RSPB INFORMATION

ROSEATE TERNS: No. 4
FEBRUARY 1990

EC Money

A proposal prepared by the RSPB in conjunction with Société pour la Protection de la Nature en Bretagne, Irish Wildbird Conservancy, Irish Wildlife Service and Universidade dos Acores was successful under the EC ACE initiative. This will fund conservation measures throughout the EC range of the Roseate Tern (which luckily corresponds with the European range) for the next three years. All involved parties have been contacted and the details of the contract explained. Just a reminder: keep original receipts.

Roseate Tern Meeting

I have organised a meeting to discuss Roseate Tern conservation this spring, near RSPB headquarters. The meeting will take place from lunch time on 10 April to lunch time on 11 April. I 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 15 March. Financial assistance for people from EC countries will be available. I hope this will be the first of many such annual meetings, but that depends on this one!

Anglesey

Alistair Moralee, RSPB Anglesey warden writes: *Anglesey has traditionally held a high proportion of the British and Irish Roseate Terns with at least eight sites used at some stage in the last century. The general decline has been mirrored on Anglesey with only two sites regularly used in the last 10 years and most birds concentrated at one site off the North-west coast. Since 1975 the RSPB has wardened this site, first with volunteers and now with contract wardens who watch the site, patrol for foxes (which can reach the islands at low tide) and carry out research. Recently numbers have declined at this colony, due at least in part to the attentions of a local pair of Peregrines, and 1987 and 1988 saw the lowest number of breeding birds at the colony for many years.*

Andrew McKeeman and Barry McDonald were the wardens in 1989, arriving on 10 May to erect signs and undertake limited vegetation cutting before the terns arrived. In the past two years the RSPB has been conducting an experiment to provide nest-boxes on the islands - partly to provide protection from the elements but also from avian predators. 25 boxes (each about 12"x12", 6" deep and with a 4" wide door) were put out on the islands in 1988. Only three were used by nesting Roseate Terns but several were used by chicks for shelter. Of the 25 boxes provided in 1989, 14 were used for nesting - 10 by Roseate and 4 by Common Terns and again some were used by chicks. Of 27 eggs known to have been laid in nest boxes 26 hatched and one was damaged whilst in the box - presumably by an adult. Around 70 pairs of Roseate Terns nested this year, 89 chicks were ringed by the stalwart team of Arthur Jones and Bill Ashby and possibly as many as 100 young fledged.

THE ROYAL SOCIETY FOR THE PROTECTION OF BIRDS

The Lodge, Sandy, Bedfordshire SG19 2DL Tel: 0767 80551

The Skerries is that rare thing in the Roseate Tern world - a ray of hope! Lying about 2 miles off Anglesey's north coast it held hundreds of pairs of Roseates Terns in the 1920s and 30s. Breeding was last recorded in 1951 so 21 pairs in 1987 was a great surprise and just reward for the RSPB's act of faith in signing a management agreement with Trinity House in 1983. 1988 was, however, a great disappointment with the Arctic Tern colony deserting early in the season and no Roseate Terns breeding at all. In 1989 Bob Price and Dave O'Hara became the first wardens to live on the Skerries with the RSPB taking over part of the lighthouse and were rewarded with 19 pairs of Roseate Terns and the return of the Arctic Tern colony. 42 nest boxes were placed on the Skerries with just one pair of Arctic Terns using a box, but a further 20 'open-fronted' boxes were put out in June and at least 16 were used by chicks for shelter and protection. It may be that the boxes have to be on the islands for two seasons before they are accepted by the terns - 1990 should show us if this is the case. Also on the Skerries we've been planting Tree Mallow as potential cover à la Rockabill. It's too early to know whether this will work but the Mallow is growing well and should be big enough to provide some cover next year .

With double the number of Roseate Terns breeding compared with 1988 and a healthy number fledging 1989 has to be counted a good year by recent standards, roll on the 90s and more Roseate Terns than we can count!

Ireland

Lady's Island lake: Eugene Wallace of the Wildlife Service reports that this year can only be described as an astounding success! Numbers of breeding Sandwich (1,317 pairs), Common (450 pairs) and Roseate Terns (76 pairs) are all higher than for many years. 72 Roseate Terns were ringed. The terns' success may be due to predator control over the past few years. In 1989 rats were controlled with poison and five mink were trapped on the lake shores.

