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ОРНИТОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЯ В СТРАНАХ СЕВЕРНОЙ ЕВРАЗИИ

Тезисы XV Международной
орнитологической конференции
Северной Евразии

посвящённой памяти академика М. А. Мензбира
(165-летию со дня рождения и 85-летию со дня смерти)

Минск
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Орнитологические исследования в странах Северной Евразии : тезисы XV Междунар. орнитолог. конф. Северной Евразии, посвящённой памяти акад. М. А. Мензбира (165-летию со дня рождения и 85-летию со дня смерти). – Минск : Беларуская навука, 2020. – 538 с. – ISBN 978-985-08-2653-4.

Сборник включает 411 тезисов пленарных, симпозиальных и постерных сообщений, а также материалов круглых столов, представленных на XV Международную орнитологическую конференцию Северной Евразии (Минск, 2020). Рассматриваются общие и частные вопросы орнитологии, разрабатываемые учёными из 23 стран Северной Евразии. Представлены результаты исследований по динамике численности и демографии популяций, изменению ареалов видов, региональным фаунам птиц. Обсуждаются вопросы систематики, морфологии, физиологии, оологии, поведения, палеорнитологии, биоакустики, синантропизации птиц и антропогенного воздействия на них, актуальные проблемы охраны видов и популяций, мониторинга сообществ птиц на ООПТ, а также перспективы использования Атласа птиц европейской части России. Освещены проблемы и достижения в области ресурсной, медицинской и любительской орнитологии. Предназначено для широкого круга специалистов и любителей, занимающихся изучением и охраной птиц и их местообитаний.

У зборнік уключаны 411 тэзісаў пленарных, сімпозіумных і постарных паведамленняў, а таксама матэрыялаў круглых сталаў, якія былі прадстаўлены на XV Міжнародную арніталогічную канферэнцыю Паўночнай Еўразіі (Мінск, 2020). Разглядаюцца агульныя і прыватныя пытанні арніталогіі, якія распрацоўваюцца навукоўцамі з 23 краін Паўночнай Еўразіі. Прадстаўлены вынікі даследаванняў па дынаміцы колькасці і дэмаграфіі папуляцый, змене арэалаў відаў, рэгіянальным фаўнам птушак. Абмяркоўваюцца пытанні сістэматыкі, марфалогіі, фізіялогіі, аалогіі, паводзін, палеарніталогіі, біяакустыкі, сінантрапізацыі птушак і антрапагеннага ўздзеяння на іх, актуальныя праблемы аховы відаў і папуляцый, маніторынгу супольнасцей птушак на ААПТ, а таксама перспектывы выкарыстання Атласа птушак еўрапейскай часткі Расіі. Асветлены праблемы і дасягненні ў галіне рэсурснай, медыцынскай і аматарскай арніталогіі. Прызначана для шырокага кола спецыялістаў і аматараў, якія займаюцца вывучэннем і аховай птушак і іх месцазнаходжання.

The collection includes 411 abstracts of plenary, symposium and poster presentations, and materials of round tables discussions submitted to the 15th International Ornithological Conference of Northern Eurasia (Minsk, 2020). The materials consider general and specific issues of ornithology, developed by scientists from 23 countries of Northern Eurasia. The abstracts contain results of studies in population dynamics, demography, and changes in bird ranges; taxonomy, phylogeny, and systematics; morphology, physiology, oology, behaviour, bioacoustics, paleornithology. The problems of synanthropization of birds and anthropogenic impact on them are analyzed. Urgent tasks in conservation of bird species and populations, the long-term monitoring programs, on especially protected natural territories in particular, and the prospects for the use of the Atlas of breeding birds of European Russia are discussed. Presentations also touch on topical issues of the resource, medical, and amateur ornithology. The book is intended for a wide range of specialists and amateurs related to the study of birds and protection their habitats.

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В. В. Писоцкая

**ДИНАМИКА ВИДОВОГО И КОЛИЧЕСТВЕННОГО СОСТАВА
ПТИЦ ПОЛЕЗАЩИТНЫХ ЛЕСОПОЛОС
ХАРЬКОВСКОЙ ОБЛАСТИ (УКРАИНА)**

V. V. Pisotska

**DYNAMICS OF THE SPECIES AND QUANTITATIVE
COMPOSITION OF BIRDS IN THE SHELTERBELTS
IN THE KHARKOV REGION, UKRAINE**

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Полезашитные лесополосы являются важным биогеоценозом для птиц во все сезоны года и периоды жизнедеятельности: миграций, гнездования и кочёвок.

