

Forth Seabird Group

Forth Islands Bird Report

2009

Compiled by Bill Bruce

February 2010

SEABIRD SPECIES SUMMARIES 2009

Note: AOS = Apparently occupied sites; AON = Apparently occupied nests; AOB = Apparently occupied burrows

FULMAR

A good year for fulmar with an overall increase of 300 AOS (26%). Only islands not showing an increase were Bass Rock and Inchkeith.

CORMORANT

Numbers dropped on Lamb and Inchkeith. None attempted to breed on Haystack while there was an increase on nearby Carr Craig and also on Craigleith. Overall, numbers up by 10 AON (4%).

SHAG

Biggest changes were on Craigleith (+67 AON/ 50%), May Isle (+41 AON/ 9%) and Lamb (-22 AON/-23%). Overall, numbers up by 86 AON (8%). Emily Barlow (CEH) reporting productivity of 2.02 on May Isle – highest ever.

GANNET

Not counted this year.

EIDER

Full counts carried out this year on Craigleith, Fidra, and Inchcolm during the puffin counts.

GREAT BLACK-BACKED GULL

Numbers are up by 11 AON compared with 2007, mainly due to increases on Craigleith and May Isle. Most of this increase would seem to have been in 2008 with a lesser increase in 2009. Incomplete count of GBB gull on Craigleith last year so direct comparison is not possible.

LESSER BLACK-BACKED GULL & HERRING GULL

Due to lack of manpower, these species are not counted on all islands. This year a full ground count was carried out on Inchcolm. The intention was to then do an aerial survey and compare the two figures. Unfortunately due to adverse weather and other factors the aerial count never took place.

KITTIWAKE

Numbers on Bass Rock, Craigleith and Fidra all show increased numbers of AON while Lamb and May Isle show decreases. The overall result is a drop of 870 AON (17.5%).

COMMON TERN

Numbers on May Isle are down by 12%. Numbers at Leith Docks are down by 7%.

ARCTIC TERN

Numbers on May Isle are down by 38%.

ROSEATE TERN

Two pairs of Roseates bred.

SANDWICH TERN

None reported as attempting to breed.

RAZORBILL

Fidra is the only island showing an increase in breeding numbers (ie +34%). The overall result is a drop in numbers by nearly 12%.

GUILLEMOT

Compared to last year, numbers breeding on Bass Rock, Craigleith, Lamb and Fidra show some big changes. However the majority of these birds are counted from a boat so some caution should perhaps be used when analysing these figures. May Isle where the majority of this species breed, shows a drop of 6% in breeding numbers compared to last year.

PUFFIN

As part of the SOS Puffin Project run by the Scottish Seabird Centre, counts of puffin burrows were carried out on Craigleith and Fidra. The last count of this species on these islands was in 2003. As expected, this year's figures are well down on these.

May Isle, the only other island where this species was counted, showed an increase of 7% in breeding numbers.

HISTORICAL NOTES

The annual seabird counts on the islands in the Firth of Forth started in 1959. In the early years it was necessary to work out the best technique for counting each species.

NOTE: These historical notes relate to Craigleith, Lamb, Fidra, Inchkeith, Inchcolm and Inchmickery. Counts are not available for the other islands for the early years.

FULMAR

In 1959 there were 135 AOS counted. Numbers increased steadily until 1997 when they reached a peak of 1,290. Since then numbers have been decreasing.

CORMORANT

In 1959, there were 44 AON. The next few years saw increases until they reached 283 AON in 1971. The next few years saw breeding numbers decrease before another steady rise until 1997

when they reached their peak of 371 AON. Since then, numbers have been reducing.

SHAG

Breeding numbers went from 45 AON in 1959 to 1,318 in 1992. That winter there were huge losses and in 1993 there were only 359 AON. The following years saw a recovery until 2004 (942 AON). Then there was another, smaller, crash and there has been some recovery since.

GANNET

This species is counted roughly every ten years. In 1969 there were 8,977 AON. There have been steady increases each year resulting in the most recent count of 48,000 pairs in 2004.

KITTIWAKE

In 1959 there were just over 400 nests counted. Numbers increased until the late 1980s/early 1990s when this species reached its peak of around 2,300 AON.

TERNs

In the past there were four species of terns breeding in the Forth: up to 750 pairs of common terns, (1974-75), 900 pairs of arctic terns (May Isle, 2001), 450 pairs of roseate terns (1962) and 1,100 pairs of sandwich terns (1962). Sadly, it is only the arctic and common terns that remain, but in smaller numbers.

AUKS

In 1959 there were only two razorbill sites recorded. Breeding numbers steadily increased to 470 AOS (2000) and have fallen slightly in the last couple of years.

Guillemot numbers have followed a similar pattern – around 200 AOS in 1959 and a peak of 28,000 in 2001.

Puffin numbers peaked at 69,300 AOB in 2003.

Table 1: Summary of seabird counts for the Forth Islands, 2009

2009	Bass Rock	Craig-leith	Lamb	Fdra	Inch-keith	Carr Craig	Inch-colm	Hay-stack	Inch-mickery	Inch-garvie	Long Craig	May Isle	Total
Fulmar AOS	c44	147	14	204	247	0	180	0	30	235		358	1,459
Cormorant AON	0	50	52	0	75	92	0	0	0	0		0	269
Shag AON	c15	200	75	159	162	20	6	0	54	0		468 (SNH)/ 521 (CEH)	1,159
Gannet AON	x	0	0	0	0	0	0	0	0	0		0	x
Eider AON	12	204	x	70-100+	x	1	155	0	51	84	9+	x	586+
Great B-b Gull AON	x	21	3	2	5	1	0	1	1	1		38	73+
Lesser B-b Gull AON	x	x	x	x	x	c5	c2600	6	289	c16		x	2627+
Herring Gull AON	x	x	x	x	x	c50	c650	8	205	259		x	967+
Kittiwake AON	425	594	82	237	344	0	92	0	0	0		2,316	4,090
Common Tern AON	0	0	0	0	0	0	0	0	0	0	122	89	211
Arctic Tern AON	0	0	0	0	0	0	0	0	0	0		316	316
Roseate Tern AON													2
Sandwich Tern AON	0	0	0	0	0	0	0	0	0	0		0	0
Razorbill AOS	c70	117	70	127	54	0	4	0	0	0		2400 (3008 b)	2,842
Guillemot (birds on cliffs)	c2550	c1800	c2200	524	49	0	0	0	0	0		16888 (14143 prs)	24,011
Puffin	a few?	c4500 AOB	x	c800 AOB	1157 b on sea	0	0?	0	11 b	0		45,000 AOB	50,000+ AOB

AOS=Apparently occupied sites, AOB=occupied burrows; x=birds present but not counted; 0=none breeding; c=circa; mixed=two species (eg Herring and LBB Gulls) counted together; b=birds; s=sites

CHRONOLOGICAL LIST OF VISITS AND SIGHTINGS

CRAIGLEITH – 15 March 2009

Bill Bruce

Mallard nest containing 9 eggs.
Wren
Greylag Geese – 2
Fulmar, Razorbill, Cormorant all present
Good numbers on LBB and Herring Gulls
A few GBB Gulls

CRAIGLEITH – 21 March 2009

Bill Bruce

Wren
Greylag Geese – 2
Robin singing
Puffin present
Shag present
Gulls, Fulmar, Razorbill, Cormorant as 15th

Fidra – 22 March 2009

John Hunt

Mallard nest containing 10 eggs

Craigleith – 5 May 2009

Martin Moss

Wren 3+ pairs / territories
Pied Wagtail 1 male (presumably a territory with a female on eggs somewhere)
Grey Lag Goose 2 separate broods (of 2 goslings and 1 gosling) + 6 adults
Mallard 2 males
Rock Pipit 2+ pairs
Linnet 2 in main gully (Area 1)
Peregrine 2 at east end
Swallow flying past NW (when in northern area).

