

ROSEATE TERN NEWSLETTER NO 9, 1997

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Introduction

This has been a pretty good year for roseate terns in most countries, with increases being apparent in Ireland, France, Azores, USA and Seychelles. However, Great Britain has suffered further population declines.

Scotland

The main Roseate colony in the Firth of Forth had a disastrous season this year. Around 7 pairs nested on the colony that is on a low shingle islet, but all failed due to flooding (per. Mark Oksien). On the Isle of May a pair nested again this year. One was the same bird from Rockabill from last year but the partner was a new bird. The pair succeeded in hatching a chick but this failed to fledge (per. Mike Harris).

On Inchmickery one pair of roseate terns held a territory this year but there was no evidence of breeding. There were 16 pairs of Common Terns on the island also but all these had failed and departed by the 30th of June. The count of Herring and Lesser Black-Backed Gulls was the highest this year since records began with 392 nests being found. The suppression of vegetation using black plastic sheeting was not necessary this year due to sea spray over the winter killing large areas of growth, notable at the east end of the island where the terns normally nest. The shingle plots on the islands were maintained by spreading the gravel evenly over the underlying plastic sheet and the chick shelters were repaired and repositioned (per Dave Fairlamb).

England

Does anyone want a few thousand pairs of Puffins? Their burrowing is greatly reducing the vegetation cover on Coquet Island, resulting in large areas of bare soil. The lack of nesting habitat may have accounted for the reduction in breeding pairs from 38 in 1995 to only 24 pairs this year. The missing 14 pairs were located in Sunderland docks where a common tern colony has recently been increasing. On the Farne Islands there were again 2 nesting pairs.

The Coquet faithful had a good breeding season, with a mean clutch size of 1.38 (38% were 2 egg clutches) and 26 fledged young (1.08 chicks per pair). The rebellious Sunderland dockers did not fair so well with only two chicks seen, so they will hopefully return to Coquet next

year. A total of 25 chicks were ringed and measured, with 18 being trapped and re-measured at least once. 70% of the breeding birds were checked for rings and 21 individuals had their ring sequences read. In 1995 ring reading showed that at least revealed half of the birds on Coquet were from Rockabill. Nest box occupancy on Coquet was unusually high this year, and this may again reflect the lack of vegetation cover. This made finding chicks far easier than in previous years as they were often in the nest boxes and old tyres that were deployed as shelters. Feeding watches were continued this year and attempts were made to re-establish tree mallow in the main colony and the lighthouse compound. Old tyres were again placed out on the Farne Islands and these were used as shelters by the chicks. (per. Rob Lidstone Scott).

There were no nesting pairs of roseate terns on Scilly again this year. Common terns nested on Green Island, a low lying rocky islet off Samson successfully this year, a contrast with previous seasons when they were usually flooded. The eradication of rats from Samson has been successful but gull numbers have increased. Efforts to encourage terns to nest on Samson instead of Green Island using decoys and sound recordings have failed, perhaps owing to the spread of large gulls into the area. The feasibility of gull control on Samson is being investigated (per. Peter Robinson).

Two pairs nested in two different sites in Hampshire. One of these pairs fledged a single chick but the fate of the other breeding attempt is unknown. One pair also bred at a colony on the North Norfolk coast.

Wales

A very poor season for Roseate Terns on Anglesey, with only one pair being present. Only one pair of roseate terns nested on the west coast site and none nested on Skerries or Cemlyn Bay. Wardening continued for other tern species at all these sites, including protection against disturbance, habitat management and discouragement of predators. On the west coast site a boat landing was made by egg collectors who took several Common Tern clutches, but the roseate tern clutch was not taken. The people were arrested by the coast guard but had dumped the eggs before capture (per. Alastair Moralee).

Northern Ireland

The number of pairs of roseate terns on Swan Island in Larne Lough, Co. Antrim increased from 7 pairs to 13 pairs and these fledged a minimum of 6 chicks. None nested on the nearby

artificial Blue Circle Island that was built as tern nesting habitat. There were no pairs on the other historic breeding sites in Northern Ireland.

A team of volunteers built and positioned 42 nest boxes on Blue Circle Island in March and early April. These cost very little as off cuts from the fitted kitchen industry were used in construction. None were used for nesting but many common tern chicks used the boxes for shelter. Hopefully they will prove attractive nest sites in the next few seasons and this will establish a population of Roseates on the island.

Roseate terns made the news during a public enquiry into a proposed dump at Mageramorne Quarry, this being a short flight from the islands in Larne Lough. RSPB were a key objector on the basis that the tip would attract gulls and would loaf on the islands in larger numbers than they do at present and could cause increased disturbance and predation at the tern colonies. The results of the Enquiry are expected next year. (per. Dave Allen).

