

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Insecta Mundi

Center for Systematic Entomology, Gainesville,
Florida

March 1994

A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part II. The subgenus *Anisostena*: Key to the species groups and the ariadne species group

C. L. Staines
Edgewater, Maryland

Follow this and additional works at: <https://digitalcommons.unl.edu/insectamundi>



Part of the [Entomology Commons](#)

Staines, C. L., "A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part II. The subgenus *Anisostena*: Key to the species groups and the ariadne species group" (1994). *Insecta Mundi*. 294.

<https://digitalcommons.unl.edu/insectamundi/294>

This Article is brought to you for free and open access by the Center for Systematic Entomology, Gainesville, Florida at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Insecta Mundi by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

A revision of the genus *Anisostena* Weise
(Coleoptera: Chrysomelidae, Hispinae).
Part II. The subgenus *Anisostena*:
Key to the species groups and the ariadne species group.

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

Abstract

The subgenus *Anisostena* (*Anisostena*) is divided into three species groups. A key to the species groups is provided and the ariadne species group is revised. Lectotypes are designated for *A. ariadne*, *A. bellula*, and *A. elegantula*.

Key words: *Anisostena*, lectotype, species group.

Introduction

This is the second 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*.

Types for the ariadne species group were examined for all species except *A. bicolor*. Lectotypes are designated for *A. ariadne*, *A. bellula*, and *A. elegantula*. In recording the label data from type specimens, a slash (/) divides data on different labels; a question mark (?) indicates that the label data was unreadable.

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 along the suture. Total length was measured from the base of the frontal sulcus to the apex of the elytra.

Anisostena (*Anisostena*)

Type species: *A. elegantula* (Baly), designated by Monrós & Viana (1947).

Description: Head: last five antennal segments wider than preceding; sulcus on inner margin of each eye; row of punctures on outer margin of each eye. Pronotum: basal margin bisinuate. Elytra: costate intervals 2 and 6 unite on apical fifth.

Anisostena s. str. divides well into three species groups based on body color and markings. One species, *A. nunenmacheri* Weise, has color morphs which fall into two species groups. This species will be covered in both species groups. Otherwise the species have only one color morph.

Key to the species groups of *Anisostena* (*Anisostena*)

1. Dorsum unicolorous nigrita group
Dorsum with more than one color 2
2. Elytra without markings ariadne group
Elytra vittate or maculate pilatei group

ariadne group

The species in the ariadne species group are distinguished by the reddish pronotum and darker elytra. Members of this species group are found from New Jersey south to Colombia.

Key to the species of the ariadne species group

1. Pronotum with transverse basal impression 2
Pronotum without transverse basal impression 5
2. Pronotum with median longitudinal carina
..... *leconteii* (Newman)
Pronotum without median longitudinal carina 3
3. Pronotum with apical or apical and basal margins
dark *cyanoptera* (Suffrian)
Pronotum entirely red 4
4. Head with median sulcus deep, v-shaped between
eyes *elegantula* (Baly)
Head with median sulcus not v-shaped between
eyes *bicolor* (Smith)
5. Antennal segment 2 longer than 3 6
Antennal segment 3 longer than 2 7
6. Vertex of head micropunctate, with row of three
punctures between median and ocular sulci;
prosternum red laterally *texana* Schaeffer
Vertex of head micropunctate, without larger
punctures; prosternum entirely red
..... *ariadne* (Newman)
7. Head with median sulcus deep, wide; surface of
sulcus punctate; pronotum with scattered punctures,
disc almost impunctate
..... *kansana* Schaeffer
Head with median sulcus not deep or wide; surface
of sulcus impunctate; pronotum uniformly
punctate *bellula* (Baly)

Anisostena ariadne (Newman)

Map 1

Hispa ariadne Newman 1841:77. Lectotype (here designated): Syntype (white disk with blue border)/ Baly Coll./ *Charistena ariadne* Newm., North America (pale pink label)/ Lectotype *Anisostena ariadne* (Newman) des. C. L. Staines 1990 (red label) (BMNH). Four paralectotypes (here designated): Syntype (white disk with blue border)/ *Hispa ariadne* (reversed blue label)/ Paralectotype *Anisostena ariadne* (Newman) des. C. L. Staines 1990 (red label) (BMNH); Syntype (white disk with blue border)/ Ent. Club 44-12/ *Hispa ariadne* Newm., Entomologist: 77, St. Johns Bluff El (?) Florida/ Paralectotype *Anisostena ariadne* (Newman) des. C. L. Staines 1990 (red label) [3 specimens on a card] (BMNH). Melsheimer 1853:119.

Charistena ariadne (Newman). Baly 1864:252; Crotch 1873b:101; Schwarz 1878:460; Horn 1883:299; Donckier 1899:583; Smith 1899:317; Ulke 1902:29; Smith 1910:355.

Chalepus ariadne (Newman). Gemminger & Harold 1876:3613.

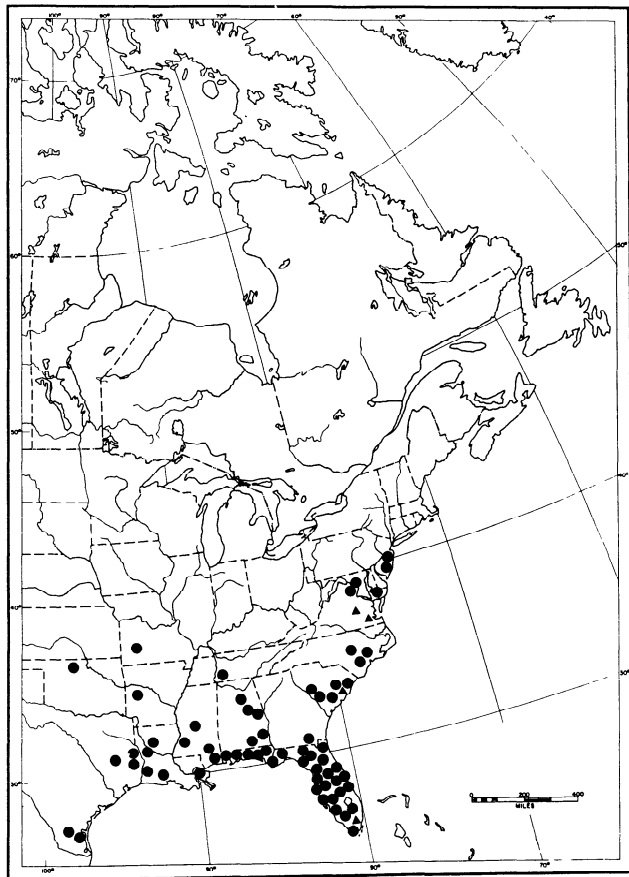
Odontota ariadne (Newman). Crotch 1873a:82.

