

Gaining ground: non-native bird species

For a long time, non-native birds received little attention. But today, invasive species are considered a threat to biodiversity. Monitoring these populations is therefore critical. Only then can we recognise when a species is spreading and, if necessary, take measures to stop it.

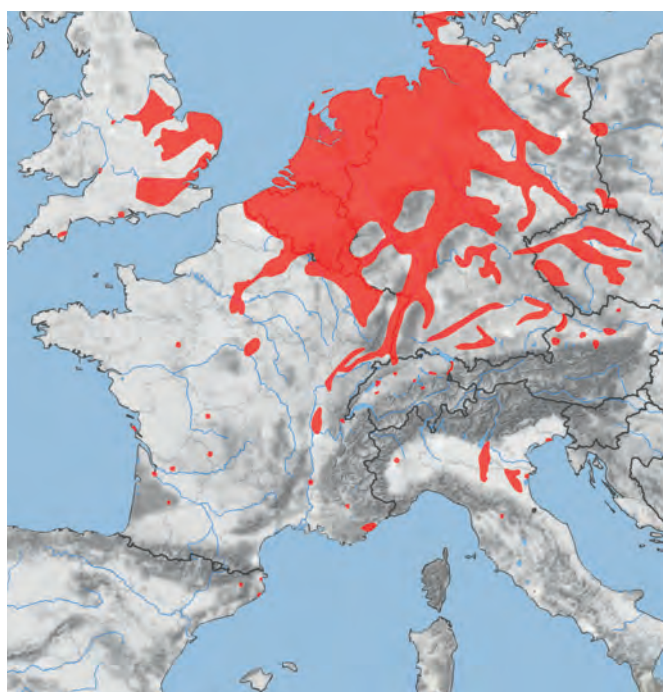
A species is considered alien or non-native when it has become established in areas outside its natural range with direct or indirect help from humans. Some species were deliberately introduced by humans, especially for hunting. In Switzerland, this mainly applies to the Common Pheasant; another example in Europe is the Canada Goose. Waterbirds were introduced to «enrich» our native birdlife with attractive species. Mute Swan and Greylag Goose first bred in Switzerland as a result of such introductions. Wild Mute Swans and Greylag Geese are native to Europe and have long wintered on Swiss lakes and rivers. Since it is no longer possible to determine whether a population derives from introduced or wild birds, these two species are not considered alien in Switzerland, and they are classified as native wild birds under federal hunting legislation. More common than deliberate introductions are accidental ones. In zoos, free-flying birds are considered an attraction, despite the risk of escape. Owners of private collections, unable to keep the young that are produced, may also sometimes let them escape.

Exotic waterbirds and parrots

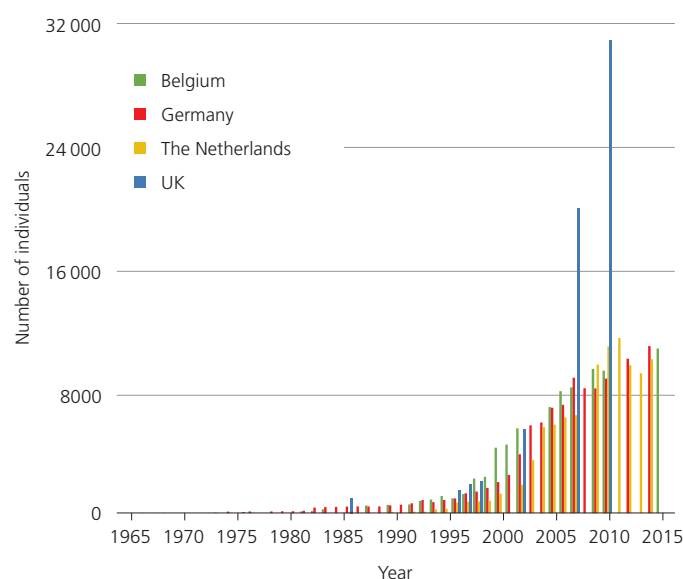
Most escapes from captivity do not survive very long or find a partner. Of the more than 150 alien bird species observed in Switzerland since 1997, only 17 have bred at all and only four breed regularly. For a long time, observers paid little attention to non-native birds, and the Swiss Ornithological Institute did not add them to its list of species to be recorded by volunteers until 1997. Compared to other European countries, Switzerland has only small populations of alien species¹⁻⁵. They are predominantly waterbirds. While the Ruddy Shelduck and Mandarin Duck populations originate from birds released or escaped within Switzerland, the Egyptian Goose, a native of Africa, now breeds here as a result of the species' southward expansion from the Netherlands and Germany. Parrots, in particular the Rose-ringed Parakeet, which can cause great damage in orchards and competes with other birds or bats for cavities^{3, 8, 10}, have only bred occasionally in Switzerland so far.

