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AGGRESSIVE BEHAVIOR OF MISSISSIPPI KITES IN SUBURBAN AREAS

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Abstract: The Mississippi Kite is a small diurnal bird of prey which nests throughout the southern Great Plains. Its aggressive behavior during nesting has created problems for residents in suburban areas. The removal of the nest and relocation of the eggs and young will end the attacks by the parent birds. The eggs are incubated and the resulting young, as well as other young removed from problem nests, are then placed in foster nests in more remote areas. Preliminary results indicated this will be a very successful way of dealing with the young of problem kites and is an effective way of resolving

Introduction

The Mississippi Kite (*Ictinia mississippiensis*) is a diurnal bird of prey belonging to the family Accipitridae. Adults are slate grey in color with the males being a lighter grey than the females. Adult kites are approximately 14 inches long and have a wingspan of about 3 feet. They weigh 8 to 11 ounces. The male is smaller than the female as is typical with other birds of prey. Mississippi Kites are primarily insectivorous, preying heavily on cicadas and grasshoppers. Their diet has also been known to include lizards, frogs, rodents, turtles, small rabbits and small birds.

The Mississippi Kite is found throughout the southern Great Plains. They are known to nest in Oklahoma, Texas, New Mexico, Arizona, southeastern Colorado, southern Kansas, and in the southeastern states southward from Missouri to South Carolina. Common nesting sites for Mississippi Kites include shelterbelts, farm woodlots, mesquite thickets, urban parks and golf courses, and residential areas with stands of large, mature trees. The Mississippi Kite winters in South America. Their southward migration generally begins in early September. They usually arrive at their nest sites in May or early June. Group migrations of 20-30 birds are not uncommon.

Mississippi Kites pair off prior to their arrival at the nesting site. They show very little territoriality and co-exist in close proximity to other nesting pairs. Conflicts between nesting pairs appears to be very rare. In fact, cooperative "swarming" displays in defense of young are quite common in urban areas where a high concentration of nesting kites exists.

Kites may either repair old nests or construct new ones. Preferred nest trees include elm (*Ulmus* spp.), cottonwood (*Populus deltoides*), hackberry (*Celtis* spp.), oak (*Quercus* spp.), mesquite (*Prosopis* spp.) and willow (*Salix* spp.). Nests vary in size from 10-20 inches long and 10 to 15 inches wide. The nest is usually constructed of small twigs and is lined with leaves. Most nests are less than 20 feet above the ground. Exceptions are nests constructed in the larger trees such as elm and cottonwood.

Egg laying usually occurs in late May to mid-June. Two white to pale bluish white eggs about 1.5 inches (3.8 cm) long are laid. Incubation is done by both parents and begins with the laying of the first egg. This almost always results in a size difference in the young. The incubation period is approximately 30 days. The young fledge and leave the nest 30-35 days after hatching. Approximately half of the rural nesting kites are able to successfully rear their young. The success rate in urban areas appears to be greater presumably due to a reduced number of natural predators such as raccoons (*Procyon lotor*) and the great horned owl (*Bubo virginianus*). Strong winds during the early nesting season account for a large percentage of nesting failures. The often poorly constructed nests are blown out of the trees, resulting in lost eggs and young.

Description of Kite Problems

The primary problem associated with Mississippi Kites is their diving attacks on persons or pets which come close to the nest sites. The attacks increase in frequency as incubation and the growth of the young progress. The attacks are the most intense after hatching. The attacks are the parent birds' attempts to run off intruders they interpret as a threat to their young. Not all Mississippi Kites show this aggressive behavior. Some kites appear to be more aggressive by nature than others. The height of the nest also seems to greatly influence diving behavior. The lower the nest, the greater the chance for attacks. Nests in tall cottonwood and elms usually do not present a problem.

During diving attacks, Mississippi Kites generally emit a high pitched scream. The shrill cry appears to be used to frighten the intruder as well as communicate to the attacking kite's mate and other kites in the areas that a problem may exist. These shrill cries often attract other kites which will in turn circle and scream their own warning. As many as 20 kites have been observed in one of these encounters which was initiated by one kite's defensive screams and dives. Our observations indicate that the actual diving attacks are only being done by the pair whose nest is threatened. The other kites generally restrict their aggression to the shrill cries of alarm.

The diving attacks of Mississippi Kites are usually very frightening to the unsuspecting victim but usually do not result in any physical harm. The diving birds swoop within inches of the head of the intruder but rarely make physical contact. This situation can be very serious, however, if the person attacked is elderly, physically handicapped or riding some form of open conveyance such as a bicycle, motorcycle or even convertible automobile. Additionally, children can have psychological problems as a result of such an attack.

