

Winter sports threaten indigenous mountain birds

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In the winter months, the mountain ranges of central Europe attract thousands of tourists for skiing, snowboarding and other outdoor sports, but conservationists fear this annual invasion may threaten indigenous bird species, including the Capercaillie. The research, published in the journal *IBIS*, reveals how the growth of human recreation may be a key factor in the rapidly declining population of these iconic alpine birds.

The Capercaillie (*Tetrao urogallus*), also known as the Wood Grouse, is the largest member of the grouse family and is renowned for its mating display. It is most commonly found in the alpine regions of Germany and Switzerland where its population has suffered a severe decline.

"Alpine habitats across Europe remained relatively undisturbed until the beginning of the last century, but today human outdoor recreation areas coincide with the winter habitats of many shy and endangered species," said lead author Dominik Thiel from the Swiss Ornithological Institute. "The Western Capercaillie has suffered rapid population declines during recent decades. However, little is known about their susceptibility to human recreation activities."

Dr Thiel's team monitored the populations of alpine Capercaillie in Germany and Switzerland close to recreation sites during two winter seasons. After analyzing 1130 samples of Capercaillie droppings the team found a marked increase in stress hormone levels closer to locations with winter recreation activity.

Capercaillie are expected to be particularly sensitive to winter tourism because during the winter months it is restricted to feeding on conifer needles which have a low [nutrient content](#) and are difficult to digest. This requires a long digestion time and results in a low rate of [energy intake](#). Therefore any sudden energy expenditure, such as escaping from humans who will be perceived as predators, is costly.

"Winter is always the most energetically demanding season of the year for any species surviving in the mountains," concluded Thiel. "The fact that this coincides with intense human disturbance has clear physiological and behavioural implications for Capercaillie."

"We believe that Capercaillie are especially sensitive to winter recreation, and the risk for negative effects is high. The access of people to undisturbed Capercaillie winter habitats should therefore be prevented. Recreation activities should be kept away from core Capercaillie wintering areas, especially during the physiologically most demanding winter days."

Provided by Wiley

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