Anisostena ariadne (Newman). Weise 1911a:21, 1911b:32; Leng 1920:303; Blatchley 1924:43; Brimely 1938:230; Loding 1945:136; Blackwelder 1946:724; Fattig 1948:41; Papp 1953:57; Uhmman 1957:73; Kirk 1969:98, 1970:94; Balsbaugh & Hays 1972:183; Wilcox 1975:140; Riley & Enns 1979:79; Ford & Cavey 1982:189, 1985:49.

Description: Head and elytra bluish-black, pronotum red. Head: vertex concave, micropunctate; median sulcus present, changes to a carina which becomes the keel between the antennae; antennal pit small; sulcus present on inner margin of each eye; row of punctures on outer margin of each eye: reddish projection at base of antennae. Antennal segment I subglobose, punctate; II elongate, expanded apically, longer than III; III cylindrical; IV-VI transverse; VII-X transverse, wider than preceding; XI pointed at apex; segments not densely pubescent. Pronotum: apical margin black, thicker in middle; wider than long; punctures large, deep; micropunctate between punctures; sides parallel on basal half, weakly convergent on apical half; basal margin bisinuate; length 0.7-1.0 mm (avg. 0.8, n=12); width 1.0-1.1 mm (avg. 1.0). Scutellum: quadrate; blue-black; micropunctate. Elytra: 8 regular puncture rows plus scutellar row of 3 punctures; lateral margins sinuate, serrate; apical margin more densely serrate; intervals 2, 4, and 6 costate, 6 most pronounced; intervals 2 and 4 more pronounced on apical fifth; 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; length 3.1-3.8 mm (avg. 3.4); width 1.3-1.6 mm (avg. 1.36). Legs: blue-black; tibia with tufts of setae at apex; mesofemur serrate on inner margin. Venter: black except prosternum which is red laterally; prosternum punctate in middle, micropunctate at sides; meso- and metasterna micropunctate; abdomen micropunctate. Total length: 4.1-4.8 mm (avg. 4.33).

Larval host plant: *Panicum virgatum* L. (Graminaceae) (Ford & Cavey, 1982).

Distribution: southeastern United States.



Map 1. Distribution of *Anisostena* species: *A. ariadne*, circles; *a. leconteii*, triangles.

Specimens examined: UNITED STATES: USA (USNM). ALABAMA: **Baldwin Co.-** 1 mi. N Foley, 30-V-1981 (EGRC); Robertsedale, 12-VI-1945 (USNM). **Barbour Co.-** Spring Hill, 4-V-1912 (USNM). **Crenshaw Co.-** County Lake, 26-VIII-1964 (AUEM). **Lee Co.-** Auburn, 20-IV-1975 (CNC); 5 mi. S. Meadow Mill, 13-IX-1963 (AUEM). **Mobile Co.-** Grand Bay, 1933 (USNM); Mobile, 20-IV-1912, VII (USNM); Orchard, 5-V-1918 (MCZC). **Talladega Co.-** Oak Grove, 17-VI, 18-VI (USNM). **Tallapoosa Co.-** Horseshoe Bend Natl. Park, 29-VII-1964 (AUEM, NDSU). ARKANSAS: **Logan Co.-** Mt. Magazine, 15-16-VII-1949 (INHS). DISTRICT OF COLUMBIA: no further data (ICCM). FLORIDA: Paradise Key, 24-II-1919 (USNM); St. Johns Bluff (BMNH); W. Pk., 24-XI-34 (FSCA). **Alachua Co.-** Gainesville (FSCA), 29-III-1960, 1-IV-1960 (CNC); Newnan's Lake, 1-IV-60 (FSCA). **Bay Co.-** Ebro, 1-VI-1973 (CNC). **Bradford Co.-** Starke, 29-III-1976 (EGRC). **Charlotte Co.-** 6-IV-1985 (ISAC); 8-IV-84 (FSCA); 5 mi. S Punta Gorda, 13-VII-1953 (INHS). **Collier Co.-** 5 mi. S Corkscrew Swamp, 5-IV-1972 (FSCA); 12 km E Naples, 8-III-1982 (CNC); Ochopee, 14-VI-1977 (NDSU). **Dade Co.-** Andytown, 22-III-1973 (CNC); Hialeah, 27-IX-1971

