

How likely are you to be attacked by an alligator in Florida – during a hurricane or under any circumstance?

Introduction

The American alligator (*Alligator mississippiensis*) and American crocodile (*Crocodylus acutus*) are two ecologically important species, meaning their presence affects other aquatic life in an ecosystem (Mazzotti et al. 2009). Both also represent the ecosystems they inhabit as flagship species, and the only place in the world where crocodiles and alligators coexist is South Florida. Conservation and management have helped their populations rebound, however the human population in Florida has increased too, leading to the potential for human-wildlife conflict.

Unprovoked alligator attacks on humans are rare relative to other accidental death risks in Florida. An unprovoked attack happens when an alligator makes first contact with a human, whereas a provoked attack happens when the human voluntarily makes contact with or disturbs an alligator in some way.

Recent media surrounding the release of the movie “Crawl” (2019) prompted the need for a factual risk comparison between unprovoked alligator attacks and other potentially fatal accidents in Florida. Crocodilians are often viewed as fearful predators, yet the fear of being eaten is greater than the fear of being bitten. Unprovoked bites from crocodilians happen, yet few cases involve humans as potential prey (IUCN Crocodile Specialist Group).



Figure 1. American alligator (*Alligator mississippiensis*) in Florida.

Globally, alligators account for less than 6% of crocodilian attacks that resulted in fatality (IUCN). A majority of these attacks occurred while the person was swimming, wading, or at the water’s edge (CrocBITE database). With the majority of Florida’s population living in close proximity to freshwater and coastal areas, there is increased potential for conflict.

The Nile crocodile (*Crocodylus niloticus*) is responsible for more attacks on humans than any other crocodilian species, giving the misconception that the American crocodile, a federally threatened species in Florida, will behave similarly. There has never been a reported incident of *Crocodylus acutus* attacking and killing a human in the wild in the United States (Langley 2010).

What do alligators do during a hurricane?

Researchers that have observed alligator behavior during storms have not found any evidence of alligators actively hunting or seeking out prey during hurricanes in Florida. While alligators are heavily armored, they are equipped with highly sensitive receptors that can detect changes in pressure. If a hurricane is moving in, they are likely preparing to hunker down. It is more likely that alligators will move around after a hurricane, and with widespread flooding they may show up in unexpected places.

Alligator attack risk comparison

Unprovoked alligator attacks do occasionally happen and should not be downplayed, however most are preventable and the fatality rate is low. Roughly 4% of alligator attacks on humans in the United States have resulted in death, a majority of which occurred in Florida (Florida Museum International Shark Attack File). Most alligator attacks are characterized by a single bite and immediate release. Few attacks can be attributed to territorial alligators or nest defense (Woodward 1994). For this reason, pet attacks are more

common since they are often perceived as potential prey by alligators (Harding and Wolf 2006).

The risk of a fatal alligator attack is low when compared to other relative risks of preventable injury-related fatality in Florida.

According to a comparison of animal-related fatalities from CDC WONDER database, venomous injuries, largely from contact with hornets, wasps, and bees accounted for an average of over 56 fatalities per year, compared to an average of about 1 fatality per year from alligator attacks in the United States (Forrester et al. 2012). Of nonvenomous animal fatalities, a majority (approximately 72 per year) resulted from interactions with mammals or dogs (Forrester et al. 2012).

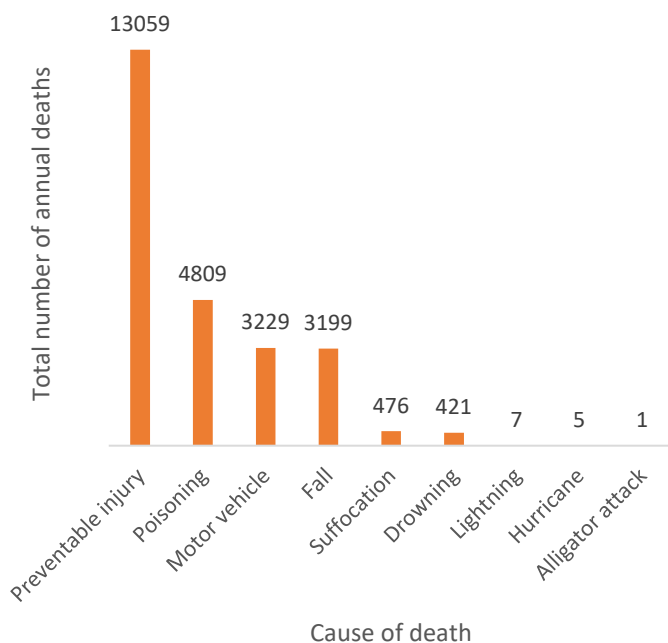


Figure 2. Comparisons of preventable injury-related fatality in Florida from 2017-2018. (Sources: Accidental death data from National Safety Council and weather data from National Weather Service).

Conclusion

There is no evidence to suggest that unprovoked alligator attacks will increase during a hurricane. Unprovoked attacks in Florida are infrequent, and rarely lead to death.

While the number of nuisance alligator reports in Florida appears to be increasing each year, past research and FWC's experience suggest that a majority of complaints to request alligator removal are due to general fear of the potential danger of alligators (Hines

and Woodward 1980). This is followed by general dislike of alligators.

There are several factors that may explain an increase in the number of adverse alligator encounters in Florida over the past decade. First, populations of American alligators are increasing and recovering (U.S. Fish and Wildlife Service 1987). Second, as more people move to coastal and freshwater environments of Florida, the interactions between humans and alligators increases, thus increasing the number of nuisance alligator complaints (Florida Fish and Wildlife Conservation Commission alligator harvest summary). The highest number of nuisance alligator complaints come from high population areas (Waters et al. 2010). Lastly, one of the most complete data sets available on crocodylian attacks globally is for American alligators in Florida, USA.

Recommendations

Follow these recommendations to reduce the risk of an adverse encounter with a wild alligator in Florida.

How to prevent negative interactions with alligators:

- Never feed an alligator (it's illegal)
- Keep a safe distance or avoid areas known to have alligators
- Swim only in designated areas during daylight. Even better have a designated lookout to keep watch for alligators
- Keep pets away from water
- Recognize the threat and take precautions to minimize

What to do in the event of an attack (Mazzotti unpub.)

- Run in a straight line, do not zig-zag
- Fight like your life depends on it
- If bitten, poke the alligator in the eyes, punch and kick it, especially around the head
- Try to induce a gag reflex by jamming objects in the back of an alligator's mouth
- Often an alligator will reposition a prey item in its mouth, that is your opportunity to escape

For more information on living with alligators, see:

<https://myfwc.com/media/16070/alligator-brochure.pdf>

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