

Forth Seabird Group

Forth Islands Bird Report 2006

Compiled by Dave Jones

MARCH 2007

SEABIRD SPECIES SUMMARIES 2006

FULMAR

Complete Forth Islands count of 1551. A welcome increase of 30% on the previous two years, with greatest recoveries at Craigleith (from 62 to 157 AOS), Fidra (from 127 to 176 AOS) and Inchcolm (from 131 to 240 AOS). No island had fewer sites than last year.

CORMORANT

Complete Forth Islands count of 347, a rise of 14% overall but still less than 2003 & 2004. Unusually, this year Carr Craig and Haystack were both occupied.

SHAG

Complete Forth Islands count of at least 1146, recovering up 39% on last year's 825 nests, but still some way to recover the 1,794 of 2003. Greatest recoveries were on Fidra and the Isle of May 72% up in both cases. Losses occurred on Craigleith and Haystack although these totalled only 15 nests.

GANNET

No count made. The most recent count was in 2004 of 48,065 AOS.

EIDER

Incomplete count of 1,080. These were on the same islands as last year when 1,345 nests were counted, suggesting an overall decline in the order of 20%. The greatest change was again on the Isle of May, the largest colony, where numbers fell again by 247 to 823.

GREAT BLACK-BACKED GULL

Complete Forth Islands count of 51 on 8 islands.

LESSER BLACK-BACKED GULL

Incomplete count of 2,066 from 1,583 nests last year. This suggests an increase of c30%. The Isle of May increased again this year by 412 nests. Once again, the substantial colonies on Craigleith, Inchkeith and Inchcolm were not counted.

HERRING GULL

Incomplete count of 4,354, up c20% on last year from 3,624 nests on the same set of islands. The largest increase was on the Isle of May of 757aons.

KITTIWAKE

A complete Forth Islands count of 4,961. Overall a further decrease of 11% after last year's fall. The recent highest was 11,229 in 1997. Numbers increased on the Lamb- (more than doubling to 202), Fidra and Inchcolm.

COMMON TERN

A complete Forth Islands count of 198. This is comparable with last year's 195 nests, with numbers falling on Long Craig but being compensated for by a similar increase on the Isle of May. 35 pulli were ringed on Long Craig.

ARCTIC TERN

Complete Forth Islands count of 515, down 15% on 2005. All of these were on Isle of May. The most recent high was 916 nests in 2001.

ROSEATE TERN

Complete Forth Islands count. Five pairs bred, up from last year's four pairs. Four pairs raised

broods of two. The fifth late breeding pair nested and laid a single egg. This pair arrived between the 3rd and 7th July. They investigated a nest box, which they later occupied. By 26th they had lost interest in the site and the egg was found to be cold on the first ringing visit (28th July). Normally roseate terns lay a clutch of two eggs: if this clutch is lost then a replacement clutch of a single egg may often be laid. It is presumed that this late pair was either a pair displaced from another breeding site or inexperienced birds breeding for the first time. Two other adults were observed at another site on 25th May this year, both birds were seen to be wearing a BTO ring and an RSPB special ring which enabled them to be identified as Forth birds rung in 1997 and 1999 respectively; Ringing: Two visits were made to ring roseate terns under the auspices of the Meta Population Study. Due to the late nesting of the fifth pair and tidal opportunities, only six of the eight chicks were available for ringing.

SANDWICH TERN

Complete Forth Islands count. No Sandwich terns nested this year. In 2001 the Isle of May held 500 nests.

RAZORBILL

Complete Forth Islands count of 3,562, most of which (84%) nested on the Isle of May. Declines occurred on the May, Bass Rock and The Lamb, but small increases were noted on Craigleith, Fidra, Inchkeith and Inchcolm.

GUILLEMOT

Complete Forth Islands count of 28,576 down again on last year by less than 3%. Numbers went down on just the Isle of May and Fidra. Increases were found on the Bass (74%), Craigleith, The Lamb and Inchkeith.

PUFFIN

Incomplete count. 1,148 individuals. Again an insignificant part of the 83,000+ occupied burrows in the Firth of Forth. Birds recorded on Bass, Inchkeith, Inchcolm and Inchmickery. No data from the main colonies.

Table 1: Summary of seabird counts for the Forth Islands, 2006 (x =present but no count, 0 =none breeding).

	<u>Ba</u>	<u>Cr</u>	<u>La</u>	<u>Fi</u>	<u>Eb</u>	<u>Ik</u>	<u>CC</u>	<u>Ic</u>	<u>Hs</u>	<u>Im</u>	<u>Ig/Frb</u>	<u>LC</u>	<u>May</u>	Total
Fulmar (AOS)	58	157	7	176	0	334	0	240	0	41	240	0	298	1551
Cormorant (nests)	0	109	62	0	0	102	25	0	49	0	0	0	0	347
Shag (nests)	36+	118	65	198	0	165	15	6	1	57	0	0	485	1146+
Gannet (nests)	х	0	0	0	0	0	0	0	0	0	0	0	0	х
Eider (nests)	х	х	0	76	0	х	3	х	0	112	60	6	823	1080
Great B-b Gull (nests)	1	17-19	1?	0	0	4	1	0	0	1	1	0	25	>51
Lesser B-b Gull (nests)	4	х	9	162	0	х	3	х	3	135	18+	0	1,732	2066
Herring Gull (nests)	76	х	51	917	0	х	38	х	12	257	152	0	2,851	4354
Kittiwake (nests)	505	444	202	275	0	295	0	73	0	0	0	0	3167	4961
Common Tern (nests)	0	0	0	0	0	0	0	0	0	0	7	92	99	198
Arctic Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	0	515	515
Roseate Tern (nests)														5
Sandwich Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill (pairs/sites)	169	175	62	123	0	53	0	5	0	0	0	0	2975, (3811 ind)	3562
Guillemot (birds on cliffs)	3230	1672+	1745	458	0	27	0	0	0	0	0	0	21,444	28576
Puffin (as stated)	A few	х	х	51	0	1059 on	0	4 on the	0	6 ind	0	0	х	1148
OB = occupied burrows	present			ashore		land		sea		ashore				inds
				nr Light		and sea				28 at sea				
								<u> </u>		sea				

