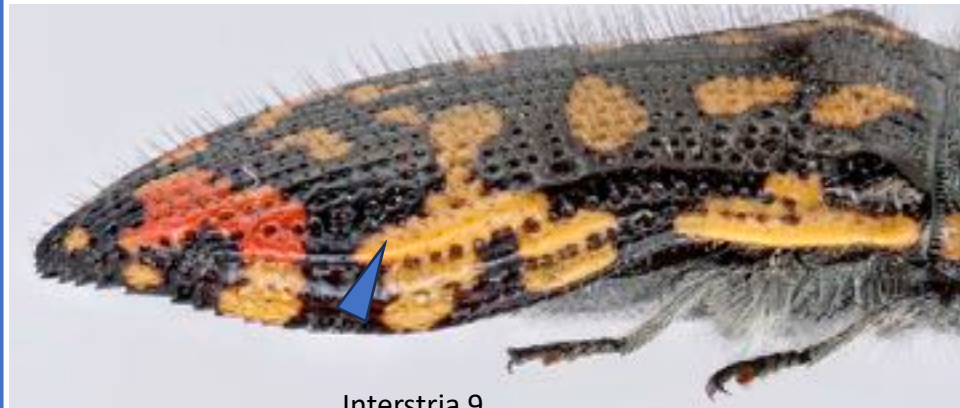
9th interstria only somewhat larger than 8 and 10 behind middle. 9-12mm. Host: *Fouguieria splendens*. AZ, NM and TX.
..... ***A. opacula*** LeConte (= *disjuncta*)

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

E10(E9) part 2 of 2

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

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



Acmaeodera opacula



Acmaeodera paradisjuncta

E11(E8)



Elytra with basomedial longitudinal bands E12

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



Longitudinal
basal band



Acmaeodera reflexa

E12(E11)

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 *A. scalaris* Mannerheim

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



Acmaeodera scalaris



Acmaeodera amplicollis

E13(E6)



Apical plate absent E14

Apical plate present E15



Example: *A. errans*

E14(E13)

Elytral pattern consistent, four pairs of maculations, the medial and postmedial largest and extending towards disk. 6.5-11mm.

Host: unknown. CA. *A. prorsa* Fall

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



Medial and
postmedial
larger

Acmaeodera prorsa



Acmaeodera errans

E15(E13)



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



Acmaeodera condita



Acmaeodera knowltoni



E16(E3)



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

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

F1(C24)



7th stria split near umbone or independent (0–5 punctures) F2

7th stria split within basal third (≥ 6 punctures) F3
(Hansen 2023)



Example: *A. neglecta*



Example: *A. natlovei*

F2(F1)

Elytra clothed with wide setae, 3.0–5.5mm. Hosts: *Karwinskia humboldtiana* and *Parkinsonia texana*. TX.....
 ***A. opuntiae*** Knull (in part)

Elytra clothed with narrow setae, 3.0–7.5mm. Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK,
 NM and TX ***A. neglecta*** Fall (in part)
 (Hansen 2023)



Acmaeodera opuntiae



Acmaeodera neglecta

F3(F1)



Each elytron with vittae or larger irregular yellow markings or fewer and larger yellow spots F4

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 **A. tubulus** (Fabricius) (Hansen 2023)



Acmaeodera tubulus

F4(F3) part 1 of 2

Pronotum black; clypeal notch variable F5

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



Example: *Acmaeodera natlovei*



Acmaeodera neoneglecta

F4(F3) part 2 of 2

Pronotum black; clypeal notch variable F5

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



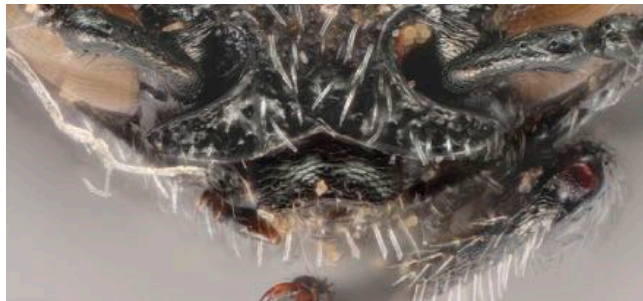
Acmaeodera neoneglecta



F5(F4) part 1 of 2

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

Clypeus emarginate (=rounded; some specimens angulate, see image below!); rarely with maculations in apical third combined into elongate maculation except when striped. 5.7-7.6mm. AZ, NM, OK, TX. Hosts: *Celtis laevigata*, *Juglans* spp., and *Ulmus crassifolia* **A. conoidea** Fall (Hansen 2023)



Specimen above angulate, typical form with rounded clypeal margin.

