Knowledge Exchange records from 01/04/2015 – 31/03/2016

CATEGORY 2 - Peer-reviewed journal articles (29 records)

Record ID	4010892
Title:	**Wildlife and conservation in community woods: business as usual?**
Author:	Van der Jagt, A.
Co-author:	Ambrose-Oji, B.; Lawrence, A.
Imprint:	2015
Source:	ECOS
Reference:	36-43
Main subject:	WILDLIFE CONSERVATION
Subjects:	FCRA AUTHORS; 2016-FR-CAT-2
Abstract:	Social and community enterprise projects in woodland management are on the rise in Britain. In this article scientists from Forest Research reflect upon the conservation and wildlife impacts of such ventures, looking at a range of business models.
Class:	Electronic resource
Bib type:	A
GMD:	Periodical article
Entered:	16/06/2015 B00000115

Record ID	4010905
Title:	**Mixed provenance and mixed species trials: Informing the debate on how to prepare native tree species for climate change in England.**
Author:	Barsoum, N.
Imprint:	The Royal Forestry Society, 2015
Source:	Quarterly Journal of Forestry
Reference:	201-207
Main subject:	CLIMATE CHANGE
Subjects:	FCRA AUTHOR; 2016-FR-CAT-2
Abstract:	Nadia Barsoum describes the important research being carried out to identify the most appropriate trees to plant to give our woodland the best chance of a sustainable future.
Class:	Electronic resource
WWW:	http://www.rfs.org.uk
Bib type:	A
GMD:	Periodical article
Entered:	30/07/2015 B00000115

Record ID	4010912
Title:	**Exceedance of critical loads and of critical limits impacts tree nutrition across Europe.**
Author:	Waldner. P.
Co-author:	Thimonier, A.; Benham, S.; Vanguelova, E.
Imprint:	Springer Paris, 2015
Source:	Annals of Forest Science
Reference:	Online June 2015; doi: 10.1007/s13595-015-0489-2 Print ISBN 1286-4560 Online ISBN 1297-966X
Main subject:	TREE HEALTH
Subjects:	TREE NUTRITION; ICP FORESTS; FOLIAGE; FCRA AUTHORS; 2016-FR-CAT-2
Abstract:	Exceedance of critical limits in soil solution samples was more frequent in intensively monitored forest plots across Europe with critical loads for acidity and eutrophication exceeded compared to other plots from the same network. Elevated inorganic nitrogen concentrations in soil solution tended to be related to less favourable nutritional status.

Class: Electronic resource
WWW: http://link.springer.com/article/10.1007%2Fs13595-015-0489-2#
Bib type: A
GMD: Periodical article
Entered: 31/07/2015 B00000115

Record ID 4010915
Title: **A multi-species modelling approach to examine the impact of alternative climate change adaptation strategies on range shifting ability in a fragmented landscape.**
Author: Synes, N.
Co-author: Watts, K.; Palmer, S.C.F.; Bodedi, G.; Barton, K.A.; Osborne, P.E.; Travis, J.M.J.
Imprint: Elsevier, 2015
Source: Science Direct
Reference: Available online 25th June 2015
Main subject: CLIMATE CHANGE
Subjects: ECOLOGICAL NETWORKS; CONNECTIVITY; HABITAT RESTORATION; POPULATION DYNAMICS; DISPERSAL; RANGESHIFTER; 2016-FR-CAT-2
Abstract: An individual-based model of animal dispersal and population dynamics was used to test the effects of different climate change adaptation strategies on species range shifting ability, namely the improvement of existing habitat, restoration of low quality habitat and creation of new habitat. These strategies were implemented on a landscape typical of fragmentation in the United Kingdom using spatial rules to differentiate between the allocation of strategies adjacent to or away from existing habitat patches...
Class: Electronic resource
WWW: http://www.sciencedirect.com/science/article/pii/S1574954115000941
Bib type: A
GMD: Periodical article
Entered: 03/08/2015 B00000115

