

# Feeding ecology and behaviour of the last known surviving oriental Northern Bald Ibises, *Geronticus eremita* (Linnaeus, 1758), at their breeding quarters in Syria

by Gianluca Serra, Mahmud Scheisch Abdallah and Ghazy al Qaim

**Abstract.** The last handful of individuals from the eastern population of the critically endangered Northern Bald Ibis (*Geronticus eremita*) have been closely observed and monitored during the breeding seasons 2002-2004 and 2006 in their breeding quarters in the Syrian desert. The home range used by the ibises was estimated to be up to about 450 km<sup>2</sup>, which was already partly included in a specific protected area established by the Syrian authorities in 2004. Their main feeding habitat was a stony and sparsely vegetated open and gently undulating steppe. This feeding habitat is heavily overgrazed by the sheep flocks of the Bedouin nomads, and the native shrub coverage has almost completely disappeared due to uprooting for firewood. Another key feeding habitat are the man-made reservoirs, where ibises fed on larvae of Eastern Spadefoot Toads (*Pelobates syriacus*), perhaps the most profitable prey occurring at their breeding quarters. The bulk of the diet of Syrian breeding ibises is estimated to be a mixture of beetles (mainly ground beetles, Tenebrionidae), grasshoppers (Acrididae) and young toads – all found to be preyed upon by ibises. A ground mantis and an isopod species, as well as lizards, may possibly be important components of the diet as well. A daily need for drinking water was found. Ibises seemed to hunt their prey both by sight and by probing with the tip of the bill in underground holes and under stones. The foraging behaviour of ibises was highly gregarious and quite conservative during each breeding season and over the years: they tended to use the same feeding areas from year to year, with a similar temporal sequence. Ibises fed at increasingly higher feeding areas throughout the breeding season, starting from about 400 m asl in February and reaching about 950 m asl in June-July.

**Key words.** *Geronticus eremita*, critically endangered, Syrian desert, Middle East, feeding habits, diet, behaviour.

## Introduction

The Northern Bald Ibis, *Geronticus eremita* (Linnaeus, 1758), is an extremely rare colonial cliff-nesting bird listed as Critically Endangered on a global scale (IUCN 2006). This bird has undergone a continuous decline over the last four to five centuries throughout its original distribution range (HIRSCH 1979, COLLAR & STUART 1985). During this period, the species has been gradually diverging into two disjunct populations (COLLAR & STUART 1985), differing morphologically (slightly) and genetically (PEGORARO et al. 2001).

The Bald Ibis was considered to have become extinct from the whole of its eastern range in 1989, when the last survivors of the colony at Birecik, southern Anatolia, were prevented from migrating and were held in semi-captivity (KASPAREK 1992). Until 2002, the Bald Ibis was known to survive only in its western range, with about 92 breeding pairs scattered in a few colonies in Morocco (BOWDEN et al. 2003). That same year, a relict colony of 7 indi-