



### Introduction

1992 was another year of mixed fortunes for Europe's roseate terns. Breeding numbers were again up in the Republic of Ireland with good numbers of young fledging. Numbers in the United Kingdom were low, despite colonies in Scotland and NE England showing small increases on 1991, the total was well down on the late 1980's. Roseate terns in Brittany bounced back remarkably well after high adult mortality in 1991. Of most concern was the decline on the Azores where numbers dropped from 1121 pairs in 1991 to 750 pairs in 1992. The total number of breeding pairs in Europe declined by 19% from ca 1675 pairs in 1991 to 1354 pairs in 1992.

### **Roseate Tern Conference, Brittany - 24-26 April 1992**

Roseate tern enthusiasts from 3 continents and 7 countries gathered in Brittany in April to exchange information and discuss the conservation of this bird. This was a useful and productive meeting made all the more enjoyable by excellent French hospitality. As well as covering the status of roseate tern colonies on both sides of the Atlantic, tern trapping and conservation initiatives in Africa and the birds nest site selection and feeding ecology, a Research Plan for Roseate Terns in the Eastern Atlantic was presented to the meeting. Copies of this plan are available from Adrian del Nevo. In addition it was agreed that the following individuals would act as co-ordinators to bring information together on these key issues:

Vegetation and Erosion Management Patrick Warner, National Parks and Wildlife Service, Bellview, MULLINGAR, County Westmeath, Ireland.

Predation Graham Hiron, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK.

Nest Boxes/Shelters Adrian del Nevo, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK.

Education Ken Smith, International Department, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK.



**Table 1 1992 EUROPEAN BREEDING SEASON SUMMARY**

Numbers of roseate terns nesting at important colonies during 1988-92

	1988	1989	1990	1991	1992
Republic of Ireland					
Rockabill, Co. Dublin	332	194	321	366	378
Lady's Island Lake, Co. Wexford	0	76	60	60	76
TOTALS	332	270	381	423	454
United Kingdom					
Swan Island, Co. Antrim	23	37	19	4	2
Green Island, Co. Down	7	25	3	0	0
Sandy Island, Co. Down	0	0	2	0	0
Strangford Lough, Co. Down	0	0	1	0	0
Forth Islands, Lothian	21	5	18	21	17
Farne Islands, Northumberland	21	12	4	3	3
Coquet Island, Northumberland	21	25	23	20	29
Isles of Scilly, Cornwall	1	3	?	6	6
Ynys Feurig, Anglesey	45	70	35	1	0
Skerries, Anglesey	0	19	7	0	0
Cemlyn Bay, Anglesey	0	2	6	3	7
TOTALS	141	198	118	58	64
Brittany					
Ile aux Dames			95	40-100	80-85
Ile de la Colombiere				2	1
Ile aux Moines				2	0
TOTALS	72	109	95	44-104	81-86
Azores (Island totals, not colonies)					
Santa Maria		116	220	102	279
Sao Miguel		0	0	0	?
Graciosa		275	150	74	119
Faial		0	60	90	20
Sao Jorge		5	2	135	10
Pico		23	50	21	6
Terceira		93	95	5	?
Corvo		0	19	?	?
Flores		480	455	694	316
TOTALS	?	992	1051	1121	750
GRAND TOTALS	?	1569	1645	c1675	1354

## ROCKABILL 1992

The success of breeding roseates on Rockabill continued into 1992 with a record 378 pairs, producing a clutch size of 1.83, which resulted in productivity of 1.7 per pair. A total of 648 roseate chicks were ringed. Irish Wildbird Conservancy Wardens Liam Ryan and Paul Galvin continued the management activities and the intensive research programmes from previous years. Due to culling and scaring by rifle, gulls were virtually absent throughout the season. A series of "rides" were once again cut through the dense areas of mallow and tern tables aided ring reading greatly. A record total of 375 BTO metal rings were read by telescope throughout the colony, and not just in the easy bits. Seventeen fledged roseates from Lady's Island, sporting their brand new roseate special rings (on their left leg) were read here in mid July. From observations, only three unringed fledglings were sighted and presumably these came from Lady's Island also.

