

Wilderness on the border (Project ID #21910254)



Report of population of RFF from Slovakia and Hungary

Prievidza, 30 October 2020

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Red-footed falcon (*Falco vespertinus*) in Slovakia in 2019 – breeding population

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Kontrolované hniezdiská	Checked territories	25
Obsadené hniezdiská	Occupied breeding territories	25
Počet hniezdiacich párov	Incubating pairs	25
Počet úspešných párov	Successful breeding pairs	22
Počet vyvedených mláďat	Fledglings	74
Počet neúspešných hniezdení	Unsuccessful breeding attempts	3
Krúžkované jedince (pull / ad)	Ringed pull. / ad.	73/0

The first arrival – of two male and two female birds – to the SPA Sysľovské polia was recorded on the common date – on 23 April 2019. Subsequently during April and May, an arrival of numerous individuals, of which the number became stable approximately in the second decade of May, was recorded.

In the Special Protected Area Sysľovské polia and in the vicinity of Trnava in 2019, in total 25 pairs bred (24 + 1). Most of the pairs (20) bred in nesting boxes again, 3 of them in the magpies' nests and two in the nests of a crow. In the nesting boxes and nests, at least 90 eggs were laid of which at least 74 chicks hatched. 22 pairs bred successfully (88%) and in total 73 fledglings flew out of the nesting boxes and nests (3.3 fledglings / successful pair and 2.9 / all the pairs on the average). The breeding attempts of three pairs were unsuccessful, in two cases most probably due to predation (1 loss during the hatching, 1 loss of 4 eggs during the incubation period) and once because of the unfortunate fall of the nesting box during the hatching. Most of the nests were protected by repellent excrements of predators (in cooperation with the ZOO Bratislava). There was no case of predation in the locations protected by the excrements. In total 73 fledglings (3x1, 2x2, 4x3, 12x4, 1x5) flew out, of which 72 were ringed and one was not. From the five siblings in one of the nests (1st recorded case in Slovakia, Fig. 1) a blood sample was taken for genetic analysis. High productivity as well as the number of breeding pairs probably greatly correlated with the gradation of the Common vole in the southwestern Slovakia during the studied season (Tulis et al. 2019). This total number of pairs is the highest since 2014, since the isolated population in the southwestern

Slovakia has been paid attention to, while the population has been growing continually since 2013 when there was only a single pair breeding in the SPA Sysľovské polia (Slobodník et al. 2017).

All the fledglings except one were marked pursuant to the international colour scheme (<http://www.cr-birding.org/note/4136>). In the SPA Sysľovské polia in the course of the year, we managed to identify 4 individuals with rings (3 females and 1 male) in which the philopatry to the locality of hatching has been confirmed (one of 2016, 2017 and two of 2018). The other individual was a male hatched in 2017 in the central Hungary, 211 kilometres from the place of hatching (Slobodník & Chavko, 2019). Interesting are the cases of the fledglings ringed in Slovakia and then found abroad. Three individuals were recorded in Moravia (108 to 176 kilometres) and a picture of one juvenile was taken in Austria (66 kilometres).



Fig. 1: Five chicks of red-footed falcons in the nest of a crow (photo: J. Chavko)

Red-footed falcon (*Falco vespertinus*) in Slovakia in 2020 – breeding population

Researchers: J. Chavko, R. Slobodník

Collaborators: K. Bacsá, M. Dobrota, M. Gális, Z. Lančaričová, J. Lenygel, F. Tulis

Kontrolované hniezdiská	Checked territories	20
Obsadené hniezdiská	Occupied breeding territories	20
Počet hniezdiacich párov	Incubating pairs	19
Počet úspešných párov	Successful breeding pairs	14
Počet vyvedených mláďat	Fledglings	35
Počet neúspešných hniezdení	Unsuccessful breeding attempts	4
Krúžkované jedince (pull / ad)	Ringed pull. / ad.	34/0

On the usual date, on 21 April 2020, the arrival of one male and one female bird to the breeding locality in the SPA Sysľovské polia was recorded.

In total 20 pairs (19+1) bred in the Special Protected Area Sysľovské polia and near Trnava in 2020. Most of the pairs, as many as 19, bred in the nesting boxes again (95%), and one breeding was recorded in the nest of a crow. At least 61 eggs were laid in the nesting boxes and nests, from which at least 44 chicks hatched. 14 pairs bred successfully (70%) and at least 35 fledglings flew out from the nest boxes and nests (2.5 fledglings / successful pair and 1.84 / all the pairs on the average). There were unsuccessful breeding attempts of at least five pairs, of which in one case as a result of the predation by a northern goshawk and in four cases the eggs for hatching were abandoned during the incubation period due to the decreased food source. Other minimum of three juveniles were caught by the goshawk shortly after leaving the nesting box (rings were found among the torn pieces of feathers, Fig. 2). The result of the breeding near Trnava is not known since we have no information about its development, thus the success rate cannot be determined.

