

Aves from Karabi Tamchin

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Fifty-three bone fragments found in Karabi Tamchin could be attributed to fossil birds, only a very small portion of the osteal material discovered during the excavation of the site. These specimens were found throughout the four levels of Middle Paleolithic deposits. The comparative collection of Paleontological Museum of the Ukrainian Academy of Sciences was used as an aid in the identification of the bird remains. Nineteen of the avian bones were identified to species, and five fragments to genus. The unidentifiable remains include bone shafts (11), phalanges (3), spondyles (3), and ribs (2). Some of the bones have slightly damaged surfaces ("flattened" by water), rendering their identification very difficult or practically impossible.

The identified avian remains in Karabi Tamchin belong to eleven bird species. Most of the fragments (30) were recovered from Level II; this layer also contained the greatest number of bone fragments (8), belonging to four species (Table 18-1). The same number of species was found in Level III.

The analysis of the fossil bird remains by their ecological groups does not show any essential differences between the lower (III, IV) and upper levels (I, II) of the site (Table 18-2). Species that typically inhabit meadow-steppe and rocky landscapes prevail for the most part. Forest species occur in insignificant numbers and are mainly represented by birds of prey. Waterfowl are absent.

The majority of the eleven identified fossil bird species have present-day analogues that breed, migrate, or winter on the Crimean Peninsula (Kostin 1983). Only *Pyrrhocorax graculus* does not presently occur in Crimea or anywhere in Ukraine. On the other

hand, such species as *Alectoris chukar* and *Sturnus roseus* hardly ever breed anywhere in Ukraine, except in Crimea.

Order: Falconiformes

Family: Accipitridae

Species: *Aquila clanga* Pallas 1811

Provenance: Level II/2, Square 10-F

Material: right radius

Description: the proximal part of the bone is present. Unfortunately, this fragment is very damaged ("flattened") by water activity. Though this damage complicates identification, the size and form of the bicipital tubercle permitted identification. This species is particularly similar to *Aquila pomarina* (lesser spotted eagle), the female bones of which are similar in size to the male bones of *Aquila clanga* (greater spotted eagle).

During the present day, the greater spotted eagle rarely occurs in Crimea and only during migrations. The nearest nesting places of this typical forest species are in the forest zone of Ukraine (Red Data Book of Ukraine 1994). A few pairs of the spotted eagle probably lived in the forests of the Crimean Mountains as late as the nineteenth century (Kostin 1983).

Order: Falconiformes

Family: Falconidae

Species: *Falco peregrinus* Tunstall 1771

Provenance: Level IA, Square G

Material: left ulna

Description: the distal part of the bone has been preserved.

TABLE 18-1
Species list and number of bird remains from Karabi Tamchin

Species	Level I	Level II	Level III	Level IV
<i>Aquila clanga</i> Pall. (lesser spotted eagle)	—	1	—	—
<i>Falco peregrinus</i> Tunst. (peregrine falcon)	1	—	—	—
<i>Falco vespertinus</i> L. (red-footed falcon)	—	—	—	1
<i>Alectoris chukar</i> (J. E. Gray) (chukar)	—	—	1	—
<i>Perdix perdix</i> (L.) (grey partridge)	1	4	1	—
<i>Melanocorypha yeltonensis</i> (J.R. Forst.) (black lark)	—	—	—	2
<i>Sturnus roseus</i> (L.) (rosy pastor)	—	—	—	1
<i>Pica pica</i> (L.) (magpie)	—	1	—	—
<i>Pyrrhocorax graculus</i> (L.) (Alpine chough)	—	2	—	—
<i>Corvus monedula</i> L. (European jackdaw)	—	—	2	—
<i>Plectrophenax nivalis</i> (L.) (snow bunting)	—	—	1	—
Accipitridae sp.	—	1	—	—
Corvidae sp.	—	1	—	—
Passeriformes sp.	—	1	1	—
Aves indeterminate	4	19	6	1

Presently, the peregrine is a non-migratory bird of the Crimean Mountains. This species prefers rocky landscapes for nesting. In other parts of Ukraine, *Falco peregrinus* occurs very rarely and has practically disappeared from the region.

Order: Falconiformes

Family: Falconidae

Species: *Falco vespertinus* Linnaeus 1766

Provenance: Level IV, Square 11-G

Material: left coracoid

Description: this is the sternal end and part of the scapular fragment of the bone.

This species nests in and migrates to Crimea in the present day. It inhabits open landscapes in forested areas and river valleys. The red-footed falcon occupies rocky environments only during its migrations.

Order: Galliformes

Family: Phasianidae

Species: *Alectoris chukar* (J. E. Gray 1830)

Provenance: Level III, Square 10-H

Material: left carpometacarpus

Description: the carpometacarpus is a distal fragment. This specimen is typical of Galliformes and in all ways resembles the genus *Alectoris*.

