Treshnish Isles Auk Ringing Group Report

26th June – 3rd July 2021



Adult Guillemot (Andrew Carter)

Compiled by Robin M. Ward

Expedition dates: 26th June – 3rd July 2021

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Introduction

Since 1971, the Treshnish Isles Auk Ringing Group (TIARG) has monitored, through ringing and census work, the breeding seabird populations of the Treshnish Isles, Argyll. A summary of the early expeditions is given in *Birds on the Treshnish Isles 1971-1995* (Walker & Cooper 1996). Annual reports have been produced since 1996 (see http://tiarg.org). This report summarises the results of the Group's 45th expedition to the Treshnish Isles, during 26th June – 3rd July 2021.

As in previous years, the expedition was based around the village ruins at the northern end of Lunga. The majority of the week's fieldwork was centred upon Lunga and Sgeir a' Chaisteil where the annual full seabird census and ringing of specific seabird colonies was carried out. Use of the inflatable boat kindly loaned by the Hebridean Trust, enabled seabird census coverage of the islands between Lunga and Fladda.

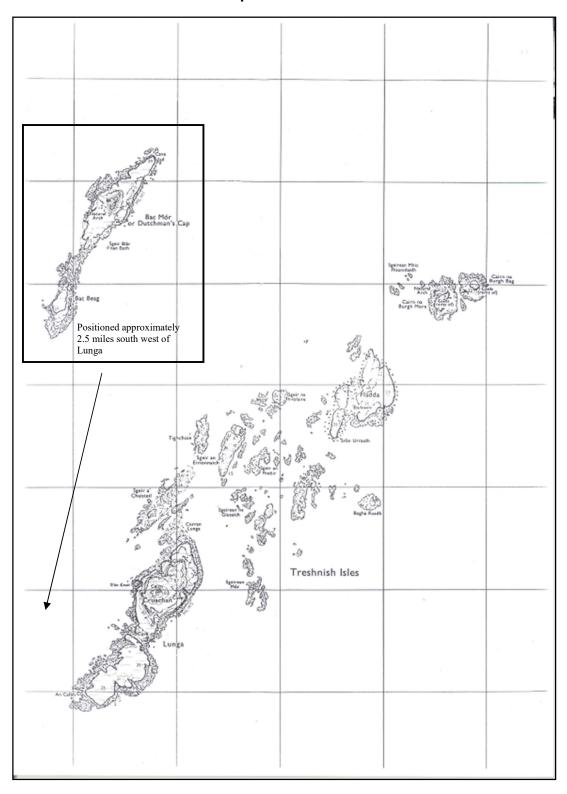
This year was the fifteenth year of a Shag Retrap Adult Survival study (RAS); this entails ringing each adult with its own uniquely engraved colour-ring so that it can be re-identified in the field in future years. This is part of the British Trust for Ornithology's (BTO) Integrated Population Monitoring Programme, funded by the UK Government. The Group's activities were dictated as always by the prevailing weather conditions. Favourable wind conditions and absence of precipitation allowed the mist netting of Storm Petrels at three localities on Lunga needed as part of the Group's two Storm Petrel RAS studies.

All TIARG census and ringing data are submitted to two national monitoring programmes, the Seabird Monitoring Programme (JNCC) and the National Ringing Database (BTO). The data supplied is of great conservation value, being the sole means of monitoring the seabird colonies of the Treshnish Isles. The conservation importance of these islands is recognised by their designation by the UK Government as a Special Protection Area for internationally important populations of breeding Storm Petrel *Hydrobates pelagicus* and wintering Barnacle Geese *Branta leucopsis*. The islands have also been designated a Site of Special Scientific Interest (SSSI), *inter alia* for seabird breeding colonies of national importance. Financial support for the monitoring work TIARG undertook in 2021 was provided by the Hebridean Trust (www.hebrideantrust.org), owners of the islands.



Expedition participants June 2021: (left to right) Andrew Carter, Imogen Lloyd, Kirstie Ross, Robbie Phillips, Lila Buckingham, Tim Dixon, Daniel Plunkett & Robin Ward (*Andrew Carter*)

Map of the Treshnish Isles



Systematic list of birds for 2021

The following systematic list describes those bird species seen during the Treshnish Isles Auk Ringing Group's (TIARG) presence on the Treshnish Isles, 26th June – 3rd July 2021. 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 the Treshnish Isles in 2021 is provided on page 18.

Canada Goose Branta canadensis

Rare visitor.

Nine birds were seen on Sgeir an Eirionnaich on 26th June.

Greylag Goose Anser anser

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

The moult flock centred north of Lunga had built up to at least 202 birds by 28th June, typically most were around the islands of Sgeir an Eirionnaich, Fladda, Sgeir an Fheòir and Sgeir na h-Iolaire. Well grown broods were associated with the moult flock. Tabulated below are the annual peak counts of the moult flock centred north of Lunga.

| 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 |
| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Peak | 160 | 140 | 50 | 140 | 196 | 272 | 70 | 98 | 198 | 200+ | no | 202 |
| count | | | | | | | | | | | count | |

Shelduck Tadorna tadorna

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

A female with one duckling were seen in the "Dirty Inlet" that separates Lunga and Corran Lunga on 29th June and on the following day nearby at Sgeir a' Chaisteil. A pair of adults were later seen in the "Dirty Inlet" on 30th June. It is unknown whether this was the same female as seen with the duckling.

Eider Somateria mollissima

Breeds regularly in small numbers.

At least three broods were noted around Corran Lunga, with single ducks accompanying two, four and five ducklings respectively. Elsewhere single ducks with three and four ducklings were seen at the south end of Lunga and five ducks accompanying two broods of four and six ducklings seen south of Harp Rock (Area 10).

The waters between Fladda and Lunga support small numbers of late-summer moulting birds, with a minimum of 17 birds on 1st July, separate from which were three females. Tabulated below are the annual peak counts of the moult flock centred north of Lunga.

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------|------|------|------|------|------|------|------|------|------|-------|------|
| Peak | 23 | 11 | 112 | 26 | 54 | 42 | 80 | 8 | 52 | 13 | 80 |
| count | | | | | | | | | | | |
| Year | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Peak | 35 | 14 | 7 | 11 | 9 | 6 | 2 | 21 | 6 | no | 17 |
| count | | | | | | | | | | count | |

Great Northern Diver Gavia immer

Rare visitor

Two summer plumaged birds were seen from the north end of Lunga on 27th June. This sighting represents the first by TIARG of the species 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*.

Three nights of light winds and no rain gave the opportunity to mist net for Storm Petrels on Lunga at the Village and the Boulder Beach. On the Boulder Beach, traditionally ringed localities near the Well and

below the Village on single nights, provided catches of 161 and 308 birds using two 12 m (for 2 hours), and one 18 m net (3 hours) respectively. At the Village, 175 birds were caught using three 18 m nets (for 3 hours).

Fulmar Fulmarus glacialis

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

Breeding was confirmed on Lunga and Sgeir a' Chaisteil. The breeding population for Lunga and Sgeir a' Chaisteil was estimated at 254 pairs based upon apparently occupied sites (AOS). This represents a 7% decrease in the number of breeding birds from the previous year. Over the longer term, 1994-2021, the population has shown an overall decline. This is consistent with a decline nationally which may be due to declines in offal from trawlers, representing a 're-adjustment' to more natural levels following a period of artificially elevated population size (JNCC 2016).

The estimated breeding population on the Treshnish Isles in 2018 was 335 AOSs, a 69% reduction from the 1,078 AOSs counted by *Seabird 2000* in 1999.

Manx Shearwater Puffinus puffinus

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

Presumed breeding birds were seen and heard at night on Lunga. Small numbers of birds were seen daily, feeding or passing offshore of Lunga. During the week in the evenings over 100 birds were noted rafting off the west coast of Lunga.

Gannet Morus bassanus

Regularly seen offshore

Small numbers of mostly adult birds, were seen daily, feeding or passing offshore of Lunga.

Shag Phalacrocorax aristotelis

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

Breeding was confirmed on Lunga, Sgeir a Chaisteil and Fladda. The breeding populations on Lunga and Sgeir a' Chaisteil were 418 and 15 pairs respectively, based on nest counts. Following a marked decline in the numbers of active nests in 2005 and 2006, numbers have since gradually increased with some fluctuation, with a further and very substantial increase noted in 2021.

2021 was the sixteenth year of a Retrap Adult Survival (RAS) study that entails ringing each adult with its own uniquely engraved colour-ring so that it can be identified in the field in future years. This is part of the BTO's Integrated Population Monitoring Programme funded by the UK Government (http://www.bto.org/ringing/ringinfo/ras/index.htm). In 2021, of the birds marked from 2006 to 2019 on Lunga, 58 out of a possible 420 individuals were re-sighted and/or recaptured by TIARG in June. A further 41 breeding adults were colour-ringed on Lunga in 2021.

White-tailed Eagle Haliaeetus albicilla

Rare visitor

A single first summer bird was seen heading south over Lunga's south west coast on 27^{th} June, being mobbed by four Great Skuas.

