INTRODUCTION

Numbers and morphology of testis in males considerably vary among insect species. In Lepidoptera, males have a pair of testes during the larval stage, and testes generally fuse to a single testis during the prepupal stage or the pupal stage as listed in Table 1. For example, in Ostrinia nubilalis (Parker and Thompson, 1926) and Boarmia slenaria (Scheepens and Wysoki, 1985), testis fusion occurs in prepupal stage, whereas in Corcyra cephalonica (Deb and Chakravorty, 1981) and Papilio xuthus (Numata and Hidaka, 1981), testis fusion occurs in pupal stage. However, in several moth species such as some Saturnids (Szöllösi, 1982) and Bombyx mori (Ômura, 1936), the testes do not fuse through their life span so that an adult has two testes.

P. c-aureum exhibits seasonal diphenism on their morphology, coloration of wings and reproductive manner, i.e. the summer form and autumn form. The summer form butterflies emerged in summer begin to reproduce shortly after emergence, while the autumn forms emerged in autumn induce an imaginal diapause and reproduce in spring followed by overwinter. Both the seasonal form and diapause induction are determined mainly by photoperiod and temperature during the immature stages: long daylength and/or high temperature favour the developing summer form, whereas short daylength and relatively lower temperature diapausing autumn.