The State of Birds in Switzerland
Report 2020

vogelwarte.ch

Headlines

40 % of Swiss breeding birds are threatened, among them many farmland species. Their population trend remains low, with still no signs of recovery. Not a single Grey Partridge was recorded in 2019. ➲ page 6

Wetlands are biodiversity hotspots, and home to many specialised bird species. But populations remain small and unable to make up for earlier losses. ➲ page 7

Populations of woodland birds are increasing. But there are exceptions: the Boreal Owl has declined steeply in the Jura. New methods will improve the monitoring of its population in the Alps as well. ➲ page 8

Some bird species fare well in landscapes radically changed by humans, among them Rook and Red Kite. Specific conservation measures can help the Eurasian Jackdaw. ➲ page 10, 22

The lakes and rivers of Switzerland attract some 500 000 wintering waterbirds. Due to climate change, more and more winter visitors, for example Mallards, winter further northeast. ➲ page 24

Numbers of mountain birds have dropped by 10 % in Europe since 2002 as a result of climate change and intensified land use. Declines are less marked in the Alps, underscoring Switzerland's responsibility in the protection of these birds. ➲ page 30

The second European Breeding Bird Atlas will be published at the end of the year. It reveals massive range changes for breeding birds. For example, the breeding range of the Reed Bunting in southern Europe has shrunk significantly since the 1980s. ➲ page 32

Contents

Editorial 4
Breeding birds 6
Migrants 16
Methodology 20
Winter visitors 22
International news 30
Acknowledgements 34
Authors and copyright 35

Further information
You can find further information online, including population trends for breeding birds and additional analyses: www.vogelwarte.ch/state

Bird monitoring in the Swiss cantons

The Red-backed Shrike, bird of the year 2020, is a fascinating creature. It is easily recognised in the field, and you don't have to be an ornithologist to understand its fate.

The steep decline in the population in the past decades is a result of intensified farming practices, especially the loss of hedges and bushes in farmland as well as the use of fertiliser and pesticides in meadows and field margins.

To reverse the trend for this insectivore, we need to improve habitat quality and food supply, that means planting hedges, reintroducing structural features in agricultural landscapes, and massively reducing the use of pesticides!

The slight increase in the national breeding bird index for the Red-backed Shrike is probably due to local measures to promote biodiversity as well as favourable weather conditions. Let's hope that it also reflects the new course in our national agricultural policy that aims to improve the situation. The steps taken include a so-called proof of ecological performance introduced in 1999, and biodiversity promotion areas introduced in 2012. Much remains to be done, however, and the recovery of the Red-backed Shrike has barely just begun. We need to see long-term positive reactions in a range of species before we can be confident that the new agricultural policy is truly taking effect.

But the example of the Red-backed Shrike highlights the fundamental importance of species monitoring; it is the only way to document population declines, but also the effect of measures taken in the field. It may sound easy. But in fact, biodiversity management is highly complex: we are faced with a diverse range of habitats, many species with different ecological requirements, a complicated web of interactions between ecosystems and all kinds of human influences. In addition, the issue of biodiversity involves diverging public interests. Conservation legislation is an important part of the solution, but it is not enough.

In the highly complex world we live in, the cantons and other levels of administration are extremely lucky to have at their disposal a resource like the common breeding bird monitoring scheme (Monitoring Häufige Brutvögel, MHB), where fieldwork has been conducted annually for 20 years. After all, as administrators, we are not only responsible for implementing legal provisions, but also have to check their effectiveness.

When monitoring data indicate that a population trend is stabilising or even reversing, such as currently appears to be the case for the Red-backed Shrike,

these are some first encouraging signs of success for everyone involved in implementing and overseeing our conservation goals.

The Canton of Vaud decided on a new action plan for biodiversity in 2019. In order to document the development of biological diversity at the cantonal level, we will mainly rely on resources such as MHB.

We are therefore extremely grateful for the valuable work you do year after year.

Dr Cornelis Neet
General director for the environment
in the Canton of Vaud

The common breeding bird monitoring scheme (MHB) shows that the population of the Red-backed Shrike has stabilised or may even be increasing slightly, following a decline that halved the population in the last 30 years.

Not all breeding bird species are sufficiently covered by MHB, for example the Grey-faced Woodpecker. But by combining monitoring data with other data, we can nevertheless effectively document its population trend.

A Grey Partridge family: images like this one may be a thing of the past in Switzerland.

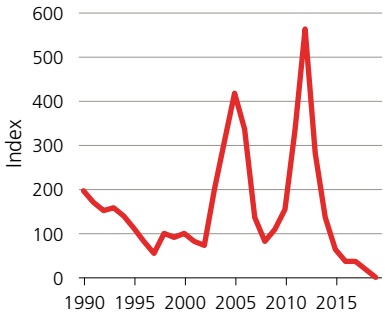
Grey Partridge: another farmland bird has disappeared

Unfortunately, it looks like 2019 will enter the ornithological history of Switzerland as the year the Grey Partridge disappeared. After two breeding pairs were recorded in the Canton of Geneva in 2018, there was not a single observation of wild birds in 2019. This marks a sad low point for what was once a common farmland bird. It is unlikely that the species will return.

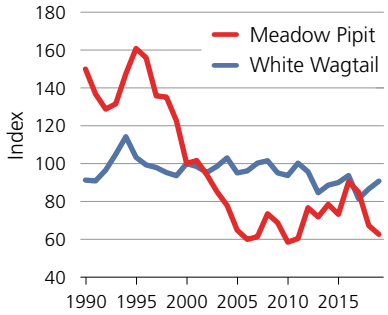
An iconic species disappears

In the mid-20th century, the Grey Partridge population in farmland areas in Switzerland was estimated at about 10 000 individuals. How large must the population have been in even earlier times, for example around 1900, when breeding pairs were found in Grisons at up to 1300 m asl? In the second half of the 20th century, the population rapidly collapsed. In 1991, the Federal Office for the Environment (FOEN) asked the Swiss Ornithological Institute to carry out a recovery project for the Grey Partridge. Restoring habitats was the first step and took place in the Klettgau and Champagne genevoise in close collaboration with farmers and cantonal authorities. Large areas were ecologically improved with wildflower plots, low hedges and meadows managed at low intensity. Starting in 1998, the first Grey Partridges were reintroduced in the Klettgau, resulting in a population of 15–20 pairs from 2002 to 2004. After the population collapsed, mainly due to adverse weather conditions, reintroductions in the Klettgau were stopped in 2008. The species was last observed there in 2016.

Model calculations indicated that larger releases were necessary to support this short-lived species. From 2008 to 2012, an average of 500 Grey Partridges were released in the Champagne genevoise every autumn. Consequently, the breeding population increased to 60 pairs in 2012. But it was unable to sustain itself. The reasons for the failure are thought to be the insufficient size of the project areas («only» a few square kilometres) and high predator density. As a short-lived species, the Grey Partridge needs suitable habitats in a catchment area far larger than the size of the project areas. On the upside, other species such as Eurasian Skylark, Common Whitethroat and Corn Bunting benefited greatly from the habitat improvements.



The breeding bird index for the Grey Partridge from 1990 onwards: the peaks in the mid-2000s and early 2010s reflect the releases in the Klettgau SH and the Champagne genevoise.



Meadow Pipit and White Wagtail: trends are negative, to a greater or lesser extent, in these two species reliant on farmland areas.

In bad company

The Grey Partridge joins a list of other farmland birds that were unable to sustain their populations in Switzerland. Lesser Grey Shrike, Crested Lark, Great Grey Shrike, Woodchat Shrike, Ortolan Bunting and now the Grey Partridge are victims of the impoverishment of farmland and food sources. We must redouble our efforts as a society if we want farmland birds such as Corn Bunting, Whinchat, Northern Lapwing and others to continue to exist in Switzerland.

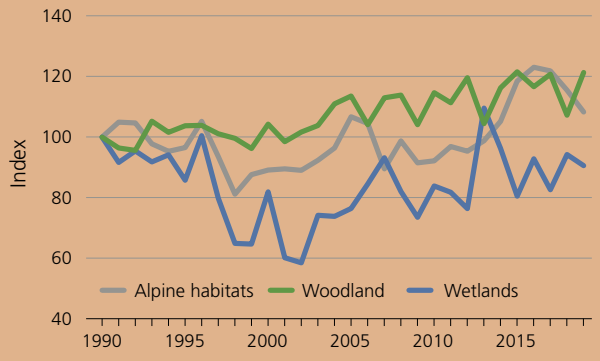
A look across the border only confirms that there is reason to fear the worst for the Grey Partridge. In Germany, its numbers declined by 90 % from 1992 to 2016. Similarly, populations have collapsed throughout Europe.

Further information
www.vogelwarte.ch/state/breeding

The situation of breeding birds in 2019

2019 was the fifth warmest year since records began in 1864. Winter was average in lowland areas and much too warm in Ticino. The coldest January for more than 30 years was recorded in the mountains above 1000 m. The eastern ranges of the Alps in particular had a lot of snow. Snowfall was at record highs again in April, and snow cover in the Alps stayed at winter levels due to unusually cool weather in May. The late snowmelt caused the decline recorded in many Alpine bird species in 2018 to continue in 2019.

The month of May was exceptionally wet and cool in lowland areas and the Jura as well, so that finding time to conduct surveys besides their regular job became a logistical challenge for many of our volunteers. The summer season was the third warmest since records began. Many birds faced difficult breeding conditions in particular because of the wet and cold weather in May. As in 2018, late breeders benefited from the warm and dry weather that followed.



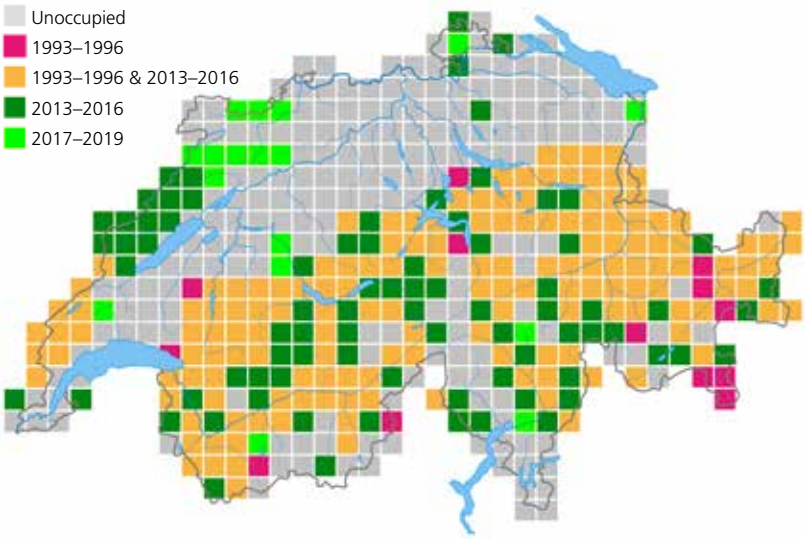
In 2019 the populations of many woodland birds (green) recovered from the previous year's setback caused by the cold and snowy winter 2017/18. Alpine species (grey) declined because of the late snowmelt, as in 2018. Wetland species (blue) showed an average trend in 2019.

Locally, the Boreal Owl population is subject to large annual fluctuations owing to changing food supplies. Forestry interventions can affect Boreal Owl populations when old stands or trees with cavities are felled.

Owls: better monitoring thanks to new technology

Because owls are nocturnal, monitoring their populations requires special efforts. But it is all the more important because the population trends of several species are currently very dynamic in Switzerland.

As is often the case, the biggest challenges arise in the monitoring of moderately common species that breed in remote areas. In Switzerland, such species include the Eurasian Pygmy-owl, the Boreal Owl and to a lesser extent the Eurasian Eagle-owl.



The range expansion of the Eurasian Pygmy-owl between the 1993–1996 and 2013–2016 breeding bird atlases has continued.

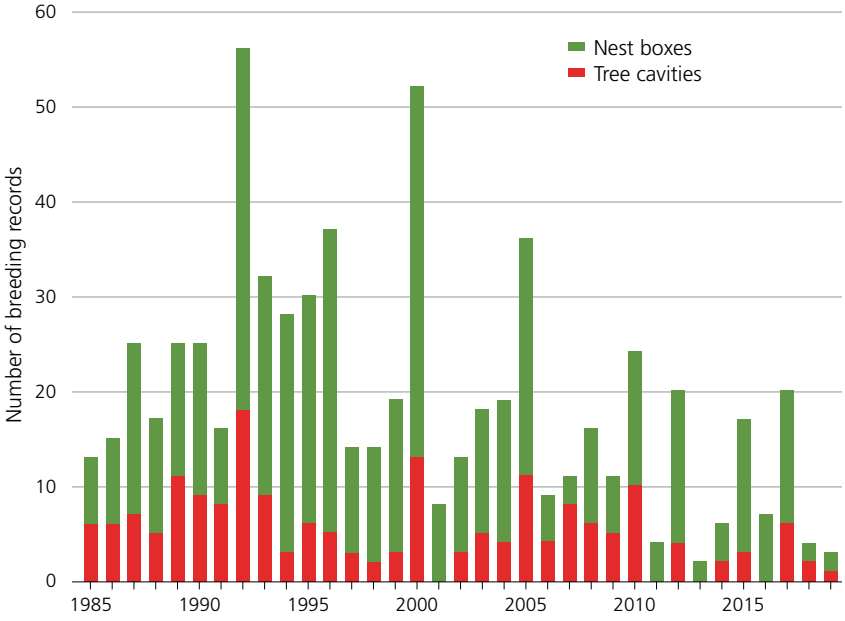
Two of these nocturnal raptors showed a substantial range expansion in the period between the two breeding bird atlases. In the Jura, the Pygmy-owl has reached the Canton of Neuchâtel and continues to spread northeastwards, occasionally breeding at lower altitude in northern Switzerland. Populations of the Eagle-owl, on the other hand, have increased in density in some regions of the Jura and the Alps as well as reoccupying some parts of the Central Plateau.

