

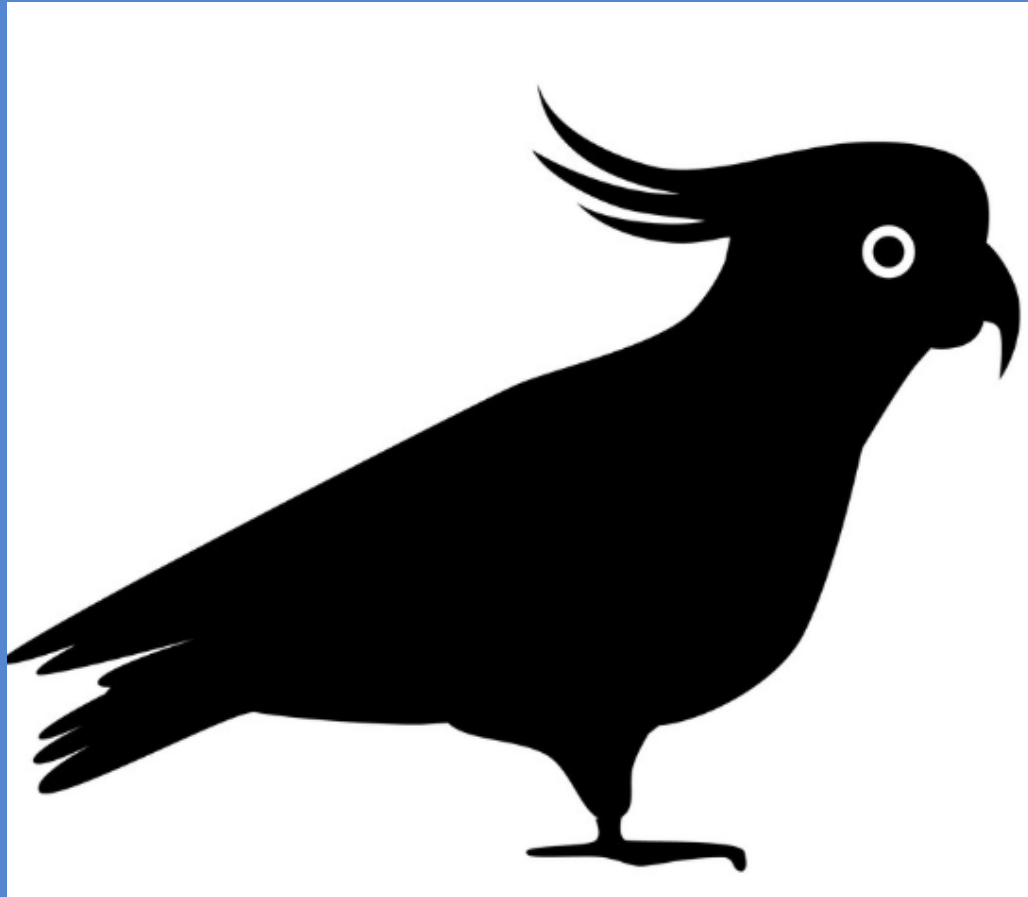


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## Review Of Methods To Help Convert Pet Birds to Pelleted Food

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# Three Conversion Methods

- Slow and Steady
- Tough Love
- Birdie's Choice

# ZuPreem Conversion Study Results

- 83 birds in the study
- Birds were separated into categories based on:
  - Family groups:
    - Family *Cacatuidae* – 20 birds
    - Family *Psittaculidae* – 16 birds
    - Family *Psitticidae* – 47 birds
      - Small – 26
      - Large - 21
  - Life stage: juvenile, adult, geriatric
    - Based on published age of maturity and lifespan



# Why Is the Study So Important?

- **Goal - Understand how different types of birds respond to diet conversion using one of three behavior-based methods to:**
  - Lead to smoother more rapid conversions
  - Develop timeline and expectations for conversion methods
  - Ease owner skepticism of diet conversion
- **The questions:**
  - What overall percentage of birds would convert?
  - Which life stage do birds convert more readily?
  - Which bird families convert more readily?
  - Which method of conversion converts fastest?

