

A revision of the genus *Anisostena* Weise
(Coleoptera: Chrysomelidae, Hispinae).
Part IV. The *nigrita* species group

C. L. Staines
3302 Decker Place
Edgewater, Maryland 21037

Abstract

The *nigrita* species group of *Anisostena* s. str. is revised. Lectotypes are designated for *A. funesta* and *A. perspicua*; *A. cyanea* is described as new.

Key words: *Anisostena*, lectotype, revision, new species.

Introduction

This is the fourth and final in a series of articles revising the genus *Anisostena*. The first article (Staines, 1993) summarized the work on the genus and revised the subgenera *Neostena* and *Apostena*. The second article (Staines, 1994a) divided the subgenus *Anisostena* s. str. into three species groups and revised the *ariadne* group. The third article (Staines, 1994b) revised the *pilatei* group.

Types were examined for all species except *A. nigrita*. Lectotypes are designated for *A. funesta* and *A. perspicua*. In recording the label data from type specimens, a slash (/) divides data on different labels.

Measurements were taken with an ocular micrometer. Pronotal length and width were taken along the midlines. Elytral width was measured at the humeri. Elytral length was measured from the base to apex. Total length was measured from the base of the frontal sulcus to the apex of the elytra.

The *nigrita* species group

Members of the *nigrita* species group are distinguished by the unicolorous dorsum.

Key to the species of the *nigrita* group

1. Mesofemur serrate on inner margin 3
Mesofemur not serrate on inner margin 2
2. Frons projecting; pronotum with basal impression *funesta* (Baly)

- Frons not projecting; pronotum without basal impression *nunenmacheri* (Weise)
3. Frons not projecting *perspicua* (Horn)
Frons projecting 4
4. Pronotum without basal impression; no tooth produced at union of lateral and apical margins 5
Pronotum with basal impression; tooth produced at union of lateral and apical margins
..... *californica* Van Dyke
5. Vertex of head with scattered punctures 6
Vertex of head with row of punctures on each side of median sulcus *cyanea* new species
6. Antennal segments II and III subequal in length; pronotum with disc impunctate
..... *daguerrei* Uhmann
Antennal segment III longer than II; pronotum with punctures on disc *nigrita* (Olivier)

Anisostena californica Van Dyke

Map 1

Anisostena californica Van Dyke 1925:170. Holotype: California, Yosemite Val[ley], 22/V/1921, Van Dyke Collection, CASC Type No. 1639 (CASC). White 1939:55; Papp 1953:58; Uhmann 1957:74; Horning & Barr 1970:39; Hatch 1971:234; Wilcox 1975:140; LeSage 1991:321.

Anisostena nigrita nec Hatch & Beller 1932:106.

Anisostena perspicua nec Fender 1945:73.

Description: Body dark metallic blue. Head: median sulcus present; vertex with two rows of punctures parallel to sulcus; sulcus present on inner margin of each eye; row of punctures on outer margin of each eye; eyes finely faceted; rugose around top of eyes; interantennal keel present; frons projecting at base of antennae; labrum large. Antennal segment I subglobose; II cylindrical; III-VI transverse, punctate; VII-X transverse, wider than preceding; XI pointed at apex; III longest. Pronotum: parallel-sided; slight prebasal impression; basal margin bisinuate; covered with large, coarse punctures, especially large on disc; small tooth in anterior angles; length 0.9 mm (n=5); width 0.9-1.0 mm (avg. 0.98). Scutellum: metallic blue; quadrate. Elytra: scutellar row 3 or 5 punctures; intervals 2, 4, and 6 costate, 6 most produced; 2 and 6 unite on apical fifth; 4 does not attain union; parallel-sided; lateral margin smooth; apices individually rounded; suture raised; length 3.3-3.6 mm (avg. 3.4); width 1.4 mm. Venter: metallic bluish; pro-, meso-, and metasterna alutaceous in middle, rugose and punctate laterally; abdominal sternum 1 alutaceous in middle, rugose at sides; remaining sterna alutaceous, punctate laterally. Legs: trochanter angulate; femora clavate, punctate, mesofemur serrate on inner margin; tibia gradually expanding to apex, cluster of setae at apex on inner margin; tarsal segments as follows- I small, triangular; II expanded; III bilobed; IV elongate, longer than III; I-III with setae beneath; claws simple, divercate. Total length: 4.1-4.6 mm (avg. 4.24).

Larval host plant: unknown.

Distribution: British Columbia, Oregon, Montana, Idaho, Washington, and California.

Specimens examined: CANADA: BRITISH COLUMBIA: Creston, 8-V-1958 (CNC); Elko (ZMA); Lumby, 17-VIII-1949 (CNC); Trinity Valley, 2-VI-1942 (CNC). UNITED STATES: CALIFORNIA: no further data (MCZC, DEFW). Alpine Co.- Woodfords, 7-V-1959, 8-V-1959, 18-VI-1959, 17-V-1980 (CDFA). Amodor Co.- Amodor, 21-VIII-1928 (USNM). Humboldt Co.- Bridgeville, 20-VI-1959 (CNC). Imperial Co.- Escondido, 15-VII-1941 (SEMC). Mariposa Co.- El Capitan, 5-VIII-1938 (WSUC); El Portal, 14-V-1959 (CDFA); Midpines, 15-V-1975 (EGRC); Yosemite, 26-V-1928, 21-VI-1928, 14-VIII-1932 (MCZC), 20-V-1934 (INHS); Yosemite Park, Valley Flat, 12-VII-1950 (FSCA); Yosemite Nat. Park, VIII-1940 (SEMC), 31-V-1938, 19-V-1938 (CNC), 12-VII-1950 (LLS), 13-VII-1940, 31-VI-1938, 12-VIII-1922 (CUIC); Yosemite Valley, 22-V-1921 (CASC); Yosemite,

3880-4000 ft., 27-V-1931 (USNM); Yosemite Valley, 14-V-1959 (CDFA). Modoc Co.- Cedarville, 14-VI-1966 (CDFA). Plumas Co.- Greenville, 19-VII-1967 (CDFA); Quincy, 18-V-1959 (CDFA). Siskiyou Co.- no further data (USNM); McCloud, 4-VII-1967 (EMUS). Trinity Co.- Hayfork, 19-VI-1968 (CDFA). Tulare Co.- Ash Mountain, 3-V-1984 (CDFA). Yolo Co.- Putah Canyon, 26-III-1964 (CDFA). COLORADO: Larimer Co.- Below Spring Creek Dam, 17-XI-1989 (SMC). IDAHO: Ada Co.- Boise, 18-IX-1987 (EGRC). Bear Lake Co.- Georgetown, 30-IX-1979 (SMC). Benewah Co.- Fernwood, 1952 (INHS); 7 mi NE St. Maire, 21-V-1970 (UICM). Butte Co.- 6 mi S Howe, 9-VIII-1982 (UICM). Camas Co.- 13 mi SE Fairfield, 10-VII-1979 (UICM). Canyon Co.- Caldwell, 12-V-1972 (AJGC). Clearwater Co.- 0.6 mi. N Elk River, 5-VI-1989 (WSUC). Franklin Co.- Club River Canyon, 10-VII-1967 (EMUS). Fremont Co.- Ashton, 23-VI-1970 (EMUS), 15-V-1939 (WSUC); Warm River, 28-IV-1987 (EGRC). Idaho Co.- Slate Cr. R. S., 9-VI-1951 (INHS, CNC); Lochsa River, 0.3 mi. E Papoose Crk., 13-VI-1988 (EGRC, UICM). Kootenai Co.- 4 mi W Athol, 9-VI-1971 (UICM); 3 mi W Cataldo, 12-VIII-1970 (UICM); Farragut St. Pk., 23-V-1986 (UICM). Latah Co.- Laird Park, 4 mi. NE Harvard, 20-V-1973 (WSUC); Moscow Mt., 23-V-1973 (UICM). Madison Co.- Kellys Canyon, 21-V-1980 (SMC). Moose Co.- Selwar-Bitter Wild., 23-30-VI-1989 (UICM). Shoshone Co.- 2 mi E Carkia, 62-VI-1966 (UICM). Teton Co.- 6 mi SW Victor, 8-VII-1967 (UICM). Twin Falls Co.- 6 mi S Cattford, 18-VI-1965 (UICM); Twin Falls, 8-VII-1958 (UICM). Valley Co.- Smiths F., 3-VI-1972 (EMUS). MONTANA: Gallatin Co.- Bozeman, 12-VIII-1990, 15-VIII-1990 (JFC); 19 mi. NE Bozeman, 15-VIII-1990 (JFC); Bridger Cr., 4800 ft., 26-VI-1987, 1-VII-1987 (SMC); M Picnic area near Bozeman, 30-VI-1988 (SMC). OREGON: Benton Co.- Corvallis, 26-IV-1915 (USNM); 5 mi NW Corvallis, 11-V-1973 (USNM). Hood River Co.- Hood River, VII-1931 (SEMC). Josephine Co.- 6-VI-1910 (INHS). Malheur Co.- Harper, 21-V-1931 (USNM). Wasco Co.- Deschutes & Columbia Riv. Junction, 23-V-1957 (EMUS). WASHINGTON: Walla Walla Co.- Walla Walla, 9-V-1941 (WSUC). Total: 177.

Anisostena cyanea, new species

Map 1, Figure 1

Types: Holotype (male): Tex: Bastrop Co., Bastrop St. Pk., June 10, 1989, Coll. E. G. Riley/Holotype *Anisostena cyanea* Staines, det. C. L. Staines 1991 (red label). (USNM). Paratypes (143) all with Paratype *Anisostena cyanea* Staines, det. C. L. Staines 1991 (pink label): 4 with same label data as holotype (EGRC); 65- Tex: Dickens Co.- 1 mi N Dickens, Oct. 11-12-1979, coll. M. E. Rice/ on BOTHRIOCHLOA SACCHARAIDES (Sw.) Rydb. Gramineae (EGRC, CLS, FSCA, USNM); 8- TX: Uvalde Co., Garner St. Pk., Oct. 8, 1982, Coll. E. G. Riley (EGRC); 3- Tex: Jeff Davis Co., nr. Fort Davis, Oct. 6, 1982, Coll. E. G. Riley (EGRC); 4- TX: Culberson Co., Guadalupe Mts. Nat. Pk., Bear Cyn., June 14-80, Coll.