Decline of Boreal Owl populations in the Jura

The differences in monitoring quality may be even larger in the case of the Boreal Owl than in the other two species, because its populations have been

closely monitored for a long time in the Jura, but only poorly in the Alps. Assessing the situation of the Boreal Owl for the whole of Switzerland is further complicated by the fact that trends in the two regions appear to diverge: while declines are evident in the Jura, the situation in the Alps seems to be more or less stable.

These findings call for better population monitoring across the board. On the one hand, we hope to benefit from bioacoustic tools; on the other hand, we want to try drawing as much information as possible from the data collected by volunteer field ornithologists. Several studies on the use of bioacoustics in owl monitoring are in progress: a Bachelor thesis on Boreal Owl and Eurasian Pygmy-owl in the Jura and the Pre-Alps, a long-term Eagle-owl monitoring project in Ticino and Grisons (focused on the Engadine), and a pilot project on the acoustic detection of all owl species in the Locarnese region in Ticino led by the Museo cantonale di storia naturale di Lugano.

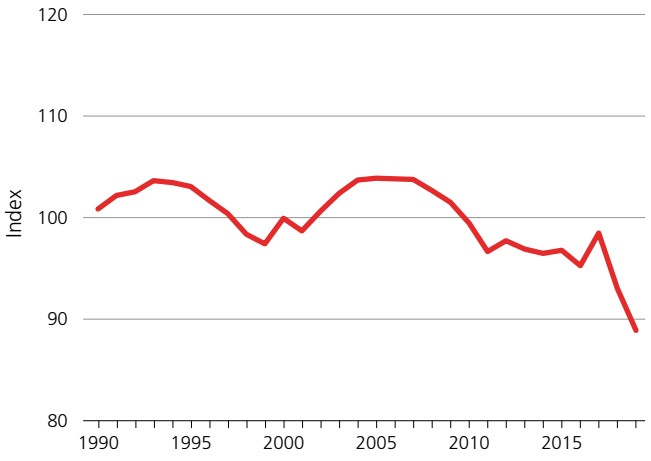


The population trend of the Boreal Owl in the north of the Canton of Vaud, monitored since 1985 by Pierre-Alain Ravussin and his team, illustrates the species' negative trend in the whole of the Jura. 2011, 2013, 2018 and 2019 were the four weakest years since the study began. Red = breeding in tree cavities, green = breeding in nest boxes. Source: Groupe ornithologique de Baulmes et environs.

Eurasian Eagle-owl: easy to miss despite its size

Of all three owls mentioned here, the Eurasian Eagle-owl is the best-monitored species; but even here, our knowledge is incomplete. Monitoring Eagle-owls involves several challenges: not all territories (not even all known territories) are visited every year, occupied territories can be missed during a survey visit, and a territory of a pair can be erroneously classified as occupied by an individual bird only.

Recently we have been able to apply new methods to correct for these influences. We place automatic recording devices (acoustic loggers) in known or suspected territories and analyse the data from ornitho using so-called multistate site occupancy models. Between 2007 and 2016, 19 % of 274 «paper territories» were unoccupied, while 28 % were occupied by individuals and 54 % by pairs, resulting in a total of about 220 occupied territories. In most regions, trends were stable or increasing, which is probably due to immigration from Germany and France. Per visit, an individual's territory was missed in 71 % of the cases; of the territories occupied by pairs, 20 % went undetected and 41 % were considered territories of single birds; this means that the presence of a pair was recognised in only 39 % of all cases. The results underscore the necessity to combine careful fieldwork by our volunteers with modern acoustic loggers and sophisticated methods of analysis in the monitoring of these secretive and nocturnal species.



The countrywide population trend of the Boreal Owl appears to be slightly negative in the long term, but the data used may incompletely represent the situation.

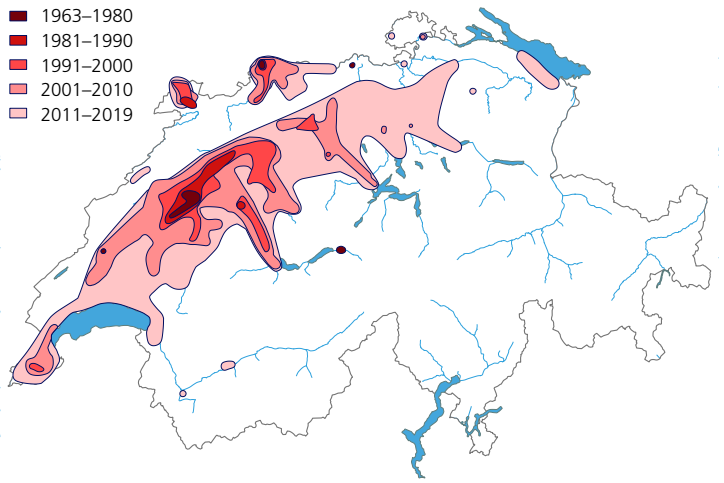
Rooks continue to expand their range

Rooks spread widely in France in the 1950s and probably colonised Switzerland from there. Breeding was first recorded in the Orbe Plain VD in 1963. The Grosses Moos was occupied from 1964, and in 1965 the first pairs arrived in Basel. The population remained small until the late 1970s, not exceeding 100 pairs until 1983.

After that, the Rook slowly spread. It reached Grenchen SO in 1987, Bern and the Ajoie JU in 1988, and Geneva in 1997. Thun BE and Lucerne were colonised in 1998. In the same year, numbers exceeded 1000 pairs for the first time. The population subsequently increased rapidly, reaching 4545 pairs in 2010. The Canton of Zurich (Thalwil) was colonised in 2007. The first colonies in Schaffhausen and the Valais (Sion) were found in 2010 and 2014, respectively. The species eventually reached Lake Constance, settling in Romanshorn TG in 2014 and in Rorschach SG in 2016. The population continued to rise steeply, achieving its current peak of 8000 pairs in 2019.

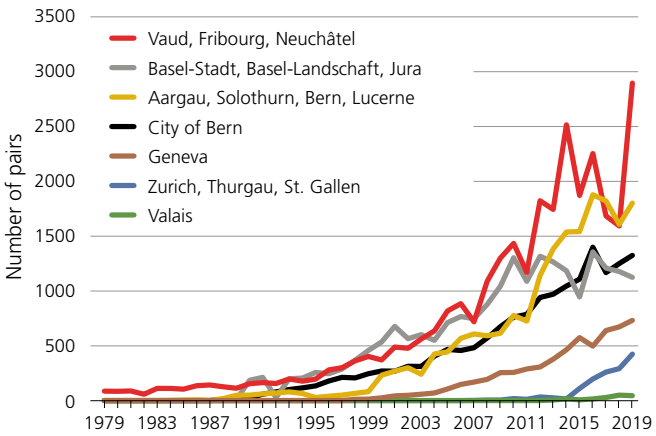
The strong range expansion and growth in numbers in Switzerland was probably, at least in the beginning, a result of the Birds Directive adopted by the European Union in 1979, which placed all songbirds under protection. In Germany the Rook population continues to rise slightly, while the French population has declined by almost 40 % in the last 20 years due to severe persecution. After a marked increase until the end of the 20th century, the Rook's overall European trend has since shown a slight decline. Besides direct persecution, intensified farming practices in many parts of Europe are also causing problems for the species. It suffers, for example, from the disappearance of low-intensity pastures, the massive use of pesticides, and the chemical treatment of seeds.

Rooks are being persecuted again in Switzerland, too; since 2012, Rooks can be hunted outside of the breeding season. Also, breeding colonies that were suddenly abandoned (e.g. in the Orbe Plain) may indicate an increase in predation pressure (for example by the growing Eagle-owl population). Both factors could lead to an increase in breeding colonies in residential areas, causing conflicts with residents. Such conflicts result in frequent and intentional disturbance at breeding and roosting sites. Hopefully, it will be possible to improve the degree of tolerance towards Rooks.



The change in the Rook's range shows how quickly the species has spread in Switzerland since 2001.

As early as late January, the Rooks visit last year's breeding colonies in the mornings, and March sees a burst in nesting and breeding activity.



Population trends of the Rook in seven regions of Switzerland (1979–2019).

Jackdaw: a small corvid regains momentum

The breeding population of Eurasian Jackdaws has risen by 40 % since the 1990s. This is the result of species recovery projects as well as bird-friendly renovations and other measures to encourage nesting on buildings. Like other former cliff-nesting birds, Jackdaws have found a secondary habitat in settlements with historical buildings.

The challenge of raising young in large settlements

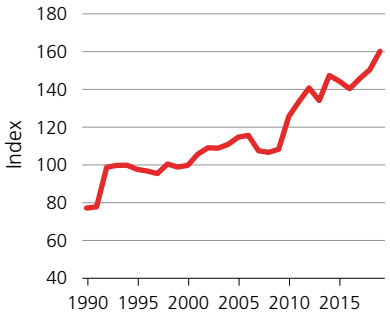
The gregarious Jackdaw breeds in colonies and feeds on insects and other invertebrates. It forages near the nesting site in short-grass meadows and pastures with an abundant supply of insects. Because human settlements are expanding and building density is rising, suitable foraging areas close to the traditional nesting sites are becoming increasingly rare. With devastating consequences: Jackdaws need to cover larger and larger distances to find food for nestlings, or resort to kitchen scraps such as bread, pasta and rice. The diminished amount or quality of nestling food significantly reduces breeding success. Therefore, installing nest boxes for Jackdaws is particularly effective in areas of low-intensity agriculture, where the birds find sufficient natural and protein-rich food for their young.

Fifteen years ago in the Bernese Seeland, Jackdaws occupied nest boxes installed on power pylons for Common Kestrels, in proximity to abundant food sources. The occupation of the site is probably related to the presence of pastures, where ground-living insects are easy to find in patches of short grass. For several years now, nest boxes for Kestrels and Barn-owls in the plain near Oensingen SO have been occupied by Jackdaws as well. Probable reasons are a shortage of nest sites in nearby colonies, and the trend towards breeding sites near prime food sources.

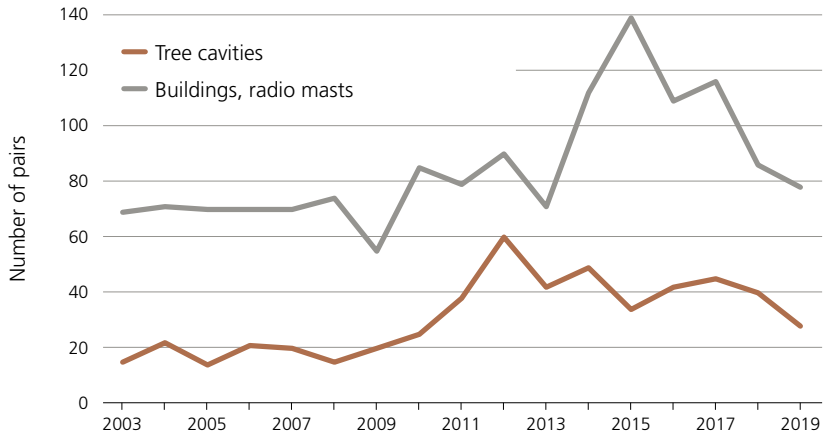
Buildings or trees: the trends differ

Thanks to the «Avimonitoring» programme in the Canton of Zurich, the population trend can be broken down by type of nest site since 2003. Overall, the population has increased somewhat, due mainly to birds nesting in buildings, towers and radio masts. However, building nesters in particular have seen a sharp decline in recent years. Since 2015, a trend towards smaller colonies has been observed. Tree-nesting Jackdaws have also recently seen some declines.

Despite the rising national trend for the Jackdaw, the data from Zurich call for continued vigilance.



Jackdaws can nest in buildings, but they rely on areas with short vegetation for foraging, e.g. pastures, meadows and fields.

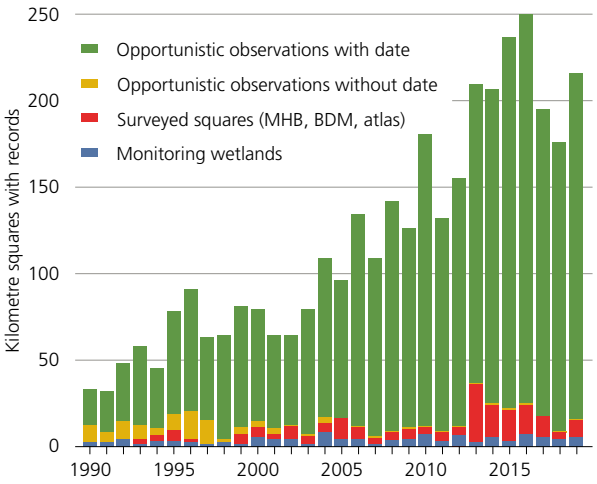


Jackdaw population trend in the Canton of Zurich between 2003 and 2019, by type of nest site. Source: Avimonitoring Canton of Zurich, BirdLife Zurich.

The national trend of the Eurasian Jackdaw has steadily increased between 1990 and 2019. It is based on annual counts at about 160 sites.

