

## LOCAL NATURE RESERVES IN TRUST

South West Lakes Trust manages over 50 sites across the South West of England for recreation and conservation. Two of these sites are designated as a Local Nature Reserves and a candidate Local Nature Reserve. Paul Gregory describes an existing Local Nature Reserve (LNR) and summarises work to record and conserve dormice on a candidate Local Nature Reserve (cLNR).

### Lopwell Dam LNR

Lopwell Dam is the only LNR in the West Devon Borough Council area that is primarily managed for nature conservation. The site is of high conservation value due to the flora and fauna and associated habitats that occur there. Habitats present on the site include semi-natural broad-leaved woodland of ancient character with sparse conifers in places, grassland, saltmarsh, tidal mudflats, freshwater marsh and woodland carr. The LNR covers approximately five hectares. The saltmarsh and adjacent woodland are designated as a Site of Special Scientific Interest (SSSI) and are part of the Tamar – Tavy Estuary SSSI, notified under Section 28 of the Wildlife and Countryside Act 1981. The estuary mudflats support internationally important populations of over-wintering wildfowl and waders and the area has been proposed as a Special Protection Area (SPA) under the EC Council Directive on the Conservation of Wild Birds.

### Visitors and facilities

Lopwell is situated on the lower reaches of the River Tavy in a tidal river valley (*ria*), five miles from Plymouth and seven miles from Tavistock/Dartmoor in Devon. There is a tidal causeway, which may be crossed at the low water mark. Tide tables are positioned on either side of the dam. There is a disused pump house at the site, which South West Lakes Trust intend to develop into a Wildlife Education and Arts Centre, but funds to achieve this have been extremely difficult to obtain. However, there is a wildlife and education web site available, which covers Key Stages 1 to 4 of the National Curriculum for the environment. See [www.lopwell.com](http://www.lopwell.com) The LNR receives many visitors throughout the season and May 2005 saw a peak 1,661 visitors to the site (Figure. 1).

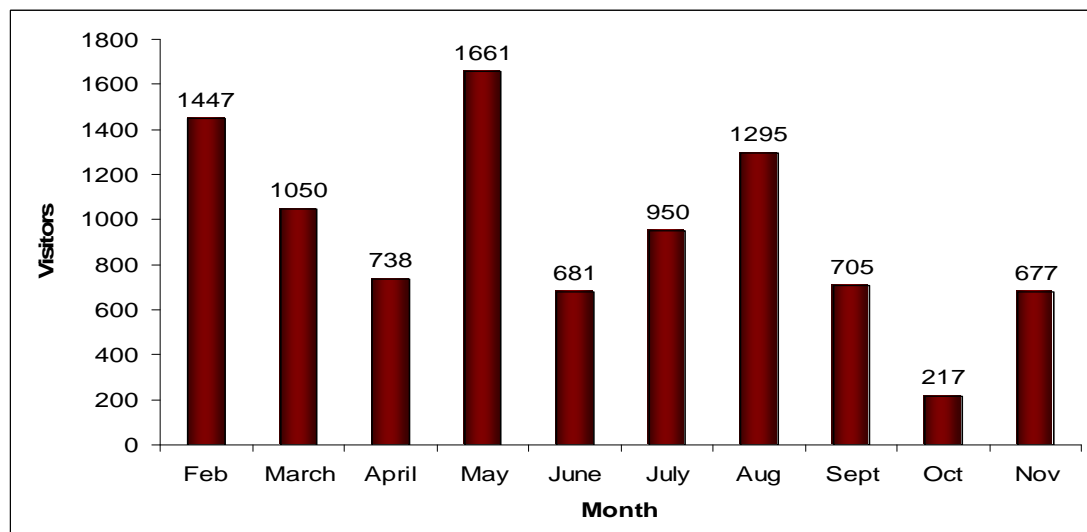


Figure 1. Visitor statistics for 2005.