Rockabill: Micheal O'Brien and Oscar Merne write: *The history of the Rockabill Roseate Tern colony has already been described (ROSEATE TERNS 3). In 1988, 332 pairs bred, protected by the lighthouse keepers. As the lighthouse was automated in April 1989, the Irish Wildbird Conservancy and the Irish Wildlife Service (with financial help from the Irish Heritage Council and RSPB) jointly wardened the site. IWC Wardens John Quinn and Liam Ryan were present from early May until late August, and were assisted by many Wildlife Service personnel operating a weekly rota.*

The wardens kept disturbance at a low level by preventing unauthorised landings and by regulating their own movements near nesting areas. Several boats tried to land, and were it not for the wardens serious disturbance would have occurred during incubation and chick-rearing.

In May, before the terns arrive, seedling Tree Mallows were transplanted to enlarge this favoured Roseate Tern nesting habitat. Nest-boxes were put in exposed areas and three pairs laid eggs in them; others were used by chicks as shelters. Herring gulls, nesting on a nearby rock, were culled in late May, and consequently there was little predation on tern eggs and chicks, although once a Great Black-backed Gull broke the wing of a young Roseate, causing it to fall into the sea and perish.

193 pairs of Roseate Terns and 108 pairs of Common Terns bred in 1989; a 42% decrease in of Roseate Tern numbers from 1988. This can largely be accounted for by the increases in Roseate numbers at other sites.

On two visits David Cabot ringed 254 Roseate and 164 Common chicks. The Roseates were also given dark blue colour rings on their right tarsi. Wing lengths and weights of pulli will provide useful information on the chick development. Studies of feeding, during courtship and chick rearing, showed that clupeid fish were the major prey, with sand-eels much less important. Common Terns had more varied diets, and sometimes fed their chicks with moths. Information on prey size, as well as frequency, will provide a baseline for comparison with future years and other colonies.

France: les sternes de Dougall ont eu un succès fou en bretagne.
Alain Leroux from SEPNB writes that Brittany saw great progress in 1989 with 106 pairs of Roseate Terns. Birds were seen at four colonies but bred at only two, and all but one of the pairs was at the SEPNB reserve at Ile aux Dames in the Baie de Morlaix in Finistère. The sites were wardened and the wardens had to intervene over 250 times during the course of the breeding season to prevent disturbance by tourists. Wardening was successful and at Ile aux Dames around 130 young Roseate Terns were fledged. This is the most successful year for Roseate Terns in France for many years.

Ghana:
Adrian del Nevo reports interesting sightings of colour-ringed Roseate Terns in Ghana. In a flock of 222 Roseate Terns (itself an impressive sight) Adrian saw birds ringed as pulli in Britain and Ireland in 1989 (8), 1988 (5) and 1987 (1) as well as two pulli ringed by him on the Azores this summer, and a bird ringed by the 1984 Azores expedition. Adrian also says that somebody in northern Europe ringed a Common Tern with a Roseate colour ring this year! Adrian has also seen Azores-ringed Common Terns in Ghana.

Azores 1989
Peter Akers writes of his and Adrian del Nevo's summer in the Azores: *the first season of this joint project between the Universidade dos Acores and RSPB investigated the distribution and numbers of Roseate and Common Terns and began studies of breeding biology.*

Work went very well, all islands were visited between 29 May and 3 July. Roseate Terns were breeding on six, and Common Terns on all nine, main islands. 992 pairs of Roseate and 4015 pairs of Common Tern were found. The corresponding figures for 1984 were 647 and 2000. However, direct comparison of these counts is inappropriate since in 1989 revisiting sites indicated that some birds arrive late in the season and would have been missed in 1984. Comparing visits of roughly comparable dates in 1984 and 1989 suggests that Roseate Terns have increased by about 14%; but this is probably within the margin of error of the counts. At least, Roseate Terns do not seem to have decreased since 1984 and Common Terns seem to have increased.

