Groupe des Jeunes
de Nos Oiseaux

International Ringing camp in Romania
Annual Report
2007

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Abstract

The *Groupe des Jeunes de Nos Oiseaux*, in collaboration with the *Romanian Ornithological Center* and the aid of numerous voluntary workers coming from the whole Europe studied the bird migration from July 18th to November 11th 2007 in Sfântu-Gheorghe in the Danube delta, Romania. The main activity was the ringing, 7494 birds from 99 different species in the forest near the mentioned village were captured and ringed. Two previously unseen subspecies in Romania were also ringed, a Common Redstart *Phoenicurus phenicurus samamisicus* subspecie and of a Chiffchaf *Phylloscopus collybita fulvescens/tristis*. The fifth observation of a Pallas' Warbler *Phylloscopus proregulus* was made. A project of color-ringing of Caspian Gulls *Larus cachinnans* allowed ringing 11 gulls on the nearby beach. The migration of the birds was also monitored at night by moonwatching and the data was analyzed by the Swiss Ornithological Institute of Sempach. The discovery of a Long-eared Owl *Asio otus* dormitory allowed the study of their diet. Voluntary workers on site sampled material for diverse studies like the determination of micro-organism (thecamibs) transported by migrating birds, the abundance of mites in the feathers, the analyzis of ticks for pathogenicity and the presence of spiders according to the habitat.

Many observations of the local fauna were made during the four months. 242 bird species were observed such as the Pine Bunting *Emberiza leucocephalos*, the first record for Romania. Scarcer species such as the Cattle Egret *Bubulcus ibis*, the Lesser Kestrel *Falco naumanni*, the Pomarine Skua *Stercorarius pomarinus* and the Pallas' Gull *Larus ichthyaetus* were also observed during the stay.

21 species of mammals, 7 of amphibians, 4 of reptiles and 43 of insects were identified at this place.

A second season of ringing activities in 2008 just ended-up and will allow a better understanding of the migration in Sfântu-Gheorghe.

Résumé

Le Groupe des Jeunes de Nos Oiseaux en collaboration avec la station ornithologique Roumaine et aidé de nombreux bénévoles venus de toutes l'Europe ont étudié la migration des oiseaux sous différents aspects du 18 juillet au 11 novembre 2007 à Sfântu-Gheorghe dans le delta du Danube en Roumanie. L'activité principale fut le baguage de 7494 oiseaux de 99 espèces différentes dans une forêt non loin du village. La capture d'un Rougequeue à front blanc *Phoenicurus phoenicurus* de la sous-espèce *samamisicus* et d'un Pouillot véloce de Sibérie *Phylloscopus collybita fulvescens/tristis* représentent 2 nouvelles sous-espèces pour la Roumanie. La 5ème données de Pouillot de Pallas *Phylloscopus proregulus* a aussi été enregistré. Un projet de bague couleur en collaboration avec Euring de Goéland pontique *Larus cachinnans* a permis de baguer 11 goéland sur la plage. Les mouvements des oiseaux au-travers de la plein lune on aussi été observé et analysé par la Station Ornithologique Suisse de Sempach, afin d'évaluer la direction et l'intensité du flux migratoire sur le site. La découverte d'un dortoir de Hibou-moyen *Asio otus* a permis l'étude de son régime alimentaire. Les bénévoles ont aussi récolté du matériel pour des études personnelles en cours tel que la détermination des microorganismes (thécamibes) transportés pars les oiseaux, l'abondance des mites sur le plumage, la récolte de tiques pour l'analyse des pathogènes et la récolte d'araignées en fonction des milieux.

Des observations directes de la faune ont aussi été effectué tous au long des 4 mois. Elles ont permis d'observer 242 espèces d'oiseaux, dont un Bruant à calotte blanche *Emberiza leucocephalos* consitutue la première pour la Roumanie. La présence d'autres espèces d'oiseaux peu observées pour la région comme le Héron garde-bœuf *Bubulcus ibis*, le

Faucon crécerellette *Falco naumanni*, le Labbe pomarin *Stercorarius pomarinus* et le Goéland ichthyaète *Larus ichthyaetus* ont aussi été mis en évidence.

Au total, 21 espèces de mammifères, 7 d'amphibiens, 4 de reptiles et 43 d'insectes ont été enregistré sur le site.

Une deuxième année de baguage vient d'être achevée en 2008, et permettra de clarifier les données et de mieux comprendre la migration à Sfântu-Gheorghe.

Zusammenfassung

Die *Groupe des Jeunes de Nos Oiseaux* hat in Zusammenarbeit mit dem rumänischen Zentrum für Ornithologie und mit Hilfe von zahlreichen Freiwilligen aus ganz Europa zwischen dem 18 Juli und dem 11. November 2007 verschiedene Aspekte des Vogelzuges in Sfântu-Gheorge im Donaudelta in Rumänien untersucht. Die Hauptaktivität war die Beringung von 7494 Vögeln von 99 verschiedenen Arten in einem Wald in der Nähe des Dorfes. Mit den Fängen eines Gartenrotschwanzes *Phoenicurus phoenicurus* der Unterart *samamisicus* und eines sibirischen Zilpzalps *Phylloscopus collybita fulvescens/tristis* gelangen die Erstnachweise dieser zwei Unterarten in Rumänien. Des Weiteren konnte der fünfte Nachweis des Goldhähnchen-Laubsängers *Phylloscopus proregulus* erbracht werden.

Im Rahmen eines Farbberingungsprojektes von Steppenmöwen *Larus cachinnans* in Zusammenarbeit mit Euring wurden 11 Möwen an einem nahe gelegenen Strand beringt.

Der Vogelzug wurde ebenfalls bei Nacht vor der Vollmondscheibe beobachtet. Diese Daten wurden von der Schweizerischen Vogelwarte Sempach analysiert, um die Zugrichtungen vor Ort zu bestimmen.

Die Entdeckung eines Schlafplatzes von Waldohreulen *Asio otus* ermöglichte es, deren Nahrungszusammensetzung anhand von Gewöllen zu untersuchen.

Die Freiwilligen haben vor Ort auch Daten für persönliche Studien gesammelt. So wurden Proben genommen, um durch Vögel transportierte Mikroorganismen zu bestimmen oder um die Häufigkeit von Milben im Gefieder zu untersuchen. Des Weiteren wurden Zecken gesammelt, um diese auf Krankheitserreger zu analysieren. Ebenfalls wurden Spinnen in verschiedenen Habitaten gefangen.

Während den 4 Monaten fanden viele Beobachtungen der lokalen Fauna statt. So wurden 242 Vogelarten festgestellt. Zum ersten Mal wurde eine Fichtenammer *Emberiza leucocephalos* in Rumänien nachgewiesen. Weitere für die Region seltene Vogelarten wie der Kuhreiher *Bubulcus ibis*, der Rötelfalke *Falco naumanni*, die Spatelraubmöwe *Stercorarius pomarinus* und die Fischmöwe *Larus ichthyaetus* wurden ebenfalls festgestellt. Neben den Vögeln wurden am Standort 21 Säugetier-, 7 Amphibien-, 4 Reptilien- und 43 Insektenarten gezählt.

Eine zweite Beringungssaison in 2008 ging soeben zu Ende und ermöglicht es, die Daten von 2007 zu ergänzen und den Vogelzug in Sfânthu-Gheorge besser zu verstehen.

Foreword

The Romanian Ornithological Center

The Romanian Ornithological Center is an institution with tradition in studying the dynamics of bird populations. On June 1, 1936 was created the Laboratory of Ornithology which functioned as an independent organism of the Entomological Center of Agricultural Research.

Later on, this Ornithological Laboratory has created the basis on which The Ornithological Center was build, institution with many activities, which functioned as an independent organism of the Romanian Institute of Agronomy, this time the primer wish would be the study of bird population dynamics, and their protection.

Nowadays, The Romanian Ornithological Center is researching with a fundamental disposition, regarding the monitoring of bird populations migration over Romania, closely and intrinsically related with bird dynamics on European and Intercontinental level.

Romanian Ornithological Center is affiliated with international ornithological associations particularly with The International Committee for Bird Ringing created in 1963, shortly EURING.

Romania thanks to its geographical location is in the path of the most important migration routes from the center and east of Europe as well as its beautiful landscapes, forms a place of great importance for the evolution and constancy of sedentary, migratory, and wanderer, bird populations. Of the 4 major migration routes in Europe, the east area which includes east-elbic, pontic and sarmatic roads is the most important migration route in Eastern Europe, because it gathers birds from the biggest migration area, from the Siberian Taiga, the Central and East Europe, to South Africa route also known as the Eurasian-Africana Route.

We would also like to mention that The Romanian Ornithological Center is one of the institution with long tradition in researching the ecology and biology of wild European birds, its creation (1963) dating as far as the other institutions of this kind in Europe, like the Swiss Ornithological Center from Sempach (1933), which, like the Romanian Ornithological Center have polarized the whole research activity in birds dynamics.

In this context the common interest was created between COR and Le *Groupe des Jeunes des Nos Oiseaux* with its representative Boris Droz, of making a more profound qualitative and quantitative study, during at least 3 years, of the dynamics of birds fauna in "The Danube Delta Biosphere Reserve", the coastline of the Black Sea, an important place for the birds of East European route.

For the first year of activity, referring to 2007, year of probing and logistic organization, I consider a success the fact that 7494 birds from 99 species were captured, ringed, and released. With all the drawbacks of the beginning, I consider that the results are promising in the future, knowing that the global dynamics of the bird population has never been elaborately studied in this area.

Dr. M. Gogu-Bogdan
Project leader

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Project goals

Boris Droz, Fabian Schneider & Alexandre de Titta

The main goal of these continuous 4 months in Romania is the study of the migration of passerine in the Danube delta forest habitat. Such studies was never conducted in this area.

The main objectives of the ringing camp are

- The ringing of migratory passerine to have a better knowledge of the migration phenology as well as the mensuration of the different species using the Danube delta as a stopover. This study will allow doing the first complete follow-up of the fall migration in Romania.
- The ringing of wader on the Island of Saccaline to have a better knowledge of the migration of these birds, in a never studied area.
- The ringing, with color-rings, of about a hundred Caspian Gulls. This program will be one of the Eastern most in Europe. The movements of this species are still not well known and we have good hopes that these rings will be read in Occidental Europe.
- The possibility of an inter-associative exchange by the meeting of many ornithologists in one of the best birding place in Europe, allowing the creation of a scientific orientated network of ornithologist.

If time and participants are sufficiently available other studies were conducted.

We plan to offer all the brought material to our Romanian collegues after having conducted the study. They possess all the necessary competence and knowledge for their use, but usually don't get the necessary funds to purchase them.

Passerines captures

Boris Droz, Fabian Schneider & Alexandre de Titta

General Introduction

The Danube delta is the biggest European delta west of the Volga with 415'200 ha [1]. The Danube Delta Biosphere Reserve (DDBR, IUCN Management Category IV [2]) has an area of 580'000 ha (Delta und Dobrodgia) including 312'440 ha classified within the UNESCO patrimony. 50'573 ha from this area, 18 small spot, are totally protected [3]. Seven Important Bird Areas (IBA) are identified by Birdlife International which cover more than 491'000 ha in DDBR [4]. About 70% of the area of the delta is dominated by Common Reed *Phragmites australis*. It's the largest reedbed of the world with its 170'000ha [1]. More than 1'800 flora and 3'540 fauna species were censuses in the delta [3]. Up to now 320 bird species of bird were mentioned in DDBR [1]. Of the 93 species of European concern (SPEC) which occur in the region, 12 are globally threatened or near threatened species (Lesser White-fronted Goose *Anser erythopus*, Red-breasted Goose *Branta ruficollis*, Ferruginous Duck *Aythya nyroca*, Pygmy Cormorant *Phalacrocorax pygmeus*, Dalmatian Pelican *Pelecanus crispus*, White-tailed Eagle *Haliaeetus albicilla*, Pallid Harrier *Circus macrourus*, Lesser Spotted Eagle *Aquila pomarina*, Eastern Imperial Eagle *A. heliaca*, Corncrake *Crex crex*, Great Snipe *Gallinago media* and Slender-billed Curlew *Numenius tenuirostris*) [2]. The most important European breeding populations of Red-crested Pochard *Netta rufina*, Ferruginous Duck *Aythya nyroca*, Red-necked Grebe *Podiceps grisegena*, Black-necked Grebe *Podiceps nigricollis* and Red-footed Falcon *Falco vespertinus* are also found in the DDBR [1].

During the fall migration, the Carpathians constrain the migration against the Black Sea coast. The Black Sea western coast is the a major migration corridor for northern European and western Asian migrants [5-7]. In this corridor the Danube delta plays a vital links in the network of wetlands that stretch from the Arctic Ocean to South Africa, providing refuge for 25 million migrating waterfowl every year [8].

Despite its high ornithological interest, Romania is the second poorest country of Europe in term of ringed birds (~5'500 ring per year) [9] and the bird's migration studies are very poor in the DDBR comparatively to the importance of the site.

The most threatened species like Red-breasted Goose *Branta ruficollis* [10, 11] and the Dalmatian Pelican *Pelecanus crispus* [12] for which the DDBR is one of the most important nesting site in Europe, are relatively well managed. Since 2002, the Milvus Group watch the raptor fall migration site in the Macin Mountains (45°15'N 28°11'E) [5]. The diet of migrant Woodchat Shrikes *Lanius senator* is studied during spring in SE coastal Romania [13].

Several ornithologists groups have studied the bird's migration in the DDBR during the last 20 years.

About the ringing: a German group studied passerine and waders spring migration in the Razim-Sinoie Lagunen System between 1990 and 1996 [14-17]. The migration of the Paddyfield Warbler *Acrocephalus agricola* was studied during 1991-92 at Istria (44°32'N 28°43'E) [18, 19]. The Milvus group managed a Ringing camp in Grindul Chituc (44°41'N 28°56'E) on the Black sea coast during 1996-97 [20]. Since 2004, Mike Reed studies the spring and fall migration in Grindul Lupilor[21].

The village of Sfântu Gheorghe lies on the left side of the oldest branch of Danube, close to the Danube's mouth into the Black Sea [22].

This village is inhabited by less than 1000 peoples and is situated in the eastern extremity of the Danube delta, in the eastern part of Tulcea County. It is distant of about 120 km from Tulcea (the largest town and the administrative centre of Tulcea county) and about 35 km from Sulina. The village is bordered north by Crisan village and Sulina town, east by the Black Sea and, south by Sacaline Island and west by Murighiol village.[23, 24]. The climate is in temperate and continental with little precipitations and some marked dryness.

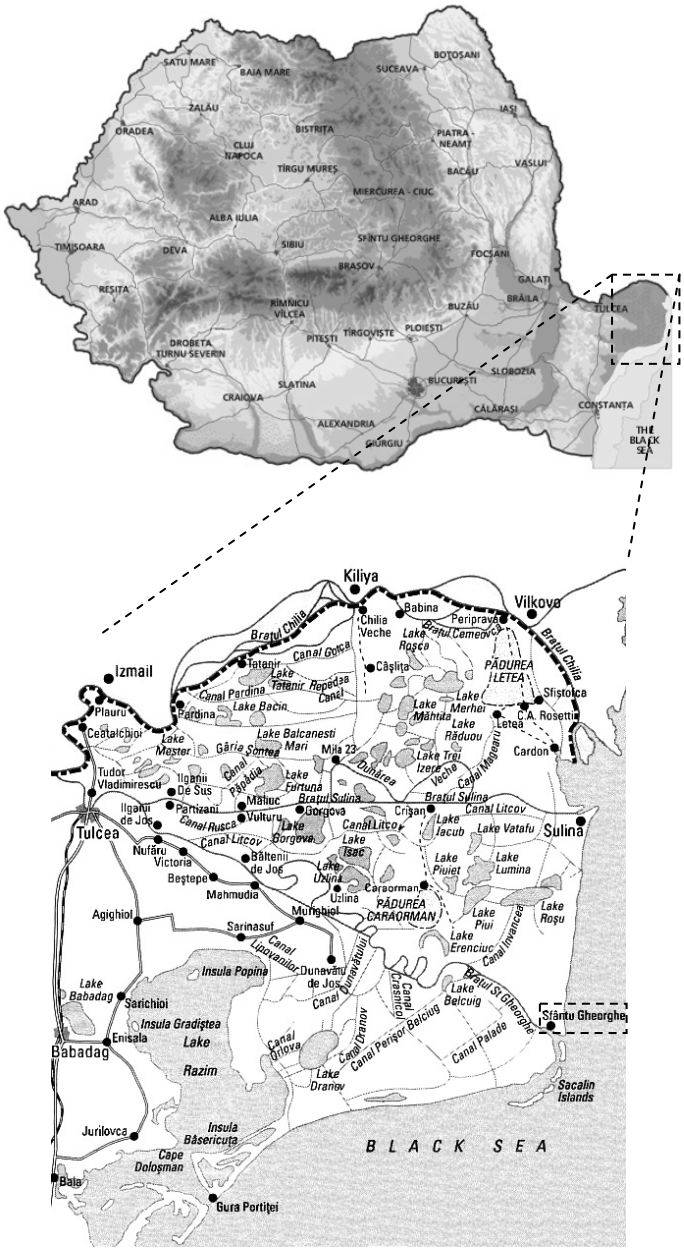


Figure 1 - Localization of the study area.

The study area is located about one kilometer north of the village (44°54'N 29°35'E) and cover about 50ha in different habitats (open lands, grasslands, canals, bushes, forest, etc) on the west part of the forest (see Figure 1). The main structure is a plantation of poplars with alders, willows and pines. Near the canals some reeds and other aquatic plants are found and in the grassland is mostly composed with dry rush and saline plants. The bush in dry areas is composed mainly of Russian Olives *Elaeagnus angustifolia* and some sea buckthorns *Hippophae l.*

The camp with the tents, the ringing place, the toilets, the shower and the cooking place are situated few meters after the "entrance" of the webbed reserve. The nets area is located in the north of the centre place.

All the preceding studies were made in the Razim-Sinoie Lagunen or in the Dobrodgea System. This study is thus the first study about the bird migration in the delta itself. The habitat is different from other studies sites too. Reeds are scanty here comparatively to the other stations (Istria and Grindul Lupilor). Bushes are present in other station too but the woodland habitant of migrant was not studied in Romania. The present study will concentrate its efforts on waders and the Caspian Gull *Larus cachinnans*, whose autumn migration is unknown for Romanian birds.

The second goal of this camp is to make a link between young birdwatchers of different countries. Many volunteers study spontaneously other topics about birds or nature. The knowledge is thus widely shared amongst the volunteers, many groups of animals and plants are well documented in the study area.

Method

The ringing station was opened from July 18th to November 11th. During this period the station had daily opening times presented in Table 1. When nets were opened, they were checked each hour from sunrise to sunset by small groups of birdwatchers. By extreme conditions, nets were closed (temperature above 27°C or wind above 5-6 Beauforts). Nets were closed from October 7th and 12th (pentad 57) due to lack of rings.

Table 1 - Daily openings.

Month	Small tour	Big tour
July	32.5%	34.7%
August	27.1%	41.4%
September	29.1%	56.6%
October	46.6%	58.1%
November	52.5%	67.3%

A total of 816 meter long, 2 meter high, 17 mm meshed mist nets were spread in the study area. The nets were parted in two tours. The big one was 546 meters and composed of 15 nets (n°1-12, 20, 21 and 91). The small one was 270 meters long and composed of 7 nets (n° 0 and 13-18). In the big tour, two 6 meter high nets were used (n°20, 21) (see appendix 3).

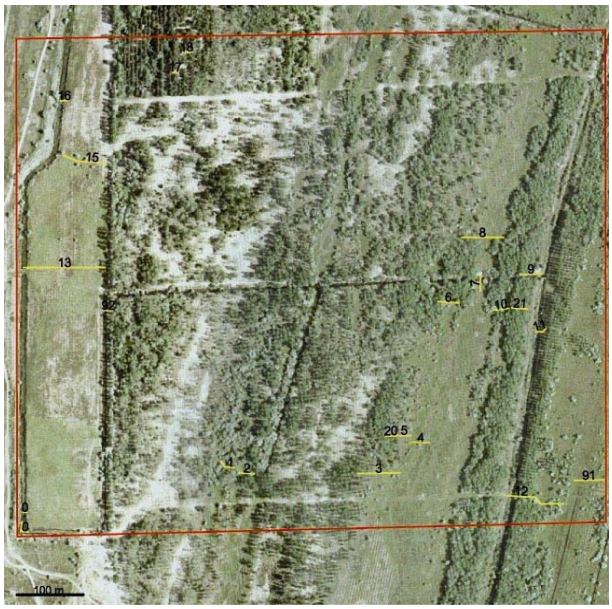


Figure 2 - Localization of nets. The study area is surrounded by a red-line. Aerial image, courtesy of: Marine and Fluvial Research Station, Sfântu Gheorghe.

All bird species were ringed except Goldcrest *Regulus regulus* and Firecrest *Regulus ignicapillus* females [25]. The species name, catching date and hour, sexes, age, moult stage, body conditions (fat and muscle score), third primary and wing length, weight, net and pocket were recorded for each bird[26-29].