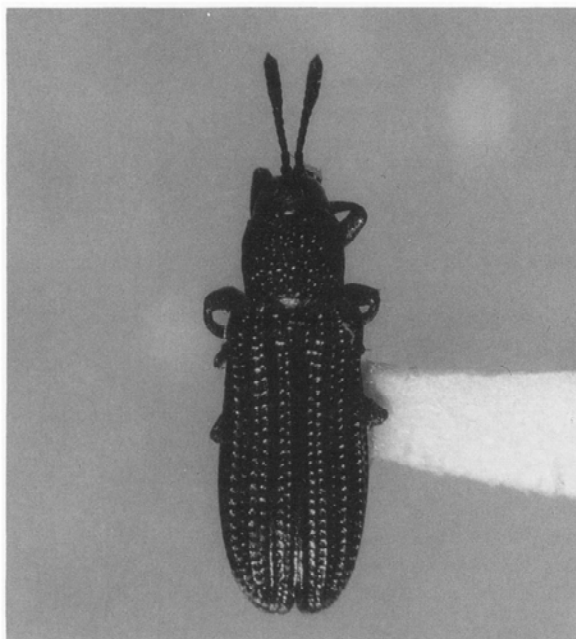


Figure 1. *Anisostena cyanea*, new species.

M. E. Rice (EGRC); 6- Tex: Crosby Co., White River Lk., Oct. 2-3-1982, Coll. E. G. Riley (EGRC); 16- TEX: Tarrant Co., Ft. Worth Nature Center, VI-24- 1989: E. G. Riley (EGRC); 7- Texas: Brazos Co., College St., White Ck. rd., VIII-13-14-82: E. G. Riley (EGRC); 3- TEXAS: Dickens Co., 1 mi N of Dickens, 24 July 1979, Marlin E. Rice coll. (EGRC); 1- with the same label data except 17 August 1979 (EGRC); 1- with the same label data except 22 July 1979 (EGRC); 1- TEXAS: Dickens Co., 2 mi N of Dickens, 8 August 1979, Marlin E. Rice coll. (EGRC); 1- Tex: Brewster Co., Chisos Mts., below the Basin area, X-7-82: E. G. Riley (EGRC); 1- Tex: Bandera Co., 8 mi W. Tarpley, Oct. 9, 1982, Coll. E. G. Riley (EGRC); 1- Texas: Brazos Co., College St., White Cr. Rd., V-18-89, Coll. E. G. Riley (EGRC); 2- TX: Val Verde Co., Hwy 90 & Amistad Resv., 18-IX-1981, Marlin E. Rice (EGRC); 1- TEX: Burnett Co., Inks Lake St. Pk., May 21, 1989, Coll. E. G. Riley (EGRC); 1- Palo Duro Cyn. St. Pk., Texas, August 7, 1961, H. R. Burke (TAMU); 1 TEXAS: Bosque Co., 3 mi S Iredell, April 21, 1972, J. C. Schaffner (TAMU); 1 TEXAS: Bosque Co., 2 mi S Iredell, June 4, 1970, J. C. Schaffner (TAMU); 1- Cisos Mts., The Basin, Big Bend Nat'l Park, Texas, June 19, 1968, M. L. Allender (TAMU); 1- Babcock Ranch, 22 mi s of Alpine, Brewster Co., Texas, August 26, 1969, Board & Hafernik (TAMU); 1- TEX: Brewster Co., 15 mi. N. Marathon, June 9, 1972, W. E. Clark (TAMU); 1- TEXAS: Erath Co., Bluff Dale, 1 mi n. Paluxy River, April 28-May 4, 1978, Malaise Trap, R. L. Sams (TAMU); 1- TEXAS: Garza Co., 2 miles s. Post, September 7, 1982, ex. cotton, D. A. Dean (TAMU); 1- Lange's Mill, Gillespie Co., Texas, June 5, 1969, Board & Hafernik (TAMU); 1- Tex. Jeff

Davis Co., vic. Bloy Camp Meeting, 15 Aug. 1982, R. Turnbow (TAMU); 1- Texas: Kerr Co., Center Point, July 31-August 6, 1987, Wharton, Praetorius, Malaise trap (TAMU); 1- 7 mi. S. W. Marfa, Tex., VIII-6-1964, H. R. Burke & J. Apperson (TAMU); 1- 4 mi. W. of Leaky, Real Co., Texas, August 7, 1969, Board & Hafernik (TAMU); 1- TEXAS: Somervell Co., 10 mi. W. Glen Rose, May 21, 1973, J. C. Schaffner (TAMU); 1- TEXAS: Travis Co., Austin, Zilker Park, October 8, 1983, J. B. Woolley, 83/002 (TAMU); 1- with the same label data except 83/003 (TAMU); 1- TEX, 19 mi NE Pine Spgs, Culberson Co., 7-25-1970/ at night, C. W. O'Brien, G. B. Marshall (LLS); 1- U.S.A. Arizona, Chiricahua Mtns., Portal, 24-27-VII-66, W. Boyle & R. Lalonde (LLS); 1- 6 mi. S. Durango, Dgo. Mex., VII-4-64, H. F. Howden/ CNC Type No. 19497 (red label) (CNC).

Description: Head: vertex micropunctate; median sulcus present; row of punctures between median sulcus and each eye; sulcus on inner margin of each eye; row of punctures on outer margin of each eye; slight depression at base of median sulcus; frons projecting at base of antennae; clypeus arcuate, with white setae. Antennal segment I subglobular, II-VI transverse, punctate, III longer than II, IV-VI decreasing in length; VII-XI wider than preceding, hirsute, XI pointed at apex. Pronotum: covered with large, deep punctures, more dense laterally; basal margin bisinuate; lateral margins divergent for basal half, then parallel; length 0.9-1.1 mm (avg. 1.0; n=30); width 0.9-1.1 mm (avg. 0.9). Scutellum: quadrate, alutaceous. Elytra: scutellar row 2 punctures; 8 regular puncture rows; interspaces 2, 4, and 6 costate, 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of 2 punctures; lateral margins smooth; apical margins dentate; length 2.8-3.6 mm (avg. 3.3); width 1.0-1.1 mm (avg. 1.1). Venter: pro- and mesosterna punctate in middle, rugose at sides; metasternum smooth, some punctures along basal margin; abdominal sternites smooth in middle, rugose at sides. Legs: mesofemur serrate on inner margin, femora punctate; tibiae expanded to apex, with tuft of setae on inner apical margin. Total length: 3.7-4.6 mm (avg. 4.2).

Larval host plant: collected on *Bothriochloa saccharides* (Gramineae).

Distribution: Mexico (Durango) and United States (Texas and Arizona).

Specimens examined: MEXICO: DURANGO- 6 mi S. Durango, 4-VII-1964 (CNC). UNITED STATES:

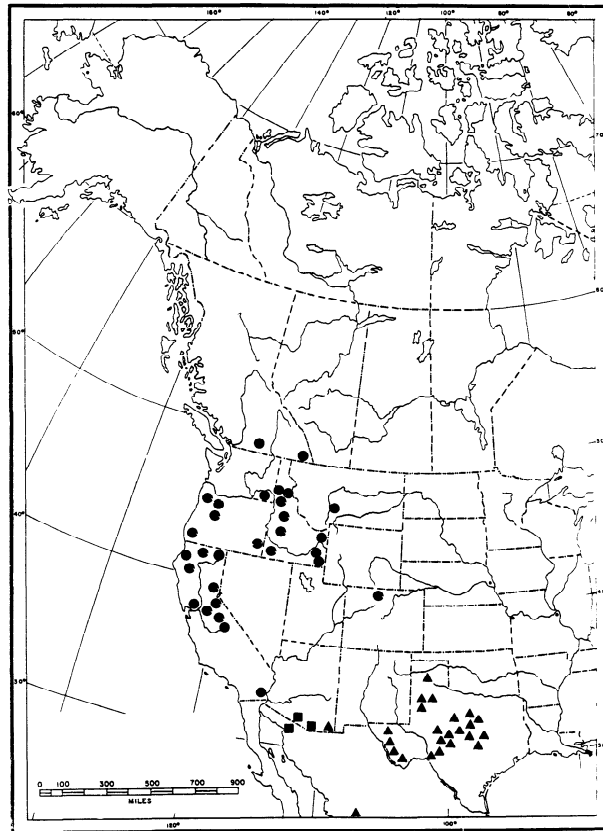
ARIZONA: Cochise Co.- Chiricahua Mtns., Portal, 24-27-1966 (LLS). **TEXAS:** Armstrong Co.- Palo Duro Cyn. St. Pk., 7-VIII-1961 (TAMU). Bandera Co.- 8 mi W. Tarpley, 9-X-1982 (EGRC). Bastrop Co.- Bastrop State Park, 10-VI-1989 (EGRC, USNM). Bosque Co.- 3 mi S. Iredell, 21-IV-1972; 2 mi S. Iredell, 4-VI-1970 (TAMU). Brazos Co.- College Station, White Cr. Rd., 18-V-1989, 13-14-VIII-1982 (EGRC). Brewster Co.- Chisos Mts., below the Basin area, 7-X-1982 (EGRC); Chisos Mts., The Basin, Big Bend Nat'l Pk., 19-VI-1968 (TAMU); Babcock Ranch, 22 mi S. Alpine, 26-VIII-1969 (TAMU); 15 mi N. Marathon, 9-VI-1972 (TAMU). Burnett Co.- Inks Lanke St. Pk., 21-V-1989 (EGRC). Crosby Co.- White River Lake, 2-3-X-1982 (EGRC). Culberson Co.- Guadalupe Mts. Nat. Pk., Bear Cyn., 14-VI-1980 (EGRC); 19 mi NE Pine Spgs., 25-VII-1970 (LLS). Dickens Co.- 1 mi N. Dickens, 11-12-X-1979, 24-VII-1979, 17-VIII-1979, 22-VII-1979 (EGRC, CLS, USNM, FSCA); 2 mi N. Dickens, 8-VIII-1979 (EGRC). Erath Co.- Bluff Dale, 1 mi N. Paluxy River, 28-IV-4-V-1978 (TAMU). Garza Co.- 2 mi S. Post, 7-IX-1982 (TAMU). Gillespie Co.- Lange's Mill, 5-VI-1969 (TAMU). Jeff Davis Co.- vic. Bloy Camp Meeting, 15-VIII-1982 (TAMU); nr. Ft. Davis, 6-X-1982 (EGRC). Kerr Co.- Center Point, 31-VII-6-VIII-1987 (TAMU). Presidio Co.- 7 mi SW Marfa, 6-VIII-1964 (TAMU). Real Co.- 4 mi W. Leaky, 7-VIII-1969 (TAMU). Somervell Co.- 10 mi W. Glen Rose, 21-V-1973 (TAMU). Tarrant Co.- Ft. Worth Nature Center, 24-VI-1989 (EGRC). Travis Co.- Austin, Zilker Park, 8-X-1983 (TAMU). Uvalde Co.- Garner St. Pk., 8-X-1982 (EGRC). Val Verde Co.- Hwy 90 & Amistad Resv., 18-IX-1981 (EGRC). Total: 144.

