

# Treshnish Isles Auk Ringing Group

## Report for 2017



Surveyor and the surveyed (*Andrew Carter*)

Compiled by  
Robin M. Ward

Expedition dates:  
24<sup>th</sup> June – 1<sup>st</sup> July 2017

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## INTRODUCTION

Since 1971, the Treshnish Isles Auk Ringing Group (TIARG) has monitored, through ringing and census work, the breeding seabird populations of the Treshnish Isles, Argyll. A summary of the early expeditions is given in *Birds on the Treshnish Isles 1971-1995* (Walker & Cooper 1996). Annual reports have been produced since 1996. This report summarises the results of the Group's 39<sup>th</sup> expedition to the Treshnish Isles, during 24<sup>th</sup> June – 1<sup>st</sup> July 2016.

As in previous years, the expedition was based around the village ruins at the northern end of Lunga. The majority of the week's fieldwork was centred upon Lunga and Sgeir a' Chaisteil where the annual full seabird census and ringing of specific seabird colonies was carried out. Use of the inflatable boat kindly loaned by the Hebridean Trust, enabled seabird census coverage of the islands between Lunga and Fladda, including Fladda. Bac Mór and Bac Beag were surveyed from boat (Hoy Lass, Turus Mara) for the first occasion since 2011. This year was the twelfth year of a Shag Retrap Adult Survival study (RAS); this entails ringing each adult with its own uniquely engraved colour-ring so that it can be re-identified in the field in future years. This is part of the British Trust for Ornithology's (BTO) Integrated Population Monitoring Programme, funded by the UK Government. The Group's activities were dictated as always by the prevailing weather conditions. The frequent occurrence of rain showers and a breeze at night, limited the extent of mist netting of Storm Petrels achieved on Lunga as part of the Group's two Storm Petrel RAS studies.

All TIARG census and ringing data are submitted to two national monitoring programmes, the Seabird Monitoring Programme (JNCC) and National Ringing Database (BTO), respectively. The data supplied are of great conservation value, being the sole means of monitoring the seabird colonies of the Treshnish Isles. The conservation importance of these islands is recognised by their designation by the UK Government as a Special Protection Area for internationally important populations of breeding Storm Petrel *Hydrobates pelagicus* and wintering Barnacle Geese *Branta leucopsis*. The islands have also been designated a Site of Special Scientific Interest (SSSI) for seabird breeding colonies of national importance. Financial support for the monitoring work TIARG undertook in 2017 was provided by the Hebridean Trust ([www.hebrideantrust.org](http://www.hebrideantrust.org)), owners of the islands.



Expedition participants 2017: (left to right back row) Robin Ward, Shaun Micklewright, Andrew Carter, (left to right front row) Chris Heward, George Henderson, Claire Dovey, Tim Dixon & Lila Buckingham (Andrew Carter)

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## WEATHER

Date	Time	Max Wind Gust (mph)	Average Wind speed (mph)	Wind Direction	Temp (°C)	RH %	Pressure (hPa)	Cloud cover (oktas)	Visibility (miles)	Notes - Significant weather during the day
24.06.2017	21:30	31	18	WSW	11	78	997	7	29	Evening sunshine
25.06.2017	08:00	27	17	WNW	11.5	86	998	8	18	Showers
	17:00	18	14	NW	13.5	86	1001	5	29	Showers
	22:30	13	10	NW	12	89	1003	4	29	
26.06.2017	03:30	5	3	NW	11.3	90	1008	3	29	Calm
	09:30	4	3	W	13	83	1009	7	29	calm
	15:00	-			15					Breeze picking up
	17:00	5	2.5	N	17	72	1009	7	50	Heavy sky
27.06.2017	03:00	12	10	ESE	13	79	1005	8	18	
	06:30	7	4	SE	12	100	1002	8	1	Continuous rain, cleared 06.45
	10:00	20	14	SE	13	93.5	1001	8	29	Light rain
	13:00	12	10	SE	13	91	1001	8	50	Dry
28.06.2017	02:30	-			-					Woken by continuous rain
	05:00	-			-					Still raining
	11:00	8	7	SE	15	80	1000	3	50	Sunshine
	19:00	11	9	NW	14	89	1000	8	50	
29.06.2017	07:30	19	15	NNW	11	78	1000	8	29	High blanket cloud
	10:30	21	14	N	12	83	1001	8	18	High blanket cloud
	15:30	18	12	N	12	86	1001	8	18	Light rain
	16:30	22	16	NNW	12	95	1001	8	18	Rain
	23:00	23	16	NW	11	100	1002	8	5	Rain
30.06.2017	08:00	17	12	NW	12		1005	8	18	
	16:00	16	12	NW	13	95	1008	8	6	Sunshine
	22:00	12	7	W	12	96	1010	1	29	Clear sky
01.07.2017	06:00	-		SW	-					Light wind - calm
	10:30	14	7	E	14	99	1007	1	18	Showers during morning

Meteorological data tabulated above was recorded using a hand-held weather station on Lunga during the period 24 June to 1 July 2017.

George Henderson

## SYSTEMATIC LIST OF BIRDS FOR 2017

The following systematic list describes those bird species seen during the Treshnish Isles Auk Ringing Group's presence on the Treshnish Isles, 24<sup>th</sup> June – 1<sup>st</sup> July 2017. The introductory comments (first paragraph) refer to the species' status during the breeding season as recorded by previous expeditions.

A detailed breakdown of breeding seabird numbers on Lunga and Sgeir a' Chaisteil in 2017 is provided on page 17.

### **Greylag Goose** *Anser anser*

Breeding noted in some years, with a moulting flock present during late summer.

The moult flock had built up to at least 98 birds by 28<sup>th</sup> June, typically most were around the islands of Sgeir an Eirionnaich, Fladda and Sgeir an Fheòir. At least 32 and 12 birds were seen on Bac Mór and Bac Beag respectively during a boat-based survey on 30<sup>th</sup> June.

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Peak count	25	160	240	268	79	101	316	90	164	77
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Peak count	80	225	160	140	50	140	196	272	70	98

### **Canada Goose** *Branta canadensis*

Rare visitor.

Two birds were seen with Greylag Geese on Sgeir an Eirionnaich on 25<sup>th</sup>, 26<sup>th</sup> and 28<sup>th</sup> June. These sightings represent the second record by TIARG of the species on the Treshnish Isles, the previous record in 2016.

### **Shelduck** *Tadorna tadorna*

Until recently a rare visitor with one pair having bred occasionally since 2003.

There were no records of this species.

### **Eider** *Somateria mollissima*

Breeds regularly in small numbers.

Two broods were noted at Lunga's north end, one duck with three ducklings and one duck with a single duckling. Elsewhere a duck with three ducklings were seen at Tarbet, Lunga.

The only males recorded were up to two late-summer moulting birds in the waters between Fladda and Lunga, and a single bird off Little Dutchman.

### **Red-breasted Merganser** *Mergus serrator*

Rare visitor.

One male were seen in flight from the Village, Lunga, flying northwest on 28<sup>th</sup> June.

### **Fulmar** *Fulmarus glacialis*

A common breeding species. The Treshnish Isles supported 0.2% of the Great Britain population as estimated by *Seabird 2000*.

Breeding was confirmed on Lunga, Bac Mór, Bac Beag, Fladda and Sgeir a' Chaisteil. The breeding population for Lunga and Sgeir a' Chaisteil was estimated at 269 pairs based upon apparently occupied sites (AOS). This represents a <1% decline in the number of breeding birds from the previous year. Over the longer term, 1994-2017, the population has shown an overall decline. This is consistent with a decline nationally which may be due to declines in offal from trawlers, representing a 're-adjustment' to more natural levels following a period of artificially elevated population size (JNCC 2013).

### **Manx Shearwater** *Puffinus puffinus*

A common breeding species. The Treshnish Isles supported 0.4% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Presumed breeding birds were seen and heard at night on Lunga. Small numbers of birds were seen daily, feeding or passing offshore of Lunga.



**Storm Petrel** *Hydrobates pelagicus*

A common breeding species. The Treshnish Isles supported 20% of the Great Britain population and between 0.7 – 1.7% of the Atlantic (north-eastern) population as estimated by *Seabird 2000*.

Many birds were heard churring from burrows on Lunga.

Three nights of light winds and no rain gave the opportunity to mist net for Storm Petrels on Lunga at the Village and the Boulder Beach (below the Village). On the Boulder Beach, traditionally ringed locality below the Village on a single night, provided a catch of 278 birds using a 18 m net (for 2 hours 20 minutes). At the Village, 185 birds were caught using three 18 m nets over two nights (for 3 hours 45 mins period in total).

**Gannet** *Morus bassanus*

Regularly seen offshore

Small numbers of adult birds with the occasional immature were seen daily, feeding or passing offshore of Lunga.

**Shag** *Phalacrocorax aristotelis*

A common breeding species. The Treshnish Isles supported 2.1% of the Great Britain population and between 0.8 – 0.9% of the Atlantic (northeastern) population as estimated by *Seabird 2000* (1998 – 2002).

Breeding was confirmed on Lunga, Bac Mór, Bac Beag, Fladda and Sgeir a' Chaisteil. The breeding populations on Lunga and Sgeir a' Chaisteil were 231 and 8 pairs respectively, based on nest counts. Following a marked decline in the numbers of active nests in 2005 and 2006, numbers have since gradually increased with fluctuations from 73 to 231 active nests.

Large numbers of adults were in the vicinity of the colonies with over 400 birds moving offshore from the islands in the mornings to forage. Of those birds that were breeding on Lunga and Sgeir a' Chaisteil, great variation was once again found in the progress of breeding, with all stages from eggs to already fledged young noted. Brood sizes were mostly small, typically only two or three young.

2017 was the twelfth year of a Retrap Adult Survival study (RAS) that entails ringing each adult with its own uniquely engraved colour-ring so that it can be identified in the field in future years. This is part of the BTO's Integrated Population Monitoring Programme funded by the UK Government (<http://www.bto.org/ringing/ringinfo/ras/index.htm>). In 2017, of the birds marked from 2006 to 2016 on Lunga, 91 were re-sighted and/or recaptured by TIARG of a possible 319 individuals. A further 32 breeding adults were colour-ringed on Lunga in 2016.

**Grey Heron** *Ardea cinerea*

Rare visitor.

A single immature was seen on Corran Lunga on 25<sup>th</sup> June with it or another bird, heard calling the following day. One bird was seen on Bac Beag during a boat-based survey on 30<sup>th</sup> June.

**White-tailed Eagle** *Haliaeetus albicilla*

Rare visitor

There were no records of this species.

**Buzzard** *Buteo buteo*

Until recently, one pair bred in most years.