Record ID 4010916
Title: **New climate change information modifies frames and decisions of decision makers: an exploratory study in forest planning.**
Author: Petr, M.
Co-author: Boerboom, L.; Ray, D.; van der Veen, A.
Imprint: Springer, 2015
Source: Regional Environmental Change
Published online July 2015
Reference: 10.1007/s10113-015-0827-9
Main subject: CLIMATE CHANGE
Subjects: UNCERTAINTY; AMBIGUITY; FRAMING; DECISION-MAKING; INFORMATION; CLIMATE CHANGE ADAPTATION; FCRA AUTHOR; 2016-FR-CAT-2
Abstract: Information helps decision makers to address and to decide about environmental problems. In the context of climate change adaptation, often knowledge is missing on how the available information from impact models affects the decision-making process. The main aim of this study was to explore the extent of ambiguity and how new climate change information influenced decision of forest planners. We investigated changes in decisions of planners about forestry actions representing species choice and forest tourism and expiry dates of these actions leading to environmental constraints in the provision of ecosystem services...
Class: Electronic resource
WWW: http://link.springer.com/article/10.1007/s10113-015-0827-9?
ISSN: Print 1436-3798
Online 1436-378X
Bib type: A
GMD: Periodical article
Entered: 03/08/2015 B00000115

Record ID 4010917
Title: Comparing the costs and revenues of transformation to continuous cover forestry for sitka spruce in Great Britain.
Author: Davies, O.
Co-author: Kerr, G.
Imprint: 2015
Source: Forests
Reference: 2424-2449
doi: 10.3390/f6072424
Main subject: FORESTRY
Subjects: CONTINUOUS COVER FORESTRY; ECONOMICS; TRANSFORMATION; FCRA AUTHOR; 2016-FR-CAT-2
Abstract: Recently continuous cover forestry (CCF) has become an accepted approach to forest management in Britain, but uncertainty about its economic consequences may be a barrier to its wider use. A study was carried out to examine the costs and revenues of transforming a stand of Sitka spruce (picea sitchensis (Bong.) Carr.) to CCF...
Class: Electronic resource
WWW: http://www.mdpi.com/1999-4907/6/7/2424/pdf
Bib type: A
GMD: Periodical article
Entered: 03/08/2015 B00000115

Record ID 4010926
Title: The match and mismatch between photosynthesis and land surface phenology of deciduous forests.
Parent Item: Agricultural and Forest Meteorology
Author: D'Odorico, P.
Co-author: Gonsamo, A.; Gough, C.M.; Bohrer, G.; ; Morison, J.; Wilkinson, M.; Hanson, P.J.; Gianelle, D.; Fuents, J.D.; Buchmann, N.
Imprint: Amsterdam: Elsevier, 2015
Source: Agricultural and Forest Meteorology 214–215
Reference: 25–38 ills. refs.
http://dx.doi.org/10.1016/j.agrformet.2015.07.005
Main subject: CLIMATOLOGY
Subjects: CLIMATOLOGY; FLUXNET; ECOSYSTEM PRODUCTIVITY; ECOSYSTEM; MODIS; NDVI; PHENOLOGY INDEX; CLIMATE CHANGE; REMOTE SENSING; EVI; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Plant phenology is a key indicator of the terrestrial biosphere’s response to climate change, as well as a driver of global climate through changes in the carbon, energy and water cycles. Remote sensing observations of seasonal canopy greenness dynamics represent a valuable means to study land surface phenology (LSP) at scales relevant for comparison with regional climate information as well as ecosystem-level CO2fluxes. We explore relationships among key LSP dates at the start and end of the season captured by three remote sensing products (i.e., NDVI: Normalized Difference Vegetation Index; PI: Phenology Index; MODIS Land Cover Dynamics Product based on the Enhanced Vegetation Index, EVI) over 19 deciduous broadleaf and mixed forest sites in the northern hemisphere for 2000–2012, and compare these estimates to estimates of start and end of photosynthesis phenology extracted from gross primary pro-ductivity (GPP) from CO2 flux measurements. To derive phenological transition dates, we use analytical solutions of various derivatives from the fitted logistic curves. LSP dates estimated by the three remote sensing products were not equivalent and differed in their sign and magnitude of lags with photosynthesis phenology dates. NDVI-derived phenology was characterized by shorter growing seasons, while EVI prolonged it by about two weeks compared to the photosynthesis phenology season length. PI start and end of season dates more closely matched the start (r2= 0.84, RMSE = 7.61) and end (r2= 0.61, RMSE = 8.57)of

photosynthesis phenology as estimated by GPP time series. PI was also found agreeing best with LSP estimates from highly spatially resolved ground digital camera observations, available for about half of the investigated FLUXNET sites. Although there were strong relationships between remotely sensed LSP and photosynthesis phenology, the relationships were not consistent across deciduous forest ecosystems implying that the vegetative and photosynthetic timing do not always follow each other in the same direction.

