

**Sociable Lapwing(*Vanellus gregarius*)**  
**2010 Autumn Season Field Report - Turkey**



**Doğa**

December 2010

Cover photograph: Sociable and Northern Lapwing mixed flock in Erzurum Plain, 2010

All photographs taken by Mmin Gkhan Őenocak, Mustafa Erturhan

## **Citation**

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## Introduction

The sociable lapwing (*Vanellus gregarius*) is a globally threatened species, classified as “Critically Endangered” (CR) on the basis of its continued rapid population decline (Eichhorn and Heinicke 2000, Khrokov and Buketov 2000). The current breeding world population is estimated at as low as 5,600 pairs (Sheldon et al. 2006). The breeding population is now restricted to the steppes of Kazakhstan and neighbouring regions of Russia (Watson et. al. 2006). The sociable lapwings migrate south through Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, Afghanistan, Armenia, Iran, Iraq, Saudi Arabia, Syria and Turkey, to key wintering sites in Israel, Syria, Eritrea, Sudan and North-west India. Birds winter occasionally in Pakistan, Sri Lanka and Oman. The species is a very rare vagrant in Western Europe, where it is usually observed together with Northern Lapwings (*Vanellus vanellus*).

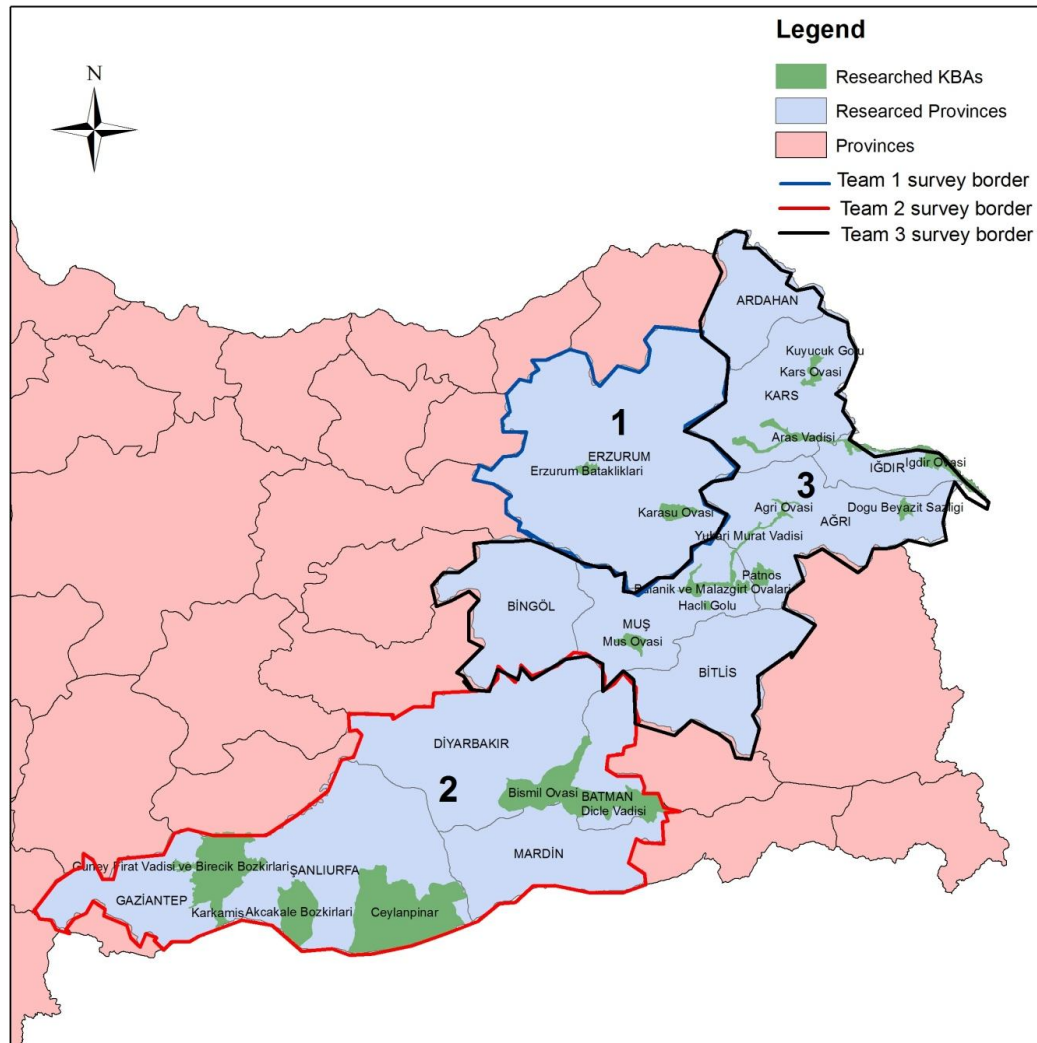
In this project, we aimed at collecting detailed information on Sociable lapwings in Eastern Turkey. This report gives detailed information about the field surveys carried out in this respect under the coordination of Doğa Derneği (BirdLife in Turkey), supported by Royal Society for the Protection of Birds (RSPB; BirdLife partner in UK), Association for the Conservation of Biodiversity in Kazakhstan (ACBK, BirdLife in Kazakhstan), the Darwin Initiative, Swarovski Optic, and Lush Cosmetics.

Turkey hosts an important number of sociable lapwings during their spring and autumn migration. There are migration records for this species in Ceylanpınar, the wetlands near Erzurum, Ağrı, the Bulanık and Malazgirt steppes, and in the Hürmetçi marshes (Eken et al. 2006; see Appendix 1). Until 2002, flocks up to 155 individuals were counted in Malazgirt and Bulanık steppes and valleys (Eken et al. 2006). In 2007, an important flock of 3,200 individuals was recorded in Ceylanpınar (Bozdoğan and Balkız 2007). In 2008, 871 individuals were recorded during spring migration season in Ceylanpınar (Biricik et. al. 2008). In 2009, 1,672 individuals were recorded in Ceylanpınar (Akarsu and Balkız 2010).

## Methodology

In our study, we aimed at defining stop-over sites sociable lapwings use along their migration routes and to estimate the number of migrating sociable lapwings during autumn migration in Eastern Turkey. A very extensive field survey was planned and put into action. Different to previous years (where the surveys were always based on information we received from satellite-tagged birds), the timing of the field survey was determined using records of sociable lapwing up to date. Accordingly, a period covering 20 September to 25 October was defined as the period when the sociable lapwings passed over Turkey during autumn migration.

Furthermore, again by taking into account all the observations of the species in Turkey, we have identified the area where the surveys must be carried out. Accordingly, three regions were identified (Figure 1).



**Figure 1.** The map showing the three areas where the field surveys on sociable lapwings were carried out.

Three separate teams were identified to carry out field surveys in the identified regions. With this respect all the teams started the surveys at the same time - on 26 September 2010. The length of surveys in each of the three areas was decided mainly based on the size of the areas. Totally 25 days were spent and an area of 139.012 km square (including 13 provinces: Ardahan, Kars, Erzurum, Ağrı, Iğdır, Muş, Bitlis, Batman, Diyarbakır, Mardin, Şanlıurfa, Gaziantep) was surveyed with a specific focus on suitable habitats and sites where previous observations were carried out. Three teams did carry out the surveys, also some members of the teams did move between teams when necessary (Table 1 and Appendix II).

