



The State of Birds in Switzerland Report 2015



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Headlines



40 % of Switzerland's breeding birds are threatened, among them many farmland species. The Swiss Bird Index SBI® indicates that the situation is stabilising at a low level. Has the decline been stopped? ➡ page 8

The Black-headed Gull population has declined by more than 80 % in the past 30 years. Today, the species is considered endangered. Other wetland birds saw the situation improve thanks to protective measures. ➡ page 10



2014 was a good year for woodland birds. Species such as the Goldcrest were able to compensate the losses caused by bad weather. ➡ page 14

In the past year, surveys for the new breeding bird atlas focused on colonial breeders. While the Rook population soared to a new high, Sand Martin numbers continued to drop significantly. ➡ page 18



Methodological breakthrough: A new statistical approach allows us to use opportunistic observations to calculate population trends of visiting species. This enables us to assess the trends of rare species more successfully. ➡ page 24



500 000 waterbirds find a safe haven in Switzerland. Due to climate change, winter visitors like the Tufted Duck increasingly choose to stay in the North. ➡ page 26

The new Red List for Europe shows that the Rock Ptarmigan is among the losers throughout Europe. The same is true for other species for which Switzerland has an international responsibility. ➡ page 30



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Monitoring birds



One of the Swiss Ornithological Institute's main activities is to monitor birds in Switzerland, a task that is supported in a substantial way by the Federal Office for the Environment (FOEN).

Birds inhabit all types of habitats, are active during the day or at night, are territorial or breed in colonies, and range from colourful to inconspicuous. This means that in order to gather information on the distribution and populations of all breeding birds and most migrants and winter visitors, we had to establish several different monitoring programmes.

Until now, separate reports provided information on the different programmes, and there was no comprehensive overview. This edition of the «State of Birds in Switzerland» is the first in a series that is to appear annually, giving a synopsis of the developments. The report contains an update of the Swiss Bird Index SBI® and replaces the SBI® fact sheet that has appeared annually since 2005. It also presents – and this is new – population trends for individual bird species. It is thanks to the dedicated work of our more than 2000 volunteers that we are able to produce this overview.

The situation of birds in Switzerland is undergoing rapid changes. Thanks to our monitoring programmes, we can present a complex, at first glance perhaps rather confusing picture. Considering all species, the SBI® reveals a slightly positive trend and in fact, it is true that the populations of certain species are on the rise. However, this pertains mainly to adaptable generalists such as crows and tits, while the specialists are declining, as are the species on the Red List (i.e. the threatened species) as well as farmland birds. But here, too, there are exceptions: the Northern Lapwing and the Little Owl have recovered

somewhat in the past years. An issue of particular concern is the slow decline of species that are still relatively common and widespread.

All species contribute to the SBI® equally, whether there are a few dozen or tens of thousands of breeding pairs in Switzerland. However, looking at the number of individual birds, a new study for the whole of Europe covering the past thirty years reveals a drastic decrease of 421 million birds (20 %), a fact explained by the decline of common species, especially those living on cultivated land. With the new breeding bird atlas, for which fieldwork is currently in progress, we will be able to show the change in the total number of birds in Switzerland, too.

The state of birds reflects our relationship with the environment, and the changes are worrying. Therefore, it is vital that we monitor how the avifauna in Switzerland is changing, be it in response to climate change or to the way we humans use the different habitats. Birds are an unfailing indicator on our way to a sustainable future. Let's stay on course!

Prof. Dr Lukas Jenni

A pair of Arctic Terns surprised us with their first breeding attempt in Switzerland in 2014. The pair repeatedly attempted to nest at the Fanel and the Chablais de Cudrefin nature reserves on Lake Neuchâtel. Unfortunately, there were no offspring.





Ground-nesting species have suffered substantial losses in the past decades. The Eurasian Skylark population in Switzerland has declined by more than a third since 1990.



The Common Cuckoo remains widespread at higher altitudes only. On the Central Plateau and in the northern Jura, this herald of spring is becoming scarce.

The situation of breeding birds

When and where did you last hear a Cuckoo? This popular species that used to be common throughout the country has become rare in places, especially at lower altitudes. There is reason to assume that the plight is «home-made»: in the Alps, where butterflies – its main source of food – still abound, the Common Cuckoo is doing better.

The threats vary, the risk remains

The situation for birds in Switzerland has seen changes in the past 200 years like never before. Humanity has interfered with nature ever more forcefully, for instance by draining wetlands and building canals.

Following severe persecution that led to the complete extinction of the Bearded Vulture and the Osprey, the populations of other raptors have recovered in the second half of the 20th century. Their situation remains unstable, however, as they face several dangers, some having appeared in the last few years: illegal persecution, habitat

destruction, disturbance by photographers, climbers, aircraft or forestry, lead poisoning, wind turbines and other structures.

From the 1930s, mechanised farming methods became increasingly prevalent; in conjunction with growing mobility and the fragmentation and destruction of habitats, this had massive effects, particularly on farmland birds.

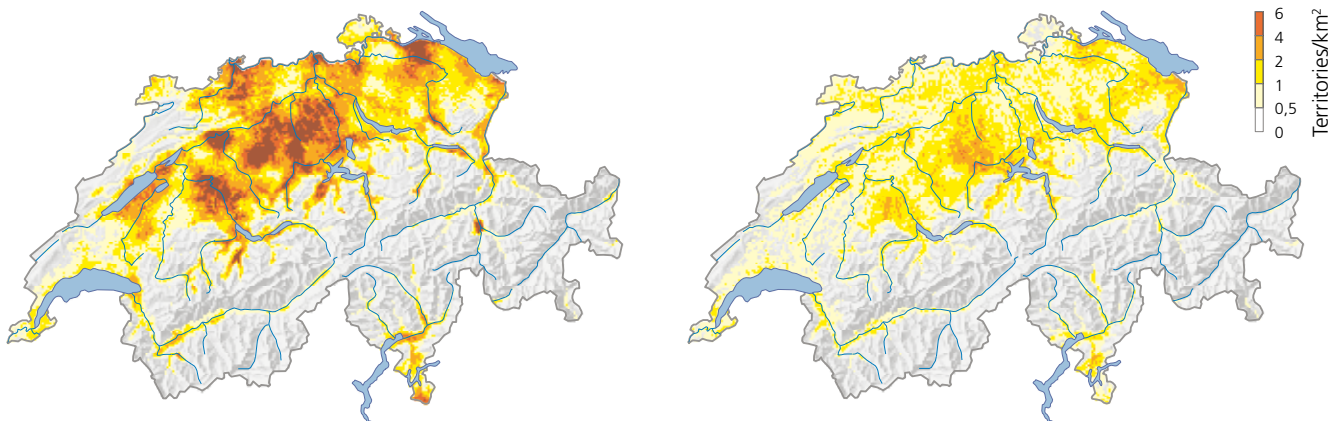
Around 1950, the use of environmental toxins increased. They caused steep declines in many farmland species and birds of prey. At the same time, the eutrophication of rivers and lakes led to reed decline and high fish mortality. The toxins used at the time have since been banned, but today, new types of pesticides (neonicotinoids) are suspected to affect bird populations. In many lakes, reedbeds never fully recovered, and populations of fish and amphibians show signs of decline.

Towards the end of the 1960s there were severe droughts in the Sahel, leading to major declines in the

populations of many long-distance migrants. Since then, the serious upheavals taking place in Africa, the loss of stop-over sites and overexploitation are further threatening many of our migratory species.

One step forward, two steps back

Currently, the more adaptable species are doing well. These include many forest birds. The specialists are in trouble, however. They have higher requirements for food as well as size and quality of their habitats, and are sensitive to disturbance. For some, the past years have brought some hope, especially thanks to species recovery programmes. The Northern Lapwing, the Common Tern, the Little Owl and the Eurasian Hoopoe are among those who have benefited. Conversely, other species have decreased since the 1990s, such as Ring Ouzel, Fieldfare, Garden Warbler, Willow Warbler, and European Serin. There are several reasons for the decline. However, many recent range



The Spotted Flycatcher used to be abundant in the lowlands. Early results of the new breeding bird atlas show that the population has declined considerably in 2013–2014 (right) as compared to 1993–1996 (left). Among the probable causes are the loss of traditional orchards and use of the last empty building plots in residential areas.

shifts correspond to the predictions based on scenarios for climate change. The winners tend to be species that like warm climates, such as European Bee-eater, Eurasian Crag Martin, Western Bonelli's Warbler, and Rock Bunting. Some typical farmland species, however, continue to decline; this is increasingly the case at higher altitudes, too, such as the Engadin. There have been massive losses in Eurasian Skylark, Tree Pipit, Whinchat and Red-backed Shrike populations, among others. Early cutting and irrigation of meadows makes life hard for grassland-nesting birds.

Loss of three breeding bird species since 2000

In the still-young 21st century, we have already lost three breeding bird species: Eurasian Curlew, Common Snipe and

Woodchat Shrike. It is likely that the Grey Partridge and the Ortolan Bunting will soon share the same fate.

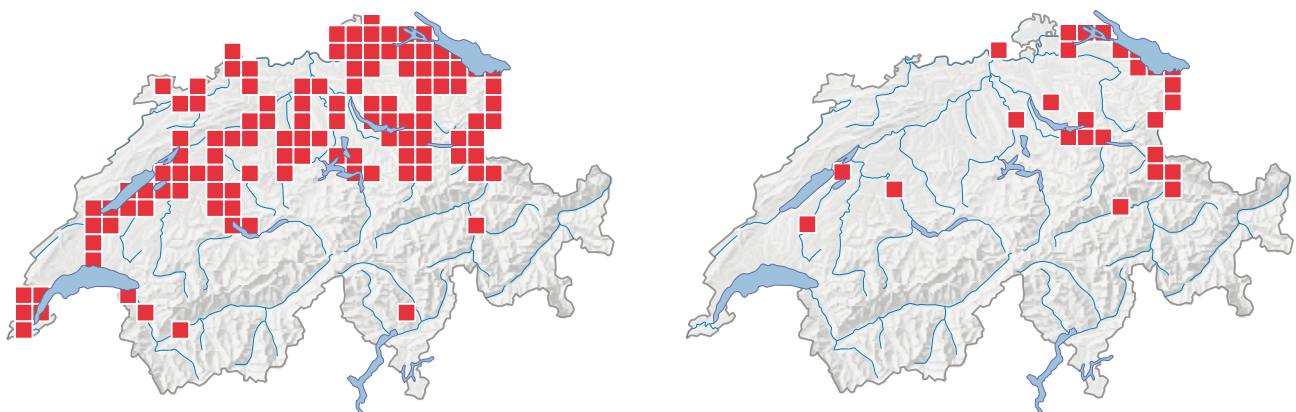
Most of the breeding bird species observed for the first time since 2000 bred only once. Exceptions are the Great Cormorant and the Ruddy Shelduck (an invasive species), which have established themselves widely as new breeding species. Swiss birds are facing a multitude of influences and major transformations. Many species will be unable to adapt to the rapidly occurring changes.



Spotted Flycatcher



Icterine Warbler



In the period 1972–1976, the Icterine Warbler was widespread in the whole of the Central Plateau and in larger Alpine valleys (left). Since then its range has been dwindling. In 2013–2014 (right), only northeastern Switzerland still has breeding sites that are regularly used.

