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#### ACCIPITERS PREY ON NESTLING BIRDS IN JAPAN

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**KEY WORDS:** *Accipiter gentilis*; *A. gularis*; Japanese lesser sparrowhawk; nestling predation; Northern goshawk.

The diet of *Accipiter* spp. has been investigated in various localities (e.g., Brown and Amadon 1968, Opdam et al. 1977, Kenward 1982, Goszczyński and Pilatowski 1986, Petty 1989, Hirano and Kimizawa 1992, Ueta 1992). In Japan the northern goshawk (*Accipiter gentilis*) preys on medium- to small-sized birds (Yamashina 1941, Ishizawa and Chiba 1967). The Japanese lesser sparrowhawk (*A. gularis*) exclusively hunts small birds such as tree sparrows and great tits (*Parus major*) during the breeding season (Hirano and Kimizawa 1992, Ueta 1992). In addition, hawks adjust their own fledgling periods to the season that prey bird species fledge (Newton 1986, Ueta 1993). Some previous reports that hawks hunt nestlings have been published (Opdam et al. 1977, Newton 1986), but these authors only observed prey delivered to hawk nests. Therefore, they did not observe the hunting technique used to capture nestlings. In this paper, we present observations on nestling hunting by northern goshawks and Japanese lesser sparrowhawks.

**Northern Goshawk.** A northern goshawk preying on a nestling bull-headed shrike (*Lanius bucephalus*) was recorded on videotape in western Hokkaido, northern Japan. The nest was being videotaped as a part of a study on shrike ecology, and was positioned among vines (*Vitis coignetiae*) about 1.2 m above ground. The four 14-d-old nestlings were recorded on videotape starting at 0800 H, 21 June 1992. The adult shrikes frequently brought prey to their nest, but during their absence the nestlings were often exposed to predators. Nest attack and subsequent behavior of the hawk and shrikes were as follows: At 1648 H the male shrike brought prey to the nest and left carrying a fecal sac. At 1649 H the goshawk approached the nest while parents gave alarm calls nearby. At 1650 H the hawk grasped one nestling and flew away with it. At 1652 H one nestling left the nest. The other two nestlings also left the nest at 1655 H and 1657 H, respectively. At 1700 H the parents again gave alarm calls. A few moments later the hawk came back and searched the vacant nest for a few minutes. The hawk remained in the vicinity and might have been searching for the rest of the nestlings for several minutes and then left the observation site. Even though



Figure 1. An adult northern goshawk capturing a nestling eastern turtle dove. The arrow indicates the nestling. Photograph by S. Ikeda.

we confirmed on videotape that one nestling was captured by the hawk, it is possible that the other nestlings were also caught in the second visit by the hawk during which the video camera was not focused on the fledglings.

A northern goshawk preying on a nestling eastern turtle dove (*Streptopelia orientalis*) was photographed on 22 June 1994 in a shelterbelt, central Hokkaido, northern Japan (Fig. 1). The camera had been set to record nestling predation by the hawk.

**Japanese Lesser Sparrowhawk.** A female Japanese lesser sparrowhawk was observed preying on nestlings of brown-eared bulbul (*Hypsipetes amaurotis*) on 13 July 1991 in central Japan. The bulbul's nest was located on a 10-m-high branch about 25 m from the hawk's nest. Nestling bulbuls captured by the hawk were large enough to fledge and were fed to the hawk nestlings. The number of bulbul nestlings taken by the hawk was unknown. This was the only example of nestling prey among 443 items that were captured by these hawks during observations at the study site (Ueta 1992). Thus, predation on nestling birds by Japanese lesser sparrowhawks appears to be rare.

**RESUMEN.**—Presentamos observaciones sobre la caza de polluelos por *Accipiter gentilis* y *Accipiter gularis*. Un *A. gentilis* depredó sobre polluelos de *Lanius bucephalus* (uno) y *Streptopelia orientalis* (uno), al norte de Japón. Una hembra de *A. gularis* capturó polluelos de *Hypsipetes amaurotis* en el centro de Japón. Aunque la dieta de este género ha sido investigada en varias localidades, este es el primer reporte sobre capture de polluelos presa en el mismo nido. [Traducción de Ivan Lazo]

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#### NEST RECORDS FOR THE KING VULTURE (*Sarcoramphus papa*) IN VENEZUELA

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**KEY WORDS:** *king vulture; nest sites; Sarcoramphus papa; Venezuela.*

The natural history of the king vulture (*Sarcoramphus papa*) is not well-known. Although nestling plumage development and threat behavior have been documented from a nest in Venezuela (Ramo and Busto 1988), the first detailed accounts of greeting ceremonies and courtship (Schlee 1987) as well as nest construction, incubation, parental care, and ontogeny of young (Schlee 1994) come from captive birds.

Several nest records indicate that king vultures are ground-nesters. In dense, wet second-growth forest in Panama, one nest was located in a rotted tree stump 30 cm above ground, and another in a scrape made in the soil and litter at the base of a palm (Smith 1970). A downy young was found wandering about on the ground in primary forest on Barro Colorado Island (Lundy 1957), and the presence of excrement and bits of bone and fur at the base of a tree indicated that this spot was probably the actual nest (C.B. Koford unpubl. data). A more recent finding in dry tropical forest in the Andean piedmont of Venezuela, however, shows that the species also uses large

holes in trees, the nest having been located 10.5 m above the ground (Ramo and Busto 1988). This paper describes two nest sites found in the northern Llanos of Venezuela.

#### STUDY AREA AND METHODS

Observations were made at the ranches Hato Don Miguel and Hato El Portón, located 35 km and 17 km, respectively, east of Altigracia de Orituco (9°55'N, 66°16'W) in the northern part of the state of Guárico not far from the Cordillera de la Costa. Elevations range from 200–500 m, the nest sites being located at approximately 290–300 m. Much of the dry deciduous forest that once covered the area has been cleared for the cultivation of corn (*Zea mays*) and milo (*Sorghum* sp.) and for cattle grazing; El Portón, however, still has large forest remnants. The area has highly mixed woodlands with many of the trees being less than 25 m in height. At least 10 tree species are common to both ranches: araguaney (*Tabebuia chrysantha* and *T. serratifolia*), locust-tree (*Hymenaea courbaril*), cedro (*Cedrela odorata*), ox-hoof tree (*Bauhinia variegata*), blood tree (*Croton gossypifolius*), hog plum (*Spondias cytherea*), onion cordia (*Cordia alliodora*), cassia (*Cassia moschata*), and flame tree (*Delonix regia*). Four other species can be found at Hato Don Miguel: erythrina (*Erythrina poeppigiana*), silk cotton tree (*Ceiba pentandra*),