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First record of the agave snout weevil, *Scyphophorus acupunctatus*
Gyllenhal (Coleoptera: Curculionidae: Dryophthorinae), in Puerto Rico

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First record of the agave snout weevil, *Scyphophorus acupunctatus* Gyllenhal (Coleoptera: Curculionidae: Dryophthorinae), in Puerto Rico

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Abstract. The agave snout weevil, *Scyphophorus acupunctatus* Gyllenhal (Coleoptera: Curculionidae: Dryophthorinae), is reported from Puerto Rico for the first time. It was collected on feral sisal, *Agave sisalana* Perrine (Agavaceae), in the Guánica Dry Forest Reserve in the southwestern part of the island.

Introduction

Scyphophorus acupunctatus Gyllenhal, 1838 (Fig. 1), is a major pest of several ornamental and commercially important species of *Agave* (Agavaceae) (Vaurie 1971). Adults feed on the leaves and bore into the bole of the plant to oviposit. Larvae also induce rotting in plant tissues by transmitting associated microbes that can cause premature death of the host (Warring and Smith 1986). Originally from the New World, *S. acupunctatus* has expanded its range considerably; undoubtedly aided by human mediated dispersal of its host plants (Warring and Smith 1986). It is currently known to occur in Australia, Brazil, Borneo (country not specified), Colombia, Costa Rica, Cuba, El Salvador, Dominican Republic, Guatemala, Haiti, Honduras, Indonesia (Java), Jamaica, Kenya, Mexico, Nicaragua, Tanzania, United States (including Hawaii), and Venezuela (Vaurie 1971, O'Brien and Wibmer 1982, Anderson 2002). It has also recently been discovered in Italy (Sicily), Spain, and France (Colombo 2000, Flinch and Alonso-Zarazaga 2007, and Germain et al. 2008 respectively); however it is not yet clear that these European records represent established populations.

Discussion

On 20 July 2009, nine adult specimens of *S. acupunctatus* (2 males, 7 females) were hand-collected at night from feral sisal plants (*Agave sisalina* Perrine) (Fig. 2A) in the Guánica Dry Forest Reserve in southwestern Puerto Rico (Fig. 2B, 2C). The collection locality (N 17°57.51'; W 66°51.71') is approximately 0.2 km north of a trailhead located on Rt. 333 at km marker 8.8. All of the weevils were actively feeding near the base of large, apparently healthy, nonblooming plants. Extensive feeding damage was observed on the leaves of nearly all mature plants in the area but we found no boring damage on the boles. No attempt was made to determine whether larvae were present and the plants were otherwise left undisturbed.

Sisal was introduced to Puerto Rico for cultivation as a fiber plant more than a century ago (Cook and Collins 1903), yet our collection of *S. acupunctatus* is, to our knowledge, the first recorded for the island. Searches of collections in the National Museum of Natural History, Washington D.C. (USNM), University of Puerto Rico Mayagüez (UPRM), Canadian Museum of Nature, Ottawa (CMNC), and Charles W. O'Brien personal collection, Green Valley, Arizona (CWOB) revealed no additional specimens from Puerto Rico. The lack of any prior published records of *S. acupunctatus* in Puerto Rico suggests that its presence in Puerto Rico is relatively recent or has not been previously recognized. Voucher specimens have been deposited in the UPRM and USNM collections.

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Figure 1. *Scyphophorus acupunctatus* Gyllenhal, female, lateral view. Scale bar = 5 mm.

