

New Species of Aphidae: Homoptera from Puerto Rico¹

Clyde F. Smith²

INTRODUCTION

The following new species of aphids were collected in Puerto Rico during 1954 and 1955, when the author was making a survey of the host plants of the green peach aphid, *Myzus persicae* (Sulzer) in cooperation with the Department of Entomology of the Agricultural Experiment Station, University of Puerto Rico. Unless otherwise indicated all of the material was collected by the author in cooperation with Mrs. Clyde F. Smith, Dr. L. F. Martorell, and Dr. Mario E. Pérez-Escolar.

Acyrtosiphon bidenticola Smith, n. sp.

This species (fig. 1) differs from *A. bidentis* Eastop in the unguis being much longer and the cornicles darker. *A. bidentis* also has a conspicuous median process.

Apterous Vivipara

Living specimens bright green, darker green at base of cornicles. Cleared specimens dark on antennal segments III, IV, V, and VI, cornicle (except base), legs beyond base of femora, and rostral IV + V. Dusky on antennal segments I, II, and base of III, coxae, trochanter, base of femora, base of cornicle and cauda. Remaining portions of body pale.

Length of body 1.87³ (1.66–1.98); width of head 0.44 (0.43–0.48); hairs on vertex of head 0.01; hairs on antennal segment III, 0.01; hind tibia 1.56 (1.56–1.89); hind tarsi 0.09 (0.09–0.11).

Antennal segments III with 1 and 2 (1–5) sensoria; rostrum attaining

¹ Contribution from the Entomology Department, North Carolina Agricultural Experiment Station, Raleigh, N. C.

² Head, Department of Entomology, North Carolina State College, Raleigh, N. C. I wish to thank the following individuals who assisted in this study: Dr. D. Hille Ris Lambers, Dr. A. N. Tissot, Dr. W. R. Richards, and Miss Louise Russell for their opinions concerning these species; Director Arturo Roque, of the Agricultural Experiment Station of the University of Puerto Rico, for providing travel funds; Dr. G. N. Wolcott for assistance and encouragement in making this study possible; Mr. A. T. Olive for drawing the illustrations; Dr. L. F. Martorell for identification of the host plants and Dr. Martorell, Dr. M. E. Pérez-Escolar and Mrs. C. F. Smith for assistance in collecting the aphids.

³ Measurements are in millimeters. The first number represents the measurements of the holotype, the numbers in parentheses represent the variation of the specimens which were measured.

2nd coxae; cauda with three pairs of lateral hairs, and 1 dorsal hair. Cornicles with one or two rows of faint reticulations.

Alate Vivipara

Color of living specimens bright green, darker green at base of cornicles. Cleared specimens dark on antennae, including I and II, (base of III pale), cornicles (except base), and legs (except base of femora). Slight shading along wing veins. Remaining areas pale to slightly dusky.

Length of body 1.31–2.05; width of head 0.39–0.44; hairs on vertex of head 0.02; hairs on antennal segment III, 0.01; hind tibia 1.60–1.69; hind tarsi 0.09–0.11.

Antennal segment III with 12–16 sensoria; rostrum attaining 2nd coxae; cauda with three pairs of lateral hairs and one dorsal hair. Cornicles with 2–3 rows of faint reticulations.

