Changes in the birds of the Aladağlar Mountains, Türkiye, 1965-2022

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Summary: I compared recent eBird sightings (2011-2022) in the Aladağlar Mountains, Türkiye, with observations made in the 1960s. The Aladağlar form the highest part of the Taurus range and the western limit for some Asian mountain birds. Only the Eurasian Griffon Vulture *Gyps fulvus* has completely disappeared from the area, but Egyptian Vulture *Neophron percnopterus*, Peregrine Falcon *Falco peregrinus*, White-throated Dipper *Cinclus cinclus* and Wallcreeper *Tichodroma muraria* have become rare and Rock Dove *Columba livia* and Red-billed Chough *Pyrrhocorax pyrrhocorax* have probably diminished in numbers, whereas Blue Rock Thrush *Monticolla solitaria* and White-throated Robin *Irania gutturalis* have increased. I note some of the weaknesses inherent in using eBird records for this type of comparison. Despite the changes observed, no clear role for climate change can be discerned.

INTRODUCTION

The Aladağlar Mountains form a compact massif on the northern edge of Türkiye's Taurus Range (*Toros Dağları*) in Çamardi District of Niğde Province (Figure 1, Plate 1). The highest peak, Demirkazık Dağı (3756 m, 37° 47′ 47″ N, 35° 09′ 20″ E) is close to the western edge of the range and easily accessible from Çamardi, a small town about 10 km to the west. The region is close to the westernmost extent of the distributions of two Caucasian specialities, Radde's Accentor *Prunella ocularis* and Caspian Snowcock *Tetraogallus caspius*. This makes it a popular destination for birders: it currently registers more eBird lists than anywhere else in the Taurus (eBird 2021). The area is also well advertised in Kirwan *et al* (2007): 'The high slopes of Demirkazik, in the Taurus Mountains, are among the most famous sites for Caspian Snowcock *Tetraogallus caspius*, whilst in summer the slopes below the cliffs harbour abundant Horned Larks *Eremophila alpestris*, Finsch's Wheatears *Oenanthe finschii* and Red-fronted Serins *Serinus pusillus* (Peter Castell)'.

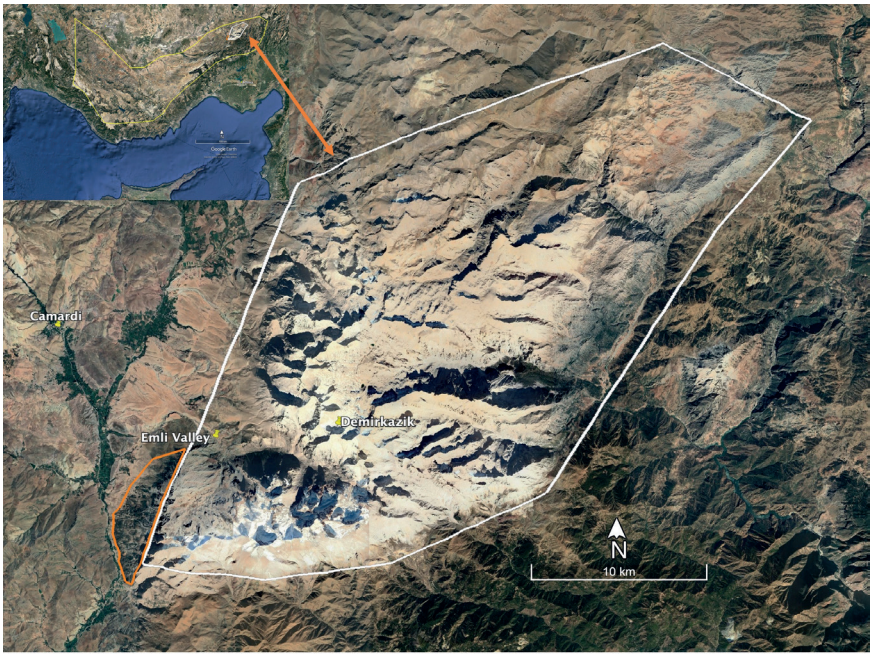

Figure 1. Map of the Aladağlar mountains and (inset) the Taurus range (outlined in yellow). The area outlined in white was the area within which eBird locations were selected. The orange polygon outlines an area of recent forest development (Google Earth 2022).

