

The occurrence of the Great Grey Shrike (*Lanius excubitor*) in Hungary, with special reference to the Csanádi-hát region

László Bozó^{1*} & András István Csathó²

Received: March 20, 2025 – Revised: July 07, 2025 – Accepted: July 08, 2025



Bozó, L. & Csathó A. I. 2025. The occurrence of the Great Grey Shrike (*Lanius excubitor*) in Hungary, with special reference to the Csanádi-hát region. – Ornis Hungarica 33(2): 330–345. DOI: 10.2478/orhu-2025-0037

Abstract The Great Grey Shrike (*Lanius excubitor*) is a regular breeding and overwintering species in Hungary. The nesting population is concentrated in a small part of the country, but during winter, it occurs countrywide. Despite this fact, only occasional reports of migration and wintering of this species can be found in the literature. The aim of our work was to collect the sporadic occurrence data published or collected by the BirdLife Hungary Monitoring Centre, and to determine an accurate occurrence period of the species in Hungary. In addition, we processed 240 field observation data from the area of the Csanádi-hát (SE Hungary) between 1991 and 2025. It was not possible to determine the most important wintering sites of the species based on the national-level observation data, but it was possible to examine the temporal distribution of the data. Based on data from the last 130 years, the first individuals of the species typically arrived in Hungary in the second half of September, while in spring the last individuals left the country by the end of March – beginning of April. Earlier records in autumn and later records in spring are very rare, with observations at extreme times probably referring to nesting birds. Most individuals were seen during the autumn migration period in October–November, after which they overwintered in varying numbers from year to year, but its number typically declined gradually until late spring. The standard data available from the Csanádi-hát indicate that in some years, records were high, while in others, far fewer individuals were seen. This is probably due to the annual fluctuation of food and the different weather conditions in the breeding and wintering grounds year to year.

Keywords: Laniidae, Passeriformes, escape migration, winter visitors, Maros–Körös köze region, Tiszántúl, Great Hungarian Plain

Összefoglalás A nagy őrgébics (*Lanius excubitor*) rendszeres, kisszámú fészkelő és rendszeres téli vendég Magyarországon. A fészkelőállomány az ország kis részére koncentrálódik, télen viszont országsszerte előfordul. Ennek ellenére a magyarországi szakirodalomban csak alkalmi közléseket találhatunk a faj vonulásáról és teleléséről. Munkánk célja az volt, hogy összegyűjtsük a szakirodalomban publikált szórványos előfordulási adatokat, illetve feldolgozzuk a Magyar Madártani és Természetvédelmi Egyesület Monitoring Központjának adatbázisát, és ezek alapján meghatározzuk a faj jellemző magyarországi előfordulási időszakait. Emellett feldolgoztunk 240 saját megfigyelési adatot is, amelyek a Csanádi-hát kistáj területéről származnak az 1991 és 2025 közötti időszakból. A faj országos megfigyelési adatai alapján nem volt lehetséges meghatározni a legfontosabb előfordulási helyeit, azonban az adatok időbeli eloszlását meg tudtuk vizsgálni. Az elmúlt közel 130 évből származó adatok alapján elmondható, hogy a faj első egyedei jellemzően szeptember második felében érkeztek Magyarországra, míg tavasszal az utolsók március végéig – április elejéig hagyták el az országot. Ősszel az ennél korábbi és tavasszal az ennél későbbi adatai nagyon ritkák, a szélsőséges időpontokban történt megfigyelések minden bizonnyal fészkelő madarakra vonatkoznak. A legtöbb példányt az október–novemberi őszi vonulási időszakban látták, ezt követően évenként változó mennyiségben telelt át, de jellemzően tavasz végéig fokozatosan csökkent a számuk. A Csanádi-hátról elérhető standard adatok alapján megállapítható, hogy bizonyos években kimagasló mennyiségben észleltük, míg máskor ennél jóval kevesebb példány jelent meg. Ennek oka valószínűleg az évenként eltérő időjárási körülmények, illetve a költő- és telelőterületeken az eltérő mennyiségben rendelkezésre álló táplálék lehet.

Kulcsszavak: gébicsfélék, énekesmadarak, vonulás, téli vendégek, Maros–Körös köze, Tiszántúl, Alföld

¹ Eötvös Loránd University, Department of Sytematic Zoology and Ecology, H-1117 Budapest, Pázmány Péter sétány 1/C.

² Dél-békési Természetvédelmi és Madártani Egyesület, H-5744 Kevermes, Jókai utca 61.

* corresponding author; e-mail: bozolaszlo91@gmail.com

Introduction

The Great Grey Shrike (*Lanius excubitor* Linnaeus, 1758) is a polytypic species with 12 subspecies, of which four subspecies are found in Europe. In western, central and north-eastern Europe, the nominate *L. e. excubitor*, in southeastern Europe and southwestern Siberia the *L. e. homeyeri*, in the Caspian Sea area and Kazakhstan the *L. e. pallidirostris*, and on the Canary Islands the *L. e. koenigi* occurs (Yosef *et al.* 2020). The latter two subspecies are resident, while the wintering grounds of individuals of the other two subspecies are located in the southern part of the breeding range (Panov 2011). Scandinavian birds migrate mainly southwestwards and winter in central Europe, but a few individuals have been found in the British Isles and Greece. Birds nesting in central Europe also show a southwesterly migratory direction (Spina *et al.* 2020). The largest populations are found in Norway, Sweden, Finland, Poland, Belarus and northern Ukraine, while in the other parts of Europe patchy populations can be found. In western Europe, a significant part of the population has disappeared in recent decades, while in the east and north, the population is increasing or stable, and the species has colonised new areas. Increasing intensification of agricultural cultivation may be behind the decline, which may also affect eastern populations in the future (Nijssen 2020).

It nests in open, tree-studded subarctic and low-cultivation agricultural areas rich in prey species (Yosef *et al.* 2020). Semi-open areas and mowed fields are found around its nest. It is particularly sensitive to habitat modification. In Hungary, it is increasingly found nesting in wooded pastures, mowed fields and extensively used ploughland, and is a regular winter visitor throughout the country, while individuals of the subspecies *L. e. homeyeri* have been observed twice (Hadarics & Zalai 2008, Lovászi 2021).

The first nesting of Great Grey Shrike in Hungary was detected in the Vas–Sopron Plain in 2000 (Hadarics 2008). From 2003, increasing number of nesters appeared in the Szatmári Plain, and in 2008 and 2011, it was detected in Nógrád County (Barna & Török 2013). According to Barna and Török (2013), these geographically distinct population were settled due to the dispersal of different (Austrian: Sachslehner *et al.* 2004, Slovakian: Kristin 1998, Romanian and Ukrainian: Barna & Török 2013) populations. Nowadays, it breeds in the Ipoly Valley, on the Szatmár–Beregi Plain, in the Nyírség, and in the northern part of the Berettyó–Körös Plain, in a total of 80–125 pairs (Lovászi 2021). The fragmented farmland structure, more extensive agriculture and sufficient prey may be the reasons for the high density of population in the Szatmár–Beregi Plain (Barna & Török 2013).

