Myzus persicae (Sulzer) in Puerto Rico

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INTRODUCTION

The green peach aphid, *Myzus persicae* (Sulzer) has been recorded as a pest of tobacco in Puerto Rico since 1950–51, Wolcott (*5*)[4]; however, it has been reported since 1916, Wolcott (*3*), on the following host plants: Eggplant, pepper, potato, tomato, sweetpotato, and sesame. Lately, it has been observed by Adsuar, Wolcott, and Martorell on ground cherry, *Physalis angulata* L., wire-weed, *Sida carpinifolia* L. f., and papaya, *Carica papaya* L.

In 1954 and again in 1955, the senior author was invited to Puerto Rico to make a survey of the distribution and host plants of the peach aphid. The survey was made during the season when tobacco was not being grown, July and August 1954, and just as the crop was being harvested, February and March 1955. Martorell and Pérez made additional observations and collections during the interim.

RESULTS OF SURVEY

During the "off-season", July and August, *Myzus persicae* was commonly found on peppers which were being grown in home gardens and commercial gardens. This is significant because peppers are known to harbor one important disease of tobacco in Puerto Rico, namely the pepper-mosaic virus. Thus the pepper plants may serve as a reservoir for the disease and also for the aphids. This disease has been studied previously by Roque and Adsuar (*2*) and lately by Pérez, Adsuar, and Padilla (*1*). The virus causing the mosaic disease of peppers in Puerto Rico is transmitted from pepper to tobacco and vice versa by the common green peach aphid. This virus is also transmitted mechanically. Another common virus of tobacco in Puerto Rico is transmitted to peppers and from peppers again to tobacco by mechanical means and not by any type of insect vector. A full account of these pepper and tobacco diseases is given in the publications mentioned above.

Several other plants also serve as alternate hosts (see host list, table 1) and all of them could play an important role as a source of infestation for

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[4] Italic letters in parentheses refer to Literature Cited, p. 266.

new tobacco. However, observations by Pérez indicate that sweetpotatoes may be one of the most important sources of infestation for tobacco because the sweetpotato is very common in Puerto Rico, being grown in rotation with tobacco or in the vicinity of tobacco, and it usually has a very heavy infestation of *Myzus persicae* just at the time tobacco is being set into the field. Young sweetpotato shoots are also commonly infested with aphids and are quite common in fields that have been harvested, thus creating

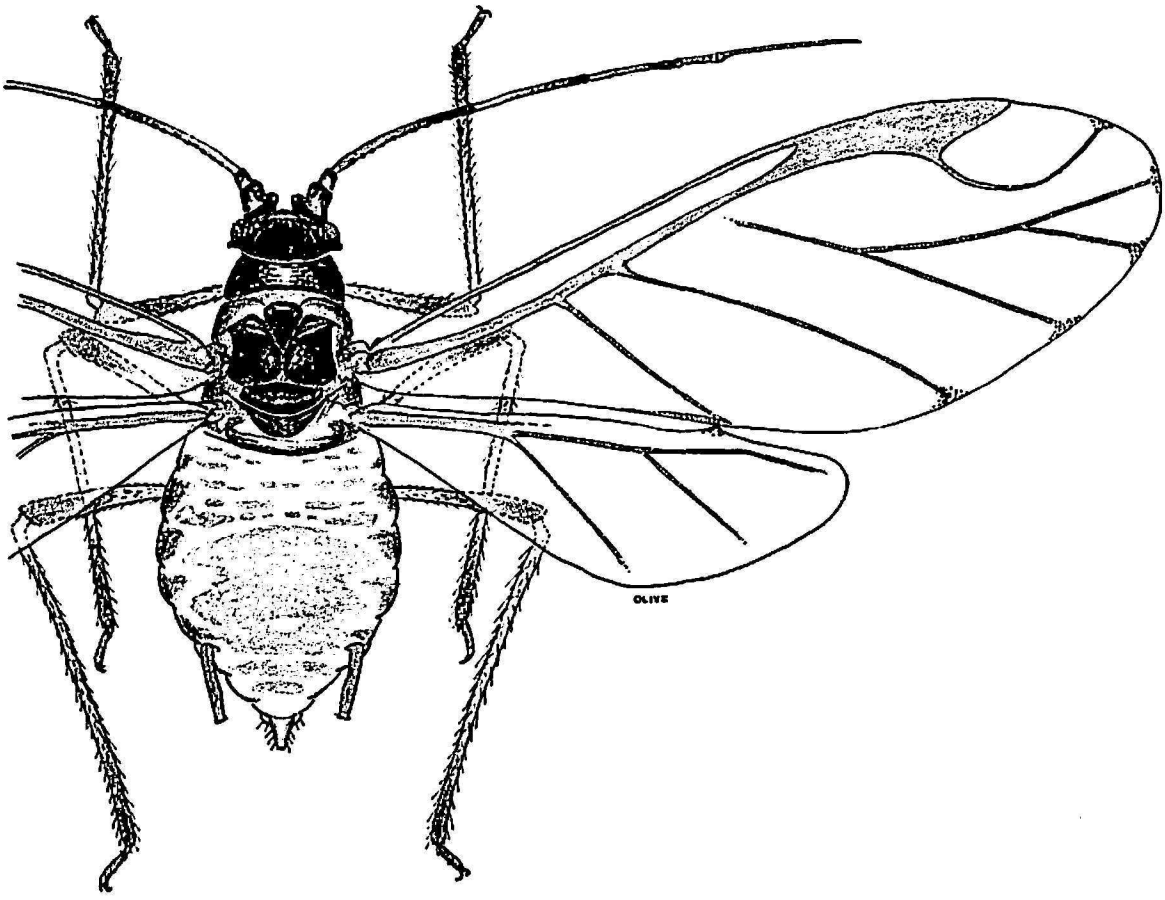

FIG. 1.—Winged alate of *Myzus persicae* (Sulzer). Drawing by Tom Olive, North Carolina State College, Department of Entomology.

an ideal source of infestation. In general the infestation does not occur in the plant bed as is often common in the United States but usually occurs after the plants are set in the field.

