

SARIMAZI RAPTOR MIGRATION COUNT 2019 IN TURKEY

TECHNICAL REPORT

under action D1 of the Egyptian Vulture New LIFE project (LIFE16 NAT/BG/000874)



PREPARED BY

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CITATION:

Arslan, Ş., Erkol, I. T., Kan, N., Özuslu, S., Kolçak, K. and Yeniuyurt, C. (2019) Sarimazi Raptor Migration Count 2019 in Turkey. Technical report under action D1 of the “Egyptian Vulture New LIFE” (LIFE16 NAT/BG/000874) project. 14 pp.

ABOUT THE PROJECT:

This report was prepared within the scope of action D1 of the “Egyptian Vulture New LIFE” project (LIFE16 NAT/BG/000874), funded by the European Commission.

ACKNOWLEDGEMENTS:

Sarimazi Raptor Migration Count is a fieldwork that requires long preparations and continues with tough conditions under direct hot sunlight for eight hours every day for seven days a week in Adana during the monitoring study. This study was possible thanks to the Egyptian Vulture New LIFE Project funded by the European Commission and the project coordinator Stoyan Nikalov (BSPB, BirdLife Bulgaria), and also Steffen Oppel (RSPB, BirdLife England) who shed light on the research with his previous studies and guidance on the field, as well as the experts, Irina Mateava, Dobromir Dobrev, Vladimir Dobrev, Anton Stamenov from BSPB team and David Wood from RSPB team, who were willing to teach raptor identification and counting to volunteers patiently, also volunteers of the research, Ben Jobson, Fulya Kaya, Işın Yılmaz, Martin Kemler, Ole Friss Larsen, Pınar Gayretli, Regina Riegler, Sarah Dalrymple, Semih Özen, Serkan Başar and Tuğba Aydın, who had great effort on the field. Moreover, we are very grateful to Ceyhan Mayor and employees of Ceyhan Municipality who did their best to make our research condition better, and also a special thanks to Çevikbaş family who always help us for organization of transport, foods and anything we need, thanks to Mukhtar of Sarimazi, to Ceyhan Otel, to local people in Ceyhan the names of whom we cannot count. We feel their support all the time. Lastly, many thanks to the Vaillant Group who supported us with a press trip for dissemination of the research on a national scale.

Contents

1. Introduction.....	4
2. Methods	6
3. Findings.....	9
4. Evaluation and Suggestions.....	13
5. References.....	14

1. Introduction

Turkey, as a result of its geographical position, is an important migration route for migratory birds. It is of global importance, especially to the migratory soaring birds moving in the Africa-Europe and Africa-Asia directions. Some species reach their breeding grounds via Turkey, while others migrate to Turkey in order to winter. Migratory soaring individuals cross long distances, spending minimum energy through the warm air currents called “thermals” that occur above land. Therefore, they need to follow the land and migrate during the day.

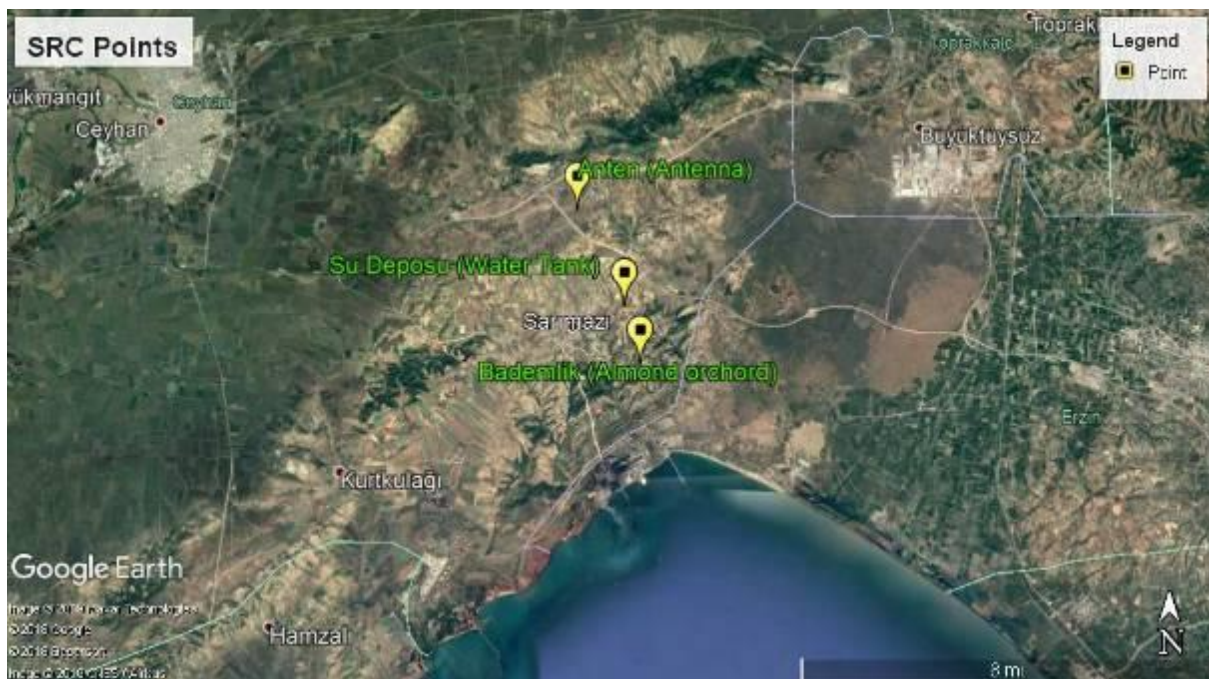
Hatay functions as a gateway to Turkey for the species that winter in Africa. The range of mountains that stretch across the Mediterranean coast, in particular, creates a bottleneck for migratory soaring birds. Every year, millions of raptors, storks and others follow this route into Anatolia. Individuals on their way to the Caucasus pass through Eastern Anatolia to reach the eastern borders, while individuals on their way to Europe reach Thrace via the Bosphorus and the Dardanelles. Many species, after arriving in their breeding grounds and raising their young, follow the same route back to their wintering grounds in autumn.

