

Investigating the impact of human disturbance

As a third year student at The University of Nottingham, I have been studying the impact of human disturbance on the breeding of the European nightjar (*Caprimulgus europaeus*). Sherwood Pines Forest Park is visited by members of the public throughout the year but is especially popular in summer with cyclists, horse riders, walkers and their dogs. In the summer of 2015 the recreational trail usage and wildlife abundance was surveyed, and breeding success of the nightjar was monitored. The surveying of the trails was carried out with a Masters student, Jack Rayner, under the supervision of Dr. Kate Durrant, while the monitoring of nightjar breeding was led by the Birklands Ringing Group.

In previous years, the nightjar of Sherwood Pines Forest Park have been shown to prefer a breeding habitat that was less frequently disturbed by humans, however in 2015 the nesting female nightjar have been found to show no preference between more or less disturbed areas of the forest. Furthermore, in 2015 there has been a higher proportion of nests that fledge chicks, as well as an altogether greater number of nests going on to fledge chicks in areas of forest that are more frequently disturbed by humans. The results of the wildlife survey established that predators potentially threatening to nightjar breeding such as corvids (crows and jays) and birds of prey live in greater densities in the area of the forest less frequently visited by humans. Corvids predate on the nightjar nests, while the birds of prey are thought to predate upon the adult nightjars. This difference in risk of predation could provide an explanation for a lower success of nightjar nests in the area of the park less frequently visited by members of the public.

Historically, nightjar have been shown to be less successful in breeding where human disturbance is greater. In recent years however, it has been shown that the nightjar in this forest may have become habituated to human disturbance, and are using disturbed areas of the forest to breed in. Additionally, disturbance seems to affect all wildlife in the park, including the species that affect nightjar breeding by pushing them to undisturbed areas of the park, affecting the reproductive success of nightjars even when human disturbance is reduced. The complex effects of disturbance from visiting member of the public needs careful consideration when examining the suitability of nightjar habitat for the future.

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