F5(F4) part 2 of 2

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

Clypeus emarginate (=rounded; some specimens angulate, see image below!); rarely with maculations in apical third combined into elongate maculation except when striped. 5.7-7.6mm. AZ, NM, OK, TX. Hosts: *Celtis laevigata*, *Juglans* spp., and *Ulmus crassifolia* **A. conoidea** Fall
(Hansen 2023)



Acmaeodera natlovei



Acmaeodera conoidea

L1(C5)



Dark areas black or dark brown L2

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



Acmaeodera auritincta

L2(L1)

Maculations more or less over entire surface L3

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. ***A. mixta*** Horn (in part)



Acmaeodera mixta

L3(L2)

With many maculations that are about as long as wide, usually with large pale spots on lateral pronotum L4

Few or no maculations as long as wide; usually without pale spots on lateral pronotum L9



Example: *Acmaeodera maculifera*



Example: *Acmaeodera decipiens*



L4(L3)

If pronotum wider than elytra, corners not distinctly prominent L5

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



Acmaeodera maculifera

L5(L4) part 1 of 2

Lateral margin of pronotum raised but dorsal and ventral surfaces not parallel; pronotum subparallel to narrower than elytral base L6

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



Example: *A. scalaris*



Acmaeodera decipiens

L5(L4) part 2 of 2

Lateral margin of pronotum raised but dorsal and ventral surfaces not parallel; pronotum subparallel to narrower than elytral base L6

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



Acmaeodera decipiens

L6(L5) part 1 of 2

Base of pronotum not distinctly impressed although it may be flattened; base of interstriae not notably raised; L7

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



Example: *A. variegata*



Bases of interstriae 3 and 7 distinctly raised



Acmaeodera princeps

L6(L5) part 2 of 2

Base of pronotum not distinctly impressed although it may be flattened; base of interstriae not notably raised L7

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



Example: *A. variegata*



Acmaeodera princeps



L7(L6)

Base of pronotum with punctures at least 1/2 diameter apart L8

Base of pronotum with punctures Less than 1/2 diameter apart. 7.75-10mm. Host: unknown. AZ, CO, NM and TX.

.....***A. variegata*** LeConte (in part)



Acmaeodera variegata

L8(L7)

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* ***A. 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. ***A. mixta*** Horn (in part)



Acmaeodera immaculata



Acmaeodera mixta

L9(L3)

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.

.....***A. tiquilia*** 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.

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



Acmaeodera tiquilia



Acmaeodera cribricollis

Large, irregular maculations

M1(C16) 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 M3



Maculations concentrated basally.
Longer with straighter sides.



Acmaeodera connexa

7.5-12mm

Host: *Quercus* spp.

Range: CA, NV, OR and WA

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



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

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



Acmaeodera labyrinthica

6.1-10.5mm

Host: *Quercus garryana* and
Umbellularia californica

Range: AZ, CA, NV, OR and UT

Lateral pronotal maculation absent

Lateral pronotal maculation present

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

Acmaeodera connexa

Go to M2





Acmaeodera connexa LeConte



7.5-12mm

Host: *Quercus* spp.

Range: CA, NV, OR and WA



Acmaeodera labrynthica Fall

6.1-10.5mm

Host: *Quercus garryana* and *Umbellularia californica*

Range: AZ, CA, NV, OR and UT

M2(M1) part 1 of 4

Pronotum with curved lateral margins;
head as wide as elytron

Pronotum wider than elytral base



Pronotum equal to or narrower than elytra



Go to M4



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



Acmaeodera gillespiensis

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. AZ,

Range: 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

M2(M1) part 1 of 4



Acmaeodera gillespiensis Knull

7-10mm

Host: *Quercus* spp.

Range: TX

M2(M1) part 1 of 4



Acmaeodera lupinae Nelson

Host: unknown
CA, CO, NV and UT

M2(M1) part 1 of 4



Acmaeodera variegata LeConte

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

Pronotum not widest at base or without pronotal

M3(M1) part 1 of 4



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

(forms w/o pronotal spots- no image available)

Host: unknown

CA, CO, NV and UT

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



Acmaeodera carlota

Host: unknown

Range: AZ

M3(M1) part 2 of 4



Acmaeodera carlota Fall

Host: unknown
Range: AZ

M3(M1) part 3 of 4



Acmaeodera lupinae Nelson

Host: unknown
CA, CO, NV and UT

M3(M1) part 4 of 4



Acmaeodera parkeri Cazier

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX

M4(M2) part 1 of 6



Pronotum equal to or narrower than elytra

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

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



Acmaeodera diffusa
Host: unknown
Range: NM, NV and UT

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

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

M4(M2) part 2 of 6



Acmaeodera diffusa Barr

Host: unknown

Range: NM, NV and UT

M4(M2) part 3 of 6



Acmaeodera hepburnii LeConte

6-12mm

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

Range: CA, OR and MX

M4(M2) part 4 of 6



Acmaeodera mixta Horn

6.5-13mm

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

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

M4(M2) part 5 of 6



Acmaeodera nevadica Barr

Host: unknown

Range: CA and NV

M4(M2) part 6 of 6



Acmaeodera wickenburgana Knull

Host: unknown

Range: AZ and MX

N1(C10)



