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# The Saker Falcon (*Falco cherrug*) population in the Czech Republic in 2011–2018

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## SHORT INTRODUCTION – THE SITUATION UP TO 2010

The Saker Falcon (*Falco cherrug*) belongs to the rarest breeding birds of the Czech Republic. Except for 1997–2001, when isolated breeding was confirmed on the German side of the Labské pískovce sandstones (Augst 1998, 2001, Barthel 2011), Czech nesting sites form the northwesternmost limit of the species' European range.

The first records of the Saker Falcon breeding on the territory of the Czech Republic come from the 19th century. We suppose its breeding has a longer history, but we miss more precise data, which is complicated by probable confusions with Peregrine Falcons (*Falco peregrinus*). Only very few breeding records were documented up to 1950, all of them were situated in the western part of the country – Bohemia (Hudec & Šťastný 2005). In the second half of the 20th century, the breeding population in the Pannonian part of Moravia (SE part of the country) was established and up to now, almost the whole recent Czech Saker Falcon population has been concentrated here in the South Moravian region. The breeding in the Bohemian region is rather exceptional. The isolated breeding locality in Northern Moravia/Silesia, occupied in 1989–1999 and 2003–2007 (Kondělka & Petro 1994, Horák 2000, Beran *et al*. 2010), is abandoned.

Systematic research started in 1976, data up to 1998 (23 years) was published by Horák (2000). At the beginning of this period, single pairs of Saker Falcons inhabited South Moravian riverside forests. From the mid 1980s, the limits of the occupied area moved to the north and west, 5–10 pairs started to occupy the agricultural landscape annually. In total, 101 breeding cases were confirmed (4.39 per year), 59 of them (58.4%) produced 172 young (i. e. 2.9 per successful nest). The population size was estimated at 15 pairs.

During 1999–2010 (12 years), 92 breeding cases were confirmed (7.67 per year, 5–11 annually), 72 of them (78.3%) produced at least 200 young (i. e. 2.8 per successful nest). The population size was estimated at 15–20 pairs (Beran *et al*. 2012).

## POPULATION IN 2011–2018 (8 YEARS)

In 2011–2018, the Saker Falcon population in South Moravia was regularly monitored. Annually, at least four people were involved in field work. They concentrated on observing display and territory defence behaviour at the beginning of the breeding season, later they tried to find occupied nests and record the number of nestlings and fledglings. More intensive monitoring was only carried out in 2015, when 15 people were involved and suitable regions of Bohemia were also included. But this more intensive effort did not bring a higher number of recorded breeding pairs.

For this article, we only summarized data on confirmed breeding. Annually, we recorded another 3–5 Saker Falcon pairs which showed breeding behaviour (display, territory defence etc.), but their breeding was not proven later. It is possible that these birds did not breed at all in those years, but it is also possible that they failed in an early stage of the breeding and we did not succeed in finding their nests in time.

The results of the Saker Falcon monitoring in 2011–2018 are summarized in Tab. 1. In total, 44 breeding pairs were confirmed (4.89 per year, 2–10 annually) in 16 grid squares (Fig. 1) of which 30 (68.2%) were successful and 69 young were fledged. The average breeding productivity was 1.4 *juv*. per nest and 2.0 *juv*. per successful nest. The number of confirmed breeding pairs and successfully breeding pairs was quite stable since 1999, with a striking decline in the last three years (Fig. 2). The estimate of the population size for the period 2011–2018 ranges between 5 and 12 pairs.

25 chicks were ringed, 23 of them also with colour rings. Three ringed birds produced the following revoveries: a chick ringed at a nest near Litobratřice (Znojmo district) in 2011 was found

flightless near Hollabrunn (Austria) in April 2014 (47 km, 1071 days), after rehabilitation it was released; a chick ringed at a nest near Hevlín (Znojmo district) in 2011 was captured near Székesfehérvár (Hungary) in January 2013 (228 km, 605 days); a chick ringed at a nest near Otnice (Vyškov district) in May 2012 was observed alive near Újezd u Brna in July (4 km, 62 days).

In the Czech Republic, four foreign ringing recoveries were obtained in 2011–2018:

– a 1cy female was found dead as a victim of electrocution near Biskupice (Prostějov district) on 25th August 2011. She was ringed and satelite-tagged in Malacky district, Slovakia (116 km, 92 days). A medium-voltage pylon, which was fatal for her, was later equipped with deterrents for avoiding similar cases (Fig. 3 and 4).

