



## Summary report for red squirrels on Furzey Island 2006

Kathy Hodder

[khh@ceh.ac.uk](mailto:khh@ceh.ac.uk)

From 31/3/07 [khodder@bournemouth.ac.uk](mailto:khodder@bournemouth.ac.uk)

At **33 squirrels**, the Furzey squirrel **population was much larger than in recent years**, recovering from the very low in population of 20 in 2003.

Survival in 2006 was average for fully grown squirrels (adults and yearlings) compared with median values for 1987-2006, and was unusually high for juveniles (Table 1).

Table1. Squirrels trapped on Furzey in 2006, and minimum survival 2005-2006

	Adult	Yearling	Juvenile	Total
Male numbers	5	5	8	18
Female numbers	4	4	7	15
Male survival %	71		71	71
Female survival %	57		1	73
Total survival %	64		82	
Median survival 1987-2005	62		41	

Fewer squirrels were in breeding condition than in 2005 when this was recorded for all of the adult and yearling squirrels. Productivity was down from 1.4 young per female in 2005 to 1.2 in 2006, but still in good contrast to the extreme year in 2003, when only 0.8 young were weaned per female. The decrease may be related to the relatively **high proportion of yearling animals** in the population.

For **long term survival** of squirrels on the island, the food supply needs to be maintained by providing suitable conditions for **regeneration of Scots pine**. The Scots pine woodland generally consists of regularly spaced, mature trees that crop well and do not require thinning. Following recent felling and understorey clearance in winter 2003, a few pine seedlings have appeared. However, without further intervention, these are likely to be rapidly over-shaded by the gorse and other regenerating understorey. Further development of the understorey was evident this year, including gorse, holly and *Rhododendron*.

Removal of large areas of understorey could make squirrels more vulnerable to avian predators, particularly if there are no 'corridors' (e.g. tree rows) remaining. Squirrels moving between habitat patches are vulnerable to predation by buzzards<sup>1</sup>. **Buzzards** are frequently seen on the island (perhaps attracted by the pheasants). Although less well recognised as a squirrel predator than the goshawk, red squirrels may make up an important component of buzzard diet. In one study in Scotland, red squirrels made up 22% of prey items at buzzard nests<sup>2</sup> and in 2001 two squirrels were found that appeared to have been killed by an avian predator<sup>3</sup> (Kenward 2002).

Following discussions with BP's contractors, Isle Shire, concerning the potential danger to squirrels from **pest control** activities, warning signs made by CEH have been placed on all visible bait boxes. These instruct staff to ensure that **bait boxes are not open during daylight**, in order to minimize risk to the squirrels. It is not clear when rat control last took place. One bait box that has been damaged since 2004 presents a particular risk because it cannot be shut. Squirrels are also encouraged to visit the lawns, and hence come into close proximity with the bait boxes by bread scraps thrown out by staff. This should be discouraged as (i) bread can be harmful to squirrels and other wildlife because it acts as empty filler and (ii) it will attract rats.

## **Recommendations**

- The increasingly imperilled status of the red squirrel both in the UK, and elsewhere in Europe in the longer term makes continued monitoring of the Furzey squirrels important.
- Monitoring increases the conservation science value of this uniquely well-studied population.
- Artificial feed sites can increase risk of avian predation (buzzards) and are not recommended.
- For long-term survival, natural food trees, especially Scots pines, should be encouraged. Some form of active management would be highly beneficial. There may be **good opportunities to test new methods for Rhododendron control**<sup>4</sup> that have recently been tested by Forest Research<sup>5</sup>.
- New Scots pines should ideally be from seed of trees that crop well on Furzey Island. Seedlings and young trees may need protection (such as cages) in order to become established.
- It is important to maintain canopy and ground cover as defense against avian predators (buzzards).
- Benefits of creating heathland will not compensate loss of habitat or cover for squirrels.
- The damaged bait box should be removed or repaired.

- Leaving out food scraps on the lawns should be discouraged. It will attract rats and also attract squirrels to the vicinity of the rat bait, making them more vulnerable.

## References

1. Wauters, L.A. (1997). The ecology of red squirrels in fragmented habitats: a review. In The conservation of red squirrels, *Sciurus vulgaris* L. (eds J. Gurnell & P. Lurz), pp. 5-12. Peoples Trust for Endangered Species, London.
2. Swann, R.L. & Etheridge, B. (1995) A comparison of breeding success and prey of the common buzzard *Buteo buteo* in two areas of northern Scotland. *Bird Study*, **42**, 37-43.
3. Kenward, R. E, (2002) Squirrel survey on Green Island.  
[http://dorset.ceh.ac.uk/Science\\_and\\_Society/Schools/Squirrel\\_Green.htm](http://dorset.ceh.ac.uk/Science_and_Society/Schools/Squirrel_Green.htm)
4. Tyler, C., and A. S. Pullin. 2005. Do commonly used interventions effectively control *Rhododendron ponticum*? Centre for Evidence-Based Conservation Birmingham, U.K.
5. Edwards, C. 2006. Managing and Controlling Invasive Rhododendron: Forestry Commission Practice Guide. Forestry Commission, Edinburgh.