On Lunga breeding was confirmed by the presence of one pair of adults raising two well grown young.

**Peregrine** *Falco peregrinus*

Seen most years with breeding known to occur on adjacent coasts.

A single female bird was seen on 26<sup>th</sup> June, with a plucking position found the previous day on the west coast of Lunga between Corran Lunga and Harp Rock.

**Water Rail** *Rallus aquaticus*

Rare visitor.

One bird was heard calling at night and on occasions by day from a bracken covered cliff top area immediately east of the Village. This is the fourth record of the species on the Treshnish Isles by TIARG, and notably in the same locality as the single birds in the previous three years. A second bird was heard calling below the southern slopes of Cruachan, Lunga.

**Corncrake** *Crex crex*

Recorded almost annually and probably a regular breeder in small numbers.

Single males were regularly heard calling from the vicinity of the Village and on Corran Lunga, Lunga. A single male was also heard calling on Sgeir a' Chaisteil during most nights. On one occasion, a single male was heard calling on the saddle of Cruachan, Lunga.

**Oystercatcher** *Haematopus ostralegus*

Breeds regularly in small numbers.

On Lunga's beaches and rocky outcrops, 10 pairs (3 pairs at Corran Lunga, 2 pairs in area 9 and 6a, and single pairs in areas 5, 4 and 8) were behaving as though on breeding territory, alarming at human intruders and performing displays on the appearance of other Oystercatchers. Away from Lunga, breeding pairs held territories on Sgeir an Eirionnaich (4 pairs), Sgeir a' Chaisteil (2 pairs), Fladda (3 pairs) and Sgeirean na Giusaich (1 pair).

Small flocks of presumed failed breeders/non-breeders were evident on Lunga, typically at high tide, in the area of Sgeir a' Chaisteil and Corran Lunga where there would generally be up to 55 birds roosting. One and three birds were noted on the tidal rocks of respectively Bac Mór and Bac Beag during a boat-based survey on 30<sup>th</sup> June.

**Ringed Plover** *Charadrius hiaticula*

One or two pairs breed annually.

Typically, the only breeding pair on Lunga was confined to Corran Lunga, where the behaviour of the adults towards human intruders suggested that they were incubating eggs or had very young chicks. A third adult was noted in territorial dispute with the afore mentioned breeding pair suggesting the presence of a second breeding pair on Corran Lunga.

One bird alarmed at human intruders during a brief visit to Sgeir a' Chaisteil on 25<sup>th</sup> June.

**Curlew** *Numenius arquatus*

An irregular visitor.

One bird was seen on Sgeir a' Chaisteil on 28<sup>th</sup> June. A single bird was also heard calling at the north end of Lunga on the 1<sup>st</sup> July.

**Dunlin** *Calidris alpina*

An irregular visitor.

A single bird was heard from the north end of Lunga on the 27<sup>th</sup> June.

**Common Sandpiper** *Actitis hypoleucos*

One or two pairs usually breed.

Typically, the only breeding pairs on Lunga were confined to Corran Lunga, where the behaviour of the adults towards human intruders suggested that they were incubating eggs or had very young chicks.

One pair alarmed at human intruders during a brief visit to Fladda on 28<sup>th</sup> June.

**Greenshank** *Tringa nebularia*

Rare visitor

A single bird was heard from the Village, Lunga on 30<sup>th</sup> June.

**Redshank** *Tringa totanus*

Irregular visitor

A single bird was heard from the Boulder Beach, Lunga in the early morning of 27<sup>th</sup> June.

**Snipe** *Gallinago gallinago*

Breeds regularly in small numbers.

Up to two birds could be heard drumming/chipping over the Village on most days. Elsewhere on Lunga, up to two birds could be heard drumming/chipping between Shearwater Gully and Shag Alley (Area 3), singles drumming/chipping above the south face of Cruachan, south of the Village and west of the Village, with up to 2 heard drumming/chipping at the south end of Lunga (area 6 and 7). These data suggest a minimum population of 9+ breeding pairs.

A total of six birds were flushed during a brief visit by TIARG to Fladda on 28<sup>th</sup> June where the finding of two chicks confirming breeding.



**Arctic Skua** *Stercorarius parasiticus*

Small numbers seen daily, presumably from the breeding grounds on Coll.

Single dark phase birds were recorded on 25<sup>th</sup> and 28<sup>th</sup> June offshore from north and south end of Lunga respectively.

**Great Skua** *Stercorarius skua*

A small but regular breeding population has become established since the first confirmed breeding by a pair in 1998.

On Lunga breeding was confirmed by the presence of one chick on the high ground south of Tarbet (area 6). Two additional pairs held territory, situated south of Tarbet towards the reedbed and the other one noted on occasions north of Tarbet on the west coast. The behaviour of the former pair towards human intruders suggested that they were incubating eggs or had young chicks.

A total of four pairs were found during a brief visit by TIARG to Fladda on 28<sup>th</sup> June to be holding breeding territories; one pair west of the Havens and three to the east. One nest with egg and a well grown chick was found.

One apparently occupied territory was seen on Bac Mór during a boat-based survey on 30<sup>th</sup> June; a single bird was in attendance. In the previous year, some 10-12 birds were observed on Bac Mór during a brief visit made on the 5<sup>th</sup> June, by Mike Stanfield (The Hebridean Trust), John Bowler (RSPB) and Janet Bowler. All birds, approximating to 5 - 6 pairs, were apparently holding territory. When last visited by TIARG in 2011, one adult was seen to come off Bac Mór as the team sailed around the island as landing was not possible. On the previous two visits by TIARG in 1999 and 2000 when landing was possible, no birds were seen. The true extent of breeding by the species on Bac Mór will not be known until further opportunities arise for surveyors to land on the island during late June/early July.

**Puffin** *Fratercula arctica*

Common breeding species. The Treshnish Isles supported 0.3% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Breeding adults occupied burrows on Lunga, Sgeir a' Chaisteil and Fladda. Three adults were seen on Bac Mór during a boat-based survey on 30<sup>th</sup> June. The estimated breeding population on Lunga and Sgeir a' Chaisteil was 3,349 apparently occupied burrows (AOBs). For counts of birds, one bird is taken to represent one AOB (Mitchell *et al.* 2004). Numbers have since 2004 fluctuated between 2,423 and 3,349 AOBs with the exception of the comparatively low estimates of the two years 2010-2011; 1,705 and 1,611 AOBs respectively. One winter plumaged adult was seen visiting a colony on Lunga.

**Black Guillemot** *Cephus grylle*

Regular breeding species in small numbers. The Treshnish Isles supported 0.4% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Adults were seen around the Sgeir an Eirionnaich - Sgeir an Fheòir sea area (2 birds), Fladda (12 birds), Bac Mór (6), Bac Beag (9) and Lunga (8).

**Razorbill** *Alca torda*

Common breeding species. The Treshnish Isles supported 0.8% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Breeding was confirmed on Lunga, Sgeir a' Chaisteil and Fladda. The main concentration was typically located within the vicinity of Harp Rock. A total of 569 birds was counted on Lunga and Sgeir a' Chaisteil, in addition to the birds associated with 30 chicks located amongst accessible boulder colonies. The breeding season was considered no more or less advanced than average for this species.

Two birds were seen on Bac Mór and none on Bac Beag during a boat-based survey on 30<sup>th</sup> June.

**Guillemot** *Uria aalge*

Common breeding species. The Treshnish Isles supported 0.7% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Breeding was confirmed only on Lunga, Sgeir a' Chaisteil and Fladda, with the main concentration as usual within the vicinity of Harp Rock where 7,858 adults were estimated. The total for Lunga and Sgeir a' Chaisteil combined was 8,463. The mean count for the past five years is 7,468 birds (range 6,324-8,758). The breeding season was considered no more or less advanced than average for this species.

Eight birds were seen on the sea within 200 m of Bac Mór during a boat-based survey on 30<sup>th</sup> June.

**Common Tern** *Sterna hirundo*

Irregular breeding species. The Treshnish Isles supported 0.6% of the Great Britain population as estimated

by *Seabird 2000* (1998 – 2002).

The behaviour of two adults on Sgeir an Eirionnaich towards avian predators suggested that they were incubating eggs or had very young chicks on the 25<sup>th</sup> June.

#### **Arctic Tern** *Sterna paradisaea*

Regular breeding species.

A ternery was present on Sgeir an Eirionnaich. A brief census visit on 28<sup>th</sup> June only found four nests, three with two eggs and a fourth with one egg. Colony size was therefore estimated from flush counts with an estimated 20 pairs (40 adults counted when flushed) on Sgeir an Eirionnaich. Elsewhere breeding was only confirmed on Sgeirean na Guisaich (estimated 2 pairs; 3 adults counted).

#### **Kittiwake** *Rissa tridactyla*

A localised breeding species. The Treshnish Isles supported 0.2% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Breeding was confirmed only on Lunga, where the main colony is around Harp Rock. The number of apparently occupied nests on Lunga was 514. A marked population decline of the colony from 2008 ended in 2011 since when numbers have widely fluctuated. The breeding season was considered no more or less advanced than average for this species.

Up to 371 birds were dispersed between roosts on Sgeir an Eirionnaich and the intertidal rocks off Sgeir a' Chaisteil. Amongst these birds were at least ten first-summer individuals with three such birds being seen on ledges amongst breeding birds.

#### **Common Gull** *Larus canus*

Irregular breeding species in small numbers.

An estimated 3 pairs (6 adults flushed) were noted on Sgeir an Eirionnaich. Elsewhere eight pairs were estimated to be holding breeding territories on Fladda, found during a brief visit by TIARG on 28<sup>th</sup> June; 3 pairs on the low-lying basalt rock outcrop on Fladda's south-east coast and 5 pairs (9 birds counted) on the east side of North Haven. Up to four adult birds were regularly seen frequenting Lunga.

#### **Lesser Black-backed Gull** *Larus fuscus*

Regular breeding species in small numbers.

One apparently occupied territory was noted within the south end gully on Lunga, in area 8. Elsewhere an estimated 3 pairs (6 birds counted when flushed) were found on Fladda during a brief visit by TIARG on 28<sup>th</sup> June.

No pairs were recorded by TIARG on sailing around Bac Mór and Bac Beag on 30<sup>th</sup> June.

#### **Herring Gull** *Larus argentatus*

A regular breeding species. The Treshnish Isles supported 0.2% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

Breeding was confirmed on Lunga (estimated 5 pairs, 10 adults counted when flushed; six nests) within the south end gully on Lunga, in area 8. Breeding was also confirmed on Fladda (estimated 13 apparently occupied territories; up to 26 adults counted) and suggested on Bac Mór by the presence of two apparently occupied territories. No birds were occupying territories on Sgeir a' Chaisteil, Sgeir an Eirionnaich, Sgeirean na Guisaich, Sgeir an Fheòir, Sgeir na h-Iolaire and (when viewed from a boat) Bac Beag.

