European white-fronted goose

Anser albifrons

England and Wales only

BASC's evidence review and recommendations for sustainable shooting

2023-2028
Recommendation

Take a maximum of two birds, per person, per day – targeted research required.

BASC

The British Association for Shooting & Conservation

European white-fronted goose – BASC recommendation

Take a maximum of two birds, per person, per day – targeted research required.

Research required

- Wintering surveys to better understand local and national distribution and abundance.
- Submission of bag data is required to better inform harvest estimates (data can be submitted to GWCT National Gamebag Census or BASC Green Shoots Bagged It).
- Shooters should support the BASC wing survey to enable better understanding of adult:juvenile harvest ratios.
- Increased ringing, ring resighting and ring recovery reporting required.

Shooting restrictions

- Two European white-fronts per person, per day, bag limit recommended.
- It is the responsibility of all who shoot to correctly identify your quarry. If in doubt, don't shoot.

Habitat management

- Collaboration with agricultural managers in key feeding areas to ensure there is adequate feeding ground available.

Stage 2 assessment

Anser albifrons sp. - Greater white-fronted goose – applies to England and Wales only

Species summary

Two distinct greater white-fronted goose (WFG) sub-species occur in the UK, both of which are migratory and overwinter in different parts of the country; The Greenland WFG *A.a. flavirostris*, which breeds in west Greenland, stages in Iceland and overwinters primarily in Scotland[1], Wales and Ireland, and the European WFG A. a. albifrons which breeds in north Europe and Asia, and overwinters in south and west Europe including England and Wales[1].

GWfG are no longer huntable quarry in the UK despite dedicated long-term conservation initiatives instigated by the shooting community that date back to 1972 in West Wales and Wales wide in 2012. There is already an International Single Species Action Plan for the Conservation of the Greenland White-fronted Goose, so this review will primarily focus on the European WFG which remains on Schedule II. NOTE: in some studies and reports the sub-species are not assessed separately.

European white-fronted geese should be retained on Schedule II given the overall stable/increasing flyway trend. Changes in WFG distribution and numbers is predominantly driven by climate change and the resulting short-stopping behaviour, which may lead to

a downturn in WFG numbers overwintering in the UK. However, the UK status and concern surrounding both WFG populations may lead to challenges surrounding this retention, BASC previously secured a moratorium with the wildfowling community on the shooting of all white-fronted geese in the North West of England to try and avoid the potential for misidentification in areas where both races could exist. The shooting of this species is infrequent within protected areas in England and Wales, with greater impacts outside of the wildfowling club structure. Therefore, efforts should focus on winter monitoring and bag recording across the entirety of the country and not just the foreshore areas.

Species conservation status (see Table 1)

The UK does not hold internationally important numbers of WFG[2] (<1% of the global population[3]), however the small wintering European WFG population appears to be stable overall. Within the two countries it overwinters in, trends differ. The sub-species shows a decline of -15% in England and an increase of +10% in Wales between 2008-2018. The species has short and long term (5 and 25 year) WeBS alerts in England identifying declines on SPA's >50% in the last 25 years[4]. European WFG is a notifiable species at only two SPAs in England (in Gloucestershire and Suffolk)4 however due to mixed trends there have been consenting conditions imposed at many sites where this is a feature species or part of a waterbird assemblage. Across the flyway, which is predominantly in Europe, the population appears stable and possibly increasing[5,6].

	BoCC[8] (2020)	**IUCN UK**[8] (2020)	**Europe**[6] (2021)	**EU28**[6] (2021)	**AEWA**[5] (2018)	**IUCN Global** (Last updated in 2016)[9]
Category	**R**	**EN**	**LC (W)**	**LC (W)**	**European: C1** **Greenland: A2***	**LC**
Trend (time period in brackets)	**Breeding: Stable** **Wintering: Decreasing**		**Stable** (over 3 generations)	**Increasing** (over 3 generations)	**Stable** (2009-2018)	Unknown
Population size estimate Mature individuals	**Breeding:** n/a **Wintering:** 14,000 Individuals[10]		1,180,000-1,970,000 (min-max)	1,040,000-1,570,000 (min-max)	**European:** 1,000,000-1,200,000[11] **Greenland:** 21,500[11]	3,100,000-3,200,000 (individuals)
Reason for category	Severe non-breeding population decline over 25yrs/longer term. Non-breeding localisation.	Reduction in the size (either abundance or range) of the wintering pop over 3 generations. Declines of 20-30% over 3 generations.	n/a	n/a	**European:** Population >100,000 and could benefit from international cooperation but does not show declines, range contraction or data deficiency. **Greenland:** Population between 10-25,000 but hunting may continue on a sustainable basis.	Large range, trend is not thought to be decreasing rapidly, large population size
WeBS UK 10-year tend (2008/09-2018/19): European -16%, Greenland -10%[12] BBS UK 10-year trend (2010-2020): n/a**						

