ENTOMOLOGY CIRCULAR NO. 183
OCTOBER 1977

FLA. DEPT. AGRIC. & CONSUMER SERV.
DIVISION OF PLANT INDUSTRY

A WEEVIL PEST OF ROSE-APPLE (SYZYGIUM JAMBOS), APPARENTLY NEW TO THE UNITED STATES (COLEOPTERA: CURCULIONIDAE)[1]

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INTRODUCTION: Normally a circular such as this would not be written without knowing the scientific name of the pest involved. Because this species was only recently found in Florida, it is presumed to be introduced, and therefore additional information is needed. This circular is prepared to acquaint field personnel with the weevil in the hope of obtaining additional distribution records and information on biology and economic importance.

DESCRIPTION (fig. 1-3): This is a small weevil, from 1/8 to 1/4 inch long (3-6mm), with the typical appearance of the subfamily Baridinae. It is shiny black (occasionally with a gun-metal blue iridescence), elliptical, convex, with the eyes and beak not visible from above. The elytra each have 8 striae from the suture to the humeral umbone. The pronotum and elytra are evenly punctate, the punctures separated by their diameter or slightly more. The venter is punctate nearly as the dorsum or somewhat coarser, and most of the ventral punctures contain a scale of varying size and shape. Most of the scales are inconspicuous except for a patch of elongate, flattened ones beneath the beak. The pygidium and head are evenly punctate but somewhat finer than the pronotum.

Typical of the Baridinae, it has the following combination of characters: tarsi 4-segmented; trochanter short and triangular; femur attached to side of trochanter and base of femur closely adjacent to coxa; tarsal claws simple, connate, free; antennae distinctly elbowed between scape and funicular segment one; rostrum free, not received into median ventral groove; funicle with 7 segments; mandibles lacking deciduous cusp, not scarred; epimera of mesosternum projecting upward and outward; pygidium exposed in both sexes.

Members of the subfamily are generally very similar in appearance and difficult to distinguish. As a result, most species cannot be identified with certainty and taxonomists presently label them as merely "Baridinae". If it were not for a very unusual morphological character these weevils would not have been noticed. The males have a large tuft of setae on the venter of the beak, giving them a "bearded" appearance (fig. 1-3). This tuft is absent in the females and has not been found in any North American species examined.