– an older cadaver of a Saker Falcon, probably a victim of electrocution, was found by a tractor driver near the Dolní Dunajovice village (Břeclav district) on 15th April 2014. The bird was ringed as a nestling in Mosonszolnok, Győr-Moson-Sopron county, Hungary, on 23rd May 2012 (119 km, 692 days).

– a 1cy female was found injured (a broken wing) probably after collision with medium-voltage powerline near the Kozlany village (Vyškov district) on 8th September 2014. She was ringed as a nestling in Kiskunlacháza, Pest county, Hungary, on 19th May 2014 (268 km, 112 days). After surgery the bird remains in captivity.

– a dead Saker Falcon was found by D. Rak below a medium-voltage pylon near the Mšené-lázně town (Litoměřice district) on 25th August 2015. The bird was ringed as a chick in Kiskunlacháza on 18th May 2015.

In 2011–2018, Saker Falcons regularly bred in Brno-venkov, Břeclav, Hodonín, Vyškov and Znojmo districts. After more than 70 years, breeding in Bohemia was again recorded and just in several localities. One pair was discovered thanks to the data from a sattelite-tagged Hungarian male *Barnabás*. He already stayed in Chrudim district (eastern Bohemia, c. 120 km from a core breeding area) in 2010, but breeding was confirmed in 2011. The birds used an old Eurasian Buzzard´s (*Buteo buteo*) nest in a poplar windbreak, the breeding was unsuccessful. After wintering in Sicily, the male returned in 2012 and bred with a female in the same nest as the previous year. They reared four young. In 2013, *Barnabás* unsuccessfully bred in the same locality in a nestbox installed on a high-voltage pylon. He was observed for the last time there on 14th October 2013. The last fixes of this bird (autumn 2013) come from Mediterranean Sea, later the transmitter stopped working.

The second Bohemian breeding was recorded in Mladá Boleslav district (Central Bohemia, c. 200 km from a core breeding area). Saker Falcons used Northern Ravens´ (*Corvus corax*) nests and reared three young in 2011 and two young in 2012. In 2012, the Northern Raven nest with chicks was probably robbed before being occupied by Saker

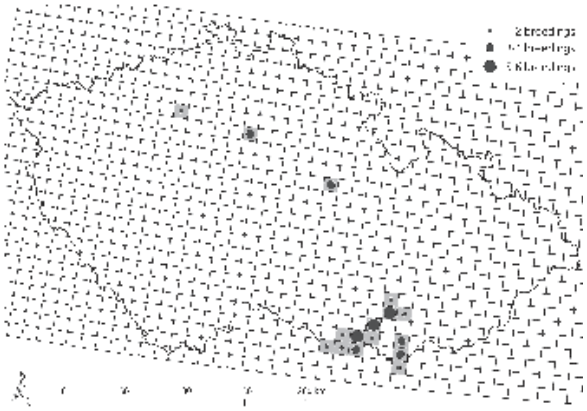

Figure 1: The number of Saker Falcon (*Falco cherrug*) breeding pairs in grid squares of the Czech Republic in 2011–2018 (n=44) (Z. Janoška) / *Kerecsensólyompárok száma az egyes négyzetekben Csehországban 2011 és 2018 között (n=44)*

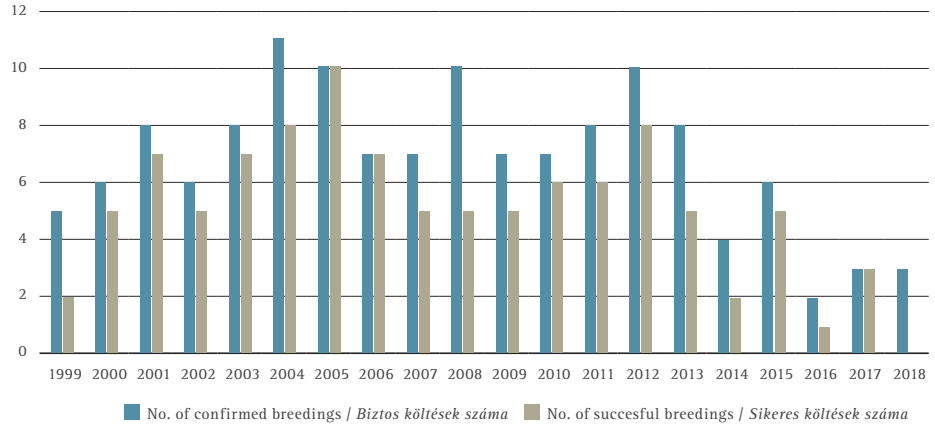


Figure 2: Development of the Saker Falcon (*Falco cherrug*) breeding population in the Czech Republic in 1999–2018 / *A kerecsensólyom költőállományának alakulása Csehországban 1999-2018 között*