Anisostena daguerrei Uhmann

Map 2

Anisostena daguerrei Uhmann 1938:366. Holotype: Chaco- Argentina, Dep. Resistencia, X-XII 1936, J. B. Daguerre/ 24/ Holotypus (red label)/ Argentina 1968 colln. Daguerre/ 36/ Holotipo (red label)/ *Anisostena daguerrei* Uhmann, Uhmann det. 1937 (USNM). Blackwelder 1946:724; Monrós & Viana 1947:203; Papp 1953:58; Uhmann 1957:74; Gaedike & Döbler 1971:346.

Description: Body elongate-oval; chestnut-brown or metallic green. Head: dull; median sulcus faint; densely punctured; frons projecting at base of antennae; sulcus present on inner margin of each eye; row of punctures present on outer margin of each eye; vertex micropunctate. Antennal segments I-II reddish, rest darker; I subglobular; II cylindrical, subequal in length to III; III-X transverse, VII-X wider than preceding; XI pointed at apex. Pronotum: wider than long; basal impression absent; punctation irregular; disc impunctate; rest with scattered



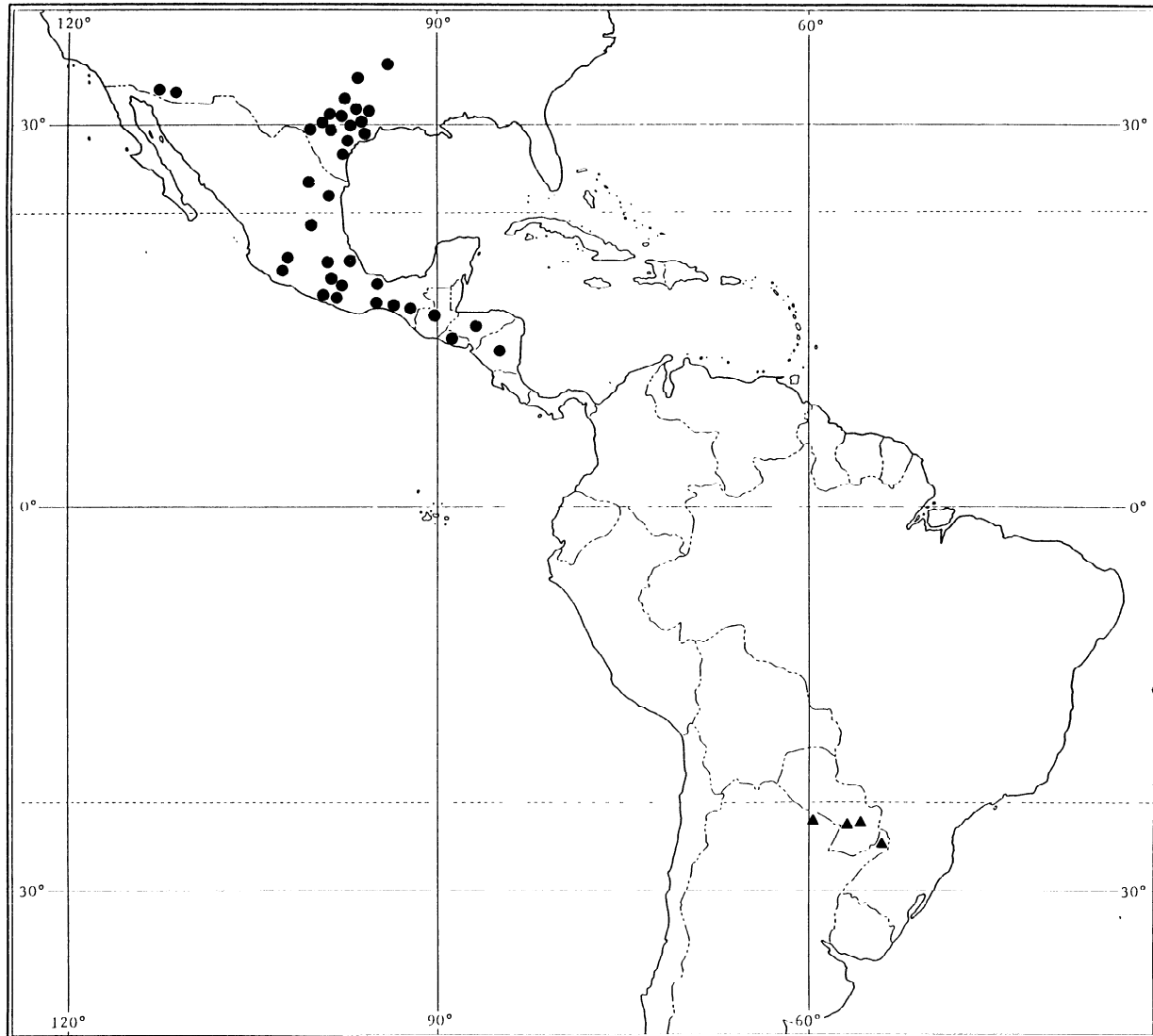
Map 1. Distribution of *Anisostena* species: *californica* (circles); *cyanea* (triangles); *nunenmacheri* (squares).

large, coarse punctures, more dense laterally; lateral margins evenly arcuate; basal margin bisinuate; highly convex; surface between punctures micropunctate; length 0.8-0.9 mm. (avg. 0.8; n=7); width 0.8-0.9 mm (avg. 0.9). Scutellum: quadrate; small; punctate. Elytra: subparallel; apices conjointly rounded; apical margins denticulate; lateral margins smooth; scutellar row of 1 puncture; costate intervals 2 and 4 more pronounced on apical fifth; 6 raised for entire length; intervals 2 and 6 unite on apical fifth; surface between punctures micropunctate; length 2.5-2.8 mm. (avg. 2.6); width 1.0-1.1 mm (avg. 1.07). Legs: mesofemur serrate on inner margin; femora and tibiae punctate. Total length: 3.3-3.6 mm. (avg. 3.4).

Larval host plant: unknown.

Distribution: Argentina and Paraguay.

Specimens examined: ARGENTINA: Dep. Resistencia- Chaco, X-XII-1936 (USNM). Misiones-



Map 2. Distribution of *Anisostena* species: *daguerrei* (triangles); *funesta* (dots).

S. Jauieri, IX-1947 (USNM); Loreto (USNM); Puerto Iguazu, 16-XI-1988 (JW); Sta. Maria, X-1947 (USNM). **PARAGUAY:** Central-Asunción, 15-I-1983 (EGRC). Cordillera-Inst. Agro. Nac. Caacupé, 17-20-I-1983 (EGRC). Total: 15.

***Anisostena funesta* (Baly)**

Map 2

Charistena funesta Baly 1885:46. Lectotype (here designated): Orizaba, Mexico/ Syntype (white disk with

blue border)/ 1423 (pale blue)/ Godman-Salvin Coll. Biol. Centr.-Amer./ *Charistena funesta* Baly, Mexico, Guatemala/ Lectotype *Anisostena funesta* (Baly), des. C. L. Staines, 1990 (red label) (BMNH). Paralectotype (here designated): S. Geronimo, Guatemala, Champion/ Syntype (white disk with blue border)/ Godman-Salvin Coll. Biol. Centr.-Amer./ *Charistena funesta*/ Paralectotype *Anisostena funesta* (Baly), des. C. L. Staines, 1990 (red label) (BMNH). Champion 1894:235; Donckier 1899:584; Weise 1905:132, 1907:206.

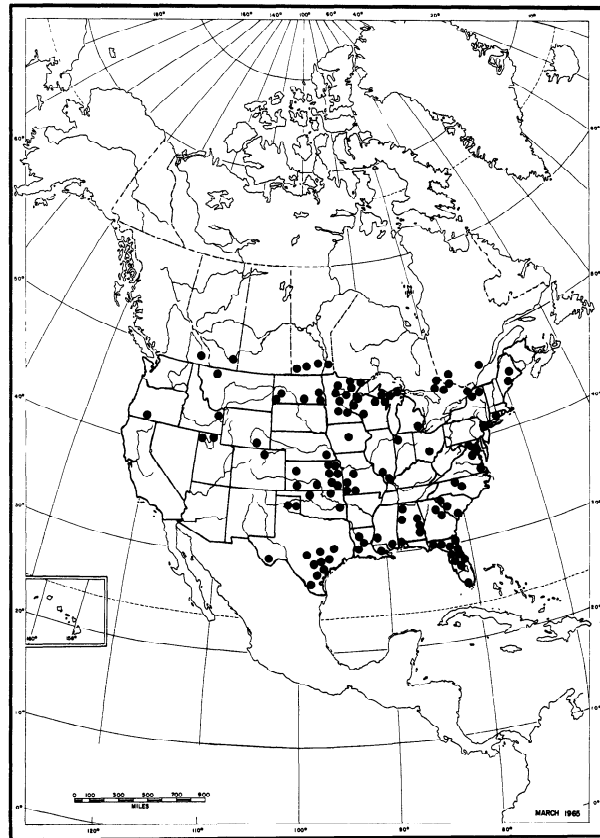
Anisostena funesta (Baly). Weise 1911a:21, 1911b:32; Leng 1920:303; Blackwelder 1946:724; Papp 1953:58; Uhmman 1957:74; Wilcox 1975:140.

Description: Overall color metallic blue-green. Head: vertex micropunctate; median sulcus present; row of punctures on each side of median sulcus; sulci present on inner margin of each eye; row of punctures on outer margin of each eye; frons projecting at base of antennae. Antennal segment I subglobose; II-III cylindrical, III longer than II; IV-VI transverse; VII-X transverse, wider than preceding; XI pointed at apex; I-VI glabrous, VII-XI with setae; several large punctures at top of each eye; frons punctate. Pronotum: covered with large scattered punctures, more dense laterally; surface between punctures micropunctate; apical margin and anterior part of disc impunctate; basal margin bisinuate; lateral margins parallel for basal half, then weakly convergent; basal impression present; length 0.7-0.9 mm (avg. 0.76, n=16); width 0.7-0.9 mm (avg. 0.82). Scutellum: black; quadrate; micropunctate. Elytra: scutellar row of 2 punctures; lateral margin slightly narrowed just behind humerus; suture slightly darker than rest of surface; interval 2 not strongly produced; intervals 4 & 6 more produced; 2 & 6 unite on apical fifth, 4 does not attain union by the diameter of three punctures; apical margin dentate; lateral margins smooth; length 2.4-3.1 mm (avg. 2.7); width 1.1-1.3 mm (avg. 1.2). Venter: pro- and mesosterna brownish, punctate in middle, blue-green and rugose at sides; metasternum entirely metallic blue-green; abdomen brownish, smooth in middle, rugose at sides. Legs: brownish; femora punctate, mesofemur not serrate on inner margin; tibiae with tuft of setae at apex. Total length: 3.1-4.0 mm (avg. 3.5).

