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The Egyptian Vulture *Neophron percnopterus* in Macedonia

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INTRODUCTION

The Egyptian Vulture (*Neophron p. percnopterus*) is classed as a rare and endangered bird of prey in Yugoslavia. Its numbers are constantly decreasing and in many parts of the country it is extinct. In Yugoslavia, apart from Macedonia where it is rather more numerous, it can still be found in Croatia on the Adriatic coast (Sušić, pers. comm. 1986); Hercegovina - 2 nesting pairs; and sporadically in Montenegro, western and eastern Serbia and in Kosovo (Vasić *et al.* 1985).

The biology of the species in Macedonia is little known: a few details only are to be found in some works (e.g. Karaman 1949; Makatsch 1950; Danko & Szilard 1971; Vasić *et al.*1985). In the period 1980-86 the author studied the biology of this species in Macedonia and here discusses details of its distribution, numbers, habitat, prey and breeding, together with factors in its decline and problems of its conservation. Besides his own data, the author also draws upon some unpublished information from Dr. V. F. Vasić (pers. comm. 1986), which, because of the method of presentation, is not specifically cited.

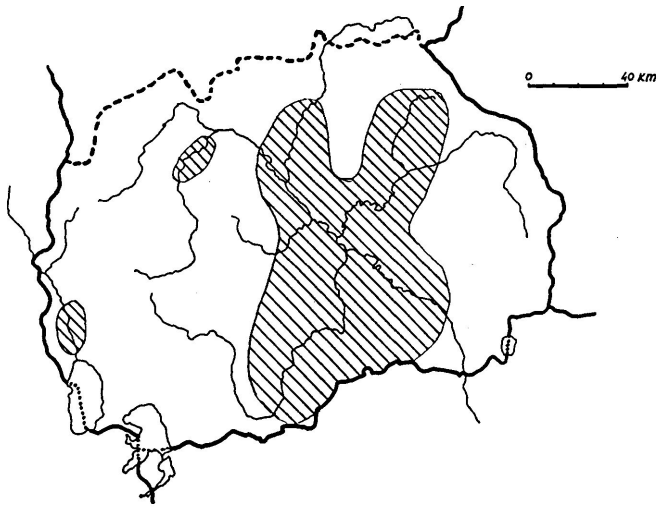
RESULTS

Distribution and numbers

As shown on the map (Fig. 1), the main regions in which the Egyptian Vulture is present as a nesting species are areas of southern Macedonia (including the Crna Reka gorge, the Vardar - around Demir Kapija, and the Bošava and its smaller tributaries, the Vitacevo plateau, the Selečka mountain and areas of Mariovo) and central Macedonia (including the Vardar gorge, from the mouth of the Pčinja to that of the Babuna, and the Babuna and its surroundings). A smaller number of pairs can still be found in the gorge and valley of the Bregalnica and Zletovska rivers (eastern Macedonia), the Pčinja gorge (approximately NE Macedonia) and the Treska gorge (a separate area in the NW). Verbal information shows that one pair nests in the Crni Drim gorge (a separate area in SW Macedonia). Single, non-nesting birds may be seen wandering outside these given areas.

Briefly, the presence was confirmed of 25 nesting pairs at the nest; 8 further pairs whose behaviour led to the conclusion that they were nesting near where they were seen; and 15-20 more nesting pairs reported but not checked. The largest group, seen at a rubbish-tip in southern Macedonia, was 51 birds together (45 adults + 6 immatures of varying ages). On the basis of these data, it is suggested that about 60 nesting pairs still exist in Macedonia.

Figure 1. Present Distribution of the Egyptian Vulture in Macedonia.



The situation in the population as regards age is unknown. A small number of immature birds of differing ages is to be encountered in various parts of southern Macedonia.

Habitat, feeding and nesting

In Macedonia, the Egyptian Vulture is to be seen at differing heights, ranging from about 100m to over 2,000m above sea level. It is more frequently found in areas with a warm, dry climate. These occur in gorges and river valleys up to about 1,000m a.s.l. and comprise different habitats, most frequently the cliffs and ledges of gorges, various rocky terrain, bare, steep slopes, areas with sub-Mediterranean shrub vegetation and steppe and semi-desert areas (rarer in southern and central Macedonia). Noticeably less often it is to be seen at heights above 1,000m and then chiefly searching for food. Those areas also comprise different habitats: cliffs and ledges, various sorts of open country - chiefly high mountain meadows - and less often various types of woodland (mostly oak, more rarely beech and pine woods).