Buzzard Buteo buteo

Until recently, one pair bred in most years.

There were no records of this species during the expedition.

Water Rail Rallus aquaticus

Rare visitor.

At least one bird was regularly heard calling in close proximity to the west end of the Village, from where both a male and female were heard on 28th June. Single birds were also heard below the north-east side of the Village on two dates. A calling bird in Shag Alley (Area 3) on 28th June was a new locality on Lungafrom which the species has been recorded by TIARG.

Corncrake Crex crex

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

There were no records of this species on Lunga during the expedition.

Elsewhere during brief visits to some of the other islands, the species was recorded on Cairn na Burgh More, a single calling bird.

Oystercatcher Haematopus ostralegus

Breeds regularly in small numbers.

On Lunga's beaches and rocky outcrops, ten pairs (two pairs each in Areas 4, 6a, 8 and Corran Lunga, and single pairs in areas 2, 5 and 9) were behaving as though on breeding territory, alarming at human intruders and performing displays on the appearance of other Oystercatchers. Confirmed breeding record was of a single pair with well grown chick at Corran Lunga. Away from Lunga, breeding pairs held territories on Sgeir an Eirionnaich (three pairs) and Cairn na Burgh More where two chicks were found and 12 adults present.

Small flocks of presumed failed/non-breeders were evident on Lunga, typically at high tide, in the area of Sqeir a' Chaisteil and Corran Lunga where there would generally be up to 21 birds roosting.

Ringed Plover Charadrius hiaticula

One or two pairs breed annually.

Typically, the only birds on Lunga were confined to Corran Lunga, where two adults were noted on $28^{\rm th}$ June.

Curlew Numenius arguatus

An irregular visitor.

A single bird was heard from the north end of Lunga on the 1st July.

Whimbrel Numenius phaeopus

An irregular visitor.

A single bird was heard from the north end of Lunga on the 1st July.

Common Sandpiper Actitis hypoleucos

One or two pairs usually breed.

No evidence of breeding was noted on Lunga, with a single bird heard alarming on occasions at Corran Lunga and a single bird was noted at Tarbet (Area 9) on Lunga on 26th June. Elsewhere during brief visits on 1st July to some of the other islands, the species was recorded on Sgeir a' Chaisteil (a single alarming bird), Cairn na Burgh More (two birds) and Fladda (one bird).

Greenshank Tringa nebularia

Rare visitor

A single bird was heard at night from the Village, Lunga on 1st July.

Snipe Gallinago gallinago

Breeds regularly in small numbers.

Up to two birds could be heard drumming/chipping over the Village on most days. Elsewhere on Lunga, a single bird could be heard drumming/chipping over the south end of Lunga and south of Shearwater Gully whilst flushed birds included a single above Shag Alley and two in Area 12.

Elsewhere during brief visits to some of the other islands, the species was flushed from Sgeir an Eirionnaich.

Kittiwake Rissa tridactvla

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

Breeding was confirmed only on Lunga, where the main colony is around Harp Rock. The number of apparently occupied nests on Lunga was 720. Though a 15% reduction in the number of breeding birds from the last count in 2019, it remains above the mean count for the past five years counted i.e. 608 birds (range 423-843).

The breeding season was considered no more or less advanced than average for this species.

Over an estimated 400 birds were dispersed between roosts on Sgeir an Eirionnaich and the intertidal rocks off Sgeir a' Chaisteil. This was comparable to the mean peak count for four recent previous years counted i.e. 402 birds (range 330-560; 2015-2018) unlike the exceptionally large number of birds in 2019 (an estimate of over 2,000 birds) when atypically comprising of several hundreds of first-summer individuals. In 2021 only one first-summer bird was noted.



Adult Kittiwake at nest with chick (Andrew Carter)

Common Gull Larus canus

A regular breeding species in small numbers.

Breeding was suggested by the presence of three adults on territory on Fladda, recorded by TIARG during a brief visit on 1st July. These presumed three pairs were on the low-lying basalt rock outcrop on Fladda's south-east coast. Returning from Fladda to Lunga, a single adult bird was seen on Sgeirean na Guisaich.

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 (six pairs), Sgeir an Eirionnaich (an estimated minimum of 25 apparently occupied territories; up to 74 adults counted when flushed), Sgeir an Fheòir (four pairs), Sgeir a' Chaisteil (five pairs; 3 chicks) and Sgeir na h-lolaire (one pairs). Breeding was suggested by the presence of four adults on territory on the boulder beach gullery at the south-eastern corner of Cairn na Burgh More, recorded by TIARG from a boat when passing on 26th June. No birds were occupying territories on Sgeirean na Guisaich.

The small numbers of birds now breeding on Lunga follows a marked decline in population during the early 2000's (see section "Population changes for a selection of breeding species on Lunga, 1994 – 2021"). The estimated breeding population on the Treshnish Isles in 2018 was 53 pairs, an 85% reduction from the 342 pairs counted by Seabird 2000 in 1999.

Herring Gull Larus argentatus

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

Breeding was confirmed on Lunga (estimated six pairs, 12 adults counted when flushed; two chicks) within the gullery at the south end of Lunga, in area 8, and on Sgeir a' Chaisteil (three pairs; 1 chick).

Breeding was suggested on Sgeir an Eirionnaich (one apparently occupied territories). No birds were found to be occupying territories elsewhere on Sgeir an Fheòir, Sgeirean na Guisaich or Sgeir na h-Iolaire.

The small number of birds now breeding on Lunga follows a marked decline in population during the late 1990s / early 2000s (see section "Population changes for a selection of breeding species on Lunga, 1994 – 2021"). The estimated breeding population on the Treshnish Isles in 2018 was 19 pairs, a 92% reduction from the 225 pairs counted by Seabird 2000 in 1999.

Lesser Black-backed Gull Larus fuscus

Regular breeding species in small numbers.

One apparently occupied territory was noted within the south end gullery on Lunga, in area 8. No birds were found to be occupying territories on Sgeir a' Chaisteil, the small islands between Lunga and Fladda, or on either of the islands of the Cairn na Burgh. The only records other than from Lunga were of two adults seen over Sgeir a' Chaisteil on 30th June.

The estimated breeding population on the Treshnish Isles in 2018 was seven pairs, an 83% reduction from the 40 pairs counted by *Seabird 2000* in 1999.

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).

There were no confirmed records of this species during the expedition.

Arctic Tern Sterna paradisaea

Regular breeding species.

Breeding was suggested by the presence of three agitated alarming adults on Sgeir an Eirionnaich, recorded by TIARG during a brief visit on 1st July.

Great Skua Stercorarius skua

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

On Lunga breeding was confirmed by the presence of one chick on the high ground of Lunga (area 4). Two additional pairs held territory situated south of Tarbet on traditional localities in Area 7 and Area 8. The behaviour of the latter two pairs towards human intruders suggested that they were incubating eggs or had young chicks.

Sightings from Lunga would suggest the presence on Fladda of a minimum of two apparently occupied territories. Two birds were recorded on Sgeir an Fheòir by TIARG from a boat when passing on 26th June. Neither birds were noted when a brief visit was made by TIARG to Sgeir an Fheòir on 1st July.

Arctic Skua Stercorarius parasiticus

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

Single dark phase birds were seen off Lunga's west coast daily between 27th – 30th June, accompanied on 28th June by a light phase bird.

Guillemot Uria aalge

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

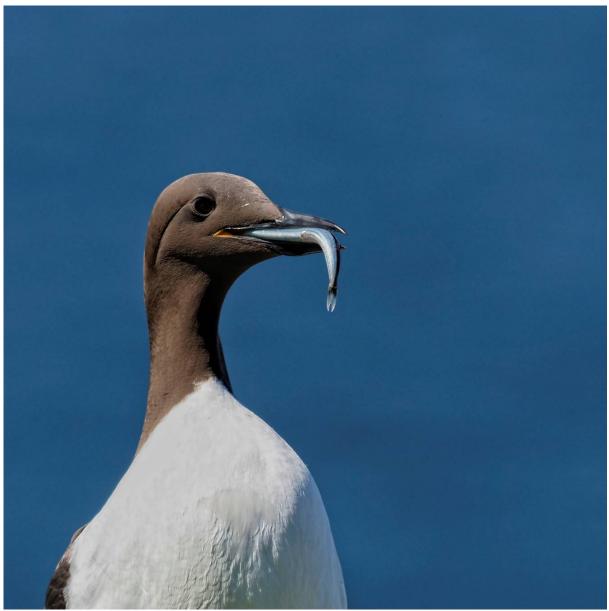
Breeding was confirmed on Lunga and Sgeir a' Chaisteil, with the main concentration as usual within the vicinity of Harp Rock where 10,505 adults were estimated. The total for Lunga and Sgeir a' Chaisteil combined was 11,231. The mean count for the past five years is 9,927 birds (range 8,463-11,231). The breeding season was considered no more or less advanced than average for this species.