Nestboxes continue to be used successfully with 114 being occupied by breeding roseates and the remainder being used for chick shelters. The computer weighing programme continued with outstanding success despite exploding batteries and short circuits, espionage, however, was not suspected.

Two pairs of arctic terns bred here for the first time this year and common tern numbers were up substantially on previous years. However, chick mortality among commons was high during a spell of inclement weather.

Human disturbance throughout the season was very low with few boats attempting to land presumably due to effective wardening. Apologies to those who tried to 'phone the island but couldn't get through because of a clapped out mobile 'phone, habitat extension continued at the end of the season with rock pools being converted into vegetated areas suitable for nesting terns.

With the continuing success of the Rockabill colony the importance of this type of management cannot be understated.

Liam Ryan & Paul Galvin

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## LADY'S ISLAND 1992

The season at Lady's Island proved to be a good one for the roseates. Voluntary wardens were present for most of the nesting season in a joint National Park and Wildlife Service/Irish Wildbird Conservancy Programme. The wardens, Ferdia Marnell, Clair McCinly and Pat Maddock were mainly involved in disturbance control to prevent unauthorised access to the colony and in public relations. Seventy six roseate nests were found and marked with numbered tags, this is a 26% increase on the previous years' total. Over 51% of the roseates nested on altered habitats, details of which were studied. It is felt that productivity was of the order of one chick per pair.

The 1129 pairs of sandwich terns present at the colony fared equally well as the roseates. However, common and arctic terns totalling 529 pairs fledged few young, less than 100. Several fully grown but very light chicks were found dying. Starvation is the most probable cause as adverse weather did not occur at that time.

Eugene Wallace

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#### NORTHERN IRELAND 1992

There were no breeding records for Strangford Lough, Green Island or Sandy Island, County Down this year. Two pairs attempted to breed on Swan Island, County Antrim. Both pairs laid single egg clutches, one hatched but the chick disappeared (possibly predation), the other failed at the egg stage. Conversely other species of terns on the island did well with apparently good productivity.

All in all a very disappointing season for roseate terns in Northern Ireland.

Compiled from a report by Dave Allen.

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#### COQUET ISLAND, NORTHUMBERLAND 1992

The 1992 season was a good one for roseate terns breeding on Coquet Island off the Northumberland Coast. The first bird appeared on 4 May and in total there were 29 nests, which is the highest number for 10 years (29 in 1982). The warden estimated that there were, in fact, between 27 and 30 pairs, one or two of the nests being re-lays. Thirty five chicks were ringed, using the new roseate tern ring, but of these three died prior to fledging. In addition at least three chicks were missed, indicating that at least 35 chicks fledged. This gives a productivity of approx 1.21 chicks per pair.

Vegetation management was undertaken in the nettle plots as usual, but these open plots tend to be used more by common or arctic terns, rather than roseates. The roseates nested more in the peripheral nettle clumps and old puffin burrows around the edge of the island. Nestboxes were not deployed this year (nor, indeed, have they ever been on Coquet) but following his visit this spring, Adrian del Nevo recommended that some are put out in 1993.

Jane Brookhouse

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#### ANGLESEY 1992

The worst year for roseate terns on Anglesey for many years with only one site (Cemlyn) holding breeding roseate terns.

Ynys Feurig - traditionally the roseate tern stronghold, none bred this year and there were greatly reduced numbers of common and arctic terns. Although this site did not hold breeding roseates this year it is nevertheless extremely important to keep the site available. No gull

predation of other terns this year though still considerable peregrine predation of young chicks and some adult arctic terns.

Skerries - c700 pairs of arctic tern, seven pairs of common but no roseates despite small numbers present at various times. A moderate season for the other terns with c350 fledged. Predation of eggs and young by gulls and an oystercatcher. Many (c40) peregrine visits.

Cemlyn (North Wales Wildlife Trust) - seven pairs of roseates bred, 12 chicks hatched. At least five pairs used nestboxes. Five young birds were ringed with the new rings. Some predation by lesser black-backed gulls.

