RSPB INFORMATION

ROSEATE TERN NEWS: NO 5.
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Introduction

Welcome to the fifth edition of Roseate News that as usual contains contributions from roseate workers throughout Europe and beyond.

Due to changes within the RSPB I have taken over the production of this newsletter from my colleague Mark Avery. Although Mark will continue to coordinate research on terns, and I'm sure many of you will continue to have contact with him, I would like to take this opportunity to thank him for producing earlier editions of this newsletter and all the hard work he has put into coordinating roseate tern work to date.

Graham Elliott, RSPB

Roseate Tern Meeting

Following on from the success of last year's meeting a second meeting has been arranged to take place in Dublin on 19th-20th March 1991. The meeting will be hosted by the Irish Wildbird Conservancy and as before we hope that many of you will be able to attend, contribute to discussions and give talks. Any person who wishes to attend the meeting should return the attached booking form by 25th February. For those requiring meals and accommodation the conference fee will be approximately Irf58. Financial assistance for people from EC countries other than Britain and Ireland will be available.

Britain and Ireland

1990 was a year of mixed fortune for the number of breeding pairs of roseates at UK and Irish colonies (Table 1). We know from observations in the Azores and ringing recoveries within the UK and Ireland that roseates move around between colonies. The changing status of roseates between some colonies may reflect this inter-colony movement. This illustrates the need for a coordinated approach to include birds throughout the European range of the species. As yet there is no evidence to suggest that the NW European and the Azorean population move between colonies. Observations in winter indicate that the two populations spend some of the non-breeding season together. Continued colour ringing of these populations should answer these questions and will help direct future conservation action.

THE ROYAL SOCIETY FOR THE PROTECTION OF BIRDS

The Lodge, Sandy, Bedfordshire SG19 2DL Tel: 0767 680551

Table 1: Numbers of roseate terns nesting at important British and Irish colonies during 1988-90.

Colony	1988	1989	1990
Farne Islands Northum.	21	12	0
Coquet Island Northum	21	25	23
Inchmickery Lothian	21	5	0
Fife	0	0	13
Fidra Lothian	0	0	0
Ynys Feurig Anglesey	45	70	35
Skerries Anglesey	0	19	7
Cemlyn Bay Anglesey	0	2	6
Swan Island Co. Antrim	23	37	19
Green Island Co. Down	7	25	3
Sandy Island Co. Down	0	0	2
Strangford Lough Co. Down	0	0	1
Tern Island Co. Wexford	0	0	0
Rockabill Co. Dublin	332	194	321
Lady's Island Lake Co. Wex'	0	76	60
Scilly Cornwall	1	3	?
Total	470	468	490

Roseates in Britain

Anglesey

The tern colony at Ynys Feurig failed completely this year with all birds having left the islands by mid-July. Failure was caused by egg and chick predation by non-breeding herring and lesser black-backed gulls. No terns fledged from the islands.

35 pairs of roseates attempted to breed, 41 eggs were laid and 22 chicks hatched - eleven of which were ringed. Overall clutch size was a meagre 1.17. Ten clutches were laid in the boxes provided - all of these were single egg clutches. Hatching success was higher for eggs in boxes (80%) than those outside (45%) and the chicks appeared to survive a little longer. All eventually succumbed to the gull onslaught.

Plans are in hand to deal with the gull predation in 1991.

Perhaps the only ray of good news is that many of the roseates which were ringed at Feurig in the past are now breeding on Rockabill.

On the Skerries, seven pairs of roseates bred laying ten eggs. Seven hatched and just two fledged. A combination of bad weather at hatching time and some gull predation was probably responsible.

Although none of the 62 boxes provided were used as nest sites 60% were used for shelter by chicks including 16 out of the 19 which were facing south, south-east or south-west.

Arctic tern numbers continue to increase with 460 pairs breeding in 1990, around 300 chicks fledged.

Alistair Moralee, RSPB

Coquet Island, Northumberland.

Coquet Island is a small sandstone platform of just under 6 hectares just off the coast of Northumberland in north-eastern England. Amongst the terns, gulls eiders and puffins on this small RSPB reserve the number of roseate terns has remained steady at an average of around 22-23 pairs every year for the last decade and have not dropped below 18 pairs since 1977. This year 23 pairs nested with common and Arctic terns in amongst the nettles around the edges of the island. Until 1990, fledging success remained steady; however, this years fledging rate was slightly lower than in the past - only 0.83 fledged per nest compared with a usual average of around 0.9. The reason for this reduction is believed to be partly due to the denudation of much of the island's vegetation caused by two consecutive dry summers and an increase in erosion as a result of the explosion of the Puffin population. Although most of the roseates on Coquet use burrows as their main means of cover, the loss of large areas of vegetation may have rendered the chicks more susceptible to predation.

