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PROBLEM AND PROCESS

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Introduction

Following protection of the American alligator (Alligator mississippiensis) in Texas beginning in 1969, alligator numbers have increased rapidly (Patter 1981). Such population increases led to the federal reclassification of the species from Endangered to Threatened—Similarity of Appearance in 1983 in Texas (Bowman 1983). Similarity of appearance classification acknowledges the biological security of the Texas alligator population and the need for specific harvest controls to ensure that the conservation of similar appearing species is not compromised.

As alligator populations recovered, nuisance complaints directed to the Texas Parks and Wildlife Department (TPWD) accelerated as well. Complaints now number several hundred annually and are especially common from residents in and near the coastal marshes where the densest alligator populations occur in close proximity to residential and work areas. Other coastal counties report the presence of many semi-tame alligators in natural and man-made impoundments where human visitation and potential for supplemental feeding is frequent. In response to the increasing number of human/alligator conflicts, the TPWD has developed a standard approach to the handling of nuisance alligator complaints. This paper describes the nuisance alligator problem, outlines the steps taken in handling nuisance situations, and discusses considerations for other agencies with alligator management responsibility.

Nuisance Circumstances

Three general types of nuisance situations exist. The first is the incident of an alligator being found outside its natural habitat. Most complaints of this type are received from residents in or near coastal marsh areas who find alligators in their yards, on the road, in drainage ditches, in work areas, or even in swimming pools. The situations are often a result of natural alligator dispersal occurring during high or low water conditions, spring territorial aggressiveness, or female alligators dispersing their older pods of young.

The second scenario involves alligators in more or less natural habitats which, through repeated contact with humans, have become semi-tame. Such alligators are often nuisances -- bothering owners of lakeshore property, fishermen, and other recreationists. In addition, potentially dangerous situations develop because such alligators tend to lose their fear of humans, especially if accustomed to being fed by people, and the usually remote chances of alligator attack are thus increased. Although Texas has been fortunate in having few
alligator-related injuries to humans and no reported deaths, such problems have been documented more widely in Florida and call for appropriate caution (Nines and Woodward 1980).

The third nuisance category involves alligator presence in areas that are managed for a specific resource which is not necessarily compatible with normal alligator behavior or feeding habits. These problems typically occur in wetlands (either artificially created or natural) where a recreational fishery or aquaculture operation is ongoing. Alligator feeding activities in these circumstances may reduce commercially valuable species or interfere with human recreation. Habituation of alligators to humans is also associated with these areas.

Geographic Perspective

As expected, nuisance alligator problems occur most frequently in the areas with the highest numbers of alligators. Alligator range in Texas is limited to wetlands located in lowland Texas or that portion of the state located east of the “fall line” created by the 13alcones Fault as described by Pass (1977) (Fig. 1). Densest concentrations of alligators occur in the marshes of the middle and upper coast, but healthy populations of alligators occur in lakes, stock tanks, farm ponds, and along most major river drainages throughout its range. Reports filed by TPWD personnel handling nuisance alligators revealed that most handling of nuisance alligators occurs where the densest alligator populations coincide with human population centers on the coastal plain of Texas (Fig. 2). Conflicts are particularly notable in the Houston metropolitan area in Harris County and the Beaumont, Orange, and Port Arthur metro-area in Jefferson and Orange counties (Fig. 2).

Personnel Involved

Most resource- or animal-related agencies and organizations have received complaints at one time or another concerning nuisance alligators. In addition to TPWD Wildlife and Law Enforcement Division personnel, employees of the U.S. Fish and Wildlife Service, local animal control offices, and wildlife rescue/rehabilitation personnel have assisted TPWD in responding to requests for help with nuisance alligators. However, primary responsibility for resolving alligator nuisances rests with TPWD and is largely accomplished by personnel in the Wildlife and Law Enforcement Divisions. This responsibility relates to the state and federal controls on handling and possession of alligators dating back to the late 1960's. Currently, handling of live alligators is strictly controlled by permit requirements established under state statutes embodied in chapters 43 and 65 of the Parks and Wildlife Code. Legal handling of give alligators and necessary lethal removal is accomplished directly by TPWD personnel or under their supervision.

