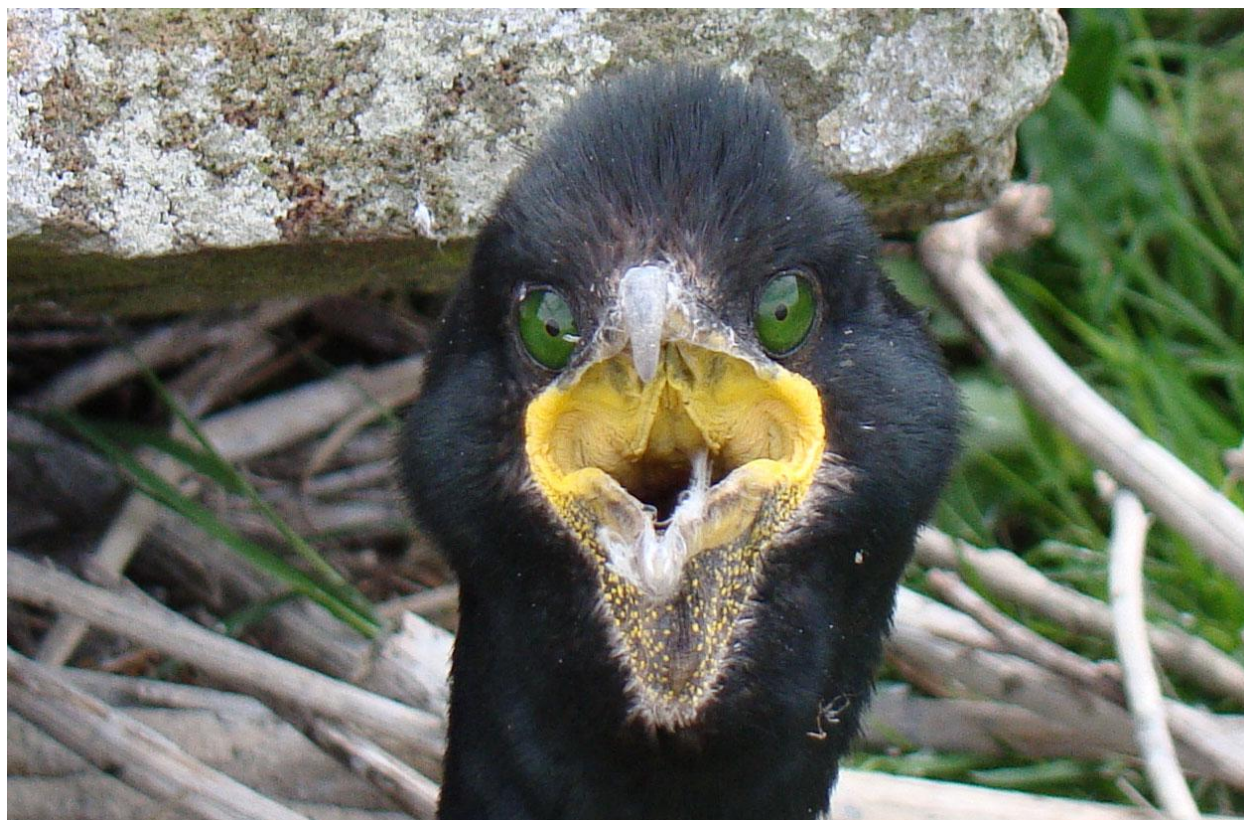


Treshnish Isles Auk Ringing Group

Report for 2010



Shag (John Hodson)

Compiled by
Robin M. Ward

Expedition dates:
26th June – 3rd July 2010

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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 generalised summary of the early expeditions is given in *Birds on the Treshnish Isles 1971-1995* (Walker & Cooper 1996). Annual reports have been produced each year since. This report summarises the results of the Group's 32nd expedition to the Treshnish Isles during 26th June – 3rd July 2010.

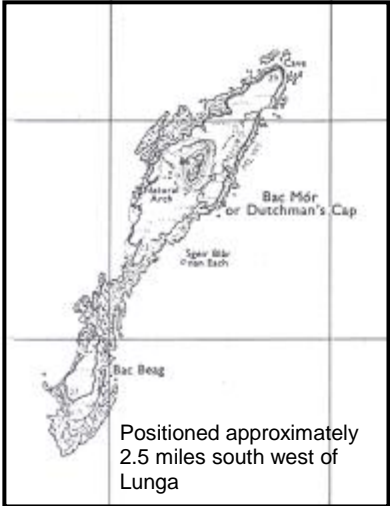
As in previous years, the expedition's base was set up around the ruined village site at the northern end of Lunga. The majority of the week's fieldwork was centred upon Lunga & Sgeir a' Chaisteil where the regular annual full seabird census and systematic ringing of specific seabird colonies was carried out. The Group's activities were typically determined by the prevailing weather conditions which whilst variable through the week, were dominated by winds coming from the east. This provided for sheltered conditions when winds were light to enable the mist netting of Storm Petrels on Lunga on several nights. A deterioration of the weather during the week led to unfavourable sea conditions to venture out for a night to obtain a ringing sample of Storm Petrels from Fladda. By day, calm sea conditions initially during the week allowed good use to be made of the inflatable boat kindly loaned by the Hebridean Trust. We succeeded in fully censusing the breeding birds of the islands between Fladda and Lunga before the sea conditions deteriorated. The negative side to the calm weather was that the somewhat unprecedented duration of winds, predominately from the south and east, resulted in very few auks being blown into range of our fleygs. This year, the fifth year of a Shag Retrap Adult Survival study (RAS) was initiated; 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 Integrated Population Monitoring Programme funded by the UK Government.

All TIARG census and ringing data are fed into two national monitoring programmes, the Seabird Colony Register (J.N.C.C.) and National Ringing Database (British Trust for Ornithology), 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 because of the breeding colonies of seabirds they support. Financial support for the monitoring work TIARG undertook in 2010 was provided by the Hebridean Trust (www.hebrideantrust.org), owners of the islands.



Expedition participants 2010: Shaun Micklewright, John Hodson, Trace Williams, Andrew Carter, Claire Dovey, Tim Dixon, Robin Ward & Jurjen Annen (*Andrew Carter*)

MAP OF THE TRESHNISH ISLES



WEATHER

The weather and visibility for the week was good but changeable, with showers broken up with sunny spells. Light winds continued throughout the week not getting stronger than force 5 for most of the time apart from a gale that set in mid week with heavy rain and winds reaching force 8. Wind and rain did not affect our activities too much as several Storm Petrel sessions and all counts were conducted successfully. The wind direction did affect fledging conditions for the week, with the most successful session conducted at the end of the week when the wind changed to a south westerly. Sea conditions were not as good as some years, with only Sgeir a' Chaisteil and the islands between Lunga and Fladda visited.

All readings were taken from the plateau just below the Village site at the NE extremity of Lunga, unless otherwise noted.

Claire Dovey

Date	Time	Wind (Beaufort scale)	Max wind speed (mph)	Cloud cover (oktas)	Visibility	Temp (° C)	Humidity (%)	Pressure (mb)	Notes
26 th June	21:20	5 WNW	12.7	5/8	Coll	15.2	86.4	1008.7	Sea conditions rough
27 th June	08:50	5 WNW	12.9	8/8	Rum	14.7	93.2	1009.0	Dull and overcast in the morning light showers throughout the day until 17:30 turning to heavy showers. 22:00 onwards -dry
	19:30	2 N	2.2	7/8	Coll/Tiree	15.4	88.3	1010.3	
28 th June	12:00	2 SW	4.3	8/8	Tiree	16.4	88.2	1012.0	Day started with light showers clearing up and becoming bright and clear for rest of the day. Cool wind, sea conditions calm.
	20:20	2 S	4.3	1/8	Tiree	16.7	85.5	1012.4	
29 th June	11:20	2 S	4.5	7/8	Tiree	17.0	90.9	1015.2	Warm, visibility good
	20:15	1 S	2.4	7/8	Skye	17.3	88.5	1016.3	
30 th June	12:00	4 SE	10.6	3/8	Rum	20.4	65.4	1012.4	Day started sunny and warm, slight breeze. Becoming over cast with a strong breeze in the afternoon. Weather progressively got worse wind reaching force 7- 8 at 01.00 with rain throughout the night until approx 07:00 on the 1 st July
	17:30	5 SE	16.6	8/8	Rum	18.4	77.3	1008.9	
1 st July	14:30	2 SE	6.7	5/8	Tiree	20.2	100	998.9	Light rain and wind gave way to sun, light breeze. Afternoon/evening still bright but with stronger breeze.
	20:15	4 SE	14.1	6/8	Rum	18.5	100	997.8	
2 nd July	10:50	5 SW	16.6	5/8	Tiree	21.4	100	998.5	Bright in morning giving way to rain in the afternoon, light showers. Sea conditions rough
	19:50	3 SW	7.5	7/8	Tiree	15.6	88.8	1001.7	
3 rd July	10:00	4 SW	13.4	8/8	Tiree/Coll	16.3	85.9	1008.0	Over cast, sea conditions rough, intermittent showers with sunny spells

SYSTEMATIC LIST OF BIRDS FOR 2010

The following systematic list describes those bird species seen during the Treshnish Isles Auk Ringing Group's presence on the Treshnish Isles, 27th June – 4th July 2010. (No records are available for the Dutchman's, Cairn na Burgh Beg and Cairn na Burgh More). 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 2010 is provided in a subsequent section of the report. For some seabird species, average rates of population change have been calculated by linear regression of the natural logarithms of the breeding numbers year on year. The significance of the slope of the regression, equivalent to the average annual rate of increase or decrease in the population, is then assessed using the t-statistic (Fowler & Cohen 1986).

