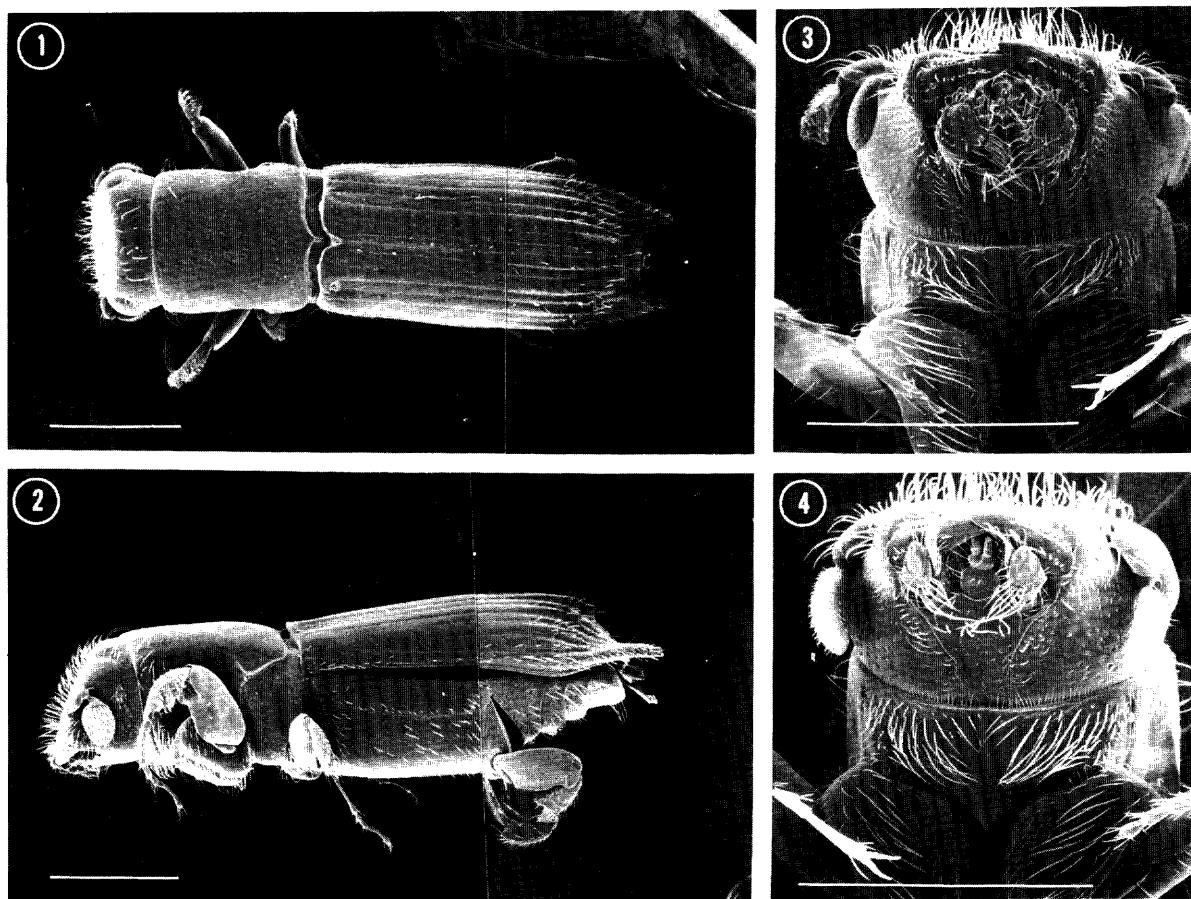


## The species of *Platypus* of Florida (Coleoptera: Platypodidae)<sup>1</sup>

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**INTRODUCTION:** The family Platypodidae includes approximately 1,000 species, most of which are found in the tropics (Schedl 1972). Seven species of platypodids, all in the genus *Platypus*, are found in the U.S., 4 of which occur in Florida. All species found in Florida are borers of trunks and large branches of recently killed trees and may cause economic damage to unmilled logs or standing dead timber. The most recent key to species was published 50 years ago (Chamberlin 1939), does not include all species known from the U.S. (Wood 1979), and has long been out of print.

