



Forth Seabird Group

Forth Islands Bird Report

2002

Compiled by Dave Jones

February 2002

SEABIRD SPECIES SUMMARIES 2002

FULMAR

Complete Forth Islands count of 1635 aos. A rise on last year. The highest rise was on Inchkeith with an additional 54 sites

CORMORANT

Incomplete count of 294 nests. Craigeith not counted (78 in 2001). Numbers similar to 2001.

SHAG

Complete Forth Islands count. 1394 nests, up on 2001 by 51 nests. Very encouraging to see a continuing increase.

EIDER

Incomplete count, 1044 nests. Slight decrease on 2001. Inchkeith, Bass and Craigeith not counted. Most recent counts of 7 on Bass (1997), 153 on Craigeith and 323 on Inchkeith (both 1994).

GREAT BLACK-BACKED GULL

Complete Forth islands count. Breeding was confirmed on nine islands. The 33 nests is just two short of last year's all-time high

LESSER BLACK-BACKED GULL

A complete count of 6521 nests was made. A very good count, although it does not exceed the high point of 7207 in 1994

HERRING GULL

Complete Forth Islands count of 9521 nests. This is still only 73% of the last all islands count, which was of 13025 in 1994.

KITTIWAKE

Complete Forth Islands count. An increase of 226 to 5686 nests. This is still only around half the last highest count of 11,229 in 1997.

COMMON TERN

Complete count of 69 nests, (163 last year). (Only two pairs on the May, lowest since 1990, continuing a decline since 543 nested in 1999.

ARCTIC TERN

Complete Forth Islands count. A decrease to 228 (from 916 last year and the lowest since 1990), all on the Isle of May.

ROSEATE TERN

Complete count. Two nests, one produced two chicks, which were rung on 24th August. The second contained one infertile/addled egg.

SANDWICH TERN

Complete count. Sandwiches deserted the Forth as a breeder this year. Up to 50 were seen on the May in early May. These left by mid-month.

RAZORBILL

Complete count with 3836 aos, a 17% decrease on last year. Most of this loss was from the Isle of May down by 899 nests on 2001.

GUILLEMOT

Complete Forth Islands count. 30,913 birds were counted on the cliffs of six islands. This represents a fall to levels of 1998-1999.

PUFFIN

Incomplete count. 1671 birds were counted from six of the islands. This is however a tiny fraction of over 70,000+ birds in the Forth.

Table 1: Summary of seabird counts for the Forth Islands, 2002 (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>	<u>Total</u>
Fulmar (AOS)	33	196	18	206	0	419	0	166	0	37	222	0	338	1635
Cormorant (nests)	0	x	101	0	0	102	91	0	0	0	0	0	0	294
Shag (nests)	25	233	102	186	0	104	9	3	4	52	0	0	676	1394
Gannet (nests)	x	0	0	0	0	0	0	0	0	0	0	0	0	x
Eider (nests)	x	x	0	97	13	x	2	0	0	196	54	9	673	1044
Great B-b Gull (nests)	1	6	1	1	0	1	0	1	0	1	1	0	20	33
Lesser B-b Gull (nests)	1	647	2	79	0	3276	0	1221	0	86	11	0	1198	6521
Herring Gull (nests)	87	823	82	1296	2	3580	48	621	18	371	214	1	2367	9510
Kittiwake (nests)	774	383	139	315	0	351	0	58	0	0	0	0	3666	5686
Common Tern (nests)	0	0	0	0	0	0	0	0	0	0	6	55	2	63
Arctic Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	0	228	228
Roseate Tern (nests)														2
Sandwich Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill (pairs/sites)	193	141	96	119	0	61	0	11+	0	0	0	0	3215	3836
Guillemot (birds on cliffs)	2960	1558	990	611	0	27	0	0	0	0	0	0	24767	30913
Puffin (as stated)	10	x	27 birds	222 birds	0	1305+ birds	0	58 birds	0	40 birds 9ashore	0	0	x	1671 birds

Frb = Forth Rail Bridge

MAIN BREEDING SEABIRDS – ADDITIONAL COUNTS AND COMMENTS

FULMAR

Recorded from 18th January (ten at Craigleith). Birds remained around the islands until mid September. Later seen around Craigleith and the May on 30th October.