Fulmar *Fulmarus glacialis*

A common 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 and Sgeir a' Chaisteil. The breeding population for Lunga and Sgeir a' Chaisteil was estimated at 380 pairs based upon apparently occupied sites (AOS). This 5% increase from 2009 when the population size was the lowest it has been since annual monitoring began in 1994. Over the longer term, 1994-2010, the average rate of change in the numbers of breeding birds on Lunga is calculated at -4.0% per annum, this trend being very highly significant ($P < 0.001$). Fulmar is amongst several offshore surface feeders whose breeding population in the UK has declined since the mid 1990s (JNCC 2008).

Manx Shearwater *Puffinus puffinus*

A regular 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. During the week up to 1,000 birds were noted passing in the evenings, offshore along the west coast of Lunga. Off the east coast, 300 birds were seen rafting on the evening of the 29th.

Cory's Shearwater *Calonectris diomedea*

Very rare passage migrant to Argyll, with nine accepted before 2008, involving eleven birds.

A bird considered to be of this species was seen passing between the north end of Lunga and the adjacent islands by several team members (TD, SM, JH) on 2nd July. If accepted by the Argyll Bird Rarities Committee, this will be the first record seen from the Treshnish Isles.

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* (1998 – 2002).

Many birds were heard churring from burrows on Lunga.

The opportunity provided by several nights of calm or light south easterly winds was taken to mist net for Storm Petrels on Lunga at the Village, the Boulder Beach (beside the Well and below the Village) and in the vicinity of known colonies above the second gully south of Corran Lunga (on the path to Harp Rock). This latter site, first worked in 2009, provided a catch of 36 birds when using two 9m nets before rain stopped operations after 1.5 hours. On the Boulder Beach, traditionally ringed localities near the Well and below the Village on single nights provided catches of 112 and 166 birds when using three 12m (for 2¼ hours) and one 12m nets (for 2½ hours) respectively. Three attempts were made at the Village using three 18m nets and provided catches of 36, 40 and 23 birds for 2, 2¼ and 1½ hours respectively. The numbers of birds being caught at the Village and Boulder Beach colonies were as in recent years, less than these sites provided during the 1990s. The occurrence of many birds with partial brood patches was again recorded amongst these smaller catches of birds. These observations suggest either a reduction in the numbers and success of breeding birds since the 1990s or change in time of breeding.

Gannet *Morus bassanus*

Regularly seen offshore

Up to in excess of fifty birds, (the majority adults) were recorded daily, feeding or passing offshore of Lunga. Over fifty Gannets were amongst a mixed species flock that followed a passing trawler discarding fish offal on 2nd July.

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 Sgeir an Eirionnaich, Lunga and Sgeir a' Chaisteil. The breeding population for Lunga and Sgeir a' Chaisteil was 149 and 15 pairs respectively, based upon a nest count. The overall number counted has increased by 41% from that in 2009. The numbers of active nests have however yet to attain the level recorded prior to the marked decline noted in 2005 and again in 2006. The 2006 count was only approximately half of the previous lowest nest count recorded since annual monitoring began in 1994.

Large numbers of adults were in the vicinity of the colonies but had once again chosen not to breed, as evidenced by atypical concentrations of up 480+ moving offshore from the islands in the mornings to forage. Presumably many of these were in too poor condition to breed successfully. Of those birds that were breeding on Lunga and Sgeir a' Chaisteil, great variation was once again found in the progress of breeding, all stages from eggs to already fledged young being noted. Brood sizes were mostly small in size, typically of two or three young.

2010 was the fourth year of a Retrap Adult Survival study (RAS) on Shags 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 British Trust for Ornithology's Integrated Population Monitoring Programme funded by the UK Government (<http://www.bto.org/ringing/ringinfo/ras/index.htm>). In 2010, of the breeding adults marked in 2006, 2007, 2008 and 2009 on Lunga, 2, 21, 26 and 12 were re-sighted by TIARG respectively involving a total of 62 individuals out of a possible 169 individuals. A further 17 breeding adults were colour-ringed on Lunga in 2010.

Grey Heron *Ardea cinerea*

Rare visitor

One bird was seen flying south past the Treshnish Isles on 2nd July.

Greylag Goose *Anser anser*

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

The late summer moult flock had built up to at least 160 birds by 29th June, typically most residing around the islands of Sgeir an Eirionnaich, Fladda and Sgeir an Fheòir. Four moulting adult Greylag Geese were seen to be attacked by a Great Skua, the end result unknown.

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Peak count	25	160	240	268	79	101	316	90	164	77	80	225	160

Shelduck *Tadorna tadorna*

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

One pair of adults was regularly seen frequenting the area of Corran Lunga and Sgeir a' Chaisteil, which were joined by a second pair on 27th June. A pair was also seen flying over the south end of Lunga on 2nd July.

Eider *Somateria mollissima*

Regularly breeds in small numbers

Only two broods were noted from Lunga, three ducks with three ducklings at the south end and a duck with one duckling within the vicinity of Corran Lunga. Elsewhere a clutch of three eggs were found on Sgeir an Eirionnaich.

The waters between Fladda and Lunga supported small numbers of late summer moulting birds, typically male-biased; a maximum of 80 birds were counted on 28th June.

Buzzard *Buteo buteo*

Until recently, one pair bred in most years

Regular sightings would suggest the presence of two adults and a juvenile on Lunga. Though no nest was found, successful breeding cannot be disregarded as the area of cliff traditionally used for nesting is difficult to view.

Peregrine *Falco peregrinus*

Seen most years with breeding known to occur on adjacent coasts

One moulting female was seen on several dates around Lunga, including when hunting Puffins circling their breeding colony in Shag Alley.

Oystercatcher *Haematopus ostralegus*

Regularly breeds in small numbers

Six breeding pairs were behaving as though on eggs, or young were being defended on Lunga's beaches and rocky outcrops (2 pairs at Corran Lunga, 1 in area 2, 1 in west Tarbet (area 9), 1 in area 8 and 1 in area 6) with the only broods seen being at Corran Lunga, a single well grown young and a single week old chick. Other pairs or singles were on territory at times, briefly alarming at human intruders and performing displays on the appearance of other Oystercatchers that numbered six birds in area 6a. Away from Lunga, breeding was confirmed on Sgeir na H-lolaire where a pair had laid one egg. Sgeir a' Chaisteil (4 pairs) and Fladda (2 including nest with 3 eggs). Additional adults may have attempted to breed and were found during brief census visits to islets between Lunga and Fladda, these being Sgeir na H-lolaire (a 2nd pair), Sgeir an Eirionnaich (6 pairs), Sgeir a' Chaisteil (4 pairs), Sgeirean na Guisaich (4 pairs) and Sgeir an Fheadair (2 pairs). 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 a maximum of 30 birds roosting.

Ringed Plover *Charadrius hiaticula*

One or two pairs breed

Typically breeding pairs on Lunga were confined to Corran Lunga and the adjacent boulder beach, this area supporting two territorial pairs, one with a fledged chick. The behaviour towards human intruders of one pair on Sgeir a' Chaisteil suggested that they were incubating eggs or had very young chicks. Elsewhere further birds were seen when visiting the islands between Lunga and Fladda on 28th June, with a pair of birds on Sgeir na H-lolaire.

Woodcock *Scolopax rusticola*

Rare visitor

A single bird was flushed from near the reedbeds at the south end of Lunga. This observation represents the first record by TIARG of the species on the Treshnish Isles.

Snipe *Gallinago gallinago*

Regularly breeds in small numbers

Up to two birds at any one time were drumming/chipping over the Village. This would suggest a maximum of two breeding pairs within the general vicinity (Gilbert *et al.* 1998) as females will also at times join the males in drumming and chipping (Nethersole-Thompson & Nethersole-Thompson 1986). One pair with three young were found on 27th June immediately west of the Village. Single birds were flushed on the slopes of Cruachan and on Corran Lunga. At the south end of Lunga, single birds were flushed in areas 7 and 6 where drumming was also noted. These data suggest a minimum population of 3+ pairs.

Elsewhere one bird was drumming and another flushed on Sgeir an Eirionnaich on 28th June.

Bar-tailed Godwit *Limosa lapponica*

Rare visitor

One bird was heard at 3am over the Village, Lunga, on the 2nd July. This observation represents the first record by TIARG of the species on the Treshnish Isles.

