



Photo: Lisa McGuire



Conservation Biology of the Critically Endangered Bahama Oriole: Estimating Current Population Size and Evaluating Threats

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PhD Student Opening*

ABSTRACT: The Bahamas and adjacent Caribbean islands are home to eight island endemic orioles, half of which are Threatened or Near Threatened. The Bahama Oriole (*Icterus northropi*) is listed by IUCN as Critically Endangered. This species is currently restricted to Andros Island, as it was extirpated from Abaco Island during the 1990s due to unknown causes. The only formal study of this species was a PhD thesis, which estimated that only 141-254 individuals remained (Price et al., J. Field Ornithology, 2011). First, we will estimate the current population size using distance sampling to obtain census estimates with statistically robust confidence intervals. We will conduct both breeding season and non-breeding season counts to determine which habitats are crucial to the species during the whole annual cycle. Second, we will monitor breeding success and evaluate known threats including cowbirds, native nest predators, introduced feral predators and lethal yellowing disease of palm trees. Third we are using remote sensing and ground truthing to map five major habitat types. A pilot field trip in May 2016 documented three pairs nesting deep within pine forest for the first time. Although densities may be low in pine forests, since the majority of terrestrial habitat is pine, this habitat could be crucial to the species. The Bahamas National Trust (BNT) and the University of Maryland (UMBC) are leading this collaborative effort, with the support of Audubon and the American Bird Conservancy. We are seeking additional funding to enable a comprehensive long-term approach to ensuring the survival of the Bahama Oriole. (Interested graduate students please contact us.)

BAHAMA ORIOLE (*Icterus northropi*) CRITICALLY ENDANGERED

RESTRICTED TO JUST THE ANDROS ISLAND COMPLEX

- extirpated from Abaco in the 1990s, ???

PHD RESEARCH CONDUCTED BY MELISSA PRICE 2009

- estimated only ~150-300 remained (but no distance sampling!)

CURRENT POPULATION SIZE NOT KNOWN

- main threats not well documented (?cowbirds, rats, cats, ??)

