



# Who's the boss? Females' impact on males' nest-building behaviour in zebra finches

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## Introduction

- Male zebra finches are the **primary nest builders**. [1]
- Females rearrange material that has already been deposited, but typically do not select material or make deposits. [1]
- **Research Question:** Do female zebra finches affect the males' nest-building behaviour?

## Methods

- 10 male-female pairs of zebra finches were provided with 50 pieces of string.
- Nest building was recorded with in-cage cameras.
- Videos were coded for the following behavioural measures:
  - when the female was on or off the nest
  - material deposits by the male, indicating whether or not the female was on the nest.



Figure 1. A dome-shaped nest built by a pair of zebra finches using 15 cm pieces of blue string. The nest entrance is on the upper right side of the photograph.

## Results

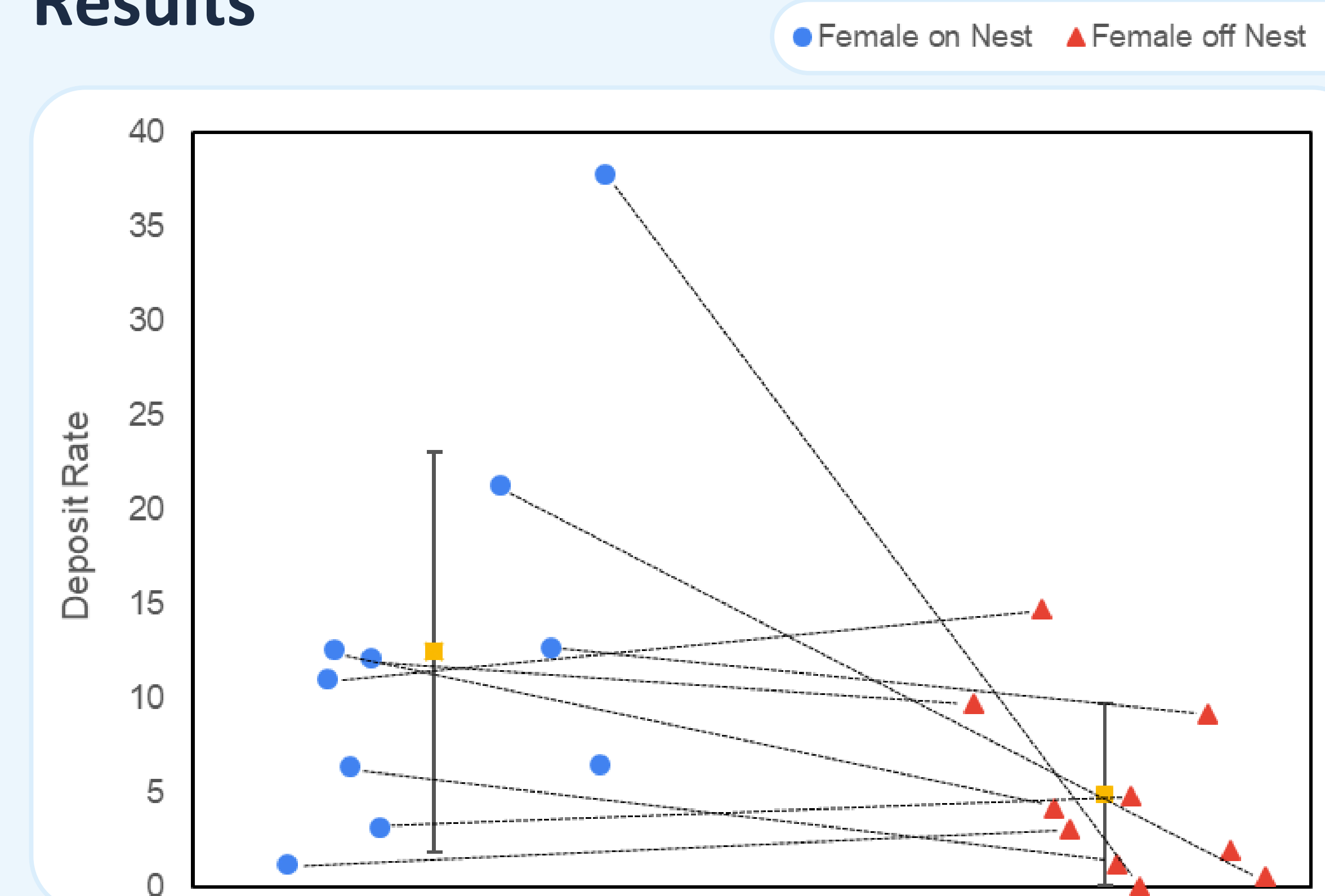


Figure 2. The y-axis shows the building rate (deposits/hour) of the male in relation to whether the female is on (blue circles) or off the nest (orange triangles, x-axis). The yellow squares represent the mean and the error bars represent the standard deviation. The dashed line represents one pair. Males deposited material at a faster rate when the females was on the nest ( $t(9) = 1.875, p = 0.047$ )

