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1992

**New Species of Mexican *Acmaeodera*
with Lectotype Designations and Synonymical Notes
(Coleoptera: Buprestidae).**

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a separate from:
Melanderia
Vol. 48, pages 1-83
Sept. 30, 1992

Table of Contents

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Abstract.....	71
Described Species.....	71
Figs 1-12.....	82
References Cited.....	83

Abstract

Eight new species of *Acmaeodera* are described: *A. digna* from Oaxaca, Guerrero, Michoacan, Nayarit, Puebla and Guatemala; *A. jubata* from Durango; *A. reflexa* from New Mexico and Chihuahua; *A. chemsaki* from Puebla and Oaxaca; *A. crossi* from Guerrero, Michoacan and Puebla; *A. singularis* from Oaxaca; *A. dozieri* from Nuevo Leon, San Luis Potosi and Zacatecas; *A. discolor* from Oaxaca, Guerrero, Michoacan and Puebla. Lectotypes are designated for the following: *A. flavosparsa* Waterhouse, *A. superba* Waterhouse, *A. picta* Waterhouse, *A. flavosticta* Waterhouse, *A. venusta* Waterhouse, *A. setosa* Waterhouse, *A. proxima* Waterhouse, *A. trifasciata* Waterhouse and *A. delectabilis* Waterhouse. The following new synonymy is proposed: *A. auritincta* Fall 1922 = *A. delectabilis* Waterhouse 1889; *A. interrupta* Kerremans 1897, *A. daggetti* Fall 1899 and *A. mexicana* Kerremans 1900 = *A. solitaria* Kerremans 1897; and *A. confusa* Fisher 1925 = *A. xanthosticta* Gory and Laporte, whereas *A. faceta* Fall 1894 is removed from synonymy.

Representatives of several distinctive new species of the large and popular buprestid genus *Acmaeodera* from Mexico have been on hand for many years awaiting description. The names of eight such species are now published in response to the requests of several colleagues who need some of these names in connection with studies they have underway. Furthermore, lectotype designations are now necessary for several species of *Acmaeodera* described by Waterhouse in the "Biologia Centrali-Americana" and new synonymical information is in order for other described species of the genus whose distributions encompass portions of either or both the United States and Mexico.

Thanks are offered to the individuals and the curators of collections, as listed as paratype recipients, who have provided me with specimens used in this study. In addition, special thanks are offered to Frank Merickel, Division of Entomology, University of Idaho, G. H. Nelson, College of Osteopathic Medicine of the Pacific, Pomona, Calif., Christine von Hayek, British Museum (Natural History) and R. L. Westcott, Oregon Department of Agriculture, Salem, Oregon for their comments and other assistance and to Dennis Schotzko, Division of Entomology, University of Idaho for providing the photographic illustrations. This paper is published with the approval of the Director of the Idaho Experiment Station as research paper 92744.

Described Species

Acmaeodera digna Barr, new species

(Figs. 1 and 2)

Male: Medium-sized, elongate, convex, head, pronotum and ventral surface dark aeneous, pronotum with a broad

yellow stripe along lateral margin, extending from hind margin to slightly behind front margin, elytra blue-black, with 2 pairs of narrow, yellow stripes on basal half and 6 pairs of yellow spots on apical half as in figure 1. Head moderately swollen in front, bisected by a broad, shallow median depression, surface densely, shallowly punctate, rather densely clothed with short, suberect silvery hairs; vertex with a faintly indicated, longitudinal smooth area at middle, clypeus with very deep, arcuate emargination that extends into the area between antennal bases; antenna extending to about middle of pronotum, segment 1 obovate, slightly less in length than combined lengths of ovate segments 2-4, segments 5-6 subtriangularly serrate, segments 7-10 becoming increasingly transversely serrate, nearly twice as wide as long, segment 11 subovate, somewhat skewed and pointed apically. Pronotum trapezoidal, approximately twice as wide across base as length at middle, evenly convex except broadly, shallowly longitudinally depressed at middle and narrowly, laterally depressed along front margin; subbasal pits faintly indicated; front margin subtruncate, slightly lobed at middle; front angles narrowly subrectangular; lateral margins not reflexed, nearly straight, strongly narrowing anteriorly from base, narrowly visible from above throughout, feebly arcuate in side view; hind margin very broadly and shallowly emarginate, bead distinct; surface rather densely clothed with short, suberect brownish hairs, coarsely, densely, nearly reticulately punctate laterally, becoming more finely and sparsely punctate on disk. Elytra convex, slightly wider than pronotum; sides subparallel on basal half when viewed from above, then gradually narrowing to conjointly rounded apices; front margin broadly, shallowly bisinuate, with a slightly indicated median lobe, without a bead; front angles in side view projecting obliquely, appearing acute; lateral margins when viewed from the side faintly emarginate below humerus then nearly linear to apices, apical half sparsely, but increasingly coarsely, sharply serrate; humeri well developed, faintly punctate; basal half not striate, punctations serially arranged, fine and sparse near suture, abruptly becoming coarse and dense near sides, with a narrow elongate area behind humerus coarsely, transversely roughened; apical half moderately striate, punctations small, deep, less evident near suture; interstitial spaces near suture subflattened and finely punctate, near sides more convex and roughened, not distinctly punctate; surface rather densely clothed with short, erect blackish hairs. Ventral surface rather densely but inconspicuously clothed with short, suberect, subflattened whitish hairs; thoracic sternites coarsely, shallowly, rather densely punctate, more sparsely punctate medially; front margin of prosternum moderately retracted from front angles of pronotum, not reflexed except at sides, with a very broad, subrectangular lobe at middle; abdominal sterna 1-4 with punctations moderate in size and densely placed laterally and sparsely placed and indistinct medially, sternum 1 also with a small concentration of rather coarse punctations immediately

behind metacoxal base, sterna 2-4 broadly impunctate along hind margins, hind angles nearly square; last visible sternum broadly transverse with punctations rather fine, shallow and somewhat indistinct except for a narrow concentration of more distinct punctations in front of hind margin, apex semicircularly rounded, margins not reflexed, subapical elevation faintly indicated, broadly rounded, slightly undercut. Length: 9.9 mm., width: 3.7 mm.

Holotype, male (California Academy of Sciences) and 19 paratypes from 5 mi W Tehuantepec, Oaxaca, July 1, 1972, on *Acacia pennatula* (S. & C.) Benth, G. H. Nelson. Additional paratypes as follows: Oaxaca: 30 from type locality, Aug. 9, 1964, D. S. Verity; two from type locality, Aug. 9, 1964, E. S. Fisher, D. S. Verity; 212 from 3 mi W Tehuantepec, July 9, 10, 19, 20 and Aug. 2, 1965, on *Acacia pennatula*, *Cercidium plurifoliatum* Micheli and dead limbs, G. H. Nelson; two from 6 mi W Tehuantepec, July 2, 1964, A. Raske; four from 9.7 km W Tehuantepec, 61 m, July 15, 1987, Acacia scrub, R. Anderson; 21 from 7 mi W Tehuantepec, July 1 and 2, 1972, on *Acacia pennatula*, G. H. Nelson; one from 8 mi W Tehuantepec, August 16, 1963, A. Hardy; one from 9 mi W Tehuantepec, July 28, 1970, E. Fisher, P. Sullivan; seven from 11 mi W Tehuantepec, August 15, 1965, A. Raske; one from 12 mi W Tehuantepec, July 11, 1971, Clark, Murray, Hart, Schaffner; one from 20.9 km W Tehuantepec, 122 m., July 15, 1987, dry Acacia scrub, R. Anderson; three from 15 mi W Tehuantepec, August 22, 1964, D. S. Verity; one from 16 mi NW Tehuantepec, June 22, 1966, J. B. Karren; four from 17 mi NW Tehuantepec, Oaxaca, July 3, 1964, C. D. Johnson; one from 56 mi NW Tehuantepec, July 27, 1963, J. Doyen; six from 5 mi N Tehuantepec, August 9, 1964, E. Fisher, D. Verity; one from 10 mi N Tehuantepec, "Chiapas," July 18, 1975, M. Mispagel; one from 10 mi E Tehuantepec, July 7, 1969, H. A. Hespenheide; two from Jalapa del Marquez, July 28, 1962, A. Michelbacher and August 17, 1969, L. A. Kelton; four from 1 mi E Jalapa del Marquez, July 15, 1981, Bogar, Schaffner, Friedlander and August 4, 1980, Schaffner, Weaver, Friedlander; seven from 3 mi E Juchitan, July 8, 1988, J. Cope; two from 5 mi E Junction of hwy. 190 and 185, June 21, 1985, desert scrub, Askevold & Heffern; one from 2 mi E La Ventosa, June 20, 1958, J. C. Schaffner; one from 4 mi E La Ventosa Jct., July 3, 1969, H. A. Hespenheide; three from 5 km E La Ventosa, June 25, 1989, J. Cope; one from 9 mi E La Ventosa Jct., July 3, 1969, H. A. Hespenheide; one from 17 mi E La Ventosa, July 26, 1963, J. Doyen; one from 18 mi E La Ventosa Jct., Hwy. 190, August 21, 1965, on *Acacia pennatula*, G.H. Nelson; seven from 15.3 km ENE and 3.5 km S Magdalena Tequisistlan, 1650 m, July 16/17, 1981, tropical deciduous, E. L. and K. W. Sleeper; one from 17 mi S Matias Romero, July 12, 1982, J. Cope; one from 21 mi S Matias Romero, July 2, 1964, C. D. Johnson; four from 23 mi S Matias Romero, August 14, 1963, Parker, Stange; two from Presa Benito Juarez,

