

STAGES IN THE LIFE CYCLE OF A PREDATORY STINK BUG,
EUTHYRHYNCHUS FLORIDANUS (L.)

(HEMIPTERA: PENTATOMIDAE)¹

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INTRODUCTION: This is the 4th in a series of circulars on the identification of eggs, nymphs, and adults of predatory stink bugs. Euthyrhynchus floridanus (Linnaeus) is a medium-sized asopine stink bug which preys on a wide variety of other arthropods including southern green stink bug, Nezara viridula (Linnaeus); West Indian sugarcane rootstalk borer, Diaprepes abbreviatus (Linnaeus); velvet-bean caterpillar, Anticarsia gemmatalis Hübner; Colorado potato beetle, Leptinotarsa decemlineata (Say); alfalfa weevil, Hypera postica (Gyllenhal); and others (Mead, 1976).

LIFE CYCLE: E. floridanus has been reared in the laboratory by Ables (1975), Oetting and Yonke (1975), and Richman and Whitcomb (1978). At 26-27 C and with a photoperiod of 14:10 both Ables and Richman and Whitcomb found that the length of time from egg to adult was 58 days. The egg stage lasted 18-19 days. Oetting and Yonke (using a temperature of 24 C and a photoperiod of 13:11) found the length of time from egg to adult was 100 days, with the egg stage lasting 33 days.

IDENTIFICATION: EGGS (fig. 1): Eggs of E. floridanus are approximately 1 mm in diameter, with short projections around the operculum, and are laid 20-90 at a time in loose oval masses.

FIRST INSTAR (fig. 2). Length approximately 1.5 mm; head width, including eyes, 0.7 mm; humeral width 1.0 mm. These are difficult to distinguish from the 1st instar nymphs of Alcaeorrhynchus grandis (Dallas): both have a blue-black head and thorax and red abdomen with dark central and lateral "stripes" composed of dorsal and lateral dark colored plates. Nymphs of this age do not stray far from the egg mass and may be distinguished by association with the form of the mass and the numbers of eggs; A. grandis masses are in multiple rows and contain 100-200 eggs.

2ND INSTAR (fig. 3). Length 2-2.5 mm; head width 0.9 mm; humeral width 1.1 mm. As in other asopine stink bugs, E. floridanus begins to capture insect prey as a 2nd instar nymph. It looks much like the 1st instar and retains the same coloration.

3RD INSTAR (fig. 4). Length approximately 4 mm; head width 1.2 mm; humeral width 1.7 mm; colored much as in the 1st instar. The iridescence of the blue-black markings is more noticeable because of the larger size of the nymph.

4TH INSTAR (fig. 5). Length 6-7 mm; head width 1.7 mm; humeral width 2.9 mm; much like the earlier stages in appearance.

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5TH INSTAR (fig. 6). Length 8-9 mm; head width 2.1 mm; humeral width 4.8 mm. The wing pads, which are blue-black, are prominent, but otherwise the nymph is much like the preceding stages.

ADULT (fig. 7). Male length approximately 12 mm; head width 2.3 mm; humeral width 6.4 mm. Female length 12-17 mm; head width 2.4 mm; humeral width 7.2 mm. The adults of *E. floridanus* are often confused with the banded form of *Stiretrus anchorago* (Fab.), from which it differs in size (*S. anchorago* is less than 10 mm long), shape (*S. anchorago* is more globose and resembles a leaf beetle), and scutellum size (*S. anchorago* has a very large scutellum covering much of the dorsum of the abdomen). *E. floridanus* differs from *Stiretrus* and the somewhat similar stink bugs in the genera *Oplomus* and *Perillus* in having a distinct humeral spine in the adults.

SURVEY AND DETECTION:

1. It has been collected during all months of the year in Florida.
2. It can be collected in a wide variety of habitats because the prey is highly variable.
3. Specimens can be collected by hand or net, and submitted for identification in alcohol-filled vials or dry in pill boxes.
4. Make special effort to submit egg mass associated with young nymphs.

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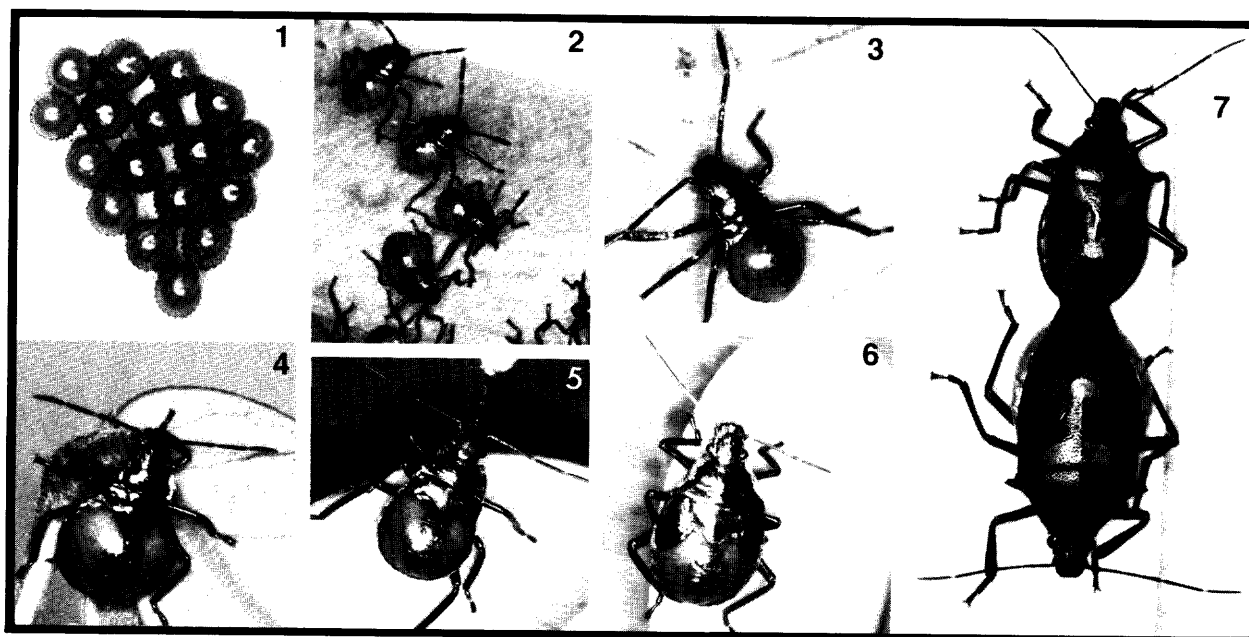


Fig. 1-7, *Euthyrhynchus floridanus* (L.): 1) typical egg mass, 2) 1st instar nymphs, 3) 2nd instar nymph, 4) 3rd instar nymph, 5) 4th instar nymph, 6) 5th instar nymph, 7) adults. Scale variable. Photographs by D. B. Richman.