**Balaustium** spp. In Florida  
*(Acari: Erythraeidae)*

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**INTRODUCTION:** The cosmopolitan genus *Balaustium* was first described from Europe in 1826. Since then approximately 20 species have been described, mostly from the northern hemisphere. Four species are currently recognized in North America: *B. aonidophagus* (Ebeling), *B. dowelli* Smiley, *B. kendaelli* Welbourn and *B. putmani* Smiley, but additional species remain undescribed. *Balaustium* is a predator of small insects and mites (Welbourn 1983 and references therein). One species, *B. putmani*, has been studied as a possible biological control agent in orchards (Putman 1970; Cadogan and Laing 1977; Childers and Rock 1981).

*Balaustium* spp. are commonly found in urban areas, where they appear in large numbers on sidewalks and walls for a brief period during the spring and early summer. It is during this time that they sometimes enter homes and buildings and become pests. There are two records of *Balaustium* spp. from Florida homes (FSCA collection). Newell (1963) reported four cases of *Balaustium* spp. biting humans; of these, three involved mites that had invaded buildings.

*Balaustium putmani* is known from orchards in Ontario, Canada (Putman 1970; Cadogan and Laing 1977) and North Carolina (Childers and Rock 1981), while *B. dowelli* is known only from Arkansas (Smiley 1964). *Balaustium aonidophagus* (Ebeling) is known only from southern California (Ebeling 1934), and *B. kendaelli* is reported from Maine (Welbourn and Jennings 1991). *Balaustium* spp. have also been reported in the literature from California (Struble 1972), Colorado (Hays 1985) and Montana (Fellin 1968). There are at least two undescribed species in Florida.

**BIOLOGY:** The biology of *B. putmani* was reviewed by Putman (1970) and Cadogan and Laing (1977). The dark red to red-brown eggs are deposited in groups of 6-55 in the late spring and summer. Development usually takes about two weeks, but eggs deposited in the late summer may overwinter as eggs or prelarvae. There are one or two generations per year. The red, hexapod larva, unlike other Erythraeidae, is predatory and can supplement its prey of small insects and mites with pollen (Cadogan and Laing 1977). There are four octopod postlarval instars (protonymph, deutonymph (DN), tritonymph and adult), but only two (DN and adult) are active feeding instars. The fast-moving DN and adult mites are 1-2 mm in length (excluding legs) and usually red in color, but they can vary from reddish brown to orange and sometimes have a metallic green sheen. These predators can also feed on pollen (Grandjean 1946, Cadogan and Laing 1977). *Balaustium* spp. have been observed

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in large numbers actively working around the anthers of flowers (Newell 1963; Welbourn unpublished data). The DN and adult can be distinguished from other erythraeid mites by the presence of a pair of glandular structures, usually on tubercles, located just posterior to the eyes and a single tooth on the inner surface of the palpal tibial claw. In the spring and early summer postlarval Balaustium congregate in sunny locations. The purpose of these aggregations is not clear, but females collected from aggregations usually start depositing eggs within a short time.

**PREY:** Balaustium spp. usually forage in vegetation, but occasionally they are found on the ground. In Florida they have been found on a wide variety of plants. All active instars of Balaustium spp. feed on eggs and early instars of Lepidoptera, Coleoptera, and Diptera (Welbourn 1983 and references therein, Welbourn and Jennings 1991). In addition, Hemiptera, (Psyllidae) (Elmer et al 1983) and Homoptera (Aphidae, Diaspididae and Cicadellidae) have been reported as prey for Balaustium (Welbourn 1983 and references therein). Balaustium will also feed on Tetranychidae, Stigmaeidae and occasionally Phytoseiidae (Welbourn 1983 and references therein). Larval Balaustium will feed on Eriophyidae (Putman 1970, Cadogan and Laing 1977), but they are too small for postlarval Balaustium. These mites are good general predators and will feed on almost anything they can overpower and/or outrun.

**DISTRIBUTION:** Balaustium spp. are probably distributed throughout Florida, but they have only been reported from the following counties: Alachua, Clay, Dade, Franklin, Indian River, Jackson, Jefferson, Leon, Martin, Levy, Pasco, St. Lucie and Union. In Florida, Balaustium spp. are most common in April, but they have been found in February, March and May. There is also a record from October and one from December.

**CONTROL:** In most cases control is not necessary as these mites are beneficial predators. In cases where they occur on walls or walkways no control is usually needed, because the mites will disappear in a short time. In cases where they invade buildings or houses control may be necessary. Consult your local IFAS extension agent or Insect Control Guide for current control recommendations.

**LITERATURE CITED**