(USNM); Miami, V-1920 (ICCM). **Duval Co.-** Jacksonville (USNM); Hilliard, 28-VII-1934 (SEMC). **Franklin Co.-** 4 mi. E St. Teresa, Jct. 98 & 370, 5-VII-1982 (EGRC). **Hardee Co.-** Highlands Hamm. St. Pk., 11-XI-1953 (FSCA), 3-IV-1955 (INHS); Ona, 16-XII-1986 (FSCA). **Hendry Co.-** La Belle, 21-IV-1921 (PADA), 16-VII-1939 (SEMC). **Highlands Co.-** Archbold Biol. Station, 6-IV-1961, 9-V-1961, 16-III-1969 (CUIC), 5-IX-1983, 30-VI-1984 (ABSC) (EGRC). **Indian River Co.-** 5 mi. E Fellsmere, 28-III-1976 (EGRC). **Lake Co.-** Astor, 11-VIII-87 (FSCA); Mt. Plymouth, 15-VII-1969 (USNM); 11 km NE Paisley, 5-V-1986 (USNM). **Lee Co.-** Leigh, 10-III-1976, 7-IV-1977, 11-IV-1977 (UGCA), 4-X-1977, 4-VII-1977, 4-X-1977 (FSCA); Leigh Acres, 3-X-1976, 7-IV-1984, 10-12-IV-1981, 24-IV-1980, 17-19-IV-1982 (FSCA); Mt. Plymouth, 15-VII-1969 (USNM). **Levy Co.-** 29-VIII-1984 (ISAC), 13-IV-1955 (FSCA); Cedar Keys, VI (USNM), 10-VIII-1939 (SEMC); 8 mi. SE Chiefland, 28-III-1976 (EGRC). **Manatee Co.-** Bradenton 22-III-1972 (FSCA). **Marion Co.-** Ocala Nat. For., 3 mi. N Hwy. 40 at Zay Pra., 30-IV-1980 (EGRC). **Martin Co.-** Bluefield, 28-VII-1982 (FSCA). **Okaloosa Co.-** Destin, 23-III-1982 (CNC). **Osceola Co.-** 7 mi. N Yeehaw Jen., 29-III-1976 (EGRC). **Pasco Co.-** Hudson, 13-VII-1939 (INHS); 6 mi. N Land O'Lakes, 23-VII-1973 (EGRC). **Pinellas Co.-** Dunedin, 16-III-1927 (CUIC), 17-IV-1922 (UMMZ); Oldsmar (FSCA); St. Petersburg, 18-26-VIII-1931 (CNC); Tarpon Springs, 9-VIII-1970 (FSCA). **Polk Co.-** 26-III-1924 (FSCA). **Putnam Co.-** 4 mi. SE Carraway, 29-III-1976 (EGRC). **Sarasota Co.-** Englewood, 23-IV-1982 (CNC); Punta Gorda, 2-IV-1952, 11-IV-1952 (CNC); 32 mi. NE Sarasota, Hwy. 72, 26-VII-1976 (EGRC). **Seminole Co.-** Geneva, 20-IV-1960 (FSCA); Sanford, VIII-IX-1929 (MCZC), 20-IV-1960 (FSCA), 16-III-1927 (USNM), 11-VII-1951 (SEMC). **Volusia Co.-** Enterprise (MCZC); New Smyrna, 29-VII-1948 (SEMC). **Wakulla Co.-** 20-IV-1955 (INHS); 2 mi. N Live Oak Pt., 7-VIII-1973 (EGRC). **Washington Co.-** Ebro, 1-IV-1973, 4-IV-1973 (CNC). GEORGIA: Fort Mt., 10-VII-1937 (USNM). **Charlton Co.-** Okefenokee Swamp, 27-VII-1939, 1-VIII-1939 (SEMC), 29-VII-1939 (INHS). LOUISIANA: S. La., 29-V-1892 (USNM); Pollard, 12-VII-1983 (CNC). **Acadia Par.-** 2.8 mi. S Eunice, 9-V-1981 (EGRC). **Beauregard Co.-** 16-VIII-1928 (SEMC); 5 mi. S DeRidder, 25-III-1982 (EGRC). **Natchitoches Par.-** 8 mi. E Kisatchie, 7-IX-1985 (EGRC); Kisatchie Nat. For., nr. Red Bluff campgrd., 15-V-1982 (EGRC); Red Dirt, lookout tower, 26-IX-1981 (EGRC); Fire Tower, 15-V-1982 (EGRC); Red Dirt W.M.A., 20-VI-1986 (EGRC). **St. Tammany Par.-** Covington, VI (USNM), 23-VI-1948 (SEMC). **Winn Par.-** 8 mi N Winnfield, 12-VIII-1968 (USNM). MARYLAND: **Dorchester Co.-** Blackwater Refuge, 10-VII-1943 (FSCA). **Somerset Co.-** Hopewell, 22-VII-1976 (CLS). MISSISSIPPI: **Adams Co.-** Homochito Nat. For., Sandy Ck. W.M.A., Pipes Lake, 30-VII-1986 (EGRC). **George Co.-** Pascagoula Wildlife Ar., nr. Lucedale, 12-IV-1987 (EGRC). **Jack-son Co.-** Hurley, 18-VI-1929 (CUIC); Ocean Springs, 29-VII-1920 (MUIC). **Stone Co.-** U. M. Forestlands, 18-

X-1986 (UMIC). MISSOURI: St. **Clair Co.**- Doyal Township, T37N R26W, secs. 35 & 36, 6-V-1979 (EGRC); Lichen Glade, 6 mi. W Osceola, 29-V-1978 (EGRC). NEW JERSEY: **Atlantic Co.**- DaCosta, 30-VII (USNM), 3-VI (MCZC). **Burlington Co.**- Wharton Tract, 26-VII-1983 (CLS). NORTH CAROLINA: **Cumberland Co.**- Fayetteville, 14-V-1939 (EDNC). **Pitt Co.**- Grimesland, V-1919 (EDNC). **Wake Co.**- Raleigh, 14-V-1931, 27-VI-1936 (EDNC). OKLAHOMA: **Kay Co.**- Ponca City, 8-VI-1947 (CNC). SOUTH CAROLINA: **Barnwell Co.**- Edisto Exp. Sta., Blackville, 15-V-1940 (CUCC). **Colleton Co.**- Ashepoo, 14-VIII-1935 (CUCC). **Dorchester Co.**- Summerville, 17-VIII-1962 (NDSU). **Edgefield Co.**- 16-VII-1935 (CUCC). **Horry Co.**- Cherry Grove, 9-VII-1962 (NDSU). **Williamsburg Co.**- Pineville, 30-VI-1962, 3-V-1962 (NDSU). TENNESSEE: **Wayne Co.**- Waynesboro, 4-VIII-1948 (SEMC). TEXAS: **Anderson Co.**- Salmon, 5-26-IV-1975, 28-IV-16-V-1975 (TAMU). **Brooks Co.**- Falfurrias, 22-III-1987 (ZMA). **Kenedy Co.**- 3 mi. N Norias, Hwy. 77, 28-III-1987 (ZMA); Sarita, 24-III-1987 (ZMA), 15-IX-1975, 14-V-1976 (USNM). **Sabine Co.**- Sabine Nat. For., 3.3 mi. E Pineland, 29-VII-1975 (TAMU). **Tyler Co.**- Kirby State Forest, 3 mi. S Warren, 22-V-1984 (TAMU). VIRGINIA: **Fairfax Co.**- Falls Church, 17-VI-1923 (USNM). Total: 306.

Anisostena bellula (Baly)

Map 2

Charistena bellula Baly 1864:253. Lectotype (here designated): (?)/ Type H. T. (white disk with red border)/ Syntype (white disk with blue border)/ Baly Collection/ *Charistena bellula* Baly, Bogota (blue-green label)/ Lectotype *Anisostena bellula* (Baly) designated C. L. Staines 1989 (red label) (BMNH). Two paralectotypes (here designated): E. Coll. Lafarte/Odontota cyanipennis Raich., Nova Granata (green label)/ 67-56/ Ex. Rev. H. Clark Coll./ Syntype *Anisostena bellula* Baly/ Paralectotype *Anisostena bellula* (Baly) designated C. L. Staines 1989 (red label); E. Coll. Lafarte/ 67-56 (reversed)/ Ex Rev. H. Clark Coll./ Syntype *Anisostena bellula* Baly/ Paralectotype *Anisostena bellula* (Baly) designated C. L. Staines 1989 (red label) (BMNH). Baly 1885:45; Donckier 1899:583.

Chalepus bellula (Baly). Gemminger & Harold 1876:3613.

Anisostena bellula (Baly). Weise 1910:123, 1911a:21, 1911b:32; Blackwelder 1946:724; Papp 1953:58; Uhmman 1957:73; Wilcox 1975:140.