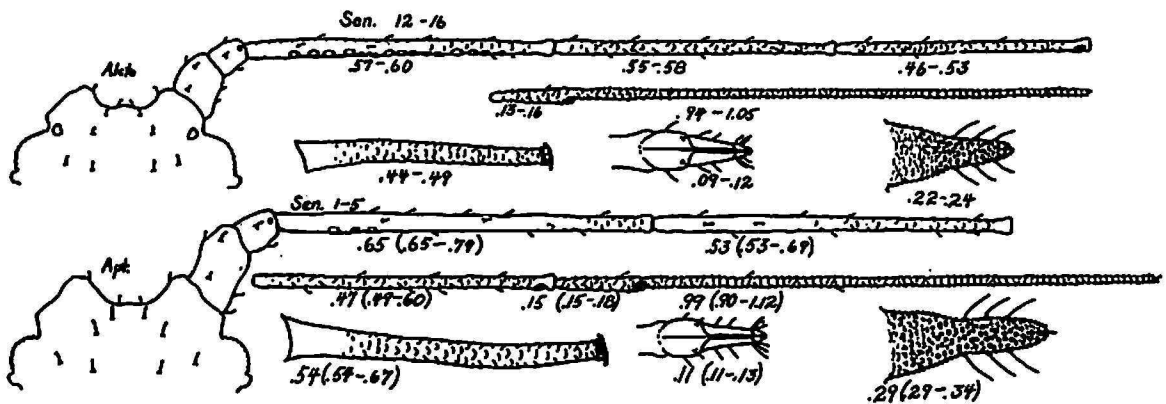


FIG. 1.—*Acyrthosiphon bidenticola* Smith, n. sp., alate and apterous vivipara.

Types

Holotype in the U. S. National Museum; paracolony types in the collection of the author, Agricultural Experiment Station of the University of Puerto Rico, D. Hille Ris Lambers, Netherlands. Paratype in the collection of the author.

Type Locality

Maricao Forest, P. R.

Collections

On "margarita silvestre" or "alfilerillo", *Bidens pilosa* L. (No. 55–192), Maricao Forest, Km. 15 Maricao-Sabana Grande Road, March 10, 1955, (Smith, Martorell, and Pérez), (11 slides).

On "achicoria de cabra", *Erechtites valerianaefolia* D. C. (No. 54–91), Cayey, 1,500 ft. altitude, August 2, 1954 (Smith and Pérez), (1 slide).

Amphorophora commelinensis Smith, n. sp.

The chief distinguishing characteristics of this species (fig. 2) are the dark, saddlelike markings on the abdomen, the relatively small number of sensoria on antennal segment III, and the dark cornicles.

Apterous Vivipara

Living specimens whitish-yellow to yellowish. Cleared specimens dark on antennal segment VI and joints of antennae, tip of cornicle, and all of tarsi.

Length of body 1.32–1.87; width across eyes, 0.40–0.44; hairs on vertex of head 0.02; hairs on antennal segment III, 0.01; hind tibia 1.18–1.27; hind tarsi 0.09–0.10; rostrum attaining 3d coxae.

Antennal III with 0–2 sensoria; rostrum attaining 3d coxae; cauda with two pairs of lateral hairs and one pair of dorso-lateral hairs.

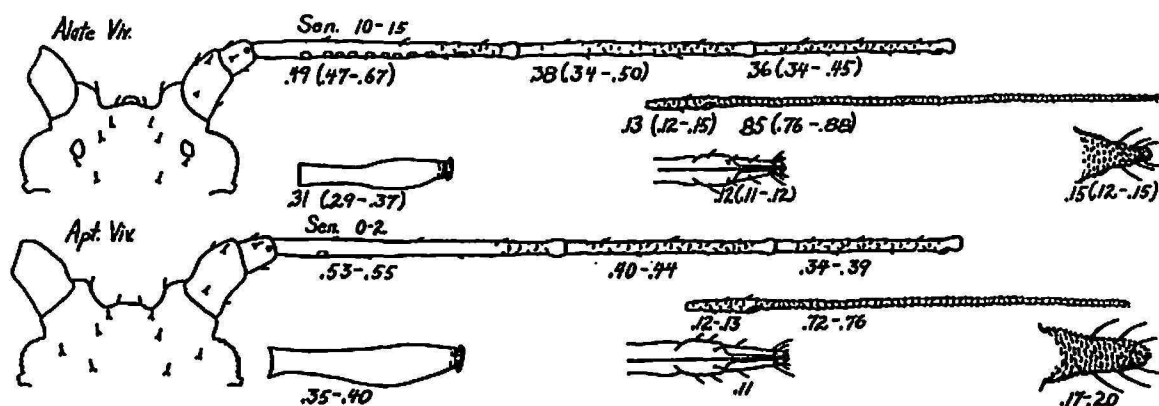


FIG. 2.—*Amphorophora commelinensis* Smith, n. sp., alate and apterous vivipara.

