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### **Ecology and conservation of birds in upland and alpine habitats**

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## **Understanding the drivers of recent Dotterel declines in Scotland**

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Climatic changes are known to drive the distribution and abundance of many taxa worldwide. Montane species are thought to be particularly susceptible to these effects but evidence for this in bird species is scarce and often inconclusive. Due to the difficulties of working in these areas and the resulting lack of long-term datasets, our understanding of the factors affecting the abundance and distribution of montane bird species is poor. However, the Scottish Eurasian Dotterel *Charadrius morinellus* population is an exception to this rule having been extensively surveyed over the last 30 years. Severe declines in the abundance of Dotterel and contractions in their Scottish range have been recorded across this period and these changes also coincide with well-documented major changes in the Scottish climate.

The Scottish Dotterel population is thus a unique and ideal case study for investigating how climatic changes impact montane bird species. Although long proposed, no evidence has been given linking the abundance and distribution of montane bird species to changes in snow lie. We present a case for declines in the Scottish Dotterel population between 1987 and 1999 being at least partly driven by decreases in winter snow lie. This insight allows us to better target future research to identify the mechanisms mediating changes in the abundance and distribution of Dotterel and montane bird species more generally.