The estimated breeding population on the Treshnish Isles in 2018 was 10,495 individuals, a 10% increase from the 9,566 individuals counted by *Seabird 2000* in 1999.

Adult birds known to be brooding chicks were caught at the colony in 2018 and 2019, and fitted with a geolocator (GLS) attached to a ring that was put onto one of the birds' legs¹. The aim was to catch the same individuals again one or two years later to recover the GLS and download data on their daily locations

¹ Tag deployment was licenced by the British Trust for Ornithology (BTO) and tagging was further licenced by Scottish Natural Heritage (SNH) where deployment was at colonies designated as Special Protection Areas (SPA) for these species and so requiring an Appropriate Assessment to ensure that there would be no adverse effect of the fieldwork on the integrity of these protected features.

between breeding seasons. In addition, Time Depth Recorders (TDRs) were deployed to 15 of the 50 birds deployed with GLS. TIARG were successful in 2021 in the recapture and retrieval of GLS and TDRs from some of the birds, building upon the success had in 2019. From the GLS data, a PhD student (TIARG member Lila Buckingham) will analyse the migration routes and wintering areas used by birds together with those from different breeding colonies around Scotland and north-east England. In addition, the TDR data will record diving behaviour from which it will be possible to estimate how hard the tagged birds are working throughout the year in order to meet their energetic requirements. This study (managed by MacArthur Green, funded by Vattenfall) aims to provide detailed and accurate data on the year-round movements of adult guillemots, with particular reference to populations likely to interact at some stage of the year with offshore wind farms in the North Sea.



Adult Guillemot bringing in food (Andrew Carter)

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. A total of 703 birds was counted on Lunga and Sgeir a' Chaisteil, in addition to the birds associated with 11 chicks located amongst accessible boulder colonies. The breeding

season was considered no more or less advanced than average for this species.

The estimated breeding population on the Treshnish Isles in 2018 was 673 individuals, a 45% reduction from the 1,232 individuals counted by *Seabird 2000* in 1999. Counts of apparently occupied nests were converted into an approximate estimate of the number of individuals to be seen at a colony at any one time by dividing by a correction factor 0.67 to allow for the presence of non-breeders and the attendance of breeding birds. This correction factor has been shown to be generally representative in Britain (Harris *et al.* 2015).

Twenty adult birds, known to be brooding chicks, were caught in the colonies at Harp Rock and the Boulder Beach, Lunga, in 2018. They were fitted with a geolocator attached to a ring that was put onto one of the birds' legs (see Guillemot for further details). TIARG were successful in 2021 in the recapture and retrieval of GLS from some of those individuals that had until now evaded the team.

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 (five birds), Fladda (eight), Cairn na Burgh More (four, of which one was carrying fish at a potential nest site), Sgeir an Fheòir (one) and Lunga (five).

The estimated breeding population on the Treshnish Isles in 2018 was 54 individuals, a 33% reduction from the 70 individuals counted by *Seabird 2000* in 1999 (when a correction factor was used by TIARG of one bird counted equated to one breeding pair).

Puffin Fratercula arctica

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

Breeding adults occupied burrows on Lunga and Sgeir a' Chaisteil. Adults were also seen by TIARG from a boat, in suitable breeding habitat on Fladda. The estimated breeding population on Lunga and Sgeir a' Chaisteil was 5,526 apparently occupied burrows (AOBs). For counts of birds in sectors where AOBs were not counted, one bird is taken to represent one AOB (Mitchell *et al.* 2004).

The estimated breeding population on the Treshnish Isles in 2018 was 2,583 AOBs, a 45% increase from the 1,788 AOBs counted by *Seabird 2000* in 1999.

Two adult birds known to be occupying breeding burrows were caught at the colony and fitted with a geolocator (GLS) attached to a ring that was put onto one of the birds' legs². The aim is to catch the same individuals again one or two years later to recover the tag and download data on their daily locations between breeding seasons. TIARG were successful in 2021 in the recapture and retrieval of GLSs from 3 of the 8 birds fitted with GLSs in 2019. From the data, SeaTrack (http://www.seapop.no/en/seatrack/) will analyse the non-breeding distribution of these individuals together with those individuals tracked from breeding in colonies encircling the Barents, Norwegian and North Seas, which includes colonies in Russia, Norway incl. Svalbard and Jan Mayen, Iceland, the Faroe Islands and Great Britain. Full details of this project's organisation and funding can be found at http://www.seapop.no/en/seatrack/about/.

ERRATUM TO 2019 ANNUAL REPORT:

The total number of AOBs in Area 12a, Lunga, should have read 1,067 and not two in the table entitled *Breeding seabird numbers for each census zone of Lunga and Sgeir a' Chaisteil in 2019*. The corrected estimated breeding population on Lunga and Sgeir a' Chaisteil is therefore 4,200 AOBs.

Rock Dove Columba livia

Regular breeding species in very small numbers.

On Lunga breeding was confirmed by the presence of eggs and young amongst six nests found with 12 adult birds inside the first gully's cave in Area 12. In another cave, six birds were found in Area 6 within which, if present, nests were not visible. Small flocks of up to 5 birds were noted daily elsewhere on Lunga.

Swift Apus apus

Irregular visitor

There were no records of this species during the expedition.

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² See previous footnote

Peregrine Falco peregrinus

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

A single male bird was seen over the Village, Lunga, on three dates $26^{th} - 28^{th}$ June. A single female bird was seen along Area 12, Lunga, only on 2th June.

Hooded Crow Corvus cornix

A regular breeding bird in small numbers.

The species was seen daily either on or flying between Lunga and Sgeir a' Chaisteil, with 1-2 birds noted at any one time. The exception was when two adults and a juvenile were seen at Sgeir a' Chaisteil on 30th June. Sightings would suggest the presence of no more than single pairs on Sgeir a' Chaisteil and Lunga.

Elsewhere during brief visits on to or passage by adjacent islands, two birds were recorded on Cairn na Burgh More.

Raven Corvus corax

At least one pair breed in most years.

Up to five individuals were seen on occasions frequenting Lunga. At least one bird was a moulting adult that was accompanied by what were thought to be four juveniles due to the absence of wing moult or abraded flight feathers.

Skylark Alauda arvensis

A regular breeding species in small numbers.

The only records for this species were of single singing males at the Village and south of Tarbet in Area 6, both on single dates.

Willow Warbler Phylloscopus trochilus

Rare visitor

A single bird was heard calling at the Village, Lunga, on 28th June. This sighting represents the fourth record by TIARG of the species on the Treshnish Isles, the previous records in 1995, 2006 and 2011.

Sedge Warbler Acrocephalus schoenobaenus

A scarce but almost annual visitor.

There were no records of this species during the expedition, though the site usually hosting a single male, the reedbed on Lunga, was not visited.

Whitethroat Sylvia communis

Rare visitor.

One singing male held territory at the Village, Lunga.

Wren Troglodytes troglodytes

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

As in previous years, the vast majority of records were confined to the northern half of Lunga, predominantly amongst the boulder scree and bracken-covered slopes from Cruachan down to the sea and on Corran Lunga. Food carrying, alarms, two nests with young and recently fledged young confirmed breeding on Lunga. There was a minimum of seven territories recorded between the Village and Harp Rock.

Elsewhere 5 birds were recorded during a brief visit to Sgeir a' Chaisteil, including a singing bird. The species was also recorded on Cairn na Burgh More, with breeding suspected at both localities.

Starling Sturnus vulgaris

A regular breeding species in small numbers.

Small flocks of up to 25 birds were noted daily on Lunga. Some were juvenile birds. Breeding was confirmed with adults feeding recently fledged young on Lunga.

Elsewhere during brief visits to some of the other islands, the species was recorded on Sgeir a' Chaisteil (16 birds in addition to 2 juveniles noted) and Cairn na Burgh More (one bird).

Blackbird Turdus merula

Rare visitor

One pair with a fledged chick were found in the first gully, Area 12, Lunga, at the back of the cave, on 27th June. This is the same locality were one member of TIARG (Lila Buckingham) on briefly visiting Lunga in late June 2020, saw an adult female Blackbird whilst chicks could be heard. These records

represent the second and third confirmed breeding of this species by TIARG on Lunga, the previous record in 2008.

Song Thrush Turdus philomelos

Rare visitor

Two fledged broods were seen in and around the Village, Lunga; one brood of two and a second of at least one. One dead fledged chick was also found from one of these broods. In addition to at least one male singing at the Village, Lunga, one bird was also heard on 28th June at Harp Rock. These records represent the second and third confirmed breeding of this species by TIARG on Lunga, the previous record within the period 1971 – 1995 (Walker & Cooper 1996).

Wheatear Oenanthe oenanthe

A regular breeding species in small numbers.

A single adult male was seen at the Village, Lunga, on two dates with four birds later noted on 30th June. Three juveniles were present above the second gully in Area 12 for at least two days 28-29th June, when a pair with two young were situated just north of Harp Rock. Elsewhere on Lunga, one or two bird were noted in Area 4, Area 5, the west side of Tarbet (Area 9) and Shaq Alley (Area 3) on one or more dates.