Approaches to Nuisance Resolution


When a nuisance alligator complaint is received, TPWD personnel travel to the site of the problem and assess the factors involved. The first is an assessment of the validity of the nuisance complaint—essentially a determination of whether a problem (or alligator) actually exists. Next, the type of environment is noted—whether the location is an unnatural habitat (yards, swimming pools) or natural habitat, and whether it is isolated or located.
Figure 1. American alligator distribution related to Texas physiography (base map modified from Pass, 1977).
Figure 2. Distribution by county of 327 nuisance alligators handled by Texas Parks and Wildlife Department personnel during 1979, 1982, and 1983.
near other natural habitat from which ingress and egress can take place. The accessibility of the problem site, including water depth, is also analyzed. Finally, personnel consider the characteristics—size, numbers, tameness—of the problem alligator(s).

Based on the results of the assessment, personnel involved proceed through a list of preferred alternatives. The first option considered is simply resolution of the problem through public enlightenment. If the situation involves alligators in a natural environment and no real threat to people, then personnel try to alleviate the fears of the complainants by providing them with more accurate information about alligators.

If a problem situation does exist, however, then a series of actions are considered (Thompson et al. 1984). The first consideration is the potential to separate the people and alligators through distance or use of a physical barrier. The first choice involves no actual handling of the alligators. If such a resolution is not feasible or if the alligator is located in unsatisfactory habitat, then an attempt is made to relocate the alligator by live capture to a more suitable environment, including natural habitat, zoos, or alligator farms. Finally, if the situation demands resolution and other methods are ineffective, the alligator is removed through lethal means. As implied, the assessment of the nuisance situation determines the extent of action which is warranted; therefore, lethal control is not always necessary for situations where the problem cannot be resolved by public enlightenment. The Department personnel involved exercise this discretion.

Once the appropriate action is determined, then its application takes place. Relocation of live alligators typically is the most involved process and potentially the most dangerous. A training video has been developed by the TPWD Information and Education Branch in conjunction with TPWD Wildlife Division to illustrate the techniques for safe handling of live nuisance alligators. This video is prepared in VHS format and can be made available for viewing by agency personnel and organization members who are interested or who may have the potential to assist in handling nuisance alligators.

Discussion

As urbanization continues to expand in the Texas coastal plain and alligator populations remain healthy, the number of human-alligator conflicts are certain to increase. Also, as alligator populations recover throughout their range, other southeastern states will be faced with developing effective, efficient programs to handle the nuisance alligator problem.

A key ingredient of such programs is public awareness. In many nuisance situations, the problem itself is created by inappropriate human behavior around alligators. A well-planned nuisance alligator program should educate people about the dangers associated with feeding alligators and familiarize people with alligator behavior. Such education has the potential to reduce the number of nuisance alligators and the possibility of human injury, to alleviate unfounded fears of alligators, and to encourage as appreciation for the resource in the process. This educational responsibility in Texas now rests primarily with the TPWD personnel involved in responding to nuisance complaints.

Secondly, agencies must be prepared to deal with situations where alligators threaten an economic enterprise such as fish production, duck hunting, or even waterfront development. In these situations one individual or a group of people may view a natural population of wild alligators as a nuisance, and the management interests of all may come into conflict with the state’s management plan for the alligator as a renewable resource. Under these circumstances, there are sometimes competing human interests that encourage non-interference with the alligators. The situation is further complicated by the fact that, while a
conflict between humans and alligators definitely exists, in many cases removal is not efficient or effective due to the type of habitat involved and the potential for future ingress and egress. The TPWD plans to conduct some removals in these circumstances to determine when removal may be effective. In other cases, construction features or human activity may have to be modified to reduce the number of nuisance encounters.

Finally, realizing that some nuisance situations do inevitably require translocation or lethal removal of problem alligators, agencies may wish to consider who should bear the cost of nuisance alligator removal. In this light, the TPWD is implementing a program through which the state would contract nuisance control hunters to remove nuisance alligators as approved by TPWD personnel. The hunter would return to the state a prearranged portion of the value of any alligator taken alive or dead as part of nuisance control operations. Contracted hunters would be required to sell or dispose of nuisance alligators as prescribed by TPWD. As human populations continue to encroach on alligator habitat, it may become necessary for landowners to bear some of the cost of handling nuisance alligators.

As indicated throughout this paper, handling of nuisance alligators should take place only when the situation demands it for the benefit of the alligator or for human safety. However, this approach does not ignore the potential for human contact with alligators every day and the soundest program will be that which attempts to prepare the public for those eventualities. With the continued recovery and expansion of alligator populations in the southeastern U.S., resource agencies within the range of the alligator must consider this need in their management planning concurrent with harvest planning. Consideration of who will ultimately pay the cost of resolving human-alligator conflicts is paramount to that planning.

Literature Cited