It builds its nests on solitary trees, bushes or hedges, forest edges, orchards. They may start building their nests very early, sometimes as early as the end of February, but this is usually not until March. They breed once a year, but may also make a replacement brood

(or even a second replacement brood). The main egg-laying period is April (Barna & Török 2013, Haraszthy 2019). The young birds do not return to their hatching site afterwards (Marcum & Yosef 1998).

The wintering birds sometimes appear as early as the end of August, but mainly arrive after mid-September (Hadarics & Zalai 2008, Török 2009, Lovászi 2021). The earliest ever autumn arrival of the Hortobágy was recorded on 10 September 1976. In a few cases, it occurred before mid-September, but the main period of arrival was between 19 and 23 September (Oláh & Kovács 2004). Their movements are strongest in October–November and January–February (Török 2009), but wintering in the Hortobágy is steady after the migration peak between 25 October and 3 November (Oláh & Kovács 2004). They winter in much smaller numbers in Hungary in milder winters (Török 2009), but the same is true when winters are extremely cold and snowy (Oláh & Kovács 2004). In the latter case, the amount of their avian prey increases and they sometimes even visit inhabited areas and bird feeders to hunt (Oláh & Kovács 2004). Numbers can be extremely high in years of vole gradations (Hadarics & Zalai 2008). Field observations suggest that birds may return to their wintering grounds for years (Oláh & Kovács 2004). They are usually seen solitarily, but flocks of a few (up to 110 abroad) have been observed (Oláh & Kovács 2004, Török 2009). Overwinterers typically leave the country by the end of March, but rarely in early April, exceptionally in mid-April, a few late individuals can be seen (Oláh & Kovács 2004, Török 2009, Lovászi 2021). Numbers increase in the Hortobágy after 10 February and remain so until 20 March (Oláh & Kovács 2004).

The origin of the birds that appear in Hungary is unknown due to a lack of recaptures, but they are likely to come from eastern Scandinavia, the Baltic, Poland, Russia and the Carpathians. Colour ring markings indicate that part of the local nesting population winters in Hungary (Török 2009).

Historical data indicate that not only its taxonomic position but also its distribution within the Carpathian Basin was disputed (Beretzk & Keve 1972). Csató (1884) mentioned the occurrence of *L. e. homeyeri* and *L. e. major* in Transylvania, in addition to the nominate race. He later wrote that *L. e. homeyeri* was breeding near Nagyenyed in 1889 (Csató 1891). Further investigations finally led to the result that only the breeding and occurrence of the nominate race was officially recognised in the Carpathian Basin (Schenk 1939). In Transylvania and Felvidék, it was a regular breeder (Schenk 1920), but within the present borders of Hungary, its nesting was not proven even in the early 1970s (Beretzk & Keve 1972). The greatest uncertainty about its movements within the year was caused by its similarity to the Lesser Grey Shrike (*L. minor*). This questioned the reliability of the late summer-early autumn and late spring data. For this reason, Beretzk and Keve (1972) used only their own data from the area of Szeged and Lake Balaton in their first detailed study of the migration and wintering of the species in Hungary. They found that the birds arrived only rarely before October and were seen only once in Szeged in August. In spring, apart from one observation on 4 April, they left the wintering grounds until the end of March. The most important result of the study was that the occurrence of the subspecies *L. e. homeyeri* in Hungary was not confirmed in any case.

A few years later, Andrési (1988) assessed the national occurrence of the species based on 496 observations published in the journal of Madártani Tájékoztató between 1974 and 1982. These data showed that winter observations were made throughout the country, but while

53% of the data were from Transdanubia and 34% from the Great Hungarian Plain, a much smaller proportion (13%) was found in the Northern Mountains. In terms of the temporal distribution of observations, the birds were typically seen in September, but were rarely seen in July and August. Most records were from November. In spring, records in April and especially in May were exceptionally rare. There was considerable variation in the number of annual observations. However, it was stressed that the distribution of the monitoring network within the country and the steady increase in the number of observers meant that the results obtained did not necessarily give an accurate picture of the spatial and temporal distribution of the species.

Since Andrési (1988), only the northeastern Hungarian nesting has been studied in detail (Barna & Török 2013), summary evaluations of its migration have been published only in books (Hadarics & Zalai 2008, Török 2009, Lovászi 2021), and regional study has been published only for the Hortobágy region (Oláh & Kovács 2004).

In the present study, we investigated the autumn and spring migration and wintering of the species in the Csanádi-hát area in southeastern Hungary. We also analysed the national distribution of the species based on literature data and the dataset of the BirdLife Hungary Monitoring Centre.

Material and Methods

A total of 240 data come from the area of the Csanádi-hát region from 1991 to 2025, a geographic sub-region located in the southern part of the present-day Békés County (*Figure 1*). Regular observations were made in three settlements, Battonya, Kevermes and Lőkösháza, while in the other settlements (Almáskamarás, Csanádapáca, Dombegyház, Dombiratos, Elek, Kaszaper, Kisdombgyház, Kunágota, Magyarbánhegyes, Magyardombgyház, Medgyesbodzás, Medgyesegyháza, Mezőhegyes, Mezőkovácsháza, Nagybánhegyes, Nagykamarás, Pusztatottlaka, Végegyháza), we recorded occurrences mainly along the busier roads and railway lines.

Nowadays, the area is dominated by farmlands, which typically accounts for around 90% of the total area with the exception of a few more forested settlements, such as Mezőhegyes (Hevesi 2005). Woody-shrubby habitats can be found along the banks of the Száraz-ér river, along artificial drainage channels and mine lakes, and in populated areas (Bozó 2018). Of particular importance for the Great Grey Shrike are the power lines, which often run alongside roads. Sightings in Battonya, Kevermes and Lőkösháza were mainly made on foot or by bicycle using binoculars, while elsewhere sightings were mainly made from cars, buses and trains, often without the use of binoculars. In all cases, only the data of clearly identified individuals were recorded. In any case, the occurrence time of the two species do not overlap in the area.

Data are available for Battonya from 1991, Kevermes from 2002 and Lőkösháza from 2010. Regular, standard field surveys started in Battonya in 2009 and in Kevermes and Lőkösháza in 2012. Since then, the number of days spent in the field annually has remained roughly constant in all three settlements. For this reason, only data from 2012 onwards