Myzus persicae (fig. 1) is common and often occurs in damaging numbers on tobacco in all areas of Puerto Rico where tobacco is grown. Table 1 is a list of the other hosts upon which *M. persicae* has been collected at various locations in Puerto Rico, and one in Haiti.

SUMMARY

The green peach aphid, *Myzus persicae* Sulzer, is a pest of tobacco in Puerto Rico. This insect is also a vector of virus diseases transmitted from

TABLE 1.—*Host list for* Myzus persicae

Host	Location	Date
Apium graveolens	Cayey	Mar. 8, 1955
Borreria verticillata	Guajataca Gorge, Quebradillas	Mar. 1, 1955
Brassica integrifolia	Cayey	Oct. 26, 1954
		Nov. 16, 1954
		Nov. 22, 1954
		Mar. 8, 1955
	Cayey-Cidra Road	Sept. 19, 1954
		Sept. 22, 1954
		Sept. 28, 1954
	Río Piedras	Mar. 7, 1954
B. oleracea	Cayey	Mar. 8, 1955
Capsicum sp.	Río Piedras	Aug. 1, 1954
		Aug. 2, 1954
	Cayey-Cidra Road	Sept. 22, 1954
	Rammey Field, Aguadilla	July 21, 1954
C. annuum	Cayey	Mar. 8, 1955
	Río Piedras	Mar. 7, 1955
Chenopodium ambrosioides	Barrio Rincón, Cidra	Feb. 28, 1955
Cleome gynandra	Cayey	Oct. 19, 1954
	Isabela	Apr. 1, 1955
Clerodendron fragans	Cayey	Mar. 8, 1955
Emilia coccinea	Cayey-Salinas Road	Mar. 16, 1955
	Cayey-Caguas Road	Mar. 16, 1955
E. sonchifolia	Cidra	Sept. 28, 1954
		Oct. 5, 1954
Fleurya aestuans	Cayey	Mar. 8, 1955
Ipomoea batatas	Treasure Island, Cidra	Feb. 28, 1955
	Cayey-Caguas Road	Mar. 16, 1955
	Cidra	Oct. 5, 1954
		Oct. 10, 1954
Lactuca floridana	Ciales-Jayuya Road	Mar. 2, 1955
L. sativa	Rammey Field, Aguadilla	July 21, 1954
Moringa oleifera	Sabana Grande-Yauco Road	Mar. 11, 1955
Nicotiana tabacum	Cayey-Caguas Road	Mar. 16, 1955
	Río Piedras-Caguas Road	Feb. 28, 1955
	Cidra	Nov. 9, 1954
	Sabana Grande-Yauco Road	Mar. 11, 1955
	Cidra	Dec. 17, 1954
	Río Piedras	Nov. 6, 1954
	Cayey-Salinas Road	Dec. 17, 1954
	Isabela	Dec. 28, 1954
	Cayey	Mar. 18, 1955
Physalis pubescens	El Collao-Cayey Road	Mar. 11, 1955
P. turbinata	Cayey-Caguas Road	Mar. 16, 1955
Polianthes tuberosa	Río Piedras	Mar. 4, 1955
Polyscias quilfoylei	Río Grande	Mar. 9, 1955
Senecio confusus	Ciales-Jayuya Road	Mar. 2, 1955
Solanum melongena	Río Piedras	Mar. 7, 1955
S. nigrum	Cayey-Caguas Road	Mar. 16, 1955
Spondias purpurea	Cayey-Salinas Road	Feb. 28, 1955
Tectona grandis	Cayey	Mar. 8, 1955
B integrifolia	Chalet de Felurs, Haiti	Feb. 25, 1955
	Cayey	Oct. 19, 1954
		Dec. 17, 1954
Unidentified cruciferous plant	Lajas Substation	Aug. 12, 1954

pepper to tobacco and vice-versa. During a survey made in Puerto Rico by the authors, the known host-plant list of this insect was greatly increased by adding around 15 new records.

RESUMEN

El pulgón verde, *Myzus persicae* Sulzer, es una plaga del tabaco en Puerto Rico. Este insecto es también el vector de enfermedades virosas trasmitidas del pimiento al tabaco y viceversa. Durante un catastro efectuado en la Isla por los autores, la lista ya conocida de plantas hospedadoras de esta especie se aumentó al añadirle alrededor de 15 nuevos récords.

LITERATURE CITED

1. Pérez, Juan E., and Adsuar, José, A survey for common tobacco- and pepper-mosaic viruses in the filler-tobacco area of Puerto Rico, *J. Agr. Univ. P.R.* **41** (1) 20–4, 1957.
2. Roque, Arturo, and Adsuar, José, Studies on the mosaic of peppers, (*Capsicum frutescens*) in Puerto Rico, *J. Agr. Univ. P.R.* **25** (3) 40–50, 1941.
3. Wolcott, G. N., Insectae Borinquenses, *J. Agr. Univ. P.R.*, **20** (1–4) 118, 1936.
4. ——, The insects of Puerto Rico, *J. Agr. Univ. P.R.* **32** (1) 155–6, 1948.
5. ——, Migrating Aphids, *Sci.* **116** (3002) 43–4, ref. 5, Lancaster, Pa. July 11, 1952.