Alate Vivipara

Living specimens yellowish-green to light green with dark area on abdomen. Cleared specimens dark on all antennal segments (base of segments III, IV, and V may be lighter), distal $\frac{1}{4}$ of femora, distal $\frac{1}{10}$ of tibiae, tarsi, cornicles, area partially surrounding base of cornicles which forms a dark saddlelike area across abdomen and marginal sclerites. Remaining areas of body pale.

Length of body 1.55 (1.49–1.76); width across eyes 0.40 (0.40–0.42); hairs on vertex of head 0.02; hairs on antennal segment III, 0.01; hind tibia 1.12 (1.11–1.32); hind tarsi 0.09 (0.09–0.10).

Antennal segment III with 9–10 (15) sensoria; antennal tubercles slightly convergent; rostrum attaining 3d coxae; cauda with two pairs of lateral hairs and one pair of dorso-lateral hairs.

Types

Holotype in U. S. National Museum; paracolonytypes in collection of

the author; paratypes in collections of U.S.N.M., the Agricultural Experiment Station of the University of Puerto Rico, D. Hille Ris Lambers, Netherlands, and the author.

Type Locality

Ciales-Villalba Road, Km. 32, Puerto Rico.

Collections

On "cohitre", *Commelina difusa* Burm. f. (No. 53-59) Ciales-Villalba Road, Km. 32, March 22, 1959 (Martorell and Medina-Gaud) (9 slides); (No. 55-79) Doña Juana Forest, Villalba, March 2, 1955 (1 slide); (No. 55-124) Cayey, March 8, 1955 (2 slides); (No. 55-166) El Yunque Mts., Km. 10 Mameyes-Río Blanco Road, March 7, 1955 (3 slides); (No. 55-215) Maricao Forest, Km. 19, March 11, 1955 (7 slides); (No. 55-242) Cayey-Salinas Road, Km. 6.4, altitude 1,500 ft., March 16, 1955 (4 slides); (No. 55-514) El Yunque, 1955 (Medina-Gaud, 2 slides).

On "achicoria", *Sonchus oleraceus* L., (No. 55-243) Cayey-Salinas Road, Km. 6.4, altitude 1,500 ft., March 16, 1955 (Smith and Martorell, 2 slides).

On "wild mustard", *Brassica integrifolia* (West) O. E. Schulz, (No. 55-125) at Cayey, March 8, 1955 (Smith and Martorell, 2 slides).

Hyalomyzus jussiaeae Smith, n. sp.

This species (fig. 3) differs from *H. eriobotryae* (Tissot) in averaging fewer sensoria on antennals III, IV, and V of the alate vivipara, in the sensoria being confined more to one side on III and IV, sensoria being less tuberculate in the alate, and in the unguis being distinctly longer than antennal III of the alate. *H. eriobotryae* was collected at Raleigh, N. C. on *Lycopus virginicus* L. (summer host of *eriobotryae*) and the above characters were fairly constant and typical of the cotype material of *eriobotryae* received from Dr. A. N. Tissot.

Apterous Vivipara

Color of living specimens dirty greenish-brown, reddish area around cornicles. Cleared specimens with all appendages light amber, unicolorous; body pale, with a few small intersegmental sclerites along the sides.

Body length 1.30-1.90; across eyes 0.35-0.45; hairs on vertex of head 0.01; hairs on antennal III, 0.01.

Rostrum attaining 2nd abdominal segment; cauda with 2 lateral hairs. Body rugose, cleared specimens sculptured like a "dried up mud puddle."

Alate Vivipara

Color of living specimens brownish-amber. Cleared specimens with all appendages, head and thorax brownish, (femur and tibiae slightly lighter

at base). Abdomen bearing marginal, post and antesiphuncular sclerites as well as intersegmental sclerites.

Body length 1.26–1.65; across eyes 0.38–0.41; hairs on vertex of head 0.01; hairs on antennal III, 0.01.