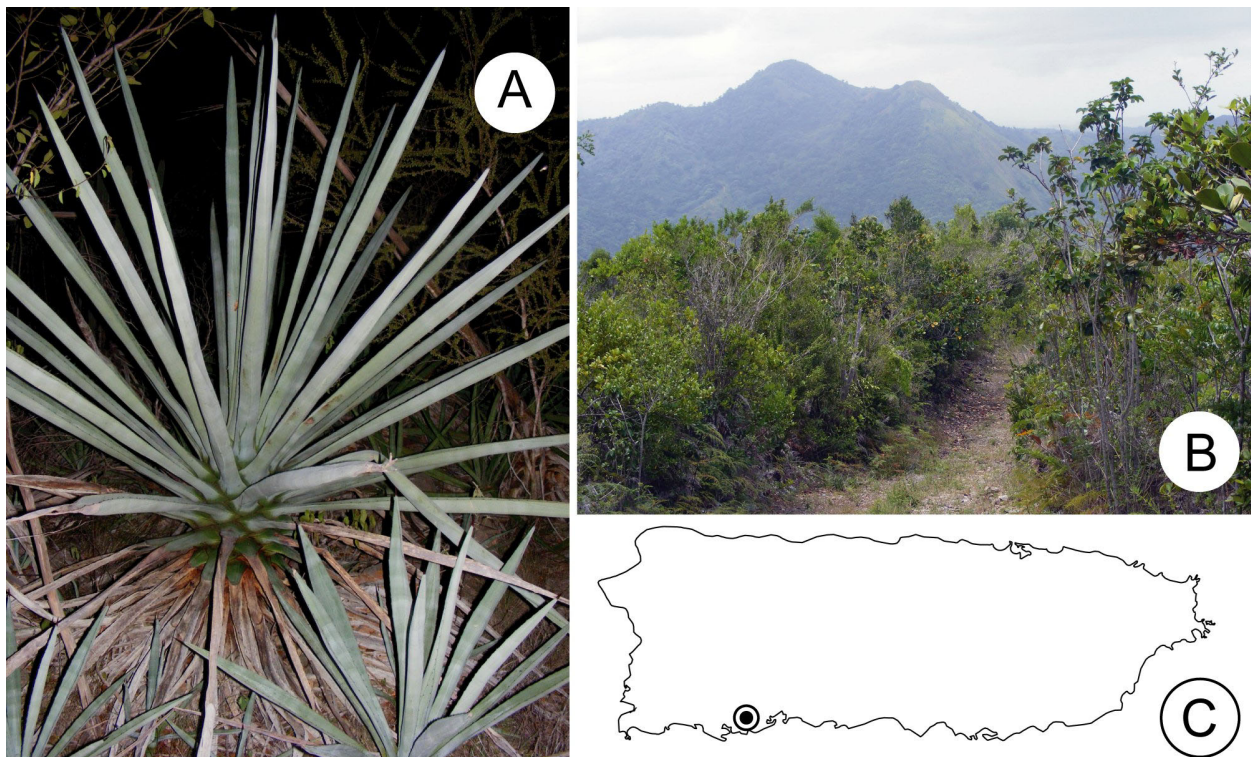


Figure 2. **A)** Sisal plants (*Agave sisalana* Perrine) infested with *S. acupunctatus* at Guánica, Puerto Rico. **B)** Guánica, dry forest habitat where *S. acupunctatus* was collected. **C)** Map of Puerto Rico with location of Guánica indicated.

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Literature Cited

- Anderson, R. S. 2002.** The Dryophthoridae of Costa Rica and Panama: Checklist with keys, new synonymy and descriptions of new species of *Cactophagus*, *Mesocordylus*, *Metamasius* and *Rhodobaenus* (Coleoptera: Curculionoidea). *Zootaxa* 80: 1-94.
- Colombo, M. 2000.** *Scyphophorus acupunctatus* (Coleoptera Curculionidae): prima segnalazione per l'Italia. *Bollettino di Zoologia Agraria e di Bachicoltura, Serie II*, 32(2): 165-170.
- Cook, O. F., and G. N. Collins 1903.** Economic plants of Porto Rico. *Contributions from the United States National Herbarium* 8(2): 57-269.
- Flinch, J. M., and M. A. Alonso-Zarazaga. 2007.** El picudo negro de la pita o agave, o max del henequén, *Scyphophorus acupunctatus* Gyllenhal, 1838 (Coleoptera: Dryophthoridae): primera cita para la Península Ibérica. *Boletín de la Sociedad Entomológica Aragonesa* 41: 419-422.
- Germain, J. F., J. M. Ramel, A. Maury, and F. Blanchon. 2008.** Premier signalement en France d'un coléoptère ravageur des agaves. *PHM Revue Horticole* 505: 34-36.
- 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* 32: 1-382.
- Vaurie, P. 1971.** Review of *Scyphophorus* (Curculionidae: Rhynchophorinae). *Coleopterists Bulletin* 25(1): 1-8.
- Waring, G. L., and R. L. Smith 1986.** Natural history and ecology of *Scyphophorus acupunctatus* (Coleoptera: Curculionidae) and its associated microbes in cultivated and native agaves. *Annals of the Entomological Society of America* 79(2): 334-340.

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