THE ANTHONOMUS GUTTATUS SPECIES GROUP (COLEOPTERA: CURCULIONIDAE)

WAYNE E. CLARK

Department of Entomology and Alabama Agricultural Experiment Station, Auburn University, Alabama 36849-5413.

Abstract. – Four species of neotropical Anthonomini are assigned to the Anthonomus guttatus group. Adults of two of these species have been collected on Casearia sylvestris Sw. (Flacourtiaceae). Characters diagnostic of the A. guttatus group and of each of the species are described and some are illustrated. A key to the species is presented. Three new species are described: A. argocephale (Brazil), A. albocapitis (British Virgin Islands, Cuba, Haiti, Puerto Rico, Republica Dominicana) and A. leucocephale (Cuba). A lectotype is designated for A. guttatus (Champion). Relationships of the A. guttatus group to A. sallei Burke and the A. triensis group are discussed.

Key Words: Anthonomus, caesaria, Anthonomini, Curculionidae

The Anthonomus guttatus group contains four species that occur in México, Central and South America and the West Indies. two of which have been collected on Casearia sylvestris Sw. (Flacourtiaceae). Champion (1903) placed A. guttatus (Champion), with the other Central American Anthonomini known by him to have 6 antennal funicular articles, in the genus Pseudanthonomus Dietz. As Burke (1979) asserted, however, A. guttatus does not belong in that genus. The species was recently transferred to Anthonomus (Clark 1990), along with several of the other species Champion (1903, 1910) had assigned to Pseudanthonomus but in which the upper margin of the lateral rostral groove is directed to the upper margin rather than to or below the lower margin of the eye. This paper includes descriptions, illustrations and a key to A. guttatus and three previously undescribed species in the A. guttatus group and discussions of the relationships of the group to A. sallei Burke and to the A. triensis group. It is dedicated to the memory of the late Donald R. Whitehead. The specific epithets, Latin or Greek combinations of words meaning "white" and "head," join *Anthonomus whiteheadi* (Clark In Press) as tokens of my appreciation to Don for his help and encouragement over the years.

MATERIALS AND METHODS

Specimens of 78 adult weevils, including the types of the previously described species, were examined. These were from the collections of the following individuals and institutions (codens identify the collections in the text):

- AMNH The American Museum of Natural History, New York, New York, USA, L. H. Herman, Jr.;
- AUEM Auburn University Entomological Collections, Auburn, Alabama, USA, W. E. Clark;
- BMNH The British Museum (Natural History), London, England, R. T. Thompson;

- CWOB C. W. O'Brien Collection, Tallahassee, Florida, USA;
- DZUP Universidade Federal do Paraná, Curitiba, Brazil, G. H. Rosado-Neto;
- HAHC H. and A. Howden Collection, Ottawa, Canada;
- MCZC Museum of Comparative Zoology, Cambridge, Massachusetts, USA, D. G. Furth;
- MHND Museo Nacional de la Historia Natural, Santo Domingo, Republica Dominicana, A. Zaglul;
- MZSP Museu de Zoología, Universidade de São Paulo, São Paulo, Brazil, U. Martins;
- TAMU Texas A&M University, College Station, Texas, USA, H. R. Burke;
- USNM National Museum of Natural History, Washington, D.C., USA, D. R. Whitehead;
- ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, DDR, F. Hieke.

Measurements were made with the aid of an ocular micrometer in a dissecting microscope as follows: total length from anterior margin of eye to elytral apex in lateral view; width across elytra at widest point; length of pronotum, dorsally, from anterior to posterior margins; length of rostrum from anteroventral margin of eye to apex, across arc, in lateral view; length of distal portion of rostrum from antennal insertions to apex in lateral view; width of frons at narrowest point between eyes; width of base of rostrum just distad of eyes in dorsal view; and width of pro- and metafemora, in anterior view, excluding the inner marginal teeth. The range and, in parentheses, the mean and sample size of each measurement are given for each species.

The Anthonomus guttatus Species Group

Recognition Characters. – The A. guttatus group includes Anthonomini with 6 antennal articles; a single profemoral tooth; broad, leucine scales in postscutellar patches on sutural interstriae, in a basal patch on interstria 6, and in a diagonal median row and a transverse declivital row of patches (Figs. 1-8); abdominal tergum 7 of male (Fig 9) with integument thickened posteriorly, with deeply emarginate internal phragma; pygidium of female (Fig. 10) with an inverted v-shaped median sulcus anterior to similarly shaped median carina with deeply emarginate internal phragma and with a bilobed, apicomedian prominence; endophallus (Figs. 15-18) with a median sclerite bounded by two lateral sclerites; and tegmen without parameres.