July 23, 1974, Clark, Murray, Ashe, Schaffner and July 23/24, 1973, Mastro & Schaffner; one from 3.5 km NE Pto. Angel, October 27, 1989, Noguera, Rodriguez; seven from 9 mi S Cuatro Caminos, July 20, 1966, on Acacia, D. S. Verity; 14 from Rio Concitos, 9 mi S Quatro Caminos, July 20, 1966, on Acacia, G. Walters; one from 3 mi SE Rio Hondo, July 17, 1981, Bogar, Schaffner, Friedlander; 12 from 43 km W Salina Cruz, 91 m, July 14, 1987, Acacia thorn scrub, R. Anderson; two from 27 mi SW Salina Cruz, July 14, 1987, Kovarik, Schaffner. Guerrero: one from 49 km N Chilpancingo, 460 m, November 7, 1976, Fisher & Sullivan; one from 59.4 km N Chilpancingo, July 24, 1987, R. Turnbow; one from 6 mi E Xochipala, July 18, 1984, Carroll, Schaffner, Friedlander; one from 6.5/7.9 km E Xochipala, September 17, 1989, R. Turnbow; four from 12.4 km W Tetelcigo, 1900', September 21, 1989, R. Turnbow two from Zopilote Cyn. June 20/23, 1989, J. Cope. Jalisco: 11 from Estacion Biologica Chamela, July 15/23, 1987, on Croton blossom, F. T. Hovore, July 27/29, 1990, R. L. Westcott, July 29, 1990, on Acacia, W. F. Barr, September 30, 1991, F. A. Noguera, October 9/10, 1989, Westcott & Mudge; one from Km 48, NW Malaque Jct., July 30, 1990, W. F. Barr. Michoacan: one from vic Km 69, hwy 37, N Italia-Arteaga, 230 m, October 13, 1988, R. L. Westcott; one from 21 mi S Tzitzio, 2700', July 8, 1970, Fisher and Sullivan. Navarit: two from 4.4 km WNW Cruz de Huanacastle, June 30/July 2, 1991, C. L. Bellamy; one from San Juan Peyotan, August 2, 1955, B. Malkin. Puebla: two from Punta del Gato, 11.5 km NW Tehuizingo, 1220 m, October 13, 1989, on Acacia, R. L. Westcott. Seven additional paratypes from Guatemala: Depto. El Progreso, 7 km N El Rancho 1455/8958, 300 m, July 23 and August 13, 1981, arid tropical scrub, E. L. and K. W. Sleeper; one from El Progreso, 5 km W jct CA14 & CA9, August 7, 1991, K. Philips and P. Kovarik.

Paratypes in the California Department of Agriculture, Sacramento; Canadian National Collection; Iowa State University; Northern Arizona University; Texas A & M University; Essig Museum of Entomology, University of California, Berkeley; the Richard M. Bohart Museum, University of California, Davis; Universidad Nacional Autonoma Mexico; the William F. Barr Entomological Museum, University of Idaho; C. L. Bellamy; J. Cope; H. A. Hespenheide; F. T. Hovore; A. D. Mudge; G. H. Nelson; R. H. Turnbow; D. S. Verity; George Walters; S. G. Wellso; R. L. Westcott and W. F. Barr.

Aside from the considerable differences in length (8.7-19.5 mm.), remarkable little variation is evident in the large number of specimens making up the type series. Occasionally the discal longitudinal stripes of the elytra are obliquely bowed laterally or these and the lateral longitudinal elytral stripes are broken posteriorly. Also, the spots of the apical half of the elytra may be reduced in

size, fused or only three or four pairs may be evident.

This species is readily recognized. The elytral coloration and markings, although bearing a slight resemblance to those of *A. scalaris* (Mannerheim) are unique. However, its relationships are with the *A. gibbula* group of species as indicated by the shape of the front angles of the pronotum and the form of the front margin of the prosternum. The elytral sculpturing, the deep emargination of the clypeus that bisects the plane between the antennal bases and the form of the lateral margins of the pronotum are distinctive for this species as well.

***Acmaeodera jubata* Barr, new species**
(Fig. 3)

Male: large, elongate, moderately sinuate in outline, feebly shining, upper surface black with a short, sublateral pronotal marking and scattered lateral elytral markings, ventral surface black with a bluish cast. Head densely, nearly reticulately punctate, conspicuously densely clothed with long, erect dark brown hairs; front transversely convex with a shallow median depression above, upper front flattened, lower front transversely depressed; clypeus finely, very densely punctate, front margin distinctly narrowly ridged, deeply, triangularly emarginate medially; antenna rather short, reaching about middle of pronotum, serrate from segment 5, segment 1 obovate, subequal to combined lengths of segments 2-4, segments 2-3 subglobose, segment 4 ovate, segments 5-10 transversely subtriangular, with upper and lower surfaces convex, segment 11 in the form of a transverse parallelogram, with outer apical and inner basal angles rounded and inner apical angle subacute. Pronotum 2.6 times broader across widest area in front of base than length at middle, irregularly convex, with a broadly triangular, median depression extending from base to near front margin and an oblique, sublateral depression extending broadly from either side of middle of base to near lateral margin behind front angle; subbasal pits distinct; front margin feebly bisinuate, broadly, shallowly lobed at middle; front angles produced anteriorly, subacute; lateral margins strongly reflexed and arcuate, broadest in front of base, visible from above throughout, nearly straight in side view; hind margin broadly, shallowly triangularly emarginate, with a narrow bead which is more evident near sides; surface densely clothed with long, erect, dark brown hairs, coarsely, densely reticulately punctate laterally, more sparsely punctate on disk; sublateral marking present on apical half, narrowly yellow. Elytra narrower at base than greatest width of pronotum, subflattened discally with sutural area narrowly, but conspicuously elevated from about basal fourth to apex; sides when viewed from above, broadly, but slightly narrowed at basal third, then broadly, arcuately attenuate to the slightly separately and distinctly narrowly rounded apices; front margin very broadly and shallowly, triangularly arcuate, distinctly beaded; front angles in side view subrectangular; lateral margins when

viewed from the side, sublinear to basal third, then broadly, rather deeply bisinuate to apices, apical third becoming increasingly coarsely, sharply serrate; scutellar area broadly depressed, bounded laterally by a short, smoothly elevated portion of the 9th interstrial space between the humeri and suture which are moderately developed and finely punctate, except for a smooth dorsolateral area; striae punctations circular, rather small, deep and conspicuous, becoming coarser laterally, striae impressed only on apical third; interstrial spaces subconvex laterally, flattened near suture, with conspicuous tiny punctations arranged serially, spaces 1-3 broader and slightly more convex, spaces 5 and 7 more convex basally; surface moderately clothed with long, erect, dark brown hairs; markings yellow and arranged as follows: a narrow stripe (broken anteriorly and posteriorly on left elytron and anteriorly on right elytron) extending from front angle to about basal third on lateral margin, a transverse spot (submarginally and discally broken on left elytron) at about middle and extending from lateral margin onto disk, a small postmedian spot (absent on left elytron) on lateral margin, a transverse spot at apical two-thirds extending onto disk and a subapical, irregularly transverse spot extending from lateral margin to near suture. Ventral surface densely clothed with short and long, erect and suberect, fine whitish hairs; prosternum coarsely, shallowly punctate laterally, more finely and densely punctate medially, front margin strongly retracted from front angles of pronotum, narrowly reflexed throughout and broadly, faintly lobed on either side of middle; meso- and metasterna rather finely, densely punctate laterally, more finely and sparsely punctate medially; abdomen rather coarsely, very shallowly punctate, sterna 2-4 broadly impunctate along hind margins, hind angles subquadrate, last visible sternum subtrapezoidal in outline, with sides strongly narrowing and hind margin subtruncate, all margins distinctly reflexed, subapical elevation small, rounded, indistinct, but conspicuously undercut. Length: 11.5 mm, width: 4.5 mm.