Jane Brookhouse, RSPB

Forth Islands, Firth of Forth.

In 1990, for the first time in 20 years, there were no breeding roseate Terns on the RSPB reserve of Inchmickery. Over the last few years the numbers of Sandwich and common terns has declined on the island as well, a management plan currently in production is proposing action to reverse this trend.

Thirteen pairs of roseate terns did however breed on a small nearby island previously only used by common terns. This site is managed by the Scottish Wildlife Trust and cover is provided in the form of old fish boxes.

Ian Bainbridge, RSPB

Roseates in Ireland

Northern Ireland.

A very bleak picture with only 25 pairs at peak in the whole of the Province. The main site was Swan Island, Lough Larne, Co. Antrim (RSPB Reserve) where 19 nests were located on June 13th. By June 27th after some horrendous weather only 18 could be found with eggs and live young. A number of dead (drowned) chicks and cold eggs were discovered plus a number of empty scrapes.

Green Island in Carlingford Lough, Co. Down only had three nesting pairs, this was once Northern Ireland's major colony. Two pairs were present at Sandy Island, Co. Down in early June but any nesting attempt by them and the vast majority of other terns at the site were thwarted by local foxes. Some encouragement came from Strangford Lough, where roseate terns have been absent for a number of years, when one pair attempted to nest on Jackdaw Island (a former breeding site). Unfortunately they failed to breed successfully, along with the bulk of other terns, due to the attentions of a local peregrine and the inclement weather.

Dave Allen, RSPB
Bob Brown, National Trust

Rockabill

The summer of 1990 was a good breeding season for the colony of roseate terns nesting on the tiny lighthouse island of Rockabill, 7km off the north Co. Dublin coast. A total of 321 breeding pairs of roseate terns was recorded, representing an increase of 128 pairs on the previous summer. Four hundred and twenty six pulli were ringed, indicating a productivity of 1.33 chicks per pair, although subsequent observations of 7% unringed birds among the fledged chicks on the island suggest that breeding output from the colony was even higher.

The success of the colony was guaranteed by the continuous presence of wardens throughout the breeding season. The protection scheme, operated jointly by the Irish Wildbird Conservancy and the Irish Wildlife Service (with financial assistance from the RSPB) ensured that disturbance was kept to a minimum, with only 13 potential incidents, one of which involved an attempted landing by a yachting party with a dog. Increased local awareness of the protection scheme, poor weather in June and July and interest in the world cup may each have contributed to the decline in attempted visits to the island.

IWC wardens, Liam Ryan and David Steele, continued the management activities on the island that were initiated in 1989. Gulls nesting on a nearby island were culled prior to the arrival of the terns. Tree Mallow plants, which provide excellent cover for nesting roseate terns, were transplanted to new areas on the island with high survival. Of 43 nest boxes that were located in more exposed areas of the colony 31 were occupied by nesting roseate terns.

A major development during the 1990 season was the reading of the BTO ring numbers on 241 roseate terns in the field using telescopes. Of 47 birds ringed on the island in 1987 and 1988 and seen again this summer, 85% had lost their colour rings. This allayed our fears of a very low return of these year cohorts to the colony and highlighted the need for a better ring design. Dr. David Cabot who is undertaking a long term ringing study of roseate terns on Rockabill has confirmed that the majority of the ringed birds originated from this site. However, 91 birds had been ringed at six other colonies in the Irish Sea including 65 terns at Ynys Feurig in Wales. One bird from the Farne Islands was controlled.

These observations serve to illustrate the extreme importance of Rockabill for roseate terns at the present time. Hopefully, the continued success of the colony will provide a reservoir of birds for the recovery of the population elsewhere throughout its range.

Dr. Micheal O Briain, Irish Wildbird Conservancy
Oscar Merne, Irish Wildlife Service

Lady's Island Lake

Lake drainage again allowed the usual predator problems despite ongoing control of foxes. Both badgers and peregrines caused problems early in the season but fortunately both had left by the time that roseates began to arrive in earnest. An electric fence was erected for the remainder of the season. Strips of vegetation one metre wide were sprayed on the nesting island and a number of nest boxes supplied.

Despite the presence of predators, which may have delayed birds settling at the site, four roseates returned on the 28th May increasing quickly to 60 breeding pairs by the 20th June. At least 20 pairs made use of nest boxes which was possibly the main factor allowing the roseates to fledge 25 chicks despite bad weather. Under the same conditions 416 pairs of comic terns produced only 38 chicks.

