CRACKING THE AVIAN CODE: ANALYZING STEREOTYPIC BEHAVIOUR IN BLACK-CAPPED CHICKADEES

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Background

- Stereotypic behaviour is defined as an abnormal, repetitive pattern with no obvious function or intent seen in captive animals *(Garner et al., 2003)*

- Most common example of stereotypy seen in captive songbirds is route-tracing, when a bird follows a specific route in a constant pattern *(Sargent & Keiper, 1967)*

- This may be due to the fact that, in the wild, chickadees put large amounts of energy towards caching food to retrieve and eat later in the season *(Lawrence, 2003)*

- The provision of environmental enrichment can often be used to mitigate these types of behaviours *(Swaisgood & Shepherdson, 2006)*

Purpose

- Determine the effects of environmental (physical) enrichment on route-tracing behavior

Methods

8 adult black-capped chickadees:
4 in housing with additional enrichment (experimental)
4 in standard housing set-up (control)

Physical enrichment provided include:
1. PVC pipe with holes filled with shredded paper
2. Apple stick in corner of the cage
3. Perch wrapped in vet wrap
4. More perches

2 birds, 1 from each group, was coded using the BORIS program to identify any reduction of route-tracing frequencies for the purposes of this poster presentation
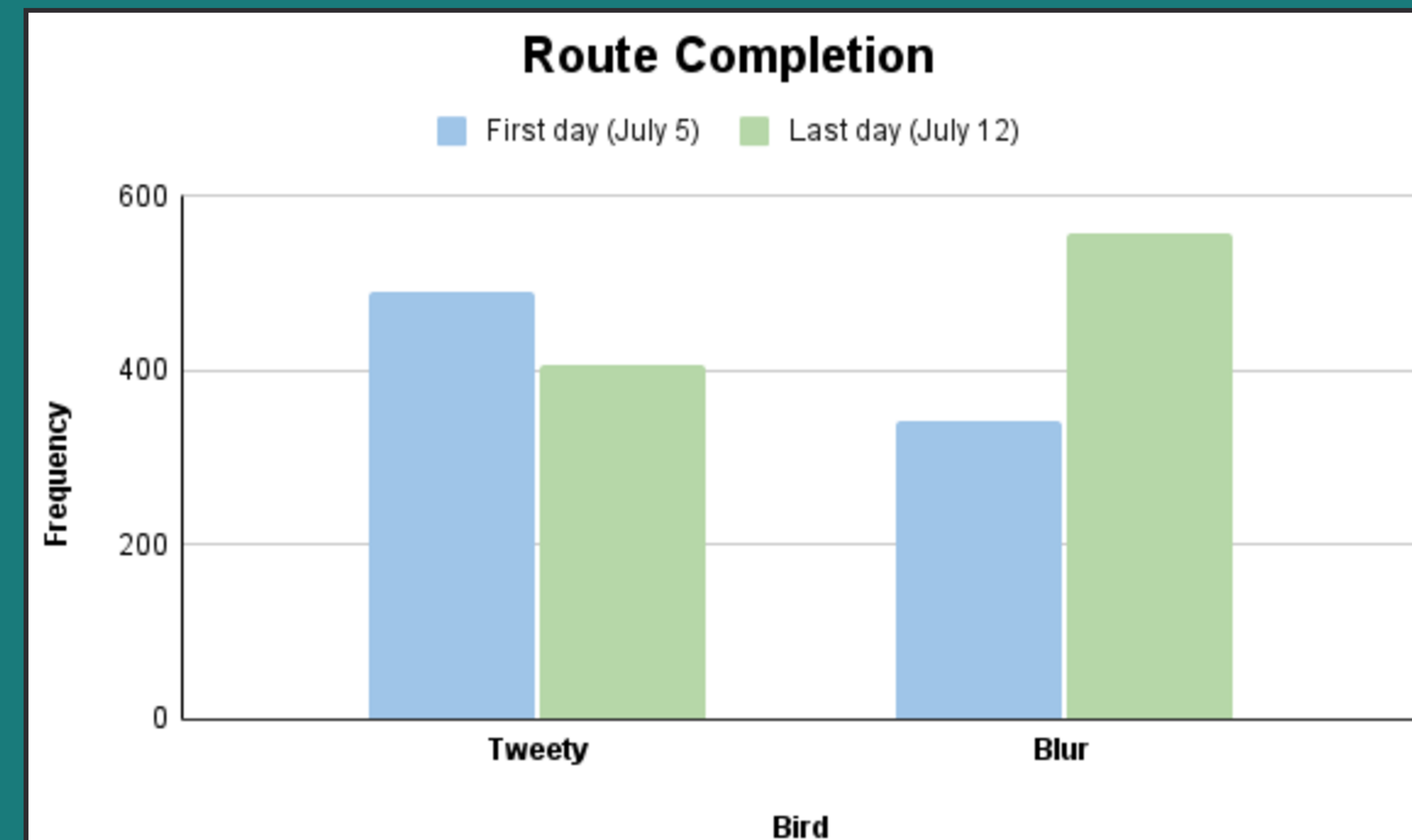
Results

