

Kittiya Suksen 2007: Biological Study of Coconut Hispine Beetle, *Brontispa longissima* Gestro (Coleoptera: Hispididae) and Its Natural Enemies. Master of Science (Entomology), Major Field: Entomology, Department of Entomology. Thesis Advisor: Associate Professor Wiwat Suasa-ard, Ph.D. 64 pages.

Biological study of the coconut hispine beetle, *Brontispa longissima* Gestro (Coleoptera: Hispididae) was conducted in the laboratory at National Biological Control Research Center (NBCRC), Central Regional Center (CRC), Kasetsart University, Kamphaeng Saen Campus, Nakhon Pathom, Thailand. The study was supplemented with the investigations including biology, ecology and population of coconut hispine beetle, *B. longissima* and its natural enemies. The laboratory study revealed that the total life cycle of *B. longissima* with four instars larvae were 21.82 ± 1.74 days. The analysis of biological life table of *B. longissima* revealed that the net reproductive rate of increase (R_0) = 72.9699: the capacity for increase (r_c) = 0.0354: the finite rate of increase (λ) = 1.0360 and the cohort generation time (T_c) = 121.0865 days. Population study of *B. longissima* was investigated in the field during August 2006 to February 2007: the population of *B. longissima* was high in September to October in 2006. The field survey of natural enemies revealed that *Asecodes hispinarum* Boucek as larval parasite while earwig, *Chelisoches morio* Fabricius were found as the important predators of all stages of development of coconut hispine beetle.

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Thesis Advisor's signature

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