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Authors: Camino Lavin, Mario, Castrejon Gomez, Victor R., Figueroa Brito, Rodolfo, Aldana Llanos, Lucila, and Valdes Estrada, MaElena

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SCYPHOPHORUS ACUPUNCTATUS (COLEOPTERA: CURCULIONIDAE) ATTACKING *POLIANTHES TUBEROSA* (LILIALES: AGAVACEAE) IN MORELOS, MEXICO

MARIO CAMINO LAVIN, VICTOR R. CASTREJON GOMEZ, RODOLFO FIGUEROA BRITO, LUCILA ALDANA LLANOS AND MA. ELENA VALDES ESTRADA

Departamento de Interacciones Planta-Insecto, Centro de Desarrollo de Productos Bióticos del Instituto Politécnico Nacional, COFAA, Carretera Yautepec-Jojutla km 8.5, A.P. 24, 62730 San Isidro, Yautepec, Morelos, Mexico
vcastrej@hotmail.com

Tuberose, *Polianthes tuberosa* L. (Liliales: Agavaceae), is grown as an ornamental plant and as a source of a fragrant essence for perfumes (Gonzatti 1981, Watson & Dallwitz 1992). It has been grown commercially in the state of Morelos, Mexico, for 60 years. Currently there is grown approximately 300 cultivated ha, which generates US $6,300,000 per year (Uribe 2000). However, in recent years, producers have noticed severe damage caused by an insect that they call black weevil but unidentified scientifically. The objective of this work was to identify the pest and to assess damage.

The study was carried out in the central Mexican state of Morelos, between 18°22'19" and 19°07'10" north and between 99°30'8" and 19°07'10" west. Mean annual temperature is 20°C and the annual rainfall ranges from 900 to 1100 mm (García 1981). Samples were collected from March to September 2000 in the main areas of tuberose production to include: the municipalities of (1) Tepalcingo, (2) Emiliano Zapata, and (3) Coatlán del Río.

In the first two municipalities, 100 bulbs of *P. tuberosa* were collected, whereas in the third, 120 plants were collected. A 1-ha plot in each municipality was selected, and samples were taken from the center and four sides of the plot. In the laboratory, bulbs and whole plants were examined for insects. The insect larvae and adults were deposited in 70% ethanol and processed for identification (see acknowledgments).

The weevil was identified as *Scyphophorus acupunctatus* Gyllenhal (Coleoptera: Curculionidae) (Muñíz 2000, Marín 2000, Nápoles & Equihua 2000). Most damage is caused by weevil larvae mining the bulb. The samples from Coatlán del Río had the highest incidence of damage (69%). Emiliano Zapata and Tepalcingo demonstrated 47 and 37% damage, respectively (Table 1).

This paper is the first formal report of S. *acupunctatus* attacking tuberose. Vaurie (1971), in her revision of *Scyphophorus,* did not mention tuberose as a host plant of *S. acupunctatus.* Dampf mentioned the weevil as "acapiche del nardo" (Anonymous 1930). Vaurie (1971) mentions that this insect is distributed from the southern USA to the north of South America, the Caribbean (Cuba, Hispaniola, and Jamaica), East Africa, Hawaii, Java, and Australia. In Mexico it has been reported attacking several economically important plants of the family Agavaceae (McGregor & Gutiérrez 1983). In the Yucatán peninsula it has been mentioned as causing damage up to 50% in the cultivation of henequen (*Agave fourcroydes* Lem.) (Ramírez-Choza 1979). In the states of Hidalgo, Tlaxcala, and México, it has been reported causing damage of 30% to the cultivated plant "maguey pulquero" (*Agave salmiana* Salm-Dyck ssp. crassispina (Trel.) Gentry and var. culta) (Ruvalcaba 1983). In the state of Jalisco, it caused damage of 10% to "agave tequilero" (*Agave tequilana* Weber var. azul) (Valenzuela 1994). In the municipalities of Tepalcingo and Coatlán del Río, cultivation of *A. tequilana* began three years ago, whereas in Emiliano Zapata there are wild agaves, predominantly *A. angustifolia* Haw., in the hills near cultivated *P. tuberosa.* These two agaves may serve as refuge to *S. acupunctatus* during chemical applications or when tuberose is not in the field, so control is complicated (Uribe 2000). Infestations in *Agave tequilana* var. azul have been reported as from 4 to 24 weevils per plant (Solis et al. 1999). The present survey showed 6-10 larvae per in-

TABLE 1. INFESTATION OF *S. ACUPUNCTATUS* IN *P. TUBEROSA* IN MORELOS, MEXICO (MARCH TO SEPTEMBER 2000).

Locality and date	Bulbs sampled/infested	Plants sampled/infested	Adults/plant	Percent infested
Tepalcingo 6 March	100/36	—	—	36
Emiliano Zapata 7 April	100/47	—	—	47
Tepalcingo 30 August	45/14	—	—	40
Tepalcingo 6 September	120/42	—	—	35
Coatlán del Río 5 September	—	120/83	4-36	69

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fested bulb and 4-36 adults per infested plant. *S. acupunctatus* is a severe pest of tuberose. Our work continue on *S. acupunctatus* life cycle, population dynamics, identification and evaluation of feeding attractants.

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Summary

Scypophorus acupunctatus is reported attacking *Polianthes tuberosa* in Morelos, Mexico. All growth stages (eggs, larvae, pupae and adults) of this insect were collected. The average percent infestation was 51%.

This paper is in memory of Dr. Mario Camino Lavín.

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