Alistair Morallee

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**SCILLY 1992**

The situation was poor for roseates again on Scilly in 1992. Around 6-8 pairs appear to have been present but nesting attempts in several situations have been frustrated by a variety of problems - cats on Tresco, tourists on rocky inlets near shore, gales on off-shore rocks and rats on Sampson. However, at least two chicks are thought to have fledged despite all odds.

Action to tackle some of the problems is being followed up this winter, including rat control measures on Sampson.

Compiled from a report by Peter Robinson

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**BRITTANY 1992**

**Table 2 Roseate Terns in Brittany 1991-92**

	Breeding pairs		Fledged young	
	1991	1992	1991	1992
Ile aux Dames	40-100 <sup>1</sup>	80-85	35-40	50-60
Ile de la Colombiere	2	1	?	1
Ile aux Moines	2	0	?	0
<b>Total</b>	<b>44-100</b>	<b>81-86</b>	<b>35-40</b>	<b>51-61</b>

**Baie de Morlaix**

Despite the mortality\* that affected breeding adults in 1991 in baie de Morlaix, the number of breeding pairs was more important in 1992 than at the end of the 1991 season. The number of fledged young was also more important.

<sup>1</sup> The 100 pairs noted in newsletter number 6 were estimated early in the season but it was not possible to carry out a thorough census at that time. A detailed search in late September revealed 40 nests. The 1991 population was therefore estimated to be between 40 and 100 pairs.

In 1992, it seems that Ile aux Dames had the advantage of new individuals from other colony(ies).

The site management is mostly possible because of enthusiastic volunteers who we congratulate. Fieldwork becomes harder and harder, because experienced people have not enough time to help them. The volunteers of SEPNB did appreciate the opportunity to discover the way European and American sites are managed, presented at the meeting at Carantec.

Daily wardening is always justified on the site because of frequent visits by people sailing or fishing. Numerous interventions were useful against people who are not informed, or who do not respect rules in this place. Killing gulls was managed with difficulty, many missions were delayed because of bad weather or lack of people. Gull colonies are always so important in baie de Morlaix and harassment has caused disturbance to tern colonies: several lesser black-backed gull pairs may have taken young from nest sites and may have caused early fledging in the three tern species, nesting in the reserve.

Nest boxes have attracted sandwich terns in early season. Roseates have apparently preferred tall vegetation, more important this year (1992) (the late season visit will give the best idea of the distribution of breeding sites).

Following the suggestions made in Carantec, SEPNB arranged to ring young, with Museum d'Histoire Naturelle de Paris. The planned visit of Adrian del Nevo (or someone else used to ringing roseates) was essential. Problems of communication with the Azores made this impossible. We hope to do this in 1993.

We feared that the events of 1991 would cause trouble to the colony this year. It has not. The 1992 season had mean success, compared to recent years.

*\* The death of 53 roseate terns has not yet been explained; no trace of poison in carcasses (but small sample), no proof of any epidemic. On the other hand, small holes discovered in the back of the head on carcasses may indicate predation. Mustellid traps set on the island early in the 1992 season, did not catch anything.*

Guillemette Rolland

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## ROSEATE TERNS, AZORES 1992

### Population

There was no complete survey of the archipelago but a population estimate based on visits to all main colonies and potential sites resulted in 736 pairs (Table 3). The 1992 population estimate represents a decrease of c.34% on 1991 and the lowest figure for the Azores. It was not possible to visit some sections of coast on Sao Jorge, Terceira and Faial and there was no coverage of Sao Miguel and Corvo. Colour ringed chicks from 1989 and 1990 were seen in colonies on Santa Maria and Flores. At one colony on Santa Maria a maximum of 20 first summer birds were seen which represented 6% of the total adult roseate population at that colony during 1992. Several first year birds were on territory but no eggs were recorded.

