

Survey of Welsh small-leaved lime woods for the scarce lime bark beetle *Ernoporus tiliae*

The scarce lime bark beetle *Ernoporus tiliae* is classed as a Red Data Book category 1 species and is listed as a Priority species in the UK Biodiversity Action Plan due to its apparent decline in post war years. The objectives of the Species Action Plan for *Ernoporus tiliae*, for which the Forestry Commission is the Lead Partner, set out to learn more about the distribution and habitat requirements of the species. The survey in Wales carried out in the autumn of 2005 complements work carried out in England in 2001-2, and together provide for the first time, a countrywide distribution for the species. The survey has been funded by the Countryside Commission for Wales and the Forestry Commission.

Ernoporus tiliae like the rest of the members of the Scolytid family, is a wood-boring insect. However, unlike its well known relatives such as the great spruce bark beetle (*Hylobius micans*), this species is not a pest but a deadwood specialist. It feeds on small-leaved lime (*Tilia cordata*), boring through the bark to reach the phloem/bast layer beneath. It is dependent on small-leaved lime and prefers limes that have been coppiced. Specific site requirements appear to be lime poles or branches 1cm to approximately 10cm in diameter, which are showing signs of becoming moribund and of the correct water content; they should not be completely dry nor waterlogged. More specific still is the preference for warmer spots within woodlands, tending to colonise trees on glade margins and edges of rides where the branches are warmed by the sun, rather than deep within shady, woodland interiors.

Although there is only one secure historical record of *E. tiliae* for Wales (from near Dolgellau), the abundance of the species in the Forest of Dean and in the Wye and Golden Valleys of Herefordshire, and the discovery of new sites along the Welsh border in 2002, confirmed the proximity of the species and the need for a survey in Wales. Indeed the survey in England showed that *E. tiliae* occurs at a low density throughout most of the small-leaved limewood areas, with significant strongholds in Lincolnshire, Essex and the southern Welsh border area.

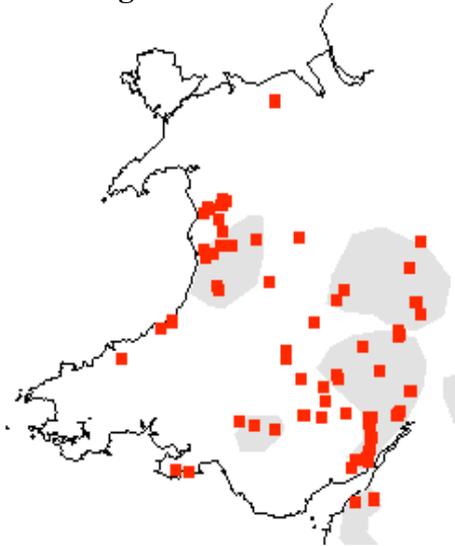
Survey effort was focused on woodland containing a concentration of small-leaved lime. Fifty-two sites were searched for *E. tiliae*, in the following vice counties: Merionethshire (12 sites), Cardiganshire (6), Montgomeryshire (4) Radnorshire (2), Monmouthshire (16), Glamorgan (3), Breconshire (4), Denbighshire (2) and Pembrokeshire (1) –see Figure 1. *E. tiliae* was found at only one site and this was at Wyndcliff, near Tintern, Monmouthshire where extensive colonies were found in the boughs that had fallen from a mature *T. cordata* growing in the centre of a car park –see Figure 2.

In Wales, *E. tiliae* is a rare beetle, seemingly confined to sunny and sheltered sites in the Wye Valley woodlands. Small leaved limewoods in Wales tend to be associated with steep riverine ravines where they cling to rocky outcrops, usually scattered among other trees such as birch, oak and ash, or growing out of rocky scarps, often fairly inaccessible. Unlike the Wyndcliff, site, many of the Welsh habitats surveyed were heavily shaded and this may account for the paucity of *E. tiliae* records, given its thermophilic requirements. However it is anticipated that more colonies of *E. tiliae*

could be discovered in the Wye valley and given the strength of the colony found at Wyndcliff, the prediction that the Welsh Marches from Shropshire south to Chepstow, Monmouthshire, as one of Britain's key refugia for this very localised species is borne out.

From Drane, A.B. (2005). The current status, distribution and conservation of the scarce lime bark beetle, *Ernopus tiliae* (Panzer), including a review of *Ernoporicus caucasicus* (Lindemann), in Wales, implementing the UK Biodiversity Action Plan. Forestry Commission, Edinburgh. Unpublished.

Figure 1
Distribution of all sites surveyed for *Ernopus tiliae* in Wales and bordering areas



Key

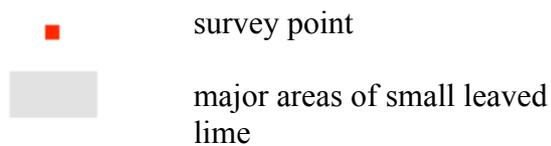
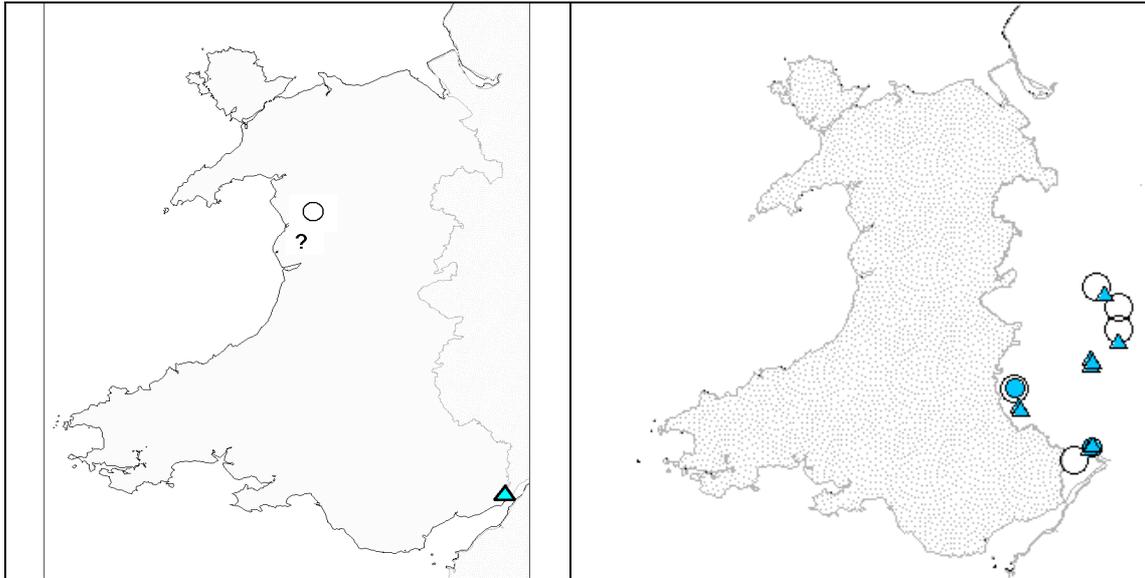


Figure 2

Distribution of all Welsh records for <i>Ernopus tiliae</i>	Distribution of <i>Ernopus tiliae</i> records in areas bordering Wales
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*Key*

○	Pre 1970's records
●	Post 1970's records
▲	New find during current surveys (Wales 2005, England 2001-2)
?	Identity uncertain