Larval host plant: unknown.

Distribution: Arizona and Texas south to Guatemala.

Specimens examined: **EL SALVADOR:** San Salvador, 9-VI-1958 (USNM), 14-VI-1948, 21-VI-1958, 25-VI-1958 (LLS); Santa Ana Valiano (USNM). **GUATEMALA:** S. Geronimo (BMNH). **HONDURAS:** 3 mi. W Progreso, 19-VIII-1983 (EGRC). **MEXICO:** no further data (USNM); Orizaba (BMNH). **Chiapas** - Palenque, 17-VIII-1979 (USNM); 2 mi. NW Pueblo Nuevo, LLU Biol. Sta., 12-VII-1965 (EGRC); 25 mi. E Tuxtla Gutierrez, 5100 ft., 4-VI-1974 (EGRC); Yaxoquintela, 560 m., 4-IX-1978 (CUIC). **Colima** - 10 mi. NE Coala, 17-19-VII-1983 (TAMU). Durango- 24 mi. W La Ciudad, 17-VII-1964



Map 3. Distribution of *Anisostena nigrita*.

(CNC). **Guadalajara** - no further data (USNM); Jalisco, 7-1-1966 (USNM). **Guerrero** - Acapulco (USNM); Chilpancingo, 6-VIII-1954 (SEMC); 15 mi. W Chichihualco, 5000 ft., 15-VII-1984 (TAMU); 2 mi. E Ocotito, 11-VII-1985 (TAMU). **Hidalgo** - 33 mi. NE Jacala, 3700 ft., 27-V-1974 (EGRC). **Jalisco** - 10 mi. SW Autlan, 22-VII-1966 (TAMU); 3 mi. NE Contla, 23-VII-1966 (TAMU); Jen. 44 & 35, S Guadalajara, 5100 ft., Hwy. 35, 12-VIII-1982 (EGRC); 11 mi. N Pihuamo, 19-VII-1966 (TAMU); 11 mi. NE Tamzula, 18-VII-1966 (TAMU); 4 mi. SW Tuxpan, 19-VII-1966 (TAMU). **Mexico** - 12 mi. N Ixtapan, 15-VII-1966 (TAMU). **Michoacan** - 4 mi. SE Tuxpan, 6500 ft., Hwy. 15, 16-VIII-1982 (EGRC); 10 mi. S Uruapan, 6-VII-1985 (TAMU). **Morelos** - Cuernavaca, 22-VI-1937 (UAIC), 1-VIII-1938, 6-VIII-1938 (SEMC), 1-1945, XI-1966 (USNM), 18-IV-1959, 5-VI-1959, 15-III-1959 (CUIC); 14 km. E Cuernavaca, 12-IX-1969 (TAMU); Taxco, 4 mi. S, 8-VIII-1954 (SEMC); Tlayucapan, 29-X-1982 (CDFA); Zacatepec, 31-VII-1947 (BPBM). **Nayarit** - Tepic, 2-VIII-1947 (USNM). **Nuevo Leon** - Monterrey, 7-VIII-1963 (CNC), 11-VII-1963 (CHAH). **Oaxaca** - Oaxaca City, 15-21-VII-1937 (UAIC). **Puebla** - Atlixco, V (USNM), 29-VI-1961 (SEMC); 7 mi. N Matamoros Izucar, 19-VIII-1962 (SEMC); 18 mi. SW

Martinez de la Torre, Hwy. 29, 11-VI-1983 (EGRC). **San Luis Potosi** - 13 mi. E Cd. Muiz, 23-VII-1962 (SEMC), El Salto, 7-VIII-1967 (TAMU); Hurchihuayan, 25-IX-1938 (USNM); 8 mi. S Valles, 22-VIII-1974 (TAMU). **Tamaulipas** - Rio Sabinas, Rancho Cielito, 14-15-IV-1984 (TAMU). Vera Cruz - Hwy. 50, 2 mi. SE Cuitlahuac, 3-VII-1965 (EGRC); 3 mi. NE Huatusco, 23-VII-1984 (TAMU); 1 mi. W Papantla, 28-VI-1971 (TAMU); Vera Cruz, 15-V-1963 (USNM). **NICARAGUA**: Est. 9 mi. NW Esteli, 3000 ft., 16-VII-1974 (EGRC). **UNITED STATES: Arizona**: Pima Co. - Continental, 8-1976 (USNM). Santa Cruz Co. - Madera Canyon, St. Rita Mts., 28-VIII-1966 (NAZU). **Oklahoma**: Latimer Co. - V-1985, VIII-1986, IV-1988, IV-1989; 5 mi. W Red Oak, 5-V-1981 (EJF). **Texas**: Anderson Co. - Salmon, 17-V-6-VI-1975 (TAMU). Bexar Co. - 28-IV-1963 (USNM). Bosque Co. - 2 mi. W Iredell, 14-IV-1967 (TAMU); Laguna Park, 13-IV-1984 (TAMU). Brazos Co. - Bryan, 23-IV-1971 (TAMU); College Station, 23-IX-1973 (TAMU), 13-14-VIII-1982 (EGRC); Minter Springs, 7-V-1970, 19-V-1970, 10-V-1071 (TAMU); 0.5 mi. W Minter Springs, 20-IV-1970 (TAMU); Hwy. 30, Navasota R., 28-III-1969 (TAMU); 0.5 mi. W Wellborn, 16-IV-1970 (TAMU). Erath Co. - Stephenville, 3-V-1971 (TAMU). Kerr Co. - Center Point, 12-18-VI-1987, 17-23-VII-1987 (TAMU). Montgomery Co. - 5 mi. N Montgomery, 8-IV-1982 (TAMU). Refugio Co. - 10 mi. SW Woodsboro, Aransas River, 15-III-1972, 26-III-1973 (TAMU). San Patricio Co. - 2 mi. S Sinton, 10-VI-1971 (TAMU). Tarrant Co. - Ft. Worth Nature Center, 31-VI-1980, 27-V-1981, 6-VI-1981 (TAMU). Uvalde Co. - Uvalde, 19-V-1937. Val Verde Co. - 20 mi. E Del Rio, 21-VII-1963 (USNM). Washington Co. - 31-III-1971 (TAMU). Wharton Co. - 4.8 mi. W Jct. 71 & 1300, 9-V-1984 (EGRC). Total: 144.

Anisostena nigrita (Olivier)

Map 3

Hispa nigrita Olivier 1808:778. (Type not seen, depository unknown). Schönherr 1817:6.

Odontota nigrita (Olivier). Dejean 1837:388.

Charistena nigrita (Olivier). Baly 1864:252; Crotch 1873:101; Schwarz 1878:360; Horn 1883:298; Donckier 1899:584; Smith 1899:317, 1910:355.

Chalepus nigrita (Olivier). Gemminger & Harold 1876:3614.

Anisostena nigrita (Olivier). Weise 1911a:21, 1911b:32; Leng 1920:303; Blatchley 1924:43; Douglass 1929:34; Brimley 1938:230; Loding 1945:136; Fattig 1948:41; Papp 1953:59; Wilcox 1954:470; Uhmman 1957:74, 1964b:414; Kirk 1970:94; Hatch 1971:234; Balsbaugh & Hays 1972:183; Wilcox 1975:140; Kirk & Balsbaugh 1975:119; Thomas & Werner 1981:2; Riley & Enns 1982:36; Ford & Cavey 1985:49; LeSage 1991:321.

Description: Body black or greenish, shining. Head: median sulcus present; vertex punctate; sulcus present on inner margin of each eye; row of punctures on outer margin of each eye; micropunctate between punctures; frons punctate; interantennal keel sharp; side of head smooth; frons projecting at base of antennae; row of punctures between sulci. Antennal segment I subglobose, punctate; II-III subcylindrical, III longest; IV-VI transverse; VII-XI wider than preceding, hirsute, XI with blunt point. Pronotum: covered with deep, coarse punctures, punctures larger on apical half; surface between punctures micropunctate; basal margin bisinuate; sides margined; lateral margins sinuate; convex; basal impression absent; length 0.7-1.0 mm (avg. 0.79, n=20); width 0.7-1.1 mm (avg. 0.9). Scutellum: quadrate; micropunctate. Elytra: scutellar row of three punctures; intervals 2, 4, and 6 costate, all raised; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; apices dentate, cojointly rounded; lateral margin sparsely dentate; humeral callous punctate; lateral margins sparsely dentate; surface between punctures micropunctate; length 2.7-3.8 mm. (avg. 3.23); width 1.1-1.7 mm (avg. 1.35). Legs: femora with row of punctures at apex, alutaceous, mesofemur serrate on inner margin; tibiae with longitudinal rows of punctures, alutaceous. Venter: prosternum punctate in middle; mesosternum punctate in middle, granulate at sides; metasternum smooth in middle, alutaceous with punctures at sides; abdominal sterna smooth in middle, rugose at sides. Total length 3.4-5.0 mm (avg. 4.06).

Larval host plants: *Schizachryium scoparium* (Ford & Cavey, 1985).

Adults have been collected from *Malvastrum aurantiacum* flowers.

Distribution: Canada and the United States from Utah and Texas east.

