Comparative biology of *Mallada desjardinsi*(navas) and *Chrysoperla congrua* (walker) (Neuroptera: Chrysopidae), predators of*Helicoverpa armigera* (Hubner) (Lepidoptera: Noctuidae) and *aphis gossypii* (glover) (Homoptera: Aphididae) on cotton in eastern Tanzania

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Abstract
The developmental biology of *Mallada desjardinsi* (Navas) and *Chrysoperla congrua*(Walker) on the American bollworm, *Helicoverpa armigera* and the cotton aphid, *Aphis gossypii* was studied in the laboratory at 28–32°C. Total larva! periods of *M. desjardinsi* and*C. congrua* on *H. armigera* eggs were 14.4 and 14.8 days respectively. However, when reared on *A. gossypii* larval periods of *M. desjardinsi* and C. *congrua* were 14.9 and 13.5 days respectively. When reared on *H. armigera* 52.9% and 25% respectively of third instars of *M. desjardinsis* and *C. congrua* sp. died before pupation. However, when reared on *A. gossypii* 82.6% and 46.9% respectively of third instars of *M. desjardinsi* and *C. congrua* died before pupation. Thus, *H. armigera* eggs and *A. gossypii* nymphs were both adequate but not optimal diets for chrysopid larval development. The number of prey consumed by *M. desjardinsi* and C. *congrua* increased with instar. Total larval consumption of *H. armigera*by *M. desjardinsi* and C. *congrua* was determined to be 135.5 and 169.8 eggs respectively. However, total larval consumption of A. *gossypii* by *M. desjardinsi* and C. *congrua* was found to be 189.0 and 171.8 nymphs respectively. Because of its longer larval period, and higher consumption of *A. gossypii*, *M. desjardinsi* would be better suited for use against *A. gossypii* than *C. congrua*. In contrast, *C. congrua* whose consumption of *H. armigera* was higher than that of *M. desjardinsi* although their larval periods were similar, would appear promising for control of *H. armigera.*

Keywords
Chrysalides,
Development,
H. armigera,
A. gossypii,
Cotton