Counts in the bottleneck regions where birds are seen en masse are one of the most prominent methods to determine the population of migratory soaring birds. Therefore, these bottleneck regions have great importance.

Turkey contains important bottlenecks. During migration seasons hundreds of thousands of birds pass through Turkey. Istanbul is known as one of the bottleneck regions which these birds use to a high degree. However, Istanbul on its own is not sufficient; while the migratory birds coming from Eastern Europe and the Balkans can be observed there, birds of Central and Western Turkey cannot. In order to overcome this issue, [Oppel S. et al. \(2014\)](#) have conducted studies in the southern regions of Turkey in 2013, and determined 13 points used intensely by the birds during the autumn migration season. Among these points, three were chosen both due to the small number of volunteers and to prevent the same birds from being counted more than once. These three points are located in the Sarımaz and Selimiye regions in Çeyhan, Adana (Map 1-2).



Map 1. Location of Sarimazi in the map of Turkey



Map 2. Sarimazi Raptor Count observation points

The aim of this study is to determine the migratory soaring bird populations while also determining the population of the globally endangered (EN) Egyptian Vulture *Neophron percnopterus*, and reveal

the threats it faces during migration. So far, counts were carried out in 2014, 2018, and 2019. As of 2018, these counts are organised as part of the Egyptian Vulture conservation programme of EU LIFE, which Doga is also a part of. Sarimazi Raptor Migration Count is aimed to be carried out every year, in order to determine the population trends of the species passing through this bottleneck. This count is also an important opportunity to educate experts aiming to improve themselves in these matters.

2. Methods

2019 Sarimazi Raptor Migration Count was carried out between August 30th – September 30th with 24 experts and volunteers in the previously determined three points (Antenna, Water Tank and Almond Orchard). Optical instruments were distributed so that every point contained at least one telescope and every observer had a binocular. The counts were carried out every day between 09.00 and 17.00. For data input a smart phone application called Trektellen was used. Data input was done hourly throughout the day, following measurements of the wind, temperature, visibility and cloud cover (Photograph 1).



Photograph 1. Observer performing the hourly measurements

Count charts were kept ready for the convenience of the observers during intense migration (Photograph 2). Each bird observed was recorded swiftly through the application. The observers were distributed so that the Antenna and the Water Tank had at least two, and the Almond Orchard had at least three observers who were in communication with each other, in order to prevent the same birds from being counted more than once. The communication tools used were smart phones and wireless radio (Photograph 3).



Photograph 2. Observer entering the data to the count chart during intense migration periods.



Photograph 3. Observer in communication with other observation points.

Observation Points

- **The Antenna**

The northernmost of the observation points, it is located between Selimiye and Dokuztekné regions.



Photograph 4. The Antenna

- **The Water Tank**

The point between all three points. It also dominates the other two points.



Photograph 5. The Water Tank

- **The Almond Orchard**

Southernmost point, it is the region through which the greatest number of birds pass.