**Table 1.** The details of the survey dates and the team composition

Team #	Survey Area	Date	Survey team
1	Erzurum Province (including Erzurum Plain)	26 September-15 October 2010	Musa Han, Mümin Gökhan Şenocak, Mikail Topdaş, Ferdi Akarsu, Murat Bozdoğan
2	Şanlıurfa Province (including Ceylanpınar, Akçakale, Diyarbakır, Batman, Mardin, Gaziantep)	26 September - 3 October 2010	Mustafa Erturhan, Nağme Akbaş, Ferdi Akarsu, Murat Bozdoğan
3	Muş Province (including Erzurum, Kars, Ardahan, Muş, Ağrı, Iğdır, Bingöl, Bitlis, Urfa)	26 September - 20 October 2010	Ferdi Akarsu, Murat Bozdoğan

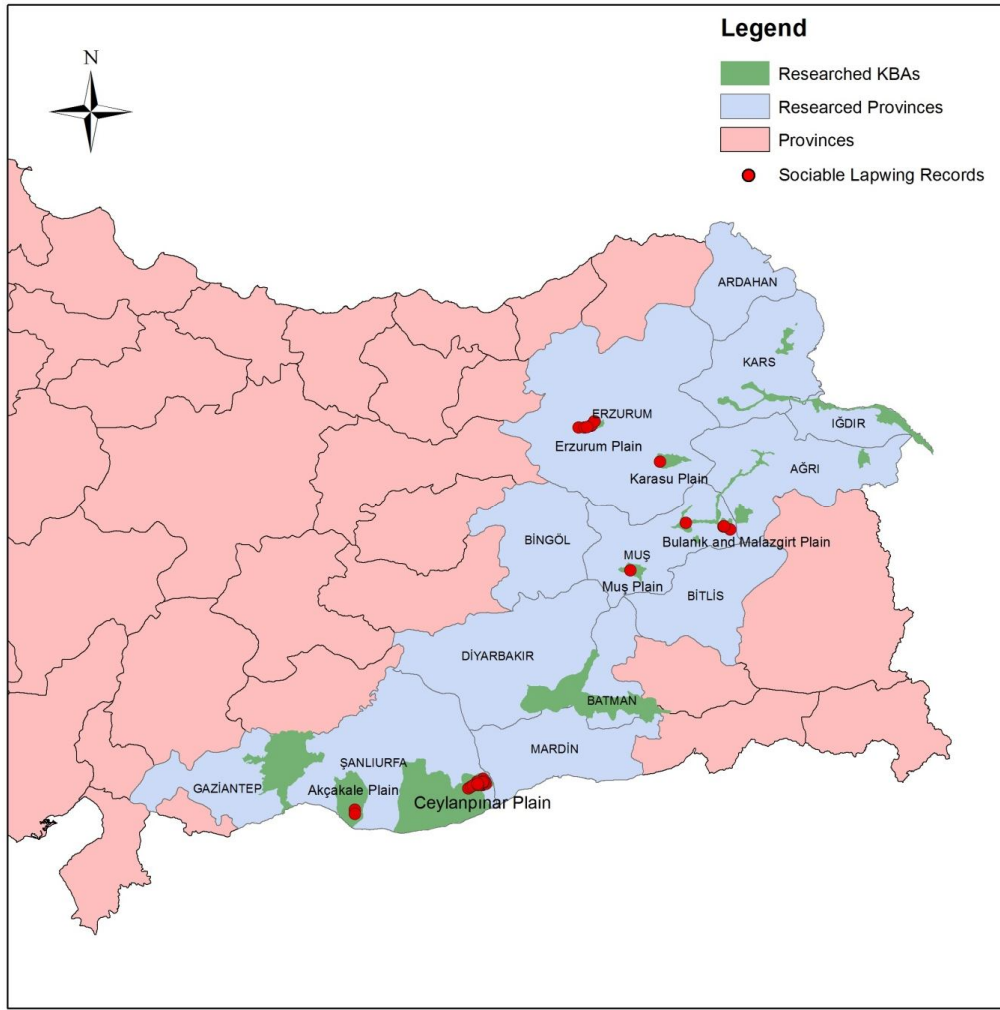
During the study, point count methodology was used in the study areas. In order to count the birds, telescopes (20x) and binoculars (10×40 and 8×40) were used. To prevent double counts, the experts did record the movements of the groups and the direction they headed with proper time. Furthermore the teams did carry out repetitive counts from different angles to make sure the counts were done from the best possible view. Other than the number of individuals, information on the habitat type where birds were observed, presence of rings, the rate of birds controlled for rings, threats, feeding biology and finally general information on the behaviour of the birds were recorded.

## Results

According to our field survey result, between 26 September and 20 October 2010, several groups with a minimum of **2** and maximum of **652** sociable lapwings were recorded (Figure 2 and Table 2). Throughout the survey, a total of 6,612 sociable lapwings were recorded, 172 of them from Erzurum Province (Survey Area #1) Province, 854 of them from Muş Province (Survey Area #3) and 5,586 of them from Şanlıurfa Province (Survey Area #2).

Throughout the field period, we stayed in contact with RSPB during the field surveys to get information about the coordinates from satellite-tagged birds. On 04.10.2010, information from one satellite-tagged bird information was received from Malazgirt (39.12 N / 42.738 E). The exact location of the bird was controlled where a total of 846 birds were counted during successive days between 9 and 13 October 2010. During the observations, no ringed birds could be seen.

During the field study, other species of birds, such as black kite (*Milvus migrans*), cream-coloured courser (*Cursorius cursor*), wheatear (*Oenanthe oenanthe*), calandra lark (*Melanocarpa calandra*), northern lapwing (*Vanellus vanellus*) and great bustard (*Otis tarda*) were recorded (see Appendix III).



**Figure 2.** The map showing the locations of the sociable lapwing observations in relation to the areas surveyed.



**Table 2.** The details of the sociable lapwing observation during autumn 2010 in Turkey

No	Survey Area Name (#)	Location Name	Date	Count	Time	Habitat	Inclination	Activity	Latitude	Longitude
1	Erzurum Province (#1)	Erzurum Plain	26.09.2010	39	08:00	Harvested Field	Flat Ground	Feeding	4426661	687253
2	Erzurum Province (#1)	Erzurum Plain	26.09.2010	32	13:00	Harvested Field	Flat Ground	Flying	4431913	693922
3	Şanlıurfa Province (#2)	Ceylanpınar	27.09.2010	2	17:45	Harvested Field	Flat Ground	Flying	4103082	588157
4	Şanlıurfa Province (#2)	Ceylanpınar	27.09.2010	21	17:48	Harvested Field	Flat Ground	Feeding-resting	4103670	590130
5	Şanlıurfa Province (#2)	Ceylanpınar	27.09.2010	33	17:51	Harvested Field	Flat Ground	Feeding-resting	4104230	592101
6	Erzurum Province (#1)	Erzurum Plain	27.09.2010	2	17:00	Harvested Field	Flat Ground	Resting	4426279	679723
7	Erzurum Province (#1)	Erzurum Plain	27.09.2010	18	10:00	Harvested Field	Flat Ground	Feeding	4431913	693922
8	Şanlıurfa Province (#2)	Ceylanpınar	28.09.2010	141	12:05	Harvested Field	Flat Ground	Feeding-resting	4104716	593731
9	Şanlıurfa Province (#2)	Ceylanpınar	28.09.2010	88	09:10	Harvested Field	Flat Ground	Feeding-resting	4102293	592611
10	Şanlıurfa Province (#2)	Ceylanpınar	28.09.2010	498	09:35	Harvested Field	Flat Ground	Feeding-resting	4102797	594054
11	Şanlıurfa Province (#2)	Ceylanpınar	28.09.2010	144	10:14	Harvested Field	Flat Ground	Feeding-resting	4103305	596010
12	Şanlıurfa Province (#2)	Ceylanpınar	28.09.2010	4	15:05	Harvested Field	Flat Ground	Flying	4098912	580044
13	Erzurum Province (#1)	Erzurum Plain	28.09.2010	25	11:14	Harvested Field	Flat Ground	Feeding	4427778	690989

No	Province Name	Location Name	Date	Count	Time	Habitat	Inclination	Activity	Latitude	Longitude
14	Erzurum Province (#1)	Erzurum Plain	28.09.2010	8	11:32	Harvested Field	Flat Ground	Feeding	4428594	691129
15	Erzurum Province (#1)	Karasu Plain - Erzurum, Hınıs Road	28.09.2010	24	16:40	Steppe area	Low slope	Feeding	4395400	752920
16	Erzurum Province (#1)	Erzurum Plain	28.09.2010	19	07:48	Harvested Field	Flat Ground	Feeding	4426273	684931
17	Erzurum Province (#1)	Erzurum Plain	28.09.2010	3	12:55	Harvested Field	Flat Ground	Resting	4431915	693921
18	Erzurum Province (#1)	Erzurum Plain	28.09.2010	2	09:13	Harvested Field	Flat Ground	Feeding	4426661	687253
19	Muş Province (#3)	Bulanık	29.09.2010	6	11:28	Harvested Field near a river	Flat Ground	Flying	4337944	258074
20	Muş Province (#3)	Muş Plain - Tigem Agricultural Field	29.09.2010	2	17:59	Harvested Field	Flat Ground	Resting	4296092	726251
21	Şanlıurfa Province (#2)	Ceylanpınar	01.10.2010	45	17:30	Harvested Field	Flat Ground	Feeding-Resting	4105218	595363
22	Şanlıurfa Province (#2)	Ceylanpınar	03.10.2010	123	10:26	Harvested Field	Flat Ground	Resting	4104720	592773
23	Şanlıurfa Province (#2)	Ceylanpınar	03.10.2010	57	16:58	Harvested Field	Flat Ground	Flying	4103363	588607
24	Şanlıurfa Province (#2)	Ceylanpınar	04.10.2010	5	07:50	Harvested Field	Flat Ground	Flying	4100527	582425
25	Şanlıurfa Province (#2)	Ceylanpınar	04.10.2010	45	07:15	Ploughed land	Flat Ground	Feeding	4103320	588456
26	Şanlıurfa Province (#2)	Ceylanpınar	04.10.2010	20	08:43	Harvested Field	Flat Ground	Flying	4104511	592848