Holotype, male (California Academy of Sciences, from the University of California, Berkeley) from 9 mi E La Ciudad, Durango, August 15, 1972, D. Viers. Four paratypes, each from Durango, as follows: one from La Rusias, 12 mi E La Ciudad, 9200', August 14-18, 1972, F. Powell; one from 8 mi W La Ciudad, 8700', August 17, 1972, Powell; one from Cienega de Nta. Senora, September 18, 1982, J. R. Zimmerman; and one from 15 km W El Salto, October 1, 1990, R. Turnbow. Paratypes in the collections of the Essig Museum of Entomology, University of California, Berkeley; G. H. Nelson; R. L. Westcott and W. F. Barr.

A few small variations in the placement and extent of the pronotal and elytral markings are evident in the type series. The sublateral pronotal marking is reduced to a small basal spot on one paratype and expanded into an elongate, arcuate stripe that extends nearly to the front

angle on another. Regarding the elytral markings, none of the paratypes has the pair of small discal spots that are present on the holotype between the two pairs of subapical transverse spots, nor do they have the basal stripe on the lateral margin broken. Further, two of the paratypes lack tiny discal spots on the basal half of the elytra, while, unlike the holotype, the third has a tiny basal spot at the base of the left elytron and the fourth paratype has a pair of tiny discal spots at about the basal fourth and another such spot on the left elytron slightly behind the basal third. Finally, two of the paratypes have an unpaired condition of spotting in front of the elytral apices. On one of these the spot occurs on the right elytron and on the other it is on the left elytron. The separately rounded elytral apices of the holotype may be an anomaly, because all other members of the type series have conjointly rounded apices. The type series varies in length from 10.7 mm to 12.3 mm.

Acmaeodera jubata, a member of the *amabilis* group of species, shows relationships with *A. chiricahuae* Barr on the basis of the pronotal depressions, the placement and extent of the elytral markings and in the denseness and length of the pubescence of the head. It, however, is readily separated from that species by the absence of subapical red elytral markings, by the more coarsely and densely punctate pronotum and by having the subapical plate of the last visible abdominal sternum much less developed. The absence of red markings on the elytra is shared by *A. jubata* with a related species that occurs in another area of the mountains of northern Mexico, *A. reflexa*. The separation of the two is discussed under that species which follows.

***Acmaeodera reflexa* Barr, new species**
(Figs. 4 and 5)

Female: Medium-sized, moderately slender, feebly shining, dorsal surface black with a faint aeneous tinge, pronotum with a narrow, sublateral yellow marking, elytra with yellow markings on disk and at sides, ventral surface black with a faint bluish tinge. Head rather finely, densely punctate, densely, but somewhat inconspicuously clothed with short and longer, erect, dark brown hairs; front broadly convex, with a faint median depression, lower front weakly, transversely depressed between antennal bases; clypeus more finely and densely punctate, front margin finely ridged, rather deeply, arcuately emarginate at middle; antenna nearly reaching hind angle of pronotum, serrate from segment 5, segment 1 obovate, subequal to combined lengths of segments 2-4, segment 2 subglobular, shorter than segment 3 which is subequal in length but less robust in form than segment 4, segment 5 transversely subtriangular, segments 6-10 becoming more transversely subquadrate with outer margin somewhat pointed, upper and lower surfaces convex, segment 11 subquadrate, outer apical and inner basal angles rounded, inner apical angle

indistinctly subacute. Pronotum 2.35 times broader across widest area in front of base than length at middle, irregularly convex, with a broad, subquadrate, shallow median depression on posterior 2/3rds and a rather broad, sublateral depression extending obliquely from either side of middle of base towards front angle; subbasal pits distinct on either side of middle, less distinct at middle; front margin broadly, subtriangularly lobed at middle; front angles slightly produced anteriorly, subacute; lateral margins conspicuously reflexed, broadly arcuate, broadest in front of base, visible from above throughout, nearly straight in side view; hind margin broadly, shallowly, arcuately emarginate at middle, with a narrow, indistinct bead; surface moderately clothed with rather long, erect, dark brown hairs, coarsely, densely punctate, more sparsely punctate on yellow markings, more sparsely and finely punctate on disk; sublateral yellow marking extending from base nearly to front angles, uniformly narrow. Elytra distinctly narrower than greatest width of pronotum, moderately convex discally, strongly convex laterally, sutural area narrowly but conspicuously elevated from about basal fourth to apex; sides when viewed from above slightly narrowing to about basal third, then broadly, shallowly, arcuately narrowing to the conjointly rounded apices; front margin very broadly, feebly arcuate, conspicuously beaded; front angles in side view subrectangular; lateral margins when viewed from the side, very feebly bisinuate to about basal third then broadly, shallowly bisinuate to apices, apical half becoming increasingly coarsely and sharply serrate; scutellar area transversely depressed, bounded laterally by a short, smoothly elevated portion of the interstrial space 9; humeri moderately developed, distinctly punctate dorsally, sparsely punctate laterally; striae punctations circular, small near suture, coarse laterally, striae impressed on apical half, but not on yellow markings; interstrial spaces flattened, with tiny punctations discally on basal half, but more roughened apically and impunctate laterally, interspaces 1-4 convex, becoming asperate apically; surface less densely pubescent than pronotum, hairs longer, erect and dark brown; yellow markings as follows: an irregularly narrow stripe extending along lateral margin from front angle to slightly beyond middle, narrowly broken slightly in front of and at middle, a rather broad, transverse marking located slightly in front of middle and extending from marginal stripe to near suture, a transverse marking located at apical fourth and extending from lateral margin to near suture, a small spot in front of apices on lateral margin and a pair of oblong discal spots, serially located behind base and at about basal fourth, in addition the right elytron has a tiny, adventitious, postmedian discal spot situated near the suture. Ventral surface sparsely, but irregularly clothed with short and longer, erect and suberect, fine white hairs; prosternum coarsely, shallowly punctate laterally, more finely and densely punctate medially, front margin strongly retracted from front angles of pronotum, narrowly reflexed throughout and broadly, shallowly lobed on either side of

middle; meso- and metasterna more densely punctate laterally, more finely and sparsely punctate medially; abdomen coarsely, very shallowly punctate, sterna 1 and 2 more finely, sparsely punctate medially, sterna 2-4 broadly impunctate along hind margins, hind angles subquadrate, last visible sternum broadly triangular in outline, broadly rounded at apex, finely, densely and deeply punctate, margins narrowly reflexed, subapical elevation small, rounded, faintly undercut. Length: 8.9 mm, width: 3.4 mm.

Holotype, female (California Academy of Sciences) and eight paratypes from Indian Creek, Animas Mountains, Hidalgo Co., New Mexico, 6,000', September 23, 1972, R. S. Wielgus. Additional paratypes from Chihuahua: Seven from 9[km or mi?] W Chinipas, 2,660', January 25, 1968, V. Roth; two from 10 mi E Cuaohemoc, August 26, 1957, J. J. Schaffner; three from Gavilan Ranch, about 50 mi SW Colonia Juarez, August 26, 1986, S. M. Clark; one from 16 mi W La Junta, October 10, 1975, W. Iselin. Paratypes in the collections of Arizona State University; the William F. Barr Entomological Museum, University of Idaho; Iowa State University; Richard Miller, G. H. Nelson, R. L. Westcott and W. F. Barr.