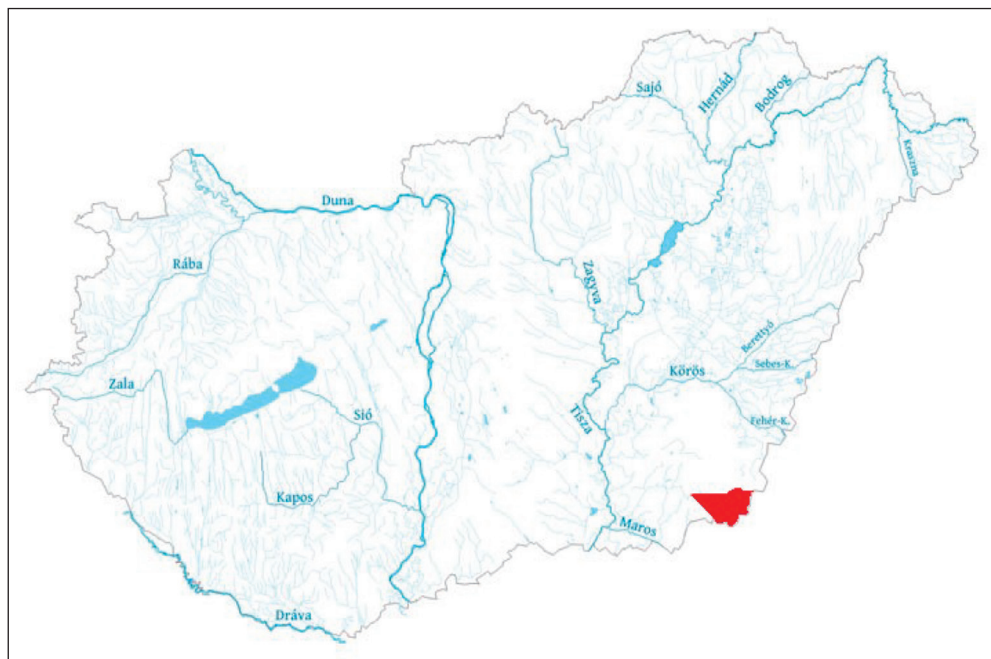


Figure 1. The location of the Csanádi-hát region within Hungary

1. ábra A Csanádi-hát elhelyezkedése Magyarországon

were used when we analysed the number of annual observations, ten-day intervals, the length of the seasons as well as the earliest and latest observations. In Kevermes, undated observations are known for the winter of 2002–2003. These have not been included in the data analysis and data counts, but because of their importance, some of these sightings have been mentioned in the context of the more interesting observations of the species.

We first looked at the distribution of the data between years and then within years in ten-days intervals. To do this, the data were plotted. In order to evaluate the results obtained, we used literature data to determine the spring (15 February – 15 April) and autumn (1 August – 30 November) migration periods and the wintering period (1 December – 15 February). We calculated the median date of observations for the whole database and also gave the earliest ever and seasonally earliest autumn and latest spring data. The latter could be determined for the period starting from 2013. Weather data (average monthly minimum temperature) for four seasons between 2016 and 2020 were also available from Dombegyház, Nyéki-major meteorological station in the Csanádi-hát. We examined whether there was a significant relationship between temperature data and the length of season between the 2016–2017 and the 2019–2020 seasons by using Spearman correlation. We also wanted to see if there was a relationship between the date of seasonal first observations and the length of the season. We have also published the more interesting observations concerning birds singing, bird predation and highlighted the occurrences in the interior areas of the villages and cities.

National observational data reported in the literature were then processed. The national data are mainly from three periods.

1. 1914–1927. 58 records from this period with exact dates and locations were found in the spring migration reports of the journal *Aquila*, and 11 wintering records were also published there (Schenk 1915, 1919, 1921, Wurga 1922, 1924, 1926, 1928). Unfortunately, unlike other migratory species, no records of the Great Grey Shrike were collected between 1894 and 1914, and only a few data were provided by later reporters. Similar to the data for the Csanádi-hát region, these data are presented by year and by month within a year. In this case, the ten-day assessment was not used due to the low sample size.

2. 1974–1982. 496 record from this period is known. The data published in the journal *Madártani Tájékoztató* have already been processed by Andrési (1988). He summarised the data in a table, while we – as before – presented the information in graphs by year and by month within the year. Some early summer and late spring occurrences are also included in the database.

3. 1996–2000. The journal *Túzok* published 2,510 data on the species for each month between 1 January 1996 and 31 October 2000 (except for the three months between 1 November 1999 and 31 January 2000) (Hadarics 1996a, 1996b, 1996c, 1996d, 1997a, 1997b, 1997c, 1997d, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 2000a, 2000b, 2000c, 2000d). Within-year comparisons were only possible for the three years between 1996 and 1998 due to missing data. Within-year, the data are presented in ten-day periods. Data from 1 January to 31 January are from 1996 to 1999, data from 1 February to 31 October are from 1996 to 2000, and data from 1 November to 31 December are from 1996 to 1998.

Finally, data from the BirdLife Hungary Monitoring Centre for the period 2000–2024 were also processed. As the methodology and geographical distribution of the data collection raised several issues (occasional observations linked to certain survey days distort the results, separation of breeding birds from non-breeding birds), the available data were selected according to the following criteria. The counties (Borsod-Abaúj-Zemplén, Győr-Moson-Sopron, Hajdú-Bihar, Heves, Nógrád, Pest, Szabolcs-Szatmár-Bereg) where the species was confirmed to breed were not included. Also, occasional data uploads were not taken into account, only data from complete species lists were used. This resulted in a total of 2,418 observations. There was an unusual peak in the second decade of January, which was an artificial product of increased field activity due to the annual bird of prey counts. For this reason, we decided to remove these data from the figure, and used the average number of observations of the first and the third decades of January.

Results

Data from the Csanádi-hát region

Between the 2012–2013 and 2024–2025 seasons ($n = 209$), the lowest number of observations was in 2014–2015 ($n = 2$), while the highest number ($n = 30$) was in 2018–2019 (*Figure 2*).

Since 1991, the earliest autumn observation is from 20 September 2024 from the Tompapuszta grassland in Battonya, while the latest spring observation is from 30 March 2008 from the Vajda-dűlő area in Battonya.

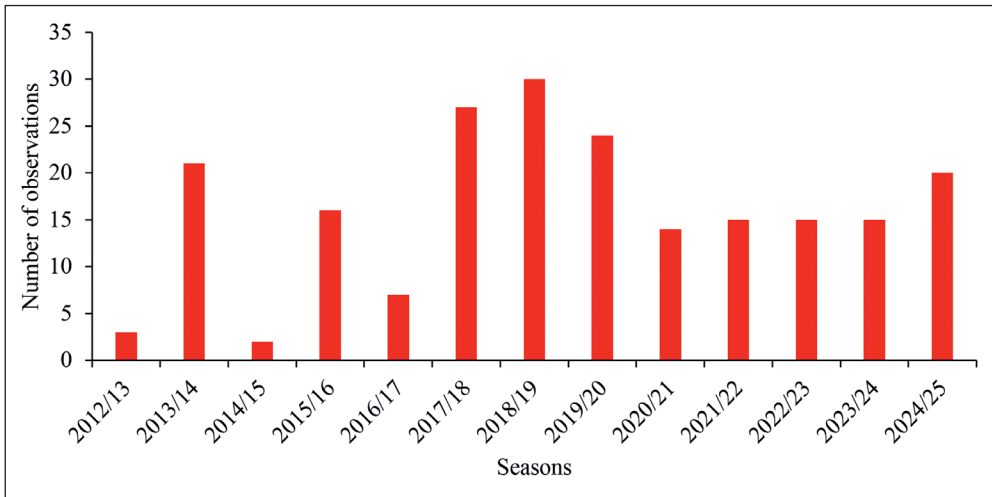


Figure 2. Number of seasonal observations between 2012–2013 and 2024–2025 in the Csanádi-hát region

2. ábra A szezononkénti megfigyelések száma 2012–2013 és 2024–2025 között a Csanádi-háton

The ten-day distribution of the data from 1991 shows that the first individuals rarely arrived in the region as early as the last third of September. After a small peak in mid-October, the number of sightings then fell again at the end of November. The number of records then fluctuated throughout the winter. Most sightings were recorded in mid-February. It was still regularly observed in early March, but after that it was extremely rare (Figure 3).