Elsewhere during brief visits to some of the other islands, the species was recorded on Sgeir a' Chaisteil, a single adult male bird.

Dunnock Prunella modularis

Irregular breeding species.

There were no records of this species during the expedition.

Pied Wagtail Motacilla alba yarrelli

A regular breeding species in very small numbers.

An adult was seen feeding a recently fledged bird in the Village, Lunga. Single record occurrences elsewhere on Lunga included an adult at Harp Rock and multiple sightings of a single bird on Corran Lunga.

Meadow Pipit Anthus pratensis

A regular breeding species in small numbers.

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

Rock Pipit Anthus petrosus

A regular breeding species in small numbers.

Breeding birds were common along the coast of Lunga and on Sgeir a' Chaisteil. Food carrying, alarms and recently fledged young confirmed breeding on Lunga and Sgeir a' Chaisteil.

Elsewhere during brief visits to some of the other islands, a recently dead bird was found Cairn na Burgh More.

Twite Linaria flavirostris

Regular breeding species in small numbers

Small parties of up to six birds, including adults with juveniles, were noted daily around the northern half of Lunga. Elsewhere during brief visits to some of the other islands, the species was recorded on both the Cairn na Burghs, two birds at each locality.

Systematic list of mammals for 2021

Otter Lutra lutra

Evidence of presence regularly noted.

No evidence of this species was noted on Lunga or during brief visits to any of the other Treshnish Isles during the expedition.

American Mink Neovison vison

No known occurrences.

No evidence of this species was noted on Lunga or during brief visits to any of the other Treshnish Isles during the expedition.

House Mouse Mus musculus

Resident, apparently in small numbers.

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

Chocolate wax monitoring blocks, "chew sticks", were laid for 3-4 successive days at 30 locations at the following sites on Lunga: the Boulder Beach (Area 1 and 2), the Puffin colony ("lawn") in Area 12A, along the wall immediately below cliff top footpath at the 2nd Gully south of the Village, the southern end of Area 12 and in Area 11 opposite Harp Rock. The chew sticks were then inspected for rodent teeth marks. Teeth marks attributable to mice were detected on one or more of the chew sticks at each site. Full details of the methodology and results are presented in an end paper to this report.

Brown Rat Rattus norvegicus

No known occurrences.

No evidence of this species was noted on Lunga or during brief visits to any of the other Treshnish Isles visited during the expedition.

Rabbit Oryctolagus cuniculus

Resident, numbers much reduced in recent years.

No live animals were seen whilst the remains of two dead animals were found east of the Village, Lunga. These casual observations confirm a marked reduction of animals on Lunga compared with the most recent years.

No evidence was noted of animals on any of the other islands of the Treshnish Isles during the brief visits by TIARG.

Common Seal Phoca vitulina

Irregular visitor

One animal was seen on Fladda's south-east coast on 1st July.

Grey Seal Halichoerus grypus

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

A maximum of 99 animals were visible from Lunga hauled out on intertidal reefs to the north and east at low tide.

Minke Whale Balaenoptera acutorostrata

Rare visitor.

One or more animals were seen off the north east coast of Lunga on 2nd July, and within proximity to small pods of dolphins.

Short-beaked Common Dolphin Delphinus delphis

Rare visitor.

One or two animals were seen off the north east coast of Lunga on 2nd July.

Bottlenose Dolphin Tursiops truncatus

Rare visitor

A pod of at least 7 animals were seen off the north east coast of Lunga on 2nd July, and within proximity to Minke Whale.

Harbour Porpoise Phocoena phocoena

Rare visitor.

Two or more animals were seen off the north east coast of Lunga on 2nd July.



Bottle-nosed Dolphin (Andrew Carter)

Systematic list of lepidoptera for 2021

Common Blue Polyommatus icarus

Regular breeder

Up to nine individuals were recorded on Lunga on six dates.

Red Admiral Vanessa atalanta

Migrant

Up to two individuals were recorded on Lunga on three dates.

Dark Green Fritillary Argynnis aglaja

Accidental

A single was seen near Shag Alley, Lunga on 2nd July.

Emperor Moth Saturnia pvonia

Two larvae were found near the summit of Cruachan, Lunga, on 29th June.

Brown Silver-line Petrophora chlorosata

A single was seen at the Village, Lunga on 27th June.

Map-winged Swift Hepialus fusconebulosa

One found dead at the Village, Lunga on 1st July.

Six-spot Burnet Zygaena filipendulae

Commonly sighted across Lunga, with tens of individuals noted at Shag Alley on 28th June and 2nd

July. On two dates, 10 individuals were counted in addition to yellow larvae cases noted on the path between the Village and the summit of Cruachan, Lunga.

Ruby Tiger Phragmatobia fuliginosa ssp.

One seen on the 29th June on the summit of Cruachan, Lunga,

Buff Ermine Spilosoma luteum

One at the Village, Lunga, on 27th June.

White Ermine Spilosoma lubricipeda

One at the Village, Lunga, on 27th June.

Knot Grass Acronicta rumicis

One at the Village, Lunga, on 27th June.

Angle Shades Phogophora meticulosa

One attracted to sugaring at the Village, Lunga, on 30th June.

Other notable wildlife records

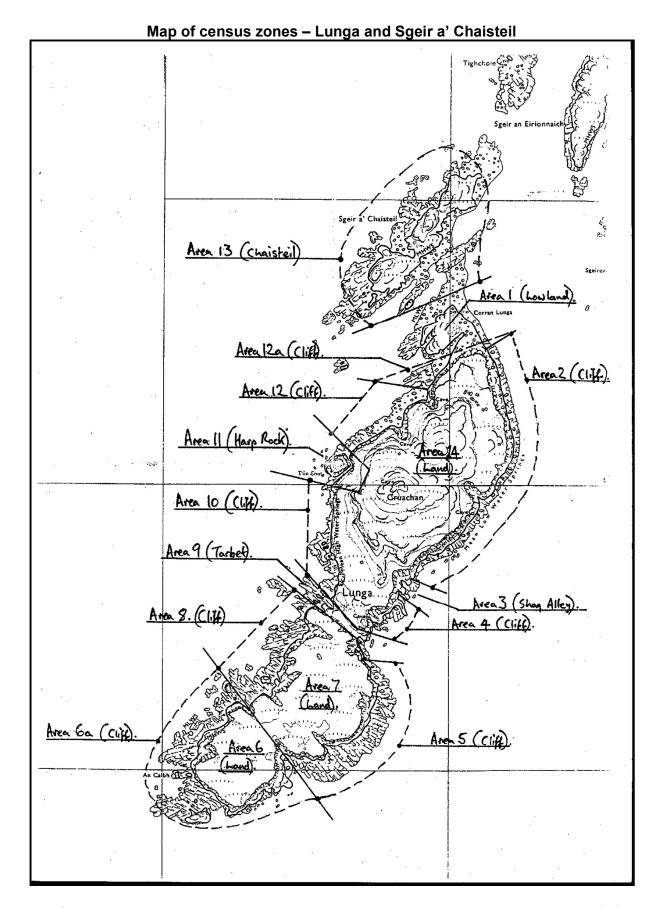
Oyster Plant Mertensia maritima

Localised species on Lunga.

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



Razorbill chick as it's about to fledge (jump into the sea) with parent bird in attendance (Andrew Carter)



Breeding seabird census data for the Lunga, Sgeir a' Chaisteil and islets in 2021

| Sector | Count | Lunga | Sgeir a' | Sgeirean na | Sgeir an | Sgeir an | Sgeir na | Cairn na | Fladda |
|-----------------|-----------|--------|-----------|-------------|----------|-------------|-----------|------------|--------|
| | unit | · · | Chaisteil | Giusaich | Fheoir | Eirionnaich | h-lolaire | Burgh More | |
| Fulmar | AOS | 234 | 20 | | | | | | |
| Manx Shearwater | No census | + | | | | | | | |
| Storm Petrel | No census | + | | | | | | | |
| Shag | AON | 418 | 15 | | | | | | |
| Great Skua | AOT | 3 | | | | | | | 2 AOT |
| Lesser B-b Gull | AOT | 1 | | | | | | | |
| Herring Gull | AOT | 6 | 3 | 0 | | 1 AOT | | 17 IND | |
| Great B-b Gull | AOT | 6 | 5 | 0 | 4 AOT | **37 | 1 AOT | 4 IND | |
| Common Gul | | | | | | | | | 3 IND |
| Kittiwake | AON | 720 | | | | | | | |
| Arctic Tern | | | | | | 3 IND | | | |
| Razorbill | IND | 696 | 7 | | | | | | |
| Razorbill | AON | 11 | | | | | | | |
| Guillemot | IND | 11,107 | 124 | | | | | | |
| Black Guillemot | IND | 5 | | | 1 | 5 | | 4 | 8 |
| Puffin | SEA | 248 | | | | | | | |
| Puffin | IND | 1,786 | | | | | | | |
| Puffin | AOB | 4,742 | 478 | | | | | | |