**IDENTIFICATION:** The Platypodidae are closely related to the Scolytidae but can be distinguished by the elongate body form (Figs. 1, 2), short abdomen (shorter than metathorax in lateral view) (Fig. 2), and elongate first



**Figures 1-4.** *Platypus flavicornis*. 1). male, dorsal view; 2) male, lateral view; 3) female, ventral view of head; 4) male, ventral view of head. White lines represent 1 mm in all figures.

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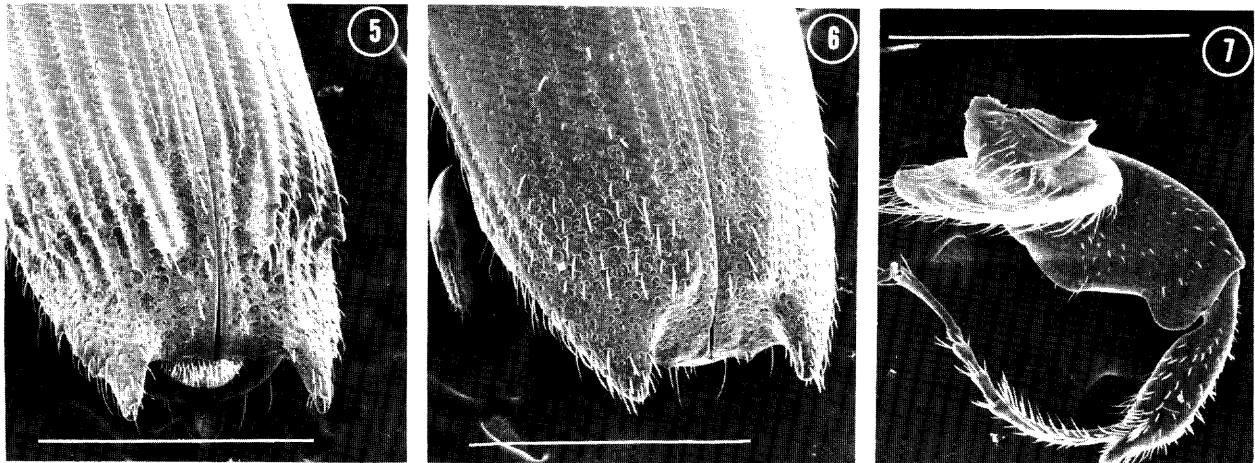
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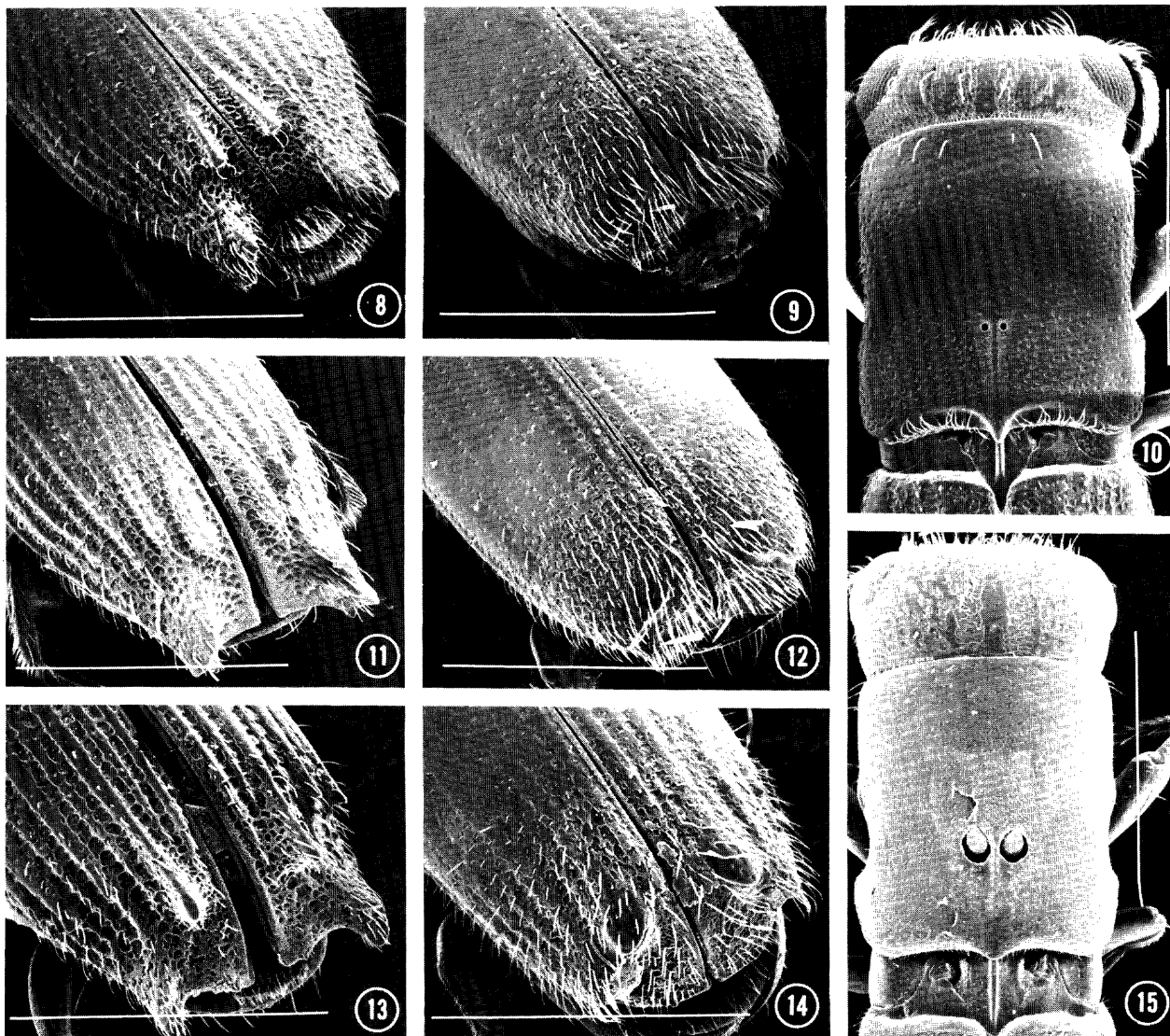
tarsal segment which is longer than the remaining segments combined (Fig. 7). Males of all species have more developed armature of the elytral declivity than females (Figs. 5, 6, 8, 9, 11-14). Females of species occurring in Florida lack terminal spines on the elytra except for *Platypus flavicornis* (F.) which has blunt projections. Females of all species have larger maxillary palpi and a larger gular region than males (Figs. 3, 4). The following key and accompanying illustrations will allow identification of both sexes of all species occurring in Florida and the eastern U.S.