Shag X23 blue digits on white darvic

Craigleith – 5–6 May 2009

Rene van der Wal (additional to above sightings)

Chiffchaff 5th May, singing in the Glen
Blackbird – 1 territory
Linnet – 1 territory
Dunnock – 1 territory
Rabbit - droppings gathered for diet analysis, some obviously from young rabbits

BASS ROCK – 30 May 2009

Seen during main seabird count

Peregrine – 2 birds and a chick
SSC reporting a guillemot with a yellow bill during week prior 22 May

CRAIGLEITH – 30 May 2009

Seen during main seabird count

Carrion Crow
Oystercatcher -1 pair
Rock Pipit - 3 pairs
Linnet
Wren - singing
Starling
Peregrine - 2 adults on E cliff but no nest seen
Feral Pigeon
Pied wagtail - 2 birds seen flying towards North Berwick, probably from Craigleith

INCHKEITH – 31 May 2009

Seen during main seabird count

Blackbird – singing
Mallard – 1 duck
Oystercatcher – 15 birds/13 territories
Feral Pigeon – c30
Rock Pipit – 3
Shelduck – 1 pair
Rabbit - 1
Grey Seals – 17+
Dolphins - pod of 4, probably white-beaked dolphins, seen off Granton on outward journey
Manx Shearwater - 16 seen from boat while returning to Granton
Garden Tiger Moth
Butterflies: Small White; Large White; Painted Lady; Green-veined White; Tortoiseshell

INCHGARVIE – 2 June 2009

Seen during main seabird count

Rock Pigeon - 10+
Common Tern - 2 overhead
Large White butterfly
Small White butterfly
"Many" Garden Tiger Moth caterpillars

HAYSTACK – 2 June 2009**Seen during main seabird count**

Grey Seal - 4 present

Long Craig tidal rocks - Dalgety Bay
Grey Seal - c.15 ashore

CARR CRAIG – 2 June 2009**Seen during main seabird count**

Oyster Catcher - 1 pr present. Nest not found
Eider - One nest
Pied Wagtail - 1 bird seen.

INCHCOLM – 2 June 2009**Seen during main seabird count**

Oyster Catcher - 5+ territories. Three nests found
Puffin - none seen
Eider - east part of island 36
Mallard - duck flushed from nest with 3 eggs
Chaffinch - 1-2 birds
Swallow - 3-4 birds seen. Three nests in toilet block recess.
Linnet - several pairs
Blackbird - singing
Wren - singing
Wood Pigeon. Nest x 2 eggs on east side
Painted Lady Butterfly - several seen

Manx Shearwater - 12 seen flying east off the Fife coast approx half-way between Inchcolm and North Queensferry.

FIDRA – 13 June 2009**Seen during main seabird count**

Oystercatcher - 2 territories
Peregrine - 2 adults + 3 juveniles
Gannet - 1 [single bird]
Dunnock - 1
Pied Wagtail - 1 pair
Pigeon (feral) - 1
Rock Pipit - 1 pair
Wren - 1
Painted Lady butterfly - 1

Leith Docks – 12 June 2009**Alan Leitch**

732 Common Tern nests

FIDRA – 15th August 2009

Dunnock nest containing 2 eggs found in tree mallow, by one of the SOS Puffin volunteers.

INCHKEITH – 15th November 2009**Seen during seal count**

Robin
Rock Pigeon
Peregrine – 2 (mobbed by GBB Gulls)
Goldfinch – 25
Rock Pipit – 2
Shag – 3
Linnet – 3 flocks, c.35, c.35 and 25
Meadow Pipit – 6
Wren
Blackbird
Rabbit
House Mouse

INCHCOLM – 15TH November 2009**Seen during seal count**

Blackbird – several
Wren
Black Rat – one dead near harbour

CARR CRAIG – 15th November 2009

Shag – 16

INCHKEITH – 21st November 2009

Blackbird – plentiful
Kestrel – 1
Common Buzzard – 1
Woodcock – 1
Meadow Pipit – several
Wren - several

INCHKEITH – 6th December 2009**Seen during seal count**

Red Breasted Merganser – 2
Goosander – 3-4 on water near harbour
Oyster Catcher – 12
Sparrowhawk – 1
Linnet – c.50 with some Goldfinches
Eider – plentiful around the coast. Not counted.
Rock Pipit – 1
Great Black-Backed Gull – 2
Kestrel – 1
Cormorant – 1
Blackbird – 2+

Grey Heron – 1
Merlin – 1
Peregrine – 1
Wren – several
Robin – 2
Rabbit - 2

FSG FOOTNOTES

Reports and monitoring figures for previous years can be found on the group's website:

www.forthseabirdgroup.org.uk

DATES FOR MAIN ISLAND COUNTS

Bass Rock	30 May 2009
Craigleith	Puffin/Eider count 5 May 2009 Seabird count 30 May 2009
The Lamb	13 June 2009
Fidra	Puffin/Eider count 6 May 2009 Seabird count 13 June 2009
Eyebroughty	
Inchkeith	31 May 2009
Carr Craig	2 June 2009
Haystack	2 June 2009
Inchcolm	2 June 2009
Inchmickery	
Inchgarvie	2 June 2009
Forth Rail Bridge	
Long Craig	
Isle of May	late May to June

Bass Rock was counted from boat; Craigleith, Lamb, Fidra and Inchgarvie were counted partly from boat and remainder after landing; all other islands were counted from ashore.

OTHER NEWS

On an SOS Puffin visit to Craigleith on 17 October 2009, volunteer Keith Knight found a specimen of the rare Beaked Earthstar (*Gastrum pectinatum*) on the west side of the island.

Tree Mallow Project – SOS Puffin

For further information about this project go to the website at www.abdn.ac.uk/treemallow

LIST OF COUNTERS & CONTRIBUTORS

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JNCC Seabird Monitoring Programme.

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Appendix 1

INCHCOLM GULL AND EIDER SURVEY – 19th - 20th May 2009

The herring gull first started to breed at Inchcolm round about 1950 when at least one pair bred. Numbers remained low for many years until the 1970's when they increased substantially.