The small numbers of birds now breeding on Lunga follows a marked decline in population during the late 1990's / early 2000's (see section "*Population changes for a selection of breeding species on Lunga, 1994 – 2016*").

#### **Great Black-backed Gull** *Larus marinus*

A regular breeding species. The Treshnish Isles supported 2.0% of the Great Britain population as estimated by *Seabird 2000* (1998 – 2002).

From colony visits, breeding was confirmed on Lunga (14 pairs), Sgeir an Eirionnaich (estimated 14 apparently occupied territories; up to 28 adults counted with 11 young found), Sgeir an Fheòir (6 apparently occupied territories with young from two broods seen), Fladda (estimated 28 pairs; 56 adults counted when flushed), Sgeir a' Chaisteil (1 pair) and Sgeir na h-Iolaire (1 pair). Four apparently occupied territories were seen on Bac Mór during a boat-based survey on 30<sup>th</sup> June. No birds were occupying territories on Sgeirean na Guisaich or Bac Beag. The breeding season was considered no more or less advanced than average for this species.

The small numbers of birds now breeding on Lunga follows a marked decline in population during

the early 2000's (see section "*Population changes for a selection of breeding species on Lunga, 1994 – 2014*").

**Rock Dove** *Columba livia*

Regular breeding species in very small numbers.

Birds were seen daily on Lunga, principally along the east coast, the largest groups being of 4 birds. Birds were seen daily, most days produced one to four sightings of party of 2-4 birds with the odd lone bird as well.

**Hooded Crow** *Corvus cornix*

A regular breeding bird in small numbers.

For a fourth consecutive year, the frequency and number of birds recorded on Lunga was notably lower than in previous years. The species was seen daily either on or flying between Lunga and Sgeir a' Chaisteil, with no more than four birds noted at any one time.

Elsewhere during brief visits to adjacent islands, two birds were seen at Sgeir an Eirionnaich, Fladda and Bac Mór.

**Raven** *Corvus corax*

At least one pair breeds in most years.

At least five individuals were seen on occasions frequenting the north end of Lunga, the largest group at any one time being of all five birds. At least two birds were moulting adults that were accompanied at times by what were thought to be three juveniles due to the absence of wing moult or abraded flight feathers.

Elsewhere during brief visits to adjacent islands, one bird was seen from the sea over the Cairn na Burghs.

**Skylark** *Alauda arvensis*

A regular breeding species in small numbers.

Up to three singing males were on Lunga. Single singing males were present on the slope of Cruachan above Shag Alley and south of Tarbet in Area 7 and Area 6. Two birds were flushed in Area 6 and another in Area 7 on 30<sup>th</sup> June. A single bird was heard to call when over flying the Village, Lunga, on 25<sup>th</sup> June.

**Whitethroat** *Sylvia communis*

Rare visitor.

Two singing males were heard during a brief visit to Fladda on 28<sup>th</sup> June. One bird was located between South and North Haven, and the second male was in the south east corner of Fladda. These are respectively the fourth and fifth records by TIARG on the Treshnish Isles, the previous birds being on Fladda (in 2002) and Lunga (2007 and 2016).

**Sedge Warbler** *Acrocephalus schoenobaenus*

A scarce but almost annual visitor.

There were no records of this species.

**Wren** *Troglodytes troglodytes*

A regular breeding species, quite common where habitat is suitable.

As in previous years, the vast majority of records were confined to the northern half of Lunga, predominantly amongst the boulder scree and bracken-covered slopes from Cruachan down to the sea and on Corran Lunga. Food carrying, alarms, a nest and recently fledged young confirmed breeding on Lunga. Casual observations indicated a minimum of four territories along the base of the west coast between the Well and the second gully south of Corran Lunga; five territories in and around the Village; one territory in Shag Alley; two territories beside the Boulder Beach; one territory in the Village south of Cruachan; and one territory in Area 6. An adult female with brood patch and two recently fledged juveniles were ringed in the Village on 29<sup>th</sup> and 30<sup>th</sup> June. A female was recaptured on 26<sup>th</sup> June at the Village where it had been ringed the previous year as an adult.

Two males were heard singing in South Haven during a brief visit to Fladda on 28<sup>th</sup> June.

**Starling** *Sturnus vulgaris*

A regular breeding species in small numbers.

Small flocks of up to 40 birds were noted daily on Lunga, comprising mostly juveniles, and regularly

to be seen foraging on and around the rotting Long-finned Pilot Whale carcass in the “Dirty Inlet” that separates Lunga and Corran Lunga.

**Wheatear** *Oenanthe oenanthe*

A regular breeding species in small numbers.

Widespread breeding species on Lunga with adults and fledged young observed across all count areas. Several families of adults with dependent (and presumed locally bred) young were seen on Lunga, including Area 7 (one family), Area 4 (two), Area 2 (1+) and Corran Lunga (a brood of 4). A nest with young was located in Area 6A/5.

Elsewhere during brief visits to adjacent islands, an adult and juvenile was seen at Sgeir a' Chaisteil, and single adults on Bac Mór, Sgeir an Eirionnaich and its adjacent islet.

**Dunnock** *Prunella modularis*

Irregular breeding species.

A singing male was heard within the vicinity of the Village between 24<sup>th</sup> and 30<sup>th</sup> June. A male was recaptured on 28<sup>th</sup> June at the Village where it had been ringed the previous year as an adult. A presumed second singing male was heard on the south slopes of Cruachan on 28<sup>th</sup> June.

**Pied Wagtail** *Motacilla alba yarrelli*

A regular breeding species in very small numbers.

One pair of adults was regularly seen in the vicinity of the Village, Lunga, and at times carrying food. Another adult carrying food was seen at Harp Rock. Single record occurrences elsewhere on Lunga included an adult male north of Shearwater Gully and a single bird in Area 8.

Brief visits to adjacent islands located a bird on Sgeir a' Chaisteil.

**Meadow Pipit** *Anthus pratensis*

A regular breeding species in small numbers.

Widespread breeding species on Lunga with no estimate of territories made, though less numerous than Rock Pipit *Anthus petrosus*. Food carrying, alarms and recently fledged young confirmed breeding on Lunga.

**Rock Pipit** *Anthus petrosus*

A regular breeding species in small numbers.

Breeding birds were common along the coast of Lunga and on Sgeir a' Chaisteil. Food carrying, alarms and recently fledged young confirmed breeding on Lunga and Sgeir a' Chaisteil. A minimum of 6 breeding pairs with young were estimated to be present at the south end of Lunga (Areas 5, 6a and 8), including Tarbet (Area 9). Up to 12 birds foraged on and around the rotting Pilot Whale carcass in the “Dirty Inlet” that separates Lunga and Corran Lunga.

Brief visits to adjacent islands located birds on Fladda, Sgeir an Eirionnaich (2 birds) Bac Beag (2) and Sgeirean na Guisaich (1).

**Twite** *Carduelis flavirostris*

Regular breeding species in small numbers

Small parties of up to three birds were noted daily around the northern half of Lunga. The frequency and number of birds recorded on Lunga was for a second successive year notably lower than in previous years.

Elsewhere six birds were seen on Fladda whilst no birds were recorded on Sgeir a' Chaisteil probably on account of the brevity of the visit to this island.

## SYSTEMATIC LIST OF MAMMALS FOR 2017

### **Otter** *Lutra lutra*

Evidence of presence regularly noted.

However in this year, no evidence of this species was noted on either Lunga or Sgeir a' Chaisteil.

### **American Mink** *Neovison vison*

No known occurrences.

No evidence of this species was noted on either Lunga or Sgeir a' Chaisteil.

### **House Mouse** *Mus musculus*

Resident, apparently in small numbers.

Individual animals were seen on several occasions at the expedition base in the Village, at the north end of Lunga.

Chocolate wax monitoring blocks are a method with which to attract and record the distinctive bite marks of different rodent groups e.g. mice and rats (Varnham 2008). Pairs of chocolate wax monitoring blocks, "chew sticks", were laid for three successive days overnight at twenty locations around the settlement at southern foot of Cruachan, Lunga. The chew sticks were then inspected for rodent teeth marks. The chocolate wax monitoring blocks were made following the method of Varnham (2008).

Teeth marks were found on some but not all chew sticks laid amongst the remaining wall foundations of house at the east end of the settlement. They were found to be chewed by mice. This locality is also where chew sticks were chewed by mice in the previous year. Where these two surveys recorded the mice was also within, or at least in close proximity to, known colonies of breeding Storm Petrel (Gilbert & Helmsley 1996). Whether these presumed House Mice are predating breeding Storm Petrels, their young or eggs, remains to be established. Determining this will be difficult given the nest sites are hidden from view in crevices within walls and under rocks, and the need for monitoring to be non-invasive.

No rodents were detected at the remaining localities that chew sticks were deployed.

The surveys of 2016 and 2017 follow similar exercises on Lunga in 2012 and 2013 as reported by TIARG in their respective annual reports, when mice were detected on the Boulder Beach but not within the seabird colony along the footpath above the 2<sup>nd</sup> gully in Area 12 and in Area 10.

### **Brown Rat** *Rattus norvegicus*

No known occurrences.

No evidence of this species was noted on either Lunga or Sgeir a' Chaisteil.

### **Rabbit** *Oryctolagus cuniculus*

Resident, numbers much reduced in recent years.

No systematic monitoring took place. Casual observations on Lunga suggest that it is abundant. All sightings of black individuals were from Lunga, involving a minimum of 7 individuals at widespread localities.

No evidence was noted of animals on Sgeir a' Chaisteil.

### **Grey Seal** *Halichoerus grypus*

A regular breeding species, contributing just under 3% of the annual UK pup production. Numbers are regularly monitored by the Sea Mammal Research Unit (NERC, St Andrews). The conservation importance of these islands as a breeding colony is recognised by their designation by the UK Government as a Special Area of Conservation.

A maximum of 75 animals were visible from Lunga hauled out on intertidal reefs to the north and east at low tide with at least a further 20 animals beyond south of Fladda. At the south end of Tarbet off Area 5, up to 16 animals were hauled out on intertidal rock on 25<sup>th</sup> June. Elsewhere eight animals were seen at both Bac Mór and Bac Beag by TIARG when sailing around the islands on 30<sup>th</sup> June.

### **Common Seal** *Phoca vitulina*

Rare visitor.