Plate 1. Aladağlar landscape, 2800 m, August 1965. © *JMB Smith*

In the summers of 1965 and 1966 I visited the Aladağlar to study the behaviour of birds in the high-altitude zone (>1200 m), on the western side of the massif (Gaston 1968). In both years, observations around Demirkazik were made for a week, enjoying good weather throughout. It is likely that the birds observed included the majority of those breeding in the massif in those years. Given that global climate change is driving changes in the distribution of many birds (Scidel *et al* 2018) and that this applies particularly to mountain birds, the distribution of which is likely to be very sensitive to temperature changes (Flousek *et al* 2015, Brambilla *et al* 2018, Freeman *et al* 2018, Bani *et al* 2019), it seems worthwhile to compare observations in the 1960s with those carried out the past decade to see whether any adjustments to numbers or distributions of local breeders have taken place over the intervening 55 years.

METHODS

My visits to the Aladağlar massif took place from 27 August to 3 September 1965 and from 21 to 30 June in 1966. In both years, we camped at about 1900 m beside a small spring on the west side of the massif (near the current Sokullupinar) and observations ranged from 1200 m up to the summit of Demirkazik. In 1966, studies of breeding phenology and behaviour were carried out, mostly within 5 km of Demirkazik, but including Yedigöller, an area of small lakes immediately to the east of Demirkazik. The 1965 visit, being too late for most breeding activity, concentrated on the daily altitude movements of birds between roosts and feeding areas (Gaston 1968). A few observations made in Mediterranean Pine forests while passing through the southern Taurus between Çiftehan and Pozanti (the Cilician Gates, Gülek Boğazı) on 4 September 1965 are also referred to here.

The majority of bird observations were made by me, but JMB Smith (1965) and E McDermott (1966) also made sightings included in the 1968 paper. It is important to note that no field guide was available for the area in 1965-66 (we were using Petersen *et al* 1954) and prior information was available only from lists published by Danford (1877-78) and Bateman & Scotland (1964, manuscript report). The ornithology of Türkiye as a whole was very poorly known then (Kirwan *et al* 2007). In fact, two birds were not identified to species in the field 1965 and had to be identified later, from field descriptions. Radde's Accentor came as a complete surprise, as Vaurie's (1964) account of Palaearctic birds, then the standard work, did not list it for Türkiye.

For comparison with the 1960s data, eBird checklists for June-August for the years 2011-2022 were used, including only those coded as complete (as recommended by Johnston *et al* 2021). Lists with fewer than four species reported were also discarded as being probably

incomplete, leaving 1665 species records in 118 lists for analysis. More than half of the species records date from 2018 or later. Mean numbers reported were calculated over all eligible lists. Where breeding activity was noted, those data have also been included to infer a list of current breeding species. The earliest lists for the massif are from the 1980s. Where comparison of 1960s and recent data suggested a change of status, eBird lists prior to 2011 were also consulted to determine possible dates of disappearance. To look for possible population declines among species recorded on most days in the 1960s, the proportion of recent eBird lists on which each species was recorded was calculated.

RESULTS

In the 1960s, 42 species of 'probable residents' were listed within the area outlined in Figure 1 (inset). Since then, a further 70 species have been reported during May-August but the majority of these are birds of forest and farmland, suggesting that many of the lists contributed to eBird for localities centred within the Demirkazik massif have included sightings at lower altitudes. Only one species, recorded in both years in the 1960s, was not reported to eBird during recent years: Eurasian Griffon Vulture *Gyps fulvus*, which was last reported in the Aladağlar in 2006 (Eva Andreu Drudis and Raphael Lebrun), although there is one record from Kapuzbaşı, near the southeast corner of the massif in 2015 (Kadri Kaya). In the 1960s the species was also recorded from the road between Çiftehan and Pozanti. There are only two records from that area since 2006, despite it being the main road from the Anatolian Plateau to the Mersin-Adana lowlands. A comparison of eBird distribution maps between 2016-2022 and earlier years (Figure 2) shows that the range of Eurasian Griffon has contracted sharply in the Taurus in recent years, despite the greater numbers of observers in the field.