The lesser black-backed gull colonised the island during the early 1970's with less than ten pairs breeding in 1973. Like the herring gull this species increased considerably. Colonies of these large gulls now cover most of the island during the breeding season except for the central part surrounding the abbey. As Inchcolm is an island of historic importance on account of its famous abbey and is also a major tourist attraction, Historic Scotland carry out limited control of nesting gulls in the vicinity of footpaths and picnic areas in the interests of public health and safety. Were it not for these control measures the gull colonies would no doubt soon spread over the remainder of the island.

In recent times numbers of herring gulls have declined and appear to have been replaced by an increasing population of lesser black-backed gulls.

The island's gull populations were surveyed during 1987 and 1994 by the Nature Conservancy Council (Scottish Natural Heritage) using sophisticated methods to count the number of nests present and calculating the proportion of each species. These surveys involved considerable planning and a highly disciplined approach which was labour intensive.

It had been hoped that such exercises would be repeated every five years or so, but due to the logistics involved in planning such surveys this has not been possible. However, an aerial survey was carried out in 2002 by John Davies, Alan Leitch and John Calladine (organiser of the 1994 survey), with numbers of breeding pairs of both species assessed from photographs taken. The results of all previous counts for both species are listed in the below table.

	1969	1987	1994	2002	2009
Herring Gull	5	1040	1615	621	*651 (639-663)
Lesser Black-backed Gull	0	730	1669	1221	*2607 (2558-2654)

* 10% error factor applied. Figures in brackets = 8-12% error factor range.

Aerial surveys pose their own problems in organising, so alternative options were sought.

Ron Morris carried out a feasibility study at Inchcolm on 8th April 2009 to see whether the colonies of herring and lesser black-backed gulls could be satisfactorily assessed by simpler methods using a boat circling the island; from high vantage points on the island and from some ground counts of nests. Although the colonies were still at an early stage in the season with some nests under construction but no evidence of egg-laying, the indications were that such a survey would have an acceptable measure of success.

Ron Morris along with SSPCA staff members Colin Seddon and Nadia Al-Dujaili conducted a survey using these aforesaid methods during over the period 19th-20th May 2009. They were joined for part of the survey by Chris Rayner who was visiting the island to see its wartime fortifications.

Historically Inchcolm became two islands at high tide, which were conjoined at low tide by a low narrow isthmus. However, during the earlier part of the 20th century a low wall was built along the south side of this isthmus to permanently link the two island portions and allowed two small sandy bays to form, one on either side of it.

In preparation for this exercise Inchcolm was divided into fifteen sections for the purpose of disciplining the counts. These sections were basically sub-sections falling within five large sections used to divide the island in former counts. The smaller, eastern portion of Inchcolm was divided by five of these subsections, designated East 1-5 and the larger western part was divided by ten sub-sections designated West 1-10.

The earlier feasibility study had revealed that seven areas facing directly seaward could be counted from a slow moving boat in favourable weather conditions. These areas were East 1, 2 and 5, and West 2, 3, 4 and 8. A further six areas could be counted from high vantage points on the island, i.e. East 3 and West 1, 6, 7, 9 and 10. The remaining areas, East 4 and West 5 being the respective summits on the island's two portions would require to be caned off and ground counts made of the nests.

Birds which were apparently nesting or were occupying possible/probable breeding territory were counted. Pairs of birds were counted as one. Due to numbers participating and time, no attempt was made to assess numbers of birds loafing. Nonetheless, a substantial number of both species were seen to do this on the fringes of their main nesting areas, i.e. rocks, cliffs and beaches for herring gulls and inland vegetated areas for lesser black-backed gulls.

The day was generally overcast with a slight breeze which did not have a detrimental effect on the main counts. The boat sailed round the island twice. On the first circuit R. Morris counted the overall numbers of gulls in each section, whilst Nadia counted herring gulls and Colin lesser black-backed gulls in order to determine proportions for the two species. On the second circuit Colin took photographs of the areas counted whilst Ron and Nadia did unrelated experimental counts of fulmar.

The counts from the island's vantage points followed the same system as that operated from the boat.

During the two ground counts eider nests were also counted, although their numbers in these areas were very small. This was to negate further disturbance to these areas during the following day's count of eider nests. The boundary canes were left in situ to demark the areas.

A sizeable control area within West 1 at the island's south bay was also marked out. This was counted from a high vantage point. This area was chosen because it contained a variety of nesting habitat for both species along with a number of obstructions such as elder bushes, rocks, depressions and tall vegetation, etc, which represented much of the ground covered by the gull colonies and would deliver an error factor through a ground count from which to work on.

Originally it was planned to have a second control area which offered greater conspicuity of the nesting gulls from which a percentage average could be calculated. However, due to numbers participating and time allowed, the idea of a second control area was abandoned and the original control area was reduced in size by about 40%, although it remained a substantial area. In any case a heavy shower of rain started just after the control area was caned off, calling a halt to the day's proceedings.

The following day Chris Rodger (RSPB) and Bobby Anderson (East Lothian Council Countryside Ranger) joined the party returning to the island to count eider nests. Although eider are reported to have bred at Inchcolm in 1772 and no doubt did so at other times, there appear to be no up to date records of them breeding until 1959. Since then the island has become an important breeding site for the species although their numbers have only been properly assessed by virtue of the joint gull counts which took place during 1987 and 1994.

The first duty of the day was to count both gull and eider nests in the control area. This completed the gull counting exercise and began the eider one. The previous day's vantage point count of gulls in the control area was 163 breeding pairs. However, the ground count revealed 186 nests, a difference of 23, or an error factor of about 12%.

Whilst this factor could be applied over other similar parts, there were nevertheless substantial areas where the breeding areas were more open and the birds more conspicuous. Also the two areas where actual ground counts were necessary must be taken into account. In view of these factors it is likely an overall error factor of between 8-10% is more realistic for a count on the day. Nevertheless, considering the fact that a small but not insignificant number of both species will nest between the date of the count and early June it is not unreasonable to apply the 12% figure to arrive at a general estimate for the season. In view of the foregoing, estimates of numbers have been calculated by including an error band width of 8-12%.

An assessment of the counts revealed 80% lesser black-backed gulls compared to 20% herring gulls. These results were borne out by general observations of the colonies. Although the overall gull numbers at the

island is similar to that of 1994 (3284) this represents a large reduction in herring gull numbers and a large increase in lesser black-backed gulls, 1615 herring gull (49%) and 1669 lesser black-backed gull (51%).

Due to time and limited numbers only the western part of Inchcolm was covered for the eider count. This took the form of disciplined sweeps where the participants formed a line slowly progressing through caned off lanes until the whole of the western part had been covered. The nests of any flushed birds were covered over by the down lining.