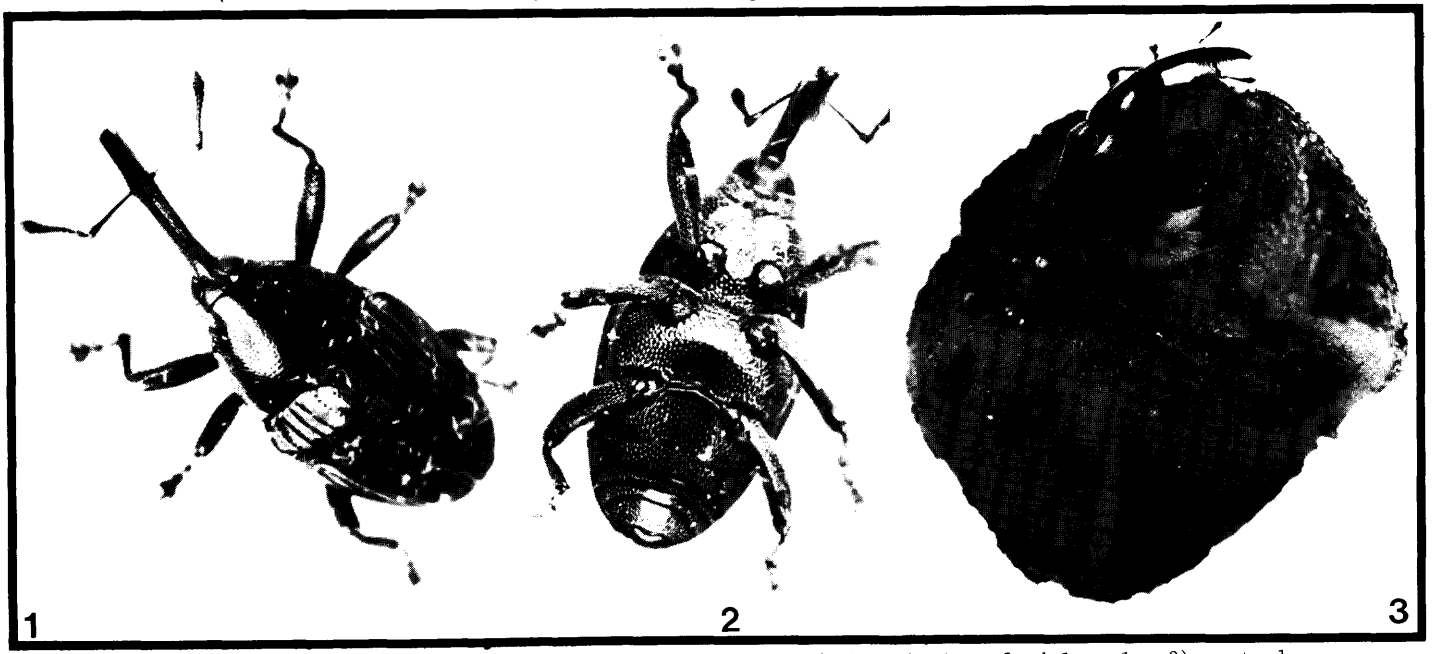

Fig. 1-3: Baridinae - gen.? sp.? pest of rose-apple: 1) dorsal view of adult male; 2) ventral view of adult male; 3) adult male emerging from rose-apple fruit.

BIOLOGY AND ECONOMIC IMPORTANCE: Most members of the Baridinae feed on flowers as adults and bore in stems of grasses, sedges, and other plants as larvae. Gilbert (1964) summarized the known biology of California *Baris* but indicated that "a complete life history of a single member of the genus *Baris* is unknown." He also stated that none of the North American species of *Baris* are of economic importance, although several European and Asian species are known to infest stems of cabbage and other edible cruciferous plants.

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The species under consideration here seems to be well established in rose-apple (*Syzygium jambos* [L.] Aiton) and rarely in Surinam-cherry (*Eugenia uniflora* L.), grumichama (*Eugenia dombeyi* = *E. brasiliensis* Lam.), *Eugenia luschnathiana* Klotzsch ex O. Berg, and *Syzygium cuminii* (L.) Skeels. Damage to rose-apple seeds is often extensive (fig. 3). Generally the scarring is similar to that of plum curculio. The adults feed on both ripe and unripe fruit, and the larvae apparently develop only in the seed. Since this circular was originally written, adult specimens have been submitted from the following plants, but it was not determined whether larvae were present in the fruits or if any economic damage could be anticipated: *Citrus* sp., *Datura* sp., and *Passiflora* sp. Few details are known about the life history, and field personnel are encouraged to make observations.

Adults have been collected in Florida from March through August, with most records in May, June, and July. This activity probably coincides with the availability of fruit, but may be an artifact of collecting.

TAXONOMY: As previously mentioned, the Baridinae are a difficult group to identify. This is due partly to their similarity, the great number of species, and to both poor and inadequate taxonomic work previously done.

In an effort to obtain a name for this species, I have compared specimens with those in the United States National Museum of Natural History (including the Casey and Kissinger collections). Specimens were also examined by the following weevil specialists: C. W. O'Brien, D. R. Whitehead, and R. E. Warner. At the moment we have been unable to obtain an identification.

Since it is suspected that this species was introduced, several foreign literature sources were checked without results. Casey (1922) described over 600 species of Baridinae from Brazil, but I could not find this one amongst his collection. Wolcott (1948) did not list any Baridinae weevils attacking *Eugenia* or *Syzygium* spp. in Puerto Rico.

Kissinger (1964) listed 17 genera and 173 species of the tribe Baridini in the United States, the largest genus being *Baris* with 93 species. Except for the fine paper by Gilbert (1964) on 10 California species, few of the others can be identified with certainty. Casey (1892, 1920, 1922) described most of the species (without any illustrations) and suggested (1920) that "it can be said very truthfully that these afford scarcely more than a prelude to the enormous total which will some day be known."

DISTRIBUTION: The first Florida specimens were collected by R. A. Dunn at the University of Florida Experiment Station, Homestead (Dade Co.) on 6 May 1976. Since then the weevil has been collected in Broward and Palm Beach counties. Records are as follows: Dade Co.: Coral Gables, Golden Glades, Hialeah, Homestead, Kendall, Medley, Miami, North Miami, Opa-Locka, Palm Springs North, Perrine, South Miami; Broward Co.: Deerfield Beach, Ft. Lauderdale, Lighthouse Point, Pompano; Palm Beach Co.: Delray.

CONTROL: Since no experimental work has been done on the control of this species, it is suggested persons encountering this pest should contact their county extension agent for the latest recommendations.

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