Invasive species are a threat to biodiversity

Not all non-native birds are problematic. The Mandarin Duck has bred in Switzerland since 1958 without any known conflict. The Ruddy Shelduck, in contrast, competes for nest sites with the Common Barn-owl and other species, which could become a problem if it continues to spread. In the past 20 years, the awareness that invasive alien species can pose a threat to biodiversity has increased. When the first Ruddy Ducks from North America began to breed in England outside of ornamental waterfowl collections, nobody anticipated that the species would spread to France and from there to Spain, where it threatened the White-headed Duck,



The Egyptian Goose is widespread and locally abundant in the Benelux countries and northwestern Germany especially. Background map: Natural Earth, Stamen Design & OpenStreetMap.



The Rose-ringed Parakeet has established itself in ten European countries, where numbers are growing rapidly, as illustrated by trends in the four most important countries besides Spain. Source: Pârâu et al. (2016).

- Black Swan
- ▼ Canada Goose
- ▲ Barnacle Goose
- Egyptian Goose
- ▼ Ruddy Shelduck
- Wood Duck
- ▽ Mandarin Duck
- △ White-cheeked Pintail



Geneva, Basel BS, Zurich, Rapperswil SG, Thun BE: The overlapping breeding records of non-native waterbirds show clusters in urban centres and near zoos. Ruddy Shelduck, Egyptian Goose and Mandarin Duck also breed in rural areas.

a species already struggling with habitat loss. The two species hybridise – an additional cause for conservation concern. A European action plan to protect the White-headed Duck was drawn up with the goal of eradicating the Ruddy Duck in Europe^{4,9}. Switzerland has joined the action plan, though it only applies to a handful of individual birds every year.

Prevention is crucial

The example of the Ruddy Duck illustrates how hard it can be to predict conflicts caused by non-native species and take timely action. As long as only a few pairs breed, no harm is done, so no measures are taken at this point, even though they would require little effort. Once a population has become established, however, interventions are costly and often have little chance of success. Prevention therefore plays an important role. Federal hunting legislation prohibits the release of non-native species; a ban has been placed on the Ruddy Duck, and special permits are required to import and keep several other species. Animal protection laws require that animals are kept in a way that prevents them

from escaping. In the case of birds, this can only be guaranteed when they are kept in secure enclosures. Prevention can also include removing broods found in new locations, particularly if the species is potentially invasive^{2,7}. According to Swiss hunting legislation, the cantons are responsible for preventing the spread of non-native species and must remove them if they pose a threat to native biodiversity.

Non-native species are expected to continue appearing in Switzerland. The most recent example is the Ashy-throated Parrotbill from China and Vietnam. The species was suspected of breeding in Ticino in 2017 after it had become established in neighbouring Italy^{HBW, 6}.

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Klingnau reservoir AG has a particularly high concentration of non-native waterbirds like the Ruddy Shelduck.

¹ Bauer et al. (2016b); ² Bundesamt für Umwelt (2016)/Office fédéral de l'environnement (2016)/Ufficio federale dell'ambiente (2016); ³ Hernández-Brito et al. (2014); ⁴ Hughes et al. (2006); ⁵ Kestenholtz et al. (2005); ⁶ Luoni et al. (2009); ⁷ Nentwig et al. (2016); ⁸ Pârâu et al. (2016); ⁹ Robertson et al. (2015); ¹⁰ Strubbe & Matthysen (2009)