

Species conservation is necessary and worth the effort

A whole range of endangered species can only be preserved by means of specific measures and projects customised to meet their ecological requirements. Since 2003, the Swiss Species Recovery Programme for Birds has provided added support for the protection of selected bird species. The results show that the efforts have paid off!

There has been a growing recognition that successful nature conservation must involve three levels:

1. «Habitats» involves the large-scale conservation of habitat, for example through nature-friendly forest management or biodiversity promotion areas on farmland.
2. «Sites» concerns areas with a special protection status, such as the traditional nature reserves or protected floodplains.
3. «Species conservation» enters the picture when habitat conservation and special sites are not enough to secure a species' survival²⁰.

Species recovery programmes involve species-specific measures to eliminate the factors limiting a species' population size. Many species that rely on recovery programmes now only occur in small, often isolated populations. Measures are needed to preserve populations and boost numbers if possible. Aims may also include helping the species to recolonise potential habitat.

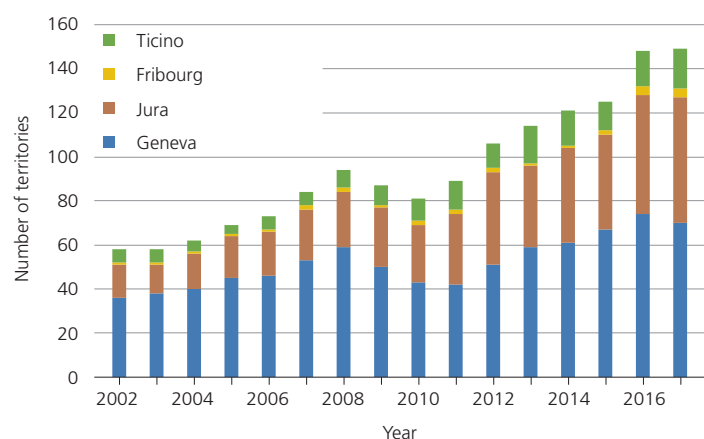
50 of our regular breeding birds are dependent on recovery measures²¹. The Swiss Species Recovery Programme for Birds, launched in 2003 by BirdLife Switzerland and the Swiss Ornithological Institute in collaboration with the Federal Office for the Environment FOEN, develops the conservation measures for so-called priority species and supports their implementation together with several partners¹⁹.

Species conservation is more than providing nest boxes

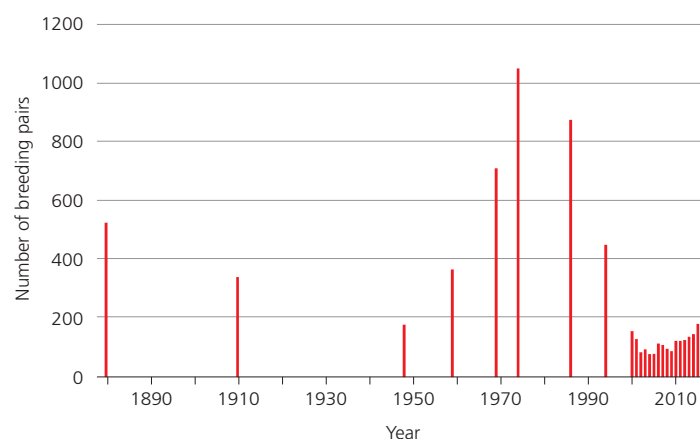
The traditional and simplest conservation measure involves increasing and maintaining the availability of suitable nest sites. This is

an effective measure where sufficient habitat exists but nest sites are few. Nest boxes are provided for Common Barn-owl, Common Hoopoe, Common Swift, Northern House Martin, Eurasian Jackdaw, and others^{1, 9, 10, 18, 22}. Rafts, platforms and gravel islands benefit Common Tern and Black-headed Gull^{2, 15}. And many places provide nest platforms for the White Stork⁶.

However, habitat quality is often inadequate. Targeted measures are necessary to improve the habitats of many priority species. To protect the Whinchat, for example, large flower meadows cut late in the season need to be preserved. In collaboration with the cantons of Valais and Grisons, core areas have been designated as special protection sites for ground nesters^{4, 5}. The Northern Lapwing lacks suitable breeding sites in farmland, and predation and intensive farming practices reduce breeding success. Thanks to targeted measures in various areas, the Lapwing population has been recovering since 2009¹⁴. For typical orchard birds such as Little Owl, Eurasian Wryneck and Common Redstart, the problem is often not a lack of trees but of low-nutrient, insect-rich grassland between trees with small habitat structures and a small-scale vegetation mosaic that includes bare ground for foraging^{8, 17}. Several projects exist to promote these types of habitat. The Western Capercaillie requires open, undisturbed mountain forests with dwarf shrubs, while the Middle Spotted Woodpecker relies on forests with large oak trees and other trees with furrowed bark as well as standing deadwood. Action plans for these two species involve forestry interventions and the designation of



