Mass of chaffinches

Emma Rand

Contents

1 Introduction

The chaffinch, *Fringilla coelebs*, is one of the most widespread and common passerine bird species (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)

2 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 4.0.2 (R Core Team 2020) and tidyverse packages (Wickham 2017).

Table 1: A summary of the data.

sex	mean	n	sd	se
females	20	20	2.1	0.48
males	22	20	2.2	0.48

3 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.
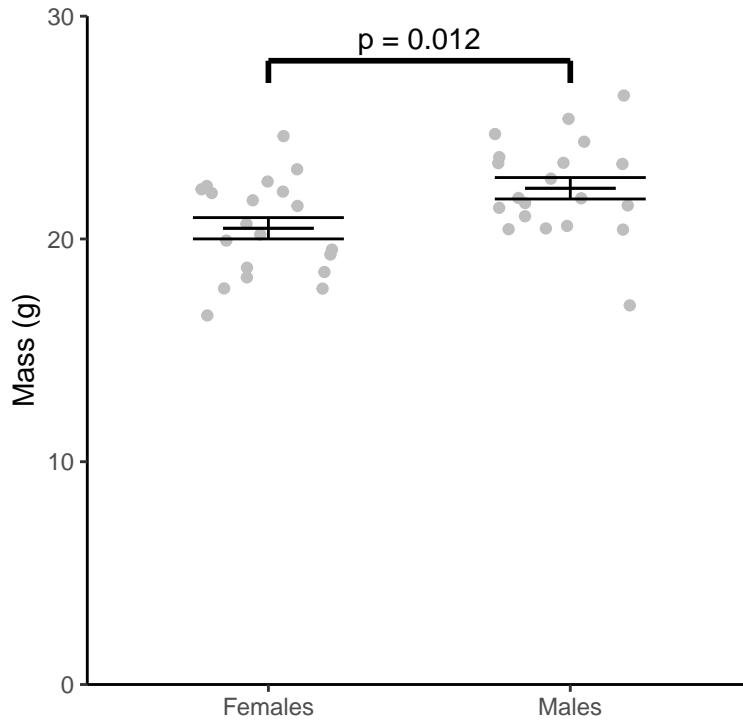

Figure 2: Mass of adult chaffinches caught on the Stray. Error bars are $\bar{x} \pm 1 s.e.$

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

4 Discussion

Here we pick up points from the introduction. See 1.

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.

R Core Team. 2020. *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.