Between the 2012–2013 and 2024–2025 seasons, an average of 138 days (SD = 19.8 days) passed between the first and the last observations of the given season (Table 1). The results are

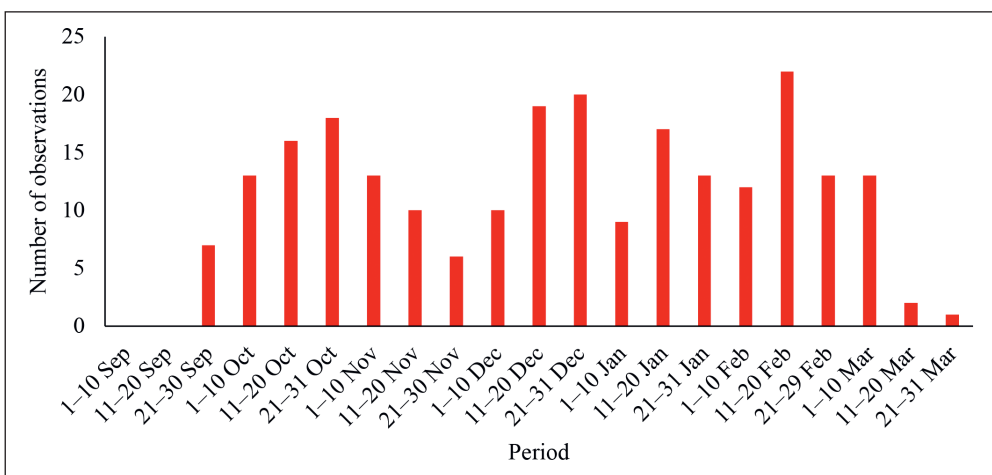


Figure 3. Ten-day distribution of the Great Grey Shrike observations in the Csanádi-hát region between 1 September and 31 March

3. ábra A nagyörgébics-megfigyelések tíznapos eloszlása a Csanádi-háton szeptember 1. és március 31. között

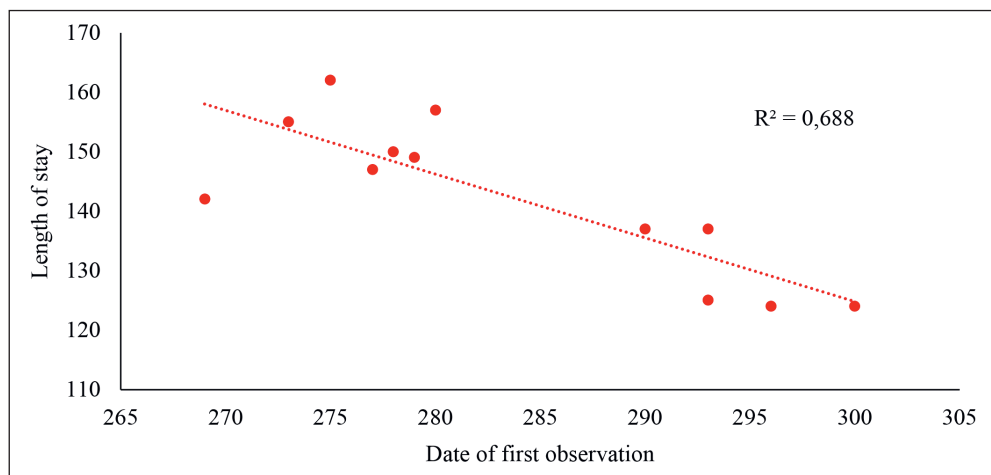


Figure 4. Relationship between the date of seasonal first observations and days spent between the seasonal first and last observations

4. ábra A szezonális első megfigyelések és az első és utolsó megfigyelések között eltelt idő közötti összefüggés

significantly skewed by the 2012–2013 season, when the last observation was extremely early, on 29 December. Apart from this, the average number of days spent in the area was 142 (SD = 13.2 days). On average, the first individuals appeared on 9 October (SD = 11.3 days) and the last individuals disappeared on 2 March (SD = 6.6 days), excluding the extremely early departure date of the 2012–2013 season.

There was a significant negative correlation between the date of seasonal first observations and days spent between the seasonal first and last observations ($R = -0.739$, $p = 0.006$) (Figure 4). However, the average monthly minimum temperatures between October and March did not affect the length of the season as well as there was no significant correlation between the date of first observations and the length of the season ($R = -0.093$, $p = 0.671$).

Considered all data from 1991, in most observations

Table 1. The earliest and latest observations by seasons, and the number of days spent in the Csanádi-hát region

1. táblázat A szezonkénti legkorábbi és legkésőbbi megfigyelések időpontjai, illetve a Csanádi-háton töltött napok száma

Season	Date of first observation	Date of last observation	Period that the birds spent in the area
2012/13	3 October	29 December	87
2013/14	4 October	1 March	147
2014/15	20 October	7 March	137
2015/16	30 September	5 March	155
2016/17	23 October	25 February	124
2017/18	27 October	1 March	124
2018/19	17 October	4 March	137
2019/20	5 October	5 March	150
2020/21	20 October	23 February	125
2021/22	7 October	14 March	157
2022/23	26 September	16 February	142
2023/24	6 October	5 March	149
2024/25	20 September	2 March	162

(224 cases; 93.3%), a single individual, and in 14 cases (5.8%) two individuals were seen in the same area. Three individuals were observed on two occasions (0.8%), on 20 October 2014 and 14 October 2024 in Kevermes.

In the interiors, it was recorded in Battonya (the western edge of the town) on 27 February 2016 and in Kevermes in the winter of 2002–2003. In the latter winter, due to thick snow cover and prolonged cold weather, solitary birds or 2–3 individuals were regularly observed in the village. In one case, we also recorded the predation of Eurasian Tree Sparrow (*Passer montanus*) in the cemetery of Kevermes.

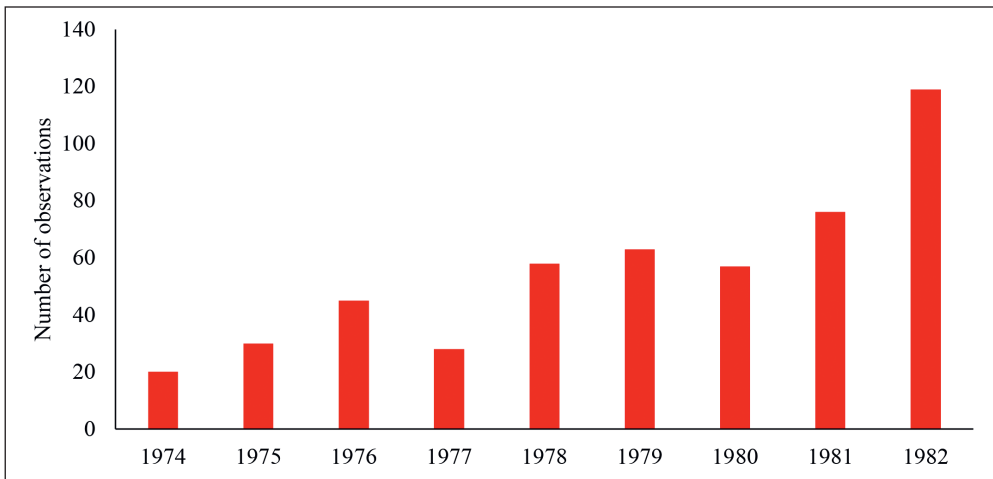


Figure 5. Annual number of Great Grey Shrike observations published between 1974 and 1982 in Hungary

