

# Effect of Temperature on the Development of *Copris tripartitus* Waterhouse (Coleoptera: Scarabaeidae)

Hea-Son Bang, Young-Il Mah, Suk-Jo Hwang and  
K.G. Wardhaugh<sup>1</sup>

Department of Sericultural and Entomology, NIAST,

<sup>1</sup>CSIRO Entomology, Canberra, Australia

We compared preimaginal development, mortality, and size of *Copris tripartitus* Waterhouse at four temperature conditions (17.5, 20, 25 and 27.5±0.5°C) under a photoperiod of 16:8(L:D). Total preimaginal development ranged from 115.0d at 17.5°C to 52.6d at 27.5°C.

Egg period was 13.1, 10.6, 7.7 and 5.6 days, larval period was 101.9, 78.9, 49.6 and 46.6 days and pupal period was 37, 31, 18.4 and 14 days at 17.5, 20, 25, 27.5°C, respectively. Development threshold temperature (DT) and accumulated day degrees (DD) were 12.1°C, 82.7 DD for eggs, 7.6 (I), 9.7 (II), 6.8 (III)°C, 620.2 DD in three larval stage, and 12.1°C, 225.7 DD for the pupal stage, respectively. These results show that the larval stage is more sensitive to the low temperature than the other stages. The optimum temperature for hatchability and development was estimated to the 25°C.