Republic of Ireland

A total of 563 pairs of roseate terns nested on Rockabill this year, with an average clutch size of 1.61, with three clutch containing 3 eggs. Colony productivity was estimated at 1.37 chicks per pair, based on subtraction of dead chicks and addled/ punctured eggs found on the colony from the total number of eggs found. 591 chicks were fitted with rings and wing and weight measurements were made for most of these. 498 rings were read using a telescope, with 125 being repeat read three times and so certainty of identification was high. Of these 115 were ringed as chicks on Rockabill, 4 at lady's island and one at Isle aux Dames in France. Habitat management and gull control was also carried out and nest boxes were distributed around the colony. Detailed studies of chick provisioning rates by known aged partners for which the sex was known were conducted this year. The main component of the diet was sprat, with sandeel and rockling being of some importance and immature gadoids (probably saithe) being irregular. This work will be written up as part of an MSc. (From a report by Rick Mundy and Cathrine Hannon).

This was an exceptional year at Lady's Island Lake, Co. Wexford with increases in all 4 nesting tern species on Inish. Roseate terns increased by 100% to 124 pairs. The average clutch size was high at 1.7, with hatching success being 75-93% and productivity being 1.07 chicks per pair. A total of 106 chicks were ringed and considerable effort was invested in ring reading of adults. Five of these were ringed as adults 13 years ago. Many adults were ringed as chicks

on Wales and Rockabill as well as Lady's Island. Water levels in the Lake remained high that prevented mammalian predators reaching Inish. Feral geese were present again this year but caused less disturbance than in 1995. Geese were discouraged from settling on Inish by taking a boat around the island periodically and the firing of a rifle to scare them away (From a report by Anne Newton and Eugene Wallace).

France

In Brittany there was an increase in the numbers of roseate terns in Ile aux Dames from 85 in 1995 to at least 100 pairs in 1996. At least 6 ringed birds were present. Ile aux Moutons had a single breeding pair in a nest box that successfully fledged one chick. This is the first breeding record for roseate terns on this island since 1983 (per. Bernard Cadiou).

Azores

A survey of terns and gulls for the entire archipelago was undertaken this year with funding from an EU Life grant. A total of 1197 pairs of roseate terns were counted, a slight increase from the 1093 pairs counted in 1995 and the highest count for 7 years.

In the Western group of the archipelago, Flores had a total of 419, mainly on 3 colonies in the Alagoa and Ponta Delgada colonies to the NW of the Island. Corvo had 83 pairs on the huge vertical sea stack at the north end of the island.

In the central group, the colony situated at Capelinhos Volcano increased from 70 to 138 pairs. This is a new colony that was first used in 1995 and is situated in rubble at the base of a cliff. There was another poor year on Graciosa with a total of 30 pairs, 25 of these being on Ilheu Gaivota, where most clutches appeared to have been deserted, 5 pairs on Ilheu Baxio and no pairs on Praia. At Terceira, the Contendas colony declined from 114 pairs to 84 pairs. There were 37 pairs in Sao Jorge, 17 pairs on Pico.

In the eastern group of the archipelago there were no pairs on Sao Miguel but Santa Maria held 389 pairs, with the small islet of Ilheu das Lagonhas having an impressive 248 pairs compared to 30 pairs in 1995. Many of these birds probably moved there from Vila Islet.

Wardening of the Contendas on Terceira, that is prone to disturbance, continued this year. However the islets at Alagoa were not warded despite picnickers causing a colony desertion here in a previous year. Progress with implementing a wardening programme on sensitive tern

colonies on the Azores has been rather slow despite this being an objective of the Life project. Detailed studies were again carried out by a student on Santa Maria this year and the understanding of diet and feeding ecology on the Azores is being improved. Studies of ratios of flush counts to clutch counts were also conducted to calculate correction factors so that the numbers of pairs can be estimated from counts of flushed birds. This is especially important on the Azores as many colonies are on inaccessible cliff ledges or stacks and so clutch counts are often impossible. (per. Luis Monteiro, Jamie Ramos and Encarnacan Sola)

USA

The annual census of roseate terns in the USA yielded a total of about 3,650 nests at 17 sites during the peak nesting period in late May to mid June. This is the highest total since comprehensive surveys began in 1987, and probably the highest since the population crash in the early 1970s. The pattern of census data since 1987 is a steady annual increase of 2-3%, broken by a sharp drop of 15-20% between 1991 and 1992. Because of uncertainty with count data it has taken almost 10 years to establish this pattern with reasonable certainty.

The outstanding success in recent years is the re-establishment of a colony at Ram Island, Massachusetts, by gull control operations in 1990-1992. Roseate terns first nested in 1993 and increased to over 400 pairs in 1995 and almost 750 pairs in 1996. Many of these birds have moved from the overcrowded colony site at Bird Island, 10km away, but others have moved from other sites, and the total number at the 2 sites has increased by almost 25%. This success has been offset however, by the loss of the Cedar Beach colony, New York in 1995-96 and by the disappointing results at another re-established colony at Gardiners Point, New York, where only 4 pairs returned in 1996.