GANNET

First 20 birds seen 18th Jan. On 12th February some are back on nest sites on the Bass. 1500 birds around by 16th February. 50000 by 23rd March, 75000 by early April. First egg seen on 20th. By 10th May 80000 on Bass. First chick on 3rd June. By 22nd October only 2 birds visible on the Bass

CORMORANT

None on Cow and Calves this year. Not counted this year on Craigleith, although numbers were thought to be similar to last year. Three birds present on Inchgarvie on 31st May. Birds 1st June on Inchkeith included 53 nesting on Long Craig and 49 on the mainland opposite. Three birds on Inchcolm on 24th September. Six on Inchkeith on 15th November and ten on Inchgarvie. Two on Carr Craig on 25th November.

SHAG

Four nests (6,3,3 eggs and 1 egg & 1 young) on Haystacks on 31st May. Only one nest noted on 8th June underneath a wooden palette. Only four birds present on 24th September. Most with large young on Inchkeith on 6th July. Four on Inchcolm on 24th September. 23 on Inchkeith on 15th November and six on Haystack. Two on Carr Craig and Inchcolm on 25th November.

EIDER

Ducklings noted 25th May. Present on Inchcolm on 3rd June in expected numbers. Female in the South Bay on 24th September. 250 at south end of Inchkeith on 15th November. A male on Carr Craig on 25th November. Several on Inchmickery on the same date. A female close to Inchcolm on 25th November

GREAT BLACK-BACKED GULL

The nest on Inchmickery containing three eggs was on the same rooftop as last year. Another clutch of 3 on Inchgarvie on 31st May. Clutch of 1 hatching on Inchkeith on 1st June. Pair with 3 chicks on Inchcolm on 22nd June. One seen there

on 4th July. Four on the Lamb 10th September. Two on Inchcolm on 24th September. At least ten on Inchkeith on 15th November. Two each on Inchmickery and Inchcolm and three (one immature) on Haystack on 25th.

HERRING GULL

Present on Inchcolm on 3rd June in expected numbers. One chick was produced on Long Craig. The nesting terns harassed both it and its parents. 200-300 on Inchkeith on 15th November (adults and juveniles). About 20 on Inchgarvie and five over Inchcolm on 25th November. Also several on Inchmickery and two on Carr Craig.

LESSER BLACK BACKED GULL

Two roosting on Haystack on 31st May. Present on Inchcolm on 3rd June in expected numbers. Two-three adults and two juveniles, Inchcolm on 24th September

BLACK-HEADED GULL

About ten on Inchcolm on 24th September.

KITTIWAKE

One chick seen 20th June. Most with 1-2 young on Inchkeith on 6th July.

COMMON TERN

Two past Inchcolm on 3rd June. Increase this year on Long Craig to 60 pairs. 136 adults and 45 chicks were recorded at 55 active nests. Few chick mortalities were noted leading to a high fledging success. At Port Edgar, a small number continue to nest on the two pontoons belonging to the Sailing School moored in the intertidal area of the harbour. The school are aware of the birds' presence and are keen not to disturb them during the breeding period. The breakwater across the front of the harbour attracts a good number of loafing and post breeding terns. At Grangemouth Docks an early report indicates that the terns nest on the pontoons in the middle of the basin and on the dolphins in the deep water channel of the River Carron with some odd pairs nesting on some of the unused basin jetties.

ARCTIC TERN

One feeding in Inchkeith harbour on 6th July.

ROSEATE TERN

The number of sightings in the Firth of Forth suggests the presence of more birds than those seen at the single breeding location.

SANDWICH TERN

First two seen near Scottish Seabird Centre on 17th April. Sandwich Terns continue to use Long Craig as a post breeding roost from the later half of July into late August with 62 birds present on 1st August. Six feeding close to Inchcolm on 24th September. Last sighting of two on 28th November from SSC.

RAZORBILL

A few chicks visible from SSC cameras on 20th June. About six birds close inshore to Inchcolm on 24th September.

GUILLEMOT

300 visiting ledges of Craigleith on 16th Feb. 40 on harbour cliffs, Inchkeith on 6th July. Five close inshore to Inchcolm on 24th September. Two close to Inchkeith on 15th November and five close to Inchgarvie and singles close to Haystack and Carr Craig on 25th. Two near to Inchcolm on the same day.

PUFFIN

Two on Bass rock on 20th March. One seen carrying fish into a burrow on Inchcolm on 4th July. A young bird found in N Berwick late July

SYSTEMATIC LIST OF OTHER BIRD SIGHTINGS (including breeding records)

BLACK THROATED DIVER

One past Carr Craig, seen on 8th June

RED THROATED DIVER

Three close to Inchkeith on 15th November.