Description: Head and elytra metallic blue, pronotum red. Head: median sulcus present; sulcus present on inner margin of each eye; vertex micropunctate; area near base of antennae reddish; row of punctures on outer margin of each eye. Antennal segment I subglobose; II-III cylindrical,

III longer than II; IV-VI transverse, decreasing in length; VII-X transverse, wider than preceding; XI pointed at apex; VII-XI hirsute; I-III punctate; IV-VI with some setae. Pronotum: longer than wide; base margined; basal margin bisinuate; lateral sides parallel for basal three-fourths then weakly convergent; apical margin darkened; covered with large, coarse punctures; length 0.7-0.9 mm (avg. 0.8, n=2); width 0.6-0.7 mm (avg. 0.65). Scutellum: quadrate; micropunctate. Elytra: 8 regular puncture rows plus scutellar row of 1 puncture; intervals 2, 4, and 6 costate, all evenly raised; intervals 2 and 6 unite on apical fifth; interval 4 does not attain union by the diameter of a puncture; lateral margins smooth; apical margins dentate; area between punctures micropunctate; length 3.0 mm; width 1.1-1.2 mm (avg. 1.15). Venter: reddish-brown. Legs: femur reddish-brown at base, darker at apex; tibia dark. Total length: 3.25-3.4 mm (avg. 3.3).

Larval host plant: unknown.

Distribution: Mexico to Colombia.

Specimens examined: COLOMBIA: Bogota (BMNH). COSTA RICA: La Caja, San Jose, III-1929 (USNM). Total: 4.

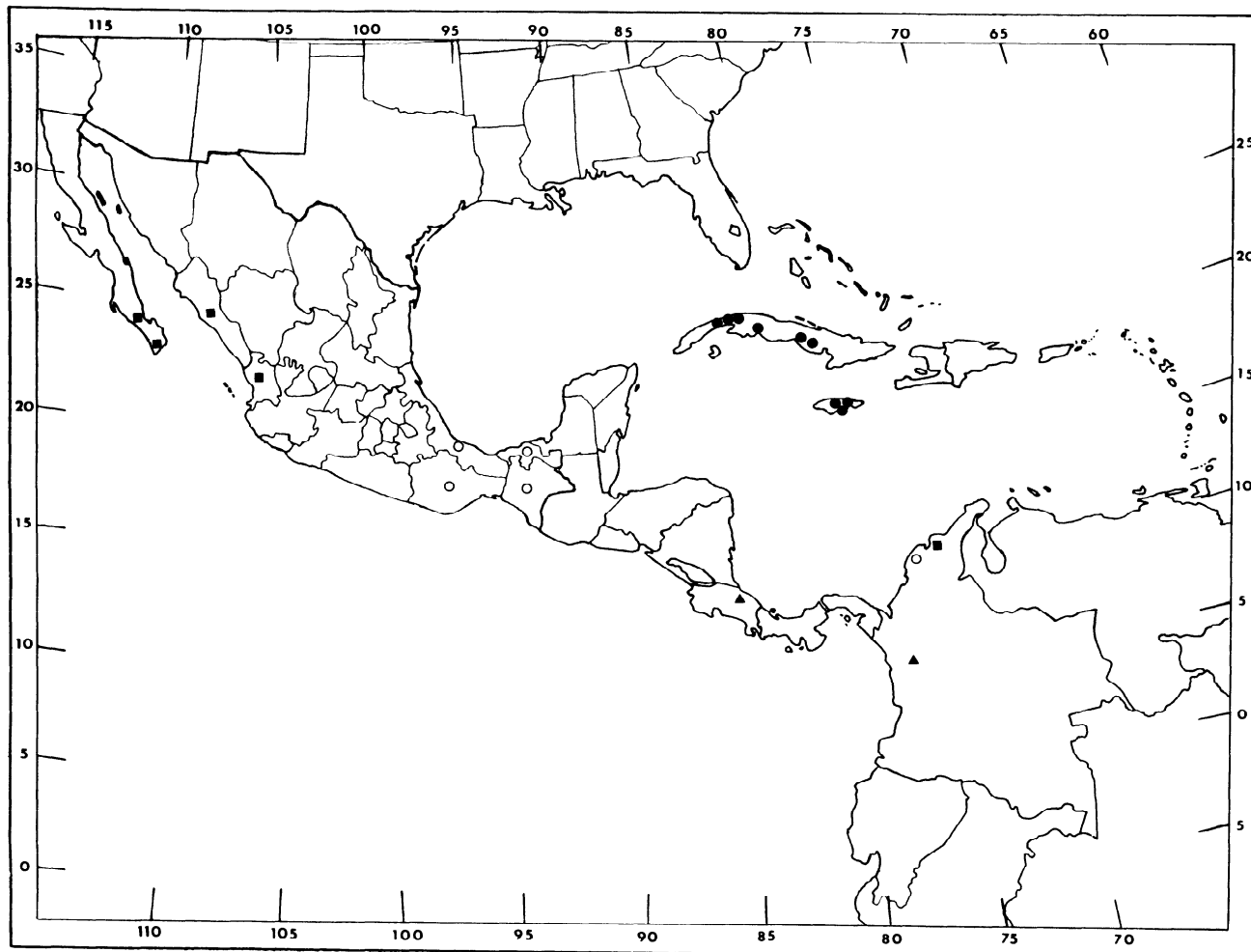
Anisostena bicolor (Smith)

Maps 2 and 3

Charistena bicolor Smith 1889:94; Donckier 1899:583; Fall & Cockerell 1907:200.

Anisostena bicolor (Smith). Weise 1911a:21, 1911b:32; Leng 1920:303; Schaeffer 1933:104; Smith & Wilbur 1937:103; Papp 1953:58; Uhmman 1957:73; Wilcox 1975:140; Thomas & Werner 1981:2.

Description: Head with metallic green sheen, elytra dark metallic blue, pronotum red. Head: median sulcus present, becomes a keel between antennae; sulcus present on inner margin of each eye; vertex with three punctures; row of three punctures along sulci near eyes; vertex micropunctate; row of punctures on outer margin of each eye; no projection at base of antennae; frons and clypeus reddish. Antennal segment I subglobose; II-III cylindrical, III longest; IV-VI transverse; VII-X transverse, wider than preceding; XI pointed at apex; VII-XI hirsute. Pronotum: apical margin black; covered with large, deep punctures, more dense



Map 2. Distribution of *Anisostena* species: *A. bellula*, triangles; *A. bicolor*, squares; *A. cyanoptera*, solid circles; *A. elegantula*, open circles.

laterally; lateral margins parallel for basal half, weakly convergent apically; median transverse impression at base; basal margin bisinuate; area between punctures alutaceous; length 0.7-0.9 mm (avg. 0.9, n=7); width 1.0 mm. Scutellum: quadrate, alutaceous. Elytra: bluish; eight regular puncture rows plus scutellar row of 2 punctures; lateral margins smooth, sinuate; apical margin dentate; intervals 2, 4, and 6 costate, interval 6 most pronounced; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of two punctures; length 3.0-3.7 mm (avg. 3.4); width 1.3-1.4 mm (avg. 1.4). Legs: reddish; mesofemur serrulate on inner margin; apex of femora, tibiae, and tarsi darker. Venter: prosternum reddish, punctate; meso- and metasterna black, smooth in middle,

rugose at sides; abdomen reddish, rugose at sides. Total length: 3.8-4.6 mm (avg. 4.3).

