

## RATS AND SEABIRDS ON LUNDY - REPORT OF A DEBATE

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This paper reports on the outcome of a debate held at the 1999 A.G.M. of the Lundy Field Society on 6th March 1999, at the Peter Chalk Centre, University of Exeter. Ordinarily material relating to 1999 would not be published until the 1999 Annual Report (published in 2000), however, it was felt by the Lundy Field Society Committee (meeting held on 4th July 1999) that the issue addressed was of sufficient importance to bring its publication forwards, hence its inclusion in the 1998 Annual Report. The debate was initiated and chaired by Dr. Keith Hiscock (Honorary Vice-President, Lundy Field Society). Dr. Hayley Randle, Editor

### INTRODUCTION TO THE DEBATE

For many years, there has been concern about falling numbers and lack of breeding success of puffins and Manx shearwaters on Lundy. It is recognised that there might be several reasons for any decline that has occurred but one is that rats are at least partly responsible. The Committee of the Lundy Field Society felt that it would like to see members informed of the issues surrounding concern about the decline in puffin and shearwater numbers and the importance of Lundy as a location for the ship (black) rat in Britain so that they could form their own view about the desirability of seeking to exterminate rats on the island. A range of specialists was contacted in the period leading up to the meeting on 6 March 1999 and the Society is grateful to all of those who contributed comments and suggestions (acknowledged later in this section) and particularly to those who presented the issues so clearly to the audience.

The aims of the session were to:

1. hear what the issues are;
2. debate the potential benefits and disbenefits of exterminating rats on Lundy (including possible effects of poisoning on other wildlife);
3. consider the feasibility of exterminating rats on Lundy;
4. identify research that might be required;
5. gauge the view of those attending the meeting of the desirability of exterminating rats from Lundy, and
6. provide main points and conclusions of the debate for publication in the Annual Report of the LFS.

The presenters of the issues were:

*Tony Taylor* (LFS ornithologist). Status and prospects for seabirds (especially shearwaters and puffins) on Lundy.

*Mark Robins* (Royal Society for the Protection of Birds, Exeter). Relationships between seabirds and rats - effects of extermination programmes elsewhere.

*Ian Linn* (Exeter University). The importance of the Lundy rat populations.

*Rob Wolton* (English Nature). The wildlife conservation dilemma.

Comments including identification of potential speakers and of issues for discussion had been made prior to the meeting by the speakers and by David Bullock (The National Trust), Pat Morris (The Mammal Society), Paul Roberts (The Landmark Trust), Mark Tasker (Joint Nature Conservation Committee), Derek Yalden (Department of Biological Sciences, University of Manchester), and Bernie Zonfrillo (University of Glasgow).

The debate was introduced and chaired by Keith Hiscock and a record of key points was recorded within a pre-defined structure by Myrtle Ternstrom. Following all of the presentations, the speakers came together as a panel to answer questions. In the record below, text in [ ] is of points not made during the debate but which nevertheless contain relevant information.

## THE DEBATE

The key points made during the presentations are noted below.

### 1 BENEFITS OF MAINTAINING THE RAT POPULATION ON LUNDY

#### 1.1 For scientific study

- i. Lundy is one of the few places where ship (black) rats survive in Britain.
- ii. Lundy is the only place providing the opportunity for comparative study of black and brown rats as co-habitants in which the black rat constitutes an 'outdoor' species.
- iii. Two populations living within an isolated environment over a considerable period offer opportunities to study whether they inter-relate or maintain separate populations.
- iv. Has the isolation of the Lundy populations produced any genetic variation not found in mainland or other populations?

#### 1.2 For the conservation of biodiversity

- i. The rats are a part of biodiversity on Lundy and have been there for a considerable period of time.
- ii. The isolated populations of rats on Lundy offer opportunities to study genetic variation in such populations.

(It was also pointed out, in relation to conservation of biodiversity, that neither shearwaters or puffins are endangered species worldwide and the evident decline on Lundy does not threaten the overall survival of the species.)