A quarter century of Swiss Bird Index SBI®

The Swiss Bird Index SBI® shows the annual population trends of Swiss breeding birds since 1990. The Swiss Bird Index SBI® consists of several sub-indices expressing the population development for all species or specific groups of birds in the past 25 years. Using long time series, short-term fluctuations can be distinguished from long-term population trends.

The availability of such detailed knowledge for a whole group of animals is unique in Switzerland. Even internationally, few monitoring programmes exist that have such a dense spatial coverage for so many species. It is possible only thanks to volunteers who are willing to offer their services long-term.

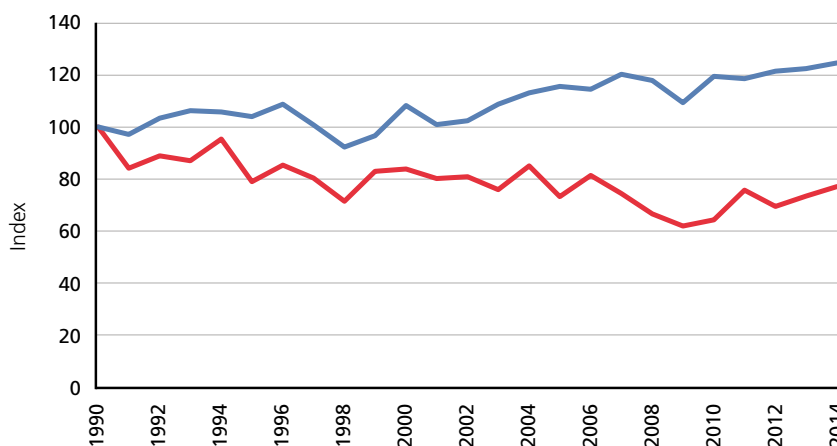
Monitoring: the foundation of the SBI®

Together with other European nations, Switzerland has committed to stopping the loss of biodiversity. Simple indicators are necessary to determine whether this goal is being achieved, and these figures are provided by the SBI®. Birds are good indicators of

habitat quality, so the data facilitates the work of the authorities, for example regarding spatial planning or agriculture. The national trends help to assess the overall development in individual habitats. Thus, the SBI® has been incorporated into national statistics, for example as a key indicator for biodiversity in the evaluation of Switzerland's sustainable development.

Varying developments

Since 1990, the SBI® for all species has been showing a slightly positive trend, while the species on the Red List are on the losing side. The values of the sub-index «Red List» have been stable at a low level for the past few years. The years to come will show whether the trend can actually be reversed. We need to remember

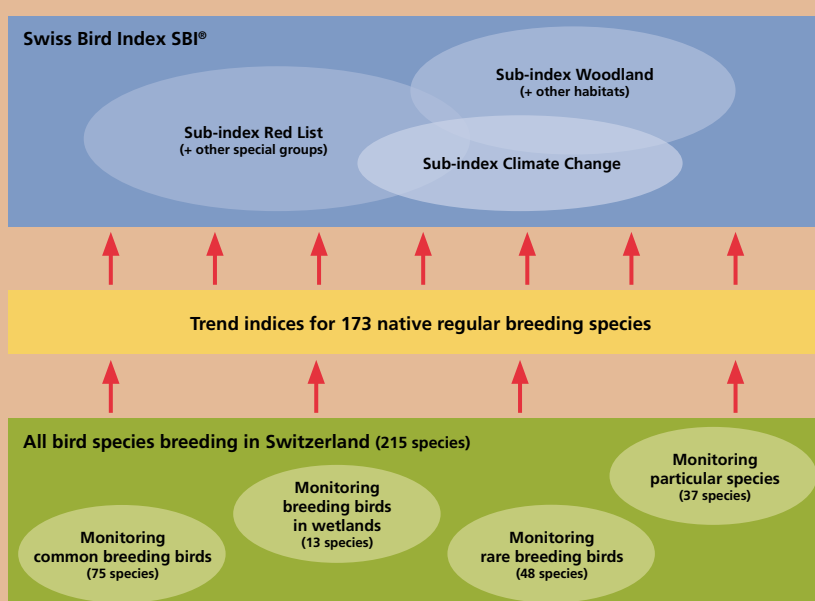


Key SBI® indicators from 1990–2014: the SBI® for all species (blue) shows a positive development, while the one for Red List species (red) illustrates their decline.

What is the Swiss Bird Index SBI®?

The Swiss Bird Index SBI® was developed by the Swiss Ornithological Institute in 2005, in line with the indicators used at the European level to assess the state of the environment. It uses simple key figures to document the situation of Swiss breeding birds since 1990. The SBI® and its sub-indices are based on the population trends of almost all regular Swiss breeding species. Different survey methods are necessary to count the many species in their diverse habitats, resulting in four monitoring programmes. Each of the currently 173 species included in the index contributes equally to the SBI® or a sub-index. For the year 2014 alone, a total of approximately 167 000 individual observations made by 976 volunteers form the basis of the SBI®.

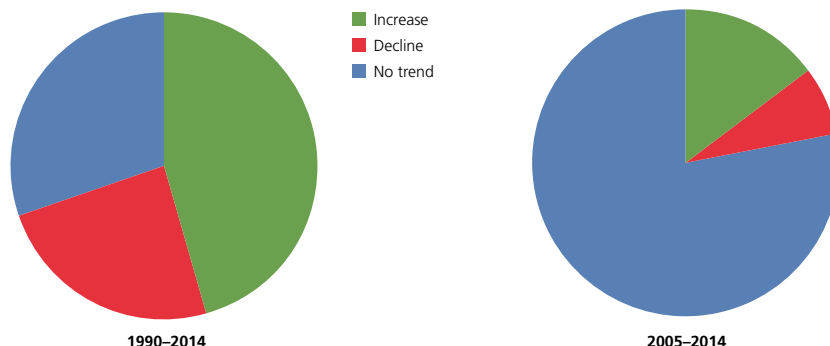
Structur of the Swiss Bird Index SBI®



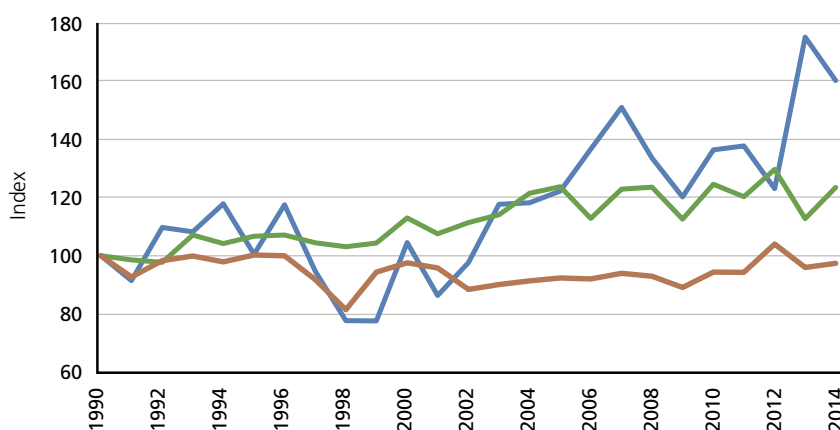
that the decline of many species on the Red List, which comprises 40 % of all breeding birds in Switzerland, started well before 1990, so the Red List's downward trend would be even more accentuated over a longer period of time.

Two study periods

The length of the study period is an important factor in determining whether statistically relevant changes in population sizes are found. Conversely, shorter periods of time allow new developments to emerge more clearly. Providing an analysis of populations for the full period of 25 years as well as one for the last ten years allows us to make a nuanced trend evaluation for a given species. For example, the table on pages 16–17 shows that while the overall trends for the Northern Lapwing and the Wallcreeper are negative, there has been a reversal of the trend in the last ten years. In contrast, there has been a negative trend in the last ten years for the Eurasian Nuthatch, the European Serin, and the European Greenfinch, all common songbirds. Substantial conservation measures explain the recovery of the Northern Lapwing; as far as the other species are concerned, the reasons are not obvious. Uncovering them would necessitate more detailed research.



The 173 regular breeding species can be divided into increasing and declining species, as well as into species showing no particular trend. Over the entire monitoring period, 70 % of all species have a discernable trend; looking at the past ten years, this is the case for only 28 %.



Farmland species (brown) remain at the same level, slightly below the reference value of 1990; woodland birds (green) show a positive development. Wetland species (blue) are also on the increase; however, there are considerable fluctuations. All sub-indices are available under «Further information».



The Whinchat is part of the sub-index «farmland». The species nests on the ground, and has declined significantly due to the intensive use of meadows. Today, it is found at higher altitudes only.

Further information:

www.vogelwarte.ch/state/breeding



Heavy regulation of water levels causes many wetlands to dry up. Sedge marshes like the one shown here on Lake Biel are in danger of becoming overgrown by bushes if they are not regularly cut.

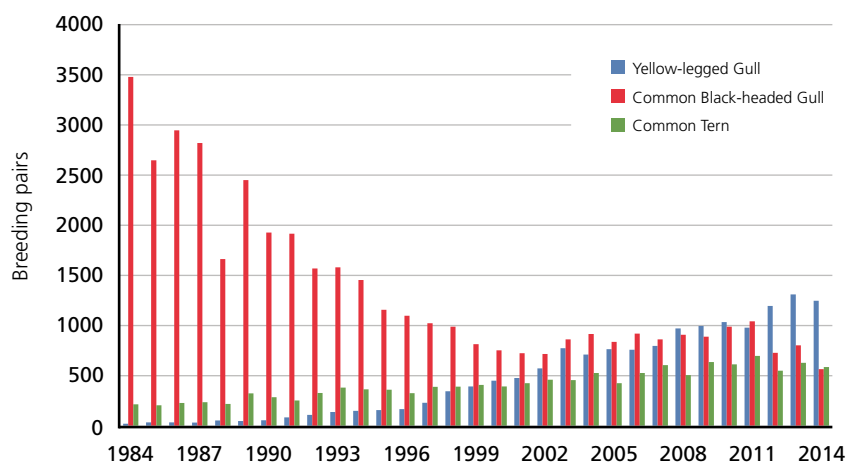
Divergent trends for wetland species

Data from 38 species are incorporated into the sub-index «wetlands». It fluctuates quite strongly, but has risen significantly since the turn of the century (see p. 9). At first glance, this development may seem surprising, since 21 wetland species are on the Red List, and five more are classified as near-threatened. The steep rise of the index is caused by species that did not colonise Switzerland until quite recently, among them the Red-crested Pochard, the Great Cormorant, and especially the Yellow-legged Gull. All in all, 12 species show a significant increase since 1990, while 10 are in decline. The other 14 species have stable populations.

The trends of species with the steepest decline demonstrate the limitations of the combined indices, especially when they span only a short period of time. The Eurasian Curlew suffered its greatest losses starting in the 19th century. In 1990, there were only a few breeding pairs left, and there were no more broods after 2006. For the Common Black-headed Gull, too, the

decline started much earlier. It used to breed in marshes like the Kaltbrunnerriet, which in the 19th century accommodated the largest colony in Switzerland. The excessive harvesting of eggs resulted in there being only four breeding pairs left in 1913. Protective measures prompted a recovery of the population, and in 1987, there were

almost 3800 breeding pairs. Today, the Common Black-headed Gull has disappeared from the marshes, possibly because the suitable wetland areas with sedges have become too small. Like the Common Tern, the Black-headed Gull now only breeds on artificial islands and platforms. In these spaces, however, it is increasingly being



Today, Black-headed Gulls, Common Terns and Yellow-legged Gulls breed almost exclusively on artificial structures, but show different population trends.