## **Past Activities**

As well as Lopwell's wildlife conservation value, the reserve is also of archaeological and historical value. Lopwell Quay is a former traditional river quay with an old millstone set in the wall close to its entrance. There seems to be a traditional fording point in the river here. There are remains of an old mineshaft (*Wheal Maristow*) in the woodland on the western side of the dam. In 1294 (four years after the first documentary reference for silver/lead mining at the Bere mines), 370lb of silver ore was sent to the king from *Martinstowe* (Maristow), where there was probably a quay. Three years later silver worth £4046 and £360 worth of lead was sent.

Surface mining for silver/lead must have followed the north-south lode in the Tavy valley. Later, post-medieval mining saw the erection of a steam pumping engine by 1822 and a 400yd long flue to the chimney (out of sight of the landowner's house). The dressing floors and small lead smelter were located a little way upstream. Engine Shaft was sunk to 40 fathoms at which depth levels were dug 30 fathoms north and 100 fathoms south. Production figures and closure date are not known. The mining remains, all of which are situated in the woodland on the western shore of the dam, are of historic interest but safety must be a foremost consideration if the Trust aims to promote these. Since 1822 the small community of mining related buildings has almost disappeared into the encroaching woodland. There are also remnants of market gardening within this area.

## **Roadford cLNR**

Roadford candidate Local Nature Reserve covers approximately 33 hectares and hosts swamp, marshy grassland, dense scrub, willow carr, broadleaved woodland and coniferous plantations.

### **Hazel Dormouse (*Muscardinus avellanarius*) project.**

Surveys have revealed that Roadford hosts a healthy population of Common or Hazel Dormice (*Muscardinus avellanarius*). The Hazel Dormouse is one of our rarest native mammals and has become locally extinct in several counties in the UK within the last hundred years. The demise of dormouse populations is mainly due to loss of habitat and changes in silvicultural practice, such as large scale reduction of traditional hazel coppicing. Dormice populations are now mainly restricted to the southern and western counties, with an isolated stronghold in Cumbria.

Evidence suggests that dormice were present at Roadford pre 1989, before Roadford Reservoir was flooded and that remnant fragmented dormouse populations occur at various locations onsite. A study was initiated to identify whether dormice were still present at Roadford. Two study sites were chosen

within the candidate Local Nature Reserve (cLNR) boundary. Southweek Wood Study Area 1 is dominated by hazel stands, with beech, sweet chestnut, sycamore and ash. The area also hosts abundant honeysuckle. This part of the woodland is much older and is probably of ancient origin, an indicator of which is the associated rich ground flora. Southweek Wood Study Area 2 is dominated by planted hazel, beech, ash and sweet chestnut and has no noticeable honeysuckle. This part of the woodland is approximately 10 – 17 years old and was planted when the reservoir was completed. An unclassified road that links the A30 trunk road to the village of Germansweek separates the two areas and effectively creates an artificial barrier to dormouse immigration and emigration.

Fifty dormouse nesting-tubes were erected in the study areas on 21<sup>st</sup> March 2005, to ascertain the presence or absence of dormice. The survey revealed that dormice were present, with a nest consisting of strips of honeysuckle bark and fresh hazel leaves in a 'ball-shaped' construction, being found on 18<sup>th</sup> April 2005. Fifty Dormouse nest-boxes were then erected on the 16<sup>th</sup> May 2005 to replace the nest-tubes and most nest-tubes removed. Where a nest-tube contained nesting material, a box was erected next to it and the tube left in-situ.

Eight boxes (16%) were used by dormice at some point during the entire eight-month study. Six boxes (12%) were occupied by dormice on the monthly survey dates. In one box dormice bred and had successfully raised four, possibly five, young. All dormice occupying boxes were active and none were recorded as being torpid during the survey. A total of 10 – 12 dormice were recorded during the study period. Females accounted for <2 (16%) males <4 (33%) and sex unknown <6 (50%). The mean average weight of adult dormice recorded was 16.98g, (Standard Deviation (SD) = 2.14). Average weight of young dormice recorded was 9.07g (SD = 0.71). Male dormice travelled between 35.20m and 58.00m per month. No photographic identification was undertaken on individual dormice.

The only other species recorded nesting in the dormouse nest-boxes was wood mouse (*Apodemus sylvaticus*). Five boxes (10%) were used and these were all from Study Area 2. A total of 21 wood mice were recorded during of September and October. However, of this total individual wood mice may have been counted twice.

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