Specimens examined: no data (USNM). **CANADA: ALBERTA:** Medicine Hat, 6-VI-1928, 30-VI-1929 (ISAC). **BRITISH COLUMBIA:** Creston, 1-V-1980 (ISAC). **MANITOBA:** Aweme, 26-VI-19, 9-VI-1907 (CNC); Birds Hill Prov. Park, 4-VIII-1983, 20-VI-1983 (ISAC); Delta, 16-V-1985 (ISAC); Glenlea Res. Stn., 27-VIII-1983 (ISAC); Hartney, 31-VII-1937 (SEMC); Ikme Hazel, 10-VI-1984 (ISAC); Ninette, 20-VI-1958 (CNC); Pinawa, 28-VII-1981 (ISAC); Spruce Woods Prov. Park, Spirit Sands, 17-VIII-1984 (ISAC); Winnipeg, 21-VI-1984 (ISAC). **NEW BRUNSWICK:** Fredericton, 17-VI-

1981 (CNC); Jemseg, 18-VI-1981 (CNC). **ONTARIO:** no further data (CNC); Algonquin Park, 13-VIII-1960 (USNM); Chalk River, 10-VIII-1963 (CNC); Hardwood Plains, 2-VII-1981 (CNC); North Bay, 17-VI-1972 (CNC); St. Lawrence Is. Nat. Park, 27-V-1975 (CNC); 15 mi. N Sioux Narrows, 8-VI-1960 (CNC); South March, 30-VI-1959 (CNC); Sundridge, 13-VII-1961 (CNC); Walpole Isl., 8-VI-1981 (CNC). **QUEBEC:** Cairnside, 24-VIII-1984 (CNC); Couey Hill, VII-1921 (LLS); Laniel, 3-4-VI-1963 (LLS), 24-VI-1963 (CNC); L'Etang, 16-VIII-1985 (LLS); Noyan, 30-V-1981 (LLS); Ormstown, 12-VII-1977 (LLS); Témiscaming, 7-IX-1981 (LLS), 16-VIII-1985 (CNC). **UNITED STATES: ALABAMA:** Barbour Co.- Public Lane, 29-VI-1965 (AUEM). Clay Co.- Cheaha St. Pk., Cheaha Mt., 2400 ft., 10-VIII-1985 (EGRC). Cleburne Co.- Cheaha St. Pk., 3-V-1964 (AUEM), 21-IX-1930 (CUIC). Lee Co.- Auburn, 14-VIII-1969 (CNC), 5-VIII-1964 (AUEM). Marion Co.- North Fork, US 43, 2-VI-1964 (NDSU). Mobile Co.- Chickasaw, 21-IX-1930 (CUIC). Tuscaloosa Co.- Peterson, 17-IV-1952 (USNM). **COLORADO:** no further data (USNM). Weld Co.- Roggen, 8-IV-1933 (WSUC). **CONNECTICUT:** Hartford Co.- Rainbow, 2-VIII-1946 (PMNH). New Haven Co.- Prospect, 20-VIII-1972 (FSCA). **FLORIDA:** no locality (UAIC); St. Nicholas (USNM). Alachua Co.- Gainesville, 24-III-1953 (FSCA), 20-IV-1948 (UMMZ); High Springs, 24-V-1949 (FSCA). Columbia Co.- Lake City, 5-VIII-1939 (SEMC). DeSota Co.- Arcadia, 25-IX-1978 (FSCA). Duval Co.- Jacksonville (CLS). Highland Co.- Archbold Biological Station, 9-IX-1983 (ABSC). Hillsborough Co.- Lutz, 19-III-1926 (ICCM). Lafayette Co.- Branford, 4-VIII-1939 (SEMC). Marion Co.- Ocala Nat. For., 3 mi. N Hwy 40 at Zay Pra., 30-VI-1980 (EGRC). Monroe Co.- Big Pine Key, 9-VII-1971 (FSCA). Nassau Co.- Jacksonville (UAIC). Orange Co.- Clamona, 30-VI-1948 (SEMC); Orlando, 6-VIII-1948 (FSCA). Osceola Co.- 7 mi. N Yeehaw Jcn., 29-III-1976 (EGRC). Pinellas Co.- Dunedin, 13-IV (UMMZ). Polk Co.- Bartow J., 16-VII (USNM). Seminole Co.- Orlando, 29-III-1953 (CNC); Sanford, VIII-IX-1929, 5-VIII-1929 (MCZC). Suwannee Co.- Suwannee Spr., 2-3-VIII-1939 (SEMC). Volusia Co.- Coronado Beach, 13-V-1921 (ICCM); Ormond Beach, 10-IV-1983 (EGRC). Washington Co.- Ebro, 1-IV-1973 (CNC). **GEORGIA:** Clark Co.- Whitehall Forest, 21-V-1975 (EGRC). Johnson Co.- 1 mi. E Kite, 22-VI-1976 (EGRC). **IDAHO:** Bonneville Co.- Targhee N. F., Warm Springs, 6-18-VI-1986 (ZMA). **ILLINOIS:** no further data (ICCM). Johnson Co.- Ferne Clyffe S. P., S. Goreville, 6-VI-1976 (CUIC). Monroe Co.- Valmeyer, 24-V-1950 (INHS). **INDIANA:** Porter Co.- Indiana Dunes Park, 18-V-1977 (FSCA). **IOWA:** Story Co.- Ames, 30-III-1932 (USNM). **KANSAS:** no further data (USNM). Doniphan Co.- Wathena (USNM). Douglas Co.- no further data (SEMC); 11-V-1940 (SEMC); Lawrence, 3-VII-1938 (FSCA). Gove Co.- 2500 ft. (SEMC). Greenwood Co.- Verdigris Riv. Bridge, 1 mi. N Madion, 28-V-1976 (EGRC). Meade Co.- 18-VIII-1945 (SEMC). Montgomery Co.- 3-VIII-1923, 26-VI-1923 (SEMC). Osage Co.- Pomona Lake, 28-V-1976 (EGRC). Pottawatomie Co.- Onaga

(USNM). Riley Co.- no further data (USNM); Ashland bottoms (EGRC); Manhattan, 19-V-1966, 15-X-1959, 3-VIII-1959 (USNM), 16-IV-1985, 30-IV-1985 (EGRC). Reno Co.- 5 mi. S Medora, 20-VII-1967 (USNM). Riley Co.- Ashland bottoms, 28-III-1986 (UICM). Shawnee Co.- Topeka (USNM), VII (USNM). **LOUISIANA:** Beauregard Par.- 5 mi. S DeRidder, 25-III-1982 (EGRC). Natchitoches Par.- 16-VIII-1928 (SEMC); Kisatchie N.F., Red Dirt W.M.A., 5-6-IV-1985, 27-IV-1985 (EGRC), Fire Tower, 26-IX-1981, 15-V-1982 (EGRC). Orleans Par.- New Orleans (USNM). Vernon Par.- no further data (UAIC). **MAINE:** Hancock Co.- Mt. Desert Isl., 7-VII-1955 (CUIC). Penobscot Co.- Enfield, 7-VI-1967 (USNM); Orono, 30-VI-1958 (USNM). **MARYLAND:** Anne Arundel Co.- BWI Airport, 28-VI-1986 (CLS). Baltimore Co.- Deer Park, 25-VI-1988 (EJF). Prince George's Co.- Beltsville, 4-VI-1971 (USNM). **MICHIGAN:** Watersmeet, 5-VII-1975 (CUIC). Delta Co.- Escanaba, 27-VI-1956 (PMNH). Gogebic Co.- 12-VIII-1919 (UMMZ); 5 mi. E Wakefield on US 2, 24-VI-1973 (UMMZ). Ingham Co.- 10-VIII-1932, 11-VIII-1932 (UMMZ). Marquette Co.- Huron Mountain Club, Ives Lake, 10-15-VI-1974 (EGRC). Menominee Co.- 1-VIII-1937 (USNM). Ontonagon Co.- 26-VIII-1947 (UMMZ). Schoolcraft Co.- 4 mi. N Germfask Seney Refuge, 3-VI-1938 (UMMZ); Manistique, 10-VII-1972 (CNC). **MINNESOTA:** Little Winnebegosish, 10-11-VI-1935 (USNM); Melrude, 2-IX-1938 (WSUC); Page, 22-IV-1936 (USNM). Aitkin Co.- Solana St. For., 11-VII-1971 (DEFW). Beltrami Co.- Bemidji, 18-VI-1958 (CNC). Cass Co.- Bena, 12-VIII-1937 (SEMC). Cook Co.- Grand Marias, 25-VI-1940 (DEFW). Hubbard Co.- Cass Lake, 23-VI-1937, 4-VII-1937 (WSUC). Itasca Co.- Deer Lake, 15-21-VI-1986 (EGRC); Itasca Park, 23-VI-1937, 18-VI-1937 (WSUC). Kanabec Co.- 6-VII-1940 (DEFW). Mille Lacs Co.- Mille Lacs Lake, near Vineland, 24-V-1974 (DEFW). St. Louis Co.- Angora Area, 30-VI-1982 (FSCA). **MISSISSIPPI:** Adams Co.- Homochitto Nat. For., Sandy Ck. WMA, 30-VIII-1986 (EGRC). Davis Co.- Jefferson, 24-VI-1970 (MUIC). Hancock Co.- Waveland (USNM). Jackson Co.- Hurley, 18-VI-1929 (CUIC). **MISSOURI:** Barry Co.- Roaring River St. Pk., 2-VII-1984 (EGRC). Barton Co.- Golden Prairie, 15-V-1978 (EGRC). Pettis Co.- Friendly Prairie, 3-VI-1976 (EGRC). Taney Co.- Hercules Glades, nr. tower, 5-V-1979, 4-V-1980 (EGRC). Vernon Co.- Gay Feather Pra., 3-V-1980 (EGRC). **MONTANA:** Flathead Co.- 15 mi. S Big Fork, 1-IX-1968 (USNM). **NEBRASKA:** no further data (MCZC, ICCM). Saline Co.- Crete, VI-1888 (USNM). **NEW JERSEY:** Hudson Co.- Greenwood Lake, 18-V-1919 (USNM). **NEW YORK:** Jefferson Co.- Watertown, 27-VII-1985 (CUIC). St. Lawrence Co.- Rossie, 28-V-1974, 12-16-VI-1978 (UGCA), 2-VI-1976, 19-VI-1967, 21-VI-1981, 30-V-1982, 25-IV-1973, 15-VIII-1973 (FSCA); V-1973, VI-1968 (USNM); no further data (UADE). **NORTH CAROLINA:** Orange Co.- 11-VII-1973 (PMNH). Wake Co.- Raleigh, 12-VII-1927 (EDNC). **NORTH DAKOTA:** Barnes Co.- Bald Mill Dam, 29-VII-1954 (NDSU). Dunn Co.- 21-VI-1963 (NDSU). Logan Co.- 6-VI-1967 (NDSU). Ransom Co.- 17-VI-1967, 6-