More accurate trends thanks to new calculation methods

Breeding bird indices are a pivotal instrument to assess a species' situation, and together they form the basis for the Swiss Bird Index SBI®. For common species and wetland birds, the common breeding bird monitoring scheme (MHB) and the wetland monitoring scheme (MF) allow us to form an accurate assessment of trends. Trends in rare breeding birds (e.g. Red-crested Pochard) and colonial species (e.g. Common Tern) are also well documented thanks to the good coverage of breeding sites in the wetland monitoring scheme (MF), observations recorded on ornitho, and, in some cases, species-specific monitoring projects. Species that are quite scarce and difficult to detect, on the other hand, fall through the net. Among them, for example, grouse, woodpeckers and rare songbirds.



The chart shows how the dataset used to calculate trends for the Common Whitethroat developed over time. Apart from the considerable increase in the number of records, it also highlights the large amount of undated records in the 1990s. Thanks to the newly developed methods, these records and quantitative data from territory mapping surveys can be included in the trend estimates.

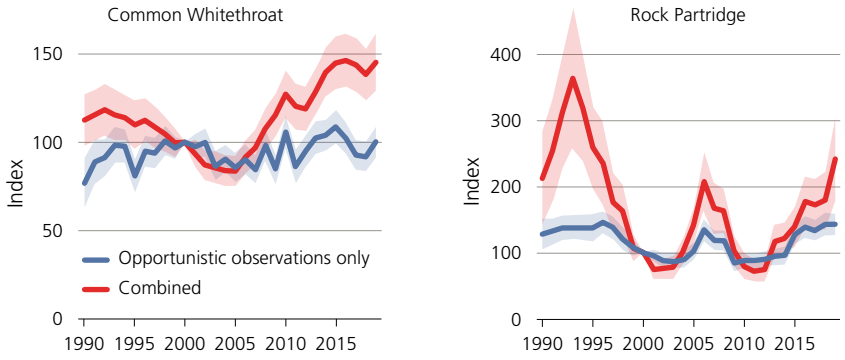
Valuable combination of different data sources

Until recently, we calculated the population trends of these species using a site occupancy model based on opportunistic observations (i.e. data from ornitho). The model accounts for the fact that a species may be present but not detected, and that observer effort has increased over the years. However, MHB and MF data are not included in this model. New methods developed at the Swiss Ornithological Institute now allow us to use data from different sources to calculate trends. Besides opportunistic observations, we can now also include quantitative data from MHB, MF, «Biodiversity Monitoring Switzerland» (BDM) and the breeding bird atlases in trend estimates.

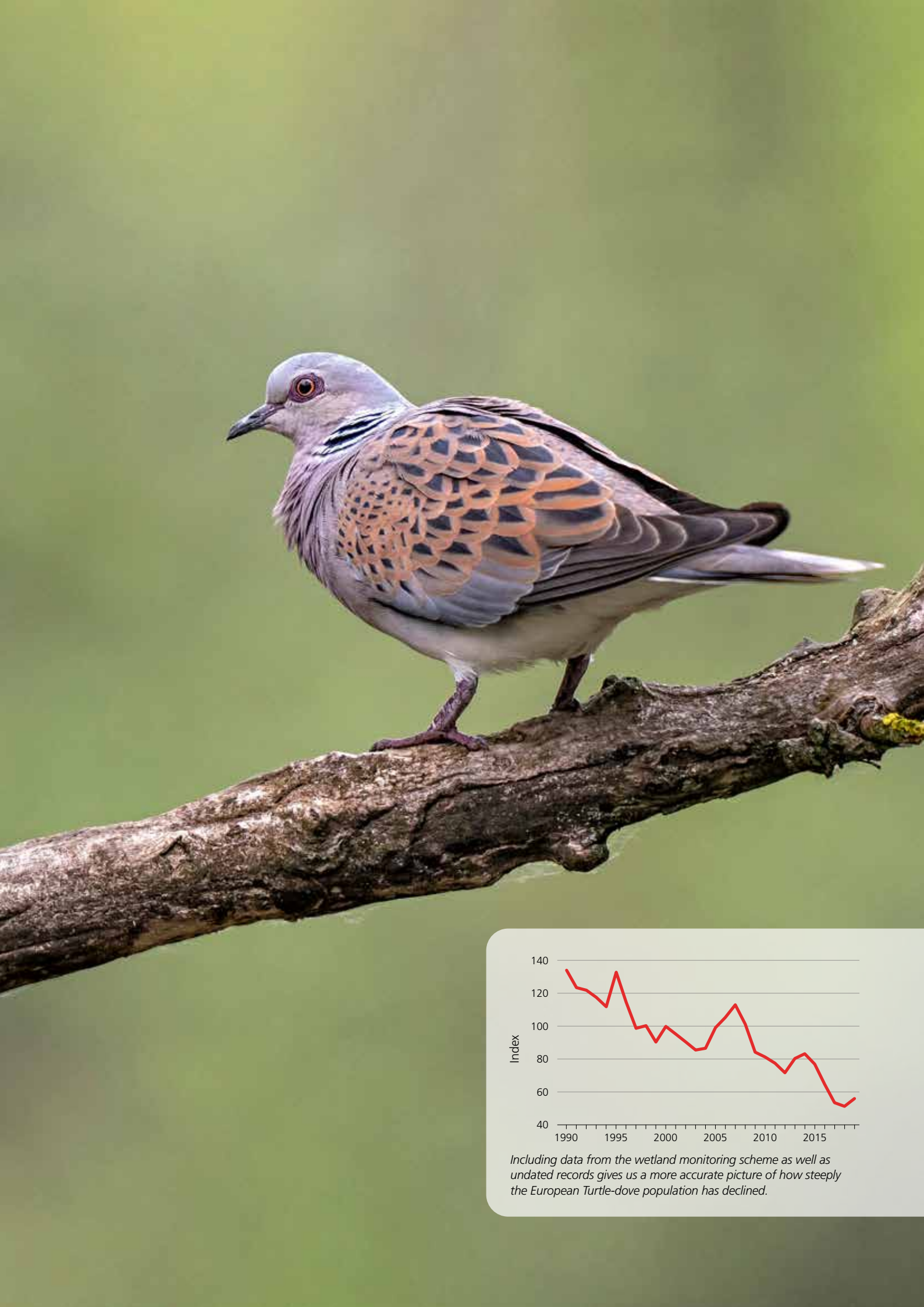
This is valuable for two reasons: in the monitoring projects, sample areas are covered regularly and with about the same observer effort, which is crucial for the assessment of long-term trends. Furthermore, we can incorporate changes in density per kilometre square – a piece of information not available from opportunistic observations. Finally, we can now include data from recording cards that have no exact date but were compiled for an entire month or season. These cards were commonly used to record observations in the 1990s. Failing to include these data would result in an incomplete picture of the situation at that time.

Differences in the 1990s especially

The trends calculated based on the new method differ quite substantially from the trends based only on opportunistic observations, especially for the 1990s. An in-depth analysis has shown that the new method provides more accurate trends in many cases.



The breeding bird index calculated by combining the various data sources (red) compared to the index based solely on opportunistic observations (blue) for Common Whitethroat and Rock Partridge. The shaded area indicates the uncertainty of the estimate (standard error). In the case of the Common Whitethroat, the divergence in the 1990s is probably due to the fact that undated records were only included in the red curve. Weather-related fluctuations in the Rock Partridge population are greatly underestimated if quantitative data from territory mapping surveys are not included.



Including data from the wetland monitoring scheme as well as undated records gives us a more accurate picture of how steeply the European Turtle-dove population has declined.

Regular breeders in Switzerland

Population trends for 174 regular breeding birds[1] analysed in Switzerland for the entire survey period (generally 1990–2019) and for the last ten years (2010–2019). Trends shown as +++ signify an increase by more than a factor of five, while ++ marks an increase between a factor of two and five and + an increase by less than a factor of two. The symbol • means that no statistically significant change was detected. This is the case for populations that are actually stable but also for those that fluctuate heavily. Trends shown as – describe a decline by less than a factor of two, –– marks a decline between a factor of two and five and ––– a decline by more than a factor of five. Population sizes refer to 2013–2016: ♂ = males, bp = breeding pairs.

Species	Trend 1990–2019	Trend 2010–2019	Population 2013–2016
Common Quail	•	•	500–2000 ♂
Rock Partridge	•	++	2500–4500 bp
Grey Partridge	•	–––	5–10 bp
Hazel Grouse	•	•	3000–5500 bp
Rock Ptarmigan	–	•	12000–18000 bp
Western Capercaillie	–	+	380–480 ♂
Black Grouse	•	•	12000–16000 ♂
Common Eider	•	–––	1–5 bp
Goosander	++	+	600–800 bp
Red-crested Pochard	+++	•	210–300 bp
Common Pochard	•	•	6–9 bp
Tufted Duck	+	•	160–280 bp
Gadwall	++	•	5–10 bp
Mallard	+	•	20000–30000 bp
Little Grebe	•	+	800–1300 bp
Great Crested Grebe	–	•	3500–5000 bp
Black-necked Grebe	•	•	3–4 bp
Stock Dove	+	+	2000–4000 bp
Common Woodpigeon	++	+	130000–150000 bp
European Turtle-dove	––	–	150–400 bp
Eurasian Collared-dove	+	•	15000–25000 bp
European Nightjar	–	–	40–50 bp
Alpine Swift	++	•	1800–2300 bp
Pallid Swift	++	•	29–36 bp
Common Swift[2]		•	40000–60000 bp
Common Cuckoo	•	•	15000–25000 ♂
Western Water Rail	•	+	500–800 bp
Corncrake	++	•	15–40 ♂
Spotted Crake	•	•	10–20 bp
Common Moorhen	+	+	1000–2000 bp
Common Coot	+	•	5000–8000 bp
White Stork	++	++	370–460 bp
Common Little Bittern	•	•	90–120 bp
Grey Heron	+	+	1600–1800 bp
Purple Heron	+++	+++	6–17 bp
Great Cormorant	+++	++	1200–2100 bp
Little Ringed Plover	•	•	90–120 bp
Northern Lapwing	–	+	140–180 bp
Eurasian Curlew	–––	•	0 bp
Eurasian Woodcock	–	•	1000–4000 ♂
Common Snipe	–––	•	0–1 bp
Common Sandpiper	•	+	70–90 bp
Black-headed Gull	––	•	560–800 bp
Mediterranean Gull	•	•	0–5 bp
Mew Gull	•	•	0–3 bp
Yellow-legged Gull	+++	•	1240–1430 bp

Species	Trend 1990–2019	Trend 2010–2019	Population 2013–2016
Common Tern	++	•	580–760 bp
Common Barn-owl	–	+	200–1000 bp
Eurasian Pygmy-owl	•	•	800–2000 bp
Little Owl	++	+	115–150 bp
Boreal Owl	–	•	1000–3000 bp
Eurasian Scops-owl	++	•	30–40 bp
Northern Long-eared Owl[3]	+	•	2000–3000 bp
Tawny Owl	•	•	6000–8000 bp
Eurasian Eagle-owl	•	•	200–230 bp
European Honey-buzzard	+	•	500–1000 bp
Bearded Vulture	+++	+++	9–15 bp
Golden Eagle	+	•	350–360 bp
Eurasian Sparrowhawk	+	•	3500–6000 bp
Northern Goshawk	+	•	1300–1700 bp
Red Kite	+++	+	2800–3500 bp
Black Kite[2]		•	2000–3000 bp
Eurasian Buzzard	+	•	15000–20000 bp
Common Hoopoe	+	•	180–260 bp
European Bee-eater	+++	++	53–72 bp
Common Kingfisher	+	•	400–500 bp
Eurasian Wryneck	•	+	1000–2500 bp
Grey-faced Woodpecker[3]	––	–	300–700 bp
Eurasian Green Woodpecker	+	•	10000–17000 bp
Black Woodpecker	++	+	6000–9000 bp
Three-toed Woodpecker	•	+	1000–2500 bp
Middle Spotted Woodpecker	++	+	1700–2100 bp
Lesser Spotted Woodpecker	+	•	1500–3000 bp
Great Spotted Woodpecker	++	•	70000–90000 bp
Common Kestrel	++	+	5000–7500 bp
Eurasian Hobby	+	•	500–1000 bp
Peregrine Falcon	++	•	260–320 bp
Eurasian Golden Oriole	+	•	3000–4500 bp
Red-backed Shrike	–	•	10000–15000 bp
Woodchat Shrike	–––	•	0 bp
Red-billed Chough	++	•	70–80 bp
Yellow-billed Chough[2]		•	11000–21000 bp
Eurasian Jay	+	•	60000–75000 bp
Eurasian Magpie	++	•	35000–40000 bp
Northern Nutcracker	•	•	20000–25000 bp
Eurasian Jackdaw	+	•	1250–1500 bp
Rook	+++	++	5800–7300 bp
Common Raven	+	•	2000–3000 bp
Carrion Crow	++	•	80000–120000 bp
Coal Tit[2]		•	400000–600000 bp
Crested Tit	+	–	90000–110000 bp
Marsh Tit	+	–	70000–100000 bp