Food is most frequently sought in the valleys of the afore-mentioned rivers, and the bird regularly flies over town and village rubbish tips. (It is less often seen in the villages themselves because of human disturbance). Also it is frequently to be seen around pastures at lower to medium mountain levels, less often in alpine pastures above 2,000m.

The food itself was determined from prey remains collected at the nest and from occasional sightings. Qualitatively and quantitatively, this consisted of: 1. Dead domestic animals - mostly mammals (*Ovis, Bos, Equus, Capra, Sus, Canis*) and birds (*Gallus*) - approximately 60-80%; 2. Various dead wild mammals, killed or run over by man (*Talpa* sp., *Erinaceus* sp., *Lepus* sp. and others), birds (*Falco biarmicus* - juv., *Columba* sp., *Picus* sp., *Corvus cornix, C. monedula, Garrulus glandarius* and others), reptiles (*Testudo* sp., unidentified snakes, *Ophisaurus apodus, Lacerta* spp.), and amphibians (*Bufo* - *Rana* spp.) - *ca.* 30-40%; 3. Young, probably captured, tortoises (*Testudo* spp.) with unbroken shells about 6cm long - *ca.* 10-15%; 4. Various other organic remains and waste: excrement (*Bos, Equus, Sus, Canis* and man), discarded organic matter, etc. - *ca.* 5-10%.

All nests were found on cliffs, ledges and similar steep areas, between 230-1,100m a.s.l. (most often between 350-700m). Nests were on cliffs of different types, most frequently limestone, less often grano-dioritic, and usually sited in a small cave or other hollow; very rarely is a pair found nesting on a cliff ledge with no protective overhang. The height to the nest was mostly from 5-30m, very rarely higher. Except in a few cases the nests were impossible to reach without climbing equipment. Their orientation was variable (however, only a very small number had a northern exposure).

The nest density has declined due to the decrease in numbers. In general it depends on the geomorphological nature of the land and other ecological factors. The shortest distance between two nests was 350-400m.

The breeding season - territory occupation and courtship display - starts immediately after the return of the birds from their winter quarters, at the end of March. Eggs are laid at the end of April or beginning of May, and hatch mostly between 5th and 20th June. The young birds fly from the middle to the end of August. Autumn migration takes place in the first half of September.

1-2 eggs are laid and mostly one young is raised, rarely two.

Factors in the decline and problems of protection

The main decline in numbers of the Egyptian Vulture has occurred since World War II. It has completely disappeared from some areas while its numbers have decreased in others. The main reasons for this are: 1. Various poisonings: (a) primarily, poison used against wolves (*Canis lupus*) which was legal from the 1950s right up to 1985 (details of birds of prey poisoned in this way have not been given, but it was confirmed verbally that 3-4 vultures were poisoned in S. Macedonia at the end of March 1982); (b) other poisons (against rodents, insects, etc.) and uncontrolled use of various destructive chemicals for different human activities (no data exist on the concentrations of such substances in the tissue of Egyptian Vultures and other animals); 2. Killing by hunters - most often for the sake of a trophy, and sometimes for no reason (4 cases of killing noted); 3. The theft of eggs and young. Such incidents are frequent and several cases of organised collection by foreign and home collectors, and of the taking of eggs and young by shepherds were noted; 4 young birds were brought to Skopje Zoo between 1980 and 1983; 4. Various other factors: hunters' traps, the reduction in cattle and game, disturbance, hygienic methods of slaughtering domestic animals, etc.

The Egyptian Vulture is protected by the Republican Law on Hunting in Macedonia. The Republican Institute for the Protection of Natural Rarities in Macedonia, at Skopje, is responsible for the protection of this species as being of natural value. In 1984 this institution started a project called 'Research into and Protection of the Birds of Macedonia', which paid special attention to this species amongst others. Part of the data given here was collected by the author during work on that project. However, active protection is weak, as is education for protection.

The main problems remain: 1. The uncontrolled use of various chemical substances and specific poisons; 2. Lack of control over the killing and stuffing of rare and endangered animals; 3. The lack of action to protect nests; 4. A range of other problems: various kinds of disturbance, hunters' traps, poor education, etc.

In such circumstances, the continuous and relatively slow decline in the numbers of Egyptian Vultures in Macedonia is to be expected.

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