Eugene Wallace, Irish Wildlife Service

Roseates in France

In 1990 roseate terns were recorded at or near to five SEPNB reserves around the Brittany coast but the only significant breeding colony remains the Ile aux Dames in the Baie de Morlaix. At this key site 95 pairs successfully fledged 100 young. All potential breeding areas were closely wardened in 1990 but disturbance from holidaymakers still remains the major problem. In 1990 wardens had to intervene on 140 occasions to prevent tourists from landing on occupied tern islands this is despite increased publicity in local newspapers and on local radio.

Prepared from a report by Alain Leroux, SEPNB

Roseates in the Azores

The main aim of the 1990 field season was to provide a detailed quantitative assessment of the breeding success of roseate terns and common terns for the Azores. We also wanted to re-assess the population and continue our studies, initiated in 1989, on feeding, chick growth, timing of breeding, attendance patterns etc and the various factors likely to influence breeding success. Strong winds and bumpy seas were constant features of April, May and June, resulting in frustrating periods at airports or harbours waiting for the conditions to become more favourable.

As in 1989 egg laying was considerably earlier in the west of the archipelago, with at least 25 clutches laid on (or just before) the 27 April. On Flores, the peak in egg laying occurred on the 7 May whereas peak egg laying in the eastern most island, Santa Maria, occurred during the last week of May. Just over 1000 pairs of roseates were recorded during 1990 and there was a marked inter-island and seasonal variation in clutch size. Overall clutch size was 1.45 (n= 378), slightly lower than the 1.57 (n= 320) recorded by David Cabot on Rockabill during 1990.

Our observations on tern attendance patterns and their relationship with numbers of breeding pairs and/non-breeding birds will form the basis of a monitoring programme currently being formulated by Mark Avery, Rhys Green and Adrian del Nevo.

The mean nesting success for 305 pairs of roseates spread throughout the Azores was 0.89 fledged chicks/pair. Breeding success of roseate terns on the Azores falls within the range of values for north American birds (see Nisbet et al.,1990. Colonial Waterbirds Vol.13, No.2 85-91) both of which are lower than the estimated 1.33 chicks/pair for Rockabill birds.

Almost 400 roseate chicks and 20 adults and a similar number of common terns were colour ringed.

There was some evidence that fish may have been less easily available during 1990 with some eggs left un-attended, slightly fewer feeds/chick, relatively long incubation shifts, the non-incubating or brooding birds spending shorter periods at the nest site than in 1989.

Colony disturbance is still a contributory factor influencing nesting success at some colonies on the Azores, although we need more information on the scale and overall importance of this threat. Similarly, we need more information on within- and between-season variation in the food supply, and both of these factors will require more attention in 1991.

A number of institutions and individuals helped us during the season and we would particularly like to thank Luis Reis, Mario Lajosa, Joao Cordosa, Regina Cunha, Ricardo Santos, Lurdes and Jorge Cunha, Gabriela Silva, Mario Gomes, Maria Vale da Paixao e Silva, Camara Municipals da Graciosa, Terceira, and Sao Jorge, Dept. Regional de Ambiente, Portuguese Navy, and the Forestry Dept.

Apart from the data on breeding numbers and success the intensive fieldwork in the last two years has given us a good picture of the real and potential threats facing roseate terns. Alongside this fieldwork we have attempted to increase the public's awareness of terns and to assess the success of educational and management actions.

The major threats identified are: 1) disturbance by crab and limpet collectors, tourists and fishermen: 2) introduced predators: 3) habitat destruction: and 4) competition with fisheries. In some of the major roseate tern colonies casual disturbance has been a real and upsetting event. Moreover, the potential impact of the decline in the stock of the black-spot sea bream (*Pagelos bogaraveo*), a major prey species, requires further research.

To improve public awareness of birds (particularly terns) and the importance of protection we identified the need for open forums, mainly with fishermen and students, and the need for graphic and audio visual material, e.g., leaflets and films on Azorean TV.

However, the real vulnerability of some of the major roseate tern colonies to disturbance, predation and the decline of prey species requires special and urgent management actions. Working in close collaboration with the Azorean Regional Department of the Environment, we proposed that an interdepartmental working group be created which would ensure the production of a management plan including: 1) wardens in the main and more vulnerable colonies during the breeding season; 2) terrestrial predator control; 3) regulation of fish exploitation; and 4) habitat protection and conservation.

The recent designation of several Special Protection Areas under the EC Birds Directive was an important step. Now there is a need to enforce these conservation measures in the field to allow terns to return to these islands. Always!.

