**Introduction**

Parakeets are an invasive species that are widespread across Europe. The British population is one of the largest in Europe, in 2015 there was 8,600 breeding pairs and 31,000 individuals [Pârâu, 2016].

Parakeets are cavity nesters and rely on cavities dug out by woodpeckers, they can however enlarge existing cavities [Newson, 2011], [Orchan, 2013]. Cavities are usually a limited resource [Orchan, 2013] and throughout western Europe natural cavities have been substantially reduced due to land management [Strubbe, 2007]. Parakeet numbers have been shown to be heavily correlated to cavity density which suggests that cavities may be a limiting factor to parakeet numbers [Strubbe, 2007].

Invasive species enter an existing community of native and other alien species [Orchan, 2013]. Cavity-nesting birds are a clearly defined community that potentially use and interact over the same resource – the nesting cavities [Orchan, 2013]. Parakeets are entering the community of cavity-nesting birds, the effects of this has been widely studied by inconclusive. Parakeets have been found to reduce nuthatch numbers in Belgium [Strubbe, 2007] but no correlation was found in a similar study in London [Newson, 2011]. Strong correlation has been found with reduced number of noctules but not with cavity-nesting birds in Tel-aviv [Hernández-Brito, 2018]. Parakeets have also been found to increase the amount of time tits spend being vigilant rather than feeding which potentially effects their fitness [Lord, 2014]. Common species may nest next to parakeets so as to benefit from parakeets’ aggression towards potential predators [Hernández-Brito, 2013].

Parks are important hot-spots for diversity and are also losing many native species due to increased exotic species [Nielsen, 2014]. This project will study the effect of parakeets on the cavity-nesting bird community within the parks and green spaces of Manchester.

**Hypothesis**

1. There is a significant difference in the cavity-nesting birds community make up between green space with parakeets and those without.
2. There is a significant correlation in the cavity-nesting species richness of a green space and the number of parakeets.
3. There is a significant difference in the cavity-nesting bird community composition between green spaces with parakeets and those without.

**Methods**

56 green spaces in Manchester were visited and comprehensively surveyed. Each hectare of a green space was entered, and each site was searched for 5 minutes per hectare. Every sighting or call of a cavity-nesting bird was recorded.

**Data Analysis**

*You should include a short section clearly stating which analyses you will conduct to resolve each of your hypotheses, with specific reference to the data. The exact statistical tests or models to be used should be specified here. Using simulated data, you should carry out the analyses for at least one of your hypotheses and present analysis as a results section with appropriate figure/s. The number of analyses you present will be dependent on project complexity and analytical complexity. Once you have written you hypotheses and suggested data analyses, ask one of us if you are unsure.*

**Effect Size**

*Your suggested sample size should be based on the anticipated statistical effect size, which should be justified. Justification may range from published relevant data (this is ideal and should be the most common situation) to an educated guess of the strength of effect size expected. If published data are used, source citations should be indicated. If guesses are made, the strength of the guess must be justified explicitly. Where appropriate, power analysis results and sample sizes should be indicated for each statistical objective.*

**Results**

**Bibliography**

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