

Oak Processionary moth, *Thaumetopoea processionea*



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Oak processionary moth (*Thaumetopoea processionea*)

- native to central and southern Europe, but spreading north
- the larvae (caterpillars) feed on oak and can cause severe defoliation
- the larvae also possess highly irritating hairs
- has a history of mass outbreaks in other European countries
- since 2004 OPM has been at outbreak levels in parts of the Netherlands, Belgium & Germany



Complete defoliation of 120-year old oak by OPM in Saxony-Anhalt, Germany, June 2011



OPM larvae carry thousands of tiny irritating hairs that are dislodged on contact. They pose a considerable hazard to public health.



0.1 mm

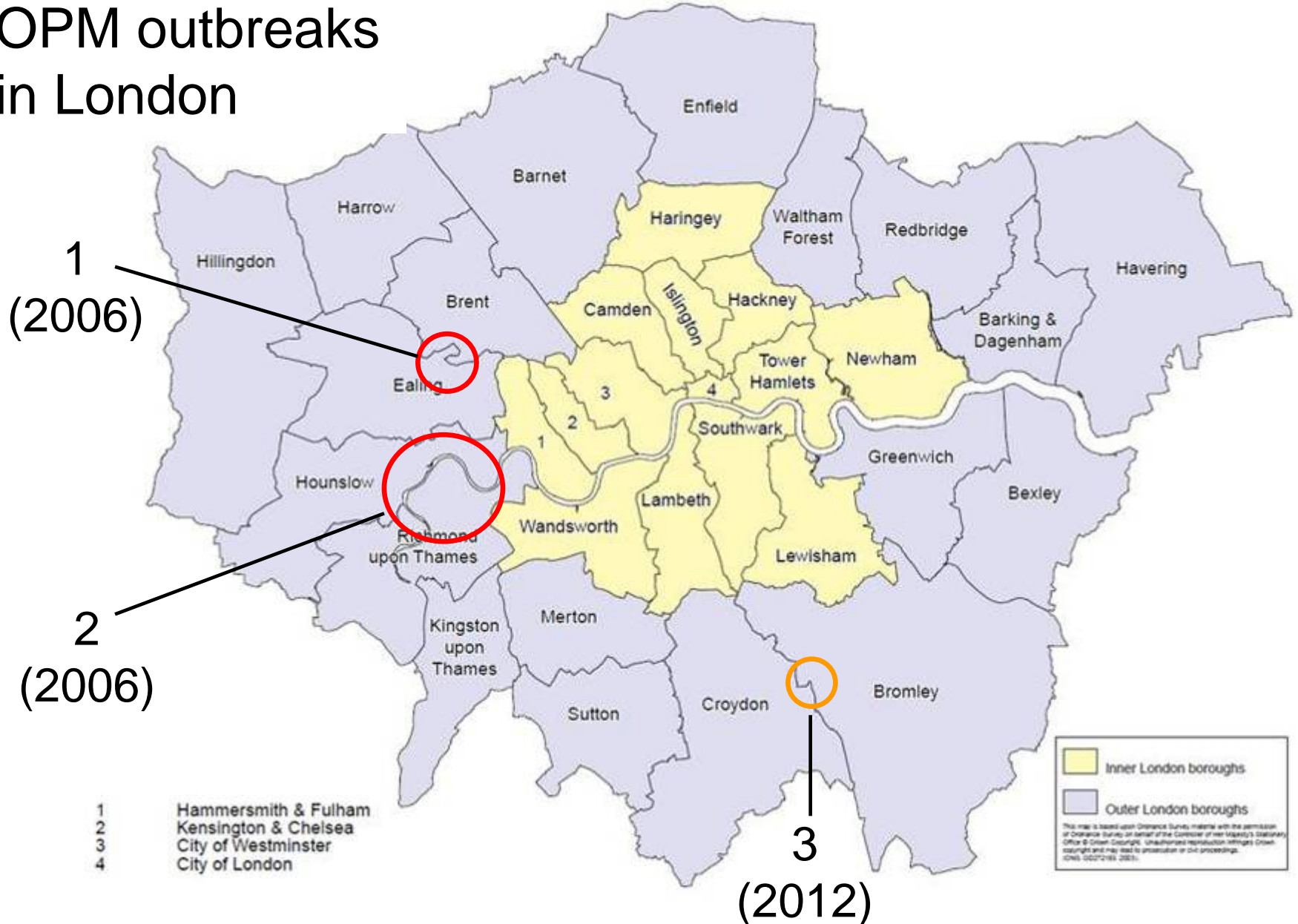




Larval
nests



OPM outbreaks in London





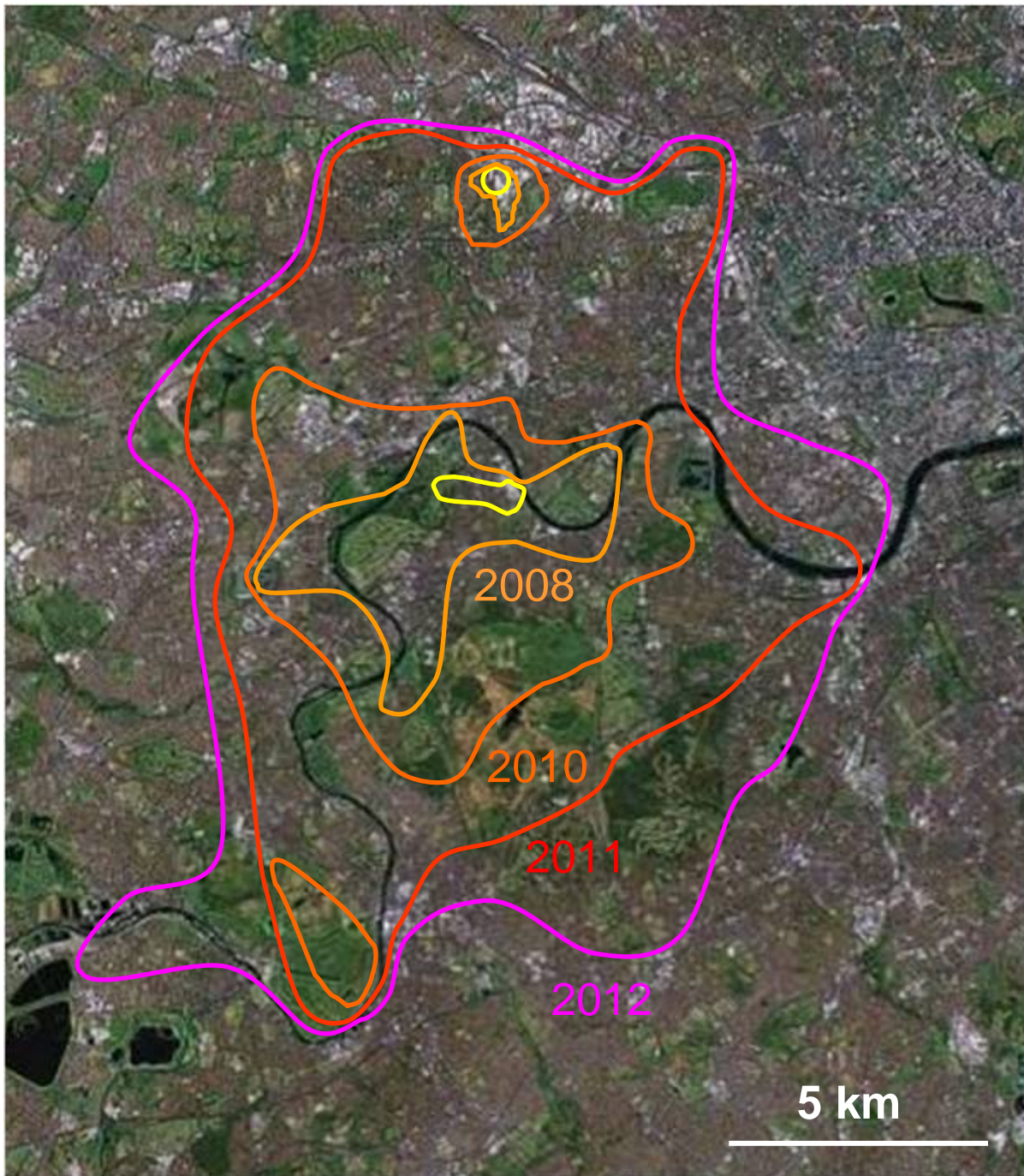
- in Acton & Richmond, OPM was introduced as eggs on 4-8m tall oak trees imported from the Netherlands during the previous winter.
- since 2006 there has been a concerted programme of survey, monitoring & control.



