

Sexual dimorphism in *Fringilla coelebs*

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Introduction

The chaffinch, *Fringilla coelebs*, is one of the most widespread and common passerine bird species (Wickham 2017)(Cramp 1994). It is sexually dimorphic in plumage with males being brightly coloured with a blue-grey cap and rust-red underparts and females being grey-brown with paler underparts (see Figure 1). This study aimed to determine whether *F. coelebs* were also sexually dimorphic in size.



Figure 1: Adult *Fringilla coelebs* Left, male (by Andreas Trepte, CC BY-SA 2.5 <https://creativecommons.org/licenses/by-sa/2.5>, via Wikimedia Commons); right, female (4028mdk09, CC BY-SA 3.0 <https://creativecommons.org/licenses/by-sa/3.0>, via Wikimedia Commons)

Table 1: A summary of the data.

sex	mean	std	n	se	ssx
females	20	2.1	20	0.48	87
males	22	2.1	20	0.48	88

Methods

We randomly sampled 20 male and 20 female birds on the stray and determined their mass with spring scales. Analysis was carried out with R version 4.1.1 (R Core Team 2021) and tidyverse packages (Wickham 2017).

Results

We wouldn't normally report the sum of the squared deviations ($SS(x)$) but we do so here to make use of a function. For males, the $SS(x) = 87.9$ and for females, the $SS(x) = 86.83$

Males ($\bar{x} \pm s.e.$: 22.27 ± 0.48 g) have significantly higher mass than females (20.48 ± 0.48 g) ($t = 2.65$; $d.f. = 38$; $p = 0.012$). See figure 2.

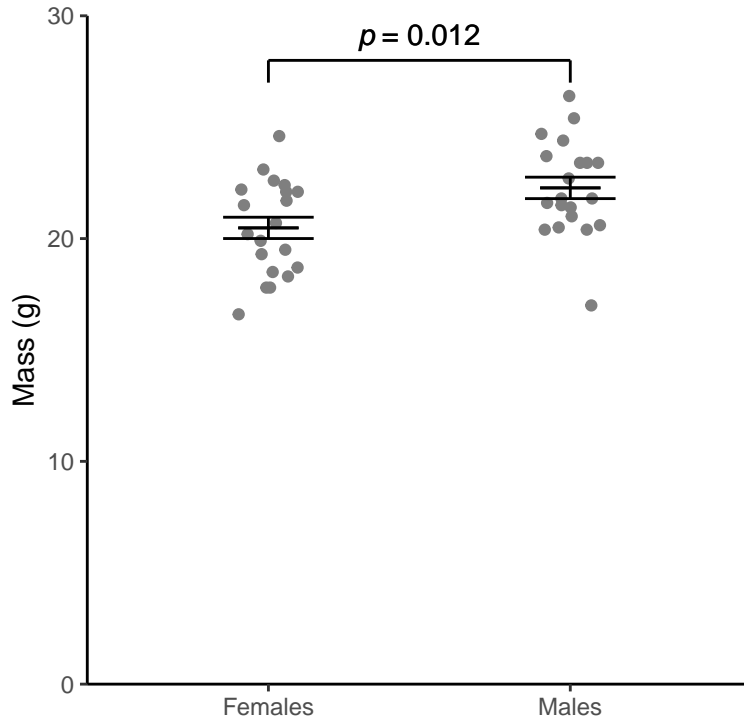


Figure 2: Mass of adult chaffinches caught on the Stray. Error bars are $\bar{x} \pm 1s.e.$

I've also gratuitously included a table with the same information just for the sake of including a table. See Table 1.

Discussion

Here we pick up points from the introduction.

Word count

Word count calculated with package `wordcountaddin` (Marwick 2020)

This doc: NA

The README: NA

Total: NA

References

- Cramp, Stanley. 1994. *Handbook of the Birds of Europe the Middle East and North Africa. The Birds of the Western Palearctic, Volume 8: Crows to Finches*. Vol. 8 Crows to Finches. Oxford University Press.
- Marwick, Ben. 2020. *Wordcountaddin: Word Counts and Readability Statistics in r Markdown Documents*.
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- Wickham, Hadley. 2017. *Tidyverse: Easily Install and Load the 'Tidyverse'*. <https://CRAN.R-project.org/package=tidyverse>.