

Treshnish Isles Auk Ringing Group

Report for 2009



Great Skua (Andrew Carter)

Compiled by
Robin M. Ward

Expedition dates:
27th June – 4th July 2009

Expedition members:
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SIMON WALKER (1956 - 2008)

Simon Walker first ventured out to the Treshnish Isles with the late Barry Lawson, Peter Deans and John Hodson in 1978. It was the seventh expedition of the Treshnish Isles Auk Ringing Group (TIARG) to monitor, through ringing and census work, the breeding seabird populations of the Treshnish Isles. Simon was captivated by these isles and its colonies of breeding seabirds, whose future conservation he was acutely aware of benefitted from the continuation and development of TIARG's valuable contributions to the national monitoring programmes. From 1994, Simon's enthusiasm, dedication and appreciation has led TIARG ever since in an annual pilgrimage to the Treshnish Isles. Simon was continually reviewing TIARG fieldwork programme, striving to ensure the data generated within a week's visit was the most pertinent to the needs of others actively engaged in using it for the conservation of seabirds on the Treshnish Isles and nationally. To this aim, advice and guidance was always being sought by Simon from others in his profession, nature conservation, for what has been for all of us involved with TIARG, following a passion whilst on holiday.

On the 27th December 2008, Simon died peacefully and as was his wish, at home with his family. Simon had over the past few months been suffering from oesophageal cancer.



The late Simon Walker taken on departure from Lunga in 2004 after the eighteenth of twenty two expeditions he made with TIARG (*Andrew Carter*)

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 31st expedition to the Treshnish Isles during 27th June – 4th July 2009.

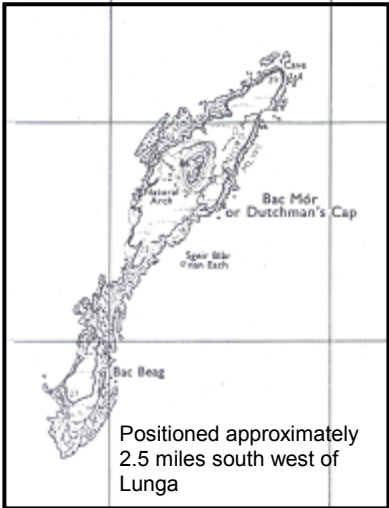
As in previous years, the expedition's base was set up around the ruined village site at the northern end of Lunga. The majority of the week's fieldwork was centred upon Lunga & Sgeir a' Chaisteil where the regular annual full seabird census and systematic ringing of specific seabird colonies was carried out. The week was dominated by very favourable weather conditions that resulted in the mist netting of Storm Petrels on Lunga during several nights. The calm conditions also allowed an attempt to be made to venture out for a night to obtain a ringing sample of Storm Petrels from Fladda which became all too brief due to deterioration in the weather soon after dusk. By day, calm sea conditions 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 Cairn na Burghs and the islands between Fladda and Lunga, as well as assessing breeding success for the less numerous seabird species on Fladda. The negative side to the calm weather was that the somewhat unprecedented duration of light winds, predominately from the east, resulted in very few auks being blown into range of our fleygs. This year, the fourth 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 2009 was provided by the Hebridean Trust (www.hebrideantrust.org), owners of the islands.



Expedition participants 2009: Dennis Cooper, Andrew Carter, Robin Ward, Tim Dixon, John Hodson, Claire Dovey, Jurjen Annen & Shaun Micklewright (*Andrew Carter*)

MAP OF THE TRESHNISH ISLES



WEATHER

In extreme contrast to the weather experienced in 2008, this year's expedition was very fortunate with the weather throughout the week. The weather pattern was very stable, with excellent weather in the first half of the week, though some deterioration did set in towards the end. Visibility was generally good, and conditions for survey and cliff counts were usually excellent. Rain was limited and did not greatly interrupt our activities; in particular sea conditions were good, flat calm for much of the time, allowing a good coverage by RIB of the small islands and skerries. Winds were light and did not generally interfere with nocturnal netting for storm petrels, although the unfortunate exception was the overnight visit to Fladda, where a combination of an exposed netting site and a sudden increase in wind velocity caused us to halt the netting session early in the night. The only problem concerning the wind was its direction, which remained stubbornly in the SE quarter through most of the week. This meant that fleygging conditions at Harp Rock were far from ideal, as the main (and indeed all) netting stations were in the lee of the island, limiting the flight activity of the auks.

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

Dennis Cooper

| Date | Time | Wind (Beaufort scale) | Max wind speed (mph) | Cloud cover (oktas) | Visibility | Temp (° C) | Humidity (%) | Pressure (mb) | Notes |
|-----------|-------------|-----------------------------|-------------------------|------------------------|-------------------|---------------|--------------|---------------|---|
| 27th June | 19:00 | 3-4 ESE | 10.4 | 3/8 | Skye | 19.2 | 77.6 | 1012.1 | Sea conditions calm |
| 28th June | 08:00 | 3 ESE | 8.4 | 7/8 | Skye | 16.3 | 85.5 | 1012.1 | Sea conditions calm; light mist, medium cloudbase. By 10:00 mist burned off. |
| | 17:40 | 1 NE | 3.9 | 8/8 | Skye | 18.6 | 84.3 | 1012.0 | Sea conditions flat calm. Cloudbase medium, very clear. |
| 29th June | 08:30 | 2 E | 5.9 | 8/8 | Coll / Tiree | 16.3 | 92.5 | 1013.0 | Cloudbase high to E, low to seaward, light haze. Significant rain before 0800, clearing by mid-morning, oktas 4/8, wind increasing. Visibility to Rum. 2/8 by 13:30 with cumulus building up. Temperature shade/sun at village 15:00 25.5/28.0 Reading from Cruachan summit; slight haze on sea, flat calm. High cloudbase. |
| | 16:00 | 3 ESE | 8.3 | 5/8 | Skye | 20.5 | 68.7 | 1005.1 | |
| | 19:10 | 1 E | 1.9 | 8/8 | Skye | 19.7 | 76.4 | 1012.8 | Sea conditions flat calm. |
| 30th June | 08:05 pm | 3-4 SE | 10.9 | 6/8 | Coll / Tiree | 16.5 21/24 | 90.5 | 1014.8 | Shade/full sun at village in afternoon No detailed observation (Fladda) |
| 1st July | 08:50 | 1-2 SE | 3.7 | 8/8 | Eigg/ Small Isles | 21.2 | 72.5 | 1018.6 | Sea conditions calm, but slight breakers on seaward rocks. Cloudbase medium. |
| | 17:20 | 1 SE | 2.6 | 8/8 | 100m | 16.3 | 100 | 1018.1 | Solid mist; sea quiet. |
| 2nd July | 08:10 | 4 SE | 12.8 | 3/8 | Skye | 19.1 | 89.5 | 1015.4 | Bright & clear, fresh breeze. Calm, riffled sea. Cloudbase high, thin cloud & cumulus over Mull |
| | 17:10 | 1 SE | 3.0 | 5/8 | Treshnish Point | 17.5 | 96.5 | 1012.0 | Cloudbase high, cloud light. Sea calm, riffled. Some haar to NW |
| 3rd July | 07:30 | ESE | 9 | 8/8 | Ben More, Mull | 19.0 | 100 | | Heavy shower started 0700 after intermittent rain in night. Eased by 0800, but started again and continued intermittently. |
| | 11:30 | 3 SE | 10.0 | 8/8 | Coll/Tiree | 17.0 | 100 | 1007.0 | Misty with high light cloud, still raining. Eased and clearing from 1400 hrs |
| | 18:00 | 3 SE | 7.5 | 7/8 | Coll/Tiree | 16.9 | 100 | 1005.0 | Dry since 1500 hrs; sea calm, riffled. Cloud high to seaward, lower over Mull & Small Isles. |
| 4th July | 07:15 | 4 ESE | 14.5 | 3/8 | Staffa | 15.1 | 96.4 | 1005.0 | Cloudbase high & thin, but thicker towards Mull & SE |

