

## DATA TO THE PHENOLOGY OF STARLING (STURNUS V. VULGARIS L. 1758)

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(Received July 31, 1983)

### Abstract

Author summarizes his observations related to the migration of starlings at the Southern basin of the Tisza river between 1958—1982. Data are presented on their over-wintering, winter alimentation and a report is given of the regional mean value of the starlings arriving to the environs of Szeged as well as the time of arrival of the native nesting birds, which corresponds to the Lübeck mean value („semicircular migration”). Analysis is given of their mingling with other species during migration, occurring only with five *Limicola* species. This points to the fact that the starlings mostly feed at moist meadows during migration. The staying of a hatching starling pair near a nesting hollow prior to nesting is demonstrated on a figure. The migration still continues at the beginning of the hatching period.

### Introduction

The Autumn and Spring migration of starlings is a rather well known process, nevertheless, there are still some obscure points to be clarified. The starlings at the environs of Szeged have been under observation by author irregularly since 1958 and regularly, with special interest since 1977. His data concerning their migration are given in the followings.

### Materials and Methods

Author's observation area was the flood-plain forest between Szeged-Tápé and Vesszős located a North from Szeged at the right bank of the Tisza river. Field-work was carried out here on 65 occasions during the mentioned period. Apart from this, averagely 6 hours long observations were accomplished on 11 occasions between Szeged and Klárafalva at the left bank of the Maros; on 28 occasions at the Southern-lowland natron lakes (Makraszék, Őszeszék, Nagy-szék); on 21 occasions at the Pitvaros plains; on 36 occasions at the area of Töserdő; on 29 occasions at the Szeged Fehértó; on 19 occasions at the Hantház-lakes and on 9 occasions at the Zsombó-meadow, walking through the areas on the same routes with a 10×50 sized binocular. Furthermore, a natural nesting hollow found in an old walnut-tree at Újszeged was followed with attention daily.

### Discussion

The Hungarian stock of starlings starts its migration Southwards at the end of Summer. According to the evidence of ringings the majority migrate to North Africa through Yugoslavia and Italy in September (IGALFFY 1952, STUDER-THIERSCH 1969, SCHMIDT 1977). Only few reports have arrived from the Soviet Union and Spain

(latter: MOLNÁR 1962). Large flocks arrive to our country from northernmost parts in September (Poland, Soviet Union), causing great damages in the vineyards especially at the environs of their overnight places (mostly large reeds) at Transdanubia as well as at areas between the Danube and Tisza rivers (SZIJ 1957, KEVE 1970, NAGY 1981). The last flocks leave in November, thus only the smaller flocks of over-wintering birds can be found later. These mainly feed on the berries of trees and ornamental shrubberies (*Celtis* sp., *Prunus* sp.). Owing to the same alimentation they mostly stay with the flocks of fieldfare (*Turdus pilaris*). Enormous flocks over-winter in Western Europe (e.g. France) (DAVIS 1955, WAGNER 1958, ROSENBERG 1968, FEIGE 1973, CLERGEAU 1981), also causing agricultural harm in the surroundings of their overnight places (HEIM de BALSAC 1931). Their over-wintering is observable throughout Europe. They endure cold well. In January—February, 1979, author observed two individuals in Elverum in Norway (Northern latitude of 61°), over-wintering on oil-seeds at a winter feeder in -32 °C cold (MOLNÁR 1980).

Their return in early Spring begins on the first days of February. Their advance in the Carpathian-basin belongs to the *Motacilla*-type migration: early arrival at the lowlands (Table 1), delay at the hill-country (SCHENK 1907). The average speed of the migration is 49 km/day (SZMIRNOV 1930). The migration is strongly influenced by climatic factors, too. A further characteristic of the European migration wave is that the birds reach the Northern parts of Western Europe at approximately the same time as our Lowland: "semicircular migration". Therefore, the mean value for the Lübeck area described by WERNER (1934) is February 15; also being February 15 at Szeged (Table 1).

Tabelle 1. *The earliest arrival of starlings to Hungary according to SCHENK and MOLNÁR*

SCHENK, 1906				MOLNÁR, 1981			
Year	month	day	siteofobservation	Year	month	day	siteofobservation
1901.	feb.	3	Békéscsaba	1959.	feb.	1	Szeged-Vesszős
1901.	feb.	9	Óverbász	1961.	feb.	26	Szeged-Vesszős
1902.	feb.	10	Temes—Kubin	1962.	jan.	30	Szeged-Vesszős
1903.	feb.	3	Óverbász	1963.	feb.	26	Szeged-Vesszős
1904.	feb.	7	Csallóközsomorja	1967.	feb.	18	Szeged-Vesszős
1905.	feb.	4	Iharosberény	1978.	feb.	25	Szeged
1906.	feb.	6	Óverbász	1980.	feb.	17	Szeged—Fehértó
Average: feb. 6				Average: feb. 15			

The February flocks are still not the arrival of the Hungarian stock. Those hatching in our country appear earliest at the end of February. On the basis of a 6 years' observation period a pair hatching year by year in the hollow of an old walnut-tree appeared at time-points between February 25 and March 5 (Ujszeged, 1977—1982).