Elytral setae mixed dark and white N2

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

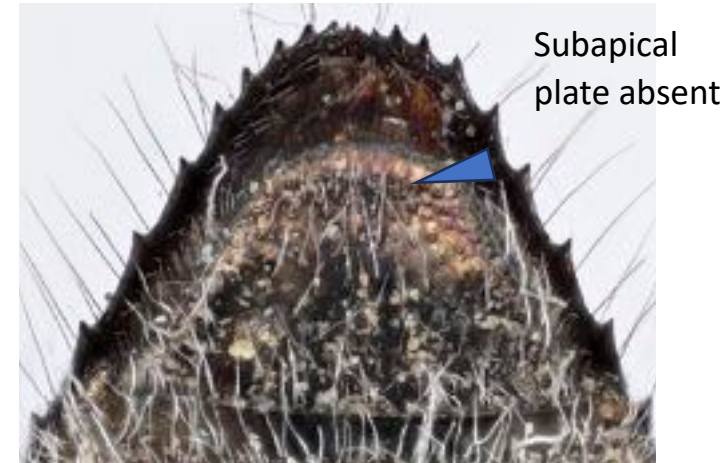
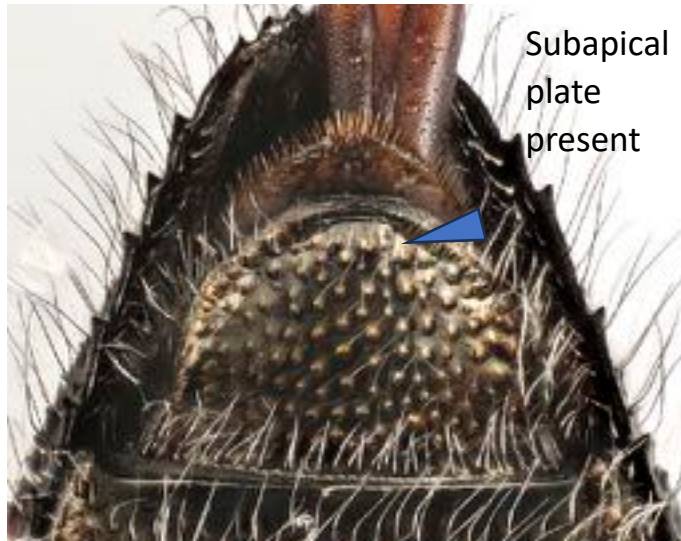


Acmaeodera vandykei

N2(N1) part 1 of 2

Subapical plate present; Pronotal punctures at least $\frac{1}{2}$ diameter apart; 9 and 11 variable, N3

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



Acmaeodera tenebricosa

N2(N1) part 2 of 2

Subapical plate present; Pronotal punctures at least $\frac{1}{2}$ diameter apart; base of interstria 9 and 11 variable, N3

Subapical plate absent; Pronotum with large, confluent punctures; base of interstria 9 and 11 joined,. Host: *Fremontodendron californicum*. CA. **A. 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



N3(N2)

Apical abdominal segment margins mostly in the same plane as the disk; pronotal punctures at least 2 diameters apart..... N4

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. ***A. dolorosa*** Fall (in part)



Example: *A. rubronotata*



Acmaeodera dolorosa

N4(N3)

Subapical plate smaller or differently shaped, although it may be undercut N5

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 ***A. rubronotata*** Laporte and Gory



Acmaeodera rubronotata

N5(N4) 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 N6

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* **A. nexa** Fall



Example: *A. angelica*



Acmaeodera nexa



N5(N4) 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 N6

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* **A. nexa** Fall



Example: *A. angelica*



Acmaeodera nexa

N5(N4) 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 N6

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* **A. nexa** Fall



Example: *A. inopinata*



Example: *A. angelica*



Acmaeodera nexa

N6(N5) part 1 of 2

Interstria 5 wider and more convex for at least half its length; maculations thicker and more distinct
..... ***A. 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.....
..... ***A. angelica*** Fall (in part)



Acmaeodera inopinata



Acmaeodera angelica

N6(N5) part 2 of 2

Interstria 5 wider and more convex for at least half its length; maculations thicker and more distinct
..... ***A. 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..... ***A. angelica*** Fall (in part)



Acmaeodera inopinata



Acmaeodera angelica

P1 (C1)

Lateral pronotal spots absent or small. P2

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

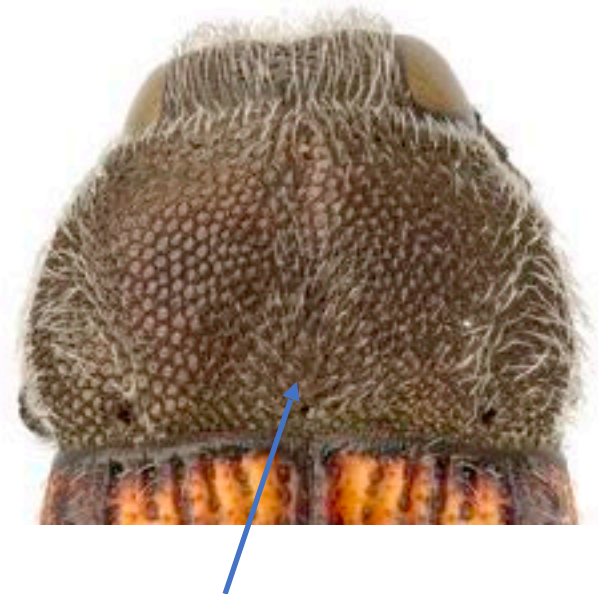


Acmaeodera marginotata

P2 (P1)

Median impression absent. P3

Median impression present P4



P3(P2)

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

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



Acmaeodera tenebricosa



Acmaeodera carlota



P4(P2)



Edges of elytral maculations well defined. P5

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



Acmaeodera cribricollis

P5(P4)

Setae long (forms without cribrate punctures treated elsewhere) P6

Setae on elytra and pronotum short. 4.8-7.1. Host: unknown. TX and MX. ***A. tildenorum*** Nelson and Westcott



Long setae



Short setae



Acmaeodera tildenorum

P6(P5)

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

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

..... ***A. retifera*** LeConte (in part)



Acmaeodera diffusa



Acmaeodera retifera

Large medial spots in a row.