Frb = Forth Rail Bridge

MAIN BREEDING SEABIRDS - ADDITIONAL COUNTS AND COMMENTS

FULMAR

On 6th September, some chicks still at sites on Craigleith, almost fledged.

CORMORANT

30-40 pairs present on 1st May on Haystack. Nine birds roosting on Inchgarvie on 28th May. Three on Inchcolm on 5th October. Present Inchkeith on 2nd and 16th December.

SHAG

One nest with downy chicks on Craigleith on 7th September. Three on Inchcolm on 5th October. Three on Craigleith on 19th November. Present on Inchkeith 2nd December, two there on 16th.

GANNET

About 50 juveniles on the sea north of Inchcolm on 5th October. Several still diving off the east side of Inchkeith on 12th November

EIDER

On Long Craig, six nests by 1st June Young present from end of June. Four broods totalling 18 young on 3rd July. Max. count of eight broods, 21 young on 26th July. A dead male was found washed up on 23rd June.

Three offshore at Inchcolm on 5th October. Present on Inchkeith on 2nd December, and at least four there on 16th.

GREAT BLACK-BACKED GULL

Three pairs, one nest with 3 eggs on Inchkeith on 1st May. Two pairs present on Inchgarvie & one pair on Haystack on the same date. On the main count of Inchgarvie, 28th May, there was one pair with 3 eggs and separate single bird. Also on 28th May was a pair on Carr Craig, the first for this island. One on Inchcolm on 5th October. At least six on Inchkeith on 12th November and 4 on Craigleith on 19th. Three on Inchkeith on 16th December.

LESSER BLACK-BACKED GULL

Two or three fledged juveniles on Inchcolm on 5th October.

HERRING GULL

Six on Inchcolm on 5th October with two or three fledged juveniles. Thirty on Craigleith on 19th November. Present on Inchkeith on 2nd December, a hundred there on 16th.

KITTIWAKE

One bird present on Inchgarvie cliffs on 1st May.

COMMON TERN

Two off Haystack and two birds flying offshore at Inchgarvie on 28th May. On Long Craig, they were late with only four nests by 6th June. At least 92 pairs bred and 152 nests contained at least 145 clutches. A minimum of 68 broods produced, totalling at least 133 young, and of these at least 105 fledged. Many of the failing single/double egg clutches are poorly sited and are later deserted. A single dead adult bird (unringed) found on the 11th August may have been the result of a fight.

Although seven nests were seen on the Jubilee tower at the south side of the Forth Rail Bridge, no terns were present on 10th June, nor two weeks later. On 7th August a mixed group of 185 common and Sandwich terns were on the breakwater at Port Edgar. 118 were present there on the 11th.

SANDWICH TERN

Two off Inchcolm on 1st May and at least three off the west end of Inchcolm on 5th October.

GUILLEMOT

At least three close inshore at Inchcolm on 5th October. Juveniles were present close to Craigleith on 14th October

RAZORBILL

At least three close in shore at Inchcolm on $5^{\rm th}$ October.

PUFFIN

Twenty-six at sea off Inchcolm on 1st May.

SYSTEMATIC LIST OF OTHER BIRD SIGHTINGS (including breeding records)

RED THROATED DIVER

One close offshore on the north side of the Lamb on 19th November.

LITTLE GREBE

One feeding below the northwest cliffs of Inchcolm on 5th October.

GREY HERON

One each on Inchkeith & Inchcolm on 12th November. One in Inchkeith on 2nd and 16th December.

MUTE SWAN

Two flying west close to north side of Inchcolm on 5th October.

GREYLAG GOOSE

Eight past Fidra on 3rd June. Nineteen feeding on grass at the summit of Craigleith on 19th November.

SHELDUCK

One over Inchcolm on $1^{\rm st}$ May, six over the west end on 28th. One on Fidra and four over Inchmickery on $3^{\rm rd}$ June.

MALLARD

A pair, plus one drake over Inchcolm on 1st May. A drake at Leith harbour, Inchkeith on 22nd May and a duck flushed from a possible nest site. Another duck flushed from a nest with seven eggs at East end of Inchcolm on 28th May, one drake also seen. A female flushed on Fidra on 3rd June and a male on Inchmickery the following day. A drake on Craigleith on 24th June and at least 40 sheltering in the east bay of Fidra on 19th November.

RED-BREASTED MERGANSER

On 1st May, eleven were flying south off the south end of Inchkeith. On 28th May at Inchcolm, a drake flying near the pier, another over the island and later a duck over (possibly from) Inchcolm.