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

Breeding seabird numbers for each census zone of Lunga and Sgeir a' Chaisteil in 2021

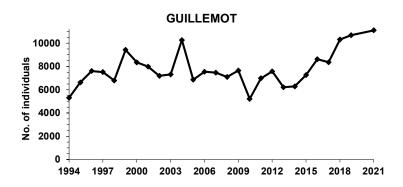
| Sector | Count | | | | | Count S | ectors o | n Lunga | (1 - 12) | a) and S | geir a' (| Chaisteil | (13) | | | | Lunga & Chaisteil |
|-----------------|-------|---|-----|-----|-----|---------|----------|---------|----------|----------|-----------|-----------|--------|-------|-------|-----|-------------------|
| | Unit | 1 | 2 | 3 | 4 | 5 | 6 | 6a | 7 | 8 | 9 | 10 | 11 | 12 | 12a | 13 | Totals |
| Fulmar | AOS | | 17 | 11 | 2 | 34 | | 5 | | 24 | | 11 | 7 | 118 | 5 | 20 | 254 |
| Shag | AON | | 26 | 105 | 10 | 60 | | 4 | | 55 | | 42 | 29 | 80 | 7 | 15 | 433 |
| Great Skua | AOT | | | | 1 | | 1 | | 1 | | | | | | | | 3 |
| Lesser B-b Gull | AOT | | | | | | | | | 1 | | | | | | | 1 |
| Herring Gull | AOT | | | | | | | | | 6 | | | | | | 3 | 9 |
| Great B-b Gull | AOT | | | | | | 4 | | 2 | | | | | | | 5 | 11 |
| Kittiwake | AON | | | | | | | | | | | 55 | 601* | 64 | | | 720 |
| Razorbill | IND | | 22 | 25 | 15 | 39 | | 4 | | 29 | | 83 | 174 | 286 | 19 | 7 | 703 |
| Razorbill | AON | | | | | 9 | | 2 | | | | | | | | | 11 |
| Razorbill | SEA | | 62 | | | | | | | | | | | 25 | | | 87 |
| Guillemot | IND | | 5 | 1 | | 40 | | | | | | 193 | 10,505 | 333 | 30 | 124 | 11,231 |
| Guillemot | SEA | | 2 | | | | | | | | | | | 100 | | | 102 |
| Black Guillemot | IND | | | | | 5 | | | | | | | | | | | 5 |
| Puffin | SEA | | 130 | | | | | | | | | | | 118 | | | 248 |
| Puffin | IND | | 103 | 141 | | 3 | | | | 3 | | | | 1,521 | 15 | | 1,786 |
| Puffin | AOB | | 69 | 117 | 123 | | | | | | | 440 | 789 | 1,646 | 1,558 | 478 | 5,220 |

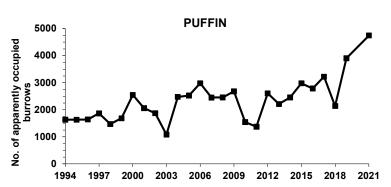
Key to count unit codes: AON/AOT/AOB = apparently occupied nest/territory/burrow IND = Individuals on land

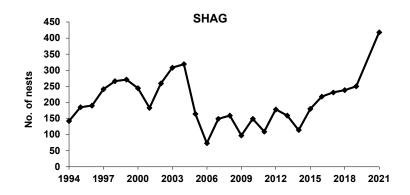
SEA = individuals on sea within 200m of colony PRS = Pairs nc = no count + = breeders present

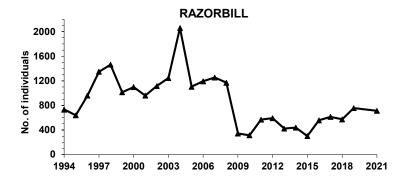
^{*} The count includes birds only visible from the sea and a wave cut platform. These were not in previous years accessible to view to include in the annual count unless otherwise stated.

Population changes for a selection of breeding species on Lunga, 1994 - 2019 & 2021

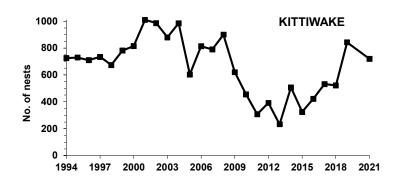


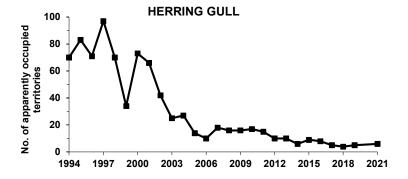


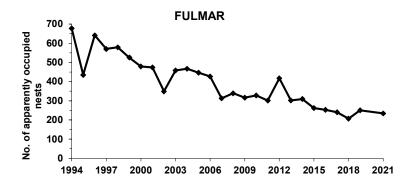


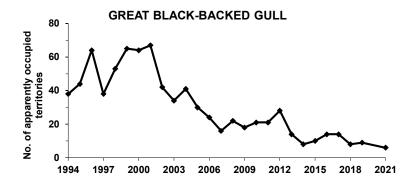


Population changes for a selection of breeding species on Lunga, 1994 – 2019 & 2021 (con't)









21

Treshnish ringing totals for 26th June – 3rd July 2021

| Site | Species | | New birds | | Reca | ptures | Total |
|----------------------|-------------------------|-------|-----------|-------|---------|----------|-------|
| | | Adult | Juvenile | Pulli | Retraps | Controls | |
| Lunga | Manx Shearwater | 9 | | | 2 | | 11 |
| · | Storm Petrel | 568** | | | 66 | 7 | 641 |
| | Shag | 36 | | 163 | 84* | | 283 |
| | Great Skua | | | 1 | | | 1 |
| | Great Black-backed Gull | | | 3 | | | 3 |
| | Kittiwake | 22 | | | 8 | | 30 |
| | Guillemot | 395 | | | 21 | 3 | 419 |
| | Razorbill | 37 | | 3 | 24 | 3 | 67 |
| | Puffin | 65 | | 4 | 25 | | 94 |
| | Meadow Pipit | 4 | | | | | 4 |
| | Rock Pipit | | 1 | | | | 1 |
| | Wren | 3 | | | | | 3 |
| | Song Thrush | 1 | 3 | | | | 4 |
| | Whitethroat | 1 | | | | | 1 |
| | Twite | 1 | 2 | | | | 3 |
| Sgeir an Eirionnaich | Great Black-backed Gull | | | 5 | | | 5 |
| Cairn na Burgh More | Oystercatcher | | | 2 | | | 2 |
| ŭ | Herring Gull | | | 10 | | | 10 |
| Fladda | Herring Gull | | | 2 | | | 2 |
| Treshnish Isles | Grand total for 2021 | 1,142 | 6 | 193 | 230 | 15 | 1,584 |

^{*69} of 84 Shag 'retraps' were colour-ringed birds of which the majority (56) were sighted only and not captured.

Note: All rings used in 2021 were registered to Treshnish Auk Ringing Group.

^{**}An additional 46 adults were ringed and 4 adults retrapped by RSPB on Lunga between 21st July and 15th August as part of tracking studies carried out on behalf of Marine Scotland.

