

13th MEETING OF THE TECHNICAL COMMITTEE
14 – 17 March 2016, Israel

**DELINEATION OF BIOGEOGRAPHIC POPULATIONS OF THE
BLACK-LEGGED KITTIWAKE (*RISSA TRIDACTYLA TRIDACTYLA*), THE
COMMON MURRE (*URIA AALGE AALGE* AND *U. A. ALBIONIS*) AND THE
ATLANTIC PUFFIN (*FRATERCULA ARCTICA*)**

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Black-legged Kittiwake *Rissa tridactyla tridactyla*

ISSUE

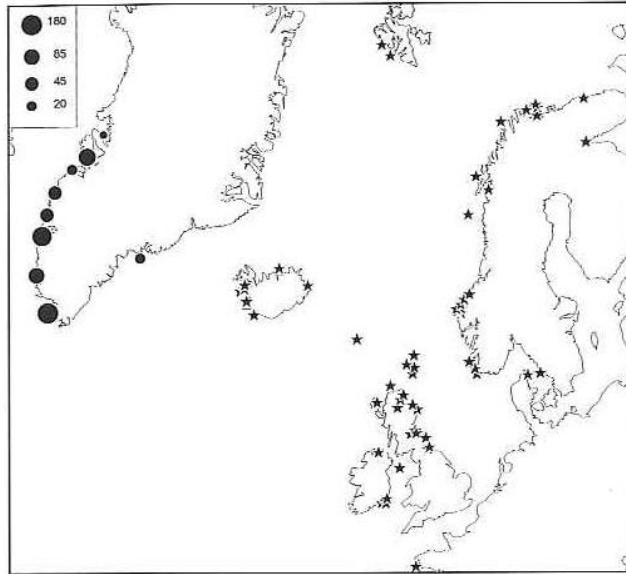
East Atlantic population of *R. t. tridactyla* should include birds breeding in Greenland (and possibly also Canada) on the basis of ringing data which shows clear movements across the northern Atlantic.

Waterbird Population Estimates 5 (WPE5) considers there to be three populations of the nominate race '*tridactyla*':

- East Atlantic 6,600,000 individuals
- Greenland 100,000 – 1,000,000 individuals
- West Atlantic 600,000 – 750,000 individuals

Conservation Status Review 6 (CSR6) gives a single East Atlantic population of *tridactyla* (6,400,000 – 7,600,000) as occurring in the Agreement area. Presumably this relates to the East Atlantic population of WPE5.

The world population of *R. t. tridactyla* includes Greenland and Canada – but there are recoveries of Greenland-ringed Kittiwake in Europe and a considerable number of recoveries of birds ringed in UK and other NE Atlantic countries in Greenland (Lyngs 2003, below), so it seems reasonable to continue to treat birds in NE & NW Atlantic as comprising a single population given this clear evidence of exchange across the Atlantic (or at least the Greenland and East Atlantic populations are clearly linked).



Map 56. Recoveries (filled circles) of Black-legged Kittiwakes ringed abroad (n = 763); stars denote ringing sites for birds ringed as chicks. The recoveries are plotted as total number per district (ASI+ILU+QEQ combined). Two recoveries from AVA are not shown.

Common Murre *Uria aalge aalge* and *U. a. albionis*

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The population of *U. a. aalge* is currently considered as a single population across the northern Atlantic. However, it should comprise separate NE & NW Atlantic populations on the basis of evidence of lack of trans-Atlantic interchange

Two races of Common Murres occur in the NE Atlantic: *Uria aalge aalge* and *U. aalge albionis*.

A number of published sources delineate the two races differently especially in respect of the different status of Irish and UK breeding birds. Detailed review for the third review of the UK's SPA network (Stroud *et al.* 2016 in press) suggest that the most robust assessment of population boundaries in Ireland and Britain is that of Harris & Wanless (2007):

- Murres in England (other than Northumberland), Ireland and SW Scotland north to, and including Ailsa Crag, are *U. a. albionis* (Table 1).
- Murres elsewhere in Scotland and in Northumberland are *U. a. aalge*.
- Races are separable but there is a degree of clinal change, so at their interface, the split between races is not absolute.