# Results

- Of the 83 birds in the study, only 3 owners claimed that their birds did not convert by any method → conversion rate of 96%
- Birds that did not convert were all following the “Slow and Steady” method
  - Adult lovebird
  - Adult budgerigar
  - Juvenile green-cheeked conure



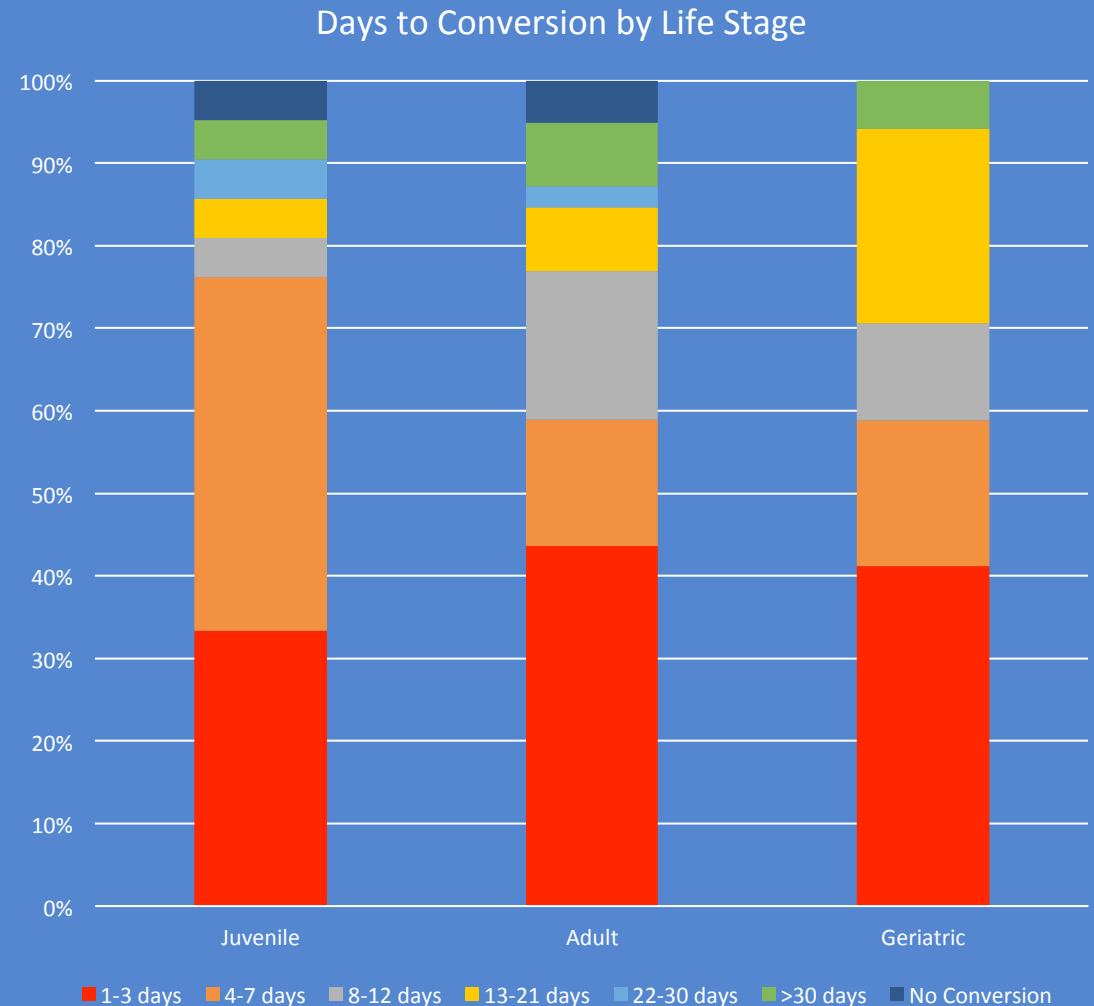
# Why Didn't Three Birds Convert?