In 2014, the Bearded Reedling was discovered to be breeding in three new areas; its main area of distribution continues to be on the southern shore of Lake Neuchâtel.



After a prolonged absence, the Purple Heron has been breeding in Switzerland again (almost) annually since 2002.

out-competed by the Yellow-legged Gull.

Wetlands are inherently dynamic habitats. Straightening and canalising rivers and controlling runoffs for flood protection resulted not only in the loss of wetlands, but also in the drying up of the remaining adjacent wetlands. Peak flood waters are rare and cannot compensate for the drying up of wetlands. This development is problematic for species like Savi's Warbler or the Common Snipe, and along

rivers for the Little Ringed Plover and the Common Sandpiper. The latter is also affected by the great fluctuations in water levels caused by hydropower plants, for example on the Rhine upstream of Lake Constance. Some species can be supported with artificial structures, as has been the case for the Common Tern. In the first half of the 20th century, the Common Tern lost ever more natural breeding sites. Platforms and rafts made available in more and more places from 1950 onward

were able to replace the natural sites, and the breeding population continues to increase.

Further information:

www.vogelwarte.ch/state/breeding



Black-headed Gulls nest with increasing frequency on rafts and fixed platforms that were originally built for Common Terns.



The Red-crested Pochard has become a common winter visitor. The breeding population is also increasing.

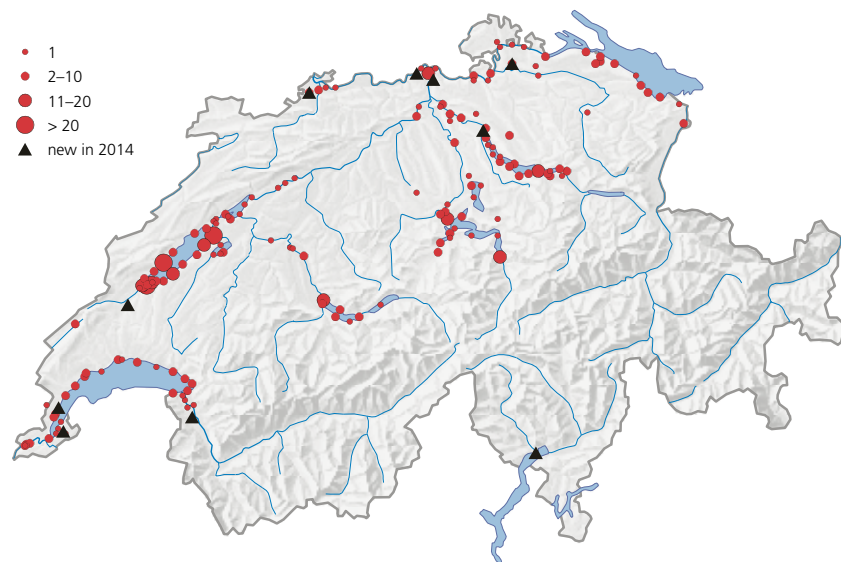
Red-crested Pochard and Cormorant on the rise

Only few of the species that started breeding in Switzerland in the past 150 years have been able to establish themselves permanently and increase their populations. Among them are several waterbirds that benefited from the abundance of food and the creation of sanctuaries.

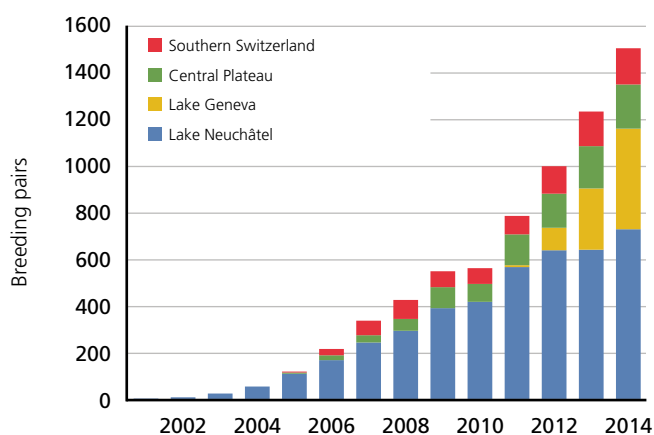
While the Red-crested Pochard was found to breed at Lake Constance as early as the beginning of the 20th century, it was not until the 1980s that broods were detected annually outside of this region. Since then, the population has increased significantly and was estimated at about 450 pairs in 2011. A

new peak was reached in 2014, when 244 broods were documented. About half of the population breeds on Lake Neuchâtel, which is also the most important wintering site in Switzerland. The increase in breeding pairs parallels the massive rise of the wintering population, which in turn is connected to improved water quality and the resulting increase in stoneworts.

The Great Cormorant is another winter visitor and breeding bird in Switzerland. It settled in Switzerland as it spread south from the northern parts of central Europe. The first pairs bred at Fanel on Lake Neuchâtel in 2001. New colonies followed, and in 2014, 1503 pairs were counted in 11 colonies. The growth rate of the Swiss breeding population is declining and has been at about 25 % per year since 2008. However, the European Cormorant



In 2014, the Red-crested Pochard was again found to breed in new places, for the first time also south of the Alps. The size of the dots corresponds to the maximum number of broods per year (1980–2014).



The breeding population of the Great Cormorant has increased significantly, especially on Lake Neuchâtel and (since 2011) on Lake Geneva.



At Fanel on Lake Neuchâtel, the Cormorants initially nested on the ground on artificial islands. In the meantime, most of them have relocated to the trees on the shore.

population as a whole does not seem to be increasing. In 2012, a Europe-wide count resulted in an estimated 371 000 pairs of the sub-species *sinensis*, which breeds inland – about the same as the last count in 2006. The Swiss colonies are relatively small compared to the rest of Europe. The largest colony, which is the one at Fanel on Lake Neuchâtel,

included 427 nests in 2014. Colonies of over 1000 nests were found mainly in coastal areas of Europe.

Further information:

www.vogelwarte.ch/state/breeding

References

- Keller, V. (2014): Vom Wintergast zum regelmässigen Brutvogel: Brutbestand und Verbreitung der Kolbenente *Netta rufina* in der Schweiz. Ornithol. Beob. 111: 35–52.
 Keller, V. & C. Müller (im Druck): Bestand und Verbreitung des Kormorans *Phalacrocorax carbo* in der Schweiz und in Europa. Ornithol. Beob.



The waterbird reserves, under protection by the Swiss Federation (the image is of Champ-Pittet on Lake Neuchâtel), accommodated about 80 % of Cormorant breeding pairs in 2014. The islands and lagoons are important breeding sites for the Red-crested Pochard.

Trends of common breeding birds

The project «Monitoring Common Breeding Birds» (Monitoring Häufige Brutvögel, MHB) started in 1999, following the publication of the last breeding bird atlas. Our goal was to establish a good monitoring project for the common and widespread species. Such species are often neglected when it comes to data collection, because no ornithologist wants to go to the trouble of reporting them systematically. A grid of 267 one-kilometre squares evenly distributed across Switzerland yields a representative sample for the entire country,

including certain altitude belts or biogeographic regions, and enables us to make statements about the changes in distribution and population size for many species. Every year, more than 200 people participate in the survey.

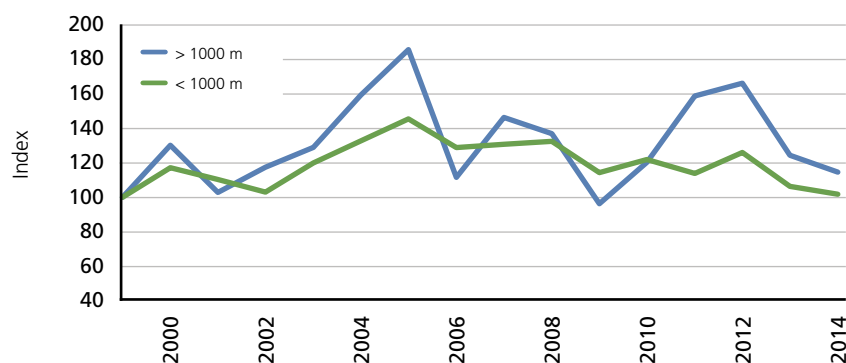
Gradual decline

Thanks to annual data collection throughout Switzerland, MHB also shows which species are subject to an almost unnoticeable decline. In any given year, the losses are unspectacular. But they have been accumulating over a period of 16 years

now. Some species show a consistent decline. Among the species that have lost 25 % or more of their population since 1999 are Eurasian Skylark, Whinchat, Ring Ouzel, Fieldfare, Garden Warbler, Wood Warbler and Spotted Flycatcher. A few of the species we had hoped to document as part of the MHB now have such small populations that we need to resort to other data sources to calculate trends. Among these species are the Common Whitethroat, the Common Grasshopper Warbler, and the Cirl Bunting.



Common and widespread species have been surveyed annually since 1999 in 267 representative areas the size of one square kilometre, allowing us to calculate trends for 75 species.



For some species, like the Eurasian Nuthatch, we have data from many squares, allowing us to calculate population trends for different altitudes or regions as well. In altitudes above 1000 metres, the populations often fluctuate more sharply than in lower-lying areas.



The Eurasian Nuthatch occurs in 170 1-km squares. Each year, around 950 Nuthatch territories are counted.



The European Serin has lost about a quarter of its population since 1999. The reasons for the decline are not clear.

Short-term weather effects

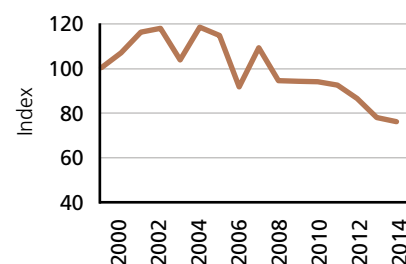
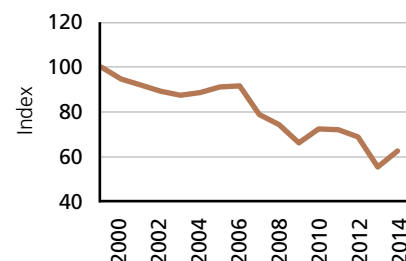
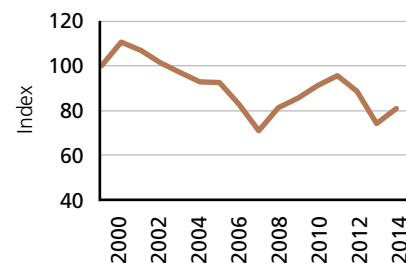
First and foremost, MHB documents the population trends of widespread and abundant species. The populations of many of the surveyed woodland and mountain birds are more or less stable; several species have actually increased over the past 15 years. In addition to these long-term trends, there are short-term fluctuations that can be quite pronounced.

Such considerable fluctuations occurred between 2012 and 2014. The comparatively harsh winter 2012/13 and late spring 2013 caused above-average losses among resident birds especially. About a dozen species were affected, including Great Spotted Woodpecker, Coal Tit, Eurasian and Short-toed Treecreeper, and Goldcrest. Unexpectedly, the short-term declines had already been compensated when the breeding season 2014 came around, one of the reasons probably being an influx of birds from other areas.