While physical injuries resulting from kite attacks are rare, they do happen. There have been several documented cases of persons cut on the forehead or back of the head by the talons of kites in the Oklahoma City area. One attack resulted in a gash over the victim's eye which required a trip to the local hospital for treatment. While no serious injuries (loss of an eye or loss of life) have been documented in Oklahoma, the possibility is there, especially when senior citizens with heart problems or motorcycle/ bicycle riders are involved.

It is for these reasons that Mississippi Kite attacks are taken seriously by the U.S. Fish & Wildlife Service Animal Damage Control (ADC) Program. All calls that are received by our office are investigated. Appropriate action is taken based on each investigation. The Mississippi Kite is fully protected under the Federal Migratory Bird Treaty Act (1918) and state regulations. It is illegal to take, possess, transport, sell or purchase kites or their parts without a permit. These regulations also protect the kite eggs and nests, even after the nest has been abandoned following the breeding season. The U.S. Fish & Wildlife Service

ADC Program has a special permit which authorizes its employees to take the appropriate action to resolve a kite/human conflict

Procedure for Dealing with Kite Problems

Kite problems in Oklahoma are usually handled in 1 of 2 ways. When a problem concerning kites is reported, a service representative meets with the person who has the complaint. The nest site is examined to determine the stage of incubation or development of the young. The location of the nest and the age and health of the person involved is considered and a decision is made to take or leave the nest

In some instances, the bird's aggressive behavior is not fully understood by the persons) with the complaint. Sometimes, after a full explanation for the kite's behavior, the persons affected agree to work around the problem and allow the nesting to continue undisturbed. If, however, the nest 'is affecting a large number of people or there are elderly, physically disabled or young children involved, the nest must be removed.

When the decision is made to remove a nest, several things must be done. First, the landowner or person responsible for the property on which the nest is located must sign an "Agreement for the Control of Animals on Private/Non-Private Property". This form is basically a release of liability in case of an accident or injury which could result in the course of removing the nest Second, arrangements for the care of the eggs or young have to be secured. Eggs and very young birds requiring incubation are taken to the Oklahoma City Zoo for care. An excellent cooperative arrangement has been worked out with this facility. If the young are of sufficient size that intensive care is not required they are turned over to representatives of the local chapter of the Audubon Society for relocating into foster nests.

Foster Nest Program

The foster nest program was recently initiated in Oklahoma as an alternative to handrearing and reintroducing kites into the wild. The latter is very time consuming, costly and of questionable success. The foster nest approach is being done by the Audubon Society under a special permit from the U.S. Fish and Wildlife Service. The basic operation involved is simple. The young kites are taken directly from the "offending" nest and given immediately to Audubon volunteers. These persons have been monitoring local Mississippi Kite nests and are familiar with the development stages of the eggs or young. The orphan kites are then placed in a nest with young at a similiar stage of development Ideally not more than 1 chick IS added to any 1 nest This will result in a maximum of 3 young per nest and will give the adult birds the best chance for rearing all 3. In instances where the nest is small or poorly constructed, additional nest material is wired in to enlarge the nest and increase stability. Eggs or young too small.for immediate nest transfer are hatched/ cared for at the Oklahoma City Zoo. When they reach the desired size they too ate relocated to foster nests.

Results and Discussion

During the 1985 nesting season, 5 nests in Oklahoma City metropolitan area had to be removed by U.S. Fish and Wildlife personnel. These nests contained a total of 5 eggs and 5 young. All 5 eggs were successfully hatched at the Oklahoma City Zoo. One kite had vision problems which precluded it from being returned to the wild. The other 4 hatchlings and 5

young were placed in foster nests by Audubon volunteers. One relocated chick and 1 of the natural chicks in the same relocation nest were lost and never accounted for. A third chick in the nest was successfully fledged. The other 8 relocated chicks were all successfully reared along with their natural nest mates. The foster nest program appeared to be very successful in its first year of use.

In all instances the aggressive behavior of the parent birds ceased within a few hours after the removal of the nest and young. Once the "catalyst" for these attacks is gone the parent birds refrain from their assaults.

The safe removal of kite nests from relatively high trees can be a difficult matter. An excellent working relationship has been established between our ADC office, one of the metropolitan city managers, and the local fire department. The fire department has ladders and personnel that are often willing to retrieve problem nests. The persons retrieving the nest should have appropriate head protection and a coat of sufficient thickness to prevent easy puncturing by an irate parent bird. If attacks on the retriever are extremely fierce and persistent, cracker shells or screamers fired from a pistol by the ground crew will usually curtail attacks by parent birds.

The results of our cooperative "foster nest" program have been encouraging. Plans have been made to continue this program next nesting season.

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