No	Province Name	Location Name	Date	Count	Time	Habitat	Inclination	Activity	Latitude	Longitude
27	Şanlıurfa Province (#2)	Ceylanpınar	04.10.2010	157	09:12	Ploughed land	Flat ground	Feeding	4105243	588034
28	Şanlıurfa Province (#2)	Ceylanpınar	05.10.2010	474	09:10	Ploughed land	Flat ground	Feeding	4105243	588034
29	Şanlıurfa Province (#2)	Ceylanpınar	05.10.2010	12	10:30	Ploughed land	Flat ground	Feeding-resting	4107674	593178
30	Şanlıurfa Province (#2)	Ceylanpınar	05.10.2010	265	11:00	Ploughed land	Flat ground	Resting	4105345	593609
31	Şanlıurfa Province (#2)	Ceylanpınar	06.10.2010	129	10:00	Ploughed land	Flat ground	Feeding	4103352	588598
32	Şanlıurfa Province (#2)	Ceylanpınar	06.10.2010	524	10:20	Ploughed land	Flat ground	Feeding	4105243	588034
33	Şanlıurfa Province (#2)	Ceylanpınar	07.10.2010	10	16:12	Ploughed land	Flat ground, low slope	Flying	4101625	584219
34	Şanlıurfa Province (#2)	Ceylanpınar	07.10.2010	167	17:21	Harvested Field	Flat ground, low slope	Feeding	4103295	588413
35	Şanlıurfa Province (#2)	Ceylanpınar	08.10.2010	289	08:50	Fallow land	Low slope	Feeding	4103295	588413
36	Şanlıurfa Province (#2)	Ceylanpınar	08.10.2010	184	10:45	Fallow land	Low slope	Feeding	4104486	592846
37	Muş Province (#3)	Malazgirt Plain	09.10.2010	101	17:16	Grassland, stony field, ploughed land	Low slope	Flying	4329290	297442
38	Muş Province (#3)	Malazgirt Plain	10.10.2010	107	07:37	Grassland, stony field, ploughed land	Low slope	Feeding	4332420	291559
39	Muş Province (#3)	Malazgirt Plain	10.10.2010	454	08:45	Grassland, stony field, ploughed land	Flat ground	Feeding	4332961	292171

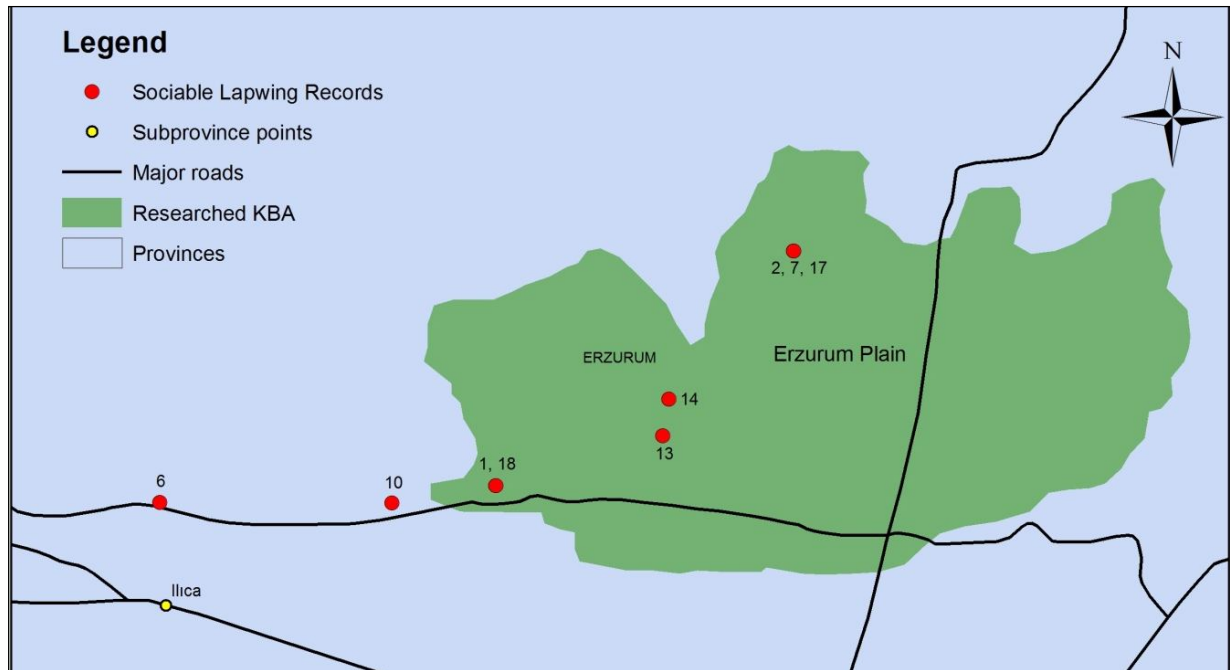
No	Province Name	Location Name	Date	Count	Time	Habitat	Inclination	Activity	Latitude	Longitude
40	Şanlıurfa Province (#2)	Ceylanpınar	11.10.2010	429	16:27	Ploughed land	Flat ground, low slope	Feeding	4104628	592764
41	Muş Province (#3)	Malazgirt Plain	12.10.2010	88	16:55	Grassland, stony field, ploughed land	Flat ground	Feeding	4332961	292171
42	Muş Province (#3)	Malazgirt Plain	13.10.2010	96	08:05	Grassland, stony field, ploughed land	Flat ground	Feeding	4332961	292171
43	Şanlıurfa Province (#2)	Ceylanpınar	14.10.2010	652	15:50	Open and ploughed land	Flat ground, low slope	Feeding	4103147	588435
44	Şanlıurfa Province (#2)	Ceylanpınar	15.10.2010	477	08:00	Open and ploughed land	Flat ground, low slope	Feeding	4103147	588435
45	Şanlıurfa Province (#2)	Ceylanpınar	15.10.2010	304	09:55	Open and ploughed land	Flat ground, low slope	Feeding	4102259	588669
46	Şanlıurfa Province (#2)	Ceylanpınar	18.10.2010	92	16:40	Open and ploughed land	Flat ground, low slope	Feeding	4103160	588485
47	Şanlıurfa Province (#2)	Ceylanpınar	19.10.2010	78	07:40	Open and ploughed land	Flat ground, low slope	Feeding	4103152	588426
48	Şanlıurfa Province (#2)	Ceylanpınar	20.10.2010	85	08:20	Open and ploughed land	Flat ground, low slope	Feeding	4103148	588446
49	Şanlıurfa Province (#2)	Akçakale Plain	20.10.2010	9	15:00	Ploughed land, open area, irrigated agricultural field	Flat ground	Feeding	4079752	477630
50	Şanlıurfa Province (#2)	Akçakale Plain	20.10.2010	23	17:45	Grassland, open stony field	Flat ground	Flying	4075930	477467

## The Surveyed Areas

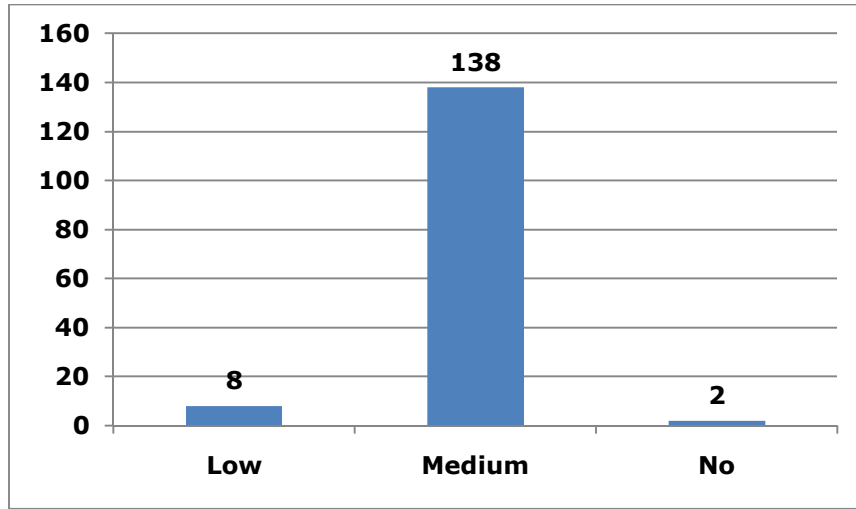
### Survey Area # 1 - Erzurum Province

#### Erzurum Plain

9 different records were taken in Erzurum Plain during which a total of 148 sociable lapwings were observed (Figure 3 and Table 2). First record was from 26 September 2010 and last one was taken on 28 September 2010. After 28 September no birds were seen in Erzurum Plain. During the observations, birds were observed on harvested fields (graminae; Table 2). All birds were observed on flat areas. According to the observations, the majority of the sociable lapwings were observed in areas where medium level of grazing pressure was present (138; Figure 4).