Source of scientific knowledge

Thanks to MHB, we not only generate trends for 75 species, which are then incorporated into the SBI®. The project is also considered exemplary

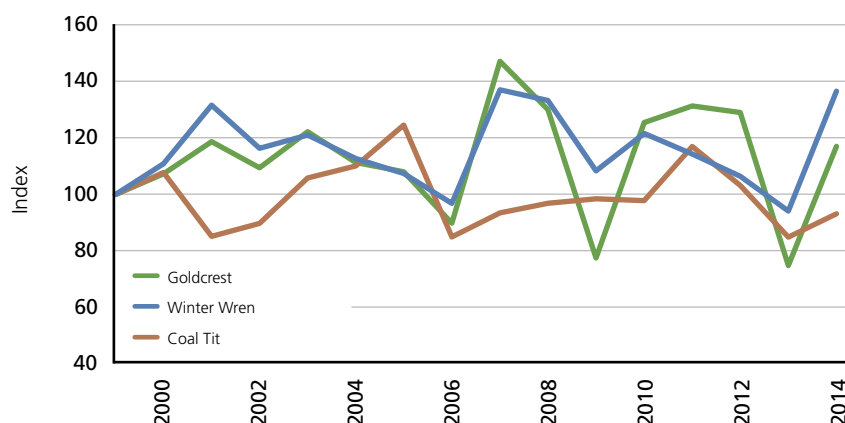
when it comes to standardised surveys and enjoys an excellent reputation among biostatisticians. Thanks in particular to a series of publications by Marc Kéry (Swiss Ornithological Institute) and Andy Royle (US Fish and Wildlife Service), we now know much more about the probability of detection of various species in the course of the year as well as about the errors that can occur in surveys, estimates and models, allowing us to make more accurate population estimates.



The populations of Ring Ouzel (top), Garden Warbler (middle), and Eurasian Serin (bottom) are in decline.

Further information:

www.vogelwarte.ch/state/breeding



In years with harsh winters, some residents and partial migrants like Goldcrest, Winter Wren and Coal Tit suffer declines of a quarter of their population or more, but are able to rapidly compensate when the conditions are right.

Trends for regular breeders in Switzerland

For each of the 173 regular breeding birds¹ in Switzerland that were analysed, a positive trend, a negative trend, or no trend is specified for the entire survey period (generally 1990–2014) and for the last ten years (2005–2014). No trend means that no statistically significant change was detected during the survey period. This is the case for populations that are actually stable, but also for those that fluctuate heavily. The colours in the last column show the status of the species with regard to the Swiss Red List (red = on the Red List, orange = near-threatened, green = least concern). Dots mark priority species for species recovery programmes.

Species	Trend 1990–2014	Trend 2005–2014	Red List Priority
Gadwall		–	
Mallard	+		
Red-crested Pochard	+		
Common Pochard			
Tufted Duck	+		
Common Eider			
Common Merganser	+	+	
Hazel Grouse			●
Rock Ptarmigan	–		●
Black Grouse			●
Western Capercaillie			●
Rock Partridge	–		●
Grey Partridge	–		●
Common Quail			
Little Grebe	–		
Great Crested Grebe	–		
Black-necked Grebe			
Great Cormorant	+	+	
Little Bittern	+		
Grey Heron	+	+	
Purple Heron	+		
White Stork	+	+	●
European Honey Buzzard	+	+	
Black Kite ²	+		
Red Kite	+	+	●
Northern Goshawk			
Eurasian Sparrowhawk	+	+	
Common Buzzard	+		
Golden Eagle	+		
Common Kestrel	+	+	●
Eurasian Hobby	+	+	
Peregrine Falcon	+		
Water Rail	–		
Spotted Crane			
Corn Crane		+	●
Common Moorhen			
Eurasian Coot	+	+	
Little Ringed Plover			●
Northern Lapwing	–	+	●
Common Snipe	–		●
Eurasian Woodcock	–		●
Eurasian Curlew	–	–	●
Common Sandpiper	–		●
Mediterranean Gull	+		
Common Black-headed Gull	–		●
Mew Gull			
Yellow-legged Gull	+	+	
Common Tern	+		●
Stock Dove	+	+	

Species	Trend 1990–2014	Trend 2005–2014	Red List Priority
Common Wood Pigeon	+	+	
Eurasian Collared Dove	+		
European Turtle Dove	–	–	
Common Cuckoo			●
Barn Owl	–	–	●
Eurasian Scops Owl	+		●
Eurasian Eagle-Owl			●
Eurasian Pygmy Owl			
Little Owl	+	+	●
Tawny Owl			
Long-eared Owl ³	+		
Boreal Owl			
European Nightjar	–		●
Alpine Swift	+	+	●
Common Swift ²			●
Pallid Swift	+	+	
Common Kingfisher			●
European Bee-eater	+	+	
Eurasian Hoopoe	+		●
Eurasian Wryneck	–		●
Grey-headed Woodpecker ³			●
European Green Woodpecker	+		
Black Woodpecker	+		
Great Spotted Woodpecker	+		
Middle Spotted Woodpecker	+	+	●
Lesser Spotted Woodpecker			
Eur. Three-toed Woodpecker			
Woodlark	+		●
Eurasian Skylark	–	–	●
Sand Martin	–		●
Eurasian Crag Martin	+	+	
Barn Swallow			
Common House Martin	–		●
Tree Pipit	–		
Meadow Pipit	–		
Water Pipit			
Western Yellow Wagtail			
Grey Wagtail			
White Wagtail			
White-throated Dipper			
Winter Wren	+		
Dunnock			
Alpine Accentor			
European Robin	+		
Common Nightingale	+		
Bluthroat	+		
Black Redstart		+	
Common Redstart	–		●
Whinchat	–	–	●

Species	Trend 1990–2014	Trend 2005–2014	Red List Priority	Species	Trend 1990–2014	Trend 2005–2014	Red List Priority
Eurasian Stonechat	+	+		Wallcreeper	–	+	
Northern Wheatear	+			Eurasian Treecreeper	+		
Rufous-tailed Rock Thrush	–			Short-toed Treecreeper	+		
Blue Rock Thrush				Eurasian Golden Oriole	+		
Ring Ouzel	–		●	Red-backed Shrike	–	–	
Common Blackbird	+			Woodchat Shrike	–		●
Fieldfare	–		●	Eurasian Jay	+	–	
Song Thrush	+	+		Eurasian Magpie	+	+	
Mistle Thrush	+			Spotted Nutcracker			
Com. Grasshopper Warbler				Alpine Chough			
River Warbler	+	+	●	Red-billed Chough	+		
Eurasian Reed Warbler				Western Jackdaw	+	+	●
Marsh Warbler				Rook	+	+	
Great Reed Warbler	+		●	Carion Crow	+		
Icterine Warbler	–			Northern Raven	+		
Melodious Warbler	+			Common Starling			
Eurasian Blackcap	+	+		House Sparrow			
Garden Warbler	–	–		Eurasian Tree Sparrow	+		
Barred Warbler	–			White-winged Snowfinch			
Lesser Whitethroat				Common Chaffinch	+		
Common Whitethroat			●	European Serin		–	
Western Bonelli's Warbler	+	+		Citrl Finch			
Wood Warbler	–		●	European Greenfinch		–	
Common Chiffchaff	+			European Goldfinch	–	–	
Willow Warbler	–	–	●	Eurasian Siskin	+		
Goldcrest	+			Common Linnet			
Firecrest	–			Lesser Redpoll	+		
Spotted Flycatcher	–	–		Red Crossbill	+		
European Pied Flycatcher	+			Common Rosefinch		+	
Bearded Reedling				Eurasian Bullfinch	–		
Long-tailed Bushtit	+			Hawfinch		+	
Marsh Tit	+			Yellowhammer	+		
Alpine or Willow Tit ²	+			Cirl Bunting	+		●
European Crested Tit	+			Rock Bunting	+		
Coal Tit	–			Ortolan Bunting	–	–	●
Blue Tit	+			Common Reed Bunting	–		
Great Tit	+			Corn Bunting	–		●
Eurasian Nuthatch		–					

¹ A species is categorised as a regular breeding bird if it has bred in Switzerland in at least nine of the past ten years. 176 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 1999–2014

³ Survey period 1995–2014

Further information:

www.vogelwarte.ch/state/breeding

Species that breed in Switzerland irregularly or exceptionally

Since 2000, a further 26 species have bred irregularly or exceptionally in Switzerland. As far as possible, these breeding occurrences are fully documented (table available online).

Reference

Müller, C. (2015): Seltene und bemerkenswerte Brutvögel 2014 in der Schweiz. Ornithol. Beob. 112: 189–202.

Focus of the atlas in 2014: colonial breeders

With the breeding bird atlas 2013–2016, we want to find out which birds breed in Switzerland and the Principality of Liechtenstein, how many there are, and where exactly they breed. The goal of this count is to achieve an overview of the state of birds and the changes going on. Since birds rely on diverse habitats, their situation reflects that of all of nature and the landscape.

In 2014, the survey efforts for the atlas focused on colonial breeders. Among these species are Great Cormorant, Grey Heron, Northern Lapwing, Common Black-headed and Yellow-legged Gull, Common Tern, Alpine Swift, Sand Martin, Western Jackdaw and Rook. Besides recording the known colonies, we planned to search for new ones.

Rooks top, Sand Martins flop

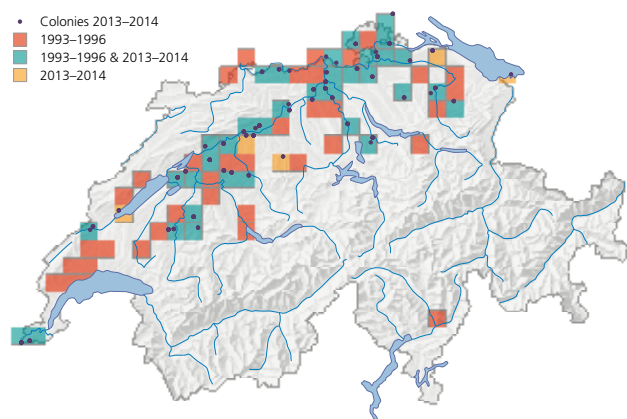
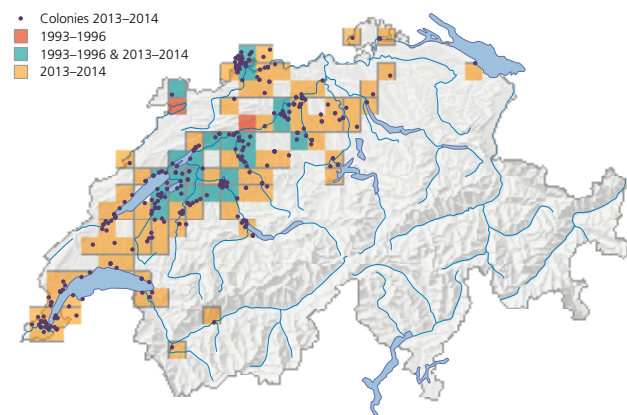
From the very first Rook brood in Switzerland in 1963, the population has been consistently on the rise. After crossing the threshold of 1000 pairs for the first time in 1998, the population continued to increase and reached 6622 pairs in 2014 – a new record! Its range expanded accordingly: compared to the last atlas, the species was found in 70 additional atlas squares (10 × 10 km). In 2014, Rooks nested in the Valais and in Thurgau for the first time. In its traditional range, the population has become denser, and several new colonies were founded in 2014 – or possibly simply discovered for the first time due to the targeted search efforts.

