



Reprinted from: *Bulletin of Entomological Research*, London: Commonwealth Agricultural Bureaux International. December 1996. 86(6):703-714.

Published by: CABI International. <http://www.cabi-bioscience.org/>

---

# Description of European *Chamaesphecia* spp. (Lepidoptera: Sesiidae) feeding on *Euphorbia* (Euphorbiaceae), and their potential for biological control of leafy spurge (*Euphorbia esula*) in North America<sup>1</sup>

I. TOSEVSKI, A. GASSMANN and D. SCHROEDER

*International Institute of Biological Control, European Station, Delémont, Switzerland. Correspondence: André Gassmann, International Institute of Biological Control, European Station, 1, Chernin des Grillons, CH-2800, Delémont, Switzerland.*

## Abstract:

The description of the ten *Chamaesphecia* species associated with *Euphorbia* in eastern and southeastern Europe is based on external adult morphology, male and female genitalia, and the structure of the egg chorion. These species can be divided into two groups according to the shape of the setae of the dorso-basal part of the valvae in the male genitalia. Most *Chamaesphecia* species are associated with one species of host-plant and all are closely tied to one habitat type. The host-plant and the structure of the egg chorion are fundamental characteristics for the determination of a few species, and very helpful for the others. All species bore into the main root of their host-plant and overwinter as larvae. With the exception of two species, which have an annual or biennial life cycle, all species are univoltine. The larvae of three of the eight *Chamaesphecia* spp. investigated feed and develop in the roots of North American leafy spurge, *Euphorbia esula* sensu lato. Of these, the best candidate for the biological control of leafy spurge is *C. crassicornis*, because the larvae have a similar survival rate on the target weed and the European host-plant, *E. virgata*.

---

---

<sup>1</sup> Accepted 9 May 1995.