Цель исследования – изучить видовой состав и плотность населения птиц полезашитных лесополос в разные сезоны года на территории Харьковской области. Маршрутные учёты птиц проводили по общепринятым методикам (Равкин, Челинцев, 1990) и методом многократного картографирования. Для анализа сезонной динамики орнитофауны выделены следующие периоды: летний (15.05–30.07), осенний (1.08–31.10), зимний (1.11–1.03) и весенний (2.03–14.05).

В ходе исследований зарегистрированы 54 вида птиц 11 отрядов. Большинство видов составляют гнездящиеся – 53,7 %; меньше оседло-кочевых (22,2), мигрантов (16,7) и зимующих (7,4 %). Видовой состав птиц в осенний период представлен 16 видами. Доминируют сорока (*Pica pica*), большая синица (*Parus major*) и серая ворона (*Corvus cornix*). Плотность населения птиц варьирует от 30,5 (2016 г.) и 31,0 (2017 г.) до 31,8 ос./10 га (2018 г.).

В зимний период выявлены 20 видов. Доминируют большая синица, свиристель (*Bombycilla garrulus*) и большой пёстрый дятел (*Dendrocopos major*). Зимой плотность населения птиц в разные годы варьирует от 39,5 (2016 г.) и 41,5 (2017 г.) до 42,5 ос./10 га (2018 г.).

В весенний период зарегистрировано 52 вида. Доминируют зяблик (*Fringilla coelebs*), черноголовая славка (*Sylvia atricapilla*) и большая синица. Плотность населения изменяется от 78,5 (2016 г.) и 80,3 (2017 г.) до 83,5 ос./10 га (2018 г.).

Видовой состав птиц в летний сезон представлен 50 видами. Доминируют те же 3 вида, что и весной. Плотность населения составляла 140,4 пары/10 га в период гнездования, снижаясь к концу этого периода до 50,8 ос./10 га в 2016 г.; соответствующие цифры для 2017 г. – 150,4 и 54,8, для 2018 г. – 148,4 и 52,8.

W. Meissner, M. Witkowska

SEX RATIO IN MALLARD WINTERING IN GDAŃSK, POLAND

В. Мейснер, М. Витковска

СООТНОШЕНИЕ ПОЛОВ У КРЯКВЫ НА ЗИМОВКЕ В ГДАНЬСКЕ (ПОЛЬША)

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Mallards (*Anas platyrhynchos*) were counted in January 2013, 2014 and 2020 on all 37 water reservoirs of the city of Gdańsk (northern Poland). Mean daily temperatures in those winters varied and were significantly lower in 2013 (-0.98 °C) than in two other seasons (3.45 °C and 4.03 °C, respectively) (GLM ANOVA $F_{2,93} = 22.51$; $p < 0.001$ and Tuckey post-hoc test). Although the difference between seasons in mean temperatures was rather low, and the winter of 2013 was not harsh, 35 % of water bodies were completely frozen in this season. This study aimed to check if the temperature had significant effect on sex ratio in mallards wintering in the city. This species displays strong sexual dimorphism in body size, which render smaller females especially susceptible to periods of harsh weather conditions, as they have a higher specific metabolic rate and lose proportionally more heat than males. Hence, larger males have greater capacity to withstand cold temperatures and we hypothesized that in the coldest season more males than females remained in the study area.

The total number of mallards was higher in the coldest winter ($n = 2435$) than in 2014 ($n = 1664$) and 2020 ($n = 1357$). Generalized Linear Model (GLM) was used to check if differences in male ratio were related to year and the number of mallards in the particular water body. In the year with the lowest temperature (2013), the proportion of males was the lowest among mallards wintering in Gdańsk. The number of birds in a water body had no significant influence on male ratio. Therefore, the results obtained are not in line with expectations.

The number of mallards wintering in Gdańsk increased with decreasing temperature in studied seasons. It seems that among the arriving birds, the percent of males was lower, which caused a decrease in the share of males among birds staying in the city. In urban areas people tend to feed waterfowl with bread, providing a high energy food source that minimizes foraging time. Probably females find better conditions for overwintering in urbanized areas due to the access to anthropogenic food resources and higher temperature compared to sites outside the city.