Q1(C16) part 1 of 3

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 elytra (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



Acmaeodera wheeleri

Host: *Celtis ehrenbergia*
Range: AZ and MX

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.

Pale lateral pronotal markings not visible from dorsal view.

Go to Q2

Pale lateral pronotal markings visible from dorsal view.



Acmaeodera serena

9-9.5mm

Host: unknown
Range: AZ, CA and MX

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



Acmaeodera xanthosticta

Host: unknown
Range: FL

Q1(C16) 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

Q1(C16) part 3 of 3



Acmaeodera wheeleri Van Dyke

Host: *Celtis ehrenbergia*

Range: AZ and MX



Acmaeodera xanthosticta Laporte and Gory

Host: unknown

Range: FL

Q2(Q1) part 1 of 4

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

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

With five rows of
spots; moderate in size

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 reticuloides

Host: unknown

Range: CA and MX

Q2(Q1) 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

Q2(Q1) part 3 of 4



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

Q2(Q1) part 4 of 4



Acmaeodera quadriseriata Fall

5.5-7mm

Host: unknown

Range: CA and MX



Acmaeodera recticollis Westcott

Host: unknown

Range: CA and MX

R1(14)

Background dark or 50/50R2

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



Acmaeodera tiquilia

R2(R1)

With no basal markings or nonlinear basal markings R3

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



Acmaeodera adenostomensis

R3(R2)

Maculations small and dense R4

Maculations may be small and sparse or large R6



R4(R3)

Red markings concentrated apically; apical margin of elytra curved, apex more broadly rounded R5

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



Acmaeodera griffithi

R5(R4)

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

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



Acmaeodera miliaris



Acmaeodera haemorrhoea

R6(R3)

With 3 red lateral markings along the length of elytra R7

With other than 3 red lateral markings or red markings apical R8



R7(R6)

Lateral elytra sinuate; markings largely irregular spots. 10-12mm. Hosts: *Acacia greggii*, *Cercidium floridum*, *Olneya tesota*, *Parkinsonia aculeata*, *Prosopis glandulosa*, and *Salix gooddingii*. AZ, CA, NM, TX, UT and MX **A. gibbula** LeConte (in part)

Lateral elytra not sinuate on apical 2/3; markings larger. 7.5-8.8mm. Hosts: *Purshia tridentata*. CA, ID, NV, OR and UT.

..... **A. purshiae** Fisher



Acmaeodera gibbula



Acmaeodera purshiae

R8(R6)



R8. Maculations not consisting of a row of spots down the middle of the elytra R9

With a row of spots down median elytra R15



R9. With lateral markings (extending from margin) narrow or small spots less than 2 interstitial widths R10

Lateral maculations wider than two interstriae R13



R10(R9)

Ventral setae single and long; femoral setae longer than femoral width R11

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



Example: *A. fenyesi*



Acmaeodera pinalorum



R11(R10) 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). R12

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. ***A. fenyesei*** Fall (in part)



Acmaeodera fenyesei

R11(R10) part 2 of 2

Ventral setae may be long and pale but not dense; maculations variable but usually with some bands; pronotum variable R12

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



Example: *A. angelica*



Acmaeodera fenyesi

R12(R11)

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. ***A. 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 ***A. angelica*** Fall (in part)



Acmaeodera dolorosa



Typical pronotal
shapes



Acmaeodera angelica

R13(R9)



Usually no brassy reflections (except *A. coquilletti*); sides of pronotum variable but if subparallel on basal third not with an abrupt angle R14

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



Acmaeodera plagiaticauda

R14(R13)

No baso-medial elytral spot R17



Baso-medial spot present R18



Baso-medial spot



R15(R8)



Pronotum widest basally, base of pronotum subequal to base of elytra. Setae long R16

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

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



Acmaeodera uvaldensis

R16(R15)

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 ***A. 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. ***A. recticollis*** Fall



Acmaeodera rubronotata



Acmaeodera recticollis

R17(R14)