For difficult species or subspecies, with fewer literature data, additional measurements were made (see appendix 1)[30-42].

Tree time a day (6h00, 12h00, 18h00 GMT) weather conditions were recorded: wind direction, wind strengh in Beaufort scale, cloud cover (on an 8th scale) and temperature (°C) (see appendix 4).

The habitat surrounding each net was described according to literature [27] and can be found in the appendix (3).

Phenology analyses were made for bird species accounting more than 100 captures. Data shown are issued from the big tour only because nets opening times were more constant. The numbers of ringed birds by pentad has been divided by the opening ratio per pentad.

For the Garden Warbler *Sylvia borin* and the Eurasian Blackcap *Sylvia atricapilla* the moult score (A: all feather are Jung, B: <1/3, C: 1/3-2/3, D: >2/3 are new and N: all feather are new) have been used to determinate the beginning of the migration of the young birds.

For the Common Chiffchaff *Phylloscopus collybita* and the Willow Warbler *Phylloscopus trochilus*, subspecies were identified and reported in the graph.

When possible, ages and sexes were reported in the graphs.

For the others species, a compilation with total capture numbers, date of the first, median and last captured birds were made. (Appendix 2)

Results and discussion

Captures of interest

The most interesting captures were

- A Common Redstart of the ssp. samamisicus *Phoenicurus phoenicurus samamisicus* on July 29th. This record is a first for Romania.
- A Siberian Chiffchaff *Phylloscopus collybita fulvescens/tristis* on October 2nd. This record represents also a first for Romania.
- A Pallas' Warbler *Phylloscopus proregulus*, the fifth for the Romania was captured on October 27th.

Migration phenologies

Several species were captured in sufficient numbers to dress a rough phenology graph. These results are not absolute; the data of only one year was not sufficient to represent the whole migration in Romania, neither in the Danube delta. However the presented phenologies were new for Romania and this was the main reason for which a discussion of them was interesting. More data are needed to present better smoothed graphs. A one-season study furnishes uneven data due to local migration and seizing conditions. However, similar data are sill lacking for the Danube Delta and ours are thus giving a first insight.

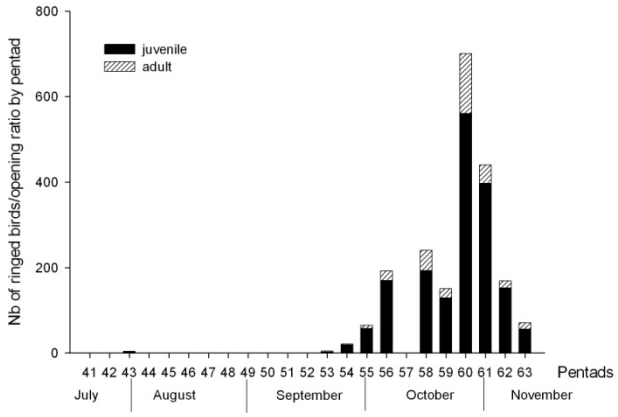


Figure 3 - Phenology of European Robin Erithacus rubecula by pentads according to age (n=736).

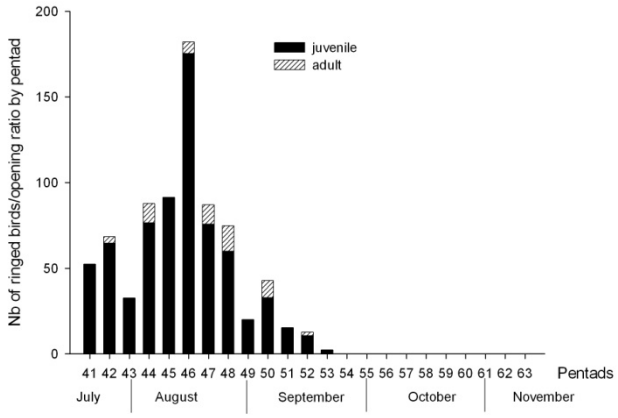


Figure 4 - Phenology of Thrush Nightingale Luscinia luscinia by pentads according the age (n=241).

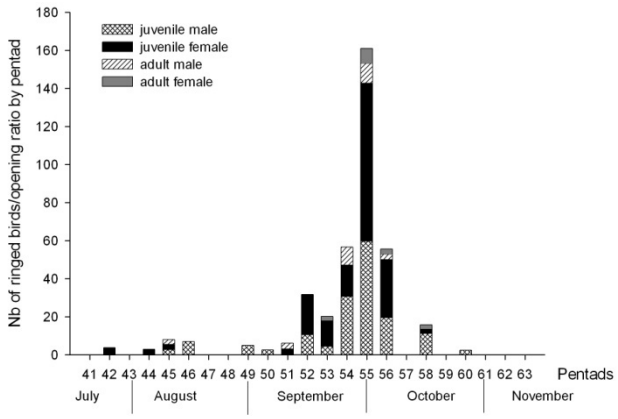


Figure 5 - Phenology of Common Redstart Phoenicurus phoenicurus by pentads according the age and the sex (n=150).

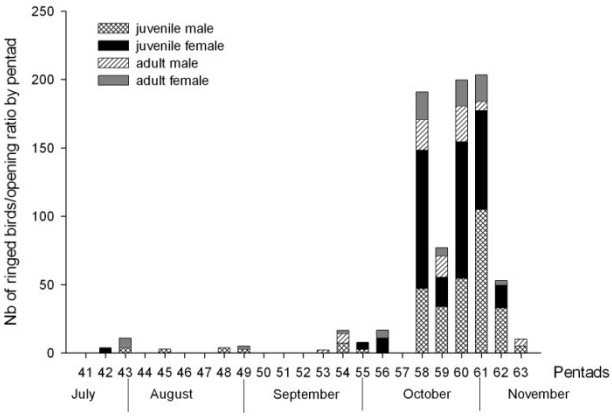


Figure 6 - Phenology of Blackbird Turdus merula by pentads according to the age and the sex (n=297).

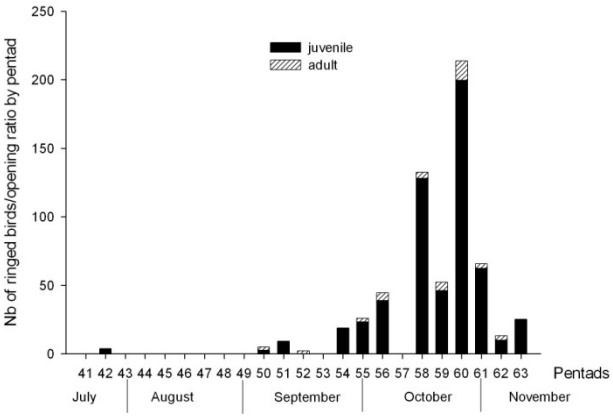


Figure 7 - Phenology of Song Thrush Turdus philomelos by pentads according the age (n=236).

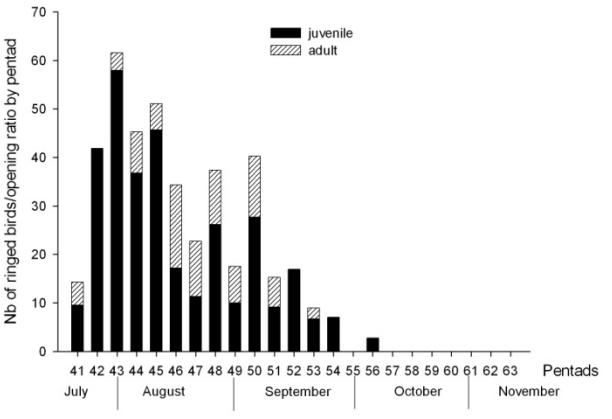


Figure 8 - Phenology of Lesser Whitethroat Sylvia curruca by pentads according to age (n=138).

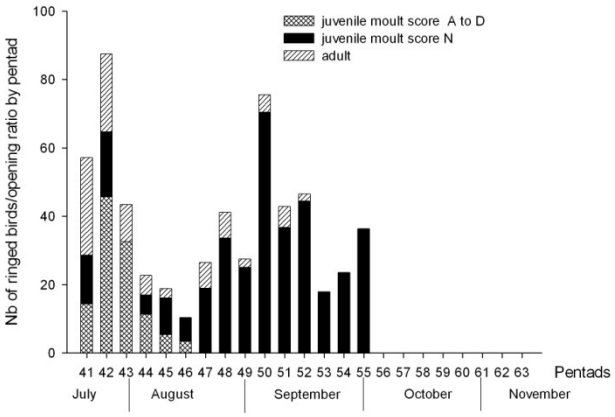


Figure 9 - Phenology of Garden Warbler Sylvia borin by pentads according to age and moult score (n=194).

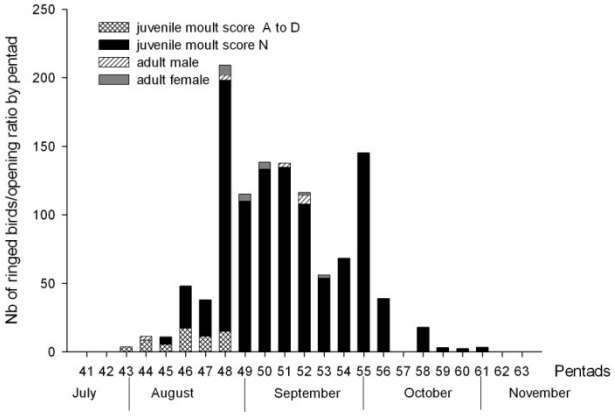


Figure 10 - Phenology of Eurasian Blackcap Sylvia atricapilla by pentads according age, moult score and sex (n=420).

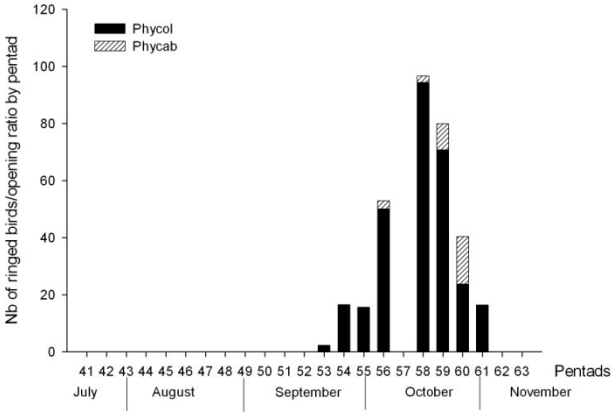


Figure 11 - Phenology of Common Chiffchaff Phylloscopus collybita by pentad according the subspecies (n=124, sp. abietinus n=12).

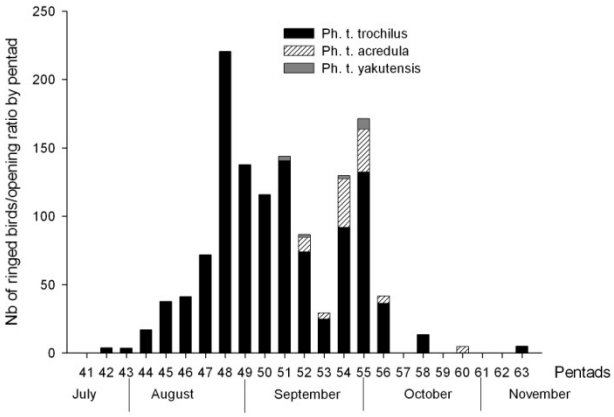


Figure 12 - Phenology of Willow Warbler Phylloscopus trochilus by pentad according the subspecies (n=459, sp. acredula n=39 sp. yakutensis n=6).

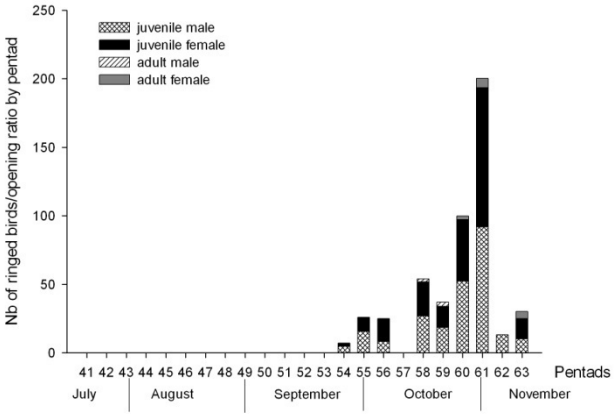


Figure 13 - Phenology of Goldcrest Regulus regulus by pentad according the age and the sex (n= 171).

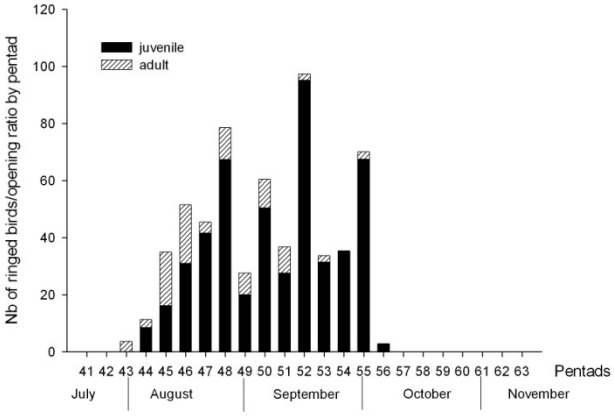


Figure 14 - Phenology of Spotted Flycatcher Muscicapa striata by pentad according to the age (n=217).

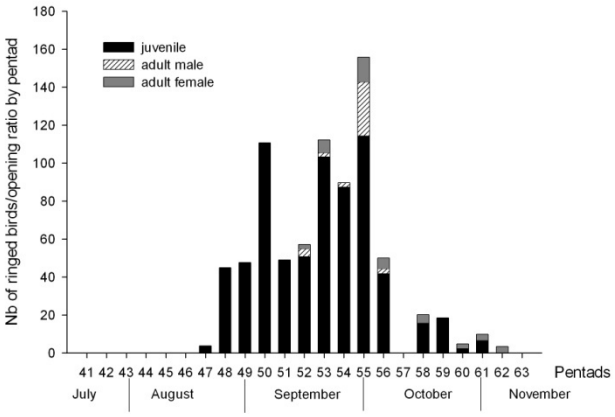


Figure 15 - Phenology of Red-breasted Flycatcher Ficedula parva by pentad according the age and sex (n=307).

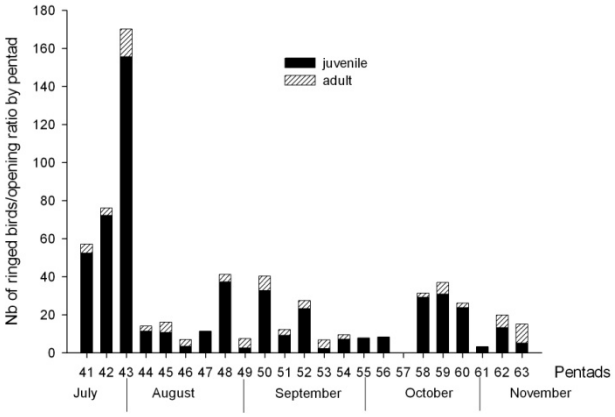


Figure 16 - Phenology of Blue Tit Parus caeruleus by pentad according the age (n=202).

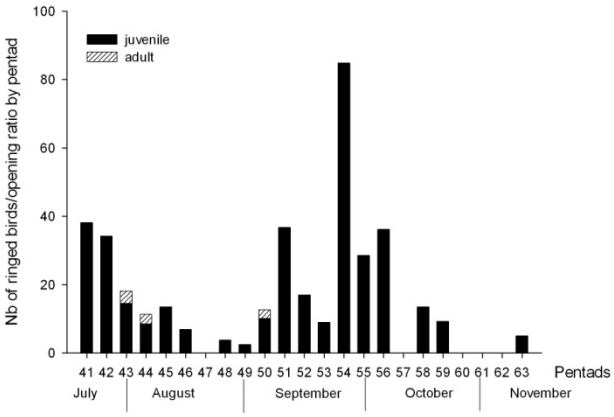


Figure 17 - Phenology of Great Tit Parus major by pentad according the age (n=139).

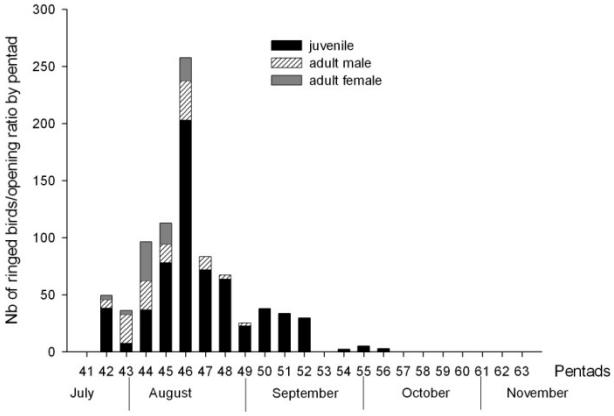


Figure 18 - Phenology of Red-backed Shrike Lanius collurio by pentad according the age and sex (n=269)

Discussion

Thrush Nightingale, Common Redstart, Blackbird, Garden warbler, Lesser Whitethroat, Eurasian Blackcap, Willow Warbler, Spotted Flycatcher, Blue Tit, Great Tit and Red-backed Shrike were present in the breeding period in the study area of Sfântu Gheorghe.

For some bird species such as European Robin, Common Redstart, Blackbird, Song Thrush and Goldcrest, the juvenile migration in Sfântu Gheorghe started before the adult migration. For the Garden Warbler the adult migration started before the juvenile. These observations are coherent with the known phenologies of the species, except for the Common redstart observed in Helgoland (Germany) during 1961-2000 [43].

Red-breasted Flycatcher and Spotted Flycatcher juveniles migrate also before the adults in Sfantu Gheorghe. This in according to the phenology for this species observed in Crimea during 2006 [44].

The peak of the migration for the Garden Warbler, Red-breasted Flycatcher and Spotted Flycatcher is respectively 10, 13, 15 days before in Crimea in 2006 [44] than in Sfantu Gheorghe in 2007.

At the end of August all adults Red-backed Shrike *Lanius collurio* had left the area (pentad 49) but juveniles were captured during the following 35 days, up to October 4th (Figure 18).

However the migration flow was scanty after mid-September (pentad 52), something similar to what was observed in Crimea during autumn 2006 [44].

The juvenile Garden Warbler and Eurasian Blackcap moult generally all body feathers before the autumn migration [28]. According of this fact all juvenile born in Sfintu Gheorghe has left the study area after the pentad 46 (Figure 9) and 48 (Figure 10), respectively.

Three subspecies of Common Chiffchaff were recorded (Figure 11): the nominal "*P. c. collybita*", the Nordic "*P. c. abietinus*" (about 15% of the caught birds are supposed to be of this ssp.) and one Siberian' Chiffchaff (*Phylloscopus collybita fulvescens/tristis*) on October 2nd.

All Willow Warbler subspecies [45] were recorded (Figure 12): the nominal "*P. t. trochilus*", the Nordic "*P. t. acredula*" (about 10% of the caught birds are supposed to be of this ssp.) and the east Siberian "*P. t. yakutensis*" (about 1% of the caught birds are supposed to be of this ssp.).

An interrupted moult in great cover are been observed in the adult *P. t. yakutensis* , which is fairly uncommon for the others subspecies [28]. Only adult are been safely determinate for acredula and yakutensis subspecies.

All Willow Warbler from Eastern Europe have their winter quarter in East Africa [46, 47]. *P. t. yakutensis* migration road is not well documented but it noted as migrate in Kazakhstan[48] and Arabian Peninsula [49, 50].

No real migration was noted for the Blue tit in Sfintu Gheorghe through the season. Although it has been proved that this bird migrates regularly in northern Europe[51].

Great Tit is an irruptive migrant in north east Europe[51, 52]. One bird captured during pentad 51 were recaptured on pentad 60 at Grindul Lupilor (see recapture section) show that some movements occur in the area for this year but probably not a real migration.

Adults and juveniles of some bird species such as European Robin, Blackbird, Song Thrush, Goldcrest and only juveniles Willow Warblers and Great Tits were captured till the end of the study. The migration is thought to have continued afterwards.

