Birds on the move

September 21 2012

(Phys.org)—Over the past 60 years, areas that have a climate suitable for certain Australian bird species have shifted much faster than previously thought, and not exactly in the expected direction.

Research led by James Cook University and recently published in *Nature* Climate Change, shows that changes in the Australian climate have caused areas with climates suitable for individual bird species have moved hundreds of kilometres in just 60 years.

Also, although warming temperatures would suggest movement toward the South Pole, shifts in areas with specific climates have occurred in all directions – north, south, east and west.

JCU's Associate Professor Jeremy VanDerWal, who led the project, said the paper highlighted the impact of climate change on the habitats of hundreds of native bird species.

"Just like us, individual bird species have a particular climate niche that is most suitable for them to live in," he said.

"Our research shows that the Australian climate has changed significantly over the last 60 years and this has led to the climatic niches for individual bird species having moved an average of 76 kilometres and up to a maximum of nearly 500 kilometres.

"The impact of this is that birds may have to change the areas in which they live faster than previously thought, resulting in the need for more

rapid shifts in the distribution of species."

Dr Helen Murphy, CSIRO Research Scientist and part of the research team, said people still did not understand how well species had been able to shift their distributions to follow this level of change in their environment, and this was an area requiring significant future research.

"Such knowledge of how species have responded over the past 60 years of climate change is vital for predicting their capacity to respond to future change," she said.

The research was a collaboration between James Cook University and the CSIRO. The team used the most robust dataset on species observations available at the time - bird observations from BirdLife Australia - and correlated these with historic monthly information on temperature and precipitation from the Australia Water Availability Project.

Provided by James Cook University