Class: Electronic resource
WWW: http://www.sciencedirect.com/science/article/pii/S0168192315002129
Bib type: A
GMD: Periodical article
Entered: 20/08/2015 b00000317

Record ID 4010928
Title: Genomic analysis of bacteria associated with acute oak decline. In Preparation.
Author: Doonan, J.
Co-author: Denman, S.; Pachebat, J.; Golyshin, P.N.; McDonald, J.E.
Imprint: 2015
Main subject: TREE HEALTH
Subjects: GENOMICS; BACTERIA; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Both species of native oak trees in the UK (Quercus robur and Quercus petraea) are affected by a Decline syndrome termed Acute Oak Decline (AOD). Black weeping patches on the stems of mature trees are the primary symptom of AOD and indicate the presence of necrotic lesions in the underlying tissue. Two newly described bacterial species, Gibbsiella quercinecans and Brenneria goodwinii are consistently isolated from necrotic lesions. The aim of this investigation is to identify the presence of genes associated with bacterial pathogenicity. This study used the Illumina MiSeq second generation and Pacific Bioscience third generation sequencing platforms, for the de novo assembly of Gibbsiella quercinecans and Brenneria goodwinii. This genomic analysis has revealed a number of potential virulence factors. These include Plant Cell Wall Degrading Enzymes (PCWDE) and assorted secretion systems. Similar studies of bacterial associated plant pathogens have indicated that the synchronous relationship of these genes in for example Pectobacterium carotovorum leads to maceration of host cell tissue. The annotated genes encompass a suite of virulence factors providing G. quercinecans and B. goodwinii with the tools to compromise oak tree health. A combination of second and third generation sequencing analysis has provided substantial evidence implicating Gibbsiella quercinecans and Brenneria goodwinii as potential pathogenic contributors to the Acute Oak Decline syndrome.
Bib type: A
GMD: Periodical article
Entered: 21/08/2015 B00000115

Record ID 4010934
Title: Gibbisiella papilionis Kim et al. 2013 is a later heterotypic synonym of Gibbsiella dentisursi Saito et al. 2012.
Author: Brady, C.
Co-author: Irisawa, T.; Iino, T.; Ohkuma, M.; Arnold, D.; Denman, S.
Imprint: Microbiology, 2015
Source: International Journal of Systematic and Evolutionary Microbiology
Reference: doi: 10.1099/ijsem.0.000649
Main subject: TREE HEALTH
Subjects: ENTEROBACTERIACEAE; FCRA AUTHOR; 2016-FR-CAT-2
Abstract: Synonymy of Gibbsiella dentisursi DSM 23818T (= NUM 1720T) and Gibbsiella papilionis JCM 18389T (= LEN 33T) was suspected following multilocus sequence analysis (MLSA) of both type strains in a previous classification study, where they were found to share >99.6 % gene sequence similarity. The taxonomic relationship between these two strains

was re-examined here using a polyphasic approach. A DNA-DNA similarity value of 98 % confirmed that the two type strains belong to a single taxon, while the phenotypic profiles were found to be nearly identical. Therefore we propose Gibbsiella papilionis as a later heterotypic synonym of Gibbsiella dentisursi.
Class: Electronic resource
Bib type: A
GMD: Periodical article
Entered: 24/08/2015 B00000115
Updated: 24/11/2015 B00000115

Record ID 4010950
Title: Spatial and temporal patterns in symptom expression within eight woodlands affected by Acute Oak Decline.
Author: Brown, N.
Co-author: Jeger, M.; Kirk, S.; Williams, D.; Xu, X.; Denman, S.
Imprint: Elsevier, 2015
Source: Forest Ecology and Management
Reference: 97-109
Main subject: TREE HEALTH
Subjects: STEM NECROSIS; AGRILUS; SPATIAL EPIDEMIOLOGY; FOREST DECLINE; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Acute Oak Decline (AOD) is a newly defined condition in the UK that forms a distinct component within the wider oak decline complex. It can be identified by distinctive stem symptoms, dark liquid seeping out between the bark plates from areas of necrosis in the cambial tissue, which are found in conjunction with signs of the two spotted oak buprestid Agrilus biguttatus. Novel bacterial species have been isolated from the inner bark necrosis, but little is known regarding the spatial and temporal patterns of AOD symptoms expression.
Class: Electronic resource
WWW: http://authors.elsevier.com/a/1S3Q01L~Gw41~C
Bib type: A
GMD: Periodical article
Entered: 25/08/2015 B00000115
Updated: 24/11/2015 B00000115