Figure 3: A successfully breeding male Saker Falcon (*Falco cherrug*) with damaged remiges in his left wing (Hrádek, Znojmo district, 2012) (photo: Z. Tunka) / *Sikeresen költő hím kerecsensólyom, sérült tollakkal a bal szárnyában*

Falcons, who started incubation very late – around 30th April (it can indicate a lack of suitable nests in the region). The breeding failed in 2013. The breeding in all these cases started rather late, between 10th and 30th April, replacement clutches are very probable.

Kladno district in Central Bohemia (c. 230 km from a core breeding area) was the third occupied Bohemian locality. Displaying Sakers were observed there in autumn 2012 and a family in summer 2013. In 2014–2018, no breeding pair was found outside South Moravia.

In the study period, Saker Falcons abandoned floodplain forests along the lower Morava and Dyje rivers. The last breeding in this area (Soutok-Tvrdonicko SPA), where up to four pairs used to breed for decades, was recorded in 2012. It is clear that Saker Falcons moved to breed on newly installed nest platforms on high-voltage pylons on the nearby Austrian territory.

Saker Falcon pairs apparently moved to the neighbouring Austria also in other parts of the studied area. In the past, 3–4 pairs alternated breeding localities on both sides along the Czech-Austrian border between the towns of Znojmo and Mikulov, but all these "trans-boundary" pairs have bred in Austria at least since 2014.

In total, 38 nests occupied by Saker Falcons were found in 2011–2018. 26 of them were placed in trees: 15 in poplars (*Populus* sp.), five in Black Locust (*Robinia pseudoacacia*), three in Scots Pine (*Pinus sylvestris*), two in oaks (*Quercus* sp.) and one in an elm (*Ulmus* sp.); 12 nests were on high voltage pylons. In 31 cases (81.6%), the nests of other bird species were used. Nests of the Eurasian Buzzard and the Northern Raven were the most popular; they were used 17× and 7×, respectively. The same nest of the Eastern Imperial Eagle (*Aquila heliaca*) was occupied 4×. In one case, a nest of the Northern Goshawk *(Accipiter gentilis*), the Red Kite (*Milvus milvus*) and the Hooded Crow (*Corvus corone cornix*) was used. The other breeding attempts occurred on artificial nesting platforms, in one case in a nestbox (Tab. 2).

Repeated breeding in the same nest was rare. In 2011–2014, Saker Falcons bred in a nest of the Eastern Imperial Eagle built in 2010. They were successful in the first two seasons, but after two following unsuccessful attempts, they abandoned the nest and bred in a Eurasian Buzzard nest 1495 m away in 2015. Two nests occupied in 2009 were re-used in 2011, another one from 2010 in 2012. If successful breeding occurs in smaller nests (mostly originally built by buzzards), they are so disintegrated at the end of the breeding season, that the chicks are in danger of falling out of the nest. This case was recorded in 2013, when one (probably the youngest) chick out of four was found on the ground. Only two young were reared, so it is probable that another chick fell out as well but disappeared between two controls. In another locality in the same year, the nest completely broke up approximately in the time of fledging, but fortunately all four chicks were successfully reared.

Thirteen of the recorded breeding cases failed, seven of them at the stage of incubation, four at the stage of small chicks. In one case, the *Liometopum microcephalum* ants, which had their colony