### Key to species of *Platypus* of Florida

1. Male declivity with large acuminate process arising from interstria 9 on posterolateral margins of elytra; interstria 3 continuing posteriorly as a spinose process, interstria 1 not elevated (Figs. 5, 13); female declivity with blunt projection at apex of interstria 3 or at apex of interstria 9, apical margin of declivity straight, not explanate (Figs. 6, 14)..... 2
- Male declivity with large blunt process arising from interstria 9 on posterolateral margins of elytra ending in 3 terminal spines; interstria 1 continuing posteriorly as a spinose process, interstria 3 not elevated or conspicuously less so than 1 (Figs. 8, 11); female declivity blunt, without projecting apical tubercles or processes, apical margin of declivity shallowly divaricate at suture, slightly explanate (Figs. 9, 12)..... 3
- 2 (1). Male declivity with prominent spines on venter of 3rd visible abdominal segment, posterolateral processes of declivity laterally compressed (Fig. 13); female declivity without apical projection on posterolateral area of elytra (Fig. 14); female pronotum with pair of large conspicuous pores in middle (Fig. 15). Southeastern U.S. In oaks. .... *quadridentatus* (Olivier)
- Male declivity without spines on venter of abdomen; posterolateral processes of declivity acute, not compressed (Fig. 5); female declivity with blunt posterolateral projections on elytra, less acute than those of male (Fig. 6); female pronotum without conspicuous pores. Southeastern U.S. In pines..... *flavicornis* (F.)
- 3 (1). Pronotum of both sexes with a pair of tiny pores in middle (Fig. 10); male elytral striae shallowly impressed, interstriae 3 times as wide as striae at base of declivity (Fig. 8). Southeastern U.S., Neotropics. .... *compositus* (Say)
- Pronotum without conspicuous pores in either sex; male elytral striae deeply impressed, subequal in width to interstriae at base of declivity (Fig. 11). Southern Florida, circumtropical. .... *parallelus* (F.)