Hairs on head small, blunt to capitate, inconspicuous. Rostrum attaining 2nd abdominal segment; cauda with two pairs of lateral hairs. Femurs rugose, with a sensorium near the base.

Types

Holotype, U. S. National Museum; paracolony types in collection of U.S. National Museum, North Carolina Agricultural Experiment Station, Agricultural Experiment Station of the University of Puerto Rico, D. Hille Ris Lambers, A. N. Tissot and the author. Paratypes in collections

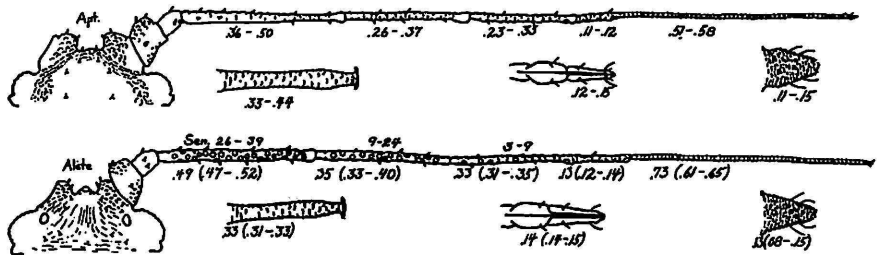


FIG. 3.—*Hyalomyzus jussiaeae* Smith, n. sp., alate and apterous vivipara.

of the Agricultural Experiment Station, University of Puerto Rico, and the author.

Type locality

Maricao Forest, Km. 219, P. R.

Collections

On “yerba de clavo” or “yerba cangá”, *Jussiaea angustifolia* Lam., (No. 55-214) Maricao Forest, Km. 19, Maricao-Sabana Grande Road, March 11, 1955 (11 slides); (No. 54-47) El Yunque Mts., Mameyes-Río Blanco Road, 1 mile below swimming pool, July 26, 1954 (Smith and Pérez), (2 slides); (No. 55-509), El Yunque Mts., Mt. Britton Trail, 3000 ft. elevation, (Pérez and Martorell) (1 slide); (No. 55-163), El Yunque Mts., Mameyes-Río Blanco Road, Km. 10.5, March 9, 1955 (7 slides); (No. 73-59) Cayey-Salinas Road, Km. 11.4, altitude 1,900 ft., March 26, 1959 (7 slides); (No. 73-59) Cayey-Salinas Road, Km. 11.4, altitude 1,900 ft., March 26, 1959 (Martorell and Medina-Gaud) (5 slides).

SUMMARY

Three new species of aphids collected in different localities of Puerto Rico are described. *Acyrtosiphon bidenticola* n. sp. breeding on "alfilerillo", *Bidens pilosa* L. and "achicoria de cabra", *Erechtites valerianaefolia* D. C.; *Amphorophora commelinensis* n. sp. breeding on "cohitre", *Commelina difusa* Burm. f., on "achicoria", *Sonchus oleraceus* L., and on "wild mustard", *Brassica integrifolia* (West) O. E. Schulz; *Hyalomyzus jussiaeae* n. sp. breeding on "yerba de clavo", *Jussiaea angustifolia* Lam. Most of these species are present in middle altitudes of Puerto Rico from 1,000 up to 3,000 ft.

RESUMEN

Se describen tres nuevas especies de pulgones colectados en diferentes localidades de Puerto Rico. *Acyrtosiphon bidenticola* sp. n. se alimenta de alfilerillo, *Bidens pilosa* L. y de la achicoria de cabra, *Erechtites valerianaefolia* D. C.; *Amphorophora commelinensis* sp. n. se alimenta de cohitre, *Commelina difusa* Burm. f., de achicoria, *Sonchus oleraceus* L. y de la mostaza silvestre, *Brassica integrifolia* (West) O. E. Schulz; *Hyalomyzus jussiaeae* sp. n. se alimenta de la yerba de clavo, *Jussiaea angustifolia* Lam. Casi todas estas especies viven en las alturas medianas de Puerto Rico, entre los 1,000 y 3,000 pies de altura.