The Sand Martin has been in decline in our country since the middle

of the 20th century. The number of colonies in the cantons of Fribourg, Bern and Solothurn decreased from 43 (1980) to 14 (2014). The population loss is visible in a patchier distribution compared to the last atlas. A large gap is beginning to show in the canton of Vaud. However, the population fluctuates quite heavily due to weather conditions in the Sahel, where the central European Sand Martins spend the winter, and the unstable supply of suitable breeding sites.

Further information:

www.vogelwarte.ch/atlas



Comparing the maps of the occupied atlas squares for the periods 1993–1996 and 2013–2014, the divergent development becomes evident: while the Rook (above) occupies many new squares, we see a different picture for the Sand Martin (below).



The colonisation of buildings by the Alpine Swift is a success story. The same cannot be said for the Swifts nesting in cliffs: the large majority of atlas squares in the mountains appear to be deserted, or rather are waiting for confirmation.



Eurasian Blackcap

An update on migrant birds

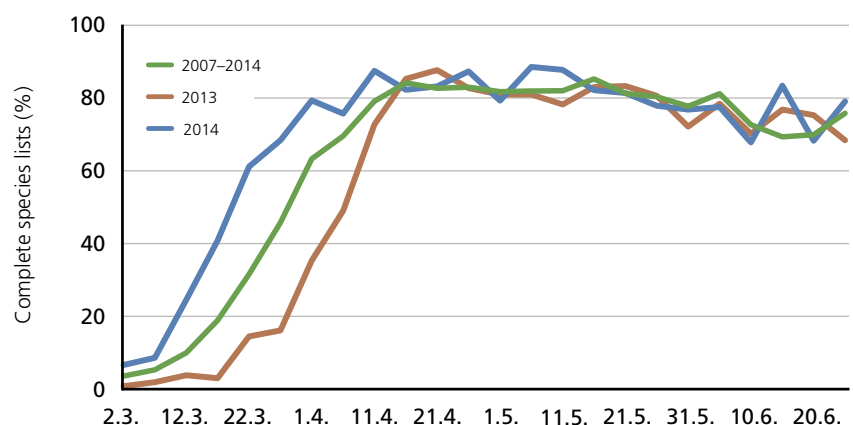
Migrant bird monitoring is based mainly on data that birdwatchers record on www.ornitho.ch from their excursions. During migration, wetlands are a particular magnet for ornithologists, as the number of migrant birds is exceptionally high in these areas. The same is true of other good observation sites, such as mountain passes, where there is a concentration of migrants due to the terrain. In other places, migration is often not well documented, at least in quantitative terms, with the exception of some agricultural areas also popular with birdwatchers. The field ornithologists can report their observations by making a complete list of the species they noted in a given area during at least one hour. From these lists, we can deduce information on frequency.

Early arrival

In the spring of 2014, the arrival of migrant species wintering in the Mediterranean region, such as the

Eurasian Blackcap, appeared to be affected by good weather in early March. Only few individuals of this species spend the winter in Switzerland, and the migrants return between the beginning of March and mid-April. Looking at the species lists sent to us in the period from 21 April

to 20 May in the years 2010–2014, the Eurasian Blackcap appears on average on 84 % of these lists. The species exceeds the forty percent mark around 29 March on average for the years 2007–2014. However, there is fluctuation depending on the weather conditions in a given year.



The early arrival of the Eurasian Blackcap in 2014 is illustrated by the percentage of complete species lists featuring this species.

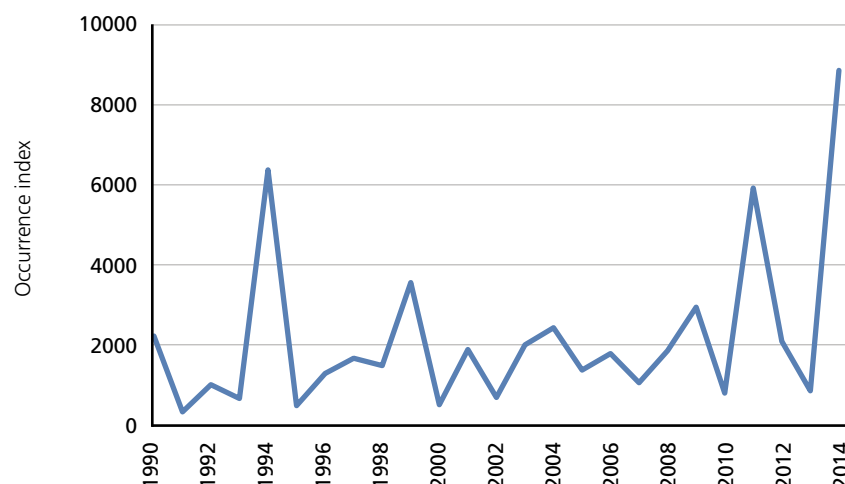
For example, in 2013, when March temperatures were 1.5–3 °C below the norm, the Eurasian Blackcap did not reach this threshold until 8 April; in 2014, with March temperatures 2 °C above average, the 40 % mark was reached as early as 19 March. These fluctuations are important because the return date can influence the laying date and breeding success. The mild weather in early March influenced other migrants, too: the passage of the Eurasian Penduline Tit, for example, started ten days earlier than in previous years. In contrast, the polar cold front that passed through Switzerland at the end of March delayed the return of several long-distance migrants, such as Barn Swallow and Western Yellow Wagtail.

Autumn migration

Autumn 2014 was characterised by intense migration of Blue Tits and, to a lesser extent, Great Tits, as well as spectacular Hawfinch migration. Migration of Blue Tits and Great Tits peaked in mid-October, when maximum day counts of observed birds were around 1500 for Blue Tits and just over 1200 for Great Tits. At the ringing station Col de Bretolet (Valais), 1571 Blue Tits were caught, a figure well above the average, which in the past ten years was only 937.

The Hawfinch's autumn migration broke all records, exceeding even the peak years 1994 and 2011. 26 777 Hawfinches were counted between the end of September and the end of October on Subigerberg (Canton of Solothurn) in the Jura mountains. On 9 October, 6502 birds were counted (P. Frara, L. Arn et al.), which is the highest day count ever recorded for this species in Switzerland. A new record was established on the Col de Bretolet, too, where 302 birds were caught (M. Thoma, S. Althaus et al.). The previous maximum from 2011 was 119. As in 2011/2012, an unusually large number of Hawfinches spent the winter 2014/2015 in Switzerland.

Some small, insectivorous species were also observed in larger numbers in autumn 2014 than in previous



The autumn migration of Hawfinches fluctuates heavily from one year to the next, depending on breeding success and food supply.



Migrating Hawfinches can be observed almost anywhere, but some sites are particularly suitable. Migration is regularly monitored by ornithologists in these locations.

years. This was the case in particular for the Lesser Whitethroat, which appeared on twice as many species lists compared to the average of the past ten years. Goldcrest and Firecrest also appeared two to three times more frequently than in past years. Remarkably, the results of the MHB monitoring programme (common breeding birds) show that the Swiss breeding population of both species was significantly higher in 2014 than in 2013. As far as the Firecrest is concerned, the numbers were the highest ever recorded since data collection started in 1999.

In 2014, the number of departing waders only barely reached the average of the last ten years, if at all. The reason was clearly the warm and dry weather in September and October. Northern Lapwing passage was particularly weak, its frequency being about half the ten-year average.

Influx of warblers from the East

Every now and again, a birdwatcher catches an unexpected glimpse of birds that have strayed well outside their normal range – magical moments in the life of a field ornithologist! In order to be recognised by the scientific community, such reports must be well documented and accepted by the Swiss Rarities Committee. One of these species rarely seen in Switzerland

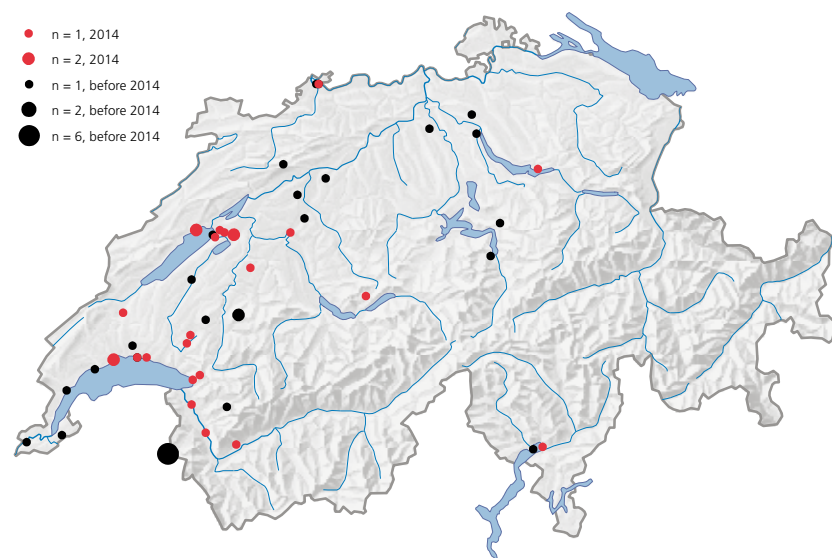
is the Siberian Yellow-browed Warbler, which normally winters in Southeast Asia. Every autumn, however, some birds migrate southwestward. Reports in Switzerland have increased in the past years and reached a new high in autumn 2014. Before the year 2000, there were only five accepted observations of this species; an additional eight were recorded from 2000 to

2009. Since 2010, however, there have already been 42 sightings. 11 were made in 2013, and 25 in 2014. It is highly unlikely that this recent increase in reports in Switzerland and the rest of Europe is merely the result of increased observation efforts; presumably, it reflects a real trend.

Another rare warbler was sighted three times in Switzerland in 2014: in late spring, three Greenish Warblers spent time in places that could be suitable for breeding; two in the Alpine foothills near Fribourg (J. Gremaud et al.), another in the Jura mountains in the Canton of Solothurn (W. Christen, T. Lüthi, U. Esslinger). These are the second to fourth reports of this species in Switzerland, and the first made in spring. The Greenish Warbler also comes from the East; it is currently gradually expanding its breeding range towards the West.

Reference

Marques, D. A. & M. Thoma (2015): Seltene Vogelarten und ungewöhnliche Vogelbeobachtungen in der Schweiz im Jahre 2014. 24. Bericht der Schweizerischen Avifaunistischen Kommission. Ornithol. Beob. 112: 161–188.



Observations of Yellow-browed Warblers in Switzerland, 1961–2013 (black) and 2014 (red).



The Yellow-browed Warbler hides in leaves and is often only detected by its sharp call similar to that of the Coal Tit.



One of three Greenish Warblers that spent the spring of 2014 in Switzerland.

Swiss Rarities Committee

The Swiss Rarities Committee (Swiss RC) is a group of independent experts. Its main task is to check whether unusual bird observations are sufficiently documented to be cited in scientific literature. This concerns species that are rare in Switzerland, species that may be common but are rarely seen at a specific time of the year or in a particular part of the country, as well as species that breed here for the first time. The Swiss RC publishes an annual report in German («Der Ornithologische Beobachter») and French («Nos Oiseaux»).

