Butterfly Conservation
Saving butterflies, moths and our environment

MOTHS COUNT

Position Statement on the Oak Processionary moth (*Thaumetopoea processionea*)

Background

The Oak Processionary moth (OPM) was first recorded in Britain from Cornwall in 1983 (it was also seen in Guernsey in the same year). This record was of a natural immigrant to these shores, with other immigrant examples recorded subsequently (including 2015). All records of immigrants (c.40 to date) have been of males. In 2006 the moth was discovered to be resident in West London and since that time it has expanded its distribution in the London area. In 2015 it was discovered to be breeding in the Guildford area of Surrey, this beyond the M25, although it may have been in the area for at least a couple of years, possibly longer. It was also found in Pangbourne, Berkshire, in 2010, and is still present there, but no larval nests have been located there for the last three years. These two populations are the result of accidental introduction. Prior to Pangbourne, there was also evidence of accidental introductions in Leeds and Sheffield (although these did not become established). The moth has expanded in parts of Europe in recent years.

The larvae feed on oak leaves emerging from the eggs, which have overwintered, around mid to late April (occasionally earlier). As they grow the larvae construct a nest. They pupate in July emerging as adults, flying at night from July to September.

OPM is considered to be a pest species. Large populations are reported to be able to defoliate trees and repeated defoliation is said to leave these trees vulnerable to attack by other pests and diseases, potentially leading to the death of the tree. Additionally, the larvae have tiny urticating hairs which they shed as a defence mechanism, and can cause itchy skin rashes, and occasionally sore throats, breathing difficulties and eye problems. These hairs can also be carried in the air and can persist in the environment for several years.

In this country there has been little evidence of a significant threat to trees from the OPM to date, although a few cases of total defoliation have been noted, whilst partial defoliation has been reported more regularly. Public Health England recently produced a report on the health effects of exposure to setae of OPM larvae. This concluded that for London the likely severity of impact on health was low and the likely impact on health services was low (localised).

The UK Plant Health (Forestry) Order 2005 was amended to include OPM as a quarantine pest (SI2008/644). As a consequence, all imported oak trees from EU member states must be accompanied by an official statement that they have been nursery grown and that the place of production and its immediate vicinity have been free of OPM since the beginning of last growing season. In 2014, all areas in the UK that were unaffected by OPM received the status of 'protected zone' by EU legislation, meaning that all oak trees supplied to the protected zone must be free from OPM. The Forestry Commission may also serve statutory Plant Health Notices on the owners of trees with the moth, requiring them to remove the larvae. Failure to comply with a notice can result in enforcement action and possible prosecution. For further background, see: www.forestry.gov.uk/oakprocessionarymoth

There has been considerable control work in recent years in an attempt to try to eradicate this species or control its numbers and spread (and it is likely that this will have reduced populations of OPM at the local level). Much of this control is through spraying *Bacillus thuringiensis* var. *kurstaki* (Bt) up into trees to kill the larvae. Other control methods have also been used, e.g. the mechanical removal of nests. Bt is not specific to OPM and will kill other Lepidoptera (moth and butterfly) larvae. This in turn is very likely to have an impact on their predators and parasitoids. Aerial

spraying of Bt has been used on two occasions in the Pangbourne area. There have been relatively few studies looking into the impact on biodiversity from this control, but a summary of those small studies can be seen here. Butterfly Conservation are now represented on the Oak Processionary Advisory Group where we aim to raise the profile of biodiversity issues relating to this species and its control, and to ensure biodiversity is taken into account in any control programme, alongside plant health and human health concerns.

Butterfly Conservation Position Statement

Despite an extensive and costly (largely publicly funded) control programme in recent years OPM continues to spread, and may be more widely established than is currently believed to be the case. The control programme is widely acknowledged to have an impact on non-target Lepidoptera, and this control could be having a wider[1] and longer lasting impact[2] than was initially considered to be the case. Conversely, there have been relatively few reports of any negative impacts on oak trees since the moth was first found to be resident here, with only a few cases of defoliation reported. However, it should be acknowledged that there is the potential with this species for an extensive localised outbreak to occur in any one year. In addition, there have been very few reports of negative health impacts from this species (this could be due to a lack of awareness and reporting), and this has been assessed by Public Health England as a low threat in the London area. There is, of course, the potential for health impacts to be an issue, most notably for people who work close to trees hosting OPM. In these circumstances protective clothing should be used to avoid any potentially harmful contact. Given this background, BC considers that the threat from this species appears to have been exaggerated, and the risks to biodiversity from pesticide use need to be more carefully considered when determining any control programme.

In broad terms, BC accepts that there will be a need to control this species in certain local situations. However, any control should be undertaken only when pre-defined criteria are met. These criteria should include potentially high human visitor numbers near affected trees, such as around schools, hospitals and car parks to selected visitor attractions. The likely long term impact on tree health should be taken into account, i.e. control should only be considered in cases of repeated defoliation. In all cases the potential impact on biodiversity from control should be assessed, including determining which scarce and threatened Lepidoptera are potentially at risk, and also should take into account the occurrence of species at the landscape level (not just designated sites such as SSSIs). Where control is deemed necessary, mechanical removal of nests should be used as the preferred approach, with other methods such as spraying only adopted on a case by case basis, having taken account of the likely negative impact on biodiversity. Away from the urban/suburban environment control should only be considered in exceptional circumstances.

Summarised Position Statement

BC acknowledges that control of the OPM may be required, and should be accepted in certain circumstances, but that any control should only be undertaken where there is a very real threat to human health or when there is a likelihood of a large number of trees dying as a result of repeated defoliation events. The impact of control on biodiversity should be carefully considered and, if any control is undertaken using non-mechanical methods, great care should be taken to minimise and mitigate against any biodiversity impact.

Notes

[1] For example, no studies have been undertaken to investigate the impact on the ground or shrub layer fauna under any trees sprayed with Bt. Also, little is known about the impact of control on natural predators and parasitoids of Lepidoptera.

[2]See summary findings of the Richmond Park study:
http://mothscount.org/uploads/A%20brief%20summary%20of%20the%20impact%20of%20control%20of%20Oak%20Processionary%20moth%20on%20biodiversity.pdf

Butterfly Conservation, March 2016