Record ID 4010951
Title: Acute oak decline and agrilus biguttatus: the relationship between stem bleeding and D-shaped exit holes at eight sites in the United Kingdom.
Author: Brown, N.
Co-author: Jeger, M.; Kirk, S.; Williams, D.; Xu, X.; Denman, S.
Imprint: 2015
Source: Agricultural and Forest Entomology
Reference: IN REVIEW
Main subject: TREE HEALTH
Subjects: FCRA AUTHORS; 2016-FR-CAT-2
Bib type: A
GMD: Periodical article
Entered: 25/08/2015 B00000115

Record ID 4010966
Title: Responses of the two-spotted oak buprestid, Agrilus biguttatus (Coleoptera: Buprestidae), to host tree volatiles.
Author: Vuts, J.
Co-author: Woodcock, C.M.; Sumner, M.; Caulfield, J.C.; Reed, K.; Inward, D.J.G.; Leather, S.; Pickett, J.A.; Birkett, M.; Denman, S.
Imprint: Wiley Online Library, 2015

Source: Pest Management Science.
Reference: Wiley Online
DOI 10.1002/ps.4208
Main subject: TREE HEALTH
Subjects: ATTRACTANT; ACUTE OAK DECLINE; FORESTRY; SEMIOCHEMICAL; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Agrilus bigutattus (Fabricius) is a forest pest of increasing importance in theUnited Kingdom. The larvae damage
weakened native oaks and are thought to contribute to premature tree death. Suspected links with acute oak decline (AOD) are not yet confirmed, but AOD-predisposed trees appear to become more susceptible to A. biguttatus attack. Thus, management may be necessary for control of this insect. To explore the possibility ofmonitoring beetle populations by baited traps, the host tree volatiles regulating A. biguttatus–oak interactions were studied.
Class: Electronic resource
WWW: http://onlinelibrary.wiley.com/doi/10.1002/ps.4208/pdf
Bib type: A
GMD: Periodical article
Entered: 11/09/2015 B00000115
Updated: 19/02/2016 B00000115

Record ID 4010968
Title: Do non-native conifer plantations provide benefits for a native forest specialist, the wood ant Formica lugubris?
Author: Procter, D.S.
Co-author: Cottrell, J.; Watts, K.; Robinson, E.J.H.
Imprint: 2015
Source: Forest Ecology and Management
Reference: 22-32
doi:10.1016/j.foreco.2015.07.034
Main subject: FORESTRY
Subjects: AFFORESTATION; PLANTATION FORESTRY; RED WOOD ANTS; COLONISATION LAG; NON NATIVE CONIFERS; LAND COVER CHANGE; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Recent increases in plantation forestry are starting to reverse the global decline in forest cover, in some areas of the world. Britain has practiced afforestation, primarily with non-native conifers, for over a century. It is unclear whether these new plantations have the potential to support native forest species.
Class: Electronic resource
WWW: http://www.sciencedirect.com/science/article/pii/S0378112715004156
Bib type: A
GMD: Periodical article
Entered: 11/09/2015 B00000115

Record ID 4011040
Title: Dieback and mortality of Nothofagus in Britain: ecology, pathogenicity and sporulation potential of the causal agent Phytophthora pseudosyringae.
Author: Scanu, B.
Co-author: Webber J.F.
Imprint: 2015
Source: Plant Pathology
doi: DOI: 10.1111/ppa.12399
Reference: Online from 25th May 2015
Main subject: TREE HEALTH
Subjects: AERIAL SPORULATION;; BLEEDING CANKERS; FOLIAR NECROSIS; OOMYCETES; FCRA AUTHOR; 2016-FR-CAT-2

Abstract: Since 2009 extensive dieback and mortality of Nothofagus obliqua, associated with bleeding cankers on stems and branches, has been observed in the UK. The causal agent was identified as Phytophthora pseudosyringae, based on morphological and analysis of the internal transcribed spacer (ITS) sequences. Between 2011 and 2013, a survey assessed the frequency and nature of these P. pseudosyringae infections...
Class: Electronic resource
WWW: http://onlinelibrary.wiley.com/doi/10.1111/ppa.12399/abstract
Bib type: A
GMD: Periodical article
Entered: 08/10/2015 B00000115

Record ID 4011050
Title: Part of the solution? Stakeholder awareness, information and engagement in tree health issues.
Author: Marzano, M.
Co-author: Dandy, N.; Bayliss, H.R.; Porth, E.; Potter, C.
Imprint: 2015
Source: Biological Conservation
Reference: doi: 10.1007/s10530-015-0850-2
Main subject: TREE HEALTH
Subjects: FCRA AUTHORS; 2016-FR-CAT-2
Class: Electronic resource
Bib type: A
GMD: Periodical article
Entered: 09/10/2015 B00000115