- **Possible reasons:**
  - Methods do not always work on a particular bird
  - Human error/noncompliance
  - Insufficient time given to change bird's behavior due to nervous owner
- **Likely owners did not give enough time for the slower-paced method to work and did not follow directions**
  - Conure and lovebird: liked pellets but owner was concerned they were not eating enough of them and continued to mix in supplemental seed
  - Budgerigar: bird continued to eat around the pellets in the bowl, so owner gave up



# Life Stage vs. Time to Conversion

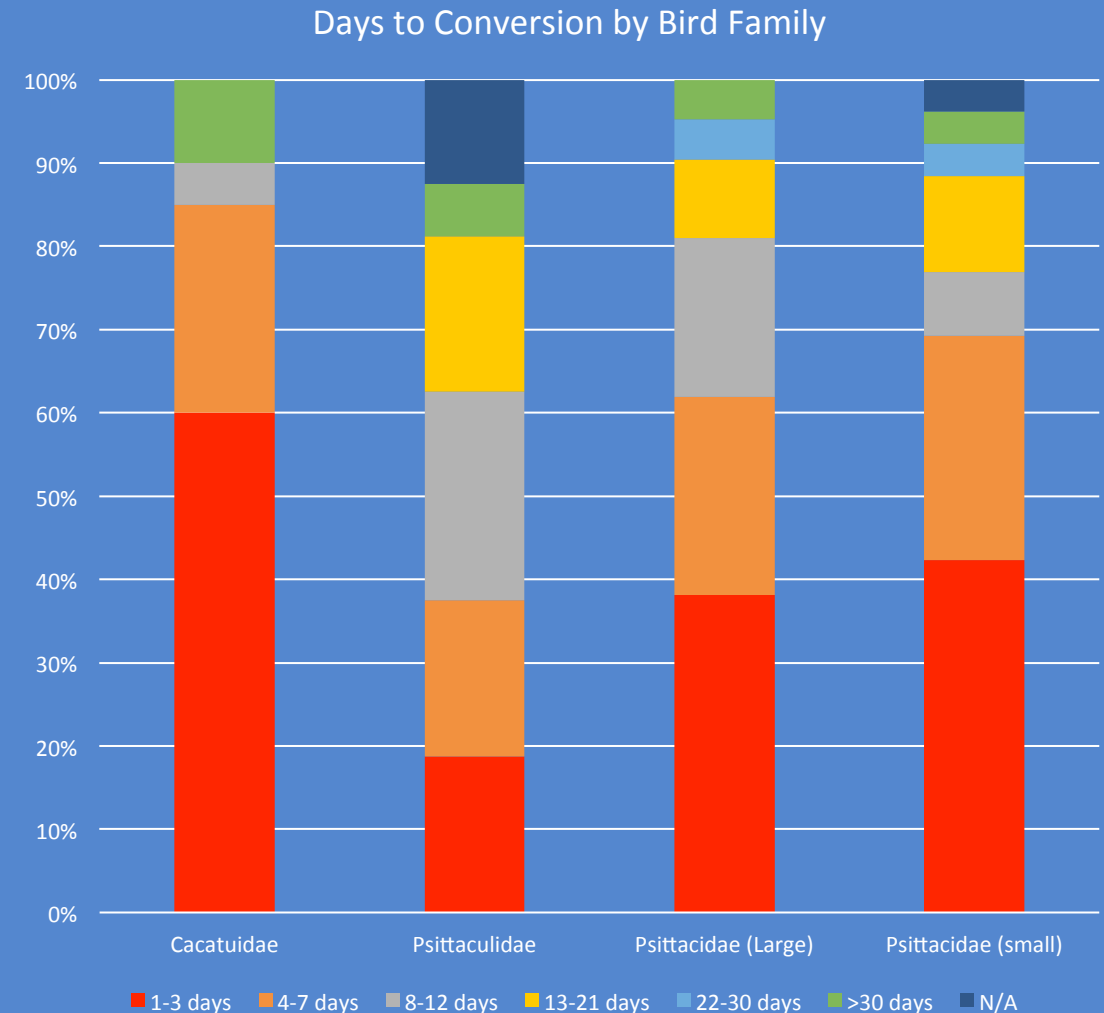
- **Assumption: birds at different life stages would convert at different rates**
  - Specifically, juvenile groups would more readily accept new foods
- **Results:**
  - 64% of birds converted within 7 days and 90% within the first month
  - Converted within first 3 days: adult (44%), geriatric (41%), juveniles (33%)
  - Converted within first 7 days: juvenile (76%), geriatric and adult (59%)
  - Geriatric group was the only group to have 100% conversion
    - 94% took less than a month