Figure 4 and 5: A nest on a high-voltage pylon with one egg of the Saker Falcon (*Falco cherrug*) and six eggs of the Common Kestrel (*Falco tinnunculus*) on 5th May 2014 and the same nest a month later (on 9th June), when only the Saker egg was left (Hrušky, Břeclav district) (photo: V. Beran) / *Nagyfeszültségű oszlopon található kerecsensólyom-fészek egy kerecsen- és hat vörösvércse-tojással 2014. május 5-én, és ugyanaz a fészek egy hónappal később, amikorra már csak a kerecsensólyom-tojás maradt meg (Hrušky, Břeclav körzet)*

in a hollow formed after a branch broke off just below a Saker Falcon nest, could be the reason. In two cases, we suppose that the eggs were predated, in one case the predation of chicks (or nest robbery). Two ringed chicks probably died after the nest fell down before they fledged and a similar reason (or unsuitable wheather conditions) could have caused another case of breeding failure. Human disturbance only caused one breeding failure – people burnt a bush just below a high-voltage pylon with a nest. On the contrary, Sakers did not abandon their nest in a small Black Locust wood; despite the fact that most of the trees were cut down and only a narrow row of locusts was left (this probably happened at an advanced stage of the breeding, when the birds already had a very strong bond to their nest). Severe conflicts with Common Kestrels (*Falco tinnunculus*) could cause Saker Falcons to abandon their nests: in 2012, two Kestrel and two Saker eggs together with a dead Kestrel female were found during a control of a nestbox in one of the Bohemian localities. Similarly in 2014, one Saker and six Kestrel eggs were found in a Raven nest on a high voltage pylon on 5th May (Fig. 4). The nest was checked again on 9th June: all of the Kestrel eggs disappeared; the Saker egg stayed in the nest but did not hatch (Fig. 5).

The breeding birds were aged in 29 cases. Interestingly, 11 out of 15 females were young (2cy or 3cy) and 12 out of 14 males were adult.

From 141 food items (Tab. 3) recorded during observation of Saker Falcons or checking nests, Feral Pigeons (*Columba livia* f. *domestica*) formed 59.6% (n=84). Obviously, pigeons are the most important source of food in our region, especially in the peri-

Figure 6 and 7: A very dangerous type of medium-voltage pylon, where a Saker Falcon (*Falco cherrug*) female died in 2011, and the same pylon after applying anti-electrocution elements in 2013 (Biskupice, Prostějov district) (photo: J. Chavko & D. Horal) / *Egy rendkívül veszélyes oszlopfejtípus, amelyen egy tojó kerecsensólyom lelte a halálát 2011-ben, és ugyanaz az oszlop a madárbaráttá alakítás után 2013-ban (Biskupice, Prostějov körzet)*

| Year / Év | No. of confirmed breedings in Moravia / *Biztos költések száma Morvaországban* | No. of confirmed breedings in Bohemia / *Biztos költések száma Bohémiában* | Total no. of confirmed breedings in the Czech Republic / *Az összes biztos költés Csehországban* | No. of successful breedings / *Sikeres költések száma* | No. of fledged juv. / *Kirepült fiatalok száma* | Juv./nest / *Átlagos kirepült fióka/fészek* | Juv./ successful nest / *Átlagos fióka szám/ sikeres költés* |
|---|---|---|---|---|---|---|---|
| 2011 | 6 | 2 | 8 | 6 | 16 | 2.0 | 2.7 |
| 2012 | 8 | 2 | 10 | 8 | 24 | 2.4 | 3.0 |
| 2013 | 5 | 3 | 8 | 5 | 9 | 1.1 | 1.8 |
| 2014 | 4 | 0 | 4 | 2 | 2 | 0.5 | 1.0 |
| 2015 | 6 | 0 | 6 | 5 | 7 | 1.2 | 1.4 |
| 2016 | 2 | 0 | 2 | 1 | 3 | 1.5 | 3.0 |
| 2017 | 3 | 0 | 3 | 3 | 8 | 2.7 | 2.7 |
| 2018 | 3 | 0 | 3 | 0 | 0 | 0 | 0 |
| Total | 37 | 7 | 44 | 30 | 69 | 1.4 | 2.0 |

Tab. 1: Annual breeding success data of the Saker Falcon (*Falco cherrug*) in the Czech Republic in 2011–2018 / *A kerecsensólyom éves költési sikere Csehországban 2011 és 2018 között*

| Trees / *Fa* | Pylons / *Oszlop* | | |
|---|---|---|---|
| Natural nests / *Természetes fészek* | Natural nests / *Természetes fészek* | Platforms / *Fészek tálca* | Nestboxes / *Költőláda* |
| 26 | 5 | 6 | 1 |

