

# ALLIGATOR ATTACKS ON HUMANS IN FLORIDA

by

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## ABSTRACT

*Accounts of reported alligator attacks in Florida are summarized and examined for evidence of patterns that might explain the causes of alligator attacks. Twenty-two such incidents were found. Three were provoked, circumstances surrounding 3 were unclear, and the other 16 appeared to be unprovoked attacks. Attacks occurred during the warmer months, usually during late afternoon. Most victims were Florida residents between 9 and 16 years old, most were standing in water or swimming, and none were feeding the alligators at the time of attack. All except one victim were unaware of the alligator's presence at the time of the attack.*

In recent years, much attention has been given to the problem of a growing alligator (*Alligator mississippiensis*) population in Florida and the resulting conflicts between people and alligators. Many people are afraid of alligators as evidenced by the number who complain about alligators that occupy wetland areas adjacent to populated areas. Goodson (1976, personal communication) estimated that the Law Enforcement Division of the Florida Game and Fresh Water Fish Commission spends approximately \$250,000 per year answering these complaints and relocating alligators. Most of the fears harbored may be unfounded, but it is evident that reports of alligators attacking humans have increased during the past 5 years. Little is known about the frequency of alligator attacks on humans, reasons for these attacks, size of the attacking animals, characteristics of the victims or the circumstances leading up to the incident.

We have examined existing documents concerning alligator attacks on humans in Florida to determine if patterns are discernible and whether any recommendations can be made regarding management of problem animals.

## METHODS AND MATERIALS

A review of the scientific literature yielded no account of an alligator attack on a human in Florida. Newspaper accounts and reports written by wildlife officers were the only source of information concerning modern day alligator attacks. Although newspaper accounts were sometimes lacking in detail, dates, times, and places of incidents were usually provided along with the victim's name and age and activity preceding the attack. More complete information is available for attacks occurring since 1972 when most were better substantiated by wildlife officers' reports.

Twenty-two separate incidents of alligators biting humans were found. Of the 22, three were obviously provoked attacks: (1) a woman handling a 3-foot (approximately 90 cm) alligator in her home which someone had told her was dead, (2) a man handling a 3-foot (approximately 90 cm) alligator which had been picked up on the road, and (3) a man swimming around a 7'4" alligator (approximately 2 meters) in a rock pit and the alligator snapped his hand. The swimmer then retreated toward shore at which time the alligator momentarily grabbed his leg. There were three other incidents where a mauled body was found and it was not determined whether the victim had drowned first and had then been

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Table 1. Data on incidents of alligator attacks on humans in Florida

<i>Date</i>	<i>Time</i>	<i>Victim</i>	<i>Injuries</i>	<i>Alligator Size</i>	<i>Victim's Activity</i>
7-30-48	—	Woman	Lacerations on right arm, lacerated & broken left hand	9'2" (2.79 meters)	Swimming alone in river
9-16-52	—	9 yr. old girl	Arm broken and lacerated	—	Standing on edge of rock pit with 10 yr. old boy
6-9-72	—	15 yr. old boy	Lacerations on head & face	—	Swimming in lake
7-12-72	—	10 yr. old girl	Lacerations on hand	est 8'	Standing on canal bank with 6 friends
7-21-72	—	12 yr. old boy	Punctures in stomach, lacerations on chest, right shoulder & back	est 14' (est 4.3 meters)	Swimming in canal with friend
8-3-72	—	6 yr. old boy	Lacerations whole right leg	est 8' (est 2.5 meters)	Playing in lake shallows with brother (picnic ground)
7-5-73	8:00 p.m.	10 yr. old boy	Lacerations on calf, thigh, and knee of left leg	est 10' (est 3.0 meters)	Wading in canal, been playing with dog
8-16-73	Dusk	16 yr. old girl	Crushed thoracic region; ate 1 arm and part of other (fatal)	11'3" male' (3.4 meters)	Swimming in park with father
9-16-73	10:00 a.m.	13 yr. old boy	Lacerations left shoulder, chest & back	est 9' (est 2.7 meters)	Swimming in canal with several others
6-15-74	7:30 p.m.	10 yr. old girl	Lacerations left foot	est 6' (est 1.8 meters)	Standing next to canal with other children
8-1-74	--	10 yr. old boy	Lacerations thigh, leg & foot	est 9' (est 2.7 meters)	Fell out of a canoe at youth camp, swimming to shore with another boy
8-15-74	7:30 p.m.	16 yr. old boy	Lacerations both arms and head	11'4" (3.42 meters)	Swimming in river with two friends
6-16-75	4:30 p.m.	45 yr. old man	Lacerations on chest and back	11'9" male' (3.45 meters)	Swimming in rock pit in park
6-30-75	4:00 p.m.	14 yr. old boy	Lacerations on thigh	est 8' (est 2.5 meters)	Swimming in canal with friend
7-5-75	5:45 p.m.	10 yr. old girl	Lacerations on right thigh	est 6' (est 1.8 meters)	Standing in water with man and two children (swimming in park)
10-22-75	12 noon	34 yr. old man	Lacerations right shoulder and chest	12' (3.7 meters)	Standing in shallow water along river

<sup>1</sup>Animal was actually sexed

fed upon or whether the victim was fatally injured or drowned by an alligator. In the remaining 16 accounts, the victim appear to have been attacked (Table 1).

## RESULTS

Definite patterns are evident in the data in Table 1. Most of the attacks occurred during the summer months. This can be correlated with the activity of the victim for most victims were either swimming or playing in the water. Winter attacks are understandably rare because there is less human activity in the water and alligators are less active during cooler months.