The species are further characterized as follows:

Length: 2.00-3.04 mm. Width: 1.02-1.70 mm. Head: vertex with elongate, narrow, pallid scales; venter with broader, imbricated, lacteous scales; eyes strongly convex posteriorly. Rostrum: proximal portion rugulose; upper margin of lateral rostral groove directed to upper mid-portion of eye; distal portion rugulose, glabrous. Prothorax: each puncture with an elongate, apically rounded, leucine scale or a narrower, aeneus scale; broad scales abundant in narrow middorsal vitta. Elytra: interstriae with apically rounded, leucine scales and narrower, aeneus scales; slightly more convex, darker in color and glabrous in alternating patches on even-numbered interstriae anterior and posterior to most prominent patches of pallid scales; strial punctures small, with minute setae. Abdomen: posterior margin of sternum 5 of male broadly, subquadrately emarginate; abdominal sternum 5 of female with shallow apicolateral emarginations that receive apicolateral prominences of pygidium; endophallus minutely denticulate proximally. Legs: profemur about as wide as metafemur; protibia straight, with innermarginal prominence; metatibial mucro of male short, slightly curved; metatibial mucro of female minute.

Plant associations. - Adults of two of the

species in the A. guttatus group, A. argocephale in Brazil and A. albocapitis in the Republica Dominicana, have been collected on Casearia sylvestris Sw. (Flacourtiaceae). One specimen of the latter species was taken, according to label data, on Faramea occidentalis (L.) A. Rich. (Rubiaceae). The immature stages and developmental sites of the species are unknown, so the host associations of the species cannot be ascertained. It seems likely, however, that C. sylvestris will be found to be a host because of the large number of specimens collected on the plant.

Relationships.-The thickened posterior margin with the emarginate internal phragma of abdominal tergum 7 of the male (Fig. 9) and the similar, corresponding, inverted v-shaped median sulcus with emarginate internal phragma of the pygidium (tergum 7) of the female (Fig. 10) are similar to the "... inverted v-shaped to broadly u-shaped line(s) . . ." found in the species of Anthonomus in the A. triensis group (Clark In Press). It seems possible that the bilobed, apicomedian prominence of the pygidium of the female of the species in the A. guttatus group might be homologous to the apicolateral pygidial prominences observed in the females of the A. triensis group (Clark In Press). It likewise seems reasonable that the "pair of spines and . . . more distal median sclerite" (Clark In Press) of the species in the A. triensis group are homologous to the three large endophallic sclerites in the A. guttatus group. It should be noted, however, that the apicolateral pygidial prominences are also shared with the species in the A. alboannulatus group and others (Clark In Press), and that the endophallic sclerites are similar to those in species in the genus Atractomerus (Clark 1989). The species in the A. triensis group are somewhat similar to the species in the A. guttatus group in having variegated lighter and darker ferruginous to piceous elytral and pronotal integument, and in possession of a large, posterolateral, elytral macula bounded by patches of pallid scales.

The species in the A. guttatus group exhibit nothing comparable, however, to the enlarged profemur with the large, bi-emarginate tooth of the species in the A. triensis group.

As noted by Burke (1979), A. sallei Burke "superficially" resembles A. guttatus. That Mexican and Central American species is like the species in the A. guttatus group in possession of 6 antennal funicular articles and in having a similar pattern of patches of broad, pallid scales on the elytra. Abdominal tergum 7 of A. sallei lacks the modifications described above for the species in the A. guttatus group, however, and the endophallus lacks the three elongate sclerites that characterize the species in that group. It is intriguing that A. sallei, like some of the species in the A. guttatus group, is known to be associated with plants in the genus Casearia (Burke 1979).