BUZZARD

One mobbed by gulls off east side of Inchkeith on 1st May. An injured bird seen on 22nd, swooped down from NE cliffs, landed on sea and scrambled ashore. One there on 16th December.

SPARROWHAWK

One on Inchcolm on 5^{th} October and one on Craigleith on 14^{th} .

PEREGRINE

An adult and immature on Castle Tarbet, Fidra on 3rd June. On 24th June two adults and two fledged young on Craigleith. Two above the harbour, Inchkeith, and one on the buildings of Inchmickery on 12th November. One on Inchkeith on 16th December

KESTREL

One on Craigleith on 14th October

COOT

A dead bird at the harbour, Inchkeith on 22^{nd} May.

OYSTERCATCHER

Seven, possibly nine pairs on Inchcolm on 28th May, one nest with two eggs found. Seven pairs also on Inchkeith, one nest with three eggs near Leith harbour, another with two eggs on the west side. On the same day, one nest with three eggs on Carr Craig is the first nesting record for this island. On 3rd June, a dead adult and an egg found, (suspected nest) on Eyebroughy and on Fidra, possibly two nests, west of garden and above the arch. On 4th June two nests found on Inchmickery and a 3rd suspected. One bird on Inchcolm on 5th October. Four on Inchkeith on 12th November and one on Craigleith on 19th. A flock of c60 seen on Inchkeith on 2nd December, 20 there on 16th.

WHIMBREL

Two past the west end of Inchcolm on 5th October. One flying north off the west side of The Lamb on 19th November.

CURLEW

One on Craigleith on 6th September and two on Inchcolm on 5th October. One on Craigleith and two on Fidra on 19th November. Two on Inchkeith on 16th December

REDSHANK

One on 6th September on Craigleith. Three on Inchkeith on 16th December.

TURNSTONE

Four on Inchkeith on 12^{th} November and six on Fidra on 19^{th} . A flock of 22 on Inchkeith on 2^{nd} December, 35 there on 16^{th} .

BLACK-HEADED GULL

Up to four seen on Inchcolm on 5th October. About 200 on the sea near the harbour, Inchkeith on 12th November and c50 on 16th December.

COMMON GULL

One on Inchkeith on 16^{th} December was the only record.

FERAL PIGEON

Many present on Inchkeith on 22nd May. Breeding in some numbers on Inchgarvie on 28th May. Two birds, probably off nests on Haystack and several pairs nesting under rocks on Carr Craig on this date too. Birds present on The Lamb on 3rd June. At least 50 individuals at Inchmickery on 4th, five nests found. Present on Craigleith on 24th June. Over 200 at Inchcolm on 5th October. A flock of more than 500 seen on Inchkeith on 2nd December, down to 200 on 16th.

WOODPIGEON

Two nests on Inchcolm on 28th May, one with two squabs. Three (a pair and a single) also on the point of fledging there on 5th October. Fourteen adults present too.

SWALLOW

A pair nest-building in the toilet block on Inchcolm on 28^{th} May. Four birds over the west end on 5^{th} October.

MEADOW PIPIT

One or two on Craigleith on 6th September. At least two on Inchcolm on 5th October. Two on Craigleith on 19th November.

ROCK PIPIT

A pair on the NE cliffs (Kirkcaldy harbour) of Inchkeith on 22^{nd} May. A pair present on Fidra on 3^{rd} June. At least two were on Inchcolm on 5^{th} October. Up to eight on Inchkeith and two on Inchcolm on 12^{th} November. Ten on Craigleith and four on Fidra on 19^{th} . At least six on Inchkeith on 2^{nd} December and at least four there on 16^{th}

PIED WAGTAIL

A single on Inchcolm on 1st May, and another seen by the abbey on Inchcolm on 28th. A pair on Fidra on 3rd June and a single on Craigleith on 24th June. Three or more on Inchcolm on 5th October. One or two on Craigleith on 6th September and another there on 19th November.

GREY WAGTAIL

One at Leith harbour, Inchkeith on 22nd May and one or two on Inchcolm on 5th October.

WREN

One on Inchcolm on 1^{st} May. One seen and another singing by the abbey on Inchcolm on 28^{th} May. At least three there on 5^{th} October. One singing on Craigleith on $6\text{-}7^{th}$ September and again on 14^{th} October. At least ten on Inchcolm on 12^{th} November and on Inchkeith on 2^{nd} and 16^{th} December.

DUNNOCK

Two seen on Inchcolm on 1st May, one with nesting material. Present on Craigleith on 14th October. Over ten on Inchkeith and two on Inchcolm on 12th November.

ROBIN

A pair on Inchcolm on 1st May, one bird seen on 28th. Many, perhaps over 50, there on 5th October and several on Craigleith on 14th. Over 20 on Inchkeith and 15 on Inchcolm on 12th November. Three seen on Inchkeith on a visit 2nd December, Ten there on 16th.

SONG THRUSH

One seen on Inchcolm on 12th November. Two or three on Inchkeith on 2nd December.

BLACKBIRD

Two seen and a nest in a building with one egg on Inchkeith on 1st May. On 22nd a male and a female seen there. Two nests also seen, one with two cold eggs and one with young. One male seen on Inchcolm on 28th May. One or two there on 5th October. At least ten on Inchkeith on 12th November, four-five on 2nd December and six on 16th..