Species	Trend 1990–2019	Trend 2010–2019	Population 2013–2016
Alpine or Willow Tit[2]		•	70 000–95 000 bp
Eurasian Blue Tit	++	•	200 000–300 000 bp
Great Tit	+	•	400 000–550 000 bp
Woodlark	•	+	250–300 bp
Eurasian Skylark	–	•	25 000–30 000 bp
Bearded Reedling	+	++	80–110 bp
Melodious Warbler	+	•	300–350 bp
Icterine Warbler	––	•	100–150 bp
Marsh Warbler	•	•	3000–6000 bp
Common Reed-warbler	•	•	9000–11 000 bp
Great Reed-warbler	+	++	270–320 bp
Savi's Warbler	+	•	280–310 bp
Com. Grasshopper-warbler	+	•	150–250 bp
Northern House Martin	–	•	70 000–90 000 bp
Barn Swallow	•	+	70 000–90 000 bp
Eurasian Crag Martin	+	+	7000–9000 bp
Collared Sand Martin	–	+	2300–3000 bp
Western Bonelli's Warbler	++	•	40 000–60 000 bp
Wood Warbler	––	•	5000–7500 bp
Willow Warbler	––	–	4000–5000 bp
Common Chiffchaff	+	•	250 000–300 000 bp
Long-tailed Tit	+	•	20 000–35 000 bp
Eurasian Blackcap	+	•	700 000–800 000 bp
Garden Warbler	–	–	35 000–50 000 bp
Barred Warbler	–––	•	0–5 bp
Lesser Whitethroat	•	•	17 000–23 000 bp
Common Whitethroat	+	•	1800–2500 bp
Short-toed Treecreeper	+	•	45 000–55 000 bp
Eurasian Treecreeper	++	•	75 000–100 000 bp
Eurasian Nuthatch	–	–	110 000–170 000 bp
Wallcreeper	–	•	1000–2500 bp
Northern Wren	+	•	400 000–550 000 bp
White-throated Dipper	+	•	6000–8000 bp
Common Starling	•	+	120 000–140 000 bp
Mistle Thrush	+	•	130 000–150 000 bp
Song Thrush	+	+	300 000–350 000 bp
Eurasian Blackbird	+	•	500 000–700 000 bp
Fieldfare	–	•	40 000–45 000 bp
Ring Ouzel	–	•	50 000–75 000 bp
Spotted Flycatcher	–	•	35 000–55 000 bp
European Robin	+	•	450 000–650 000 bp

Species	Trend 1990–2019	Trend 2010–2019	Population 2013–2016
Bluethroat	++	•	5–12 bp
Common Nightingale	+	•	1700–2200 bp
European Pied Flycatcher[2]		•	17 000–22 000 bp
Black Redstart	+	•	300 000–400 000 bp
Common Redstart	•	•	12 000–18 000 bp
Rufous-tailed Rock-thrush	–	+	2000–3000 bp
Blue Rock-thrush	•	•	15–25 bp
Whinchat	––	•	5000–7000 bp
Common Stonechat	+	+	1500–2000 bp
Northern Wheatear	+	•	40 000–60 000 bp
Goldcrest	+	•	200 000–400 000 bp
Common Firecrest	•	++	250 000–400 000 bp
Alpine Accentor	–	•	25 000–40 000 bp
Dunnock	+	•	200 000–250 000 bp
House Sparrow	+	•	450 000–550 000 bp
Eurasian Tree Sparrow	+	•	80 000–95 000 bp
White-winged Snowfinch	–	•	6000–9000 bp
Tree Pipit	–	•	50 000–70 000 bp
Meadow Pipit	––	•	500–800 bp
Water Pipit	•	+	150 000–200 000 bp
Western Yellow Wagtail	+	•	300–340 bp
Grey Wagtail	•	•	17 000–20 000 bp
White Wagtail	–	•	90 000–110 000 bp
Common Chaffinch	+	•	900 000–1 100 000 bp
Hawfinch	•	•	13 000–17 000 bp
Common Rosefinch	•	•	50–70 bp
Eurasian Bullfinch	–	•	40 000–75 000 bp
European Greenfinch	–	–	90 000–120 000 bp
Common Linnet	•	+	25 000–30 000 bp
Redpoll	•	•	15 000–20 000 bp
Red Crossbill	++	•	25 000–35 000 bp
European Goldfinch	–	+	50 000–70 000 bp
Citril Finch	–	•	10 000–20 000 bp
European Serin	•	•	35 000–45 000 bp
Eurasian Siskin[2]		•	10 000–16 000 bp
Corn Bunting	–	––	80–110 bp
Rock Bunting	+	•	7000–10 000 bp
Ortolan Bunting	–––	–––	1–5 bp
Cirl Bunting	+	+	1000–1500 bp
Yellowhammer	•	–	65 000–75 000 bp
Reed Bunting	–	•	1700–3000 bp

[1] This includes species categorised as regular breeders at least once since 1990 (i.e. the species has bred in Switzerland in at least nine of ten consecutive years). 177 species belong in this category, not counting introduced species (i.e. Mute Swan, Ruddy Shelduck, Common Pheasant). No assessment is possible for White-backed Woodpecker, Collared Flycatcher and Italian Sparrow due to lack of data.
[2] Survey period 1999–2019
[3] Survey period 1996–2019

Further information
www.vogelwarte.ch/state/breeding

Irregular and exceptional breeders

Since 2000, a further 28 species have bred in Switzerland irregularly or exceptionally. Their breeding occurrences are documented as consistently as possible (table available online in the section «Further analyses»).

Reference

Müller, C. (2020): Seltene und bemerkenswerte Brutvögel 2019 in der Schweiz. Ornithol. Beob. 117 (in press).

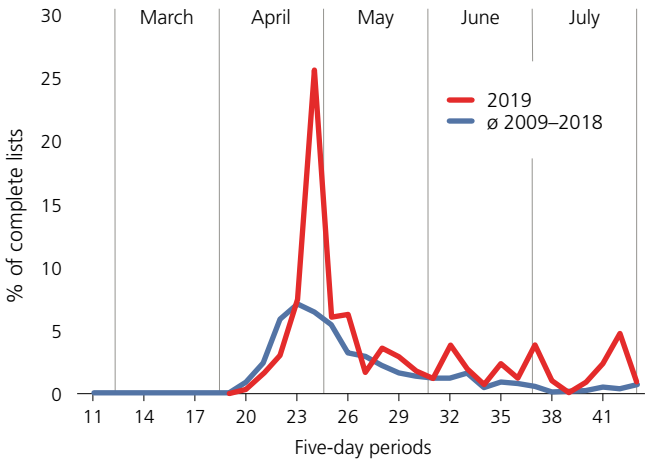
In late April the Collared Flycatcher appeared in surprisingly large numbers, especially in Ticino and the Rhone Valley.

Spring and autumn invasions

The Glossy Ibis population is growing in southern Europe, especially in Spain and in the Camargue. Since 2010, it has appeared in Switzerland annually in steadily rising numbers. In spring 2019, influxes occurred between 19 April and 17 May with observations in 12 places; the largest group, consisting of 11 birds, was seen in the Fanel nature reserve BE. It was the greatest influx of this species recorded in Switzerland to date.

Spectacular appearance of the Collared Flycatcher

One of the most impressive events of 2019 was the big wave of returning Collared Flycatchers, especially in Ticino and the Rhone Valley. From 23 to 30 April, the species was observed at about 50 sites between Locarno TI and Giubiasco TI alone. The invasion peaked on 25 April, with 15 birds in the Maggia Delta TI and at least 28 in the Magadino Plain TI. Collared Flycatchers have never been seen in such large numbers before. Sightings were less numerous in the rest of Switzerland and occurred mainly on the last three days of April. A constant, strong southeasterly wind over the central Mediterranean favoured the influx, which was registered in other countries as well, leading to an invasion of unprecedented magnitude in Catalonia. The species is extremely scarce in Spain, and only 79 records had existed until the



The Wood Warbler normally stops over in small numbers in Switzerland. But in late April 2019 it was the most abundant warbler in some areas. The reasons lie in a constant, strong southeasterly wind and a weather-related blockage that prevented the birds from continuing their migration.

Unlike the previous year, there were many sightings of Collared Flycatchers in late April 2019 on the Mediterranean coasts of Catalonia and southern France.

end of 2017, most of them from the Balearic Islands. Between 19 and 30 April, 120 Collared Flycatchers were reported in Catalonia alone. There were many sightings on the south coast of France as well.

The notable spike in migrating Wood Warblers in late April suggests that these birds benefited from the same airstream. The number of Wood Warblers reached a peak of 60 birds in the Maggia Delta TI on 25 April, and 50 individuals were recorded near Cressier NE on 28 April. In Catalonia, this migrant, relatively uncommon in Spain, was also seen in much larger numbers than in previous years.

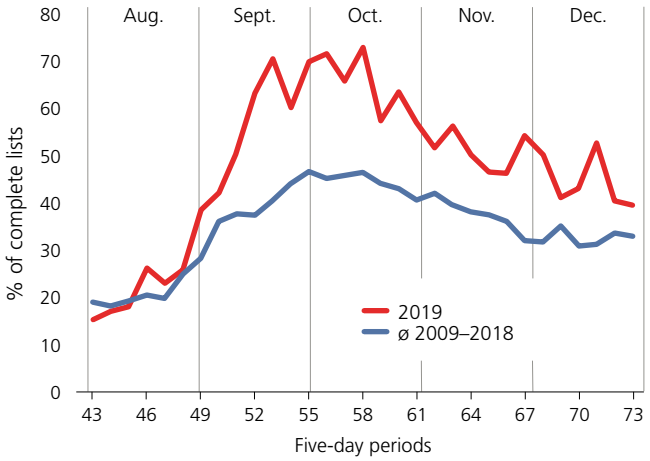
Woodpigeons in their thousands

In autumn 2019, the passage of most diurnal migrants was phenomenal. In October, especially in a fine-weather period mid-month, daily totals reached record highs for several species. For the first time, the Common Woodpigeon even crossed the threshold of 100 000 birds per day. The old 2018 record of 74 319 birds was surpassed on 13 October 2019, when 103 700 Woodpigeons were recorded near Liestal BL. On the same day, 113 121 individuals passed through Wolschwiller in neighbouring France; as many as 177 753 birds had been counted there on 11 October. Numbers north of the Swiss border were of a similar magnitude: according to reports on ornitho.de, the passage of Woodpigeons in Germany was much stronger than in the two previous years. Falsterbo at the southern tip of Sweden reported a record high of almost one million migrating Woodpigeons in autumn 2019.

Massive invasion of Eurasian Jays

The extraordinary passage of Eurasian Jays in autumn 2019 will also be remembered. The interactive maps on EuroBirdPortal (EBP) clearly show that it was a Europe-wide phenomenon. In certain years, large migration movements of birds from northern and eastern Europe are observed in this normally sedentary species. Influxes of Eurasian Jays were previously recorded in Switzerland in 1977, 1983, 1996, 2004 and 2010. Systematic surveys by the Ornithologische Arbeitsgemeinschaft Bodensee (OAB) on the northern shore of Lake Constance recorded more than 130 000 Jays between 15 September and 20 October 2019, more than double the previous record from 1977. On 11 October, over 42 000 birds were counted on a single day. The invasion was also noted on the Alpine passes: on Col de Bretolet VS, for instance, 135 Jays were ringed in 2019, compared to an average of only 11 birds between 1954 and 2018. Two thirds of the ringed birds were juveniles. Such mass migrations are in fact often triggered by high breeding success combined with a local food shortage.

Further information
www.vogelwarte.ch/state/migration

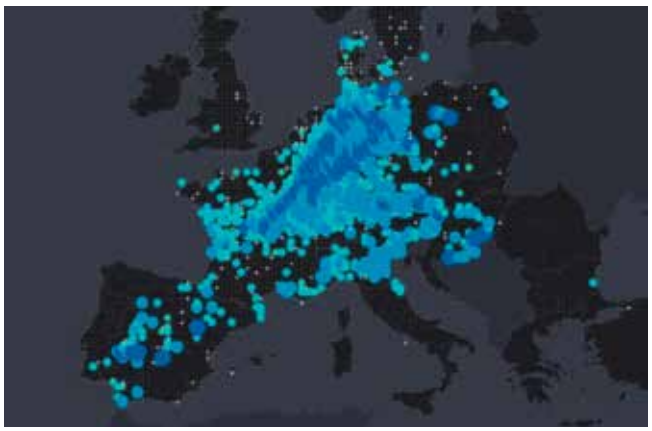


In autumn 2019, loose groups of Eurasian Jays were seen on passage through Switzerland in unusually large numbers. The invasion peaked between mid-September and mid-October.

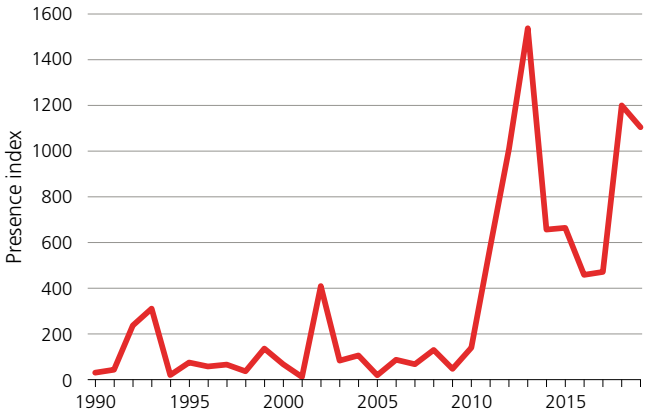
Flocks of migrating cranes fly over Switzerland at all times of the day and night, giving their loud, trumpeting calls.

Cranes in the sky over Switzerland

Towards the end of the 20th century, the Common Crane was a scarce passage migrant in Switzerland. There was an average of 17 records per year, most of them from autumn migration between mid-October and mid-November. Spring migration from early March to mid-April was insignificant. Crane sightings were so rare because Switzerland lies outside of the traditionally quite narrow main migration routes. The western migration corridor starts in Scandinavia, western Poland and Germany, stretches across France from the northeast to the southwest, and ends in Spain. A second pathway leads from Finland across the Baltic States,



Data from various European online portals show the new migration routes connecting Hungary with France both north and south of the Alps.



Autumn migration of Common Cranes (1 September–31 December) has significantly increased in Switzerland since 2011. This was the first year in which the connection between the Hungarian and the western migration routes was used by a large number of birds.