KEY TO SPECIES OF ANTHONOMUS IN THE A. GUTTATUS SPECIES GROUP

- 1. Glabrous sections of elvtral interstriae 2 and 4 between anterior and declivital patches of broad, pallid scales interrupted medially by diffuse patch of similar scales (Fig. 4); metatibia of male (Fig. 12) with well-developed, median, inner-marginal prominence
- A. argocephale 1'. Glabrous sections of elytral interstriae 2 and 4 between anterior and declivital patches of broad, pallid scales continuous, not interrupted medially by diffuse patch of such scales (Figs. 1, 2, 5-8); metatibia of male without inner-marginal prominence (Fig. 11), OR, inner marginal prominence at apical 1/3 (Figs. 13, 14)
- 2. Elytral interstriae 3 and 7 without significant patches of pallid scales, interstria 5 without declivital patch (Figs. 1, 2); metatibia of male (Fig. 11) curved, without inner-marginal prominence; profemoral tooth uncinate

2

3

-A. guttatus 2'. Elytral interstriae 3 and 5 with significant anterior and declivital patches of pallid scales, interstria 7 with small anterior patch (Figs. 5-8); metatibia of male (Figs. 13, 14) not curved, with inner-marginal prominence at apical 1/3; profemoral tooth straight
- 3. Metatibia of male with well-developed innermarginal prominence (Fig. 13); rostrum of fe-

Anthonomus guttatus (Champion) Figs. 1, 2, 11, 15

- Pseudanthonomus guttatus Champion 1903: 195. Lectotype (here designated). PAN-AMA. Chiriquí: male [Sp. figured] [Bugaba,/ Panama./ Champion.] [32] [B.C.A.Col.IV.4/ Pseudanthonomus/ guttatus,/ Champ.] [Type] (BMNH). Paralectotypes. PANAMA. Chiriquí: 1 female, mounted with the lectotype; 1 male [89] [Bugaba,/ Panama./ Champion.] [B.C.A.Col.IV.4/ Pseudanthonomus/ guttatus,/ Champ.]; 1 male, 5 females [Bugaba,/ Panama./ Champion.] [B.C.A. Col.IV.4/ Pseudanthonomus/ guttatus,/ Champ.] (BMNH). Blackwelder 1947: 840. O'Brien and Wibmer 1982: 113. Burke 1979: 203.
- Anthonomus guttatus (Champion). Clark 1990: 657.

Recognition characters (Figs. 1, 2).-Anthonomus guttatus is distinguished from the other members of the A. guttatus group by the following combination of characters: Elytra (Figs. 1, 2) glabrous between median and declivital patches of pallid scales on interstriae 2 and 4, without significant anterior and declivital patches of pallid scales on interstriae 3 and 7, but with fairly distinct anterior patch on interstria 5; metatibia of male (Fig. 11) curved; profemoral tooth curved; broad, pallid scales on lower portion of propleuron replaced on lower mid-portion by narrower scales. The eyes are less strongly prominent in A. guttatus than in the other members of the A. guttatus group.

Male. – *Length:* 2.24–2.64 mm (mean = 2.43, n = 6). *Width:* 1.26–1.42 mm (mean = 1.33, n = 6). *Head:* eyes not prominent,

separated by distance approximately $0.7 \times$ width of rostrum at base. Rostrum: length 1.38-1.57 (mean = 1.50, n = 6) × pronotal length; distal portion 34-38% (mean = 36, n = 6) of total rostral length. Prothorax: interspaces between punctures narrow; broad, pallid scales forming broad postocular vitta on pleuron. Elvtra: leucine scales elongate, dense in diagonal median and declivital rows of patches on interstriae 2, 4, 6, 8 and 10. Abdomen: aedeagus (Fig. 15) subparallel sided, with slight apical prominence; endophallus (Fig. 15) with median sclerite long, lanceolate, lateral sclerites shorter, stouter. Legs: profemoral tooth slender, acute, curved; protibia with innermarginal prominence feebly developed; protibial uncus short, nearly straight.