SOOTY SHEARWATER

It was a record year for Sooty Shearwater passage past the Isle of May with 669 on 22nd September and 642 on the 23rd.

MANX SHEARWATER

Three few past Oxcar on 8th June.

BALEARIC SHEARWATER

Two Balearic Shearwaters were recorded on 21st and 23rd of September past the Isle of May

GREY HERON

Two on tidal rocks of Inchcolm on 24th September.
Two on Inchkeith on 15th November.

MUTE SWAN

An immature bird in the harbour at Inchkeith on 15th November.

CANADA GOOSE

One around Inchcolm Abbey from about 4th July until mid September. The bird had a ring, which was not read.

GREYLAG GOOSE

Five on Fidra on 8th January.

SHELDUCK

Two pairs and a single on Inchmickery on 31st May. A pair flying into Inchkeith on 1st June. 3-4 pairs on Inchcolm 22nd June, one on 4th July. Two at Inchkeith on 6th July (Harbour and Long Craig).

MALLARD

On Craigeith, also a female flushed from a clutch of 9 eggs above the harbour on Inchkeith on 1st June. Another flushed on 29th, but brood not seen. Two pairs seen on Inchcolm on 3rd June. Female in flight Inchkeith, 6th July.

COMMON SCOTER

About forty past Fidra group on 1st June.

RED-BREASTED MERGANSER

A male close to Carr Craig, 25th November and six males close to Inchmickery.

PEREGRINE

Singles on Craigeith ledge on 8th January and 31st August. Also seen on Fidra various dates from 5th February to 28th September. A pair plus two young seen on there on 1st June. In July, the custodian of Inchcolm rescued a male from the rocks at the harbour. It had been in the water and was being mobbed by gulls. The staff of the Maid of the Forth took it to the Middlebank, SSPCA Wildlife Centre where it was cleaned of fulmar oil (?) and released later. Male on NW cliffs of Inchcolm on 24th September. Male at the south end of Inchkeith on 15th November. Another or the same bird flushed from the cliffs at the North Stell. Two on Inchmickery on 25th November, many pigeon kills evident.

KESTREL

Male hovering over west side of Inchcolm on 24th September. Two (one a female) over Inchkeith on 15th November.

SPARROWHAWK

Female (?) in trees by Inchcolm Abbey on 24th September. One on Inchmickery on 25th November.

BUZZARD

One flying about the north end of Inchkeith on 15th November and one on Inchcolm on 25th.

OYSTERCATCHER

Three pairs on Fidra on 1st June (including a brood of two near the lighthouse). One nest on Eyebroughy on the same date. Up to 44 roosting on Long Craig on the 1st August. One pair on Haystacks on 31st May. Eight pairs on Inchkeith, including clutches of 3 at the harbour and on the east side (1st June). Twelve possible territories on Inchcolm on 3rd June (6 clutches found). Seven there on 24th September. At least 40 were on Inchkeith on 15th November and one on Inchgarvie on 25th November. Two on Haystack and on Carr Craig and one on Inchmickery on 25th November.

CURLEW

17 roosting on Long Craig on 14th August. Two over Inchcolm on 4th July and seven on 24th September. 37-40 on Inchkeith on 15th November.

REDSHANK

37 roosted on Long Craig on 14th August. Two on Inchcolm on 24th September. Ten on Inchkeith on 15th November.

COMMON SANDPIPER

One on Inchcolm on 4th July

PURPLE SANDPIPER

One, perhaps two on Inchkeith on 15th November.

TURNSTONE

Ten on Inchmickery on 7th August, and on Inchkeith on 15th November. One on Inchkeith on 25th November.

BLACK HEADED GULL

Ten on Carr Craig on 25th November.

SABINE'S GULL

One past the Isle of May on 23rd September

WOODPIGEON

Two on Inchcolm on 22nd June and 4th July. Five on Inchcolm, one with a nest containing two eggs on 24th September.

FERAL PIGEON

Thirty-four a/s on Inchmickery on 31st May. A minimum of four pairs seen on Fidra on 1st June. Birds present on Craigleith again this year. Haystacks nesting in blowhole? 31st May. On Inchgarvie, 31st May, 15+ nests with eggs/young, c100 birds roosting on N side. "High numbers" reported from Inchcolm on 24th September. 200-300 on Inchkeith on 15th November. Present on Inchcolm, 120 on Inchmickery and 70 on Inchgarvie on 25th..