VIII-1966 (NDSU). Slope Co.- Burning Coal Vien, 22-VI-1977 (NDSU). **OHIO:** Fairfield Co.- Barneby Center, 10-V-1986 (SMC). **OKLAHOMA:** Alfalfa Co.- 3 mi E. Cherokee, 5-VI-1962 (FSCA). Latimer Co.- VIII-1984, VI-1985 (FSCA); 5 mi W Red Oak, VIII-1980 (UICM). Washington Co.- nr. Bartlesville (USNM). **OREGON:** Klamath Co.- 15 mi SW Keno, 21-VI-1964 (FSCA). **SOUTH CAROLINA:** Barnwell Co.- Edisto Exp. Sta., Blackville, 7-VI-1948 (CUCC). Beaufort Co.- Hilton Head Isl., 15-VII-1965 (CNC). Pickens Co.- Jocassee, 3-VIII-1934 (CUCC); Rocky Bottom, 22-VIII-1935 (CUCC); 4.5 mi. S Rocky Bottom, 29-IV-1973 (EGRC). **TEXAS:** no further data (MCZC, USNM). Bexar Co.- San Antonio, 13-VIII-1958, 17-X-1958 (MCZC). Brazos Co.- Hwy. 21 @ Little Brazos R., 28-V-1987 (EGRC). Brewster Co.- 23.5 mi. N Marathon, 2-VII-1978 (EGRC). Briscoe Co.- Lake Theo, 8 mi. N Quitaque, 8-VII-1970 (CNC). Hall Co.- 6 mi. SE Turkey, 18-VI-1970 (EMUS). Jim Wells Co.- 24-VII-1928 (SEMC). Kerr Co.- Hwy 27, 1.4 mi. E Jct. 480, 1-VII-1978 (EGRC); Kerrville, 13-VIII-1963 (USNM), 3-IV-1959, 17-IV-1959, 6-V-1952 (CNC). Lavaca Co.- no further data (MCZC). Live Oak Co.- 16 mi. SW Geo. West., 2-VI-1984 (EGRC). San Patricio Co.- Mathis, 23-V-1972 (SEMC); Welder Wildlife Refuge, 31-V-1982 (EGRC). Travis Co.- Austin (WSUC). Zapata Co.- 6 mi. S 2687 on US 83, 10-V-1978 (EGRC). **UTAH:** Box Elder Co.- Martha, 2-VII-1970 (EMUS). Cache Co.- Blacksm. Fk. Can., 6-VI-1973 (EMUS); East Canyon, 6-VI-1974, 22-VI-1974 (EMUS); Green Canyon, 7-VI-1978 (EMUS); Logan, numerous specimens 5-V to 8-XI (EMUS); Logan Canyon, 28-VII-1973 (USNM), 16-V-1960 (WSUC); Logan Canyon, Spring Hollow, 18-VI-1966, 3-VI-1976, 5-VI-1976 (EMUS), 18-VI-1976 (USNM); Mendon, 20-V-1977 (EMUS); Millville, 11-VI-1975 (EMUS); Paradise, 6-VI-1973 (EMUS); Providence, 14-V-1949, 15-V-1956, 25-VI-1970, 20-V-1980 (EMUS); Smithfield, 2-VII-1980 (EMUS). **VIRGINIA:** Arlington Co.- Barcroft, VII-1928 (USNM); Glencarlyn (CUIC); Vienna, VII-1943, 4-VII-1937, 6-IX-1936 (USNM). Virginia Beach- Cape Henry, 21-VI-1932 (USNM). **WISCONSIN:** Burnett Co.- 14 mi. NE Clam Falls (DEFW). Douglas Co.- Brule, 16-VIII-1937 (SEMC). Polk Co.- Amery, 11-VIII-1916 (USNM). Vilas Co.- Eagle River, 9-VI-1935 (USNM). **WYOMING:** Albany Co.- Laramie, 23-VI-1935 (SEMC). Total: 441.

Anisostena nunenmacheri (Weise)

Map 1

Charistena nunenmacheri Weise 1907:206.

Anisostena nunenmacheri (Weise). Weise 1911a:22, 1911b:33; Leng 1920:303; Papp 1953:59; Uhmman 1957:75; Wilcox 1975:140.

Description: Overall color reddish-brown, elytra usually with a black sutural vitta. Head: median sulcus present, deep, extends to between antennae; vertex impunctatae, alutaceous; frons not pro-

jecting. Antennal segments I-VI punctate, glabrous; VII punctate with setae at apex; VIII-XI hirsute; III longer than II; II transverse; III cylindrical; IV-VI transverse; VII-X wider; XI acutely pointed at apex. Pronotum: parallel-sided, convex; covered with scattered large punctures, more dense laterally, punctures separated by more than the diameter of a puncture; longer than wide; margined laterally; basal impression absent; faint longitudinal sulcus on disc; surface alutaceous; length 0.6-0.8 mm (avg. 0.8) (n=11); width 0.7-0.8 mm (avg. 0.7). Scutellum: black; quadrate; alutaceous. Elytra: scutellar row of 2 punctures; black sutural vitta reaching interval 1; anterior half of lateral margin black; lateral and apical margins smooth; intervals 2, 4, and 6 costate, none strongly produced; intervals 2 and 6 unite on apical fifth, 4 does not attain union; apical angles cojointly rounded; length 2.1-2.7 mm (avg. 2.4); width 0.8-1.0 mm (avg. 1.0). Legs: reddish-brown; mesofemur not serrate on inner margin. Venter: pro-, mesosterna, and abdomen reddish-brown, metasternum black. Total length: 2.8-3.4 mm. (avg. 3.1).

Larval host plant: unknown.

Distribution: Arizona and northern Mexico.

Specimens examined: **MEXICO: SONORA:** Maicova River, west of Maicova, 21-VIII-1986 (SMC). **UNITED STATES: ARIZONA:** Sta. Rita Mts., 5-X-1936 (INHS). Pima Co.- Sahurita, 5-VII-1956 (UAIC). Santa Cruz Co.- Nogales, 18-IX-1906 (USNM, ZMHB); Santa Rita Mts., 21-VI-1935 (UAIC); Santa Rita Mts., Madera Cyn., 19-V-1968 (FSCA). Total: 14.

Anisostena perspicua (Horn)

Map 4

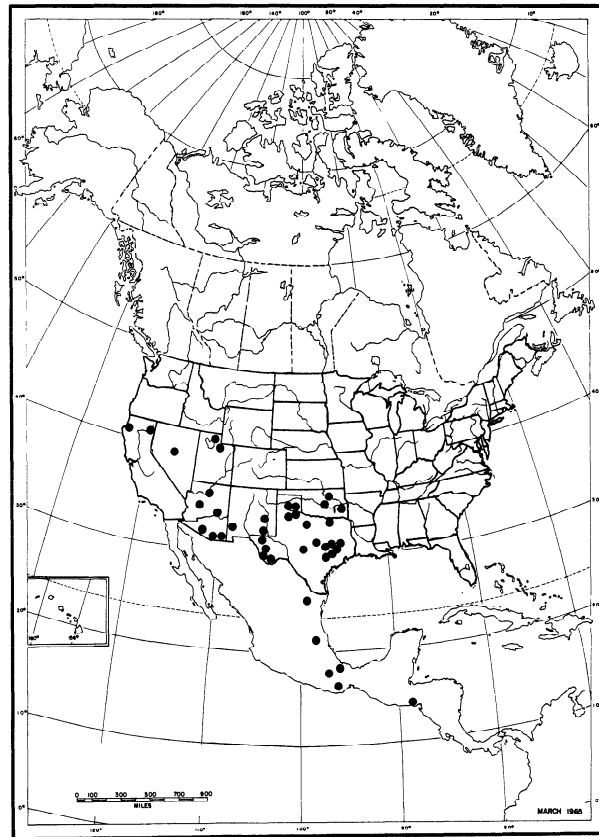
Charistena perspicua Horn 1883:298. Lectotype (here designated): N[ew] M[exico], MCZC type 3879 (red label)/ *Ch. perspicua* Horn [male] (MCZC). Paralectotype (here designated): N.M./ Type 8218 (red label)/ *Ch. perspicua* Horn/ Paralectotype *Anisostena perspicua* (Horn) designated C. L. Staines 1989 (red label) (MCZC). Baly 1885:47; Donckier 1899:584; Weise 1905:132; Fall & Cockerell 1907:200.

Anisostena perspicua (Horn). Weise 1911a:22, 1911b:32; Leng 1920:303; Douglass 1929:34; Uhmman 1930:161; Blackwelder 1946:724; Papp 1953:59; Uhmman 1957:75; Wilcox 1975:140; Thomas & Werner 1981:2.

Description: Body dark black or light metallic blue or green. Head: vertex concave; median sulcus present; sulci on inner margin of each eye; raised area between sulci micropunctate; row of punctures along edge of concavity; side of head smooth; antennae inserted into quadrangular pit, divided by median keel; frons projecting at base of antennae. Antennal segment I subglobose, punctate; II transverse, punctate, shorter than III; III transverse, punctate, setae on apical half; IV-VI transverse, subequal, punctate, with setae; VII-X wider than preceding, ring of setae at apex; XI longer than four preceding, hirsute, apex acute point. Pronotum: convex; longer than wide; margins covered with deep, discrete punctures; disc less punctate; surface between punctures micropunctate; basal margin bisinuate; lateral margins weak, parallel apical two-thirds, then convergent; basal impresseion present; length 0.6-1.1 mm (avg. 0.9, n=45); width 0.7-1.1 mm (avg. 0.9). Scutellum: subquadrate; longer than wide; rugose. Elytra: parallel-sided; apices cojointly rounded; apical margin serrate; sutural row of 3 or 4 punctures, each elytron may be asymmetrical in the number of punctures; interval 2 barely raised basally, more raised on apex; 4 and 6 strongly raised, 6 begins after basal third; sutural margin raised; surface between punctures micropunctate; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; lateral margins serrate; length 2.4-4.4 mm (avg. 3.3); width 1.0-1.6 mm (avg. 1.3). Legs: trochanter angulate; femora widest in middle, punctured at apex, mesofemur serrate on inner margin; tibiae widest at base, setae on inner margin; tarsal segment I small, triangular; II wider, almost bilobed; III deeply bilobed; IV long, slender, reaches to apex of III; claws divergent. Venter: prosternum micropunctate in middle, rugose at sides, row of punctures on prosternal process, five punctures on episternum; mesosternum micropunctate; metasternum rugose in middle, micropunctate at sides; abdominal sterna I-IV rugose in middle, granulose at sides; V four punctures on each lateral margin. Total length: 3.3-5.4 mm (avg. 4.2).

Host plant: collected sweeping *Acacia constricta* flowers.

Distribution: Texas, Oklahoma, New Mexico, Arizona, California, south to El Salvador.



Map 4. Distribution of *Anisostena perspicua*.

