

Introduction

The male zebra finch is the primary nest builder



Figure 1. Photo nest by zebra finches with 15cm pieces of string in our laboratory.



Figure 2. Pair of zebra finches in our laboratory. Female (left) and male (right).

Research Question: Does evolutionary history of nest building affect how male and female zebra finches interact with a cognitive test?

Predictions: Male zebra finches will interact with materials (the S+ and S-) longer than females.

Methods

16 M & 18 F zebra finches learned to discriminate between long and short string using a foraging board [1]

- Long string (S+) was rewarded with food
- Short sting (S-) was not

Behavioural measure: Time spent interacting with S+ and S-

Main comparison: Did the average time per trial spent interacting with string differ between M and F birds?

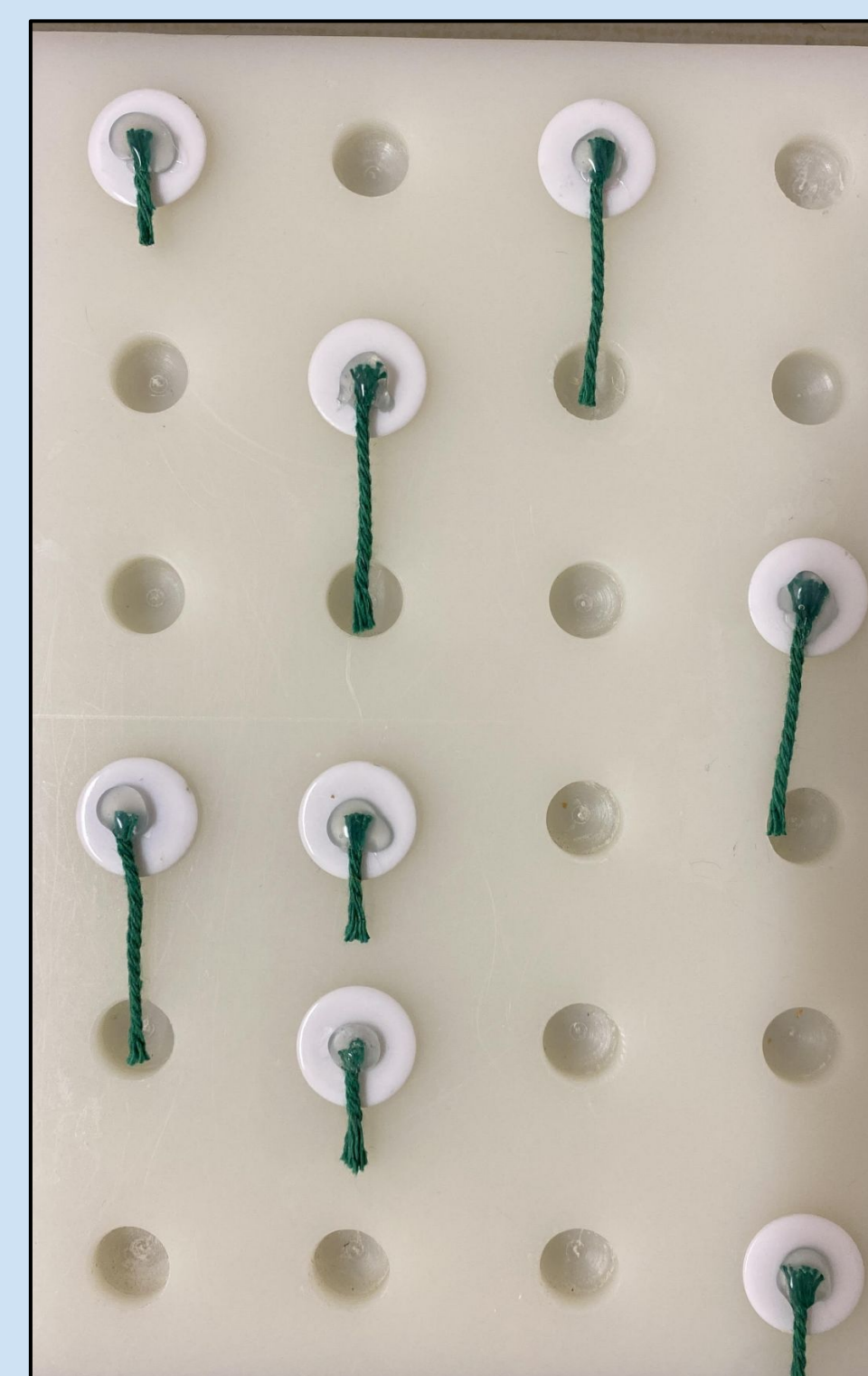


Figure 3. Foraging board (21 × 15 cm) with 4 S+ and 4 S- stimuli. 3 seeds were located under each S+

