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Short Communication
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ATTEMPTS OF THE WHITE STORK (*CICONIA CICONIA*) (CICONIIDAE, AVES) TO INHABIT KARELIA, NORTHWESTERN RUSSIA

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Abstract. The paper briefly relates the history of the white stork's expansion into Karelia (Northwestern Russia, 61° N, 33° E), this species being red-listed with a 3NT status (rare, near threatened) in the regional Red Data Book. The western populations of the species declined dramatically in the second half of the 20th century, but targeted conservation actions have helped the species numbers to be restored. However, its West European populations are still listed in column A (category 3b) in the Action Plan of the African-Eurasian Waterbird Agreement (AEWA). In view of the remaining risks and the tangible changes having occurred in the population size, it appears important to monitor the species' distribution range and possible pathways of its expansion to new regions. The white stork's breeding range currently encompasses Europe, excluding its northern regions, and reaches into the westernmost parts of Russia up to the southern districts of the Leningrad Region in the north. Vagrant birds are occasionally seen in central and northern districts of the Leningrad Region and even beyond, in Karelia. In this study, we have processed and synthesized archival, including partially published, and new records of solo individuals and groups of birds of this species from areas north of the regular breeding range and described some attempts of white storks to breed in these northern regions. We demonstrate that since the late 1960s, these birds have been regularly showing up in southern parts of Karelia, sometimes even farther north, and making occasional breeding attempts, pushing their permanent breeding range to the north and north-east. Having analyzed the records, we conclude that the visits of white storks to northern regions have become regular in the previous decades, but their attempts to breed there are still episodic and largely unsuccessful, suggesting that this species has not yet colonized Karelia as a breeding region.

Keywords: white stork, range expansion, breeding, occurrence, red-listed species, Northwestern Russia

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To the honorable memory
of Dr. Nikolai V. Lapshin (*October 8*, *1946–June 23*, *2024*),
who has contributed greatly to the study of birds in Karelia

Introduction. The European breeding range of the white stork (*Ciconia ciconia* Linnaeus, 1758) extends from the Pyrenean Peninsula to the Volga Region and Transcaucasia, and northwards up to Denmark, Estonia, Southern Sweden, and Southern Finland. Storks also breed in the west of Northern Africa, in Western and Middle Asia, and there is a small population breeding in Southern Africa (Gozhko, Grishanov, 2020). In Northeastern Europe, the permanent breeding area of these birds covers only Russia's westernmost fringe up to the Leningrad Region (Elliott et al., 2020; Chodkiewicz, Sikora, 2020). Within the Leningrad Region, in the north-eastern periphery of the species range, white storks have nested regularly in the past decade up to 59° N (Dombrovsky, 2015–2018, 2023; Khrabry et al., 2019; Dombrovsky et al., 2021) and have occasionally been encountered even farther north – up to 60° N (Dombrovsky, Chirinskaite, 2020, 2022), including sites in the Karelian Peninsula (Khrabry, 2020). Furthermore, since 1969, white storks have periodically been seen also in South Karelia (60–61° N, 32–33° E) (Lapshin, 1997, 2000; Artemyev, 2015; Matantseva, Matantsev, 2019), where these birds have a status of a rare, sporadically breeding species, listed in the regional Red Data Book (Artemyev et al., 2020). The white stork is also listed on Annex I of the EU Birds Directive, Annex II of the Bern Convention and Annex II of the Convention on Migratory Species, under which it is covered by the African-Eurasian Waterbird Agreement (AEWA). The eastern and western European populations are currently listed in columns C (category 1) and A (category 3*b*) in the AEWA Action Plan, respectively (BirdLife International, 2024).