A single pup and mother was seen on the intertidal reefs along the west coast of Bac Beag by TIARG when sailing around the islands on 30<sup>th</sup> June. Nearby were another 14 animals. Previous records of this species by TIARG around the Treshnish Isles has been occasional sightings of lone animals.

### **Harbour Porpoise** *Phocoena phocoena*

Rare visitor.

Two separate groups of two or more animals were watched at the same time off the west coast of

Lunga on 26<sup>th</sup> June.

**Minke Whale** *Balaenoptera acutorostrata*

Irregular visitor

One was seen travelling north off the west coast of Lunga on 26<sup>th</sup> June.

**Long-finned Pilot Whale** *Globicephala melas*

Rare visitor

The well rotten body of a small individual of this species laid beside the “Dirty Inlet” that separates Lunga and Corran Lunga. The skull of this animal which had become separated from the body was located along Lunga’s coast to the east of Corran Lunga.

**Pipistrelle Bat** *Pipistrellus pipistrellus* (45 kHz)

Previously regarded a rare visitor. True status uncertain.

Two or more animals of this species now recorded annually since 2011, were recorded over the Village on several nights. The species’ identity was confirmed from use of a bat dectector (a device used to detect the presence of bats by converting their echolocation ultrasound signals, as they are emitted by the bats, to audible frequencies).



A Long-finned Pilot Whale skull (Andrew Carter)



## SYSTEMATIC LIST OF LEPIDOPTERA FOR 2017

### **Common Blue** *Polyommatus icarus*

Regular breeder

Two were recorded on Sgeir a' Chaisteil on 25<sup>th</sup> June.

### **Red Admiral** *Vanessa atalanta*

Migrant

Singles were recorded at the Village, Lunga, on three dates.

## OTHER NOTABLE WILDLIFE RECORDS

### **Oyster Plant** *Mertensia maritima*

Localised species on Lunga.

At Tarbet (west) the species continues to be well established with no marked difference in abundance and extent to that of recent years.

### **Common Carder Bee** *Bombus pascuorum*

Probable resident

A queen of this species was seen at the Village, Lunga, on 25<sup>th</sup> June.

### **Red-tailed Bumblebee** *Bombus lapidarius*

Probable resident

Individuals of this species were seen at the Village, Lunga, on 25<sup>th</sup> and 26<sup>th</sup> June.

### **White-tailed Bumblebee** *Bombus lucorum*

Probable resident

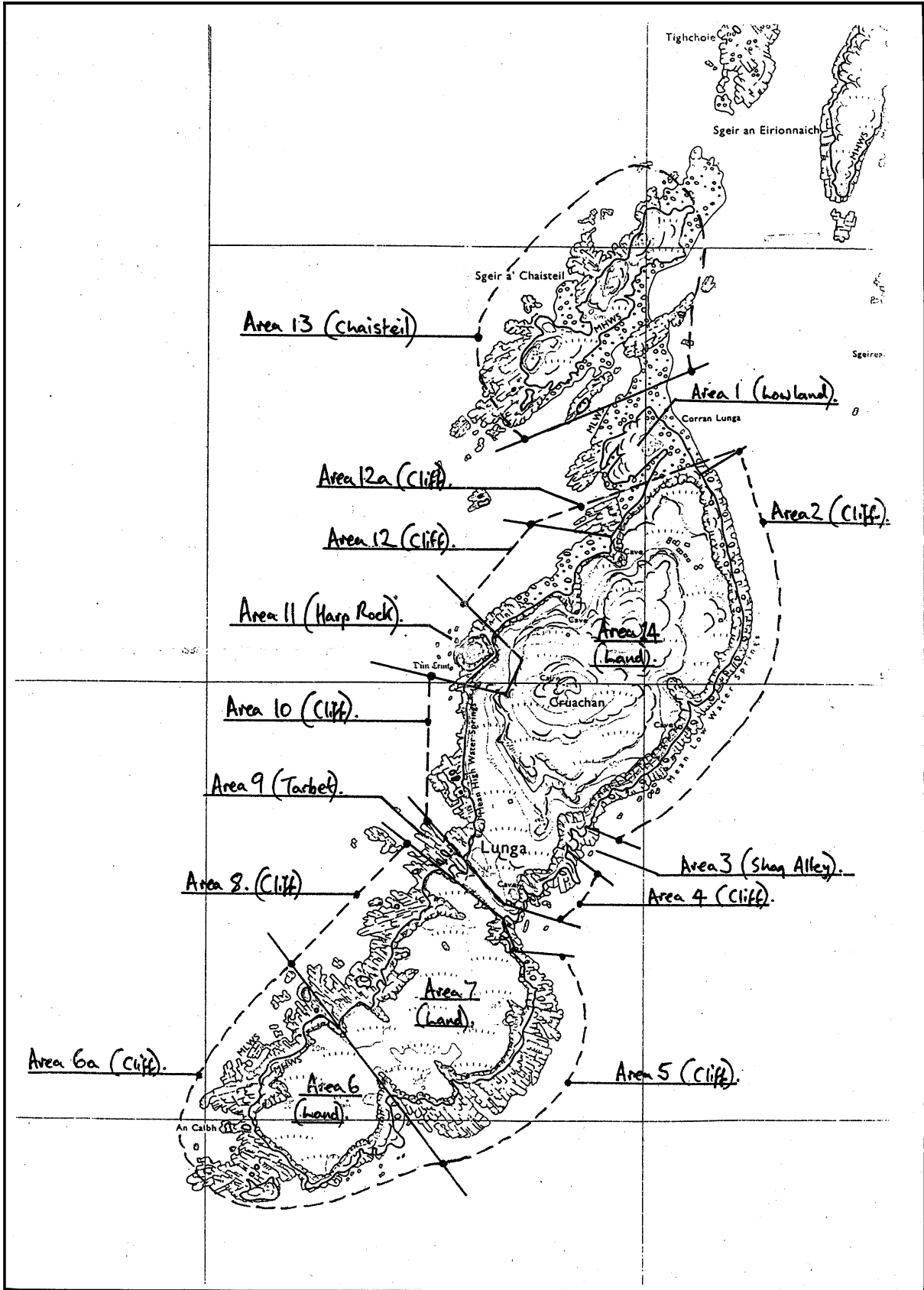
The species was recorded at several localities in the northern half of Lunga during the expedition. Elsewhere an individual of this species was recorded during a brief trip to Fladda on 28<sup>th</sup> June.



Breeding adult Puffin with retained winter plumage (Andrew Carter)



# MAP OF CENSUS ZONES – LUNGA AND SGEIR A' CHAISTEIL



## 2017 BREEDING SEABIRD CENSUS DATA FOR LUNGA, SGEIR A' CHAISTEIL AND ISLETS

Sector	Count unit	Lunga	Sgeir a' Chaisteil	Sgeirean na Giusaich	Sgeir an Fheoir	Sgeir an Eirionnaich	Sgeir na h-Iolaire	Bac Mór	Bac Beag	Fladda
Fulmar	AOS	240	29					69	6	+
Manx Shearwater	No census	+								
Storm Petrel	No census	+								+
Shag	AON	231	8					15	4	+
Great Skua	AOT	2						1		
Lesser B-b Gull	AOT	1								3
Herring Gull	AOT	5						2		13
Great B-b Gull	AOT	14	1		6	14	1	4	3	28
Common Gull	AOT					3				8
Kittiwake	AON	532								
Common Tern	AON					1**				
Arctic Tern	AON			2**		20**				
Razorbill	IND	569	1							
Razorbill	AON	30								+
Razorbill	SEA	114								
Guillemot	IND	8358	105							+
Guillemot	SEA							8		
Black Guillemot	IND	8				2		6	9	12+
Puffin	SEA	951								
Puffin	IND	1140	11					3		
Puffin	AOB	2083	215							+

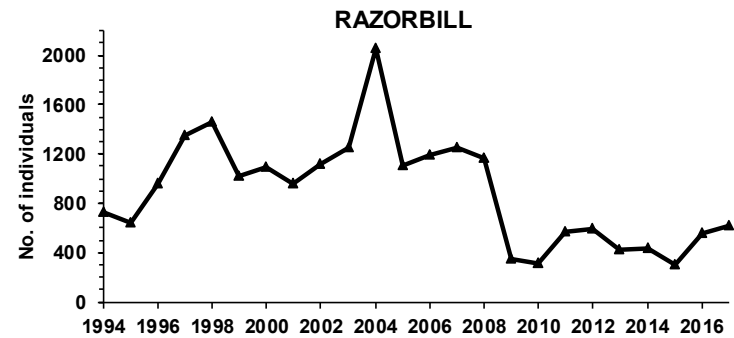
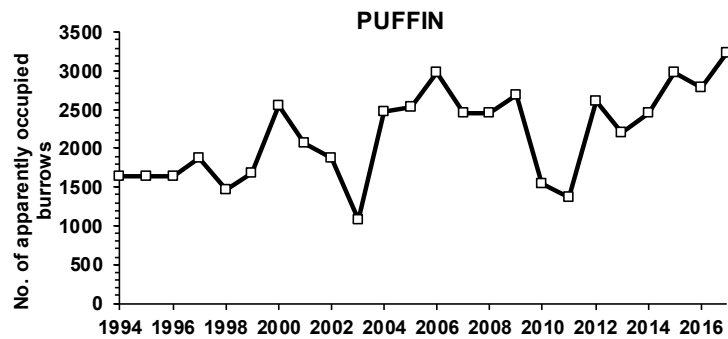
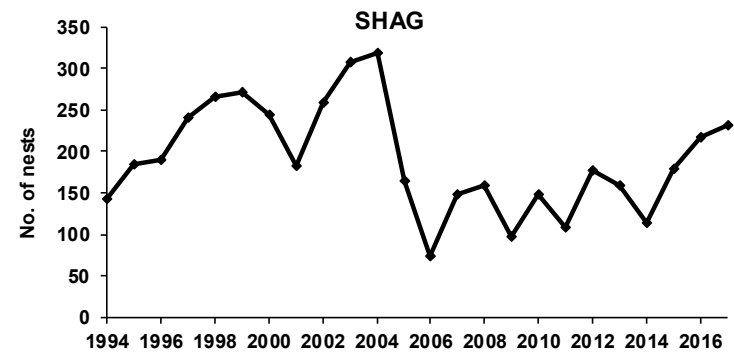
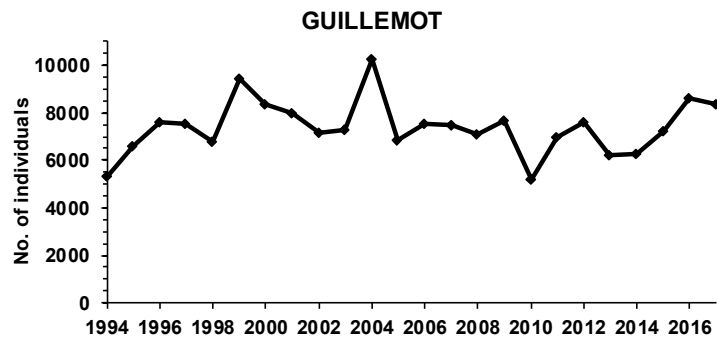
**Key to count unit codes:** AON/AOT/AOB = apparently occupied nest/territory/burrow IND = Individuals on land  
SEA = individuals on sea within 200m of colony PRS = Pairs nc = no count + = breeders present  
\*\*Estimated from flush counts with the number of adults divided by two

