

First Record on Ground Nesting of Egyptian Vulture *Neophron percnopterus* (Aves: Accipitriformes) in Continental Europe

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Abstract: The preferred breeding substrates of the Egyptian Vulture are cliffs, alternative substrates such as trees and buildings are rarely used. Under extreme conditions, the species may also breed on the ground. Here we publish the first record on ground nesting of the Egyptian Vulture in continental Europe.

Keywords: nest site, interspecific competition, Bulgaria

Introduction

The Egyptian Vulture *Neophron percnopterus* (Linnaeus, 1758) is a medium-sized scavenger distributed in South Europe, the Middle East, Central and South Asia and Africa (FERGUSON-LEES, CHRISTIE 2001). Populations across much of the range have dramatically declined during last decades (BIRDLIFE INTERNATIONAL 2011). The species prefers cliffs for breeding and the same nests are usually used each year, but occasionally alternative sites are occupied (CRAMP, SIMMONS 1980).

In the 19th century, throughout its range, the Egyptian Vulture was recorded with up to hundreds of pairs in big towns in a number of countries like Turkey (Istanbul), Bulgaria (Plovdiv), Syria (Damascus), Egypt (Cairo) and Sudan (Khartoum, Wad Medani). In the towns the vultures used mainly the buildings and trees for nesting, while in Egypt also the pyramids (HEUGLIN 1869, NIKOLAUS 1984, BAUMGART *et al.* 1995). Throughout the range, most cases of urban and tree nesting, excluding the South Asia continent, occurred before the start of the dramatic population decline. The last three ur-

ban breeding pairs in Khartoum were recorded in the early 1980s (G. Nikolaus, *in litt.*), while to our knowledge, an urban population still occurs in parts of India (GALUSHIN 1971), where the birds breed also on high-voltage electricity pylons.

The breeding of the Egyptian Vulture on trees as an alternative nesting substrate, was recorded from Somalia, Sudan, Pakistan, Oman and India (BUTLER 1905, ARCHER, GODMAN 1937, GALLAGHER 1989, NAOROJI 2006), while WADLEY (1951) even described a breeding "colony of c. 40" on trees in Western Turkey, which was recorded from 1943 to 1946. In Bulgaria, there are three documented records of breeding on trees. Close to the village of Veselie near Burgas town, a nest of Egyptian Vulture with two eggs was found on an Oak tree (*Quercus sp.*) (PROSTOV 1955), while in the vicinity of the town of Yambol, a pair nested for several years in a row on an old Willow tree (*Salix sp.*), near a slaughter house (ARABADZHIEV 1962). There is one record of an incubating bird in a tree nest in the Eastern Rhodopes, near the village of Boturche, in 1994 (Hristov, pers.

comm.). Information, collected from local people in the Eastern Balkan Mountains, shows that in the first quarter of the 20th century, the species bred also on trees in addition to the cliff nesting population in the same area.

To our knowledge, there are three published records on pairs occupying ground nests under extreme conditions. In the first case in the Canary Islands, a pair traditionally breeding in a cave easily accessible to humans, moved to flat and exposed surface on the ground with scattered shrubs ca. 600 m from the old nest and successfully fledged one juvenile, but returned to the old nest in the next year (GANGOSO, PALACIOS 2005). The second case was in the Red Sea's Island of Farasan, Saudi Arabia, where a pair once used the old ground nest of an Osprey *Pandion haliaetus* (JENNINGS 2010, JENNINGS *in litt.*). Ground nesting was reported also from India, where a nest with one egg was found situated at the base of a tree (PAYNTER 1924). Here we document the fourth record worldwide and first for continental Europe on ground nesting of the Egyptian Vulture.

Results and Discussion

The Provadiisko-Royaksko Plateau is located in Northeast Bulgaria, and there between 3 and 6 breeding territories of the Egyptian Vultures were occupied yearly by pairs during 1990-2000. One particular pair traditionally bred on a single isolated limestone cliff and we were aware of only one nest used in this territory during 1995-1997. The cliff, situated on the top of a hill, was about 450 m long, from 2 to 8 m high and with south to west exposition. It showed scarcity of niches and ledges, which are potentially good for alternative Egyptian Vulture nest sites.