Larval host plant: *Tripsacum dactyloides* (Poaceae) (Smith & Wilbur, 1937).

Distribution: Kansas, Arizona, New Mexico, California, and Mexico.

Specimens examined: MEXICO: BAJA CALIFORNIA SUR- 3 km S Microflores, 17-X-1978 (FSCA); San Jose de Cabo (USNM). NAYARIT- 15 mi. S Acaponeta, 20-VIII-1964 (TAMU). SINALOA- 38 mi NE Concordia, nr. Loberas, 3-VII-1982 (AJGC); 4.5 mi N Elota, 17-VII-1984 (FSCA); Los Mochis, 12-IV-1924 (USNM), 28-V-1955 (EGRC); 8 mi N Matzatlan, 7-VIII-1963 (AJGC); 5 mi N Mazatlan (USNM). UNITED STATES: ARIZONA: no further data (USNM). CALIFORNIA: Rossmond, 23-

VII-1940 (SEMC). IDAHO: Ocery, 17-VII-1979 (EGRC). KANSAS: **Reno Co.**- 30-VI-1934 (USNM). Total: 19.

Anisostena cyanoptera (Suffrian)

Map 2

Odontota cyanoptera Suffrian 1868:227. Holotype: 31576/MLU Halle, WB Zoologie, S.-Nr. 7/1/10, T.Nr. cyan./cyanipennis m., cyanoptera Wng. Hrch. 1868, Cuba (green label) (MLUH).

Chalepus cyanoptera (Suffrian). Gemminger & Harold 1876:3613; Donckier 1899:586.

Anisostena cyanoptera (Suffrian). Weise 1911a:21, 1911b:32; Leng & Mutchler 1914:457; Blackwelder 1946:724; Papp 1953:58; Uhmman 1957:74; Sanderson 1967:138; Wilcox 1975:140.

Description: Head and elytra blue, pronotum red. Head: median sulcus present, faint; sulcus on inner margin of each eye; occiput alutaceous; keel between antennae; front concave; sides of head reddish, smooth; projection at base of antennae; frons red, with tubercle; clypeus punctate. Antennal segment I globular; II cylindrical, as wide as I; III longer than II, cylindrical; IV-VI transverse, decreasing in length; VII-XI expanded, with setae; VII-X transverse; XI acutely pointed. Pronotum: margined laterally; apical and basal margins dark; arched; covered with punctures; basal margin bisinuate; transverse basal impression present; lateral margins parallel for basal two-thirds, then weakly convergent; surface between punctures alutaceous; length 0.7-0.9 mm (avg. 0.8; n=6); width 0.9-1.0 mm (avg. 0.95). Scutellum: metallic blue; quadrate; alutaceous. Elytra: basal margin arcuate, overlapping base of pronotum; 8 puncture rows plus scutellar row of 2 punctures; intervals 2, 4, and 6 costate, all moderately produced; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; lateral margins sparsely dentate; apical margins dentate; length 2.6-3.0 mm (avg. 2.7); width 1.1-1.4 mm (avg. 1.35). Venter: pro- and mesosterna entirely red; metasternum red in center, blue-black at sides; abdomen blue-black, smooth in middle, alutaceous at sides. Legs: trochanter blue-black; femur red on basal half, rest blue-black, punctate, mesofemur not serrate on inner margin; tibia blue-black, expands to apex; tarsal segment IV barely exceeds lobes of III; claws red. Total length: 3.3-3.8 mm (avg. 3.5).

Larval host plant: unknown.

Distribution: Cuba, Jamaica, and Hispaniola.

Specimens examined: CUBA: no further data (MLUH, MCZC); Baragua, 22-X-1925, 13-X-1928 (MCZC); Camagüey, 30-VII-1923 (USNM); Cayamas, 5-6 (USNM); Finca Sabalo, San Jose de Las Lajas, 12-VI-1950 (USNM); Havana (USNM); Hormiguero, 10-28-II-1923 (ZMA); Hoya Colorada, Hav. Pr., 23-VIII-1917 (USNM); Lomus de Camoa, Habana, 18-IX-1956 (INHS); Mina Carloto, Cienfuegos, 1-XII-1927 (FSCA); Omaja, 24-VII-1927 (USNM); Pinar del Rio, 16-29-V-1933 (ZMA); Santiago d. l. Vegas (USNM); Soledad, Cienfuegos, 4-XI-1927 (FSCA), 16-X-1926 (USNM), V-VI-1939, 16-X-1926 (MCZC). JAMAICA: St. Andrew Parish- Kingston, IV-1906, 25-29-XII-1961, II-1970 (USNM). St. Ann Parish- Clermont, 27-XII-1972 (CNC). St. Catherine Parish- Rio Cobre Gorge, 1 mi. N Flat Bridge, 27-VI-1958 (INHS). Total: 32.

Anisostena elegantula (Baly)

Map 2

Charistena elegantula Baly 1864:254. Lectotype (here designated): E. Coll Chev. (folded)/ Type H. T. (white circular label with red margin)/ Baly Coll./ *Charistena elegantula* Baly, New Granada (pale green label)/ Lectotype *Anisostena elegantula* (Baly) designated C. L. Staines 1989 (red label). Baly 1885:45; Donckier 1899:583.

Chalepus elegantulus (Baly). Gemminger & Harold 1876:3613.

Anisostena elegantula (Baly). Weise 1910:123, 1911a:21; Blackwelder 1946:724; Papp 1953:58; Uhmman 1957:74; Wilcox 1975:140.