BLUE TIT

One nesting in a nest box on Inchcolm on the 1st May. Two, possibly four there on 5th October.

JACKDAW

Two on Inchcolm on 1st May, including one at a nest site. Nest still present on 28th of the month. At least four on Inchcolm on 5th October.

CARRION CROW

Two at west side of Inchcolm on 1st May, a pair nesting there on 28th. A nest with three young on Inchkeith on 22nd May. One on Eyebroughy, another on the Lamb on the 3rd June. Two on Inchcolm on 5th October. A nest, possibly last year's seen in an elder on Craigleith on 6th September. Two on Inchkeith on 12th November and 16th December. One each on Craigleith and Fidra on 19th November.

STARLING

A flock of about 35 on Craigleith on 6th September, c50 the next day. Recorded over Craigleith on 14th October.

CHAFFINCH

Three pairs on Inchcolm on 1st May. At least two on there on 5th October. Recorded over Craigleith on 14th October.

GOLDFINCH

Five seen on Inchkeith on 1st May. One on Inchcolm on 5th October and c15 on Craigleith on 14th. At least 12 on Inchkeith on 12th November, c20 on 2nd December and 25 on 16th.

GREENFINCH

A male and a female on Inchcolm on 1^{st} May. Two birds there on 28^{th} . Two also on 5^{th} October.

LINNET

At least one pair on Inchcolm and one or two pairs on Inchkeith on 1st May. Two or more on Inchcolm on 28th May. A nest with six eggs found on Fidra on 3rd June and two birds on Inchmickery on 4th June. Two on Craigleith on 24th June. Several small parties totalling more than 15 on Craigleith on 6th September. On the following day, several groups of two or three there, and a group of c50 of possibly with other species. Several flocks of up to ten on Inchcolm on 5th October and at least 20 on Craigleith on 14th. Fourteen on Craigleith and 15 on Fidra on 19th November. A flock of 60 on Inchkeith on 16th December.

TWITE

A possible flock of eight to ten birds on Inchcolm on 5th October.

MAMMALS 2006

GREY SEAL

Fifteen on Inchkeith on 1st May and over 26 on Iron Craig, Inchkeith on 22nd May. Fifteen on Swallowcraig rocks, Inchcolm, ten on Haystack, and four on Carr Craig on 28th. A yearling on Craigleith on 24th June. One or two offshore at Inchcolm on 5th October and present close to Craigleith on 14th.

COMMON SEAL

Six off Inchmickery on 4th June. Four were ashore at the northwest bay of Inchcolm on 5th October.

For a summary of seal breeding numbers, see Appendix 2

WHALE sp

A school of cetaceans seen through binoculars from North Berwick on 19th November, travelling from west side of the Bass Rock, disappearing behind it, and re-appearing to its east heading eastwards. At one point, what appeared to be a large dorsal fin might have been seen suggesting orcas, although at this distance it may have been one of the flippers of a minke. Reports on the news the following day of a school of "minke" whales off the east coast of Scotland were perhaps the same animals.

RABBIT

Three seen on Inchkeith on 1st May and at least two seen there on 22nd. Three live adults seen on Inchmickery on 4th June. On Inchkeith more than 20 seen on 12th November, 12 on 2nd and 8 on 16th December.

BLACK RAT

One dying, below the tourist centre on Inchcolm on 5^{th} October. It was killed by the boatman

BAT sp

Two seen in his garden at about 9pm on 22nd April by custodian on Inchcolm.

INVERTEBRATES 2006

Green-veined whites and two red admirals seen on Inchkeith on 22nd May. One orange-tip, one small tortoiseshell and several unidentified

whites on Inchcolm on 28th May. An unidentified white on Inchgarvie on the same day. A small tortoiseshell seen on Inchmickery on 4th June. On Craigleith on 7th September were several peacocks, red admirals, small tortoiseshells and large whites. Also present then was one painted lady and a number of small whites and silver Y moths. On Inchcolm on 5th October, there were three red admirals, three small whites and four silver Y moths. On Craigleith, there were at least six large whites, one peacock and two tortoiseshells on 14th October

For summary of butterfly records, see Appendix 3

On 7th September a large dragonfly, probably a common hawker (*Aeshna juncea*) was seen on Craigleith.

On 8th September a female common darter (*Sympetrum striolatum*) was photographed by Bill Bruce on the Isle of May

FLORA 2006

TREE MALLOW (Lavatera arborea)

Below is an update on current knowledge of the species occurrence on some islands in our area of study.

Craigleith It was noted on a visit on 24th

June that the area where the grey seals pup on Craigleith was surprisingly clear of tree mallow. The main plant here is now oilseed rape. A mallow-cutting project was carried out in two zones on the island this year on 6-7 September and 14th October. A lot of regrowth occurred between visits, more than expected.

Fidra Further work this year hampered

by poor weather

Inchcolm Now well established at the

southwest corner of the South Bay. It has also established its own strandline on the beach south of the Abbey, where it has spread enormously since a visit

end of May 2006.

