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New guide to identify mosses and lichens of English orchards

The free guides will help orchard owners and amateur naturalists to identify the species thriving on fruit trees.

On Monday (4 March 2013) the Open Air Laboratories (OPAL) East of England team, based at the University of Hertfordshire, will publish their new orchard keys to help people to identify over 50 species of mosses and lichens most commonly found growing on fruit trees.

Orchards are recognised as biodiversity hotspots. The fully-illustrated identification guides have been developed by the OPAL team in collaboration with the Field Studies Council to help orchard owners, amateur naturalists and experts to identify and record the changes in biodiversity in their area. The keys cover lichens and mosses local to the East of England although many species are also found throughout the UK.

Mark Powell, lichenologist and member of the British Lichen Society, said: *'The lichen diversity in lowland England was devastated by the effects of industrial pollution during and after the Industrial Revolution, creating what became known as 'lichen deserts' in the nineteenth century. In recent decades, levels of pollution have fallen dramatically and there has been a spectacular re-colonisation by lichens. Some of the lichens involved in this re-colonisation have only recently been described and they are new to science. A great deal of useful recording can be performed by amateur lichenologists.'*

Anyone can use the guides but they are especially useful to people interested in starting to study mosses and lichens. Designed with simplicity in mind, the keys can be an easy way into the field - a 'warm up' - before moving on to using more complete and detailed field guides.

Lichens are known pollution indicators. For example, the bright yellow *Xanthoria* is a common sight near roads due to its tolerance for high levels of nitrogen, often found in exhaust fumes. Others, however, such as *Usnea* are only found where nitrogen levels are low. Mosses are also often used to monitor the presence of heavy metals in the environment, such as lead, due to their tendency to accumulate these substances within their leaves.

Dr Mari Whitelaw, OPAL East of England researcher, said: *'In the past people considered both mosses and lichens to be an indicator of an unhealthy tree and scrape them off the branches. Today we know that they cause no damage to the tree itself. Mosses and lichens are not parasites, they do not have roots which dig into the tree's bark and take no nutrients from the trees themselves. Both mosses and lichens take much of their nutrition from rain water and particles in the air.'*

The laminated identification guides are free and can be ordered online at www.opalexplornature.org/discover-orchards or, for those eager to get stuck in straight away, can be downloaded from the same address.

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Notes for editors

Images and interviews available on request. Please contact Giorgio De Faveri, OPAL Communications Officer, 0207 942 5946, g.de-faveri@nhm.ac.uk

1. Any lichen or moss records will be important in monitoring the biodiversity of an area and could be of interest to local county recorders, which monitor the biodiversity of these plants around the UK. If you wish to get involved in monitoring activities, please contact the British Bryological Society or British Lichen Society.

2. More advanced and complete field guides include the British Bryological Society's 'Mosses and Liverworts of Britain and Ireland – a Field Guide' and Frank Dobson's 'Lichens: an Illustrated Guide to the British and Irish Species'.

3. Open Air Laboratories (OPAL), led by Imperial College London, www.imperial.ac.uk/opal is a nationwide partnership initiative that inspires communities to discover, enjoy and protect their local environment. It aims to create a new generation of nature-lovers by stimulating interest through local and national projects which are accessible, fun and relevant to anyone who wants to take part. Launched in 2007, OPAL provides the skills and materials needed for the first national community-led study of the world around us. For more information, please visit www.OPALexplorenature.org.

4. The Field Study Council is an environmental education charity committed to helping people, discover, explore, understand and be inspired by the natural world. Its network of centres provides day and residential courses for all ages from young children to retired adults from schools and communities throughout the UK. It also reaches many others through its publications and community-based programmes. Full details are on the website www.field-studies-council.org

5. The University of Hertfordshire is the UK's leading business-facing university and an exemplar in the sector. It is innovative and enterprising and challenges individuals and organisations to excel. The University of Hertfordshire is one of the region's largest employers with over 2,650 staff and a turnover of almost £233 million. With a student community of over 27,200 including more than 2,800 students from eighty-five different countries, the University has a global network of over 175,000 alumni. It is also one of the top 100 universities in the world under 50 years old, according to the new Times Higher Education 100 under 50 rankings 2012. For more information, please visit <http://www.herts.ac.uk>

6. The Big Lottery Fund's support for OPAL comes from its Changing Spaces programme, which was launched in November 2005 to help communities enjoy and improve their local environment. The programme funds a range of activities from local food schemes and farmers markets, to education projects teaching people about the environment.

7. The Big Lottery Fund, the largest of the National Lottery good cause distributors, has been providing grants to health, education, environment and charitable causes across the UK since its inception in June 2004. It was established by Parliament on 1 December 2006. Full details of the work of the Big Lottery Fund, its programmes and awards are available on the website: www.biglotteryfund.org.uk

8. The British Bryological Society is a registered charity (No. 228851) which exists to promote a wider interest in all aspects of bryology. It provides tuition, organizes meetings, facilitates research and aids measures for conservation. Its worldwide membership, both amateur and professional, is actively engaged in field studies as well as laboratory-based subjects; members' interests in taxonomy, distributional recording, exploration and ecology, and in physiology, cyto-genetics and molecular biology, are served and encouraged by the Society. With their combined experience, the Society is thus able to offer specialized advice and

balanced judgement on matters of public concern affecting mosses and liverworts.

<http://www.britishbryologicalsociety.org.uk/>

9. The British Lichen Society welcomes all who are interested in lichens, amateur and professional, and from beginner to expert. We work to promote the conservation and study of lichens, and to raise public awareness of them and their importance as indicators of the health of our environment. To do this we produce a range of publications, including a Bulletin and a highly regarded scientific journal, The Lichenologist. Members are encouraged to get involved in field meetings, workshops and recording projects.

www.britishlichensociety.org.uk