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Population Structure and Social Behavior of the Crow Tit *Paradoxornis webbiana* during the Breeding Season

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This study was conducted during 1993-94 in Puyong-ri, Yangpyung-gun, Kyunggi-do. A total of 375 Crow Tits *Paradoxornis webbiana* were all individually marked with three colored plastic leg bands. In this study, 57.8% of the members of winter flocks were found in the same area during the following breeding season (breeders= 46.1%, non-breeders= 11.7%; n= 180 in 1993-94). Winter flock (n= 94) were found to be composed of breeders (18.3%), non-breeders (4.3%) and juveniles (12.8%) all from the previous breeding season, members of the previous winter's flock (17.0%), and newcomers (52.1%) which immigrated after the breeding season. The Crow Tit forms monogamous breeding pairs. About 30 (n= 99) of breeding birds produced two broods within one breeding season. If first clutches were successful, pairs tended to build second nests close to the first nest (mean= 74.6 m; n= 5), whereas if the first nesting attempt failed, the second nest was built well away from the first nest site (mean= 221.3 m; n= 9). Males protected their mates from other birds by approaching and spending more time close to the mates. Territorial behavior was only rarely observed. Both males and females spent similar proportions of their time carrying nest material, incubating and delivering food to the nestlings. Male and female home ranges overlapped and the home ranges of several pairs overlapped at prime feeding sites. Clutches ranged in size from four to seven eggs, but averaged 5.21 eggs (n= 105). Most clutches (82.0%; n= 57) hatched within 24 hours.

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Egg-color Dimorphism and Breeding Success of the Crow Tit *Paradoxornis webbiana*

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This study was conducted during 1988-89 in Donguk University Forest at Namyangju-gun (area A) and during 1993-94 in Puyong-ri, Yangpyung-gun, in Kyunggi-do (area B). A total of 1306 Crow Tits *Paradoxornis webbiana* (931 in area A; 375 in area B) were all individually marked with three colored plastic leg bands. The Crow Tit in South Korea were found to lay eggs that were either blue or white. No nests were found, however, containing eggs of both colors. Blue and white clutches were widely distributed throughout both study areas. In area A blue clutches (75.5%) were far more frequent than white ones (24.5%)(n= 53), whereas in area B (n= 62) the ratio was closer; 59.7% of clutches were blue and 40.3% were white. No relationship between egg color and either the egg-laying period or clutch size was found. Twenty females which laid two or more successive clutches always produced eggs of the same color, whether they kept the same mates or not. Of seven males that mated with different females, however, two produced eggs which differed in color from one nesting attempt to the next indicating that females determine egg color. Breeding success proved to be related to nest height and not to egg color or nest tree species. Low (<40 cm above the ground) and high (>40 cm) were less successful than nests located 40-90 cm above ground. Nest predation of high nests seems to have been caused mostly by Eurasian Jays *Garrulus glandarius*, in mid-level nests were most often parasitized by Common Cuckoos *Cuculus canorus* and low nests were most often taken by snakes *Natrix tigrina*.