Can a two-day bird education event affect the long-term knowledge, attitudes, and behaviors of students? Evidence from 13 Jamaican high schools.

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Research Question & Hypothesis:

Overarching Question: Does participation in "bird education" activities influence:

- Knowledge about birds?
- Attitudes towards birds?
- Self-reported behaviors?

Null Hypothesis: There is no relationship between student participation in bird education activities and their knowledge, attitudes and behavioral intentions.

Methods:

- Study group – 430 students from 13 high schools on Jamaica.
- Students in their second year of high school (13-14 years old).
- 7 **experimental group** schools & 6 **control group** schools.
- **Experimental Group** - Workshop and Field Based Activities
- **Control Group** – Only completed questionnaires.
- All students completed pre-and post-test questionnaires.

Workshop Content:

- What are birds?
- Why birds and their conservation matter?
- Threats to birds
- Personal responsibilities and possible actions.
- Careers in bird conservation (featuring select Jamaicans)
- Games and class exercises

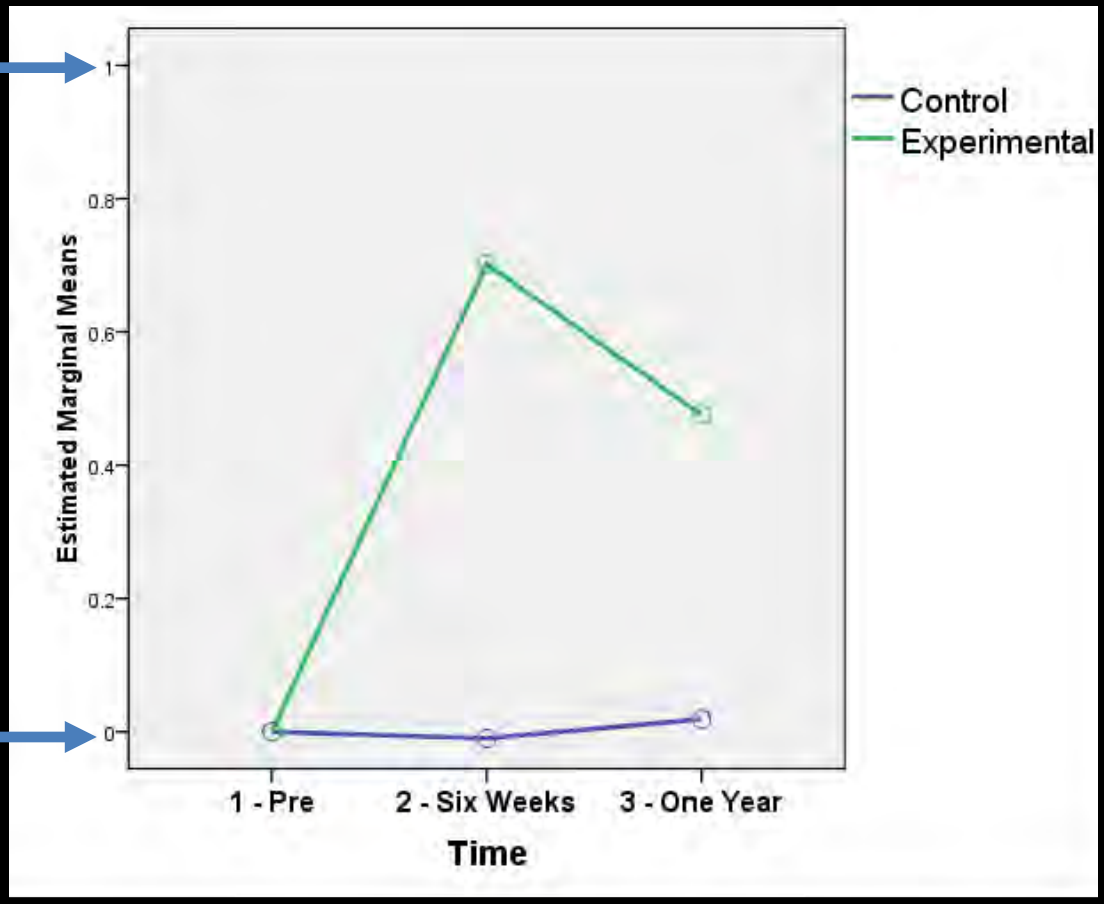
Field Based Programs

Bird watching with ID-cards
&
Bird-banding station participation.