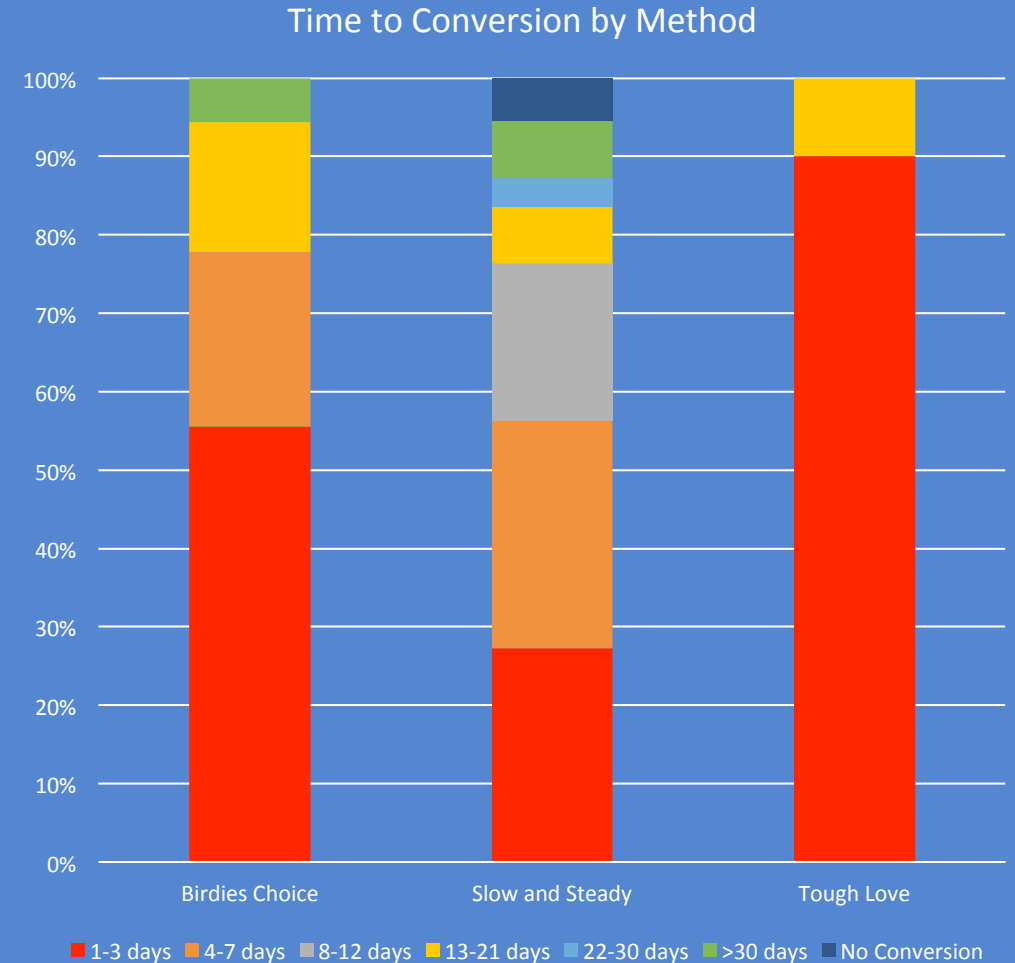
# Bird Family vs. Time to Conversion

- **Assumption:** family would have no effect on time to conversion due to diversity in methods
- **Results:**
  - Fastest conversion: *Cacatuidae*
    - 60% in 1-3 days, 85% in first week
  - Slowest conversion: *Psittaculidae*
    - 38% in first week, 81% in first month
  - No conversion: Small *Psittacidae* (4%) and *Psittaculidae* (13%)
  - Small *Psittacidae* converted faster than large *Psittacidae*
    - First 3 days: 42% versus 38%
    - First week: 69% versus 62%



# Time to Conversion By Method

- **Assumption:** there would be a significant difference between conversion times depending on method
  - Specifically, "Tough Love" would convert fastest, and "Slow and Steady" would take longest
- **Results:**
  - Fastest method: "Tough Love" with 90% of birds converting in 1-3 days
    - Most successful overall, with 100% of birds converting in the first month
  - Slowest method: "Slow and Steady" with 56% converting in first week, and 87% in first month
    - Least successful overall
    - Only method that had birds not convert (5%)