Tab. 2: Localization of Saker Falcon (*Falco cherrug*) nests in the Czech Republic in 2011–2018 (n=38) / *A kerecsensólyom-fészkek elhelyezkedése Csehországban 2011 és 2018 között (n=38)*

| Period / *Időszak* | No. of confirmed breedings / *Biztos költések száma* | No. of breedings per year / *Költések száma évenként* | No. of successful breedings (%) / *Sikeres költések száma (%)* | No. of fledged juv. / *Kirepült fiatalok száma* | Average no. of fledged juv. per successful nest / *Kirepült fiatalok átlagos száma sikeres fészkenként* |
|---|---|---|---|---|---|
| 1976-1998 | 101 | 4.39 | 59 (58.4) | 172 | 2.9 |
| 1999-2010 | 92 | 7.67 | 72 (78.3) | 200 | 2.8 |
| 2011-2018 | 44 | 4.89 | 30 (68.2) | 69 | 2.0 |

Tab. 4: Comparison of basic breeding characteristics of the Saker Falcon (*Falco cherrug*) population in the Czech Republic in 1976–1998, 1999–2010 and 2011–2018 / *A csehországi kerecsensólyom-állomány alapvető költési jellemzőinek összehasonlítása 1976–1998, 1999–2010 és 2011–2018 időszakokban*

| Species / *Fajok* | No. of recorded items / *Feljegyzett maradványok száma* |
|---|---|
| *Columba livia f. domestica* | 84 |
| *Microtus arvalis* | 11 |
| *Sturnus vulgaris* | 10 |
| *Larus ridibundus* | 8 |
| *Vanellus vanellus* | 4 |
| *Alauda arvensis* | 3 |
| *Asio otus* | 3 |
| *Corvus frugilegus* | 3 |
| *Turdus philomelos* | 3 |
| *Lepus europaeus* | 2 |
| *Phasianus colchicus* | 2 |
| *Aythya fuligula* | 1 |
| *Columba oenas* | 1 |
| *Coturnix coturnix* | 1 |
| *Cricetus cricetus* | 1 |
| *Ficedula hypoleuca / albicollis* | 1 |
| *Mustela erminea* | 1 |
| *Perdix perdix* | 1 |
| *Turdus pilaris* | 1 |

Tab. 3: Diet of the Saker Falcon (*Falco cherrug*) in the Czech Republic in 2011–2018 (n=141 food items) / *A kerecsensólyom táplálék-összetétele Csehországban 2011 és 2018 között (n=141)*

od of feeding young. However, their proportion in the food structure is apparently influenced by the detectability of their remnants, i. e. feathers, bones and very often rings, in nests and around them. On the contrary, captured small mammals such as voles or hamsters completely disappear. We only have information on their hunting (or robbing from other raptors) thanks to direct observations. The European Hare (*Lepus europaeus*) as Saker Falcons' prey was recorded twice: a young hare in 2013 and on 25th February 2017, when both birds from a pair fed on a dead hare.

During non-breeding periods, Saker Falcons were recorded both in the breeding localities and in other areas in the Czech Republic, especially the in lowlands. They were apparently attracted by large flocks of Stock Doves (*Columba oenas*) and Feral Pigeons or by the European Hamster (*Cricetus cricetus*) populations. Except for South Moravia, Central Moravia and the Labe river floodplain (in the surroundings of Mladá Boleslav or Roudnice nad Labem towns) were also regularly used.

During the monitoring in 2011–2018, we recorded several cases of interesting Saker Falcon breeding or behaviour:

In 2012, a male from the breeding pair had a striking gap in his left wing (Fig. 7). It was obviously not caused by moulting, because the missing feathers did not grow back during the breeding season. Despite this disadvantage, the male was very active and successful, the pair reared four young.

In 2013, food caching by a pair breeding in a windbreak was repeatedly observed in Znojmo district. Both the male and the female used three concrete cylinders of 1 m in diameter protecting an irrigation equipment (Fig. 8) 25–260 m apart from the nest (Škorpíková 2013).

On 27th September 2016, a young Saker Falcon female (later named *Soňa*) attacked a falconry Goshawk resting on the ground near the village of Pravčice (Kroměříž district). Their fight was so severe, that the falconer had to separate one from another. The slightly injured female spent around three weeks in a rehabilitation station and was tagged with a GPS–GSM logger and released on 17th October. Later, she spent most of the time in Austria (visiting also Hungary and Slovakia). She stayed in the territory of a breeding Saker Falcon pair in Austria in the 2017 breeding season and finally, she was found dead on 22nd August 2017, the reason unknown (http://www.birdtelemetry.cz, I. Literák & R. Raab *pers. comm.*).

