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.

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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 Monné & Viana (1947).

Description: Head: last five antennal segments wider than preceding; suture 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 .......... 3
   Pronotum without median longitudinal carina 4

3. Pronotum with apical or apical and basal margins dark ...................................... cyanoptera (Suffrian Pronotum entirely red) ............................................. 4

Antennal segment 2 longer than 3 6
Antennal segment 3 longer than 2 5

5. Vertex of head micropunctate, with row of three punctures between median and ocular sulci; pronotum red; leconteii (Newman) ............................................. 6
   Pronotum without median longitudinal carina 7

6. Vertex of head micropunctate, with row of three punctures between median and ocular sulci; pronotum red; leconteii (Newman) ............................................. 6
   Pronotum without median longitudinal carina 7

7. Head with median sulcus deep, wide; surface of sulcus punctate, pronotum with scattered punctures, disc almost impunctate ............................................. kansas (Schaeffer)
   Head with median sulcus deep, wide; surface of sulcus punctate, pronotum with scattered punctures, disc almost impunctate ............................................. bellula (Baly)

Anisoslena ariadne (Newman)  
Map 1


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


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-V transverse; VII-X transverse, wider than preceding; XI pointed at apex; segments not densely pubescent. Pronotum: apical margin thick, thicker in middle; wider than long; punctures large, deep, micropunctate between punctures; sides parallel on basal half, weakly convergent on apical half, basal margin sinuate, 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 seutellar row of 3 punctures; lateral margins sinuate, serrate; apical margin more densely serrate; intervals 2, 4, and 6 more 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 metaerena 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.
Anisostena bellula (Baly)

Map 2


Description: Head and elytra 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. Antennal segment I subglobose; II-III cylindrical.
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 0.7-0.5 mm; 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; width 1.3-1.4 mm (avg. 1.4). Legs: reddish; mesofemur serrulate on inner margin; apex of femora, tibiae, and tarsi darker. Venter: prothorax 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 Micraflores, 17-X-1978 (FSCA); San Jose de Cabo (USNM). Nayarit: 15 mi S Acaponeta, 20-VIII-1964 (TAMU). Sinaloa: 38 mi NE Cameruela, nr. Loberas, 3-VII-1982 (AGOC); 4.5 mi N Elota, 17-VII-1984 (FSCA); Los Mochis, 12-IV-1924 (USNM), 28-V-1955 (EGHC); 8 mi N Mazatlan, 7-VIII-1963 (AGOC); 5 mi N Mazatlan (USNM). United States: Arizona, no further data (USNM). California, Rossmond, 23-

**Anisostena cyanoptera** (Suffrian)

**Map 2**

*==ontotaca cyanoptera* Suffrian 1868:227. Holotype: 31576! MLU Halle, "VB Zoologie, S.-Nr. 7/1/10, T.Nr. cyan."

1923 (2:MA); Hoya Colorada, Hav. Pr., 23-VIII-1911 (USNM); Lomus de Camoa, Habana, 18-IX-1956 (INHS); Mins Carloto. Cienfuegos, 1-XII-1927 (FSCA); Omaia, cyanipennis m., cyanoptera Hrch. 1868, Cuba (gleen label) (MLUII).

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


24-VII-1927 (USNM); Pinar del Rio, 16-29-V-1933 (ZMA); Santiago d. l. Vagas (USNM), Soledad, Cienfuegos, 4-XI-1927 (FSCA), 16-X-1926 (USNM), V-VI-1939, 16-X-1926 (MCZC).


**Distribution:** Cuba, Jamaica, and Hispaniola.

**Specimens examined:** CURA: no further data (MLUH, MCZC); Baragua, 22-X-1923, 13-X-1928 (MCZC); Camaguey, 30-VII-1923 (USNM); Cayamans, 6-6 (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-117 (USNM); Lomus de Camoa, Habana, 18-IX-1956 (INHS).

**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 con cave; sides of head red dish, 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 serrat on inner margin; tibia blue-black, expands to apex; tarsal segment IV bare, exceeds lobes of III; claws red. Total length: 3.3-3.8 mm (avg. 3.5).

**Larval host plant:** unknown.

**Anisostena elegantula** (Baly)

**Map 2**


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


**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 con cave; sides of head red dish, 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 serrat on inner margin; tibia blue-black, expands to apex; tarsal segment IV bare, exceeds lobes of III; claws red. Total length: 3.3-3.8 mm (avg. 3.5).
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.


Anisostena kansana Schaeffer
Map 3


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; median sulcus deep, wide; surface with scattered large, deep punctures; disc almost unpunctate; 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; 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 serrate on inner margin, femora punctate at apex; tibiae punctate. Venter: prothorax 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 dactyloides* (Poaceae) (Riley & Enns, 1982).

Distribution: Kansas, Missouri, and Oklahoma.


**Anisostena leconteii** (Baly)

Map 1

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


*Odontota lecontei* (Baly). Crotch 1872a:92.

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


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 0 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 margin serrate; surface between punctures alutaceous; length 2.5-3.7 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: 4.0-4.8 (avg. 4.75) mm.

Larval host plant: unknown.

Distribution: Virginia to Florida.


**Anisostena texana** Schaeffer

Map 3


Description: Head and elytra metallic blue; pronotum reddish-orange; legs and antennae black. Head: median sulcus present, deep; s-:les 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.


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Literature Cited


Papp, C. S. 1953. The Hispinae of America. Third contribution for promoting the scientific results of the International Hylean Amazon Inst. in Manaos, Brazil. Portugaliae Acta Biologica (B)4:1-147.


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.


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.