In April 1998, in a field newly sown with Sunflower (*Helianthus annuus* Linnaeus, 1735), we recorded an adult Egyptian Vulture incubating in a ground nest (Fig. 1). It was built with sticks and lined with sheep and goat fur. The nest was located ca. 2.3 km from the traditional nest on the cliff, which was occupied by a breeding pair of Common Ravens (*Corvus corax* Linnaeus, 1758). In a second visit two days later, one adult was observed again incubating in the nest, which contained a clutch of two eggs. After departure of the observer, the adult bird immediately returned to the nest and continued the incubation. During third visit about one week

after the second one, the nest was found deserted, while a tail of Raccoon Dog (*Nyctereutes procyonoides* Gray, 1834) was found newly added by the birds to the nest edge. We were not able to locate another pair of Egyptian Vultures in the vicinity, thus we assumed that this was the pair occupying the traditionally used cliff nest. In the following two years a pair of Egyptian Vultures was breeding again in its traditional nest on the cliff, while the pair of Ravens was absent.

A possible explanation for the unusual nest site change of this pair could be the appearance of the breeding pair of Common Ravens, which occupied the nest before the vultures' arrival after the spring migration. The Ravens were probably a newly established pair and were not breeding on the cliff in the previous years. The Egyptian Vulture is often dominant over Ravens during interactions on the ground, but the opposite occurs in aerial conflicts, given the Raven's higher maneuverability (I. Angelov, pers. obs.). The Ravens may exclude the Egyptian Vultures from occupying a particular nest if they have the ad-



Fig. 1. A ground nest of the Egyptian Vulture in the Provadiisko-Royaksko Plateau, in Northeast Bulgaria (April 1998). (Photo: Dimitar Georgiev).

vantage of occupying the site before the spring arrival of the vultures from their wintering areas in Africa (I. Angelov, pers. obs.). Such circumstances may have influenced the switch of Egyptian Vultures for breeding on the ground. Other species like Griffon Vultures (*Gyps fulvus* Hablizl, 1783) have already been reported to be able to exclude Egyptian Vultures from their traditional breeding niches (FERNANDEZ,

DONAZAR 1991, CARLON 1998), while Ravens have been reported to exclude Common Buzzards (*Buteo buteo* Linnaeus, 1758) (RATCLIFFE 1997).

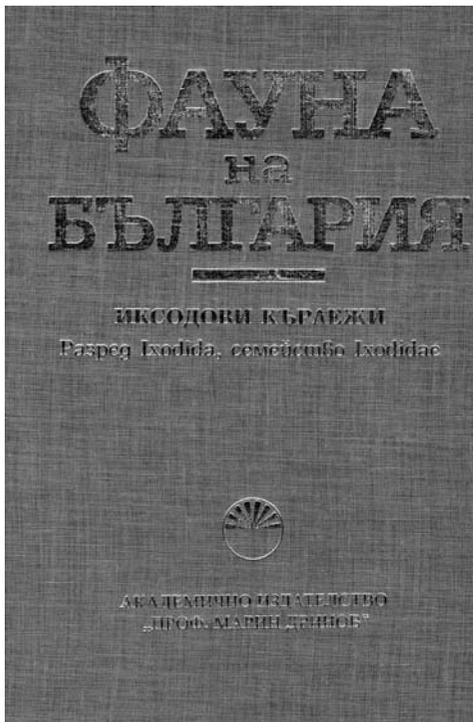
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After a long delay the well designed Volume 32 of the series “Fauna Bulgarica” of the Institute of Biodiversity and Ecosystem Research was released. This monograph of Gabriela Georgieva and Gergana Gecheva was much needed and expected by many Bulgarian human and veterinary doctors, as with the proliferation of many tick–transmitted diseases in Bulgaria was necessary to compile a modern treatment of Ixodidae in the country, together with medicoacarological analysis and instructions on how to deal with these potentially dangerous Acarids. The monograph contains morphological descriptions of the order, the family and subfamilies, the seven genera and 36 species of Ixodid ticks, recorded in Bulgaria. The historical data about the findings of Ixodid ticks in Bulgaria are critically reviewed, and the names of hosts are updated. For each species a list of the most important synonyms and the names used in publications in Bulgaria is provided. It was not an easy task to decide which of the several modern classifications of ticks to adhere to, but the authors have found a reasonable balance.

The list of references contains 261 titles, of which 135 papers concerning the Bulgarian Ixodidae. The other 126 papers include the most modern and important review of the family and lists of the species in the world.

For many years Bulgarian medical specialists and acarologists used the old Russian keys for identification and were not aware of the modern tendencies in Ixodology. Now the monograph of the two very experienced authors will be very useful, and not only to Bulgarians, but also to the specialists from other Balkan countries (Macedonia, Serbia), and other users, as the keys are also given in English.

Petar Beron