## Distribution

Flores, Graciosa and Santa Maria continue to be the most important locations for roseate terns in the Azores. Within these islands we gained more evidence of inter-colony movement. Individually colour-ringed (1991) birds from Ilheu de Vila, Santa Maria, were recorded as breeding adults c.40km away. Only one pair of roseates bred at Praia on Graciosa and the 119 pairs were fairly evenly distributed between four relatively small but difficult to access sites. 71% of roseates on Flores were on Baixa do Moinho, and the colony at Lajado (totally inaccessible to everything except gulls) was completely empty.

## Productivity

Only three colonies were assessed for productivity estimates on Flores. The largest (225 pairs) was almost completely destroyed due to a prolonged visit by picnickers and fishermen. One chick was found c.8 days after the event and it was thought that a maximum of three chicks were alive. The majority of nest sites had been deserted. In the central islands productivity was low with several eggs deserted at Furnas and Pico with few chicks seen on Graciosa and Faial. The overall picture indicates low breeding success throughout the Azores. Data have not been computerised but the general impression is one of sudden and dramatic food shortages at some locations, particularly for the inshore feeding common terns. Large numbers of 1-3 day old chicks (mostly commons but some roseates) were found dead. Two day old chicks were c.40% below normal body weight. Several chicks were found with Capros aper stuck in their throats. This spine covered, low calorific value, fish has only previously been observed as a display fish by roseates and commons.

## Ecology

Studies of tern feeding ecology, incubation patterns, adult body weight, chick growth, clutch size, egg size etc were continued and will provide useful comparative data with previous years. The new roseate special ring was used. There are some problems with the rings which will need to be sorted out. At the time of my departure (16/7/92) only 104 roseate chicks were ringed with c.12% of these measured more than once. It was only possible to catch 23 adult roseates.

## Conservation

Two newspaper articles, a three minute television spot (at peak news time), and greater involvement by Government, island and legislative officials helped to direct attention to specific problems at some locations. One of the Azorean MEPs stirred things up for the Government at two locations by suggesting (in Brussels) that they were ignoring their responsibilities towards roseate terns in the Azores. The Friends of the Azores, a relatively new NGO have proven to be an active and effective ally of conservation work in the Azores. ADN has been working closely with them and they are very keen to help with the production and distribution etc of education/conservation material.

Adrian del Nevo  
Mario Gomes  
Fatima Medeiros  
Luis Monteiro

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## Roseates Terns in the USA, 1992

1992 was a poor year for roseate terns in the northeastern USA. They arrived a week late and nested one to two weeks late in most of the colonies. The annual census yielded a total of 2,932 pairs at 17 colony sites, a decline of about 18 per cent from the 1991 total. Similar declines were noted in common terns at most of the same colonies. Spring and summer were unusually cool and sea temperatures were low, so it may be that a substantial number of birds did not breed in 1992. The average productivity of those that did breed was about 1.0 fledglings per pair, lower than normal but not dramatically so.

Detailed studies were continued in the five largest colonies. For individual marking of adults, we have started to switch from combinations of three darvic colour-rings to the special numbered incoloy rings supplied by RSPB. Almost 1,000 special rings were put on chicks. A new study at Bird Island, the largest colony, was designed to investigate supernormal clutches (SNCs) containing three or four eggs. SNCs usually comprise about four per cent of clutches laid at Bird Island. We sexed many of the adults attending SNCs by analysing DNA from blood samples. Many of the SNCs were attended by female-female (FF) pairs and we also found two MFF trios, one FFF trio and one FFFF quartet. These observations suggest that the sex ratio is strongly skewed in favour of females. I would welcome information on the frequency of SNCs in other populations.

David Shealer reports that roseate terns in Puerto Rico also had a poor year in 1992. They arrived late, nested in reduced numbers and with low synchrony, laid small clutches (mostly single eggs) and suffered heavy predation from turnstones. Fish samples included unusual numbers of pelagic fish, suggesting low availability of fish inshore.