SYSTEMATIC LIST OF BIRDS FOR 2009

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 2009. (No records are available for the Dutchman's). 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 2009 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. 19 and 27 apparently occupied sites were also noted on Cairn na Burgh Beg and Cairn na Burgh More respectively during our visit on 1st July. The breeding population for Lunga and Sgeir a' Chaisteil was estimated at 362 pairs based upon apparently occupied sites (AOS). This 9% decrease from 2008 brings the population size to the lowest it has been since annual monitoring began in 1994. Over the longer term, 1994-2009, 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 ($P < 0.001$). For a similar period, 1993-2005, Mavor *et al.* (2008) reports a non-significant downward trend in the cumulative Fulmar population of colonies monitored in this region, S.W. Scotland.

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 11,000 birds were noted rafting in the evenings, offshore along the west coast 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* (1998 – 2002).

Many birds were heard churring from burrows on Fladda and Lunga.

Mist netting on Lunga simultaneously at the Village and the Boulder Beach on one date provided catches of 116 (including 24 retraps) and 169 (incl. 31 retraps) birds when using three 18m and three 12m nets respectively for 2.5 hours. Four days later a further attempt to mist net at the Village resulted in only 24 birds being caught (incl. 6 retraps). The opportunity provided by several nights of calm weather was taken to mist net for Storm Petrels in the vicinity of known colonies above the second gully south of Corran Lunga (on the path to Harp Rock). Two attempts were made on consecutive days and provided catches of 28 (incl. 3 retraps) and 74 (incl. 14 retraps) birds. Elsewhere an attempt to mist net on Fladda on the night of the 30th June was quickly thwarted by rain and wind with only 85 birds (incl. 18 retraps) caught in an hour.

Gannet *Morus bassanus*

Regularly seen offshore

Up to in excess of twenty birds, (the majority adults) were recorded 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 Sgeir an Eirionnaich, Cairn na Burgh Beg, Cairn na Burgh More, Fladda, Lunga and Sgeir a' Chaisteil. The breeding population for Lunga and Sgeir a' Chaisteil was 97 and 19 pairs respectively, based upon a nest count. The overall number counted has decreased by 39% from that in 2008. The breeding population has yet to recover significantly from a rapid, marked decline in the numbers of active nests 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 400+ 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.

2009 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 2009, of the breeding adults marked in 2006, 2007 and 2008 on Lunga, 4, 17 and 16 were re-sighted by TIARG respectively involving a total of 38 individuals out of a possible 145 individuals. A further 22 breeding adults were colour-ringed on Lunga in 2009.

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 225 birds by 27th June, typically most residing around the islands of Sgeir an Eirionnaich, Fladda and Sgeir an Fheòir. Evidence of local breeding included a well grown but flightless gosling on Fladda. One moulting adult Greylag Goose was seen to be predated by a Great Skua.

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

Shelduck *Tadorna tadorna*

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

One pair with a lone 1-2 week old duckling was initially seen around Corran Lunga on 28th & 29th June. The same or a different family were seen in North Haven when TIARG visited Fladda on 30th June. Later that day and for the remainder of the expedition, a pair of Shelduck frequented Corran Lunga but with no duckling. Originally the pair of Shelduck on Lunga had at least 5 ducklings (I.Morrison pers. com).

Eider *Somateria mollissima*

Regularly breeds in small numbers

Only two broods were noted from Lunga, three ducks with a duckling at the south end and daily two adults with a duckling within the vicinity of Corran Lunga. Elsewhere clutches of two and three eggs were found on Sgeir an Eirionnaich and Sgeirean na Guisaich (north) respectively, whilst an old nest was found on Sgeir a' Chaisteil.

The waters between Fladda and Lunga supported small numbers of late summer moulting birds, typically male-biased; a maximum of 13 males was counted on 30th June.

Buzzard *Buteo buteo*

Until recently, one pair bred in most years

Regular sightings would suggest the presence of two adults on Lunga, both in distinctly different stages of wing and tail moult. No food-carrying by adults was observed. These observations suggest any breeding attempt this year may have been unsuccessful.

Honey Buzzard *Pernis apivorus*

Very rare passage migrant to Argyll, with six accepted records between 1980 and 2000

When waiting at South Haven, Fladda, for the first Storm Petrels of the evening to be mist netted, at 11.30 BST four TIARG members briefly watched a buzzard-sized bird fly in silhouette against the sky directly overhead at 40+ metres height. The silhouette suggested Honey Buzzard to two experienced observers. There were no further sightings of the bird, however, to confirm its identity. This possible sighting would be if it had been confirmed, the first documented record of this species by a TIARG expedition.

Interestingly, in spring 2009 Scotland has had an unusual number of records of Honey Buzzards overshooting in the northern isles (<http://nickrossiter.org.uk/hbweb/month2009.html>). One bird was also seen on the 4th June from Kintyre, Argyll.

Kestrel *Falco tinnunculus*

Rare visitor

Single male and female birds were seen from the Village, Lunga and over Sgeir a' Chaisteil on five dates. The species was previously recorded on the Treshnish Isles by TIARG in 2005.

Peregrine *Falco peregrinus*

Seen most years with breeding known to occur on adjacent coasts

One immature female was seen on 2nd July flying over Tarbet then around Cruachan where it was mobbed by a Common Tern.

Corncrake *Crex crex*

Probably a regular breeder in small numbers

Two calling males were noted on Lunga during the week. One calling male was in residence typically to the north and east of the Village, on 29th and 30th June. This was considered to be probably the same individual later heard calling on 29th June west of the Village. A second calling male was heard in the vicinity of the second gully south of Corran Lunga on 30th June. No birds were recorded on any of the other islands visited.

Oystercatcher *Haematopus ostralegus*

Regularly breeds in small numbers

Eight 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 beside Shag Alley (in area 4), 2 in area 8 and 2 in area 6a) with the only brood seen being at Corran Lunga, a single well grown young. Other pairs or singles were on territory at times, briefly alarming at human intruders and performing displays on the appearance of other Oystercatchers. Away from Lunga, breeding pairs held territories on Sgeir an Eirionnaich (1 pair with 1 chick), Sgeir a' Chaisteil (2) 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 (1 bird), Sgeir an Eirionnaich (8) and Sgeir an Fheòir (6). 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 minimum of 23 birds roosting.

Ringed Plover *Charadrius hiaticula*

One or two pairs breed

The behaviour towards human intruders of one pair on the northern half of the Landing Beach, and a second pair on Corran Lunga suggested that they were both incubating eggs or had very young chicks. Elsewhere single pairs were on territory on Sgeir a' Chaisteil and at North Haven, Fladda. Further birds were seen when visiting the islands between Lunga and Fladda on 2nd July, with two birds on Sgeir an Eirionnaich and a single on Sgeirean na Guisach.