Photograph 6. The Almond Orchard

3. Findings

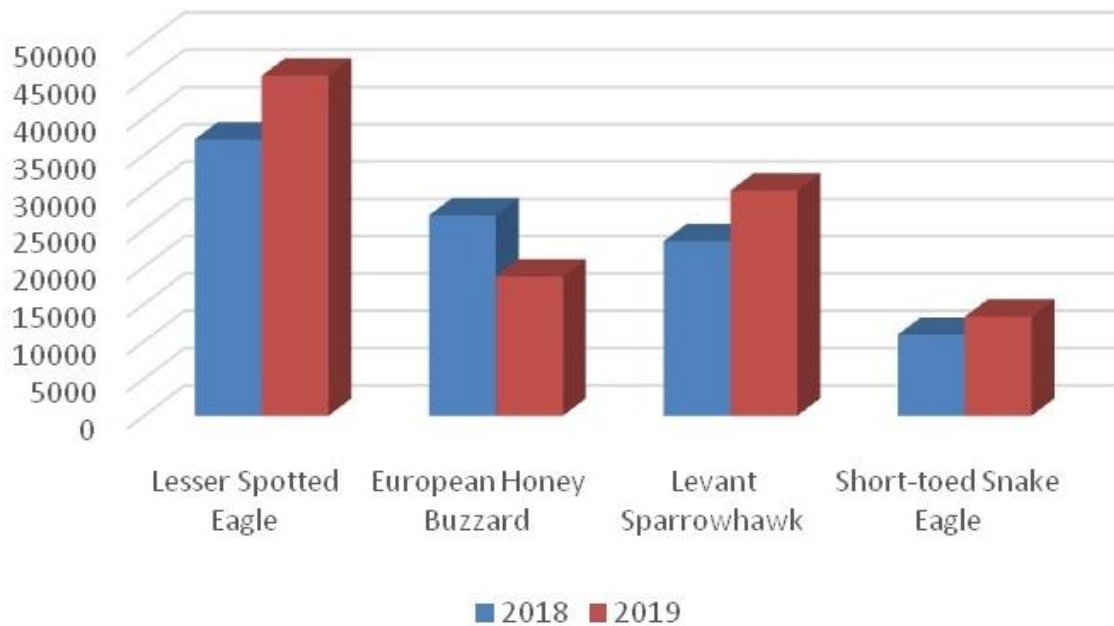
In the points determined in 2013, the first count was organised in 2014, and regular counts have started being carried out in 2018. In 2018, a total of 106,731 raptors were counted, while in 2019 the number was 118,124 (Table 1).

Table 1. Sarimazi Raptor Migration Count				
Species (Turkish)	Species (Latin)	Species (English)	Number (2018)	Number (2019)
Küçük Orman Kartalı	<i>Clanga pomarina</i>	Lesser Spotted Eagle	37034	45562
Arı Şahini	<i>Pernis apivorus</i>	European Honey Buzzard	26863	18667
Yaz Atmacası	<i>Accipiter brevipes</i>	Levant Sparrowhawk	23369	30157
Yılan Kartalı	<i>Circaetus gallicus</i>	Short-toed Snake Eagle	10853	13121
Şahin	<i>Buteo buteo</i>	Common Buzzard	2850	4477
Küçük Kartal	<i>Hieraaetus pennatus</i>	Booted Eagle	2199	2315
Kara Çaylak	<i>Milvus migrans</i>	Black Kite	1948	1739

Küçük Akbaba	<i>Neophron percnopterus</i>	Egyptian Vulture	813	903
Atmaca	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	326	167
Saz Delicesi	<i>Circus aeruginosus</i>	Western Marsh Harrier	170	255
Kızıl Şahin	<i>Buteo rufinus</i>	Long-Legged Buzzard	48	49
Çayır Delicesi	<i>Circus pygargus</i>	Montagu's Harrier	39	11
Delice Doğan	<i>Falco subbuteo</i>	Eurosian Hobby	34	39
Bozkır Delicesi	<i>Circus macrourus</i>	Pallid Harrier	11	2
Gök Doğan	<i>Falco peregrinus</i>	Peregrine Falcon	10	21
Ada Doğanı	<i>Falco eleonora</i>	Eleonora's Falcon	7	7
Kızıl Çaylak	<i>Milvus milvus</i>	Red Kite	6	5
Gökçe Delice	<i>Circus cyaneus</i>	Hen Harrier	5	9
Kerkenez	<i>Falco tinnunculus</i>	Common Kestrel	5	33
Balık Kartalı	<i>Pandion haliaetus</i>	Western Osprey	3	9
Çakır	<i>Accipiter gentilis</i>	Northern Goshawk	3	5
Bozkır Kartalı	<i>Aquila nipalensis</i>	Steppe Eagle	2	15
Şah Kartal	<i>Aquila heliaca</i>	Eastern Imperial Eagle	2	8
Küçük Kerkenez	<i>Falco naumanni</i>	Lesser Kestrel	2	0
Ala Doğan	<i>Falco vespertinus</i>	Red-footed Falcon	2	0
Büyük Orman Kartalı	<i>Clanga clanga</i>	Greater Spotted Eagle	1	3
Ak Çaylak	<i>Elanus caeruleus</i>	Black-winged Kite	0	1
Ulu Doğan	<i>Falco cherrug</i>	Saker Falcon	0	2
Boz Doğan	<i>Falco columbarius</i>	Merlin	1	1
Diğer veya bilinmeyen		Other or Unknown	125	541
Total			106.731	118.124