Owing to special conservation measures (Berthold et al., 2000) the white stork currently has the LC (least concern) status on the global scale (BirdLife International, 2024). Relatively recently however, some populations of this species, especially in their western group, were declining catastrophically – in the second half of the 20th century, free living Stork populations became extinct in Switzerland, Sweden, and the Netherlands, and declined critically to just several breeding pairs in Denmark. A special assessment carried out in 1994–1995 revealed a significant decline in white stork populations of 22 European and North African countries, with only one country retaining a stable population and with some growth in only four countries (Allan, 1989; Mullié et al., 1995; Berthold et al., 2000). In view of the remaining risks and the tangible changes that have occurred in the population size, it appears important to monitor the species' distribution range and the possible pathways of its expansion to new regions.

This paper was designed to briefly communicate the history of the white stork's expansion into Karelia, beyond the species' regular breeding range, as well as to present new records of the encounters and breeding attempts of these birds in areas north of the Leningrad Region. The tasks were to synthesize and analyze the archival (including partially published) and new data on white stork encounters and breeding attempts in Karelia.

Material and Methods. This communication is based on a synthesis and analysis of data on white stork encounters north of the Leningrad Region, which were partially published in some regional digests and special articles, supplemented with new white stork observations in Karelia in the past decade.

Results and discussion. We processed data on solo individuals and groups of white storks sighted in the territory Karelia in the period 1969–2024. The analysis of these records resulted in the below-given account of the north-eastern limits of the modern region of the species occurrence and regular breeding in Northwest Russia. In addition, the history of the expansion beyond the north-eastern periphery of the range is described.

Reports of white stork encounters in Karelia started arriving in the late 1960 (Lapshin, 1997, 2000; archival data). They were not annual and mostly came from southern districts (61° N, 33° E). Since the mid-1980s, solo individuals, pairs and small groups have been appearing up to middle Karelia (62° N, 33° E) (Lapshin, 1997, 2000; archival data). The northernmost reliable record of the white stork in European Russia comes from Vlg. Olenitsa (66.47° N, 35.35° E) on the Kola Peninsula southern coast (Kokhanov, 1987). The northernmost in Russia attempt of white storks to build a nest (left incomplete) was observed in the same place in 1994 (Rezanov, Rezanov, 2008).

The first and as yet the only case of successful breeding of white storks in Karelia was recorded in Vlg. Bolshaya Selga, Olonets District (61.05° N, 33.17° E), in 1988 (Lapshin, 1993). In the 1990s, encounters were limited to southern districts of Karelia, where some pairs started building nests but left the structures unfinished (Lapshin, 2000; our data).

In the early 21st century, encounters of solo individuals, pairs or small groups of white storks in the spring and summer period in southern and central parts of Karelia became almost annual (Artemyev, 2015). In 2004, white storks started building a nest in the Olonets District but left the next day (Artemyev, 2015). A completed nest and incubation of eggs were observed in that district in 2013. That breeding attempt however was unsuccessful (Artemyev, 2015). The next year, white storks were seen in the same area again (Artemyev, 2015). On one day in April 2019, four storks were noted in the fields on the right bank of the Shuya River and in the environs of the same-name village (61.90°N; 34.21°E) in the Prionezhsky District of Karelia (Matantseva, Matantsev, 2019).

The latest reports of storks in Karelia, including a nesting attempt, were received from the Olonets District in 2023. On April 23, four white storks appears in the fields near Vlg. Aleksala (60.98° N, 32.79° E), and on April 26 there were five individuals already. On April 25 and 27, two birds were sighted near Vlg. Putilitsa (60.98° N, 32.93° E). On April 29, one individual was spotted in Vlg. Rypushkalitsy (60.97° N, 32.91° E), and on May 10, two birds landed on the water tower but did not start nesting. Another

pair built a nest on the water tower in Vlg. Tuksa (61.03° N, 32.85° E) – a picture of a brooding bird on the nest was taken on May 6, 2023. The breeding attempt recorded that year failed – the adults disappeared on 1st July and on 20th July the karelia.news portal posted a photo of the abandoned nest with a dead chick and one egg (https://karelia.news/news/10095719/tragediey-zakonchilas-popytka-aistov-zavesti-potomstvo-v-oloneckom-rayone/). Another known record from 2023 (undated) is one bird encountered in the fields of the Shunga rural settlement cluster, Medvezhyegorsk District (62°N; 35°E). Finally, four individuals appeared in Vlg. Derevyanka (61.56°N; 34.45°E) in the Prionezhsky District of Karelia in 2024, on May 28, stayed overnight there and flew away.