### 2 BENEFITS OF EXTERMINATING RATS FROM LUNDY

#### 2.1 For seabirds

- i. Extermination programmes carried out elsewhere have, for whatever reason, been

followed by recovery of seabird populations. Therefore, following an extermination programme, it might be that: puffin numbers may swell, shearwaters may breed successfully and storm petrels may re-colonise.

- ii. The seabirds which are considered threatened by rats (puffins, shearwaters, storm petrels) are rarer than rats and therefore deserve protection. If no action is taken and the number of breeding birds declines the proportional effect of rat depredations will be much higher.

## 2.2 For other species

- i. The rats pose health risks to humans.

## 2.3 General points

- i. There would be a long-term cost and effort saving in the poisoning programme around the village.
- ii. Rats are an abundant and world-wide pest that will not be kept under control by any natural predators on Lundy: there are only a few domesticated cats.

## 3 RISKS OF AN EXTERMINATION PROGRAMME TO OTHER WILDLIFE ON LUNDY

### 3.1 Warfarin has poisoned sparrows

- 3.2 Warfarin will kill rabbits which are prey/carrion to birds of prey. (However, the comment was made that there would be unlikely to be a long-term effect on other species following a rat extermination programme.)

## 4 FEASIBILITY OF EXTERMINATING RATS ON LUNDY

### 4.1 Statement of feasibility

- i. The opinion of the panel was that extermination is possible provided that the full expense of a suitable programme can be met.
- ii. Rats develop resistance to Warfarin and other chemicals. The longer delay in instigating an extermination programme, the more difficult it will be to achieve.

### 4.2 Effort likely to be required.

- i. Extensive effort would be likely to be required to reach inaccessible areas inhabited by rats.
- ii. Expense would be high. [Following the debate, an estimate of cost was given as £100,000.]
- iii. Constant vigilance would be needed to prevent a re-establishment of the rat population from shipping.

## 5 FURTHER RESEARCH THAT MIGHT BE REQUIRED ON LUNDY

- 5.1 Establish the relationship between rats and the breeding birds (for instance, monitoring equipment in shearwater burrows). [Shearwaters are known to spend time during the day down burrows in July suggesting incubation, but no young are ever seen.]
- 5.2 Establish the likely importance of other factors that might explain decline, especially food supply.

## 6 GENERAL POINTS AND DISCUSSION

It was generally agreed that studies to establish the destructiveness or otherwise of the rats or the importance of other factors in the decline of seabirds would not produce meaningful results for about 10 years after commencement. In the meanwhile, the threatened species of breeding seabirds may become extinct on Lundy. A significant issue here is the 'Puffin Island' image of Lundy: the very name in Norse means "Lund" - puffin; "y" - island. The choice between a puffin island with and a puffin island without the birds it is named after might be highly effective in raising funds for an eradication campaign.

Although the meeting was discussing eradication of rat populations, the point was also made that a programme to reduce the rat population may allow the co-existence that previously existed (except that co-existence might have relied on there being a large population of seabirds). Since the birds in question are not considered priorities for conservation in the UK, any action might/should be part of an overall bird restoration programme. Any thought of increasing the number of cats should be set to one side as they are highly destructive of wildlife in themselves.

### THE VOTE

The motion was put to the meeting:

*"That eradication of rats from Lundy is both practical and desirable in order to contribute to the recovery of shearwater and puffin populations."*

The final vote of 9 in favour of eradication and 25 against from a meeting of about 60 was followed by a discussion and further vote that suggested the meeting favoured more research before any conclusion about the need for eradication could be reached. The vote was indicative of the views of those at the meeting having heard the points raised and there is no Lundy Field Society policy on the issue of whether or not rats should be exterminated on Lundy.

*Footnotes (information not available at the debate):* Martin Coles Harman spent £350 on rat eradication in 1926 (the equivalent of about £10,000 today) but did not quite clear-out the population. He noted that "The resulting saving of bird life was clearly seen the following season". (Source: LFS Archive 22.4.47. Found by Myrtle Ternstrom).