The revised total of just under 1000 pairs represents c.66% of the western Palearctic's Roseate Terns. As in 1984, Flores, the most westerly island, held most (48% of the Azores total) and included two colonies of 150+ pairs. The number of Roseate Tern colonies was similar in both 1984 and 1989 but the number of Common Tern colonies increased. Up to four Sooty Terns

frequented one colony and one pair was proved to breed (only the second nesting record for the western Palearctic).

Some interesting questions concerning the timing of arrival and breeding across the archipelago arise. Why do both Roseate and Common Terns arrive and nest much later on Santa Maria (the most southerly and easterly island) than on the other islands? Why do Roseates (except those on Santa Maria) breed earlier than Commons; the reverse of the pattern elsewhere in the north Atlantic?

Information on clutch size, egg size, egg weight and chick growth were collected. 61 Roseate and 216 Common Tern chicks were colour-ringed (yellow on one leg and green on the other for Roseates and blue replacing green for Commons).

Adverse affects on breeding success included disturbance by fishermen, shellfish collectors, picnickers and tourist boats, predation by mammals and in one case an earthquake-induced landslip fell upon a large mixed colony.

Collaboration with colleagues at the Universidade dos Acores (particularly Fatima Madeiros, Frias Martins and Duarte Furtado) and many other local people enabled successful completion of the survey and the great friendship encountered made the season very enjoyable.

A paper on the status, distribution and conservation of Roseate Terns in the Azores will soon be submitted to Biological Conservation.

Important Bird Areas in Europe by Richard Grimmett and Tim Jones.
This important publication is produced by ICBP and IWRB and lists sites of importance for birds. Most Roseate Tern colonies are included with information about their current status. One surprise, for me, was that the Canaries hold small numbers of Roseate Terns, so that Spain is the fifth European country to have responsibility for this species.

Birds to Watch by Nigel Collar and Paul Andrew
An ICBP publication which lists birds threatened with extinction. Roseate Tern is classed as being near-threatened.

A good omen?
The successes of Roseate Tern, a 3-year old filly, have been watched with great interest, and some profit, by members of the RSPB research department. After coming third in the Epsom Oaks she was second at Royal Ascot and Goodwood before winning at Haydock and York. The St Leger was next on the list where she was second again.

USA
Ian Nisbet writes: *The north-eastern population of the Roseate Tern (breeding from Long Island to Maine) was officially listed as Endangered on 2 December 1987. At the same time the Caribbean population (Florida Keys, Puerto Rico and US Virgin Islands) was listed as Threatened. The small population breeding in Canada (mostly in Nova Scotia) has also been designated as Threatened (IR Kirkham and DN Nettleship, J Field Ornithol. 58: 505-515, 1987). Official listing under the US Endangered Species Act provides for enhanced protection, gives the US Fish & Wildlife Service*

(USFWS) a major role in management and restoration efforts, imposes special permit requirements for research and other activities, and gives the species a claim on the limited federal funds available for research and management of endangered species.

A five-member recovery team was appointed for the north-eastern population and issued an 86-page recovery plan in March 1989 (Roseate News 2 referred to a draft which was revised after public comment). A technical advisory group has been established also, including seven scientists who are conducting field research on Roseate Terns. In conjunction with the recovery plan, Dr I Nisbet prepared a a review of published and unpublished information on the north-eastern population. This 74-page report, entitled "Status and biology of the north-eastern population of the Roseate Tern: A literature survey and update: 1981-1989," was completed in August 1989 and is being issued by USFWS. Copies of both the recovery plan and the report may be obtained from Ralph Andrews, US Fish & Wildlife Service, One Gateway Center, Suite 700, Newton Corner, MS 02158, USA (no charge, but supplies may be limited).

A recovery team has also been appointed for the Caribbean population and has started collecting information for use in preparing a recovery plan. This population is scattered among many political jurisdictions and information on its distribution and biology in most parts of the Caribbean is fragmentary. For these reasons, the recovery team is keen to obtain any information that is unpublished or published in obscure journals. Information should be sent to Dr Joanna Burger, Dept of Biological Sciences, Rutgers University, Piscataway, NJ 08855 USA.