Purple Sandpiper *Calidris maritima*

Rare visitor

One bird was seen on Sgeir an Eirionnaich on the 2nd July. This sighting represents the first record by TIARG of the species on the Treshnish Isles.

Dunlin *Calidris alpina*

Irregular visitor

Two singles were recorded, an adult female *C.a.schinzii* seen on Sgeir an Eirionnaich and a bird heard calling in flight from Tarbet, Lunga, on 2nd and 3rd July respectively.

Snipe *Gallinago gallinago*

Regularly breeds in small numbers

Up to three birds at any one time were drumming/chipping over the Village. This would suggest a maximum of three 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). Further south, single birds were flushed along the length of the east coast path from the Village to Shag Alley, and the slopes of Cruachan with on occasions 2-3 birds flushed within close vicinity of each other. Up to three birds were heard drumming over Corran Lunga. At the south end of Lunga, single birds were flushed in areas 7 and 6. These data suggest a minimum population of 10 pairs.

Elsewhere at least 5 birds were flushed or seen whilst walking the heath and bogs of Fladda, and a single was flushed on Cairn na Burg Beg.

Whimbrel *Numenius phaeopus*

An irregular passage migrant

Single birds were heard over the Village, Lunga and Fladda on 30th June and again over Lunga on 1st July.

Curlew *Numenius arquata*

Irregular visitor

Two singles and a pair of birds were either heard or seen passing Lunga on two dates. Single birds were also found foraging on Fladda (30th June) and Corran Lunga/Chaisteil (1st - 2nd July).

Redshank *Tringa totanus*

Irregular visitor

Single birds were seen on Corran Lunga and heard from the west coast of Lunga on 1st and 2nd July respectively. Whilst visiting the islands between Lunga and Fladda on 2nd July, single birds were seen on Sgeir an Eirionnaich and Sgeir an Fheòir.

Greenshank *Tringa nebularia*

Rare visitor

Single birds were heard calling in flight from the Village, Lunga, on three dates. This is the first 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 one pair on Corran Lunga suggested that they were incubating eggs or had very young chicks. Elsewhere single birds were observed on Cairn na Burgh More, Sgeir a' Chaisteil, Sgeir an Eirionnaich, Sgeir na H-lolaire and at Tarbet, and two birds were seen on Sgeir an Fheòir.

Arctic Skua *Stercorarius parasiticus*

Small numbers seen daily, presumably from the breeding grounds on Coll where there had been 11 apparently occupied territories in 2006 (Mavor *et al.* 2008)

Up to 1 light phase and 2 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 on the high ground south of Tarbet (area 6), where breeding has previously been proven. At times another one or two birds were sitting on the summit of Cruachan allowing close approach before flying quietly away.

Two pairs were found with chicks (2 and 1) where breeding has previously been proven on the east side of Fladda. On the west side of Fladda, another pair apparently occupied a territory where breeding has also previously occurred.

Up to 5 birds were seen daily over the Village, Lunga. Elsewhere one bird was seen to leave Cairn na Burgh More when we visited the island.

Common Gull *Larus canus*

Irregular breeding species

Two adults were seen flying over the Village, Lunga, on 27th and 28th June. Breeding was suggested by the presence of six adults on territory on Sgeir an Eirionnaich. No birds were seen 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

Three birds of a presumed two pairs were noted within the south end gully, Lunga, in area 8. Elsewhere breeding was confirmed on Fladda and Sgeir a' Chaisteil, and suggested by the presence of paired adults on territory on Cairn na Burgh More and Sgeir an Eirionnaich. At the Fladda, Sgeir an Eirionnaich and Cairn na Burgh More colonies respectively, 52 adults (estimated 26 pairs), 1 adult (estimated 1 pair) and 4 adults (estimated 2 pairs) were counted when flushed. At Sgeir a' Chaisteil, one pair were found with three chicks.

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 16 pairs), Sgeir a Chaisteil (estimated 5 pairs) and Fladda (estimated 6 pairs; 11 adults counted when flushed). Breeding was also suggested by the presence of paired adults on territory on Sgeir an Fheòir (3 pairs), Cairn na Burgh Beg (estimated 10 pairs; 20 adults) and Cairn na Burgh More (2 pairs; 3 adults). No birds were occupying territories on Sgeirean na Guisaich, Sgeir na H-lolaire or Sgeir an Eirionnaich. The average rate of change in the numbers of breeding birds on Lunga for the period 1994 – 2009, is calculated at -13.1% per annum, this downward trend continuing to be very highly significant ($P < 0.001$).

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 (18 pairs), Sgeir an Eirionnaich (estimated 17 pairs; 33 adults), Fladda (estimated 7 pairs; 13 adults), Sgeir an Fheòir (2 pairs), Cairn na Burgh Beg (3 pairs), Cairn na Burg More (8 pairs) and Sgeir na H-lolaire (1 pair). During the period 1994-2009 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 – 2009, is -6.9% per annum, this downward trend highly significant ($P < 0.01$) 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 621 which includes nests in the part of sector 11 to which access was obstructed by a rockfall in winter 2004; 56 nests were counted there in 2009 from a boat. The nest count in 2009 only just exceeds its lowest count since annual monitoring of Lunga began in 1994. This is a 31% decrease from the previous year; markedly reversing the recent trend of population increase and returning it to the level produced by an earlier marked reduction in colony size in 2005 (604 apparently occupied nests). Previous to 2005, the population had undergone an overall increase following a period of stability at c.725 pairs during the mid 1990s.

Typically a flock of up to 40 adults was noted daily roosting on intertidal rocks beside Sgeir a' Chaisteil.

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).

Mixed Common/Arctic terneries were present on Sgeir an Eirionnaich and Sgeirean na Guisaich. Sgeirean na Guisaich supported a mixed colony dominated by Arctic Terns of which four adult Common Terns (2+ pairs) were noted alarming during a visit. 55 pairs of Common Terns were considered to be breeding on Sgeir an Eirionnaich where only a single alarming adult Arctic Tern was noted during a visit. 56 Common/Arctic Tern nests were counted and inspected on the main island and much smaller islet of Sgeir an Eirionnaich, the contents of which were:

| Sgeir an Eirionnaich | | Scrape | 1 egg | 2 eggs | 3 eggs | 4 eggs |
|----------------------|--------------|--------|-------|--------|--------|--------|
| Main island | No. of nests | - | 4 | 8 | 27 | 0 |
| Islet | No. of nests | - | 2 | 4 | 11 | 0 |

Observations made from Lunga recorded up to 100 birds put to flight over Sgeir an Eirionnaich in response to unexplained disturbances.

Arctic Tern *Sterna paradisaea*

Irregular breeding species

Breeding was confirmed on Sgeirean na Guisaich and was suggested by an alarming adult within the Common Tern *S. hirundo* colony on Sgeir an Eirionnaich. The mixed Common/Arctic ternery on Sgeirean na Guisaich was predominately Arctic Tern where 34 nests were counted and inspected, the contents of which are tabulated below. With four alarming adult Common Terns amongst the Arctic Terns, this would suggest a maximum of 32 of the 34 nests may be attributed to breeding Arctic Terns.

| | Scrape | 1 egg | 1 egg + chick | 2 eggs | 3 eggs | 4 eggs |
|--------------|--------|-------|---------------|--------|--------|--------|
| No. of nests | 2 | 7 | 1 | 19 | 5 | 0 |

Observations made from Lunga recorded up counted up to 120 birds put to flight over Sgeirean na Guisaich in response to unexplained disturbances.