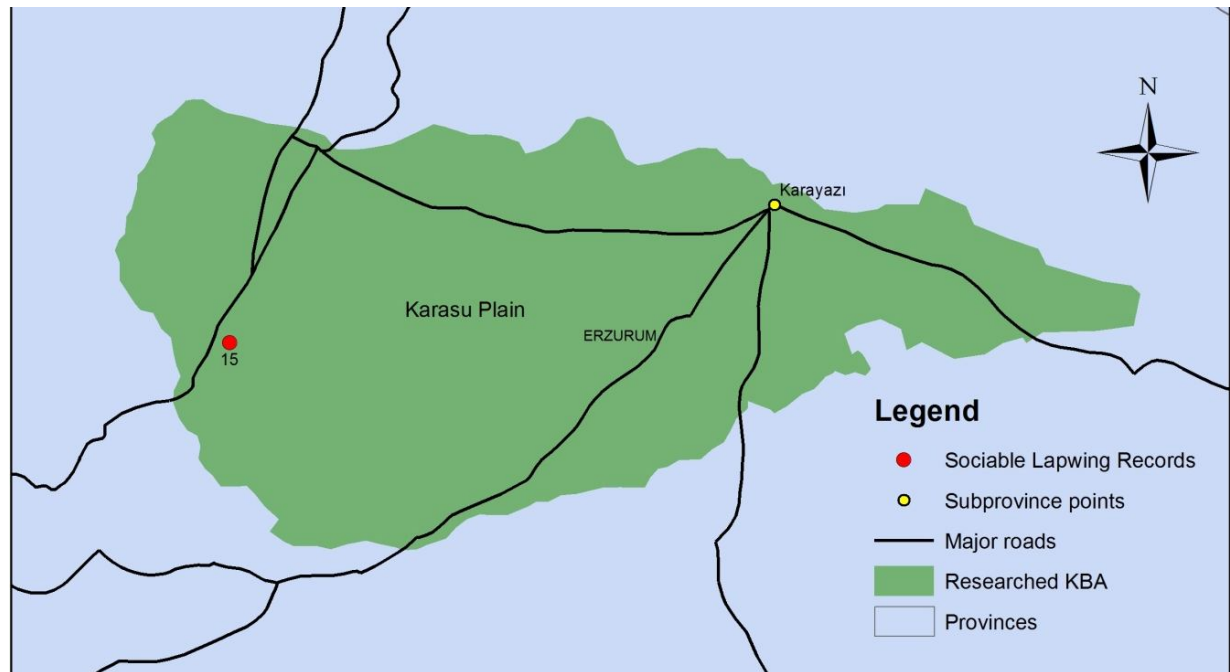
**Figure 3.** The map showing the locations of the sociable lapwing observations in Erzurum Plain (the numbers correspond to the raw number in Table 2 detailing the observation)



**Figure 4.** The number of birds observed in areas where different types of grazing pressure were present.

### Karasu Plain

1 record of 24 sociable lapwings was observed the 28 September 2010 in Karasu Plain (Figure 5 and Table 2). This was the first time sociable lapwings were ever recorded in Karasu Plain. The record was from steppe areas. As for inclination structure, all birds were observed on sloped grounds where grazing pressure was low.

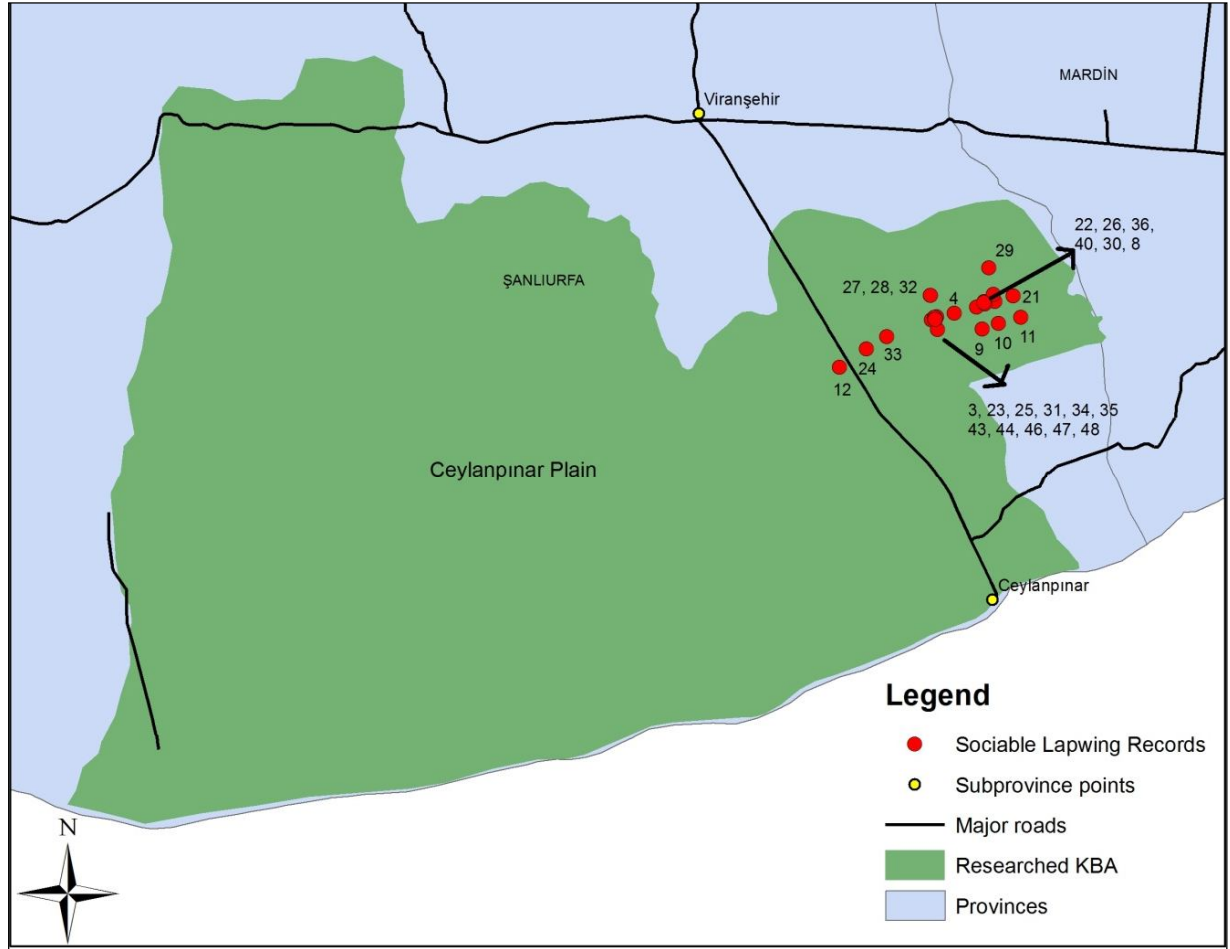


**Figure 5.** The map showing the locations of the sociable lapwing observations in Karasu Plain (the numbers correspond to the raw number in Table 2 detailing the observation)