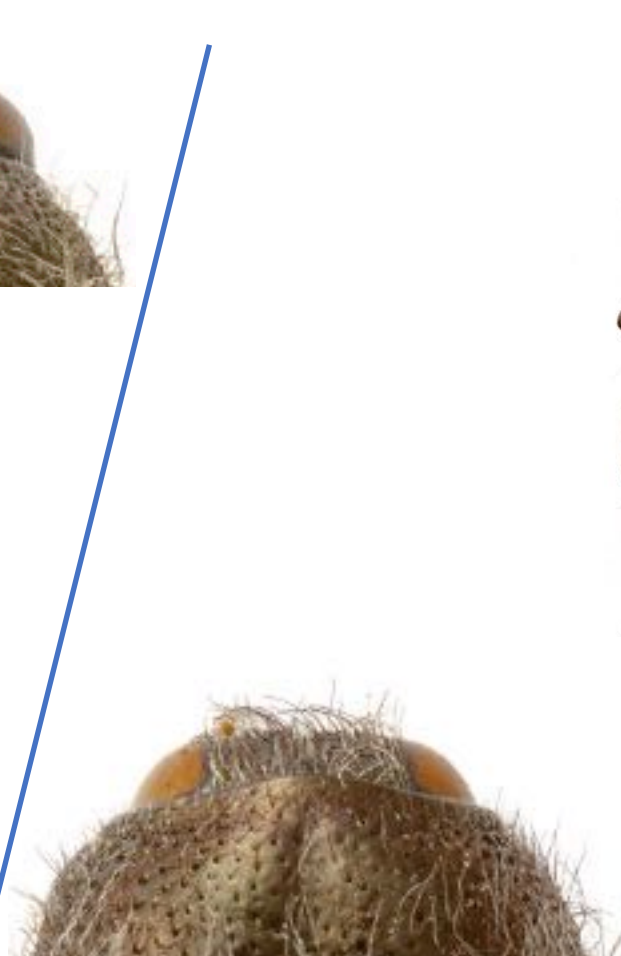


Setae on head and pronotum pale (some pale gray) and long; setae on frons able to reach the margin of the eye from almost the middle of the face. 7.5-8mm. Host: unknown. CA ***A. coquilletti*** Fall

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. ***A. knullorum*** Barr (in part)



Acmaeodera coquilletti



Acmaeodera knullorum

R18(R14)



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. ***A. jocosa*** Fall

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



Acmaeodera jocosa



Acmaeodera adenostomae

S1(C15)

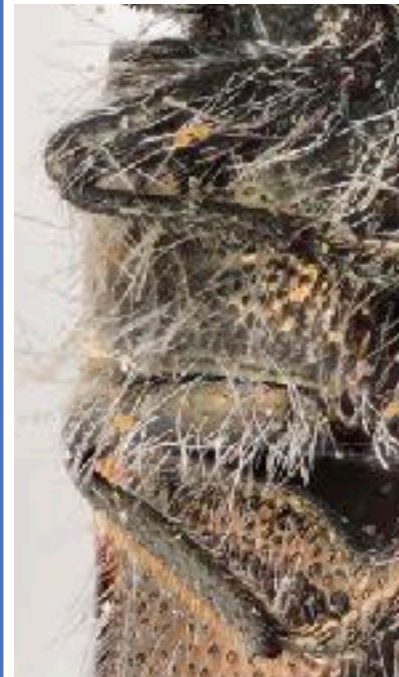


With long pale setae on elytra; femoral setae longer than width S2

If long setae present on elytra, then not all over or pale; setae on femora shorter than or equal to femoral width and flattened S4



Example: *A. mojavei*



Example: *A. sphaeralceae*



S2(S1)

Pronotum widest at base; striae punctures larger, at least 2x as large as interstriae punctures. Host: *Ephedra* spp ***A. pubiventris* ssp.** S3

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



Acmaeodera mojavei

S3(S2)

Body black with faint brassy reflections; lateral vittae entire to umbone; humeral spot present; 6.3-10mm; CA; larval host *Ephedra californium* ***A. 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. ***A. pubiventris lanata*** Horn (Westcott 1999)



Acmaeodera panocheae

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



Acmaeodera lanata

S4(S1)



If pale, setae not short and spiny; interstriae wider than striae S5

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..... **A. *opuntiae*** Knull



Acmaeodera opuntiae

S5(S4)

Dorsal seta not all white; pronotal setae variable S6

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



Acmaeodera vulturei

S6(S5)

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* ***A. pulchella*** (Herbst)

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



Mike Quinn, TexasEnto.net

Acmaeodera pulchella

Acmaeodera sphaeralceae

T1(C16) 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.



Acmaeodera griffithi

Host: unknown

Range: AZ

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



Acmaeodera miliaris

8-10.5mm

Host: unknown

Range: TX and MX

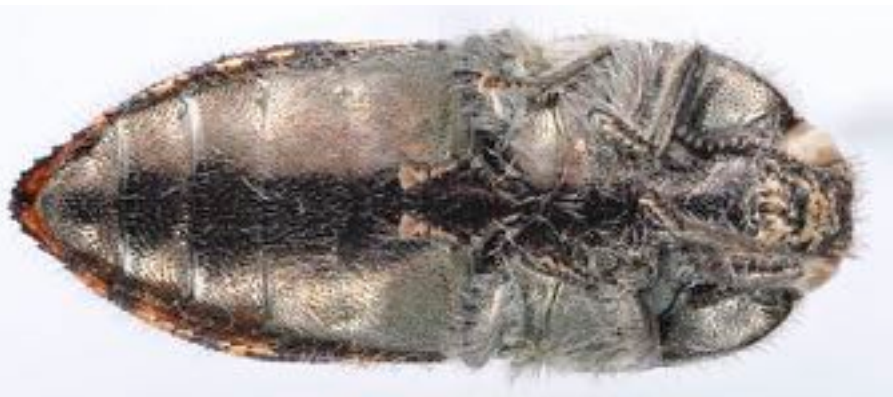
Legs and surface ventral meso and metasternal sclerites with moderately long hairs but they do not obscure the surface of the thorax.