Variation of this species is principally evident in the discal markings on the basal half of the elytra. Two pairs of spots that range from a small to medium-size are evident on most of the specimens available for study. However, in some, the posterior pair of spots is absent or greatly reduced in size. On the other hand, two of the paratypes have a third pair of spots present and located immediately in front of the median transverse marking. Apparently these spots result from a fracturing of that marking. Length the paratypic series ranges from 7.6 mm to 11.4 mm.

This species, another member of the *amabilis* group, most closely resembles *A. jubata* Barr. It can be separated from that species by having the hairs on the upper area of the head much shorter and less densely placed, by having the pronotum and elytra less densely punctate, by having one or two pairs of spots on the disk of the basal half of the elytra, by having the median transverse marking of the elytra extend onto the disk and nearly attain the suture and by having a more slender form.

It is my understanding that the type locality of this species is situated on the Gray Ranch, an extensive property in southwestern New Mexico that is under the control of The Nature Conservancy. Fortunately, this organization is dedicated to the preservation of natural environmental habitats.

Acmaeodera chemsaki Barr, new species

(Fig. 6)

Male: Medium-sized, moderately robust and flattened, upper surface bluish with a brassy cast, especially laterally on pronotum and elytra, head brassy, somewhat blue laterally, elytra with small yellow spots along lateral margins from front angles to near apex and on disk from basal fourth to near apex, laterally the spots are elongate, discally and near sides they are irregular, undersurface darkened and strongly brassy. Head transversely depressed between antennal bases, transversely convex across lower front, broadly, longitudinally depressed on upper front; surface with dense, somewhat roughly placed, moderate-sized punctations, rather densely clothed with long, erect brown hairs and with some scattered, fine white hairs on lower front; clypeus deeply, subtriangularly emarginate, front margin faintly reflexed; antenna extending to about middle of pronotum, serrate from segment 5, segment 1 obovate, slightly longer than combined lengths of segments 2-4, segment 2 globular, shorter in length than either segment 3 or 4 which are obovate and subequal in length, segments 5-10 subtriangularly transverse, segment 11 transverse, basal outer angle rounded, apical angles subrectangular, apical margin truncate. Pronotum transverse, 2.5 times wider across base than length at middle, convex, with a broad, triangular median depression on basal two-thirds and an oblique, shallow depression extending from lateral subbasal pit to approximate transverse midline, feebly depressed along front margin; subbasal pits conspicuous; front margin broadly bisinuate, distinctly lobed at middle; front angles slightly projecting, narrowly rounded; lateral margin moderately reflexed, broadly arcuate, strongly narrowing anteriorly, broadest in front of base, visible from above throughout, nearly straight in side view; hind margin broadly, shallowly emarginate, without a bead; surface rather densely clothed with moderately long, erect brown hairs, coarsely, densely, reticulately punctate laterally, more sparsely punctate on disk. Elytra slightly narrower than pronotum, subflattened discally, convex laterally, sutural area narrowly elevated from about basal fourth to apex; sides when viewed from above subparallel on basal third, then gradually, arcuately narrowing to conjointly rounded apices; front margin broadly, shallowly arcuate, strongly beaded; front angles in side view laterally subacute; lateral margins when viewed from the side, sublinear to basal third, then broadly, shallowly bisinuate to apices, apical third becoming increasingly moderately coarsely, sharply serrate; scutellar area narrowly depressed, bounded laterally by a short, slightly elevated scutellar interstitial space and the more strongly elevated 9th interstitial space between humerus and suture; humeri moderately developed, finely punctate; striae punctations circular, rather small and deep near suture, distinctly coarser between 9th interspace and lateral margin, striae impressed on apical half; interstitial spaces uniformly flattened near suture, tending to be alternately wider and more convex laterally and on apical half, with rather sparsely placed, serially arranged, tiny, inconspicuous

punctations discally, transversely roughened and conspicuously subserrate and asperate laterally; surface rather densely clothed with moderately long, erect and suberect brown hairs. Ventral surface rather densely clothed with short and long, erect and suberect, fine white hairs; prosternum coarsely, densely punctate laterally and more finely, sparsely punctate medially, front margin strongly retracted from front angles of pronotum, narrowly reflexed throughout and broadly, shallowly bisinuate lobed at middle; meso- and metasterna finely, densely punctate laterally, more finely, sparsely punctate medially; sterna rather sparsely, shallowly punctate, more sparsely so at middle of sterna 1 and 2, sterna 2-4 with hind margins broadly impunctate, hind angles feebly acute, last visible sternum subtrapezoidal in outline, lateral margins faintly reflexed, subtruncate hind margin more conspicuously reflexed, hind angles broadly rounded, subapical elevation weakly developed, transverse, feebly undercut. Length: 10.5 mm, width: 3.9 mm.

Holotype, male (California Academy of Sciences, through the University of California, Berkeley) and 36 paratypes from 7 km SW Morelos Cañada, Puebla, 7700', October 4, 1975, J. Powell, J. Chemsak, T. Eichlin and T. Friedlander. Additional paratypes as follows: Puebla: Three from 4 mi SW Morelos Cañada, September 20, 1977, J. Chemsak and A. & M. Michelbacher; three from 3 km N Calipan, 18°17'N, 97°11'W, October 30, 1990, R. L. Westcott; three from 6 mi N Chapulco, 7000', October 4, 1975, J. Powell, J. Chemsak, T. Eichlin and T. Friedlander; 24 from 3 km S Zapotitlan Salinas, 18°18'N, 97°30'W, November 1, 1990, R. L. Westcott, in arroyo; one from 6 mi S Zapotitlan, 5500', October 6, 1975, J. Powell, J. Chemsak, T. Eichlin, T. Friedlander. Oaxaca: one from 15 km E Mitla, 2140 m, August 13, 1988, J. Doyen.

Paratypes in the collection of the Essig Museum of Entomology, University of California, Berkeley; the William F. Barr Entomological Museum, University of Idaho; G. H. Nelson; R. L. Westcott and W. F. Barr.

On many individuals of this species the discal portion of the anterior half of the elytra tends to have the small maculations reduced in size and abundance, and in some instances they are entirely absent. On the other hand, a tendency can be seen in other individuals for the spots on the posterior half of the elytra to be concentrated and/or merged to the extent that one or more pairs of short, transverse, irregularly margined fasciae that extend from the lateral margin toward the suture are evident. The overall length of the type series ranges from 6.8 mm to 11.2 mm.

Acmaeodera chemsaki does not exhibit features that allow it to be closely aligned with any described species. It does appear to be a member of the *vandykei* group on the basis of the reflexed lateral margins of the pronotum and

other features, but the nature of the front angles of the elytra seem to belie this placement. It does however, show considerable similarity in elytral markings, form and punctations of the dorsal surface to those of *A. ornatoides* Barr. It is distinct from that species by having the pronotum and elytra dark aeneous rather than blue-black and by having the lateral margins of the pronotum visible from above throughout rather than being partially obscured basally.

It is with pleasure that I name this species after Dr. John A. Chemsak, University of California, Berkeley, an ardent beetle collector and student of the Cerambycidae, who has been of great assistance to me over the years.

Acmaeodera crossi Barr, new species
(Figs. 7 and 8)

Male: Medium-sized, elongate, convex; aeneous-black, each elytron with five yellowish maculations as follows: two small, narrowly elongate markings on lateral margin at about basal third and behind middle, and one such marking in front of apices and two large circular spots at sides at about basal two-fifths and apical third. Head convex, front with a broad, shallow, median depression and a deep, transverse depression between antennal bases; surface finely, densely, shallowly punctate, densely clothed with rather long, erect brown hairs; clypeus broadly, deeply, triangularly emarginate; antenna extending to middle of pronotum, serrate from segment 5, segment 1 narrowly elongate, basally curved, apically enlarged, slightly shorter than combined lengths of segments 2-4, segment 2 globose, segments 3-4 obovate, segments 5-6 subtriangularly serrate, segments 7-10 becoming increasingly transversely, triangularly serrate, nearly twice as wide as long, segment 11 subovate, transverse. Pronotum subrectangular, twice as wide as long, irregularly convex, broadly, shallowly and longitudinally depressed near sides, broadly depressed at middle of base, narrowly, indistinctly and longitudinally depressed at middle and narrowly, transversely depressed along front margin; subbasal pits faintly indicated; front margin broadly, shallowly bisinuate, broadly lobed at middle; front angles subacute, narrowly rounded; lateral margins not reflexed, narrowly visible from above except at extreme base, nearly straight, subparallel on basal two-thirds, then moderately, arcuately narrowing to the narrowly rounded, subacute front angles, strongly, evenly arcuate in side view; hind margin very broadly, shallowly, arcuately emarginate, bead feebly indicated medially; surface densely but inconspicuously clothed with rather long, erect brown hairs, intermixed with a few, short white hairs at sides, coarsely, densely, subreticulately punctate laterally, becoming finely, sparsely punctate on disk. Elytra moderately convex, slightly wider than pronotum, width across base slightly less than width across middle; sides when viewed from above subparallel on basal half, then gradually narrowing to conjointly