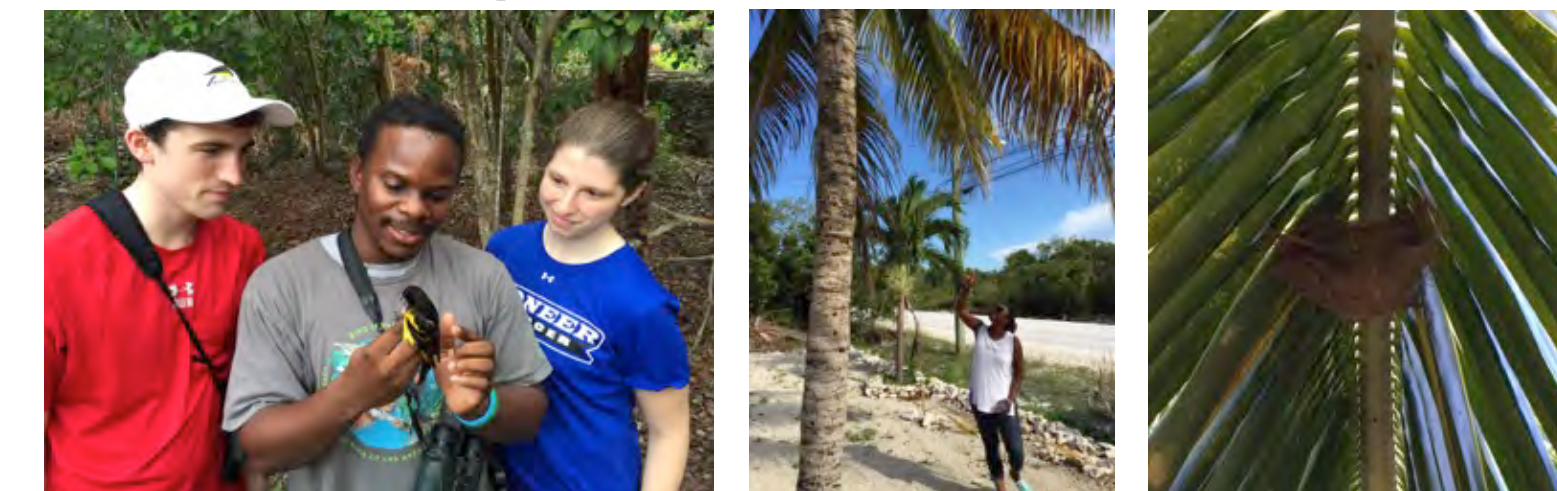
FIELD WORK BEGINNING IN 2016

- starter grant from MBZ Species Conservation Fund

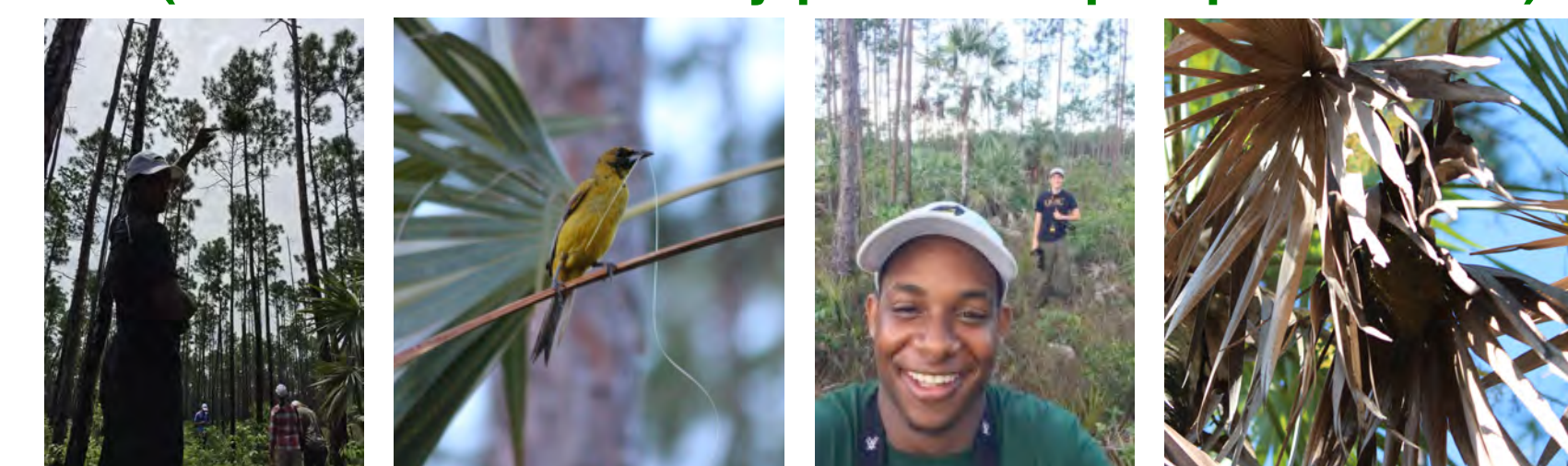
POSSIBLE THREATS TO THE POPULATION:

1. INTRODUCED PREDATORS (cats, dogs, rats, etc.)
2. COWBIRDS (Shiny Cowbird nest parasitism)
3. HABITAT LOSS (but which habitats most crucial?)
4. COCONUT PALM LETHAL YELLOWING DISEASE (most nests in settlements in coconuts, dying fronds may fall w/ nest) [Other possibilities: climate change, fire, hurricanes, etc.]

ASSUMED TYPICAL NESTING HABITAT (Coconut palms in settlements; Price 2011.)



NEWLY DOCUMENTED NESTING HABITAT (Pines and understory palms deep in pine forest.)



Five Habitat Types (pilot point counts, May 2016, n=68)



Coppice (Hardwood) Forest (orioles detected 13% points)



Developed Areas w Coconut Palms* (orioles detected 12% points)



Mixed Pine/Coppice (orioles detected 38% points)



Pine Forest (orioles detected 11% points)



Second Growth / Agriculture* (orioles detected 6% points)

PRELIMINARY RESULTS:

- 1) Bahama Orioles in all of the five habitat types.
- 2) Not more common in developed/disturbed habitats*.
- 3) Higher densities than reported previously (Price et al. 2011).

WHAT ROLE DID JAMES BOND PLAY IN ALL THIS???

- Bahama Oriole originally described as distinct species (Allen, 1890)
- Lumped with other Caribbean orioles by famous ornithologist James Bond! (Birds of the West Indies, 1960)
- BUT, plumage shown as distinct from other orioles (Omland & Lanyon 2000; Price & Hayes 2009)
- Mitochondrial DNA distinct (Omland et al. 1999; Sturge et al. 2009)
- Re-recognized as distinct species by AOU Checklist Ctte. (2011)
- Lost track of the species for the 50 years it was lumped with other taxa!

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ARE BAHAMA ORIOLES TYPICAL TROPICAL ORIOLES?

- plumage monomorphic? YES
 - female song & duetting? YES
 - yearling plumage both sexes? YES
 - year-round territorial? PROBABLY NOT!
- (breeding season & non-breeding season habitat are both likely crucial to the future of the species)

*YEARLINGS?

(second year, both sexes)



JUVENILES

(hatch year, both sexes)



ADULTS

(after second year, both sexes)

"New World Blackbirds" Jaramillo & Burke 1999

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***We are recruiting a PhD student for the project. Please contact Kevin Omland, UMBC Cell 301-332-7749. omland@umbc.edu**

Colin Studds and Matthew Fagan (UMBC Geography) recently joined the project and could serve as graduate co-advisors.