

# Sexual dimorphism in *Fringilla coelebs*

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## Contents

<b>Introduction</b>	<b>1</b>
<b>Methods</b>	<b>2</b>
<b>Results</b>	<b>2</b>
<b>Discussion</b>	<b>3</b>
Word count . . . . .	3
<b>References</b>	<b>3</b>

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

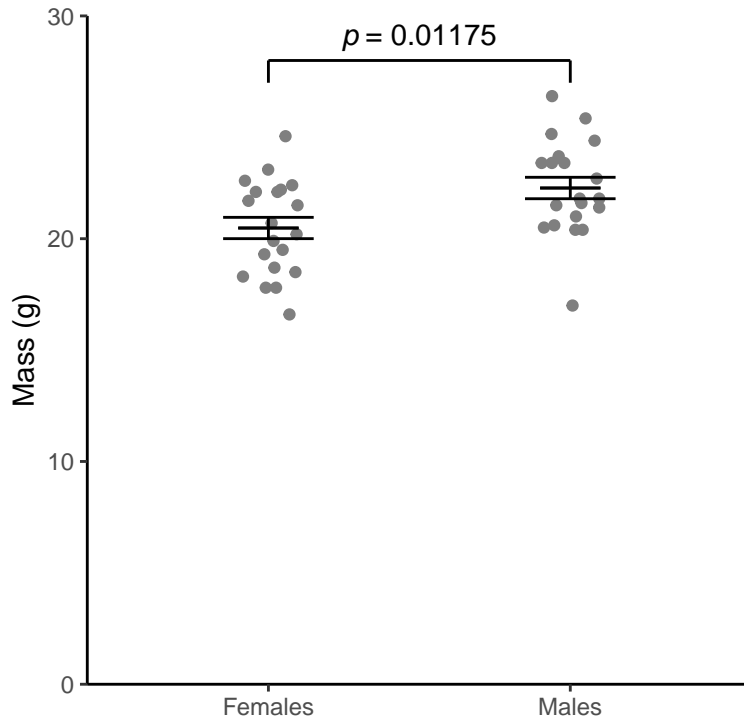


Figure 2: Mass of adult chaffinches caught on the Stray. Error bars are  $\bar{x} \pm 1s.e.$

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*.

R Core Team. 2021. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.

Wickham, Hadley. 2017. *Tidyverse: Easily Install and Load the 'Tidyverse'*. <https://CRAN.R-project.org/package=tidyverse>.