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 7,542 adult birds estimated. The latter estimate includes 150 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 7,712, a 6% increase from the mean count of the past four years (7,286, range 6,943-7,540). The count for 2009 falls above the mean, but well within the range of variability, shown by counts from annual monitoring of Lunga and Sgeir a' Chaisteil since 1994.

The average annual rate of change for the population of Lunga is calculated at 1.0% p.a. for the period 1994-2009; 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. Birds were also seen at suitable breeding sites on Fladda. The main concentration was typically located within the vicinity of Harp Rock with 149 adult birds estimated.

The number of individuals counted on Lunga and Sgeir a' Chaisteil totalled 348, a 71% decrease from 2008. 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 has since remained largely stable at around 950-1250 birds (1999-2008; no significant trend). The apparent marked reduction in numbers counted in 2009 is comparable in magnitude to census figures from 1974 and 1986 of 415 and 290 individuals respectively. The main concentration of birds at Harp Rock was counted between 1994 and 2008 by the late Simon Walker. Any difference as a result of a change in counter is being investigated. However, in 2009 three separate experienced observers counted Harp Rock and obtained comparable counts within and between days following the standard count methodology protocol of *Seabird 2000* (Mitchell et al. 2004).

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), Lunga's south end (9), Fladda (7) Cairn na Burgh More (3) and Cairn na Burgh Beg (1). Single birds were observed flying up into nest sites on Sgeir an Eirionnaich and Cairn na Burgh Beg; the latter bird was carrying food.

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. Birds were also seen offshore from suitable breeding sites on Fladda.

The estimated breeding population on Lunga and Sgeir a' Chaisteil totalled 2,831 AOBs, a 2.2% increase from 2008; for counts of birds, one bird is taken to represent one AOB (Lloyd et al. 1991, Mitchell et al. 2004). The population on Lunga remains well above the average for the period since 1994 (2,065 AOB). The average annual rate of change for Lunga's population is calculated at +3.7% p.a. for the period 1994 – 2009; the upward trend is highly significant ($P < 0.01$).

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 four birds. Elsewhere two birds were seen at Cairn na Burgh More and Cairn na Burgh Beg.

Collared Dove *Streptopelia decaocto*

Rare visitor

A single bird was seen over the Village, Lunga on 27th June. This is the third documented record of this species by a TIARG expedition, the previous records being in 1999 and 2006.

Swift *Apus apus*

Irregular visitor

Between 1 and 6 birds were seen or heard on four dates over Lunga.

Skylark *Alauda arvensis*

Regular breeding species in small numbers

At least six singing males were on Lunga in 2008 all within the same general localities frequented in recent years. Territories were on the slopes of Cruachan, immediately above the Village and at least one each in sectors 6 and 7. Elsewhere two birds were seen on Fladda.

Meadow Pipit *Anthus pratensis*

Regular breeding species in small numbers

Widespread breeding species on Lunga and Fladda with no estimate of territories made though probably less numerous than Rock Pipit *Anthus petrosus*. A minimum of 11 territories were estimated to be held along the east coast footpath between the Tarbet and the Village. Elsewhere birds were noted on Sgeir an Eirionnaich (2 birds) and Fladda where breeding was confirmed. Breeding also probably occurred on Sgeir a' Chaisteil where a singing bird and alarming by at least two other individuals were noted.

A small passage movement of birds south was detected which included 5 and 8 birds over the Village on 30th June and 3rd July respectively.

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 Sgeir a' Chaisteil. Birds were also recorded on Fladda, Sgeir an Fheòir (3 birds) and Sgeir an Eirionnaich (2 birds).

An accumulation of decaying seaweed beside Corran Lunga attracted up to 20 foraging birds, at any one time.

Pied Wagtail *Motacilla alba yarrelli*

Irregular breeding species

At least two adult birds were regularly observed around the Village and Corran Lunga. Evidence of breeding included adults carrying food within the vicinity of the Village. Elsewhere on Lunga, a single bird was noted at Harp Rock and two in Area 5. No juveniles were noted.

No birds were noted 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. Casual observations indicated a minimum of eight territories along the west coast footpath between the Village and Tarbet and two north of the Village. At least one brood was noted.

Elsewhere birds were on territory singing on Fladda (1+ male) and Cairn na Burgh Beg (2 males)

Wheatear *Oenanthe oenanthe*

Regular breeding species in small numbers

A minimum of seven families of dependent and presumed locally bred young were noted on Lunga around the Village, Tarbet, Corran Lunga, Harp Rock, Shag Alley, the first gully south of Puffin Lawn and Shearwater Gully. At the south end of Lunga, one juvenile was located near the gully in area 8.

Elsewhere during single visits by TIARG to other islands, lone birds were seen on Sgeir a' Chaisteil and Cairn na Burgh Beg, and two birds on Fladda.

Sedge Warbler *Acrocephalus schoenobaenus*

Scarce visitor

A male was found on territory singing on the west side of the low lying "waist" on Fladda on 30th June.

Blackbird *Turdus merula*

Rare visitor

One bird was possibly seen briefly on Lunga on 30th June.

Hooded Crow *Corvus corone cornix*

Regular breeding species in small numbers

One pair appears to have bred on Lunga. At least four juveniles and two moulting adults were regular seen frequenting the south and north ends of Lunga.

Elsewhere birds could be seen from Lunga on Fladda (1 bird), Sgeir an Eirionnaich (1) and Sgeir a' Chaisteil (5, presumably birds from Lunga). No birds were seen when these islands were visited by TIARG.

Raven *Corvus corax*

At least one pair breeds in most years

Up to ten individuals were seen at any one time on Lunga and Sgeir a' Chaisteil between which birds regularly commuted. At least two birds were moulting adults, with a minimum of five of the remainder thought to be juveniles due to the absence of wing moult or abraded flight feathers.

Elsewhere up to 2 birds were seen over Fladda and one bird departing south from Cairn na Burgh More. Up to four birds on occasions visiting Sgeir an Eirionnaich could be seen from Lunga.

Starling *Sturnus vulgaris*

Regular breeding species in small numbers

Small flocks of up to 30 birds (including 20 juveniles) were noted daily on Lunga. Though breeding was not confirmed on Lunga it is considered very likely to have occurred, given the numbers of birds, juveniles and habitat. Elsewhere birds were noted on Sgeir an Eirionnaich (flock of 20 adults), Sgeir a' Chaisteil (9) and Fladda (11).

Siskin *Carduelis spinus*

Rare visitor

A single bird calling in flight was seen at the north-east end of Lunga on 28th June. This sighting represents the second record by TIARG of the species on the Treshnish Isles.

Linnet *Carduelis cannabina*

Rare visitor

A single and latter two birds were seen at the Village, Lunga on 27th and 28th June respectively. These sightings follow on from those in 2008 that were the first records by TIARG of the species on the Treshnish Isles.