Record ID 4011052
Title: Phytosanitary inspection of woody plants for planting at European Union entry points: a practical enquiry.
Author: Eschen, R.
Co-author: Rigaux, L.; Sukovata, L.; Vettraino, A.M.; Marzano, M. and Gregoire, J-M
Imprint: 2015
Source: Biological Invasions
Reference: doi: 10.1007/s10530-015-0883-6
Main subject: BIOLOGICAL CONTROL
Subjects: FCRA AUTHOR; 2016-FR-CAT-2
Class: Electronic resource
Bib type: A
GMD: Periodical article
Entered: 09/10/2015 B00000115

Record ID 4011061
Title: Forests and global change: what can genetics contribute to the major forest management and policy challenges of the twenty-first century?
Author: Fady, B.
Co-author: Cottrell, J.; Ackzell, L.; Alía, R.; Muys, B.; Prada, A.; González-Martínez, S. C.
Imprint: Springer Berlin Heidelberg - online 7th August 2015, 2015
Source: Regional Environmental Change
Reference: 1-13
doi:10.1007/s10113-015-0843-9
Main subject: FORESTRY
Subjects: SUSTAINABLE FORESTRY; ASSISTED MIGRATION; CLIMATE CHANGE; ADAPTATION; GENETIC DIVERSITY; GENE CONSERVATION; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: The conservation and sustainable use of forests in the twenty-first century pose huge challenges for forest management and policy. Society demands that forests provide a

wide range of ecosystem services, from timber products, raw materials and renewable energy to sociocultural amenities and habitats for nature conservation. Innovative management and policy approaches need to be developed to meet these often-conflicting demands in a context of environmental change of uncertain magnitude and scale...

Class: Electronic resource
WWW: http://link.springer.com/article/10.1007%2Fs10113-015-0843-9
ISSN: Print ISSN 1436-3798
Online ISSN1436-378X
Bib type: A
GMD: Periodical article
Entered: 13/10/2015 B00000115

Record ID 4011071
Title: Identifying robust response options to manage environmental change using an Ecosystem Approach: A stress-testing case study for the UK.
Author: Brown, I.
Co-author: Berry, P.; Everard, M.; Firbank, L.; Harrison, P.; Lundy, L.; Quine, C.; Rowan J.; Wade, R.; Watts, K.
Imprint: Science Direct, 2015
Source: Environmental Science and Policy
Reference: 74-88
Main subject: ENVIRONMENTAL MANAGEMENT
Subjects: POLICY APPRAISAL; ECOSYSTEM SERVICES; SCENARIO ANALYSIS; INTEGRATED ASSESSMENT; DECISION-MAKING; CROSS-SCALE RESPONSES; INTEGRATED RESPONSES; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: A diverse range of response options was evaluated in terms of their utility for sustaining ecosystem services in the UK. Robustness of response options was investigated by applying a ‘stress-testing’ method which evaluated expected performance against combined scenarios of socioeconomic and climate change. Based upon stakeholder feedback, a reference scenario representing current trends in climate and socioeconomic drivers (‘business-as-usual’) was used as a dynamic baseline against which to compare results of other scenarios...
Class: Electronic response
WWW: http://www.sciencedirect.com/science/article/pii/S1462901115001021
Bib type: A
GMD: Periodical article
Entered: 03/11/2015 B00000115
Updated: 03/11/2015 B00000115

Record ID 4011076
Title: Adapting Scotland's forests to climate change using an action expiration chart
Author: Petr, M.
Co-author: Boerboom, L.G.J.; Ray, D.; van der Veen, A.
Imprint: UK : Environmental Research Letters, 21 October 2015
Source: Environmental Research Letters
Main subject: CLIMATE CHANGE
Subjects: FOREST ECOSYSTEM; FOREST MANAGEMENT; ECOSYSTEM SERVICES; FOREST PRODUCTION; TREE GROWTH; SITKA SPRUCE; SCOTS PINE; PEDUNCULATE OAK; PEDUNCULATE OAK; SCOTLAND; UK; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: The inherent uncertainty of climate change impacts is one of the main challenges for adaptation in environmental management. The lack of knowledge about climate impacts on ecosystem services at high spatial and temporal resolution limits when and what adaptation measures should be taken. We addressed these limits by assessing four ecosystem services—forest production, tree growth, sequestered carbon, and tourism potential—under drought or climate change. To support adaptation, we adapted the existing concept of 'dynamic adaptive policy pathways' for forest management by

