The Ghost Moth is one of the candidate BAP species that the Upper Thames Project will be looking out for

Roy Leverton

Agricultural landscape typical of where the Pale Shining Brown was discovered

Thomas Merck

Moth-friendly farming studied by Oxford team

Dr Thomas Merckx of Oxford University's Wildlife Conservation Research Unit, known as WildCRU, reports on an exciting new collaboration between the University and Butterfly Conservation

Reversing declines

The Upper Thames Project aims to pinpoint habitat management practices in agri-environment schemes that can help reverse declines of farmland moths. This involves examining hedgerow management, field margins and the presence of mature trees to see what impact they have on moth abundance, species richness and diversity during every stage of the life cycle. The study also aims to test whether these management practices are more effective when implemented in areas where farmers have been targeted to participate in agri-environment schemes.

WildCRU are grateful to the Esmée Fairbairn Foundation for funding this research project.

Butterfly Conservation's *The State of Britain's Larger Moths* highlighted that many wider countryside moths are declining. Moth numbers have dropped by a third since 1968. These creatures play an essential role in farmland ecosystems, so these declines are likely to cause harmful knock-on effects. Moths are a highly diverse group. They can occur in huge numbers and provide food for many other creatures such as bats, birds and many invertebrates. This means that they are excellent bio-indicators of farmland quality.

Urgent conservation measures are needed to halt these declines. Last year WildCRU, Butterfly Conservation and Rothamsted Research launched a five-year project. The Upper Thames-based research will examine biodiversity impacts of agri-environment schemes on moths. The aim is to secure widespread environmental benefits by encouraging farmers to manage their land sympathetically. As part of WildCRU's Upper Thames Project, researchers work with farmers and advisors to restore farmland biodiversity. Fieldwork is varied and involves egg hunts, beating and suction sampling for larvae, as well as light trapping on many different sites. The first results should be available next spring, and the plan is to pass the results on to *Butterfly* readers immediately.

An exciting discovery came about while conducting the research. Moth monitors were amazed when they stumbled upon an undiscovered hotspot for UK BAP species the Pale Shining Brown *Polia bombycina*. Adults were trapped on four different farms in the Evenlode catchment area. Sixty-eight individuals have been trapped so far, making this the strongest known colony in Britain.

The larva of the Lackey moth