This left the circumference of Inchcolm's eastern part un-surveyed (the summit had been covered during the gull count on 19th May). Discussions at this point raised the possibility of considering Inchcolm to be two islands and to survey the eastern part for eider nests in 2010, however it was later decided to carry out a survey of the west and south sides and a the lower slopes of the steep, densely vegetated eastern face of the east side during the main seabird counts which were to take place on the island on Tuesday 2nd June.

Chris Rodger, John Davies, Nadia Al-Dujaili, Colin Seddon, John Hunt, Kevin Ingleby and Ron Morris took part in this exercise. Although part of the eastern face was unsurveyed (upper slopes) it is believed few eider would have been nesting in this area. Results for the eider survey are listed below along with previous counts for comparison.

	1959	1987	1994	2009
Eider	2	128	258	155 *

*116 west side, 39 east side.

Although it is difficult to make true comparisons between the various gull counts where different methods have been used and where they have been undertaken years apart, there are nevertheless some interesting observations arising from this year's surveys.

In 1994 a total of 3284 gull nests were counted. The estimate for 2009 (10% error factor applied) is 3258.

In 1994 the percentage of lesser black-backed gulls was 51%. This had increased to 80% i.e. from 1669 pairs to 2607 pairs. Correspondingly the herring gull proportion had declined from 49% to 20% i.e. 1615 pairs to 651 pairs.

The 2002 aerial count of herring gull pairs was 621 which compares with the 2009 estimate of 651 pairs. However, the 2002 figure for lesser black-backed gulls was 1221 pairs which is less than half the 2009 estimate of 2607. Although there are other factors which could explain this difference, including fluctuation in numbers, it is possible that the herring gulls which tend to nest on the beaches, cliff tops, rocky outcrops and more open areas as well as being lighter in colour are far more conspicuous for an aerial survey, whereas the lesser black-backed gulls which to a great extent nest in well vegetated areas may be somewhat less obvious?

The peak time for carrying out gull surveys is considered to be about the third week in May, just as the first eggs are hatching. However, on Inchcolm and no doubt Inchkeith, the vegetation is already too high by this time and not only conceals many nesting birds in the lushest areas, it also makes ground counts much more taxing.

R. Morris

(June 2009)

Dramatic decline in numbers of Atlantic Puffins in the Firth of Forth

It comes as something of a surprise to many people to learn that at the start of this millennium there were more puffins breeding on the North Sea coasts of Scotland and north-east England than at the famous seabird island of St Kilda.

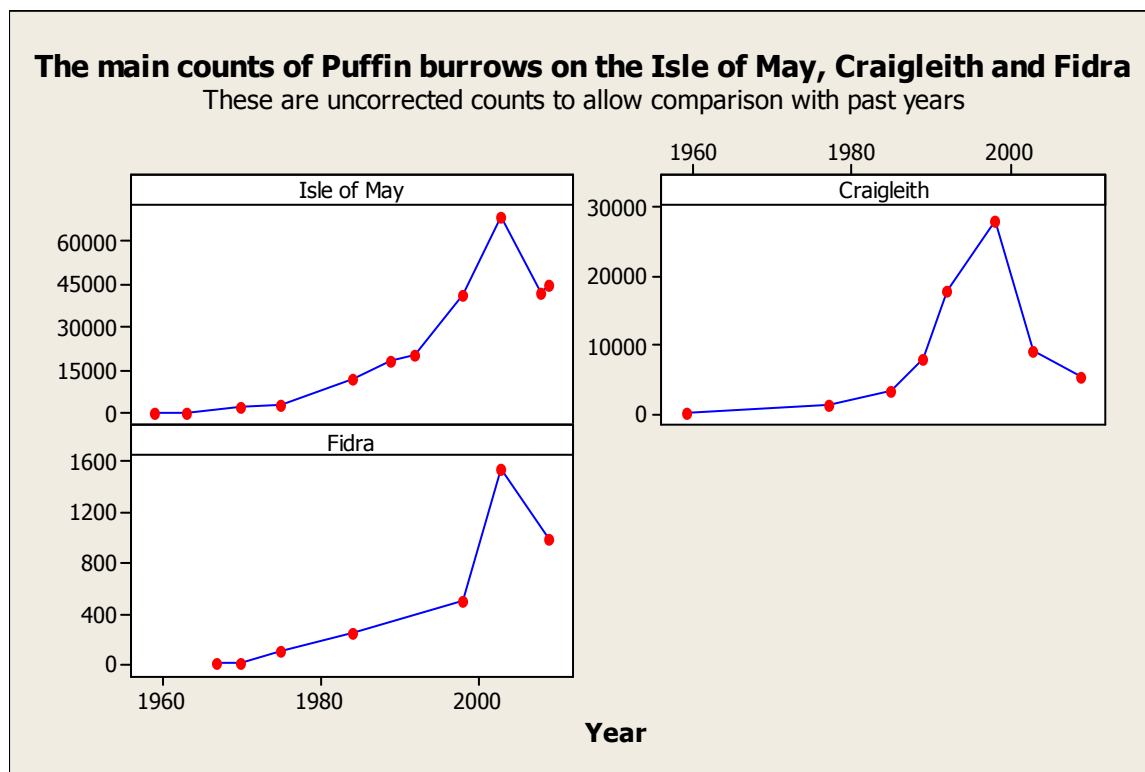
The last survey of the Puffin colonies of the Firth of Forth Special Protection Area, made in 2003 by Centre for Ecology and Hydrology (CEH) staff under contract to Scottish Natural Heritage (SNH) found 69,300 occupied burrows on the Isle of May National Nature Reserve (making it the largest single colony in Britain), 12,100 on Craigleith and 1500 on Fidra. In 2008 a count of randomly selected parts of the Isle of May that had held about half the burrows in 2003 found that numbers had declined to 42,300 occupied burrows. This was totally unexpected since up to 2003 the population had been increasing at 11% per annum and we anticipated there being at least 100,000 occupied burrows. A count of burrows on the Farne Islands made by the National Trust in 2008 also showed a decline of the same order of magnitude, suggesting that the problem was serious and not just confined to the Isle of May. Clearly, checking other islands in the Firth of Forth was a high priority and a count was scheduled for 2009

Nesting underground, Puffins are difficult to census and the usual method is to count burrows. A widely used counting unit is the 'apparently occupied burrow', defined as a burrow showing signs of use by Puffins, i.e. fresh digging, droppings or other signs that birds have been going in and out. In many colonies there is potential for confusion between a rabbit and a Puffin burrow but the former tends to be much larger, to have much more substantial diggings and characteristic droppings in the entrance. The rabbit population on the Isle of May crashed due to myxomatosis during the 2007-8 winter, Craigleith has few rabbits and Fidra none so this was not a serious problem during the current count. Counts in southeast Scotland are best made in late April or early May by when all Puffins should have returned to their burrows and most will have eggs but before the vegetation has grown up.