# Statistically Speaking...

- For statistical purposes, successful conversion was defined as birds taking fewer than 30 days to convert
- Survival statistics, Kaplan-Meier plot, and hazard ratios were used to compare the times to conversion between the groups of variables
- Results:
  - Median time of diet conversion for all birds was 5.5 days
  - Median time of diet conversion was significantly different between Slow & Steady and Tough Love groups, with Tough Love being faster
  - Median time of diet conversion was not significantly different between Birdie's Choice and Slow & Steady, and Birdie's Choice and Tough Love, respectively
  - There was no significant effect of sex or bird family on the rate of diet conversion
  - There was no significant difference in the rate of diet conversion between small and large *Psittacidae* species



# Statistical Analysis

Method	Number of Birds	Percentage of Birds	Median diet conversion time (95% CI)
Birdie's choice (BC)	18	22	2 (2-5.5)
Slow and steady (S/S)	55	66	5.5 (5.5-10)
Tough love (TL)	10	12	2 (2-2)

Table 1. Time (in days) of diet conversion of birds based on the method of diet conversion. The median time of diet conversion was significantly different between S/S and TL birds ( $P < 0.002$ ) but not between BC and S/S and BC and TL birds ( $P > 0.05$ )

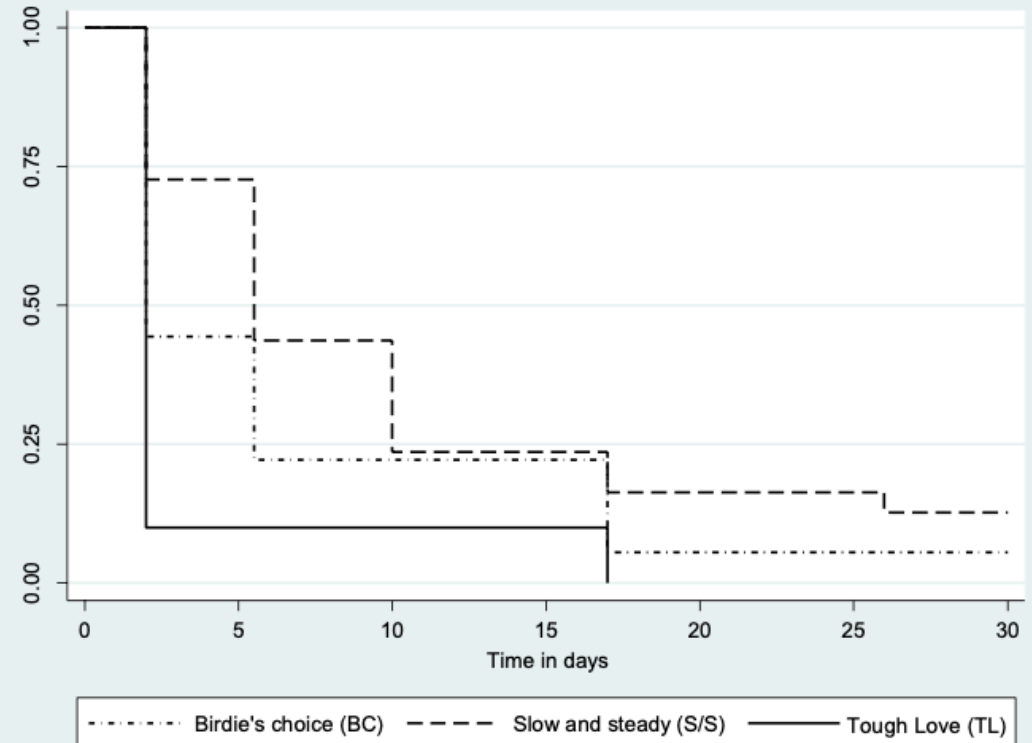


Figure 1. Kaplan-Meier plot of cumulative proportion of birds not yet converted for each diet conversion method.



## Conclusions:

Many owners are unaware of the basic principles of avian nutrition and believe that popular seed-based diets provide sufficient, balanced nutrition

Owners are under a misconception that birds will be unwilling to change their eating habits

Contrary to owners' common concerns, the majority of birds will convert to a pelleted diet from a seed-based diet

For most birds, conversion takes less than 1 week regardless of life stage, method chosen, or bird family

Statistically, the method chosen is the only variable that affects conversion time