Table 1. Species conservation status across different scales. *It has been highlighted by BASC that such automatic linkage between IUCN status and levels of protection by AEWA is directly contrary to the IUCN's advice on the use of its list. **No Breeding Bird Survey data (BBS) as the species does not breed in in the UK.

Population dynamics

Historic and current research on WFG predominantly focusses on the Greenland WFG population which, following a recovery in the 1990's due to hunting regulation, is now experiencing substantial, widespread decline as a result of poor breeding success[7]. Greenland WFG were removed from the quarry list in 2019 despite a widespread voluntary moratorium dating back to the 70's in the Dyfi and c. 2012 across Wales. The European population lacks such in-depth research but currently shows different trends. The dichotomy of UK trends versus European trends creates a complex situation surrounding European WFG, particularly given that the decline is thought to be driven by climate change and resulting short-stopping behaviour[3]. The BoCC and UK IUCN listings merge the sub-species in recent reports, however supplementary material reveals both species were assessed separately but both classed as 'Red' and 'Endangered' as a result of long-term population trends[8].

Hunting and harvest

European WFG shooting seasons in the UK are compliant with the Key Concepts of Article 7(4)[13]. WFG bag numbers over the last 20 years have been very low (<100) and as a result there is insufficient bag data on the species to estimate a trend in bag size or the sustainability of their harvest in the UK[14,15]. Overall, WFG experience limited hunting pressure within the UK, however, historically the highest bags have been in the former USSR, the Netherlands and Germany[2].

Greenland WFG may not be shot at all in the UK, this particularly affects Scotland and Ireland[2], however this has resulted in the restriction of any 'grey' goose shooting on the Dyfi, Wales and may impact Anglesey. This action has, in part, been driven by a Conservation Strategy for the species led by AEWA which has called for full legal protection of Greenland WFG16.

Given the primarily herbivorous nature of WFG, lead shot ingestion, is suggested not to be a major threat to the species[17]. Annual mortality in European WFG is relatively low, estimated around 25-30%[2]. However, hunting was previously stated as being the greatest driver of this mortality (around 80-95% of annual mortality)[2].

Pressures, action and research

Pressures

Climate change is likely the greatest driver of European WFG declines in the UK. With the UK being the most western extent of the species wintering range, the milder winters further north and east are thought to facilitate short-stopping and thus a decline in UK wintering numbers[2,3,18,19]. These climatic changes and shifts in other species distributions may eventually lead to competition with other species, such as Canada geese, for resources[20]. Given the localised distribution of wintering WFG populations in the UK, changes to these wetland sites and the surrounding agricultural land may be limiting the survival of migrant WFG9. European WFG are not considered major vectors of avian influenza compared to duck species[21]. Limited studies suggest WFG do not transmit the disease on long-distance migrations and stop-overs but rather contract it at wintering sites[21].

Practical action

Given the localised distribution of wintering European WFG in the UK[2], the conservation and improvement of over-wintering sites is key for the individuals that return to the UK each year[9,18]. This will be of paramount importance in severe winters where the species will likely extend the migration as far west as possible. Such habitat improvement may include collaboration with surrounding agricultural managers to ensure there is adequate feeding ground available. Continued monitoring of the species through WeBS surveys, as well as recording of any bag data is key to understanding the remaining wintering populations distribution and demographics.

