

NOTEBOOK

Notes on the diet of the Black Eagle *Ictinaetus malaiensis*

ZHU LEI, YANG XIAO-NONG, HAO GUANG, LIU TIAN-TIAN, DAI ZI-YUE & SUN YUE-HUA

Introduction

The Black Eagle *Ictinaetus malaiensis* is a large diurnal raptor which inhabits mountain forests of tropical and subtropical Asia (Clark 1994). Although widespread in Asia, it is not well known and most of the relatively few studies have focused on breeding biology (Zhu *et al.* 2014). Here we present a note of our observations of the species at Wawu Shan National Forestry Park (NFP), central Sichuan, China (29.650°N 102.933°E), including predation of a nocturnal Red and White Giant Flying Squirrel *Petaurista alborufus*, and review available information on the diet of the Black Eagle.

Observations

On 29 April 2011 at 12h10 the authors in the course of their fieldwork were watching a pair of Black Eagles previously seen displaying on 23 April (Zhu *et al.* 2014) on the table mountain top of Wawu Shan NFP. This site is near a view-point close to a cliff at about 2,750 m. The pair soared for about five minutes, mainly just above the canopy of the Emei Fir *Abies fabri* forest. One then perched on a tree and the other dropped down the cliff, disappearing from view; then about three minutes later, the birds flew to and fro together below the view-point before gliding northward along the mountainside and out of sight. At 13h00, the pair

reappeared, one of them with what was clearly a large mammal dangling from its claws; it then flew due north before disappearing from view. Although the observation only lasted about a minute, DZ-Y obtained images (Plates 1 & 2) which enabled the animal to be identified as a Red and White Giant Flying Squirrel. The observation also suggests that the pair might have engaged in cooperative hunting.

Notes on diet

Although the Black Eagle is widely described as feeding on rodents, snakes, lizards, pheasants and, particularly, eggs and nestlings of other birds (Ferguson-Lees & Christie 2001, Ali 2005, Robson 2008) or regarded as a small mammal specialist (Rasmussen & Anderton 2012), few studies have focused on its diet and feeding habits. The Black Eagle has long been known for its very slow but dynamic gliding and soaring with lengthy pauses between wing flaps (Henry 1933), which is believed to help it search systematically for arboreal mammals and birds nests. Mammalian prey noted in West Java include forest rats *Rattus* sp. and Plantain Squirrels *Callosciurus notatus*, the latter seen to be fed to nestlings (Suparman *et al.* 2003). In India, attempts on the nests of Malabar Giant Squirrel *Ratufa indica* have been observed, with a confirmed sighting of a pup weighing

Plates 1 & 2. Second-year Black Eagle *Ictinaetus malaiensis* (aged by the brownish, rather than entirely black, lesser coverts of upperwing and the pale head) carrying Red and White Giant Squirrel *Petaurista alborufus* at Wawu Shan National Forest Park, Sichuan, China, 29 April 2011.



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approximately 1 kg being carried off with part of the nest structure tangled in the Black Eagle's talons, and an adult Malabar Giant Squirrel, which was crouching and attempting to hide in foliage, was attacked and its exposed tail largely stripped of fur (Naoroji 2006). In north-east Taiwan, the Spiny Taiwan Niviventer *Niviventer coninga* and Formosan Hairy-footed Flying Squirrel *Belomys pearsonii kaleensis* were found to be the main food items during the breeding season (Lin 2005). Lin & Lin (2010) reported 92 mammal victims (comprising 69% of all prey items), mainly Pallas's Squirrels *Callosciurus erythraeus* with eight Formosan Hairy-footed Flying Squirrels and two Formosan Giant Flying Squirrels *Petaurista philippensis grandis*, which were brought to one nest between March and July 2008. These authors also noted that 72% of mammal and 83% bird prey items involved young animals, which indicates that this raptor is a specialist forest predator of young mammals and nestlings. A study in Sri Lanka found that Three-striped Palm Squirrels *Funambulus palmarum* and House Rats *Rattus rattus* comprised the majority of prey items at one nest and that no eggs or nestlings were supplied (Samarawickrama *et al.* 2011). These observations show the importance of mammalian prey, particularly squirrels, to the Black Eagle during the breeding period.

The Red and White Giant Flying Squirrel, which occurs in southern mainland China, Taiwan and possibly northern Myanmar, is the largest member of the genus *Petaurista* (Smith & Xie 2009), and with an adult body mass of 1,000–1,750 g its weight is very similar to that of an adult Black Eagle, which is reported to be 1,000–1,600 g (Ferguson-Lees & Christie 2001). Although it cannot be confirmed whether the *Petaurista* predated at Wawu Shan NFP was an adult or not, it is still remarkable and unusual for this specialised nest predator to hunt such a large prey species.

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ZHU Lei & SUN Yue-Hua
Key Laboratory of Animal Ecology and Conservation
Biology, Institute of Zoology Chinese Academy of
Sciences, Chaoyang, Beijing 100101, China
Email: (corresponding author) sunyh@ioz.ac.cn

YANG Xiao-Nong & HAO Guang
Department of Biology and Science
Sichuan Agricultural University
Ya'an 625014, China

LIU Tian-Tian
Graduate University of the Chinese Academy
of Sciences
Beijing 100049, China

DAI Zi-Yue
China Bird Watch, Beijing 100026, China