developing an action expiration chart, which helps to define expiry dates for forestry actions using ecosystem services delivery thresholds. We assessed services for Sitka spruce, Scots pine, and pedunculate oak on the National Forest Estate in Scotland for the next 80 years using probabilistic climate change data from the UKCP09 weather generator. Findings showed that drought would have an overall long-term negative impact on the provision of three services with a decrease up to 41%, whereas climate change has a positive impact on tourism potential with up to five times higher frequency of good climate conditions during summer months. Furthermore, the results highlighted when forestry actions, mainly in the lowlands, will reach their environmental limits during the next 80 years. Our findings reduce knowledge uncertainty and highlight when and where adaptation should be implemented to ensure the provision of future forest ecosystem services in Scotland.

WWW: http://iopscience.iop.org/article/10.1088/1748-9326/10/10/105005#top
Bib type: A
GMD: text
Entered: 09/11/2015 b00000317

Record ID 4011079
Title: **Identification of bacteria associated with the acute oak decline syndrome in England using Next Generation Sequencing.**
Author: Sapp, M.
Co-author: Lewis, E.; Moss, S.; Barrett, B.; Kirk, S.; Elphinstone, J.; Denman, S.
Imprint: 2015
Source: Forests
Reference: doi: 10.3390/f60x000x
Main subject: TREE HEALTH
Subjects: OAK ASSOCIATED MICROBIOME; PYROSEQUENCING; 16S rRNA gene; ACUTE OAK DECLINE; ENDOSPHERE; NATIVE OAK; ENGLAND; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Outbreaks of acute oak decline (AOD) have been documented in England from 2006. Both species of native oaks (Quercus robur and Quercus petraea) are affected. To complement isolation efforts for identification of putative causative biotic agents and increase our understanding of bacteria associated with oak tissue, 5 sites in England were chosen for this study...
Class: Electronic resource
WWW: www.mdpi.com/journal/forests
ISSN: 1999-4907
Bib type: A
GMD: Periodical article
Entered: 10/11/2015 B00000115

Record ID 4011083
Title: **IUFRO Conference held at the University of Alberta, Edmonton, Alberta, Canada, 11-13 August 2015. Ecology, silviculture and management of spruce species in mixed forests.**
Other titles: Preliminary sitka spruce (picea sitchensis) early growth model for MOSES_GB
Author: Bianchi, S.
Co-author: Hale, S.; Arcangeli, C.; Cahalan, C.; Henshall, P.; Kerr, G.; Jenkins, T.
Company: IUFRO
Imprint: 2015
Main subject: FORESTRY
Subjects: REGENERATION; MODELLING; FCRA CONTRIBUTORS; CONTINUOUS COVER FORESTRY; 2016-FR-CAT-2
Notes: The proceedings are to be published.
Abstract: Continuous Cover Forestry is an alternative management approach promoted in the UK Forestry Standard and in the UK Woodland Assurance Scheme. To support its

implementation the Forest Research Agency is developing MOSES_GB, a distance-independent individual tree growth model suitable for use in mixed-species, uneven-aged stands. The model has been developed following the MOSES (MOdelling Stand rESponses) approach originally suggested by researchers at the University of Natural Resources and Life Sciences (BOKU), Vienna, Austria. The overstorey components of MOSES_GB are being adapted and re-calibrated for Sitka spruce (Picea sitchensis) growing under UK conditions, but no work has been yet carried out on the regeneration and early growth components of the model. We present here preliminary developments in the preparation of these components using both existing Forestry Commission datasets and data newly collected from coniferous stands. Both empirical and mechanistic approaches (such as the relationships between stand structure, light regime and regeneration) are investigated. The main knowledge and data gaps to be addressed in the UK situation are identified, and the methodology for preparing the regeneration components for Sitka spruce and other coniferous species in MOSES_GB is discussed.