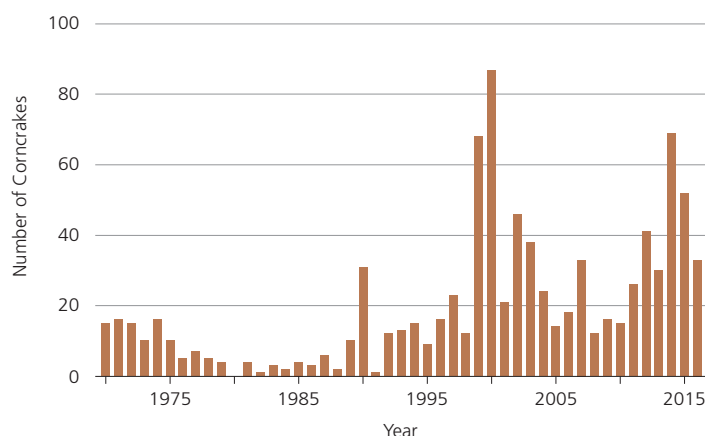
Population trend of the Little Owl in various regions of Switzerland in 2002–2017. Measures succeeded in halting the decline at the turn of the millennium. Thanks to intensive recovery efforts and favourable climate conditions, the Little Owl population has since increased significantly, albeit at a low level.



The population trend of the Northern Lapwing in Switzerland from 1880 to 2016 illustrates the species' turbulent history. Numbers declined massively from the mid-seventies, but recovery efforts have succeeded in reversing the trend.



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Number of Corncrakes observed in Switzerland during the breeding season from 1970 to 2016. Thanks to the recovery programme initiated in 1996, the Corncrake now breeds successfully again in Switzerland. The increase is, however, also related to other factors such as improved observer effort and the species' overall situation in Europe.

Species like the Eurasian Wryneck require bare ground to forage for insects. Several recovery programmes have therefore created areas of patchy vegetation.

special forest reserves to promote suitable habitat in priority areas^{11, 12}. Refuge zones for Capercaillie protect the species from disturbance, at least in winter.

Partnerships are crucial

Species conservation has become an established part of nature conservation policy in Switzerland. The cantons have defined cantonal priorities based on the national strategies. Valais and Ticino have developed cantonal species recovery schemes together with the Swiss Ornithological Institute and BirdLife Switzerland^{13, 16}. Other cantons have implemented species-specific cantonal action plans^{7, 23, 24}.

A central pillar of species conservation are the many volunteers and local organisations that dedicate their resources and expertise to nature conservation and species recovery. The regional integration of recovery projects via people, institutions and authorities is a key success factor.

Future challenges

To date, seven national action plans have been published in the context of the Swiss species recovery programme. Hopefully, these action plans will reinforce the commitment to species conservation on the part of the cantons and other partners.

The results of the 2013–2016 atlas clearly show that species conservation will continue to play an important role in nature conservation in Switzerland. Birds that breed in farmland and on natural rivers have experienced especially steep declines. Despite important achievements in the recovery of Western Capercaillie, Northern Lapwing, Little Owl, Common Hoopoe and other species, their populations remain vulnerable. To secure their survival in the long term, conservation efforts must continue. In future,

other birds will have to be included in the species recovery programme, as they meet the inclusion criteria following substantial population declines. Species conservation is specified as an important immediate measure in the «Action Plan for the Swiss Biodiversity Strategy»³. Besides the necessary funds, meeting these urgent challenges requires mutual understanding and close collaboration between authorities, conservationists, land owners and land users. Successful species conservation takes time and resources, so recovery programmes must be planned carefully and include strategies for monitoring success.

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¹ Arlettaz et al. (2010c); ² Beaud (2017); ³ Bundesamt für Umwelt (2017a)/Office fédéral de l'environnement (2017b)/Ufficio federale dell'ambiente (2017)/Federal Office for the Environment (2017); ⁴ Graf et al. (2014d); ⁵ Horch et al. (2015); ⁶ Kestenholz et al. (2010a–b); ⁷ Martinez (2016); ⁸ Meisser et al. (2016a–b); ⁹ Michler et al. (2015a–b); ¹⁰ Michler et al. (2016a–b); ¹¹ Mollet et al. (2008a–b); ¹² Pasinelli et al. (2008b–c); ¹³ Posse et al. (2011); ¹⁴ Ritschard (2017); ¹⁵ Robin (2014); ¹⁶ Scandolara & Lardelli (2007); ¹⁷ Schaub et al. (2010b); ¹⁸ Scholl (2016a–b); ¹⁹ Spaar & Ayé (2016a); ²⁰ Spaar & Ayé (2016b–c); ²¹ Spaar et al. (2012a–b); ²² Strebel et al. (2012a–b); ²³ Weggler (2004a); ²⁴ Weggler (2004b)