Thus, since the late 1960s, white storks have been regularly appearing in southern districts of Karelia, sometimes reaching even farther north and occasionally making breeding attempts. At about the same time, white storks started actively colonizing the Leningrad Region, occupying its south-western districts and the southern Lake Ladoga region (Mal'chevsky, Pukinsky, 1983; Pchelintsev, 1996; Vysotsky, 1999). In the late 1990s – early 2000s, white storks dynamically expanded their presence in the Leningrad Region north-eastwards and eastwards (Khrabry, 2020). Their regular breeding however is known only for southern and central districts of the Leningrad Region. White storks occasionally appear in the north of the region and in the Karelian Isthmus, but no successful nesting attempts have been recorded there (Khrabry, 2020). An overwhelming majority of the attempts of white storks to nest in Karelia have also failed. Such attempts are likely made by young and inexperienced birds. This assumption is indirectly supported by the fact that the birds have not been seen returning to the previous nesting sites.

Late in the 20th century, some researchers talked of the white stork's tendency to expand its range north-eastwards and eastwards (Lebedeva, 1975, 1986; Mal'chevsky, Pukinsky, 1983). At present, there are also speculations of a forming trend for the species to expand northwards (Khrabry, 2020). The available data however corroborate the hypothesis that the white stork has not yet colonized Karelia (even its southern districts) as a regular breeding area (Artemyev, 2015) – the species' expansion into this region is still in the phase of regular vagrancy and sporadic nesting.

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Попытки освоения белым аистом (*Ciconia ciconia*) (Ciconiidae, Aves) территории Карелии, Северо-Запад России

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Аннотация. Кратко приведена история проникновения в Карелию (Северо-Запад России, 61° N, 33° E) белого аиста – охраняемого вида, включенного в региональную Красную книгу со статусом 3NT (редкий, находящийся в состоянии, близком к угрожаемому). Во второй половине XX в. западные популяции этого вида катастрофически сократились, но благодаря специальным природоохранным мероприятиям, в настоящее время численность этого вида восстановилась. Тем не менее, его западноевропейские популяции по-прежнему перечислены в колонке A (категория 3*b*) Плана действий Афро-Евразийского соглашения по водоплавающим птицам (AEWA). В свете сохраняющихся рисков и столь существенных изменений численности важно отслеживать область распространения этого вида и возможные пути проникновения его представителей в новые регионы. Современный гнездовой ареал белого аиста охватывает Европу, за исключением северных районов, и затрагивает крайний запад России, доходя на севере до южных районов Ленинградской области. При этом периодически отмечают залеты белых аистов в центральные и северные районы Ленинградской области и даже за ее пределы – в Карелию. В ходе наших исследований были обработаны и обобщены архивные, в том числе частично опубликованные, и новые данные регистраций одиночных особей и групп птиц этого вида севернее зоны регулярного размножения, описаны попытки гнездования белых аистов в северных регионах. Показано, что начиная с конца 1960-х гг. белые аисты регулярно появляются в южных районах Карелии, иногда продвигаясь еще севернее, и периодически предпринимают попытки гнездования, распространяясь за пределы постоянного гнездового ареала в северном и северо-восточном направлении. На основании анализа регистраций сделано заключение, что залеты белых аистов в северные регионы в последние десятилетия приобрели регулярный характер, однако попытки их гнездования здесь остаются эпизодическими и в большинстве случаев оказываются неудачными, что свидетельствует о том, что на данный момент белый аист еще не освоил Карелию как место размножения.

Ключевые слова: белый аист, расширение ареала, гнездование, встречаемость, охраняемые виды, Северо-Запад России

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Соблюдение этических норм. Исследования проводили без использования животных и без привлечения людей в качестве испытуемых.

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