SWALLOW

At least 21 birds west over Inchcolm on 24th September.

MEADOW PIPIT

At least one present on Inchcolm on 24th September. At least eight on Inchkeith on 15th. Two on Inchcolm on 25th November.

ROCK PIPIT

A single bird seen on Fidra on 1st June. Three pairs on Craigleith in June. Two on Inchmickery and 4-5 on Inchcolm on 25th November.

PIED WAGTAIL

Two at the Inchcolm Abbey on 3rd June and a brood at the west end. Adult and Juvenile also seen on the 22nd. Adult and two juveniles on 4th July and five on 24th September.

WREN

Three singing on Inchcolm on 3rd June. One present on 22nd. One feeding young at nest in the Abbey, a second bird seen 4th July. Five on the island on 24th September. Many present on Inchkeith on 15th November. "Tens" present on Inchmickery and Inchcolm on 25th November.

DUNNOCK

One on Inchcolm on 3rd and 22nd June and on 4th July. Three there on 25th November.

ROBIN

Two on Inchcolm on 22nd June. Many there on 24th September. A large fall present on 15th November. "Tens" present on Inchmickery and Inchcolm on 25th November

WHEATEAR

One on Isle of May on 22nd April and three on 16th May

BLACKBIRD

Three males and one female carrying food on Inchcolm on 3rd June. Three birds there on 22nd. Female on Inchcolm on 4th July. Two males on Inchkeith on 6th July. Two males on Inchcolm on 24th September. At least 30 on Inchkeith on 15th November and 15 on Inchcolm on 25th November.

SONGTHRUSH

At least eight on 15th November on Inchkeith and one on Inchmickery and two on Inchcolm on 25th November.

FIELDFARE

Custodian of Inchcolm Abbey saw a male on 30th June

JACKDAW

Three on Inchcolm on 3rd June and six on 22nd.
Five there on 24th September.

CARRION CROW

Juvenile present on Inchkeith, 1st June. One on Inchcolm on 3rd June, two on 22nd and one on 4th July. Two– three birds there on 24th September. Two each on Inchcolm, Inchgarvie and Inchmickery on 25th November. An old nest was seen in an elder on Inchmickery.

STARLING

One with three juveniles on 3rd June on Inchcolm. Also one on Inchkeith on 29th. Ten on Inchcolm on 24th September.

BLUE TIT

One on Inchcolm on 25th November.

LINNET

At least two present on Inchmickery on 31st May. And three on Inchcolm on 3rd June, and four on 22nd June. Eleven there on 24th September. At least 15 on Inchkeith on 15th November. Two on Inchgarvie and 40 on Inchmickery and 20 on Inchcolm on 25th November.

GOLDFINCH

Three on Inchkeith on 15th November, the first record for the island.

CHAFFINCH

One on Inchcolm on 3rd June and a pair on the 22nd. One female there on 24th September. One on Inchcolm on 25th November.

BUDGERIGAR

One all white individual on Inchmickery on 7th August

MAMMALS 2002

GREY SEAL

Thirteen present on Cow and Calves on 31st May. One on Inchmickery on the same day.

COMMON SEAL

Eleven were present with young on Inchmickery on 7th August.

RABBIT

A live individual of small size was seen on Inchmickery on 31st May. Three were seen on Inchkeith on 15th November.

HOUSE MOUSE

One nest of about six was disturbed when Alan Murray fell through a Puffin burrow on Inchkeith on 15th November. Two others were seen near the harbour.

BUTTERFLIES etc 2002

Garden tiger moth caterpillars were again seen on thistles on Inchmickery on 31st May. A Red Admiral was also seen on this island on this day. On the same day three small whites and one large white were seen on Inchgarvie

On 1st June on Inchkeith the following butterflies were seen; small tortoiseshell and red admiral, and lots of “whites” consisting of small white, green-veined white, large white

On 24th September on Inchcolm, the following were recorded; 15+ red admiral, 3-4 small tortoiseshells, 4+ painted ladies and 4+ peacocks.

15th November - one small tortoiseshell hibernating in the old military buildings on Inchkeith

**A SUMMARY OF SEABIRD MONITORING
AT ST ABB'S HEAD NNR IN 2002 (by Kevin
Rideout)**

FULMAR

Fulmars increased by 21% to 256 AOS, compared with 212 in 2001. Between the years 1978 and 2001, the population fluctuated between 181 (1978) and 393 (1994) AOS with a mean over this period of 305 AOS.