The main period of the migration is the beginning and middle of March. Large flocks of some thousand individuals also occur at this period, but crowds similar to the Autumn huge clouds do not develop. The birds generally feed at damp meadows, grassy areas and plough-lands during migration. Their "sociable instinct" is well developed (MARIÁN 1975), thus they readily mix with species of similar alimentation area during migration (Table 2). At the Southern Lowland they are observable the most frequently together with the lapwing (*Vanellus vanellus*) which, too, searches

Table 2. *The intermingle of migrating starling flocks with other species*

Date	Site	<i>Sturnus vulgaris</i>	<i>Vanellus vanellus</i>	<i>Numenius phaeopus</i>	<i>Philomachus pugnax</i>	<i>Limosa limosa</i>	<i>Numenius arquata</i>
		No. of individuals					
1976. marc., 23	Makraszék	40	19				
marc., 27	Makraháza	150	30				
marc., 28	Hantháza	100	40				
marc., 28	Hantháza	60	14				
1977. marc., 19	Hantháza	30	15				
marc., 21	Pitvaros	200	60				
marc., 26	Pitvaros	29			7		
apr., 10	Zsombói rét	150	10				
oct., 9	Fehértó	150	2				
1978. marc., 4	Vesszős	20	25				
marc., 11	Őszeszek	12	10				
1979. szept., 7	Fehértó	1	50				
1980. marc., 15	Pitvaros	150					40
marc., 23	Pitvaros	300	40				
oct., 18	Pitvaros	40	6				
1981. marc., 15	Pitvaros	400	80				
marc., 21	Pitvaros	300	200				
marc., 28	Pitvaros	200		50			
marc., 29	Pitvaros	80		25			
apr., 4	Pitvaros	200			25		
aug., 30	Fehértó	60			160		
oct., 7	Fehértó	160				50	
1982. marc., 15	Pitvaros	200		60			
marc., 15	Pitvaros	100				100	
marc., 23	Makraszék	20	4				
marc., 23	Őszeszek	50	40				
apr., 3	Pitvaros	80		40			

for aliment at damp meadows and at the same time, the major features of their migration correlate with those of the starling. These birds also spend the Winter in Tunisia, their earliest arrival is also at the beginning of February, the majority migrate in March, the culmination falls to the time-point of March 8, being March 6 in the case of starlings (HEGYFOKY 1906, SCHENK 1907, FÖNYEDI 1981). The association of the starling flocks with other species is as follows, according to the order of frequency: whimbrel (*Numenius phaeopus*), ruff (*Philomachus pugnax*) black-tailed godwit (*Limosa limosa*), curlew (*Numenius arquata*) (Table 2). The flocks may intermingle on ground during feeding, but soon after flying up they form homogeneous stocks separated according to species. Small flocks migrate intermingled as well.

Table 2 demonstrates that from the observed 27 cases the intermingle occurred with the lapwing (*Vanellus vanellus*) in 17 cases (63%) and in 10 cases (37%) with other species. In 23 cases (85%) the individual number of the starlings was much higher than that of the species with which they mingled. The species intermingling with starlings do not, or only rarely mix with each other.

After arrival the starlings rove. In this regard their behaviour is similar to that of the blue pigeon (*Columba oenas*) which also arrives early and wanders a lot before

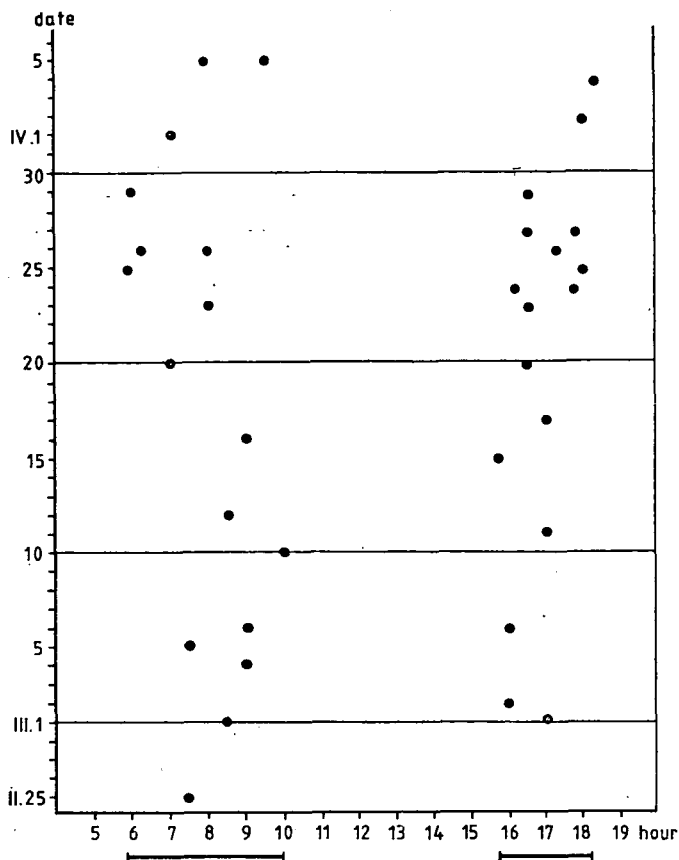


Fig. 1. The daytime dwelling of a starling pair around their nesting hollow from the time of their arrival till the beginning of hatching (February 25—April 6)