WWW: http://spruce2015.ualberta.ca/Home
http://www.forestry.gov.uk/fr/INFD-8BXETZ
Country: ca
Bib type: M
GMD: Conference Poster
Entered: 01/12/2015 B00000115

Record ID 4011096
Title: **Soil disturbance resulting from stump harvesting**
Parent Item: Scottish Forestry
Author: Collison, J.
Co-author: Wilson, C.A.; Moffat, A.J; Gallacher, J.
Imprint: Royal Scottish Forestry Society, 2015
Series: Scottish Forestry
Source: Scottish Forestry 69 (2) 20-27
Main subject: BRITISH FORESTRY
Subjects: FCRA AUTHOR; 2016-FR-CAT-2
Class: AH Library Serials 'S' Room L12
Bib type: A
GMD: Periodical article
Entered: 04/01/2016 b00000317
Updated: 04/01/2016 b00000317

Record ID 4011161
Title: **First Report of Shoot Blight Caused by Sirococcus tsugae on Atlantic Cedar (Cedrus atlantica) in Britain.**
Author: Pérez-Sierra, A.
Co-author: Gorton, C.; Lewis, A.; Kalantarzadeh, M.; Sancisi-Frey, S.; Brown, A.
Imprint: The American Phytopathological Society, 2015
Source: Plant Disease
Reference: 1857
Main subject: TREE HEALTH
Subjects: FCRA AUTHORS; 2016-FR-CAT-2
Abstract: Atlantic cedar (Cedrus atlantica) could become of increasing importance to U.K. forestry as an alternative species to plant to counter the impacts of climate change, particularly on drier sites in southern and eastern Britain. However, in late autumn 2013, severe shoot blight and defoliation on Atlantic cedar was reported to the Forest Research Tree Health Diagnostic and Advisory Service (THDAS)...
Class: Electronic resource
WWW: http://dx.doi.org/10.1094/PDIS-04-15-0378-PDN
Bib type: A
GMD: Periodical article

Entered: 01/03/2016 B00000115

Record ID 4011162
Title: **Phytophthora siskiyouensis causing stem lesions and cankers on Alnus incana.**
Author: Perez-Sierra, A.
Co-author: Kalantarzadeh, M.; Sancisi-Frey, S.; Brasier C.M.
Imprint: The British Society for Plant Pathology, 2015
Source: New Disease Reports
Reference: p.17
Main subject: TREE HEALTH
Subjects: GREY ALDER; BLEEDING LESIONS; CANKERS; PATHOGENICITY; FCRA AUTHORS; 2016-FR-CAT-2
Abstract: In late summer 2013, stem cankers and sparse foliage were reported on European grey alder (Alnus incana) growing on a 500 ha site recently-planted with broadleaf and coniferous trees in south-west England. A site visit showed that approximately 10% of more than 1000 grey alders (thought to have been imported from Europe and planted in the late 1990s) had symptoms including bleeding stem lesions similar to those caused by Phytophthora alni (Gibbs et al., 2003). In November 2013, samples were collected from stem lesions (Fig. 1), roots (internal lesions tracking-down from stem lesions) and rhizosphere soil from symptom-bearing trees. Tissue from root and stem lesion margins was plated onto Phytophthora selective medium (SMA) (amended as per Brasier et al., 2005) and incubated at 20°C for 48 hrs. Green apples were used as baits for soil samples by inserting a few grams of soil under a flap cut in the side of the apple and incubating for 4-7 days at 20°C. Isolation from developing SMA mycelial cultures and incubated apple baits onto potato dextrose agar (PDA) and carrot agar (CA) was then undertaken...
Class: Electronic resource
WWW: http://dx.doi.org/10.5197/j.2044-0588.2015.031.017
Bib type: A
GMD: Periodical article
Entered: 01/03/2016 B00000115

Record ID 4011163
Title: **The Use of Genus-Specific Amplicon Pyrosequencing to Assess Phytophthora Species Diversity Using eDNA from Soil and Water in Northern Spain.**
Author: Català, S.
Co-author: Pérez-Sierra, A.; Abad-Campos, P.
Imprint: 2015
Source: PLoS ONE
Reference: DOI: 10.1371/journal.pone.0119311
Main subject: TREE HEALTH
Subjects: FCRA AUTHOR; 2016-FR-CAT-2
Abstract: Phytophthora is one of the most important and aggressive plant pathogenic genera in agriculture and forestry. Early detection and identification of its pathways of infection and spread are of high importance to minimize the threat they pose to natural ecosystems. eDNA was extracted from soil and water from forests and plantations in the north of Spain.
Class: Electronic resource
WWW: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0119311
Bib type: A
GMD: Periodical article
Entered: 01/03/2016 B00000115

Record ID 4011164
Title: **Evaluation of Pinus radiata seed treatments to control Fusarium circinatum: effects on seed emergence and disease incidence.**
Author: Berbegal, M.

