

Mechanisms Underlying Host Plant Selection

by *Holcocerus hippophaecolus* Adults

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We determined the mechanisms underlying host selection by adults of the seabuckthorn carpenterworm, *Holcocerus hippophaecolus* Hua, Chou, Fang et Chen. Four sea buckthorn (*Hippophae rhamnoides* L.) subspecies (varieties) with different degrees of resistance to *H. hippophaecolus* were chosen for artificial insect infection in cages. The results showed that olfactory and visual cues are very important for the selection of host plants by *H. hippophaecolus*, but that olfactory stimuli play a more vital role in this process. The relative abundance of branches and leaves had no effect on the likelihood that adults landed on plants from four subspecies (varieties), but did influence landing rates within the same subspecies (varieties). When considering only the most resistant sea buckthorn subspecies (varieties), the presence of luxuriant branches and leaves led to lower landing rates. These results provide a theoretical basis for the understanding of *H. hippophaecolus* damage to sea buckthorn and the means to implement effective measures of control.

Key words: *Holcocerus hippophaecolus*, *Hippophae rhamnoides*, Host Selection