Further information:

www.vogelwarte.ch/src



Successful ornitho.ch, now with a new app

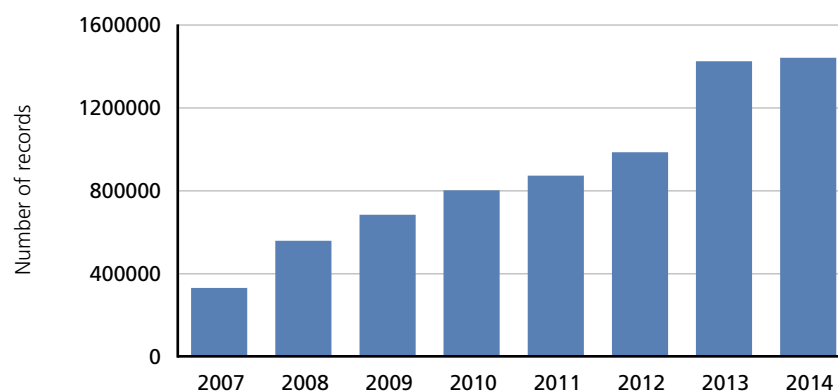
The Internet platform ornitho.ch was established in 2007 to record opportunistic observations in Switzerland and the border regions. Thanks to a network of observers grown and developed over decades – there were about 1500 at the time – the new platform was immediately put to use. It quickly became a central information point for field ornithology in Switzerland. Since then, activity on the site has quadrupled. In 2014 alone, more than 1.4 million observations were recorded, and there were 16 million page views. Ornitho.ch has become an indispensable data pool, especially with regard to the ongoing data collection for the breeding bird atlas 2013–2016.

The company that developed and operates the site, Biolovision S.à.r.l in the Valais, now also operates reporting platforms for the whole of Germany, Austria, Italy, Poland, Catalonia, the Basque region as well as many parts of France. An international steering group provides professional support and coordinates further development. The group is headed by Hans Schmid at the Swiss Ornithological Institute in Sempach.

Autumn 2014 saw a major milestone: the launch of the ornitho-app «NaturaList» for Android smartphones. The app provides a simple way for users to record field observations without the necessity of an Internet connection. In addition to birds, users can also record other animals such as mammals, amphibians, reptiles and insects. Thanks to a map based on OpenStreetMap and a NASA relief map, this is possible for all of Europe. The effort that went into developing the app was

huge. Providing the map alone took 90 000 server operating hours!

Download and instructions:
www.vogelwarte.ch/state/migration



The number of records on ornitho.ch has quadrupled since 2007. Today, an average of 4000 entries are made every day. On peak days, there can be more than 12 000 records.

Calculating trends from opportunistic observations

Population trends are best calculated using data from standardised projects like the waterbird census. But we would also like to know, for example, how the occurrence of migratory waders changes over time. From as early as the 1980s, we have tried to extract trends from opportunistic observations that were collected by the so-called information service. By means of a «five-day maximum per site», which means that we use only the maximum number of birds recorded per site (1-km square) and five-day period, we correct for the fact that the number of observations varies greatly among the sites. Adding the maxima for all five-day periods in a year results in an annual index, the «sum of five-day maxima per site», or SOPM (the acronym for the German term, «Summe der Ortspentadenmaxima»).

However, this index becomes unrealistic when observation effort increases. We have now developed a method to correct for such an increase in opportunistic observations. In a first step, we draw a random sample from all the observations made in a given year. The sample size is the same as the number of records in the years with the least observation effort. The SOPM is calculated for this random sample. This method is repeated many times with new random samples. The mean of



The Mew Gull arrives with the first cold spells. The number of birds arriving in Switzerland is decreasing.

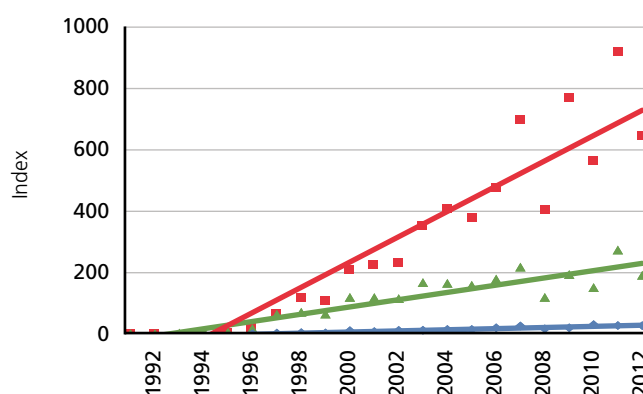
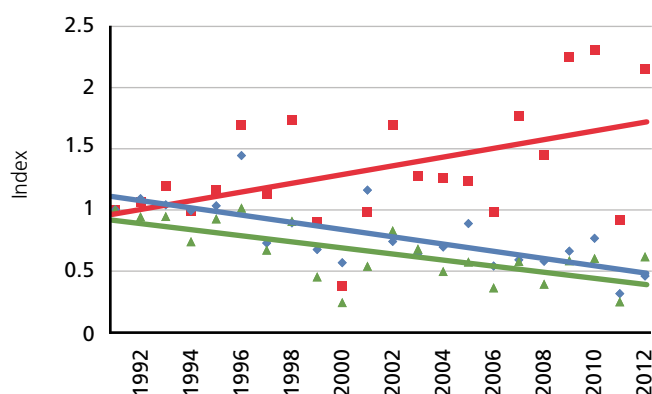
Reference

Zbinden, N., M. Kéry, G. Häfliger, H. Schmid & V. Keller (2014): A resampling-based method for effort correction in abundance trend analyses from opportunistic biological records. *Bird Study* 61: 506–517.

the resulting SOPM is used to calculate the standardised annual index of occurrence.

To check the plausibility of this occurrence index, we compared it with the index extracted from the waterbird census. For most species, the index values corresponded well, whereas the uncorrected SOPM indices often

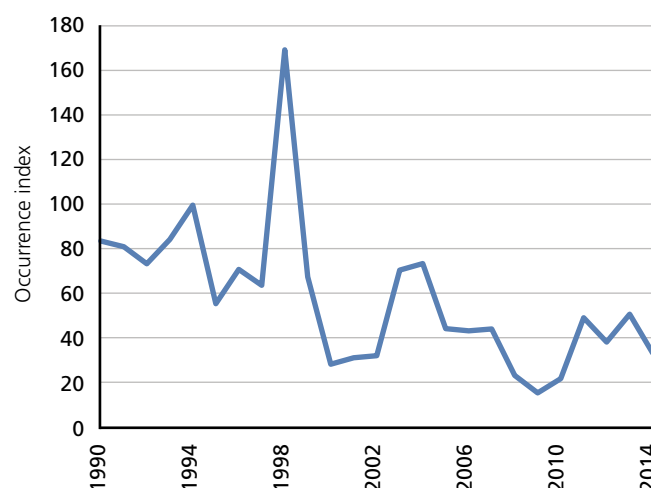
resulted in unrealistic trends. Thus, the chosen random resampling method seems to correct well for the increase in observation effort. When there is good geographical coverage, it is possible to calculate trends from opportunistic observations using this approach. They cannot, however, replace standardised monitoring schemes.



According to the waterbird census (blue), the wintering population of Mew Gulls (left) has declined sharply, while the uncorrected SOPM index derived from opportunistic observations (red) suggests an increase. The standardised occurrence index (green) shows a decline similar to the waterbird census. In the case of the Great Egret, the massive increase is corrected to reflect a more realistic trend.



The breeding populations of Black-tailed Godwits are massively declining in large parts of Europe. As a consequence, migrants are becoming scarce in Switzerland, too.



The occurrence index for the Black-tailed Godwit has declined significantly since 1990.

Downward trend for several species of waders

The standardised index of occurrence gives us a tool that we can also use to calculate meaningful trends for migratory birds based on opportunistic observations.

The number of occurrences in Switzerland is also a measure of a species' general population trend. Many wader populations are under pressure in large parts of Europe. For most species, the cause is loss of habitats in their breeding, migration and/or wintering grounds (mainly due to drainage). Other causes are intensified land use in breeding areas, the effects of climate change, and hunting.

In Europe, the Black-tailed Godwit breeds mainly in wet, not intensively cultivated meadows with short vegetation. In the 1960s, the negative impact of structural changes in modern agriculture started to take effect. As a consequence, the population in the Netherlands, where 90 % of Black-tailed Godwits in Western Europe breed, has declined by more than half over the past ten years. Worldwide, the population has decreased by almost 30 % in the last 15 years. This trend is confirmed by the occurrence index for migrants in Switzerland: since 1990, the curve has been bending sharply downwards. Other wader species show a similar picture,

for example Little Ringed Plover, Northern Lapwing, Ruff, Spotted Redshank and Common Sandpiper.

Arrival of the Griffon Vulture

Other migrants show a different trend. In the 20th century and up until 1990, the Griffon Vulture only appeared in Switzerland between one and three times per decade. Since then, there has been a significant increase of records, probably thanks to re-introduction efforts in France. Due to the arrival of birds from the

growing French and Spanish populations, the Griffon Vulture has been an annual visitor in Switzerland since 2000. Since 2005, influxes occur more and more frequently, making it possible to observe large groups: 54 birds were observed on 28 May 2005 near Baulmes (Canton of Vaud; P.-A. Ravussin) and 53 birds on 17 July 2014 near Wistättthore/Saane (Canton of Bern; A. Jordi).



The Griffon Vulture is seen more and more frequently, sometimes in groups, like here near Plaffeien (Canton of Fribourg) in July 2014.



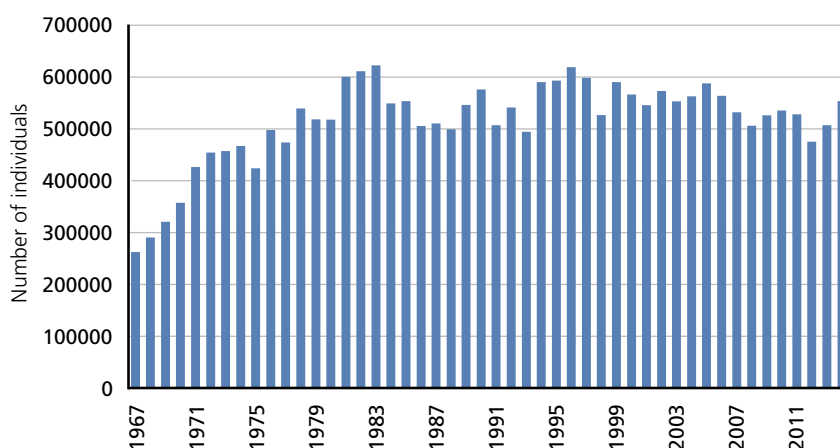
The Tufted Duck dominates the picture. It remains our most abundant wintering waterbird. However, its population has decreased significantly.