Treshnish Isles ringing totals 1971 – 2021

| SPECIES | 1971 | 1974 | 1976 | 1977 | 1978 | 1980 | 1982 | 1984 | 1986 | 1989 | 1991 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Eider | | | | | | | | | | | | | | | | | | | | |
| Fulmar | 17 | 6 | 4 | | 8 | 21 | 14 | 18 | 7 | 21 | 15 | | 4 | 27 | 38 | 7 | 24 | 23 | 12 | 25 |
| Manx Shearwater | | 2 | 13 | | 4 | 4 | 1 | 8 | | | | | 9 | 1 | | 2 | 1 | 4 | 4 | |
| Storm Petrel | | 254 | 22 | | 1 | 283 | | 203 | 800 | 411 | 975 | 75 | 440 | 536 | 331 | 1104 | 741 | 732 | 414 | 1030 |
| Shag | 150 | 7 | 10 | 10 | 24 | 80 | 50 | 160 | | 40 | 10 | | 10 | 59 | 96 | 99 | 150 | 100 | 59 | 37 |
| Buzzard | | | | | | 1 | 2 | | | | | | | | | | | | | |
| Corncrake | | | | | | | | | | | | | | | | | | | | |
| Oystercatcher | | 1 | | | | 1 | 4 | 2 | | | | | | | | | | 2 | | 1 |
| Ringed Plover | | | | | | | | | | | | | | | | | | | | |
| Common Sandpiper | | | | | | | | | | | | | | | | | 1 | | | |
| Great Skua | | | | | | | | | | | | | | | | | 1 | | | |
| Kittiwake | | | | | | 1 | 1 | 1 | 2 | 2 | 4 | | 6 | 10 | 1 | 50 | 41 | 23 | 13 | 11 |
| Common Gull | | | | | | · | • | • | _ | _ | • | | Ū | | • | | 4 | | 5 | 11 |
| Lesser Black-b Gull | | | | | | | | | | | | | | | | | | | | |
| Herring Gull | 6 | 1 | | | 14 | 46 | 35 | 56 | 4 | 4 | 3 | | 5 | 24 | 19 | 52 | 73 | 39 | 15 | 11 |
| Great Black-b. Gull | 3 | 6 | 3 | 7 | 6 | 22 | 14 | 35 | | 22 | 15 | | 6 | 25 | 16 | 48 | 19 | 16 | 2 | 27 |
| Guillemot | 32 | 20 | 14 | | 66 | 502 | 137 | 364 | 180 | 250 | 306 | | 109 | 498 | 349 | 472 | 503 | 507 | 892 | 312 |
| Razorbill | 65 | 72 | 90 | | 115 | 266 | 218 | 236 | 151 | 103 | 64 | | 81 | 101 | 105 | 98 | 112 | 102 | 133 | 31 |
| Black Guillemot | | | | | | | | | | | | | | | | 1 | | | | 1 |
| Puffin | 70 | 198 | 271 | | 203 | 200 | 208 | 182 | 174 | 160 | 114 | | 358 | 236 | 301 | 267 | 398 | 274 | 389 | 214 |
| Hooded Crow | | | | | | | | | | | | | | | | | | | | |
| Willow Warbler | | | | | | | | | | | | | | 1 | | | | | | |
| Wren | | | | | | | | | | | | | | 3 | | | | | | 1 |
| Starling | | | | | | | | | | | | | | | | | | | | |
| Stonechat | | | | | | | | | | | | | | | | | | | | |
| Wheatear | | | 12 | | | | | 1 | 3 | | | | | | 5 | 24 | 37 | 22 | 50 | 24 |
| Pied Wagtail | | | | | | | | | | | | | 1 | 3 | 2 | | | | | |
| Meadow Pipit | | | | | | | | | | | | | | 4 | | 1 | | | 12 | 1 |
| Rock Pipit | | | | | | | | | 5 | 1 | | | | 2 | 4 | 2 | 4 | 2 | 1 | 2 |
| Twite | | | | | | | | | | | | | | | | 2 | | | | |
| TOTAL | 343 | 567 | 439 | 17 | 441 | 1427 | 684 | 1266 | 1326 | 1014 | 1506 | 75 | 1029 | 1530 | 1267 | 2229 | 2109 | 1846 | 2001 | 1739 |
| | | | | | | | | | | | | | | | | | | | | |

NOTES:

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

Treshnish ringing totals 1971 – 2021 (continued)

| SPECIES | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2021 | Total |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Eider | | | 1 | | | | | | | | | | | | | | | | | 1 |
| Fulmar | 22 | 25 | 47 | 14 | 15 | 8 | | | | | | 1 | | 1 | | 1 | 9 | 1 | | 435 |
| Manx Shearwater | | 2 | | 1 | 1 | 2 | | 4 | 9 | 3 | 18 | 3 | 13 | 13 | 5 | 8 | 2 | 6 | 9 | 150 |
| Storm Petrel | 15 | 360 | 83 | 491 | 962 | 21 | 118 | 403 | 293 | 202 | 212 | 191 | 448 | 978 | 258 | 289 | 476 | 486 | 614 | 15154 |
| Shag | 97 | 99 | 200 | 77 | 35 | 141 | 124 | 53 | 116 | 67 | 120 | 115 | 90 | 148 | 165 | 200 | 236 | 99 | 199 | 3533 |
| Buzzard | | | | | | | | | | | | | | | | | | | | 3 |
| Corncrake | | | | 1 | | | | | | 2 | | | | | | | | | | 3 |
| Oystercatcher | | | | | | 4 | | | | 2 | 2 | 1 | 2 | 1 | 4 | | 1 | | 2 | 30 |
| Ringed Plover | | | | 1 | | 1 | | | | | | | | | | | 1 | | | 3 |
| Common Sandpiper | | | | | 1 | 1 | 1 | | | | | | | | | 1 | | | | 5 |
| Great Skua | 1 | 1 | | 1 | | | 2 | 4 | | 2 | | | 2 | | | 2 | 1 | | 1 | 18 |
| Kittiwake | 3 | 2 | 21 | 15 | 14 | 16 | 3 | 4 | 3 | 8 | | | 16 | 12 | 14 | 22 | 13 | 25 | 22 | 379 |
| Common Gull | 11 | 6 | | 16 | 8 | | | | | | | | 4 | 1 | 1 | | | | | 67 |
| Lesser Black-b Gull | | | | | | | 1 | | 2 | 2 | | | | 4 | 1 | | | | | 10 |
| Herring Gull | 11 | 8 | 11 | 8 | 1 | 11 | 7 | 20 | 11 | 8 | 7 | 3 | 4 | 3 | 8 | 4 | 2 | | 12 | 546 |
| Great Black-b. Gull | 5 | 21 | 18 | 12 | 3 | 4 | 13 | 12 | 15 | 10 | 4 | 1 | 2 | 15 | 11 | 16 | 2 | 17 | 8 | 481 |
| Common Tern | | | | | 1 | | | | | | | | | | | | | | | 1 |
| Arctic Tern | | | | | | | | | | | | | 44 | 104 | 16 | | 11 | | | 175 |
| Guillemot | 425 | 261 | 800 | 141 | 172 | 123 | 1 | 51 | 53 | 169 | 46 | 8 | 145 | 154 | 161 | 230 | 329 | 375 | 395 | 9552 |
| Razorbill | 110 | 56 | 147 | 37 | 33 | 34 | 5 | 6 | 7 | 8 | 2 | 2 | 32 | 23 | 17 | 40 | 76 | 40 | 40 | 2858 |
| Black Guillemot | | | | | | | | | | | | | | | | | | | | 2 |
| Puffin | 351 | 244 | 226 | 151 | 272 | 195 | 327 | 32 | 38 | 68 | 301 | 71 | 128 | 239 | 260 | 214 | 337 | 96 | 69 | 7856 |
| Hooded Crow | | | | | | 1 | | | | | | | | | | | | | | 1 |
| Rock Dove | | | | | | | | | | | | | | | | | 3 | | | 3 |
| Willow Warbler | | | | | | | | | | 1 | | | | | | | 1 | | | 3 |
| Whitethroat | | | | | | | | | | 1 | | | | | | | | | 1 | 2 |
| Sedge Warbler | | | | | | | | | | 2 | | | | | | | | | | 2 |
| Wren | | | 2 | 4 | 2 | | 2 | 1 | 1 | 2 | 6 | | 2 | 1 | 3 | | 16 | | 3 | 49 |
| Starling | | | | | | 3 | | | | | | | | 1 | | | | | | 4 |
| Stonechat | | | | | 2 | | 1 | | | | | | | | | | | | | 3 |
| Wheatear | 2 | 2 | 2 | 7 | 1 | 2 | 4 | 2 | 4 | 5 | 10 | 4 | 7 | 11 | 3 | 3 | 5 | | | 252 |
| Dunnock | | | | | | | | | | 1 | | 1 | 1 | | 2 | | | | | 5 |
| Pied Wagtail | | | | | | 4 | | | | 3 | 1 | | | 4 | | | | | | 18 |
| Meadow Pipit | 4 | 1 | 3 | 5 | 1 | | 4 | | 1 | 2 | 15 | 3 | 1 | 5 | | 1 | 3 | | 4 | 71 |
| Rock Pipit | 2 | 2 | 2 | | 3 | 21 | 10 | 1 | 2 | 4 | 3 | 1 | 2 | 11 | 1 | 4 | 7 | | 1 | 100 |
| Song Thrush | | | | | | | | | | | | | | | | | | | 4 | 4 |
| Twite | 1 | | | | | 1 | 1 | 1 | | 3 | 1 | | | | | | 16 | | 3 | 29 |
| TOTAL | 1060 | 1090 | 1563 | 982 | 1527 | 593 | 624 | 594 | 555 | 575 | 748 | 405 | 943 | 1729 | 930 | 1035 | 1547 | 1145 | 1387 | 41808 |
| | | | | | | | | | | | | | | | | | | | | ,,,, |

NOTES: (1) Storm Petrel ringing totals include 21st July – 15th August 2021 (RSPB visit).