Poland and Hungary to North Africa. There are additional routes further east.

A shortcut to the west

Since 2011, autumn sightings have drastically increased in Switzerland. The same phenomenon was observed in Austria, southern Germany and northern Italy. According to a study that analysed the migration movements in autumn 2013 in detail using data from internet platforms such as ornitho.ch or ornitho.de, these birds set out from Hungary heading west. Some of them reached the western migratory pathway via the northern Pre-Alps, others took a southern route around the Alps towards southern France, where the number of wintering Cranes has seen a marked increase since 2010. Numbers of winter visitors in the Camargue document this trend: more than 14 000 individuals were counted in 2017, up from a mere 200 in 2004. Ring recoveries in this area tell us that 89 % of the ringed winter visitors came from Finland. One of these birds had previously been recorded in Hungary, thus confirming the connection between the Hungarian and the westernmost migration corridors.

Passage over Switzerland

The massive migration observed in Switzerland and southern Germany in autumn 2011 was probably encouraged by the strong easterly wind dominating at the time. But there seem to be other factors that make this shortcut towards the west worthwhile, as it continued to be frequently used in the following years and has since become an established new pathway.

The map of all autumn sightings in Switzerland since 2011 shows that most of the data come from the Central Plateau and northern Switzerland. The birds probably then traversed the Jura in a westerly direction, as only few larger groups were reported in the Lake Geneva region. Some kept to a southwesterly direction, however, like the group of 66 birds that was repeatedly reported between Winterthur ZH and Anières GE on 13 November 2019. It took the birds 6 hours and 45 minutes to cover this stretch of 230 km, which corresponds to an average speed of 34 km/h. While only about 30 Cranes passed through the defile in the Jura near Fort l'Écluse F southwest of Geneva in the 2000s, this figure has skyrocketed in recent years, reaching 1652 birds in 2018. In line with the trend during autumn migration, the number of winter visitors and spring migrants has also increased in Switzerland, though to a lesser extent.

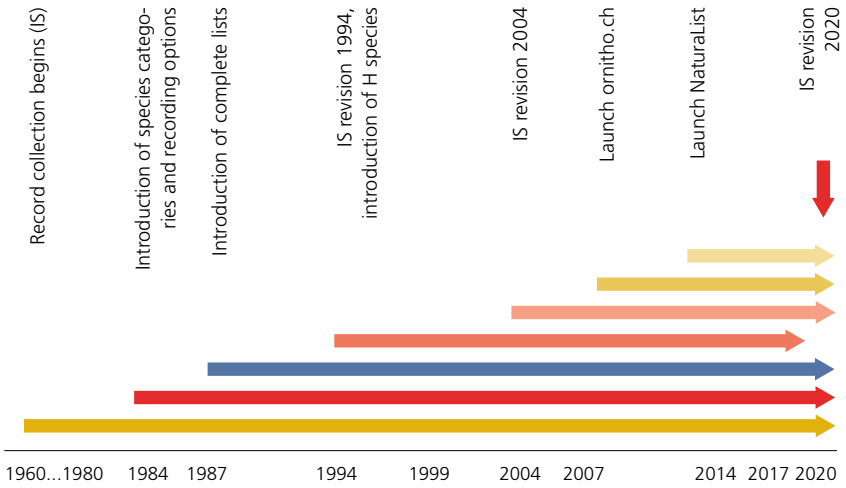
The largest flocks occur in autumn in northern Switzerland. The dots indicate the maximum number of individuals per site between September and December during 2011–2019: white = 1–50 ind., yellow = 51–150 ind., orange = 151–300 ind., red = 301–800 ind.

Positive trend

The current trends match the overall increase in Crane population sizes and range expansion in Europe, which has led to new breeding records in France and the Netherlands. As is to be expected, the number of migrants on the western route has risen from 35 000 individuals in the 1980s to more than 80 000 in 1995 and up to 350 000 in autumn 2015. At least another 150 000 birds use the corridor between the Baltic States and Hungary. The restoration of wetlands that serve as breeding or stopover sites for Cranes is probably one of the drivers of this positive trend. In addition, climate change appears to have benefited survival during migration and on the wintering grounds, at least so far.

Recording: how and why?

Never before have records of birds in Switzerland been used as frequently and as widely as today, e.g. for database requests from ecological consultants, authorities and conservation groups. We are extremely grateful to our volunteer collaborators for continuing their excellent recording work, especially the recording of breeding birds. We understand that many people like to have clear guidelines, e.g. regarding which species to record when. On our side, we appreciate knowing exactly which data were collected according to the guidelines and which were not. Only with this information can we filter out the data that will yield the most accurate results given a certain research question.



Record collection with clear guidelines on recording options and species categories was introduced in 1984 and has proven very effective. Several revisions have since taken place.

Guidelines updated as of 1 January 2020

The abundances of certain species have changed markedly over the past years, for example those of Red-crested Pochard, Red Kite and Yellow-legged Gull. The last revision dates back to 2004, so an update was overdue. The changes that took effect in 2020 focused primarily on updating the assignment of species categories and making the guidelines more specific.

Consistent recording is crucial

Opportunistic observations still make up a large portion of the records we receive. In order to put these to the best possible use, we need to be sure they were collected according to the «standard» recording option, i.e. according to clear guidelines. This is particularly important for category A species. The principle «all or nothing» applies here; someone recording observations using the «standard» option is requested to record all sightings of A species and also all observations of B species if they merit an atlas code of 7 or higher. The number of birds detected should be added for A species whenever possible. As an alternative to the«standard» option, there is also a «mini» recording option. If observers choose this option, they don't have to follow the guidelines, but accept that records collected this way will only be used in certain analyses.

The value of complete lists

We have good reasons for promoting the use of complete species lists. First of all, such a list tells us when an area was surveyed and for how long. Secondly, the lists not only provide information on the birds that were actually recorded, but also on those not found. We thus gain additional information that helps us in phenological analyses and models. Other databases such as BirdTrack and eBird also encourage the use of complete lists. Switzerland is in a good position, with currently more than 30 % of records reported using complete lists.

Category	Symbol on ornitho.ch	Significance	Examples	When to record?
A	● 1 Northern Lapwing	Scarce and rare species, vagrants, escapees	Northern Lapwing, Red-necked Grebe, Little Bunting, Mandarin Duck	All sightings year-round
B	● 1 Tufted Duck	Waterbirds and colonial species that breed in Switzerland rarely or in small numbers	Tufted Duck, Collared Sand Martin	All sightings with atlas code 7 or higher (strong indication of breeding)
C	1 Common Chaffinch	Common species	Common Chaffinch, Western Yellow Wagtail	At observer's discretion

Recording bird sightings

A list of all species found in Switzerland and their species categories is available here: www.vogelwarte.ch/id (available in German, French or Italian). More on recording: www.ornitho.ch/instructions

The Red-crested Pochard is now classified as a category B species. Most helpful to us are records that give a strong indication of breeding, i.e. atlas code 7 and higher.

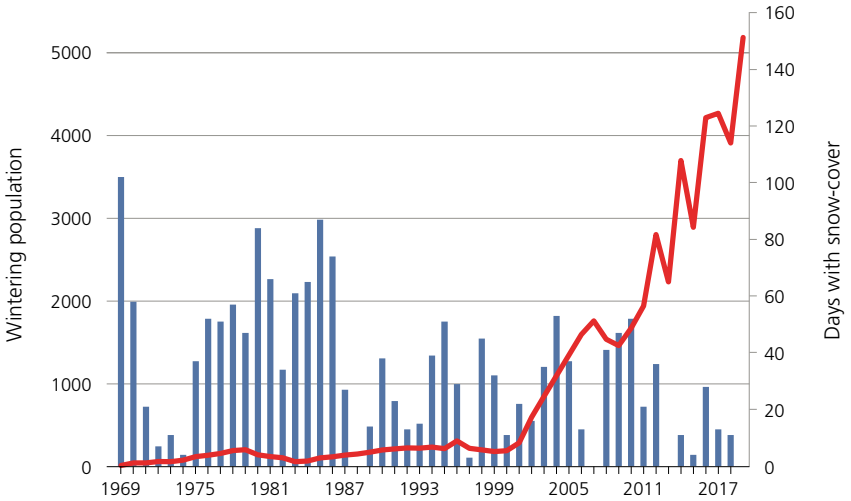
In the afternoon, Red Kites gather in free-standing trees or high hedges.

Wintering Red Kites on the increase

Few other bird species have seen such dynamic growth in the past decades as the Red Kite. Widespread and common in the Middle Ages, then all but obliterated by guns and poison, the species has recolonised large parts of Switzerland as a breeding bird since 1950. In recent years, it has continued its expansion into Grisons and Valais. The species excels at adapting to new circumstances and taking advantage of available niches and opportunities. Its adaptability is reflected in a growing number of wintering birds as well.

Roost counts document increase

A veritable surge has taken place since the turn of the century. The first Red Kites started wintering in the Canton of Zurich and the Ajoie JU in the winter of 1969/70. In the winter of 2002/03, 11 roosts with at least 1000 birds were known. Prompted by similar surveys in France, Red Kite expert Adrian Aebischer began conducting more systematic roost counts in the winter of 2007/08. The project has since grown into a veritable «enterprise» involving about 170 volunteers. In November 2019, 63 roosts were occupied by 5200 Red Kites, and as many as 67 roosts in January 2020, totalling 4300 individuals – as usual a significantly smaller number than in November, but again a record high for the January counts. About 90 % of winter visitors are adult birds. Residents are joined by migrants from Germany. The



Wintering population trend of the Red Kite at roosts since 1969 (red, left axis). The decrease in days with snow-cover (blue columns, right axis) makes foraging easier for the Red Kite (weather station Lucerne; source: MeteoSwiss).

The birds fly to the roost at dusk. The site can change from day to day.

In Switzerland most resident Red Kites are adult birds. Plumage colour and moulted tail indicate that this individual is an adult.

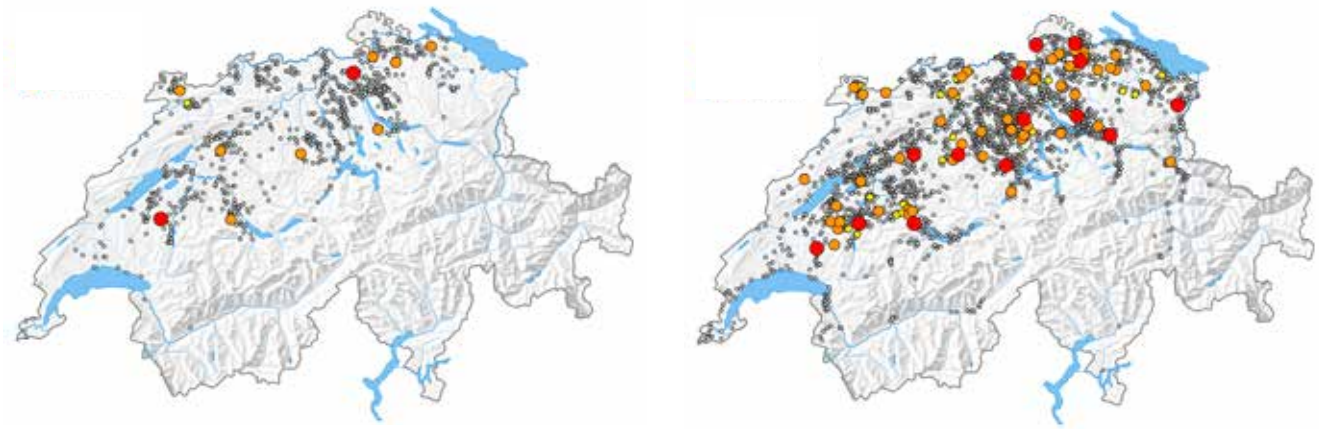
increase is due to the growing breeding populations and to behavioural changes.

Growing percentage of resident birds

The older Red Kites get, the less likely they are to migrate to the traditional wintering grounds located primarily in Spain, but also in southern France and Portugal. Studies by the Swiss Ornithological Institute have shown that food is abundant in Switzerland all year round. Red Kites profit from roadkill and feeding stations as well as from the supply of small mammals and earthworms. Winters with little snow make hunting easier. It comes as no surprise that Red Kites are increasingly seen at altitudes of 1000 m and above even in winter!

Further information
www.vogelwarte.ch/state/winter

2002 2019



In winter 2002/03, 11 roosts were known and the population was estimated at about 1000 Red Kites. In November 2019, 5300 birds occupied 63 roosts. White = winter records; yellow = roosts with up to 20 individuals; orange = roosts with 21–99 ind.; red = roosts with more than 100 ind. Source: Adrian Aebischer.

Mild autumn, few winter visitors

November 2019 was mild and rainy; it rained on the Sunday of the waterbird counts as well, so November counts were conducted a day earlier in many places. Following a warm month of December, January was dominated by high-pressure periods, providing ideal conditions for the January counts.

Mallard population at a low

Overall, around 400 000 waterbirds were counted in Switzerland (including cross-border areas) in November 2019. This is by far the lowest figure since November counts began in 1991, which may be partly due to the bad weather, but is mainly a result of climate-related changes in the migratory behaviour of many species. Species with all-time lows in November included Common Pochard (62 000 individuals) and Mallard (32 000). The January count was at a record low for Mallards as well (38 000). Since the 1990s, the wintering population of Mallards has ranged between 40 000 and 50 000 individuals in November and between 50 000 and 60 000 in January. Most of these birds stem from the central European breeding population, but ring recoveries also point to migrants from eastern Europe. In the past five years, the wintering population of Mallards in Switzerland has declined sharply. This trend may be due to the absence of winter visitors from eastern Europe, given that the breeding population in Switzerland and in Europe is currently fairly stable. Various dabbling ducks and the Tufted Duck (68 000) had low November counts as well.