Breeding success was 0.32 young fledged per active site. Between 1988 and 2001, productivity on the plots ranged from zero (1998) to 0.35 (1996) with a mean of 0.21.

SHAG

296 AON were counted, very similar to the 2001 count of 300 AON. Between the years 1978 and 2001, the population ranged between 115 (1994) and 463 (1991) AON with a mean over this period of 270 AON.

The breeding success was a healthy 1.6 young fledged per active nest for the third successive year. This is well above the average value of 1.21 for the period 1990 – 2001 (range = 0.5 – 1.85)

HERRING GULL

Herring gulls decreased slightly by 15% to 257 AON, compared to 301 in 2001. Between the years 1978 and 2001, the population ranged between 907 (1978) and 243 AON (1998) with a mean over this period of 466 AON.

KITTIWAKE

Kittiwakes increased by 11% to 8,890 AON, compared to 8,028 in 2001. Between 1978 and 2001, the population ranged from 8,028 (2000) to 19,066 (1989) with a mean over this period of 13,390 AON.

The productivity was only 0.33 young fledged per AON. This compares with an average productivity for the period 1987 – 2001 of 0.71 (range = 0.27 to 1.25).

GUILLEMOT

On the monitoring plots, numbers of individuals increased on average by 2%, and the sum of plots means was the second highest on record. The last full census was in 1998 when 40,720 individuals were counted.

RAZORBILL

On the monitoring plots, numbers of individuals increased on average by 8.5%. The last full census was in 1998 when 2,214 individuals were counted.

**SUMMARY OF ISLE OF MAY SEABIRD
SPECIES ACCOUNTS IN 2002 (Data supplied
by Ian Parkinson)**

During the 2002 season, weather conditions on the Isle of May were poor, with much more rain than usual, and strong westerly and easterly winds. Common guillemots, razorbills, Atlantic puffins and black-legged kittiwakes experienced lower breeding success relative to the long-term average, although common guillemots and razorbills did better than in 2001. In contrast, northern fulmars had their best season since 1995, and European shags had their best season ever. Timing of breeding for all species was normal, although European shags and black-legged kittiwakes started breeding earlier than in 2001. Return rates for razorbills and Atlantic puffins were close to the long-term average, whereas those for common guillemots and black-legged kittiwakes were around 6% lower. European shag return rates, in contrast were much higher than the long-term average.

Northern fulmars had a relatively good season, with breeding success estimated at 0.48 chicks per incubating pair. This is above the long-term average and the highest success since 1995. There were 338 AOS, which represented an 8% decrease on 2001. European shags had an excellent breeding season. Breeding started earlier than in 2001 and overall breeding success (1.66 chicks per incubated nest) was the highest recorded since intensive monitoring began in 1986. There were 676 AOS, which represented an 8% decrease on 2001.

Black-legged kittiwakes started breeding earlier than in 2001, but conditions appeared less than favourable at the start of the season and losses were high during incubation. Breeding success (0.47 chicks per pair laying) was much lower than in 2001, and below the long-term average. There were 3666 AOS, +1% on 2001.

Common guillemot productivity in 2002 (0.68 young per pair laying) was the third lowest value recorded since monitoring began in 1986, was well below the long-term average and continued the trend of declining breeding success noted in recent years. Some chicks were temporarily neglected, but fledging weights were close to the long-term average. There were 19169 AOS, an increase of 4% on 2001. Razorbill breeding success (0.65 chicks per pair laying) was slightly lower than the long-term average, but higher than that in 2001. Most losses occurred during incubation, while survival of hatched chicks to fledging was very high. There were 2841 AOS, a 15% decrease on 2001. Breeding success of Atlantic puffins (0.72 chicks per pair laying) was lower than in 2001 and was slightly below the long-term average.

The return rate of adult colour-ringed European shags (92.2%) in 2002 was the highest since 1998. Black-legged kittiwake return rates (73.5%) were much lower than in 2001, and lower than the long-term average. The return rate of common guillemots (87.0%) was slightly below the long-term average whereas razorbill return rates (83.8%) were slightly higher than the long-term average. The return rate of Atlantic puffins (83.5%), although much lower than in 2001, was similar to the long term average.

