



Shiny Cowbird Brood Parasitism Threatens the Critically Endangered Bahama Oriole

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ABSTRACT

- The Bahama Oriole is a critically endangered species endemic to Andros island.
- Shiny Cowbirds are nest parasites that lay their eggs in oriole nests.
- We rigorously assessed the severity of the threat cowbirds pose for the Bahama Oriole population.
- Used wireless nest-monitoring camera to take images of contents of oriole nests
- Found and identified whether nests had been parasitized
 - Used statistical test to compare nests in developed areas to nests in undeveloped forest

QUESTION: Are nests in developed areas more heavily parasitized?



Taking pictures of a nest

METHODS

- Took pictures of contents of nests within 15m of ground
- Determined parasitism outcome by identifying fledglings to be orioles or cowbirds
 - For low nests, we immediately deduced whether the nests were parasitized or not parasitized.
 - For all other nests, four observers independently assessed whether the nest was parasitized, not parasitized, or unknown.



Parasitized nest: seven eggs in a nest suggests parasitism



Cowbird chick in nest

RESULTS

Table of Nest Fates

	Parasitized	Not Parasitized
Developed	9 (75%)	3 (25%)
Undeveloped	0 (0%)	10 (100%)

Fisher Exact p ≤ 0.00046

- The Fischer two-tailed test revealed that developed nests are significantly more likely to be parasitized than undeveloped nests
- 75% of developed nests were parasitized versus 0% in undeveloped forests.

ANSWER: Developed area nests are much more subject to cowbird parasitism.

CONCLUSIONS

- Bahamas National Trust should consider oiling or removing cowbird eggs from oriole nests.
- Note: Cowbirds may have caused local extinction of the oriole on Abaco, Bahamas

ACKNOWLEDGMENTS



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