Table 2 - compilation of data for the main caught bird

			Juveniles				Adults			
			1st date	Maximal		Last date	1st date	Maximal		Last date
	nb. data	Ratio juv/ad		date	number			date	number	
European Robin *Erithacus rubecula*	736	5.1	1.8	27.10	100	8.11	22.9	27.10	30	8.11
Thrush Nightingale *Luscinia luscinia*	241	12.3	22.7	17.8	20	23.9	27.7	27.8	4	15.9
Common Redstart *Phoenicurus phoenicurus*	150	7.8	28.7	30.9	17	27.10	12.8	29.9	3	14.10
Blackbird *Turdus merula*	297	3.6	30.7	24.10	35	8.11	28.7	24.10	11	8.11

Song Thrush ***Turdus philomelos***	236	12.9	26.7	24.10	34	8.11	5.9	24.10	4	7.11
Lesser Whitethroat ***Sylvia curruca***	138	3.8	22.7	3.8	7	5.10	21.7	14.8	4	18.9
Garden Warbler ***Sylvia borin***	194	5.9	21.7	13.9	11	4.10	21.7	27.7	4	14.9
Eurasian Blackcap ***Sylvia atricapilla***	420	31.3	1.8	2.9	24	30.10	9.8	27.8, 14 and 15.9	2	19.9
Common Chiffchaff ***Phylloscopus collybita***	124		*P. c. collybita*					*P. c. abietinus*		
			22.9	14.10	17	1.11	2.10	24.10	6	1.11
Willow Warbler ***Phylloscopus trochilus***	459		*P. t. trochilus*					*P. t. acredula*		
			27.7	29.8	25	7.11	14.9	28.9	11	27.10
			P. t.yakutensis							
			9.9	28.9	3	28.9				
Goldcrest ***Regulus regulus***	171	27.5	23.9	30.10	37	7.11	16.10	17, 19, 27, 28, 30.10 et 8.11	1	8.11
Spotted Flycatcher ***Muscicapa striata***	217	5.8	7.8	14.9	19	5.10	3.8	12.8	4	29.9
Red-breasted Flycatcher ***Ficedula parva***	307	8.3	21.8	17 et 29.9	17	30.10	13.9	22.9 et 4.10	5	3.11
Blue Tit ***Parus caeruleus***	202	5.7	22.7	3.8	18	8.11	22.7	1, 6, 14.8 et 20.10	2	8.11
Great Tit ***Parus major***	139	33.8	21.7	25.9	21	8.11	1.8	3, 6, 25.8 et 3.9	1	16.10
Red-backed Shrike ***Lanius collurio***	269	3.1	26.7	13. et 17.8	15	4.10	25.7	4.8	10	2.9

Recaptures

An adult male Great Tit *Parus major* ringed R004977 on 11.9.2007 was recaptured by Mike Redd in Grindul Lupilor (44°41'N, 28°55'E) four times. This bird travelled about 60km in 18 days.

Table 3 - Summary of the R004977 captures.

Date	Hour (GMT)	Weight [g]
11/09/2007	6h00	20.0
29/09/2007	9h00	18.2
09/10/2007	13h00	18.0
10/10/2007	13h00	18.3
27/10/2007	9h30	18.5

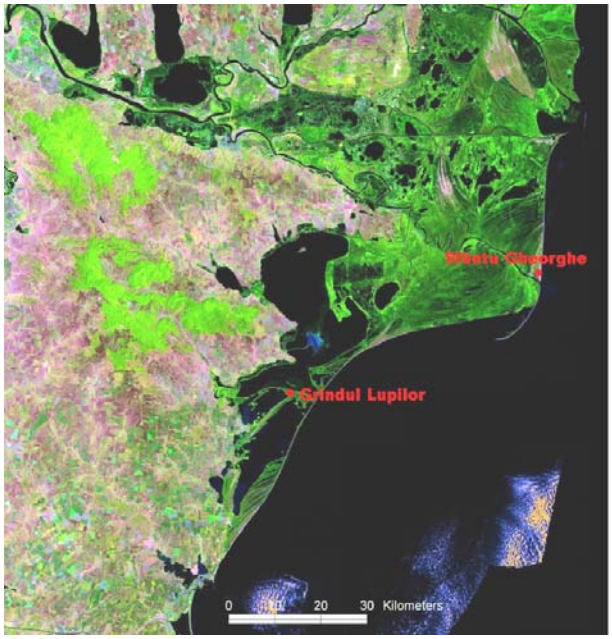


Figure 19 - The two ringing stations where R004977 was captured. Aerial image, courtesy of: [3]

Two Song Trush *Turdus philomelos* ringed on October 3rd and October 25th 2007 were shouted by a hunter in Karpaz (35°33'N 34°00'E) in Northern Cyprus on January 13th and February 10th 2008, respectively. Each one traveled at least 1100km in 103 and 109 days respectively.

Preparation for waders captures

Boris Droz & Fabian Schneider

Introduction

The Sacalin Islands are located 8 kilometres away from Sfântu Gheorghe. The Sacaline-Zatoane area is the biggest integral reserve (21'410 ha) in the Danube delta [3].

The area is located at the "Gârla de Mijloc" end's and is constituted of big bank of silt, a very important stopover for waders.

During fall, most of the Danube delta is dry, unlike Sacalin. As a consequence, waders are more concentrated there, making it ideal for catching them.

The wader's migration is not well known in Eastern Europe. Except for the Baltic area [53], a Belarus station [54] and the Crimea in Ukraine [55, 56], the migration of this group of bird in Eastern Europe would benefit from more research [57]. Moreover, this site has never been used as a study area, and the data we'll provide could help for conservation.

The migration route of the critically endangered Slender-billed Curlew (Numenius tenuirostris) passes along the Black Sea cost. Several record in the Danube delta are available were recorded in the past (4 birds 25th July to 21st August 2003, 6 11th August 2004, and 1 12th August 2004) [58]. Nobody really knows if this bird is extinct or not and Sacaline is probably the best place for the stopover of this bird.

Figure 20 - Location of the wader ringing station. Aerial image, courtesy of Google Earth.

The ringing camp (44°49' N 29°35' E) is located in the south of the island, on the nearby beach. The ringing study area is bordered in the southwest by a reedbed and a bank of silt and in the north by the small vegetation. The study area corresponds to the silt bank.

Experiments in 2007

The camp site on Sacalin was only occupied from October 21st to November 7th (because of really high temperatures in summer and the lack of rings afterward).

During this period, several nets were placed in different habitats (reeds and beach vegetation) of the Island. Two traps for waders were built. The fast variation in water level and the wader's low concentration resulted in no bird catch.

The second goal was to estimate the number of birds and determine thespecies present on the Island.

Three groups of 5 people reliverd one another. These visits gave some clues for deeper investigation in future.

Methods for 2008

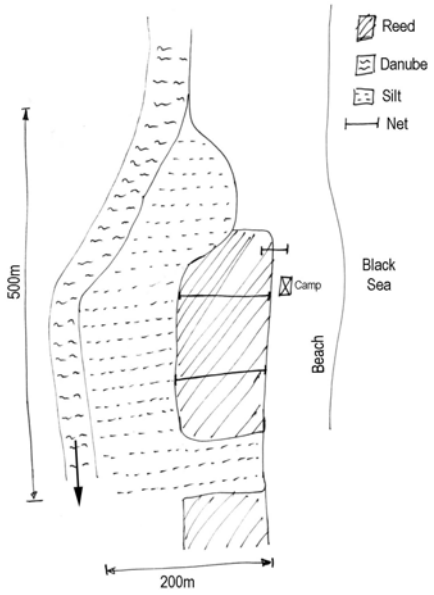


Figure 21 - Localization of traps.

The species, catching date and hour, sexes, age, moult age, body condition (fat and muscle score), third primary and wing length, weight, net and pocket number were recorded for each bird. [26, 42, 59]

Tree times a day (6h00, 12h00, 18h00 GMT) weather conditions were recorded: wind direction and strength by Beaufort scale, cloud cover, temperature (°C) (see appendix 4).

Preliminary results of 2008

Although much was expected from the captures on Sacalin Island, ringing activities on the Island proved to be more complicated, the placement of the nets was difficult to achieve. At the same time the wether conditions on the Island were rough and mainting material as well as peoples on the Island proved to be really hard.

c-ringing project on Caspian Gulls

Alexandre de Titta

Introduction

Caspian Gulls breed in the Black Sea area, some scatered pairs breed within Herring Gull *Larus argentatus* colonies along the Danube River and affluents. Some studies are undergoing on the migration behavior of the birds in Poland and a ringing program took place from 1999 to 2002 in Black Sea Biosphere Reserve (Ukraine) [60]. It proved that the juveniles ringed in this area spread across Europe, some birds reaching North, Baltic and Adriatic Seas.

In this study we plan to ring Caspian Gull in the Danube delta, to take morphological measurements and we expect recoveries of these birds after the breeding season. The project aims to ring about 200 gulls in 3 years. The aims are

- to have a better knowledge of the migratory routes
- to show that Caspian Gulls observed in Western Europe do not only come from colonies of Poland and Germany but also from the Black Sea.
- to obtain information about the spreading of the gulls spending summer and autumn in the Danube delta
- to obtain more information about the wing pattern and the measures of the Romanian birds.

Material and Methods

Gulls were ringed in the Danube delta, near the village of Sfântu-Gheorghe. Birds were captured at night in dormitories using a strong torch light and nets. For this purpose, two persons were needed, one holding the light and another holding the net to catch the bird.

Each gull was ringed with an orange ring bearing a black R:xxx code– each x representing a number - made of 35mm tall high quality PVC (Risto Juvaste, Viljakaari 4, 80510 Onttola, Finland; e-mail: Risto.Juvaste@kolumbus.fi).

For each bird, date and time of ringing, age, length of tarsus and width of knee, length of head + bill (bill-tip to back-head bump), gonys-height, hand span and second primary length were recorded. For adult birds, primary moult score, pictures of unfolded wing for a portray of primaries and secondaries, color of the back using a KODAK scale (Kodak gray scale card Q-13) with picture of the left wing and back were also taken.

Only Caspian Gulls *Larus cachinnans* were ringed with color rings, all other Gull species, especially Yellow-Legged Gull *Larus michahellis* were only ringed with metal ring.

Results

During 2007, 10 gulls were captured from August 10th to September 10th. Of these birds, 7 were in their first calendar year and 3 were adults or sub-adults.

8 Gulls were ringed with color rings, the other two were only ringed with a metal ring.

All adult birds had already moulted the 5 outermost primaries, p1 to p5, two were growing at different stages, p6 and p7. 3 old primaries were remaining, p8 to p10.

Three birds (R:003 and R:006, juveniles and R:002, adult) were observed during the following weeks (ranging from 2 days for R:002 to one month after ringing for R:003) after ringing in the village of Sfântu-Gheorghe by volunteers present at the camp.

Figure 22 –Adult Caspian Gull Larus cachinnans determination of back gray-level with a Kodak gray-scale.

Discussion

During the season we experienced difficulties in finding regular dormitories in the delta, near our base ringing camp. Some gulls could be captured for several nights but were slowly changing of dormitory places after capturing nights. We decided to change method for 2008: this will be described in next year's report.

We did not ring and measure a sufficient number of gulls to obtain significance in results. However some early analysis can be made, especially on adults. The moult score of the three individuals we captured is similar to what is observed on other large Gull species in Europe, meaning that in middle of August, most adults do have moulted all feathers except p8-p10.The dorsal color correspond to the usuall color found in Caspian Gulls (ranging from 5 to 5.5 on a Kodak grayscale).

At the time of writing the report none of the ringed birds were sighted outside Sfântu-Gheorghe. Two birds observed in the village were juveniles, probably born nearby.

A dump is present in the North of the village and attracts many gulls, which use the Black sea seaside as a dormitory. The resighted juveniles certainly stay there because of the dump which provide easy food in quantity.

Registration of bird movements by observation of the moon

Dieter Peter & Felix Liechti

Introduction

Nocturnal bird migration over Europe is dominated by small passerines [61, 62], many of them being long-distance migrators flying to sub-Saharan Africa. Their migratory routes have been studied through various ringing schemes for several decades [63, 64]. Based on these ringing results, Zink suggested that a majority of trans-Saharan migrants circumvent the Mediterranean Sea east and west, via the Gibraltar and Bosphore straits. In contrast, Moreau [65] proposed that most species cross the Mediterranean Sea and the Sahara desert on a broad front. Nocturnal passage has been observed directly at numerous sites by means of radar, moon watching and passive infrared techniques [66-70]. Up to now, only few data have been available for the European part of the eastern flyway (except [71-75]. It was therefore not possible to conclude whether the European branch of the eastern flyway is mainly directed towards the Middle East or crosses the eastern basin of the Mediterranean Sea on a broad front. The aim of this study was to fill part of this gap in south-eastern Europe.

Method

All presented data were collected by the method of "moonwatching" at Sfântu Gheorghe, delta of the Danube River (Latitude: 44°54" North, Longitude: 29°36" East of Greenwich).

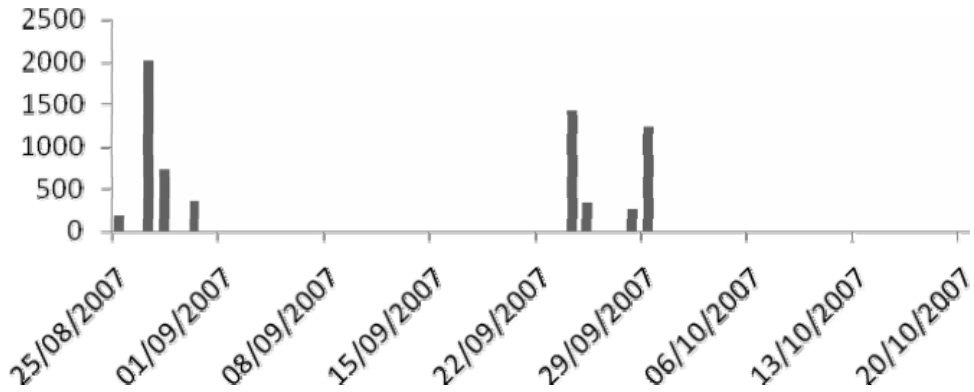
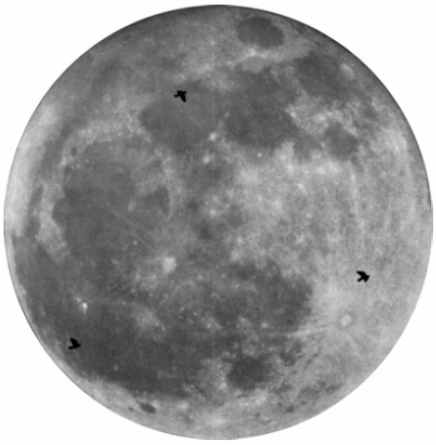


Figure 23 - Migration intensities MTR (in birds per km and hour) in the nights with observations. Nights without bars were nights where the moon was not visible because of meteorological conditions or nights more than 3 days before or past full moon night. The date of a night is represented by the current date at the beginning of the corresponding night.

The following pages show mean MTR and number of observed birds within the total observation time of every night with observations. A circular graph shows the relative distribution of flight directions in 30° intervals for each night. A second graph shows the absolute (MTR) altitudinal distribution of the observed birds in 200m intervals above the observation site.

Results

These first results on nocturnal bird migration across Romania are generally in line with observations from further south (Bulgaria) with main flight directions towards SSW. However, a considerable proportion of the nocturnal migrants seem to cross the Black Sea directly towards South (e.g. 27/28.8). This interesting point should be further investigated. It would be interesting to see if these southward movements occur only in the first half of the night, as observed at the coast of southern Spain, or all night.



Long-eared Owl diet

Marie Monney, Blaise Mulhauser & Frédérique Vaidie.

Introduction

The diet of the Long-eared Owl *Asio otus* during fall and winter has been extensively studied across Europe, Switzerland [76-78], central Europe [79, 80] and Eastern Europe countries such as Poland [81, 82], Yugoslavia[83] and Slovenia [84]. In Romania only, a dozen of studies at least are cited in a review of the status of this night raptor [85]. However none of these took place in the Danube delta. This part of the report is a first approach of the preys eaten by the Long-eared Owl in fall at the Black Sea border.

Material and Method

On October 25th 2007, a dormitory of 21 Long-eared Owl (counted when they leaved it) was discovered near Sfântu Gheorghe, in the main study area (Figure 1). This dormitory was located in a sandy area in the middle of a planted pineland *Pinus sp.* surrounded by Poplars *Populus sp*. near of a pasture area. Big areas of reeds are located in near the dormitory (1km) and the border of the black sea is 2km away only.

86 rejection pellets were collected 2 to 3 days apart in order to make the minimal disturbance to the individuals.

Identification of the preys was made using a binocular magnifying glass, from the skull biometrical measures and from the bone rests found in the pellets. Several scientific articles were used, especially for micro-mammals, in order to determine species from the rich East-European rodents (see table) [86-88]. The Danube delta is rich in micro-mammals, according to the "Atlas des Mammifères d'Europe" [89] 20 species of small rodents are present in this region.

Table 4 – List of rodent species present in the Danube delta area.

Latin name	French name	English name
Cricetus cricetus	Grand Hamster	Common hamster
Mesocricetus newtoni	Hamster de Newton	Romanian hamster
Arvicola terrestris	Campagnol terrestre	Water vole
Ondatra zibethicus	Rat musqué	Muskrat
Microtus agrestis	Campagnol agreste	Field vole
Microtus arvalis	Campagnol des champs	Common vole
Microtus rossiaemeridionalis	Campagnol d'Ondrias	Sibling vole
Microtus subterraneus	Campagnol souterrain	Common pine vole
Nannospalax leucodon	Spalax occidental	Lesser mole rat
Micromys minutus	Rat des moissons	Harvest mouse
Apodemus agrarius	Mulot rayé	Striped field mouse

Apodemus flavicollis	Mulot à collier	Yellow-necked mouse
Apodemus sylvaticus	Mulot sylvestre	Wood mouse
Apodemus uralensis	Mulot pygmée	Pygmy field mouse
Rattus norvegicus	Rat surmulot	Brown rat
Rattus rattus	Rat noir	Black rat
Mus musculus	Souris grise	Eastern house mouse
Mus spicilegus	Souris des steppes	Steppe mouse
Dryomys nitedula	Lérotin	Forest dormouse
Sicista subtilis	Siciste des steppes	Southern birch mouse

Results

From all the rejection pellets, the genus *Micromys* is the most abundant. The Harvest mouse *Microtus minutus* constitutes by itself 71% of the 146 preys.

The Sibling vole *Microtus rossiaemeridionalis* is the most appreciated substitution prey (13%). Initially considered as a sub-specie of the Common vole *Microtus arvalis*, this species is bigger in size and has a karyotypic difference [89].

The *Apodemus sp.* were also researched preys (6%). Determination of certain species was not possible, but the rests were not sufficiently complete to make all the statistical needed measurements. It was however possible to tell if they were from the Yellow-necked mouse *Apodemus flavicollus* or the Striped field mouse *Apodemus agrarius* species. Many individuals from the last specie were observed near the camp site and the Owl dormitory.

The Common pine vole *Microtus subterraneus* was a rare prey (1%) during this period of the year. The occasional species, classed as "others" in figure 24, are made out of Moles *Talpa sp.* and one Hydrophile *Hydrophilus sp.*, a big aquatic coleopteran.

Finally, some voles and several birds have not been identified to the specie level (6%).

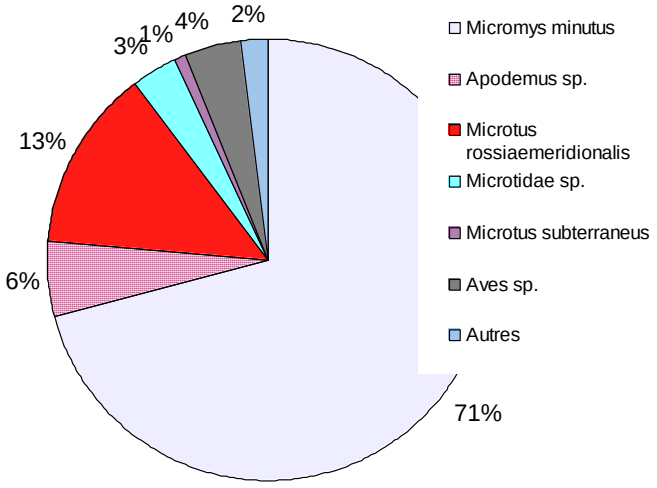


Figure 24 –Proportion of preys of Long-eared Owl Asio otus in Sfântu Gheorghe in October 2007.

Discussion

The Long-eared Owl *Asio otus* has usually a less varied diet than other Strigiformes[45]. In the majority of European countries where the diet was studied most of the preys came from the genus *Microtus*. In Romania it seems that this is also the case, although the *Mus* genus was also well represented. For example in Amara (44° 37' N, 27° 20'E), in the Ialomita province, near the city of Slobozia, located 180km away from Sfântu Gheorghe, more than 90% of the preys are constituted by the species Eastern house mouse *Mus musculus* for 51% and by the Common vole *Microtus* arvalis for 41%. These two species are also dominant in Tamdau, North-East of Bucharest (44° 28' N, 26° 33' E) in the province of Calarasi, but with smaller proportions of respectively 37 and 21% of the biomass (proportion calculated in function of the fresh weight of the different preys) [90]. In many of the cases, the main prey is the most abundant species [45, 78].

No studies in Europe and in Romania, except our short-term one, notes the Harvest mouse *Micromys minutes* as one of the main prey and rare are those that show its presence in the diet of the Long-eared Owl. The species is found for example in Tamadau (0.55% of the preys), located about 220km from Sfântu Gheorghe. This is the main originality of the diet of this night raptor in the Danube delta: this really small rodent is endangered in many countries but seem to be present in high density in the traditional faming style of Sfântu Gheorghe, where it is also able to take advantage of the big reeds and wet grassland to built its nest and breed.