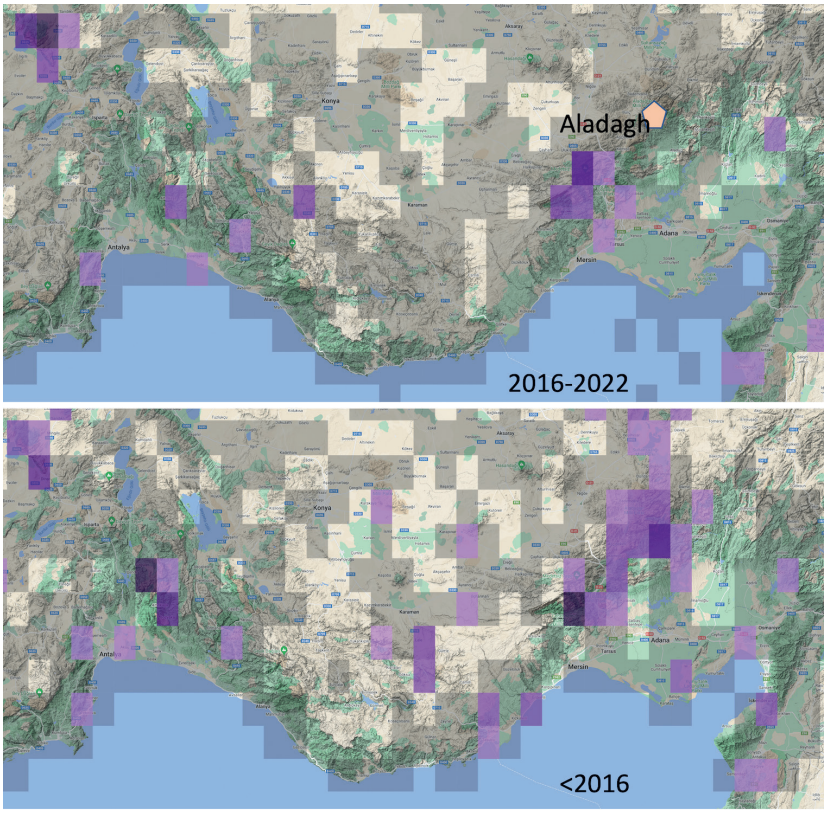

Figure 2. Occurrence of eBird records (all months) for Eurasian Griffon Vulture *Gyps fulvus* in the Taurus Mountains and adjacent areas: up to 2015 (lower) and 2016–2022 (upper). Grey cells indicate those visited but where no vultures were recorded.

Two other species, seen in both years in the 1960s, were reported only once in recent years: White-throated Dipper *Cinclus cinclus*, which was last reported in 2018 in the Emli Valley (Fouad Itani) and for which there are only 12 records since the 1960s and Eurasian Skylark *Alauda arvensis,* a nest of which was found in 1966 (the possibility that this was a misidentified Wood Lark *Lullula arborea* cannot be ruled out). Egyptian Vulture *Neophron percnopterus*, seen 'on several occasions' in the 1960s, appeared on only two of the eligible lists, although there were three records in 2022 (including incomplete lists) and there have been a total of seven since 2000. The species was also recorded from the road between Çiftehan and Pozanti in 1965: there is only one subsequent record from that valley.

