



Swamp Cypress Rust Mite *Epitrimerus taxodii*



Plate 1. Swamp cypress foliage discoloured by an infestation of *Epitrimerus taxodii*



Plate 2. A cleared slide-mounted specimen of *Epitrimerus taxodii*

Sand Hutton ■ York

YO41 1LZ ■ U.K.

Tel: +44 (0)1904 462000

Fax: +44 (0)1904 462111

Website: www.csl.gov.uk

E-mail: science@csl.gov.uk

Background

In October 2006 *Epitrimerus taxodii* a North American species of eriophyid mite, host specific to *Taxodium distichum*, the swamp, bald, or southern cypress was found for the first time in Britain (Herefordshire). Approximately 20% of a stock of 400 *T. distichum* saplings imported from France in April 2006 were affected.

Detection and Pest Biology

Because adult *E. taxodii* are so small, an infestation is first indicated by the onset of host symptoms. In the USA it is observed that in warm weather populations of *E. taxodii* can develop very rapidly. As the mites feed on the epidermal cells, the leaves quickly become discoloured, turning from green to yellow and later reddish brown/bronze. Not only does this affect the aesthetic quality of the tree, it also stresses the host and may in some circumstances warrant control action being taken. It was foliar discolouration which led to the discovery of this mite in Britain (Plate 1). *Epitrimerus taxodii* is free living on the leaves of its host during the growing season and over winters as adults in bark crevices and bud scales.

Geographical Distribution

Described from California, USA in 1939, *E. taxodii* has since been recorded as present in Illinois and Oregon, but is likely to be present throughout the natural range of its host in South-Eastern USA. This mite had never been intercepted or recorded in Europe before this find. The discovery of *E. taxodii* in Herefordshire is a first British record for this mite, and would also indicate that it is present in France, from where the saplings originated.

Description

In life the mites measure 0.18-0.22 mm in length (Plate 2) and are therefore not clearly visible to the naked eye. They are spindle shaped, pale orange to amber in colour and are often covered in patches of white wax. The species *Platyphytoptus taxodii* Petanović is almost indistinguishable morphologically and in habit from *E. taxodii*. Described in Serbia in 1999, it is the only other eriophyid known from this host, however *P. taxodii* may yet prove to be the same species as *E. taxodii*, but further investigation is required.

Economic importance

Taxodium distichum is a commercial species in the USA. The timber is used in boat building and in the construction of out buildings because it is naturally impervious to insect attack and decay. In Europe this deciduous conifer is not grown commercially but is valued as an ornamental and a number of different cultivars are available. In the spring the soft finely divided foliage is a vivid green and in the autumn this turns to a fiery red colour before leaf fall. In addition this is one of the few trees that thrive in waterlogged soils.

Advisory Information

Suspected outbreaks of *Epitrimerus taxodii* should be reported to the local DEFRA Plant Health and Seeds Inspector or to PHSI Headquarters, York (Tel.: 01904 455174, Fax: 01904 455197) and samples submitted to the Central Science Laboratory for identification.

Joe Ostojá-Starzewski
Central Science Laboratory
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Distribution

PHSI (Plant Health and Seeds Inspectorate):
All Inspectors (via David Butler)

CSL (Central Science Laboratory):
Mike Roberts, Chief Executive
Tony Hardy, Agri-Env. Science Director
CSL Information Centre

Hheads of Groups:

John Dennis
Linda Owen
Peter Robertson
Keith Walters

CSL Plant Health Group:
Nicola Spence, Head of Group

Andy Aspin
Richard Baker
Paul Bartlett
Ray Cannon
Dom Collins
Dominic Eyre
Neil Giltrap
Roger Hammon
Val Harju
Sue Hockland
Alan MacLeod
Chris Malumphy
Gay Marris
Sara Martins
Sharon Matthews-Berry
Helen Moran
Rick Mumford
Joe Ostoja-Starzewski
Tom Prior
Peter Reed
Claire Sansford
Sharon Reid
Anna Skelton
James Woodhall
Daphne M Wright

PHD (Plant Health Division):

Steve Ashby
Richard Harris
Steve Hunter
Alan Inman
Iain Johnstone
Richard McIntosh
Martin Ward
Defra Library

PSD (Pesticides Safety Directorate):

Richard Davis
David Richardson

Science Directorate:

Matthew Bell
David Cole, (Hort-Link)
David Murphy-Bokern
Peter Street, (SAPPIO)

ADAS (Agricuilt. Devel. & Advisory Service):

Dept of Agriculture Fisheries & Forestry IoM:

Michael Caley
Andrew Macloud

DARDNI (Dept Agriculture & Rural Devel. N. Ireland):

Reid Coleman
Stephen Jess
Jonathan McAdams
Michael McKillen
Stephen Nixon

East Malling Research:

Library

EC SCPH (EC Standing Committee on Plant Health):

Marc Vereecke

Eden Project:

Katie Treseder

EPPO (European & Mediterranean Plant Protection Org.):

Nico Van Opstal

FC (Forestry Commision):

Roddie Burgess

Forest Research:

Hugh Evans
Christine Tilbury

FVO (Food & Veterinary Office):

Lars Christoffersen

Garden Organic (Henry DoubleDay Research Assn.):

Andy Strachan
Phil Sumption

Harper Adams University College, Plant Health Clinic:

Matthew Back

HDC (Horticulture Development Council)

Horticulture & Potatoes Division:

Mr I Llewellyn

Hope Collection (U o Oxford):

George McGavin

HRI (Horticulture Research International):

Hunterian Museum (U o Glasgow):

Geoff Hancock

HTA (Horticultural Trades Association)

Liverpool Museum:

Steve Judd

Manchester Museum:

Dimitri Logunov

MGA (The Maize Growers Association):

Simon Draper

Monks Wood Biological Records

National Museum Wales:

James Turner
Mike Wilson

NIAB (National Institute of Agricultural Botany):

National Museums Scotland:

Graham Rotheray

NAW (National Assembly for Wales, PHBB):

Stephen Jackson
Nigel Cooke
Emma Cross

NHM (Natural History Museum):

Anne Baker
Stuart Hine
Jon Martin
Malcolm Scoble
Mick Webb

Jude Bennison
Mike Lole
Sue Ogilvy
Tim O'Neil
BCPC (British Crop Production Council):
David Alford
Bishop Burton:
John Hickling
BOPP (British Ornamental Plant Producers):
Jeanette Soer
British Plant Gall Society:
Michael Chinery
Broom's Barn Experimental Station
CABI Bioscience UK Centre
CUF (Cambridge University Farms):
David Firman
Andrew Lee
Mark Pettigrew
Mark Stalham
Debbie Winstanley
Dept. of Agriculture & Fisheries Jersey:
Scott Meadows

NSALG (Nat. Soc. Allotment & Leisure Gardeners)
RBG (Royal Botanic Gardens) Edinburgh:
Library
RBG (Royal Botanic Gardens) Kew:
Martin Staniforth
RHS (Royal Horticultural Society Garden, Wisley):
Andrew Halstead
Rothamsted Research:
Library
SASA (Scottish Agricultural Science Agency):
June Chard
Fiona Highet
John Pickup
Scottish Agricultural Colleges:
SEERAD (Scottish Executive Env. & Rural Affairs Dept.):
Charles Greenslade
States Committee for Horticulture, Guernsey:
Nigel Clark
Stockbridge Technology Centre
Ulster Museum:
Brian Nelson