1989 was the third year of a four-year co-operative study of Roseate Terns in the north-east, under the overall direction of Dr Jeffrey Spendelow of the Patuxent Wildlife Research Center, USFWS. Population modelling based on ringing and retrapping at one small colony had suggested that the average annual survival rate of adults breeding there may be as low as 75% (JA Spendelow and JD Nichols, Auk 106: 367-374, 1989). A major goal of the co-operative study is to develop an improved population model for the entire north-eastern population, including estimates of adult survival, recruitment, and inter-colony dispersal. In the first three years of the programme, about 1,700 adults have been trapped on nests, and about 1,300 of these have been marked with individual combination of three colour-rings and one metal ring. Almost 20% of the regional population are now individually colour-marked, and about 40% have metal rings (including those ringed before the programme started in 1987. Preliminary reports from the 1989 season indicate that a number of birds marked as breeders in 1988 were sighted or trapped on nests in other colonies in 1989. At least two were sighted in a different colony in May 1989, but returned and later bred in the colony where they had been marked in 1988.

As part of the same programme, about 1,600 chicks have been ringed in each year, and have been given a single colour-ring designating the colony of origin. Sightings of colour-ringed juveniles in the post-fledging period show that the birds disperse throughout the breeding area in July and August. Eventually, most converge on Cape Cod, where a large fraction of the regional population (5,000-7,000 birds) can be seen at a single evening roost in September, departing within a short period around 22 September.

This concentration and synchronized migration may make the population vulnerable to adverse weather events. In 1989, hurricanes 'Hugo' and 'Iris' crossed the migration path of this population three times during the 10 days before the birds took off.

Colony counts in 1989 indicate a breeding population of about 3,100 pairs in the north-eastern USA. Canadian colonies were not censused, but might add another 100 pairs. Unfortunately, the total count is subject to substantial uncertainty (at least ±15%), because the birds at the two largest colonies nest in difficult terrain (in dense vegetation or under boulders), so that precise counts are very difficult to make. Subject to this uncertainty, total numbers have been more or less constant during the 1980's. About 85% of the total population is concentrated into the two largest colonies, about 90% in three, and 93% in four. This concentration into a few sites was the primary reason for the listing of the population as Endangered; the recovery plan designates restoration of one of the former colonies (now occupied by gulls) as a high-priority management objective.

The co-operative program also includes intensive studies on breeding performance including measurements of chick growth and survival in three of the larger colonies. Studies of food and foraging are also being conducted in several areas. This population of the Roseate Tern will soon be very well known in its breeding area. In contrast, almost nothing is known about it in its winter quarters in South America. Investigation of its status there is another high-priority management objective.

Aride, Seychelles

Information from Robert Mileto (warden) and Gill Castle, *via* James Cadbury: a better year than the past two, with c.1000 pairs producing c.660 fledged young. Roseate Terns arrived in the first week of April and most chicks hatched in the first week of July. The first flying young were seen on 21 July. Remaining chicks were deserted after heavy rains on 1 and 2 August.

Egg identification:

It is usually assumed that experienced observers can identify Roseate Tern eggs without problems but I do not know of any tests of this. Although Cramp, Bourne and Saunders (1974) considered that Roseate Tern eggs were a distinctive pyriform shape, Bannerman and Bannerman (1965) wrote that unless the parents were seen it is impossible to identify them with certainty. Some Roseate Tern eggs are very obviously long and thin but the range of overlap between Roseate and Common Tern egg measurements is great (Common, 35-48x27-33, n=400; Roseate, 38-48x27-32mm, n=180 (Schonwetter 1967)) but can we believe that all these eggs were correctly identified to species anyway? Roseate Tern eggs are often more finely marked than those of Common Tern (Cramp 1985, see plate 89). Often the clutch size (smaller in Roseate than Common), nest (copious nest material is likely to indicate Common Tern) and nest site (Roseate Terns more often nest in crevices and sites overhung with vegetation) will give clues to the species, but it is a matter of faith identifying eggs in mixed tern colonies; without seeing the adult how can one know? What do you think?

Mark Avery

Name:

I will attend the meeting on Roseate Tern conservation on 10-11 April.

I will require overnight accommodation for 10 April.....YES/NO
(please indicate)

Please inform us of any special dietary requirements
you may have e.g.vegetarian, vegan.....
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I would like to give a talk entitled:.....
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The following topics are ones which it would be useful to discuss..
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