5. ábra A szakirodalomban közölt nagyörgébics-megfigyelések éves mennyisége 1974 és 1982 között Magyarországon

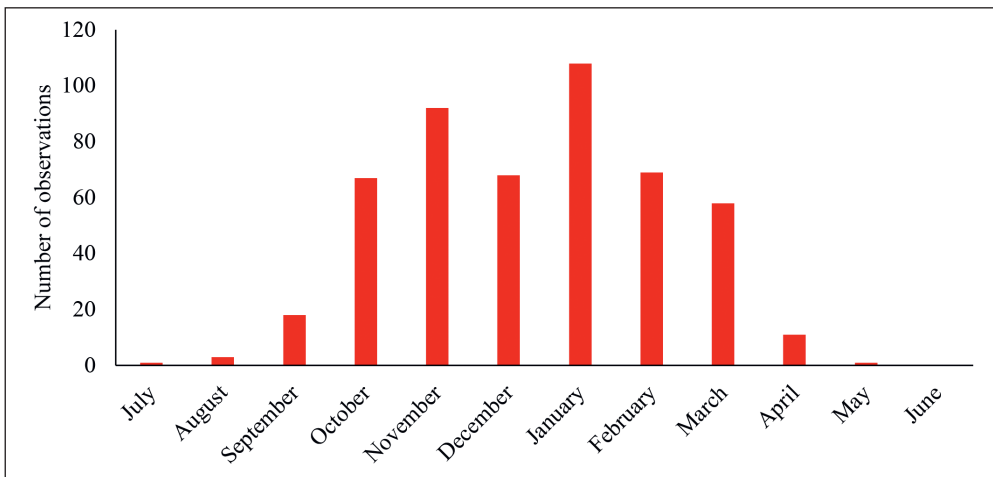


Figure 6. Monthly distribution of the Great Grey Shrike observations between 1974 and 1982 in Hungary

6. ábra A nagyörgébics-megfigyelések havi eloszlása 1974 és 1982 között Magyarországon

Singing birds were observed in Battonya on 16 January 2019, in Kevermes on 2 November 2011, 2 November 2018 and 4 November 2022.

Carpathian Basin data between 1914 and 1927

In terms of the distribution of the data between years, the highest number of data was from 1926 ($n = 15$), while no records were available from 1920. However, the data collection was random during this period.

Within a season, the earliest autumn observation was on 11 September 1926 and the latest spring observation on 23 May 1914. It was very rare in September, but birds were regularly seen in October, and then fluctuated in numbers throughout the winter. There was a new peak in March, after which it became rare again. The observations in Szombathely on 2 May 1914, in Tarnaméra on 23 May 1914 and in Eperjes (Prešov) on 8 May 1918 could all have been of nesting birds, but also of Lesser Grey Shrikes. Except for these, the latest, and most definite Great Grey Shrike sighting was in Budapest on 14 April 1925.

Data for Hungary between 1974 and 1982

In terms of the distribution of data between years, the highest number of data came from 1982 ($n = 119$), while the lowest number of data ($n = 20$) came from 1974 (*Figure 5*).

Most observations within year were made in November and January. Apart from some very early summer sightings, the first individuals appeared in September, but the species was only seen in greater numbers in October. Again, only small numbers were seen in April (*Figure 6*).

Of the occurrences defined as late spring by Andrési (1988), only two stand out from the data (29 April 1980 Gyirmót and 15 May 1982 Kiskunfélegyháza), while the summer occurrences (26 July 1980 Tokod; 2 August 1976 Nyírtelek; 5 August 1978 Polgár; 9 August 1980 Császárszállás) are really interesting.

Observations between 1996 and 2000

Between 1996 and 2000, a total of 2,464 observations were reported, of which 665 observations were from 1996, 592 from 1997, 487 from 1998, 392 from 1999 and 328 from 2000.

Apart from a few summer occurrences, the number of observations started to increase in the second half of September and peaked in October. Thereafter, it was recorded in constant numbers until March. By April it was rare (*Figure 5*).

Great Grey Shrike observations between 2000 and 2024 (BirdLife Hungary Monitoring Centre data)

Between the 2015–2016 and 2023–2024 seasons ($n = 2,018$), the lowest number of observations was in 2018–2019 ($n = 149$), while the highest number ($n = 295$) was in 2020–2021 (*Figure 8*).

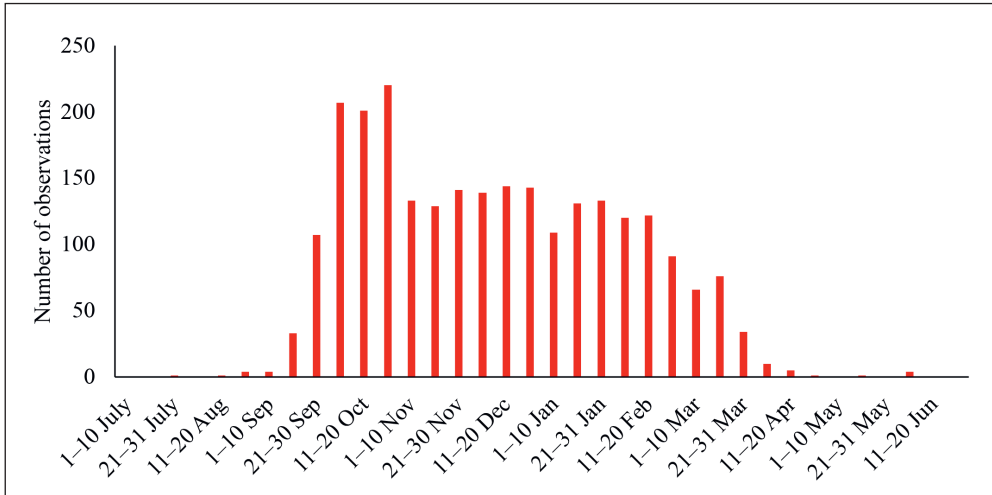


Figure 7. Ten-day distribution of the Great Grey Shrike observations published in Hungary between 1996 and 2000

7. ábra A szakirodalomban közölt nagyörgébics-megfigyelések tíznapos eloszlása a Magyarországon 1996 és 2000 között

The first individuals were typically observed in mid-September. By mid-October, the number of sightings had reached the level that was typical throughout the winter. There was a peak in late-October. The number of sightings started to decrease in the second half of February and the species was quite rare by the end of March. There is also three sightings

