

BIRDS OF GORIČKO

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The bird richness of Goričko

The cultural landscape of Goričko is home to 110 species of birds. The largest lake in the area, Lake Ledava with its vast reedbeds, is, among others, inhabited by the little bittern (*Ixobrychus minutus*), the greylag goose (*Anser anser*), the great reed warbler (*Acrocephalus arundinaceus*), the reed warbler (*Acrocephalus scirpaceus*), Savi's warbler (*Locustella luscinioides*) and the grasshopper warbler (*Locustella naevia*). Rich waterfowl attracts Europe's largest eagle, the white-tailed eagle (*Haliaeetus albicilla*).

Wet meadows on the northern side of the lake are the most important breeding site of the sedge warbler (*Acrocephalus schoenobaenus*) in Goričko. The elusive black stork (*Ciconia nigra*), the honey buzzard (*Pernis apivorus*) and the black woodpecker (*Dryocopus martius*) nest in large deciduous and mixed forest complexes. The most important habitat of birds in Goričko is the mosaic cultural landscape with numerous extensively used meadows, high-trunk orchards, cereal fields and hedges. The rapid song of the quail (*Coturnix coturnix*) echoes at



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1 Mole crickets are the main prey of the exotic-looking hoopoe.
2 In 2020, the white stork nested in twelve villages.
3 The kingfisher (*Alcedo atthis*) inhabits the Velika Krka and Ledava rivers.

dusk. The red-backed shrike (*Lanius collurio*), the common stonechat (*Saxicola torquata*) and the yellowhammer (*Emberiza citrinella*) are typical inhabitants of the hedges. A few dozen pairs of hoopoe (*Upupa epops*) still nest in old high-trunk orchards. The redstart (*Phoenicurus phoenicurus*) and the wryneck (*Jynx torquilla*) occur locally. The white stork (*Ciconia ciconia*) remains the symbol of Goričko and the Pomurje region.

The last breeding of the European roller (*Coracias garrulus*) in Slovenia was in Goričko in 2014.



The big story of a small owl

Until the late 1990s, Goričko was a blank slate in Slovenian ornithology. The discovery of a large breeding population of the scops owl (*Otus scops*), estimated at 210–250 nesting pairs in 1997, was a remarkable surprise at the time. The species' population in Goričko is at its northern extent in Central Europe and it is the second largest in Slovenia. A lot of research and nature conservation attention has been devoted to the scops owl in recent years. Its diet in Goričko consists of large insects,

The newly installed 400 hunting poles and 3 km of newly planted hedges will improve the foraging conditions for the scops owl as well as other farmland birds.

Conservation agreements with the owners of 40 ha of meadows, 1 km of hedges and 50 habitat trees were signed to ensure conservation measures for the improvement of scops owl foraging and its breeding habitats.



The scops owl



The European mistletoe can even kill the host fruit tree so it needs to be removed.

such as the great green bush-cricket, mole crickets, field crickets, beetles, moths and spiders. The majority of its prey is caught in hedges, meadows and orchards, but its foraging success also depends on the availability of hunting perches, as the scops owl hunts from trees, shrubs or different poles. The availability of natural tree cavities or nest-boxes to be used as nesting sites is also an important feature. With that in mind, 950 fruit trees were rejuvenated by pruning and the European mistletoe was removed. Moreover, 20 ha of meadow orchards are being planted as part of the Gorička krajina project.



Hunting poles make foraging easier.

FACTS about the scops owl

Size: up to 20 cm

Weight: 60–120 g

Food: bush-crickets, mole crickets, field crickets, beetles, moths, spiders, small mammals

Estimated breeding population (DOPPS, BirdLife Slovenia):

● **in Slovenia:** 500–800 pairs in 2018

● **Natura 2000 site Goričko:** 75–80 pairs in 2019

Population trend, Goričko, 1997–2019: steep decline of 65%
GPS-telemetry based research revealed the astonishing migration routes of the scops owl from Goričko to Nigeria.



The woodlark – trapped by habitat choice

There are two main areas of concentrated woodlark (*Lullula arborea*) populations in Slovenia. The first is located in southwestern Slovenia, including the Karst region, the Vipava valley, the southern edge of Trnovski gozd and Nanos, and the Pivka region. The second area is Goričko. Both concentration areas have a warm climate with low precipitation and extensive dry meadows with sparse shrubs and trees. The woodlark inhabits southern hill slopes in the central and eastern part of Goričko.

a result of unintentional destruction due to farm work. Poor nesting success probably contributed significantly to the decline of the woodlark population in Goričko. The woodlark predominately forages on winter cereals, ploughed fields, fallow land and extensively used dry meadows. In order to improve the woodlark's foraging habitat, conservation agreements with the owners of 7 ha of extensively used dry meadows were signed and two dry meadows were purchased to restore a suitable meadow nesting habitat.