A team of people walks across the colony each searching a strip about 5 m wide by zig-zagging slowly along it. Where there is potential for overlooking burrows or double-counting them, either a cane is used to mark the earth in the entrance of each burrow as it is counted or the counter points to a burrow and says 'mine' to the neighbouring counter. The boundaries of each transect are marked with bamboo canes. Small sections of the colony are delimited with string and the burrows counted separately. Immediately after the count someone who has not taken part in the count make a detailed examination of each possible burrow to check for burrows which belonged to a rabbit rather than a Puffin, entrances which were not true burrows (e.g. were very short), cases where there were two entrances to a single burrow (i.e. the burrow had been counted twice) and Puffin burrows which had been overlooked (i.e. were unmarked). Double-occupancy of a burrow, where two pairs use a single entrance, is extremely rare and the possibility of this is discounted. These calibration counts, that usually show that the actual counts are over-estimates, are later used to correct the actual counts for that part of the colony. All this is time consuming with the result that counts are made only irregularly. Given unlimited time it is possible to check a sample of burrows every few days to assess how many burrows actually have eggs laid but this risks birds deserting burrows. Therefore changes in numbers are almost always based on counts of active burrows.

Counts of the parts of the Isle of May not counted in 2008 (and some repeat counts) were made between 1st and 3rd May by members of CEH (6) and SNH (2), and Craigleith and Fidra were counted on 6th and 7th May by members of the Forth Seabird Group and Craigleith Management Group volunteers (13 on Craigleith and 7 on Fidra) In all the count took about 40 hard person-days, and we thank all those who took part and also the Scottish Seabird Centre for getting us on and off Craigleith and Fidra! Tallying up all the counts indicated that the Isle of May had 45,000 occupied burrows (count 56,867), Craigleith 4500 (5363 counted made up to 5959 to allow for 10% of area not counted due to nesting cormorants) and Fidra 800 (count 987). There were also maybe a couple of hundred burrows in a steep part of Craigleith that has never been counted. Counts such as these are too imprecise to detect annual changes in numbers with any

certainty. However, in 2009 counts of parts of the Isle of May censused in 2008 were slightly up and this suggested no serious decline in numbers between 2008 and 2009.



Although counts such as these are of unknown accuracy, it is obvious that there has been a dramatic decline in numbers at these three Firth of Forth colonies since the last count in 2003. The reduction in numbers on Craigleith between 1998 and 2003 was probably a separate process and due to the spread of tree mallow on that island, leading to the current control programme. The survival of breeding Puffins on the Isle of May has been monitored since the early 1970s. Usually it is high and the bulk of adults alive one year are seen again the next. Return rates over the winters of 2006-7 and 2007-8 were very low, suggesting a marked increase in the over-winter mortality of breeding adults. Relatively little is known of where Puffins from the Forth go during the winter or what they eat. Research effort is now being put into filling these gaps as a necessary step to determine what environmental changes might have been responsible for the recent declines in numbers.

Mike Harris and Mark Newell, Centre for Ecology and Hydrology
 Alan Leitch and Bill Bruce, Forth Seabird Group
 John Hunt, Craigleith Management Group

Tables of Puffin burrow counts and correction factors

Craigleith

Section	Total count	Field Count	Corrected Count	Correction Factor	Count Team
1	683	21 (A)	21	1.00	1
2	1470	24 (F)	20	0.83	1
3	480	16 (C)	12	0.75	1
4	1371	58 (E)	28	0.48	2
5	40				1
6	1006	38 (D)	28	0.74	2
7	257	[8] (B)	[3]	[0.38]	2
8	56				1
Mean (ignoring section 7)				0.76	

Team 1 2729
 Team 2 2634
 Total uncorrected 5363

Fidra

Area	Field Count	Corrected Count	Correction Factor
Below Lighthouse	50	46	0.92
Below Garden north	24	15	0.63
Below Garden south	26	23	0.88
Mean			0.81

Total count main island 701
 Castle Tarbet 286
 Total uncorrected 987

Appendix 3

FORTH GREY SEAL PUP SURVEY – 2009

This survey concerns itself with the islands in the Firth of Forth, other than Isle of May, with regards to their usage by the Atlantic Grey Seal for the purposes of pupping. Inchkeith and Craigleith have established colonies, whereas the remaining islands and rocks only have occasional or insignificant use.

INCHKEITH

Two land counts took place at Inchkeith on Sunday 15th November and Sunday 6th December respectively with the below tables compiled in respect of each visit. A total of 232 pups were counted on the former date, including four dead pups, whilst a total of 188 pups were counted on the latter date including 76 “whites” of which four were dead. There were also four dead “moults” on that date, one of which had been virtually decapitated by a boat’s propeller before being washed ashore.

This year’s total number of pups born at Inchkeith is estimated at 308, calculated by adding the figure of 76 “whites” from the second visit, to the overall total of 232 pups from the first visit.

The overall figure for pups born during 2008 was 197. An extra 111 pups were born during 2009, representing a 56.3% increase over the previous year. Clearly this is not attributable to a natural increase from the colony alone and must be due to factors occurring elsewhere? It is believed the nature and location of Inchkeith does not render its seal colonies as vulnerable to winter storms as occurs at other locations and this may be a factor involved in the immigration ?

The 12 dead pups out of a total figure of 308 represents a mortality rate of 3.89% which is exceptionally good.

In order to simplify recording of seal numbers it has been decided to divide the island up into 7 distinct areas; viz,

- Area 1 = The whole of the island’s west side including the harbour and the offshore rocks, Seal Carr and Iron Craig.
- Area 2 = The two north bays, (Kinghorn Harbour)
- Area 3 = Kirkcaldy Harbour (NE of island)
- Area 4 = Lighthouse Bay. Located on the east side directly below the lighthouse. This area begins/includes a short rocky gully lying between Kirkcaldy Harbour and the actual Lighthouse Bay.
- Area 5 = Centre Bay. Located on the east side and begins /includes a lengthy gully lying between Lighthouse Bay and Centre Bay.
- Area 6 = South Bay. Located on the east side and begins after the south end of Centre Bay.
- Area 7 = South Point. This begins at the island’s south-east after South Bay and includes the offshore rock, Long Craig which can be reached at low tide.

Table 1. INCHKEITH 15th November 2009

	Bulls	Cows	Pups	Pups (dead)	Pups total
Area 1	0	11	2	0	2
Area 2	5	51	39	1	40
Area 3	3	29	39	2	41
Area 4	4	44	54	1	55
Area 5	3	32+	47	0	47
Area 6	2	13	24	0	24
Area 7	1	20	23 (1 moult)	0	23
Totals	18	200+	228	4	232

Table 2. INCHKEITH 6th December 2009

	Bulls	Cows	Pups (white)	Pups (moult)	Pups Dead	Pups total
Area 1	3	15	3	4	2 (1 moult)	9
Area 2	2	6	15	27	4 (1 moult)	46
Area 3	1	5	10	13	0	23
Area 4	4	5	20	26	1 (1 moult)	47
Area 5	3	8	15	24	0	39
Area 6	1	0	2	5	0	7
Area 7	1	3	7	9	1 (1 moult)	17
Totals	15	42	72	108	8 (4 whites, 4 moults)	188

INCHCOLM - 15th November 2009

South Bay – One bull, one cow and one “white” pup. One “moult” on NW harbour.