Curlew *Numenius arquata*

Irregular visitor

A single bird was seen on Sgeir an Eirionnaich on 28th June.

Redshank *Tringa totanus*

Irregular visitor

A single bird was heard from the west coast of Lunga on 1st July.

Greenshank *Tringa nebularia*

Rare visitor

A single bird was heard calling in flight from the Boulder Beach and Village, Lunga, before dawn on 29th June. This is the second documented record of this species by a TIARG expedition.

Common Sandpiper *Actitis hypoleucos*

One or two pairs usually breed

The behaviour towards human intruders of two pairs on Corran Lunga suggested that they were incubating eggs or had very young chicks. Elsewhere the only birds observed was on Sgeir a' Chaisteil.

Arctic Skua *Stercorarius parasiticus*

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

Up to 1 light phase and 1 dark phase birds at any one time were seen almost daily, generally offshore from the Harp Rock - Sgeir a' Chaisteil shoreline.

Great Skua *Stercorarius skua*

A regular but small breeding population has become established since confirmation of breeding by a pair in 1998.

On Lunga breeding was confirmed by the presence of one chick and an egg immediately south of Tarbet (area 7), a new breeding locality. The behaviour towards human intruders of one pair on the high ground south of Tarbet (area 6), where breeding has previously been proven suggested that they were incubating eggs or had very young chicks. A bird was also in daily attendance at the south-western tip of area 6 where a search only found what was presumed to be feathers from a chick.

On the west side of Fladda, a pair of birds could be seen from Lunga to be on an apparently occupied territory where breeding has also previously occurred. No other birds could be seen on Fladda from Lunga.

Common Gull *Larus canus*

Irregular breeding species

Birds were heard calling whilst flying over the Village, Lunga, on 1st and 2nd July. Breeding was confirmed by the presence of a chick on Sgeir an Eirionnaich with an estimated four pairs on territory. No birds could be seen from Lunga at the low-lying basalt rock outcrop on Fladda's south-east coast where a colony had been established since 1998.

Lesser Black-backed Gull *Larus fuscus*

Regular breeding species in small numbers

Two pairs, one at least with young, were noted within the south end gully, Lunga, in area 8. Elsewhere single adults were seen but not considered to be breeding on Corran Lunga and Sgeir an Eirionnaich.

Herring Gull *Larus argentatus*

A common but declining 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 17 pairs) and Sgeir a Chaisteil (estimated 7 pairs). Breeding was also suggested by the presence of paired adults on territory on Sgeir an Eirionnaich (2 pairs) and Sgeirean na Guisach (north: 3 pairs). No birds were occupying territories on Sgeir na H-lolaire or Sgeir an Fheòir. The average rate of change in the numbers of breeding birds on Lunga for the period 1994 – 2010, is calculated at -12.3% per annum, this downward trend continuing to be very highly significant ($P < 0.001$).

Over fifty Herring Gulls were amongst a mixed species flock that followed a passing trawler discarding fish offal on 2nd July. The unusual occurrence of a second-summer bird was noted over the Village, Lunga, on 1st July.

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 (21 pairs), Sgeir an Eirionnaich (estimated 18 pairs), Sgeirean na Guisach (2 pairs on north island, 1 pair on south island) and Sgeir na H-lolaire (1 pair). Breeding was also suspected on Sgeir a Chaisteil from the presence of paired adults on territory (2 pairs). During the period 1994-2010 the population of Lunga has fluctuated widely (16-67 pairs) though the population has been in decline since 2000, reaching its lowest in 2007 at 16 pairs. The average rate of change in the numbers of breeding birds on Lunga for the period 1994 – 2010, is -6.8% per annum, this downward trend very highly significant ($P < 0.001$) because of the continuing low numbers.

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 only confirmed on Lunga where the main colony is situated around Harp Rock. The numbers of apparently occupied nests on Lunga totalled 456 which includes nests in the part of sector 11 to which access was obstructed by a rockfall in winter 2004; 49 nests were counted there in 2010 from a boat. The nest count in 2010 is the lowest count since annual monitoring of Lunga began in 1994. This is a 27% decrease from the previous year. Following a series of poor or late breeding seasons of recent years, in 2010 most breeding pairs were further advanced into breeding than of recent years with broods of two or three downy chicks.

Typically a flock of up to 65 adults was noted daily roosting on intertidal rocks beside Sgeir a' Chaisteil.

Arctic Tern *Sterna paradisaea*

Irregular breeding species

Breeding was suggested by seven alarming adults over the islet at the north end of Sgeir an Eirionnaich. No other birds were seen when visiting the islands between Lunga and Fladda on 28th June

Flocks of 2 and 11 of either Common or Arctic Terns were noted past the north of Lunga on 1st and 2nd July respectively.

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 and Sgeir a' Chaisteil, the main concentration typically located within the vicinity of Harp Rock with 5,044 adult birds estimated. The latter estimate includes 180 birds counted on the seaward side of Harp Rock only visible from the sea. The overall number of individuals counted on Lunga and Sgeir a' Chaisteil totalled 5,265, a 29% decrease from the mean count of the past five years (7,371, range 6,943-7,712). The count for 2010 is the lowest count since annual monitoring of Lunga and Sgeir a' Chaisteil began in 1994.

Following a series of poor or late breeding seasons of recent years, in 2010 most breeding pairs were further advanced into breeding than of recent years with many brooding chicks at or close to fledging. Furthermore, in contrast to recent years, there appeared to be a good supply of fish being brought in by the adults amongst which no Pipefish were noted. Some adults were returning to feed chicks with fish over 1.5 times the length of the adult's bill.

The average annual rate of change for the population of Lunga is calculated at 0.1% p.a. for the period 1994-2010; the trend is not significant.

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 and Sgeir a' Chaisteil. The main concentration was typically located within the vicinity of Harp Rock with 177 adult birds estimated.

The number of individuals counted on Lunga and Sgeir a' Chaisteil totalled 317, a 9% decrease from 2009. Following a significant period of increase in the past decade (+24% p.a. 1994-1998; $P < 0.05$) from a count of 640 individuals to 1,400, the population had since remained largely stable at around 950-1250 birds (1999-2008; no significant trend) until 2009. The apparent marked reduction in numbers counted in 2009 and then 2010, is comparable in magnitude to census figures from 1974 and 1986 of 415 and 290 individuals respectively.

Black Guillemot *Cepphus 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).

Adult birds were seen around Sgeir an Eirionnaich - Sgeir an Fheòir sea area (10 birds) and Lunga's south end (12). Single birds were observed carrying food at sea at Lunga's south end.

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 were occupying burrows on Lunga and Sgeir a' Chaisteil. The estimated breeding population on Lunga and Sgeir a' Chaisteil totalled 1,705 AOBs, a 40% decrease from 2010; for counts of

birds, one bird is taken to represent one AOB (Lloyd *et al.* 1991, Mitchell *et al.* 2004). These data would suggest the population on Lunga in 2010 (1,544 AOB) has markedly declined from the comparatively high estimates of the past six years to well below the average of the past 16 years (2,065 AOB). The average annual rate of change for Lunga's population is calculated at +2.5% p.a. for the period 1994 – 2010; the upward trend is significant ($P < 0.1$).

Rock Dove *Columba livia*

Regular breeding species in very small numbers

Birds were seen daily on Lunga, principally along the east coast, the largest group being north of Tarbet, consisting of seven birds. Two dead chicks were found in the cave of the 2nd gully south of Corran Lunga whilst two possible nests were found in a cave on the east coast.

Swift *Apus apus*

Irregular visitor

Between 1 and 5 birds were seen or heard on four dates over Lunga.

Skylark *Alauda arvensis*

Regular breeding species in small numbers

Six singing males were on Lunga in 2010 all within the same general localities frequented in recent years. Territories were on the slopes of Cruachan, immediately above the Village and probably two each in sectors 6 and 7.

Swallow *Hirundo rustica*

Irregular visitor

Single birds were seen north of Harp Rock (area 10) and over the Village, Lunga on the 27th and 30th June respectively.

Meadow Pipit *Anthus pratensis*

Regular breeding species in small numbers

Widespread breeding species on Lunga but found to be much less numerous than previous years. This latter observation was shared with most other regular breeding passerine species on Treshnish Isles that winter locally or elsewhere in Europe. This may suggest poor survival of birds through last winter's prolonged severe cold weather period. Elsewhere no birds were seen when visiting the islands between Lunga and Fladda on 28th June, or during a brief visit to Sgeir a' Chaisteil which usually supports breeding birds.

Rock Pipit *Anthus petrosus*

Regular breeding species in small numbers

Common breeding species along the coast of Lunga and on Sgeir a' Chaisteil. Food carrying, alarms and recently fledged young confirmed breeding by several pairs on Lunga and two pairs on Sgeir a' Chaisteil. Birds were also recorded on Sgeir na H-Iolaire (1 pair) and Sgeir an Eirionnaich (2 pairs; carrying food).