Acmaeodera haemorrhhoa

Host: unknown.

Range: TX and MX



T1(C16) part 2 of 3



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

V1(7)



Elytra testaceous to black, red, yellow or orange, sometimes with metallic reflections V2

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



Acmaeodera resplendens

V2(V1)

Elytra almost entirely pale, immaculate and dark suture not spreading onto disk, may have dark umbones V3

Elytra with at least some significant dark maculations on elytral disk or entirely dark V5



V3(V2)

Elytral apical margin without red V4

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



Acmaeodera aurora

V4(V3) part 1 of 4

Elytral margin without red.

Large pale markings not visible dorsally on pronotum

Large pale markings on lateral pronotum visible dorsally (covering about $\frac{1}{2}$ distance between eye and base); Immaculate form



Setae long.



Acmaeodera pubiventris yumae

7.9-14.1mm

Host: *Ephedra trifurca*

Range: AZ, CA and MX

Setae short.



Pronotum black. Setae not obscuring surface.



Elytra subparallel for $\frac{2}{3}$. Elytral apex acute.



Acmaeodera starrae

(less common form)

Host: *Baccharis neglecta*

Range: TX

Pronotum with brassy reflections. Dense pale setae on pronotum.



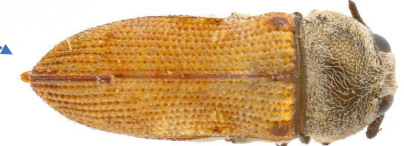
Acmaeodera immaculata

(in part)

4.7-10.5mm

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

Host: *Krascheninnikovia lanata*



Acmaeodera ephedrae

Host: *Palafoxia arida* and

Psorothamnus spp.

Range: AZ and CA

Elytra subparallel for $\frac{3}{4}$ length. Elytral apex rounded.



Acmaeodera navajo

3.8-6.5mm

Host: unknown

Range: AZ and UT

V4(V3) 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*

V4(V3) 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

V4(V3) part 4 of 4



Acmaeodera starrae Knull

(less common form)

Host: *Baccharis neglecta*

Range: TX

V5(V2)



At least one of first 5 characters does not match V6

Convex pronotum with no sign of medial impression (only 3 basal impressions present) and with large, uniseriate punctures laterally. Dorsal setae pale-clear and "stiff"; femoral setae shorter than femoral width. Interstriae 2-3x strial punctures. Pronotal margin visible entirely. No pronotal spot. Small (~5.5mm) Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX ***A. neoneglecta*** Fisher (in part)

Forms of *A. neoneglecta* keying here



Other forms keying elsewhere



V6(V5)

Elytral disk dark, immaculate V7

Elytral disk striped or with dark sutural stripe V9



V7(V6) part 1 of 4

From elytra disk dark

With maculations

Completely dark



To V8

Distinct pattern: Bold white/yellow maculations interconnected along margin



Acmaeodera horni

Host: *Quercus arizonicus*
Range: AZ

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



Maculations smaller and narrower, not as bold



Maculations pale yellow; dorsal surface black



Acmaeodera deviata

Host: *Juniperus californica*
Range: CA and MX

Short setae; lateral elytral markings single and red



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

V7(V6) 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

V7(V6) part 3 of 4



Acmaeodera deviata 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

From completely dark

V8(V7) part 1 of 4

Setae dark

Fuzzy, brown



Acmaeodera morbosa

Host: unknown

Range: CA

Setae pale

Setae long



Setae short and inconspicuous



Acmaeodera parkeri

4.5-7.5mm

Host: unknown

Range: AZ, NM, TX and MX

Body depressed, elytra looks typical;
elytral setae dense, twisted and almost
curly and very long, if straightened,
more than 1/2 the elytral width



Acmaeodera perlanosa

Host: unknown

Range: AZ and CA

Strongly convex, elytra look swollen;
elytral setae dense, straighter and shorter,
not more than 1/3 the elytral width



Acmaeodera curtilata

Host: unknown

Range: CA

Short setae, black



Acmaeodera bryanti

Host: unknown

Range: TX

V8(V7) part 2 of 4



Image by J. Hansen

Acmaeodera bryanti Van Dyke

Host: unknown

Range: TX



Acmaeodera curtilata Knull

Host: unknown

Range: CA

V8(V7) 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

V9(V6)



Elytral disk with dark sutural stripe; may have lateral, irregular dark maculations V10

Distinct dark sutural band bordered by uninterrupted (and fairly regular) pale bands V13



V10(V9)

Elytral disk with dark sutural stripe with irregular lateral dark maculations V11

Dark sutural stripe with mostly blank pale lateral areas V19



V11(V10)

Lateral elytra maculations not usually discrete spots, if present then only on one elytron, setae short and pale V12

With one or two distinct spots on the pale areas of each elytron; elytral setae long and dark V20



From Elytra widest at base,
weakly serrate apically

V12(V11) part 1 of 3

Lateral pronotal margin visible
dorsally for most of length.

