

## AN OVERVIEW OF THE MOST SIGNIFICANT RECENT (1990–2012) RAPTOR MONITORING STUDIES IN EUROPEAN RUSSIA

### Pregled najpomembnejših nedavnih (1990–2012) dejavnosti v okviru monitoringa ptic roparic v evropskem delu Rusije

VLADIMIR GALUSHIN

Department of Zoology and Ecology, Moscow  
Pedagogical State University, Kibalchicha 6, RU–  
129164 Moscow, Russia, e-mail: v-galushin@yandex.ru

The avifauna of European Russia includes 47 breeding raptor species: 13 species of owls and 34 species of birds of prey (BIRDLIFE INTERNATIONAL 2004). Population status and trends of the latter at the end of 20<sup>th</sup> century are shown in Appendix 1.

#### Raptor studies in European Russia

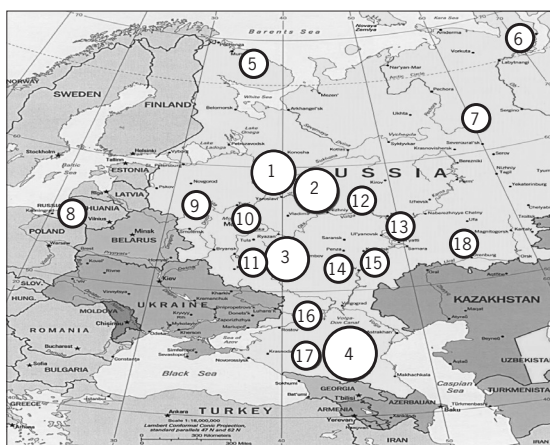
Raptor research, including long-term monitoring of their regional populations, does not evenly cover the entire European Russia. In the last two decades, regular studies covering all raptor species have been implemented in the following areas: Darwin Nature Reserve and its vicinities (1), north of Moscow (2), the Upper Don River (3) and the Northern Caucasus (4). Some irregular surveys and research covering only certain species have been carried out in the Murman (5) and Yamal (6) peninsulas, the Urals (7), Kaliningrad (8) and Smolensk (9) regions, the Middle Oka River (10), Kaluzhskie Zaseki Nature Reserve (11), the Volga River (12, 13, 15), the Central Chernozem (Black Soil) region (14), the Lower Don River (16), the North-Western Caucasus (17) and the Orenburg region (18).

Within Darwin Nature Reserve (120 km<sup>2</sup>) near Rybinsk Reservoir at the Upper Volga (1) it was ascertained that 65 years after the reserve was established the number of rare raptors like the Osprey *Pandion haliaetus* and White-tailed Eagle *Haliaeetus albicilla* increased gradually (up to 38–40 and 27–30 pairs, respectively), while populations of common species like the Buzzard *Buteo buteo*, Black Kite *Mivus migrans*, Kestrel *Falco tinnunculus* and harriers decreased owing to the total afforestation of their open hunting places (KUZNETSOV & BABUSHKIN 2006,

BABUSHKIN 2010).

A model study and monitoring of the Kestrel, Long-eared Owl *Asio otus* and Short-eared Owl *A. flammeus* are being implemented within the area of 48 km<sup>2</sup> some 100 km north of Moscow (2) annually from 1996 onwards. A number of owls sharply fluctuated from 0 to 41 (LeO) or even 0 to 63 (SeO) breeding pairs quite synchronously with the population dynamics of their major prey, specifically Common Voles *Microtus arvalis* (VOLKOV *et al.* 2009, GALUSHIN & SHARIKOV 2011). The findings clearly indicate that myophagous predators are capable of wide annual movements in search of breeding places with high density of their favourite prey not only through open tundra and steppe as shown before (GALUSHIN 1974), but within forest-agricultural landscape as well (KOSTIN *et al.* 1990, KOSTIN 2012).

Long-term monitoring of raptors breeding within 50 km<sup>2</sup> (including 3.2 km<sup>2</sup> of forest fragments) of the Plushchan area along the west bank of the Upper Don River (3) has been carried out from 1992 onwards (GALUSHIN *et al.* 2000, ZAKHAROVA 2003, SOLOVKOV *et al.* 2009). The numbers of Goshawks *Accipiter gentilis* have increased (from 1 to 3 pairs); Buzzards (5–9 pairs), Sparrowhawks *A. nisus* (1–2 pairs) and Montagu's Harriers *Circus pygargus* (2–4 pairs) have been relatively stable, Black Kites have decreased in numbers (from 4 to 1 pair), one pair of Booted Eagle *Aquila pennata* and Honey Buzzard *Pernis apivorus* nested irregularly, while the Hobby *F. subbuteo* and



**Figure 1:** Map of recent raptor monitoring sites in European Russia (numbers correspond to those given beside the site names in the text)

**Slika 1:** Zemljevid novejših lokacij za monitoring ptic roparic v evropskem delu Rusije (številke lokacij so enake številkam ob imenih lokacij v besedilu)

Kestrel disappeared after 1999 resulting in predation by martens on their nest providers, i.e. Hooded Crows *Corvus cornix* and Magpies *Pica pica*.