Pied Wagtail *Motacilla alba yarrelli*

Irregular breeding species

At least one pair of adult birds was regularly observed around the Village and Corran Lunga. The presence on Corran Lunga of a juvenile accompanied by an adult on 27th June was the only evidence suggestive of breeding on Lunga. Elsewhere on Lunga, a single bird was noted at Harp Rock and two in Area 8.

One adult male was noted on Sgeir an Eirionnaich during visits to other islands.

Wren *Troglodytes troglodytes*

Regular breeding species, quite common where habitat suitable.

As in previous years, the vast majority of records of the species 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. The species was much less numerous than previous years, this likely to be a consequence of the past winter's severe cold weather (see Meadow Pipit account). Casual observations indicated a minimum of two territories on Corran Lunga, three south of Tarbet, two along the east coast footpath between the Village and Harp Rock, and four along the west coast footpath between the Village and Tarbet. At least three broods were noted with an empty nest located in area 2.

No birds were noted during visits to other islands.

Dunnock *Prunella modularis*

Scarce visitor

Single singing males were present throughout the week on territory south of the Village and around lazy beds beside the 2nd gully south of Corran Lunga, Lunga.

Wheatear *Oenanthe oenanthe*

Regular breeding species in small numbers

A several families of dependent and presumed locally bred young were noted on Lunga including around the Village, Tarbet, Corran Lunga and below the south slope of Cruachan.

Elsewhere during single visits by TIARG to other islands, no birds were noted.

Sedge Warbler *Acrocephalus schoenobaenus*

Scarce but almost annual visitor

Two singing males were found on territory in the reedbed at the south end of Lunga on 29th June. Alarming towards a human intruder of one bird suggested that it was incubating eggs or had chicks.

Blackbird *Turdus merula*

Rare visitor

One male bird was seen at the Village, Lunga on 28th June.

Hooded Crow *Corvus corone cornix*

Regular breeding species in small numbers

One pair appears to have bred on Lunga. As many as five juveniles and at least two moulting adults were regular seen frequenting the north end of Lunga.

Elsewhere birds could be seen from Lunga on Fladda (1 bird) and two were seen on Sgeir an Eirionnaich when the islands between Lunga and Fladda were visited by TIARG.

Raven *Corvus corax*

At least one pair breeds in most years

At least ten individuals were regularly seen frequenting the north end of Lunga. At any one time, up to three birds seen together were moulting adults, and another seven thought to be juveniles due to the absence of wing moult or abraded flight feathers. The reported flock size and age composition varied as groups split and merged, the juveniles apparently independent of their parents.

Elsewhere single birds were seen from Lunga over Fladda. No birds were seen during visits to other islands.

Starling *Sturnus vulgaris*

Regular breeding species in small numbers

Small flocks of up to 50 birds were noted daily on Lunga, all entirely comprised of adults. Though breeding was not confirmed on Lunga, adults were regularly seen carrying food in the vicinity of the Village, Lunga. Elsewhere birds were noted on Sgeir an Eirionnaich (flock of 28 adults) and Sgeir a' Chaisteil (40).

Remains of one bird was found in the pellet of a Great Black-backed Gull.

Twite *Carduelis flavirostris*

Regular breeding species in small numbers

One pair of birds was recorded daily between Harp Rock and the Village, Lunga. Three birds were in this area on 1st & 2nd July. The species was noticeable by its absence elsewhere on the island when one or more family parties would at least be expected to be recorded elsewhere on the north end of Lunga. None were seen during the visit to Sgeir a' Chaisteil.

SYSTEMATIC LIST OF MAMMALS FOR 2010

Otter *Lutra lutra*

Evidence of presence regularly noted

Tracks of animals were found in both caves on the west coast of north Lunga, and in the blow hole on the west coast of south Lunga (area 8).

American Mink *Neovison vison*

No known occurrences

No evidence of the presence of this species was noted on any of the islands visited.

House Mouse *Mus musculus*

Resident

Up to 3 animals at any one time were seen at the expedition base, the Village at the north end of Lunga. These animals were seen the frequenting the remains of the western three most cottages.

Brown Rat *Rattus norvegicus*

No known occurrences

No evidence of the presence of this species was noted on any of the islands visited.

Rabbit *Oryctolagus cuniculus*

Resident, numbers much reduced in recent years.

No systematic monitoring of this species took place, casual observations on Lunga suggesting the species to be abundant. All sightings of black individuals were from Lunga, involving several individuals at widespread localities.

No evidence was noted of animals on the other islands visited.

Grey Seal *Halichoerus grypus*

Regular breeding species, contributing just under 3% of annual UK pup production. Their 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.

Unusually small numbers of animals were visible from Lunga hauled out on intertidal reefs to the north and north-east at low tide. A maximum of 17 animals were recorded at any one time.

Common Seal *Phoca vitulina*

Rare visitor

Single unaccompanied immature animals were seen on Corran Lunga and the intertidal reefs north-east of Lunga on 2nd July.

Common Porpoise *Phocoena phocoena*

Rare visitor

One animal was briefly seen from the MV Hoy Lass of Turus Mara when travelling between Staffa and Lunga on 26th June.

Bottlenose Dolphin *Tursiops truncatus*

Rare visitor

Four animals were attracted to the MV Hoy Lass of Turus Mara when travelling between Ulva and Staffa on 26th June.

SYSTEMATIC LIST OF LEPIDOPTERA FOR 2010

Common Blue *Polyommatus icarus*

Regular breeder

No more than one hundred individuals were seen daily on Lunga, the species notably less numerous than of recent years. The species was also noted during a visit to Sgeir an Eirionnaich (10 individuals).

Dark Green Fritillary *Argynnis aglaja*

Accidental

Singles were seen at the Village, Lunga and north of Shearwater Gully on 30th June and 1st July respectively. At the latter site a further two individuals were seen on 1st July.

Small Pearl Bordered Fritillary *Boloria selene*

Accidental

Singles were seen north of Shearwater Gully on 30th June and 1st July respectively. The identity of one individual was confirmed in the hand. These are the first documented records of this species by TIARG

Meadow Brown *Maniola jurtina*

Accidental

Between one and ten individuals were recorded daily on Lunga, chiefly along the north-east coast and south of Tarbet.

Ringlet *Aphantopus hyperantus*

Accidental

One was seen above Shag Alley (area 3), Lunga on 29th June.

Six-spot Burnet *Zygaena filipendulae*

Resident

Small numbers were seen on Lunga in comparison to previous years.

Emperor Moth *Saturnia pavonia*

Resident

Four caterpillars of this species were found when walking Lunga south of Tarbet.

Magpie *Abraxas grossulariata*

Probable resident

A single moth was seen on Lunga at the Village.

Small Magpie *Eurrhpara hortulata*

Probable resident

A single moth was noted on Lunga.

Angled Shade *Phlogophora meticulosa*

Probable resident

A single moth was seen on Lunga on 28th June.

Silver Y *Autographa gamma*

Resident

The species was noted on Lunga.

Common Swift *Hepialus lupulinus*

Resident

The species was noted on Lunga

NOTABLE RECORDS FROM OTHER ORDERS OF FAUNA AND FLORA

Basking Shark *Cetorhinus maximus*

Rare visitor

A total of three individual animals, based on size, were seen from Lunga. A medium sized animal was seen off the Boulder Beach, Lunga on 26th June, followed on the 29th by a similar sized animal in the company of a small animal off the east coast. A large animal was seen offshore at the north end of Lunga on the 1st July. The final sighting was of a medium sized animal feeding close in shore along the south east coast of Lunga on 2nd July.

Red-tailed Bumblebee *Bombus lapidarius*

Probable resident

Single queens of this species were seen at the Village, Lunga on 29th & 30th June.

Buff-tailed Bumblebee *Bombus terrestris*

Probable resident

A queen of this species was seen west of Shearwater Gully, Lunga, on 29th June.

Bilberry Bumblebee *Bombus monticola*

Probable resident

A queen and workers of this species were seen on west of Shearwater Gully, Lunga on 1st July.

Oyster Plant *Mertensia maritima*

Localised species known only from "colonies" at Tarbet (west), Lunga and two localities on Sgeir a' Chaisteil.

An absence of plants from what was a well established "colony" at the north end of Sgeir a' Chaisteil was again noted for the sixth consecutive year. At Tarbet (west), Lunga, over 200 plants were found, most comparatively large and many spreading extensively.