In total 35 fledglings flew out (2x1, 6x2, 3x3, 3x4) of which 34 were ringed. Compared to the previous year, the productivity of the breeding pairs is significantly lower, which correlates to the decrease of the local population of Common vole. To a certain extent, it caused also the decrease in the number of breeding pairs, as there was also a group of non-breeding pairs recorded. It is the first time since 2004 that a slight decrease of breeding population occurred. Interesting is the case of a late breeding in which on 3 September 2020 at least three fledglings flying out of the crow's nest on a locust tree were

recorded (Fig. 3). This way the chicks hatched sometime between the 2nd and 5th August which represents the latest breeding recorded in our conditions.

All the juveniles except one were marked pursuant to the international colour scheme (<http://www.crbirding.org/node/4136>). In the SPA Sysľovské polia, we managed to record 45 feedback reports of the ringed individuals in the course of the year. As far as the ring reading is concerned, it is definitely the most successful season. The ringed individuals with confirmed philopatry to the locality of hatching prevailed. Moreover, two juveniles hatched in Hungary this year were identified and localized in the SPA Sysľovské polia (9 and 129 kilometres from the place of hatching). It was the first time in our country that we could read the ring of the individual coming from Parma in Italy (Fig. 4) where this local population has been also showing increase (Calabrese et al. 2020).



Fig. 2: Remains of feathers after the predation of a red-footed falcon by a northern (photo: M. Gális)



Fig. 3: One of the fledglings which flew out from the nest of a crow – 3/9/2020 (photo: Jozef Chavko)



Fig. 4: The red-footed falcon juvenile ringed in a nesting box in Italy (photo: Jozef Chavko)

Red-footed falcon (*Falco vespertinus*) in Slovakia in 2019 and 2020 – night roost counting

During the migration, the night roost sites were monitored, from which the SPA Sysľovské polia was occupied the most abundantly (85%). The significance of this locality is supported by the fact that the falcons often spent the night in the same places in which a part of the population had bred and in which they had spent the night also in the previous years. Falcons used the former night roost sites in the SPA Úľanská mokrad' and the SPA Dolné Považie only occasionally, although contrarily, the migration stop in Turiec continues to be regularly, though not abundantly, used, just as the migration through Liptov has been confirmed.

The migration in 2019 had a different development in comparison to the one in 2020. While in 2019 the most of the birds were counted in August or in the beginning of September (Fig. 5), in 2020 the most of the falcons were counted in the second or third decade of September (Fig. 6). On the official date of the last counting in the Central Europe the falcons were not recorded in our night roost sites anymore, though in the past or in other localities, the species had been recorded (www.birding.sk).

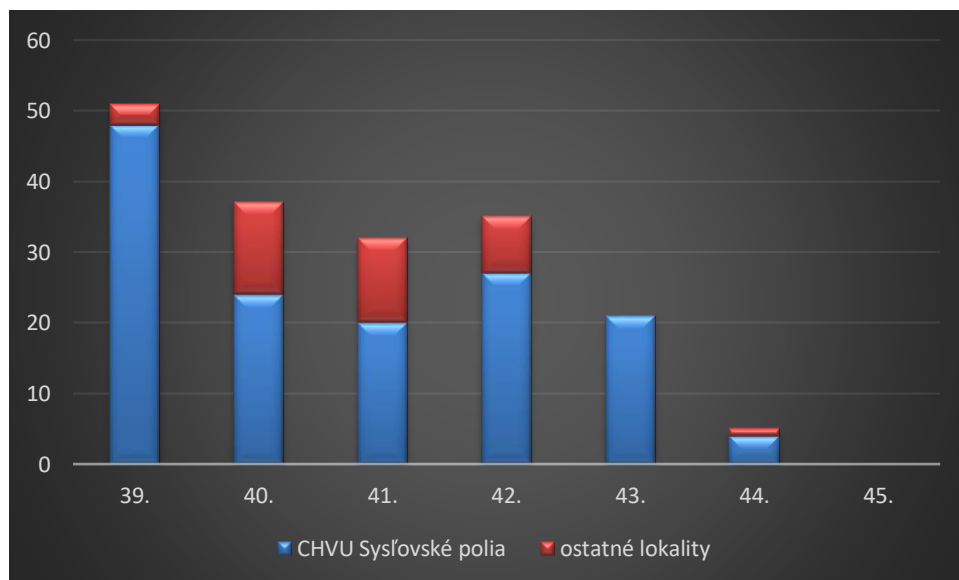


Fig. 5: Development of the red-footed falcon migration in Slovakia in autumn 2019 (x axis = week of the year, y axis = number of individuals recorded)