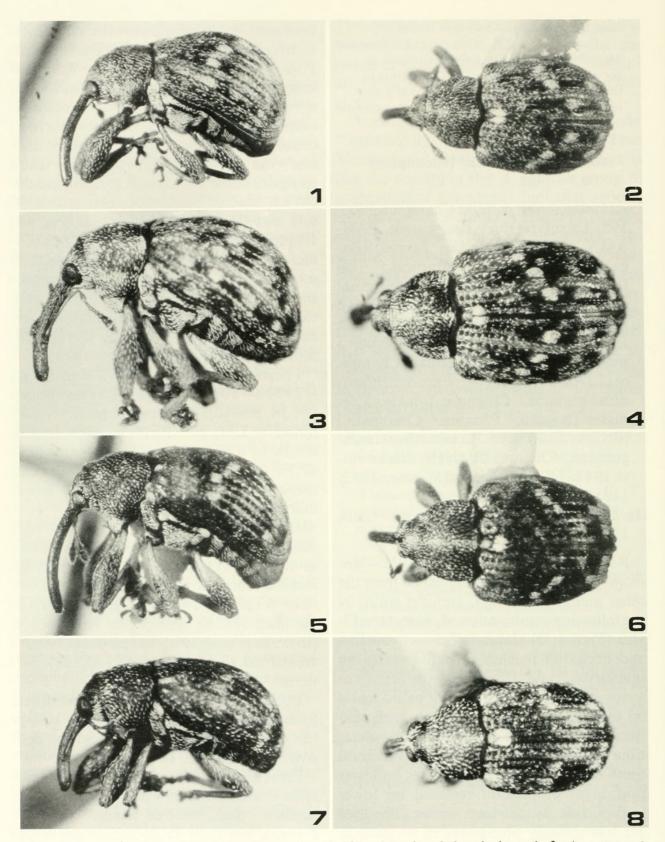
Female. – Length: 2.00–2.72 mm (mean = 2.46, n = 10). Width: 1.10–1.52 mm (mean = 1.34, n = 10). Rostrum: length 1.56–1.84 (mean = 1.71, n = 10) × pronotal length; length of distal portion 43–50% (mean = 47, n = 10) of total rostral length. Legs: metatibia nearly straight, without innermarginal prominence.

Discussion. – Champion (1903: 195) considered A. guttatus to be closely related to A. curvicrus (Champion), noting that the femoral tooth "arises from near the middle" in both species. The metatibia is curved in the male of both species (the female of A. curvicrus is unknown), but all of the femora are curved, and more strongly so, in A. curvicrus.

Burke (1979) stated that *A. sallei* differs from *A. guttatus* "in its larger size, stouter legs, shorter, stouter rostrum and the constricted appearance of the head."

Plant associations. – Specimens of A. guttatus from Turrialba, Cartago, Costa Rica, labelled "moss on tree trunks" were examined, but there is no indication of the host relationships of the species.

Distribution.—In addition to the 9 syntypes from Panamá, 13 specimens of A. guttatus from the following localities were examined. BRAZIL. São Paulo: Fazhenda Pau



Figs. 1–8. Anthonomus guttatus group members, habitus, lateral and dorsal views. 1, 2. A. guttatus, \mathcal{Q} , Turrialba, Cartago, Costa Rica; 3, 4. A. argocephale, δ , Chapecó, Santa Catarina, Brazil; 5, 6. A. albocapitis, \mathcal{Q} , 10.5 km E Sabana de la Mar, El Seibo, Republica Dominicana; 7, 8. A. leucocephale, δ , holotype.

d'alho, Itú (1 MZSP). COSTA RICA. Cartago: Turrialba (6 HAHC). San José: 2 km S Colón (1 HAHC). MEXICO. San Luis Potosí: Tamazunchale (2 USNM). VENE-ZUELA. Lara: Terepaima (1 AUEM).

Anthonomus argocephale, New Species Figs. 4, 12, 16

Type series.-Holotype. BRAZIL. Santa Catarina: male [Brasilien/ Nova Teutonia/ 27°11'B · 52°23'L/ Fritz Plaumann/ 14 XI 1949/ 300 W. 500 m.] [Pflanze/ 640] (MZSP). Paratypes. BRAZIL. Paraná: 1 female [Paraná/ Guarauna/ 12-40] [4877] [Coleção/ F. Justus Jor] [DPT°/ ZOOL/ UF-PARANA] 1 female [DPT°/ ZOOL/ UF-PARANA] [PIRACUARA - PARANA/ BRASIL - 20/ 11/ 1970/ Marinoni & Moure]. Río Grande do Sul: 1 female [75 28/ Pio Buek] [Porto Alegre/ 73.9.44] [Casearia/ sylvestris Bery] [4990] [Gregorio Bondar/ Collection/ David Rockefeller/ Donor]. Santa Catarina: 2 males [CHA-PECO'/ 27°07 52'33/ 600 m] [F. Plaumann/ Nov. 1962]. 1 male, 1 female [Brasilien/ Nova Teutonia/ 27°11'B · 52°23'L/ Fritz Plaumann/ IX 1954/ 300 W. 500 m.]; 1 male [Brasilien/ Nova Teutonia/ 27°11'B · 52°23'L/ Fritz Plaumann/ X 1962/ 300 W. 500 m.]. Total paratypes, 8 (AMNH, DZUP, MZSP).