In March and April 2016, a Saker Falcon female (Fig. 10) stayed in a nestbox installed on a chimney of Prunéřov Power Station (at the height of 125 m above the ground) and caused the breeding failure of a local Peregrine Falcon pair. She left the locality later, but she was observed in the surroundings several times during the winter. In spring 2017, she again occupied the Prunéřov nestbox (30th March – 21st April), but no Saker male was recorded. Subsequently, the box was occupied by a Peregrine Falcon pair that reared two young from a rather late breeding.

In 2017, a Saker Falcon pair bred in a locality traditionally occupied by the Northern Goshawk, they chose one of its three known nests. The local Goshawk pair built a new nest in a poplar tree at the edge of the same forest, just 103 m apart. Even more, Eurasian Buzzards started breeding in a new nest 110 m apart from both nests (Fig. 9). Surprisingly, only the Saker Falcons were successful and reared min. three juv. Competition for nests between different raptor species in this attractive locality could have caused the late beginning of Saker Falcons breeding – incubation started around 10th April.

Figure 8: A windbreak with a Saker Falcon (*Falco cherrug*) nest and one of three concrete cylinders used for food caching by a breeding pair (Hrádek, Znojmo district, 1st May 2013) (photo: V. Škorpíková) / *Szélfogó takarásában lévő kerecsensólyom-fészek és a három betonhenger egyike, amelyet a költőpár táplálékraktárként használt*

Until the winter of 2013/2014 (usually from November to February), the regular wintering of the Saker Falcon (some years also the Peregrine Falcon) was recorded on a grain silo in Chrlice on the SSE edge of the city of Brno; later on, the observations have only been very rare. Similarly, since the winter of 2012/2013, regular wintering of the Saker Falcon has been recorded on a grain silo (c. 50 m high) near the village of Šakvice (Břeclav district), previously also well known as a regular wintering site of the Peregrine Falcon. On some occasions both species were present (on different sides of the silo). Out of seven winters (October to February 2012/13 – 2018/19), Saker was found there every winter except for 2014/15.

## DISCUSSION

We can compare our data with data from periods 1976–1998 and 1999–2010, when the Saker Falcon population in the Czech Republic was monitored and the results were published (Tab. 4). In the years 1976–1998, the situation was optimistic as the population increased. The average number of occupied nests per year in defined 5-years periods was 2.6, 2.4, 6.0 and 6.2. The proportion of successful breeding pairs was rather low (58.4%), but the number of fledged young per successful nest was relatively high – 2.9. In the next 12 years, the population was quite stable. The breeding of 5–11 pairs was confirmed annually, 78.3% of them were successful and 2.8 juveniles were reared on average from a successful nest. At the beginning of the last period, this stable situation seemed to continue or even improve, as 2–3 pairs were found in Bohemia. But the situation changed dramatically after 2015. Only 2–3 breeding pairs were confirmed annually and all pairs failed in 2018. Monitoring in the next few years will be very important, because it should show if the recent development was only an exceptional fluctuation or if it is the start of a new trend. In total, 26 grid squares (6 latitudinal × 10 longitudinal minutes, i. e. approx. 12.0×11.2 km) were occupied at least once in 1976–2018 in the Czech Republic. In all three periods, the breeding outside the main distribution range was recorded: in 1989–1999 and 2003–2007, Saker Falcons repeatedly occupied two grid squares in North Moravia near the Polish border and in 2011–2018, breeding in three different Bohemian localities was confirmed. But none of these areas have been occupied continuously up to now. Only seven squares were occupied in all involved periods: 6966, 6967, 7065, 7164, 7165, 7267 and 7367. They apparently form a core area of the Saker Falcon range in the Czech Republic.

We tried to estimate the theoretical size of the Saker Falcon population in the Czech Republic. 26 grid squares (c. 3484 km$^2$) occupied at least once can


Figure 9: Interesting localization of the nests of three raptor species in 2017 (Drnholec, Břeclav district) / *Három ragadozófaj fészkeinek érdekes elhelyezkedése 2017-ben (Drnholec, Břeclav körzet)*

form a maximal suitable area for the species, 13–14 squares (1747–1882 km$^2$) occupied in each of the three periods in total form the common breeding range here. According to studies by Prommer *et al.* (2018), the average home range size of a successfully breeding pair of Saker Falcons is c. 190.5 km$^2$ (51.3–529.7 km$^2$). Based on this data we can expect max. 18 breeding pairs, but more likely is 9–10 pairs in the Czech Republic annually.