Co-author: Landeras, E.; Sánchez, D.; Abad-Campos, P.; Pérez-Sierra, A.; Armengol, J.
Imprint: Wiley Online Library
Article first published online: 30 MAY 2015, 2015
Source: Forest Pathology
Reference: 525–533
DOI: 10.1111/efp.12204
Main subject: TREE HEALTH
Subjects: FCRA AUTHOR; 2016-FR-CAT-2;
Abstract: In this study, the effects of hot water (HWT), hydrogen peroxide and fungicides on the incidence of Fusarium circinatum on artificially inoculated Pinus radiata seeds were evaluated. Fifteen commercial fungicide formulations were screened in vitro for inhibitory activity on mycelial growth and conidial germination of F. circinatum. With half-maximal effective concentration (EC50) lower than 0.5 ppm, fluazinam, imazalil and tebuconazole were the most effective fungicides on mycelial growth, while captan, mancozeb or pyraclostrobin were the most effective (EC50 < 0.3 ppm) on conidial germination...
Class: Electronic resource
Bib type: A
GMD: Periodical article
Entered: 01/03/2016 B00000115

Record ID 4011165
Title: **Histology of Quercus ilex roots during infection by Phytophthora cinnamomi.**
Author: Redondo, M.A.
Co-author: Pérez-Sierra, A.; Abad-Campos, P.; Torres, L.; Solla, A.; Reig-Armiñana, J.; Garcia-Breijo, F.
Imprint: Springer Berlin Heidelberg - First online: 03 September 2015, 2015
Source: Trees
Reference: 1943-1957
Main subject: TREE HEALTH
Subjects: CELL STRUCTURE; HISTOLOGICAL ALTERATIONS; HISTOPATHOLOGY; MICROSCOPY; PATHOGENESIS; INVASIVE PATHOGEN, FCRA AUTHOR; 2016-FR-CAT-2
Abstract: This study aimed to elucidate the infection process of the invasive pathogen Phytophthora cinnamomi on primary and secondary roots of 2-month-old Quercus ilex seedlings. To test if different methods of inoculation lead to different changes in the host caused by the pathogen, the root system of plants was either immersed into a suspension of P. cinnamomi zoospores, or placed in direct contact with agar plugs colonized by P. cinnamomi mycelium...
Class: Electronic resource
ISSN: Online 1432-2285
Print 0931-1890
Bib type: A
GMD: Periodical article
Entered: 01/03/2016 B00000115

Record ID 4011166
Title: **No seed zone effects on the survival, growth, and stem form of Pacific silver fir (Abies amabilis) in Britain.**
Author: Kerr, G.
Co-author: Stokes, V.; Peace, A.; Fletcher, A.; Samuel, S., Mackintosh, H., Mason, W.L.
Imprint: Canadian Science Publishing
Published on the web 13 February 2016, 2015
Source: Canadian Journal of Forest Research
Reference: 427-436
Main subject: SEED SCIENCE

Subjects:	SEED ZONE; ABIES AMABILIS; SILVICULTURE; GENETICS; FCRA AUTHORS; 2016-FR-CAT-2
Abstract:	Pacific silver fir (Abies amabilis Douglas ex J. Forbes) was first introduced to Britain in 1830 but has not been widely planted and occupies a minute part of the forest estate. The results of six experiments established in the uplands of Britain examining material from 30 collection sites in 14 seed zones clearly demonstrate that its potential has not been recognised. The trials were assessed after 28 years and show that Pacific silver fir has the potential to be as productive as other common species options.
Class:	Electronic resource
WWW:	http://www.nrcresearchpress.com/doi/abs/10.1139/cjfr-2015-0303
Bib type:	A
GMD:	Periodical article
Entered:	01/03/2016 B00000115

Record ID	4011193
Title:	**The ecological and conservation implications of Ash Dieback (Chalara) and methods to mitigate impacts**
Author:	Mitchell, R.
Co-author:	Broome, A; Harmer, R.
Company:	The James Hutton Institute; Forest Research
Imprint:	In Practice (CIEEM), 1 March 2016
Description:	article, ills.
Main subject:	TREE HEALTH
Subjects:	ASH DIEBACK; CHALARA; CHALARA ASH DIEBACK; CHALARA FRAXINEA; FRAXINUS EXCELSIOR; HYMENOSCYPHUS FRAXINEUS; UK; FCRA AUTHORS; 2016-FR-CAT-2
Bib type:	M
GMD:	text
Entered:	18/03/2016 b00000317
Updated:	21/03/2016 b00000317