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Version 1.0
21 February
2017

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The sugar cane weevil, *Rhabdoscelus obscurus* (Boisduval), a native of New Guinea, is a relatively large weevil that has spread to many areas of the world, especially sugar cane growing regions of the Pacific. The preferred host is sugar cane but this weevil has been known to attack a large variety of plants, including banana and a variety of palms, and infrequently corn. Larvae feed on stalks and stems creating large tunnels, leading to plant death or loss of value due to aesthetic damage in ornamental plants. This species has been a pest in Hawaii since the 1860's but has not been established in the continental United States.

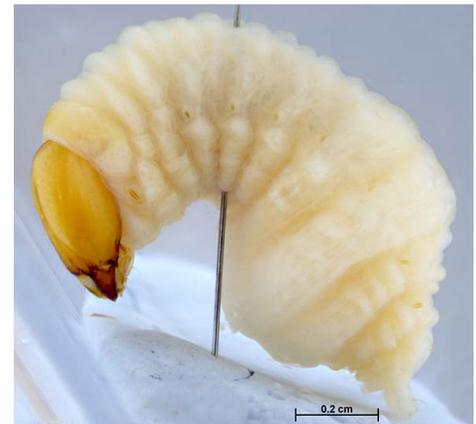


Fig. 1: *Rhabdoscelus obscurus* larva.
(Photo by Caroline Harding).

While there are several genera that are similar in appearance to *Rhabdoscelus*, only a few are established in the U.S. Generic separation is possible but difficult, and identification to species will be difficult without representatives of each species to compare. Adults are highly variable, ranging in size from 12-14 mm, colored reddish to reddish-brown, and the pronotum often has a dark streak from apex to base. Some species of *Rhynchophorus* have similar markings and hosts, but can be differentiated by size. They typically measure 2-2.5 times longer and 3 times wider than *R. obscurus*. Separation from other genera in the Dryophthoridae, the palm weevils, will be difficult without a microscope but can be done by comparison of several key characteristics. These genera include *Cosmopolites*, *Metamasius*, and *Sphenophorus* which share monocotyledonous hosts and whose characters can be difficult to compare, and *Scyphophorus* which also appears similar, but can be separated by their black color, larger size and succulent host plants *Agave* and *Yucca*.



Fig. 2: Adult female sugar cane weevil.
(Photo by Sarah McCaffrey).

Visual inspection for the presence of larvae or larval damage is effective, but traps using a combination of lures is recommended for adults. This weevil has been transported by plant material into several continents and little literature is available to separate species; any specimen resembling *R. obscurus* should be reported. Basic knowledge of adult Coleoptera morphology is necessary to screen for *R. obscurus* suspects.



Fig. 3: Adult female sugar cane weevil.
(Photo by Sarah McCaffrey).

Rhabdoscelus obscurus pheromone traps should be sorted initially for the presence of weevils of the appropriate size, color, and shape. Traps that contain weevils meeting all of the following requirements should be moved to Level 1 Screening (Page 3):

- 1) Weevils are approximately 12-14 mm (one-half inch) long (Fig. 4).
- 2) Weevils have an overall shape that is similar to the outline depicted in Fig. 4.
- 3) Weevils are reddish to red-brown, sometimes with a dark streak down midline of pronotum (Fig. 5).
- 4) Weevils have an elongated rostrum (Fig. 6).

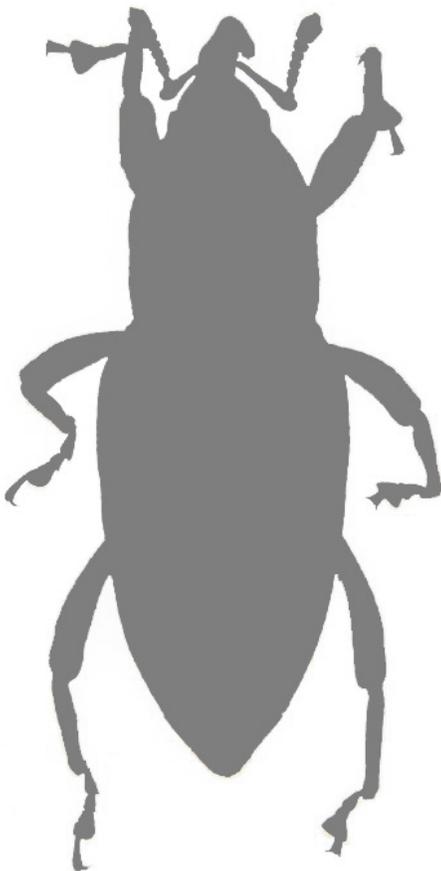


Fig. 4: Outline and size of *R. obscurus*.