Recognition characters (Figs. 3, 4). - Anthonomus argocephale is distinguished from the other members of the A. guttatus group by the following combination of characters: Elytra (Figs. 3, 4) with glabrous sections between median and declivital patches of broad, pallid scales on interstriae 2 and 4 interrupted medially by diffuse patches of similar broad, pallid scales, without significant declivital patches of pallid scales on interstriae 3 and 7, but with small anterior patch on interstria 5; metatibia of male (Fig. 12) with well-developed inner-marginal prominence; broad, pallid scales on lower portion of propleuron replaced on lower mid-portion by narrower scales. It is most likely to be confused with A. guttatus, but differs from that species by the above listed characters as well as by having more prominent eyes and by the metatibia of the female which has the outer margin broadly concave and has a broad inner-marginal prominence.

Male. -Length: 2.24-2.52 mm (mean =2.39, n = 4). Width: 1.22-1.46 mm (mean = 1.32, n = 4). *Head*: eyes prominent, separated by distance approximately $0.7 \times$ width of rostrum at base. Rostrum: length 1.39-1.59 (mean = 1.46, n = 4) × pronotal length; distal portion 30-37% (mean = 34, n = 4) of total rostral length. Prothorax: interspaces between punctures narrow; broad scales forming broad postocular vitta on pleuron. Elytra: leucine scales elongate, dense in diagonal median, posteromedian and declivital rows of patches on interstriae 2, 4, 6, 8 and 10. Abdomen: aedeagus (Fig. 16) constricted in distal 1/3, narrowed to bluntly rounded apex; endophallus with median sclerite long, slender, spatulate, lateral sclerites shorter, slender. Legs: profemoral tooth slender, acute, conical; protibia with well-developed inner-marginal prominence; protibial uncus short, slightly curved.

Female. – Length: 2.24–2.48 mm (mean = 2.41, n = 4). Width: 1.28–1.44 mm (mean = 1.40, n = 4). Rostrum: length 1.68–1.92 (mean = 1.78, n = 4) × pronotal length; length of distal portion 42-54% (mean = 46, n = 4) of total rostral length. Legs: metatibia with slight inner-marginal prominence, outer margin slightly concave.

Plant associations.—Label data indicate that a paratype of *A. argocephale* from Porto Alegre, Río Grande do Sul, Brazil, was collected on *Casearia sylvestris*.

Distribution.—*Anthonomus argocephale* is known only from the type series from Brazil.