Most species recorded on the majority of days in the 1960s were still reported on >10% of checklists in recent years (48 species), the exceptions being, apart from those already mentioned: Lammergeier *Gypaetus barbatus* (7 recent records), European Nightjar *Caprimulgus europaeus* (9), Eurasian Scops Owl *Otus scops* (8), Common Whitethroat *Curruca communis* (3), Peregrine Falcon *Falco peregrinus* (2) and Wallcreeper *Tichodroma muraria* (10).

Rock Dove *Columba livia,* which was present in hundreds in the 1960s and seen commuting daily in large numbers between roost sites at 2000-2500 m and lowland agricultural land, was reported in much lower numbers in recent year, daily counts averaging 7.6 birds (n = 10). Because some birders treat Rock Dove as a feral species, they may be under-reported. However, a substantial decline in numbers seems to be indicated. The status of choughs in the massif may also have changed. In the 1960s, Red-billed Choughs *Pyrrhocorax pyrrhocorax* were said to 'outnumber the Alpine [*P. graculus*] by about five to one… at all levels', whereas on recent lists numbers were quite similar: Red-billed mean 13.3, maximum 70 (n = 43); Alpine mean 9.8, maximum 50 (n = 49). Likewise, Wallcreeper, of which six were seen in 1965, was reported on only ten recent lists, with only two reporting more than one seen.

Some species reported frequently in recent years were not seen in the 1960s (Table 1). Most of these are birds of forests and agriculture at lower altitudes (*eg* Coal Tit *Periparus ater,* Northern Goshawk *Accipiter gentilis*), but both Blue Rock Thrush *Monticolla solitaria* (28 records) and White-throated Robin *Irania gutturalis* (18 records) breed above 1500 m in the Taurus (Kirwan *et al* 2007). It is possible that these birds have expanded their range in the Aladağlar since the 1960s.

DISCUSSION

The positive news from this comparison is that the status of most of the iconic mountain birds in the Aladağlar appears to have changed little since the 1960s: populations of Caspian Snowcock, Red-fronted Serin, Radde's Accentor and White-winged Snowfinch all appear to be robust. Only the Wallcreeper and perhaps the two chough species may have declined. There seems to be no reason why these species should be particularly affected by climate change, so their decline may be related to other factors. Among birds of more diverse altitudes, the principle declines were among birds of prey, with Eurasian Griffon Vulture, Egyptian Vulture, Lammergeier and Peregrine all being recorded less frequently than might be expected on the basis of the 1960s records. Of note in this context, I recorded six adult Saker Falcons *Falco cherrug* on telegraph poles along the highway between Şanlıurfa and Diyarbakir in July 1966 (AJG, unpublished). There are currently no eBird records from that region.

The decline of the Eurasian Griffon Vulture in Turkey is well-documented, with the population in 2001 thought to be 300-1000 breeding birds (Vaassen 2001, Kirwan *et al* 2007). Information provided here suggests that the decline in the Taurus continued throughout the period from the 1960s onwards. The possible decline of Egyptian Vulture and Lammergeier may point to a common cause and the most obvious one is a reduction

Table 1. List of known and potential breeding birds for the Aladağlar Mountains, including all species recorded in June 1966 and all reported on >10% of eBird lists from 2011-2022. Abbreviations for breeding evidence: C = chicks in nest or pre-fledging; Cop = pair copulating; E = Nest with eggs; Fledge = young birds soon after fledging; FY = young being fed out of nest; Juv = juvenile birds apparently not long from fledging; N = nest site visited by adult; NB = nest-building; Pr w T = Pair apparently on territory.