Fig. 5: Dorsal aspect of *R. obscurus*. (Photo by Caroline Harding)



Fig. 6: Elongated rostrum of *R. obscurus*. (Photo by Caroline Harding)

Level 1 Screening

Sugar Cane Weevil *Rhabdoscelus obscurus* (Boisduval)

While most species similar in appearance to the sugar cane weevil are not native to the United States, they might be detected in commodity surveys as many have the same host plants, including sugar cane, palms, and corn. Separation to family can be accomplished based on tarsal and antennal characteristics:

Tarsus: Dryophthoridae have flaps between tarsal claws (Fig. 7a) and Curculionidae do not (Fig. 7b):

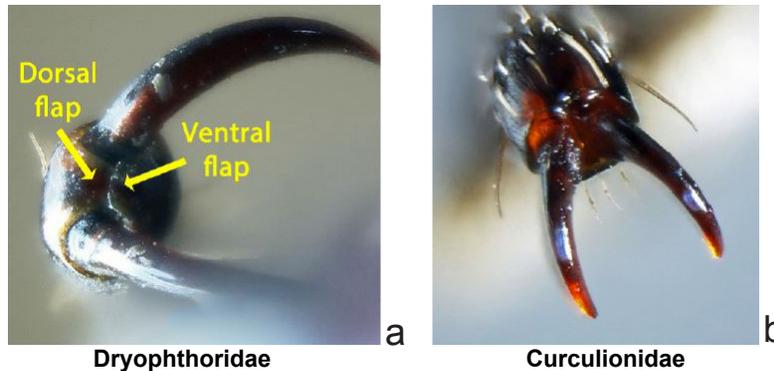


Fig. 7: a) flaps between tarsal claws present in the Dryophthoridae and b) absence of flaps in the Curculionidae

Antenna: Dryophthoridae have a glabrous (lacking setae) first antennal club segment (Fig. 8a) and a scape that surpasses the posterior margin of the eye (Fig. 8b). Curculionidae have a first antennal club segment that is not glabrous (Fig. 8c) and a scape that does not surpass the posterior margin of the eye (Fig. 8d):

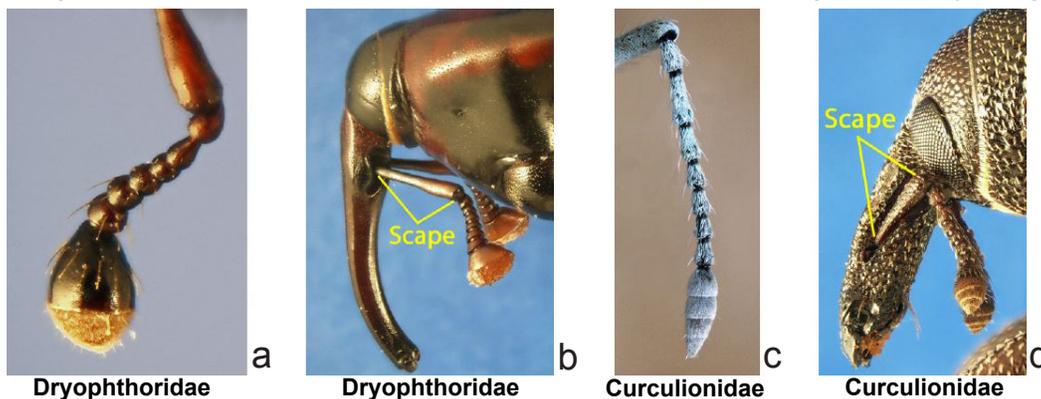


Fig. 8: Differences in antennae of Dryophthoridae and Curculionidae (Photos by Charles Brodel USDA-APHIS-PPQ)

