

Sensory Cues for Shelter Use

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Abstract Many insects spend a large proportion of their life inactive, hiding in shelters. Therefore, the presence of shelters may influence where the insects feed. I examined stimuli affecting the use of shelters by adults of the pine weevil, *Hyllobius abietis* (L.), which is an economically important forest pest in Europe since the adults feed on the stem bark of newly planted conifer seedlings. When there are hiding or burrowing places present in close vicinity of a seedling, pine weevils may hide there and repeatedly return to feed on the same seedling. Experiments were conducted in a laboratory arena with above- or below-ground shelters and in the presence or absence of wind. Pine weevils were highly attracted to both above- and below-ground shelters and weevils in shelters were often observed placing themselves in a characteristic "resting" posture. Experiments with opaque and transparent shelters showed that visual stimuli are used in the orientation towards shelters and also increase the probability of remaining for a long period behind a shelter. The presence of wind increased the propensity to use both above- and below ground shelters.