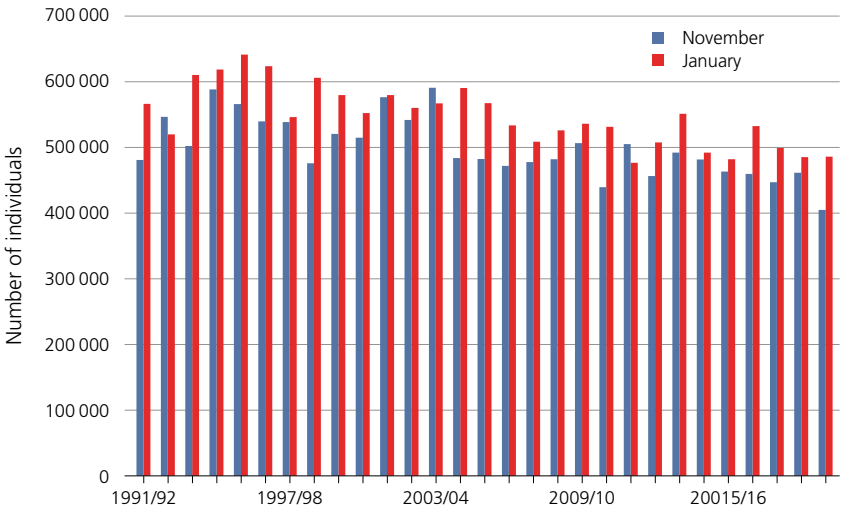
Observers were surprised by record-high numbers both in November and in January of Eurasian Curlew (1700 individuals in November, 1900 in January) and Common Moorhen (1100 in November, 1000 in January). The Egyptian Goose counts were also at an unprecedented high (160 individuals in November, 260 in January). In addition, new highs were reached by Common Snipe (400 ind. in November), Ferruginous Duck (110 ind. in November), Great White Egret (540 ind. in January), Eurasian Wigeon (4500 ind. in January) and Black-necked Grebe (8000 ind. in January).

The breeding population of Mallards is stable or slightly increasing in Switzerland, but the wintering population has decreased markedly in the past five years.

Declines on Lake Geneva, increases on Lake Neuchâtel

Trends over the past 20 years vary depending on the site. On Lake Geneva, numbers are declining steeply especially on the Swiss side and have now reached the lowest level since the census began in 1967. The surface temperature of Lake Geneva is warmer than that of other lakes north of the Alps well into the winter. Many waterbirds relocate to Lake Geneva when the shores of other lakes on the Central Plateau freeze, but that happens less and less. The populations on Lake Neuchâtel show a long-term positive trend. Its extensive shallow-water zones offer excellent feeding conditions for wintering waterbirds – as long as they do not freeze over. As a further advantage, birds are sheltered from disturbance in the protected nature reserves of the Grande Cariçaie. This is not always the case on other waterbodies.

Human disturbance has reached a level where the current protective measures in sanctuaries for waterbirds and migratory birds are not always sufficient. Hunting waterbirds, a major disturbance in the past, is now prohibited in the reserves, but other sources of disturbance (stand-up

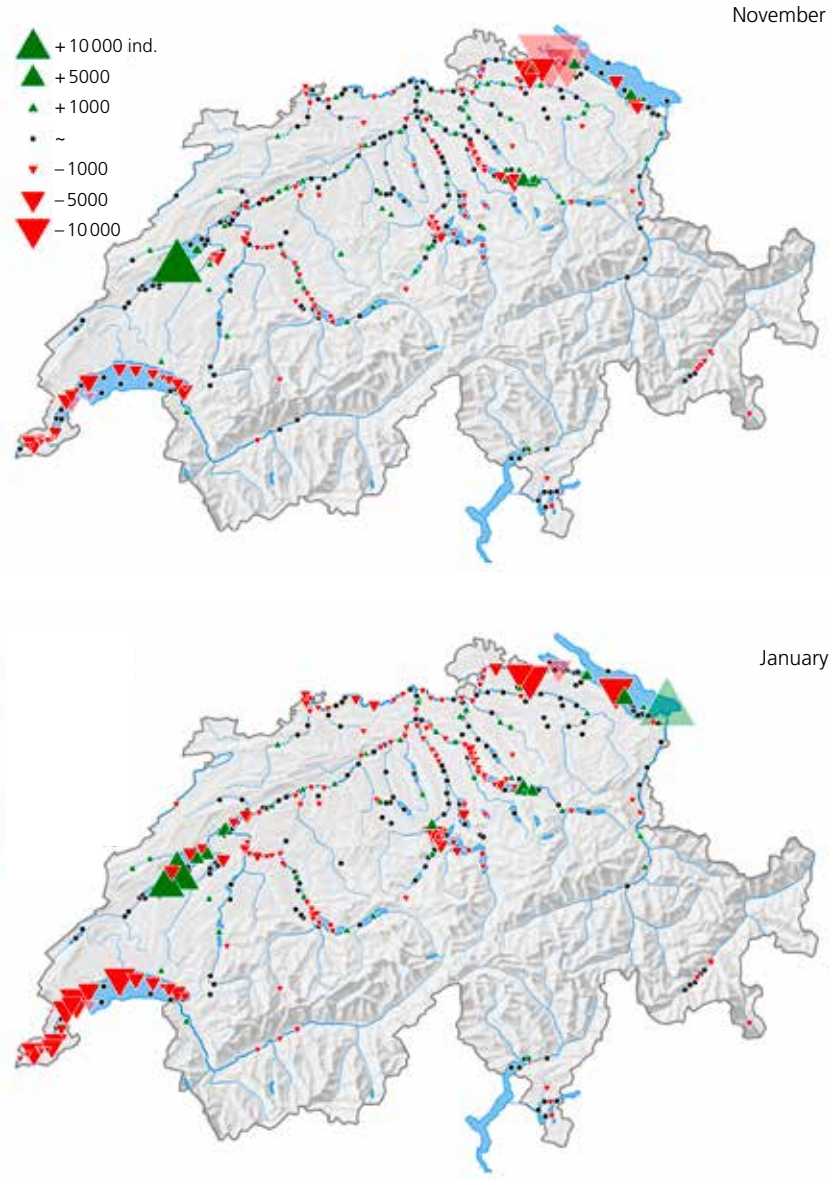


Trend of November and January waterbird counts (total of all species) on Swiss waterbodies including the German and French parts of Lake Constance and Lake Geneva. The chart covers the entire period since the first November count in 1991. Numbers were at an all-time low in November 2019.

The record-high number of wintering Eurasian Wigeons in January 2020 is in line with the long-term increase of this species as a winter visitor. The Rhine Delta on Lake Constance, where the Eurasian Wigeon is commonly found on grassy areas near the water, is an extremely important wintering site for this species.

paddling especially, but also manually propelled boats and motorboats) are often permitted and have become more popular in recent years even in winter – partly because of the mild temperatures. More attention must be brought to the problem of disturbance, or we will miss the conservation goal for waterbird and migratory bird reserves – preserving the area as a stopover and feeding site for wintering waterbirds – by an ever larger margin.

The growing population of Great Cormorants has led to increasing pressure to drive them away even from nature reserves. But such measures tend to affect other species much more than the actual target. Great Cormorants are less shy than most winter visitors, which continue to use Swiss lakes and rivers in numbers of international importance. By the time the Great Cormorant has been chased away, many dabbling and diving ducks have long left. Their flight causes them to waste valuable energy, which has been shown to reduce breeding success in the following spring.



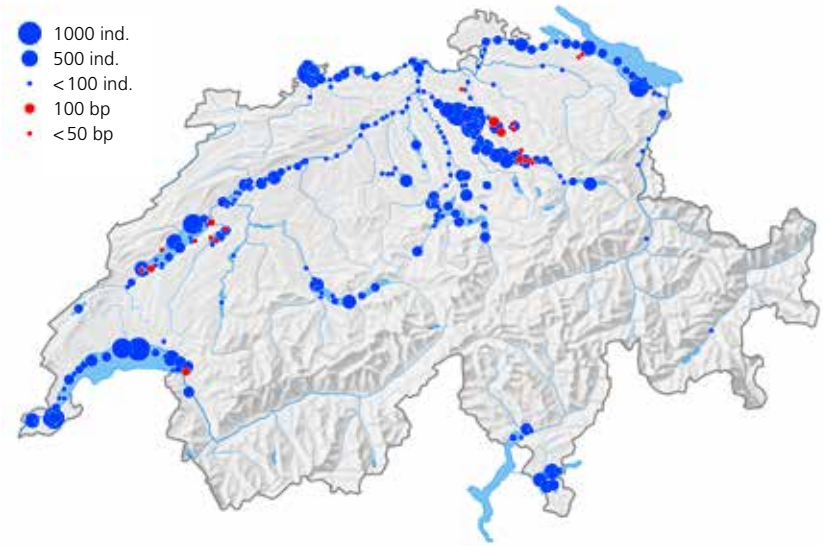
Changes in waterbird numbers per count stretch in November (top, 1999–2018) and January (bottom, 2000–2019). The size of the symbols corresponds to the estimated change, calculated using a linear model. Stretches showing no clear change were marked with a black dot. The transparent marks designate counts of stretches outside of Switzerland; on the Obersee part of Lake Constance, the counts are grouped by country.

Further information
www.vogelwarte.ch/state/winter

The traditional roost site in the Rhine port in Basel («Dreiländereck») is occupied by several thousand Black-headed Gulls every winter.

Ups and downs in Black-headed Gull numbers

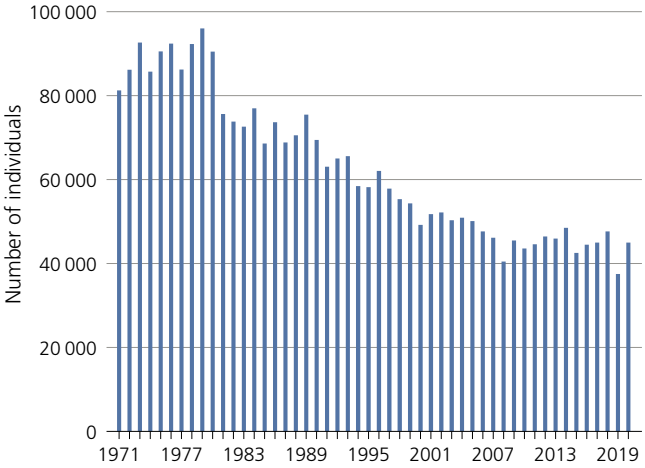
Towards the end of the 19th century, Black-headed Gull numbers were low in Europe as a result of direct persecution, egg collection and the destruction of breeding habitat. The recovery that followed brought a substantial increase in population size that extended into the second half of the 20th century. Black-headed Gulls benefited from rubbish dumps, feeding in cities, the spread of cultivated land, and an increasingly open agricultural landscape. Thanks to new conservation legislation, the species lost its fear of humans and was able to exploit these new resources. At the same time, losses through egg collection and direct persecution dwindled. Currently, the European breeding population is estimated at 1.3–2 million pairs. The Black-headed Gull is one of the most common bird species on Swiss lakes and rivers in winter. Locally, it roosts in remarkably large numbers. The largest roost ever recorded in Switzerland was at the lower end of Lake Zurich. When wintering numbers were at their highest, in February 1979, an estimated 25 000 Black-headed Gulls regularly went there to roost. For the entire Central Plateau, the population was estimated at up to 180 000 individuals.



The Black-headed Gull is a widespread winter visitor in Switzerland (blue), as documented by the average January counts in 2015–2019. It is a much scarcer breeding bird (red; the map shows colonies recorded in 2013–2016).

Decline in the past 40 years

Since then, the wintering population of Black-headed Gulls in Switzerland has dropped sharply. It is impossible to determine the exact extent of the decline, as no national roost count has been conducted since 1979, and the species has only been included in the waterbird census consistently in the last few years. Furthermore, flocks



January totals of the past 50 years based on the results of the waterbird census. Missing values were calculated for each stretch by interpolation. The decline in the wintering population of Black-headed Gulls was particularly marked in the 1980s and 1990s. The actual numbers are presumably quite a bit higher, because only birds on and near waterbodies were counted.

The waterbird census currently records about 40 000 Black-headed Gulls. Despite the decline, this species is still one of the most common winter visitors in Switzerland.

that gather away from waterbodies are generally not counted.

The Black-headed Gulls wintering in Switzerland come from various European countries. The drop in the Swiss wintering population reflects the international situation. In western and central Europe, the breeding population has more or less halved since 1990. Among the reasons cited for the decline are changes in farming practices that impact the food supply during the nestling period. Earthworms are an important source of nestling food. Intensified farming can reduce the supply of worms. In addition, the window for hunting exposed earthworms shrinks when larger areas are tilled in one go thanks to faster and more efficient machinery. Predation on eggs and nestlings by larger gull species also reduces breeding success. On North Sea coasts, populations of European Herring Gulls were artificially kept small up until the 1970s to protect the broods of smaller species. Since then, the populations of several large gulls have substantially increased, locally causing Black-headed Gull colonies to disappear and probably impacting the population trend at a larger scale as well. Outside of the breeding season, the closure of rubbish dumps and bans on feeding have reduced the availability of food.

Farming activities cause a short-term boost in the food supply.