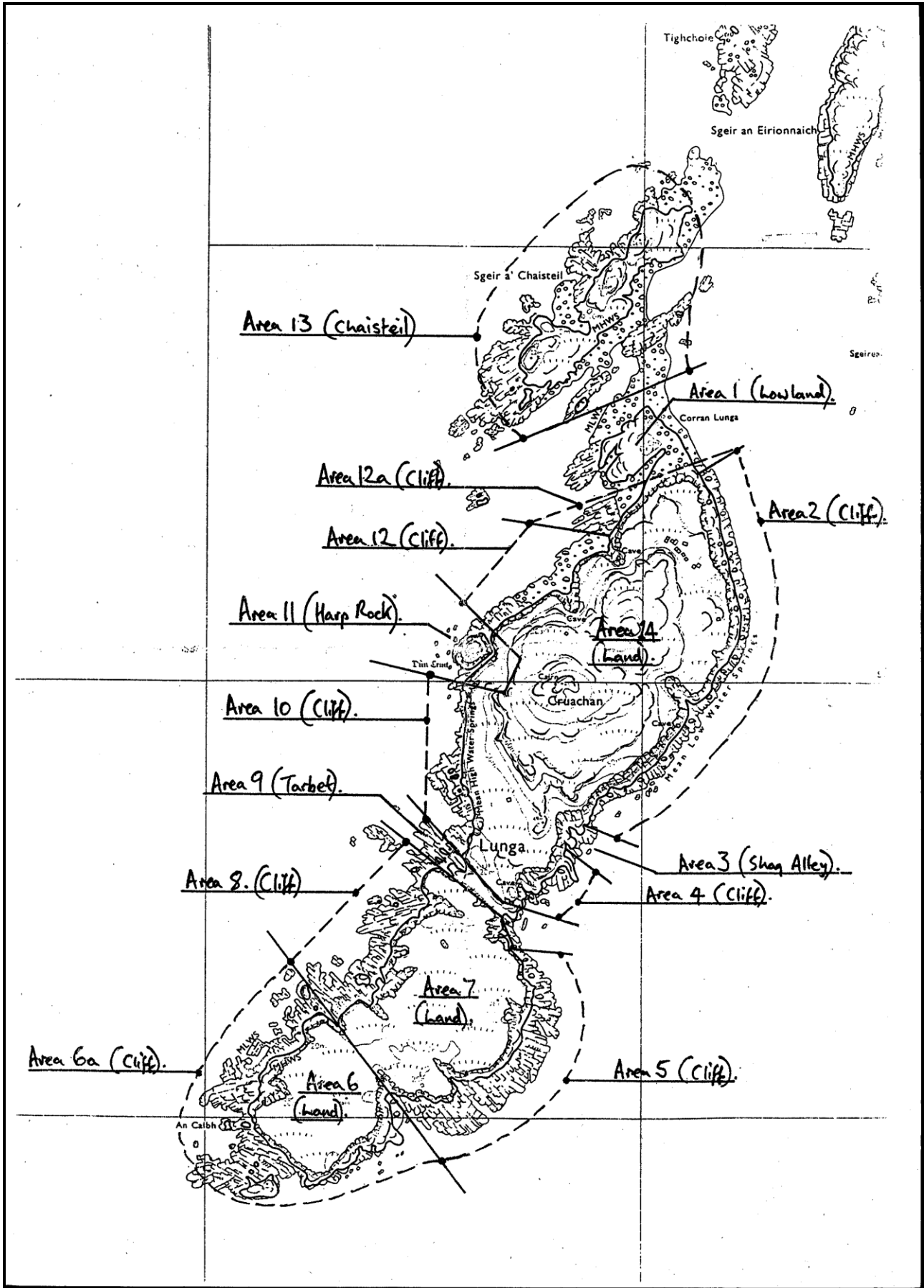
A notable find was of a single plant at Corran Lunga, a previously unknown site to TIARG.

Bog Pimpernel *Anagallis tenella*

Localised species

Two "colonies" of this plant in flower were located on Corran Lunga.

MAP OF CENSUS ZONES – LUNGA AND SGEIR A' CHAISTEIL



2010 BREEDING SEABIRD CENSUS DATA FOR LUNGA AND SGEIR A' CHAISTEIL

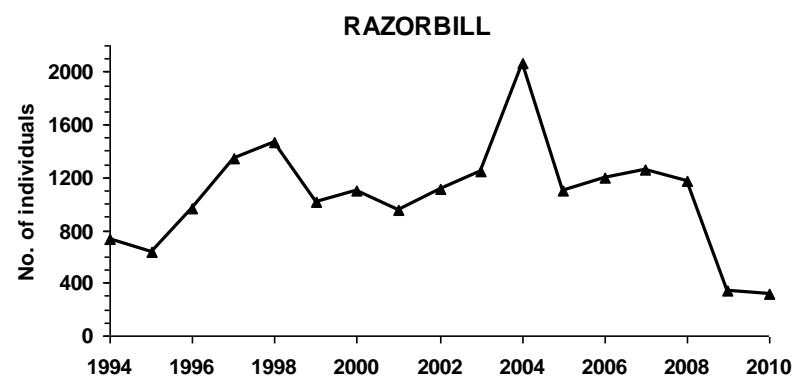
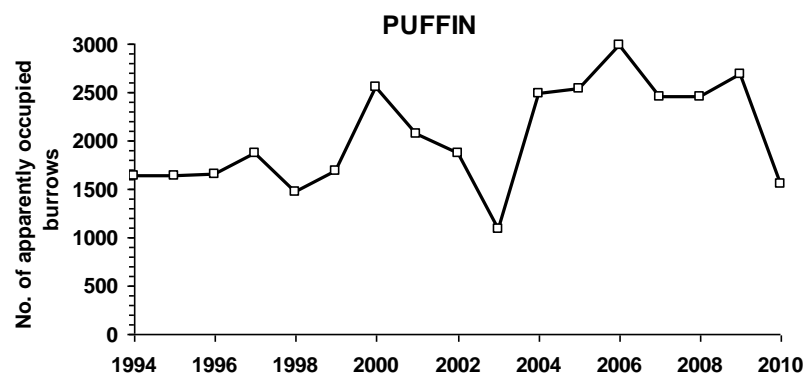
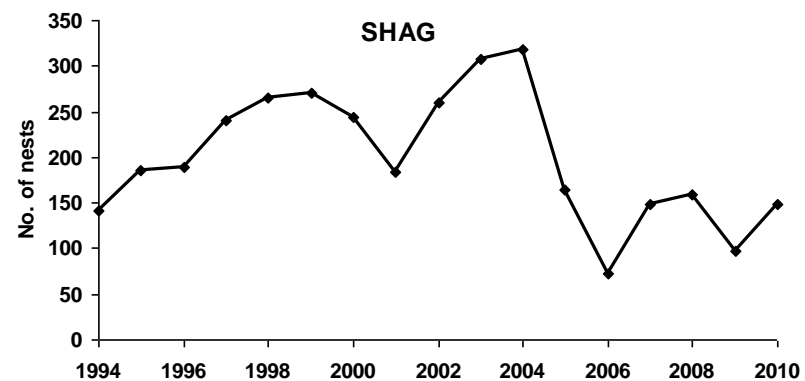
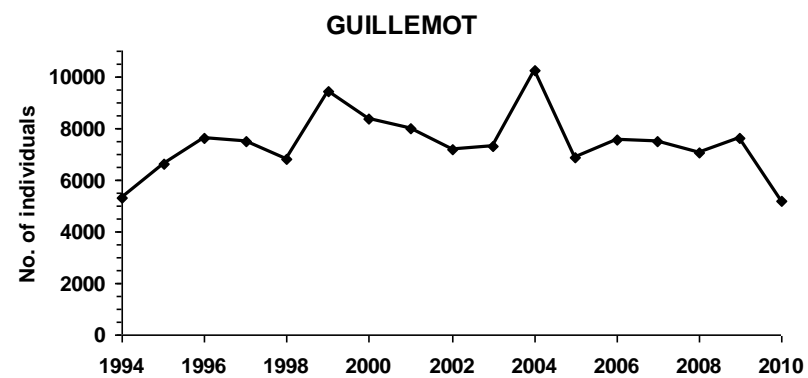
Sector	Count unit	Lunga	Sgeir a' Chaisteil	Sgeirean na Giusaich	Sgeir an Fheoir	Sgeir an Eirionnaich	Sgeir na h-Iolaire
Fulmar	AON	328	52				
Manx Shearwater	No census	+					
Storm Petrel	No census	+					
Shag	AON	149	15			2	
Great Skua	AOT	3					
Common Gull	AOT					4	
Lesser B-b Gull	AOT	2					
Herring Gull	AOT	17	7	3 (N)		2	
Great B-b Gull	AOT	21	2	2(N) 1(S)		18	
Kittiwake	AON	456					
Common Tern	AON						
Arctic Tern	IND					7	
Razorbill	IND	314	3				
Guillemot	IND	5213	52				
Black Guillemot	IND	12				9	1
Puffin	SEA	295					
Puffin	IND	315					
Puffin	AOB	1229	161				