Recent ringing recoveries

STORM PETREL

TIARG have in the past year received details of 13 recoveries of birds ringed within Britain and Ireland in the months July - September and controlled by TIARG on Lunga in June 2019. These recoveries are summarised in the table below; all birds were ringed as adults (Euring code 4).

| Ringing Site | No. of controls at: | Time interva | l (years, days) | Distance | Direction |
|-----------------------------------|---------------------|--------------|-----------------|----------|-----------|
| | Lunga | Min | Max | km | (degrees) |
| Ponta de Almadena, Faro, Portugal | 1 | | 24 d | 2,167 | 5 |
| Marloes, Pembrokeshire | 1 | | 3 yr 364 d | 534 | 352 |
| Fair Isle, Shetland | 1 | | 354 d | 442 | 220 |
| Bewan, North Ronaldsay, Orkney | 2 | 2 yr 322 d | 2 yr 324 d | 401 | 217 |
| Twinyess, North Ronaldsay, Orkney | 1 | | 6 yr 334 d | 396 | 217 |
| Sanday, Orkney | 1 | | 1 yr 302 d | 385 | 216 |
| Calf of Man, Isle of Man | 1 | | 2 yr 342 d | 290 | 340 |
| Eilean nan Ron, Highland | 1 | | 5 yr 332 d | 262 | 209 |
| Faraid Head, Highland | 1 | | 2 yr 305 d | 255 | 203 |
| Ballyreagh, Londonderry | 1 | | 3 yr 315 d | 146 | 007 |
| Isle of Canna, Highland | 1 | | 339 d | 64 | 174 |
| Fladda, Treshnish Isles | 1 | | 20 yr 5 d | 3 | 228 |

RECOVERIES OF OTHER SPECIES

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

| Storm Petrel 2725925 | 6 R | 29/6/2019 10/7/2020 Recaptured | 208 km 165 | bservato 5 degs | ory, Co.Down, Northern ireland 377 days |
|-------------------------|--------|--------------------------------------|---|----------------------|--|
| Storm Petrel 2679399 | 6 R | 05/7/2014 12/7/2019 Recaptured | | 'estern Is 2 degs | sles 4 years 373 days |
| Guillemot X56666 | 6 R | 28/6/1995 28/6/2019 | Lunga Isle of Canna, Hi 64 km 354 | ghland I degs | 8766 days |

Recaptured.

Razorbill

M72749 6 04/7/1997 Lunga

X 22/3/2021 Scapa, St Ola, Orkney

343 km 37 degs 8662 days

Dead for more than a week, not fresh. Bird found.

Shag

1701745 1 23/6/2019 Lunga

X 11/12/2020 Sorobaidh, isle of Tiree

29 km 267 degs 537 days

Dead for more than a week, not fresh. Bird found.

Puffin

ET80417 6 21/6/1999 Lunga

X 28/01/2021 Lagoa de Obidos, Leiria, Portugal

1907 km 187 degs 7892 days

Dead for more than a week, not fresh. Bird found.

Puffin

EG61390 6 27/6/2002 Lunga

X 12/2/2021 Parque Biologico de Gaia, Faro, Porto, Portugal

1716 km 186 degs 6805 days

Freshly dead - within about a Week Poor Condition (starvation, thirst), No Indication of Cause

Guillemot

T14999 4 24/6/1991 Lunga

X 30/5/2019 Les Moutiers-En-Retz, Loire-Atlantique, France

1091 km 164 degs 10202 days

Ring Only Found.

Shag

1453650 1 30/6/2010 Lunga

R 15/7/2019 Great Saltee Island, Wexford, Ireland

486 km 182 degs 3302 days

Recaptured by ringer

Guillemot

R92845 1 5/7/2015 Isle of Canna, Highland

R 27/6/2019 Lunga

29 km 267 degs 537 days

Recaptured by ringer.

Guillemot

R91030 1 9/7/2014 Isle of Canna, Highland

R 24/6/2019 Lunga

29 km 267 degs 1811 days

Recaptured by ringer.

Razorbill

M77258 1 30/6/1996 Isle of Canna, Highland

R 25/6/2019 Lunga

29 km 267 degs 8395 days

Recaptured by ringer.

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We thank lain Morrison and his family, for providing our transportation between Mull and Lunga, between the islands of the Treshnish Isles (http://www.turusmara.com/), and are grateful for his continuing advice, cooperation and help.

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

The Expeditions 1971 – 2021

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

1971 Barry Lawson, Peter Deans, John Eatough, Shiela Anderson, Dick Hansford. Full census and ringing.

This was the first trip and the Treshnish Isles were included in a "mopping up" of islands not fully covered during the 1969/70 "Operation Seafarer" National Seabird Census.

1972 Barry Lawson, Geoff Ward, Bevan Craddock.

Part census and ringing

Forced to leave after three days due to bad weather.

1973 Barry Lawson, Peter Deans, John Hodson, Geoff Cope.

Trip abandoned – unable to land due to rough seas

1974 Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Geoff Cope, Tom Pool.

Census of Lunga and ringing

An RAF Helicopter landed a photographer onto Harp Rock, causing many bird casualties.

1976 Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Geoff Cope, Tony Kilgallen.

Full census Lunga - Fladda and ringing.

Very hot summer.

1977 Barry Lawson, John Hodson.

Ringing only.

Called in on "Corryvreckan" boat cruise.

1978 Barry Lawson, Peter Deans, John Hodson, Simon Walker.

Full census Lunga and Sgeir a' Chaisteil and ringing.

1980 Barry Lawson, Peter Deans, John Hodson, Simon Walker, David Lawson.

Ringing only

1981 Geoff Ward, Geoff Cope.

Part census and photography

1982 Barry Lawson, Peter Deans, John Hodson, Simon Walker, Andrew Lawson.

Ringing only.

1984 Barry Lawson, Peter Deans, John Hodson, Simon Walker.

Ringing only.

1986 Barry Lawson, Peter Deans, Geoff Ward, John Hodson, Simon Walker, Andrew Lawson.

Full census with ringing

1989 Barry Lawson, Peter Deans, John Hodson, Simon Walker.

Ringing only.

1991 Barry Lawson, Peter Deans, Simon Walker, David & Andrew Lawson, Jan Densham.

Ringing only.

1993 Roger Broad *et al.* (Scottish Natural Heritage charter)

Full census of The Dutchman's, Lunga, Sgeir a' Chaisteil and Fladda.

Chris Redfern et al.

Storm Petrel ringing.

The Expeditions 1971 – 2021 (continued)

1994 Simon Walker, Mike Smith, Dennis Cooper, Jan Densham, Danny Lenain.

Full census Lunga and Sgeir a' Chaisteil and ringing.

Chris Redfern et al.

Storm Petrel ringing.

1995 Simon Walker, Mike Smith, Dennis Cooper, Jan Densham, Fergus Henderson.

Full census of Lunga and Sgeir a' Chaisteil and ringing.

1996 Simon Walker, Mike Smith, Dennis Cooper, Danny Lenain, Robin Ward

Full census of Lunga and Sgeir a' Chaisteil and ringing.

1997 Simon Walker, Dennis Cooper, Robin Ward, Damian Offer, Steve Willis, Chris Spray

Full census of Lunga – Fladda and ringing.

1998 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Steve Willis,

Steve Worwood

Full census of Lunga - Fladda and ringing.

1999

Week 1 Simon Walker, Dennis Cooper, Steve Willis, John Osbourne.

Week 2 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Jan

Densham

Full census of the Treshnish Isles for Seabird 2000 and ringing

2000

Week 1 John Hodson, Dennis Cooper, Damian Offer

Full census of Manx Shearwater on Lunga for Seabird 2000. Limited passerine ringing. (May).

Week 2 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Steve Willis, Andrew Carter,

Steve Woodward

Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Tern census for *Seabird 2000*. Ringing.

2001 Simon Walker, John Hodson, Dennis Cooper, Robin Ward, Damian Offer, Andrew Carter Completion of census for *Seabird 2000*. Full census of Lunga, Sgeir a' Chaisteil and the islands

between Lunga – Fladda. Ringing.

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

Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga - Fladda. Ringing.

2004 Simon Walker, Robin Ward, Andrew Carter, John Calladine, Tim Dixon, Shaun Micklewright,

Tina Wiffen.

Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga - Fladda. Ringing.

2005 Simon Walker, Robin Ward, Andrew Carter, Shaun Micklewright, Gareth Harris, George

Henderson, Tracé Williams.

Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga - Fladda. Ringing.

2006 Simon Walker, Dennis Cooper, Robin Ward, Andrew Carter, Shaun Micklewright, John Calladine, Tim Dixon, George Henderson.

Full census of Lunga, Sgeir a' Chaisteil, Cairn na Burgh More, Cairn na Burgh Beg and the islands between Lunga – Fladda. Ringing.