Table 1. Country allocation of Common Murre races following Harris & Wanless (2007) is as follows:

	<i>alge</i>	<i>albionis</i>
UK: Scotland (N, W & E)	<i>alge</i>	
UK: Scotland (S)		<i>albionis</i>
UK: England (Northumbria)	<i>alge</i>	
UK: England (minus Northumbria)		<i>albionis</i>
UK: Wales		<i>albionis</i>
UK: Northern Ireland		<i>albionis</i>
Ireland		<i>albionis</i>
France	<i>alge</i>	
Germany	<i>alge</i>	
Spain	<i>alge</i>	
Portugal	<i>alge</i>	
Sweden	<i>alge</i>	
Denmark	<i>alge</i>	
Finland	<i>alge</i>	
Faeroes	<i>alge</i>	
Iceland	<i>alge</i>	
Norway	<i>alge</i>	
Bear Island	<i>alge</i>	
Jan Mayen	<i>alge</i>	
Spitzbergen	<i>alge</i>	
Russia	<i>alge</i>	

Lyngs (2003) states “ ... birds of W Palearctic origin winter off Iceland eastwards to the E Atlantic coasts and no others have been recovered in Greenland or Canada despite large numbers being ringed... Canadian populations winter off Newfoundland, Nova Scotia and New England...”

del Hoyo *et al.* (1996) state “ ... no trans-Atlantic migrations known...” On this basis it seems valid to consider *aalge* breeding in the NW & NE Atlantic as two separate populations.

CSR 6 presents a single estimate for *U. a. aalge* related to “E North America, Greenland, Iceland, Faeroes, Scotland, S Norway, Baltic” sourced from a single source for the period 1997-2014.

The species is not included in WPE5.

There seems no basis to treat NW & NE Atlantic *aalge* as comprising as single population as CSR5 does, given the lack of evidence on any trans-Atlantic movements (especially notable given the large number of ringed birds on both sides of the Atlantic).

Atlantic Puffin *Fratercula arctica*

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The validity of *Fratercula arctica grabae* as a taxon.

Stroud *et al.* (2001) used the total population of *Fratercula arctica grabae* as the reference population for the UK SPA network for Puffin. This was derived from breeding populations of UK, Ireland, Faeroes, France and S. Norway. However, Harris & Wanless (2004) noted:

“In recent times, the Atlantic Puffin has usually been considered to comprise three subspecies, separated solely on size, although probably only two deserve recognition. Nominate F .a. arctica breeds in Iceland, most of Norway and Russia, and the west Atlantic. Atlantic Puffins breeding in Britain, Ireland, France, the Faeroes and southwest Norway tend to be smaller, and were assigned the name grabae. However, within Europe there is a continuous latitudinal cline in wing length, with large birds in the north and small birds in the south, and no obvious discontinuity that makes it easy to assign geographical limits to grabae and arctica. Protein evidence also suggests that there is no justification for separating grabae in the southeast Atlantic colonies from arctica in the north, and thus the name grabae is best discarded (Moen, 1991; Lowther et al., 2002).”

Accordingly Harris & Wanless (2004) concluded that “*grabae* ... is now considered to be indistinct from *arctica* ... and so [we have] treated those national estimates previously assigned to *grabae* as *arctica*.”

Accordingly, Stroud *et al.* (2016) has used an estimate for NE Atlantic *arctica* - derived as for former *grabae* but with the addition of arctic breeding birds in N Norway, Iceland and Russia (Table 2) *i.e.* *F. a. arctica sensu lat.*

Table 2. Derivation of population estimate for *arctica* Puffin *sensu lat* as given by Harris & Wanless (2004).

	pairs min	pairs max	
GB, IoM & CI	600,000	600,000	
All-Ireland	21,000	21,000	
Faeroes	550,000	550,000	
France	257	257	
Norway	1,500,000	1,500,000	
Iceland	2,500,000	2,500,000	
Russia	5,000	5,000	
	5,176,257	5,176,257	pairs
	Midpoint = 5,176,257		pairs
	10,352,514		individuals

CSR6 gives two populations:

- *Fratercula arctica arctica* (Hudson Bay & Maine E to S Greenland, Iceland, Bear Is, Norway to S Novaya Zemlya), and
- *Fratercula arctica grabae* (Faeroes, S Norway & Sweden, Britain, Ireland, NW France).

The CSR 6 estimate for *grabae* (1,167,000 pairs) is significantly less than the Harris & Wanless estimates for the same countries (3,843,000 pairs). It is not possible to calculate an *arctica sensu lat.* estimate with data more recent than that of Harris & Wanless (2004) without access to the national totals used by CSR 6.

There seems to be doubt as to the validity of *grabae* as a valid taxon, although Harris & Wanless (2004) give no source for their assertion. This needs to be resolved.

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