Knowledge:
How many types of birds are found only on Jamaica?

Correct Answer

Incorrect Answer

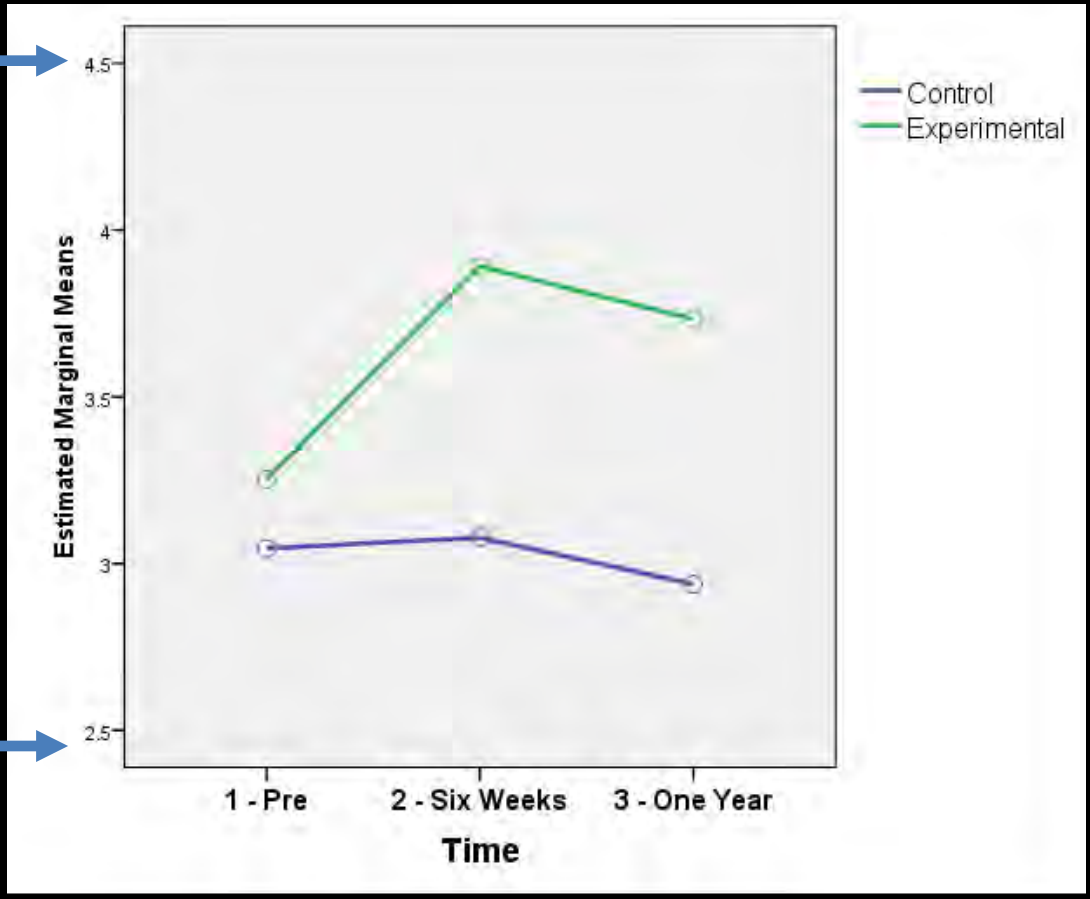


F = 333.7
p < 0.0001
Partial Eta Sq = 0.51

Participation in the education program had a dramatic and very strong effect on knowledge, with some atrophy after one year.

Attitude:
How important are birds for Jamaica and its people?