rounded apices; front margin broadly, shallowly arcuate, bead faintly indicated; front angles in side view rectangular; lateral margins when viewed from the side nearly straight to basal third, then faintly emarginate and broadly, shallowly bisinuate to apices, apical two-fifths rather coarsely and widely serrate; humeri moderately developed, finely punctate and faintly, strigose laterally; striae not evident on basal half, faintly indicated on apical half, more strongly indicated at sides, punctations near suture small, slightly larger laterally; interstitial spaces flattened on disk, irregularly convex and roughened laterally, punctations tiny, faintly indicated; basal area broadly depressed at middle and with a short, longitudinal elevation between suture and humeri; surface densely but inconspicuously clothed with rather long, erect brown hairs. Ventral surface densely but inconspicuously clothed with short, suberect whitish hairs; prosternum coarsely, shallowly punctate laterally, more finely and deeply punctate medially, front margin strongly retracted from front angles of pronotum, narrowly reflexed, very broadly and shallowly, somewhat irregularly emarginate; meso- and metasterna more finely, densely punctate especially laterally; abdomen rather finely and sparsely punctate, sternum 1 more coarsely and densely punctate laterally, sterna 2-4 broadly impunctate along hind margins, hind angles of sterna 2 and 3 nearly square, of sternum 4 faintly acute, last visible sternum subtriangular in outline with hind margin broadly rounded, margins distinctly narrowly reflexed except basally, subapical elevation not evident. Length: 9.9 mm, width: 3.6 mm.

Holotype, male? (National Museum of Natural History) from 17.8 km N Chilpancingo, Guerrero, September 25, 1968, on rock, W. H. Cross. Paratypes as follows: Guerrero: one from 49 km N Chilpancingo, 460 m, November 7, 1976, E. Fisher, P. Sullivan, one from vicinity of Mexcala, 1 mi S Rio Balsa, hwy. 95, September 3-4, 1970, E. M. and J. L. Fisher; four from 12.4 km W Tetelcingo, 1900', September 21, 1989, R. Turnbow; one from 6.5-7.6 km E of Xochipala, September 17, 1989, R. Turnbow; one from Zapilote Cyn., 8 km S Mezcala, 550 m, September 17, 1982, J. A. Powell, J. A. Chemsak; one from 5 km N Zumpango del Rio, October 15, 1984, F. Hovore; three from 3 km S Zumpango del Rio, 1200 m, November 6, 1990, R. L. Westcott. Michoacan: four from N Italia-Arteaga, km 179, hwy 37, 200 m, October 13, 1988, R. L. Westcott; one from Las Juntas, 600 m, October 12, 1988, Westcott & Mudge. Puebla: one from 14 km N Acatlan, 1240 m, November 1, 1991, R. Ayala, F. A. Noguera, A. Rodriguez; one from 3 km N Calipan, October 30, 1990, R. L. Westcott; two from 15 km WNW Izucar de Matamoros, 1250 m, October 13, 1989, R. L. Westcott; one from NE Matamoros, October 28, 1945, B. Rotger C. R.; one from 1 km S Petlacingo, 1280 m, November 1, 1991, R. Ayala, F. A. Noguera, A. Rodriguez; 10 from 5 km NW Petlacingo, 1400 m, October 13, 1989 and November 2, 1990, R. L. Westcott; one from 1 km NE Tepexco, 1120 m, October

31, 1991, R. Ayala, F. A. Noguera, A. Rodriguez.

Paratypes in the collections of Universidad Nacional Autonoma Mexico; the Essig Museum of Entomology, University of California, Berkeley; R. Turnbow; R. L. Westcott and W. F. Barr.

The variation exhibited by this species is minimal and it shows up principally in the form of inconsistencies in the number and arrangement of the small to tiny, elongate markings along the lateral margins of the elytra. Length of the paratypic series ranges from 7.2 mm to 11.4 mm.

This species should be placed next to *A. pullata* Cazier, a distinctive species known from chaparral areas of southwestern California. Compared with that species, *A. crossi* can be distinguished by having the disk of the pronotum more finely and sparsely punctate, the sides of the pronotum subparallel along the posterior two-thirds and without a small concentration of white hairs at about the middle and by not having concentrations of long white hairs at the sides of the abdominal sterna. In addition, *A. crossi* lacks a pair of subbasal spots on the elytra, whereas *A. pullata* rarely has these spots absent.

Acmaeodera crossi is named after and dedicated to the memory of W. H. "Bill" Cross, formerly a member of the USDA at the University of Mississippi, who was murdered by "bandidos" while on a collecting trip to mountainous areas of northern Mexico.

Acmaeodera singularis Barr, new species (Fig. 9)

Medium-sized, slender, subcylindrical, feebly shining, upper surface uniformly aeneous-black, undersurface black. Head finely, densely punctate, densely clothed with short, erect, brown hairs; front transversely convex with a faint median depression at middle, lower front transversely depressed between antennal bases; clypeus irregularly roughened, not distinctly punctate, front margin narrowly ridged, very shallowly, broadly triangularly emarginate medially; antenna rather short, reaching slightly beyond middle of pronotum, serrate from segment 5, segment 1 obovate, slightly longer than combined lengths of segments 2-4 which are ovate and subequal in form and length, segment 5 equilaterally triangular, segments 6-10 transversely triangular, appearing faintly hooked at outer angle, with upper and lower surfaces convex, segment 11 irregularly subglobose in outline. Pronotum nearly one and two-thirds times broader across basal third than length at middle, nearly uniformly convex with only a narrow, shallow median depression on anterior half and a broad, shallow median depression at base; subbasal pits distinct; front margin broadly lobed at middle; front angles subrectangular, narrowly rounded, not produced; lateral margins narrowly reflexed and arcuate, broadest at basal

third, not visible from above anteriorly, broadly, shallowly bisinuate in side view; hind margin very broadly, shallowly emarginate at middle, bead faintly indicated; surface densely clothed with rather short, erect brown hairs, finely, densely punctate with punctations becoming larger and somewhat reticulate laterally. Elytra slightly narrower at base than greatest width of pronotum, subconvex except for a transverse median depression at base, sutural area narrowly and slightly elevated on apical third; sides when viewed from above subparallel to about middle (except for a slight swelling at about basal fourth), then gradually, arcuately narrowing to the conjointly rounded apices; front margin broadly, very shallowly arcuate, conspicuously beaded; front angles in side view subrectangular; lateral margins when viewed from the side, feebly emarginate to about basal fourth where they are conspicuously, semicircularly notched and margined, then gradually, very shallowly bisinuate to apices, apical fourth sparsely, somewhat indistinctly serrate; humeri moderately developed, finely, irregularly punctate dorsally and laterally; striae punctations near suture rather small, circular and deep, becoming progressively coarser, more elongate and somewhat reticulate towards sides, striae slightly impressed on apical third; interstriae spaces flattened near suture, more convex and finely asperate laterally, with tiny, serially arranged punctations, interspace 3 broadened and irregularly flattened from behind humerus to about middle; surface densely, but more sparsely clothed with rather short, brown hairs than on pronotum. Ventral surface moderately clothed with short, suberect, fine whitish hairs; prosternum coarsely, shallowly punctate laterally, more finely and densely punctate medially, front margin slightly retracted from front angles of pronotum, distinctly reflexed laterally, not reflexed at middle; meso- and metasterna rather finely, densely punctate laterally, more sparsely punctate medially; abdomen with sternum 1 very coarsely and shallowly punctate laterally, finely, sparsely punctate medially, remaining sterna rather finely and densely, shallowly punctate, sterna 2-4 broadly impunctate along hind margins and with hind angles subacute, last visible sternum subtriangular, but with apex broadly rounded, margins narrowly reflexed, subapical elevation not evident. Length: 10.2 mm, width: 3.4 mm.