Fig. 1 Average route completions, or each time a bird completed a full route rotation. Bars represent the frequency of the behaviour performed
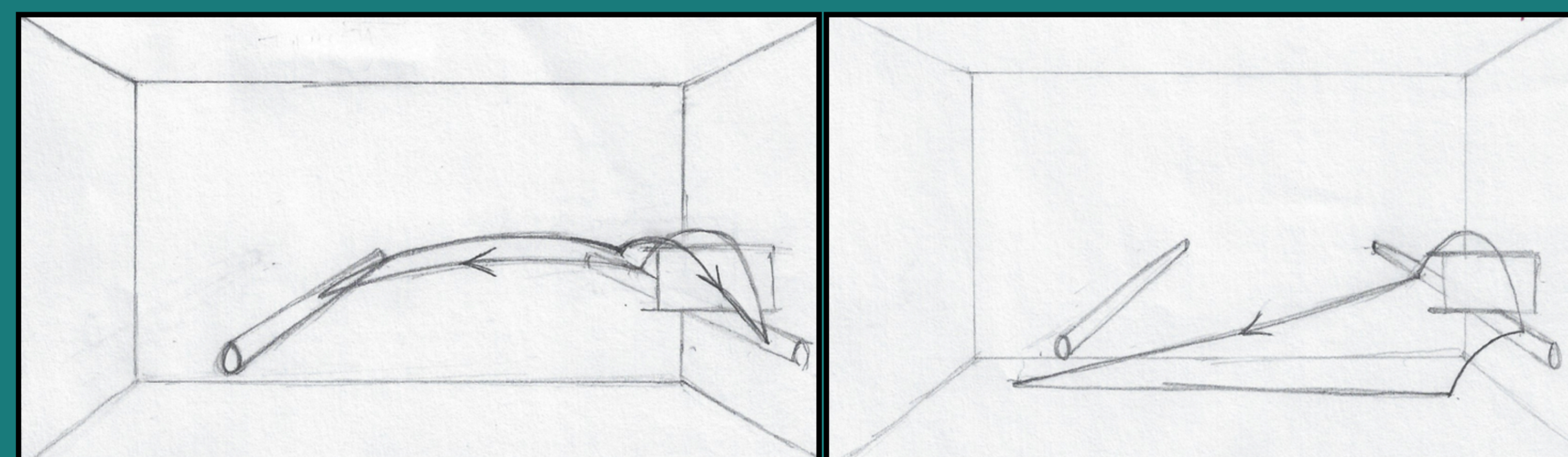

