

UK SPA SCIENTIFIC WORKING GROUP

29th January 2003

SPA provision for non-estuarine non-breeding waders

Background on the process

A number of birds use non-estuarine shorelines around the UK during the non-breeding period, including a number of migratory waders that are widely dispersed in such habitats. These non-estuarine habitats are not well surveyed by the Wetland Bird Survey (WeBS), especially in northern Britain, and so our knowledge of populations and usage is often limited to information from special national surveys, such as the Winter Shorebird Count (WSC; 1984/85), the WeBS Non-estuarine Waterfowl Survey (NEWS; 1998), and local surveys. These surveys were used to assess areas during the SPA review.

As waders are typically dispersed on non-estuarine shores, few areas support sufficient numbers to meet the requirements of the SPA Selection Guidelines (JNCC 1999¹), although sites with small numbers were selected to add to range coverage. For most waders, their UK SPA suite is considered to provide adequate site-based protection (Stroud *et al.* 2001²). However, the BTO has investigated an alternative way to assess the relative importance of areas for five waders associated with non-estuarine habitats³.

For each species, linear densities (number of birds divided by length of count section) were inversely weighted by the appropriate national threshold to give density in NIUs/km (National Importance Units):

$$\text{Density}_{(\text{NIUs}/\text{km})} = \Sigma \text{birds} / (\text{count section length}_{(\text{km})} \times \text{national threshold}_{(\text{birds})})$$

The derived density measure (NIUs/km) for all species can be summed to come up with a total for a given group of waders. For any group of count sections making up an area the average NIU was derived to allow comparisons with other areas. Densities for coastline not surveyed were also extrapolated:

$$\text{Extrapolated importance}(\text{NIUs}) = (\text{average importance} \times \text{total length of coastline in area of interest}_{(\text{km})}) / \text{total length of coastline visited in area of interest}_{(\text{km})}$$

This approach could only be used when count sections had accurate spatially referenced end points, which is not always the case in non-estuarine habitats for WeBS core count data. For these data an alternative minimum importance NIU was derived for each species from the sum of bird counts in all sections counted within an area divided by the national threshold.

On the basis of these definitions the BTO report presents results using NEWS and WSC data for non-estuarine coasts in the UK at two scales: 100 km and 10 km national grid squares. Thus, allowing comparison of different grid squares across the UK and at regional levels. Some results using WeBS core counts are also presented.

¹ JNCC. 1999. The Birds Directive: selection guidelines for Special Protection Areas. JNCC, Peterborough.

² Stroud *et al.* 2001. The UK SPA network: its scope and content. JNCC, Peterborough.

³ Austin, G.E., Mellan, H.J. & Rehfisch, M.M. 2003. Identifying stretches of the UK's non-estuarine coast that could be worthy of SPA designation for their waterbird interest. BTO Research Report No. 272. BTO, Thetford. See also; Rehfisch, M.M., Holloway, S.J. & Austin, G.E. (2003) Population estimates of waders on the United Kingdom's and the Isle of Man's non-estuarine coasts during the winter of 1997-98. *Bird Study*, **50**, 22-32.

The results are discussed and areas of relatively high density for each species are identified, some of which lie outside of the SPA network (Table 3 of the report). The report makes some recommendations to WeBS about future needs for monitoring of non-estuarine species, including areas where improvement in coverage would be essential and improvements in the utility of the WeBS core count data for providing information about non-estuarine species.

Recommendations

It is recommended that the UK SPA Scientific Working Group:

- **Reviews** the BTO report and considers whether this is a robust way of identifying areas of relatively high wader density.
- **Considers** whether there are implications for the UK SPA network and, if any, agree when and how to take consideration of these implications further within its work programme.

*Helen Baker, JNCC
January 2003*