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

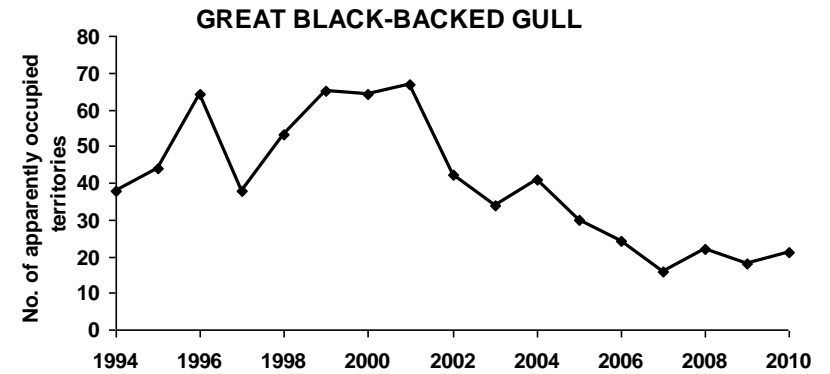
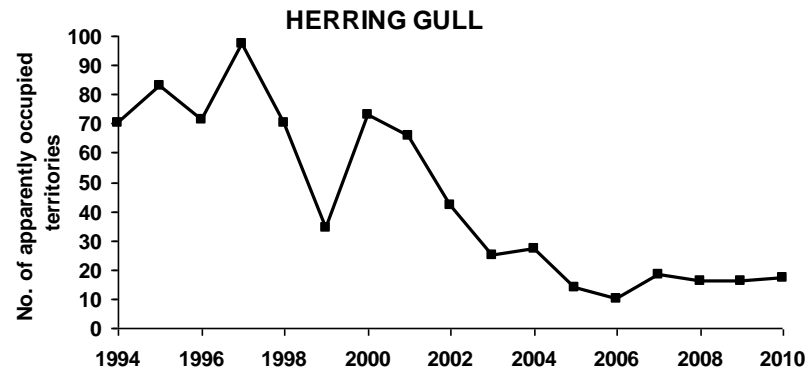
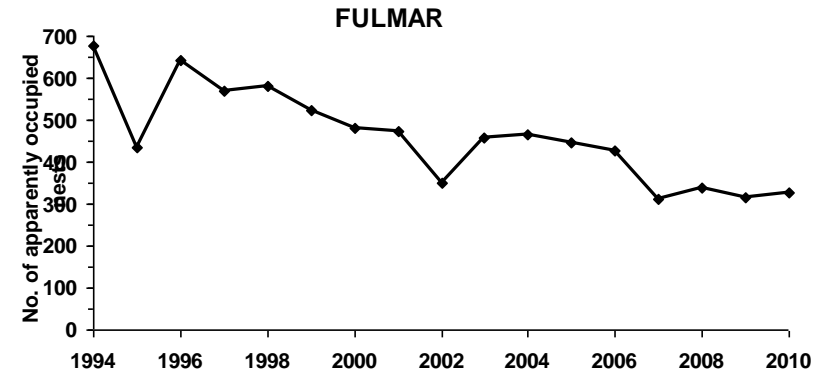
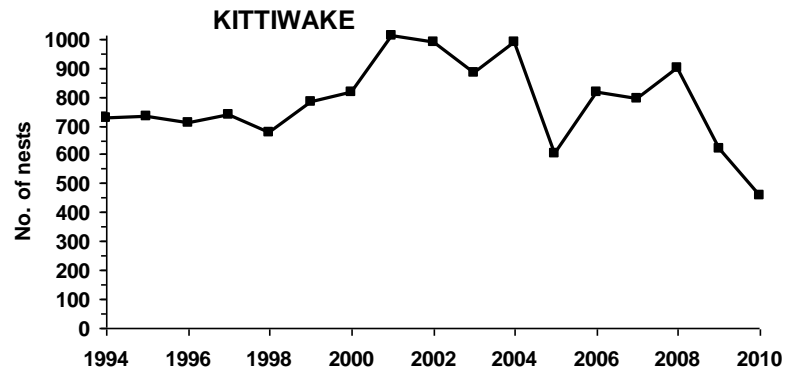
Sector	Count Unit	Count Sectors on Lunga (1 – 12a) and Sgeir a' Chaisteil (13)															Lunga & Chaisteil Totals
		1	2	3	4	5	6	6a	7	8	9	10	11	12	12a	13	
Fulmar	AON		47	9	12	40		36		27		11	35	102	9	52	380
Shag	AON		21	37	7	32				11		24	7	8	2	15	164
Lesser B-b Gull	AOT									2							2
Herring Gull	AOT	2	1							12				2		7	24
Great B-b Gull	AOT	2					13		4			2				2	23
Kittiwake	AON												406	50			456
Great Skua	AON						2		1								3
Razorbill	IND		46	18	5	10		5		8		16	177	22	7	3	317
Guillemot	IND					20						107	5044	88	1	52	5265
Black Guillemot	IND					1		4		7							12
Puffin	SEA											35		260			295
Puffin	IND		114	51		4							43	103			315
Puffin	AOB				69								72	272	816	161	1390

Key to count unit codes: AON/AOT/AOB = apparently occupied nest/territory/burrow within 200m of colony PRS = Pairs nc = no count IND = Individuals on land SEA = individuals on sea + = breeders present

POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2010



POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2010 (con't)



TRESHNISH RINGING TOTALS FOR 2010

Site	Species	Adults	Pulli	Retraps/Controls	Total
Lunga	Manx Shearwater	9	0	1	10
	Storm Petrel	293	0	119	412
	Shag	17	99	14	130
	Herring Gull	0	11	0	11
	Lesser Black-backed Gull	0	2	0	2
	Great Black-backed Gull	0	13	0	13
	Kittiwake	3	0	1	4
	Guillemot	53	0	11	64
	Razorbill	7	0	3	10
	Puffin	38	0	0	38
	Meadow Pipit	1	0	0	1
	Rock Pipit	2	0	0	2
	Wren	1	0	0	1
	Wheatear	4	0	0	4
Other islands	Great Black-backed Gull	0	2	0	2
Treshnish Isles	Grand total for 2010	428	127	149	704

Note: All rings used in 2010 were registered under *Treshnish Auk Ringing Group*.

TRESHNISH RINGING TOTALS 1971 – 2010

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

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 was not available.

TRESHNISH RINGING TOTALS 1971 – 2010 (continued)

SPECIES	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Fulmar	7	24	23	12	25	22	25	47	14	15	8				422
Manx Shearwater	2	1	4	4			2		1	1	2		4	9	72
Storm Petrel	1104	741	732	814	1030	15	360	83	491	962	21	118	403	293	11498
Shag	99	150	100	59	37	97	99	200	77	35	141	124	53	116	2093
Eider								1							1
Buzzard															3
Corncrake									1						1
Oystercatcher			2		1						4				15
Common Sandpiper		1								1	1	1			4
Ringed Plover									1		1				2
Great Skua		1				1	1		1			2	4		10
Common Gull		4		5	11	11	6		16	8					61
Herring Gull	52	73	39	15	11	11	8	11	8	1	11	7	20	11	495
Lesser Black-b Gull												1		2	3
Great Black-b. Gull	48	19	16	2	27	5	21	18	12	3	4	13	12	15	395
Kittiwake	50	41	23	13	11	3	2	21	15	14	16	3	4	3	247
Guillemot	472	503	507	892	312	425	261	800	141	172	123	1	51	53	7540
Razorbill	98	112	102	133	31	110	56	147	37	33	34	5	6	7	2578
Black Guillemot	1				1										2
Puffin	267	398	274	389	214	351	244	226	151	272	195	327	32	38	6053
Meadow Pipit	1			12	1	4	1	3	5	1		4		1	37
Rock Pipit	2	4	2	1	2	2	2	2		3	21	10	1	2	66
Pied Wagtail											4				10
Wren					1			2	4	2		2	1	1	16
Wheatear	24	37	22	50	24	2	2	2	7	1	2	4	2	4	204
Stonechat										2		1			3
Willow Warbler															1
Hooded Crow											1				1
Starling											3				3
Twite	2					1					1	1	1		6
TOTAL	2229	2109	1846	2401	1739	1060	1090	1563	982	1526	593	624	594	555	31842

RECENT RINGING RECOVERIES

STORM PETREL

TIARG have in the past year received details of 28 recoveries of birds ringed within Britain and Ireland in the months July - September and controlled by TIARG on Fladda or Lunga in June - July 2009. These recoveries are summarised in both the table and map below; all birds were ringed as adults (Euring code 4).

Ringing Site	No. of controls at:		Time interval (days)		Distance Km	Direction (degrees)
	Fladda	Lunga	min	Max		
Tullagh Point, Co.Donegal, Eire	0	3	1070	2176	149	27
Annagh Head, Bellmullet, Co.Mayo, Eire	0	2	1060	1061	342	43
Sheepand Harbour, Ardglass, Co.Down	1	2	344	1419	251	348
Bardsey Island, Aberdaron, Gwynedd	0	1		1439	428	346
Burroo Ned, Isle of Man	0	1		1039	290	340
Calf Of Man, Isle Of Man	0	3	301	4365	290	340
Ailsa Craig, Strathclyde	0	2	3269	3990	160	330
Sanda Island, Kintyre, Strathclyde	3	1	325	3625	146	340
North Rona, Highland Region	0	1		1434	295	188
Eilean Nan Ron, Highland Region	0	2	334	341	262	209
Tres Ness, Sanday, Orkney	1	0		1422	380	218
North Ronaldsay, Orkney	1	2	324	1442	396	216
Craig Stirling, Grampian	0	2	334	686	268	258

STORM PETREL RECOVERIES

Details are given below of a bird originally ringed in Portugal and recovered on the Treshnish Isles and six birds 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
 X - Found dead
 XF - Found freshly dead or dying
 SR - Sick or injured, released with ring

Storm Petrel

N03256	6	09/6/2007	Ponta De Almadena, Faro, Algarve, Portugal
	R	24/6/2008	Lunga
			2165km 5 degs 381 days

This is the eighth recovery of a Portuguese ringed bird by TIARG, all of which have come from Ponta De Almadena, Faro, Algarve.