starting to nest (HEGYFOKY 1907). The starlings arriving at their usual nesting hollow stay near the surroundings in the early morning and evening hours, they feed and rove during daytime. This is demonstrated on Fig. 1, on the basis of author's observations between 1977—1982. Occasionally they disappear for days as well, and according to assumption and literary data they rove farther at such times.

A further most characteristic feature of their Spring assemble is that the migration is intensively protracted: it still lasts even during the hatching period beginning in April. On April 16, 1980 nests containing 1—2 eggs were found at the flood plain between Szeged-Tápé and Vesszős, on April 15, 1980, at Tőserdő a flock constituted of 70 individuals was migrating to the North, and on April 17, 1980, at Ujszeged 270 individuals were migrating.

The migration of starlings is only known in general outline. With some of his data, author wished to contribute to the clarification of the details.

## References

- FŐNYEDI, E. (1981): Data on the Spring arrival of some bird species from the environs of Siófok. — Ornithological scenery 7—9, 160.
- HEGYFOKY, K. (1906): Annual bird migration and the weather. — *Aquila* 14, 81—90.
- KEVE, A. (1970): The avifauna of the Keszthely-mountains and the Small-Bakony. — Results of the natural science researches of the Bakony 6, 74—77.
- MARIÁN, M. (1975): The avifauna of the Protection Area at Pusztaszer. — *Aquila* 82, 81—98.
- MOLNÁR, GY. (1962): Starling ringed in Szeged and observed in Spain. — *People's Word* 90, 254, 4.
- MOLNÁR, GY. (1980): Ornithological notes from Norway. — *Ornithological scenery* 7—9, 40—42.
- MOLNÁR, GY. (1981): Population-ecological studies on *Sturnus vulgaris*. — Doctoral Dissertation. Attila József University, Department of Zoology, Szeged.
- NAGY, S. (1981): Data to the avifauna of Balatonederics and environs. — *Ornithological scenery*, 4—6, 75—79.
- SCHENK, J. (1906—1907): Migration of birds in Hungary. — *Aquila* 14, 32—45.
- SCHMIDT, E. (1977): From where and to where do our migrating birds come and go? — *Natura*, Budapest.
- SZLIJ, J. (1957): The alimentation-biology of starlings and its agricultural significance. — *Aquila* 63—64, 71—101.
- SZMIRNOV, N. (1930): The Spring assemble of starlings in Eastern Europe and Western Siberia. — *Aquila* 36—37, 95—104.
- WERNER, H. (1934): The Spring arrival of migrating birds to Lübeck. — *Aquila* 38—41, 114—121

### Adatok a seregély (*Sturnus vulgaris* L. 1758) fenológiájához

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#### Kivonat

A szerző összefoglalja a seregély vonulásával kocsolatos megfigyeléseit 1958—1982 között a Dél-Alföldön, a Tisza déli szakaszán. Átteleléséről, téli táplálékaról közöl adatokat, majd a Szeged környékére érkező seregélyek területi középértékét, a hazai fészkelők megérkezésének idejét közli. Elemzi vonulás közbeni keveredését más fajokkal, megérkezés utáni kóborlását. Ábrán szemlélteti egy költőpár fészkelés előtti tartózkodását a fészkelő odú közelében. A költés megkezdésekor a vonulás még tartott.

### Да фе к фенологии скворцов *Sturnus vulgaris* L. 1758)

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#### Резюме

Автор дает сводки о наб юдении пере ета скворцов по южной части Среднедунайской равнины, а также по южному отрезку реки Тисы в 1958—1982 годах.

Сообщаются данные об их зимних кормах, а также о ко ичестве скворцов, при етающих в окрестности города Сегед и времени при ета. Наводятся данные о местах гвздования и смешивания их с другими птицами.

На таблице иллюстрируются две пары скворцов вблизи дупла.

## Prilog poznavanju fenologije vorka (*Sturnus vulgaris* L. 1758)

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### Abstrakt

U radu su prikazani rezultati posmatranja seobe čvoraka na južnom području reke Tisza u periodu 1958—1982. godine. Autor daje podatke o prezimljavanju i ishrani čvoraka tokom zime kao i o vremenu dolaska domaćih gnezdarica, i o srednjim vrednostima teritorijalnosti u okolin, Szeged-a. Analizirano je mešanje čvoraka sa drugim vrstama tokom seobe i njihovo lutanje nakon pristizanja. Utvrđeno je da početkom gneždjenja još traje seoba.