Lateral pronotal margin
not visible dorsally.

Base of pale bands about as
wide as dark central area



Acmaeodera discalis

Host: unknown

Range: AZ

With small pronotal spot.



Acmaeodera raschkoi

4.2-5mm

Host: unknown

Range: NV

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

Pronotal spot absent.

Subapical plate present.



Acmaeodera ligulata

Host: *Quercus* spp.

Range: AZ, NM, NV and UT

Subapical plate absent
(species difficult to discern!).



Go to V21



V12(V11) part 2 of 3



Acmaeodera discalis Cazier

Host: unknown

Range: AZ



Acmaeodera ligulata Cazier

Host: *Quercus* spp.

Range: AZ, NM, NV and UT

V12(V11) 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



V13(V9)



With bands more or less regular; elytral setae variable V14

With irregular or disrupted bands and short, stiff, pale elytral and pronotal setae; femoral setae shorter or subequal to femoral width V18



V14(V13)

With lateral pale bands..... V15

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



Acmaeodera cazieri

V15(V14)

With short pale setae; femoral setae shorter than femoral width..... V16

With long setae; femoral setae longer V17



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

V16(V15)

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

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



Acmaeodera quadrivittatoides



Acmaeodera quadrivittata



With long setae

V17(V15) part 1 of 3



Long, mostly pale setae



Acmaeodera pubiventris lanata

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

6.3-12.6mm

Host: *Ephedra* spp.

Range: AZ, CA, NV, UT and MX

Long, mostly dark setae

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

V17(V15) part 2 of 3



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

V18(V13)



Elytra subparallel on basal 2/3, weakly serrate apically; when lateral pale bands present, not well-defined behind the umbone 3.0–7.5mm. Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK, NM and TX. **A. 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. **A. sabinae** Knull



Acmaeodera neglecta



Acmaeodera sabinae

V19(V10) part 1 of 3



Dark suture only

Short, pale setae on the elytra.

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

Long, dark and pale setae on the elytra.



Acmaeodera starrae

Host: *Baccharis neglecta*

Range: TX

Pale areas of elytra reddish

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

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



Acmaeodera robigo

Host: *Dalea formosa*

Range: OK and TX



Acmaeodera chuckbellamyi

Known from a single specimen.

Image from Macrae 2014.

Length: 7.15mm

Host: unknown

Range: AZ



*

Acmaeodera sinuata sinuata

Van Dyke

Host: unknown

Range: CA

*Image by Joshua Basham 2011

<https://bugguide.net/node/view/483552>

V19(V10) 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

V19(V10) part 3 of 3



Acmaeodera sinuata sinuata Van Dyke

Host: unknown

Range: CA



*



Acmaeodera starrae Knull

Host: *Baccharis neglecta*

Range: TX



V20(V10)



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

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



Acmaeodera riograndei



Acmaeodera latiflava latiflava

V21(V12)



7th stria split near umbone or independent (starts 0–5 punctures from umbone) V22

7th stria split within basal third (starts ≥ 6 punctures from umbone) V23
(Hansen 2023)



Example: *A. neglecta*



Example: *A. natlovei*

V22(V21)

Elytra clothed with wide setae, 3.0–5.5mm. Hosts: *Karwinskia humboldtiana* and *Parkinsonia texana*. TX.....
..... ***A. opuntiae*** Knull (in part)

Elytra clothed with narrow setae, 3.0–7.5mm. Hosts: *Quercus pungens*, *Ulmus crassifolia*, and *Ziziphus obtusifolia*. AR, MO, OK,
NM and TX ***A. neglecta*** Fall (in part)
(Hansen 2023)



Acmaeodera opuntiae



Acmaeodera neglecta

V23(V21)



Each elytron with vittae or larger irregular yellow markings or fewer and larger yellow spots V24

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 **A. tubulus** (Fabricius)
(Hansen 2023)



Acmaeodera tubulus

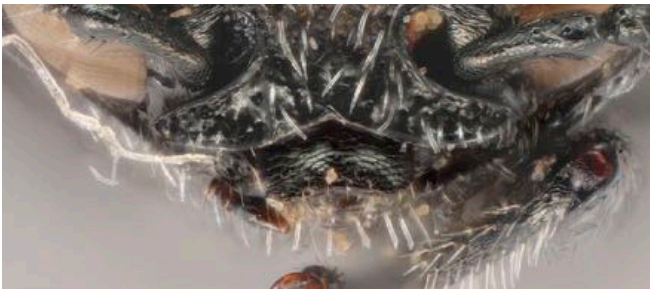
V24(V23)

Clypeus triangulate/angulate. V25

Clypeus emarginate (= round notch; angulate in some specimens!). 5.7-7.6mm. AZ, NM, TX. Hosts: *Celtis laevigata*, *Juglans* spp., and *Ulmus crassifolia* **A. conoidea** Fall
(Hansen 2023)



Example: *Acmaeodera neoneglecta*



Examples: *Acmaeodera natlovei*



Specimen above angulate, typical form with rounded clypeal margin.