Future trend is uncertain

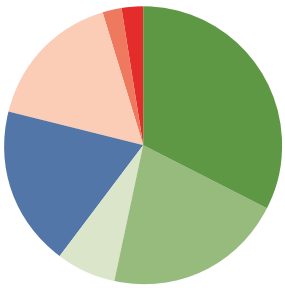
It is not clear whether the species will persist as a breeding bird in Switzerland in the long term. The survival of most colonies will depend on specific conservation measures. Besides large gulls, terrestrial predators or the Eurasian Eagle-owl can impact breeding success as well. The predicted range shift due to climate change may lead to the Black-headed Gull disappearing from parts of central Europe. According to the European Red List, the species is not considered threatened. Locally, however, further declines are to be expected. Other species like Common Pochard, Tufted Duck and Black-necked Grebe could also be affected, as they like to nest in Black-headed Gull colonies for protection against predators.

Wintering waterbirds in Switzerland

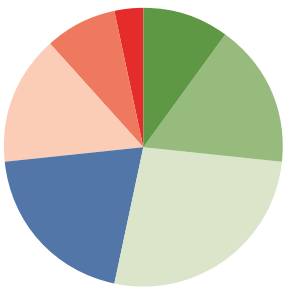
Population trends for waterbirds in Switzerland for the entire survey period (1967–2020) and for the last 20 years (2001–2020). Trends shown as +++ signify an increase by more than a factor of five, while ++ marks an increase between a factor of two and five and + an increase by less than a factor of two. The symbol • means that no statistically significant change was detected, which also applies to populations that fluctuate heavily. Trends shown as – describe a decline by less than a factor of two, –– marks a decline between a factor of two and five and ––– a decline by more than a factor of five. The January count 2020 also includes the German and French parts of Lake Constance and Lake Geneva.

Species	Trend 1967–2020	Trend 2001–2020	Individuals January 2020
Mute Swan	+	+	7387
Whooper Swan	+++	++	835
Tundra Swan		++	10
Barnacle Goose		•	7
Canada Goose		•	5
Greylag Goose	+++	+++	1538
Bean Goose	–––	–––	2
Gr. White-fronted Goose	+++	–	4
Long-tailed Duck	++	•	2
Common Eider	–	––	35
Velvet Scoter	++	+	33
Common Scoter	•	•	2
Common Goldeneye	–	––	4120
Smew	––	––	20
Goosander	++	+	5828
Red-breasted Merganser	++	•	97
Egyptian Goose		+++	265
Common Shelduck	+++	+	58
Ruddy Shelduck		+++	698
Mandarin Duck		+	59
Red-crested Pochard	+++	++	31202
Common Pochard	++	–	66117
Ferruginous Duck	+++	++	75
Tufted Duck	++	–	103725
Greater Scaup	•	––	17
Garganey	•	•	0
Northern Shoveler	+++	•	754
Gadwall	+++	+	11506
Eurasian Wigeon	+++	++	4459
Mallard	–	–	37552
Northern Pintail	+++	++	1296

Species	Trend 1967–2020	Trend 2001–2020	Individuals January 2020
Common Teal	+	+	7458
Little Grebe	–	•	3461
Red-necked Grebe	•	–––	24
Great Crested Grebe	+	+	36554
Horned Grebe	++	++	22
Black-necked Grebe	++	++	8037
Common Moorhen		+	1018
Common Coot	–	–	87526
Red-throated Loon	+++	•	15
Arctic Loon	+++	+	113
Common Loon	•	•	4
Eurasian Bittern		–	13
Grey Heron	++	+	1907
Great White Egret		+++	537
Great Cormorant	+++	•	5886
Eurasian Curlew		+	1940
Common Snipe		++	189
Common Sandpiper		+	77
Little Gull	+++	+++	0
Black-headed Gull	–	–	45102
Mediterranean Gull	•	+++	5
Mew Gull	–	––	1890
Lesser Black-backed Gull	•	–	18
European Herring Gull		–	17
Yellow-legged Gull		++	4476
Caspian Gull			160
Yellow-l./Herring/Casp. G.			731
Great Black-backed Gull	•	•	1
Common Kingfisher		+	377
White-throated Dipper		+	823
Grey Wagtail		+	728



Trend 1967–2020
(43 species)



Trend 2001–2020
(60 species)

+++ increase > factor of 5
++ increase between factor of 2 and factor of 5
+ increase < factor of 2
• not significant or fluctuating
– decline < factor of 2
–– decline between factor of 2 and factor of 5
––– decline > factor of 5

For most species, the long-term trend is positive. Egyptian Goose, Ruddy Shelduck and Great White Egret have shown the strongest increase in the last 20 years.

Further information
www.vogelwarte.ch/state/winter

The numbers of wintering Great White Egrets have multiplied in the past 20 years. In January 2020, 537 individuals were counted in all of Switzerland, a new record for the waterbird census.

The Cantabrian Mountains in northwestern Spain: the terrain and the traditional types of land use sustain a rich biodiversity at a small spatial scale.

Growing international responsibility for Switzerland

Mountains are home to about a quarter of terrestrial biodiversity worldwide and almost half of the world's biodiversity «hotspots». In Europe, too, the mountain ecosystems are extremely diverse and cover about 36 % of the continent. The great diversity of lifeforms is mainly due to geographical features and human impact: steep gradients and varying exposures create an abundance of different living conditions in a relatively small area. This natural diversity has been increased over the centuries by the effects of small-scale land use. But for several decades now, traditional forms of land management have been in decline. Together with global warming, which affects mountains more strongly than elsewhere, this trend has caused living conditions to change drastically for many species – the unique diversity of mountain habitats is increasingly at risk.

The Northern Wheatear is the only species to occur in all four mountain regions included in the study. While the population in the Iberian Peninsula is declining, it is increasing in the Alps and stable in the Fennoscandian and British mountains.

Europe-wide study reveals clear differences

An international study with the participation of the Swiss Ornithological Institute has examined, for the first time, how changes in habitat and climate across Europe relate to changes in bird populations. The study analysed the population trends of 44 alpine bird species, i.e. species that occur above the tree line. The data from 12 countries were analysed for Europe as a whole as well as for four large European mountain regions:

Fennoscandia, UK upland, southwestern mountains (Pyrenees, Iberian Peninsula) and southern mountains (Alps, Apennines). Overall, mountain bird species declined by 7 % during 2002–2014, while mountain specialists even showed a significant decline of 10 %.

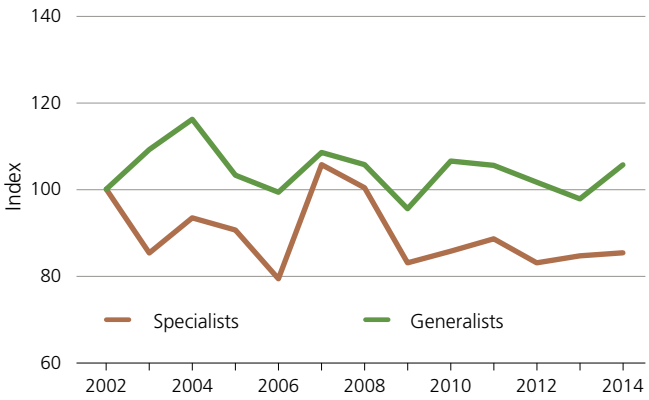
The Fennoscandian and Iberian mountain birds declined more markedly, on average, than those in the UK and in the Alps. Climate change is considered one of the main drivers of this negative trend in mountain bird populations. The trend may have been less marked in the Alps because birds can still move to higher altitudes in this massive range, thus mitigating the negative effects of climate change. The Swiss breeding bird atlas 2013–2016 has already shown that alpine species in Switzerland saw a greater altitudinal range shift than species occupying lower altitudes. This means that our country's international responsibility in the conservation of mountain bird species will continue to grow.

In Fennoscandia, the Common Redshank is a mountain bird.

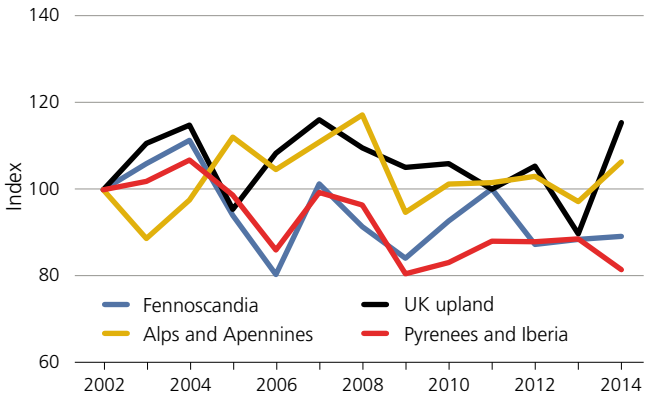
Agriculture has a responsibility for bird conservation

Besides the challenge of climate change, biodiversity in the mountains is coming under increasing pressure from changing land-management practices. Intensified land use in productive locations threatens the traditional refuges and thus the survival of species like Whinchat and Corncrake. Farmland in steep or remote areas is abandoned and becomes overgrown with bushes and eventually forest, causing habitat to disappear for species of open landscapes. The Swiss Ornithological Institute is engaging with partners to find solutions that will enable the long-term survival of mountain birds in Switzerland despite rising temperatures. The vast mountain ranges of the Alps play a key role in species conservation not only in Switzerland, but in Europe.

Further information
www.vogelwarte.ch/state/international



For the period 2002–2014, the mountain bird indicator for Europe shows that mountain specialists are in decline, while the trend for generalists has remained largely stable.



Mountain birds in the Alps and Apennines and in the UK upland areas showed more stable trends on average than those in Fennoscandia and in the Pyrenees and Iberia.

EBBA2 – a unique compilation of data on the breeding birds of Europe

One of the most ambitious faunistic research projects ever undertaken is nearing completion: the second European Breeding Bird Atlas (EBBA2) will be published towards the end of 2020. Ten years ago, the board of the European Bird Census Council (EBCC) proposed the idea of a new distribution atlas to its network of national delegates at the EBCC conference in Cáceres (Spain). The first atlas had been published in 1997 presenting data mostly collected in the 1980s. The proposal was received with enthusiasm. Two years of planning, five years of fieldwork, collection and evaluation of data, analyses, and finally the production of the book – such a huge project can only be managed by a strong team of experts spanning the continent. EBCC consists of a Europe-wide network of institutions and ornithologists. The decentralised coordination team had members in Sempach, Barcelona and Prague. The number of participants is impressive: national partners from 48 countries and 120 000 fieldworkers, of which 35 000 conducted territory mapping surveys and other systematic counts.

How many bird species breed in Europe?

During the period 2013–2017, 596 breeding bird species were recorded. Europe is in fact a peninsula of the vast Eurasian continent. So it is not surprising that the number of species endemic to Europe is quite small, with the exception of the island endemics in the Canary Islands or Madeira, or the Cyprus Scops-owl, only recently added to the European species list as a separate species. Among the more widespread endemics are Rock Partridge, European Herring Gull and Citril Finch.

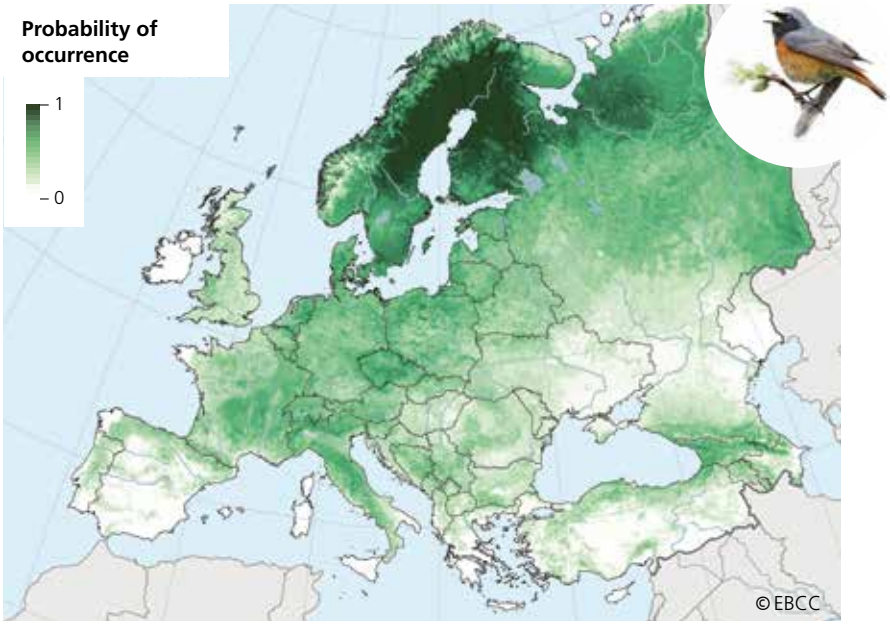
Distribution hotspots

The first EBCC atlas of 1997 was a milestone for European ornithology, but data from eastern Europe were scarce and based mostly on expert knowledge and only partially on field data. This has changed. Thanks to the huge efforts of all involved, coverage for EBBA2 was much better in Russia and Turkey than anticipated. For the first time, we are able to see how European birds are distributed and recognise distribution hotspots from the Ural Mountains to the Caspian Sea, be it in abundance maps at a resolution of 50 × 50 km or in modelled maps showing occurrence probability at a resolution of 10 × 10 km. From these maps, Switzerland emerges as a hotspot for species like Black Redstart, Rock Partridge and White-winged Snowfinch, but it clearly lies at the very edge of the ranges of Grey-faced Woodpecker or Common Rosefinch.

