

B105 Breeding Ecology of the Black-billed Magpie in Korea (*Pica pica sericea*)

Sang-im Lee*, Myoung-bok Lee, Youna Hwang, Eung-il Lee and Jae Chun Choe
Department of Biology, Seoul National University

General breeding ecology of Korean black-billed magpies (*Pica pica sericea*) was investigated on the campus of Seoul National University. Two main aspects were compared between 1998 and 1999; (i) breeding success/failure and (ii) territoriality. The proportion of successful nests increased from 46% (34/74) in 1998 to 55.4% (41/74) in 1999, and the breeding success also increased from 2.2 to 3.2 fledglings/successful nest. These increases were thought to be due to the rainless fledging period in 1999. Causes of breeding failure differed between the two years. The main cause in 1999 was hatching failure (27.3%) whereas nest desertion (13.0%) was the main cause in 1998. The reason for this increment of hatching failure might be insufficient incubation time, because female magpies participated more actively in agonistic territorial interactions this year. Nestling mortality decreased, which might be related to weather and food abundance. We also found some evidence suggesting that the causes of fledgling mortality may include attacks from neighboring adults and collisions with buildings. Unlike the difference found in breeding success/failure, the distribution and size of territories and distance between nests did not differ significantly from those in 1998. This consistency suggests that territoriality might be a stable and useful behavioral character for cross-subspecies comparisons in magpies.

B106 Food Hoarding in Black-billed Magpies, *Pica pica sericea*

Myung Bok Lee and Jae Chun Choe
Department of Biology, Seoul National University

Various internal and external factors are known to affect food hoarding in animals. In this study we analyzed the influence of load size and the presence of conspecific competitors on hoarding behavior in black-billed magpies, *Pica pica sericea*. Experiments were conducted on the campus of Seoul National University during January-March of 1998 and 1999. Diced bread pieces of different sizes and densities were provided in 5×5 m quadrats, the number of foraging and hoarding individuals, load size, and collection duration were recorded. Magpies tend to hoard when the size of an individual food items or the total amount of collected food was above certain levels. As the density of potential competitors increased, magpies tended to collect food faster and hoard with smaller load sizes. This is part of the long term behavioral and ecological study of the Korean Black-billed Magpie conducted by the Behavioral Ecology Laboratory of Seoul National University.