

Z701 **Development and Life Cycle of Korean Woodroaches (*Cryptocercus*)**

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Woodroaches of the genus *Cryptocercus* live as a family unit in chambers of rotting log. They are well known for long lifespan and advanced subsociality, including the extended parental care. We discovered populations of Korean *Cryptocercus* in Mt. Kyebang of the northeastern South Korea, and determined the number of instars and lifespan. The analysis of head capsule widths during nymphal development suggests that the nymphal stage consists of 10 instars. The time of hatching to adult requires 7-8 years. The nymphs prior to the eighth instar went through two to three molts a year, the older nymphs molted once a year, and subadult (= tenth instar) required 2 years to mature. Reproduction required at least 2 years after maturity. Adult pairs cared for their offspring at least for 3 years until they became eighth instars. These results indicate that the lifespan of *Cryptocercus* extends 12 to 13 years, including 5 years as adults and 7 to 8 years as nymphs.

Z702 **The Effect of Parental Care on the Development of Offspring in Korean Woodroaches (*Cryptocercus*)**

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Woodroaches of the genus *Cryptocercus* provide elaborate parental care to their offspring. Parental roaches transfer symbiotic flagellates and nutrients to their offspring via proctodeum trophallaxis, provide fragment woody diets for their youngs, and defend chambers against intruders. In this study, we investigated beneficial effects of parental caring on nymphal development in Korean *Cryptocercus* spp. In young nymphs, body mass and head capsule width were significantly greater in broods with parental care than in broods without parents, while in older nymphs both components did not differ significantly. Survival rates did not differ significantly in both conditions. These results suggest that parental care is more important for the development in younger nymphs than in older nymphs.