The presence of invertebrates (2 insects in our case) in the pellets is rare. Some pupal stage ants [91] as well as Lombricids [92, 93] where found relatively rarely by other authors. The discovery of big Hydrophils in the pellets is a curiosity and will probably stay anecdotic.

In our case, the owls did not took advantage of the high presence of migratory passerine stopping over in the study site, at least during the end of October (see Passerine migration phenology). But the proportion of captured bird could certainly be higher in case of a cold period, which would make the hunt of small rodent more difficult.

Microorganisms on captured birds

Mircea G. Bogdan

Introduction

No real studies about microorganisms carried by birds during migration have been conducted. Actually it is not really well known which microorganisms are carried by birds and if birds play an important role in transportation of diseases, crop devastating and other sanitary problems. This study tries to give some hints on this domain.

Material and Methods

Microorganisms were taken from feathers and anal areas of captured birds in the area of Sfântu Gheorghe. Samples were kept 12 days at room temperature and then colonies were identified [94-98]. Samples were taken on 20.07.2007, 19.09. 2007, 21.09,2007 and 3.10 2007.

Results

The microorganisms are mostly species from the *Actinomycetes* and *Micromycetes* group.

Table 5 –Bird species and microorganism found, according to the date.

	Bird species	Microorganisms found		Bird species	Microorganisms found
19.09 2007			30.07 2007		
1	*Sylvia atricapilla*	-	39	*Parus major*	-
2	*Ixobrychus minutus*	*Cladosporium nigrellum*	40	*Parus coeruleus*	-
3	*Certhia familiaris*	*Actynomyces*, acarieni	41	*Sylvia atricapilla*	-
4	*Ficedula parva*	*Aspergillus niger*	42	*Hypolois icterina*	-
5	*Sylvia atricapilla*	-	43	*Parus coeruleus*	*Ulocladium atrum*
6	*Ficedula parva*	-	44	*Lanius collurio*	-
7	*Parus major*	*Alternaria*	45	*Phioscopus*	-
8	*Ficedula parva*	-	46	*Luscenia luscenia*	-
9	*Sylvia atricapilla*	*Actynomyces*	03.10.2007		
10	*Ficedula parva*	-	47	*Erithacus rubecula*	*Alternaria,Bacterii Candida*
11	*Ficedula parva*	*Alternaria gomphrenae*	48	*Erithacus rubecula*	*Bacterii, Penicillium,* acarieni
21.09.2007			49	*Fringilla coelebs*	*Bacterii, Rhodotorula*
12	*Sylvia atricapilla*	-	50	*Fringilla coelebs*	*Ulocladium, acarieni*
13	*Ficedula parva*	*Streptomyces, Alternaria*	51	*Erithacus rubecula*	*Penicillium*
14	*Ficedula parva*	*Actynomyces, Cladosporium herbarum, Alternaria tenuissima*	52	*Erithacus cubecula*	*Alternaria, Ulocladium*
15	*Sylvia atricapilla*	*Alternria sp.*	53	*Erithacus cubecula*	*Alternaria*
16	*Ficedula parva*	*Cladosporium herbarum*	54	*Phylloscopus callytita*	-
17	*Sylvia atricapilla*	-	55	*Phoenicurus phoenicurus*	*Bacterii*
18	*Sylvia atricapilla*	-	56	*Turda philomelos*	-

19	*Sylvia atricapilla*	-	57	*Erithacus rubecula*	*Alternaria tenuissima*
20	*Alcedo athis*	-	58	*Phoenicurus phoenicurus*	*Bacterii, Cladosporium*
21	*Ficedula parva*	-	59	*Phylloscopus collybita*	-
22	*Phylloscopus trochilus*	-	60	*Erithacus rubecula*	*Bacterii, Cladosporium, Altenaria*
22.09.2007			61	*Parus major*	*Cladosporium*
23	*Ficedula parva*	-	62	*Ficedula parva*	*Cladosporium*
24	*Sylvia atricapilla*	-	63	*Regulus regulus*	*Alternaria,Cladoporium, Phoma*
25	*Phoenicurus phoenicurus*	-	64	*Sylvia atricapilla*	*Ulocladium*
26	*Sylvia atricapilla*	*Alternaria tenuissima*	65	*Erithacus cubecula*	*Ulocladium, Alternaria, Cladosporium*
27	*Turdus merula*	-	66	*Pica pica*	*Ulocladium*
28	*Muscicapa striata*	-	67	*Erithacus rubecula*	*Ulocladium, Alternaria*
29	*Parus major*	-	68	*Erithacus rubecula*	*Bacterii, Alternaria. Phoma*
30	*Erithacus rubecula*	*Alternaria tenuissima*	69	*Picus canus*	*Bacterii, Alternaria, Ulocladium*
31	*Sylvia atricapilla*	-	70	*Erithacus rubecula*	*Alternaria, Cladosporium*
32	*Ficedula parva*	*Scytalidium sp., Mucor sp.*	71	*Erithacus rubecula*	*Ulocladium, Candida*
29.07.2007			72	*Turdus philomelus*	*Bacterii, Penicillium*
33	*Erithacus cubecula*	*Alternaria tenuissima*	73	*Phoenicurus phoenicurus*	-
34	*Sylvia atricapilla*	-	74	*Erithacus rubecula*	*Cladosporium*
35	*Sylvia atricapilla*	-	75	*Phylloscopus collybita*	*Bacterii, Cladosporium, Phoma*
36	*Acrocephalus palustris*	-	76	*Ficedula parva*	
37	*Lanius collurio*	*Periconia laminella*	77	*Ficedula parva*	*Alternria, Cladosporium*
38	*Hypopois istuina*	-	78	*Sylvia atricapilla*	*Alternria, Cladosporium*
			79	*Phoenicurus phoenicurus*	*Alternaria*
			80	*Phylloscopus callytita*	*Bacterii, Alternaria, Cladopsoirum*
			81	*Ficedula parva*	*Rhodotorula*

Patterns of variation in abundance of feather mites on birds

Peter L. Pap & Istvan Kovacs

Introduction

Feather mites are one of the most widespread groups of symbionts of the birds in terms of occurrence and intensity of infestation[99], but little is known about their relationship with the host, their general ecology and factors affecting their distribution [100-104]. Birds harbor an abundant community of feather mites, and observations suggest that prevalence and intensity of infestation vary among species. Previous observations on the distribution of feather mites on bird species suggests that proximal factors, like the quantity of oil produced by the uropygial gland and the environmental factors like humidity and/or temperature determine distribution and occurrence of feather mites on birds [105].

Questions

1. Does parasitism by feather mites vary between species?

2. Are climatic (humidity and/or temperature) (and potentially other) factors responsible for differences in infestation among species living in different environmental condition?

3. Is there any relationship between the size of the uropygial gland and the abundance of feather mites?

Results

387 collected data from the following avian species during our staying in Sfântu Gheorghe: *Acrocephalus arundinaceus* (9 samples), *A. palustris* (4), *A. schoenobaenus* (6), *A. scirpaceus* (2), *Alcedo atthis* (1), *Anthus campestris* (1), *A. trivialis* (3), *Caprimulgus europaeus* (1), *Corracias garrulus* (1), *Dendrocopos major* (5), *Dryocopus martius* (1), *Falco subbuteo* (1), *Ficedula albicollis* (5), *F. hypoleuca* (5), *F. parva* (18), *Fringilla coelebs* (1), *Hippolais icterina* (8), *Jynx torquilla* (5), *Lanius collurio* (36), *Locustella fluviatilis* (2), *L. luscinioides* (4), *Luscinia luscinia* (40), *Motacilla alba* (5), *M. flava* (1), *Muscicapa striata* (28), *Oriolus oriolus* (4), *Parus caeruleus* (20), *P. major* (1), *Passer montanus* (9), *Phoenicurus ochruros* (1), *P. phoenicurus* (1), *Phylloscopus trochilus* (41), *P. sibilatrix* (2), *Picus canus* (5), *Saxicola rubetra* (8), *Sylvia atricapilla* (33), *S. borin* (20), *S. communis* (19), *S. curruca* (21), *S. nisoria* (3), *Tringa nebularia* (2), *T. ochropus* (1), *Turdus philomelos* (1), *Upupa epops* (2).

Since the data collected was not sufficient for a comparative statistical analysis, the study will continue in 2008.

Birds as reservoirs and disseminators of tick-borne pathogens

Elena Lommano

This study is conducted by the Laboratory of Parasitology, Neuchâtel University, under the direction of Dr. Lise Gern in collaboration with the Swiss Ornithological Instiute, Sempach.

Introduction

Ticks are blood feeding ectoparasites in class *Arachnida*. Approximately 850 species have been described worldwide. Its main habitat is forests and grassland areas with sufficient rainfall. By the pathogens they can transmit, ticks bring on public sanitary problems and important economic loose in cattle industry.

In Europe, *Ixodes ricinus* is the main species that affects human. It can transmit a lot of different pathogens such as bacteria, virus or protozoans. The most frequent diseases transmitted by ticks are Lyme borreliosis and TBE (Tick-Borne Encephalitis). Borreliosis is a quite common bacterial disease causing dermatological, articular and neurological troubles, but never death. TBE has a viral origin and is less frequent, however it can be lethal. In nature, virus infected ticks occur in natural foci or endemic areas.

The vertebrate tick's hosts are very important in the ecology of these diseases for two reasons. They permit the survival of the natural tick population by providing resources during the blood meal and they act as reservoirs of the pathogens allowing them to multiply. The reservoir competence of the European blackbird *Turdus merula* for the Lyme *Borreliosis spirochetes* has already been demonstrated [106]. Concerning TBE, no study has demonstrated the role played by birds as reservoir for the virus yet. However migratory birds can transport infected ticks over long distances and could be responsible for new foci emergence.

The goal of this study is to measure the implication of birds in the ecology of the TBE virus and other pathogens transmitted by ticks like *Borrelia spp.*, *Rickettsia spp.*, *Coxiella burnetti*, *Ehrlichia spp.* and *Anaplasma spp.*

Method

Ticks are collected on migratory birds and analyzed in laboratory to assess pathogen prevalence.

Results

24 ticks from the following avian species were collected: *Parus major* (8 samples), *P. caeruleus* (1), *Sylvia curruca* (3), *S. atricapilla* (1), *Phoenicurus phoenicrus* (3), *Turdus merula* (3), *Erithacus rubecula* (2), *Phylloscopus collybita* (1), *Acrocephalus palustris* (1), *Emberiza schoeniclus* (1).

One tick was also collected on a human (1).

Spiders population

Maxime Leuchtmann

Introduction

Spiders are ectotherm arthropodes (cold-blooded). These organisms have short moving possibilities and are sensitivity to climatic conditions and habitat structure. Thus they can be used as indicators on the state of conservation of habitats [107-110]. In spite of these characteristics, spiders are forgotten in account for biodiversity conservation, a characteristic they share with many arthropods [111]. Moreover, the knowledge of these animals in Romania is extremely limited compared to other countries like United Kingdom and Scandinavia.

This inventory of Spiders taxa is a contribution to the naturalistic knowledge of the Danube delta.

Question

What is the ground spiders' community made of?

Material and Methods

We concentrated our efforts on spider on the ground moving community. We tried to complete these data by several visual researches and by catching tree spiders with beating sheets disposed under trees. Spiders on the ground were captured using pitfall traps (Baber type). Traps used were plastic cans of 2.5dl (7cm diameter) buried at ground level and filled to the fifth with 70° ethanol. Ethanol has a conservative role and is not attractive for the collected species [112]. Traps were disposed along 20m long transects in 8 of the principal habitats surrounding the camp. Each transect was composed of 10 traps disposed 2 meter apart, making the total trap number of 80 pieces.

Captures were realized continuously from 02/10/07 to 08/11/07 for a total of 37 days. Traps were emptied and reinitiated each 7 days (5 collects per transect). Each time, the trap content was put in airtight flasks containing 70° ethanol. Sample sorting was conducted in a laboratory by placing spiders form the same transect in bottles containing 70° ethanol.

After the sampling phase, only adult spiders will be identified.

Identification of adult specimen will be done by analysis of the genitalia (pedipalps for males and epigyne for females) under a binocular magnifying glass (maximum magnification 80x) and using different reference books of central and occidental Europe [113-119]. Immature specimens will be conserved but excluded from this work due to uncertainty of identification. After identification, specimens will be conserved in micro-tubes containing 70° ethanol. The results of this sampling work will be entered in Biota2©, a specific database developed for studies of biodiversity.

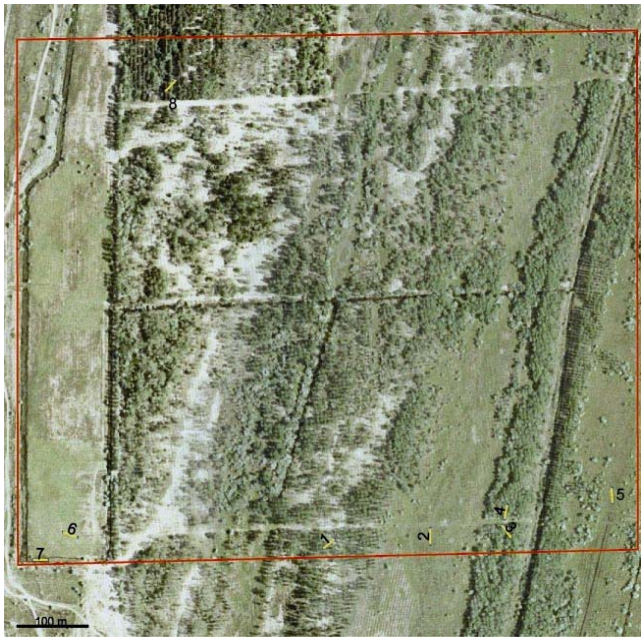


Figure 25 – Map of the area with le places where the traps were placed. The study area is surrounded by a red-line. Aerial image, courtesy of Marine and Fluvial Research Station, Sfântu Gheorghe.

Results

As identification has not begun, no data concerning the number of species can be made, however, a total of 200 specimens have been collected.

We can already say that this type of inventory must be followed up to have more information and that ideally, it must be performed during the whole period of the camp, from 15/07 to 15/11. To complete the species list and allow a statistical treatment, it will be necessary to reproduce scrupulously the protocol and in the exact place where transects took place.

Table 6 – Transect numbers and type of habitats of the transects

Transect n°	Habitat
1	Poplar
2	Rush and carex
3	Common hornbeam with nude soil
2	Common hornbeam with herbaceous soil
5	Rush
6	Steppe
7	Reed
8	Pine-wood

Inter-associative exchange and formation

Boris Droz

During the 4 months, 84 birdwatchers (Figure 26) from 10 countries worked at the ringing station. A mean of 16 people were present together during this period. Of the peoples who came, 16 were ringer, 38 apprentice ringers, and 30 novices in ringing. 1'916 working-days were done for a total of 15'346 hour of voluntary work (15'090 during the day and 256 at night).

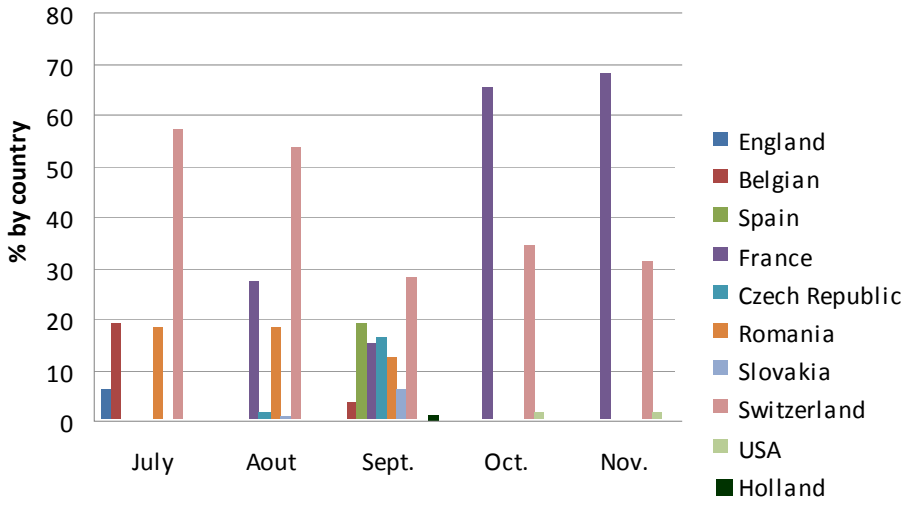


Figure 26 – Representation of the origin of participants per month.

Marie Monney stayed for 3.5 months at the ringing station. She made her practice for entering high school. Her tasks were planning of the budget and non-scientific activities related to the station.

All workers have writen short news on the camp blog (http://gdJ.bleublog.ch). This blog is very representative of the general interest generated by the camp. The blog has been visited 11'090 times in fourth months by visitor from 9 countries (England, Belgian, Spain, France, Czech Republic, Romania, Slovakia, Switzerland and USA). The blog is still visited by about 2'000 times a month.

Some worker wrote news about the camp in their regional newspaper or journals. [120-123]

Account for 2007

Out		In	
Spendings before the camp		Private donations	SFr. 1'400
Various materials	SFr. 16'124	Collectivity donations	SFr. 14'709
Office	SFr. 1'117	Participants donations	SFr. 1'015
Pharmacy	SFr. 171	Total donations	SFr. 17'124
Transport materials Switzerland to Romania	SFr. 1'000	Paid by the GdJ	SFr. 13'881
Spendings in Romania			
Food	SFr. 10'655		
Transports	SFr. 1'659		
Others	SFr. 279		
Total-fees	**SFr. 31'005**		

Budget for 2008

Ringing and office material	SFr. 3'279
Tools	SFr. 758
Kitchen material	SFr. 1'452
Camping material	SFr. 3'350
Pharmacy	SFr. 354
Transport materials Switzerland to Romania	SFr. 1'000
Charges in Sfântu (food, transportation, various)	SFr. 12'600
Transport to the Island	SFr. 7'550
Total	**SFr. 30'342**

Conclusion

This preliminary report shows the importance of the work in Romania during the fall 2007. The large participations of peoples from different countries proves the big interest induced by the camp and show the opportunities of co-operations between peoples. Many studies were only made possible by the participation of the volunteer and their interest in sharing their knowledge to broaden the scope of the initial project. The camp also generated many new contacts which helped us analyze the data.

The most important study of this year was the study of the phenologies of many migrant passerine species. Our data furnish a good frame of the migration patter in this part of Eastern Europe. However, local conditions of seizing and of migration are too uneven to give relevant results in only one year of sampling.

The second edition of the camp is already behind and new data has been collected. They will refine the resuls of our study.

This study is supported by

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"Gheorghe Ionescu Şişeşti"

Institul de Cercare Dezvoltare Pentru, Research and Development

Protectia Plantelor, Institute for Plant Protection

Asociația pentru Protecția Păsărilor şi a Naturii "Grupul Milvus"

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SFÂNTU GHEORGHE
MARINE AND FLUVIAL RESEARCH STATION

Marine and Fluvial Research Station, Department of Geography, University of Bucharest, Sfântu Gheorghe

Acknowledgements

We would like to specially thank Bucurlescu Bogdan and Adnana, the two persons in Sfântu Gheorghe that helped us in all conditions during the whole duration of the camp.

We would like to thank Mircea Gogu Bogdan, first for allowing us to conduct this study in the reserve of Sfântu Gheoghe, then for all the paperwork he did for us, for his ability in solving complicated situations and for his support during the duration of the camp.

We thank the Milvus group, especially Istvan Kovacs and Làsslio Pap Peter who kindly provided us 2'000 Romanian rings when we ran short of rings. They did actively work for the camp and the present report. Thanks for the cooperation work and for welcoming us in their country.

Our thanks also goes to Laesser Jacques, Wipraechtiger Elisabeth, Gilléron George, Riesen Walti, Numakura Josette, Andréazza Olivier, Droz Pierre-Yves, Schaer Monique, Sandoz Danièle, Woodtli-Lerch Wilhelm, Eggenberger Hans, Torréfaction de Cafés "La Semeuse", Menetrey Yves, Henrioux Jean-Daniel, Etat de Neuchâtel: M. Bulla, Antoinette, Hofer Joel, Regamey Jean-Laurent and the Swiss ornithological Institute for the material donations.

Manor Yverdon, Hoffmann Luc, Bureau d'ingénieurs et de géologues Tissières SA, the Droz family, Tombet Anne-Lise, Fondation des Grangettes, Andrée et Claude Moser, Centre d'Etude et de Protection des Oiseaux, Bienne et environs (CEPOB), Albert Bassin, Bernard Lugrin and Bottin Philippe for the donation of money.

Janine Bauermeister, Droz Christelle, Leuba Sibil and Droz Josette for having made the bird pockets.

Dussaix Cyrille for the determination of some Dipters.

Turrian François, Laesser Jacques and Posse Bertrand for the proof reading of the report.

Amez-Droz Bastien for the data entering and the management of the blog.

Reed Mike for its collaboration and the communication of the Great Tit informations

The family Bastardot, Ceausoglu Cristian, Florin Filip, Capota Paula, the family Auroi and Jeanmonod Jacques for their support.