Research action

Given the likelihood that UK declines are driven by climate change, a co-ordinated ringing/tagging programme is key to understanding distributional shifts and the exchange of individuals between flyways[2]. There is limited monitoring in eastern European countries where there are a number of remote WFG sites. Here, bio-logging methods as part of flyway-level project work, would provide some insight into their role in short-stopping and migration. Within the UK, monitoring changes to the wintering population and the agricultural feeding sites, which are predominantly unprotected, will provide greater insight into drivers of trends and priority areas for conservation actiion[2].

References

1. Eda, M. et al. Phylogenetic relationship of the Greater White-fronted Goose Anser albifrons subspecies wintering in the Palaearctic region. Ornithol Sci vol. 12 (2013).
2. Hearn, R. D. Greater White-fronted Goose Anser albifrons albifrons (Baltic-North Sea population) in Britain 1960/61 – 1999/2000. (2004).
3. Mitchell, C. et al. Trends in goose numbers wintering in Britain and Ireland, 1995 to 2008. Ornis Svec 20, 128–143 (2010).
4. Woodward, I. D., Frost, T. M., Hammond, M. J. & Austin, G. E. Wetland Bird Survey Alerts 2016/2017: Changes in numbers of wintering waterbirds in the Constituent Countries of the United Kingdom, Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and Areas of Special Scientific interest (ASSIs). BTO Research Report 721. www.bto.org/webs-reporting-alerts (2019).
5. AEWA. Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) - Agreement Text and Annexes As amended by MOP8. (2022).
6. BirdLife International. European Red List of Birds. https://op.europa.eu/en/publications. (2021) doi:10.2779/967570.
7. Fox, A. D. et al. The rise and fall of Greenland White-fronted goose: A case study in international conservation. British Birds 99, 242–261 (2006).
8. Stanbury, A. et al. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114, 723–747 (2021).
9. BirdLife International. Anser albifrons. The IUCN Red List of Threatened Species 2016. https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22679881A85980652.en (2016) doi:10.2305/IUCN.UK.2016.
10. Woodward, I. et al. APEP 4: Population estimates of birds in Great Britain and the United Kingdom. British Birds 113, 69–104 (2020).
11. Wetlands International. Waterbird Populations Portal. wpp.wetlands.org (2022).
12. Frost, T. M. et al. Waterbirds in the UK 2019/20: The Wetland Bird Survey. (2021).
13. Key concepts of Article 7(4) of Directive 79/409/EEC: Period of reproduction and prenuptial migration of Annex II bird species in the 28 Member States. (2014).
14. Aebischer, N. J. Fifty-year trends in UK hunting bags of birds and mammals, and calibrated estimation of national bag size, using GWCT's National Gamebag Census. Eur J Wildl Res 65, (2019).
15. Ellis, M. & Cameron, T. An initial assessment of the sustainability of waterbird harvest in the United Kingdom. bioRxiv (2022).
16. Stroud, D. A., Fox, A. D., Urquhart, C. & Francis, I. S. International Single Species Action Plan for the Conservation of the Greenland White-fronted Goose (Anser albifrons flavirostris). www.snh.org.uk/speciesactionframework/default.asp (2012).
17. Aloupi, M., Kazantzidis, S., Akriotis, T., Bantikou, E. & Hatzidaki, V. O. Lesser White-fronted (Anser erythropus) and Greater White-fronted (A. albifrons) Geese wintering in Greek wetlands are not threatened by Pb through shot ingestion. Science of the Total Environment 527–528, 279–286 (2015).
18. Stichting BirdLife Europe, BirdLife International & IUCN. Article 12 EU population status assessments: Annex B - Bird species' status and trends report format (Article 12) for the period 2013 - 2018. (2020).
19. BirdLife International. Anser anser. The IUCN Red List of Threatened Species 2018. https://dx.doi.org/10.2305/IUCN.UK.2018- (2018) doi:10.2305/IUCN.UK.2018.
20. Fox, A. D. & Glahder, C. M. Post-moult distribution and abundance of white-fronted geese and Canada geese in West Greenland in 2007. Polar Res 29, 413–420 (2010).
21. Yin, S. et al. No evidence that migratory geese disperse avian influenza viruses from breeding to wintering ground. PLoS One 12, (2017).