	Number of lists during 2011-2022 (n = 112)	Number of years seen in 1965-66		Breeding evidence	
		Aladagh	Further S in Taurus	1960s	After 2000
Caspian Snowcock	32	2			
Chukar	42	2		C	
European Nightjar	9	2			
Alpine Swift	19	2		N	
Common Swift	16	1		N	
Rock Dove	18	2		N	
Lammergeier	7	1		Juv	
Egyptian Vulture	1	2			
Eurasian Griffon	0	2			
Golden Eagle	26	2			Fledge
Long-legged Buzzard	22		1		Fledge
Eurasian Scops-Owl	8	1			
Eurasian Hoopoe	24		1		
Eurasian Kestrel	35	2		C	
Peregrine Falcon	2	1		N	
Red-backed Shrike	40	1		Pr w T	
Eurasian Magpie	30		1		
Red-billed Chough	61	2		N	N
Yellow-billed Chough	53	2		N	
Jackdaw	4	1		N	
Northern Raven	13		1		
Great Tit	15		1		
Eurasian Skylark	1	1		FY	
Woodlark	6				Fledge
Horned Lark	31	2		N	Fledge
Eurasian Crag-Martin	57	2		N	N
Common House-Martin	33	2		C	N
Lesser Whitethroat	30		1		
Common Whitethroat	3	1			

	Number of lists during 2011-2022 (n = 112)	Number of years seen in 1965-66		Breeding evidence	
		Aladagh	Further S in Taurus	1960s	After 2000
Western Rock Nuthatch	50	2		N	
Wallcreeper	10	2			
Ring Ouzel	17	1		Pr w T	
Common Blackbird	29		1		
White-throated Robin	18				
Black Redstart	57	2	1	Juv	
Common Rock Thrush	27	2		C	Fledge
Blue Rock Thrush	28				
European Stonechat	22		1		
Northern Wheatear	66	2		C	Fledge
Isabelline Wheatear	31	1			Fledge
Finsch's Wheatear	18	2		N	
White-throated Dipper	1	2			
House Sparrow	17		1		
Rock Sparrow	38	1		NB	Fledge
White-winged Snowfinch	38	2		C	C
Alpine Accentor	20	1			
Radde's Accentor	23	2		E	
White Wagtail	17	1			Fledge
Tawny Pipit	11	2			
Water Pipit	14	2			Fledge
Common Chaffinch	13		1		
Crimson-winged Finch	34	2		Cop	
European Greenfinch	14		1		
Common Linnet	56	1		Juv	
European Goldfinch	15				
Red-fronted Serin	50	2			FY
European Serin	12				
Rock Bunting	35	1		Pr w T	
Ortolan Bunting	31	1		N	
Black-headed Bunting	22				

of domestic flocks grazing the mountains. Goats were extremely numerous in the 1960s, leading to speculation that ground-nesting birds would be at risk from trampling. Reviewing recent pictures of the mountains on Google suggests an increase in the amount of trees and shrubs in some valleys. In addition, a substantial area on the southwest margin of the massif has been planted with conifers (orange polygon in Figure 1), no doubt increasing the habitat available to birds of woodland and scrub (*eg* White-throated Robin). These changes may have had a negative effect on sight-dependent scavengers. It does not seem that the study provides any clear evidence of an effect of climate change on the birds of the Aladağlar, although some role in observed reductions cannot be ruled out.

Two species seem to have colonized the Aladağlar since the 1960s: Blue Rock Thrush and White-throated Robin. As a bird of open rocky ground and perching prominently while singing, it is hard to imagine missing Blue Rock Thrush in the 1960s, especially as it appeared on 24% of recent lists. The earliest eBird record from the Aladagh is 1990 (Kirwan, Stremke). Some change in status seems probable. On the other hand, the more skulking White-throated Robin, which appeared on <15% of recent lists, could have been overlooked, although it may have expanded its population with the increase in shrubby vegetation.

Using eBird lists for making historical comparisons is an obvious, but potentially imprecise, tool. On the face of it, many more species occur now in the Aladagh than in the 1960s, so either the 1960s observations were very deficient, or many more species have moved into the Aladağlar since then. However, it is impossible to know the extent to which these changes have been caused by increased vegetation, or by the inclusion of lowland observations on lists ostensibly relating to mountain localities. This problem could be remedied if altitude was included in the location data input with eBird lists. In carrying out surveys in the Western Himalayas, I have used 300 m altitude bands, starting a new list whenever I pass from one 300 m band to the next. This would be a very helpful practice for eBirders operating in mountain areas.

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