Specimens examined: **EL SALVADOR:** Quezalrepeque, 500 m., 4-VIII-1963, 15-VII-1963, 19-VI-1963, 7-8-VII-1963 (CASC). **MEXICO:** **Durango** - 24 mi. W La Ciudad, 7000 ft., 25-VI-1964 (CNC). **Morelos** - Cuernavaca, May, June (CASC). **Oaxaca** - 18 mi. SE Tlacolula, 6500 ft., 12-VIII-1974 (EGRC); 16.1 mi. NW Totalapan, 21-VII-1974 (TAMU). **Puebla** - Camacho, 700 ft., 28-XII-1963 (CASC). **San Luis Potosi** - 15 mi E of C. del Maiz, 19-XI-1948. **UNITED STATES:** Ind. Ter. (MCZC, USNM). **ARIZONA:** no further data (USNM, CUIC, ICCM, INHS); Molino Cn., Catalina Mt. (USNM); Sta. Catalina Foothills, 3000 ft., 27-IX-1968 (CNC); Sta. Catalina Mts., Upper Bear Cn., 6000 ft., 21-VI-1970 (USNM); Sta. Rita Mts., 1-VIII-1943, 18-VIII-1935, 1-VIII-1941, 12-VII-1950 (SEMC), 1-VIII-1979 (UICM), 10-VII-1930 (USNM). Coconino Co.- Oak Crk. Cyn., 29-VI-1966 (UICM). Cochise Co.- Cave Creek Cyn., Sunny Flat Cp., 8-IX-1964 (NAZU), 1-VI-1982 (CHAH); Cave Creek Cyn., E. Turkey Ck., 6.5 mi. W Portal, 6400 ft., 20-VII-1981 (CHAH); Cave Creek Cyn., Southwestern Res. Stn., 5350 ft., 19-VII-1981 (CHAH); Chiricahua Mts., 5-VII-1940 (SEMC); Dragoon Mts, W. Stronghold, 30-V-1973 (FSCA); Douglas, 60 mi NE, 2-

VII-1966 (USNM); Huachuca Mtn., Ash Cyn., 9-VII-1968, 29-VII-1979 (AJGC, UICM); Huachuca Mtn., Copper Cn., 1767 m., 15-VIII-1978 (EGRC); Miller Cyn., 9-VII-1986 (AJGC), 23-VIII-1969 (FSCA); Oak Creek Cyn., 29-VI-1966, 8-VIII-1981 (AJGC); Palmerly, VII-1923 (USNM); 1.3 mi. E Paradise, 11-IX-1978 (TAMU); Pedrogoosa Mts., 6.2 mi NW Chiricahua, 23-30-VI-1985 (UICM); Portal, 12-IX-1959, 5000 ft. (CUIC); Portal SW Res. Sta., 8-VII-1956 (USNM); W. Portal, 11-VII-1956 (USNM); Rustler's Park, Chiricahua Mts., 25-VI-1967 (CASC); Stronghold, 8-VIII-1979 (AJGC). Coconino Co.- Oak Creek Cyn., 14 mi N Sedona, 23-IX-1968 (NAZU), 11-VI-1953 (CUIC), 9-VII-1941 (SEMC); Oak Creek at Banjo Bill Cmpg., 16-VII-1968 (USNM); Oak Creek Canyon, 20-VII-1979 (EGRC), 19-VI-1949 (INHS); Oak Creek Canyon, Pine Flat, 15-VII-1981 (EGRC); W. Fk. Oak. Ck., 30-VIII-1985 (SMC); Rustler Park, 13-VI-1956 (USNM); 8 mi N Sedona, 17-VI-1967 (NAZU); Sedona, 23-VII-1964 (NAZU), 7-VI-1969, 30-V-1972, 6-VI-1964 (FSCA). Gila Co.- 26-VIII-1923 (MCZC); Sierra Ancha Mts., 1-IX-1914 (ISAC), 7-VII, 1-IX-1924, 1-VIII-1925 (LLS), 16-VII-1924 (USNM), 1-IX-1924, 1927 (MCZC), 5-VII-1936 (DEFW), 1-IX-1914 (ICCM), 1-VII-1924, 1-IX-1924 (INHS), 1-IX-1924, 26-VIII-1922, 1-VI-1924, 7-VII (UMMZ). Pima Co.- Box Cn., VIII-1975 (USNM), 14-VII-1977 (AJGC); Flat Canyon, 30-VIII-1971 (AJGC, UICM); Florida Canyon, 14-IX-1982 (ISAC); Madera Cyn., 6-VII-1984, 18-VII-1964, 15-VII-1971 (AJGC), 28-VII-1968 (CNC), 4-IX-1971 (PMNH); Madera Canyon, Bog Spr., 9-IX-1979, 7-IX-1986 (EMUS); Redington Pass, 1-IX-1969 (FSCA); Santa Rita, 12-VII-1932 (SEMC); 7 mi. N Sonoita, 15-VIII-1966 (AJGC, UICM); Sta. Rita Mts., Madera Canyon, 8-VIII-1986 (SMC). Santa Cruz Co.- Canelo, 8-VIII-1970 (FSCA); Huach. Mts., VII-1926, VIII-1931, VII-1912, 1-VII-1907 (USNM); Huachuca Mts., 30-VII-1941 (SEMC), 3-VI-1910 (MCZC); Madera Canyon, 6000 ft., 11-VII-1977, 28-VII-1979 (CHAH), X-1969 (USNM); Madera Canyon, 30-VII-1965 (CHAH), 20-VIII-1981 (ICCM), 17-VII-1978 (AJGC); Madera Cyn., St. Rita Mts., 7-VIII-1961 (EGRC); Nogales, 29-IX-1906 (USNM, FSCA); Pajarito Mts., Pena Blanca Cyn., 15-VIII-1970 (FSCA); Penna Blanca Lake, 19-20-VII-1978, 3980 ft. (AJGC); Santa Rita Mts., Madera Cyn., 19-V-1968 (FSCA, CDFa), 11-V-1969, 21-VII-1968, 13-VII-1968 (FSCA); St. Rita Mts., 1-VII-1935 (MCZC); Santa Rita Ldg., 1-VIII-1979 (AJGC); 5 mi. S Sonoita, 15-VII-1977 (AJGC); Sycamore Cr., 7000 ft., 11-IV-1970 (USNM); Sycamore Canyon, Hank & Yank Springs, 9 mi. W Pena Blanca Lk., 4100 ft., 18-V-1983 (EGRC). Yavapai Co.- Oak Creek Canyon, 5600 ft., 5-VI-1978 (CHAH). **CALIFORNIA:** Humboldt Co.- Dinsmore, 12-V-1940 (CASC). Lassen Co.- Hallelujah Jet., 12-VII-1962 (AJGC). **NEVADA:** no further data (MCZC). Ormsby Co.- VII (MCZC). **NEW MEXICO:** no further data (MCZC, USNM). Chaves Co.- Hwy 285, 25 mi N Roswell, 12-VIII-1976 (ISAC). Eddy Co.- White's City, 6-VIII-1976 (ISAC); 12 mi SW White's City, 15-VIII-1976 (ISAC). Grant Co.- Silver City, 22-VII-1936 (SEMC). **OKLAHOMA:** Wichita N.F., 28-VI-1936 (SEMC).

Latimer Co.- Wilburton, 7-8-VI-1991 (EJF). Oklahoma Co.- Oklahoma City, VII-1961 (USNM). Payne Co.- 4 mi. N, 15 mi W, Stillwater, 18-X-1957 (USNM). **TEXAS:** Bastrop Co.- 13-VII-1958 (TAMU). Baylor Co.- Seymour, 30-VI-1936 (SEMC). Blanco Co.- Cypress Mills, 28-IV-1971 (TAMU). Brazos Co.- College Station, 16-IV-1978, 19-VI-1977 (TAMU). Brewster Co.- Alpine, 20-22-VII, 4000-6000 ft. (USNM), 28-VI-1933 (USNM); 17 mi. S Alpine, 23-VII-1970 (EMUS); Big Bend, 23-VI-1947 (SEMC); Big Bend Nat. Park, Grapevine Hills Cpgd., 3100 ft., 27-VI-1982 (ISAC); Big Bend Nat. Pk., Green Gulch, 5300 ft., 8-V-1959 (CNC). Big Bend Nat. Pk., Pine Cyn., 5100 ft., 5-VI-1970 (EMUS); Big Bend Natl. Park, Pine Canyon, 7-VIII-1968 (TAMU); 15 mi. N Marathon, 9-VI-1972 (TAMU). Briscoe Co.- 3 mi. N Quitaque, Lake Theo, 8-VII-1970 (EMUS); 27 mi. NE Silverton, Hwy. 70, 28-V-1970 (EMUS). Burnet Co.- Inks Lake St. Park, 12-VI-1975 (TAMU). Crosby Co.- 3 mi. S Crosbyton, White R., 3-V-1970 (EMUS). Culberson Co.- Pine Springs, 18-VIII-1970 (ISAC), 18-VIII-1970, 19-VIII-1970 (EMUS); 3.6 mi S Pine Springs, 5200 Ft., 20-22-VII-1982 (ISAC); 19 mi. NE Pine Spgs., 25-VII-1970 (EMUS). Foard Co.- 2-X-1988 (TAMU). Garza Co.- Post, 14-VI-1983 (ISAC). Gillespie Co.- Lange's Mill, 5-VI-1969 (TAMU). Grayson Co.- Fink, 18-VI-1983 (ISAC). Hall Co.- 6 mi. SE Turkey, 18-VI-1970 (EMUS). Jeff Davis Co.- Davis Mountains, 28-V-2-VII-1986 (SMC); 9 mi. NW Ft. Davis, 5-VII-1964 (TAMU); H. O. Canyon, Davis Mts., 20-VII-1968 (TAMU); Madera Canyon, W Ft. Davis, 23-VIII-1969 (TAMU); 1 mi. N Rockpile roadside pk., W Ft. Davis, 17-VIII-1969 (TAMU). Kendall Co.- Kendalia, 19-IV-1987 (ZMA). Lee Co.- 2-V-1959 (TAMU). Presidio Co.- Marfa, 4500 m, 6-VII-1933 (USNM); 10 mi. N Shafter, 22-VI-1968 (TAMU). Uvalde Co.- Uvalde, 19-V-1977 (AJGC). **UTAH:** Cache Co.- Logan, 21-VI-1949 (USNM). Summit Co.- 1 mi E Echo, 24-VIII-1963 (ISAC). Total: 359.