Records of the time of attacks are available only since 1972 when more complete accounts were obtained by wildlife officers. During the warmer months, attacks occurred in late afternoon or towards dusk. The only fatality recorded occurred at dusk. During the cooler months, attacks occurred during the middle of the day. In these cases, encounters may reflect the activity patterns of alligators rather than activity of victims.

Fourteen of 16 victims were between 9 and 16 years old. Smaller alligators were involved with younger children and larger alligators were usually involved in the attacks on larger people.

Additional observations were made on the activity of the victim preceding the attack and the body parts injured. When a victim was standing near the water's edge, the injury usually occurred on the hand or foot. When the victim was standing or moving in relatively

shallow water, the usual area of attack was in the vicinity of the knee or thigh. In two instances, the alligator first knocked the victim down in shallow water and then attacked him in the shoulder or chest area. If the victim was swimming when attacked, the alligator tended to strike the upper torso, especially the shoulder and chest area. Leg attacks on swimmers were usually made by smaller alligators while larger alligators tended to grasp their victims in the chest area or even the head.

In only one case did the victim indicate that they saw the alligator before being attacked, and that was a result of someone shouting a warning from the bank. In at least two attacks (on 6-16-75 and 10-22-75) the victim definitely stated that the gator approached from under water. In no case did the available information indicate that the victim had been feeding the alligator previous to nor at the time of attack. However, the alligators may have been fed previously by other people. In each case, the victim was a resident of the state. In at least 12 incidents, the victim was accompanied or at least in close proximity to one or more persons at the time of attack. There was no indication that the presence of other people in the vicinity deterred the attacker. In several instances, the alligator attacked more than once before the victim could escape.

## DISCUSSION

LeMoyné (1591) stated that alligators were a constant threat to Indians in early Florida, and the Quaker naturalist William Bartram gave accounts of large alligators pursuing his canoe in the late 1700's. His fear of the large reptiles was obvious throughout his accounts (Van Doren, 1955). Ditmars (1953) and Carr (1940), however, indicated that the persecution of alligators in the early 1900's somehow altered their behavior so that they became shy and retreating. They suggested that the alligator was no longer a threat to humans as long as he was given ample room to escape. In fact, a leading herpetologist told swimmers that they were safe from an alligator attack unless they molested the reptile (Carle, 1948).

Perhaps the turning point in the controversy of whether an alligator will attack, even if "unprovoked", came in 1973 when a 16-year-old girl was killed in Sarasota County, Florida, by a large male alligator. Apprehension was high in Brevard County in 1957 and again in 1959 near Daytona Beach when the alligator-mangled bodies of two children were found, but the Sarasota incident was the first proven account of an alligator actually killing and eating a victim. This 1973 incident might also have remained uncertain as to whether the victim was drowned first had not the father of the girl had an autopsy performed to determine the cause of death. The autopsy report revealed that the girl had died of a massive hemorrhage of the liver caused by a broken rib from the crushed thoracic region and definitely showed the alligator as the causative agent.

Although there have been attacks recorded during nearly 30 years, it has been only within the last few years that attacks have occurred regularly. Obviously, as human and alligator populations grow, alligators are exposed to humans more frequently. Under recent strict protection from killing, these animals are no longer persecuted, and one may suspect that some of the reptiles, especially the large ones in close contact with man, have lost their "natural" fear of man. An additional problem is the common practice for visitors to attempt to feed alligators in an effort to see them in many public use areas. Consequently, an increasing alligator population, containing many large individuals, coupled with an increasing human population encroaching on the reptile habitat, has led to a situation where incidences of attacks may increase. In addition, information which has been disseminated in the past has indicated that alligators are harmless, and probably has led to the unwaryness on the part of some people.

It is apparent that the out-of-state tourist is not the usual victim. Resident youths are most frequently involved. The victim does not necessarily have to be in the water to be a potential target, nor does he have to be in the vicinity of an alligator "nest" (which is often suggested as a reason for attack). It appears the larger animals, generally males, pose the greatest threat to humans. Similarly, it is obvious that the greatest number of incidents

occur in areas where alligators are exposed to humans rather frequently such as parks and residential canals.

Evidence strongly suggests in at least three of the accounts, on 8-16-73, 6-16-75 and 10-22-75, that the attack was hunger motivated. The first attack was fatal to a 16-year-old girl and the latter two involved adult men who stated they did not see the alligator until he struck. In both cases the animal made more than one attempt to bite them.

### RECOMMENDATIONS

Recent removal of the alligator from the Federal Endangered Species List in Florida will necessitate development of a statewide management plan for the reptile. The overall plan of managing Florida's alligator population need not be addressed here. The data on attacks point out several potential areas of concern which should be considered in the development of a Florida alligator management plan.

It appears that the large alligator is the most dangerous. This situation may be aggravated in areas where the reptile is frequently exposed to humans, such as in parks or canals where they may be relatively free from human persecution, and, indeed, may be encouraged to associate with humans. In addition, these very large animals may inhabit areas that may barely provide enough food for them.

The problem, however, is what to do with such problem alligators. The general procedure in Florida has been to live-trap these individuals and release them into wild areas. This solution should be reviewed in light of the potential danger of releasing conditioned animals into areas where people do not expect "tame" alligators to be. Since most of the dangerous animals appear to come from high intensity human use areas, and large alligators appear to be most dangerous, other means of disposal of large animals from these areas should be sought.

In some areas that contain high alligator populations, controlled harvest may be desirable. Harvest recommendations based on biological considerations may alter population size and structure enough to reduce the problem to acceptable levels in areas of high human density. Furthermore, if the animal is recognized as a renewable resource having economic as well as ecological value, public acceptance of the animal as a part of the Florida wildlife scene may very likely continue. However, if very dense alligator populations containing relatively high proportions of large animals are allowed to continue increasing, severe public reaction may occur.

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