Anthonomus albocapitis, New Species Figs. 5, 6, 9, 10, 11, 17

Type series.—*Holotype*. REPUBLICA DOMINICANA. *El Seibo*: male [REPUB-LICA Dominicana/ El Seibo: 10.5 km. E/ Sabana de la Mar/ 11 Sept. 1983/ W. E. Clark] [on Casearia/ sylvestris Sw./ (Flacourtiaceae)/ dt. S. McDaniel] [27213/ host] (MHND). Paratypes. BRITISH VIRGIN ISLANDS. Tortola: 1 male [British Virgin] Is./ Tortola, Meyers/ 18-19 Aug. 1982/ R. S. Miller, colr.]. CUBA. 1 male [Cuba,/ G. Wright]; 1 male [Cayamas/ 5.2 Cuba] [EA Schwarz/ Collector]; 2 males, 2 females [Cayamas/ 24.2 Cuba] [EA Schwarz/ Collector]; 1 male, 1 female [Cayamas/ 26.2 Cuba] [EA Schwarz/ Collector]; 1 male [Cayamas/ 2.3 Cuba] [EA Schwarz/ Collector]; 1 female [Cayamas/ 4.3 Cuba] [EA Schwarz/ Collector]; 1 female [Cayamas/ 4.3 Cuba] [EA Schwarz/ Collector] [404.]; 1 female [Cayamas/ 6.3 Cuba] [EA Schwarz/ Collector]. Camaguey: 1 male [CUBA: Monte Imias/ nr. California,/ Camaguey Prov./ June 7, 1959/ M. W. Sanderson/ C59-20]. HAITI. île de la Tortue: 1 male [Tortue Isl./ Haiti EC&/ GM Leonard] [Bisse Terre/ Apr. 29/ #20]. REPUBLICA DOMINI-CANA. El Seibo: 13 males, 15 females [RE-PUBLICA Dominicana/ El Seibo: 10.5 km. E/ Sabana de la Mar/11 Sept. 1983/W.E. Clark]. Santiago: 1 male [fthills Cord. Cent./ S. of Santiago/ June '38, Dom. Rep./ Darlington]. PUERTO RICO. 1 female [Portorico/ Krug S. G.] [259./ Anthonomus./ Germ.] [Zool. Mus./ Berlin]; 1 female [Portorico/ Krug S. G.]. Aguadilla: 1 male [Aguadilla/ P.R. 6-26-50/ Faraemea/ occidentalis] [Stringer/ San Juan/ 10,279/ 5G-15661] [Anthonomus/ sp./ REW/ II-51]; 1 female [PUERTO RICO/ Barriomora,/ Isabella, VIII-4-58/ A. F. A. Sanderson]. Are*cibo:* 2 males [PUERTO RICO:/ Cambalache For./ Arecibo/ XI-6-1959/ A. M. Nadler]. *Guayama:* 1 female [Aibonito, P.R./ July 14–17, '14]. *Mayagüez:* 2 males [Mayaguez, P.R./ VI-2-1932/ Coll: F. Mora] [Stuart/ T. Danforth/ Collection]; 1 male, 1 female [Mayaguez, P.R./ VI-4-1932/ Coll: F. Mora] [Stuart/ T. Danforth/ Collection]; 1 male [Mayaguez, P.R./ July 24–29, '14] [Anthonomini]. *Ponce:* 1 female [5 mi. N. E. Jayuya/ P.R. VII 23, 1969/ H. & A. Howden]. Total paratypes, 57 (AMNH, AUEM, CWOB, MCZC, MHND, TAMU, USNM, ZMHB).

Recognition characters (Figs. 5, 6). -Anthonomus albocapitis is distinguished from the other members of the A. guttatus group by the following combination of characters: Elytra (Figs. 5, 6) glabrous between median and declivital patches of broad, pallid scales on interstriae 2 and 4, with significant anterior and declivital patches of pallid scales on interstriae 3 and 5, and with anterior patch on interstria 7; metatibia of male (Fig. 13) with inner-marginal prominence displaced distally; scales on vertex of head distinctly narrower than scales around dorsal margins of eyes and on frons.

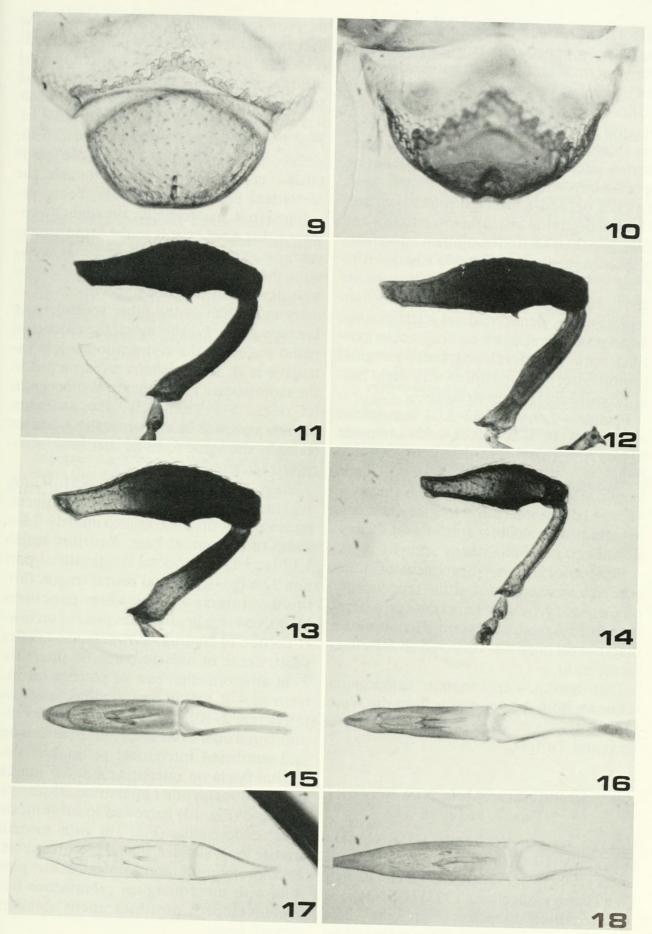
Male. – Length: 2.04–2.64 mm (mean = 2.30, n = 10). Width: 1.02–1.44 mm (mean = 1.24, n = 10). Head: with short, broad, lacteous scales around dorsal margins of eyes and on frons; eyes prominent, separated by distance approximately $0.7 \times$ width of rostrum at base. Rostrum: length 1.41–1.58 (mean = 1.48, n = 10) \times pronotal length; distal portion 31–38% (mean = 36, n = 10)