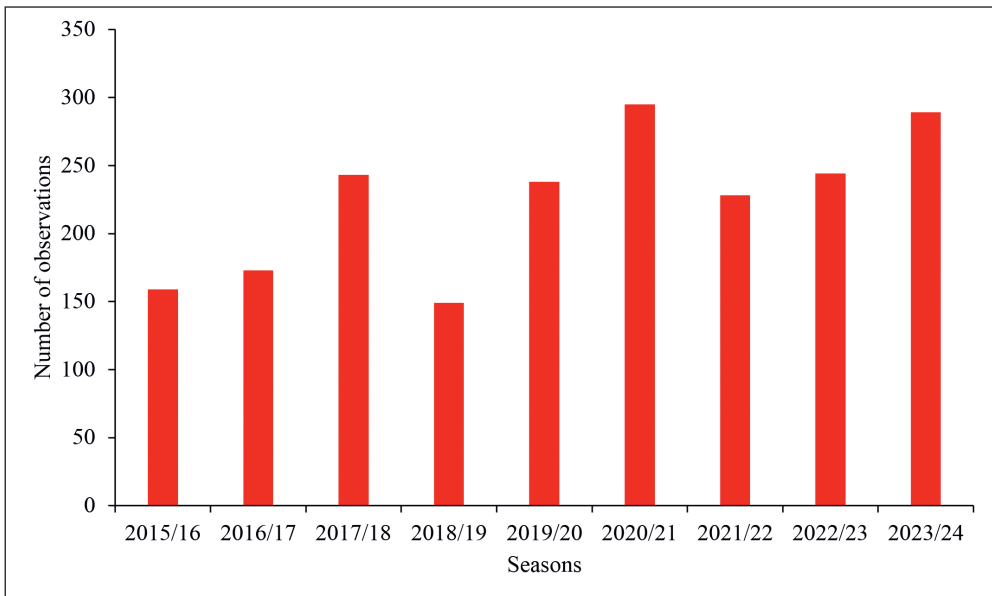


Figure 8. Number of seasonal observations between 2015–2016 and 2023–2024 in Hungary

8. ábra A szezononkénti megfigyelések száma 2015–2016 és 2023–2024 között Magyarországon

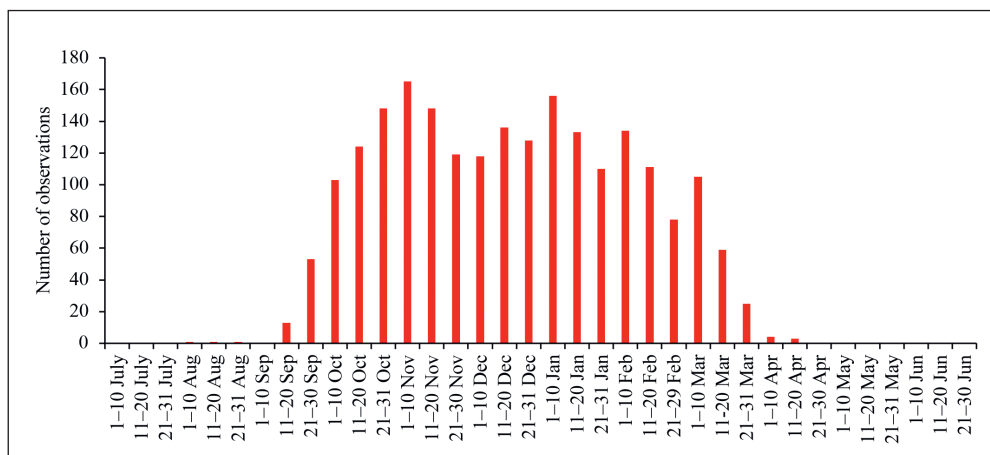


Figure 9. Ten-day distribution of the Great Grey Shrike observations based on the dataset of the BirdLife Hungary Monitoring Centre

9. ábra A nagyörgébics-megfigyelések tíznapos eloszlása a Magyar Madártani és Természetvédelmi Egyesület Monitoring Központjának adatbázisa alapján 2000 és 2024 között

in August (earliest: 7 August 2006, Szatymaz, Csongrád-Csanád County) and seven in April (latest: 16 April 2015, Vértestolna, Komárom-Esztergom County) (Figure 9).

In 92.9% of the cases, 1, 6.0% 2, 1.0% 3 individuals were observed, and there were two data when 4 birds were observed in one UTM quadrat.

Discussion

According to the data we have processed, the Great Grey Shrike was a regular winter visitor to Hungary in all periods in the last century, and occasionally in small numbers, it was a rare breeder. National data collection was not standard even in the years when the Hungarian Ornithological Centre and later BirdLife Hungary/MME were expecting data from observers on the occurrence of migratory birds and rarer, scattered species. At the beginning of the 20th century, this was because they were mainly interested in the spring return of birds, and the Great Grey Shrike was not a migratory species in the classical sense. The data started to increase after the First World War, when it became important to clarify questions about the bird life of the Carpathian Basin, including the status of the Great Grey Shrike. The main problem with the observations from 1970 to 1980 and from 1996 to 2000 is that the spatial distribution of the data is random from year to year, with only one Great Grey Shrike observation from some sites and several years from others. Comparison of data between years does not give a realistic picture of the true status of the species. For this reason, the difference in the number of data between years could only be evaluated for the Csanádi-hát region. In this region, the number of observations was much higher than average in some years and much lower in others. The number of observations was particularly high in 2015, but the situation was probably similar in the winter of 2001–2002.

The number of Great Grey Shrikes away from nesting sites is related to the weather, and they are also conspicuously abundant during the gradation years of the Common Vole (*Microtus arvalis*) (Oláh & Kovács 2004). In both periods were cold winters, and in 2001–2002 the landscape was covered with the thickest snow cover in decades. Observations (presence in the interior areas, bird predation, movements in flocks) that were otherwise uncharacteristic were also made during this period. Bird predation has been observed by several authors (Bod 1901, Nozdroviczky 1907, Rácz 1907, Vasvári 1942, Bechtold 1977, Radetzky 1919, Bank 1985, Wágner 1999), and in exceptional cases even bats (Gorman 1997). They were also rare in the Hortobágy in inhabited areas, and even then they only moved to the outskirts of settlements (Oláh & Kovács 2004), which is confirmed by our own observations in the Chanádi-hát region. The occurrence in flocks was also considered exceptional (Oláh & Kovács 2004).

The timing of the first birds' appearance and the last birds' departure is broadly similar in each period and in different parts of the country. In autumn, the first individuals were typically observed from mid-September onwards. Sightings in August are likely to be of Lesser Grey Shrikes, possibly members of the local breeding population. In the Hortobágy, where the species also did not breed, the earliest sighting was on 10 September 1976, but they only appeared in greater numbers in the last third of the month (Oláh & Kovács 2004). A similar pattern is also typical of the Csanádi-hát region, but here, the first individuals arrived even later. Sightings were high at all periods during the migration periods in October and March, as in other parts of the country, but were typically most frequent in winter. In March, sightings were quite rare on the Csanádi-hát region, and there were no records at all in April, although they were still regularly observed throughout the country at that time. It is possible that the birds that appeared here came from areas to the north of the Carpathian Basin, and therefore, arrived later in the autumn due to the longer migration route, leaving earlier in spring.

The early autumn arrival resulted in a later spring departure, but this did not depend on the local weather. Additionally, earlier arrival did not result in longer season. For this reason, it is likely that the movement of the species is mainly influenced by the weather at the breeding sites.