Desiere Sam, Lehane Simon, Alexandre, Vangansbeke Maarten, Geboes Anne-Laure, Lehane Xavier, Bartonicek Jan, Hromádka Kamil, Vymazal Martin, Jamie Gabriel, Barataud Julien, Barre Pierrick, Binetruy Marion, Blanc Jean-François, Boutolleau Yann, Colombo Raphaël, Guillet Willy, Hajdukjewicz Sandrine, Harter Nicolas, Henry Jérôme, Hinz Mélanie, Lambert Mathilde, Le Meur Sybile, Leuchtmann Maxime, Leyssère Elodie, Loubon Maxime, Massé Tony, Minéry Nicolas, Miskiw Guillaume, Perpina Karen, Renaudet Ludovic, Rouault Jean-Pierre, Schiffli Odile, Sola Elise, Théron Franck, Tiné Rémi, Vaidie Frédéric, Zwald Jérémy, Mathkor Yahya, Bugariu Sebastian, Dehelean Luca, Gheba Raul, Istvan Kovacs, Làsslio Pap Peter, Maranda Anamaria, Ochiane Diana, Parau Liviu, Popovoci Ramona, Ràducescu Lavinia, Sandu Andrea, Teodor Ion, Tescaru Marius, Turcokova Lucia, García-Cervigón Morales Ana Isabel, Díaz Pastor Álvaro, Garcia Monica, Herguido Estela, Pavon Gozalo Pilar, Bastardot Marc, Berthold David, Beuchat Samuel, Bonnard Jeanne-Charlotte, Bornand Christophe, Bueguelin Romain, Delavy Thomas, Duplain Jérôme, Fuerst Romain, Guntern Jodok, Keller Stephane, Martinez Nicolas, Monney Marie, Parisod Aristide, Perrenoud Benoît, Pochelon Alexis, Progin Samuel, Progin David, Rime Yann, Stutz Sonja, Tercier Charles and Ohare Nancy for their participation to the camp.

…and all other peoples we might have forgotten and who helped us making this outstanding camp!

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Appendix 1

Additional measurements and characters checked on some species

Species	Check-list	Additionnal measurement	Litterature
Emberiza sch*[oe]*niclus		Depth, width and length of bill	Schmitz 2006
***Phoenicurus* sp.**	Underwing color and wing pattern, to check the possibility of an eastern subspecies or hybrid	Wing-tip to first secondary, P2=	Nicolai 1996
Lanius excubitor	Possibility for the tree subspecies (excubitor, homeyeri & sibiricus)		Conzemius 2001
Ficedula hypoleuca, albicilla, semitorquata	Species identification keys	Moult, wing formula, lenghts of white on primary patch (A)	Mild 1993
Ficedula parva		Moult	
Phyloscopus collybita	Key for the subspecies ID		Clement 1998
Coccothraustes coccothraustes	Key characters for ageing		Fornasari 1994
Acrocephalus scirpaceus, Acrocephalus paludicola	Bio indice by Svensson Tail for Acrsci fuscus with Pearson	Width and length Bill, wing-tip to first secondary, hind claw length, Wilson index, wing formula, emargination	Wilson 2001, Pearson 2002
Acrocephalus dum, Acrocephalus agricola		Length Bill, wing formula, emargination	Bradshaw 2001
Hippolais sp.			Shirihai 1996
Hippolais palida		Depth, width and length Bill, P2=	Svensson 2001
Hippolais rama, Hippolais caligata		Length of bill, wing formula	
Sylvia curruca	Wing formula, tail		Shirihai 2001
Aegithalos caudatus		Black on head (White, Intermediar or Black)	Svensson 1992
All limicola		Length Bill	Prater 1977

Appendix 2

List of captured birds

n°	English name	Latin name	Number	First catching	Mediane	Last catching
1	Little Bittern	Ixobrychus minutus	2	10.09.		19.09.
2	Mallard	Anas platyrhynchos	1	18.09.		
3	Eurasian Sparrowhawk	Accipiter nisus	45	23.09.	26.10.	08.11.
4	Levant Sparrowhawk	Accipiter brevipes	5	08.08.	09.09.	14.09.
5	Common Buzzard	Buteo buteo	1	30.10.		
5b	Steppe Buzzard	Buteo buteo vulpinus	1	02.10.		
6	Common Kestrel	Falco tinnunculus	4	03.08.	08.09.	15.09.
7	Red-footed Falcon	Falco vespertinus	3	27.07.	27.07.	01.08.
8	Eurasian Hobby	Falco subbuteo	8	26.07.	11.08.	11.09.
9	Common Quail	Coturnix coturnix	1	29.10.		
10	Spotted Crake	Porzana porzana	1	08.10.		
11	Jack Snipe	Lymnocryptes minimus	2	08.10.		09.10.
12	Common Snipe	Gallinago gallinago	17	07.10.	09.10.	30.10.
13	Eurasian Woodcock	Scolopax rusticola	5	02.10.	24.10.	31.10.
14	Common Greenshank	Tringa nebularia	3	17.08.	23.08.	23.08.
15	Green Sandpiper	Tringa ochropus	8	14.08.	17.08.	09.09.
16	Caspian Gull	Larus cachinnans	11	10.08.	13.08.	10.09.
17	Long-eared Owl	Asio otus	3	24.10.	28.10.	30.10.
18	European Nightjar	Caprimulgus europaeus	14	05.08.	09.09.	05.10.
19	Common Kingfisher	Alcedo atthis	18	28.07.	13.08.	20.10.
20	European Bee-eater	Merops apiaster	9	01.08.	07.09.	09.09.
21	European Roller	Coracias garrulus	22	26.07.	31.07.	16.08.
22	Eurasian Hoopoe	Upupa epops	11	29.07.	05.08.	24.08.
23	Eurasian Wryneck	Jynx torquilla	10	18.08.	22.08.	10.09.
24	Grey-headed Woodpecker	Picus canus	11	30.07.	03.09.	02.10.
25	Black Woodpecker	Dryocopus martius	4	26.07.	07.08.	02.09.
26	Great Spotted Woodpecker	Dendrocopos major	14	28.07.	17.08.	16.10.

27	Syrian Woodpecker	Dendrocopos syriacus	1	09.08.		
28	Lesser Spotted Woodpecker	Dendrocopos minor	3	01.08.	06.08.	07.09.
29	Sand Martin	Riparia riparia	2	06.09.		06.09.
30	Barn Swallow	Hirundo rustica	2	22.09.		25.09.
31	Common House Martin	Delichon urbicum	3	06.09.	06.09.	07.09.
32	Tawny Pipit	Anthus campestris	1	03.09.		
33	Tree Pipit	Anthus trivialis	15	21.08.	05.09.	03.10.
34	Water Pipit	Anthus spinoletta	1	31.10.		
35	Western Yellow Wagtail	Motacilla flava	1	24.08.		
36	White Wagtail	Motacilla alba	25	01.08.	06.09.	31.10.
37	Winter Wren	Troglodytes troglodytes	65	13.10.	30.10.	08.11.
38	Dunnock	Prunella modularis	33	13.10.	26.10.	07.11.
39	European Robin	Erithacus rubecula	1172	01.08.	27.10.	08.11.
40	Thrush Nightingale	Luscinia luscinia	306	22.07.	16.08.	23.09.
41	Common Nightingale	Luscinia megarhynchos	1	01.08.		
42	Bluethroat	Luscinia svecica	3	10.09.	18.09.	02.10.
43	Black Redstart	Phoenicurus ochruros	60	13.10.	27.10.	04.11.
44	Common Redstart	Phoenicurus phoenicurus	188	28.07.	29.09.	27.10.
44b	Ehrenberg's Redstart	Phoenicurus ph. samamisicus	1	29.07.		
45	Whinchat	Saxicola rubetra	22	18.08.	06.09.	29.09.
46	Eurasian Stonechat	Saxicola torquatus	20	24.09.	30.10.	03.11.
47	Common Blackbird	Turdus merula	439	28.07.	24.10.	08.11.
48	Fieldfare	Turdus pilaris	8	16.10.	04.11.	07.11.
49	Song Thrush	Turdus philomelos	396	26.07.	24.10.	08.11.
50	Redwing	Turdus iliacus	21	18.10.	30.10.	07.11.
51	Mistle Thrush	Turdus viscivorus	6	03.10.	13.10.	16.10.
52	River Warbler	Locustella fluviatilis	9	31.07.	28.08.	07.09.
53	Savi's Warbler	Locustella luscinioides	16	28.07.	19.08.	31.10.
54	Sedge Warbler	Acrocephalus schoenobaenus	12	12.08.	25.08.	05.10.
55	Paddyfield Warbler	Acrocephalus agricola	1	03.08.		
56	Marsh Warbler	Acrocephalus palustris	59	23.07.	13.08.	17.09.
57	Eurasian Reed Warbler	Acrocephalus scirpaceus	14	26.07.	11.08.	14.09.

	Marsh/Reed Warbler	Acrocephalus sp	1	13.08.		
58	Great Reed Warbler	Acrocephalus arundinaceus	23	27.07.	17.08.	09.09.
59	Olivaceous Warbler	Hippolais pallida	46	21.07.	29.07.	20.08.
60	Icterine Warbler	Hippolais icterina	73	21.07.	22.08.	28.09.
61	Barred Warbler	Sylvia nisoria	39	24.07.	14.08.	07.09.
62	Lesser Whitethroat	Sylvia curruca	207	21.07.	12.08.	05.10.
63	Common Whitethroat	Sylvia communis	87	30.07.	25.08.	30.09.
64	Garden Warbler	Sylvia borin	237	21.07.	03.09.	04.10.
65	Eurasian Blackcap	Sylvia atricapilla	485	01.08.	10.09.	30.10.
66	Wood Warbler	Phylloscopus sibilatrix	44	25.07.	02.09.	30.09.
67	Common Chiffchaff	Phylloscopus c. collybita	207	22.09.	14.10.	01.11.
67b	Nordic Chiffchaff	Phylloscopus c. abietinus	29	02.10.	24.10.	01.11.
67c	Siberian Chiffchaff	Phy. c. fulvescens/tristis	1	02.10.		
68	Willow Warbler	Phylloscopus t. trochilus	627	27.07.	03.09.	07.11.
68b	Willow Warbler	Phy. t. acredula	52	03.08.	27.09.	27.10.
68c	Willow Warbler	Phy. t. yakutensis	6	09.09.	25.09.	28.09.
69	Pallas's Warbler	Phylloscopus proreglus	1	27.10.		
70	Goldcrest	Regulus regulus	218	23.09.	27.10.	08.11.
71	Firecrest	Regulus ignicapilla	7	13.10.	30.10.	03.11.
72	Spotted Flycatcher	Muscicapa striata	250	03.08.	09.09.	05.10.
73	Red-breasted Flycatcher	Ficedula parva	347	21.08.	22.09.	03.11.
74	Collared Flycatcher	Ficedula albicollis	37	05.08.	18.08.	13.09.
75	European Pied Flycatcher	Ficedula hypoleuca	21	01.08.	25.08.	28.09.
76	Bearded Reedling	Panurus biarmicus	32	07.10.	06.11.	07.11.
77	Long-tailed Bushtit	Aegithalos caudatus	68	21.07.	20.08.	27.10.
78	Blue Tit	Parus caeruleus	302	22.07.	03.09.	08.11.
79	Great Tit	Parus major	205	21.07.	11.09.	08.11.
80	Eurasian Treecreeper	Certhia familiaris	9	14.09.	15.10.	07.11.
81	Eurasian Penduline Tit	Remiz pendulinus	2	01.11.		07.11.
82	Eurasian Golden Oriole	Oriolus oriolus	33	27.07.	05.08.	10.09.
83	Red-backed Shrike	Lanius collurio	449	25.07.	17.08.	04.10.

84	Lesser Grey Shrike	Lanius minor	1	16.08.		
85	Eurasian Magpie	Pica pica	12	26.07.	06.08.	07.11.
86	Hooded Crow	Corvus corone cornix	1	30.07.		
87	Common Starling	Sturnus vulgaris	13	28.10.	28.10.	28.10.
88	House Sparrow	Passer domesticus	3	18.08.	02.11.	02.11.
89	Eurasian Tree Sparrow	Passer montanus	40	27.07.	11.08.	04.09.
90	Common Chaffinch	Fringilla coelebs	64	22.07.	05.10.	07.11.
91	Brambling	Fringilla montifringilla	1	02.10.	02.10.	02.10.
92	European Greenfinch	Carduelis chloris	6	01.11.	01.11.	07.11.
93	European Goldfinch	Carduelis carduelis	2	03.08.		13.09.
94	Eurasian Siskin	Carduelis spinus	28	22.09.	28.10.	08.11.
95	Eurasian Bullfinch	Pyrrhula pyrrhula	1	04.11.		
96	Hawfinch	Coccothraustes coccothraustes	3	16.10.	30.10.	01.11.
97	Yellowhammer	Emberiza citrinella	5	25.10.	26.10.	30.10.
98	Common Reed Bunting	Emberiza schoeniclus	27	26.07.	30.10.	07.11.
99	Black-headed Bunting	Emberiza melanocephala	2	26.07.		30.07.
		Total	**7494**			

Appendix 3

Habitat recordings

Use the habitat recording form

Habitat 1 (code 1)	Habitat 2 (code 2)
A REEDBED	1 Mainly Reeds (*Phragmites* spp) 2 Mainly Reedmace (*Typha* spp) 3 Mainly Rushes (*Juncus* spp) 4 Mainly Sedges (*Carex* spp)
B MIXED SCRUB & REEDS	1 Mainly Reeds (*Phragmites* spp) 2 Mainly Reedmace (*Typha* spp) 3 Mainly Rushes (*Juncus* spp) 4 Mainly Sedges (*Carex* spp) 5 Mainly bushes
C WET SCRUB	1 Mainly bushes without reeds 2 Mainly bushes with reeds 3 Mainly herb layer 4 Half bushes, half herb layer 5 Mainly grass layer
D DRY SCRUB	1 Mainly bushes 2 Mainly herb layer 3 Half bushes, half herb layer 4 Mainly grass layer
E WOODLAND	1 Broadleaved with scrub (bushes) layer 2 Broadleaved without scrub (bushes) layer 3 Coniferous with scrub (bushes) layer 4 Coniferous without scrub (bushes) layer 5 Mixed with scrub (bushes) layer 6 Mixed without scrub (bushes) layer
F OTHER	1 Mountaintop 2 Heathland 3 Acid bog 4 Isolated patch of scrub or trees in open habitat 5 Farmland 6 Saltwater marsh 7 Other (please specify)

Height (code 3)

Average maximum height of the vegetation within 20m of the net.

1 Less than 1.5m
2 1-2m
3 2-3m
4 3-6m
5 6-9m
6 Greater than 9m

Standing Water (code 4)

Presence and depth of standing water in the area 20m either side of the net.

1 Dry (no standing water)
2 Dried out (was wet earlier in the season) (N.B. season = spring or autumn)
3 Standing water - depth 1-10cm
4 Standing water - depth 11-30cm
5 Standing water - depth 31-100cm
6 Standing water - depth >100cm
7 Flowing water - small stream (depth < 20cm)
8 Flowing water - river (depth > 20cm)

Presence of fruit (code 5)

Presence of berries and other fruit in the area 20m either side of the net

0 No fruit
1 Some fruit (less than 100 berries within 20m of net)
2 Much fruit (more than 100 berries within 20m of net)

Type of fruit (code 6 & 7)

List the two commonest fruits.

0 No fruit
1 Juniper (Juniperus spp)
2 Yew (Taxus spp)
3 Holly (Ilex spp)
4 Spindle (Euonymus spp)
5 Buckthorn (Rhamnus catharticus & Frangula alnus)
6 Brambles (Rubus spp; includes raspberry, blackberry, strawberry)
7 Roses (Rosa spp; includes dog rose and sweet briar)
8 Cherries and Plums (Prunus spp; includes blackthorn, wild cherry)
9 Hawthorn (Crataegus spp)
10 Sorbus shrubs (Sorbus spp; includes rowan, whitebeam)
11 Gooseberry family (Ribes spp; includes blackcurrant and redcurrant)
12 Sea Buckthorn (Hippophae rhamniodes)
13 Misteltoe (Viscum album)
14 Strawberry Tree (Arbutus unedo and other Rhododendron shrubs)
15 Ivy (Araliaceae family like Hedera helix)
16 Olive family (includes Privet Ligustrum vulgare and cultivated olive Olea europaea)
17 Nightshades (Solanum spp; includes S. nigrum and S. dulcamara)
18 Honeysuckle family (Caprifoliaceae incl. Elderberry Sambucus spp, Viburnum spp, Lonicera spp)
19 Salvadora spp (Africa)
20 Nitraria spp (Africa)
21 Introduced/exotic species (e.g. Myoporum)
22 Mixed fruit (use this code if more than 2 species are common)
50 Russian Silverberry (Elaeagnus angustifolia)
99 Unknown (use this code if you do not know the names of the fruit)

Habitat Management (code 8)

0 No management
1 Annual 'cut-back' of vegetation around the nets (for standardization purposes)
2 Main vegetation completely cut back at least once per year (e.g. burning or reed cutting)
3 Grazing by domestic animals
4 Coppicing on woodland
5 Normal forest management
9 Unknow

Appendix 4

Habitat and net description

NW_HABITAT_1	NW_HABITAT_2	NW_HEIGHT [m]	NW_WATER	NW_FRUIT_PRES	NW_FRUIT_TYPE_1	NW_FRUIT_TYPE_2	NW_MANAGEMENT	NET_NO	NET_LENGTH [m]	NET_HIGH [m]	SE_HABITAT_1	SE_HABITAT_2	SE_HEIGHT [m]	SE_WATER	SE_FRUIT_PRES	SE_FRUIT_TYPE_1	SE_FRUIT_TYPE_2	SE_MANAGEMENT	POCKET
A	1	1.5	1	0			0	0.01	9	2	D	3	3.5	1	2	50		0	4
D	3	2	1	2	50	12	0	0.02	12	2	A	1	1.5	3	0			0	4
A	1	2	1	0			0	0.03	6	2	A	1	2	3	0			0	4
E	1	7	1	2	50		0	1.01	9	2	E	1	7	1	2	50		0	4
E	1	7	1	2	50		0	1.02	9	2	E	1	7	1	2	50		0	4
E	1	6.5	1	1	50		0	1.03	9	2	E	1	8	1	1	50	12	0	4
E	1	7	1	2	50		0	2.01	9	2	D	2	5	1	2	50	7	0	4
E	1	8	1	2	50		0	2.02	9	2	E	1	3	1	2	50		0	4
E	1	9	1	2	50		0	2.03	9	2	E	1	4	1	2	50		0	4
E	1	8	1	1	50		0	3.01	9	2	E	1	6	1	1	50		0	4
E	1	7	1	1	50		0	3.02	9	2	E	1	5.5	1	1	50		0	4
E	1	7	1	1	50		0	3.03	9	2	D	1	6	1	1	50		0	4
D	3	6	1	0			0	3.04	9	2	D	1	5	1	1	50	12	0	4
D	4	5	1	0			0	3.05	9	2	D	4	2.5	1	2	50	12	0	4
D	4	1	1	1	50		0	3.06	9	2	D	4	2	1	1	50		0	4
D	4	4	1	2	50		0	3.07	9	2	D	4	3	1	1	50		0	4
D	4	3	1	1	50		0	4.01	9	2	D	4	3	1	0			0	4
D	4	3	1	1	50		0	4.02	9	2	D	4	2	1	0			0	4
D	4	3	1	1	50		0	4.03	9	2	D	4	3	1	0			0	4
D	4	7	1	0			0	5.01	6	2	D	3	7	1	2	50		0	4
D	4	6	1	1	50		0	5.02	9	2	D	3	6.5	1	1	50		0	4
D	4	4.5	1	0			0	5.03	6	2	D	3	2	1	0			0	4
E	1	8.5	1	1			0	6.01	6	2	E	1	8	1	2	50		0	4