FLORAL RECORDS FROM THE ISLE OF MAY

A list of the species recorded during an investigation into the frequency of occurrence in vegetation quadrats from 1996 – 2006

Common bent Agrostis capillaris
Fiorin Agrostis stolonifera
Early hair-grass Aira praecox
Bugloss Anchusa arvensis
Burdock Arctium minus agg.
Thrift Armenia maritima

Spear-leaved orache Atriplex hastata agg.
Starwort Callitriche stagnalis

Common sedge Carex nigra
False fox sedge Carex otrubae
Dark green mouse-ear Cerastium diffusum
Common mouse-ear Cerastium fontanum
Spear thistle Cirsium arvense

Creeping thistle Cirsium vulgare
Common scurvy-grass Cochlearia officinalis
Danish scurvy-grass Cochlearia danica
Red fescue Festuca rubra
Goose-grass Galium aparine
Heath bedstraw Galium saxatile

Sea milkwort

Hogweed Heracleum sphondylium

Glaux maritima

Yorkshire fog Holcus lanatus Henbane Hyoscyamus niger Toad rush Juncus bufonius Shore-weed Littorella uniflora Field wood-rush Luzula campestris Matricaria maritima Sea Mayweed Blinks Montia fontana Field forget-me-not Myosotis arvensis Changing forget-me-not Myosotis discolor Buck's horn plantain Plantago coronopus

Annual meadow grass Poa annua

Rough-stalked meadow-grass Poa trivialis

Knotgrass Polygonum aviculare agg. Japanese knotweed Polygonum cuspidatum Silverweed Potentilla anserina Tormentil Potentilla erecta Saltmarsh grass Puccinellia capillaris Ranunculus ficaria Lesser celandine Ranunculus repens Creeping buttercup Common sorrel Rumex acetosa Curled dock Rumex crispus Sea pearlwort Sagina maritima Procumbent pearlwort Sagina procumbens White stonecrop Sedum album

English stonecrop Sedum anglicum
Ragwort Senecio jacobaea
Sea campion Silene maritima
Prickly sow-thistle Sonchus asper
Spurrey sp. Spergularia marina
Chickweed Stellaria media

Sea mayweed Tripleurospermum maritimum

Colt's foot Tussilago farfara
Stinging nettle Urtica dioica
Small nettle Urtica urens
Clover sp Trifolium sp.

Dandelion Taraxacum officinale agg.

Dead-nettle sp Lamium sp.

Mouse-ear hawkweed Pilosella officinarum

SUMMARY OF ISLE OF MAY SEABIRD PRODUCTIVITY 2006 (Based upon M Newell, MP Harris, F Daunt, D Kortan & S Wanless (2006) Isle of May Seabird Studies in 2006 - contract report by CEH (Banchory) to JNCC as part of their Integrated Seabird Monitoring Programme.

Fortunes for Isle of May seabirds were very mixed in 2006. Of the six species studied intensively, European shags had a good season, breeding success of northern fulmars, black-legged kittiwakes, Atlantic puffins and razorbills was similar to the long-term average, and common guillemots had their worst ever breeding season. Return rates were also fairly normal for all species except common guillemots for which the value was very low. Conditions early in the season appeared to be poor with colony attendance in many species being rather low. Although lesser sandeels remained the main food of young Atlantic puffins, razorbills and blacklegged kittiwakes, common guillemots fed their young mainly on clupeids, while European shags brought in a wide variety of bottom-living fish. Very few 1 group sandeels were present in food samples during the chick-rearing period. Feeding conditions seemed to deteriorate markedly at the end of the season with black-legged kittiwakes and Atlantic puffins being particularly badly affected. 2006 was also notable for the marked increase of snake pipefish in the diet of many of the seabirds.

Northern fulmar breeding success (0.44 chicks per incubating pair) was an improvement on 2005 and close to the long-term average.

In contrast to most other species, European shags began breeding earlier than in 2005 and had a productive season. Breeding success was 1.22 chicks per pair and the shag was the only species for which productivity was above the long-term mean. Following a major wreck early in 2005, over-wintering survival appeared much improved in 2006, with an 83% return rate that was close to the long-term mean. As in the previous two years, the prey eaten was unusually varied with sandeels making up only 53.4% by mass of the diet. The sandeels that were recorded

were fairly evenly split between 0 group and the older (1+ group) fish that are normally taken.

Black-legged kittiwakes had a very late season with only 2005 being later. Breeding success was below average (0.47 chicks per completed nest) but within the long-term confidence intervals. However, there were indications that feeding conditions at, and just after, fledging deteriorated and that post fledging survival was probably low. Adult return rate (80.9%) was close to the long-term mean. The proportion of sandeel in the diet was lower than normal particularly in terms of the contribution by biomass, which was only 63%.

Common guillemots had their poorest breeding season on record with only 0.41 chicks leaving per pair laying. As in 2004 and 2005, many chicks were left unattended. Surprisingly few were taken by gulls; more were killed by other guillemots and razorbills. Return rate of adults was very low (86.9%) with only 2005 being lower. Adults fed their chicks mainly on sprats with small gadoids being the main alternative. Sandeels made up only 4% of the diet by mass. Chicks grew slowly and all the evidence suggested that feeding conditions were poor.

Razorbill breeding was late and but breeding success (0.62 chicks leaving per pair) was close to the long-term average. Adult return rate (88.2%) was higher than the long-term average. Chicks were fed mainly 0 group sandeels.

Atlantic puffins had another late breeding season. Breeding success improved on the previous two years at 0.78 chicks per pair, which was similar to the long-term mean. However, just as with kittiwakes there was evidence that conditions deteriorated at the end of the season with late hatching chicks showing slower growth rates and failing to reach the sea successfully. Chicks were mainly fed 0 group sandeels (90% by number, 61% by biomass). Adult return rate (81.8%) was a little below normal.

