

**Biology of *Trichobaris bridwelli* (Coleoptera: Curculionidae), a  
Possible Agent for the Biological Control of Jimsonweed,  
*Datura stramonium* (Solanaceae)**

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*Abstract*

Biological investigations were conducted on the curculionid *Trichobaris bridwelli*, a natural enemy of Jimsonweed, *Datura stramonium*, in the southern United States. The temporal distribution of all life stages showed that *T. bridwelli* is bivoltine in central Texas, and overwinters principally in the adult stage inside the spiny capsular fruits of its host plant. Females oviposited in the capsular spines, floral calyces and leaves of Jimsonweed; subsequent development occurred inside the capsules or stems. The duration of the egg and combined larval stages averaged 5.9 and 31.1 d, respectively, in the laboratory. The prepupal period ranged from 1 to 5 d, and the pupal stage averaged 8.7 d. All life stages of *T. bridwelli* were attacked by hymenopterous parasitoids. Life tables were constructed from laboratory data to calculate basic population statistics. *T. bridwelli* was also evaluated for its potential effectiveness as a biological control agent of Jimsonweed, and was shown to possess several important ecological attributes which are desirable in promising agents for biological control.