



Spoonbills in Belgium

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The Belgian population of Eurasian Spoonbill stands at 80 pairs in 2022. Colonies are spread over 7 to 8 locations, almost all in the very low lands. The numbers at the first locality at Verrebroek (first breeding pair in 2003) still count for 45 % of the national total. Only one other area, the wetlands around river Ijzer, reaches consistently 10 or more pairs. Although suitable habitat seems to be present at quite a few other places, the lack of safe breeding places seems to limit the growth of the population. The presence of Red Fox *Vulpes vulpes* seems to have a big influence on colonising suitable breeding habitat. More than 80 % of the current breeding pairs are either tree nesting or nest in fenced off areas (Figure 1). Ongoing wetland restoration and management, taking into account safe breeding places for colonial waterbirds, could push the breeding numbers in the near future well over 100 breeding pairs.



Figure 1: Belgium's biggest colony at Verrebroek, fenced off since 2020, as it was abandoned by the spoonbills during the breeding season of 2018.

At the oldest colony, numbers reach 30 breeding pairs easily but not after a drawback by predation of Red Fox between 2017 and 2020. In 2019 the colony moved to an adjacent location, ignoring the newly fenced off breeding locality. They probably abandoned this location due to a manipulated nest site in combination with temporarily noisy activities



at 350 m. Only eight pairs bred on an unprotected nest site where all nests were predated. From 2020 onwards the ‘safe’ breeding locality was recolonised. At this colony the breeding success was measured since its origin. Within this measure the fate of all nests is included, starting from the early March-breeders to the late breeders, sometimes only starting at the end of June. Between 2003 and 2022 the breeding success was 1.4 fledged juvenile per pair on a total of 323 nests (Figure 2). This includes the years with no or very low breeding success due to predation. Mortality of pulli and even nests with eggs is also higher in springs with long, cold and/or rainy periods. This explains the low breeding success of 0.6 in 2013 and 0.9 in 2021, respectively the coldest and one of the wettest springs of this period.

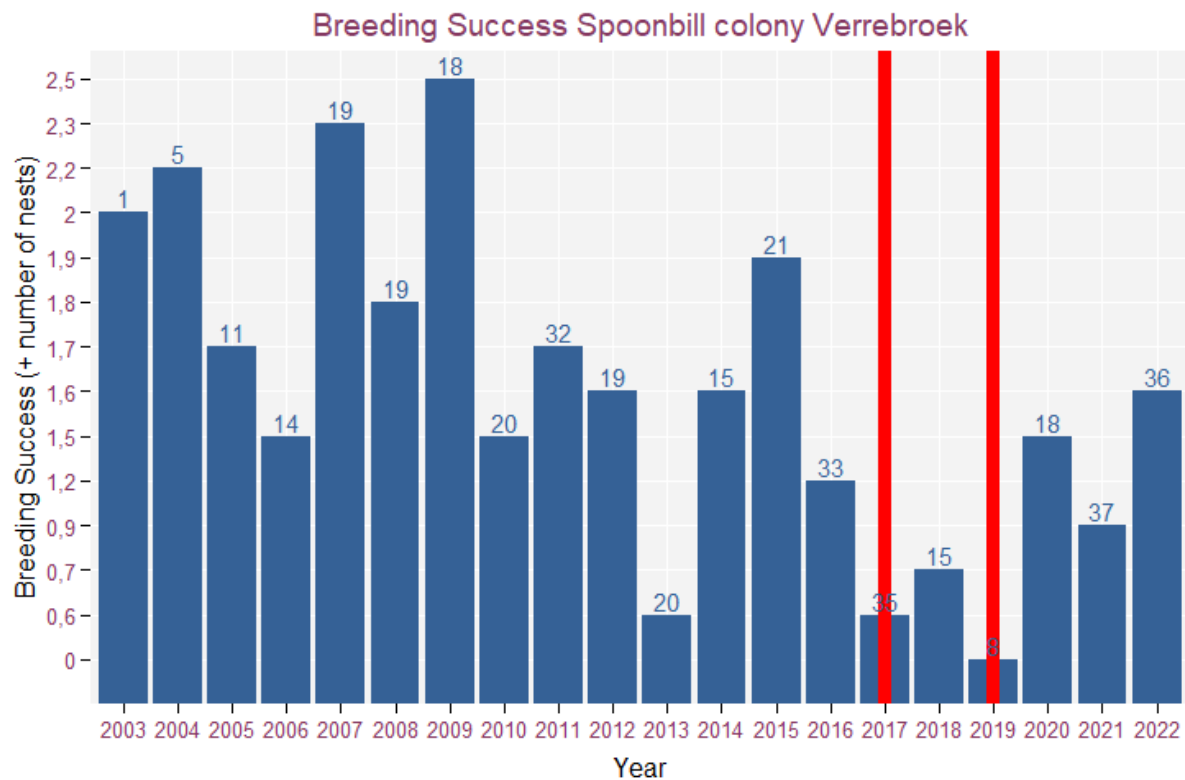


Figure 2: Breeding Success (= number of fledged youngs per pair) of the entire colony at Verrebroek with the number of nests indicated on top. The red lines indicate the period of heavy predation by Red Fox.

Throughout the years some fragmentary data was collected on mortality of flying birds near the colony of Verrebroek. A ‘natural’ cause of death in different years were toxic blooms of bacteria, either botulism or cyanobacteriae. The latter seem to be more important in certain foraging areas where the former is known to occur in all used areas but with a high variety of occurrences throughout the years. In the summer of 2023 Avian Influenza was not found on dead or ill waterbirds (Pied Avocet *Recurvirostra avosetta* and Northern Lapwing *Vanellus vanellus*) in the area indicating that the ill or dead spoonbills found here probably also suffered from bacterial infections. Just like some other waterbirds, some ill found spoonbills also recovered in only a few days.

Non-natural causes of death in the Antwerp harbour area are collisions with wind turbines or power lines. The application for a building permit must be accompanied by an impact analysis on flying birds and bats. At a selection of wind turbines, the spoonbill is considered a critical species implying that any case of collision leads to the revision of the operation procedure. We do, however, suffer a lack of knowledge about flight heights



and nocturnal/diurnal movements throughout the breeding cycle of the spoonbills. A misjudgement of these can influence the impact factors in the analysis in a detrimental way for the species.

A study was launched in 2022 to fill this knowledge gap using GPS-GSM transmitters. Although the original plan was to use one or two transmitters on adult birds, we did not succeed in capturing them. In the end, five transmitters were deployed on nearly fledged juveniles. As a start the study seems promising, producing multiple data on flight behaviour in and around the harbour area but limited compared to what we could expect from adult birds.

All five juveniles survived into their first winter, well after settling in their wintering grounds (Figure 3): one in the Netherlands (43 km north of the breeding area, arriving at the end of November), three in Atlantic France (arriving around 10th October) and one in southern Spain near Sevilla (arriving on 20th September). In the second half of January 2023 one of the wintering birds in France died (of an unknown cause). We expect some of the four other birds to return to the colony when they reach maturity. In addition, in 2023 we want to gather more data by deploying five more transmitters in the study area.



Figure 3: Movements of the five juvenile Spoonbills from Verrebroek equipped with a GPS-GSM transmitter between July and December 2022. The southern edge of each colour indicates the wintering site for the first four birds. For Wout (orange) this was at the northern edge of the line.