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Y. Rouxel⁴, D. Mitchell⁵

**BYCATCH OF DIVING BIRDS
IN THE CURONIAN LAGOON OF THE BALTIC SEA:
FIRST RESULTS OF LITHUANIAN-RUSSIAN COLLABORATION**

Ю. Моркунас, М. Бружас, П. М. Глазов, Ю. А. Лощагина,
Я. Роксел, Д. Митчелл

**ПРИЛОВ НЫРЯЮЩИХ ПТИЦ В КУРШСКОМ ЗАЛИВЕ
БАЛТИЙСКОГО МОРЯ: ПЕРВЫЕ РЕЗУЛЬТАТЫ
ЛИТОВСКО-РОССИЙСКОГО СОТРУДНИЧЕСТВА**

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Accidental catch of birds in fisheries is recognized as one of the major threats affecting seabirds worldwide, including no less than 400.000 birds estimated being killed each year in gillnet fisheries alone. With 76.000 birds drowning annually, the Baltic Sea has been identified as one of the major bycatch hotspots for gillnet fisheries. However, much less is known about the Baltic coastal lagoons, where many breeding and migratory bird species tend to aggregate in very large numbers.

Started in 2017 and finishing in 2020, the project “*Untangling the net: tackling bird bycatch in Baltic gillnet fisheries*” had among its objectives evaluation of bycatch of bird species in the Curonian Lagoon, for the first time involving simultaneous data collection in both the Lithuanian and Russian parts of the lagoon. Bycatch incidences were collected in collaboration with 11 fishermen (seven from Lithuania and four from Russia) using a self-reporting methodology.

Over two years of data collection (2018 and 2019), a total of 296 bycatch events were recorded from both gillnets and fish traps, including 159 birds bycaught in Lithuania and 137 in Russia. Peak of bycatch occurred in autumn, when large numbers of migratory birds arrived in the lagoon. The two most affected bird species were the Great Cormorant (*Phalacrocorax carbo*) and the Great Crested Grebe (*Podiceps cristatus*), 189 and 40 individuals, respectively. Other species included the Goosander (*Mergus merganser*) (13 individuals), Goldeneye (*Bucephala clangula*) (12), Greater Scaup (*Aythya marila*) (10), Red-throated Diver (*Gavia stellata*) (8), and Smew (*Mergus albeus*) (8). Overall, piscivorous birds were the most impacted, followed by benthos-feeding species.

With the use of these data and by accessing the latest fishing effort information, we will then try to extrapolate the potential annual take of birds in the fisheries operating in the Curonian Lagoon.

I. V. Pokrovskaya

**SEABIRDS AS AN EVIDENCE OF “ATLANTIFICATION”
OF THE PALEARCTIC BIOTA**

И. В. Покровская

**МОРСКИЕ ПТИЦЫ КАК ПРИЗНАК «АТЛАНТИФИКАЦИИ»
БИОТЫ ПАЛЕАРКТИКИ**

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Recently, in the Barents Sea region, a trend has been observed in the expansion of the nesting and nomadic ranges of a number of bird species in the direction from west to east. Some seabirds, not so long ago limited in their nesting by the North Atlantic, carry out intensive eastward expansion into the space of the Arctic Ocean.

This applies primarily to two large species — the Northern Gannet (*Morus bassanus*) and the Great Skua (*Stercorarius skua*). The first one, having the optimum of its breeding range in the British Isles, expanded the breeding area in the end of the last century to the east, forming a colony on Murman near the Kola Peninsula. At the same time, it penetrates the north, expanding the nesting range to Bear Island.

The Great Skua mastered the entire Barents Sea region at the end of the 20th century and the Kara Sea region with nesting in the northeast of Novaya Zemlya – since 1988.

These birds complement the species of the North Atlantic, which are expanding into the Arctic in the form of migrations from the Southern Hemisphere. As an example, one can specify the Black-browed albatross (*Thalassarche melanophris*) wintering singly in the North Atlantic, whose flies have already been recorded twice in the eastern part of the Barents Sea in the last decades. It has been observed quite regularly in northern Europe, but did not attempt to penetrate into the Arctic regions east of Svalbard until 2007, when it was discovered near the south-west of Novaya Zemlya and 2017 near the southwest of Franz Josef Land.