### Totals for each Census Zone of Lunga and Sgeir a' Chaisteil

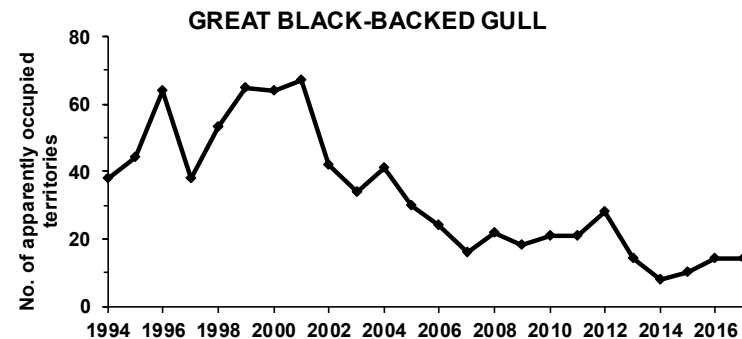
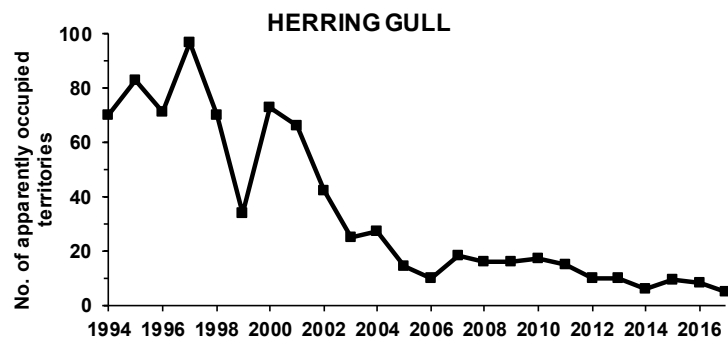
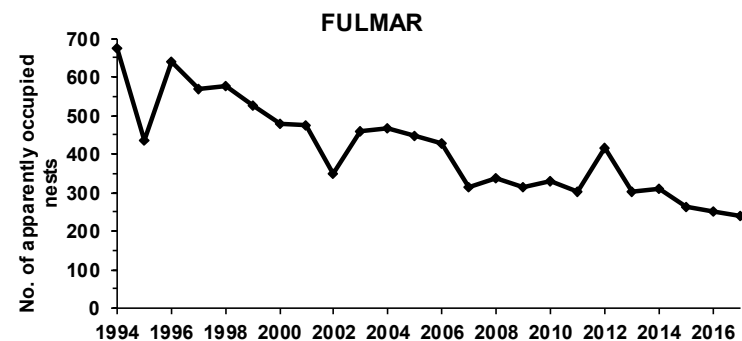
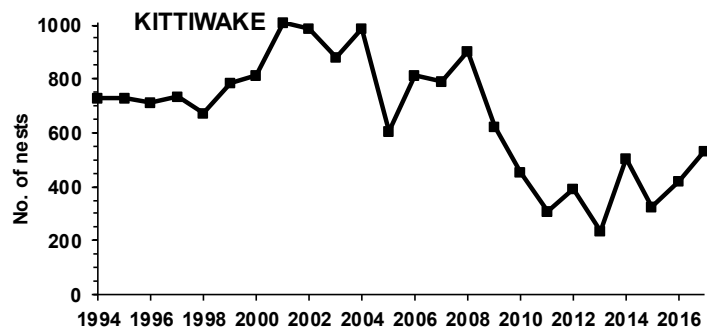
Sector	Count Unit	Count Sectors on Lunga (1 – 12a) and Sgeir a' Chaisteil (13)															Lunga & Chaisteil
		1	2	3	4	5	6	6a	7	8	9	10	11	12	12a	13	Totals
Fulmar	AOS		41	11	15	30		10		21	7		8	86	11	29	269
Shag	AON		36	41	4	34				21		17	29	47	2	8	239
Great Skua	AON						1		1								2
Lesser B-b Gull	AOT									1							1
Herring Gull	AOT									5							5
Great B-b Gull	AOT	1			1		4		7			1				1	15
Kittiwake	AON												514*	18			532
Razorbill	IND		98	89		26		3				30	185	115	23		569
Razorbill	AON					25				5							30
Razorbill	SEA				82			14		28							114
Guillemot	IND					16						158	7858	306	20	105	8463
Guillemot	SEA				72												72
Black Guillemot	IND					1		7									8
Puffin	SEA				347	4								600			951
Puffin	IND			430										710		11	1151
Puffin	AOB											197	480		1406	215	2298

**Key to count unit codes:** AON/AOT/AOB = apparently occupied nest/territory/burrow IND = Individuals on land  
SEA = individuals on sea within 200m of colony PRS = Pairs nc = no count + = breeders present  
\* 120 birds were only visible when counted from the sea (75 AON) and a wave cut platform (45 AON). These are not in previous years accessed to include in the annual count unless otherwise stated.

## POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2017



## POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2017 (con't)



## TRESHNISH RINGING TOTALS FOR 2017

Site	Species	New birds			Recaptures		Total
		Adult	Juvenile	Pulli	Retraps	Controls	
Lunga	Fulmar	1					1
	Manx Shearwater	7			1		8
	Storm Petrel	339			109	15	463
	Shag	25		176	103		304
	Great Skua			1			1
	Herring Gull			4			4
	Great Black-backed Gull			4			4
	Kittiwake	22			17		39
	Guillemot	229			24		253
	Razorbill	40		1	6	1	48
	Puffin	219			27	1	247
	Wheatear		3				3
	Rock Pipit		3		1		4
	Meadow Pipit		1				1
	Wren				1		1
	Dunnock				1		1
Fladda	Great Skua			1			1
	Great Black-backed Gull			1			1
Sgeir an Eirionnaich	Great Black-backed Gull			11			11
Treshnish Isles	Grand total for 2017	882	7	119	290	17	1396

\*91 of 103 Shag 'retraps' were colour-ringed birds of which the majority were sighted and not captured.

Note: All rings used in 2017 were registered to *Treshnish Auk Ringing Group* with exception of one used on a Wheatear (*Robin M. Ward*).



Manx Shearwater (Andrew Carter)

## RETRAPPING ADULTS FOR SURVIVAL PROJECT

### 1. Introduction

Breeding adult Storm Petrels and Shags are ringed annually by TIARG in specific sections of the colonies on Lunga. The conservation value of this aspect of TIARG's ringing programme has since 2006 been much increased with its inclusion into the British Trust for Ornithology's Retrap Adult Survival (RAS) monitoring programme. Adult Shags are now fitted with a uniquely numbered colour ring; many of these birds have been metal ringed already as pulli by TIARG. Over 300 Shags are now individually identifiable in the field without the need for recapture. Adult Storm Petrels continue to be BTO metal ringed only.

### 2. What is RAS

RAS aims to provide information on adult survival. RAS uses re-sightings of colour-marked individuals and captures of adult birds to calculate what proportion survive each year. The aim of a RAS project is to re-capture (or re-sight, Shag only) within a defined area, a minimum of 30 adult birds from previous years. TIARG try to avoid big changes in effort between years and keep a record of their catching effort (number of visits made and number of hours spent re-capturing and / or re-sighting). This means that survival can be calculated by the British Trust for Ornithology (BTO) more precisely from the information collected.

### 3. Study area and Method

#### 3.1. Shag RAS

TIARG's Shag RAS study areas extend along Lunga's north-west coast and section of the east coast.

All adults are caught by hand in the colonies and usually at the nest. A single engraved darvic colour-ring is placed on the bird's left leg. The colour-ring is either:

- 1) lime (light green) with a black engraved number between 100 to 299, read from top to bottom and repeated twice on the ring; or
- 2) dark green with a white engraved number between 300 to 499, read from top to bottom and repeated twice on the ring

During the annual one week visit to Lunga by TIARG at the end of June, expedition members record the details of any colour-ringed Shags seen, both during targeted searches of the colonies for marked birds, and at all other times.

#### 3.2. Storm Petrel RAS

TIARG operate two Storm Petrel RAS on the north-east corner of Lunga. All adults are mist netted (without tape lure) in colonies. The study area of one RAS is the Village where a survey visit uses a line of three 18 m four shelf mist nets erected adjacent to the south side of the Cottages. The study area of the second RAS is the Boulder Beach. Here a survey visit comprises of using two or three 18 m nets positioned at the northern end or alternatively one 18 m or two 12 m nets towards the colony's southern end (below the 'latrine').

During the annual one week visit to Lunga by TIARG at the end of June, expedition members attempt one night of mist netting at each of the three netting locations, or more if required to meet the sample of Storm Petrels required.

### 4. Results

The BTO has provided TIARG with project specific feedback on the results of the three RAS studies up to and including 2016. The results are presented here alongside the latest national trend for comparison. National survival trends are published as part of the BirdTrends report ([www.bto.org/birdtrends](http://www.bto.org/birdtrends)) and on the RAS website ([www.bto.org/ras-results](http://www.bto.org/ras-results)).