Acknowledgements

The following institutions and individuals have lent material for this study, the assistance of the curators responsible is gratefully acknowledged- Archbold Biological Station (ABSC), M. Deyrup; University of Arkansas (UADE), C. Carlton; I. S. Askevold (ISAC); Auburn University (AUEM), W. E. Clark; University of Arizona (UAIC), F. G. Werner; B. P. Bishop Museum (BPBM), G. A. Samuelson; British Museum (Natural History) (BMNH), S. L. Shute; California Academy of Sciences (CASC), N. D. Penny; California Department of Food and Agriculture (CDFa), T. N. Seeno; Canadian National Collection (CNC), L. LeSage; Carnegie Museum of Natural History (ICCM), R. L. Davidson; J. F. Cavey (JFC); S. M. Clark (SMC); Clemson University (CUCC), J. C. Morse; Cornell University (CUIC), E. R. Hoebeke; Florida State

Collection of Arthropods (FSCA), M. C. Thomas; E. J. Ford (EJF); Arthur J. Gilbert (AJGC); University of Georgia (UGCA) C. L. Smith; University of Idaho (UICM), F. W. Merikel; Illinois Natural History Survey (INHS), K. McGiffin; H. A. Hespenheide (CHAH); L. LeSage (LLS); University of Michigan (UMMZ), M. O'Brien; University of Minnesota (DEFW), P. J. Clausen; Mississippi Entomological Museum (MUIC), T. L. Schiefer; Museum of Comparative Zoology (MCZC), C. Vogt; North Carolina Department of Agriculture (EDNC), J. F. Greene; North Dakota State University (NDSU), E. U. Balsbaugh; Northern Arizona University (NAZU), C. D. Johnson; Museum für Naturkunde der Humboldt-Universität zu Berlin (ZMHB), F. Hieke; Peabody Museum of Natural History (PMNH), C. L. Remington; E. G. Riley (EGRC); Snow Entomological Museum (SEMC), R. W. Brooks; Texas A & M University (TAMU), E. G. Riley; U. S. National Museum (USNM), R. E. White; Utah State University (EMUS), W. J. Hanson; Washington State University (WSUC), R. S. Zack; Jürgen Wiesner (JW); Zoölogisch Museum Universiteit van Amsterdam (ZMA), C. van Nidek. R. E. White and J. F. Cavey, USDA, APHIS, Baltimore, MD commented on an earlier draft of this manuscript.

Literature Cited

- Balsbaugh, E. U. & K. L. Hays.** 1972. The leaf beetles of Alabama. Auburn Agricultural Experiment Station Bulletin 441:1-223.
- Baly, J. S. 1864.** X. Further descriptions of new genera and species of Phytophaga. Transactions of the Entomological Society of London (3)2:251-258.
- Baly, J. S.** 1885. *Biologia Centrali-Americana*, Insecta, Coleoptera, Hispidae. 6(2):1-124.
- Blackwelder, R. E.** 1946. Checklist of the Coleopterous insects of Mexico, Central America, the West Indies, and South America. United States National Museum Bulletin 185:551-763.
- Blatchley, W. S.** 1924. The Chrysomelidae of Florida. Florida Entomologist 8:39-46.
- Brimley, C. S.** 1938. The insects of North Carolina. North Carolina Department of Agriculture, Division of Entomology 560 pp.
- Champion, G. C.** 1894. *Biologia Centrali-Americana*, Insecta, Coleoptera (Cassididae and supplement, appendix to Hispinae). 6(2):125-242.
- Crotch, G. R.** 1873. Checklist of the Coleoptera of America, north of Mexico. Naturalists Agency, Salem, MA. 136 pp.
- Dejean, P. F. M. A.** 1837. Catalogue des Coléoptères de la collection de M. le comte Dejean. 3rd. ed. Paris. 503 pp.
- Donckier, H.** 1899. Catalogue Systematique des Hispides. Annales de la Société Entomologique de France 68:540-615.
- Douglass, J. R.** 1929. Chrysomelidae of Kansas. Journal of the Kansas Entomological Society 2:26-38.
- Fall, H. C., & T. D. A. Cockerell.** 1907. The Coleoptera of New Mexico. Transactions of the American Entomological Society 33:145-272.
- Fattig, P. W.** 1948. The Chrysomelidae or leaf beetles of Georgia. Emory University Museum Bulletin 6:1-47.
- Fender, K. M.** 1945. Oregon Chrysomelidae. Pan Pacific Entomologist 21:72-73.
- Ford, E. J., & J. F. Cavey.** 1985. Biology and larval descriptions of some Maryland Hispinae (Coleoptera: Chrysomelidae). Coleopterists Bulletin 39:36-59.
- Gaedike, R., & H. Döbler.** 1971. Katalog der in den Sammlungen des ehemaligen Deutschen Entomologischen Institutes aufbewahrten Typen- VII (Coleoptera: Hispinae). Beitrag zur Entomologie 21:341-395.
- Gemminger, M., & B. Harold.** 1876. Catalogus Coleopterum hucusque descriptorum, synonymicus et systematicus. Williams & Norgate, London. Vol. 12:3479-3822.
- Hatch, M. H.** 1971. The beetles of the Pacific northwest. Part V. Ripicerioidea, Sternoxi, Phytophaga, Rhynchophora, and Lamellicornia. Univ. Wash. Publ. Biol. 16:1-662.

- Hatch, M. H. & S. Beller.** 1932. A preliminary checklist of the Chrysomelidae of Oregon. *Pan Pacific Entomologist* 8:102-108.
- Horn, G. H.** 1883. Miscellaneous notes and short studies of North American Coleoptera. *Transactions of the American Entomological Society* 10:269-312.
- Horning, D. S., & W. F. Barr.** 1970. Insects of Craters of the Moon National Monument Idaho. University of Idaho College of Agriculture Miscellaneous Series 8:1-118.
- Kirk, V. M.** 1970. A list of the beetles of South Carolina Part 2- Mountain, piedmont, and southern coastal plain. *South Carolina Agricultural Experiment Station Technical Bulletin* 1038:1-117.
- Kirk, V. M. & E. U. Balsbaugh.** 1975. A list of the beetles of South Dakota. *South Dakota State University Technical Bulletin* 42:1-139.
- Leng, C. W.** 1920. Catalogue of the Coleoptera of America, north of Mexico. John D. Sherman, Mt. Vernon, NY. 420 pp.
- LeSage, L.** 1991. Family Chrysomelidae, leaf beetles. *in* Y. Bousquet (ed.). Checklist of beetles of Canada and Alaska. Agriculture Canada Publication 1861E. 430 pp.
- Löding, H. P.** 1945. Catalogue of the beetles of Alabama. University of Alabama Monograph 11:1-172.
- Monrós, F., & M. J. Viana.** 1947. Revisión sistemática de los Hispidae argentinos (Insecta, Coleop., Chrysomeloid.). *Anales del Museo Argentina Ciencias Naturales "Bernardino Rivadavia"* 42:125-324.
- Olivier, G. A.** 1808. Entomologie, ou histoire naturelle des insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. 6: 613-1104. Paris.
- Papp, C. S.** 1953. The Hispinae of America. Third contribution for promoting the scientific results of the International Hylean Amazon Inst. in Manaus, Brazil. *Portugaliae Acta Biologica* (B)4:1-147.
- Riley, E. G., & W. R. Enns.** 1982. Supplement to an annotated checklist of Missouri leaf beetles (Coleoptera: Chrysomelidae). *Entomological News* 93:32-36.
- Schönherr, C. J.** 1817. *Synonymia insectorum, oder: Versuch einer Synonymie aller bischer bekannten Insectem; nach Fabricii System Eleutheratorum geordnet.* Vol. 1, pt. 3. Stockholm. 506 pp.
- Schwarz, E. A.** 1878. The Coleoptera of Florida. *Proceedings of the American Philosophical Society* 17:353-471.
- Smith, J.B.** 1899. Insects of New Jersey. 27th Annual Report of the State Board of Agriculture. MacCrellish & Quigley, Trenton. 755 pp.
- Smith, J. B.** 1910. Annual report of the New Jersey State Museum. MacCrellish & Quigley, Trenton. 888 pp.
- Staines, C. L.** 1993. A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part I. Key to the subgenera and the subgenera *Neostena* and *Apostena*. *Insecta Mundi* 7: 183-190.
- Staines, C. L.** 1994a. A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part II. The subgenus *Anisostena*: Key to the species groups and the ariadne group. *Insecta Mundi* 8: 125-135.
- Staines, C. L.** 1994b. A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part III. The pilatei species group. *Insecta Mundi* 8: 213-226.
- Thomas, D. B. & F. G. Werner.** 1981. Grass feeding insects of the Western Ranges: An annotated checklist. University of Arizona Agricultural Experiment Station Technical Bulletin 243:1-50.
- Uhmman, E.** 1930. Hispinen des Zoologischen Staatsinstitutes und Zoologischen Museums zu Hamburg. (21. Beitrag zur Kenntnis der

- Hispinen [Col., Chrys.]. Deutsche Entomologische Zeitschrift 1930:161-175.
- Uhmann, E.** 1938. Hispinen aus Argentina. 57. Beitrag zur Kenntnis der Hispinen (Col. Chrys.). Revista de Entomología 9:364-370.
- Uhmann, E.** 1957. Coleopterorum Catalogus, Supplementa, Chrysomelidae: Hispinae. pars 35(1):1-153. W. Junk, Gravenhage.
- Uhmann, E.** 1964. Coleopterorum Catalogus Supplementa. Chrysomelidae: Hispinae Corrigenda et addenda. W. Junk, Gravenhage. pars 35(3):399-490.
- Van Dyke, E. C.** 1925. Notes and descriptions of new species of west American Hispinae (Coleoptera: Chrysomelidae). Pan Pacific Entomologist 1:170-173.
- Weise, J.** 1905. Aufzählung mexicanischer Hispinen. Deutsche Entomologische Zeitschrift 1905:130-135.
- Weise, J.** 1907. Hispinen aus Arizona. Archiv für Naturgeschichte 1907:205-209.
- Weise, J.** 1911a. Coleopterorum Catalogus Chrysomelidae: Hispinae. W. Junk, Berlin. pars 35:1-94.
- Weise, J.** 1911b. Coleoptera: Phytophaga, family Chrysomelidae, subfamily Hispinae. in P. Wytsman, *Genera Insectorum* fasc. 125:1-123. Brussels.
- White, B. E.** 1939. A new *Anisostena* (Coleoptera: Chrysomelidae) from Owens Valley, California. Bulletin of the Brooklyn Entomological Society 34:55-56.
- Wilcox, J. A.** 1954. Leaf beetles of Ohio (Chrysomelidae: Coleoptera). Ohio Biological Survey Bulletin 43:353-506.
- Wilcox, J. A.** 1975. Checklist of the beetles of Canada, United States, Mexico, Central America and the West Indies. Vol. 1 part 7, the leaf beetles (red version). Biological Research Institute of America, Latham, NY. 166 pp.