PREVALENCE OF Anthracophora rusticola (Coleoptera: Cetoniidae) IN NESTS OF THE CHINESE GOSHAWK (Accipiter soloensis)

KEY WORDS: Chinese Goshawk; Accipiter soloensis; Anthracophora rusticola; commensal beetle; nest.

The Chinese Goshawk (Accipiter soloensis) is a small migratory raptor that inhabits the edges of secondary forests near rice fields and marshes in East Asia (Ferguson-Lees et al. 2001, Raptors of the world, Christopher Helm, London, U.K.). The goshawk is the only common breeding Accipitridae raptor in Korea, but details of its breeding ecology there are unclear. Moreover, there have been no reports on the relationship between the nesting Chinese Goshawk and commensal insects in its nests.

During recent investigations of the breeding biology of the Chinese Goshawk, we found larvae and cocoons of beetles in the nests of goshawks. From 2005–2008, we examined 12 Chinese Goshawk nests in Korea (eight nests in Gyeonggi Province, two in Daejeon, one in Seoul, and one in Chungnam Province), and all of the nests had beetle larvae and cocoons. Because it was difficult to identify the larvae of beetles to the species level, we retrieved nests of the goshawks after fledging and enclosed them in sealed cages to identify the adult beetles after metamorphosis. Beetles were then identified as Anthracophora rusticola (Coleoptera: Cetoniidae). We also disassembled six nests of a corvid species, the Black-billed Magpie (Pica pica), and two of the Oriental Turtle-Dove (Streptopelia orientalis) to estimate prevalence of the beetle in stick nests, but found no larvae or cocoons. This result suggests that Anthracophora rusticola is not a generalized beetle in all kinds of stick-nests.

There are no detailed reports on the life history and diet of this beetle, but it is thought to be a detritivore of rotten woods in larval stages and a sap-feeding insect as an adult (Kim 1998, Insects’ life in Korea, Vol. 3: Coleoptera, Korean Entomological Institution of Korea University, Seoul, Korea). When we observed a dead nestling goshawk in its nest on 21 August 2006, however, the beetle larvae were feeding on the dead nestling, suggesting that the larvae also feed on animal debris and prey remains in raptor nests and that the beetles may favor goshawk nests as breeding sites that have a sustained supply of varied food resources.

We examined a small number of nests, but the complete association of these beetles with goshawk nests observed in our study suggests that Anthracophora rusticola is a commensal beetle in the nests of Chinese Goshawks in its larval stages (Fig. 1). Moreover, in light of previous reports of larvae in several nests of the Oriental Honey-Buzzard (Pernis pinto) and other raptors, we suggest that Anthracophora rusticola may be a common commensal in stick-nests of goshawks in Korea and other regions where the goshawk breeds.