

Migratory connections in a changing climate by Dr James Pearce-Higgins

The climate we all experience is affected by common causes of change. This commonality masks inequality between those responsible for most of the greenhouse gas emissions and those likely to suffer the most serious consequences. The gulf between the affluent countries of Europe and North America, and the vulnerable of tropical Africa and South America, is bridged by millions of inter-continental migratory birds on their seasonal movements. The same swifts that nest in English church towers catch insects over the tropical savannas of Mozambique in winter. The cuckoos whose call echoes across the British countryside in summer spend even longer in the Congo Basin during our winter.

Migratory birds help us connect with the climatic changes that different societies along their routes are exposed to. The livelihoods of pastoral farmers of the Sahel depend on the rains which stimulate green growth during our summer for their livestock to browse. That same rain provides fruit and insects for many long-distance migrants returning to Africa after breeding in the UK, to recharge their energy after crossing the Sahara. The volume of rain that falls determines the overwinter survival of species such as the sedge warbler or whitethroat that winter in Africa. Fluctuations in the populations of these birds breeding in Britain tell us about the conditions those farmers would have experienced over the

previous year. The numbers of cuckoos returning to the Congo may be declining in response to climate change, whether due to shifts in the timing of spring on their European breeding grounds, falling insect populations in Western Europe, or increasing drought conditions in the Mediterranean, connecting African societies with climate change in Europe.

The decline in abundance of many migratory birds is one of the conservation challenges of our time. Because they are affected by changing conditions across their life-cycle as they move between continents, they show us particularly vividly the effect our actions are having on natural systems and processes across the globe – and on societies very different from our own. Organisations like the British Trust for Ornithology combine information collected by thousands of volunteers about the birds they see, with scientific enquiry and analysis to understand how and why bird populations are changing, and the skills of those that tell stories about those changes. Together, we can inspire others to hearken to what the call of the cuckoo or the scream of the swift may be telling us about environmental change across our world.

James Pearce-Higgins is Director of Science at the British Trust for Ornithology. He leads BTO's climate change research.