The foregoing allows us to talk about the directed tendency of the «atlantification» of the Arctic avifauna. This term in biogeography was first used in 1963 by L. A. Zenkevich for invertebrate fauna in the Mediterranean Basin. In relation to the current situation in the Arctic, this term was used in 2018 by M. Vihtakari and his colleagues to describe the change in the diet of the Kittiwake (*Rissa tridactyla*) at Spitsbergen. It seems to us appropriate to expand the use of this term to describe changes in the ranges of seabirds.

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THE PHYLOGENY OF NORTH EURASIAN RAPTORS BASED ON MITOCHONDRIAL DNA SEQUENCES

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ФИЛОГЕНИЯ ХИЩНЫХ ПТИЦ СЕВЕРНОЙ ЕВРАЗИИ ПО ДАННЫМ СЕКВЕНИРОВАНИЯ МИТОХОНДРИАЛЬНОЙ ДНК

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Samples collected in North Eurasia has become object of genetic research since the 1990s. At the same time most of them were scattered in different articles compared with specimens from other geographic regions. The aim of our work is to assemble the sequences with provenance from this wide area to obtain a general view of phylogenetics, identify poorly studied taxonomic groups, and set targets for the future. Specimens from the former Soviet countries and Mongolia were processed. We used data on mitochondrial sequences of *cyt b* and *COI* genes > 500 base pairs available in open sources (GenBank and BOLD databases), as well as our own data of IMPB and IMCB. Sequences from the majority of North Eurasian raptor species were obtained: 8 of 13 species of falcons, 35 of 44 species of Accipitriformes and 15 of 18 species of owls. Phylogenetic trees based on Bayesian Inference, Neighbor Joining and Maximal Likelihood models were constructed for each gene and all three orders of raptors presented in Palearctic realm. The results demonstrate that the knowledge of phylogenetic position of North Eurasian raptors remains different for each group; the lack of data is most significant in the biggest order Accipitriformes and on the sub-species level.

The study of the Black Kite haplotypes was partially supported by the Fundamental Scientific Research Program, project N 0310-2019-0003.

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THE GREAT WHITE EGRET IN LATVIA

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БОЛЬШАЯ БЕЛАЯ ЦАПЛЯ В ЛАТВИИ

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The first proved breeding of the species was registered in 1997 when a mixed pair (*Ardea alba* × *A. cinerea*) bred at Lake Engure. In 2000, a single species pair was registered there. In 2013–2017 the total breeding population was estimated at 750–1000 pairs. The bulk of the population reside at two colonies with the longest nesting history, located in reed beds in *Natura* 2000 sites. In 2019, the Engure Lake Nature Park hosted 327 pairs and Lake Kanieris 404 nests. Other known colonies comprise 5–30 pairs and, in most cases, are associated with tree-nesting Grey Herons.

During mid-winter waterfowl counts in January, the sighting of the Great White Egret was first reported in 2012. In 2019, 40 individuals were wintering at 30 sites. In January 2020, more than 130 wintering birds were counted. Both breeding and wintering trends are estimated as a strong increase.

T. Szekely

SHOREBIRDS: THE GOLDILOCKS MODEL ORGANISMS IN AVIAN ECOLOGY, BEHAVIOUR AND EVOLUTION

Т. Шекели

КУЛИКИ КАК «МОДЕЛЬ ЗЛАТОВЛАСКИ» ДЛЯ ИЗУЧЕНИЯ ЭКОЛОГИИ, ПОВЕДЕНИЯ И ЭВОЛЮЦИИ ПТИЦ

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Shorebirds (sandpipers, plovers and allies) are some of the most charismatic animals that breed on all continents and inhabit diverse habitats, and their ecology, behaviour and evolution have attracted much attention ever since the work of Charles Darwin. In this presentation I will summarize the insights from 30 years of research on shorebird biology to illustrate the contributions to four research fields: breeding

system evolution, sex ratio research, speciation and biodiversity conservation. Two major conclusions can be drawn from these insights. First, as shorebirds live in a variety of habitats and exhibit puzzling adaptations to their environments, studying their ecology, behaviour and life histories provides novel insights into the emergence and maintenance of organismal diversity. Second, to uncover patterns and processes in evolution, it is both important and stimulating to combine different research methods, and detailed single-species studies with multi-species comparative approach. Taken together, these studies put shorebird science at the forefront of evolutionary biology research. To continue these investigations in future, we need larger scale studies and better collaborations between scientists and conservationists.