Holotype, sex uncertain, (California Academy of Sciences, through the University of California, Berkeley) from 56 mi NW Tehuantepec, Oaxaca, July 27, 1963, J. Doyen.

This species cannot be related to any of the currently described New World species of *Acmaeodera* with assurance. However, it is readily recognized by the distinctive notch at the sides of the elytra, by the uniformly black body and by its size and subcylindrical shape.

***Acmaeodera dozieri* Barr, new species**
(Figs. 10 and 11)

Female: medium-sized, robust; head, pronotum and ventral surface aeneous-black, pronotum with an irregularly narrow, lateral yellow marking that extends from in front of hind margin to near front angles, elytra mainly yellowish with front margin narrowly blackish, an irregularly broad, black sutural stripe that extends from base to apex and with 3 pairs of large and 2 pairs of small blackish spots, 1st pair large, covering humeri and joining dark front margin, but not attaining lateral margin, 2nd pair large, each one located at middle of elytron at about basal third, 3rd pair large, each located at middle of elytron at about apical third, 4th pair small, each located near lateral margin at apical sixth, 5th pair small, each located on lateral margin in front of apices. Head: transversely convex across middle, broadly, shallowly depressed on upper front, transversely depressed between antennal bases; surface coarsely, densely, nearly reticulately punctate, rather densely clothed with long, erect brown hairs; clypeus deeply, arcuately emarginate; antenna short, reaching slightly beyond front margin of pronotum, serrate from segment 5, segment 1 obovate, slightly shorter than combined lengths of segments 2-4, segment 2 globose, segments 3-4 ovate, segment 5 subtriangularly serrate, broader than long, segments 6-10 compacted, progressively becoming subrectangular, segment 11 transversely subrectangular. Pronotum: twice as broad across in front of base as length at middle, irregularly convex, with a broadly oblique, sublateral depression extending anteriorly from base to behind front angles, a broad, shallow depression at middle of base and a narrow, shallow longitudinal depression on disk; subbasal pits distinct; front margin feebly bisinuate, broadly lobed at middle; front angles subrectangular; lateral margins not reflexed, feebly arcuate, broadest in front of base, narrowing anteriorly, visible from above on anterior third, nearly straight in side view; hind margin narrowly beaded, very broadly and shallowly emarginate; surface rather densely clothed with moderately long, erect brown hairs, uniformly coarsely, densely, nearly reticulately punctate. Elytra with basal width subequal to greatest width of pronotum, flattened on disk, strongly convex laterally; sides when viewed from above feebly bisinuate on basal half, then gradually, arcuately narrowing to bluntly, conjointly rounded apices; front margin very broadly, feebly arcuate, distinctly beaded; front angle in side view subrectangular; lateral margins when viewed from the side straight to basal fourth then broadly bisinuate to apices, apical half rather finely, densely serrate; humeri well developed, faintly punctate; striae shallowly evident throughout, punctations coarse and deep; interstriae spaces subflattened, with tiny, sparsely placed punctations, narrower than width of striae punctations except for outer interspaces and the posterior portion of interspace 8 which are broader and convex, interspace 3 and extreme base of interspace 9 more strongly convex; surface rather densely clothed with moderately long, semierect brown hairs and with shorter suberect hairs

at sides. Ventral surface inconspicuously clothed with numerous short, suberect and subflattened whitish hairs, thoracic sterna and abdominal sternum 1 coarsely, densely punctate, more finely punctate medially, sterna 2-5 more finely, sparsely punctate, especially medially; front margin of prosternum strongly retracted from front angles of pronotum, indistinctly reflexed, broadly, but very slightly lobed on either side of middle; abdominal sterna 2-4 broadly impunctate along hind margins, hind angles somewhat acute; last visible sternum subtransverse, apex broadly rounded, margins narrowly reflexed, subapical elevation small, transverse, distinctly undercut. Length: 8.4mm, width: 3.5mm.

Holotype, male (Field Museum of Natural History) and 67 paratypes from 4.7 km E Galeana, Nuevo Leon, July 21, 1987, B. K. Dozier. Additional paratypes as follows: Two from 15 mi E Galeana, Nuevo Leon, July 15, 1963, A. T. Howden and one from same locality, July 15/16, 1963, H. F. Howden; one from Cerro Potosi, Nuevo Leon, 10,300', July 15/16, 1963, H. & A. Howden; one from 8 mi W Iturbide, Nuevo Leon, July 24, 1976, Peigler et al; one from 20 mi W Linares, Nuevo Leon, July 6, 1971, B. K. Dozier; two from 50-51 and 54-55 km W Linares, Nuevo Leon, July 17, 1988, R. Turnbow; one from 7 mi E San Luis Potosi, San Luis Potosi, 6225', July 3, 1987, R. Wharton; two from 1 km N Entronque El Huizache, San Luis Potosi, 1493 m, June 2, 1987, on *Sphaeralcea hastula* A. Gray, R. Anderson and two from 2 mi E Sombrerete, Zacatecas, August 24, 1981, J. Chemsak, A. & M. Michelbacher.

Paratypes in the collections of the Canadian National Museum; Texas A and M University; the William F. Barr Entomological Museum, University of Idaho; B. K. Dozier; H. F. Howden; G. H. Nelson; R. H. Turnbow; R. L. Westcott and W. F. Barr.

The elytral markings show a considerable degree of variation in this species and this is mainly evident in the number, size, and form of the sublateral row of markings. They range in number from two to five, in size from very small to large, and they may be circular, irregular or elongate in form and they often are, in part, longitudinally fused, broken or asymmetrically arranged. The body length ranges from 7.2 mm to 10 mm.

This species must be allied with the very variable *A. gillespiensis* Knull of western and southwestern Texas, which tends to have its elytral markings transversely arranged, but which also may have them in the form of spotting similar to that of *A. dozieri*. However, the two species are easily separated because *A. dozieri* lacks the conspicuously elevated third interstrial space of the elytra that is characteristically present on *A. gillespiensis*.

Acmaeodera dozieri is named after Byrd K. Dozier, a

friend, colleague and outstanding collector, in recognition of his many contributions to the study of buprestid beetles.

Acmaeodera discolor Barr, new species
(Fig. 12)

Male: Small-sized, subcylindrical, strongly shining, dark aeneous, elytra becoming greenish apically. Head with dense, nearly reticulate, moderate-sized shallow punctations, moderately clothed with short, suberect, fine white hairs; front convex with a shallow, longitudinal depression at middle and a deep, transverse depression between antennal bases; clypeus with front margin broadly, subtriangularly emarginate; antenna short, extending slightly beyond front margin of pronotum, serrate from segment 5, segment 1 elongate, subequal to combined lengths of segments 2-4, segment 2 globose, segments 3-4 subcylindrical, segments 5-10 transversely triangular, gradually increasing in width, outer segments twice as wide as long, segment 11 largest, transversely subovate, outer apical angle pointed. Pronotum approximately 1.6 times wider than length at middle, strongly convex with a small, longitudinal median depression on anterior half; anterior transverse depression not evident; lateral subbasal pits small, deep; front margin strongly lobed at middle; front angles nearly acute; sides broadly, arcuately rounded, broadest across middle; lateral margins feebly carinate, not reflexed, visible from above only near front angles, moderately arcuate in ventral view; hind margin slightly emarginate, faintly beaded at middle; surface moderately clothed with short, suberect, fine white hairs, coarsely, densely, nearly reticulately punctate, becoming more shallowly punctate towards middle, faintly scabrous at middle. Elytra moderately convex, transversely depressed behind front margin, slightly narrower than pronotum; sides when viewed from above gradually narrowing, except for a slight constriction at basal third, from base to the broadly and conjointly rounded apices; front margin slightly arcuate, strongly beaded; front angles in side view quadrate; lateral margins when viewed from the side shallowly bisinuate on basal third, then broadly arcuate to apices, apical half sparsely serrate, with serrations small at middle and progressively becoming coarse in front of apices; humeri well developed, nearly smooth; striae evident only on apical half, punctations coarse, deep, somewhat elongate and confused on basal half, becoming much smaller and regular on apical half, especially near suture; interstrial spaces subconvex, bearing tiny, sparsely placed punctations near suture, spaces more convex, sparsely imbricate and impunctate toward sides; surface sparsely clothed with short, suberect, recurved, fine white hairs. Ventral surface inconspicuously clothed with short, subdepressed, fine white hairs, thoracic sterna coarsely, rather densely, shallowly punctate, more densely so medially, front margin of prosternum slightly retracted from front angles of pronotum, subtruncate, narrowly reflexed at sides and on either side of middle; abdominal

sternum 1 coarsely, densely and shallowly punctate laterally, more finely, sparsely punctate medially, sterna 2-5 very shallowly, indistinctly punctate, sterna 2-4 broadly impunctate along hind margins, hind angles slightly prolonged, acute, last visible sternum rather narrowly rounded at apex, margins narrowly reflexed, subapical elevation small, rounded, distinctly undercut. Length: 6.2 mm, width: 2.0 mm.