Results

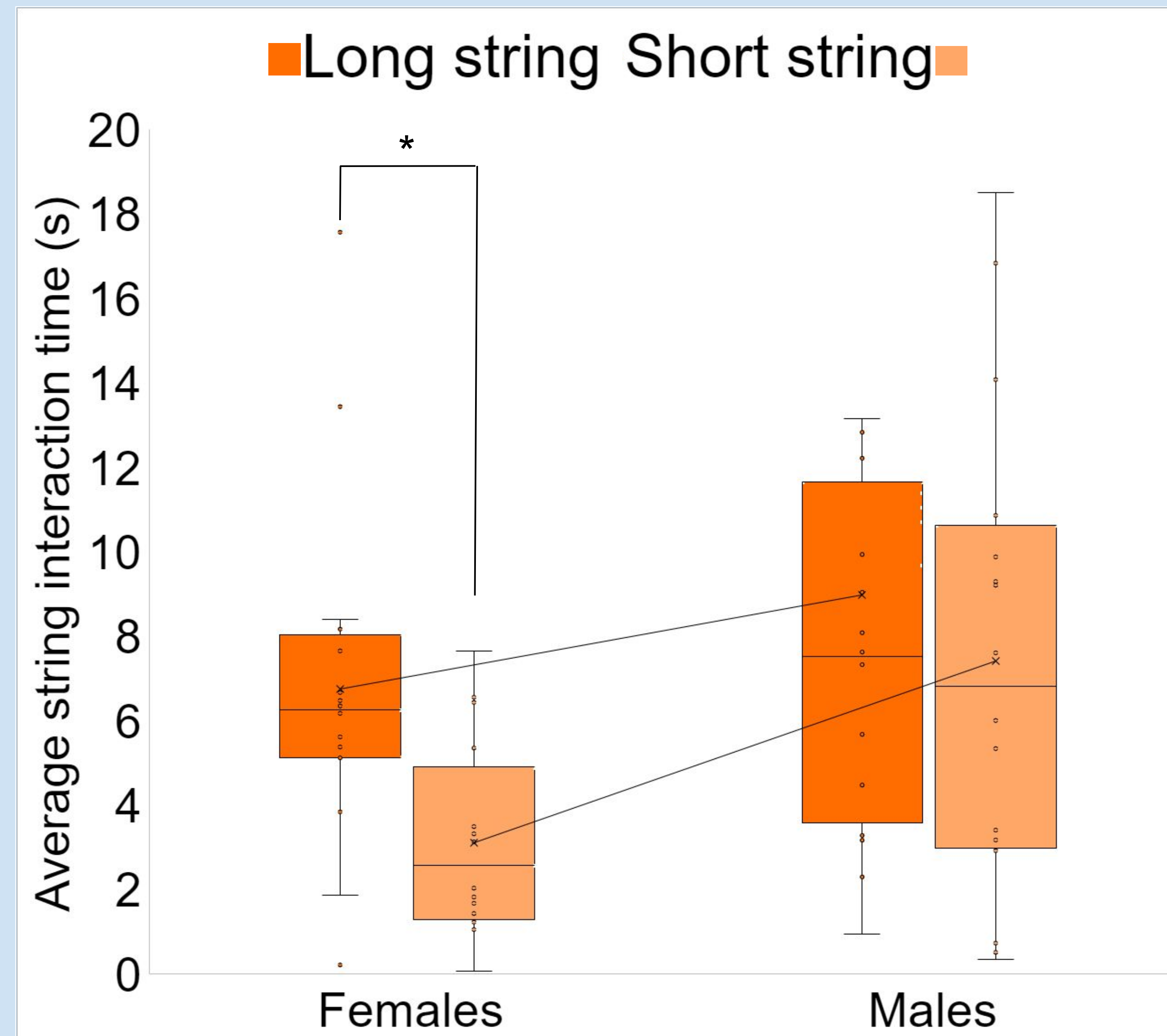


Figure 4. Average time spent interacting with each type of string (y-axis) per trial for male and female zebra finches (x-axis). Each dot represents one individual. X's show the group mean.

- No sex differences in the average time spent interacting with long ($p = 0.54$) or short ($p = 0.08$) string.
- Females spent more time interacting with long string (S+), compared to short string (S-; $p < 0.001$)
- No difference in the time males spent interacting with long string (S+), compared to short string (S-; $p = 0.40$)

Project details

Birds were tested individually until they learned to ignore the short string (S-) and remove the lid with long string (S+) to receive a food reward.

M and F birds learned in the same amount of trials.

→ 20% of the above trials, for each individual, were scored with BORIS software

→ 278 trials scored overall

Conclusions

Even though interacting with the long string resulted in a food reward, males spent just as much time interacting with the short (but unrewarded) string.

Main takeaways: Interacting with potential nest material is intrinsically rewarding for male zebra finches, but not for females.

Evolutionary pressure shapes what animals find rewarding

Citation

[1] Lambert, C. T., Balasubramanian, G., Camacho-Alpizar, A., & Guillette, L. M. (2022). Do sex differences in construction behavior relate to differences in physical cognitive abilities? *Animal Cognition*, 25(3), 605–615. <https://doi.org/10.1007/s10071-021-01577-2>