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



Acmaeodera conoidea

V25(V24)

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. ***A. natlovei*** Hansen (in part)

Pronotum black bronze (often vague). Elytral markings extremely variable, sometimes with narrow irregular vittae, less commonly wide vittae, rarely immaculate. Hosts: *Acacia* spp., *Carya tomentosa*, *Ebenopsis ebano*, *Leucaena pulverulenta*, *Prosopis glandulosa*, *Sophora secundiflora*, and *Ulmus crassifolia*. TX and MX. ***A. neoneglecta*** Fisher (in part) (Hansen 2023)



Acmaeodera natlovei



Acmaeodera neoneglecta

Mid and preapical
bands large and
extend from margin

W1(C14) Part 1 of 6



Central basal elytral
spots present

No basal spots or irregular.



Go to **W2**

Preapical band distinctly red
near margin; large apical spot



Acmaeodera adenostomae

Host: unknown
Range: CA

basal elytral spots near/
almost touching margin

basal elytral spots set back from basal
margin by ½ their length or more



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

Central basal elytral spots and
variable irregular bands- usually
three; femoral setae longer



Acmaeodera vernalis Barr

Host: unknown
Range: CA and MX

Central basal elytral spots and
4 distinct bands; femoral
setae subequal to or shorter
than femoral width



Acmaeodera alicia

Host: *Acacia willardiana*
and *Cercidium floridum*
Range: AZ, CA and MX

W1(C14) Part 2 of 6



Acmaeodera adenostomae Cazier

Host: unknown

Range: CA

W1(C14) Part 3 of 6



Acmaeodera Alicia Fall

Host: *Acacia willardiana*
and *Cercidium floridum*
Range: AZ, CA and MX

W1(C14) Part 4 of 6



Acmaeodera pullata Cazier

Host: unknown
Range: CA

W1(C14) Part 5 of 6



Acmaeodera tuta Horn

6.9-9.5mm.

AZ, CA, NV and UT.

Host: *Psorothamnus schotti*

W1(C14) Part 6 of 6



Acmaeodera
vernalis Barr

Host: unknown
Range: CA and MX

W2(W1)

Elytral setae long, longer than width between rows. Moderate to large species W3

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



Acmaeodera yuccavora

W3(W2)

Elytra with at least some pale setae; subapical plate variable; Anterior margin of basal maculation not distinctly angled posteriorly from side W4

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



Acmaeodera alpina

W4(W3)

Basal elytra markings not symmetrical or reaching forward medially; lateral pronotal spot variable; pronotal setae with dark setae W5

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. ***A. convicta*** Fall



Acmaeodera convicta

W5(W4)

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

..... W6

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. ***A. linsleyi*** Van Dyke



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



Example: *A. obtusa*



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



Acmaeodera linsleyi

W6(W5)

Large punctures covering the entire surface of pronotum, often touching, but can be $\frac{1}{2}$ diameter apart; with 4 fasciae on elytra;
..... W7

Punctures either not large over entire surface or spaced more than $\frac{1}{2}$ diameter apart on pronotum; elytral maculations variable
..... W8



W7(W6)

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..... **A. 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 **A. idahoensis** Barr (in part)(uncommon form)



Acmaeodera diffusa



Acmaeodera idahoensis
(uncommon form)

W8(W6)



Pronotum bronzed or black W9

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. **A. obtusa** Horn (in part)

(Hansen 2023)



Acmaeodera obtusa

W9(W8)

Pronotum black W10

Pronotum dark bronzed to brassy W12

(Hansen 2023)



W10(W9)

Pronotum immaculate or with small yellow spot basolaterally; elytra with scattered yellow spots and/or irregular, thin, transverse bands W11

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



Acmaeodera robusta

W11(W10)

Posthumeral yellow spot attenuated, more or less straight; dorsum sometimes with blue reflections. Host: unknown. OK, TX, NM.
..... ***A. 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 ***A. ornata*** (Fabricius) (in part)
(Hansen 2023)



Acmaeodera ornatoides



Acmaeodera ornata

W12(W9)

Pronotum moderately to deeply depressed basomedially W13

Pronotum lightly depressed or uniformly convex basomedially W14
(Hansen 2023) 



W13(W12)

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

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



Acmaeodera bowditchi



Acmaeodera consors



W14(W12)

Pronotum shallowly, finely punctate W15

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



Acmaeodera variegata

W15(W14)

Vestiture of head mostly light brown to brown; lateral margin of pronotum not rounded under. On average larger 6.5–13 mm W16

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* ***A. immaculata*** Horn (in part)
(Hansen 2023)



Pale setae

Lateral margin rounded



Acmaeodera immaculata

W16(W15)

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* **A. 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. **A. mixta** LeConte

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

(Hansen 2023)



Mike Quinn, TexasEnto.net

Acmaeodera pulchella

Acmaeodera mixta

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