## Survey Area # 2 - Şanlıurfa Province

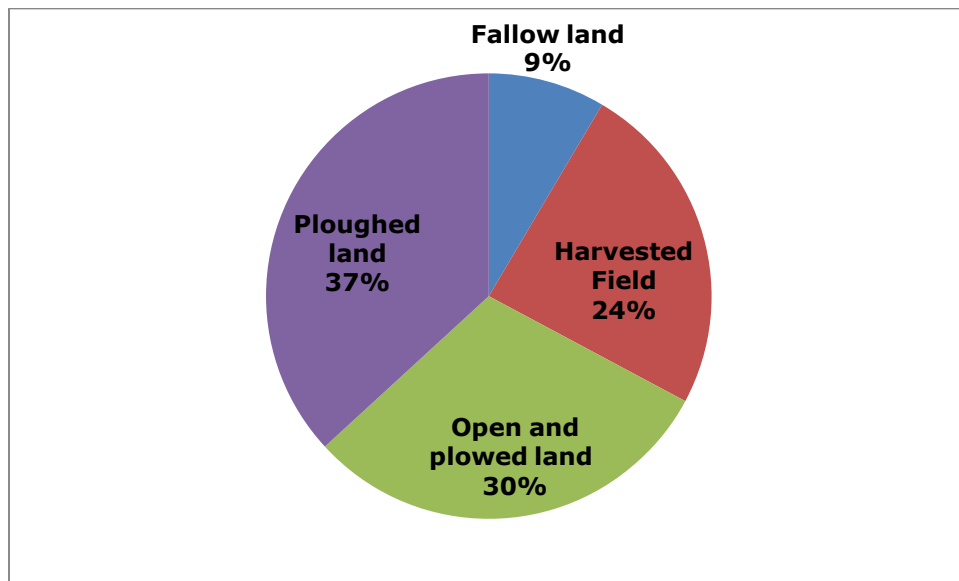
### Ceylanpınar Agricultural Field

31 different records were taken during which a total of 5,554 sociable lapwings were counted in Ceylanpınar Agricultural Field (max. of 524 individuals during one count, Figure 6 and Table 2). First record was taken on 27 September 2010 and last birds were observed on 20 October 2010.



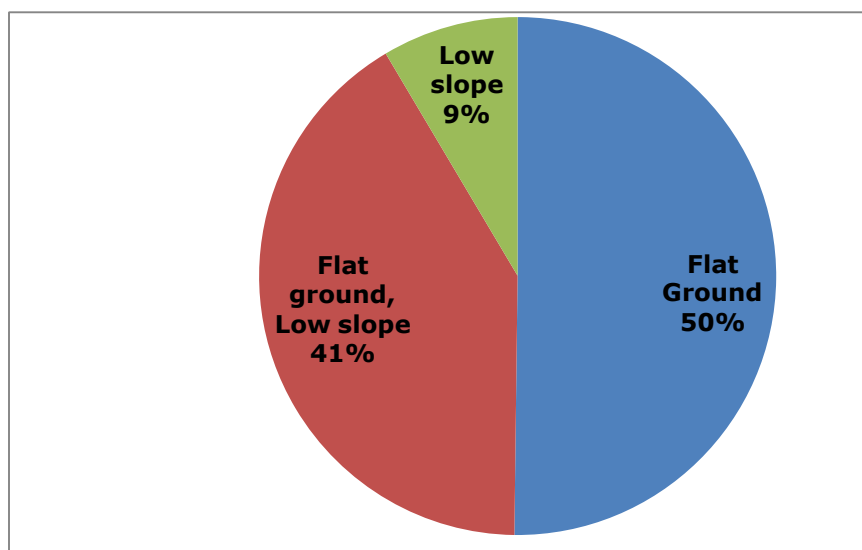
**Figure 6.** The map showing the locations of the sociable lapwing observations in Ceylanpınar Agricultural Field (the numbers correspond to the raw number in Table 2 detailing the observation)

During the surveys, all sociable lapwings were observed to be present on lentil fields at different stage (i.e. fallow land, ploughed field, harvested field etc.; Figure 7).



**Figure 7.** The pie chart showing the different habitat types where birds were observed, and the relevant proportions.

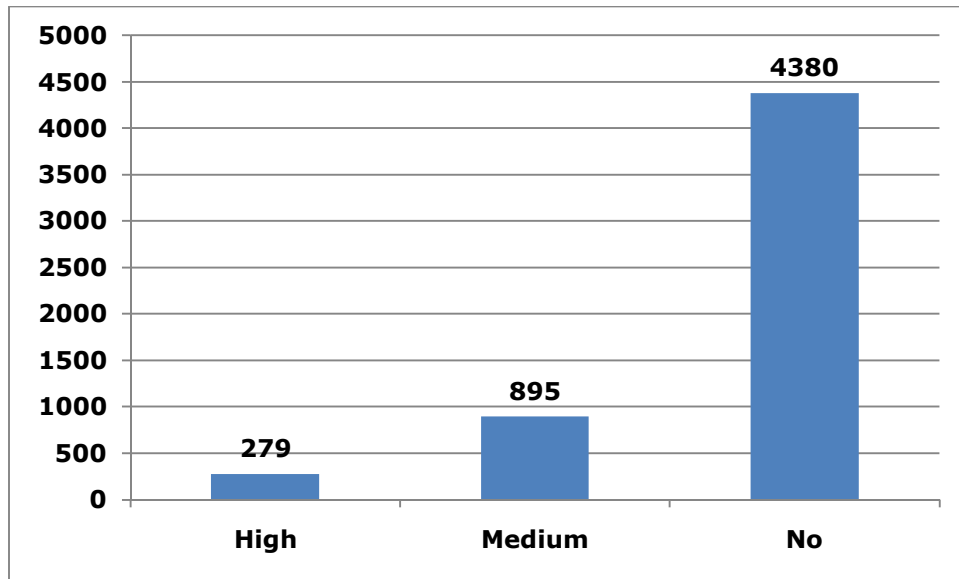
Birds generally were observed on flat areas and only a tiny fraction of them were recorded at sloped grounds (Figure 8).



**Figure 8.** The pie chart showing the different inclination types where birds were observed, and the relevant proportions.

In Ceylanpınar, a small group of sociable lapwings were recorded in areas with a lot of grazing pressure (279). This was the site where the highest numbers of birds were observed in the last years. Most of the birds were observed in sites where low or no grazing activity was present (5,275; Figure 9).