Holotype, male (California Academy of Sciences) from 5 mi W Tehuantepec, Oaxaca, July 1, 1972, G. H. Nelson. Paratypes as follows: Guerrero: two from 3 km W Chilpancingo, July 20/27, 1987; one from 59.4 km N Chilpancingo, July 26, 1987, R. Turnbow; four from 34.6 km SW Iguala, July 5, 1987, Acacia woodland, R. Anderson; three from Mexcala, June 29, 1951, P. D. Hurd; one from 6 mi S Rio Mexcala, hwy 95, August 5, 1965, on yellow-blossomed *Acacia*, G. H. Nelson; one from Mezcala, August 10, 1941, C. Bolivar; three from 12 km E Telolapan, July 20/27, 1987; one from 5.4 mi NE Xochipala, July 13, 189, Jones & Schaffner; one from 6 mi E Xochipala, July 18, 1984, Carrol, Schaffner, Friedlander; two from Zopilote Cyn., June 20-23, 1989, J. Cope. Michoacan: nine from 9 mi S of Cuatro Caminos, July 20, 1966, on *Acacia* sp., D. S. Verity and July 11, 1972, G. H. Nelson; four from Rio Concita, 9 mi S Quatro Caminos, July 20, 1966, on *Acacia* sp., G. Walters and one, July 11, 1972, G. H. Nelson; seven from 29/51 and 45/71, S Nueva Italia, 518 m and 335 m, July 30, 1988, Acacia scrub, R. S. Anderson. Oaxaca: three from 3 km E Juchitan, July 8, 1988, J. Cope; two from 18 mi E La Ventosa Jct, hwy 190, July 21, 1965, G. H. Nelson; six from 23 mi S Matias Romero, August 14, 1963, F. D. Parker & L. A. Stange; one from near Tecomavaca, June 28, 1965, G. H. Nelson and A. Lau; 142 from 3 mi W Tehuantepec, July 9, 10, 19, 20 and August 2, 1965, on *Caesalpinia pulcherrima* (L.) SW., *Cnidocolus urens* (L.) and pink flowered *Acacia*, G. H. Nelson; one from same locality, cut from wood of *Haematoxylon* sp., collected in August 1965, G. H. Nelson; nine from 2 mi W Tehuantepec, July 2, 1964, C. D. Johnson; two from 22 mi W Tehuantepec, June 18, 1955, R. B. & J. M. Selander; three from 16 mi NW Tehuantepec, 1100', June 22, 1966, J. B. Karren; one from 56 mi NW Tehuantepec, July 27, 1968, J. Doyen. Puebla: seven from Acatlan, 4800', July 19, 1955, P. & C. Vaurie; four from 1 mi N Coxcatlan, July 28, 1973, D. S. Verity; three from 30 mi SE Tehuacan, July 7, 1973, Mastro & Schaffner; two from 13.3 mi NE Tehuizingo, July 13-14, 1974, Clark et al.

Paratypes in the collections of the American Museum of Natural History; Essig Museum of Entomology, University of California, Berkeley; Northern Arizona University; R. M. Bohart Museum, University of California, Davis; Texas A & M University; Universidad Nacional Autonoma Mexico; Utah State University; William F. Barr Entomological Museum, University of

Idaho; C. L. Bellamy; G. H. Nelson; R. H. Turnbow; D. S. Verity; George Walters; S. G. Wellso; R. L. Westcott and W. F. Barr.

Most specimens of *A. discolor* are distinctly bicolored, with the pronotum being the darkest. Elytral coloration ranges from aeneous, dark aeneous to blue and blue-green. Overall length ranges from 5.1 mm to 8.2 mm.

This species can be allied with *A. unicolor* Fisher. It is readily differentiated from that species by its coarsely sculptured pronotum and bicolored condition of the upper surface.

Acmaeodera flavosparsa Waterhouse

Acmaeodera flavosparsa Waterhouse 1882:22

As implied by Waterhouse in his original description, two specimens make up the type series of this species. The first, with the label "Mexico W. Coffin" and bearing a subsequently assigned blue disk [=type] has been designated the lectotype. The other specimen, from the Sturm Collection, also bearing a "Mexico" locality label is the paralectotype.

Acmaeodera superba Waterhouse

Acmaeodera superba Waterhouse 1882:23

The type series of two specimens as indicated by Waterhouse is extant. The designated lectotype is from Puebla, Mexico, from the Sallé Collection, bears the number 538 and has a Waterhouse type label. The paralectotype has a small green triangle, a blue label with "Braz" hand written and is from the Saunders Collection. In comparison with the lectotype, the paralectotype is more robust in form and shows differences in the number, placement and extent of the red markings on the pronotum and elytra. This specimen may represent another species.

Acmaeodera picta Waterhouse

Acmaeodera picta Waterhouse 1882:24

There are three specimens in the Waterhouse type series. The one from Orizaba, Mexico which bears his type label and was illustrated by him, unfortunately has its abdomen missing. Regardless, it must be the designated lectotype. The other two specimens, without locality labels and indicated by Waterhouse to be varieties of *A. picta* become paralectotypes. The two additional specimens from Monclova, Coahuila (Dr. Palmer) and Villa Lerdo, Durango, Höge that were subsequently assigned to this species by Waterhouse (1889:180) appear to be *A. paradisjuncta* Knoll and are not designated paralectotypes.

***Acmaeodera flavopicta* Waterhouse**

Acmaeodera flavosticta Waterhouse 1882:24 (nec Horn 1878)

Acmaeodera flavopicta Waterhouse 1889:180

This species, originally described as *A. flavosticta* by Waterhouse was later renamed by him because of the prior use of the name by Horn. Two specimens make up the type series. The designated lectotype is labeled "Mexico Sallé Coll. 546 x-coll J. Sturm" and bears a Waterhouse type label. The designated paralectotype is labeled "Mex J.V.Coffin, *Acmaeodera flavosticta* type variety."

***Acmaeodera venusta* Waterhouse**

Acmaeodera venusta Waterhouse 1882:25

Apparently only two specimens made up Waterhouse's type series of this species. One of these, with a green triangle, a white disk bearing the designation "6191A" and with Waterhouse's type label becomes the lectotype. The paralectotype is labeled "Mexico Sallé Coll/547/*Acmaeodera venusta* Waterh/*Acmaeodera rubronotata* Lap.=*venusta* Sturm apud Sallé. It more closely resembles the species currently recognized as *A. rubronotata* Gory and Laporte than does the lectotype.

***Acmaeodera setosa* Waterhouse**

Acmaeodera setosa Waterhouse 1882:26

The type series is represented by three specimens, each of which bears the label "Mexico Sallé Coll." The lectotype also bears the number "551" which the two paralectotypes lack.

***Acmaeodera proxima* Waterhouse**

Acmaeodera proxima Waterhouse 1889:178

Waterhouse described this as a doubtfully distinct species from a series of five specimens. The lectotype, bearing his type label and three paralectotypes are from Acapulco, Mexico and one paralectotype is from Rincon, Guerrero 2800 feet (H. H. Smith). This name has been treated in the literature as a synonym of the widely distributed *A. flavomarginata* (Gray). However, a reappraisal of this synonymy is in order, because of the apparent geographic association of several supposed variable characters present in populations of *A. flavomarginata*.

***Acmaeodera trizonalis* Kerremans**

Acmaeodera trifasciata Waterhouse 1889:179 (nec Thunberg 1789)

Acmaeodera trizonalis Kerremans 1892:181

Waterhouse described this species, from 13 specimens, as *A. trifasciata*, but it was later renamed by Kerremans because of prior usage of the name. The lectotype, bearing a Waterhouse type label, and six paralectotypes are from Acapulco, Mexico, Höge. Two additional paralectotypes are from the type locality and collected by H. H. Smith and four paralectotypes are from Dos Arroyos, Guerrero, 1000 feet, September (H. H. Smith).