CARR CRAIG - 15th November 2009

Two cows. No pups evident.

HAYSTACK - Not surveyed

INCHMICKERY - 15th November 2009

Two bulls, four cows and one “white” pup.

CRAIGLEITH

Maggie Sheddan conducted surveys on 15th and 28th November respectively. On the former date she assessed that a minimum of 26 pups had been born to date, with five of these being dead (two washed off the island). Three of the pups were in various stages of moulting. There were 21 cows present ashore and in the sea, along with three bulls.

On the latter date there were 10 “whites” including one new dead one and one newly born individual, 12 “moults,” c.10 cows and 2 bulls. Only 3 of the pups were completely white. As there were only 13 days between the two visits it has been roughly estimated that about 4 pups (including the dead one) were born during the interim. This gives an estimate of c.30 pups for the season’s total.

BASS ROCK, The LAMB, FIDRA and EYEBROUGHTY

No reports of any pups from any of these islands although it is likely two or three would have been born at the Bass (in the cave?). An occasional pup is born at Eyebroughty. To date no pups have ever been reported from The Lamb or Fidra. M. Sheddan received reports of individual pups at Tynningame and Yellow Craig beaches, as well as of a cow dying in labour at Musselburgh beach.

R. Morris

Appendix 4

Season's Overview Isle of May NNR, October 2009

Productivity was up for most species (CEH), fulmar and shag populations were up.

Populations brief overview:

Fulmar up 22%

Shag up 9%

Kittiwake down 31%

Guillimot (pair) down 6%

Razorbill (pair) down 7%

Tern numbers were down and productivity was poor.

Fulmar (AOS) 358

Shag (AON) 468

Eider (AON) not counted

Great B-b Gull 38 AON

Lesser B-b Gull not counted

Herring Gull not counted

Kittiwake 2316 AON

Common Tern 89 AON

Arctic Tern 316 AON

Sandwich Tern 0

Razorbill 3,008 individuals and 2,400 pairs

Guillemot 16,888 individuals and 14, 143 pairs

Puffin 45,000 AOB

Cetations

Records kept. Very quiet year.

Invertebrates

Butterfly and moth census daily. Again new species for the island. 11 new moths.

Seals

First pup on the 21st Oct.

Therese Alampo

Appendix 5

Seabird Ringing 2009 Report

This year's seabird ringing season on the Firth of Forth islands was a little better than the previous two years (2007 & 2008), although wet and windy weather again postponed or cancelled a few trips. Nearly 900 birds were ringed, retrapped or controlled during the year. Individually colour-ringing Cormorants and Shags this year gave significant numbers of resightings showing the worth of these two projects.

Seabird Ringing Totals 2009

	Full	Pulli	Retraps/ Recoveries	Total
Fulmar	1	174	0	175
Cormorant	0	36	17	53
Shag	59	283	24	366
Kittiwake	23	138	15	176
Common Tern	3	75	1	79
Razorbill	6	22	1	29
Puffin	4	8	0	12
Total:	96	736	58	890

The Cormorants on Craigeith and Inchkeith still nest at sites difficult to access safely for ringing other than a few chicks. So we, or rather I and members of the Forth Seabird Group, successfully ringed chicks at the colony on Car Craig, near Inchcolm whilst counting it. We have had 16 resightings of 8 individual birds from Aberdeenshire to Ayrshire during the year, showing the worth of this individual colour-ringing project organized by Raymond Duncan and the Grampian Ringing Group.

The Isle of May have been individually colour-ringing Shags for a number of years now. As part of a Ph.D. study to investigate inter-colony movements and breeding within the Firth of Forth, we helped Francis Daunt and Emily Barlow (CEH, Edinburgh) to colour ring Shags on Inchmickery and Fidra, as well as Craigeith. This is the first time the Lothian RG (or the Edinburgh RG) have ringed on these two RSPB island reserves. There have been numerous resightings of birds up and down the East coast of Scotland and the Northeast coast of England, as well as in the Firth of Forth.

We had a couple of trips to Inchkeith to ring Kittiwakes as part of our continuing RAS study. Despite Martin Moss's excellent efforts at snaring adults, we are on the borderline for the number of retraps for a continuing RAS. More time and effort required in 2010!

We failed again, due to the weather, to get out to Craigeith at the right time to ring Puffins. Even though the number of breeding pairs has dropped dramatically due to the spread of Tree Mallow, ringing Puffins again would contribute to the monitoring of the population and the success of the Tree Mallow clearing programme.

For the first time ever (?) we missed out on Fulmars on Inchkeith (What a shame!), but increased numbers on Inchgarvie made up for this.

As usual, we ringed Common Tern chicks at Leith Docks whilst we counted the colony. With the help of Bob Furness and Gemma Jennings (University of Glasgow), we also caught 4 adult terns including a control from Teesport. Gemma is studying the ecology of the colony for her Ph.D.

Acknowledgements

Many thanks to the Lothian and Tay Ringing Group members and the others who helped ring seabirds this year, particularly the "old" stalwarts Martin Moss, Alan Leitch and Alan Heavisides. Many thanks also to our boatman: Dougie Ferguson (North Berwick), Bill Simpson (Granton), Forth Pilots and Port Edgar Marina. And finally, thanks to the island owners: Sir Tom Farmer (Inchkeith), Sir Hew Hamilton-

Dalrymple (Craigleith), Moray Estates (Car Craig), RSPB (Inchmickery & Fidra) and Sir Jack Stewart-Clark (Inchgarvie).

John C. Davies

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Terns at Leith Docks

The Leith Docks Common Tern colony was counted on 12/06/2009. There were 732 nests, (2008: 789).

Gemma Jennings, (a University of Glasgow Ph.D. student who studying the ecology of the colony), made an estimate of productivity of 0.6 from a total chick count of 447 later in the season.

While counting the colony we ringed 75 chicks. In 2009 we had 2 recoveries from West Africa of chicks ringed in previous years. We also caught 4 adults at the colony, one previously ringed at Teesport.