I. M. Tiunov¹, H. Lee², S. Lee²

**AN EXPERIENCE OF STUDYING MIGRATION OF BIRDS
WITH GPS-GSM TRACKERS IN THE PRIMORSKY KRAI,
THE FAR EASTERN RUSSIA**

И. М. Тиунов, Х. Ли, С. Ли

**ОПЫТ ИСПОЛЬЗОВАНИЯ GPS-GSM ПЕРЕДАТЧИКОВ
ПРИ ИЗУЧЕНИИ МИГРАЦИЙ ПТИЦ ПРИМОРСКОГО КРАЯ
(ДАЛЬНИЙ ВОСТОК РОССИИ)**

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Due to collaboration between FSC of Biodiversity (Russia) and KoEco (South Korea) we use GPS-GSM trackers for studying birds breeding in the Russian Far East. Since the beginning of 2016, 84 trackers were used.

In 2016 and 2017, adult Streaked Shearwaters (*Calonectris leucomelas*) were caught in the colony on Karamzina Island, Peter the Great Bay. Analysis of data revealed that their main feeding places were located along the 50-meter isobate, in areas with circular currents or at junctions of multidirectional currents, *i.e.* in places with high concentrations of zooplankton. Some individuals wintered near the Philippine Islands, much more northerly than the main wintering areas of birds breeding near the coast of Japan.

Trackers were also attached to adult Slaty-backed Gulls (*Larus schistisagus*) and young Grey Herons (*Ardea cinerea*) in 2017. Birds of the former species which breed in Peter the Great Bay spent winter near non-freezing areas along the sea coast, with no distant migration. For comparison, Slaty-backed Gulls with trackers from Magadan Region in the same year migrated for winter to the Japanese Islands. Grey Herons

wintered mainly in Thailand, on the Korean Peninsula, along the coast of China and in Hong Kong. They successfully migrated between wintering and breeding grounds during three consecutive years.

Young Great Egrets (*Castromerodis albus*), Mallards (*Anas platyrhynchos*) and Eastern Spot-billed Ducks (*A. poecilorhyncha*) were tracked in 2018 and 2019. Three Great Egrets migrated to South Korea in 2018, while two to North Korea and one to northern Honshu Island, Japan in 2019. Juvenile Mallards and Eastern Spot-billed Ducks wintered on the Japanese Islands in 2018, and some young birds migrated to South Korea in 2019.

Migration of three young Black Kites (*Milvus migrans*) was tracked in 2019. Despite heavy devices and short duration of their operation all birds successfully fledged and migrated for winter in China, thus providing unique information.

E. M. Zaynagutdinova, K. A. Karenina, A. N. Giljov

VISUAL LATERALIZATION IN THE VIGILANT BEHAVIOUR OF THE WHITE-FRONTED GOOSE

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ЗРИТЕЛЬНАЯ ЛАТЕРАЛИЗАЦИЯ В ПОВЕДЕНИИ БЕЛОЛОБЫХ ГУСЕЙ

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The dominance of one brain hemisphere in the implementation of any function can be manifested in animal behaviour in the form of one-sided preferences, for example, preference to inspect a stimulus with one eye. It was hypothesized that consistent one-sided behavioural bias would make prey species predictable for predators. Therefore, any source of disturbance in nature has to be monitored by both the left and right sensory organs. However, sensory lateralization in antipredator behaviour can occur in other ways, for example, in the lateral biases in the flight initiation distance, latency of the escape response, and intensity of alarm calls. Our study was focused on visual lateralization in the behaviour of social birds and its association with the distance to the source of disturbance and flock size.

Observations of the behaviour of White-fronted geese were made at spring migration stopover site in the Olonets Region, Karelia, Russia in April – May 2019. The distance to the flock, the size of the flock, the type of behaviour of the individuals, the wind direction, and the orientation of the individuals in relation to the source of disturbance (motor road) were recorded. In total, 88 feeding flocks with the dominance of White-fronted geese were observed.

There was no significant bias to monitor the road with the left or right eye, but flocks which used the right eye to observe the road and the flocks with birds oriented in different directions were at greater distances to the road than the flocks which used the left eye. The tendency to monitor the road with the right eye decreased with increasing flock size.

A trade-off between feeding, social and vigilant behaviour in flocks could explain the absence of significant bias to monitor the road with the left eye. The enhanced stress and fear at closer distances to the road may elicit in geese the enhanced use of the left eye for monitoring the source of the disturbance. The more consistent visual bias in larger groups may be a result of the interplay between behavioural lateralization and social pressures.

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