Ian C T Nisbet

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### NEWS UPDATE

#### Roseate Tern Symposium 1993

A one day roseate tern symposium will take place in Arles, France as part of the Colonial Waterbird Conference, 6-10 October 1993. The title of the symposium is 'Recent advances in the Biology, Conservation and Management of a Globally Threatened Colonial Waterbird - the Roseate Tern'. It is hoped that as many people as possible that are working on roseates will be able to attend. The meeting is being jointly organised by Ian Nisbet, Jeff Spendelov and Adrian del Nevo. More details, costs etc will be available by the end of March. If you are interested please write to ADN as soon as possible.

In view of the nature and timing of this meeting it will serve as the roseate tern liaison meeting for 1993. Further consideration will be given to holding a future liaison meeting in Azores.

Robin Wynde

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#### **ROSEATE TERN RINGS**

Good and bad news. At last we obtained a roseate special ring to increase the chance of reading rings and identifying individuals without re-trapping. However, as many of you know there have been problems with it. The ring is very difficult to close and does not always butt-up correctly. Even more worrying, several ringers have noted duplication of ring numbers and missing ring numbers. Clearly there are many problems that need to be sorted out with the suppliers. I enlisted the help of a team of volunteers to check all the rings that have yet to be distributed. Action is being taken to correct the problems that we have identified.

Adrian del Nevo

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#### **FORTHCOMING PAPERS**

A paper on the status and distribution of roseate terns in the Azores is due to be included in the next issue of SEABIRD. A chapter on the roseate tern is due to appear in a forthcoming ICBP publication covering international initiatives in bird conservation. Other papers should be produced over the next few months as I have become more desk bound. There is an enormous amount of non-breeding / breeding data to be written up; which hopefully we can all benefit from in the near future. A list of recent and relevant articles and papers will appear in the next newsletter.

Adrian del Nevo

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#### **A NOTE FROM THE EDITOR**

My apologies for the delay in getting this newsletter to you, especially to those who sent in their contributions on time and must have been wondering what had happened to their efforts. The next newsletter will appear as soon after the end of this years breeding season as possible. In the meantime any comments on the content of the newsletter or any contributions from any reader would be received with interest.

Robin Wynde, RSPB, Sandy, Bedfordshire, SG19 2DL, United Kingdom

Table 3 Roseate tern breeding pairs for each island of the Azores 1984, 1989-92

Island	1984 <sup>1</sup> %	1989 <sup>1</sup> %	1990 <sup>2</sup> %	1991 <sup>3</sup> %	1992 <sup>4</sup> %
Santa Maria	70 (10.9)	116 (11.7)	220 (21.0)	102 (9.1)	279 (37.2)
Sao Miguel	30 (4.7)	0 (0.0)	0 (0.0)	0 (0.0)	?
Graciosa	112 (17.4)	275 (27.7)	150 (14.3)	74 (6.6)	119 (15.9)
Faial	70 (11.0)	0 (0.0)	60 (5.7)	90 (8.0)	20 (2.7)
Sao Jorge	35 (5.4)	5 (0.5)	2 (0.2)	135 (12.0)	10 (1.3)
Pico	20 (3.1)	23 (2.3)	50 (4.7)	21 (1.9)	6 (0.8)
Terceira	42 (6.5)	93 (9.4)	95 (9.0)	5 (0.4)	?
Corvo	0 (0.0)	0 (0.0)	19 (1.8)	?	?
Flores	263 (41.0)	480 (48.4)	455 (43.3)	694 (62.0)	316 (42.1)
Total	642 (100) 867 <sup>5</sup>	992 (100)	1051 (100)	1121 (100)	750 (100)

Notes:

- 1 Complete survey of the Azores archipelago.
- 2 Most known tern sites were visited. Complete coverage of Flores, Graciosa, Corvo, Faial, and Santa Maria.
- 3 Most known tern sites were visited. Complete coverage of Flores, Graciosa, Corvo, Faial, Sao Jorge, and Pico.
- 4 Complete coverage of Flores, Graciosa, Pico, Sao Jorge and Santa Maria. Partial coverage on Faial and Terceira. No survey of Sao Miguel and Corvo.
- 5 Re-calculated total see del Nevo et al. (in press)