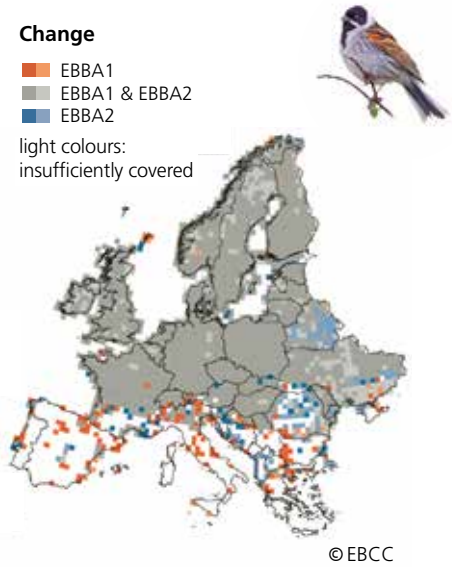
European Breeding Bird Atlas 2: distribution, abundance and change

The new atlas will be published by Lynx Edicions at the end of 2020. EBCC wants to ensure that it is available at an affordable price even in economically weaker countries. EBCC will therefore cover part of the production costs for the book. To achieve a price under 100 Euros, EBCC relies on support in this final project phase as well, for example through species sponsorship. Join in and support EBBA2: https://www.ebba2.info/support-ebba2/ebba2-species-sponsorship/

The abundance map for the Rufous-tailed Rock-thrush highlights its strongholds in the southern European mountain ranges. The species has practically disappeared from the Carpathians. Source: European Bird Census Council (EBCC).



The Common Redstart is an abundant breeding bird in the open forests of northern Europe, as the modelled occurrence probability map clearly shows. But the differences north and south of the Alps are visible as well. Source: European Bird Census Council (EBCC).



The change maps are limited to the area already covered in the first atlas. The range of the Reed Bunting has shrunk dramatically since the 1980s, especially in southern Europe. Source: European Bird Census Council (EBCC).

Winners and losers

In any atlas, species expansion is easier to document than range losses, as the complete disappearance of a species from a grid square is usually preceded by a population decline. A remarkable finding is the northward range shift in many songbird species, presumably caused mainly by climate change. Eurasian Tree Sparrow and Common Firecrest, for instance, are increasingly found in Fennoscandia. Among the losers are many species of farmland and steppes such as Ortolan Bunting, Greater Short-toed Lark and Great Bustard, but also mountain birds like Rufous-tailed Rock-thrush and Rock Partridge.

Invasive species gain ground

Among the 596 species are 57 non-native species, an impressive number, even without including species like the Common Pheasant, whose natural range only just extends into Europe in the Caucasus region. Many non-native species have significantly expanded their range, among them the Rose-ringed Parakeet and other parrot species and, in southern Europe, some passerines such as Common Waxbill and Red-billed Leiothrix.

The new European breeding bird atlas includes illustrations by 45 artists from 18 countries. Many of them can be purchased, like this picture of a Horned Lark by Jacques Laesser. Part of the proceeds will go towards funding the atlas: https://www.ebba2.info/support-ebba2-2/illustrations-for-ebba2/

Further information
www.ebba2.info

Decades of commitment

With a friendly «tchack» we say goodbye to Jackdaw authority and Sand Martin monitor, Christoph Vogel. Ever since he compiled the available knowledge on Jackdaw breeding populations in Switzerland in the so-called «white book» in the late 1980s, he has remained loyal to this small member of the crow family. With around 80 volunteers, he monitored breeding populations at 160 sites every year. He was in charge of the monitoring project for Collared Sand Martins, also supported by dozens of volunteers (see the box), for almost as long. The project concentrated on breeding sites in the cantons of Fribourg, Bern, Solothurn and Aargau. Christoph will soon be retiring, and he entrusted his projects to younger hands at the end of 2019 following 30 years of dedicated work. Katarina Varga will take over the monitoring of these two species. We thank Christoph Vogel for his decade-long supervision of the two monitoring schemes and hope he continues to find joy in observing his favourite feathered friends!

Our admiration and thanks go to every one of the Ornithological Institute's volunteers for their effort and commitment – without their tireless fieldwork, the monitoring of birds in Switzerland would not be possible! We are grateful to all our local, regional, national and international partner organisations for the effective collaboration, in particular in the breeding bird surveys and the waterbird census.

A heartfelt thank you goes to our collaborators at Biolovision S.à.r.l. for their patience and perseverance running ornitho.ch. We are extremely grateful to the Federal Office for the Environment FOEN for its financial support of the monitoring projects.

The population trends of Eurasian Jackdaw and Collared Sand Martin could only be seamlessly tracked thanks to the dedication of volunteer fieldworkers:

Adrian Aebischer, Walter Affolter, Hans Althaus, Hans Peter Althaus, Rolf Amiet, Hans Peter Ammann, Roland Ammann, Walter Amsler, Christof Angst, Christian Bachmann, Samuel Bachmann, Michèle Baechtold, Carl'Antonio Balzari, Jonas Barandun, Annelies Bärenbold, Artur Bärtsch, Sibylle and Daniel Baumann, Michel Beaud, Andres Beck, René Berner, Annette and Stefan Bernhard, Romano Bianchi, Peter Bieli, Hans-Peter Bieri, Monica Biondo, Peter Blaser, Bruno Blöchliger, Jeanine Bolt, Ursula Bolt, Josef Borer, Frank Borleis, Rolf Bösch, Paul Brändli, Laurent Broch, Markus Brüderli, Hans Brüngger, Hans Brunner, Werner Buchser, Reto Buri, Wolfram Bürkli, Paul Burri, Urs Bütikofer, Aquilino Cabezas, Eugen Christ, Ruedi Christen, Walter Christen, Andrea Clavuot, José Collaud, Florian Comment, Alexandre Copertino, Charly Corminboeuf, Carole Daenzer, Susanne Dehler, Verena Döbelin, Catharina Dohrn, Gertrud Donatsch, Jérôme Duplain, Jeannette Dür-Lindt, Annelies Ehrler-Gabathuler, Marc Eichenberger, Regina Eichenberger, Konrad Eigenheer, Verena Ellenberger, Urs Elsenberger, Severin Erni, Maya Fahrni, Karl Fässler, Kuno Feurer, Gregor Fiechter, Olivier Fiechter, Walter Finger, Patrick Fitze, Hansruedi Flück, Laurent Francey, Patrick Frara, Philippe Frei, Otto Freiburghaus, Monika Frey, Daniel Friedli, Jean-Luc Gauchat, Dani Gebauer, Fritz Geissbühler, Lydia and Ruth Gerber, Niklaus Gerber, Rita Gerber, Madeleine Gfeller-Liechti, Paolo Giacometti-Thöni, Erika Giesch, Pascal Grand, Jérôme Gremaud, Leo Grolimund, Marcel Guggisberg-Gerber, Christian Habegger, Theo Haldimann, Gottfried Hallwyler, Nicola Haltiner, Jakob Hartmann, Rolf Hauri, Bernhard Herren, Peter Heuberger, Claudia Hischenhuber, Kaspar Hitz, Susanna Hofer, Sabina Horst, Eva Huber, Niklaus Huber, Otto Hug, Paul Hügli, Christine Hunziker, Gottlieb Hunziker-Lüthy, Leo Hutter, Thomas Imhof, Markus Iseli, Elisabeth Isler, Patrick Jakob, Jacques Jeanmonod, Paul-André Jeanmonod, Norbert Jordan, Adrian Jordi, Willi Jost-Badertscher, Michel Juillard, Elisabeth Kalbermatten, Marianne Käppeli-Habegger, Adrian Keller, Heinz Keller, Regula Keller, Theresia Keller, Andi Kofler, Stefan Kohl, Martin Kohli, Enrica Kohli-Beretta, Jürg Kolb, Markus Krähenbühl, Franz Krauer, Marianne Küffer, David Külling, Felix Kurz, Michael Lanz, Daniel Legler, Daniel Lehner, Barbara Leuenberger Jörg, Martin Leuenberger, Paul Leupp, Annatina Leuthold-Campbell, Werner Löffel, Lilo Looser, Célestin Luisier, Peter Lüps, Benoit Magnin, Hans Märki, Ulrich Marti, Walter Marti, Veronika Martignoli, Roger Maurer, Pius Meier, Sebastian Meyer-Rust, Willi Michel, Lina Minder-Ragettli, Alfred Mischler, Markus Mooser, Max Moser, Paul Mosimann-Kampe, Agi Müller, Claudia Müller, Martin Müller, Hans Murer, Lorenz Mutzner-Käser, Germano Neri, Alain Niclass, Carole Niffenegger, Jean Oberhaensli, Adrian Oser, Benno Oser, Simon-Pierre Parrat, Benjamin Pfäffli, Samuel Progin, Ferdi Proyer, Pascal Rapin, Kurt Räz, Emmanuel Revaz, Lucas Rieder, Gilbert Rochat, Stefan Röllin, Peter Rosin, Attilio Rossi, Olivier Roth, Rolf Ryser, Bea Sager, Marianne Schläpfer-Meyer, Roland Schneeberger, Sylvia Schneeberger, Iris Scholl, Alice Schöni, Ernst Schrag, Harry Schumacher, Eveline Schürmann, Alfred Schwab, Thomas Schwaller, Yvonne Schwarzenbach, Manuel Schweizer, Manuel Scussel, Eva Seiler, Emile Sermet, Otto Sieber, Bruno Siegrist, Walter Siegrist, Ruth Sonder-Augustin, Manfred Steffen, Alex Steiger, Manfred Steiger, Michael Straubhaar, Stephan Strebel, Roger Strozzega, Beat Studer, Erwin Stutz-Bochsler, Maja and Fritz Suter, Alois Tanner, Sergio Tirro, Michael Tobler, Antonio Trippi, Annette Tromp, Pius Tröndle, Martin Tschumper, Brigitte Urech, Ralf Vanscheidt, Stefan Varruch, Christoph Vogel-Baumann, Alois Vogler, Wilfried Vogt-Kalchofner, Gian Voirol, Andreas von Ballmoos, Ernst von Ballmoos, Philippe Vuilleumier, Carole and Samuel Wagner, Res Wagner, Stefan Wassmer, Martin Weggler, Michel Weissbrodt, Fritz Werthmüller, Martin Wettstein, Heinrich Wicki, Yvar Wider, Georg Willi, Robert Winter, Laurenz Wirth, Armin and Margrit Wittmer, Jacques-Louis Wyss, Bruno Zeller, Sibylle Zindel-Grunder, Thomas Zischg, Edith and Rudolf Zulauf.

The Eurasian Skylark population in Switzerland is in decline. The quality of its habitat has continued to decrease, due mainly to the intensified use of farmland. As a consequence, the Skylark is now considered Vulnerable and has been added to the new Red List of breeding birds published this year by the Federal Office for the Environment FOEN.

Authors and copyright

Authors
Peter Knaus, Thomas Sattler, Hans Schmid, Nicolas Strebel, Bernard Volet

With the collaboration of
Sylvain Antoniazza, Marcel Burkhardt, Lukas Jenni, Isabelle Kaiser, Verena Keller, Marc Kéry, Gilberto Pasinelli, Arno Schneider, Martin Spiess, Samuel Wechsler

Translation
Stephanie Morris

Images
Front cover: Red Kite: M. Burkhardt; p. 2: Grey Partridge: B. Rüegger, Common Little Bittern, Boreal Owl, Eurasian Jackdaw: M. Burkhardt; p. 3 Mallard, White-winged Snowfinch: M. Burkhardt, Reed Bunting: D. Occhiato; p. 4: Cornelis Neet: Direction générale de l'environnement du canton de Vaud; Red-backed Shrike: M. Burkhardt; p. 5: Grey-faced Woodpecker: R. Martin; p. 6: Grey Partridge: Richard Brooks (rspb-images.com); p. 7: Meadow Pipit, White Wagtail: M. Burkhardt; p. 8: Boreal Owl: R. Kistowski; p. 10: Rook: M. Schäf; p. 11: Eurasian Jackdaw: M. Burkhardt; p. 13: European Turtle-dove: M. Burkhardt; p. 16: Collared Flycatcher: R. Martin, Wood Warbler: A. Wullschleger; p. 17: Eurasian Jay: M. Varesvuo; p. 18: Common Crane: B. Rüegger; p. 21: Red-crested Pochard: R. Martin; p. 22: Red Kite: A. Aebischer; p. 23: two images of Red Kite: A. Aebischer; p. 24: Mallard: D. Occhiato; p. 25: Eurasian Wigeon: M. Schäf; p. 26: Black-headed Gull: R. Martin: p. 27: Black-headed Gull: M. Burkhardt, Black-headed Gulls with tractor: M. Varesvuo; p. 29: Great White Egret: R. Martin; p. 30: landscape Spain: A. M. Domínguez, Northern Wheatear: M. Burkhardt; p. 31: Common Redshank: M. Burkhardt; p. 32: Rufous-tailed Rock-thrush: D. Occhiato; p. 33: Common Redstart: R. Aeschlimann, Reed Bunting: M. Burkhardt, Horned Lark: J. Laesser; p. 35: Eurasian Skylark: R. Kistowski. Maps on p. 17–18: copyright www.eurobirdportal.org. Maps on pp. 32–33: copyright European Bird Census Council (EBCC). The copyright for the map background (relief maps) is held by the ETH Zurich Institute of Cartography and Geoinformation. Other images: archive of the Swiss Ornithological Institute.

ISSN
2297-5691 (electronic resource: 2297-5705)

Recommended citation
Knaus, P., T. Sattler, H. Schmid, N. Strebel & B. Volet (2020): The State of Birds in Switzerland: Report 2020. Swiss Ornithological Institute, Sempach.

PDF-download
www.vogelwarte.ch/state

© 2020, Swiss Ornithological Institute

printed in switzerland

Schweizerische Vogelwarte
Station ornithologique suisse
Stazione ornitologica svizzera
Staziun ornitologica svizra

CH-6204 Sempach