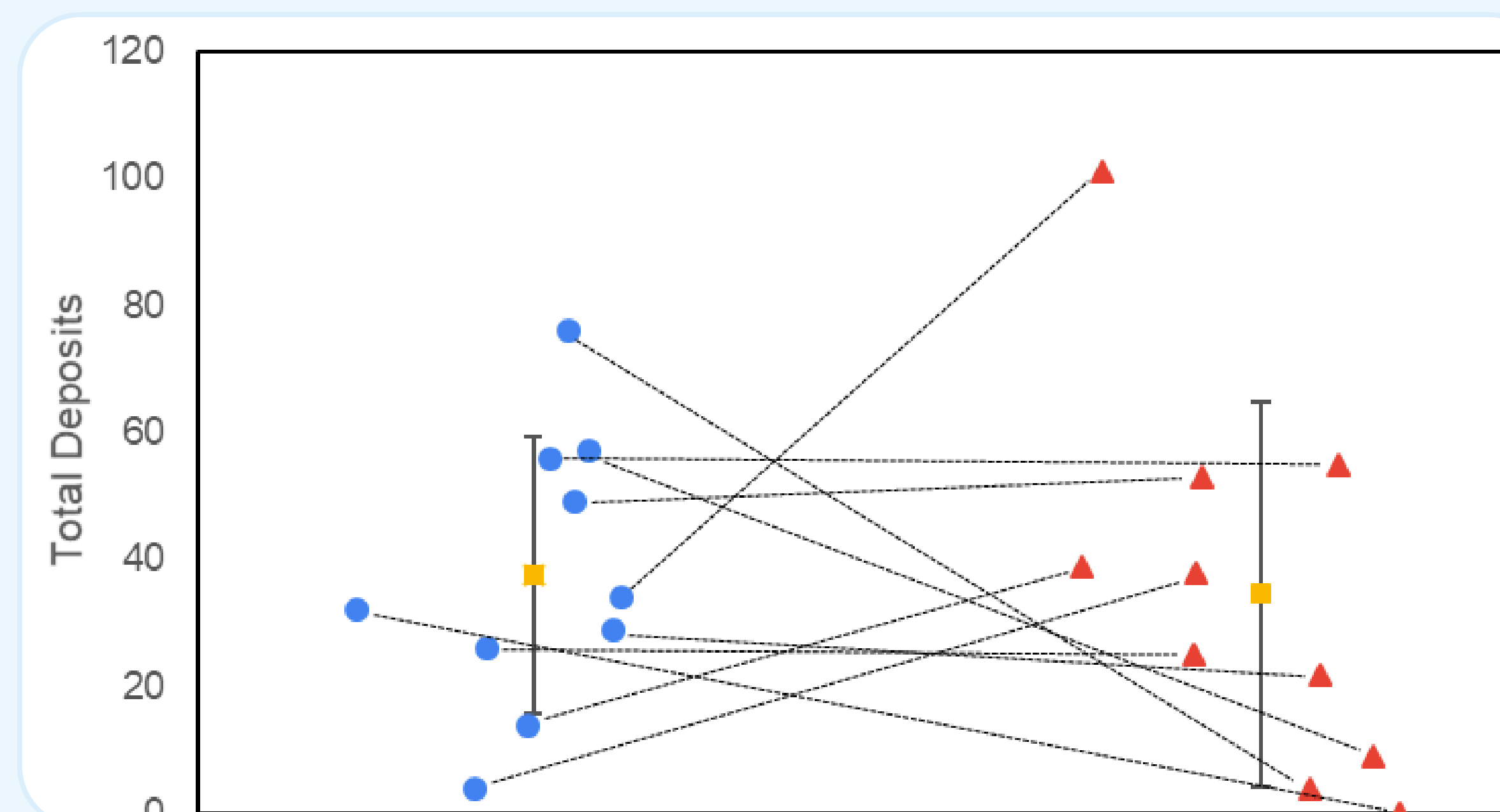


Figure 3. The y-axis shows the total number of deposits made by the male in relation to whether the female is on (blue circles) or off the nest (orange triangles, x-axis). The yellow squares represent the mean and the error bars represent the standard deviation. The dashed line represents one pair. The males deposited the same amount of material regardless of the females' location ( $t(9) = 0.242, p = 0.407$ )

## Summary

- There is a significant difference between the rate of deposits made by the male while the female is on the nest compared to when she is off. As the female spends time on the nest, the **rate of deposits increase**.
- There is **no significant difference** between the total amount of deposits made by the male when the female is on the nest compared to when she is off the nest.



Figure 4. A pair of zebra finches, the male is on the right with the orange cheek patches and the female is on the left.

## Conclusion

- **Females have an impact** on the nest-building behaviours of the males. Females increase the number of deposits made by the male per hour.
- Females do not affect the total amount of deposits made by the male.

## Reference

[1] Lambert, C.T., Balasubramanian, G., Camacho-Alpizar, A., & Guillette, L.M. (2020). Do sex differences in construction behavior relate to differences in physical cognitive abilities? *Animal Cognition*, 25(3), 605-615. DOI: 10.1007/s10071-021-01577-2

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