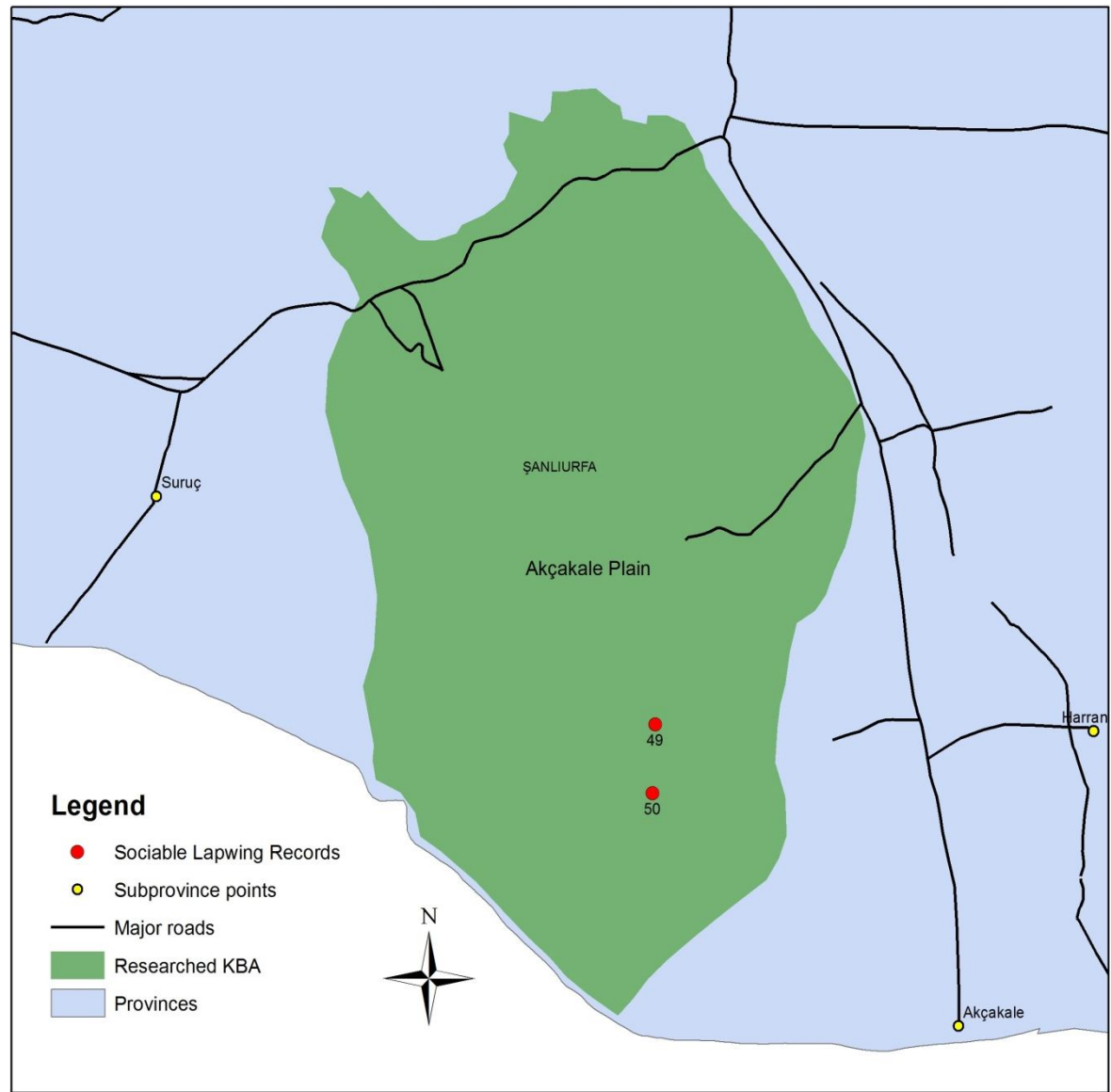




**Figure 9.** The number of birds observed in areas where different types grazing pressure was present.

#### **Akçakale Plain**

A small group of sociable lapwings (9 and 23) were observed from 2 different locations during 20 October 2010 in Akçakale Plain (Figure 10, Table 2). This was the first time sociable lapwings were ever recorded during autumn migration in Akçakale Plain (previous observations were from spring migration). During the observations, birds were recorded at ploughed land, open field, grasslands, open stony fields and few irrigated agricultural fields (Table 2). All birds were observed on flat areas. According to observation results, sociable lapwings were observed only at sites with low grazing pressure.

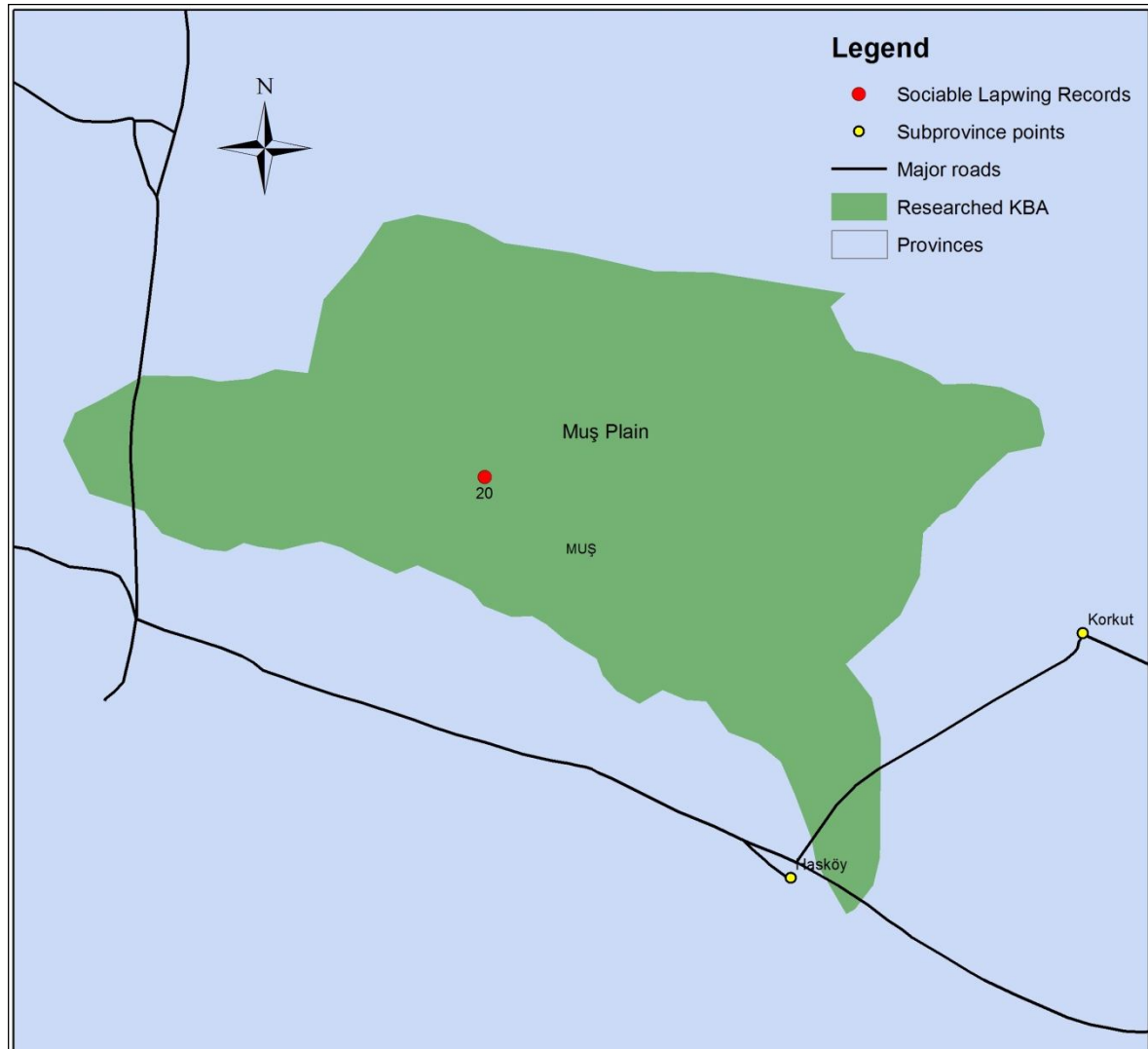


**Figure 10.** The map showing the locations of the sociable lapwing observations in Akçakale Plain (the numbers correspond to the row number in Table 2 detailing the observation)

## Survey Area # 3 – Muş Province

### Muş Plain

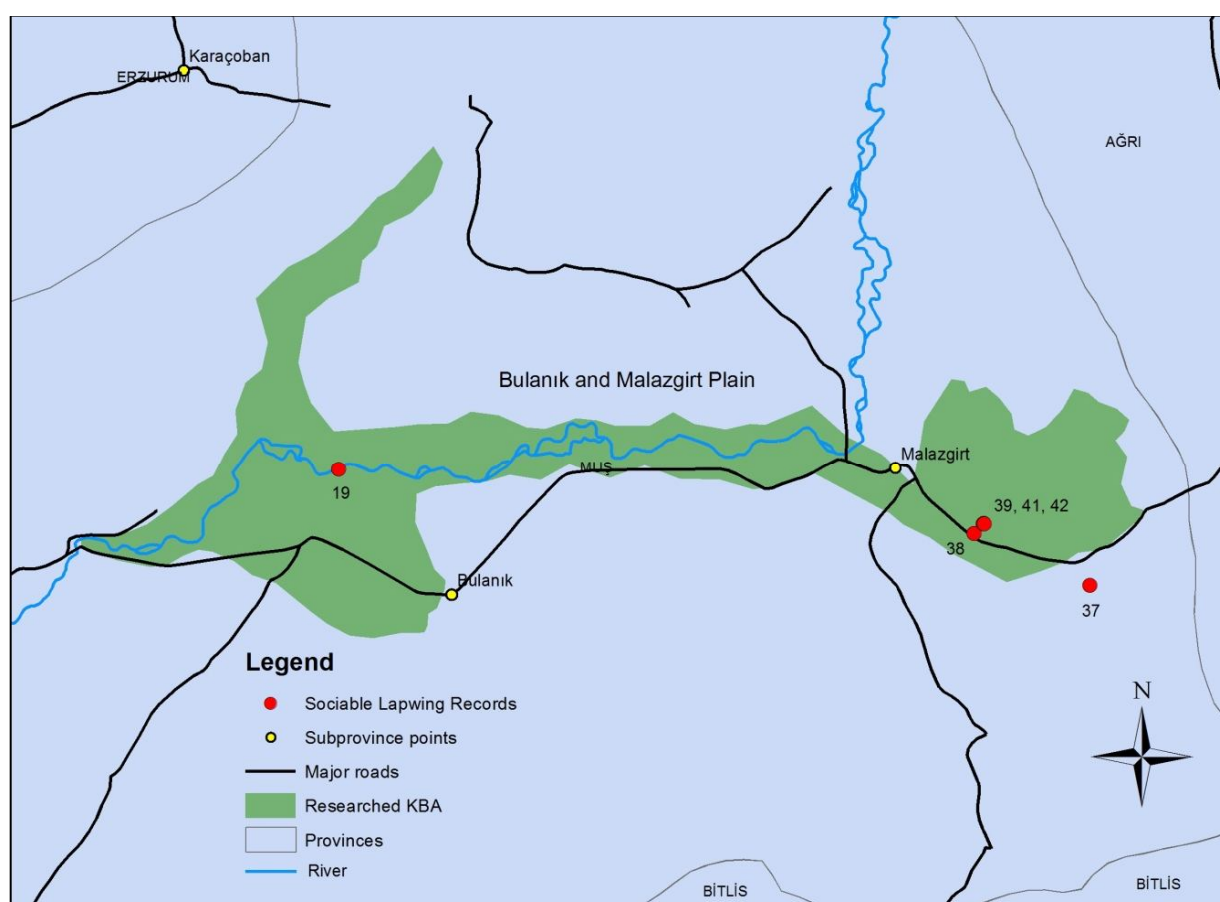
During the surveys, only once 2 sociable lapwings were recorded in Muş Plain during 29 September 2010 (Figure 11 and Table 2). This was the first time sociable lapwings were ever recorded in Muş Plain. The birds were observed on harvested fields (graminae) inside the Muş Tigem Agricultural Land. The birds were present on flat grounds where no grazing pressure was existing.