Very Important



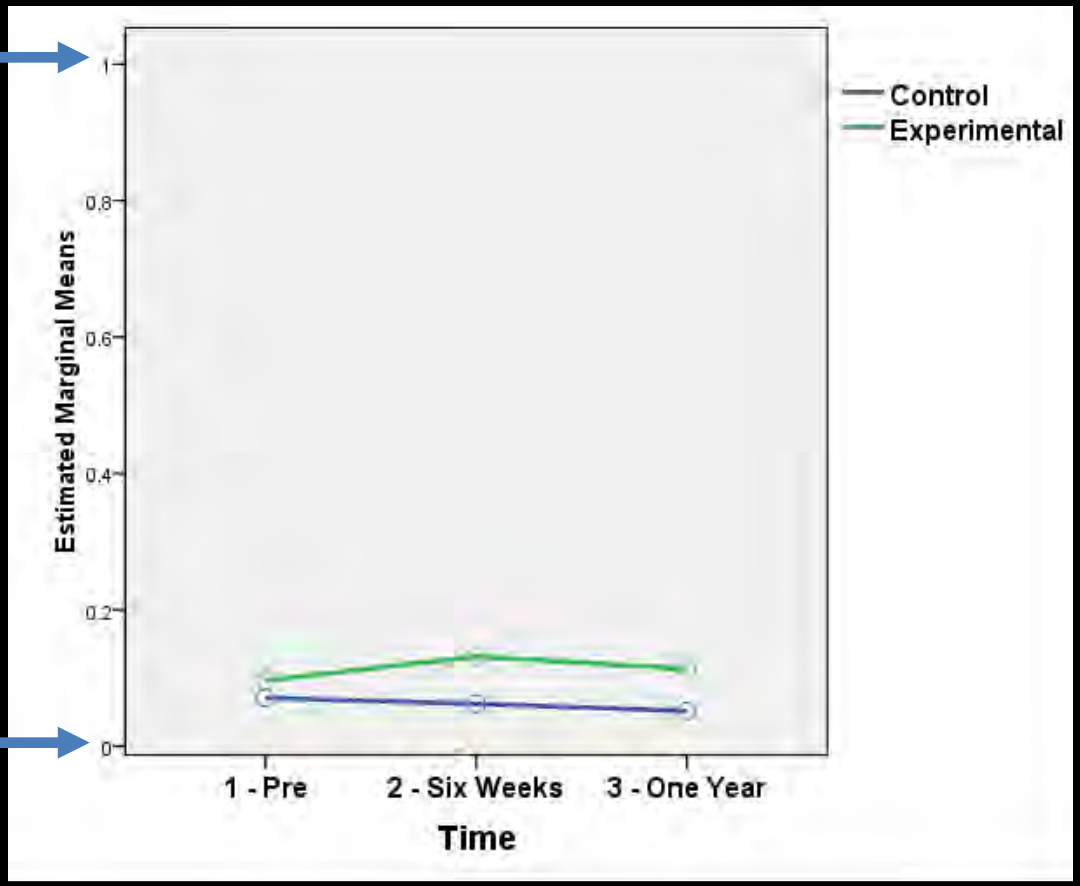
Not Important

(F = 48.8, p < 0.0001)
Partial Eta Sq = 0.13

There was a large and significant effect on attitudes, however, not as dramatic as knowledge.

Self Reported Behaviors: Interest in a Nature-based versus other careers.

Interested



No Interest

(F = 4.4, p < 0.04)
Partial Eta Sq = 0.01

Across multiple measures of behaviors there was a small but significant effect on behavior (such as interest in STEM, Env. Careers, and conservation practices).

Conclusions

1. Short term programs can have a huge impact on knowledge and attitudes.

2. Improving conservation behaviors and an interest in science broadly will require more sustained efforts to achieve greater impacts.

3. Well designed education programs have much to offer. This work, nevertheless, underscores the need for conservation education not only as one-time programs but should be reinforced to prevent atrophy and encourage pro-conservation behaviors.