Waterbirds face a changing world

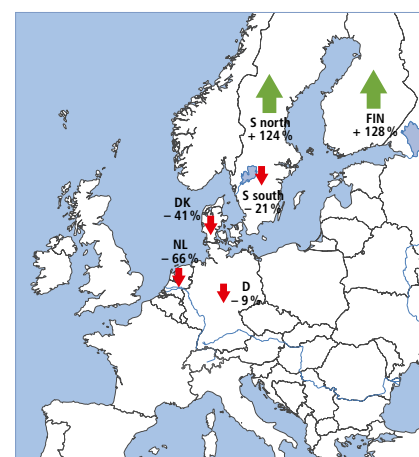
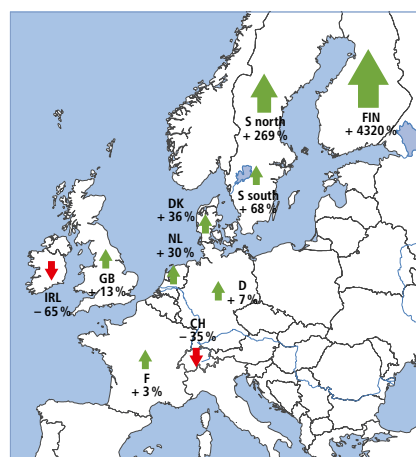
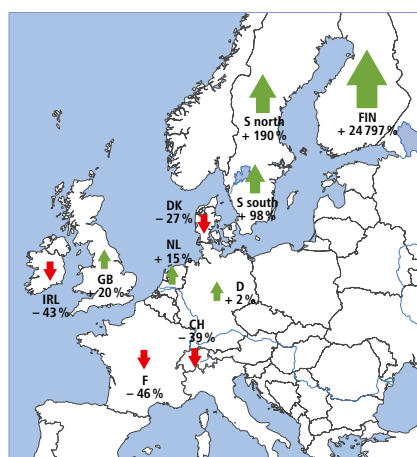
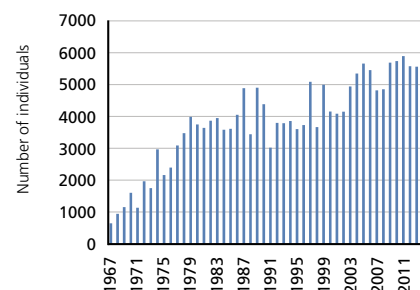
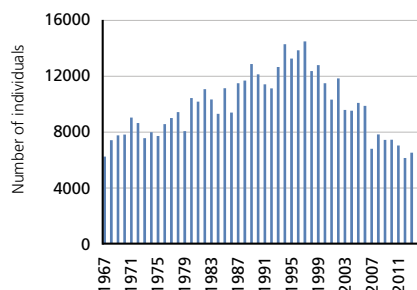
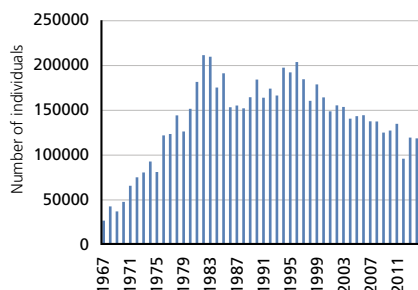
Since 1967, when the international waterbird census started in mid-January, we have observed a similar pattern for many species in Switzerland. With the exception of the Little Grebe, most species showed a steady increase, which can be attributed mainly to growing breeding populations,

the decline of waterfowl hunting, new sanctuaries, and the appearance of the zebra mussel *Dreissena* sp. The combined population size of all winter visitors has stabilised at about half a million. Since the mid-1990s, however, different species show very varied developments. The population of

our most abundant species, the Tufted Duck, has decreased from 200 000 individuals in 1995 to 120 000 in January 2014. During the mild winter of 2011/2012, the number fell below 100 000 for the first time since 1975. Analyses of the international waterbird census directed by Aleksi Lehikoinen reveal that the population decreased mainly in the southern and western parts of the wintering range, but increased greatly in the countries around the Baltic Sea. The same is true of the Common Goldeneye, the Smew and the Common Merganser. The latter does not fit the pattern with regard to Switzerland, probably because the decline of winter visitors from the North is compensated by an increase in the alpine breeding population. The contrasting trends in northern and southern Europe indicate that the wintering ranges of many species that breed in northern Europe are shifting north due to increasingly mild winters. Several other



There are still about half a million waterbirds wintering in Switzerland. The species composition has changed, however.



The charts of the January population of Tufted Ducks (left) and Common Goldeneyes (middle) in Switzerland indicate a decline over the past 20 years. Only the Common Merganser (right) increased due to the growing breeding population in the Alpine region. A look at the rest of Europe suggests that declines in Switzerland in the period 1980–2010 correspond with increases in northern Europe (not including Common Mergansers in the Alpine regions).

ducks from the North have exhibited a similar negative trend in Switzerland in the past ten years, including the Eurasian Teal, the Northern Pintail, the Common Pochard and the Greater Scaup.

Overall, the wintering populations of 14 species have declined significantly in Switzerland in the past ten years. Among them are national priority species such as Gadwall, Common Pochard, Tufted Duck and Great Cormorant. In contrast, 17 species have increased, sometimes considerably. Among them are three national

priority species: the Great Crested Grebe set a new record, with 62 000 individuals counted in January 2014, probably due partly to the extremely favourable counting conditions on the large lakes. At Lake Geneva alone, more than 34 000 Great Crested Grebes were counted; at Lake Constance, 15 000. The Black-necked Grebe also broke its previous record: 5700 birds were counted. In January 2014, 32 000 Red-crested Pochards set a record for that month. The species that have become more numerous in the last few years are species

whose wintering grounds lie further south. When the shallow water zones of the large lakes don't freeze over, they can take advantage of the food supply for long periods of time.

References

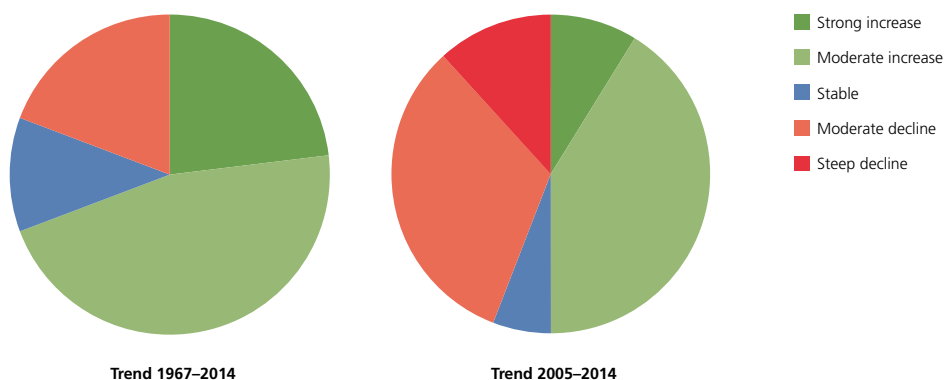
- Lehikoinen, A. et al. (2013): Rapid climate driven shifts in wintering distributions of three common waterbird species. *Glob. Chang. Biol.* 19: 2071–2081.
- Pavón-Jordán, D. et al. (2015): Climate-driven changes in winter abundance of a migratory waterbird in relation to EU protected areas. *Divers. Distrib.* 21: 571–582.

Wintering waterbirds

January 2014 population in Switzerland (including the German and French parts of Lake Constance and Lake Geneva), and long- and short-term trends (percentage change). No trend means that no statistically significant change was detected during the survey period; this is the case when populations are stable, but also when they fluctuate widely.

Species	Individuals Jan 2014	Trend (%) 1967–2014	Trend (%) 2005–2014
Mute Swan	7532	57	19
Tundra Swan	15		
Whooper Swan	508	>1000	33
Bean Goose	2	–16	
Gr. White-fronted Goose	0		
Greylag Goose	896		60
Canada Goose	10		
Egyptian Goose	31		
Ruddy Shelduck	1198		311
Common Shelduck	44		
Wood Duck	4		
Mandarin Duck	87		–41
Eurasian Wigeon	2535	>1000	27
Gadwall	10751	>1000	–22
Eurasian Teal	5486	31	–51
Mallard	58315	–9	5
Northern Pintail	456	653	–43
Garganey	1		
Northern Shoveler	947	>1000	35
Red-crested Pochard	32003	>1000	24
Common Pochard	70286	113	–13
Ferruginous Duck	76	366	162
Tufted Duck	118814	99	–24
Greater Scaup	71		–69
Common Eider	53	–48	
Long-tailed Duck	4		
Black Scoter	2		
Velvet Scoter	42	125	
Common Goldeneye	5489	–4	–43
Smew	8	–39	–64
Red-breasted Merganser	61	614	

Species	Individuals Jan 2014	Trend (%) 1967–2014	Trend (%) 2005–2014
Common Merganser	5623	271	8
Red-throated Loon	37		164
Black-throated Loon	111	>1000	63
Great Northern Loon	3		
Little Grebe	3473	–50	15
Great Crested Grebe	62254	74	55
Red-necked Grebe	27	–3	–69
Horned Grebe	3		
Black-necked Grebe	5683		48
Great Cormorant	4766	>1000	–19
Great Egret	265		88
Grey Heron	1450	115	–4
Eurasian Bittern	12		
Common Moorhen	703		–8
Eurasian Coot	94473	–18	–24
Eurasian Curlew	1027		
Common Sandpiper	29		–53
Common Snipe	98		
Mediterranean Gull	1		
C. Black-headed Gull	47800		
Mew Gull	2505		
Lesser Black-backed Gull	10		
Herring Gull	17		
Yellow-legged Gull	3988		
Caspian Gull	174		
Great Black-backed Gull	1		
Little Gull	0		
Common Kingfisher	182		–21
White-throated Dipper	891		15
Grey Wagtail	412		–37



For the large majority of species, the long-term trend (left) is positive. When it comes to the past ten years, almost half the species demonstrate a significant decline.

Further information:

www.vogelwarte.ch/state/winter



The Smew is becoming a scarce winter visitor in Switzerland.

How are birds doing in Europe?

Switzerland is not an island, and birds are mobile. Our local populations are part of a larger system. When evaluating the situation of our breeding and visiting birds, international collaboration is indispensable. For example,

the results of the internationally coordinated waterbird census enter the database of Wetlands International, and the breeding population trends are used to calculate pan-European trends.



Because its population is declining across Europe, the European Turtle Dove has been classified as «vulnerable». The decline is attributed to the intensification of agriculture, use of pesticides in breeding and wintering sites, and hunting.



The Rock Partridge, along with Rock Ptarmigan and Red Kite, is one of the species on the European Red List for which Switzerland bears international responsibility.

Data collected at the national level also form the basis for assessing the conservation status of each species. As early as 1994, BirdLife International identified «SPEC», «Species of European Conservation Concern», a list of species particularly important for nature conservation. The list was revised in 2004. In the summer of 2015, a European Red List based on the criteria of the International Union for Conservation of Nature (IUCN) was published for the first time. Of the 533 evaluated species, six have gone extinct since 1800, 67 (13 %) are threatened and 32 are near-threatened. As is to be expected, there are many species on the list that are restricted to few locations, for instance islands, and are vulnerable due to their small populations. When widespread species need to be put on the Red List, that is generally an indication of a dramatic population decline. The appearance on the Red List of widespread species like the Northern Lapwing, Eurasian Curlew and European Turtle Dove is a sign of the poor state of agricultural habitats and wetlands. All in all, 14 of the threatened or near-threatened species breed or used to breed in Switzerland. Apart from the three mentioned above, these are: Common Pochard and Common Eider, Bearded Vulture, Common Kingfisher and Great Grey Shrike (threatened species), Red-breasted Merganser, Rock Ptarmigan, Rock Partridge, Meadow Pipit, Red Kite and Eurasian Coot (near-threatened).

