

P191*Antennal cropping in the Asian dry-wood termite, Neotermes koshunensis***Yasushi Miyaguni**, Koji Sugio, Kazuki Tsuji

Antennal cropping, a behavior inferred to exist because queens and kings have shorter antennae than fresh alates, is widespread in lower-termites. However, the proximate and ultimate mechanisms underlying this phenomenon remain unclear. We studied the occurrence of antennal cropping in queens and kings of the dry-wood termite *Neotermes koshunensis* (Kalotermitidae). The tip structure of the cropped antennae of queens and kings showed the edges folded inward. The same inward folding was also observed in some antennae cropped using the mandible of a termite. Antennal cropping also occurred in isolated dealates reared in isolation. This implies that self-cropping is an important proximate mechanism of antennal cropping in this termite. Previous studies inferred that antennal cropping may play a key role in the life-history of alates at the colony-founding stage. However, we also found antennal cropping in adultoid reproductives (secondary reproductives) that had not experienced colony founding. We propose a new hypothesis that antennal cropping is important for individuals in regulating their physiology when they change from the non-reproducing to the reproducing phase. The adaptive significance of antennal cropping may be to reduce the inhibitory effect of pheromones released by the reproductives on their own reproduction.