E	1	8.5	1	0			0	6.02	9	2	D	3	3	1	2	50		0	4
E	1	9	1	1	7		0	6.03	9	2	D	3	1.5	1	0			0	4
E	1	8	1	2	50		0	6.04	9	2	D	1	4.5	1	1	50		0	4
E	1	5	1	2	50		0	7.01	9	2	D	1	4	1	2	50		0	4
E	1	8	1	2	50	12	0	7.02	9	2	D	1	5	1	2	50	12	0	4
E	1	8	1	2	12		0	7.03	6	2	D	1	2.5	1	2	12	50	0	4
D	3	4	1	0			0	8.01	6	2	E	1	6	1	1	50		0	4
D	3	5	1	1	50		0	8.02	9	2	D	1	3.5	1	2	50	12	0	4
D	3	6	1	1	50		0	8.03	9	2	D	1	5	1	2	12		0	4
D	4	1	1	0			0	8.04	9	2	D	4	5	1	1	12	50	0	4
D	4	1.5	1	0			0	8.05	9	2	D	4	1	1	0			0	4
D	4	1.5	1	0			0	8.06	6	2	D	4	1	1	0			0	4
D	4	1.5	1	0			0	8.07	6	2	D	4	1	1	0			0	4
D	4	1	1	0			0	8.08	9	2	D	4	1	1	0			0	4
E	2	9	1	0			0	9.01	9	2	E	1	8.5	1	1	12	7	0	4
E	1	9	1	1	7	16	0	9.02	9	2	E	1	8.5	1	2	12		0	4
E	5	8	1	1	7		0	9.03	9	2	E	5	8	1	2	12		0	4
E	5	7	1	1	50		0	9.04	9	2	D	3	7	1	2	12		0	4
D	1	4	1	2	50		0	10.01	9	2	D	3	4	1	2	50		0	4
D	1	6	1	2	50		0	10.02	9	2	D	3	4	1	1	50		0	4
D	3	5	1	0			0	10.03	9	2	E	2	8	1	0			0	4
D	3	4	1	1	7		0	11.01	9	2	D	3	4	1	2	12	7	0	4
B	1	3	2	1	7		0	11.02	9	2	B	1	2	2	0			0	4
B	2	2	2	2	50		0	12.01	9	2	B	2	2	2	1	7		0	4
E	1	6	1	2	50		0	12.02	9	2	E	1	8	1	2	50		0	4
E	1	9	1	1	50		0	12.03	9	2	E	1	9	1	0			0	4
E	1	9	1	1	50		0	12.04	9	2	E	1	9	1	1	50		0	4
E	1	5	1	2	50		0	12.05	9	2	E	1	9	1	2	50	7	0	4
D	1	4.5	1	1	50		0	12.06	9	2	D	3	3.5	1	2	50		0	4
D	3	2.5	1	0			0	12.07	9	2	D	1	2	1	2	50		0	4
D	1	3	1	0			0	12.08	9	2	D	1	5	1	2	50		0	4
D	1	3.5	1	1	50		0	12.09	9	2	D	1	4	1	2	50		0	4

D	3	5	1	2	50	0	12.10	9	2	D	1	5	1	2	50	0	4
B	2	4	2	1	50	1	13.01	6	2	A	2	2	2	2	12	1	4
D	3	4	1	1	50	1	13.02	6	2	D	2	1	1	1	50	1	4
D	2	1.5	1	0		1	13.03	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.04	6	2	D	2	1	1	2	50	1	4
D	2	1.5	1	0		1	13.05	6	2	D	2	1	1	2	50	1	4
D	2	1.5	1	0		1	13.06	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.07	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.08	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.09	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.10	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.11	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.12	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.13	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.14	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.15	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.16	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.17	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.18	6	2	D	2	1	1	0		1	4
D	2	1.5	1	0		1	13.19	6	2	D	2	1	1	0		1	4
D	3	3	1	1	50	1	13.20	6	2	D	2	1	1	0		1	4
D	2	0.4	1	0		0	15.01	9	2	D	2	1	1	0		0	4
D	2	4	1	2	50	0	15.02	9	2	D	2	2	1	1	50	0	4
D	3	3	1	2	50	0	15.03	9	2	D	3	4.5	1	2	50	0	4
D	3	4	1	2	50	0	15.04	9	2	D	2	3.5	1	2	50	0	4
D	2	2	1	1	50	0	15.05	9	2	D	3	5	1	2	50	0	4
D	2	0.4	1	0		0	15.06	6	2	D	2	0.5	1	0		0	4
D	2	0.3	1	0		0	15.07	9	2	D	2	0.5	1	0		0	4
D	2	0.3	1	0		0	15.08	6	2	D	2	1.5	1	2	50	0	4
B	2	2.5	3	1	50	0	16.01	6	2	B	2	2.5	3	1	50	0	4
D	3	2.5	1	0		0	16.02	9		D	1	3	1	2	12	0	4
E	3	7	1	0		0	17.01	6	2	E	3	7	1	0		0	4

E	3	5	1	0			0	17.02	6	2	E	3	6	1	0		0	4
E	3	6	1	0			0	18.01	6	2	E	3	5	1	0		0	4
E	5	6	1	0			0	18.02	9	2	E	3	5	1	0		0	4
E	2	8	1	1	50	7	0	20.01	9	6	E	2	8	1	0		0	12
E	2	8	1	0			0	20.02	9	6	E	1	7	1	2	50	0	12
E	1	9	1	0			0	21.01	9	6	E	2	9	1	0		0	12
E	1	9	1	0			0	21.02	9	6	E	1	9	1	1	7	0	12
E	5	10	1	0			0	21.03	9	6	E	5	9	1	0		0	12
A	3	1.5	1	0			0	91.01	9	2	A	3	1.5	1	0		0	4
A	3	1.5	1	0			0	91.02	9	2	B	3	4	1	2	50	0	4
A	3	1.5	1	0			0	91.03	9	2	B	3	4	1	2	50	0	4
B	5	5	1	2	50		0	91.04	9	2	B	3	3	1	1	50	0	4
B	3	4	1	2	50		0	91.05	9	2	B	3	4	1	2	50	0	4
B	2	4	2	1	50		0	92.01	6	2	B	2	4	2	2	50	0	4
D	3	5	1	2	50		0	92.02	9	2	D	1	5	1	2	50	0	4

Appendix 5

Meteorological conditions

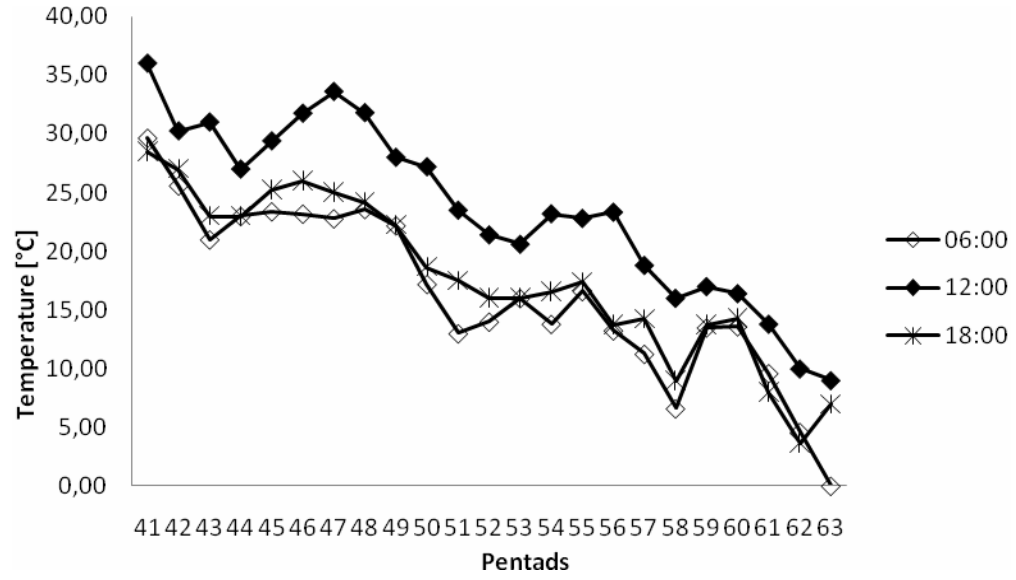


Figure 27 - Temperatures evolution by pentade at 6:00am, 12:00pm and 18:00pm GMT.

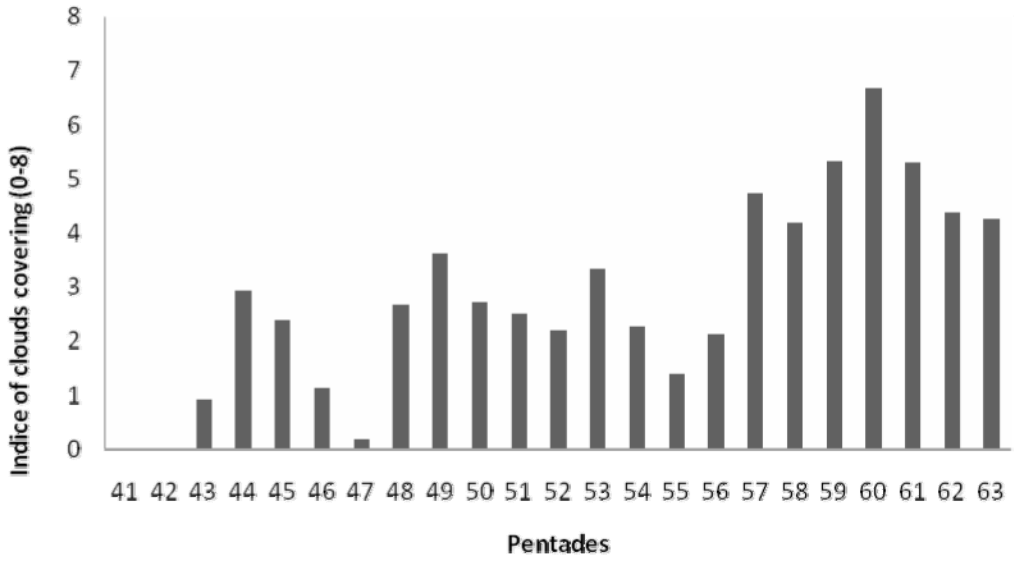


Figure 28 - Average of clouds covering by pentade at 12:00pm GMT.

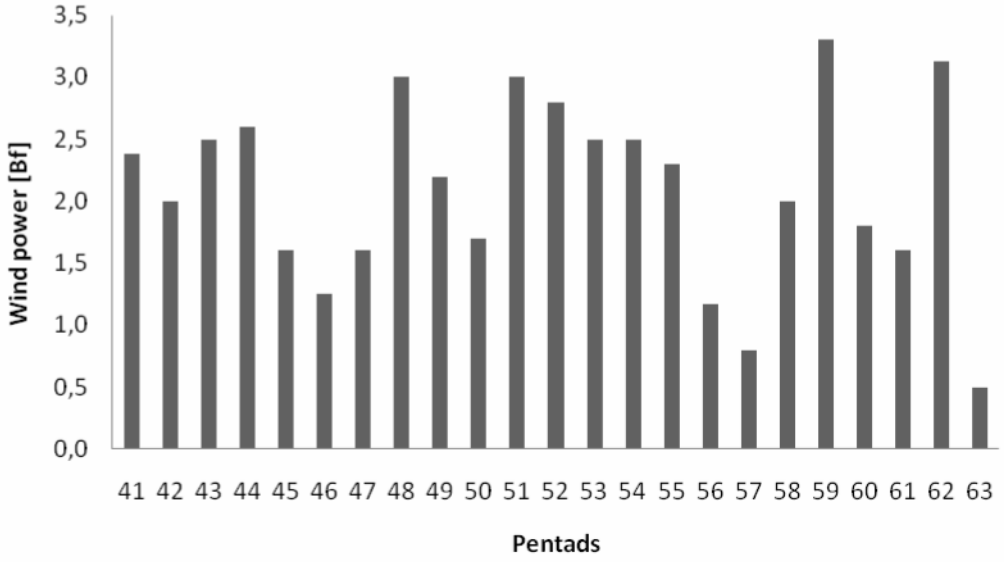


Figure 29 - Average of wind strength by pentades at 12:00pm GMT

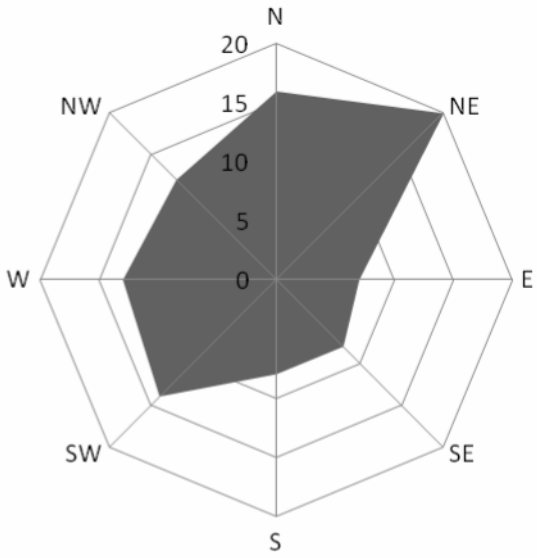
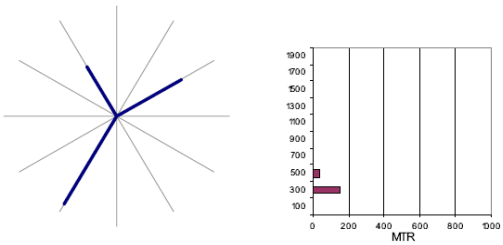


Figure 30 - General directions of the wind at 12:00pm GMT.

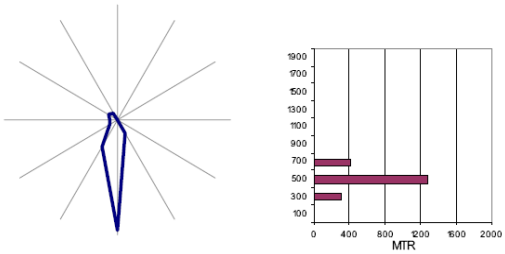
Appendix 6

Moonwatching additional data

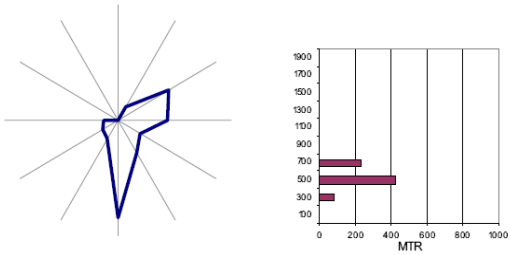
Date: 25.08.07, MTR: 189, n birds: 4



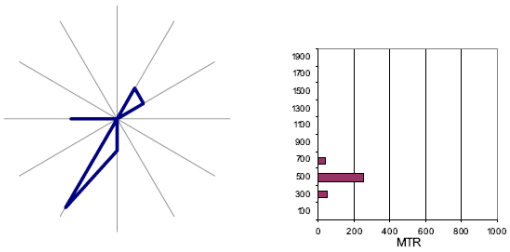
Date: 27.08.07, MTR: 2003, n birds: 25



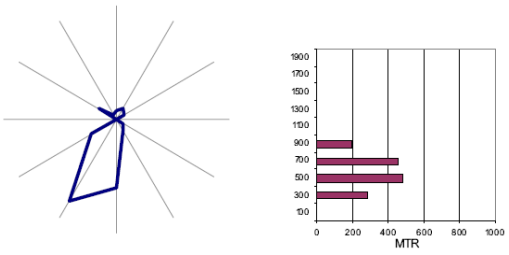
Date: 28.08.07, MTR: 737, n birds: 21



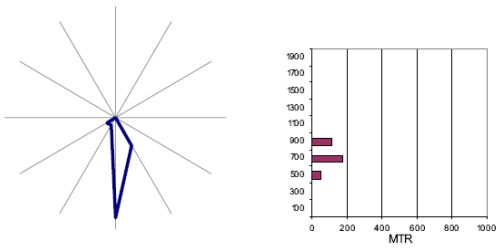
Date: 30.08.07, MTR: 348, n birds: 7



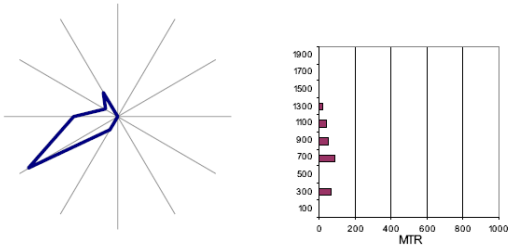
Date: 24.09.07, MTR: 1414, n birds: 47



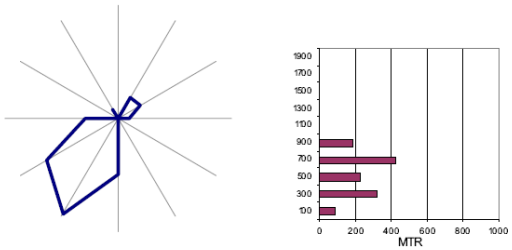
Date: 25.09.07, MTR: 338, n birds: 13



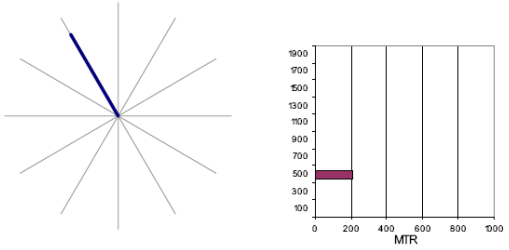
Date: 28.09.07, MTR: 254, n birds: 10



Date: 29.09.07, MTR: 1240, n birds: 37



Date: 24.10.07, MTR: 207, n birds: 1



Appendix 7

Birds observations from July 18th to November 11th 2007

Black-throated Diver (*Gavia arctica*)	6 the 11.10 and 2 the 25.10 in migration above the camp, also 1 the 19.10 and 3 the 29.10 on the beach
Little Grebe (*Tachybaptus ruficollis*)	2 the 4.11 on Sacaline Island
Great Crested Grebe (*Podiceps cristatus*)	Irregular presence of 1-2 individuals on the sea in August, regular presence of small groups (<20 individuals) from the beginning of October on the sea (beach and Sacaline Island)
Red-necked Grebe (*Podiceps grisegena*)	1 juvenile in mid-August in the North of Sfântu Gheorghe
Black-necked Grebe (*Podiceps nigricollis*)	Presence of small to midsized groups (about 50 individuals) from the beginning of October on the sea (beach and Sacaline Island)
Cormorant (*Phalacrocorax carbo*)	Common; presence of a dormitory in the North of Sfântu Gheorghe with several thousands of individuals
Pygmy Cormorant (*Phalacrocorax pygmeus*)	Common, high numbers (up to about 500 individuals) near Sacaline Island and in small to midsized groups in the village and vicinity. Presence rather regular around the camp, the biggest group being of 67 individuals the 9.08
White Pelican (*Pelecanus onocrotalus*)	Regularly present until the 10.10 on Sacaline Island; note a flock of more than 50 individuals the 15.08 over the camp and the presence of 100-200 individuals on Sacaline Island in July-August
Dalmatian Pelican (*Pelecanus crispus*)	Irregularly observed (8 times) above the camp between the beginning of August and mid-September with a maximum of 6 individuals the 2.08, also regular presence of small groups (less than 20 individuals) on Sacaline Island, then it became regular almost everywhere (particularly on Sacaline Island) with groups of about 50 individuals the 10.10 on Sacaline Island and of 34 in migration the 30.10 above the camp. Note that this was the last species observed in Sfântu Gheorghe, on the Danube before the ship left!
Bittern (*Botaurus stellaris*)	1 the 7.10 and 7.11 in the North of Sfântu Gheorghe, the 12.10 on the shore of the Danube, also 1 the 24.10, 4 the 5.11 and 3 the 6.11 on Sacaline Island
Little Bittern (*Ixobrychus minutes*)	Present in small numbers near Sacaline Island, in Sfântu Gheorghe and in its vicinity at least the 19.09 with a bird caught at the ringing station
Night Heron (*Nycticorax nycticorax*)	Common almost everywhere in groups of variable sizes, with an example of big group on the 15.08 in the evening when hundred of birds flew over the camp (two flocks being constituted of 50 and 70 individuals passing by in 15 minutes). Note the presence of big "herons" colonies near Sacaline Island with hundreds of individuals
Squacco Heron (*Ardeola ralloides*)	Very common in rather small groups in Sfântu Gheorghe and in its vicinity. On Sacaline Island in big numbers (100-200 individuals) until the 10.10
Cattle Egret (*Bubulcus ibis*)	**2 the 7.10 on the shore of the Danube**
Little Egret (*Egretta garzetta*)	Present almost everywhere in variable groups with a reduction of the effectives in October
Great White Egret (*Ardea alba*)	Presence of small groups in the North of Sfântu Gheorghe and of bigger groups on Sacaline Island
Grey Heron (*Ardea cinerea*)	Common almost everywhere in variable number