Fig. 2a Tweety's (E) original route

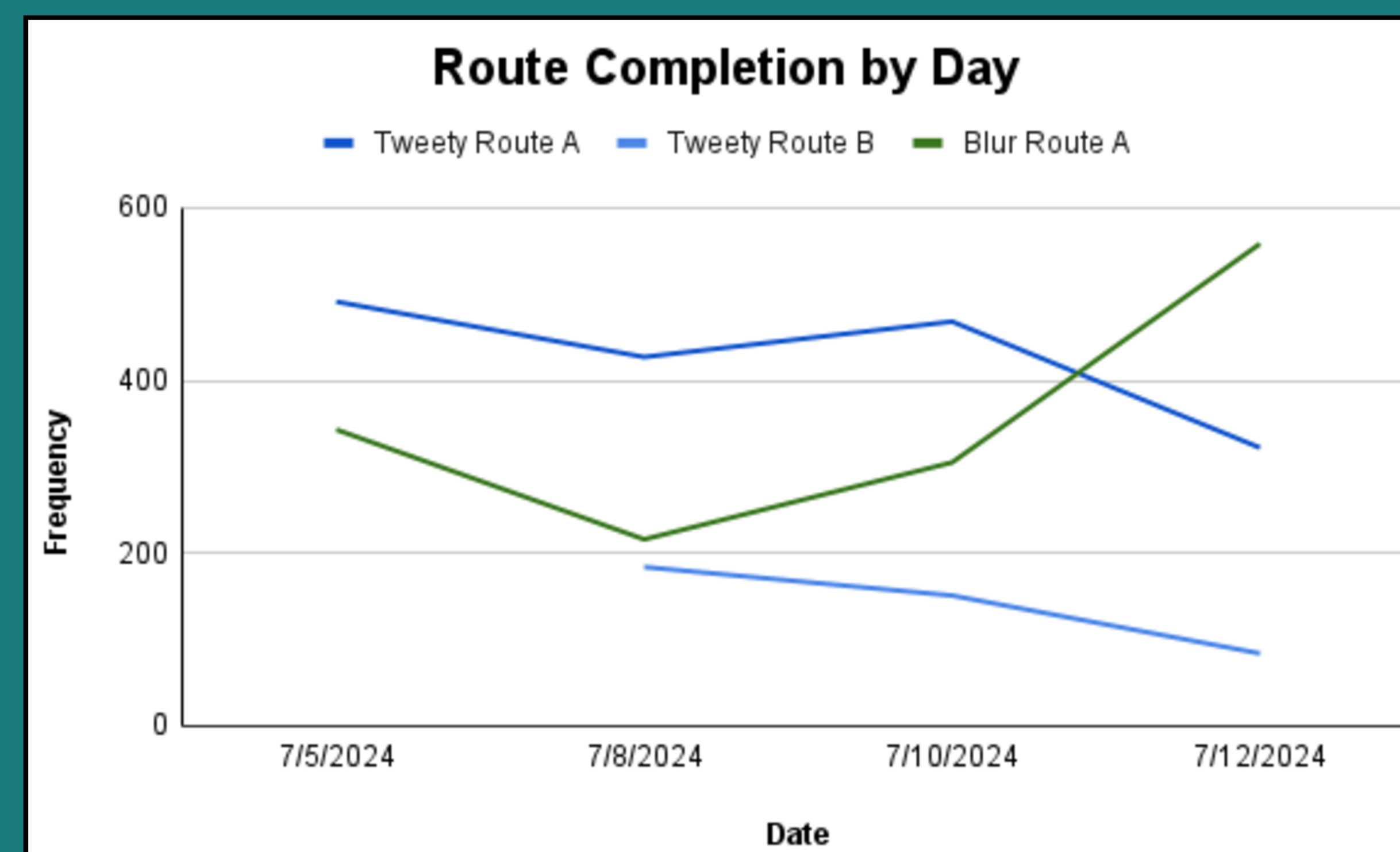**Fig. 2b** Tweety's (E) added route

Fig. 3 Average route completions by day performed by each bird. Note the new route Tweety, the enriched bird added after the first day of recording
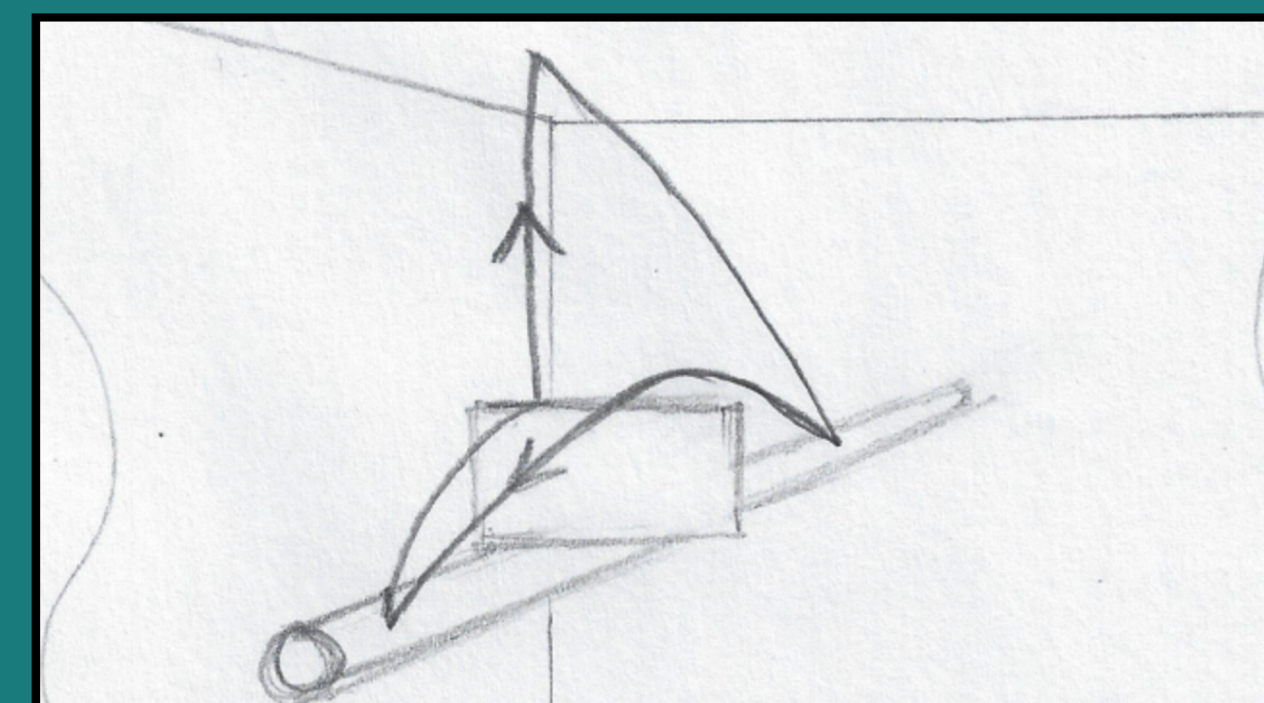

Fig. 2c Blur's (N) constant route. Blur showed no deviation from his route throughout the monitoring period

Bird Enclosures

Fig. 3 Non-enrichment Enclosure

Fig. 4 Enrichment Enclosure

Conclusion

- Although there was not a huge difference in stereotypy between the two birds, we saw promising trends

- We saw some decrease in Tweety's route-tracing after enrichment. We also saw an indication of behavioral flexibility, when Tweety introduced a new route midway through observation

- We expect to see these trends in the other six birds

- In the future, and with better implementation of enrichment techniques, we hope to see increased differences over time

Acknowledgements

References

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