**Figure 11.** The map showing the locations of the sociable lapwing observations in Muş Plain (the numbers correspond to the row number in Table 2 detailing the observation)

## Malazgirt and Bulanık Plain

5 different records were taken during which a total of 846 sociable lapwings were counted in Malazgirt Plain between 9 – 13 September 2010 (max. of 454 individuals during one count; Figure 12 and Table 2). In Bulanık Plain, 6 birds were recorded on 29 September 2010 (Figure 12 and Table 2). The observations were from grasslands, stony fields, ploughed land in Malazgirt Plain and in a harvested field near a river in Bulanık Plain (Table 2). As for inclination structure, most of birds were observed on flat areas however a few of them were observed on low sloped grounds. According to observations, all of the sociable lapwings were observed at sites where medium level of grazing pressure was present, both in Bulanık and Malazgirt Plain.

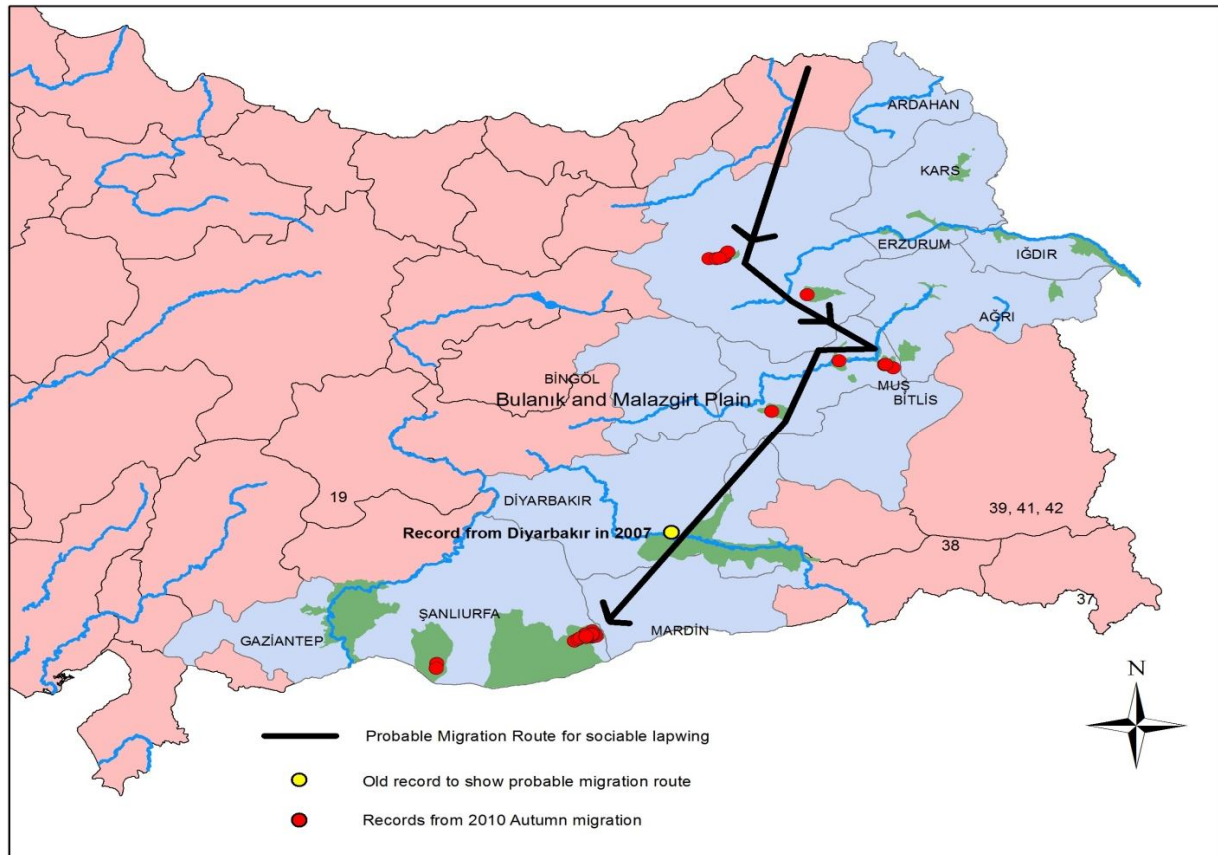


**Figure 12.** The map showing the locations of the sociable lapwing observations in Bulanık and Malazgirt Plain (the numbers correspond to the raw number in Table 2 detailing the observation)

## Discussion

Sociable lapwing is a species of global conservation importance and is mainly threatened with hunting pressure and habitat degradation especially on their migration route. With this survey, we aimed at increasing our limited knowledge on the stop-over sites used by the species during migration in Turkey. Through the survey, in addition to the known important stopover site (namely Ceylanpınar), two new important sites were identified: the Malazgirt Plain and the Erzurum Plain. For the first time, the species were recorded in Muş Plain and Karasu Plain. Furthermore for the first time the species was recorded in Akçakale Plain in autumn migration (previous observations were from spring migration period).

By taking into consideration all previous records and those from 2010, a migration corridor used by the sociable lapwings might be passing from Erzurum, Muş, Diyarbakır and Şanlıurfa in Turkey (Figure 13). In this survey, no birds were recorded in Diyarbakır, however there are observations from there in 1997. New surveys should be concentrated in Diyarbakır province to identify if the region is still used by the species during migration. Furthermore, Bitlis, Ağrı and Ardahan provinces were used irregularly in the past by small groups of sociable lapwings.



**Figure 13.** The map showing the possible migration corridor of sociable lapwings in Eastern Turkey.

Ceylanpınar is the site where the highest number of birds has always been recorded during migration. In the past, the birds were recorded mainly in fallow lands and harvested fields. However, since last year, water was brought to the site with channels (Figure 14) and sociable lapwings were mainly observed on the ploughed fields. This is mainly because, with the construction of the water channel, the former site started to be used heavily by sheep as a feeding and resting place (at night time). We believe, this change in the habitat of the species should be searched in more detail to better understand its influence on the species. This in turn can be used to identify the action that needs to be taken at the site to conserve this important stop-over site.