The Northern-Caucasus Plains (4) (180,000 km<sup>2</sup>) are inhabited by 28 raptor species, i.e. 21 Falconiformes and 7 Strigiformes. Eight of them have decreasing populations: Honey Buzzard, Black Kite, Long-legged Buzzard *B. rufinus*, Steppe Eagle *A. nipalensis*, Imperial Eagle *A. heliaca*, Peregrine Falcon *F. peregrinus*, Eagle Owl *Bubo bubo* and Short-eared Owl. Evident increasing populations are indicated for the following four species: Tawny Owl *Strix aluco*, Barn Owl *Tyto alba*, Goshawk and Sparrowhawk. Other 16 species have either stable or slightly increasing populations (ILYUKH & KHOKHLOV 2010).

Major results of raptor research and monitoring are published in books (KARYAKIN 1998 & 2008, RAKHIMOV & PAVLOV 1999, ILYUKH & KHOKHLOV 2010, KOREPOV & BORODIN 2013) and in over 200 papers in conference proceedings and other paper collections, as well as in scientific journals *Ornithologia* (Moscow, Chief Editor V.M. Gavrilov), *Zoological Journal* (Moscow, Chief Editor Ju.I. Chernov), *Strept* (Rostov on Don, Chief Editor V.P. Belik), published in Russian with English summaries, and bilingual (Russian and English) *Raptors Conservation* (Nizhny Novgorod, Chief Editor I.V. Karyakin). They have also been discussed at the 4<sup>th</sup> (Penza, 2003), 5<sup>th</sup> (Ivanovo, 2008), and 6<sup>th</sup> (Krivoy Rog, Ukraine, 2012) conferences organized by the Working Group on Birds of Prey and Owls of North Eurasia and at other ornithological workshops and meetings.

### **Questions raised by EURAPMON**

The data collected by raptor monitoring are practically used for their protection mostly by the federal and regional conservation organisations and societies first of all for the preparation and revision of Red Data Books at various levels, which comprise an important basis for the national and regional conservation legislation.

Raptor specialists in Russia are in permanent contacts with our colleagues from EURAPMON as well as from Ukraine, Belarus, Georgia, Latvia, Kazakhstan, Turkmenistan, Finland, Poland, Germany, UK, Spain, Israel, Bulgaria, Serbia and many other countries.

Co-ordination of the raptor research, monitoring and conservation is the major activity carried out by the Working Group on Birds of Prey and Owls of Northern Eurasia, which has been led from the very beginning of 1983 by Vladimir Galushin. The membership of this working group consists of about

100 persons, with over 20 specialists coordinating local activities for raptor research and monitoring in various regions. As already mentioned, raptor monitoring in Russia does not cover the entire country in its European part evenly, but is fragmented through separate regions.

Local monitoring efforts usually concern all raptor species. At times, however, regional administrations mainly support monitoring of particular rare species for the preparation or revision of local Red Data Books. In such cases, major threats and conservation measures are the key issues. The most endangered raptors in Russia are large falcons, specifically the Saker Falcon *F. cherrug* and Gyrfalcon *F. rusticolus*, mostly due to illegal taking and falconry trade. Any international help in their study and, most of all, protection could be very valuable indeed.

The major problem of raptor monitoring in Russia is a huge size of the country – European part of it is almost equal to Western and Central Europe combined. So, it is impossible to cover it by the existing professional ornithologists, while our birdwatchers are still few and less experienced at the same time. Therefore, participation of professionals and volunteers from other countries would be highly beneficial.

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### **Povzetek**

Monitoring 47 gnezdečih ptic roparic (13 sov in 34 ujed) poteka na kakih 20 lokacijah v evropskem delu Rusije. Najpomembnejši in najrednejši monitoring opravljajo v (1) Darwinovem naravnem rezervatu (120 km<sup>2</sup>) v bližini zadrževalnika Ribinsk na Gornji Volgi, (2) v severnem delu moskovske oblasti, (3) ob Gornjem Donu z majhnimi gozdnimi zaplatami med kultiviranimi polji, in (4) v Severnem Kavkazu (180.000 km<sup>2</sup>), ki ga poseljuje 28 ptic roparic (21 vrst ujed in 7 vrst sov). Najpomembnejši rezultati, doseženi z raziskavami in monitoringom ptic roparic so bili v

zadnjih 15 letih objavljeni v petih posebnih knjigah, v več kot 200 znanstvenih člankih, predstavljenih na treh različnih konferencah, posvečenih pticam roparicam (2003, 2008 in 2012), in na mnogih drugih srečanjih. Raziskave, monitoring in varstvo ptic roparic koordinira Delovna skupina za ujede in sove severne Evrazije, ki je bila ustanovljena leta 1983.