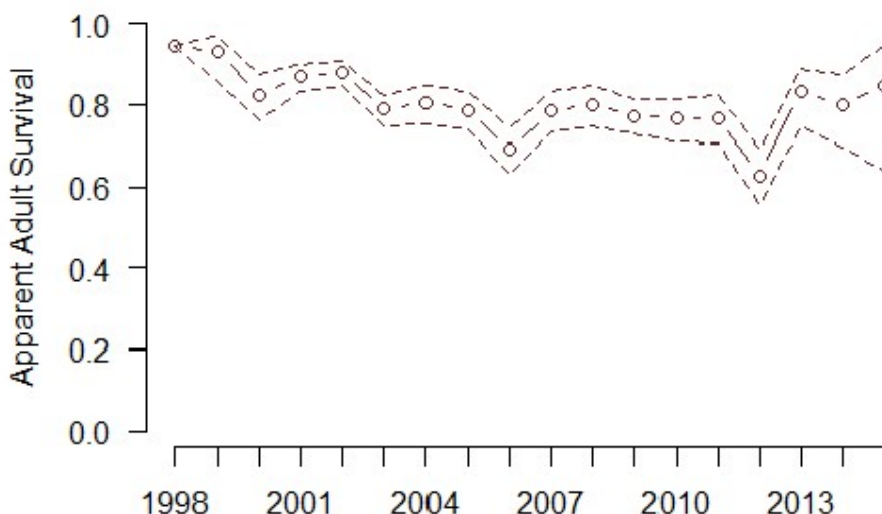


## 4.1. Storm Petrel RAS

### 4.1.1. National trend

TIARG's RASs are two of three active projects for Storm Petrel in the UK. The national trend is generated from two historical and three current projects (Figure 1). The quality of the national trend is considered to be 'Good'. Following a prolonged, gradual decline, Storm Petrel survival rates exhibited a sharp increase in survival between 2013 and 2014 but declined again slightly between 2014 and 2015.

**Figure 1.** The RAS programme national trend in the apparent adult survival of Storm Petrel



On viewing the graphs in this paper, the following three points should be noted:

- That the graphs end at 2015; this is because the RAS programmes calculate survival between years, so the last point is the survival from 2015 to 2016.
- The graphs show "Apparent Adult Survival", defined as the probability that an adult bird alive in the previous year survives and returns to the study area. The analysis accounts for the fact that birds which are present may not be seen every season, but birds permanently emigrating from the study area will be presumed dead, thus the true survival rate may be slightly higher than the figures presented here.
- The dotted lines show the upper and lower 95% Confidence Limits around the average estimate (solid line and points). The closer these lines are to the solid line, the more confidence we have in the accuracy of the survival rates.

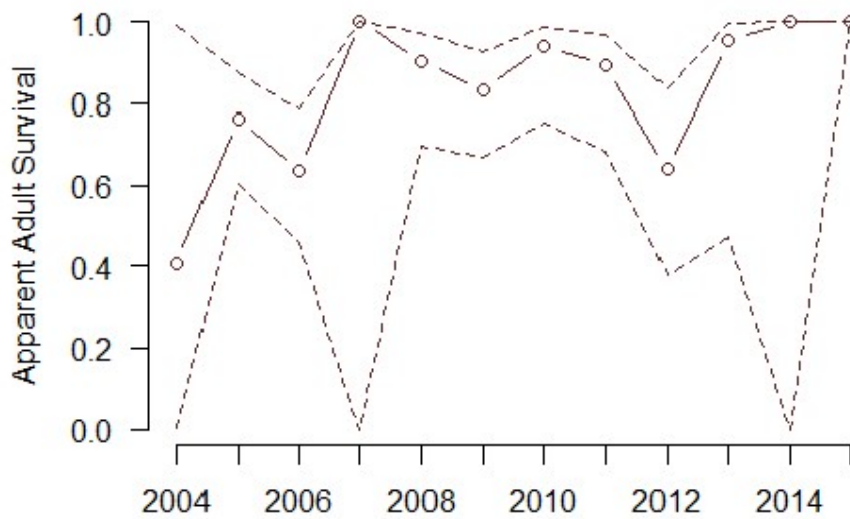
### 4.1.2. Boulder Beach RAS

Unlike the national trend, the results from the Boulder Beach RAS (Figure 2) suggest that the population is increasing. The modelling programmes were unable to calculate a survival rate estimate for 2007 (as there were no birds caught that year) or for 2015. The reason for the latter is unclear but may be due to the high number of birds caught and the proportionally smaller number of adult-adult retraps caught. The range of recapture probabilities across the active projects is between 9% and 18%.

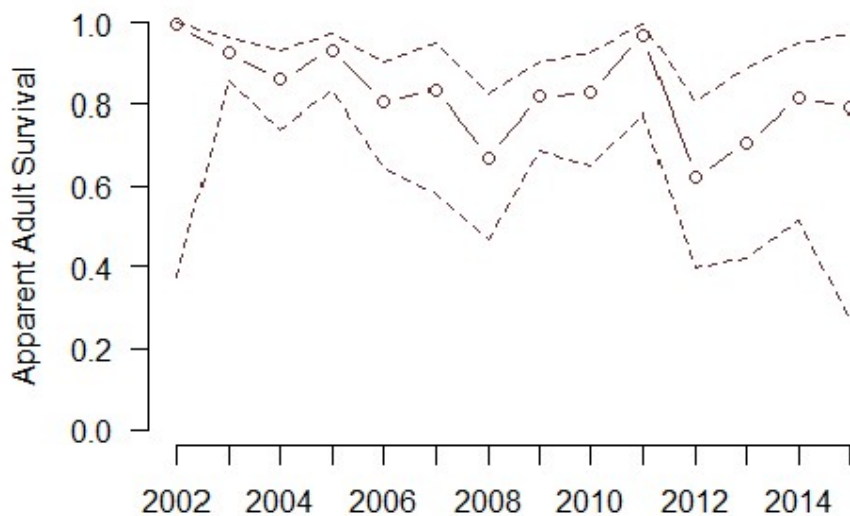
### 4.1.3. The Village RAS

Although fluctuating, the trend appears to show a slight decline in the survival rate of the population; however, the decline is less steep than the national decline and the survival rate estimate is higher than the national estimate. The increase in the width of the confidence limits over the last couple of seasons is likely due to the proportionally smaller number of adult-adult retraps caught in relation to the numbers of birds caught. The range of recapture probabilities across the active projects is between 9% and 18%. The results indicate that TIARG have a well-designed project that is working well.

**Figure 2.** The trend in the apparent adult survival of Storm Petrel at Boulder Beach RAS study



**Figure 3.** The trend in the apparent adult survival of Storm Petrel at the Village RAS study



A summary of the results for the TIARG Storm Petrel RAS studies are presented in Table 1. On viewing the summary results tabulations, the following three points should be noted:

- The 'mean survival rate' is the probability that an individual bird alive in one breeding season will survive to the next averaged across all years and sites; and,
- The 'mean re-encounter rate' is the probability that an individual (which is alive and living in the study area) will be either recaptured or resighted.

**Table 1:** Summary results for the two Storm Petrel RAS studies

	Boulder Beach RAS	The Village RAS
Estimate of average annual adult survival across all projects	78%	78%
Estimate of average annual adult survival from TIARG project	80%	82%
Estimate of TIARG project's average annual recapture probability	9%	18%

## 4.2. Shag RAS

### 4.2.1. National trend

TIARG's RAS is one of two active projects for Shag. The national trend is generated from two historical projects and your project. The quality of the national trend is considered to be 'Uncertain'. As one project began the year after the previous two ended, it has been difficult to calculate appropriate confidence limits for the last few years. The long-term trend (1998-2016) is stable.

### 4.2.2. TIARG RAS

The results of TIARG's RAS show the population has declined in recent years; however, it is encouraging to see that the survival rate is higher than the national rate. For some reason, the modelling programme was unable to calculate a survival rate for this past season hence the 100% survival rate and very wide confidence limits. This is not a reflection on the number of adult-adult retraps achieved as TIARG have been getting just over 50 for the last few years. Ignoring this last season, the narrow confidence limits around the trend and the high recapture probabilities indicate that TIARG have a well-designed project that is working well.

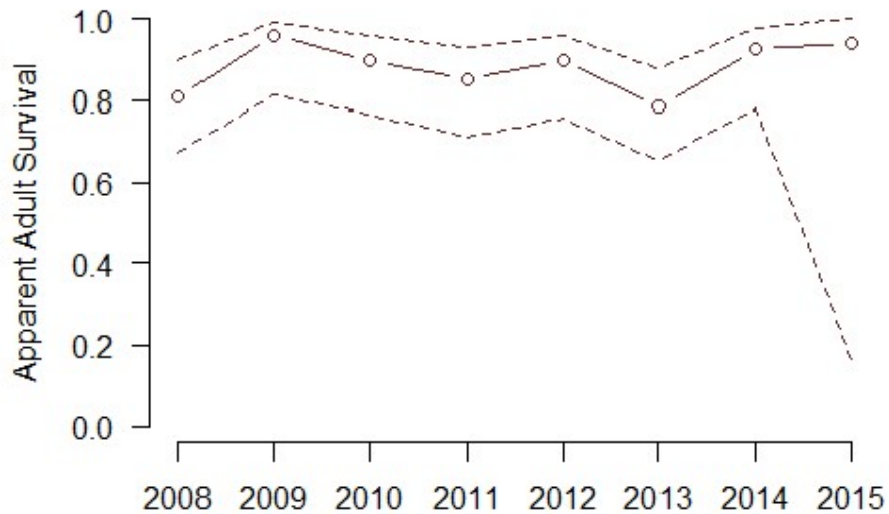
A summary of the results for the TIARG Shag RAS study are presented in Table 2.

**Table 2:** Summary results for the Shag RAS studies for the two sexes

	Shag RAS	
	Males	Females
Estimate of average annual adult survival across all projects	78%	81%
Estimate of average annual adult survival from TIARG project	83%	89%
Estimate of TIARG project's average annual recapture probability	63%	55%

**Figure 4.** The RAS programme national trend in the apparent adult survival of Shag

**Figure 5.** The trend in the apparent adult survival of Shag for the RAS study on Lunga



## 5. Acknowledgements

RAS is supported by a partnership between the BTO and the Joint Nature Conservation Committee (JNCC) on behalf of the country agencies (Natural England, Natural Resources Wales, Scottish Natural Heritage and the Department of Agriculture, Environment and Rural Affairs, Northern Ireland). It is also part of the BTO Ringing Scheme which is funded by the BTO/JNCC Partnership, The National Parks and Wildlife Service (Ireland) and the ringers themselves.