Woodlark habitat before and after restoration



Incubating woodlark female

In the past, it frequently nested on dry grassland ridges. Some years ago, its numbers began to decline rapidly as the intensification of agriculture caused the disappearance of extensive dry meadows and hedges, while the intensity of land use and the area of arable land increased significantly. In a survey of nesting sites conducted in 2018 and 2019, ornithologists came to an unexpected finding – instead of nesting on dry meadows, woodlarks preferred winter cereal fields. Unfortunately, the fields mostly act as an ecological trap, as they greatly increase the likelihood of nest failure as

FACTS about the woodlark

Size: up to 15 cm

Weight: 25–35 g

Food: seeds, beetles, flies and moths



Estimated breeding population (DOPPS, BirdLife Slovenia):

● **in Slovenia:** 2770–3750 pairs in 2020

● **Natura 2000 site Goričko:** 50–60 pairs in 2020

Population trend, Goričko, 1997–2020: steep decline of 75 %

As part of research conducted in the scope of the Gorička krajina project in 2019, ornithologists found the first nest in an extensive, slightly overgrown meadow in Goričko.

High-trunk orchards and hedges

High-trunk meadow orchards give the cultural landscape of Goričko its characteristic appearance. They are distinguished by great diversity, as several old varieties of apples and pears, cherries and plums can be found in a single orchard. Species that are already rare elsewhere, such as the service tree, also thrive in these orchards. The primary purpose, fruit production, is once again gaining importance, as the fruit is produced organically and has an intensive taste and aroma.

The poet's daffodil (*Narcissus poeticus* ssp. *radiiflorus*) is most abundant in meadow orchards in the western part of Goričko, while the natural cavities in trees are the nesting sites of the redstart, the hoopoe and the wryneck. Hedges are inhabited by insects, reptiles, birds and small mammals, providing a foraging habitat for a number of animals, such as birds and bats.

For the scops owl, both habitats have multiple functions. Orchards are both nesting and foraging sites. In a GPS telemetry study of scops owl habitat use, ornithologists



One of the species thriving in the orchards is the poet's daffodil.



The scops owl uses tree cavities as a nesting site.



The common spindle (*Euonymus europaeus*) is frequently found in hedges.

These traditional orchards additionally perform a number of important ecological functions, as they reduce wind strength by up to 60%, minimize the risk of landslides on slopes and act as an important habitat of plants and animals. Hedges have a very similar and important role within the landscape, but unfortunately, their number is declining. The intensification of agriculture and its subsidizing have contributed significantly to their disappearance over the past two decades. Both high-trunk orchards and hedges are crucial habitats of different species of plants and animals.

concluded that, on the one hand, the probability of scops owl presence increased with an increased area of hedges, meadows and high-trunk orchards. On the other hand, owls clearly avoided arable fields. They mostly foraged within several hundred meters from their nest, one female setting a record at almost 2 km.

The red-backed shrike impales its surplus prey on thorny shrubs, such as the blackthorn.













Natura 2000 site Goričko

Species that are actively protected within designated Natura 2000 sites are deemed to be of European importance because of their endangerment, rarity, vulnerability or endemism. From around 2000 species, 232 species are actively protected in Slovenia. The Natura 2000 site Goričko was designated for the protection of 38 animal and one plant species. The sole plant species is the rare Carniolan spike rush (*Eleocharis carniolica*). Among animals, birds are the largest group with 14 protected Natura 2000 species. Among other groups, butterflies and bats are also well represented, with six and five species, respectively. Meadows within the Natura 2000 site Goričko combined with the cross-border Ŕsreg area maintain the largest

continuous distribution of the scarce large blue (*Phengaris teleius*) and the dusky large blue (*P. nausithous*) in Central Europe. Among four beetle species, the stag beetle (*Lucanus cervus*) is the most abundant. The Balkan goldenring (*Cordulegaster heros*), which is endemic to Central and Southeastern Europe, inhabits small, intact streams and their upper courses. Natural streams are inhabited by the bitterling (*Rhodeus sericeus amarus*) and its inseparable partner, the thick shelled river mussel (*Unio crassus*). The Italian crested newt (*Triturus carnifex*) inhabits larger ponds without fish, while the yellow-bellied toad (*Bombina variegata*) inhabits forest puddles. Within the Natura 2000 site Goričko, we can find the most vital population of the European otter (*Lutra lutra*) in Slovenia.

Natura 2000 species in Slovenia

| 4 | 27 | 4 | 5 | 6 | 29 | 11 | 12 | 15 | 119 |
|---|---|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |  |  |
| crabs & reptiles | plants | damselflies & dragonfly | molluscs | amphibians | fishes | beetles | butterflies | mammals | birds |
| 0 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 14 |
| Natura 2000 site Goričko | | | | | | 2 | 3 | 3 | 2 |
| | | | | | | Project target species | | | |



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