Luis Monteiro & Fatima Melo, Universidade dos Azores
Adrian del Nevo, Pete Akers, RSPB

Roseates in Africa

As you read this Pete Akers and I will be in warmer climes looking for roseate terns. Studies in Ghana have shown that roseates and other palearctic terns leave west Africa during late November/early December. The timing of this departure is probably related to sea temperature. Warmer sea temperatures lead to faster growth rates of young anchovy and sardinella, the principal prey of roseates in and around Ghana, and with increased size these fish move into deeper waters and become unavailable to terns. The problem is that we don't know where roseates (and other terns) spend the period between when they leave Ghana and their return to European breeding grounds.

Considerable information e.g. proximity of the continental shelf (an area rich in marine life), seasonal oceanographic up-welling, fishery statistics, ringing recoveries, and casual sightings all indicate that Senegal and The Gambia are likely wintering areas. To see if this is the case, I shall be spending half of January and most of February looking for roseates both on the coast and along the continental shelf. Meanwhile Pete Akers has been fortunate in gaining permission to join the British government research vessel, the Charles Darwin, on her journey between Dakar, Senegal and Accra, Ghana. At the same time the Save the Seashore Birds Project survey team will be working in Ghana. This coverage will give a unique opportunity to investigate the winter distribution of roseates and other terns. It may also shed some light on the factors which influence their survival during this currently unknown period of their life. We hope to report on our findings at the next roseate tern conference. We hope you are having a mild winter.

Adrian del Nevo

Roseates in Canada

A recovery team for roseate terns in Canada was established in October 1990. One of the first tasks of the team will be to complete an up-to-date inventory. Only about 20 breeding pairs were found in 1990, but others may still be breeding on the many islands around southern Nova Scotia. The major problem facing this peripheral population is thought to be pressure from herring and great black-backed gulls settling on the breeding sites. Dr Anthoney Lock of the Canadian Wildlife Service (c/o Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia B2Y 4A2) has prepared management plans for both gulls and terns in Atlantic Canada. He will be studying roseate terns and harassing gulls on Sable Island in 1991.

Anthoney Lock and Ian Nisbet

Roseates in the USA

The 1990 census again showed a total of about 3300 pairs at 18 sites in the northeastern USA. This population has remained more or less stable for the last 10 years, despite continued high breeding success. A two-year gull control programme was initiated to restore a former colony site at Ram Island, Massachusetts.

1990 was the last year of a four-year cooperative study programme, in which breeding success, and other aspects of breeding biology have been studied at each of the four largest colonies and at several of the smaller colonies. Altogether about 1800 nests have been followed to completion, including 475 by known aged parents, and more than 1000 chicks have been weighed regularly to 20 days of age. About 9000 chicks have been ringed, mostly with a single colour ring indicating the colony of origin, and 1900 adults have been marked with unique combinations of one metal and three colour rings. Over half the total population is now ringed.

The detailed studies of breeding will be phased down in 1991, but some trapping and sighting of marked adults will be continued to develop a demographic model.

Unfortunately, the Darvic colour-rings used in 1988-89 (butt-ended rings supplied by A.C. Hughes) have proved impermanent: at one colony about 3% of rings have been lost in each year, and about 2% of the colour-ringed adults suffered foot injuries. Almost all the Darvic rings used in 1990 have been heat sealed, which appears a promising solution to these problems, but the planned demographic studies have been somewhat compromised. Darvic rings should not be used on this or any other ground-nesting species unless sealed.

The recovery team for the population in the area of the Caribbean under U.S. juristiction (Florida Keys, Puerto Rico, U.S. Virgin Islands) has been redesignated under the chairmanship of Dr. Jorge Saliva (U.S. Fish & Wildlife Service, P.O. Box 491, Boqueron, PR 00622, USA). This population includes several thousand pairs, but its management is complicated by movements into and out of other juristictions (Bahamas, British Virgin Islands, etc.). Roseate terns in the Florida Keys are critically short of nesting sites; some have been nesting on building roofs, including one successful colony on top of a six-storey building.

Ian Nisbet

Name: .....

Address: .....
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.....

I will attend the meeting on roseate tern conservation on 19th-20th March.

I will require overnight accommodation for 19th March YES/NO
(please indicate)

Please inform us of any special dietry requirements you may have
e.g. vegetarian:

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.....

I would like to give a talk entitled:

.....
.....
.....

The following topics are ones which it would be useful to discuss:

.....
.....
.....

Please return completed forms by 25th February to:

Micheal O Briain
IWC
Ruttledge House
8 Longford Place
Monkstown
Co. Dublin
Ireland

or Graham Elliott
RSPB
The Lodge
Sandy
Beds
SG19 2DL
United Kingdom

Further details to follow.