The fragment is ascribed to the species *Alectoris chukar*, since in the ornithological systematics of Eastern Europe it is an allospecies of the overspecies group. This group also includes the western Palearctic form of *Alectoris graeca* (Meisner) (Stepanyan 1990). In Crimea, chukar (Indian partridge) inhabits rocky landscapes where it lives year-round.

Order: Galliformes

Family: Phasianidae

Species: *Perdix perdix* (Linnaeus 1758)

Provenance: Level I, Square G—left tarsometatarsal; Level II/2, Square 10-G—left coracoid, right ulna, right tarsometatarsal, sternum; Level III, Square 9-G—right tarsometatarsal

Material: left tarsometatarsal, left coracoid, right ulna, right tarsometatarsal, sternum, right tarsometatarsal

Description: The tarsometatarsals from Levels I, II/2, and III are all distal fragments. The coracoid from Level II/2 includes the scapular part of the bone. The ulna is a distal fragment.

The remains of this species are the most numerous among the fossil bird bones of Karabi Tamchin (Table 18-1). Today, the grey partridge is a common non-migratory species of Crimea, living in steppe environments and arable lands.

Order: Passeriformes

Family: Alaudidae

Species: *Melanocorypha yeltonensis* (J. R. Forster)

Provenance: Level IV, Square 10-G

Material: right humerus and mandible

Description: the humerus is a distal fragment. The mandible is a fragment of the right mandibular ramus, with the lateral mandibular process.

Today, the black lark appears infrequently during winter in Crimea (Kostin 1983). It occurs mainly in the steppes and salt marshes of Kazakhstan, the Aral-Caspian plain, and east of the Volga River (Stepanyan 1990). To the west, its distribution reaches the Rostov District of Russia.

Order: Passeriformes
 Family: Sturnidae
 Species: *Sturnus roseus* (Linnaeus 1758)
 Provenance: Level IV, Square 10-H
 Material: right ulna
 Description: the ulna is a distal fragment.

Currently, the rose-colored starling (rosy pastor) occurs in Crimea and prefers to nest in colonies in rocky landscapes. This species nests periodically in the Azov coast region as well.

Order: Passeriformes
 Family: Corvidae
 Species: *Pica pica* (Linnaeus 1758)
 Provenance: Level II/2, Square 11-I
 Material: right tibiotarsus

Description: this is a proximal fragment and includes the *cricta fibularis*.

This species now occurs throughout the Crimean Peninsula. It inhabits the Crimean steppe and northern piedmonts. The black-billed magpie is a common non-migratory bird in all parts of Ukraine.

Order: Passeriformes
 Family: Corvidae
 Species: *Pyrrhocorax graculus* (Linnaeus 1758)
 Provenance: Level II/2B, Square 8-H
 Material: left femur

Description: proximal and distal parts, the two fragments belong to the same bone. Morphologically, its structure is characteristic of the species *Pyrrhocorax graculus*.

The Alpine chough, a yellow-billed member of the crow family, is a high-mountain species that nests only in the upper belts of mountains. In the winter, it descends into river valleys where berry-producing scrub is present. Presently, this species is found neither in Crimea nor Ukraine; it inhabits the mountains of Central Europe and Southern Asia.

Order: Passeriformes
 Family: Corvidae
 Species: *Corvus monedula* Linnaeus 1758
 Provenance: Level III, Square 10-E—right humerus;
 Level III, Square 10-H—left coracoid
 Material: right humerus, left coracoid

Description: the humerus consists of a distal fragment and a damaged proximal fragment. The coracoid is a fragment of the scapular end of the bone.

Today, this species is a common non-migratory bird of Crimea and Ukraine. European jackdaws have adapted quite well to urban life and commonly nest on buildings; they will also nest in forested areas, rocks, and breaks.

Order: Passeriformes
 Family: Emberizidae
 Species: *Plectrophenax nivalis* (Linnaeus 1758)
 Provenance: Level III/2, Square 7-I
 Material: right carpometacarpus

Description: the carpometacarpus is almost intact, but the *os carpometacarpal III* is absent.

This species is a typical inhabitant of the tundra zone of the far north and Arctic coast. It can nest in northern river breaks and rocks (Stepanyan 1990). In Crimea, the snow bunting is seen only in winter.

TABLE 18-2

Ecological groups of avian remains from Karabi Tamchin

Ecological group	Upper levels (I–II)		Lower levels (III–IV)	
	N	%	N	%
Forest	2	20.0	1	11.1
Meadow-steppe	5	50.0	4	44.4
Rock	3	30.0	4	44.4

In sum, the range of avian species so far identified from the Middle Paleolithic site of Karabi Tamchin in the mountainous region of Crimea is consistent with those found there today, particularly those birds that like rocky and steppe environments. They are either year-round residents or migratory residents that visit Crimea during the winter months. The single exception is *Pyrrhocorax graculus*, the Alpine chough, which now lives in colder climes. This, and the paucity of forest-adapted birds, suggest that during the occupation of Karabi Tamchin, the area around the site was colder and less forested than it is today.