Alan Leitch

Recovery and Sightings of Ringed Birds

Fulmar

Ring No: FC84833

Ringed: 02/08/1997 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Re-trapped: 28/07/2009 At sea: 54°42'N 4°54'E (At Sea, North Sea), North Sea, 528km ESE. Caught and released by ringer. 11 yrs 360days

Ring No: FP07571

Ringed: 01/08/1998 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Re-trapped 09/04/2008 Inchmickery, Firth of Forth: 56°0'N 3°17'W (NT2080) (Edinburgh) 9km W. Caught and released by ringer. 9 yrs 252 days

Cormorant

Ring No: 5171700

Ringed: 17/06/1995 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Found: 02/06/2009 Inchgarvie, Queensferry: 56°0'N 3°24'W (NT1379) (Edinburgh) 17km W. Found dead (not recent). 13 yrs 350 days

Ring No: 5179775

Ringed: 01/06/1996 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Found: 10/05/2009 Lochgelly: 56°8'N 3°20'W (NT1795) (Fife) 18km NW. Found fresh dead. 12 yrs 343days

Ring No: 5226473

Ringed: 10/06/2007 The Lamb, Firth of Forth: 56°4'N 2°45'W (NT5386) (East Lothian)

Found: 21/01/2009 Cameron Reservoir: 56°17'N 2°51'W (NO4711) (Fife) 25km NNW. Shot or intentionally killed by man – fresh. 1 yr 225 days

Ring No: 5226483

Ringed: 10/06/2007 The Lamb, Firth of Forth: 56°4'N 2°45'W (NT5386) (East Lothian)

Found: 20/02/2008 Pusk Farm: 56°22'N 2°55'W (NO4320) (Fife) 35km NNW. Found dead (not recent). 255 days

Ring No: 5245004

Ringed: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Seen: 11/09/2008 Irvine Harbour: 55°36'N 4°42'W (NS3038) (North Ayrshire) 108km WSW. Alive and probably healthy, ring or colour marks read in the field, not by ringer. 90 days

Seen: 19/10/2008 Irvine Harbour: 55°36'N 4°42'W (NS3038) (North Ayrshire) 108km WSW. Alive and probably healthy, ring or colour marks read in the field, not by ringer. 128 days

Ring No: 5245005

Ringed: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Seen: 12/09/2009 Aberdeen Harbour: 57°8'N 2°4'W (NJ9605) (Aberdeen) 140km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 1 yr 91days

Ring No: 5245007

Ringed: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Found: 19/03/2009 River Eden, Pitlessie: 56°16'N 3°5'W (NO3309) (Fife) 28km N. Found dead (not recent). 279 days

Ring No: 5245013
 Ringed: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)
 Seen: 14/09/2008 Roseheart: 57°41'N 2°7'W (NJ9367) (Aberdeenshire) 195km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 93 days
 Seen: 16/11/2008 Cairnbulg: 57°40'N 3°38'W (NJ0365) (Moray) 186km N. Alive and probably healthy, ring or colour marks read in the field, not by ringer. 156 days

Ring No: 5245017
 Ringed: 30/05/2009 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Seen: 12/12/2009 Peterhead: 57°30'N 1°47'W (NK1346) (Aberdeenshire) 169km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 196 days

Ring No: 5245030
 Ringed: 02/06/2009 Car Craig, Firth of Forth: 56°2'N 3°18'W (NT1983) (Fife)
 Seen: regularly between 11/09/2009 and 19/12/2009 Ythan Estuary: 57°18'N 2°0'W (NK0024) (Aberdeenshire) 162km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 200 days

Ring No: 5245033
 Ringed: 02/06/2009 Car Craig, Firth of Forth: 56°2'N 3°18'W (NT1983) (Fife)
 Seen: 16/08/2009 Ythan Estuary: 57°18'N 2°0'W (NK0024) (Aberdeenshire) 162km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 75 days

Ring No: 5245036
 Ringed: 02/06/2009 Car Craig, Firth of Forth: 56°2'N 3°18'W (NT1983) (Fife)
 Seen: 29/08/2009 Lossiemouth: 57°43'N 3°18'W (NJ2371) (Moray) 187km N. Alive and probably healthy, ring or colour marks read in the field, not by ringer. 88 days

Ring No: 5245043
 Ringed: 02/06/2009 Car Craig, Firth of Forth: 56°2'N 3°18'W (NT1983) (Fife)
 Seen: 27/09/2009 Ythan Estuary: 57°18'N 2°0'W (NK0024) (Aberdeenshire) 162km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 117 days
 Seen: 14/10/2009 Ythan Estuary: 57°19'N 2°0'W (NK0025) (Aberdeenshire) 163km NNE. Alive and probably healthy, ring or colour marks read in the field by a ringer. 134 days

Ring No: 5245048
 Ringed: 02/06/2009 Car Craig, Firth of Forth: 56°2'N 3°18'W (NT1983) (Fife)
 Seen: 15/11/2009 Inverkeithing: 56°1'N 3°24'W (NT1382) (Fife) 6km WSW. Alive and probably healthy, ring or colour marks read in the field by a ringer. 166 days

Shag

Ring No: 1309824
 Ringed: 27/06/1992 Isle of May: 56°11'N 2°34'W (NT6599) (Fife)
 Re-trapped: 14/06/2008 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian) 16km SW. Caught and released by ringer. 15 yrs 353days

Ring No: 1315366
 Ringed: 18/07/1994 Isle of May: 56°11'N 2°34'W (NT6599) (Fife)
 Re-trapped: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 40km WSW. Caught and released by ringer. 13 yrs 331days

Ring No: 1396785
 Ringed: 09/07/2005 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Found: 04/09/2008 The Scar, Saltwick Bay: 54°29'N 0°37'W (NZ9011) (North Yorkshire) 220km. Condition unknown. SE. 3 yrs 57days

Ring No: 1416793
 Ringed: 20/07/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)
 Found: 15/09/2008 Amble Links: 55°20'N 1°34'W (NU2704) (Northumberland) 124km SE. Sick or injured - not known to have been released. 57 days

Ring No: 1416806
 Ringed: 14/06/2008 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Found: 25/12/2008 West Mersea: 51°46'N 0°55'E (TM0112) (Essex) 533km SSE. Found dead. 194 days

Ring No: 1336826
 Ringed: 24/07/1997 Isle of May: 56°11'N 2°34'W (NT6599) (Fife)
 Re-trapped 08/06/2003 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 40km WSW. 5 yrs 319days
 Re-trapped 31/05/2009 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 40km WSW. 11 yrs 311days

Ring No: 1374756
 Ringed: 29/06/2000 Isle of May: 56°11'N 2°34'W (NT6599) (Fife)
 Re-trapped 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 40km WSW. 7 yrs 350days

Ring No: 1378827
 Ringed: 31/05/2003 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Re-trapped 05/06/2009 Isle of May: 56°11'N 2°34'W (NT6599) (Fife) 16km NE. 6 yrs 5days
 Re-trapped 07/06/2009 Isle of May: 56°11'N 2°34'W (NT6599) (Fife) 16km NE. 6 yrs 7days

Ring No: 1380852
 Ringed: 25/06/2001 Isle of May: 56°11'N 2°34'W (NT6599) (Fife)
 Re-trapped 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 40km WSW. 6 yrs 354days

Ring No: 1416207
 Ringed: 13/06/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)
 Found: 08/02/2009 Cambo Ness: 56°17'N 2°39'W (NO6011) (Fife) 42km NE. Found dead. 240 days

Ring No: 1416769
 Ringed: 14/06/2008 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Found: 29/11/2008 West Runton: 52°56'N 1°15'E (TG1842) (Norfolk) 432km SE. Found freshly dead or dying. 168 days