Description: Head and pronotum orange, elytra metallic blue. Head: vertex punctate; median sulcus deep, v-shaped between eyes; eyes are darker than head; clypeus with projection below base of antennae, punctate, quadrate. Antennal segment I orangish, subglobular; II-XI blackish; II transverse; III cylindrical, longer than II; IV-VI transverse, decreasing in size; VII-X hirsute, transverse; XI hirsute, pointed at apex; I-VI punctate. Pronotum: basal margin bisinuate; sides margined; basal impression present; covered with large punctures, more dense laterally; alutaceous between punctures; width 0.8 mm (n=1); length 0.9 mm. Scutellum: blue; quadrate; alutaceous. Elytra: blue except for faint orange markings at base between intervals 2 & 4; 8 regular puncture rows; scutellar row of 2 punctures; intervals 2, 4, and 6 costate; intervals 2 & 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; sides

margined, sparsely dentate; apical margin dentate, laminate; suture costate; surface between punctures alutaceous; length 2.6 mm; width 1.5 mm. Venter: pro- and mesosterna orange, punctate; metasternum orange in center, blue laterally, alutaceous; abdomen with last 3 segments blue in center, orange laterally, others all orange. Legs: femur and tibiae orange at base, dark apically. Total length: 3.5 mm.

Larval host plant: unknown.

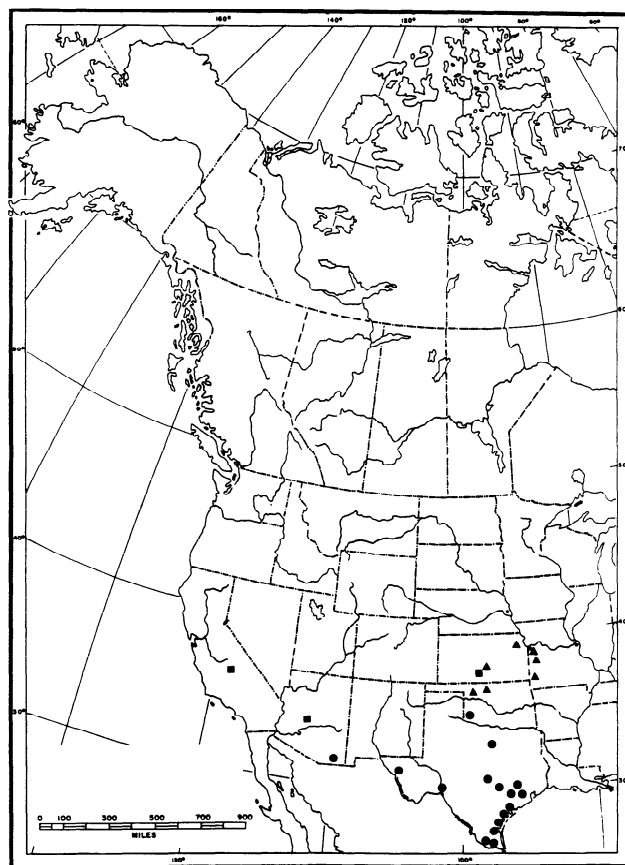
Distribution: Mexico to Colombia.

Specimens examined: New Granada (BMNH). COLOMBIA: Magdalena- Parque, 21 mi E Sta. Marta, 15-V-1973 (CNC). MEXICO: CHIAPAS: 4 mi. NE Pichucalco, 14-VI-1965 (TAMU). OAXACA: 11 mi. N Matias Romero, 6-VII-1971 (TAMU). TABASCO: 21 mi. N Villahermosa, 19-VIII-1967 (TAMU). VERA CRUZ: Coatzacoalcos, 7-IX-1968 (TAMU). Total: 8.

Anisostena kansana Schaeffer Map 3

Anisostena kansana Schaeffer 1933:104. Holotype: Medora, KS, W. Knaus/ May/ kansana Schaeff., Holotype, C. Schaeffer Coll., 1935 Barber/ Charles Schaeffer Collection/ HS Barber Bequest 1950/ *Anisostena kansana* Schaeffer (USNM). Papp 1953:58; Uhmman 1957:74; Wilcox 1975:140; Riley & Enns 1982:35.

Description: Head and elytra metallic greenish-blue; pronotum reddish-orange with anterior portion greenish-blue; legs and antennae black. Head: vertex alutaceous; median sulcus deep, wide; surface of median sulcus punctate; rugose between eyes; sulcus present on inner margin of each eye; row of punctures on outer margin of each eye; sides of head smooth; frons reddish; projection at base of antennae; clypeus evenly arcuate. Antennal segment I subglobose, punctate; II transverse, punctate; III cylindrical, longer than II, punctate with setae; IV-VI transverse; VII-X, transverse, wider than preceding, with setae; XI pointed at apex. Pronotum: lateral margins sinuate, margined; basal margin bisinuate; basal impression absent; surface with scattered large, deep punctures; disc almost impunctate; anterior margin greenish-blue, markings wider in middle; surface between punctures alutaceous; length 0.7-1.0 mm (avg. 0.9, n=20); width 0.9-1.3 mm (avg. 1.1). Scutellum: quadrate; greenish-blue; alutaceous. Elytra: greenish-blue;



Map 3. Distribution of *Anisostena* species: *A. bicolor*, squares; *A. kansana*, triangles; *A. texana*, circles.

alutaceous; 8 regular puncture rows plus sutural row of 2 or 3 punctures, each elytron may be asymmetrical in the number of sutural punctures; at base a depression before the humerus; lateral margins sinuate, smooth; apical margin sparsely dentate; intervals 2, 4, and 6 costate; interval 2 most pronounced on apical fifth, 4 most pronounced on apical fourth, 6 carinate for entire length; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of a puncture; length 3.1-4.1 mm (avg. 3.7; n=20); width 1.3-1.7 mm (avg. 1.5). Legs: mesofemur serrulate on inner margin; femora punctate at apex; tibiae punctate. Venter: prosternum black in middle, punctate, reddish and rugose at sides; meso- and metasterna black, alutaceous in middle, punctate-rugose at sides; abdomen alutaceous in middle, rugose at sides. Total length: 4.1-5.3 mm (avg. 4.8).

Larval host plant: *Tripsacum dactyoides* (Poaceae) (Riley & Enns, 1982).

Distribution: Kansas, Missouri, and Oklahoma.

Specimens examined: KANSAS: **Douglas Co.**- Baldwin, 23-V-1971 (SEMC). **Reno Co.**- Medora, May (USNM), 3-VII-1927 (SEMC). MISSOURI: **Bates Co.**- Ballard, 5-VI-1978 (EGRC). **Dade Co.**- Niawathe Prairie, 10 mi. N Lockwood (EGRC). **Pettis Co.**- Friendly Prairie, 3-VI-1978 (NDSU, CNC, EGRC, TAMU). OKLAHOMA: **Kay Co.**- Ponca City, 8-VI-1947 (CNC). **Woodward Co.**- Woodward, 19-V-1981 (USNM). Total: 84.