Twite *Carduelis flavirostris*

Regular breeding species in small numbers

All records on Lunga were mostly confined to Tarbet northwards, with parties of usually between 2 and 8 birds noted at Tarbet and along the cliff tops and lower slopes of Cruachan and above the Village. Amongst the larger groups were juveniles, with breeding confirmed for Lunga by an adult caught at the Village with an active brood patch. Elsewhere a family party of six birds plus a single were seen during the visit to Cairn na Burgh Beg on 1st July. On Fladda, birds were noted on both halves of the island including three on the west side, whilst none were seen during the visit to Sgeir a' Chaisteil.

Crossbill *Loxia curvirostra*

Rare visitor

One calling bird was seen in flight over the Village, Lunga on 30th June. This sighting represents the first record by TIARG of the species on the Treshnish Isles.

SYSTEMATIC LIST OF MAMMALS FOR 2009

Otter *Lutra lutra*

Evidence of presence regularly noted

Tracks of an adult were found on the south-east side of Fladda.

House Mouse *Mus musculus*

Resident

Unusually no individuals were at the expedition base, the Village at the north end of Lunga.

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 Dolphin *Delphinus delphis*

Rare visitor

Six animals were watched from the quayside, Oban, as the expedition were boarding the ferry to Craignure on 27th June

Bottlenose Dolphin *Tursiops truncatus*

Rare visitor

Initially five animals were attracted to the MV Hoy Lass of Turus Mara when arriving to take day trippers off from Lunga on 27th June. Unexpectedly only four animals remained in the vicinity to later follow the vessel as it departed for Staffa.

SYSTEMATIC LIST OF LEPIDOPTERA FOR 2009

Common Blue *Polyommatus icarus*

Regular breeder

Up to in excess of one hundred individuals were seen daily on Lunga. The species was also noted during visits to Sgeir a' Chaisteil, Fladda, Sgeir an Eirionnaich and Cairn na Burgh Beg.

Red Admiral *Vanessa atalanta*

Migrant

Up to four individuals were recorded daily on Lunga, the vast majority at the north end. Elsewhere the species was noted on Sgeir an Eirionnaich.

Painted Lady *Vanessa cardui*

Regular migrant

Between two and over twenty individuals were recorded daily on Lunga. Elsewhere the species was noted on Fladda, Sgeir an Eirionnaich and Sgeir a' Chaisteil.

Small Tortoiseshell *Aglais urticae*

Migrant

One was seen at the north end of Lunga on 27th June.

Dark Green Fritillary *Argynnis aglaja*

Accidental

Singles were seen at the Village, Lunga on 27th and 28th June. This is the third consecutive year the species has been recorded by TIARG on the Treshnish Isles.

Meadow Brown *Maniola jurtina*

Accidental

Between one and three individuals were recorded daily on Lunga, chiefly along the north-east coast. Elsewhere a single individual was seen on Fladda during a visit on 30th June.

Ringlet *Aphantopus hyperantus*

Accidental

Singles were recorded on three dates along the north-east coast of Lunga.

Six-spot Burnet *Zygaena filipendulae*

Resident

In excess of one hundred individuals were seen on Lunga with the species also noted on Sgeir a' Chaisteil.

Yellow Shell *Camptogramma bilineata*

Probable resident

A single moth was photographed on Lunga.

Magpie *Abraxas grossulariata*

Probable resident

A single moth was seen on Lunga at the Village.

Buff Ermine *Spilosoma luteum*

Resident

Tens of individuals were seen during Storm Petrel ringing at night above the second cave gully south of Corran Lunga on 30th June.

Silver Y *Autographa gamma*

Resident

One was seen on Lunga at the Village on 28th June and two on Sgeir an Eirionnaich on 2nd July.

OTHER SPECIES RECORDED LISTED SYSTEMATICALLY

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 fifth consecutive year. At Tarbet (west), Lunga, over 200 plants were found, most comparatively large and many spreading extensively.

Common Hawker *Aeshna juncea*

Presumed migrant

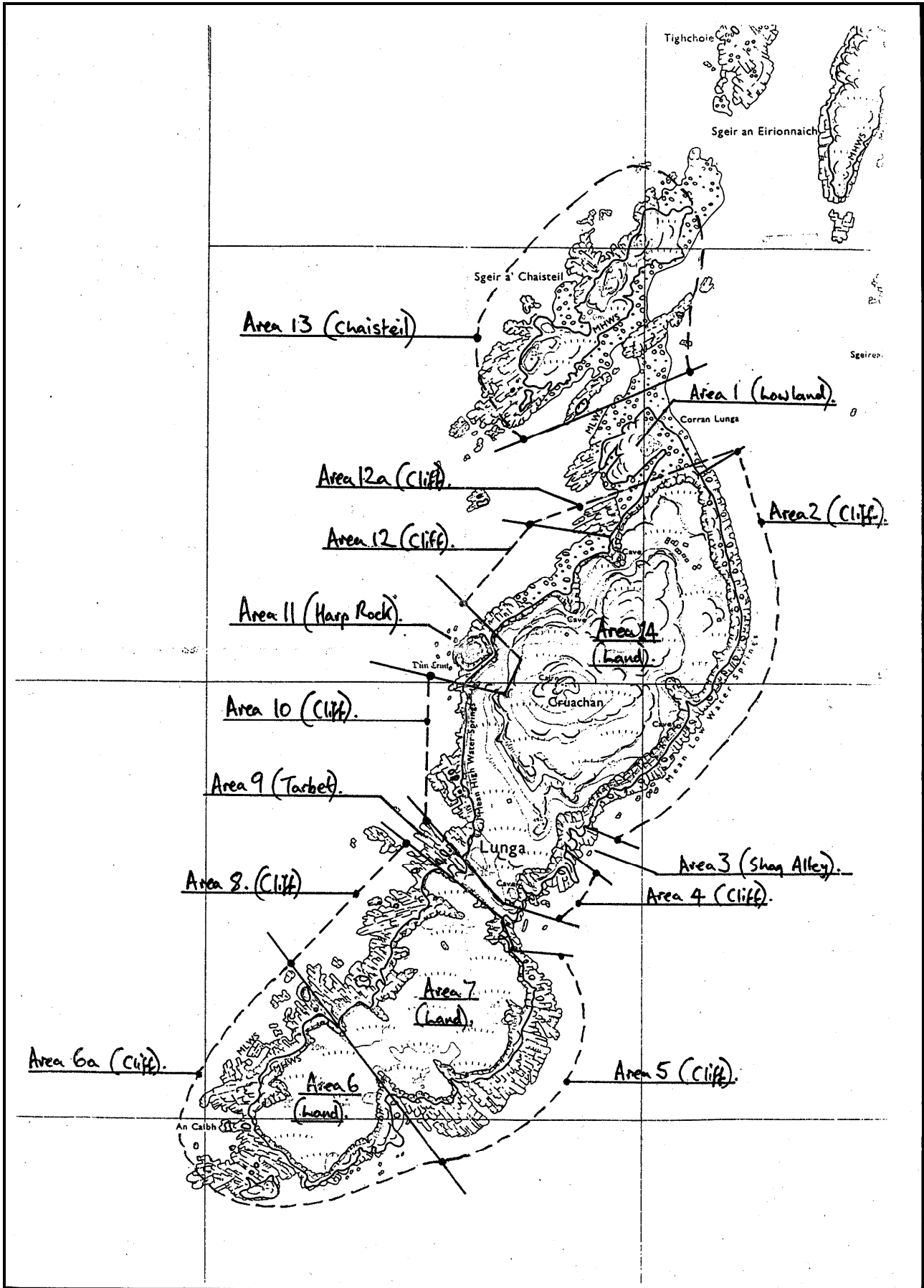
An adult was seen on Lunga above the Well on 28th June. This is the third record for TIARG of this species on the Treshnish Isles. The previous two records were in 2007 along Lunga's north-east coast.