Further information:

www.vogelwarte.ch/state/international

Successful start of the European Breeding Bird Atlas

The first European atlas with maps showing the distribution of breeding birds was a milestone for ornithology in Europe. Published in 1997, but based mainly on data from the 1980s, the atlas is no longer up-to-date. Furthermore, there was only limited information from the areas of the former Soviet Union. Therefore, the EBCC decided, together with its network, to produce a new atlas, the «European Breeding Bird Atlas 2», or EBBA2. Various countries have published an atlas in the past few years or – as in the case of Switzerland – are already doing fieldwork for the second or third atlas. In addition, today we have observations recorded on online portals. At the end of 2014, the coordinators were asked to provide a first batch of data for five selected species. This made it possible to test technical aspects of data transfer and to generate provisional maps. There are still many gaps, but the maps already yield interesting results such as the spread of the European Bee-eater to the North. However, the challenges facing atlas work are considerable, especially in eastern and southeastern Europe. Some countries are very large, many regions are poorly accessible,

the economic and political situation is difficult, and human resources are few. In these situations, ornithologists from abroad can provide support.

For Switzerland, providing data for the European atlas is easy, given that data collection for the Swiss atlas falls into the same period as data collection for EBBA2, 2013–2017. However, such a large project needs to be centrally coordinated. The guiding principle of the EBCC network is apparent in how the project is organised. The chair of the steering committee, Verena Keller, directs the project from Switzerland, while Petr Voříšek from the Czech Society for Ornithology and Sergi Herrando from the Catalan Ornithological Institute share coordination work between them in Prague and Barcelona, respectively.

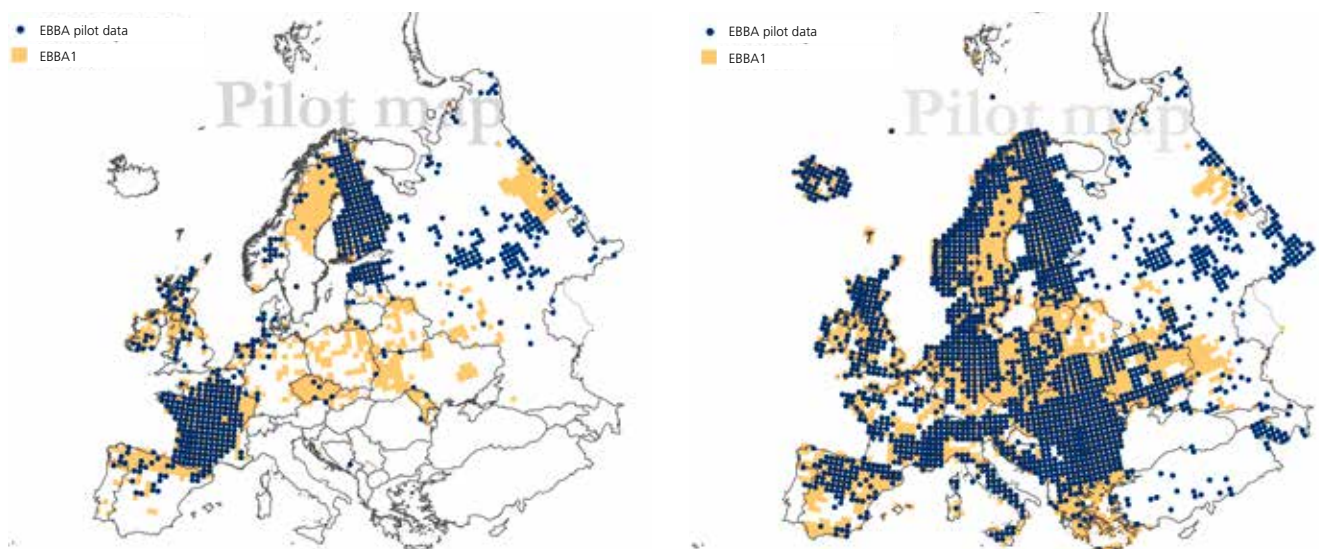


The Northern Wheatear lives in arctic habitats as well as in dunes or on alpine scree slopes. It is not surprising, then, that the species is widespread in Europe.

Further information:
www.ebba2.info

What is the EBCC?

The European Bird Census Council (EBCC) is a network of organisations concerned with the monitoring of bird populations. The EBCC develops standards for monitoring projects and plays a leading role in the European Breeding Bird Atlas as well as in the Pan-European Common Bird Monitoring Scheme. The EBCC supports collaboration beyond national borders.



The first provisional map for the Northern Harrier (left) still has many gaps, but there are also records for areas in Russia that were not covered by the first atlas. Is the range loss in central Europe real? The widespread distribution of the Northern Wheatear (right) is already clearly visible.

The team behind the numbers

At the Swiss Ornithological Institute, the monitoring team coordinates projects, supervises volunteers, manages the databases and evaluates data. Besides doing office work, all team members are passionate field ornithologists and do volunteer work themselves, for example for the new breeding bird atlas.

The aim of the monitoring projects is to document the distribution and population size of birds in Switzerland, to use the data to analyse the temporal and spatial development of species, and to assess the state of their populations. We achieve these goals through work in three closely integrated sections. Thomas Sattler, who heads the monitoring division, is responsible for elaborating trends and maintaining the Swiss Bird

Index SBI®. Hans Schmid is in charge of monitoring schemes and manages the project «Monitoring common breeding birds». In addition, he heads the steering group for the online platform ornitho and the related project EuroBirdPortal. Finally, Verena Keller is responsible for maintaining the Red List and the list of national priority species. She is also the contact person for any issue related to waterbirds and chairs the steering committee for the European Breeding Bird Atlas. The large-scale project Swiss Breeding Bird Atlas is directed by Peter Knaus, with the help of Sylvain Antoniazza and Samuel Wechsler. Martin Spiess works mainly for the common breeding birds monitoring programme. Christian Rogenmoser supports various monitoring tasks and is in charge

of the division's archive. Bernard Volet manages the database of the information service and is secretary of the Swiss Rarities Committee. The monitoring schemes «Breeding birds in wetlands» and «Selected species» are led by Claudia Müller. Nicolas Strebel coordinates the waterbird census and also contributes to other projects with his profound knowledge of statistical analysis. Enhancing statistical models is Marc Kéry's specialty, while Jérôme Guélat is an expert in spatial modelling. Both also regularly teach statistics courses. The core team in Sem-pach has the support of Bertrand Posse of the Valais branch and Roberto Lardelli in the Ticino.



The members of the monitoring division. Front row, from the left: Nicolas Strebel, Thomas Sattler, Sylvain Antoniazza, Martin Spiess. Middle: Claudia Müller, Samuel Wechsler, Roberto Lardelli, Verena Keller, Jérôme Guélat, Bernard Volet. Back: Christian Rogenmoser, Hans Schmid, Marc Kéry, Peter Knaus, Bertrand Posse.



Michel Antoniazza first began systematic surveys of marsh birds on several study plots in 1985. Today, the monitoring programmes in La Grande Cariçaie include all marsh birds, the gull, tern and cormorant colonies, and monthly waterbird counts all year round.

Thanks to our regional partners ...

With our national monitoring schemes such as MHB and the waterbird census, we achieve good coverage of Switzerland. However, not all species can be monitored in these standard programmes, and special habitats such as wetlands are not adequately represented. Today, many important wetland areas have become nature reserves, cared for by regional and local organisations, some of which have been recording bird populations for decades. It is only thanks to the commitment of these regional partners, who are able to provide data for national overviews and analyses, that we can adequately monitor wetland birds. Apart from organisations like Ala, Fondation des Granges, Fondation Bolle di Magadino, Orniplan and others, the Association de la Grande Cariçaie is one of our most important partners. La Grande Cariçaie is the large wetland area on the southern shore of Lake Neuchâtel; it is home to more than 50 % of all Savi's Warblers in Switzerland, and

over 10 % of the breeding population of Red-crested Pochards, Great Crested Grebes, Little Bitterns, and Great Reed Warblers, to name just a few. In some cases, the data collection on breeding birds and visitors started several decades ago. In collaboration with the Swiss Ornithological Institute, projects were expanded and adapted, and they now deliver data used to calculate nationwide trends.

In addition, the data also contribute to the monitoring programmes for waterbird and migratory bird reserves, carried out on behalf of the federal government, to assessing the effectiveness of moorland protection, and, at a local level, to maintaining and protecting the area. The association's head office coordinates the surveys, which are conducted by local ornithologists.



Without the survey data collected on Lake Neuchâtel, it would be impossible to calculate a national population trend for Savi's Warbler.

... and the many volunteers!

This report is based mainly on innumerable opportunistic observations, counts, territory mapping, and special surveys. It is possible only thanks to the decade-long dedicated work of more than 2000 volunteers. They are out and about in all kinds of weather, in summer and winter, on mountaintops, in marshes and along busy roads. Many of them are equipped with expert knowledge and a wealth of experience, and devote a large part of their leisure time to their hobby.

This achievement can be expressed in numbers: for the breeding bird atlas, ornithologists covered about 200 000 kilometres on foot in the first two field seasons in 2013 and 2014. A heartfelt thanks goes to all our contributors for this extraordinary effort!

We thank all our local, regional, national and international partner organisations for the effective collaboration, especially with regard to the breeding population surveys and the waterbird census. We are grateful to

the photographers for the many stunning pictures.

A warm thank-you also goes to the colleagues at Biolovision S.à.r.l. for their tireless support of ornitho.ch. We are indebted to the Federal Office for the Environment (FOEN) for the financial contributions to our monitoring programmes.

Volunteers at the annual meeting in Sempach (below), the meeting for French-speaking volunteers in Yverdon (top right), and the meeting for ornithologists from the Ticino in Bellinzona (bottom right).



Authors

Thomas Sattler, Verena Keller, Peter Knaus, Hans Schmid, Bernard Volet

Contributors

Sylvain Antoniazza, Marcel Burkhardt, Jérôme Guélat, Lukas Jenni, Marc Kéry, Matthias Kestenholz, Tabea Kölliker, Claudia Müller, Christian Rogenmoser, Martin Spiess, Nicolas Strebel, Samuel Wechsler

Translation

Stephanie Morris

Images

Association de la Grande Cariçaie (Michel Antoniazza), R. Aeschlimann (Arctic Tern, Black-tailed Godwit, Rook), O. Born (Rock Ptarmigan), M. Burkhardt (Tufted Duck male, Northern Lapwing, Common Black-headed Gull, Great Egret, Red-crested Pochard title page, Hawfinch, European Turtle Dove, Icterine Warbler, Eurasian Nuthatch), P. Desbiolles (Griffon Vulture), B. Gabbud (Rock Partridge), J. Gremaud (Greenish Warbler), A. Juvonen (Common Goldeneye), V. Keller (Mew Gull, Common Merganser, Heideweg, Champ-Pittet, Tufted Ducks), P. Keusch (Eurasian Blackcap), R. Kunz (Whinchat), E. Lüscher (Spotted Flycatcher, Sand Martin nest), L. Maumary (nest raft Common Black-headed Gulls, Yellow-browed Warbler), J. Peltomäki (Snew), P. Rapin (Common Cuckoo, Great Cormorant), B. Rüegger (European Serin, Savi's Warbler), M. Schäf (Goldcrest, Sand Martin, Eurasian Skylark, Northern Wheatear, Bearded Reedling, Purple Heron), S. Schweizer (Alpine Swift), N. Zbinden (Red-crested Pochard pair). Copyright background maps: Institute of Cartography and Geoinformation ETH Zurich. All other Images: archive Swiss Ornithological Institute.

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CH-6204 Sempach