St Abb's Head National Nature Reserve

Summary of Seabird counts in 2006

1. Whole Colony Counts

Species	Count Unit	2006 Total	Change on 2005	Comments
Fulmar	Apparently occupied	190	+20%	A welcome increase on the
	site			exceptionally low counts of 2004
				and 2005
Shag	Apparently occupied	162	+24%	An increase on 2005, but still the
	nest			second lowest count since 1997
Herring Gull	Apparently occupied	248	+58%	A large increase on 2005 but still
	nest			the third lowest count on record
Kittiwake	Apparently occupied	6,288	-13%	This is the second lowest count
	nest			since 1970 – the breeding
				population has decreased by two-
				thirds since 1989

2. Counts at Monitoring Plots

Species	Count Unit	Sum of	Change on 2005	Comments
		plot means		
Guillemot	Individuals	1,636	-4%	A small decrease on 2005 and
				well below the high counts
				between 2000 and 2003, but still
				well above the 22 year mean
				(1441)
Razorbill	Individuals	130	+2%	A slight increase on 2005, but still
				the third lowest count since 1989

3. Productivity

Species	Mean productivity	Change on	Comments
	(chicks	2005	
	fledged/active nest)		
Shag	0.98	+234%	A much better year compared to the very low
			productivity of the previous two years and close to
			the 15 year mean (1.12)
Kittiwake	0.27	-69%	Equal lowest value on record and well below the 19
			year mean (0.7)
Fulmar			No formal monitoring this year but, from casual
			observation, only two chicks known to have fledged
			from the whole colony

SUMMARY OF OTHER TERN SITES IN THE FORTH (Data supplied by East Scotland Tern Conservation Group (ESTCG)

Aberlady Bay

No terns nested this year

Grangemouth Docks

No count made this year, access problems

Granton Harbour

Four pairs of common terns nested this year

Leith Docks

900-1000 nests of common terns counted

Methil Docks

No count made this year.

Port Edgar

Common terns were nesting on a pontoon. On 20th July 34 adults were present and 15 AON were counted. Four chicks were on the pontoon and one was on mud flats (probably jumped from pontoon).

Rosyth Royal Dockyard

Terns present but no count made this year

FSG FOOTNOTES

DATES FOR MAIN ISLAND COUNTS

Bass Rock	24 June
Craigleith	24 June
The Lamb	3 June
Fidra	3 June
Eyebroughy	3 June
Inchkeith	22 May
Carr Craig	28 May
Haystack	28 May
Inchcolm	28 May
Inchmickery	4 June
Inchgarvie	28 May
Forth Rail Bridge	14 May
T 0 '	1 . 3 .

Long Craig late May to Aug Isle of May late May to June

TERNS IN EAST SCOTLAND

Data supplied by Mike Fraser of the East Scotland Tern Conservation Group (ESTCG) whose monitoring area stretches from the Borders to the southeast boundary of the Moray Firth. Counting unit is in pairs. As always, this may not fully estimate the totals as not all sites have been counted this year. 2005 totals in brackets.

Totals for East Scotland	<u>2006</u>	(2005)
Common tern	1315	1208
Arctic tern	976	1197
Roseate tern	5	4
Sandwich tern	814	573
Little tern	31-32	34

Firth of Forth Breeding Terns

These totals are minima and include all reported island and mainland sites, with 2005 totals in brackets. (Not all sites counted, see above)

Common tern	1117	(999)
Arctic tern	515	(609)
Roseate tern	5	(4)
Sandwich tern	0	(3)
Little tern	0	(0)

OTHER NEWS

Farewell to Pete Gordon

Pete Gordon, RSPB Conservation Officer for Lothian and the Borders has now left for a new post based in the Inverness Office of RSPB Scotland. Many thanks to Pete for chairing the East Scotland Tern Conservation Group (ESTCG) and for his great involvement in the Forth Seabird Group over the years. Mike Fraser takes up the reins in this post and currently chairs the ESTCG

Tree mallow work in the Forth

Over the last two years or so there has been a project running to monitor the distribution and to investigate the removal of tree mallow (*Lavatera arborea*) on the Forth Islands. This plant, although native to south and western Britain, was introduced to this area and presents problems of habitat change for seabirds in particular. This year a concerted volunteering session on Craigleith featured in the programme "Wild Thing I Love You" shown by Channel Four television in November. This nicely highlighted the problems in the Forth and encouraged the formation of a band of volunteers. This group can be mobilised in future years to beat this problem, at least on the outer islands. For further information about this project go to the website at

www.ceh.ac.uk/treemallow/

LIST OF COUNTERS & CONTRIBUTORS

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Thanks again to the above and any others who have assisted with counts and provided data and anybody I have inadvertently overlooked!

Data passed onto:

East Scotland Tern Conservation Group;

Dr R M Sellers for inclusion in the annual Cormorant Breeding Colony Survey

The Scottish Natural History Archive

The Seabird Group

ACKNOWLEDGEMENTS

Thanks to Westminster Gravels and Fife Council who once again provided funding towards the group's work in the Firth of Forth. Also thanks to Mr John Carpenter of New York who generously assisted our work again this year.