The possibility of confusion with the Lesser Grey Shrike is often not completely ruled out, so the use of summer data is severely limited. It is, however, striking that between May and August, Great Grey Shrikes were observed mainly in western, northwestern and northeastern Hungary and in the Kiskunság region. In those regions – with the exception of the Kiskunság – where there was evidence of nesting later (Lovászi 2021), it cannot be excluded that it was already nested in the first decades of the 20th century.

We have not been able to quantify the numbers, but it seems that the timing of the occurrence of the species has not changed over the last century. According to Busse (1995), a decline and fluctuation in the abundance of migratory birds in Europe was already detectable from the mid-20th century, but this probably did not significantly affect the timing of bird migration.

It is also not proven, but it is likely that individuals may overwinter in a given area and return there years later (Oláh & Kovács 2004). This is supported by our observations of singing individuals. Three quarters of these observations occurred in early November, when the birds were occupying their winter territories and protecting them with territorial song.

Acknowledgements

The authors are grateful to Péter Lovászi for providing and preparing dataset of the BirdLife Hungary Monitoring Centre as well as his thorough review of the manuscript.

References

- Andrési, P. 1988. A nagy örgébics (*Lanius excubitor*) előfordulása Magyarországon 1974 és 1984 között [Occurrences of Great Grey Shrike (*Lanius excubitor*) in Hungary between 1974 and 1984]. – Madártani Tájékoztató 12(1–2): 46–49. (in Hungarian)
- Bank, L. 1985. Barázdabillegetőt (*Motacilla alba*) zsákmányoló nagy örgébics (*Lanius excubitor*) [Great Grey Shrike (*Lanius excubitor*) preys White Wagtail (*Motacilla alba*)]. – Madártani Tájékoztató 9(3): 53. (in Hungarian)
- Barna, P. & Török, H. A. 2013. A nagy örgébics (*Lanius excubitor*) fészkelése a Szatmári-síkság és a Beregi-síkság területén [Nesting of Great Grey Shrike (*Lanius excubitor*) on Szatmári-sík and Beregi-sík (North-East Hungary)]. – Aquila 120: 41–52. (in Hungarian with English Summary)
- Bechtold, I. 1977. Fenyvescinegét támadó nagy örgébics [Great Grey Shrike attacking Coal Tit]. – Aquila 76–77: 193. (in Hungarian)
- Beretzki, I. & Keve, A. 1972. A nagy örgébics (*Lanius excubitor*) Magyarországon [The Great Grey Shrike (*Lanius excubitor*) in Hungary]. – Aquila 78–79: 209–221. (in Hungarian)
- Bod, P. 1901. Az örgébics madárpusztításáról [On the killing of birds by Great Grey Shrike]. – A Természet 4(13): 11–12. (in Hungarian)
- Bozó, L. 2018. Dél-Békés természeti értékei [Natur assets of South Békés]. – Dél-békési Természetvédelmi és Madártani Egyesület, Kevermes (in Hungarian)
- Busse, P. 1995. Migration dynamics of Red-backed (*Lanius collurio*) and Great Grey Shrikes (*L. excubitor*) in the Baltic region, 1961–1990. – Proceedings Western Foundation Vertebrate Zoology 6: 55–60.
- Csató, J. 1884. Über *Lanius homeyeri* Cabanis [About *Lanius homeyeri*]. – Zeitschrift für die gesammte Ornithologie 2: 229–234. (in German)
- Csató, J. 1891. Über *Lanius homeyeri* CAB. und sein Nest [About *Lanius homeyeri* and its nest]. – Ornithologische Jahrbuch 1: 163–167. (in German)
- Gorman, G. 1997. Korai denevérré (*Nyctalus noctula*) vadászó nagy örgébics (*Lanius excubitor*) [Great Grey Shrike (*Lanius excubitor*) hunting Common Noctule Bat (*Nyctalus noctula*)]. – Aquila 103–104: 133–153. (in Hungarian)
- Hadarics, T. 1996a Érdekes madármegfigyelések 1995/1996 tél (november–január) [Interesting bird observations in the winter of 1995/1996 (November–January)]. – Tűzok 1(1): 49–53. (in Hungarian)
- Hadarics, T. 1996b Érdekes madármegfigyelések 1996 tavasz (február–április) [Interesting bird observations in the spring of 1996 (February–April)]. – Tűzok 1(2): 93–100. (in Hungarian)
- Hadarics, T. 1996c Érdekes madármegfigyelések 1996. május–július [Interesting bird observations between May and July 1996]. – Tűzok 1(3): 133–141. (in Hungarian)
- Hadarics, T. 1996d Érdekes madármegfigyelések 1996. augusztus–október [Interesting bird observations between August and October 1996]. – Tűzok 1(4): 168–181. (in Hungarian)
- Hadarics, T. 1997a Érdekes madármegfigyelések 1996. november – 1997. január [Interesting bird observations between November 1996 and January 1997]. – Tűzok 2(1): 38–47. (in Hungarian)
- Hadarics, T. 1997b Érdekes madármegfigyelések 1997. február–április [Interesting bird observations between February and April 1997]. – Tűzok 2(2): 71–82 (in Hungarian)
- Hadarics, T. 1997c Érdekes madármegfigyelések 1997. május–július [Interesting bird observations between May and July 1997]. – Tűzok 2(3): 115–126. (in Hungarian)