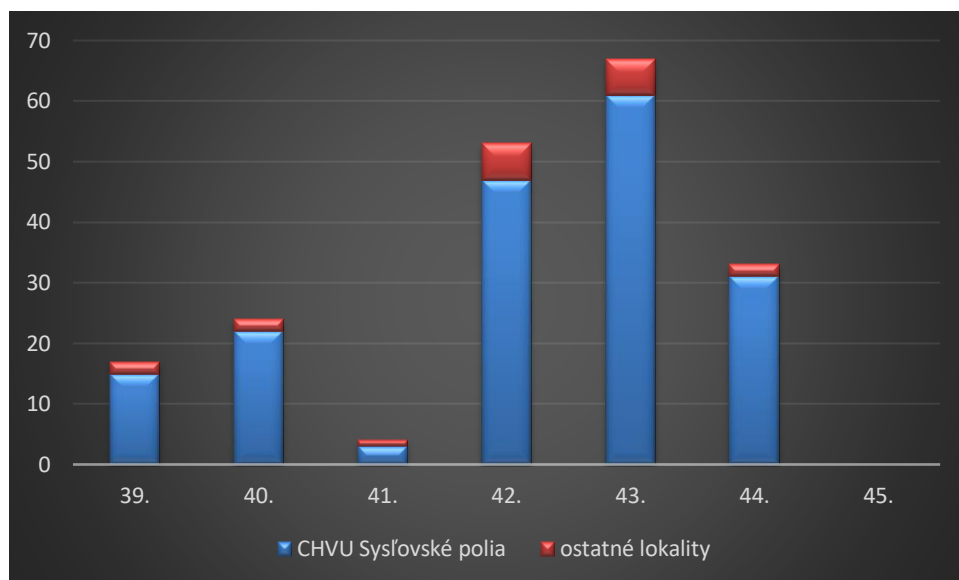


Fig. 6: Development of the red-footed falcon migration in Slovakia in autumn 2020 (x axis = week of the year, y axis = number of individuals recorded)

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Red-footed Falcon (*Falco vespertinus*) in Hungary in 2019 – breeding population

The data below show the main estimated parameters of the population in Hungary, in 2019.

Kontrolované hniezdiská	Checked territories	all
Obsadené hniezdiská	Occupied breeding territories (estimated)	1200-1300
Počet hniezdiacich párov	Incubating pairs	1163
Počet úspešných párov	Successful breeding pairs*	74,53% (min. 867 pairs)
Počet vyvedených mláďat	Fledglings*	2387
Počet neúspešných hniezdení	Unsuccessful breeding attempts*	25,47% (min. 296 pairs)
Krúžkované jedince (pull / ad)	Ringed pull. / ad.	576 /43

*estimated from 3 study sites, based on the data gathered from 212 pairs (Jászság, Heves, Kardoskút)

In 2019 we experienced a medium year for the Falcons in Hungary. In the Northern regions of Hungary both the number of breeding pairs and the breeding success was above the long term average, due to the good food supply conditions. The population level of Field voles (*Microtus arvalis*), main prey of falcons in the breeding period started to grow in early spring and stayed high during the summer and autumn. The Southern regions had a medium year, as Field voles' population outbreak started later. The long term conservation works continued and we could ring more than 600 birds, among them 43 adults.

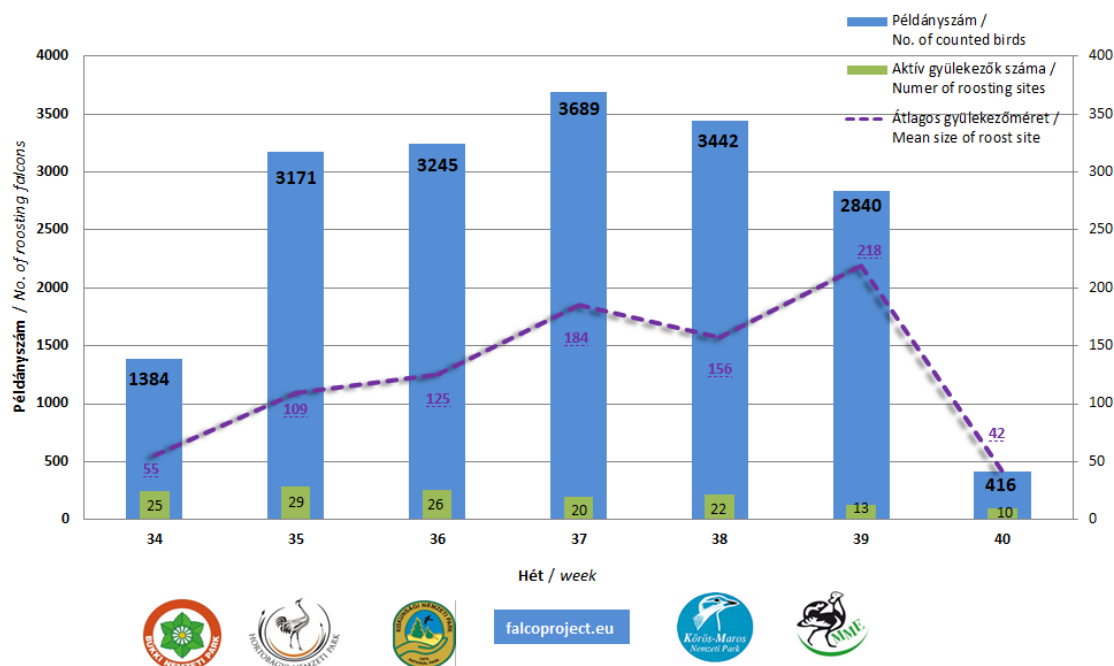
Country-wide data from 2020 are not available yet, however the research sites indicated a very good year for 2020. Both the number and the breeding success of Red-footed Falcons were high due to the widely available prey species, including voles and insects. Detailed results are available in the Field report of Jászság region attached to the final report.