Figs. 9, 10. Anthonomus albocapitis, abdominal terga, dorsal view. 9. terga 7 and 8 (pygidium), & holotype; 10. tergum 7 (pygidium), & paratype, 10.5 km E Sabana de la Mar, El Seibo, Republica Dominicana.

Figs. 11–14. Anthonomus guttatus group members, & right metathoracic legs, posterior views. 11. A. guttatus, Turrialba, Cartago, Costa Rica; 12. A. argocephale, holotype; 13. A. albocapitis, holotype; 14. A. leucocephale, holotype.

Figs. 15–18. Anthonomus guttatus group members, aedeagus, dorsal views. 15. A. guttatus, Turrialba, Cartago, Costa Rica; 16. A. argocephale, holotype; 17. A. albocapitis, holotype; 18. A. leucocephale, holotype.

VOLUME 93, NUMBER 2



of total rostral length. Prothorax: interspaces between punctures narrow; broad scales forming small anterolateral patches, present on lower portion of pleuron. Elvtra: leucine scales short, dense in median patch on interstria 2, in anteromedian row of patches on interstriae 4-8, and in declivital fascia across interstriae 2-10; median patches on even-numbered interstriae longer than patches on odd-numbered interstriae; sections of declivital fascia on interstriae 4 and 5 longer than sections on other interstriae. Abdomen: aedeagus (Fig. 17) slightly widened in distal 1/3, narrowed to subtruncate apex; endophallus (Fig. 17) with median sclerite short, slender, lateral sclerites long. Legs: profemoral tooth conical, acute; protibia with well-developed inner-marginal prominence; protibial uncus with slight basal prominence, nearly straight.

Female. – Length: 2.32–3.04 mm (mean = 2.56, n = 10). Width: 1.24–1.70 mm (mean = 1.42, n = 10). Rostrum: length 1.50–1.70 (mean = 1.59, n = 10) × pronotal length; length of distal portion 38-52% (mean = 46, n = 10) of total rostral length. Abdomen: pygidium with shallow apicodorsal depression. Legs: metatibia nearly straight.

Plant associations.—Specimens of A. albocapitis were collected at the type locality on Casearia sylvestris. Label data on a paratype from Aguadilla, Puerto Rico, indicate that the specimen was collected on Faramea occidentalis.

Distribution.—*Anthonomus albocapitis* is known from the type series from the West Indian islands of Cuba, Hispañola, Puerto Rico and Tortola.

Anthonomus leucocephale, New Species Figs. 7, 8, 14, 18

Type series.—*Holotype*. CUBA. male [Cayamas/ 10.6 Cuba] [EA Schwarz/ Collector] (USNM). *Paratype*. 1 female [Cuba] [Wickham/ Collection/ 1933] (USNM).

Recognition characters (Figs. 7, 8).—The near absence of an inner-marginal metatib-

ial prominence in the male (Fig. 14), the narrower, more strongly tapered aedeagus (Fig. 18), and the different relative lengths of the endophallic sclerites (the median sclerite is much longer and the lateral sclerites are much shorter in A. leucocephale, cf. Figs. 17, 18) distinguish A. leucocephale from A. albocapitis. The two species are obviously very closely allied. Although the metatibial prominence is only feebly developed in A. leucocephale, the slight prominence that does exist is in the same unique position as that in A. albocapitis. It is notable that the metatibial prominence is less well developed in Cuban specimens of A. albocapitis than in the other specimens in the type series. Furthermore, the patches of pallid scales on the elytra, though less extensive in A. leucocephale, are arranged in the same pattern as the ones in A. albocapitis (cf. Figs. 5-8). Similarly, the aedeagus, though narrower in A. leucocephale, has essentially the same form as that in A. albocapitis (cf. Figs. 17, 18).