Anisostena leconteii (Baly)

Map 1

Charistena leconteii Baly 1864:252. Holotype: E Coll. Laferte (folded)/ Type H.T. (white disk with red border)/ Baly Coll./ *Charistena leconteii* Baly, North America (faded green) (BMNH). **Incorrect original spelling.**

Charistena lecontei (Baly). Crotch 1873b:101; Horn 1883:299; Donckier 1899:584.

Odontota leconteii (Baly). Crotch 1873a:82.

Chalepus lecontei (Baly). Gemminger & Harold 1876:3613.

Anisostena lecontei (Baly). Weise 1911a:21, 1911b:32; Leng 1920:303; Blatchley 1924:43; Papp 1953:58.

Anisostena leconteii (Baly). Uhmman 1957:74; Wilcox 1975:140.

Description: Head, antennae, and elytra black; pronotum red with basal and apical margins black. Head: median sulcus deep, wide; sulcus present on inner margin of each eye; vertex micropunctate; row of punctures on outer margin of each eye; side of head smooth; red projection at base of antennae; clypeus black, punctate. Antennal segments I-VI punctate; I subglobular; II-III cylindrical, III longer than II; IV-VI transverse, equal in length; VII-X transverse, wider than preceding, with setae; XI pointed at apex. Pronotum: red; transverse basal impression present; margined laterally; central longitudinal carina present; basal margin bisinuate, black in basal impression; apical margin black, markings bisinuate, widest in middle; lateral margins divergent for basal half, convergent for apical half; covered with large, deep punctures, some are confluent; surface between punctures alutaceous; length 1.0 mm (n=3); width 1.1-1.3 mm (avg. 1.2). Scutellum: black; punctate; quadrate; surface between punctures alutaceous. Elytra: scutellar row of 3 punctures; intervals 2, 4, and 6 costate, 2 and

6 unite on apical fifth, 4 does not attain union by the diameter of 2 punctures; interval 2 raised for entire length, 4 more pronounced at base and apex, 6 costate from humerus; lateral margins sinuate, serrate; apical margins serrate; surface between punctures alutaceous; length 3.5-3.7 mm (avg. 3.65; n=5); width 1.6-1.7 mm (avg. 1.65). Venter: prosternum black in middle, alutaceous, red laterally, punctate; meso- and metasterna black, alutaceous; abdominal segments black except for last which is lighter laterally. Legs: black; femur punctate, mesofemur serrate on inner margin; tibiae alutaceous, tuft of setae at apex. Total length: 4.6-4.8 (avg. 4.75) mm.

Larval host plant: unknown.

Distribution: Virginia to Florida.

Specimens examined: NORTH AMERICA (BMNH). FLORIDA: **Dade Co.**- 19-VII-1954 (FSCA). SOUTH CAROLINA: **Charleston Co.**- 1 mi. W McClellanville, 2-VI-1973 (EGRC). VIRGINIA: **Chesterfield Co.**- Petersburg, VIII-1923 (MCZC). **Isle of Wright Co.**- Suffolk, 25-V-1931 (USNM). Total: 5.

Anisostena texana Schaeffer

Map 3

Anisostena texana Schaeffer 1933:103. Holotype: Brownsville, Texas, June/ *texana* Schaeff., Holotype, C. Schaeffer Coll., 35 HSB/ Charles Schaeffer Collection/ HS Barber Bequest 1950/ *Anisostena texana* Schaeff. (USNM). Papp 1953:59; Uhmman 1957:75; Wilcox 1975:140.

Description: Head and elytra metallic blue; pronotum reddish-orange; legs and antennae black. Head: median sulcus present, deep; sulcus present on inner margin of each eye; vertex with three punctures in transverse row; rest of vertex micropunctate; row of three punctures between median sulcus and ocular sulcus; row of punctures along outer margin of each eye; projection at base of antennae; frons and clypeus red; side of head alutaceous. Antennal segment I subglobose, punctate; II-III cylindrical, II longer than III; IV-VI transverse; VII-X transverse, wider than preceding; XI pointed at apex; VII-XI hirsute. Pronotum: strongly convex; apical margin black; covered with large, deep punctures; surface between punctures micropunctate; lateral margins with margin black;

basal margin bisinuate; lateral edges parallel on basal half, weakly convergent on apical half; length 0.7-0.9 mm (avg. 0.8, n=6); width 1.0. Scutellum: metallic blue; quadrate; micropunctate. Elytra: eight regular puncture rows plus sutural row of 3 punctures; lateral margins smooth, parallel; intervals 2, 4, and 6 costate, 6 most pronounced; intervals 2 and 6 unite on apical fifth, 4 does not attain union by the diameter of two punctures; apical margins dentate; length 3.4-3.6 mm (avg. 3.5); width 1.4. Venter: prosternum black in middle, red at sides; meso- and metasterna black; abdomen black. Legs: black; femora punctate; mesofemora serrulate on inner margin. Total length: 4.1-4.6 mm (avg. 4.4).

Larval host plant: unknown.

Distribution: Oklahoma, Texas, Arizona, and Mexico.

Specimens examined: MEXICO: CHIAPAS- El Sumidero, 20-VI-1950 (INHS). OAXACA- 9 mi. SE El Camaron, 4600 ft., 2-VI-1974 (EGRC). UNITED STATES: ARIZONA: **Pima Co.**- Baboquivari Mts., 30-VII-1987 (UICM). **St. Cruz Co.**- Nogales, 29-IX-1906, 16-IX-1906, 27-IX-1906 (USNM, UMMZ), 3-X-1906 (INIIS, UMMZ); 8 mi. W Pena Blanca Lake, 23-VII-1987 (UICM); Ruby, 13-VII-1940 (SEMC); Santa Rita Mts., Madera Cyn., 14-VIII-1988 (UICM). OKLAHOMA: Wichita Nat. For., 4-8-VI-1926 (CNC). TEXAS: no further data (ICCM). **Aransas Co.**- 6-VIII-1928 (SEMC). **Brooks Co.**- 4.8 mi. N Encino, 12-IX-1987 (EGRC). **Cameron Co.**- Boca Chica, 30-VI-1938 (SEMC). **Comal Co.**- New Braunfels, 24-VIII-1947 (CNC). **Dallas Co.**- Dallas, 15-IV-1940 (INHS). **Gillespie Co.**- 23-VI-1940 (CNC). **Harris Co.**- Deer Park, 13-VIII-1981 (ISAC). **Hildago Co.**- Delta Lake Co. Pk., 16-X-1988 (EGRC). **Jeff Davis Co.**- Davis Mts., 8-VI-1939 (CNC). **Kenedy Co.**- 1 mi. S Armstrong on Hwy. 77, 8-X-1984 (EGRC); 3.5 mi. N Norias, 13-X-1988 (EGRC, TAMU); 13 mi S Sarita, 8-VIII-1972 (USNM). **Kleberg Co.**- Kingsville, 11-IX-1975 (USNM). **Leon Co.**- Flynn, 7.6 mi. N Normangee, 14-VIII-1982 (EGRC). **San Patricio Co.**- Welder Wildlife Refuge, 3-V-1979 (UGCA). **Val Verde Co.**- 11 mi. N Comstock, 25-VII-1987 (EGRC). **Wharton Co.**- 2 mi. E Bernard, 16-V-1984 (UICM); 4.8 mi. W Jct. 71 & 1300, 20-VI-1984 (EGRC). **Willacy Co.**- 7 mi. W Port Mansfield, 3-X-1986 (EGRC). Total: 129.