Lesser sand eels predominated in the diet of European shags, black-legged kittiwakes, razorbills and Atlantic puffins in 2002. As in 2001, well over half of common guillemot chick diet was made up of clupeids.

The first incubating Eider was noted on 16 April and the first chicks on 22 May. Of the 100 marked eider nests, 84 hatched successfully, six were predated, one was deserted, and the fate of a further 9 nests is unknown. This gave an overall hatching success of 84%, very similar to last year's 86%. A total of 732 AOS were found representing a decline of 18%. A total of 2367 AOS for herring gulls was a decline of 17% on 2001 and productivity was 0.61. Lesser black-backed gull numbers were stable and productivity was 1.3 chicks per incubated nest. There was an overall decline of 12% for both species in 2002 and 10% in

2001. A total of 20 Great black backed gull nests were found compared to 27 in 2001.

No roseate terns bred this season and there were two AOS for common and 228 AOS for Arctic Terns. No Sandwich terns bred this season. This represented a very poor season for all four potentially breeding tern species, with not a single chick fledged, the ultimate reason for which remains uncertain. One possible factor is the cold, wet and windy weather at the time of their settling down to breed, and there was a noticeable decline in the proportion of clupeids in the diet of the few broods that did hatch, if not survive. However, there did seem to be a direct relationship between the small number of individuals attempting to breed and their consequent susceptibility to gull predation.

<p>SUMMARY OF ISLE OF MAY SEABIRD SPECIES PRODUCTIVITY ACCOUNTS IN 2001 (Data supplied by Prof MP Harris)</p>
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During 2002, the situation did not seem as encouraging as in 2000 and 2001. The Isle of May, like the rest of Scotland, suffered from poor weather conditions during the summer, with much more rain than usual, and strong westerly and easterly winds. All species, bar shags and fulmars, experienced lower breeding success than the long-term average. However, all species did have a better season than in 1999, the year prior to the closure of the fishery.

Fulmars, for which sand eels appear not to be an important part of the diet, produced more chicks than average, although their breeding success is still relatively low at 0.48 chicks per incubating pair. This was their best season since 1995.

Shags, which forage primarily on older age-classes of sand eels, had their best breeding season ever. Breeding started earlier than in 2001 and overall breeding success (1.66 chicks per incubated nest) was the highest recorded since intensive monitoring began in 1986. The return rate of adult colour-ringed shags (92.2%) was the highest since 1998.

Kittiwakes, which also rely heavily on sand eels, but tend to target the youngest age-class during chick rearing, experienced low breeding success

(0.47 chicks per pair laying) and did not maintain the improved performance shown in 2000, immediately after the fishery closure. Although breeding started earlier than in 2001, conditions appeared less than favourable at the start of the season, and losses were high during incubation: of 477 completed nests, only 174 went on to hatch chicks (77% produced broods of only 1). Kittiwake return rate (73.5%) was much lower than in 2001, and lower than the long-term average.

All three auk species experienced lower breeding success than the long-term average for the Isle of May. Guillemot productivity in 2002 (0.69 young per pair laying) was the third lowest value recorded since monitoring began in 1986. This continues the trend towards relatively poor breeding success in recent years. Most losses occurred during incubation, but chick losses were also relatively high. Observations suggested that most of these losses were due to eggs and chicks falling from their site, rather than because of predation or chick starvation. Adult attendance was generally low, with most chicks having only one parent present at the site at any one time. Despite this apparently difficult season, guillemot chick fledging weights were close to the long-term average, which suggests that the adults were able to sustain adequate provisioning for their chick, perhaps by working harder at foraging, which would explain the low attendance at the colony.

Razorbill breeding success (0.65 chicks per pair laying), although slightly lower than the long-term average, was higher than that in 2001. Most losses occurred during incubation, while survival of hatched chicks to fledging was very high. It was difficult to determine the causes of losses, due to the nature of their breeding sites. The return rate of razorbills (83.4%) were slightly higher than the long-term average whereas guillemot return rates (87.0%) were slightly below the long-term average.

Our feeding watches and general observations indicated that guillemots were targeting small sprat to feed their chicks, while razorbills tended to bring in food loads made up of several small sand eels. Puffins also provisioned their chicks with mainly small sand eels. Their breeding success (0.72 chicks per pair laying) was lower

than in 2001 and bucked the trend of the steady increasing success over the previous 4 years. The return rate of puffins (83.5%) was similar to the long-term average.