Raptor Protection of Slovakia – RPS, Magyar Madártani és Természetvédelmi Egyesület - MME

The migration of RFF takes place in late September each year. Birds start to form night roosts in late August. We searched and monitored these sites on a weekly basis in 2019/2020.



Kék vércse őszi gyülekezők Magyarországon 2019 /
Post-nuptial roosting sites of the Red-footed Falcon in Hungary, 2019



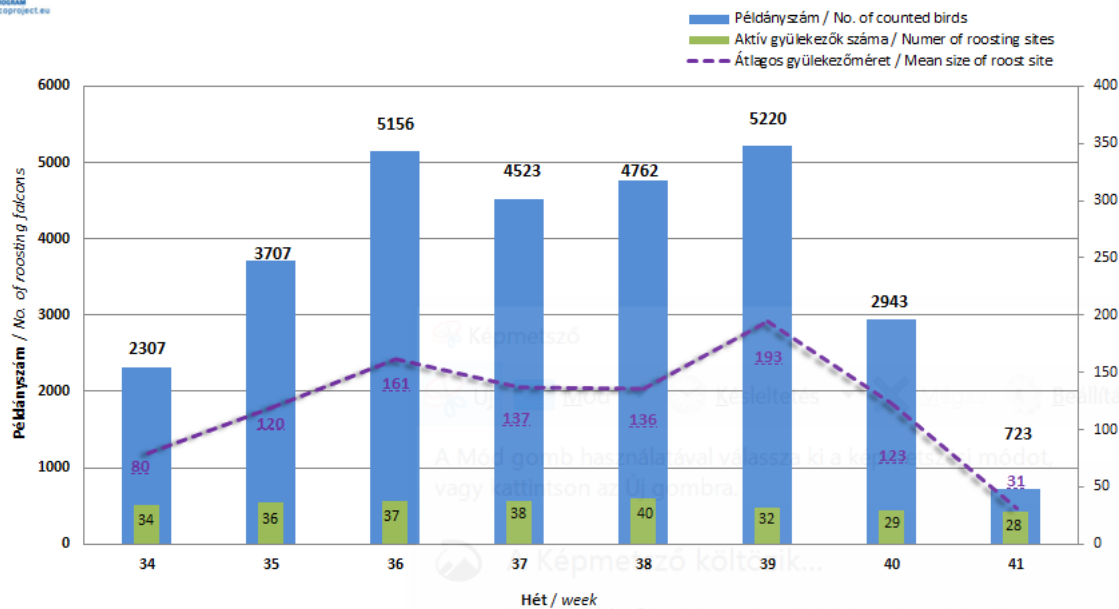
In 2019 we listed 29 active roost sites in Hungary (Fig. 7). The maximum total number of birds (3689 individuals) was counted in the 2nd week of September on 20 roost sites. The average concentration of falcons (218 falcons/roost) was the highest before the departure, in the last week of September. Altogether the numbers reflected an average year, but the high number of juveniles indicated the good breeding succes.

The roost site monitoring also took place in 2020 (Fig. 8). We could list 40 active roost sites and the average concentration rate was slightly lower cca. 193 birds/roost. However the total number was above 5000 individuals in early and late September, indicating a good year in overall. The rainy summer caused insect irruptions in autumn everywhere in the Great Plain and together with the high number of voles provided abundant food for the falcons everywhere.

This phenomena could be detected in the smaller but more numerous roost detected in each main breeding regions of the species.



Kék vércse őszi gyülekezők Magyarországon 2020 / Post-nuptial roosting sites of the Red-footed Falcon in Hungary, 2020



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Fig. 9: Red-footed falcons on the roosting site in SPA Sysľovské polia (photo: Jozef Chavko)