

Cryptocephalus nitidulus Fabricius (Chrysomelidae) larvae and parasitism

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During June of 2000, a small section of the south-facing escarpment of the White Downs in Surrey was searched for the larvae of *Cryptocephalus nitidulus* Fabricius. After 1-2 hours of searching, seven larval cases were found, four of which were broken and empty. Of the other three larvae, one was very small (\approx 2mm) and still active. The remaining two larvae were fully grown and the case aperture was sealed in preparation for pupation. These cases were opened and found to contain the cocoon and pupae of hymenopteran parasitoids.

These parasitoids were identified by Dr Martin Schwarz as wingless ichneumons of the genus *Thaumatogelis* (Hymenoptera: Ichneumonidae). *Thaumatogelis* spp. have only been reported parasitising spider egg sacs (M. Schwarz, pers. comm.). Genera, closely related to *Thaumatogelis*, i.e. *Gelis*, have been described attacking other chrysomelid larvae (Dysart *et al.*, 1973; Momoi, 1973; Cox, 1994) but never *Cryptocephalus* species. The *Cryptocephalus* larvae within these cases had been almost entirely consumed leaving just the sclerotised head capsule and pro-thorax. *Thaumatogelis* and their relatives are idiobionts; therefore, it is likely that mature *Cryptocephalus* larvae are targeted by the female parasitoids in the spring/early summer. The parasitoid larvae will develop rapidly and consume the host. As the females of *Thaumatogelis* sp. overwinter, it is likely there is more than one generation of these parasitoids per year.

To the author's knowledge, this is the only observation of *C. nitidulus* falling prey to a parasitoid. There is very little data on the mortality rate of *Cryptocephalus* larvae due to parasitoids, but if these observations are anything to go by (29% of larval cases found), parasitoids may account for considerable mortality of these beetle larvae.

References

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