SUMMARY OF OTHER TERN SITES IN THE FORTH (Data supplied by Mark Oksien)

Port Edgar

A small number of Common Terns continue to nest on the two pontoons belonging to the Sailing School moored in the intertidal area of the harbour. The school are aware of the birds' presence and are keen not to disturb them during the breeding period. The breakwater across the front of the harbour attracts a good number of loafing and post breeding terns.

Grangemouth Docks

An early report indicates that the terns nest on the pontoons in the middle of the basin and on the dolphins in the deep water channel of the River Carron with some odd pairs nesting on some of the unused basin jetties.

Rosyth Dockyard

Common tern counts were not possible this year due to security arrangements surrounding a nuclear submarine; the population, however seemed as healthy as last year.

FSG FOOTNOTES

DATES FOR MAIN ISLAND COUNTS

Bass Rock	1, 9, 13, 23 June
Craigeith	9, 16, 22 June
The Lamb	1st June
Fidra	1st June
Eyebroughy	1st June
Inchkeith	1 June
Carr Craig	31 May
Haystack	31 May
Inchcolm	29 May, 3 June

Inchmickery	31 May
Inchgarvie Forth Rail Bridge	31 May
Long Craig	late May to Aug
Isle of May	late May to early June

TERNs IN EAST SCOTLAND

Data supplied by the East Scotland Tern Conservation Group (ESTCG) whose monitoring area stretches from the Borders to the southeast boundary of the Moray Firth. Collated by Pete Gordon / Andy Wight. Counting unit is in pairs.

Totals for East Scotland	<u>2002</u>	<u>(2001)</u>
Arctic tern	>691	1300
Common tern	665-7	1166+
Sandwich tern	975	1304
Little tern	80	75
Roseate tern	2	1

Firth of Forth Breeding Terns

These totals include all island and mainland sites, with 2001 totals in brackets.

Arctic tern	234	(916)
Common tern	169	(824)
Sandwich tern	0	(500)
Little tern	1	(0)
Roseate tern	2	(2)

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Appendix 1

Seabirds Ringing Totals Forth Islands

2002

(Data supplied by the Lothian Ringing Group)

Total

Species	Adult	Pullus	Total New	Retrap
Fulmar	5	169	174	1
Cormorant		121	121	
Shag	12	167	179	28
GBB Gull		1	1	
Kittiwake	3	217	220	1
Guillemot		19	19	2
Razorbill	7	24	31	2
Puffin	11	12	25	

Craigeith

Species	Adult	Pullus	Total New	Retrap
Fulmar	2	80	82	
Cormorant		70	70	
Shag	12	150	162	28
GBB Gull		1	1	
Kittiwake	2	11	13	
Guillemot		18	18	2
Razorbill	7	24	31	2
Puffin	11	11	22	

Inchkeith

Species	Adult	Pullus	Total New	Retrap
Fulmar	3	89	92	1
Cormorant		51	51	
Shag		17	17	
Kittiwake	1	206	207	1
Guillemot		1	1	
Puffin		1	1	

Appendix 2

Bird Counts on Craigleith 2002

9/6/01 Count of east cliff from boat: Wind E force 3-4; 8/8 cloud; raining and sea rough so the figures for E cliff are likely to be less accurate than usual, count started at 1130. Counters: Bill Bruce, Lesley & Henry Fairweather, Mike Fraser, Vicky Hughs, Alan, Emily & Fiona Leitch, Ian Thomson

16/6/02 Count from landing point clockwise to N end of east cliff. SW wind force 2, 8/8 cloud. Count started 1600. Coastguards forecasting wind about to get up caused count to be halted at 1800. Counters: Bill Bruce, Lesley & Henry Fairweather

22/6/02 Count above east cliff & inland. Wind SW force 2 rising to force 5; 7/8 cloud; warm; count started 1030. Cormorants not counted though number of nests thought to be similar to last year. Counters: Bill Bruce, Lesley Fairweather

	Unit of count	S Side 16/6/02	W&N Side 16/6/02	Above E Cliff & SE corner 22/6/02	East Cliff 9/6/02	Inland 22/6/02	Total
<i>Fulmar</i>	<i>Sites</i>	6	52	89	27	22	196
Kittiwake	Nests	9	57	1	316		383
Guillemot	Birds		179	59	1320		1558
Razorbill	Sites	5	61	37	38		141
Shag	Nests	10	84	120	2	17	233
Cormorant	Nests			Similar to 2001			Yes
Herring Gull	Nests						Yes
LBB Gull	Nests						Yes
GBB Gull	Nests	1		2		3	6
Puffin	Burrows						Yes

Appendix 3

Bird Counts on Bass Rock 2002

Count of inland areas carried out by Alan Leitch about 1 June 02.