Golden-ringed Dragonfly *Cordulegaster boltonii*

Presumed migrant

One adult was photographed at Village at the north of Lunga on 29th June. This is the first record for TIARG of this species on the Treshnish Isles.

MAP OF CENSUS ZONES – LUNGA AND SGEIR A' CHAISTEIL



2009 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 | Fladda | Cairn na Burgh More | Cairn na Burgh Beg |
|-----------------|------------|-------|--------------------|----------------------|-----------------|----------------------|--------------------|--------|---------------------|--------------------|
| Fulmar | AON | 316 | 46 | | | | | + | 27 | 19 |
| Manx Shearwater | No census | + | | | | | | | | |
| Storm Petrel | No census | + | | | | | | + | + | |
| Shag | AON | 97 | 19 | | | 5 | | + | 2 | 1 |
| Great Skua | AOT | 1 | | | | | | 3 | | |
| Common Gull | AOT | | | | | 3 | | | | |
| Lesser B-b Gull | AOT | 3 | 1 | | | 1 | | 26 | | 3 |
| Herring Gull | AOT | 16 | 5 | | 3 | | | 6 | 2 | 10 |
| Great B-b Gull | AOT | 18 | | | 2 | 17 | 1 | 7 | 8 | 3 |
| Kittiwake | AON | 653 | | | | | | + | | |
| Common Tern | AON | | | 2 | 2 | 55 | | | | |
| Arctic Tern | AON | | | 32 | | 1 | | | | |
| Razorbill | IND | 343 | 5 | | | | | + | | 4 |
| Guillemot | IND | 7633 | 66 | | | | | + | | |
| Black Guillemot | IND | 9 | | | | 10 | | 7 | 4 | 16 |
| Puffin | IND | 489 | | | | | | | 1 | 72 |
| Puffin | AOB | 2193 | 151 | | | | | + | | 5 |

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 | | 21 | 9 | 12 | 49 | | 41 | | 36 | 8 | 15 | 24 | 88 | 13 | 46 | 362 |
| Shag | AON | | 9 | 15 | 7 | 20 | | | | 11 | | 21 | 5** | 7 | 2 | 19 | 116 |
| Lesser B-b Gull | AOT | | | | | | | | | 2 | | 1 | | | | 1 | 4 |
| Herring Gull | AOT | | 1 | 1 | | | | | | 11 | | 2 | | 1 | | 5 | 21 |
| Great B-b Gull | AOT | 2 | | | | | 9 | | 5 | | | 1 | | | 1 | | 20 |
| Kittiwake | AON | | | | | | | | | | | 5 | 621 | 12 | 15 | | 653 |
| Great Skua | AON | | | | | | 1 | | | | | | | | | | 1 |
| Razorbill | IND | | 22 | 5 | 5 | 22 | | 8 | | 5 | | 33 | 149 | 62 | 32 | 5 | 348 |
| Guillemot | IND | | | 20 | | 24 | | | | | | 120 | 7392 | 86 | 4 | 66 | 7712 |
| Black Guillemot | IND | | | | | | | 8 | | 1 | | | | | | | 9 |
| Puffin | IND | | 11 | 57 | 69 | 2 | | | | | | | | 350 | | | 489 |
| Puffin | AOB | | | | | | | | | | | 378 | 823 | | 990 | 151 | 2342 |

Key to count unit codes: AON/AOT/AOB = apparently occupied nest/territory/burrow IND = Individuals

PRS = Pairs nc = no count

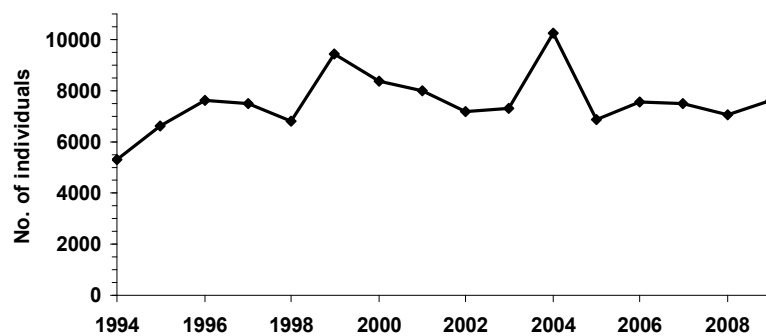
* Access was not gained in 2007 & 2008 to a cave entrance where in 2006 there were 100 Guillemots (IND).

+ = breeders present

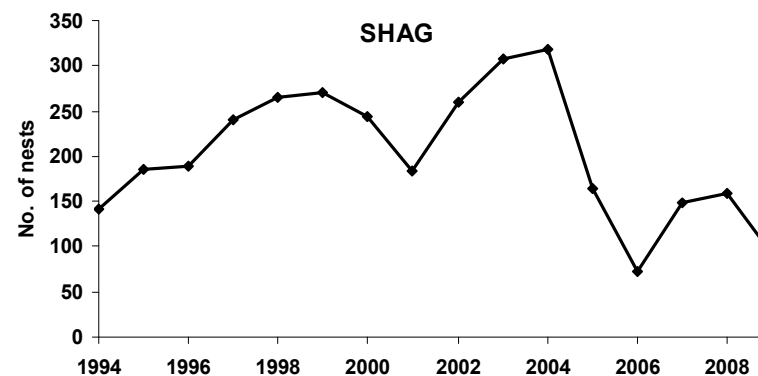
**A estimated minimum count - notebook lost in field

POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2009

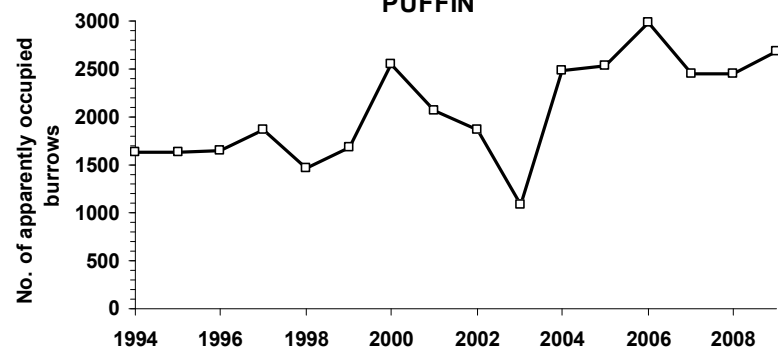
GUILLEMOT



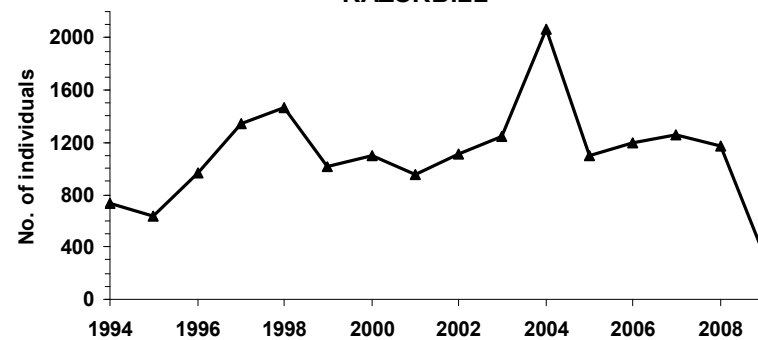
SHAG



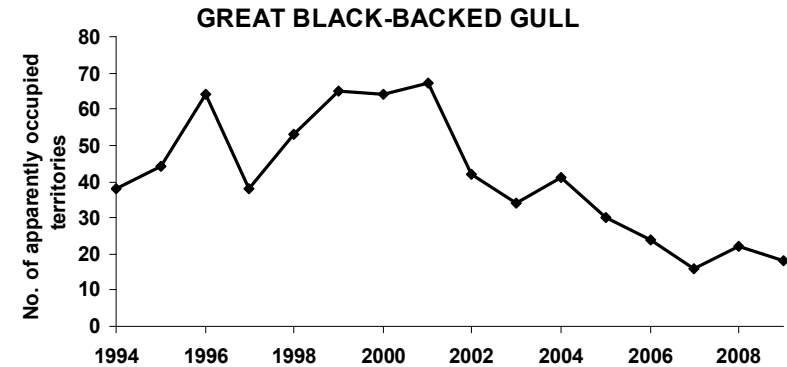
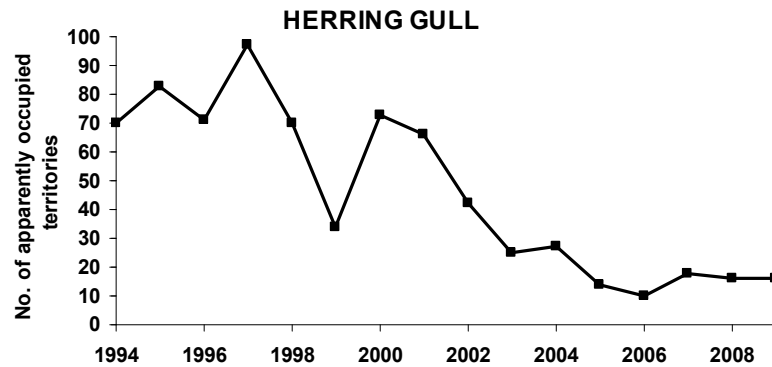
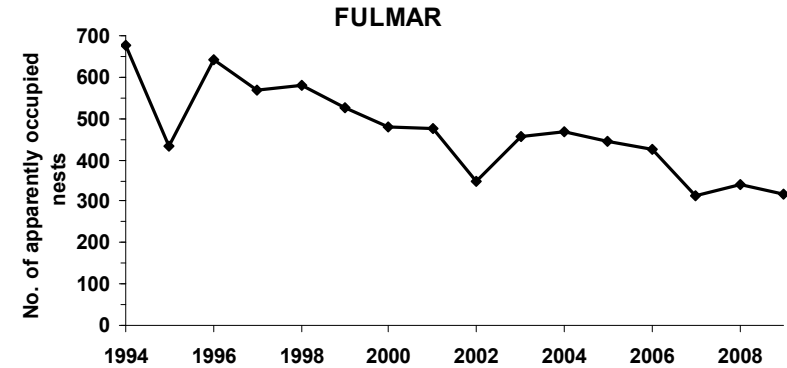
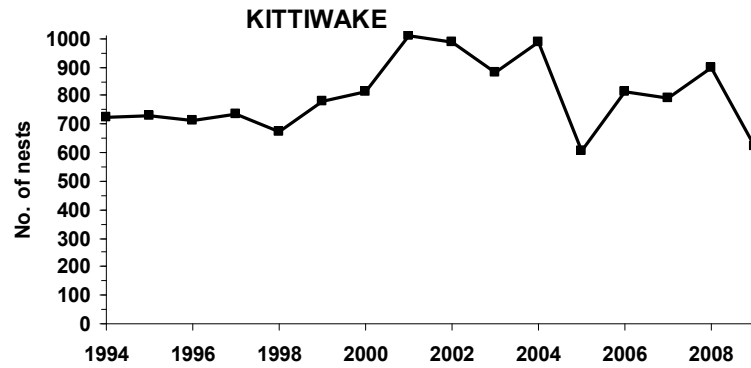
PUFFIN



RAZORBILL



POPULATION CHANGES FOR A SELECTION OF BREEDING SPECIES ON LUNGA, 1994 – 2009 (con't)



TRESHNISH RINGING TOTALS FOR 2009

| Site | Species | Adults | Pulli | Retraps/Controls | Total |
|-----------------|-------------------------|--------|-------|------------------|-------|
| Lunga | Manx Shearwater | 4 | | | 4 |
| | Storm Petrel | 336 | | 78 | 414 |
| | Shag | 19 | 34 | 80 | 133 |
| | Great Skua | | 1 | | 1 |
| | Herring Gull | | 6 | | 6 |
| | Great Black-backed Gull | | 2 | | 2 |
| | Kittiwake | 4 | | | 4 |
| | Guillemot | 51 | | 6 | 57 |
| | Razorbill | 6 | | 10 | 16 |
| | Puffin | 32 | | 6 | 38 |
| | Rock Pipit | | 1 | | 1 |
| | Wren | 1 | | | 1 |
| | Wheatear | 2 | | | 2 |
| | Twite | 1 | | | 1 |
| Fladda | Storm Petrel | 67 | | 18 | 85 |
| | Great Skua | | 3 | | 3 |
| Other islands | Herring Gull | | 14 | | 14 |
| | Great Black-backed Gull | | 10 | | 10 |
| Treshnish Isles | Grand total for 2009 | 523 | 71 | 198 | 792 |

Note: All rings used in 2009 were registered under *Treshnish Auk Ringing Group*.

TRESHNISH RINGING TOTALS 1971 – 2009

| 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).
(2) Ringing data for a three day visit in 1972 was not available.