**Figure 14.** New irrigation canal constructed on the main sociable lapwing stop-over area in Ceylanpınar.

## **Acknowledgements**

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## APPENDIX I. Observations of Sociable lapwings in Turkey before 2010

Date	Latin name	Number	UTM Zone	Y	X	Key Biodiversity Area	Observers
12.10.2003	<i>Vanellus gregarius</i>	3	36	4287956	702833	Hürmetçi Sazlığı	Nurten Budak, Esra Per, Sinan Per
22.09.2004	<i>Vanellus gregarius</i>	3	36	4286384	702176	Hürmetçi Sazlığı	Emin Yoğurtcuoğlu
03.10.2004	<i>Vanellus gregarius</i>	3	36	4286384	702176	Hürmetçi Sazlığı	Hülya Alkan, Kadir Baran, Nurten Budak, Behiye Yılmaz
05.03.2007	<i>Vanellus gregarius</i>	250	37	557789	4092562	Ceylanpınar	Korhan Özkan, Soner Bekir
06.03.2007	<i>Vanellus gregarius</i>	615	37	557789	4092562	Ceylanpınar	Korhan Özkan, Soner Bekir
07.03.2007	<i>Vanellus gregarius</i>	<b>1017</b>	37	557789	4092562	Ceylanpınar	Korhan Özkan, Soner Bekir
09.03.2007	<i>Vanellus gregarius</i>	48	37	4190797	657701	Bismil Ovası'na çok yakın	Murat Biricik, Hamza Deniz
09.03.2007	<i>Vanellus gregarius</i>	737	37	598127	4107773	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
10.03.2007	<i>Vanellus gregarius</i>	203	37	597915	4106645	Ceylanpınar	Murat Bozdoğan, Ercan Aslan

Date	Latin name	Number	UTM Zone	Y	X	Key Biodiversity Area	Observers
11.03.2007	<i>Vanellus gregarius</i>	78	37	597915	4106645	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
11.03.2007	<i>Vanellus gregarius</i>	6	37	587684	4102883	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
12.03.2007	<i>Vanellus gregarius</i>	6	37	594589	4104979	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
12.03.2007	<i>Vanellus gregarius</i>	223	37	596414	4109401	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
13.03.2007	<i>Vanellus gregarius</i>	140	37	596414	4109401	Ceylanpınar	Murat Bozdoğan, Ercan Aslan
12.10.2007	<i>Vanellus gregarius</i>	<b>1810</b>	37	592018	4104216	Ceylanpınar	Murat Biricik, Ercan Aslan
13.10.2007	<i>Vanellus gregarius</i>	<b>3200</b>	37	592215	4101366	Ceylanpınar	Murat Biricik, Ercan Aslan
20.10.2007	<i>Vanellus gregarius</i>	24	37	4416387	716210	Palandöken Dağları'na yakın	Emrah Çoban
01.03.2008	<i>Vanellus gregarius</i>	200	37	477187	4076618	Akçakale Bozkırları	Soner Bekir ve Ali Atahan
01.03.2008	<i>Vanellus gregarius</i>	100	37	551630	4076896	Ceylanpınar	Soner Bekir ve Ali Atahan

Date	Latin name	Number	UTM Zone	Y	X	Key Biodiversity Area	Observers
08.03.2008	<i>Vanellus gregarius</i>	156	37	4100220	479992	Akçakale Bozkırları	Soner Bekir ve Bahar Bilgen
11.03.2008	<i>Vanellus gregarius</i>	313	37	597530	4106292	Ceylanpınar	Murat Biricik, Hamza Deniz, Recep Mungan
12.03.2008	<i>Vanellus gregarius</i>	<b>871</b>	37	589570	4103483	Ceylanpınar	Murat Biricik, Hamza Deniz, Recep Mungan
13.03.2008	<i>Vanellus gregarius</i>	820	37	589740	4104860	Ceylanpınar	Murat Biricik, Hamza Deniz, Recep Mungan
14.03.2008	<i>Vanellus gregarius</i>	201	37	597530	4106292	Ceylanpınar	Murat Biricik, Hamza Deniz, Recep Mungan
29.09.2009	<i>Vanellus gregarius</i>	178	37	592824	4104622	Ceylanpınar	Ferdi Akarsu, Can Yeniyurt
30.09.2009	<i>Vanellus gregarius</i>	<b>1672</b>	37	594274	4107183	Ceylanpınar	Ferdi Akarsu, Can Yeniyurt
01.10.2009	<i>Vanellus gregarius</i>	14	37	594210	4107160	Ceylanpınar	Ferdi Akarsu, Can Yeniyurt
01.10.2009	<i>Vanellus gregarius</i>	298	37	594147	4108118	Ceylanpınar	Ferdi Akarsu, Can Yeniyurt
01.10.2009	<i>Vanellus gregarius</i>	600	37	593225	4107996	Ceylanpınar	Ferdi Akarsu, Can Yeniyurt

Date	Latin name	Number	UTM Zone	Y	X	Key Biodiversity Area	Observers
02.10.2009	<i>Vanellus gregarius</i>	18	37	592471	4105516	Ceylanpınar	Ferdi Akarsu, Can Yenyurt
02.10.2009	<i>Vanellus gregarius</i>	13	37	591484	4107057	Ceylanpınar	Ferdi Akarsu, Can Yenyurt

## APPENDIX II. Survey Team Contact Details

Survey team	E-mail	Title
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Mümin Gökhan Şenocak	gokhansen@migros.com.tr	Bird Watcher
Mikail Topdaş	topdasmikail@hotmail.com	Bird Watcher

### APPENDIX III. Other bird species recorded during the surveys

Province Name	Location Name	Date	Species name (Numbers)
Erzurum	Erzurum Plain	26.09.2010	<i>Vanellus vanellus</i> (60)
Erzurum	Erzurum Plain	27.09.2010	<i>Glareola nordmanni</i> (3) - <i>Vanellus vanellus</i> (45) - <i>Tringa nebularia</i> (1) - <i>Tringa ochropus</i> (1)
Erzurum	Erzurum Plain	28.09.2010	<i>Vanellus vanellus</i> (150)
Erzurum	Erzurum Plain	28.09.2010	<i>Vanellus vanellus</i> (90), <i>Philomachus pugnax</i> (90), <i>Gallinago gallinago</i> (1), <i>Tringa totanus</i> (1), <i>Buteo rufinus</i> (1)
Erzurum	Karasu Plain - Erzurum, Hınıs Road	28.09.2010	<i>Vanellus vanellus</i> (30), <i>Philomachus pugnax</i> (1)
Erzurum	Erzurum Plain	28.09.2010	<i>Vanellus vanellus</i> (2)
Erzurum	Erzurum Plain	28.09.2010	<i>Vanellus vanellus</i> (2000)
Erzurum	Erzurum Plain	28.09.2010	<i>Vanellus vanellus</i> (31), <i>Falco tinnunculus</i> (1), <i>Milvus migrans</i> (1)
Urfa	Ceylanpınar	04.10.2010	<i>Milvus migrans</i> (1), <i>Melanocorypha calandra</i> (1)
Urfa	Ceylanpınar	05.10.2010	<i>Cursorius cursor</i> (5), <i>Aquila nipalensis</i> (1), <i>Milvus migrans</i> (2)
Urfa	Ceylanpınar	05.10.2010	<i>Milvus migrans</i> (3), <i>Aquila pomarina</i> (1)
Urfa	Ceylanpınar	06.10.2010	<i>Oenanthe oenanthe</i> (1)
Urfa	Ceylanpınar	07.10.2010	<i>Cursorius cursor</i> (34), <i>Circus macrourus</i> (1), <i>Milvus migrans</i> (5)
Urfa	Ceylanpınar	08.10.2010	<i>Cursorius cursor</i> (21)
Muş	Malazgirt Plain	09.10.2010	<i>Corvus sp.</i> (more than thousand)
Muş	Malazgirt Plain	10.10.2010	<i>Vanellus vanellus</i> (10), <i>Pterocles orientalis</i> (3), <i>Sturnus vulgaris</i> and <i>Corvus sp.</i> (more than thousand)
Muş	Malazgirt Plain	10.10.2010	<i>Otis tarda</i> (4), <i>Vanellus vanellus</i> (18), <i>Pterocles orientalis</i> (11), <i>Corvus sp.</i> (more than one thousand individuals)
Urfa	Ceylanpınar	11.10.2010	<i>Milvus migrans</i> (3)
Muş	Malazgirt Plain	12.10.2010	<i>Corvus sp.</i> (more than one thousand individuals)

Province Name	Location Name	Date	Species name (Numbers)
Muş	Malazgirt Plain	13.10.2010	<i>Corvus sp. (more than one thousand individuals)</i>
Urfa	Ceylanpınar	14.10.2010	<i>Cursorius cursor (15), Milvus migrans (4)</i>
Urfa	Ceylanpınar	15.10.2010	<i>Cursorius cursor (5), Milvus migrans (4), Circus cyaeus (1)</i>
Urfa	Ceylanpınar	15.10.2010	<i>Cursorius cursor (13), Milvus migrans (2)</i>
Urfa	Ceylanpınar	18.10.2010	<i>Cursorius cursor (6), Milvus migrans (2)</i>
Urfa	Ceylanpınar	19.10.2010	<i>Cursorius cursor (7), Milvus migrans (3)</i>
Urfa	Ceylanpınar	20.10.2010	<i>Cursorius cursor (7), Milvus migrans (2)</i>