Assessing and communicating animal disease risks for countryside users

Many people take great pleasure in spending time in the great outdoors and still more are being encouraged to visit green spaces to improve their health and well-being. Although considerable evidence supports the benefits of spending time in the countryside, little is known about how best to warn visitors of potential risks and encourage appropriate behaviour without causing alarm.

Research summary

An interdisciplinary research team is exploring the possible impact of zoonotic diseases on the development of recreation in rural areas, within an overarching framework of risk communication. The initial focus will be on Lyme disease (also known as Lyme borreliosis), an infectious disease caused by the bacterium *Borrelia burgdorferi* s.l. Lyme disease is found in a number of wild animal hosts and can be transferred to humans by infected ticks.

The study will:

- analyse scenarios for future risk of disease transmission;
- estimate the risk of encountering ticks in a range of habitats;
- develop an understanding of the risk perceived by public users and land managers;
- identify the possible responses of organisations and potential behavioural responses of individuals following precautionary advice;
- recommend methods for communicating precautionary information.

Study sites will represent remote upland woodland and wild land, accessible lowland woodland and farmland/heath, and peri-urban park and woodland.

Research outputs

The project will increase understanding of how individuals, groups and organisations perceive and respond to the risk of zoonotic diseases. The development of mathematical models will improve predictions of the location of infected ticks within the countryside. The evaluation of precautionary information will assist policy makers, countryside managers and users to effectively communicate the degree of risk and encourage preventative action.

Research team

Forest Research and the Universities of Oxford and Surrey are conducting this three-year study (2007–2010), which is funded by the Rural Economy and Land Use Programme (RELU)[1] and Defra. Members of the team and research topics are as follows:

Forest Research

Chris Quine, Liz O'Brien, Darren Moseley, Mariella Marzano
Scenario analysis and information provision

University of Oxford, Department of Zoology

Sarah Randolph, Andrew Dobson, Jenny Taylor
Risk analysis and tick modelling

University of Surrey, Department of Psychology

David Uzzell, Julie Barnett, Afrodita Marcu
Risk perception and communication

The expertise of the project team is supplemented by
● a Project Advisory Board of experts in the fields of medicine, veterinary science, land management, and health and safety;
● a Practitioner Panel of stakeholders involved in management, policy development and use of forests and wild lands in the UK.

In addition, close links are being maintained with the Health Protection Agency (*Lyme Borreliosis* Unit) and a number of other RELU projects.

Further information:

For further information, visit:
www.forestresearch.gov.uk/animaldiseaserisks
or contact:
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Authoritative health protection advice on Lyme disease and other zoonotic diseases can be found at:
www.hpa.org.uk