Related genera in the Dryophthoridae can be separated based on the shape of the scutellum. *Rhabdoscelus* possesses a scutellum that is longer than it is wide, with the width equal to or less than that of the sutural interval, and with sides that are almost parallel (Fig. 9a). *Cosmopolites* has a scutellum that is sub-circular (Fig. 9b) while *Metamasius*, *Sphenophorus*, and *Scyphophorus* have a triangular scutellum (Fig. 9c):

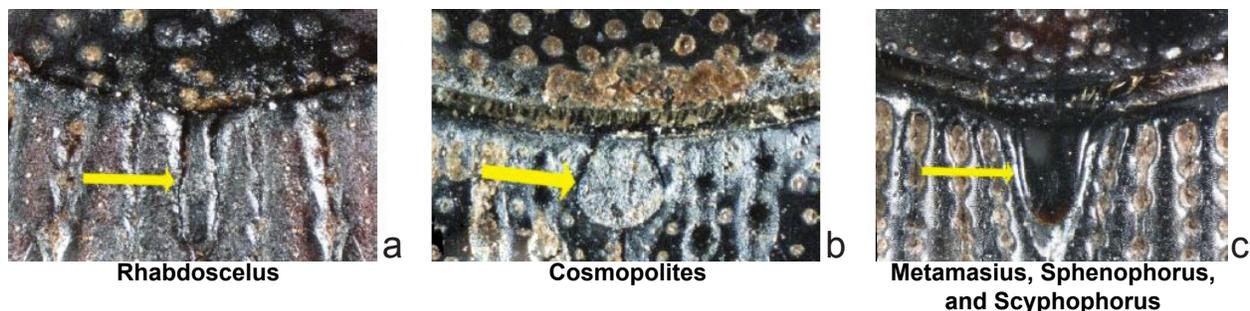


Fig. 9: Scutellum shapes differentiating some genera of the Dryophthoridae (Photos by Charles Brodel USDA-APHIS-PPQ)

Key to Sort and Screen *Rhabdoscelus* and Related Genera

1. Scutellum sub-circular, with length about equal to width; associated with bananas.....*Cosmopolites*
- 1'. Scutellum almost parallel-sided, with length greater than width, width equal to or less than that of sutural interval..... ***Rhabdoscelus suspect***
- 1". Scutellum widest at base, triangular or tapering apically..... 2

2. Tarsal segment 3 with ventral pilosity restricted to anterolateral areas, area in middle mostly glabrous; segment 3 not dilated in most species, about equal in width to segment 2, dilated in a few species and wider than 2; associated with grasses and corn..... *Sphenophorus*
- 2'. Tarsal segment 3 with ventral pilosity covering almost all of ventral surface except near base at middle; segment 3 greatly dilated in most species compared to segment 2 but, if only slightly dilated, then longer than segment 2; associated with palms, sugar cane, bananas, and bromeliads *Metamasius*
- 2". Tarsal segment 3 with ventral pilosity long, confined to apical margin as a continuous fringe, ventral surface otherwise glabrous; segment 3 greatly dilated in both species compared to segment 2; associated with *Agave*, *Beaucarnea*, and *Yucca*..... *Scyphophorus*

Citation

Royals, H. R., T. M. Gilligan and C. F. Brodel. 2017. Screening aid: Sugar Cane Weevil, *Rhabdoscelus obscurus* (Boisduval). Identification Technology Program (ITP), USDA-APHIS-PPQ-S&T, Fort Collins, CO. 4 pp.

References for more information on *R. obscurus* and non-targets

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Acknowledgments

We would like to thank USDA-APHIS-PPQ National Identification Services and the USDA-APHIS-PPQ-S&T Identification Technology Program for support of this work, and Jim E. Zabloutny (Identifier, USDA APHIS PPQ) for their review of this screening aid. Funding for this project was provided to H. Royals through section 10007 of the 2014 Farm Bill.