A special thank-you to Sir Hew Hamilton Dalrymple, Sir Tom Farmer, Sir Jack Stewart Clark, Historic Scotland, and other owners who have allowed access to their islands for counts, and to boatmen Dougie Ferguson and Bill Simpson, and to Forth Pilots and Ollie Ludlow for their help.

Appendix 1

Lothian Ringing Group Seabird Ringing Report and Totals 2006

This year's seabird season was a bit of a mixed bag. It didn't start off too well with changed working practices at Leith Docks preventing us counting and ringing the common tern colony; and persistent westerly winds for the first half of June preventing us getting out to Craigleith to ring cormorants. However, it ended well with good numbers of kittiwakes ringed on Inchkeith and a fulmar "fest" in August. We made eight trips to three islands and ringed nearly 800 seabirds of eight different species.

The first trip was to Inchkeith at the beginning of June to ring cormorants. This is a large colony and we arrived at the right time, but there were only 30 or so chicks big enough to ring. With apparently good food supplies available, Forth cormorants are now breeding asynchronously unlike in the past. At an exposed rocky site like Inchkeith, this makes ringing cormorant chicks of different ages impossible due to the disturbance involved.

After three or four failed attempts, we eventually got out to Craigleith for the shag and auk-ringing trip. While Mark and David Cubitt, and Alan Heavisides landed and started ringing, John Davies and Alan Leitch stayed on the boat with the seabird counters and went off to do a late count of the Bass and the east cliff on Craigleith. John and Alan landed later and joined in the ringing. It was a good day with around 250 birds caught including 160 shags, 34 razorbills, 27 guillemots, but only 19 puffins. The tree mallow is a continuing problem for breeding puffins. It will be interesting to see the effects of the clearance programme over the next few years. (It'll also be very interesting the see the TV programme about this on Channel 4 when it's shown!)

John and Fiona Davies made a trip to Inchkeith at the beginning of July to see how the kittiwakes were doing and ringed 50 shag and a few other birds while they were there. The two kittiwake ringing trips were a success with over 200 birds being ringed. However, this success was dampened when we found dead fledged and unfledged chicks later in the season. Although Inchkeith kittiwakes appeared to be being adequately fed sand eels and sprats earlier in the season, later on pipefish were being brought in. Pipefish have no nutritional value to seabird chicks and we also saw them in shag nests on Craigleith. Kittiwakes on Inchkeith are a possibility for a future Re-trapping Adults for Survival (RAS) study, particularly now that Mark Hulme (TRG) has got his eye in for noosing adults!

The season finished with a week's fulmar fest at the beginning of August with well over 200 chicks being ringed on Craigleith, Inchgarvie and Inchkeith. The numbers ringed on Inchkeith were significantly up due to the mountain goat antics of David Grieve and George Smith! There also seems to be a slight recovery in numbers since the departure of Charlie Nolf's dogs.

Next summer we hope to get our act together in time to once again ring common terns at Leith Docks. We also have plans to resume ringing gannets on the Bass as well as continuing our ringing on Craigleith, Inchkeith and Inchgarvie.

I would like to thank everyone who helped ringing seabirds this summer, whether on one trip or several. Besides, those mentioned above, Andrew Barker, Niall Campbell, Francesco Germi, Les Hatton, Alex Sansom (TRG), Calum Leitch, Phil May (TRG), Shirley Millar and Martin Moss also helped with the seabird ringing this summer. Finally, I would like once again the acknowledge the island owners – Sir Hew Hamilton-Dalrymple (Craigleith), Sir Tom Farmer (Inchkeith) and Sir Jack Stewart-Clark (Inchgarvie) – for their continuing permissions to ring seabirds on their islands and also our boat men – Dougie Ferguson (North Berwick), Forth Pilots (Granton) and Ollie Ludlow (Port Edgar) for their help in getting us safely to and from the islands.

Provisional Seabird Ringing Totals 2006

	Pulli	Full Grown	Retraps
Fulmar	237		
Cormorant	31		
Shag	210	19	22
Great Black-backed Gull	3		
Kittiwake	193	17	5
Razorbill	33	4	1
Guillemot	23	4	
Puffin	8	11	
Totals	738	55	28

SEAL SURVEY OF THE FORTH ISLANDS NOVEMBER 2006

Surveyors: Bill Bruce, Ron Morris, Lesley and Henry Fairweather, and David Ross.

Sunday 12th November 2006

This trip was planned for the preceding day, which was cancelled because of the elements, and took in the islands of Inchkeith, Carr Craig, Inchcolm, Haystack and Inchmickery. Inchkeith was surveyed first, with the group landing at the island and walking round its coastline, either on the beaches or more often from the cliff tops. Five main pupping areas were encountered this year, viz, the Southern point, two bays on the East side (French Fort Bay and Centre Bay), Kirkcaldy Harbour (N.E. Bay), and the small bay at the N.W. side of Kinghorn Harbour (North Bay).

Figures listed below are totals of bulls, cows and pups recorded.

INCHKEITH

BULLS: - 17 (estimate)

COWS: - 104 (estimate). N.B. Possibly a dozen or so still to pup?

PUPS: - 80 including 3 dead (stillborn/early post birth death).

Rough break down of ages of all the pups.

1-7 days = 40, 8-15 days = 31, 16-21 days = 8

Others = 1 (This year's pup fully weaned c.6 weeks + old. Probably an early Inchkeith pup but could have come from elsewhere)

INCHCOLM Landing made.