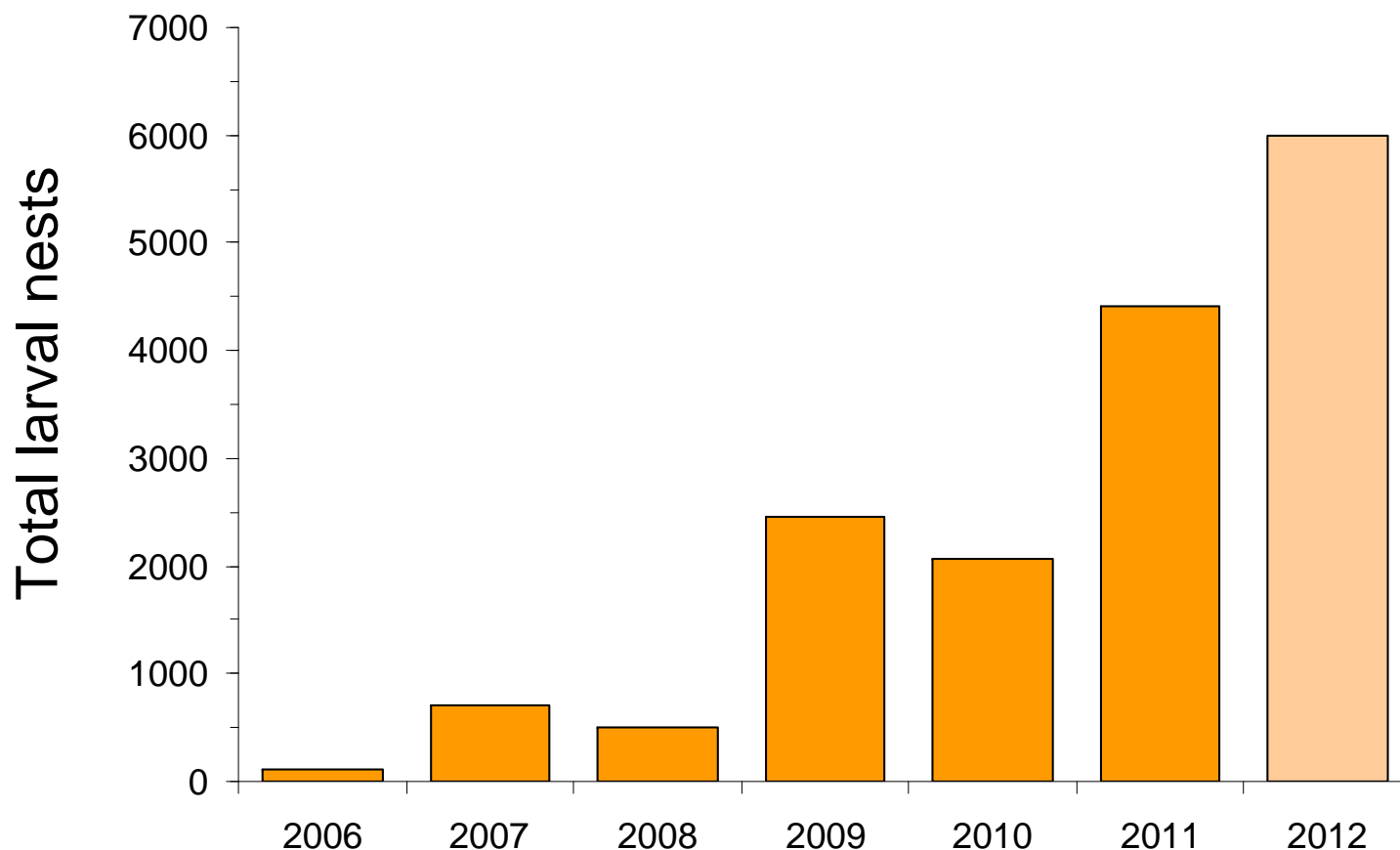
egg plaque

OPM outbreak area in London, 2006–2012

- on average, the population has spread at a rate of 0.9 km per year.
- new outbreaks were found at Pangbourne in Berkshire in 2010 and in Bromley in 2012.



Total number of OPM larval nests in west London, 2006–2012



Survey & monitoring

- surveys for larvae and larval nests (May–July)
- pheromone traps
- light traps



Control

- (1) insecticide spray
against young larvae
(instars 1-3)
(BT, Dimilin)
- (2) manual removal of
larvae & larval nests using
vacuum equipment or by
hand
- (3) insecticide spray against
older larvae (instars 4-6)
(deltamethrin)



DEFRA funded research projects 2012–2015

Partnership projects

(1) Improved control methods (*Lead: ADAS*)

- new low volume application methods
- integrated pest management systems, incl.
 - biological control agents
 - novel pesticides

(2) Improved methods for early detection (*Lead: Fera*)

- pheromone traps
- health reporting, social media, amateur networks
- novel approaches, remote sensing
- larval behaviour & biology

(3) Management review (*Lead: Imperial College*)

- Lessons Learnt analysis
- recommendations for future management