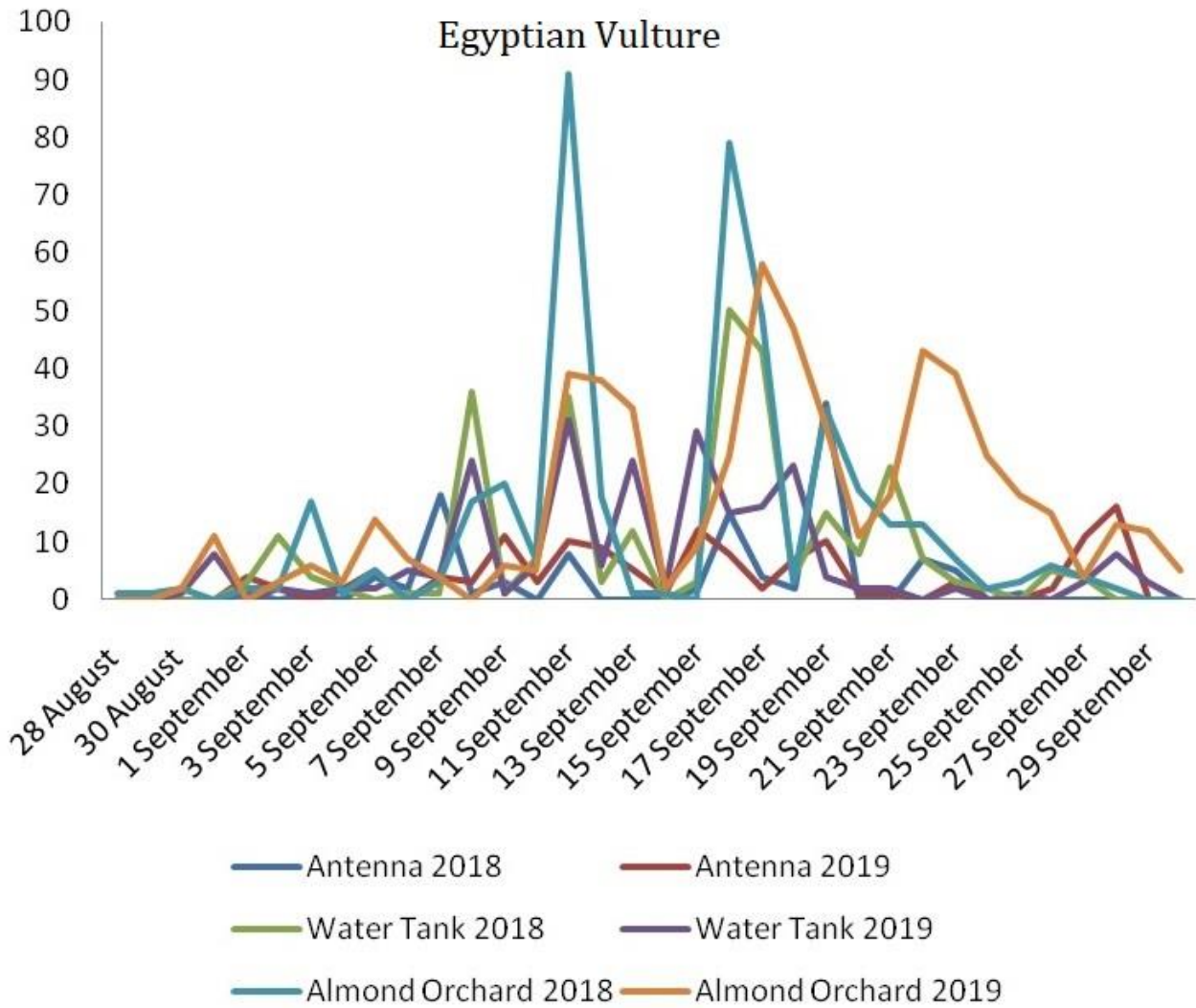
The species observed the most in 2018 and 2019 were the Lesser Spotted Eagle, European Honey Buzzard, Levant Sparrowhawk, and Short-toed Snake Eagle. However, the number of European Honey Buzzards observed in 2019 was quite smaller than the number in 2018. The other three species were observed in greater numbers in 2019 than 2018 (Graph 1).