Storm Petrel

2560828	6	23/6/2005	Fladda
	R	24/7/2008	Sanda Island, Kintyre
			146 km 159 degs 1470 days

Storm Petrel

2579788	6	24/6/2008	Lunga
	XF	02/9/2009	Kielder Forest, Northumberland
			279 km 121 degs 435 days
			Freshly dead, found following strong winds during violent weather

Storm Petrel

2579957	6	29/6/2009	Lunga
	R	08/8/2009	Sanda Island, Kintyre
			146 km 159 degs 40 days

Storm Petrel

2579990	6	29/6/2009	Lunga
	R	22/8/2009	Sheepand Harbour, Ardglass, Co.Down
			251 km 168 degs 54 days

Storm Petrel

2605497	6	29/6/2009	Lunga
	R	01/7/2009	Sanda Island, Kintyre
			146 km 159 degs 2 days

Storm Petrel

2605182	6	01/7/2009	Fladda
	R	07/8/2009	Tres Ness, Sanday, Orkney
			380 km 38 degs 37 days

Storm Petrel recoveries relating to the Treshnish Isles as either birds ringed or controlled there, now number 534 (relating to 504 birds) of which many have been of birds from the Isle of Man & Sanda (64 & 146 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 a wandering immature (up to 4 years old) or failed breeders. Only 68 birds ringed on the Treshnish Isles have been recaptured elsewhere, 13.5% 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.

RECOVERIES OF OTHER SPECIES

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

Shag

1414353	1	24/6/2005	Fladda
	X	07/8/2009	Loch Tuath, Isles of Mull
			9 km 78 degs 1505 days
			Found on shallow snorkel dive

Kittiwake ET80439	8	22/6/1999	Lunga			
	S	08/2/2010	Southend-on-Sea, Essex	722 km	140 degs	3884 days
			Sick or injured, taken into care, fate unknown			
Razorbill M856000	6	03/7/1998	Lunga			
	XF	13/9/2009	Annalong, Newcastle, Co.Down, Northern Ireland	267 km	173 degs	4090 days
Puffin EW50267	8	25/6/2008	Lunga			
	XF	28/6/2009	Lunga	0 km	0 degs	368 days
			Freshly dead on beach			
Puffin EW18282	8	28/6/2009	Lunga			
	XF	28/6/2009	Lunga	0 km	0 degs	372 days
			Freshly dead on beach			
Puffin EL52518	6	23/6/2004	Lunga			
	XF	28/6/2009	Lunga	0 km	0 degs	1831days
			Freshly dead on beach			
Puffin EG23549	4	24/6/2000	Lunga			
	XF	30/6/2009	Lunga	0 km	0 degs	3293days
			Freshly dead on beach			
Puffin EN22275	8	30/6/1995	Lunga			
	XF	05/7/2009	Lunga	0 km	0 degs	5119days
			Fresh gull kill			
Puffin EN22429	8	22/6/1996	Lunga			
	XF	28/5/2009	Lunga	0 km	0 degs	4723 days
			Fresh deadly, probably predated by gull or Great Skua			
Puffin EG61467	6	26/6/2002	Lunga			
	R	25/7/2009	Sule Skerry, Orkney	313 km	23 degs	2586 days
Puffin EK29795	4	29/6/1989	Lunga			
	R	16/7/2002	Sule Skerry, Orkney	313 km	23 degs	4765 days

Puffin

EG61315

6	24/6/2002	Lunga		
R	15/2/2002	Sule Skerry, Orkney		
		313 km	23 degs	21 days

Puffin

ES64256

8	30/6/1994	Lunga		
X	17/8/2009	Isle of Staffa, Strathclyde		
		8 km	138 degs	5527 days

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ACKNOWLEDGEMENTS

Firstly we would like to express our appreciation to the owners of the Treshnish Isles, THE HEBRIDEAN TRUST (www.hebrideantrust.org) for permission and funding to allow our continuing studies to be made on these fascinating islands.

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.



TIARG expedition unloading MV *Hoy Lass* of Turus Mara (R.M. Ward)

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

THE EXPEDITIONS 1971 – 2009

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.
- 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.

THE EXPEDITIONS 1971 – 2010 (continued)

- 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.
- 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.

THE EXPEDITIONS 1971 – 2010 (continued)

- 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.

RING SERIES USED ON THE TRESHNISH ISLES SINCE 1927*

SHAG RINGS	A2 RINGS	E RINGS	F RINGS	G RINGS	H RINGS	RAZORBILL RINGS	GUILLEMOT RINGS	MISC. RINGS
1080101 – 110	2010581 – 583	EF75001 – 500	FB22601 – 700**	GH21301 – 350	HT03619	K10701 – 1000**	R07001 – 100	1F4094 - 097
1087111 – 120	2101991 – 2000	EG23501 – 700	FB23401 – 500**	GN85301 – 400**	HT09001 – 004	K13001 – 300 [#]	R19401 – 20200	C331894 - 900
1105561 – 570	2121401 – 500	EG23721 – 780	FC52551 – 558	GJ35401 – 500	HT17871 – 890	M46501 – 800	R24001 – 26350	E196501 - 520
1123541 – 550	2167051 – 068	EG23801 – 999	FC52571	GJ76001 – 800**	HT17931 – 940	M55001 – 500	R31601 – 900	JB44316
1123671 – 690	2170201 – 203	EG61000 – 500	FC74501	GJ99081 – 082	HT34021 – 030	M72451 – 800	R51501 – 2000	K039209 - 230
1123961 – 970	2238501 – 600	EG88501 – 9000	FH36101 – 200	GK34351 – 354	HT68201 – 210	M85501 – 800	R65501 – 6000**	K419290 - 295
1159651 – 700	2261001 – 2350	EH33377 – 380	FR13606 – 636	GK50214 – 220	HT68221 – 226	M88001 – 300	R72501 – 4000**	NA84296 - 299
1163701 – 740	2284001 – 5000 [#]	EH54501 – 55000	FR14401 – 500	GK50551 – 570	HT80301 – 400	M92501 – 700**	T14001 – 5000**	KX83101 - 106
1168001 – 100	2309901 – 10000	EH89256	FR56351 – 400	GK62985 – 990	HW05351 – 360		R73001 – 4000**	KX83116 - 118
1170601 – 700	2311301 – 400	EH89260	FS21478	GK90821 – 840	HW06951 – 7000		T82001 – 300	RF10011-020 [#]
1187901 – 950	2311501 – 2000	EH98001 – 300	FS51016 – 500	GK91471 – 490	HW08994 – 09000		X39501 – 40000	LA59201-300**
1237401 – 450	2348001 – 500	EK29501 – 900	FS87001 – 100	GM78756	HW37361		X56501 – 57000	DD90261-270 [#]
1322951 – 960	2369301 – 400	EK72657 – 660	FV10611 – 620	GP13416 – 450	HW68101 – 110		X63001 – 500	CBV601-700**
1328481 – 490	2405001 – 6000	EK91471 – 490	FV10646 – 650	GP47917	HW68161 – 170		X67501 – 68000	V711401-500**
1350801 – 900	2430701 – 900	EL19801 – 276	FV54446 – 460	GP62201 – 207	HW74971 – 990		X79501 – 80000	TJ18901-9000 [#]
1357901 – 8000	2436501 – 7000	EL52501 – 3000	FV62410	GP74501 – 75000	HW87211 – 225		X99001 – 500	BT09481-490**
1366901 – 7000	2444501 – 5000	EN22001 – 500	FV62416 – 226		HW94907 – 913			NV42851-860**
1373751 – 3900	2446202 – 233	EP85608 – 612	FV96681 – 684		MA12551 – 600**			SR49601-700**
1378401 – 8500	2455501 – 6000	EP85687 – 700	SS96101 – 300		MA15801 – 900**			A297482-500
1399601 – 700	2480001 – 500	ER03701 – 800						B229951-992
1408301 – 500	2513501 – 4000	ER48401 – 404						BV70669
1414301 – 500	2538001 – 800	ES64018 – 189						
1421701 – 800	2542001 – 3000	ET19501 – 700						
1417001 – 7100	2554001 – 500	ET52501 – 3000						
1445601 – 800**	2560001 – 1000	ET80001 – 500						
	2579001–80000	EW18001 – 500						
	2605001 – 5500**	EW50001 – 500**						
	2624001 – 5000**	EX12501 – 3000 [#]						
	2650101 – 61000							

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

** Ring series still in use

[#] Ring series purchased but yet to be used

SURVEY FOR BREEDING TERRESTRIAL BIRDS OF LUNGA

Tracé Williams

INTRODUCTION

The only assessments known to have been made of breeding birds other than seabirds on the Treshnish Isles have been based on casual observations such as those reported upon annually during TIARG expeditions. In 2010, TIARG embarked on carrying out a survey of Lunga to evaluate its importance to breeding terrestrial birds, defined for the purposes of this paper as passerines and inland breeding waders.