9 June 02: Easterly wind 4-5, misty with rain, 8/8 cloud. Bad swell so impossible to count east side of island.

Counters: Bill Bruce, Lesley & Henry Fairweather, Mike Fraser, Vicky Hughs, Alan, Emily & Fiona Leitch, Ian Thomson

13 June 02

Counters: Lesley Fairweather, Mike Fraser, Vicky Hughs, Alan Leitch, and Ian Thomson

Due to the poor weather conditions and rough seas, the count figures for cliffs are likely to be less accurate than usual.

	Unit of count	Inland 1/6/02 ?	W Cliffs 9/6/02	E Cliffs 13/6/02	Total
Fulmar	Sites		22	11	33
Kittiwake	Nests		404	370	774
Guillemot	Birds		1140	1820	2960
Razorbill	Sites		153	40	193
Shag	Nests		18	7	25
Herring Gull	Nests	87			87
LBB Gull	Nests	1			1
GBB Gull	Nests	1			1
Puffin					

Appendix 4

INNER FORTH ISLANDS GREY SEAL SUMMER COUNTS 2002

31st May

Haystacks	40
Long Craig Rocks, Dalgety Bay	8
Downing Point Rocks, Dalgety Bay	2
Cow and calves Rocks (Inchmickery)	c22
Oxcar	c 36
Carr Craig	c12
Meadulse Rocks (N.of Inchcolm)	c 40
Inchcolm	c10

3rd June

Inchcolm	26
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29th June

Inchkeith	c18 on Iron Craig
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6th July

Inchkeith	c12 on Iron Craig
-----------	-------------------

24th September

Inchcolm	22+
Haystack	12+
Meadulse	6+

INNER FORTH ISLANDS GREY SEAL PUPPING SURVEY 2002

15th November

Inchkeith

A total of 18 grey seal pups were counted at the island's southern point, in the same area where the cormorant colony is located during the spring-summer months. All the pups were one day old – two and a half weeks old. Twenty-three adult seals were counted in or out of the water in the vicinity of the pupping grounds, and another ten adult grey seals were seen in the water around Inchkeith. There were no grey seal pups at any other place on the island this year.

25th November

Inchgarvie, Carr Craig	None present
Haystack	c22 on tidal rocks. No pups
Inchmickery	
One bull, one cow and one c3-4 week old pup present (west shore)	
Inchcolm	

Eleven pups were discovered in south bay. All were two weeks to four-five weeks old. One bull plus seven cows seen at or near the colony. Two bulls and another seven cows were elsewhere around the island, but no pups at other locations.

INNER FORTH ISLANDS COMMON SEALS SURVEY 2002

31st May

Carr Craig 4

7th August

Inchmickery 11 present with young

25th November

Inchmickery One pup on east side (c3 months old?)

Appendix 5

Fulmars at Tantallon, East Lothian, 2002

The fulmar colony on the cliffs by Tantallon Castle is one of the largest in the Forth. As a mainland colony it is vulnerable to ground based predators and human disturbance, although the latter is thought to be negligible. Several sections of cliff, which held apparently nesting fulmars in June produced few if no visible young later in the summer.

Three sections of particularly steep cliff have been monitored for some years as part of the national programme on seabird productivity. From 1997-2001 these three sections have held from 100-137 apparently occupied sites in June. Productivity has ranged from 0.50-0.16 large young per site in August. In 2002, there were 100 AOS in June. On 5th August, only one young fulmar was visible though sea fog reduced visibility. Another visit on 10th August confirmed that this was the only young bird on any of the three monitored sections. No young were visible on adjacent cliffs. The whole colony was not checked but it appears to have produced virtually no young in 2002.

This was by far the lowest breeding success I have recorded for this colony. Only one young fulmar was visible on 5th August (a rather foggy day) and this was confirmed in better visibility on 10th August. The three areas of cliff that are monitored are among the steepest and least accessible to land based predators, which are probably an important factor in limiting fulmars at this site.

	<u>AOS (9th & 15th June)</u>	<u>Young (5th & 10th August)</u>
A	45	1
B	30	0
C	25	0

Stan da Prato