TRESHNISH RINGING TOTALS 1971 – 2009 (continued)

| SPECIES | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 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 | 63 |
| Storm Petrel | 1104 | 741 | 732 | 814 | 1030 | 15 | 360 | 83 | 491 | 962 | 21 | 118 | 403 | 11205 |
| Shag | 99 | 150 | 100 | 59 | 37 | 97 | 99 | 200 | 77 | 35 | 141 | 124 | 53 | 1977 |
| Eider | | | | | | | | 1 | | | | | | 1 |
| Buzzard | | | | | | | | | | | | | | 3 |
| Corncrake | | | | | | | | | 1 | | | | | 1 |
| Oystercatcher | | | 2 | | 1 | | | | | | 4 | | | 15 |
| Common Sandpiper | | 1 | | | | | | | | 1 | 1 | 1 | | 5 |
| 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 | 484 |
| Lesser Black-b Gull | | | | | | | | | | | | 1 | | 1 |
| Great Black-b. Gull | 48 | 19 | 16 | 2 | 27 | 5 | 21 | 18 | 12 | 3 | 4 | 13 | 12 | 380 |
| Kittiwake | 50 | 41 | 23 | 13 | 11 | 3 | 2 | 21 | 15 | 14 | 16 | 3 | 4 | 244 |
| Guillemot | 472 | 503 | 507 | 892 | 312 | 425 | 261 | 800 | 141 | 172 | 123 | 1 | 51 | 7487 |
| Razorbill | 98 | 112 | 102 | 133 | 31 | 110 | 56 | 147 | 37 | 33 | 34 | 5 | 6 | 2571 |
| Black Guillemot | 1 | | | | 1 | | | | | | | | | 2 |
| Puffin | 267 | 398 | 274 | 389 | 214 | 351 | 244 | 226 | 151 | 272 | 195 | 327 | 32 | 6015 |
| Meadow Pipit | 1 | | | 12 | 1 | 4 | 1 | 3 | 5 | 1 | | 4 | | 36 |
| Rock Pipit | 2 | 4 | 2 | 1 | 2 | 2 | 2 | 2 | | 3 | 21 | 10 | 1 | 64 |
| Pied Wagtail | | | | | | | | | | | 4 | | | 10 |
| Wren | | | | | 1 | | | 2 | 4 | 2 | | 2 | 1 | 15 |
| Wheatear | 24 | 37 | 22 | 50 | 24 | 2 | 2 | 2 | 7 | 1 | 2 | 4 | 2 | 200 |
| 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 | 31288 |

RECENT RINGING RECOVERIES

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
 XL - Found long dead
 S - Alive, sighting with ring read in field/from photograph

STORM PETREL RECOVERIES

Details are given below of one Storm Petrel originally ringed on the Treshnish Isles and recovered elsewhere, and eight vice versa.

Storm Petrel

| | | | | | |
|---------|---|-----------|-----------------|---------|---------|
| 2560927 | 6 | 24/6/2008 | Lunga | | |
| | R | 24/7/2008 | Fife Ness, Fife | | |
| | | | 238 km | 96 degs | 30 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|-----------------|----------|----------|
| 2589813 | 4 | 10/8/2007 | Fife Ness, Fife | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 238 km | 276 degs | 319 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|---------------------|----------|-----------|
| 2583044 | 4 | 12/7/2005 | Sule Skerry, Orkney | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 313 km | 203 degs | 1078 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|--------------------------|----------|-----------|
| 2563016 | 4 | 09/7/2004 | Calf of Man, Isle of Man | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 290 km | 340 degs | 1446 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|----------------------------|----------|-----------|
| 2602842 | 4 | 01/8/2005 | Porth Iago, Llyn Peninsula | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 419 km | 345 degs | 1058 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|--------------------------|----------|-----------|
| 2521926 | 4 | 05/8/2003 | Brough of Birsay, Orkney | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 347 km | 212 degs | 1785 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|--|----------|-----------|
| 2515453 | 4 | 07/8/2004 | Sheepand Harbour, Ardglass, Northern Ireland | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 251 km | 348 degs | 1417 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|-----------------------|----------|----------|
| 2591316 | 4 | 28/7/2006 | Sanda Island, Kintyre | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 146 km | 339 degs | 697 days |

Storm Petrel

| | | | | | |
|---------|---|-----------|-----------------------|----------|-----------|
| 2330163 | 4 | 23/7/1985 | Sanda Island, Kintyre | | |
| | R | 24/6/2008 | Lunga | | |
| | | | 146 km | 339 degs | 8372 days |

Storm Petrel recoveries relating to the Treshnish Isles as either birds ringed or controlled there, now number 499 (relating to 469 birds) of which many have been of birds from the Isle of Man & Sanda (60 & 139 respectively). The above recovery of a bird ringed on the Treshnish Isles, was attracted in by tape lure on recapture at Fife Ness, Tayside, and is therefore likely to have been a wandering immature (up to 4 years old) or failed breeders. Only 62 birds ringed on the Treshnish Isles have been recaptured elsewhere, 13% 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

| | | | | | |
|---------|---|-----------|-------------------------|----------|----------|
| 1417055 | 8 | 26/6/2007 | Lunga | | |
| | X | 26/5/2009 | Feall Bay, Isle of Coll | | |
| | | | 18 km | 310 degs | 700 days |

Shag

| | | | | | |
|---------|----|-----------|-------------------------------------|----------|----------|
| 1417001 | 1 | 25/6/2007 | Lunga | | |
| | XL | 06/9/2008 | Orasaigh, South Uist, Western Isles | | |
| | | | 25km | 270 degs | 167 days |

Shag

| | | | | | |
|---------|----|-----------|-------|--------|----------|
| 1421739 | 8 | 25/6/2007 | Lunga | | |
| | XF | 22/6/2008 | Lunga | | |
| | | | 0 km | 0 degs | 363 days |

Guillemot

| | | | | | |
|--------|----|------------|----------------------------|----------|-----------|
| X56758 | 6 | 29/6/1985 | Lunga | | |
| | XF | 24/10/2008 | West Kilbride, Strathclyde | | |
| | | | 131 km | 133 degs | 4866 days |
| | | | Freshly dead on shore | | |

Puffin

| | | | | | |
|---------|----|-----------|--------------------------------|--------|-----------|
| EN22302 | 8 | 30/6/1995 | Lunga | | |
| | XF | 28/4/2009 | Lunga | | |
| | | | 0 km | 0 degs | 5051 days |
| | | | Freshly dead, predated by bird | | |

Puffin

| | | | | | |
|---------|---|-----------|-------|--------|-----------|
| EG61038 | 6 | 26/6/2001 | Lunga | | |
| | S | 23/5/2009 | Lunga | | |
| | | | 0km | 0 degs | 2888 days |

Puffin

| | | | | | |
|---------|----|-----------|------------------------|--------|-----------|
| EG23939 | 6 | 23/6/2001 | Lunga | | |
| | XF | 21/5/2009 | Lunga | | |
| | | | 0km | 0 degs | 2889 days |
| | | | Freshly dead, predated | | |

| | | | | | |
|----------------------------|---------|------------------------|---|----------|---|
| Puffin EG23668 | 4 XF | 28/6/2000 12/6/2009 | Lunga Lunga 0km | 0 degs | 3271 days |
| Puffin EL52728 | 6 XF | 26/6/2006 22/6/2009 | Lunga Lunga 0km | 0 degs | 1092 days |
| Puffin EG61328 | 6 XF | 24/6/2002 16/6/2008 | Lunga Whitepark Bay, Antrim, Northern Ireland 139km | 180 degs | 2184 days Freshly dead on shore with six other Puffins |
| Puffin EG23642 | 4 XF | 27/6/2000 15/6/2008 | Lunga Whitepark Bay, Antrim, Northern Ireland 139km | 180 degs | 2910 days |
| Razorbill M92556 | 6 S | 20/6/2004 15/6/2009 | Lunga Lunga 0km | 0 degs | 1821 days Field sighting, ringed read from photograph |
| Razorbill M85667 | 6 S | 14/6/1999 15/6/2009 | Lunga Lunga 0km | 0 degs | 3654 days Field sighting, ring read from photograph |

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MV Hoy Lass of Turus Mara with Bottle-nosed Dolphins (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 – 2009 (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 – 2009 (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.

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