AIMS AND OBJECTIVES

The aims and objectives of the study were to provide baseline information on the current status of Lunga in respect of breeding passerines and inland waders from visits during TIARG's expedition week.

METHODS

The survey methodology involved standard territory (registration) mapping techniques as detailed in Bibby *et al.* (2000). This method is based on the observation that many species during the breeding season are territorial. This is found particularly amongst passerines, where territories are often marked by conspicuous song, display, and periodic disputes with neighbouring individuals. Registrations of birds, using standard British Trust for Ornithology (BTO) two letter species codes (BTO 2010), were placed onto an appropriate field map. Specific codes were also used for singing, calling, movements between areas, flying, carrying food, nest building, aggressive encounters and other behaviour.

The study area was walked at a slow pace in appropriately fine weather in order to locate and identify all individual birds. All suitable breeding habitats were walked where personal safety was not compromised. Visits were undertaken early in the morning, generally between 05:00–10:00. The whole of Lunga was covered in each visit, using suitable optical equipment to observe bird behaviour. The route and direction walked was varied between the two visits so that there was no tendency for any part of the site to be visited later or earlier in the day.

The survey visits were undertaken on the 29th June and 2nd July 2010. Further survey visits though intended were not found possible on account of the prevailing weather and the time necessary to satisfactorily complete other ornithological projects.

The locations of birds were recorded directly onto a 1:10,000 scale Ordnance Survey base map of the island.

A fresh master field map was used on each survey visit. These were then used to create individual species master maps, following the completion of the surveys. The expected outcome of this technique would be that mapped registrations fall into clusters, approximately coinciding with territories. This necessitates however more than two survey visits that are well spaced through the period of the breeding season, usually mid March – mid June (Bibby *et al.* 2000). In Scotland and for some of the species known to be breeding on Lunga, the breeding season extends into July. As only two surveys were undertaken in 2010, the data can not be interpreted beyond providing breeding status for a minimum number of species and individuals within the study area, and where relevant, their approximate breeding territory location.

Standard registration mapping techniques were also used to record non-breeding species.

The following definitions have been used to identify the breeding status of the species recorded.

- **Confirmed Breeding:** Includes species observed carrying faecal sac or food, using an active nest, the presence of recently fledged young or downy young.
- **Probable Breeding:** Includes a pair observed in suitable nesting habitat in breeding season, agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby. Behaviour was observed on insufficient occasions to confirm the presence of a territory.
- **Possible Breeding:** Includes species observed in breeding season in suitable nesting habitats, singing male present (or breeding calls heard) in breeding season in suitable breeding habitat.
- **Non Breeding:** Fly-over species observed but suspected to be still on migration. Species observed but

suspected to be summering non-breeder.

Some of the coast of Lunga was inaccessible to the surveyor during the two survey visits. Records from these locations during a seabird census on the 27th June have, where appropriate, been included into the present survey results. Where included, these data have been identified.

RESULTS

Table 1 & 2 shows respectively the number of territories and breeding status by area of the species recorded by the two survey visits.

Buzzard *Buteo buteo*

Two birds were seen during both survey visits along the north-east coast and Area 7. On 2nd July, presumably the same two birds were seen with a third north of Shearwater Gully when good views allowed the birds to be aged as two adults and a juvenile.

Woodcock *Scopolax rusticola*

One bird was flushed from near the reed bed in Area 7, south end of the island, on 27th June. In Argyll the species is a widespread, but probably under recorded, breeder with breeding season records from nearby Colonsay and Mull (Callan 2010).

Snipe *Gallinago gallinago*

The survey recorded four single drumming birds on territory over the Village, south of Shearwater Gully, Area 6 and Area 7.

Skylark *Alauda arvensis*

The survey suggested the presence of six territories. The ranker grassland at the south end of the island provides the best habitat for skylarks on Lunga, and probably supported four territories in total. Two further pairs were recorded in the vicinity of the Village and above Shearwater Gully.

Meadow Pipit *Anthus pratensis*

Only two territories were identified from the two survey visits; at the Village and above the Well. However, this is an underestimate as at least 10 birds were recorded in other areas.

Rock Pipit *Anthus petrosus*

Approximately 22 territories were identified by the survey. Four pairs were seen actively carrying food and only seven juveniles recorded, although much alarming of unaccompanied adults was suggestive of many pairs still with active nests. The highest concentration was in Area 14, in rocky outcrops among bracken on the hillside, and in the gully/cliffs in Areas 5, 6a and 8. (The latter areas were only surveyed from the bases of the cliffs during seabird surveys on 27/6 and not during the early morning surveys).

Pied Wagtail *Motacilla alba yarrelli*

No territories were recorded by the survey, although one and two birds were seen respectively in areas 11 and 8.

Wren *Troglodytes troglodytes*

Twelve territories were recorded by the survey. The species seem to favour the rocky areas along the lower hillside, especially east of the Village, and the gully tops. Adults were singing on territory and several fledged young were seen. A notable lack of birds at the south end of the island.

Duncock *Prunella modularis*

No territories proven although single adults were singing in two locations, above the second gully south of Corran Lunga and between the Village and the Well.

Wheatear *Oenanthe oenanthe*

Eleven territories were recorded by the survey. An abundance of recently fledged young were seen (29), with most territories being in Area 14.

Sedge Warbler *Acrocephalus schoenobaenus*

At least one territory was recorded with two alarming males recorded on 29th June, each within the two

separate areas of reed bed in Area 7. One alarming male was recorded at the reedbeds on 2nd July.

Hooded Crow *Corvus corone cornix*

Single birds were seen during both survey visits.

Raven *Corax corax*

An adult with five juveniles was seen during the survey over Area 11.

Starling *Sturnus vulgaris*

At least two territories were recorded by the survey. Adults were noted between the two gullies south of Corran Lunga carrying food and doing so from the Village down to the Boulder Beach. A flock of 12 birds, consisting of seven juveniles was noted on June 29th.

Twite *Carduelis flavirostris*

The survey recorded two territories. Birds were regularly seen between the second gully south of Corran Lunga and Harp Rock and opposite the latter on the hillside.

CONCLUSION

The survey of breeding birds recorded 15 species over the two survey visits of Lunga. Of the species recorded eight species were confirmed to be breeding, four species considered to be probably breeding and two species possibly breeding, resulting in a breeding bird assemblage of 14 species. One species was considered not to be breeding.

The relatively short time on the island and the weather conditions only allowed for two surveys to be carried out. The results are a brief snapshot of species populations on Lunga, and would benefit from a repeat at an increased frequency of the territory mapping in forthcoming years.

REFERENCES

Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000). *Bird Census Techniques: 2nd edition*. Academic Press, London.

BTO (2008). The Bird Atlas 2007-11. www.bto.org/birdatlas/taking_part/breedingcodes.pdf (accessed June 2010)

Callan, D. (ed.) (2010). *Argyll Bird Report 2006-2007*. Argyll Bird Club.

Table 1: The minimum number of territories of breeding passerines and inland waders on Lunga as recorded by the survey, June/July 2010

Common Name	Approximate no. of territories in census zones																
	1	2	3	4	5	6	6a	7	8	9	10	11	12	12a	13	14	Total
Snipe		1				1		1								1	4
Skylark						2		2								2	6
Meadow Pipit																2	2
Rock Pipit	1				2	2		4		2		2				9	22
Pied Wagtail																	
Wren		1	1	1				1								8	12
Dunnock																	
Wheatear	1					1	1			1		1				6	11
Sedge Warbler								1									1
Starling	1												1			2	4
Twite																2	2

Table 2: The breeding status of passerines and inland waders recorded on Lunga as recorded by the survey, June/July 2010

June/July 2010

Common Name	Breeding status in census zones															
	1	2	3	4	5	6	6a	7	8	9	10	11	12	12a	13	14
Snipe		P				P		P								C
Skylark						P		P								P
Meadow Pipit																P
Rock Pipit	C				P	C		C		C					C	
Pied Wagtail	C								o							
Wren		C	C	C				P							C	
Dunnock												o				o
Wheatear	C					C	C			C		C				C
Sedge Warbler								P								
Hooded Crow												C				
Raven												C				
Starling	C												C			P
Twite																P
Buzzard																o

Notes on Table 2: C = confirmed breeding, P = Probable breeding, o = Possible breeding.