Colour-ringed Shag '410' (Andrew Carter)

### TRESHNISH RINGING TOTALS 1971 – 2017

SPECIES	1971	1974	1976	1977	1978	1980	1982	1984	1986	1989	1991	1993	1994	1995	1996	1997	1998	1999	2000
Eider																			
Fulmar	17	6	4		8	21	14	18	7	21	15		4	27	38	7	24	23	12
Manx Shearwater		2	13		4	4	1	8					9	1		2	1	4	4
Storm Petrel		254	22		1	283		203	800	411	975	75	440	536	331	1104	741	732	414
Shag	150	7	10	10	24	80	50	160		40	10		10	59	96	99	150	100	59
Buzzard						1	2												
Corncrake																			
Oystercatcher		1				1	4	2										2	
Ringed Plover																			
Common Sandpiper																	1		
Great Skua																	1		
Kittiwake						1	1	1	2	2	4		6	10	1	50	41	23	13
Common Gull																	4		5
Lesser Black-b Gull																			
Herring Gull	6	1			14	46	35	56	4	4	3		5	24	19	52	73	39	15
Great Black-b. Gull	3	6	3	7	6	22	14	35		22	15		6	25	16	48	19	16	2
Guillemot	32	20	14		66	502	137	364	180	250	306		109	498	349	472	503	507	892
Razorbill	65	72	90		115	266	218	236	151	103	64		81	101	105	98	112	102	133
Black Guillemot																1			
Puffin	70	198	271		203	200	208	182	174	160	114		358	236	301	267	398	274	389
Hooded Crow																			
Willow Warbler														1					
Wren														3					
Starling																			
Stonechat																			
Wheatear			12					1	3						5	24	37	22	50
Pied Wagtail													1	3	2				
Meadow Pipit														4		1			12
Rock Pipit									5	1				2	4	2	4	2	1
Twite																2			
TOTAL	343	567	439	17	441	1427	684	1266	1326	1014	1506	75	1029	1530	1267	2229	2109	1846	2401

NOTES: (1) Data for 1971 - 1995 extracted from Walker & Cooper (1996). This may not include all rings used.  
(2) Ringing data for a three day visit in 1972 are not available.

**TRESHNISH RINGING TOTALS 1971 – 2017 (continued)**

SPECIES	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Eider				1														1
Fulmar	25	22	25	47	14	15	8						1		1		1	425
Manx Shearwater			2		1	1	2		4	9	3	18	3	13	13	5	8	135
Storm Petrel	1030	15	360	83	491	962	21	118	403	293	202	212	191	448	978	258	289	14076
Shag	37	97	99	200	77	35	141	124	53	116	67	120	115	90	148	165	200	3023
Buzzard																		3
Corncrake					1						2							3
Oystercatcher	1						4				2	2	1	2	1	4		27
Ringed Plover					1		1											2
Common Sandpiper						1	1	1									1	5
Great Skua		1	1		1			2	4		2			2			2	16
Kittiwake	11	3	2	21	15	14	16	3	4	3	8			16	12	14	22	318
Common Gull	11	11	6		16	8								4	1	1		68
Lesser Black-b Gull								1		2	2				4	1		10
Herring Gull	11	11	8	11	8	1	11	7	20	11	8	7	3	4	3	8	4	532
Great Black-b. Gull	27	5	21	18	12	3	4	13	12	15	10	4	1	2	15	11	16	454
Common Tern						1												1
Arctic Tern														44	104	16		164
Guillemot	312	425	261	800	141	172	123	1	51	53	169	46	8	145	154	161	230	8455
Razorbill	31	110	56	147	37	33	34	5	6	7	8	2	2	32	23	17	40	2706
Black Guillemot	1																	2
Puffin	214	351	244	226	151	272	195	327	32	38	68	301	71	128	239	260	214	7152
Hooded Crow							1											1
Willow Warbler											1							2
Whitethroat											1							1
Sedge Warbler											2							2
Wren	1			2	4	2		2	1	1	2	6		2	1	3		26
Starling							3								1			4
Stonechat						2		1										3
Wheatear	24	2	2	2	7	1	2	4	2	4	5	10	4	7	11	3	3	247
Dunnock											1		1	1		2		5
Pied Wagtail							4				3	1			4			18
Meadow Pipit	1	4	1	3	5	1		4		1	2	15	3	1	5		1	64
Rock Pipit	2	2	2	2		3	21	10	1	2	4	3	1	2	11	1	4	92
Twite		1					1	1	1		3	1						10
TOTAL	1739	1060	1090	1563	982	1527	593	624	594	555	575	748	405	943	1730	930	1033	36479

## RECENT RINGING RECOVERIES

### STORM PETREL

TIARG have in the past year received details of 18 recoveries of birds ringed within Britain and Ireland in the months July - September and controlled by TIARG on Lunga in June - July 2016. These recoveries are summarised in the table below; all birds were ringed as adults (Euring code 4).

Ringing Site	No. of controls at:	Time interval (years, days)		Distance Km	Direction (degrees)
	Lunga	min	Max		
Wooltack Point, Pembrokeshire	1		361 d	534	352
Strumble Head, Pembrokeshire	1		21 yr 364 d	503	350
Porth Iago, Gwynedd	1		1 yr 362 d	419	345
North Sands, Hartlepool, Cleveland	1		17 yr 328 d	383	302
Calf of Man, Isle of Man	1		11 yr 312 d	290	340
Eyemouth, Scottish Borders	1		1 yr 329 d	277	285
Eilean nan Ron, Highland	1		1 yr 334 d	262	209
Faraid Head, Highland	3	673 d	4 yr 306 d	255	203
Isle of May, Fife Region	1		318 d	241	278
Fife Ness, Fife	1		8 yr 335 d	238	276
Priest Island, Highland	1		14 yr 14 d	173	199
Eilean An Taighe, Western Isles	2	7 yr 350 d	361 d	156	182
Sanda Island, Kintyre	1		16 yr 336 d	146	339
Ballyreagh, Londonderry	2	1 yr 350 d	3 yr 321 d	146	007

### STORM PETREL RECOVERIES

Details are given below of four birds originally ringed on the Treshnish Isles and recovered elsewhere.

Abbreviations used:

Age  
 1 - Pullus  
 4 - Hatched before this calendar year, exact year unknown  
 6 - Hatched before previous calendar year, exact year unknown  
 8 - Hatched more than two calendar years before year of ringing

Manner of recovery

R - Caught and released by a ringer  
 S - A re-sighting of a colour-ringed bird  
 X - Found dead  
 XF - Found freshly dead or dying

#### Storm Petrel

2664154      6    01/7/2015    Lunga  
                  R    24/8/2016    Copeland Bird Observatory, Co.Down, Northern Ireland,  
                                          208 km            165 degs    420 days

#### Storm Petrel



2679760      6    03/7/2015    Fladda  
                  R    06/7/2016    Eilean An Taighe, Western Isles  
                                  154 km          2 degs          369 days

Storm Petrel recoveries relating to the Treshnish Isles as either birds ringed or controlled there, now number 671 (relating to 630 birds) of which many have been of birds from the Isle of Man & Sanda (70 & 156 respectively). The above retraps of birds ringed on the Treshnish Isles, were attracted in by tape lure on recapture and are therefore likely to have been wandering immatures (up to 4 years old) or failed breeders. Only 80 birds ringed on the Treshnish Isles have been recaptured elsewhere, 12.7% of all recoveries. This figure is remarkably close to the overall probability of 15% that Ratcliffe *et al.* (1998) found for non-breeder colony attendance in late June/early July.

Summated below is the age since ringing of birds captured in 2016 with connectivity to Treshnish Isles, having either been where originally ringed and/or in 2016 recaptured. As all birds were originally ringed as adults i.e. at least one year old, the oldest birds are a minimum of 25 years old. Up until the end of 2016, of all Storm Petrels ever ringed and/or recaptured on the Treshnish Isles, the maximum age since ringing is 27 years and 338 days with the next at 25 years 4 days and a further four birds at 24 years. The UK record of age since ringing for this species is 37 years 11 days set in 2011 (Robinson *et al.* 2017).

Years since ringing	1	2	3	4	5	6	7	8	9	10	11	12	13
No. of birds	28	16	10	3	6	4	1	1	2	1	0	4	2
Years since ringing	14	15	16	17	18	19	20	21	22	23	24	25	
No. of birds	2	3	0	2	2	0	0	1	3	0	0	1	

## RECOVERIES OF OTHER SPECIES

All other recoveries relating to the Treshnish Isles received since the previous TIARG report are listed below.

### Shag

1445701      1    28/6/2009    Lunga  
                  S    01/10/2016    Rinn Thorbhais, Argyll and Bute  
                                  35 km          261 degs          2652 days  
                  Re-sighting of a colour-ringed bird.

### Shag

1483607      1    27/6/2016    Lunga  
                  X    22/2/2017    Traigh nan Gilean, Isle of Tiree  
                                  34 km          267 degs          240 days  
                  Dead for more than a week. Found on beach, just wings and legs.

### Shag

1483698      1    02/7/2015    Lunga  
                  X    10/5/2017    Heanish, Isle of Tiree  
                                  24 km          270 degs          678 days  
                  Found dead on shore

### Guillemot

R24375      6    23/6/2002    Lunga  
                  X    10/5/2017    Ben More, Mull, Argyll and Bute  
                                  24 km          99 degs          5435 days  
                  Dead, more than a week, found on high tide line

### Guillemot

R24373      6    23/6/2002    Lunga  
                  XF    12/5/2017    Loch na Keal, Isle of Mull, Argyll and But  
                                  22 km          100 degs          5437 days  
                  Freshly dead, found within a week on high tide line

**Guillemot**

GK95485	1	07/7/1980	Isle of Canna, near Mallaig, Highland
	R	29/6/2016	Lunga
			64 km            174 degs    1314 days

**Puffin**

EY32379	8	26/6/2016	Lunga
	XF	07/5/2017	Croig, Dervaig, Argyll and Bute
			18 km            44 degs    315 days
			Freshly dead, found within a week on high tide line

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## ACKNOWLEDGEMENTS

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We thank Iain Morrison and his family, for providing our transportation between Mull and Lunga (<http://www.turusmara.com/>), and are grateful for his continuing advice, co-operation and help.

Any comments on this report, and suggestions for improvements for relaying information required by conservation agencies, are much welcomed.



Great Skua (Andrew Carter)

## THE EXPEDITIONS 1971 – 2017

A list of participants through the years, with brief notes on the work performed

- 1971**            Barry Lawson, Peter Deans, John Eatough, Shiela Anderson, Dick Hansford.  
Full census and ringing.  
*This was the first trip and the Treshnish Isles were included in a “mopping up” of islands not fully covered during the 1969/70 “Operation Seafarer” National Seabird Census.*
  
- 1972**            Barry Lawson, Geoff Ward, Bevan Craddock.  
Part census and ringing  
*Forced to leave after three days due to bad weather.*
  
- 1973**            Barry Lawson, Peter Deans, John Hodson, Geoff Cope.  
*Trip abandoned – unable to land due to rough seas*
  
- 1974**            Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Geoff Cope, Tom Pool.  
Census of Lunga and ringing  
An RAF Helicopter landed a photographer onto Harp Rock, causing many bird casualties.
  
- 1976**            Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Geoff Cope, Tony Kilgallen.  
Full census Lunga – Fladda and ringing.  
*Very hot summer.*
  
- 1977**            Barry Lawson, John Hodson.  
Ringing only.  
*Called in on “Corryvreckan” boat cruise.*
  
- 1978**            Barry Lawson, Peter Deans, John Hodson, Simon Walker.  
Full census Lunga and Sgeir a’ Chaisteil and ringing.
  