Purple Heron (*Ardea purpurea*)	Present almost everywhere in variable groups until the 31.10 on Sacaline Island; note maximum of 10-50 individuals groups in migration above the camp in August
Black Stork (*Ciconia nigra*)	Migrates irregularly above the camp between the 25.07 and the 28.08 with a maximum of 10 individuals the 28.07, then 2 individuals follow the 25.09
White Stork (*Ciconia ciconia*)	Presence of few local breeding birds (2 adults and 2 juveniles) and some rare migrant birds irregularly observed above the camp between the 21.07 and the 8.08 with a maximum of 6 individuals the 2.08, then follow 1 tardy individual the 14.10
Glossy Ibis (*Plegadis falcinellus*)	Rather regular presence of small groups (<15 individuals) on Sacaline Island. Also 2 the 20.07 and 1 the 14.08 above the camp, about10 the 24.07 near the village and 2 the 13.09 near the Danube
Eurasian Spoonbill (*Platalea leucorodia*)	Fly irregularly above the camp and the village between the 24.07 and the 8.10 with maximum of 18 the 16.08 above the village and 12 individuals the 8.10 above the camp; regular presence of small to medium groups (<about 60 individuals) on Sacaline Island in July-August, then irregularly in October-November with 1 to 4 individuals
Mute Swan (*Cygnus olor*)	Rarely observed in flight above the camp in small number; otherwise common on Sacaline Island with a count of 93 individuals the 4.11
Whooper Swan (*Cygnus cygnus*)	3 first the 5.10 above the camp, then pass more regularly from the 25.10 with a maximum of 31 individuals the 25.10; otherwise regular presence on Sacaline Island at least from the 21.10 with a highest number of 36 individuals the 30.10
Bean Goose (*Anser fabalis*)	45 flying the 30.10 above Sacaline Island
White-fronted Goose (*Anser albifrons*)	Regular presence above the camp and above Sacaline Island from the 22.10 with a maximum of 657 individuals above the camp in half a day the 3.11
Greylag Goose (*Anser anser*)	Regular presence of groups of variable size (generally <20 individuals until September, then >100 individuals) in the north of Sfântu Gheorghe and near the beach. Regular on Sacaline Island, mostly on October-November with a maximum of about 300 individuals the 30.10
Ruddy Shelduck (*Tadorna ferruginea*)	The 24.07 near Sfântu Gheorghe
Shelduck (*Tadorna tadorna*)	Presence in small numbers (1-4 individuals) on Sacaline Island in July-August, then more regular from October with a maximal count of 64 individuals the 4.11
Wigeon (*Anas penelope*)	2 the 21.10 in the north of Sfântu Gheorghe and 2 the 31.10 above the camp. Common on Sacaline Island from October with a maximal count of 243 individuals the 4.11
Gadwall (*Anas strepera*)	About 60 the 21.10 in the north of Sfântu Gheorghe. Common on Sacaline Island with a maximal count of 970 individuals the 4.11
Teal (*Anas crecca*)	Common in the north of Sfântu Gheorghe from September with some groups of about 200 individuals in October. Pass also irregularly above the camp during this period and the species is common on Sacaline Island with a maximal count of 961 individuals the 4.11
Mallard (*Anas platyrhynchos*)	Regular presence almost everywhere with number relatively scanty (except on Sacaline Island) until September, more important groups in October and November with maximal counts of 848 individuals the 21.10 in the north of Sfântu Gheorghe and of 633 individuals the 4.11 on Sacaline Island
Pintail (*Anas acuta*)	Common in October and November in the vicinity of Sfântu Gheorghe, on the beach and on Sacaline Island; note a maximum of about 200 individuals the 19.10 in the mouth of the Danube and a count of 140 individuals the 4.11 on Sacaline Island

Garganey (*Anas querquedula*)	Regular presence of big groups (up to300 individuals) on Sacaline Island in July-August
Shoveler (*Anas clypeata*)	Present on Sacaline Island in October-November 139 individuals on 4.11
Red-crested Pochard (*Netta rufina*)	6 the 8.08 near the camp, 1 the 21.10 and 3 the 29.10 on Sacaline Island
Pochard (*Aythya ferina*)	1 the 29.07, 20 the 3.11 and 207 the 4.11 on Sacaline Island
Ferrugineous Duck (*Aythya nyroca*)	2-4 individuals present until the beginning of September in the North of Sfântu Gheorghe
Tufted Duck (*Aythya fuligula*)	1 the 21.10 and some the 4.11 on Sacaline Island
Goldeneye (*Bucephala clangula*)	Some the 4.11 on Sacaline Island
Red-brested Merganser (*Mergus serrator*)	17 the 4.11 on Sacaline Island
Goosander (*Mergus merganser*)	1 the 13.10 on the Danube and 1 the 3.11 on Sacaline Island
Honey Buzzard (*Pernis apivorus*)	4 the 8.09 above Sfântu Gheorghe, 1 the 14 and 27.09 and 3 the 15.09 above the camp and 1 last the 7.10 near the beach
Black Kite (*Milvus migrans*)	Scarce observations of 1-3 individuals in August above the camp and near Sacaline Island
White-tailed Eagle (*Haliaeetus albicilla*)	Regular presence near the camp with a maximum of 8 individuals the 30.10 and regular presence on Sacaline Island with 2-5 individuals, also regular principally in October near the beach and the village
Marsh Harrier (*Circus aeruginosus*)	Regular presence above the camp, in the North of Sfântu Gheorghe and above Sacaline Island with a maximum of 34 individuals the 30.10 in migration above the camp
Hen Harrier (*Circus cyaneus*)	Regular presence from the middle of October above the camp, near Sfântu Gheorghe and Sacaline Island with maximum of 12 individuals the 29.10 near the beach
Goshawk (*Accipiter gentilis*)	1 the 4, 5, 18, 26.10 and 9.11 in the camp, 1 the 29.10 near the beach and 1 the 31.10 on Sacaline Island
Sparrowhawk (*Accipiter nisus*)	Regular presence from the 7.10 on the camp with a maximum of 104 individuals in 5 hours of migration survey, also regular on Sacaline Island and less regular near Sfântu Gheorghe
Levant Sparrowhawk (*Accipiter brevipes*)	1 the 27.07 above the camp, 1 capture the 8.08 in the camp, 1 the 17.08 above Sfântu Gheorghe and 1 the 23.08 in the North of the village, then 4 captures between the 9.09 and the 14.09 in the camp
Buzzard (*Buteo buteo*)	Rare near the camp in August-September, then regular in October near the camp and the village, but rarer on Sacaline Island, note a maximum of 363 individuals the 30.10 in migration above the camp between 9AM 3PM.
Steppe Buzzard (*Buteo (buteo) vulpinus*)	1 capture the 2.10 in the camp and an observation of a flock of about 500 individuals the 30.10 above Sacaline Island coming from east above the Black Sea.
Long-legged Buzzard (*Buteo rufinus*)	Irregular in the camp and near the village between the beginning of August and the middle of October and 1 the 30.10 above Sacaline Island
Rough-legged Buzzard (*Buteo lagopus*)	First the 16.10 above the camp, then regular since the 26.10 near the camp and the village with a maximum of 20 individuals in migration between 9AM and 3PM above the camp
Lesser Spotted Eagle (*Aquila pomarina*)	1 the 15.08 on Sacaline Island and 1 adult the 8.10 above the Danube

Greater Spotted Eagle (*Aquila clanga*)	1 the 26.10 above the camp
Booted Eagle (*Hieraaetus pennatus*)	3 observations in August above the camp
Osprey (*Pandion haliaetus*)	1 the 6.08 near the village, 1 the 13.08, 1 the 10.09, the 16.09 and the 23.09 above the camp and 1 the 16.09 above the beach.
Lesser Kestrel (*Falco naumanni*)	**1 adult female the 20.07 and 1 adult male the 25.09 above the camp, 1 adult male the 5.08 north of Sfântu Gheorghe**
Kestrel (*Falco tinnunculus*)	Present regularly in the camp and near the village
Red-footed Falcon (*Falco vespertinus*)	Common in rather large number in the camp, in the north of Sfântu Gheorghe and on Sacaline Island until the end of August, then become irregular until mid-September, and again regular until the 8.10 near the camp and the village; note the presence of 4 to 12 individuals (the 26.09) near the the camp from the 23 to 29.09
Merlin (*Falco columbarius*)	1 the 7.10 on the beach, then irregular from the 19.10 near the village, but most commonly on Sacaline Island
Hobby (*Falco subbuteo*)	Common with a large number of individuals in the camp, near the village and on Sacaline Island until the beginning of October with a big group of about 50 individuals hunting near the group of net "91", then 1 last the 21.10 near the village and on Sacaline Island
Saker (*Falco cherrug*)	1 the 13.08 above the camp and 1 the 15.08 near Sacaline Island, then rather regular presence of isolated individuals in October-November near the camp, in the vicinity of Sfântu Gheorghe and on Sacaline Island
Peregrine (*Falco peregrinus*)	1 the 16.10 in the camp and 1-2 individuals on Sacaline Island from mid-October
Quail (*Coturnix coturnix*)	2 the 11.08, 1 singer the 16.08 and 1 the 30.09 in the camp and 1 found in the village dead the 29.10; also 1 the 29.10 and 30.10 on Sacaline Island
Pheasant (*Phasianus colchicus*)	Common with a large number of individuals in the camp
Water Rail (*Rallus aquaticus*)	Present in the north of Sfântu Gheorghe and near the Danube. Also good presence on Sacaline Island, mostly in October-November
Spotted Crake (*Porzana porzana*)	Irregular presence in August on the shore of the canals near Sfântu Gheorghe, also 1 capture the 8.10 and 1 observation the 9.10 near the Danube, then 2 individuals the 30.10 on Sacaline Island
Little Crake (*Porzana parva*)	Regular presence on the shore of the canals and near Sacaline Island until mid-September with biggest groups of 5 individuals observed several times
Corncrake (*Crex crex*)	1 singer the 19.07, then 1 the 2.09, 16.10 and 1.11 near the camp
Moorhen (*Gallinula chloropus*)	Presence of rather important groups (about 50 individuals) in the north of Sfântu Gheorghe in July-August, then a decrease is observed which ends up with only 1 or 2 individuals; isolated individuals near the village, near the Danube and on Sacaline Island during the whole season
Coot (*Fulica atra*)	Common with variable groups on Sacaline Island with maximums of hundred individuals
Crane (*Grus grus*)	74 flying the 29.10 above the camp, then noted also near the beach and a flock the 2.11 above Sacaline Island
Oystercatcher (*Haematopus ostralegus*)	Many groups fly in the north of Sfântu Gheorghe in July-August with maximal groups of 20-30 individuals, otherwise, irregular presence of small groups (1-5 individuals) on the beach and of bigger groups (up to 100 individuals) on Sacaline Island until the end of October

Black-winged Stilt (*Himantopus himantopus*)	Fly sometimes over the camp in July-August with a maximum of more than 50 individuals the 15.08, also presence of small groups (1-6) in the village of Sfântu Gheorghe between July and September. Regular presence of variable groups (about 100 individuals) on Sacaline Island in the same period
Avocet (*Recurvirostra avosetta*)	Presence of small groups (about 30 individuals) on Sacaline Island in August and in the end of October
Stone Curlew *(Burhinus oedicnemus*)	Several individuals heard near the camp and near the beach from July to October, also presence of some birds near the beach in September and October; The biggest group is of 7 individuals the 6.10; last observation the 2.11 on Sacaline Island
Little Ringed Plover (*Charadrius dubius*)	1 the 7.10 in Sfântu Gheorghe
Ringed Plover (*Charadrius hiaticula*)	1 the 7.10 in Sfântu Gheorghe, 1 the 11.10 above the camp and presence of small groups (about 10 individuals) in the end of October on Sacaline Island
Golden Plover (*Pluvialis apricaria*)	1 the 18.10 above the camp, 3 the 21.10, 20 the 30.10 and present the 3.11 on Sacaline Island
Grey Plover (*Pluvialis squatarola*)	Presence of small groups (1-19 individuals) on the beach between August and October and presence on Sacaline Island with a maximum of about 40 individuals the 21.10, also 3 the 11.10 above the camp
European Lapwing (*Vanellus vanellus*)	Presence of small to medium groups near the camp, in the north of Sfântu Gheorghe and on Sacaline Island from the beginning of August with a maximum of 47 individuals the 25.10 near the camp
Sanderling (*Calidris alba*)	Small groups (<10 individuals) irregular on the beach and on Sacaline Island between the end of August and the middle of October
Little Stint (*Calidris minuta*)	1-3 individuals irregularly present in October at the Danube mouth and on Sacaline Island
Temminck's Stint (*Calidris temminckii*)	1 in the beginning of September at the Danube mouth
Curlew Sandpiper (*Calidris ferruginea*)	2 the 21.10, 1 the 28.10 and 10 the 29.10 on Sacaline Island
Dunlin (*Calidris alpina*)	Present on the beach in October with a maximal group of about 60 individuals, also present on Sacaline Island between July and November with maximums of around 100 individuals
Ruff (*Philomachus pugnax*)	Irregular presence of small groups (1-12 individuals) near the camp, near the village and on the beach between August and October; also present on Sacaline Island until the beginning of November
Jack Snipe (*Lymnocryptes minimus*)	1-2 individuals irregularly seen in the north of Sfântu Gheorghe, regular presence on Sacaline Island in October-November
Snipe (*Gallinago gallinago*)	Regular presence on Sacaline Island, in the village of Sfântu Gheorghe and in its vicinity with a maximum of about 50 individuals the 7.10 on the shore of the Danube
Great Snipe (*Gallinago media*)	1 in the middle of August on Sacaline Island and 1 the 7.10 near the village
Woodcock (*Scolopax rusticola*)	1 observed the 16.10 and 24.10 in the camp
Black-tailed Godwit (*Limosa limosa*)	Rather regular presence in Sfântu Gheorghe between July and September and regular presence on Sacaline Island until the end of October with maximal group of about 2000 individuals the 29.07
Whimbrel (*Numenius phaeopus*)	1 the 5.08 and 3 the 23.08 in the north of Sfântu Gheorghe and up to 3 the 15.08 and 2 the 29.10 on Sacaline Island

Curlew (*Numenius arquata*)	Small groups (1-6 individuals) present irregularly near Sfântu Gheorghe and on the beach. Regular presence of variable groups (about 100 individuals) on Sacaline Island between August and November
Spotted Redshank (*Tringa erythropus*)	1-3 individuals in Sfântu Gheorghe and in its vicinity (north of the village and beach) between July and the beginning of November. Small and medium groups (about 100 individuals) present regularly on Sacaline Island during the same period
Redshank (*Tringa totanus*)	About 30 individuals the 23.08 in the north of Sfântu Gheorghe and presence of variable groups (about 200 individuals) on Sacaline Island between July and the beginning of November
Marsh Sandpiper (*Tringa stagnatilis*)	1 the 16.08 in the camp. Rather regular presence of small to medium groups (about 50 individuals) on Sacaline Island in July-August
Greenshank (*Tringa nebularia*)	Small groups (10 individuals) rather regular in the camp (until the beginning of September), in Sfântu Gheorghe and surroundings(until the middle of October) and also present but in bigger groups on Sacaline Island (until the beginning of November)
Green Sandpiper (*Tringa ochropus*)	Small groups (1-10 individuals) rather regular near the camp (July-August), in Sfântu Gheorghe and surroundings until mid-October and regular in small to medium number (40 individuals) on Sacaline Island in July-August. Twice a solitary individual in migration the 11 and 28.10 above the camp
Wood Sandpiper (*Tringa glareola*)	Small groups (1-7 individuals) rather regular in Sfântu Gheorghe and surroundings and on Sacaline Island until September
Terek Sandpiper (*Xenus cinereus*)	1 in the end of July an 2 late individuals the 21.10 on Sacaline Island, also 1 in the beginning of October on the shore of the Danube
Common Sandpiper (*Actitis hypoleucos*)	Irregularly heard during the night above the camp between July and October. Also irregular presence of small groups (1-5 individuals) in Sfântu Gheorghe and surroundings in July-August
Ruddy Turnstone (*Arenaria interpres*)	Irregular presence of small groups (about 25) in August-September on Sacaline Island and on the beach
Red-necked Phalarope (*Phalaropus lobatus*)	1 in the middle of September on Sacaline Island
Pomarine Skua (*Stercorarius pomarinus*)	**1 juvenile the 21.10 above Sacaline Island**
Arctic Skua (*Stercorarius parasiticus*)	2 adults the 10.08 on Sacaline Island
Great Black-headed Gull (*Larus ichthyaetus*)	**1-2 adults present between the 14.09 and the 17.09 at the Danube mouth**
Mediterranean Gull (*Larus melanocephalus*)	Rather regular presence of small to medium groups (50 individuals) on the beach, in Sfântu Gheorghe and surroundings and on Sacaline Island. Regular presence on Sacaline Island in October-November the biggest group being of about 300 individuals the 24.10
Little Gull (*Larus minutus*)	Rather regular presence of small to medium groups (up to about 100 individuals) on the beach, on the Danube and near Sacaline Island between the end of July and the middle of October
Black-headed Gull (*Larus ridibundus*)	Common (also in the camp) during the whole period
Slender-billed Gull (*Larus genei*)	3 the 19.08 and 2 adults the 7.10 near the beach, also some in mid-August and 1 the 1.11 on Sacaline Island
Common Gull (*Larus canus*)	Presence of small groups on the beach an on Sacaline Island from the 8.10
Baltic Gull (*Larus (f.) fuscus*)	1-2 individuals present irregularly on the beach and 1 the 11.10 above the camp

Caspian Gull (*Larus cachinnans*)	Presence of medium to big groups (sometimes more than 1'000 individuals at the Danube mouth) in the whole study area
Yellow-legged Gull (*Larus michahellis*)	Isolated individuals present irregularly in Sfântu Gheorghe, near the beach and on Sacaline Island
Gull-billed Tern (*Gelochelidon nilotica*)	Regular presence of 1-6 individuals in the camp, in Sfântu Gheorghe and surroundings until the beginning of September. Irregular presence near the beach and on Sacaline Island but with bigger groups (about 20)
Caspian Tern (*Sterna caspia*)	Rather regular presence of 1-3 individuals near the camp, in Sfântu Gheorghe and surroundings; scare individuals but also bigger groups (about 100 individuals) near Sacaline Island till the beginning of November.
Sandwich Tern (*Sterna sandvicensis*)	Irregular presence of small to medium groups (about 30 individuals) near the camp, in Sfântu Gheorghe and surroundings in July-August. Regular presence of small to big groups on the beach until October with a maximum of about 300 individuals the 16.09 at the Danube mouth. Regular on Sacaline Island with variable groups (max of 200 individuals)
Common Tern (*Sterna hirundo*)	Rather regular presence of small or medium groups (around 15 individuals) on the beach, on Sacaline Island and also near Sfântu Gheorghe between July and October
Little Tern (*Sterna albifrons*)	Rare observations of some individuals in August near the beach
Whiskered Tern (*Chlidonias hybridus*)	Rather regular presence of 1-4 individuals between July and September in the North of Sfântu Gheorghe and presence of up to 50 individuals near Sacaline Island and near the beach in the same period. Also more common upriver of Sfântu Gheorghe on the Danube
Black Tern (*Chlidonias niger*)	Irregular presence of small groups near Sacaline Island, near the beach and in the vicinity of the village in August-September. More common upriver of Sfântu Gheorghe on the Danube. Note 94 *Chlidonias* sp. In migration the 9.10 above the camp
White-winged Tern (*Chlidonias leucopterus*)	Only presence of few individuals upriver of Sfântu Gheorghe on the Danube in July-August
'Domestic' Rock Dove (*Columba livia 'domestica'*)	1 individual in the end of October and the beginning of November in the village of Sfântu Gheorghe
Stock Dove (*Columba oenas*)	1-2 individuals in migration in October above the camp, also 12 the 29.10 near the beach and 1 the same day above Sacaline Island
Wood Pigeon (*Columba palumbus*)	Regular presence of several breeding birds near the camp, then migration in October above the camp and more rarely above Sacaline Island with a big group of about 12000 individuals in two groups the 27.10 above the camp
Collared Dove (*Streptopelia decaocto*)	Regular presence of several individuals in Sfântu Gheorghe and surroundings
Turtle Dove (*Streptopelia turtur*)	Regular presence until September at the camp and the vicinity of Sfântu Gheorghe
Cuckoo (*Cuculus canorus*)	Isolated individuals (generally juveniles) regularly observed at the camp, in Sfântu Gheorghe and surroundings until the middle of August, except an observation on September 4th and a last observation on October 10th near the camp. Note observations of feeding by Lesser Whitethroat (*Sylvia curruca*) and Olivaceous Warbler (*Hippolais pallida*)
Long-eared Owl (*Asio otus*)	1 the 6.10 in day migration above the sea, 3 individuals the 24.10 and 1 the 25.10 near the camp. Note 3 captures the 24th, 28th and 30th October at the camp

