



## Broad-Headed Bugs

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### Introduction

Broad-headed bugs (family: Alydidae) are a small family of insects with five species in Virginia. They feed on a wide variety of legumes, and are particularly notable for the ant-like appearance of their nymphs. Two species, *Alydus eurinus* and *Alydus pilosulus*, can gather in large numbers, causing damage to several different bean crops.



Figure 1. *Alydus eurinus* adults feeding on edible soybean (edamame). Photo credit: Daniel Wilczek

### Description

Adults are about ½ inch long, slender and wasp-like, and black to dark brown in color. On the top of the abdomen, a red-orange spot is revealed when their wings open for flight. Nymphs resemble a large black ant in appearance and behavior.



Figure 2. *Alydus* nymph. Photo credit: Daniel Wilczek

### Life Cycle

Broad-headed bugs spend winter in the egg stage, and nymphs hatch in early spring. They feed on wild legumes and progress through 5 instars, reaching adulthood in May-June. Adults do not lay egg masses. Rather, they lay single eggs indiscriminately on the ground. They have 2-3 overlapping generations in a year, and can be present in the field until as late as December.

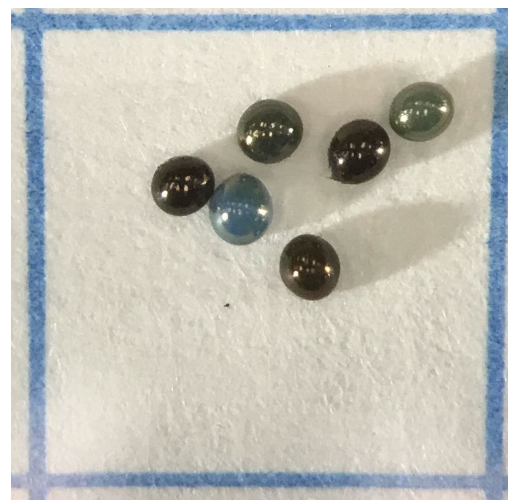


Figure 3. *Alydus* eggs on 1 cm<sup>2</sup> paper. Photo credit: Daniel Wilczek

## Distribution

*Alydus eurinus* and *Alydus pilosulus* are present all throughout Virginia. They are commonly found in clover fields.

## Damage to Crops

In mid to late summer, adults may move from wild legumes to cultivated ones. Females release an aggregation pheromone that draws in large numbers of broad-headed bugs to fields. The feeding from these aggregations can reduce yield and damage seeds, rendering them unmarketable. Damaged seeds exhibit inhibited development, dark marks, and reduced germination. This is especially detrimental to edamame because, unlike conventional soybean, cosmetic damage can be seen by the consumer.



Figure 4. Edamame damaged by broad-headed bug feeding. Photo credit: Tom Kuhar

## References

- Aldrich, J. R. (2000). Attractant Pheromone and Allomone from the Metathoracic Scent Gland of a Broad-Headed Bug (Hemiptera: Alydidae). *The Canadian Entomologist*, vol. 132, pp. 915-923.
- Currin, B. (2021). "*Alydus eurinus*", *Animal Diversity Web*. Accessed July 08, 2021 at [https://animaldiversity.org/accounts/Alydus\\_eurinus/](https://animaldiversity.org/accounts/Alydus_eurinus/)
- Underhill, G. W. (1943). Two Pests of Legumes: *Alydus eurinus* Say, and *A. pilosulus* Herrick-Schaeffer, J. *Econ. Entomology*, vol 36, no. 2, pp. 289-294.

Yonke, T. & Medler, J. (1968). *Biologies of Three Species of Alydus in Wisconsin*. *Annals of the Entomological Society of America*, vol. 62, no. 2, pp. 526-531.

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