- Hadarics, T. 1997d Érdekes madármegfigyelések 1997. augusztus-október [Interesting bird observations between August and October 1997]. – Tűzok 2(4): 146–160. (in Hungarian)
- Hadarics, T. 1998a Érdekes madármegfigyelések 1997. november – 1998. január [Interesting bird observations between November 1997 and January 1998]. – Tűzok 3(1): 18–32. (in Hungarian)
- Hadarics, T. 1998b Érdekes madármegfigyelések 1998. február-április [Interesting bird observations between Februar and April 1998]. – Tűzok 3(2): 67–81. (in Hungarian)
- Hadarics, T. 1998c Érdekes madármegfigyelések 1998. május-július [Interesting bird observations between May and July 1998]. – Tűzok 3(4): 168–185. (in Hungarian)
- Hadarics, T. 1998d Érdekes madármegfigyelések, 1998. augusztus-október [Interesting bird observations between August and October 1998]. – Tűzok 3(4): 169–185. (in Hungarian)
- Hadarics, T. 1999a Érdekes madármegfigyelések 1998. november – 1999. január [Interesting bird observations between November 1998 and January 1999]. – Tűzok 4(1–2): 33–45. (in Hungarian)
- Hadarics, T. 1999b Érdekes madármegfigyelések 1999. február-április [Interesting bird observations between Februar and April 1999]. – Tűzok 4(1–2): 46–56. (in Hungarian)
- Hadarics, T. 1999c Érdekes madármegfigyelések 1999. május-július [Interesting bird observations between May and July 1999]. – Tűzok 4(4): 130–152. (in Hungarian)
- Hadarics, T. 1999d Érdekes madármegfigyelések, 1999. augusztus-október [Interesting bird observations between August and October 1999]. – Tűzok 4(4): 130–152. (in Hungarian)
- Hadarics, T. 2000a Érdekes madármegfigyelések 1999. november – 2000. január [Interesting bird observations between November 1999 and January 2000]. – Tűzok 5(1–2): 30–44. (in Hungarian)
- Hadarics, T. 2000b Érdekes madármegfigyelések 2000. február-április [Interesting bird observations between Februar and April 2000]. – Tűzok 5(1–2): 45–56. (in Hungarian)
- Hadarics, T. 2000c Érdekes madármegfigyelések, 2000. május-július [Interesting bird observations between May and July 2000]. – Tűzok 5(3–4): 64–72. (in Hungarian)
- Hadarics, T. 2000d Érdekes madármegfigyelések 2000. augusztus-október [Interesting bird observations between August and October 2000]. – Tűzok 5(3–4): 73–84. (in Hungarian)
- Hadarics, T. 2008. A nagy örgébics (*Lanius excubitor*) első bizonyított fészkelése Magyarországon [First confirmed breeding of Great Grey Shrike (*Lanius excubitor*) in Hungary]. – Szélkiáltó 13: 18–20. (in Hungarian)
- Hadarics, T. & Zalai, T. 2008. Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. An annotated list of the birds of Hungary. – Magyar Madártani és Természetvédelmi Egyesület, Budapest, p. 207.
- Haraszthy, L. 2019. Nagy örgébics [Great Grey Shrike]. – In: Haraszthy, L. (ed.) Magyarország fészkelő madarainak költésbiológiája. 2. kötet. Sárgarigóféléktől a sármányfélékig (Passeriformes) [Nesting birds of Hungary. Vol. 2. Oriolidae – Emberizidae (Passeriformes)]. – Pro Vértess Nonprofit Zrt., Csákvár, pp. 41–45. (in Hungarian)
- Hevesi, J. 2005. Határ mentén [Along the border]. – Békés Megyei Önkormányzat, Typografika Kft., Békéscsaba (in Hungarian and Romanian)
- Kristin, A. 1998. Breeding range trends of four shrike species in Slovakia. – In: Yosef, R. & Lotter, F. (eds.) Shrikes of the World. Conservation Implementation. – International Birdwatching Center, Eilat, pp. 18–21.
- Lovászi, P. 2021. Nagy örgébics [Great Grey Shrike]. – In: Szép, T., Csörgő, T., Halmos, G., Lovászi, P., Nagy, K. & Schmidt, A. 2021. Magyarország madáratlasza [Bird Atlas of Hungary]. – Agrárminisztérium – Magyar Madártani és Természetvédelmi Egyesület, Budapest, pp. 460–462. (in Hungarian with English Summary)
- Marcum, H. & Yosef, R. 1998. A comparison of life history parameters of five Laniidae species. – International Centre for Birdwatching in Eilat Technical Publication 7: 92–101.
- Nijssen, M. 2020. Great Grey Shrike. *Lanius excubitor*. – In: Keller, V., Herrando, S., Vorišek, P., Franch, M., Kipson, M., Milanese, P., Marti, D., Anton, M., Klvanová, A., Kalyakin, M. V., Bauer,

- H.-G. & Foppen, R. P. B. (eds.) European Breeding Bird Atlas 2. Distribution, Abundance and Change. – European Bird Census Council, Lynx Edicions, Barcelona, pp. 534–535.
- Nozdroviczky, L. 1907. Nagy őrgébics (*Lanius excubitor* L.), mint cinegepusztító [Great Grey Shrike (*Lanius excubitor*) killing tits]. – Aquila 14: 319. (in Hungarian)
- Oláh, J. & Kovács, G. 2004. Nagy őrgébics [Great Grey Shrike]. – In: Ecsedi, Z. (ed.) A Hortobágy madárvilága [Birds of the Hortobágy]. – Hortobágy Természetvédelmi Egyesület, Winter Fair, Balmazújváros – Szeged, pp. 503–504. (in Hungarian)
- Panov, E. N. 2011. The true shrikes (Laniidae) of the world: ecology, behavior and evolution. – British Birds 104: 676–680.
- Rác, B. 1907. *Lanius excubitor* L. mint madárpusztító [*Lanius excubitor* killing birds]. – Aquila 14: 319. (in Hungarian)
- Radetzky, D. 1919. A nagy őrgébics vakmerősége [The audacity of Great Grey Shrike]. – Aquila 24: 123, 144. (in Hungarian)
- Sachslehner, L., Schmalzer, A. & Probst, R. 2004. The breeding population of the Great Grey Shrike (*Lanius excubitor*) in Austria, 1995–2003. – Biological Letters 41(2): 135–146.
- Schenk, J. 1915. A madárvonulás Magyarországon az 1914. év tavaszán [The bird migration in Hungary in the spring of 1914]. – Aquila 22: 5–56. (in Hungarian and German)
- Schenk, J. 1919. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 26: 46–75. (in Hungarian)
- Schenk, J. 1920. Erdély madarai. Zeyk Miklós hátrahagyott kézírata [Birds of Transylvania. Manuscript left behind by Miklós Zeyk]. – Aquila 27: 71–243. (in Hungarian)
- Schenk, J. 1921. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 28: 97–126. (in Hungarian)
- Schenk, J. 1939. Namenverzeichnis der Vögel des historischen Ungarns [List of the birds of historical Hungary]. – Aquila 52–55: 9–79. (in German)
- Spina, F., Baillie, S. R., Bairlein, F., Fiedler, W. & Thorup, K. 2022. The Eurasian African Bird Migration Atlas. – EURING/CMS <https://migrationatlas.org>.
- Török, H. A. 2009. Nagy őrgébics [Great Grey Shrike]. – In: Csörgő, T., Karcza, Zs., Halmos, G., Magyar, G., Gyurácz, J., Szép, T., Bankovics, A., Schmidt, A. & Schmidt, E. (eds.) Magyar Madárvonulási Atlasz [Hungarian Bird Migration Atlas]. – Kossuth Kiadó, Budapest, pp. 570–571. (in Hungarian with English Summary)
- Vasvári, M. 1942. Az 1939/40-es tél és a madárvilág. (Összefoglaló jelentés) [The winter of 1939/40 and birdlife (Summary report)]. – Aquila 46–49: 340–365. (in Hungarian)
- Wágner, L. 1999. Madarakra vadászó nagy őrgébics (*Lanius excubitor*) [Great Grey Shrike (*Lanius excubitor*) preying birds]. – Tüzek 4(4): 129. (in Hungarian)
- Warga, K. 1922. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 29: 91–131. (in Hungarian)
- Warga, K. 1924. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 30–31: 179–237. (in Hungarian)
- Warga, K. 1926. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 32–33: 66–127. (in Hungarian)
- Warga, K. 1928. Madárvonulási adatok Magyarországból [Bird migration data from Hungary]. – Aquila 34–35: 257–305. (in Hungarian)
- Yosef, R., ISWG International Shrike Working Group, Sharpe C. J., Marks J. S. & Kirwan G. M. 2020. Great Grey Shrike (*Lanius excubitor*), version 1.0. – In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D. A. & de Juana, E. (eds.) Birds of the World. – Cornell Lab of Ornithology, Ithaca, NY, USA. DOI: 10.2173/bow.norshr1.01