BULLS = 1

COWS = 6

PUPS = 2 (1 = 1-2 days old, 1 = 15-21 days old)

The bull, 3 cows and the 2 pups were all found at the usual pupping location at South Bay. The remaining 3 Cows were in the water elsewhere close inshore.

INCHMICKERY Non – landing

Fifteen grey seals hauled out in the area of the East Jetty. Three bulls and 12 cows. No evidence of pupping on this island, although several of the cows appeared to be pregnant.

CARR CRAIG AND HAYSTACK

No adult seals or pups evident at either rock.

Sunday 19th November 2006

CRAIGLEITH Landing made

BULLS - 7 (estimate)

COWS - 24 (estimate)

PUPS - 32 (including one dead (stillborn?)

Estimated ages of pups

1-7 days = 6 (incl. dead pup); 8-14 days = 7; 15 days + = 19

The Lamb (non-landing) and Fidra (Landing)

No evidence of adult or grey seal pups at either island.

Sunday 2nd December 2006

INCHCOLM

Information received from Relief Custodian to the effect there were 3 grey seal pups in South Bay by 31/10/06. Our visit on 12/11/06 only found two, one of which was of an age- which made it likely to be one of this number. However, the other pup was only recently born and could not have been part of this number. Additionally, on 27/11/06 Bill Simpson, saw a dead pup (appeared recently born) on the beach in South Bay below the tractor shed. It appears at least 5 pups have been born at Inchcolm this year.

INCHKEITH

A full survey of the island was carried out. An estimate of 51 adult grey Seals present at or near the colonies was arrived at, i.e. 9 bulls and 42 cows. A count of the pups returned the figure of 105, with ages and numbers estimated below.

PUPS 105

Estimated ages of pups;

1-7 days = 23 (c. $10 \times 1-2$ days old including 3 dead); 8-14 days = 17; 15-20 days = 10; 20+ days = 55

This survey reveals that an estimate of 50 pups have been born since the visit on 12/11/06, which was 20 days prior to the current trip. Also, the fact that about 20% of this number were only 1-2 days old suggests there could be more births this season.

The visit of 12/11/06 returned a count of 80 pups, of which 25 must have left the island prior to the current trip. From the information learned so far an estimate of 130 Grey Seal pups have been born at Inchkeith this season.

An interesting observation was that only 6 pups were found at the formerly main colony at the southern tip of the island and only one of these had been born since the previous trip. Both parts of North Bay (Kinghorn harbour area) had grown in importance with about 25% of the pups being found there and the remainder being at Kirkcaldy harbour and spread right down the eastern side of the island.

Clearly Inchkeith is growing in importance as a nursery for Grey Seals and now warrants closer attention in the future.

Summary of counts carried out on 12th November 2006

		Common			
	Bulls	Cows	Pups live	Pups dead	seals
Inchkeith	17	104	77	3	0
Inchmickery	3	12	0	0	0
Carr Craig	0	0	0	0	0
Inchcolm	1	6	2	0	0
Haystack	0	0	0	0	0

Summary of counts carried out on 19th November 2006

		Common			
	Bulls	Cows	Pups live	Pups dead	seals
The Lamb	0	0	0	0	0
Fidra	0	0	0	0	0
Eyebroughy	n/c	n/c	n/c	n/c	0
Craigleith	7	24	31	1	0

Summary of counts carried out on 2nd December 2006

		Common			
	Bulls	Cows	Pups live	Pups dead	seals
Inchkeith	51 adults		102	3	0

Summary of counts carried out on 16th December 2006

		Common			
	Bulls	Cows	Pups live	Pups dead	seals
Inchkeith	6	23	34	2	0

Additional notes

Bill Bruce made a brief visit to Bass Rock on 17th December when three grey seal pups were present.

Just outside our area along at Fast Castle, near to St Abb's Head, Bill also counted grey seals from Rammel Cove and the next two bays to the west (i.e. NT846704 - NT831703). Although this is not a complete count, in this stretch of coast he counted approx 170 pups (including approx 6 dead and another 6 recently born) and approx 60 cows.

Ron Morris, speaking to staff on Inchcolm has ascertained that at least five pups were born there this year.

Summary of minimum estimated Forth pup totals 2006 (excludes Isle of May)

	Grey seals	Common	
		seals	
Inchkeith	136+	0	
Inchmickery	0	0	
Carr Craig	0	0	
Inchcolm	5	0	
Haystack	0	0	
The Lamb	0	0	
Fidra	0	0	
Eyebroughy	n/c	0	
Craigleith	32	0	
Bass Rock	3	0	
Total	171+	0	

n/c = not counted

LEPIDOPTERA RECORDED ON FORTH ISLANDS 2006

	Inchgarvie	Inchmickery	Inchcolm	Inchkeith	Craigleith
Peacock					Several on 7/9, 1
					on 14/10
Red admiral			3+ on 5/10	2 on 22/5	Several on 7/9
Small		1 on 4/6	1 on 28/5		Several on 7/9, 1
tortoiseshell					on 14/10
Painted lady					1 on 7/9
Small white			3+ on 5/10		Present on 7/9
Large white					Several on 7/9, 1
					on 14/10
G-v white				1+ on 22/5	
Unidentified	1 on 28/5		Several on 28/5		
white sp					
Orange-tip			1 on 28/5		
Silver Y			4+ on 5/10		Present on 7/9