

The Saker Falcon in European Russia

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INTRODUCTION

The world Saker population in the early 1980's was assessed as 35,000-45,000 pairs (Baumgart, 1991). The number of Sakers in Europe was roughly estimated as 400-600 pairs (Tucker & Heath, 1994). The precise number of Sakers in Russia is unknown. At the beginning of the 1980's it was supposed to be "probably not less than 1000 pairs" (Red Data Book, 1983). Within European Russia (west of the Urals) the Saker population was likely to be between 80 and 150 pairs (Tucker & Heath, 1994) or about 100 pairs (Galushin, 1994, 1995).

The Saker Project started in European Russia in 1997 and continued in 1998 with the support by NARC (Abu Dhabi, UAE) and the Falcon Facility (Wales, UK) as a part of the overall Saker Eurasian Project (Fox, 1995; Fox & Eastham, 1996; Fox *et al.*, 1996). Its major objectives for European Russia were:

- (1) to survey the Saker breeding range and populations within European Russia;
- (2) to assess the current state of nesting and feeding habitats for the Saker in the region.
- (3) to study Saker migrations in the south of European Russia.
- (4) to reveal present and potential threats to the Saker in the region.
- (5) to disseminate up-to-date knowledge on the species' status in the country in order to arouse people's awareness.

METHODOLOGY

Saker populations were assessed by two major methods: (1) surveys by mobile teams and (2) precise studies of the promising former and potential nesting sites of the species within the breeding range.

Two large regions were selected, namely the Don river basin (over 450,000 km²) and between the Lower Volga and Ural rivers (340,000 km²). Data on former records of Saker breeding found in literature and archives were studied, compiled and mapped. Reliable records by experienced local game-keepers, hunters and bird watchers were also taken into account. According to Sakers' behaviour and other particular indications, three categories of records have been accepted:

- (1) proved nesting area - active nest with eggs or young found;
- (2) presumed nesting area - Sakers repeatedly recorded during one breeding season at one site, hunting or defence behaviour, sighting of fledglings, proved nesting one-two years back.
- (3) questionable area - isolated records of Sakers, reliable information from local game-keepers, hunters and bird watchers.

RESULTS

Don River Basin

This occupies over 450,000 km², which is almost 1/5 of European Russia and encompasses 14 administrative regions (some of them partly). At the beginning of the 20th century the entire Don river basin was a part of the Saker breeding range and covered 2/3 of the latter within European Russia. Six spring and summer surveys in 1997 embraced 11 regions west of the Lower Volga river. In 1998 two areas within the Don river basin were surveyed.

Totally 35,000 - 50,000 km² or about 10% of the Don basin were presumed to be potentially suitable for Sakers, due to their favourite combination of both nesting (forest edges, wood groves, river cliffs or high pylons of electric power lines) and hunting habitats (suslik colonies as most preferable food and also rook aggregations).

In 1997 10 Saker breeding areas, including the only proved one with a living nest, were recorded while in 1998 only 4 nesting areas were noted. So the average density of Saker populations was 0.55 (1997) - 0.25 (1998) pairs per 1000 km² of potential nesting habitats. Extrapolation allows one to suppose that 20-30 Saker pairs in 1997 and 10-15 pairs in 1998 inhabited almost 0.5 mln km² of the entire Don basin. The Saker breeding range lost at least three nesting "islands" in one year. Populations of susliks also continue to decrease, however some local specialists still expect some kind of population recovery for susliks in a south-eastern part of European Russia.

Volga-Ural Inter-rivers

This covers 5 administrative regions and occupies 340,000 km² between the Volga and Ural rivers. Two surveys were performed in 1997 and one in 1998 by mobile teams. Potential Saker habitats roughly composed 120,000 km² or about 30% of the entire Volga-Ural inter-river area.

In 1997 22 Saker breeding areas (5 proven ones with active nests) and in 1998 24 areas (10 proven) were recorded there. The average population density was 0.92 (1997) and 0.96 (1998) pairs per 1000 km² of potential nesting habitats and a total number was assumed at 100-120 pairs of Sakers between the Volga and Ural rivers.

