

Breeding birds use alligators to protect nests from raccoons, opossums

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Alligator attempting to eat a raccoon on a bait station in southwest Florida.
Credit: Florida Fish and Wildlife Conservation Commission

Breeding birds that nest above alligators for protection from mammalian predators may also provide a source of food for the alligators living in the Everglades, Florida, according to a study published March 2, 2016 in the open-access journal *PLOS ONE* by Lucas Nell from the University of Florida and colleagues.

For many bird species, nest predation is the greatest threat to raising chicks. Long-legged wading birds, like herons, egrets, ibises, storks, and spoonbills may choose [nesting sites](#) above resident American [alligators](#), likely to take advantage of protection from nest predators such as raccoons and opossums. While the benefits to the bird species of having alligators nearby are well-documented, few studies have explored the effect on the protector, the alligator. Specifically, some previous research has shown that wading bird nesting colonies could provide substantial food for alligators in the form of dropped chicks, which are chicks ejected from the nest when a bird lays more eggs than they can raise. In this study, the authors compared the body condition of ~40 female alligators living with and without long-legged wading bird nesting colonies in similar habitat in the Everglades, Florida. To measure body condition, they took blood samples and measured the mass and length of the alligators.

The researchers found that the body condition of alligators found near [wading bird](#) nesting colonies was higher than those in similar habitat without active colonies, independent of a range of environmental variables. The mean body condition based on size and shape for colony-associated alligators captured for the study ranked as the 63rd percentile, while that for non-colony females ranked as the 17th. The authors suggest that there appears to be a beneficial interaction between the alligators and [nesting birds](#), where birds nest above alligators for protection, but chicks that fall from the nest may also provide a food source for the alligators. The authors indicate that further studies are needed to analyze a wide variety of alligators living in a different

habitats, but since nesting birds and crocodilians co-occur in many tropical and subtropical wetlands, the results highlight a potentially widespread beneficial interaction between two ecologically important species groups.

Dr. Nell added, "Our study is the first to demonstrate a mutually beneficial relationship between nesting birds and a crocodilian: nesting wading birds provide nutrition for alligators that, by their mere presence, create predator-free space for birds. Crocodilians and nesting birds co-occur throughout the tropics, so these may be globally important ecological associations."

More information: Lucas A. Nell et al. Presence of Breeding Birds Improves Body Condition for a Crocodilian Nest Protector, *PLOS ONE* (2016). [DOI: 10.1371/journal.pone.0149572](https://doi.org/10.1371/journal.pone.0149572)

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