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## APPENDIX 1 / DODATEK 1

Birds of prey populations and their trends in European Russia in the 1975–2000 period (GALUSHIN 2002, 2005 & 2007, BIRDLIFE INTERNATIONAL 2004): (–) small decline, (– –) moderate decline, (– – –) large decline, (F) fluctuating, (S) stable, (+) small increase, (+ +) moderate increase, (+ + +) large increase, (?) – trend unknown

Populacije ujed in njihovi trendi v evropskem delu Rusije v obdobju 1975–2000 (GALUSHIN 2002, 2005 & 2007, BIRDLIFE INTERNATIONAL 2004): (–) majhen upad, (– –) zmeren upad, (– – –) velik upad, (F) nihajoč, (S) stabilen, (+) majhen porast, (+ +) zmeren porast, (+ + +) velik porast, (?) – trend neznan

\* Combination of various signs for individual species indicates variations of its status and trends in different regions in the vast territory of European Russia

Species / Vrsta	Population trend/ Populacijski trend 1975–2000*	No. of breeding pairs at the end of 20 <sup>th</sup> century / Št. gnezdečih parov ob koncu 20. stoletja
<b>A. Population decreasing</b>		
<b>A1. Rare species included into RED DATA BOOK OF RUSSIAN FEDERATION (2001) or proposed to be included in its next edition</b>		
Pallid Harrier <i>Circus macrourus</i>	F, –	300–1,100
Greater Spotted Eagle <i>Aquila clanga</i>	– –	600–800
Steppe Eagle <i>Aquila nipalensis</i>	– –	5,000–20,000
Red-footed Falcon <i>Falco vespertinus</i>	S, –	20,000–30,000
Saker Falcon <i>Falco cherrug</i>	– – –	10–20
<b>A2. Common species</b>		
Black Kite <i>Milvus migrans</i>	– –	30,000–50,000
Griffon Vulture <i>Gyps fulvus</i>	–	200–400
Hen Harrier <i>Circus cyaneus</i>	S, F	20,000–40,000
Kestrel <i>Falco tinnunculus</i>	F, –	40,000–60,000
<b>B. Populations relatively stable</b>		
<b>B3. Rare species</b>		
Red Kite <i>Milvus milvus</i>	S, +	5–10
Lammergeier <i>Gypaetus barbatus</i>	S, –	50–100
Egyptian Vulture <i>Neophron percnopterus</i>	S, –	70–120
Black Vulture <i>Aegypius monachus</i>	S, –	30–70
Long-legged Buzzard <i>Buteo rufinus</i>	S, –	1,000–2,000
Golden Eagle <i>Aquila chrysaetos</i>	S	500–1,000
Booted Eagle <i>Aquila pennata</i>	S, +	600–1,500
Osprey <i>Pandion haliaetus</i>	S, +	2,000–4,000
Gyr Falcon <i>Falco rusticolus</i>	F, –	100–200
<b>B4. Common species</b>		
Honey Buzzard <i>Pernis apivorus</i>	S, F	60,000–80,000
Sparrowhawk <i>Accipiter nisus</i>	S, +	160,000–180,000
Buzzard <i>Buteo buteo</i>	S, +	200,000–500,000
Rough-legged Buzzard <i>Buteo lagopus</i>	S, F	30,000–60,000
Merlin <i>Falco columbarius</i>	S	20,000–30,000
Hobby <i>Falco subbuteo</i>	S, –	30,000–60,000
<b>C. Population increasing</b>		
<b>C5. Rare species</b>		
White-tailed Eagle <i>Haliaeetus albicilla</i>	+ +	1,000–2,000
Short-toed Eagle <i>Circaetus gallicus</i>	S, +	500–1,000
Levant Sparrowhawk <i>Accipiter brevipes</i>	S, +, –	2,000–3,000
Lesser Spotted Eagle <i>Aquila pomarina</i>	S, +	300–500
Imperial Eagle <i>Aquila heliaca</i>	S, +	800–1,200
Lesser Kestrel <i>Falco naumanni</i>	S, +	400–600
Peregrine Falcon <i>Falco peregrinus</i>	S, +	1,000–1,200
<b>C6. Common species</b>		
Marsh Harrier <i>Circus aeruginosus</i>	+	40,000–60,000
Montagu's Harrier <i>Circus pygargus</i>	F, +	25,000–35,000
Goshawk <i>Accipiter gentilis</i>	+ +	90,000–110,000
Total / Skupaj		781,465–1,335,820