

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2006/07

European White-fronted Goose *Anser albifrons albifrons*

1. Abundance

The abundance of European White-fronted Geese during 2006/07 was monitored through the Wetland Bird Survey (WeBS).

2. Breeding success

A total of 1,072 European White-fronted Geese was aged at four localities in Britain between 24 December 2006 and 23 January 2007. Five flocks from four sites were sampled, varying in size from 150 to 313 birds. These comprised single samples from three independent flocks at WWT Slimbridge, Gloucestershire, and Holkham NNR and Heigham Holmes, Norfolk, and two samples from North Warren, Suffolk, which were both included as the overall proportions of young in each sample were considerably different from each other (5.5% and 32.7%). The overall percentage of young present in these flocks was 16.3%. Brood size was recorded for a total of 49 families, and the mean brood size per successful pair was 1.9 goslings, with brood sizes ranging from 1-5 goslings.

The proportion of young and mean brood size of European White-fronted Geese during winter 2006/07.

Region	No. sites	Total aged	% young	No. broods	Mean brood size
Gloucestershire	1	313	14.7	15	2.2
Norfolk	2	474	17.9	34	1.7
Suffolk	1	285	15.4	0	-
Total	4	1,072	16.7	49	1.9

3. Discussion

Following an exceptionally good breeding season in 2005, breeding success of European White-fronted Geese in 2006 was among the lowest recorded in the preceding ten years. However, prior to 2004/05, estimates of annual productivity were only routinely conducted at WWT Slimbridge, Gloucestershire. The proportion of young birds recorded at this site in 2006 was considerably lower (53.5%) than that recorded in 2005 and also below the recent ten year mean (1996-2005: 21.1%, ± 2.3 s.e.). The mean brood size at WWT Slimbridge (2.2 goslings per successful pair) was also lower than the preceding year (3.3) and the recent 10-year mean (1996-2005: 2.7, ± 0.2 s.e.).

The breeding success of European White-fronted Geese is greatly influenced by rodent abundance, predation and other factors such as weather. It is thought that the reproductive success of tundra-nesting geese follows the cyclic pattern of lemming populations, as a result of predators switching from lemmings to birds when the lemming population crashes (Blomqvist *et al.* 2002). During 2006, monitoring stations in the Arctic recorded low numbers of lemmings, following peaks in abundance in 2005 (Soloviev & Tomkovich 2007). Low abundance of predators (predominantly Arctic Foxes) however, resulted in high breeding success for certain parts of the breeding range (Soloviev & Tomkovich 2007).

The winter distribution is highly localised in Britain with most regular wintering sites situated in southern England (Hearn 2004). Although the largest flock occurs at Slimbridge, past records show that the proportion of young birds measured in flocks there are not always representative of the population as a whole (Cranswick *et al.* 2005). This emphasises the importance of making age assessments across a wider range of the wintering grounds, continuation of which will allow estimates of breeding success to be made that are more representative of both the total British and Baltic/North Sea populations.

4. References

Blomqvist, S, N Holmgren, S Åkesson, A Hedenström & J Pettersson. 2002. Indirect effects of lemming cycles on sandpiper dynamics: 50 years of counts from southern Sweden. *Oecologia* 133: 146-158.

Soloviev, M & P Tomkovich. (Eds.) 2007. *ARCTIC BIRDS: an international breeding conditions survey*. Online database: <http://www.arcticbirds.ru/> Accessed 13 June 2007.

Hearn, RD. 2004. *Greater White-fronted Goose Anser albifrons albifrons (Baltic/North Sea population) in Britain, 1960/61 – 1999/2000*. Waterbird Review Series, The Wildfowl & Wetlands Trust/Joint Nature Conservation Committee, Slimbridge.

Cranswick, PA, J Worden, RM Ward, HE Rowell, C Hall, AJ Musgrove, RD Hearn, SJ Holloway, AN Banks, GE Austin, LR Griffin, B Hughes, M Kershaw, MJ O'Connell, MS Pollitt, EC Rees & LE Smith. 2005. *The Wetland Bird Survey 2001/02 & 2002/03: Wildfowl & Wader Counts*. BTO/WWT/RSPB/ JNCC, Slimbridge.

This report should be cited as:

WWT. 2007. *Goose & Swan Monitoring Programme: survey results 2006/07 European White-fronted Goose Anser albifrons albifrons*. WWT/JNCC/SNH, Slimbridge.

© The Wildfowl & Wetlands Trust

All rights reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the copyright holder.

This report was produced under the Goose & Swan Monitoring Programme (GSMP). This programme monitors numbers and breeding success of geese and swans in the UK during the non-breeding season. GSMP is organised by the Wildfowl & Wetlands Trust in partnership with the Joint Nature Conservation Committee (on behalf of Natural Resources Wales, Natural England and the Council for Nature Conservation and the Countryside) and Scottish Natural Heritage.



Goose & Swan Monitoring