The most observed species



Graph 1. The most observed species in 2018 and 2019, and their numbers

In the raptor migration count carried out in Sarimazi, 813 individuals of the globally endangered (EN) Egyptian Vulture were observed in 2018, and 903 individuals in 2019. In 2018, the date in which the most individuals were observed was September 16th with 144 individuals, and in 2019 it was September 10th with 80 individuals. While the numbers fluctuated in 2018, in 2019 the Egyptian Vulture counts were closer to each other, especially after the second week of September. Furthermore, in 2019 more Egyptian Vultures were counted in the first week of the count, compared to 2018. This is evaluated as an indicator that the migration started earlier in 2019 (Graph 2).



Graph 2. The daily number of Egyptian Vultures observed in 2018 and 2019.

Two species were observed in 2018 but not in 2019: Red-footed Falcon (2) and Lesser Kestrel. Both (2) were observed twice in 2018. There are also two species observed in 2019 but not in 2018: Saker Falcon (2) and Black-winged Kite (1).

7 out of 29 species observed meet the criteria for important bird areas (Table 2). A4 criterion is given when the population encapsulates 1% of the global population, while B3a is given when it encapsulates 1% of the European population.

Species (Turkish)	Species (Latin)	Species (English)	Number (2018)	Number (2019)	IBA Criteria
Küçük Orman Kartalı	<i>Clanga pomarina</i>	Lesser Spotted Eagle	37034	45562	A4-B3a

Arı Şahini	<i>Pernis apivorus</i>	European Honey Buzzard	26863	18667	A4-B3a
Yaz Atmacası	<i>Accipiter brevipes</i>	Levant Sparrowhawk	23369	30157	A4-B3a
Yılan Kartalı	<i>Circaetus gallicus</i>	Short-toed Snake Eagle	10853	13121	A4-B3a
Küçük Kartal	<i>Hieraaetus pennatus</i>	Booted Eagle	2199	2315	B3a
Kara Çaylak	<i>Milvus migrans</i>	Black Kite	1948	1739	B3a
Küçük Akbaba	<i>Neophron percnopterus</i>	Egyptian Vulture	813	903	A4-B3a

Table 2. Species that meet IBA criteria.

4. Evaluation and Suggestions

In the last two years (2018 and 2019) the studies were conducted in a more comprehensive manner. In 2019, in particular, participation from different regions from Europe was combined with a considerable number of volunteers. For the upcoming years, participation from Turkey needs to increase and experts need to be educated. Adana's Ceyhan district, one of the important migration bottlenecks in Turkey, has the potential to lead migration studies with the support of the local government. Since this region meets some criteria of an Important Bird Area mentioned in the report, it needs to be evaluated as an Important Bird Area. Due to these features, Sarimazi Raptor Migration Count is an event that attracts the attention of experts on a national and global scale.

Among the various threats faced by migratory birds along their flight paths, electrocution and collisions with hazardous power lines are one of the most important threats causing death in the Mediterranean region. After the Sarimazi Raptor Migration Count data becomes meaningful, the dimensions of the threats will be better understood.

For the data to be evaluated in a meaningful manner, the counts need to be carried out with the same methods for at least 5 years. 813 Egyptian Vultures were observed in 2018, and 903 in 2019. For this to have a meaningful answer, the changes in 5, 10 and 15 years need to be observed. These changes also need to be observed for the other species. However, the important factor here is that the studies conducted in each year need to be done according to the determined methods.

In certain periods, intense migration activity happens in the observation points. Therefore, it is of utmost importance for there to be enough observers participating in the studies in these points to improve the quality of the count and ensure a healthy study.

As a potential IBA, the monitoring, research and conservation activities hold an increasing importance to continue these efforts in the region. Sustainability of the counts of the migratory birds in this bottleneck and continuation of the investigations of the potential threats such as hazardous powerlines requires further financial and technical support in the long-term.

5. Reference

Oppel, S., Iankov, P., Mumun, S., Gerdzhikov, G., Iliev, M., Isfendiyaroğlu, S., Yenyurt, C. & Tabur, E. 2014. Identification of the best sites around the gulf of Iskenderun, Turkey, for monitoring the autumn migration of Egyptian Vultures *Neophron percnopterus* and other diurnal raptors. Sandgrouse 36: 240-249