BEHAVIORAL RESPONSES OF LARVAE AND ADULTS OF ESTIGMENE ACREA (LEPIDOPTERA: ARCTIIDAE) TO LIGHT OF DIFFERENT WAVELENGTHS.



ABSTRACT

We investigated the behavioral responses of neonate and mature (6th instar) larvae, and mated females of Estigmene acrea (Drury) (Lepidoptera: Arctiidae) to a range of wavelengths under laboratory conditions. The behavioral responses of E. acrea were determined by means of choice tests, exposing the insects to 2 different wavelengths, ranging from 340–670 nm (ultraviolet to red colors), of the same intensity in selection chambers. Both neonate and mature larvae were significantly more attracted to 380, 400, and 520 nm than to the control wavelength of 570 nm. Because E. acrea is a generalist species that moves between plants to feed, it may be important for a larva to detect and move towards green foliage in preference to the ground or other objects. Mated females were significantly more attracted to the wavelengths of 340, 350, 370, 380, 420 and 460 nm than to the control wavelength. Females may use ultraviolet and blue lights as orientation cues during the searching behavior for oviposition sites.

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