The Expeditions 1971 – 2021 (continued)

| 2007 | Simon Walker, Robin Ward, Andrew Carter, Shaun Micklewright, George Henderson, Tim Dixon, Tracé Williams. Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing. |
|-------------|---|
| 2008 | Simon Walker, John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, George Henderson, Tim Dixon, John Calladine. Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing. |
| 2009 | John Hodson, Robin Ward, Dennis Cooper, Andrew Carter, Shaun Micklewright, Tim Dixon, Jurjen Annen, Claire Dovey. Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing. |
| 2010 | John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, Tim Dixon, Tracé Williams Jurjen Annen, Claire Dovey. Full census of Lunga, Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing. |
| 2011 | John Hodson, Robin Ward, Andrew Carter, Shaun Micklewright, Tim Dixon, George Henderson, Jurjen Annen, Claire Dovey. Full census of Lunga, Sgeir a' Chaisteil, Bac Mór (from boat) and Bac Beag (from boat). Ringing. |
| 2012 | John Hodson, Robin Ward, Dennis Cooper, Tim Dixon, Steve Willis, Jurjen Annen, Claire Dovey, Richard Barnes, Simon Roberts. Full census of Lunga and Sgeir a' Chaisteil. Ringing. |
| 2013 | John Hodson, Robin Ward, Dennis Cooper, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, George Henderson. Full census of Lunga and Sgeir a' Chaisteil. Ringing. |
| 2014 | John Hodson, Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, Claire Dovey, Cerian Thomas. Full census of Lunga and Sgeir a' Chaisteil. Ringing. |
| 2015 | Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, John Calladine, Stuart Brown, Chris Heward, Daniel Plunkett. Full census of Lunga and Sgeir a' Chaisteil and the islands between Lunga – Fladda. Ringing. |
| 2016 | Robin Ward, Andrew Carter, Tim Dixon, Jurjen Annen, Chris Heward, Daniel Plunkett, Matt Smith, Lila Buckingham. Full census of Lunga, Sgeir a' Chaisteil, Cairn na Burgh More, Cairn na Burgh Beg and the islands between Lunga – Fladda. Ringing. |
| 2017 | Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, George Henderson, Claire Dovey, Chris Heward, Lila Buckingham. Full census of Lunga, Sgeir a' Chaisteil, Bac Mór (from boat), Bac Beag (from boat) and the islands between Lunga – Fladda. Ringing. |
| 2018 May | Dennis Cooper, Tim Dixon, Jamie Dixon, Ross Johns, Matt Williams (For 24 hours: Robin & Judith Ward). |
| June | Full census of Manx Shearwater on Lunga for <i>Seabirds Count</i> . Limited ringing. (1 week). Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, Chris Heward, Lila Buckingham, Emma Hughes. |
| July | Full census of the Treshnish Isles for <i>Seabirds Count</i> . Ringing. (1 week) Dennis Cooper, Tim Dixon, Chris Heward, Lila Buckingham, Daniel Plunkett, Jamie Dixon, Matt Williams, Nicci Cox, Carole Davis, Jacki Gittins, Thomas Hibbert, Peter Robinson, Chris Smith, Helen Stace. |
| | Census of Storm Petrel on Lunga, Sgeir a Chaisteil and Fladda for <i>Seabirds Count</i> . Limited ringing. (2 weeks). |

The Expeditions 1971 – 2021 (continued)

2019

June Robin Ward, Andrew Carter, Tim Dixon, Shaun Micklewright, Jurjen Annen, Claire Dovey, Chris Heward, Lila Buckingham.

Full census of Lunga and Sgeir a' Chaisteil and the islands between Lunga - Fladda. Ringing.

July Tim Dixon, Chris Heward, Lila Buckingham, Daniel Plunkett, Jamie Dixon, Matt Williams, Helen Stace. Sophie Bennett.

Census of Storm Petrel on Bac Mór and Cairn na Burgh More for *Seabirds Count*. Limited ringing. (1 week).

2020 Lila Buckingham, Sophie Bennett.

Attended in their capacity of academic researchers, as Covid restrictions prevented a formal TIARG expedition taking place in 2020. A short visit was made solely for the recapture and retrieval of GLS deployed to Guillemot and Razorbill in previous years by TIARG.

2021 Robin Ward, Andrew Carter, Tim Dixon, Lila Buckingham, Daniel Plunkett, Imogen Lloyd, Robbie Phillips, Kirstie Ross.

Full census of Lunga and 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 |
|----------------|-----------------|-----------------|---------------|-----------------|-----------------|--------------------|--------------------|---------------|
| 1078761 - 800 | 2010581 - 583 | EF75001 - 500 | FA50601 - 700 | GF10471 - 489 | HT03619 | K10701 – 1000 | R07001 - 100 | 1F4094 - 097 |
| 1080101 – 110 | 2101991 – 2000 | EG23501 - 700 | FB22601 - 700 | GH21301 - 350 | HT09001 - 004 | K13001 – 300 | R19401 - 20200 | C331894 - 900 |
| 1087111 – 120 | 2121401 - 500 | EG23721 - 780 | FB23401 - 500 | GN85301 - 400 | HT17871 – 890 | M36341 - 350 | R24001 - 26350 | E196501 - 520 |
| 1105561 – 570 | 2167051 – 068 | EG23801 - 999 | FC52551 - 558 | GJ35401 - 500 | HT17931 – 940 | M46501 - 800 | R31601 – 900 | JB44316 |
| 1123531 – 540 | 2170201 – 203 | EG61000 - 500 | FC52571 | GJ76001 - 800 | HT34021 - 030 | M55001 - 500 | R51501 – 2000 | K039209 - 230 |
| 1123541 – 550 | 2238501 - 600 | EG88501 - 9000 | FC74501 | GJ99081 - 082 | HT68201 - 210 | M72451 - 800 | R65501 - 6000 | K419290 - 295 |
| 1123671 – 690 | 2261001 – 2350 | EH33377 - 380 | FH36101 - 200 | GK34351 - 354 | HT68221 - 226 | M85501 - 800 | R72501 - 4000 | NA84296 - 299 |
| 1123961 – 970 | 2284001 - 5000 | EH54501 - 55000 | FR13606 - 636 | GK50214 - 220 | HT80301 - 400 | M88001 - 300 | T14001 - 5000 | KX83101 - 106 |
| 1130701 - 800 | 2309901 - 10000 | EH89256 | FR14401 – 500 | GK50551 - 570 | HW05351 – 360 | M92501 - 700 | R73001 – 4000 | KX83116 - 118 |
| 1159651 – 700 | 2311301 – 400 | EH89260 | FR51201 - 300 | GK62985 - 990 | HW06951 - 7000 | | T82001 - 300 | RF10011-020 |
| 1163701 – 740 | 2311501 – 2000 | EH98001 - 300 | FR56351 – 400 | GK90821 - 840 | HW08994 - 09000 |) | X39501 - 40000 | LA59201-300 |
| 1168001 – 100 | 2348001 - 500 | EK29501 - 900 | FR76701 = 800 | GK91471 – 490 | HW37361 | | X56501 – 57000 | DD90261-270 |
| 1170601 – 700 | 2236801 – 7000 | EK72657 - 660 | FS21478 | GM78756 | HW42996 - 3000 | | X63001 - 500 | CBV601-700 |
| 1174201 - 300 | 2369301 – 400 | EK91471 – 490 | FS51016 - 500 | GP13416 - 450 | HW68101 – 110 | | X67501 – 68000 | V711401-500 |
| 1187901 – 950 | 2405001 - 6000 | EL19801 – 276 | FS87001 - 100 | GP47917 | HW68161 – 170 | | X79501 - 80000 | TJ18901-9000 |
| 1237401 – 450 | 2430701 – 900 | EL52501 - 3000 | FV10611 - 620 | GP62201 - 207 | HW74971 – 990 | | X99001 - 99500 | BT09481-490 |
| 1322951 – 960 | 2436501 – 7000 | EN22001 - 500 | FV10646 - 650 | GP74501 - 75000 | HW87211 – 225 | | Y09403 - 09405 | NV42851-860 |
| 1328481 – 490 | 2444501 – 5000 | EP85608 - 612 | FV54446 – 460 | GR44201 – 250 | HW96181 - 200 | | Y26001 – 26500 | SR49601-700 |
| 1350801 – 900 | 2446202 – 233 | EP85687 - 700 | FV62410 | | HW94907 – 913 | | Y32501 – 33000 | A297482-500 |
| 1357901 – 8000 | 2455501 – 6000 | ER03701 – 800 | FV62416 – 226 | | MA12551 – 600 | | | B229951-992 |
| 1366901 – 7000 | 2480001 – 500 | ER48401 – 404 | FV96681 – 684 | | MA15801 – 900 | | | BV70669 |
| 1373751 – 3900 | 2513501 – 4000 | ES64018 - 189 | SS96101 - 300 | A2 RINGS | MA44251 – 900 | | | SV58551-600 |
| 1378401 – 8500 | 2538001 - 800 | ET19501 - 700 | | (cont) | | | | BV28661-670 |
| 1399601 - 700 | 2542001 - 3000 | ET52501 - 3000 | | 2664001 - 5000 | SHAG RINGS | | | SV58601-616 |
| 1408301 - 500 | 2554001 - 500 | ET80001 - 500 | | 2679001 - 80000 | (cont) | | | Z155001-100 |
| 1414301 - 500 | 2560001 - 1000 | EW18001 - 500 | | 2725001 - 6000 | 1497001 – 100 | | | EL69255-300 |
| 1421701 – 800 | 2579001-80000 | EW50001 - 500 | | 640801 - 640900 | 1500201 - 300 | | | |
| 1417001 – 7100 | 2605001 - 5500 | EX12501 - 3000 | | 2627701 - 800 | 1701501 - 2000 | | | |
| 1445601 - 800 | 2624001 - 5000 | EY32001 - 500 | | 2777001 - 8000 | 1118766 - 789 | | | |
| 1491001 – 100 | 2650101 – 1000 | EZ30001 - 1000 | | | 1712301 - 500 | | | |

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