

SCIENTIFIC COMMUNICATION

Odontopus brevirostris (Hustache, 1936) (Coleoptera, Curculionidae) associated with new host plants belonging to *Annona* (Annonaceae)¹

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ABSTRACT. *Odontopus brevirostris* (Hustache, 1936) feeding on *Annona squamosa* L., *A. cherimola* Mill., *A. glabra* L., and *A. muricata* L. was observed. The last three host plants are recorded for the first time. The endophytic oviposition occurs in the veins of the ventral surface of the young leaves. The larvae, leaf miners, eat the parenchyma and the adults make small holes in the leaves. The pupation occurs in spherical cocoons protected by a sort of nest (pupation chamber) between the two epidermal layers.

KEYWORDS. Annonaceae; Coleoptera; Curculionidae; new hosts; *Odontopus*.

The importance of fruit production of *Annona* species, such as *A. muricata* L. (sour sop) and *A. squamosa* L. (sugar apple) in humid and in drought areas of the Northeast Region of Brazil has increased along the last two decades; the exotic smell, flavor, and consistence, give them an important role as source for industries of juice, ice-cream, and consumption of fruits in natura. Both species can also be used for medical purposes (BRAGA 1976).

WIBMER & O'BRIEN (1986) listed 32 species of *Odontopus* to Brazil. Only few informations are available on the biology of some species which adults and larvae are associated with Lauraceae, Meliaceae, Annonaceae, Polygonaceae and others (VOSS 1934; BONDAR 1937 a, b, 1938, 1939, 1947).

HUSTACHE (1936) described *Prionomerus brevirostris* based on specimens collected in Corumbá (Mato Grosso, Brazil). Shortly afterward, BONDAR (1939) described *Meroprion anonicola* from Bahia (Brazil) which was considered as a synonym of *P. brevirostris* Hustache, 1936 (KUSCHEL 1955). As *Prionomerus* Schoenherr, 1836 is an invalid name, all the species described in this genus and in others considered synonyms (*Meroprion*, *Plectrodontus*, *Prionopus* and

Scymnoplastophilus) were transferred to *Odontopus* Say, 1831, presently the valid name (KISSINGER 1964; WIBMER & O'BRIEN 1986).

The adults and leaves with larvae and pupae were collected and taken to the laboratory where the observations were carried out. Dead adults were mounted and identified by the first author. The specimens are deposited in the Departamento de Zoologia-UFPR, "Coleção de Entomologia Pe. J. S. Moure", Curitiba, Paraná (DZUP), and also in the collection of Prof. José Cordeiro da Silva, and in the "Coleção do Museu de História Natural", the last two at Departamento de Zoologia, Universidade Federal de Alagoas, Maceió.

Prior records of *Odontopus brevirostris* on *Annona* spp. and on *A. squamosa* were made in the States of Bahia (BONDAR 1939; COSTA-LIMA 1956; SILVA *et al.* 1968) and Santa Catarina (BONDAR 1947; SILVA *et al.* 1968). It was also recorded in the state of Mato Grosso (HUSTACHE 1936) but without reference to associated plant.

PEÑA & BENNET (1995) recorded *Prionomerus brevirostris* as associated to *Annona coriacea* Mart., *A. palustris* L., and *A. squamosa*.

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This paper confirms the occurrence of *Odontopus brevisrostris* on *Annona squamosa*, and for the first time includes *Annona cherimola* Mill., *A. glabra* L. and *A. muricata* L. as new host plants to this weevil.

Odontopus brevisrostris were collected feeding on *Annona cherimola* in the State of Paraná (Curitiba), on *A. glabra*, *A. squamosa*, and *A. muricata* in Alagoas (Maceió, Ipioca, Ponta Verde), and on *A. muricata* in the State of Pernambuco (Palanqueta farm in Caruaru, and in Frei Miguelinho).

The females make endophytic oviposition, generally in the veins of the ventral surface of the young leaves. After eclosion, the larvae migrate towards the inside of the leaf and start to eat only the parenchyma (the leaf veins are not eaten). The last instar larvae migrate to the same site (generally to the apex of the leaf) and start to construct, between the two epidermal layers, a sort of nest with rejected veins (pupation chamber) in order to protect the spherical cocoons (2-3 mm in diameter) constructed by each larva. Generally the attack by the larvae causes destruction of more than half of the leaf. In moderate attacks, on which only one side of the leaf is consumed, the leaf turns deformed in the direction of the damaged side.

The adults emerge from the cocoons through a circular hole. The cover of the cocoon remains attached to the substrate by a small area of the leaf that was not chewed. As soon as they emerge, the adults (length: 3.00 mm; width: 2.5 mm) are pale and after some hours they turn yellowish, with the head, legs and sternum darker. The middle of the elytra are transversally marked with a reddish spot. The old specimens are nearly black. The damage caused by the adults is represented by a series of small ovate holes, usually made at the dorsal surface of the leaves. The adults feed on either perfect leaves or those previously damaged by the larvae. The general aspect of the plants infested by this insect is the terminal stems with perforated and deformed leaves. Deformed leaves show necrotic black areas and sometimes the damage is caused by adults.

The feeding strategy of *O. brevisrostris* demonstrates that it could be considered as a potential pest in a secondary level, less important than other which attack flowers and fruits of *Annona* spp., reducing the productivity and marketability.

The synchronized life cycle in the leaf is an important

biological feature of the species. The establishment of the life cycle and other biological parameters related to fecundity, should be studied in order to evaluate the economic role of this insect.

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