Total European Russia

The Saker population status and trends differ in the western (Don river basin) and eastern (Volga-Ural inter-rivers) parts of the region. In short, in the west populations the breeding range is decreasing, while in the east Sakers are relatively stable at a low level. The recent position of Saker populations throughout the whole of European Russia is as follows:-

	<i>Don River Basin</i>	<i>Volga-Ural inter-rivers</i>	<i>European Russia</i>
Former breeding range (km ²)	450,000	340,000	790,000
Potential nesting habitats within the whole areas (km ²)	40,000	120,000	160,000
The same (%)	9	35	20
Actual breeding range (km ²)	9,000	40,000	ca.50,000
Number of breeding pairs recorded in 1997	10	22	32
The same in 1998	4	24	28
Density within surveyed potential nesting habitats (pairs/1000 km ²)	0.25	0.96	0.68
Density within former breeding range (pairs/1000 km ²)	0.02	0.32	0.15
Total population over whole areas (pairs)	12	110	ca.120
The same in limits (pairs)	10-15	100-120	110-140

The total number of Sakers was assessed as *ca.* 120 pairs which is more or less the same as in 1997. Predictions are bad for the Don river basin where Saker populations will continue to decline but rather favourable for the Volga-Ural inter-rivers where stability is expected.

Autumn Migrations

The North-Caucasus autumn migration route for raptors is well known. However Sakers are very scarce there. Special observations were carried out 12-19 September 1998 in vicinities of Kislovodsk city at the northern foothills of a central part of the Caucasus mountains. In one week three Sakers were recorded flying south-west along the foothills, whereas hundreds of other raptors migrated daily. That scarcity of migrating Sakers supports the conclusion that the nesting Saker population in European Russia is very small. The raptor migration study to the south of the Caucasus ridge was similar. From 26 August till 29 October 1997 only 11 Sakers were recorded, comprising 0.009% out of over 120,000 raptors (Abuladze, 1998). As for wintering places to the south of the Caucasus ridge, Alexander Abuladze recorded only 4 Sakers through December 1998.

In general the autumn migration of Sakers in 1998 was tiny in the south of European Russia.

Breeding Range

The first result of the Project was a clear picture of overall shrinkage and fragmentation of the Saker breeding range in Eastern Europe during the last 20-30 years.

All handbooks on raptors (Dementiev & Gladkov, 1951; Brown & Amadon, 1968; Baumgart, 1978; Cramp & Simmons, 1980; Cade, 1982) including recent editions (Baumgart, 1991; del Hoyo *et al.*, 1994; Snow & Perrins, 1998) show a continuous breeding range of the Saker Falcon stretching over 1 mln km² of the southern half of European Russia and Ukraine. It embraces, for example, the entire basin of the Don river. However only single Sakers were met there along thousands of km of survey roads. Recent surveys made it apparent that the present breeding range is quite fragmented and formed of separated areas, localities and even individual nesting sites. Today it looks spotty and is unlikely to exceed 50,000 km² (about 10,000 km² in the Don river basin and 40,000 km² within the Volga-Ural inter-rivers), that is 20 times less than the former range 30-50 years ago.

Threats and Conservation

The Saker population crash in Russia was caused by habitat destruction, human disturbance, lack of ready-made nests and most of all by the heavy pressure of illegal taking and smuggling of the best birds. According to some official data in the autumn of 1997 alone, over 300 Sakers were confiscated by customs at Russian airports (mostly in Siberia). Therefore a total number of smuggled Sakers in 1997 was probably close to 1000 birds. However in 1998 smuggling of Sakers decreased: less than 50 people (mostly Syrians) were stopped at the customs with falcons. For the first time in Russia four men were sentenced as Saker smugglers. There is some hope that the customs in Russia have become more watchful for illegal trade in falcons including Sakers.

As for the lack of nests constructed by ravens or raptors on trees or other suitable places during the last decade, Sakers demonstrate remarkable adaptability to nesting on electricity pylons (Piluga, 1991) and other artificial sites. These recent adaptations promoted a significant increase in the Saker population over huge areas in Mongolia, very rich in food but poor in nesting sites (Potapov *et al.*, 1999).

For European Russia a major cause of the Saker population decline was the almost overall decrease and local disappearance of its principle food namely two species of susliks (*Citellus citellus* and *C. pygmaeus*). This could have resulted from natural phenomena like changes in climate, growing more humid and warm. In turn, that led to grass growing tall and dense and less acceptable for susliks. At the same time the recent collapse in agriculture led to a sharp decrease in live-stock and grazing pressure on pastures, which finally also overgrew with tall and dense grass and shrubs, accelerating further shrinkage of suitable suslik habitats. The very existence and, moreover, probable recovery of the Saker populations and range could be possible only if susliks restore their previous numbers through forest-steppe areas of European Russia.

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