Reproductive success was below average at most sites in 1996: average productivity of the regional population probably fell below 1.0 fledglings per pair for the first time in recent history. At colonies in the western and eastern parts of the range, low productivity was attributed to low food availability, predation and/or wet foggy weather. At the large colonies in the centre of the range, breeding success was initially only a little lower than usual, but many late chicks were lost to flooding during the tropical storm 'Bertha' in mid July. (per. Ian Nisbet).

The study of metapopulation dynamics of roseate terns in the USA between 1988 and 1992 have found some very interesting results that have considerable conservation value. Mark-

recapture studies demonstrated that the annual adult survival rate is 82% and 7% moved between colonies, with younger birds showing lower site fidelity than older ones. Analysis suggests that movement between colonies is related to characters of the destination colony than those of the colony of origin or the distance between colony sites. The results of this work are described in more detail in Spendelow *et al.* (1995). In the 1980s and 1990s only Bird Island and Great Gull Island produced sufficient chicks to balance adult mortality while Falkner Island was a 'sink' population, being maintained by recruitment from the other 2 colonies.

This work has made the conclusions that (1) The availability of nesting habitat is not a major limiting factor, (2) the initial colonisation of the of new or historic sites is done mainly by 3 to 6 year olds, (3) older terns will move to new sites within 2 years of the site being colonised, (4) Survival rates for the species are low compared to other seabirds, (5) Catastrophic events such as Hurricanes can greatly reduce post fledging survival and (6) most mortality occurs outside the breeding season. The low survival rate appears to be the most important limiting factors on the recovery of Roseate Terns (from a report by Jeff Spendelow).

Results of a detailed study of chick provisioning rates on Falkner Island are now published in a report. Provisioning rates of males (0.75 feeds/hour) were significantly higher than that of females (0.67 feeds/hour). The rate of provisioning increased with the age of the male rather than the age of the female, but a slight decline was evident in males over 11 years old. Growth rates of a-chicks were similar, regardless of male age. However b-chicks in broods of 3-4 year old males never gained mass and none survived. Sandeels were the most common prey item fed to mates and chicks. Herring and Silversides were fed more often to mates, whereas rockling and immature bluefish were more often fed to chicks (from a report by David Shealer).

Seychelles

The population on Aride increased this year to 1,255, this being the highest count since 1990. Most of these were in the Western Woodlands colony, with Bois Torte having only 13 pairs and the Lodge Glade again having no breeding pairs despite vegetation management at the site. Productivity was 0.32-0.40 chicks per pair. Observations from a hide suggested that a large proportion of chick mortality was due to high levels of conspecific aggression. Later on in the season, heavy infestations of ticks were found on chicks. Barn owls killed at least 18 adults and many chicks. Fortunately the fruiting of the *Pisonia* trees did not coincide with the roseate tern nesting season this year and this eliminated mortality due to entanglement with the sticky seeds.

There was no strong evidence of food shortage as in previous years when complete colony failures occurred. (per Anna Maria Maul).

West Africa

Counts of roost sites were carried out for the 10th year by the Ghana Wildlife Society. Terns started to increase in numbers on roost sites in August and peaked in October / November before declining sharply in December. The key sites for roosting terns were the Songor Lagoon with a peak November count of 700 roseate terns and Densu Delta with a peak count of 260, these sites accounting for 70% of the peak counts. Both of these wetlands are Ramsar Sites. The totals of roseate terns counted were considerably higher than in previous years, reflecting increases in the European population (from a report by Yaa Ntiamoah-Baidoo). However, these totals still fall well short of the estimated total European population of 4000 breeding adults and approximately 2000 pre-breeders. It seems that other areas within West Africa may be as important as Ghana for wintering roseate terns. Much of the knowledge of winter distribution comes from ringing recoveries. The high ring recovery rate in Ghana due to tern trapping may have over-emphasised its relative importance as a wintering ground (Ed).

Inter-Reg

Roseate tern conservation and research in Anglesey and Ireland will receive a considerable financial boost this year following a successful bid for funding under the European Union Inter-Regional (Inter-Reg) Scheme. This encourages adjacent European countries to co-operate in addressing environmental issues. Partners in the project are the Irish Wildbird Conservancy and National Parks and Wildlife Service in Ireland and North Wales Wildlife Trust, Countryside Council for Wales and RSPB in Anglesey. The project will run for 3 years. The funding will be used to employ more wardening staff, carry out habitat management and increase research effort. A project officer will be appointed in Ireland to co-ordinate work on Rockabill and Lady's Island.

Roseate tern Workshop

The 1997 roseate tern workshop will be held in Horta, Azores on 26-27 April, this being arranged by myself and Luis Monteiro. All offers of presentations or posters are welcome. All those interested in attending should contact me. The programme will hopefully include a visit to breeding colonies where some Roseates should be present. Look forward to seeing you there.