

Unravelling migration routes and the spread of Avian Influenza

Jacquie Clark, Phil Atkinson, Stuart Newson, Rob Robinson

British Trust for Ornithology, The Nunnery, Thetford, IP24 2PU, UK. jacquie.clark@bto.org

This talk describes work on migration and distribution of birds that has been carried out to help the understanding of the possibility of wild birds bringing Avian Influenza to Britain. This work, carried out by BTO with the Wildfowl and Wetland Trust and Defra, provides background information on all species using Britain, develops a new recovery mapping technique, and identifies priority areas for surveillance. The new mapping technique uses statistical methods to define and describe migration 'pathways'. The direction of movement of ringing recoveries is plotted against the distance moved and a smooth line is fitted to the data using GAMS. Turning points are identified to distinguish groups of recoveries each of which may then be mapped separately. A smooth line is fitted to the recoveries to indicate the directions and timing of movements through the year. In addition, kernel mapping is used to describe the distribution of populations of birds at different times of year based on ring recoveries. Priority areas for surveillance to detect AI were defined using a combination of wild bird and poultry abundance. This work is extremely valuable in helping to understand the possible spread of AI and how to detect it. The methods developed to map recovery direction and timing can also be applied to other species and at different scales to help understand the movements and distribution of birds.