Male. — Length: 1.96 mm (n = 1). Width: 1.02 mm (n = 1). Head: eves prominent, separated by distance approximately $0.8 \times$ width of rostrum at base. Rostrum: length $1.17 (n = 1) \times \text{pronotal length; distal por-}$ tion 32% (n = 1) of total rostral length. *Pro*thorax: interspaces between punctures broad, convex; broad scales present on lower portion of pleuron. Elvtra: leucine scales short, dense in median patch on interstria 2, in anteromedian row of patches on interstriae 4-8, and in declivital fascia across interstriae 2-10; median patches on evennumbered interstriae longer than patches on odd-numbered interstriae; sections of declivital fascia on interstriae 4 and 5 longer than sections on other interstriae. Abdomen: aedeagus (Fig. 18) narrowed to subtruncate apex; endophallus (Fig. 18) with median sclerite long, slender, lateral sclerites short. Legs: profemoral tooth conical, acute; protibia with inner-marginal prominence feebly developed; protibial uncus slender, curved, acute.

Female.—Length: 2.04 mm (n = 1). Width: 1.16 mm (n = 1). Rostrum: length 1.34 (n = 1) × pronotal length; length of distal portion 41% (n = 1) of total rostral length. Legs: metatibia nearly straight.

Plant associations. - Unknown.

Distribution.—*Anthonomus leucocephale* is known from the type series from Cuba.

ACKNOWLEDGMENTS

Thanks are extended to the individuals and institutions listed in the Materials and Methods section for the loan of specimens. The manuscript was reviewed by H. R. Burke, G. L. Miller, and M. L. Williams. This paper is published as Alabama Agricultural Experiment Station Journal Series No. 17-902722P.

LITERATURE CITED

- Blackwelder, R. E. 1947. Checklist of the coleopterous insects of Mexico, Central America, the West Indies and South America, Part 5. Bulletin. United States National Museum (185): I–IV, 765–925.
- Burke, H. R. 1979. New species of Mexican and Central American Anthonomus (Coleoptera: Curcu-

lionidae). The Southwestern Entomologist 4(3): 201–208.

- Champion, G. C. 1903. Curculionidae: Curculioninae, Volume 4, Part 4, pp. 145–312. In F. D. Godman and O. Salvin, eds., 1879–1911. Biologia Centrali-Americana, Insecta, Coleoptera, 7 volumes in 17 parts. Dulau, London.
- ——. 1910. Biologia Centrali-Americana. Insecta. Coleoptera. Rhynchophora. Curculionidae. Curculioninae (concluded) and Calandrinae, vol. 4, pt. 7, pp. 79–221. In F. D. Godman and O. Salvin, eds., 1879–1911. Biologia Centrali-Americana, Insecta, Coleoptera, 7 volumes in 17 parts. Dulau, London.
- Clark, W. E. 1989. Revision of the Neotropical weevil genus *Atractomerus* Duponchel and Chevrolat (Coleoptera: Curculionidae). Transactions of the American Entomological Society 114: 313–413.
- . 1990. The Neotropical species of *Pseudan-thonomus* Dietz (Coleoptera: Curculionidae). Transactions of the American Entomological Society 116(3): 655–695.
- ——. In press. Revision of the Anthonomus alboannulatus and Anthonomus triensis species groups (Coleoptera: Curculionidae). Coleopterists Bulletin.
- O'Brien, C. W. and G. J. Wibmer. 1982. Annotated checklist of the weevils (Curculionidae *sensu lato*) of North America, Central America, and the West Indies (Coleoptera: Curculionoidea). Memoirs of the American Entomological Institute 34: i–ix + 1–382.



Clark, Wayne E. 1991. "The Anthonomus guttatus species group (Coleoptera: Curculionidae)." *Proceedings of the Entomological Society of Washington* 93, 262–271.

View This Item Online: <u>https://www.biodiversitylibrary.org/item/54815</u> Permalink: <u>https://www.biodiversitylibrary.org/partpdf/55505</u>

Holding Institution Smithsonian Libraries and Archives

Sponsored by Smithsonian

Copyright & Reuse Copyright Status: In copyright. Digitized with the permission of the rights holder. Rights Holder: Entomological Society of Washington License: <u>http://creativecommons.org/licenses/by-nc-sa/3.0/</u> Rights: <u>https://biodiversitylibrary.org/permissions</u>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.