Ring No: 1416827
 Ringed: 14/06/2008 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Found: 30/03/2009 Janet's Craig, Inverallochy: 57°40'N 1°56'W (NK0465) (Aberdeenshire) 184km NNE. Found freshly dead or dying. 289 days

Ring No: 1416843
 Ringed: 31/05/2009 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)
 Found: 22/06/2009 Pettycur Sands: 56°3'N 3°12'W (NT2586) (Fife) 6km NW. Found dead. 22 days

Lesser Black-backed Gull

Ring No: GG42234
 Ringed: 13/07/1986 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)
 Re-trapped 19/09/2009 Isle of May: 56°11'N 2°34'W (NT6599) (Fife) 16km NE. 23 yrs 68days

Kittiwake

Ring No: ET92271

Ringed: 14/06/2001 Dunbar: 56°0'N 2°32'W (NT6779) (East Lothian)

Found: 20/07/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 37km W. Found dead. 7 yrs 36days

Ring No: EL98217

Ringed: 05/07/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife)

Found: 30/01/2009 Bassin D'Arcachon: 44°44'N 1°6'W (Gironde) , France, 1262km S. Found freshly dead or dying. 209 days

Common Tern

Ring No: XR66284

Ringed: 16/06/2008 Leith Docks, Edinburgh: 55°59'N 3°11'W (NT2677) (Edinburgh)

Found: 04/06/2009 Off Dakar: 14°40'N 17°25'W (Senegal) , Senegal, 4753km SSW. Found fresh dead or dying . 353 days

Ring No: SV31546

Ringed: 23/07/1999 Teesport: 54°36'N 1°10'W (NZ5423) (Redcar & Cleveland)

Re-trapped 01/06/2009 Leith Docks, Edinburgh: 55°59'N 3°11'W (NT2677) (Edinburgh) 200km NW. 9 yrs 313days

Ring No: XS30705

Ringed: 30/06/1996 Granton Harbour, Edinburgh: 55°59'N 3°14'W (NT2377) (Edinburgh)

Found: 15/01/2009 18 miles west of Nouadhibou: 20°55'N 17°19'W (At Sea, North Atlantic) , North Atlantic Ocean - At Sea, 4071km SSW. Sick or injured - not known to have been released. 12 yrs 199days

Puffin

Ring No: ER40917

Ringed: 07/07/1990 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)

Found: 08/06/2009 Cramond, Edinburgh: 55°59'N 3°18'W (NT1977) (Edinburgh) 37km WSW. Found dead (not recent). 18 yrs 336days

Ring No: ET34490

Ringed: 26/06/1999 Craigleith, Firth of Forth: 56°4'N 2°43'W (NT5587) (East Lothian)

Found: 20/04/2009 West Barns: 55°59'N 2°34'W (NT6578) (East Lothian) 13km SE. Found freshly dead or dying. 9 yrs 298days

Ring No: EW00274

Ringed: 10/07/2005 Sule Skerry: 59°5'N 4°24'W (HX6224) (Orkney)

Found: 05/07/2008 Inchkeith, Firth of Forth: 56°1'N 3°8'W (NT2982) (Fife) 349km SSE. Found dead (not recent). 2 yrs 361days

Mark Cubitt
Lothian Ringing Group

Long Craig Island 2009

Island Maintenance

Maintenance and clean up visit undertaken on 12th March.

The three tyres laid out the previous year were noted for their absence, these tyre had been positioned on the west side of the island, which receives the full brunt of the winter scouring waves, had been washed away. This year nine car tyres, (with holes in side wall to allow drainage previously drilled), were taken out and positioned and screwed together on the north eastern section of the island. The tyres were secured from a local garage whose help in this aspect is much appreciated.



In an attempt to reduce the growth of Mayweed this year the emergent growth in the central areas of the island were grubbed out and raked over. Nest boxes were checked and several will need to be replaced next year (2010). The nest boxes and hollows were cleaned out and re-freshened with new sand. The rock walls defining the recording areas were reinstated where missing.

The amount of domestic debris on the island was notably down to only six plastic bottles found and removed this year.

As no terns were found to be using the island at the time of the post breeding visit made on the 24th August the growth of Mayweed was grubbed out and cleared with the hope that this will reduce seeding and any future growth.

Breeding Report

Eider

At least nine Eider ducks nested on the island. Although some ducklings were observed during monitoring visits and indicates successful breeding it is difficult to confirm that they were island bred. Several of the nests were noted to contain un-hatched/addled eggs during the later visits to the island.

Common Tern

A much improved year with breeding up to circa 122 pairs an increase of c20 % from 2008.

Long Craig Island	2007	2008	2009
Breeding pairs	139	90-100	122
Clutches	172	163	163
Eggs laid	249	285	218
Eggs Hatched	117	73	177
Eggs Un-hatched	132	170	28
Eggs outcome unknown		43	13
Young Fledged	91	42	152
Young Died	26	31	25

The tyres have proved to be a firm favourite with the nesting Common Terns with all nine being used in addition the immediately adjacent areas also saw an uptake in nesting occupation. Whilst the area where the tyres were used saw only a c20% increase in nesting pairs the more significant aspect has been the improved breeding, with 50+% nests producing young. Whilst it should be noted that this may in some way be attributed to this years good breeding season, the productivity from this area in the past has always been poor at best.

Ringing Report

Three visits to the island were made during the latter part of the breeding season. The first visit to ring Common Tern chicks was made on the 24th July (a chart datum low tide). During this visit 24 Common Tern pulli (SR29609 – 632) were ringed.

A second ringing visit was made on the 7th August. This visit is usually made during the latter half of August but was brought forward because of the early tern breeding season. A further three Common Tern chicks (SR29633 – 635) were ringed with two re-traps of birds ringed during the earlier ringing visit (SR29615 & SR29630). Nine of the previously ringed pulli were found to have died before fledging (ring numbers: SR29610, 611, 613, 617, 618, 619, 622, 624 & 629).

The third island visit was made on the 24th August, this is effectively the post breeding visit primarily made to monitor fledging success of the tern young. This year by this date breeding had completed and the terns had left the island. Terns were still present locally and at this time circa 65 terns were noted across the river on the breakwater at Port Edgar.

Ringing Recoveries

Ring

Number	Type	Age	Date	Details
SR29627	N	1	24/07/09	Long Craig Island, Fife
	C	3	29/08/09	Seal Sands, Teesmouth, Redcar & Cleveland (208 km, SE, 36 days)

Development

The construction of walls to stabilise the tidal scree areas of the island was discussed during the maintenance visit and it is anticipated that some SWT Conservation Team resources will be available next year.

Forth replacement crossing

Monitoring of the Forth natural history in respect of the proposed new Forth Bridge Crossing has continued during the year with consultants continuing with their monitoring of flight paths and breeding activities in the area from the mainland shoreline. It is hoped that in due course that the data relating to tern activities in the area will be made available to the SWT.

Mark Oksien
Reserve Warden/Convenor
2009