Thanks to the British Museum (Natural History), two of the paralectotypes (from Acapulco, H. H. Smith and Dos Arroyos) have been deposited in the William F. Barr Entomological Museum, University of Idaho.

***Acmaeodera delectabilis* Waterhouse**

Acmaeodera delectabilis Waterhouse 1889:14; Cazier 1951:22

Acmaeodera auritincta Fall 1922:88; Cazier 1951:23. **New synonym**

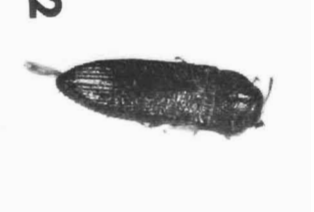
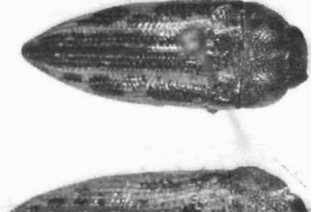
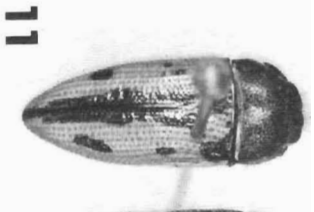
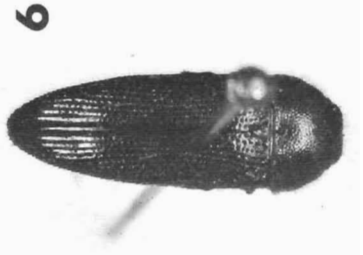
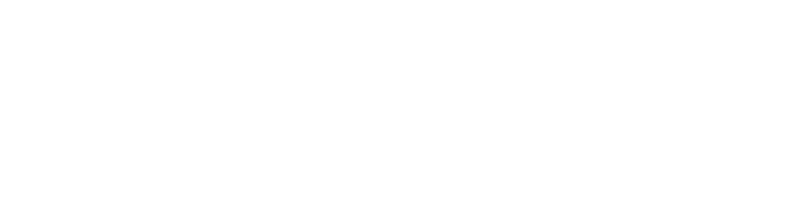
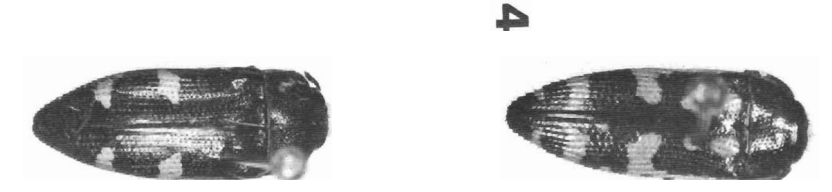
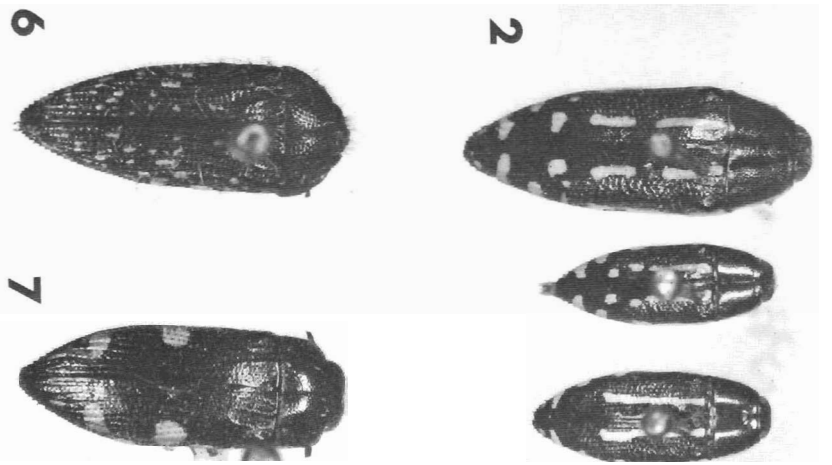
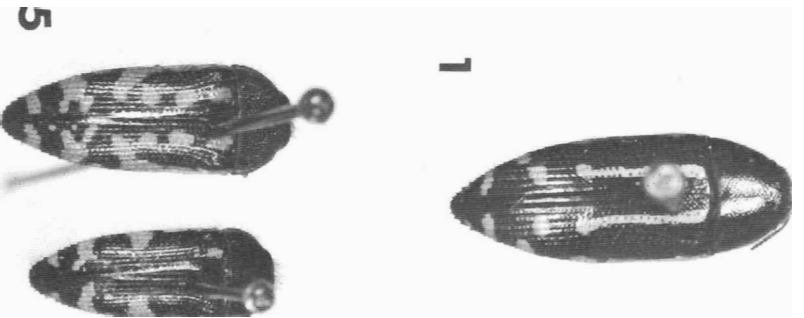
Although Waterhouse indicated *A. delectabilis* to be a probable variety of his *A. flavosticta* he nevertheless, formally described it as a valid species. The type series consists of six specimens, all from Villa Lerdo, Durango. The first specimen in the series and bearing the Waterhouse type label becomes the designated lectotype. The paralectotypes consist of four other corresponding specimens and one specimen that he also indicated to be a variety of *A. flavosticta*, but which he illustrated as a variety of *A. delectabilis*. In actuality, this specimen is *A. maculifera* Horn.

Through the kindness of the British Museum (Natural History), one of the paralectotypes has been deposited in the William F. Barr Entomological Museum, University of Idaho.

Cazier (1951), in separating *A. delectabilis* and *A. auritincta* placed emphasis on the presence or absence of a lateral yellow spot on the pronotum, having the pronotum widest basally or subbasally and on the degree of carination of the subapical elevation on the last visible abdominal sternum. Based on an examination of type material of each entity, along with additionally collected specimens, I believe these characters to be of too variable a nature to justify the retention of these names as representatives of two distinct species.

***Acmaeodera solitaria* Kerremans**

Acmaeodera solitaria Kerremans 1897:40



Figs. 1-12. *Acmaeodera* n. spp., dorsal view. Fig. 1. *A. digna*, holotype. Fig. 2. elytral variation. Fig. 3. *A. jubata*, holotype. Fig. 4. *A. reflexa*, holotype. Fig. 5. elytral variation. Fig. 6. *A. chensaki*, holotype. Fig. 7. *A. crassi*, holotype. Fig. 8. elytral variation. Fig. 9. *A. singularis*, holotype. Fig. 10. *A. dozieri*, holotype. Fig. 11. elytral variation. Fig. 12. *A. discolor*, holotype.

Acmaeodera interrupta Kerremans 1897:41 (nec Kerremans 1892). **New synonym**
Acmaeodera daggetti Fall 1899:26. **New synonym**
Acmaeodera mexicana Kerremans 1900:310, 1902:29.
New synonym

This species, described from Mexico is large and subcylindrical, has lateral yellow markings on the pronotum, has the sides of the elytra strongly toothed and the elytra are dark and balteately marked. *Acmaeodera interrupta* (later renamed *A. mexicana*), also from Mexico is very similar, but lacks any markings on the pronotum. *Acmaeodera daggetti* is similar, but from the southwestern United States, smaller in size and more abundantly marked with yellow. My contention, after examining the type specimens, that these names represent but one species has been reinforced by my finding several *A. solitaria*-like specimens, along with "typical" *A. daggetti*-like specimens, at two localities in southern Arizona in recent years.

Acmaeodera xanthosticta Gory and Laporte

Acmaeodera xanthosticta Gory and Laporte 1837:4
Acmaeodera confusa Fisher 1925:41. **New synonym**

The types of each of these described taxa have been examined, and I believe them to be conspecific. Thus the name *Acmaeodera confusa* Fisher is to be added to the list of several previously established synonyms of the widely ranging Caribbean species, *A. xanthosticta*.

Acmaeodera faceta Fall

Acmaeodera faceta Fall 1907:241

My synonymizing of this species under *A. stigmata* Horn (Barr 1975) was incorrect and was due to several misidentified specimens that were used for comparison purposes. Subsequent examinations of the type specimens involved has convinced me that *A. faceta* is a valid species. It is more robust and less attenuate than *A. stigmata* and is bicolored with a black pronotum and dark violaceous elytra rather than having the uniformly black condition of that species.

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