Short-eared Owl (*Asio flammeus*)	1 the 2.11 and the 3.11 on Sacaline Island. Note two observations of undetermined Owls (*Asio otus/flammeus*) in the same place the 22.10 and the 2.11
Nightjar (*Caprimulgus europaeus*)	Irregular presence of few breeding birds in the camp in July-August, then rather regular presence between the beginning of September and the beginning of October
Swift (*Apus apus*)	First observation of the species near the camp in the beginning of August and few days later, the 9.08, we assist to a migration of about ten thousand individuals (particularly in the morning), then rare observations during August and 1 last individual observed the 13.09 above the Danube
Kingfisher (*Alcedo atthis*)	Common near water in Sfântu Gheorghe, surroundings and near Sacaline Island. Also presence of several individuals in the camp as well as near the small canals and in the forest
European Bee-eater (*Merops apiaster*)	Common in the vicinity of Sfântu Gheorghe (also in the camp) until the beginning of August with the local breeding birds, then become scarce. From the end of August and until the end of September, we can observe and hear day-and-night migrant flocks reaching up to hundred individuals. Then, last observations of an individual the 16 and 18.10 in the camp
Roller (*Coracias garrulus*)	Common in the camp and the vicinity of the village until the beginning of September
Hoopoe (*Upupa epops*)	Common in the camp and the vicinity of the village until the beginning of September
Wryneck (*Jynx torquilla*)	Rather regular in the camp and in the vicinity of the village between mid-August and mid-September
Grey-headed Woodpecker (*Picus canus*)	Common in the camp, in Sfântu Gheorghe and surroundings
Black Woodpecker (*Dryocopos martius*)	Common in the camp
Great Spotted Woodpecker (*Dendrocopos major*)	Common in the camp
Syrian Woodpecker (*Dendrocopos syriacus*)	Rather common in the camp, in Sfântu Gheorghe and surroundings
Lesser Spotted Woodpecker (*Dendrocopos minor*)	Uncommon in the camp (rather rarely observed)
Calandra Lark (*Melanocorypha calandra*)	1 the 27 and 28.10 in the camp and 1 the 29.10 on Sacaline Island
Short-toed Lark (*Calandrella brachydactyla*)	Irregular presence of isolated individuals or small groups between September and the beginning of October
Crested Lark (*Galerida cristata*)	First observation of 2 individuals the 7.10 in the village of Sfântu Gheorghe, then becomes increasingly common in the village and surroundings (more scarce at the camp). The biggest groups (around ten individuals in November) are generally present in the dump and in the village. Note one observation of an isolated individual the 6.11 on Sacaline Island.
Woodlark (*Lullula arborea*)	Regular presence in the camp and surroundings from the end of September and rare mention on Sacaline Island in the end of October. Note a maximum of 41 individuals the 11.10 near the camp
Skylark (*Alauda arvensis*)	Regular presence of small groups (about 15 individuals) in the camp and surroundings and on Sacaline Island from the beginning of September
Sand Martin (*Riparia riparia*)	Rather regular presence (scarcer until mid-August) almost everywhere until the beginning of October with an important passage of hundreds of birds between the 22 and 25.09 and a late observation of 2 individuals the 2.11 on Sacaline Island

Barn Swallow (*Hirundo rustica*)	Rather common almost everywhere at least until the 12.10 with an important passage of several hundred thousands of birds between the 22 and 25.09
House Martin (*Delichon urbicum*)	Rather regular in August-September
Tawny Pipit (*Anthus campestris*)	Rare presence of isolated individuals in the camp and surroundings in the end of August and September. An "unspotted" pipit (Tawny Pipit (*Anthus campestris*), Richard's Pipit (*Anthus richardi*) or Blyth's Pipit (*Anthus godlewskii*) has been observed the 28.10 above the camp: the late date and the meteorological conditions (strong eastern wind the days before) argue for a Richard's or Blyth's Pipit, but the bird didn't call
Tree Pipit (*Anthus trivialis*)	Regular presence of small groups (<15 individuals) in the camp, in Sfântu Gheorghe and surroundings between the 11.08 and the end of October
Meadow Pipit (*Anthus pratensis*)	Regular presence of small groups (about 20 individuals) from the beginning of October in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island
Red-throated Pipit (*Anthus cervinus*)	Regular presence of small groups (about 15 individuals) between the 15.09 and the 21.10 near the camp, in Sfântu Gheorghe and surroundings, also one observation on Sacaline Island
Water Pipit (*Anthus spinoletta*)	Irregular presence of isolated individuals from the middle of October in the north of Sfântu Gheorghe and regular presence of small groups on Sacaline Island in October-November
Yellow Wagtail (*Motacilla flava*)	Regular presence near the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island until the 21.10. Note the observation of an individual of the eastern subspecies "*lutea*" in the beginning of August in the North of the village, the others appertaining to the subspecies "*flava*", "*feldegg*", "*thunbergii*", "*dombrowskii*" and "*supercilliaris*"
Citrine Wagtail (*Motacilla citreola*)	1 early individual the 6 and 7.08 in the north of Sfântu Gheorghe, then become regular in a very short period between the end of August and the beginning of September in Sfântu Gheorghe and surroundings with a maximum of at least 7 different individuals the 29.08 near the village. Note one observation above the camp the 31.08
Grey Wagtail (*Motacilla cinerea*)	1-2 individuals regularly observed between the end of September and the beginning of November in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island
Pied Wagtail (*Motacilla alba*)	Small groups regular rather everywhere, then becomes more common between mid-September and mid-October when some big groups have been observed with a maximum of 515 individuals seen in two hours in the camp the 5.10
Waxwing (*Bombycilla garrulus*)	One observation in the end of October near the camp
Wren (*Troglodytes troglodytes*)	Regular presence in small number from the 7.10 almost everywhere
Dunnock (*Prunella modularis*)	Regular presence in small number from the 5.10 almost everywhere
Robin (*Erithacus rubecula*)	1 capture the 1.08 in the camp, then common everywhere from the 22.09. Peak of captures the 27.10 with 191 birds ringed
Thrush Nightingale (*Luscinia luscinia*)	Present in the camp until the 23.09. Peak of the captures the 17.08 with 24 birds ringed
Nightingale (*Luscinia megarynchos*)	1 bird ringed the 1.08 in the camp and controlled the 5.08
Bluethroat (*Luscinia svecica*)	1 male adult the 27.08 and 1 the 8.10, 3 the 12.10 in the north of Sfântu Gheorghe and 2 the 21.10 on Sacaline Island. Also 3 captures (10, 18.09 and 2.10) in the camp

Black Redstart (*Phoenicurus ochruros*)	Regular presence in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island from the end of September. Peak of captures the 27.10 with 27 birds ringed
Redstart (*Phoenicurus phoenicurus*)	Rather regular presence in small number until mid-September in the camp and surroundings, then becomes more common everywhere (also on Sacaline Island) until the 27.10 with a peak between the end of September and the beginning of October.
Whinchat (*Saxicola rubetra*)	Regular presence in small groups (generally less than 15 individuals) in the camp and in the vicinity of Sfântu Gheorghe between the 7.08 and the 23.10
Common Stonechat (*Saxicola torquata*)	Regular presence in rather small groups (up to 20 individuals) in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island from the 5.10
Isabelline Wheatear (*Oenanthe isabellina*)	Rare observations of small groups in August in the north of Sfântu Gheorghe
Northern Wheater (*Oenanthe oenanthe*)	present of small groups (generally less than 15 individuals) in the camp and in the north of Sfântu Gheorghe between the beginning of August and the end of October
Pied/Black-eared Wheater (*Oenanthe pleschanka/hispanica*)	1 the 10.10 at the camp
Ring Ouzel (*Turdus torquatus*)	3 the 10.10 and 1 the 11.10 in the camp
Blackbird (*Turdus merula*)	Irregular in the camp and in the vicinity of Sfântu Gheorghe until the end of September, then becomes common almost everywhere.
Fieldfare (*Turdus pilaris*)	First observation the 10.09 in the camp, then regular from the 1.10 in the camp, in the vicinity of Sfântu Gheorghe and rare on Sacaline Island
Song Thrush (*Turdus philomelos*)	Rather regular until the beginning of August in the camp, then regular almost everywhere from September
Redwing (*Turdus iliacus*)	Regular from the 15.10 in the camp, in the vicinity of Sfântu Gheorghe and on Sacaline Island
Mistle Thrush (*Turdus viscivorus*)	Regular presence of small groups (up to 10) from the end of September in the camp, in the vicinity of Sfântu Gheorghe and more rare on Sacaline Island
Savi's Warbler (*Locustella luscinioides*)	Regular near the canals in July-August and in the camp between the 28.07 and the 2.10, follow two late captures the 26.10 and the 31.10
Moustached Warbler (*Acrocephalus melanopogon*)	1-5 individuals irregularly observed near the canals in the vicinity of Sfântu Gheorghe at least until mid-October
Sedge Warbler (*Acrocephalus schoenobaenus*)	Regular presence until the 23.10 near the water in Sfântu Gheorghe and surroundings, also present near the camp until the 5.10 with a peak of the captures between the 23 and the 26.08 (7 birds ringed for a total of 12). Note that in some days in September-October, Sedge Warblers were the most common species of "*Acrocephalus*" in the vicinity of Sfântu Gheorghe
Paddyfield Warbler (*Acrocephalus agricola*)	Scarce near the canals in the vicinity of Sfântu Gheorghe and of Sacaline Island until the 3.09. Note a capture the 3.08 in the camp
Marsh Warbler (*Acrocephalus palustris*)	Regular presence until the 17.09 in the camp and in the vicinity of Sfântu Gheorghe. Peak of the passage in August
Reed Warbler (*Acrocephalus scirpaceus*)	Common until mid-October near the canals in the vicinity of Sfântu Gheorghe and on Sacaline Island (the most common species of "*Acrocephalus*" in July-August). Irregular presence in the camp until mid-September; note a late observation the 24.10

Great Reed Warbler (*Acrocephalus arundinaceus*)	Rather common until the end of September near the canals in the vicinity of Sfântu Gheorghe and on Sacaline Island. Rather regular in the camp until the 9.09 and scarce in the other places (village or bushes near the village)
Olivaceous Warbler (*Hippolais pallida*)	Rather common in the camp and in the north of Sfântu Gheorghe until the 20.08
Icterine Warbler (*Hippolais icterina*)	Rather common in the camp and in the north of Sfântu Gheorghe until the 28.09
Barred Warbler (*Sylvia nisoria*)	Regular in small number in the camp and surroundings until the 7.09
Lesser Whitethroat (*Sylvia curruca*)	Common in the camp until the 5.10 and rather regular in Sfântu Gheorghe and surroundings, mostly in August-September. Two late observations the 10.10 and 12.10 in the north of Sfântu Gheorghe. Note a peak of the passage during the first half of August
Whitethroat (*Sylvia communis*)	Rather common between the 30.07 and the beginning of October in the camp and irregular presence in the vicinity of Sfântu Gheorghe. Note a late observation the 17.10 near the camp
Garden Warbler (*Sylvia borin*)	Common until mid-October near the camp with a late observation the 23.10 and rather regular presence in the vicinity of Sfântu Gheorghe.
Blackcap (*Sylvia atricapilla*)	Common between the 1.08 and the 30.10 in the camp and rather regular presence in the vicinity of Sfântu Gheorghe
Wood Warbler (*Phylloscopus sibilatrix*)	Rather regular presence near the camp and surroundings until the 30.10 with a late observation the 24.10
Chiffchaff (*Phylloscopus collybita*)	Regular presence almost everywhere between mid-September and the 3.11
Willow Warbler (*Phylloscopus trochilus*)	Common almost everywhere between the 27.07 and the 27.10
Goldcrest (*Regulus regulus*)	Regular presence from the end of September in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island. Note a peak of the captures the 30.10 with 42 birds caught
Firecrest (*Regulus ignicapilla*)	7 captures at the camp between the 13.10 and the 3.11
Spotted Flycatcher (*Muscicapa striata*)	Common between the 3.08 and the 5.10 in the camp, regular but less numerous in Sfântu Gheorghe and surroundings.
Red-brested Flycatcher (*Ficedula parva*)	Common between the 21.08 and the 3.11 almost everywhere but more abundant near the camp. Note the peaks of captures the 29.09 (23 ringed birds) and the 7.09 (20 ringed birds)
Collared Flycatcher (*Ficedula albicollis*)	Regular presence between the 5.08 and the 13.09 near the camp and scarcer in Sfântu Gheorghe and surroundings
Pied Flycatcher (*Ficedula hypoleuca*)	Regular presence between the 1.08 and the 28.09 in the camp and scarcer in Sfântu Gheorghe and surroundings. Note that this species is less abundant than the preceding
Beared Tit (*Panurus biarmicus*)	Common near the canals in the vicinity of the village and very common on Sacaline Island. Note more than 4 migrant birds in the forest of the camp the 9.11
Long-tailed Tit (*Aegithalos caudatus*)	Rather common in camp and surroundings.
Blue Tit (*Parus caeruleus*)	Common in variable numbers (up to 50 individuals) almost everywhere. More abundant between the end of July and the beginning of August (local family groups) and also between mid-September and mid-October (migrant birds)

Great Tit (*Parus major*)	Common in rather small groups (<20 individuals) in the camp, in Sfântu Gheorghe and surroundings. More abundant in the end of July (local family groups) and also between mid-September and mid-October (migrant birds)
Treecreeper (*Certhia familiaris*)	Rather regular presence from the 14.09 in the camp
Penduline Tit (*Remiz pendulinus*)	Rather common in small groups (up to 25 individuals) near the camp, near the beach and near the canals in the vicinity of Sfântu Gheorghe until September. From October, the species becomes more common near the canals and, most of all on Sacaline Island
Golden Oriole (*Oriolus oriolus*)	Common almost everywhere where they are trees or even small bushes until mid-September
Red-backed Shrike (*Lanius collurio*)	Common in small to medium numbers (note some days in August with 20-30 captures) in the camp and in the vicinity of Sfântu Gheorghe until the beginning of October and also two late observations of isolated individuals the 11.10 in the camp and the 12.10 near Sfântu Gheroghe.
Lesser Grey Shrike (*Lanius minor*)	A first observation the 31.07 near the beach, then, becomes regular from the 6.08 in small groups (less than 10 individuals) until the end of August
Great Grey Shrike (*Lanius excubitor*)	1 the 11.10 in the camp and 1 the 12.10 in the north of Sfântu Gheorghe
Magpie (*Pica pica*)	Very common in small to medium numbers near the camp, in Sfântu Gheorghe and surroundings during the whole season, but we note some bigger groups in October-November and several individuals on Sacaline Island until the end of October (maybe migratory birds)
Jackdaw (*Corvus monedula*)	Very common in the camp, in Sfântu Gheorghe surroundings. Note that the breeding birds are intermediate between the subspecies "*soemmeringii*" and "*monedula*" with a small pale grey collar, then in October-November we observed an increasingly number of birds with a visible white collar appertaining presumably to the subspecies "*soemmeringii*"
Rook (*Corvus frugilegus*)	Regular presence in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island from the 23.09. Note the passage of 1529 individuals the 25.10 in four hours above the camp
Carrion Crow (*Corvus corone*)	Punctual observations of isolated individuals north of the village and in the camp in October
Hooded Crow (*Corvus cornix*)	Very common in medium groups everywhere
Raven (*Corvus corax*)	Presence of 2 to 4 individuals near the camp and in the north of Sfântu Gheorghe (generally in the dump), also presence of 1-2 individuals on Sacaline Island from the 29.10
Starling (*Sturnus vulgaris*)	Common in variable groups (about hundred) in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island
House Sparrow (*Passer domesticus*)	Very common in the village of Sfântu Gheorghe and surroundings. Note an observation of migrant birds the 6.11 on Sacaline Island
Tree Sparrow (*Passer montanus*)	Very common in small to medium groups (about 50 individuals) in the camp, in Sfântu Gheorghe and surroundings, also two observations in November on Sacaline Island
Chaffinch (*Fringilla coelebs*)	Regular in small numbers until the end of September in the camp, then regular with sometimes important groups almost with for example, groups of 2333 individuals in one hour and 1277 individuals in two hours counted from the camp
Brambling (*Fringilla montifringilla*)	Regular presence in small to medium groups (less than 100 individuals) in the camp, in the vicinity of Sfântu Gheorghe and on Sacaline Island from the 5.10

Serin (*Serinus serinus*)	Irregular observations of isolated individuals in the end of October in the camp
Greenfinch (*Carduelis chloris*)	Rather regular until September in Sfântu Gheorghe and surroundings. From October, becomes regular almost everywhere with a maximum of 75 individuals observed in two hours in the camp
Goldfinch (*Carduelis carduelis*)	Regular until September in Sfântu Gheorghe and surroundings, scarcer near the camp. From October, becomes more regular in rather small groups (generally less than 30 individuals) almost everywhere
Siskin (*Carduelis spinus*)	Regular presence of small to medium groups (less than 100 individuals) from the 13.09 in the camp, in Sfântu Gheorghe and surroundings and on Sacaline Island
Linnet (*Carduelis cannabina*)	Regular presence of small to medium groups (sometimes up to 50 individuals) from the 11.10 in the camp, in the north of Sfântu Gheorghe and on Sacaline Island
Redpoll (*Carduelis flammea*)	1 the 11.10 in the camp
Bullfinch (*Pyrrhula pyrrhula*)	1 captured the 4.11 and 1 observed the 9.11 in the camp
Hawfinch (*Coccothraustes coccothraustes*)	Regular presence of small to medium-sized groups (less than 50 individuals) near the camp from the 26.09
Pine Bunting (*Emberiza leucocephalos*)	**1 female of first year the 31.10 and 1.11 near the camp (first for Romania)**
Yellow Hammer (*Emberiza citrinella*)	Regular presence in the camp and surroundings from the beginning of October with a maximum of 22 individuals observed in 2 hours and irregular presence of small groups from the end of October on Sacaline Island
Ortolan Bunting (*Emberiza hortulana*)	3 the 31.08 in the camp
Reed Bunting (*Emberiza schoeniclus*)	Until the end of September, regular presence in small number in the north of Sfântu Gheorghe and on Sacaline Island and irregular in the camp, then becomes regular almost everywhere in small to medium groups (less than 40 individuals). The breeding birds were of the local subspecies "*tschusii*", characterized by a heavy bill and longer wings, later in October appeared some individuals with more conical bill and with shorter wings appertaining to the nominal subspecies "*schoeniclus*" and perhaps of eastern subspecies like "*ukrainae*"
Black-headed Bunting (*Emberiza melanocephala*)	Irregular presence of 1 to 2 juveniles until the 16.08 in the camp
Corn Bunting (*Emberiza calandra*)	1 the 31.10 and the 5.11 on Sacaline Island

Mammals observations

Golden Jackal (Canis aureus)	Present on the beach, near the camp and on Sacaline Island
Raccoon Dog (Nyctereutes procynoides)	Present almost everywhere
Beech Marten (Martes fouina)	1 observation near the camp
Otter (Lutra lutra)	Scare presence in the canals, on the beach and on Sacaline Island
European Mink (Mustela lutreola)	1 observation near Sacaline Island
Wild Boar (Sus scrofa)	Present in the forest of the camp
Harbour Porpoise (Phocoena phocoena)	<5 the 2.11 at the Sea near Sacaline Island
Brown Rat (Rattus norvegicus)	Present in the village and in the camp from October

Eastern European Hedgehog (Erinaceus concolor)	Present in the camp and in the village
European Roe Deer (Capreolus capreolus	Present in the forest of the camp
Grater Noctule (Nyctalus lasiopterus)	Heard the 23.10 in the camp
Grey long-eared bat (Plecotus austriacus)	1 catched the 23.7 in the camp
Soprano pipistrelle (Pipistrellus pygmaeus)	1 catched the 1.8 in the cam p
Parti-coloured Bat (Vespertilio murinus)	1 catched the 28.08 in the camp
Nathusius's pipistrelle (Pipistrellus nathusii)	1 catched the 27.10, 14.09, 16.09 and 08.10 in the camp
Common Noctule (Nyctalus noctua)	1 catched the 14.09 in the camp
Leisler's Bat (Nyctalus leisleri)	1 catched the 16.09 in the camp
Muskrat (Ondatra zibethicus)	Present near the canals
Field Mouse (Apodemus agrarius)	Present in the camp
Brown Hare (Lepus europaeus)	Present near the camp
Dormouse (Muscardinus avellanarius)	Some on Sacaline and in the camp

Amphibians observations

Bufo viridis	Present in the village
Pelobates syriacus	1 observation in September in the east of the village
Pelobates fuscus	Present in the vicinity of the village
Hyla arborea	Present almost everywhere
Rana ridibunda	Present near the canals
Rana lessonae	Present near the canals
Bombina bombina	Present in the temporal pond in the north of the village

Reptiles observations

Natrix natrix	Present everywhere
Vipera (ursinii) moldovica	Present in the camp and in this vicinity
Elaphe quatuorlineata	1 observation in the end of August in the camp
Lacerta agilis	Present everywhere

Insects observations

Ordonata

Lestes barbarous

Anax parthenope

Anax imperator

Anax ephippiger	Note a big group of 20-30 individuals the 1.08 in the camp
Orthetrum cancellatum	
Orthetrum albistylum	
Sympetrum fonscolombii	The most common specie
Sympetrum striolatum	
Sympetrum vulgatum	
Crocothemis erythraea	
Aeshna mixta	Present from the 4.09

Orthopters

Acrida ungarica

Acrotylus insubricus

Aiolopus strepens

Aiolopus thalassinus

Calliptamus barbarus

Chorthippus loratus

Chorthippus biguttulus-K.

Epacromius coerulipes

Gryllus sp.

Oedipoda caerulescens

Tetrix bolivar

Chrthippus sp.

Manthopters

Empusa pennata

Mantis religiosa

Syrphes

Episyrphus balteatus

Eristalis tenax

Eupeodes corallae

Helophilus trivittatus

Scaeva pyrastri

Sphaerophoria scripta

Xanthandrus comtus

Others

Polyphylla fullo

Oryctes nasicornis

Hyles euphorbiae

Agrius convolvuli

Ranatra linearis

Smerinthus ocellata

A. gamma

Lampyris noctiluca

Xylocopa violacea

Vespa crabra

Cynthia cardui