- 1980**            Barry Lawson, Peter Deans, John Hodson, Simon Walker, David Lawson.  
Ringing only
  
- 1981**            Geoff Ward, Geoff Cope.  
Part census and photography
  
- 1982**            Barry Lawson, Peter Deans, John Hodson, Simon Walker, Andrew Lawson.  
Ringing only.
  
- 1984**            Barry Lawson, Peter Deans, John Hodson, Simon Walker.  
Ringing only.
  
- 1986**            Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Simon Walker, Andrew Lawson.  
Full census with ringing
  
- 1989**            Barry Lawson, Peter Deans, John Hodson, Simon Walker.  
Ringing only.
  
- 1991**            Barry Lawson, Peter Deans, Simon Walker, David & Andrew Lawson, Jan Densham.  
Ringing only.
  
- 1993**            Roger Broad *et al.* (Scottish Natural Heritage charter)  
Full census of The Dutchman’s, Lunga, Sgeir a’ Chaisteil and Fladda.  
Chris Redfern *et al.*  
Storm Petrel ringing.

## THE EXPEDITIONS 1971 – 2017 (continued)

- 1994** Simon Walker, Mike Smith, Dennis Cooper, Jan Densham, Danny Lenain.  
Full census Lunga and Sgeir a' Chaisteil and ringing.  
Chris Redfern *et al.*  
Storm Petrel ringing.
- 1995** Simon Walker, Mike Smith, Dennis Cooper, Jan Densham, Fergus Henderson.  
Full census of Lunga and Sgeir a' Chaisteil and ringing.
- 1996** Simon Walker, Mike Smith, Dennis Cooper, Danny Lenain, Robin Ward  
Full census of Lunga and Sgeir a' Chaisteil and ringing.
- 1997** Simon Walker, Dennis Cooper, Robin Ward, Damian Offer, Steve Willis, Chris Spray  
Full census of Lunga – Fladda and ringing.
- 1998** Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Steve Willis,  
Steve Worwood  
Full census of Lunga – Fladda and ringing.
- 1999**  
Week 1 Simon Walker, Dennis Cooper, Steve Willis, John Osbourne.  
Week 2 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Jan  
Densham  
Full census of the Treshnish Isles for *Seabird 2000* and ringing
- 2000**  
Week 1 John Hodson, Dennis Cooper, Damian Offer  
Full census of Manx Shearwater on Lunga for *Seabird 2000*. Limited passerine ringing. (May).  
Week 2 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Steve Willis, Andrew Carter,  
Steve Woodward  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Tern census for  
*Seabird 2000*. Ringing.
- 2001** Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Andrew Carter  
Completion of census for *Seabird 2000*. Full census of Lunga, Sgeir a' Chaisteil and the islands  
between Lunga – Fladda. Ringing.
- 2002** Simon Walker, Robin Ward, Andrew Carter, Phil Bone, Sara Brown, Jackie Hay.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2003** Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Andrew Carter, Jackie Hay, Matt  
Smith.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2004** Simon Walker, Robin Ward, Andrew Carter, John Calladine, Tim Dixon, Shaun Micklewright,  
Tina Wiffen.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2005** Simon Walker, Robin Ward, Andrew Carter, Shaun Micklewright, Gareth Harris, George  
Henderson, Tracé Williams.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2006** Simon Walker, Dennis Cooper, Robin Ward, Andrew Carter, Shaun Micklewright, John  
Calladine, Tim Dixon, George Henderson.  
Full census of Lunga, Sgeir a' Chaisteil, Cairn na Burgh More, Cairn na Burgh Beg and the islands  
between Lunga – Fladda. Ringing.

## THE EXPEDITIONS 1971 – 2017 (continued)

- 2007** Simon Walker, Robin Ward, Andrew Carter, Shaun Micklewright, George Henderson, Tim Dixon, Tracé Williams.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2008** Simon Walker, John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, George Henderson, Tim Dixon, John Calladine.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2009** John Hodson, Robin Ward, Dennis Cooper, Andrew Carter, Shaun Micklewright, Tim Dixon, Jurjen Annen, Claire Dovey.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2010** John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, Tim Dixon, Tracé Williams, Jurjen Annen, Claire Dovey.  
Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2011** John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, Tim Dixon, George Henderson, Jurjen Annen, Claire Dovey.  
Full census of Lunga, Sgeir a' Chaisteil, Bac Mór (from boat) and Bac Beag (from boat). Ringing.
- 2012** John Hodson, Robin Ward, Dennis Cooper, Tim Dixon, Steve Willis, Jurjen Annen, Claire Dovey, Richard Barnes, Simon Roberts.  
Full census of Lunga and Sgeir a' Chaisteil. Ringing.
- 2013** John Hodson, Robin Ward, Dennis Cooper, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, George Henderson.  
Full census of Lunga and Sgeir a' Chaisteil. Ringing.
- 2014** John Hodson, Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, Claire Dovey, Cerian Thomas.  
Full census of Lunga and Sgeir a' Chaisteil. Ringing.
- 2015** Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, John Calladine, Stuart Brown, Chris Heward, Daniel Plunkett.  
Full census of Lunga and Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing.
- 2016** Robin Ward, Andrew Carter, Tim Dixon, Jurjen Annen, Chris Heward, Daniel Plunkett, Matt Smith, Lila Buckingham.  
Full census of Lunga, Sgeir a' Chaisteil, Cairn na Burgh More, Cairn na Burgh Beg and the islands between Lunga – Fladda. Ringing.
- 2017** Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, George Henderson, Claire Dovey, Chris Heward, Lila Buckingham.  
Full census of Lunga, Sgeir a' Chaisteil, Bac Mór (from boat), Bac Beag (from boat) and the islands between Lunga – Fladda. Ringing.

# **RING SERIES USED ON THE TRESHNISH ISLES SINCE 1927\***

<b>SHAG RINGS</b>	<b>A2 RINGS</b>	<b>E RINGS</b>	<b>F RINGS</b>	<b>G RINGS</b>	<b>H RINGS</b>	<b>RAZORBILL RINGS</b>	<b>GUILLEMOT RINGS</b>	<b>MISC. RINGS</b>
1078761 – 800	2010581 – 583	EF75001 – 500	FA50601 - 700	GH21301 – 350	HT03619	K10701 – 1000	R07001 – 100	1F4094 - 097
1080101 – 110	2101991 – 2000	EG23501 – 700	FB22601 – 700	GN85301 – 400	HT09001 – 004	K13001 – 300	R19401 – 20200	C331894 - 900
1087111 – 120	2121401 – 500	EG23721 – 780	FB23401 – 500	GJ35401 – 500	HT17871 – 890	M36341 – 350	R24001 – 26350	E196501 - 520
1105561 – 570	2167051 – 068	EG23801 – 999	FC52551 – 558	GJ76001 – 800	HT17931 – 940	M46501 – 800	R31601 – 900	JB44316
1123531 – 540	2170201 – 203	EG61000 – 500	FC52571	GJ99081 – 082	HT34021 – 030	M55001 – 500	R51501 – 2000	K039209 - 230
1123541 – 550	2238501 – 600	EG88501 – 9000	FC74501	GK34351 – 354	HT68201 – 210	M72451 – 800	R65501 – 6000	K419290 - 295
1123671 – 690	2261001 – 2350	EH33377 – 380	FH36101 – 200	GK50214 – 220	HT68221 – 226	M85501 – 800	R72501 – 4000	NA84296 - 299
1123961 – 970	2284001 – 5000	EH54501 – 55000	FR13606 – 636	GK50551 – 570	HT80301 – 400	M88001 – 300	T14001 – 5000	KX83101 - 106
1159651 – 700	2309901 – 10000	EH89256	FR14401 – 500	GK62985 – 990	HW05351 – 360	M92501 – 700	R73001 – 4000	KX83116 - 118
1163701 – 740	2311301 – 400	EH89260	FR51201 – 300	GK90821 – 840	HW06951 – 7000		T82001 – 300	RF10011-020
1168001 – 100	2311501 – 2000	EH98001 – 300	FR56351 – 400	GK91471 – 490	HW08994 – 09000		X39501 – 40000	LA59201-300
1170601 – 700	2348001 – 500	EK29501 – 900	FS21478	GM78756	HW37361		X56501 – 57000	DD90261-270
1187901 – 950	2236801 – 7000	EK72657 – 660	FS51016 – 500	GP13416 – 450	HW42996 - 3000		X63001 – 500	CBV601-700
1237401 – 450	2369301 – 400	EK91471 – 490	FS87001 – 100	GP47917	HW68101 – 110		X67501 – 68000	V711401-500
1322951 – 960	2405001 – 6000	EL19801 – 276	FV10611 – 620	GP62201 – 207	HW68161 – 170		X79501 – 80000	TJ18901-9000
1328481 – 490	2430701 – 900	EL52501 – 3000	FV10646 – 650	GP74501 – 75000	HW74971 – 990		X99001 – 500	BT09481-490
1350801 – 900	2436501 – 7000	EN22001 – 500	FV54446 – 460	GR44201 – 250	HW87211 – 225		Y09403 – 405	NV42851-860
1357901 – 8000	2444501 – 5000	EP85608 – 612	FV62410		HW96181 - 200			SR49601-700
1366901 – 7000	2446202 – 233	EP85687 – 700	FV62416 – 226		HW94907 – 913			A297482-500
1373751 – 3900	2455501 – 6000	ER03701 – 800	FV96681 – 684		MA12551 – 600			B229951-992
378401 – 8500	2480001 – 500	ER48401 – 404	SS96101 – 300		MA15801 – 900			BV70669
1399601 – 700	2513501 – 4000	ES64018 – 189		<b>SHAG RINGS</b>	MA44251 – 900			SV58551-600
1408301 – 500	2538001 – 800	ET19501 – 700	<b>A2 RINGS</b>	(cont)				BV28661-670
1414301 – 500	2542001 – 3000	ET52501 – 3000	(cont)	1701501 - 2000				SV58601-616
1421701 – 800	2554001 – 500	ET80001 – 500	2664001 – 5000					
1417001 – 7100	2560001 – 1000	EX12501 – 3000	2679001 – 80000					
1445601 – 800	2579001-80000	EW18001 – 500	2725001 – 6000					
1491001 – 100	2605001 – 5500	EW50001 – 500	640801 – 640900					
1497001 – 100	2624001 – 5000	EZ30001 – 1000	2627701 - 800					
1500201 - 300	2650101 – 61000							

\*All rings series known (to TIARG) to have been used on the Treshnish Isles are documented irrespective of ring ownership.