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; I.

S. Askevold (ISAC); Auburn University (AUEM), W. E. Clark; British Museum (Natural History) (BMNH), S. L. Shute; Canadian National Collection (CNC), L. LeSage; Carnegie Museum of Natural History (ICCM), R. L. Davidson; Clemson University (CUCC), J. C. Morse; Cornell University (CUIC), E. R. Hoebeke; Florida State Collection of Arthropods (FSCA), M. C. Thomas; Arthur J. Gilbert (AJGC); University of Georgia (UGCA) C. L. Smith; University of Idaho (UICM), F. W. Merickel; Illinois Natural History Survey (INHS), K. McGiffin; Martin-Luther Universitat (MLUH), M. Dorn; University of Michigan (UMMZ), M. O'Brien; Mississippi Entomological Museum (MUIC), T. L. Schiefer; University of Mississippi (UMIC), P. K. Lago; Museum of Comparative Zoology (MCZC), C. Vogt; North Carolina Department of Agriculture (EDNC), J. F. Greene; North Dakota State University (NDSU), E. U. Balsbaugh; Pennsylvania Department of Agriculture (PADA), A. G. Wheeler; 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; Zoölogisch Museum Universiteit van Amsterdam (ZMA), C. van Nidek. J. F. Cavey, USDA, APHIS, Baltimore, MD, and R. E. White 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.
- Crotch, G. R.** 1873a. Materials for the study of the Phytophaga of the United States. Proceedings of the Academy of Natural Science, Philadelphia 25:19-83.
- Crotch, G. R.** 1873b. Checklist of the Coleoptera of America, north of Mexico. Naturalists Agency, Salem, MA. 136 pp.
- Donckier, H.** 1899. Catalogue Systematique des Hispidés. Annales de la Société Entomologique de France 68:540-615.
- 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.
- Ford, E. J., & J. F. Cavey.** 1982. Biology and immature stages of the Hispinae beetle *Anisostena ariadne* (Coleoptera: Chrysomelidae). Coleopterists Bulletin 36:189-192.
- Ford, E. J., & J. F. Cavey.** 1985. Biology and larval descriptions of some Maryland Hispinae (Coleoptera: Chrysomelidae). Coleopterists Bulletin 39:36-59.
- Gemminger, M., & B. Harold.** 1876. Catalogus Coleopterum hucusque descriptorum, synonymicus et systematicus. Williams & Norgate, London. Vol. 12:3479-3822.
- Horn, G. H.** 1883. Miscellaneous notes and short studies of North American Coleoptera. Transactions of the American Entomological Society 10:269-312.
- Kirk, V. M.** 1969. A list of the beetles of South Carolina Part 1- Northern coastal plain. South Carolina Agricultural Experiment Station Technical Bulletin 1033:1-117.
- Kirk, V. M.** 1970. A list of the beetles of South Carolina Part 2- Mountain, pedimont, and southern coastal plain. South Carolina Agricultural Experiment Station Technical Bulletin 1038:1-117.
- Leng, C. W., & A. J. Mutchler.** 1914. A preliminary list of Coleoptera of the West Indies as recorded to Jan. 1, 1914. Bulletin of the American Museum of Natural History 33:392-493.
- Leng, C. W.** 1920. Catalogue of the Coleoptera of America, north of Mexico. John D. Sherman, Mt. Vernon, NY. 470 pp.
- Loding, H. P.** 1945. Catalogue of the beetles of Alabama. University of Alabama Monograph 11:1-172.
- Melsheimer, F. E.** 1853. Catalogue of the described Coleoptera of the United States. Smithsonian Institution, Washington. 174 pp.
- 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.
- Newman, E.** 1841. Entomological notes. The Entomologist 73-79.
- 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.** 1979. An annotated checklist of Missouri leaf beetles (Coleoptera: Chrysomelidae). Transactions of the Missouri Academy of Science 13:53-83.
- Riley, E. G., & W. R. Enns.** 1982. Supplement to an annotated checklist of Missouri leaf beetles (Coleoptera: Chrysomelidae). Entomological News 93:32-36.
- Sanderson, M. W.** 1967. New West Indian Hispinae, with notes and keys (Coleoptera: Chrysomelidae). Caribbean Journal of Science 7:135-139.
- Schaeffer, C. F. A.** 1933. Notes on some Hispini and Cassidini and descriptions of new species

- (Coleoptera: Chrysomelidae). Pan Pacific Entomologist 9:103-109.
- Schwarz, E. A.** 1878. The Coleoptera of Florida. Proceedings of the American Philosophical Society 17:353-471.
- Smith, J. B.** 1889. Some new species of Hispini. Entomologia Americana 5:94-95.
- 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.
- Smith, R. C., & D. A. Wilbur.** 1937. Insects injurious to alfalfa, grasses, and allied plants. Biennial Report of the Kansas Agricultural Experiment Station 8:100-103.
- Staines, C. L.** 1993. A revision of the genus *Anisostena* Weise (Coleoptera: Chrysomelidae, Hispinae). Part I. Introduction and the subgenera *Neostena* and *Apostena*. Insecta Mundi 7:183-190.
- Suffrian, E.** 1868. Verzeichniss der von Dr. Gundlach auf der Insel Cuba gesammelten Chrysomelinen. Archiv für Naturgeschichte 34:163-252.
- 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.
- Uhmann, E.** 1957. Coleopterorum Catalogus, Supplementa, Chrysomelidae: Hispinae. pars 35(1):1-153. W. Junk, Gravenhage.
- Ulke, H.** 1902. A list of the beetles of the District of Columbia. Proceedings of the United States National Museum 25:1-57.
- Weise, J.** 1910. Zweiter Beitrag zur Kenntnis der Hispinen. Verhandlungen des Naturforschenden Vereines in Brünn 48:115-162.
- 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. Wytzman, *Genera Insectorum* fasc. 125:1-123. Brussels.
- 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.