But the situation in recent years has changed. In 2011–2018, only 5.5 breeding pairs were confirmed on average annually, in the last 5 years only 3.6 pairs. This trend could be caused by a fluctuation on the limit of the species range, but if the populations in important neighbouring countries (Slovakia, Austria, Hungary) have been stable and at least in Hungary the suitable area is saturated (Prommer *et al.* 2018), we should look for other reasons. We can exclude the weather, because except for 2013 with a cold and rainy spring, the weather conditions were favourable. But we have recorded a shift of breeding pairs to Austria since 2013. It was first observed in pairs from localities in Soutok-Tvrdonicko SPA, where Sakers obviously used the offer of breeding possibilities on newly installed nest platforms on high-voltage pylons. Another two pairs breeding regularly on the Czech side of the border in Znojmo district have moved to Austria since 2016. All these pairs obviously had transboundary territories and recently they have bred in Austria, so the total size of the Central European Saker Falcon population should not change. But it is a very strong signal about the quality of our open landscape, where Saker Falcons apparently have not found enough food. Similarly to Prommer *et al.* (2018) we think that agricultural practices that decrease prey abundance subsequently lead to fewer breeding pairs. From the biodiversity point of view, the recent state of the Czech agricultural landscape is desperate and the decrease of population size in birds of the open landscape is proven (Reif *et al.* 2014). The main reasons such as large fields with few set-aside elements among them, low diversity of the crops grown and the high level of pesticides used have been discussed.

A National Action Plan for the Saker Falcon was prepared in 2017. The proposed measures do not only include installation of new nesting platforms or boxes in regions where natural nests are obviously lacking, or applying proven equipment on dangerous types of medium-voltage pylons, but the pressure for changes to recent agricultural practices is also emphasized.

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Figure 10: A Saker Falcon (*Falco cherrug*) female at Prunéřov Power Station (7th June 2016) (photo: V. Beran) / *Tojó kerecsensólyom a prunéřovi villamos erőműnél (2016. június 7.)*


### A KERECSENSÓLYOM (*FALCO CHERRUG*) HELYZETE CSEHORSZÁGBAN 2011–2018 KÖZÖTT

Csehország a kerecsensólyom (*Falco cherrug*) elterjedési területének északnyugati peremén fekszik. A jelen cikk összefoglalja a 2011–2018 között gyűjtött adatokat a csehországi kerecsensólyom-állomány helyzetéről. Az ezt megelőző időszakból már jelentek meg arról cikkek, az 1998 előtti adatokat Horák (2000), az 1999–2010 közöttieket pedig Beran *et al.* (2012) dolgozták fel. Az itteni állomány magterülete az ország délkeleti részére (Dél-Morávia) koncentrálódik, a mely a pannon biogeográfiai régióhoz tartozik. Ezen a régión kívül csak nagyon ritkán jegyezték fel a faj költését (1. táblázat). Az elterjedési terület más országaival (Magyarország, Szlovákia, Ausztria) ellentétben a cseh állomány nagyobb része egyelőre fán költ, más madárfajok – elsősorban ragadozók – fészkeit elfoglalva (2. táblázat). A cseh állományt 1999–2010 között 15–20 párra becsülték, míg 2011–2018 között ez 6 és 12 pár között mozgott, az állomány különösen az utolsó három költési szezonban mutatott jelentős csökkenést, melynek okai egyelőre nem tisztázottak. Az utolsó periódus költési sikeressége egyértelműen alacsonyabb volt, mint amit az azt megelőző két időszakban tapasztaltak (2,0 kirepült fióka/pár a 2,8-hoz, illetve a 2,9-hez képest) (4. táblázat). A gyűrűs megkerülések (elsősorban magyarországi eredetűek), a fészkelőhely-választást és a táplálkozás szintén feldolgozásra került (3. táblázat). Ezenkívül néhány figyelemre méltó, érdekesebb költésbiológiai és viselkedési adatot szintén bemutatunk. 2017-ben elkészült a nemzeti fajvédelmi akcióterv, azonban azt az illetékes állami szervek még nem fogadták el.