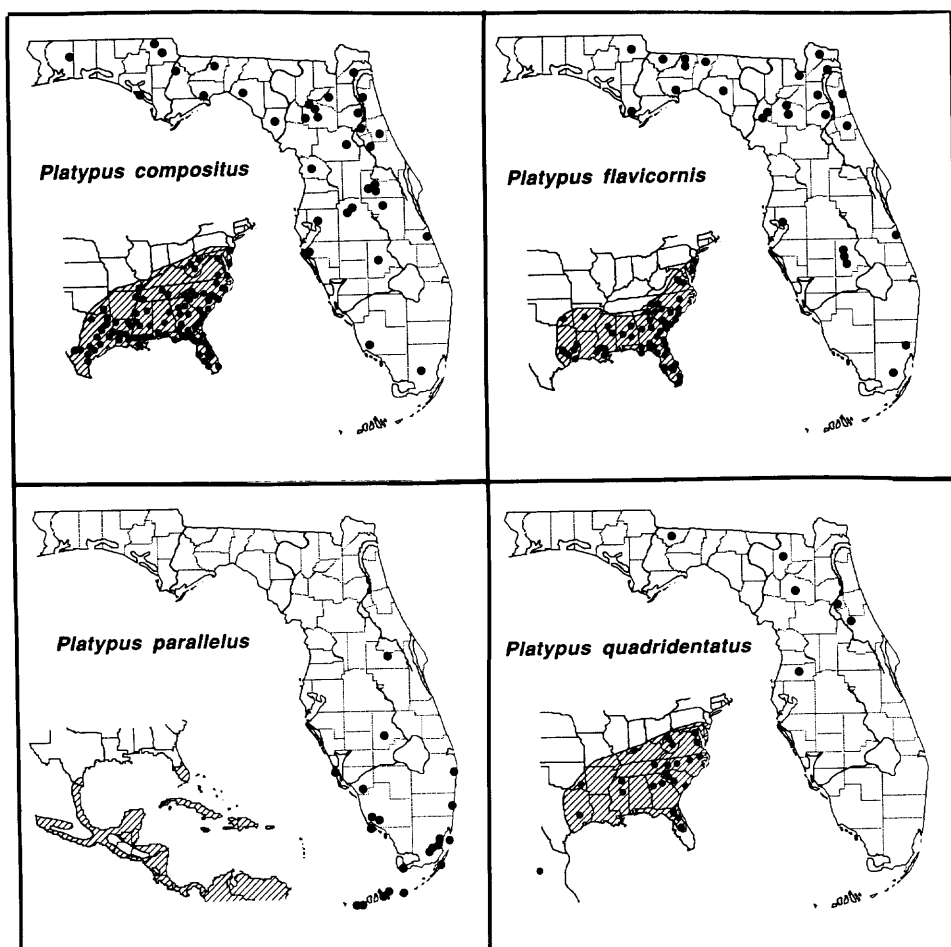


**Figures 5-7.** *Platypus flavicornis*. 5) male declivity; 6) female declivity; 7) prothoracic leg. White lines represent 1 mm in all figures.



**Figures 8-15.** *Platypus* spp. 8) *P. compositus* male, declivity; 9) *P. compositus* female, declivity; 10) *P. compositus* female, pronotum; 11) *P. parallelus* male, declivity; 12) *P. parallelus* female, declivity; 13) *P. quadridentatus* male, declivity; 14) *P. quadridentatus* female, declivity; 15) *P. quadridentatus* female, pronotum. White line represents 1 mm in all figures.

**BIOLOGY:** All species are ambrosia beetles and generally breed in large diameter host material. Galleries are initiated by males; each male is joined by a single female. Apparently pheromones are produced and large numbers of simultaneous attacks are frequently observed. Mated pairs tunnel into the heartwood and introduce ectosymbiotic fungi into their tunnels upon which they and their brood feed. For the most part the wood is not actually consumed. Larvae move freely inside the parental tunnels and excavate individual pupal cells off the main tunnels. Adults emerge through the original entry hole. Platypodids can only breed in undegraded, recently killed host material, with a high moisture content. Decaying wood or wood which has dried out is unsuitable. Normally only a single generation can be produced in a given host. *Platypus flavicornis* and *P. quadridentatus* are respectively restricted to pines and oaks. *Platypus compositus* and *P. parallelus* are extremely polyphagous and will breed in most trees within their ranges. These latter 2 species are commonly attracted to light.



**Figure 16.** Distributions of species of *Platypus* found in Florida. Based on Beal & Massey (1945), Blackman (1922), Wood (1958, 1979), Staines (1981) and unpublished observations.

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