

AIRCRAFT — ITS USE AND ABUSE IN LAW ENFORCEMENT

BY EDWARD S. FARISH

Hunters and fishermen are becoming more modern each year, and in doing so, they are presenting additional problems for the enforcement officer. Fast boats, citizen band radios, high-powered automobiles, and even airplanes are being utilized by the hunters and fishermen that most of us deal with daily.

In order to keep abreast of the modern trend taken by the hunters and fishermen, we are finding it necessary to stay as modern, if not more so, than the people we deal with in the law enforcement field. In Alabama we have provided the entire enforcement force with high-powered automobiles equipped with two-way radios and other necessary items to get the job done. We have also streamlined the boat fleet by going to the 110-horsepower outboards in areas where speed is a necessary factor in apprehending violators. This past year we went one step further in the auto-boat equipment category by supplying each enforcement district with a new jeep type vehicle. The combination of fast automobiles, adequately equipped boats, and jeep type vehicles to cover the rough spots have given us a pretty good ground and water coverage. There is little excuse for not reaching an area in which violations are taking place once these areas are defined.

The one additional item on the enforcement equipment list is the Game and Fish Division aircraft. Initially there was much criticism of the use of the airplane in the enforcement program. Many people, including several members of our Legislature, felt that we had gone too far and were becoming somewhat extravagant in our equipment purchases. The pressure brought on from these objectors made it mandatory that a well-planned operation be implemented whereby the plane would carry a favorable image among the hunting and fishing public.

Perhaps the foremost item in the setting up of the aircraft operation was to decide when, where, and how the airplane would be utilized. The problem of when was more difficult than we realized. At first we found that the use of the aircraft during the dove season was an excellent means of locating shoots and directing the enforcement personnel to such areas. We became so enthused with our new weapon for locating dove shoots that we tended to overdo the job. On many occasions we would utilize the aircraft when prior to the time the aircraft was used, the officers had already located the shoot and were in the process of checking the field. The use of the aircraft on these occasions tended to warn the dove shooters, and in many instances prevented valid arrests which the officers could have made. With this experience behind us, we then provided a high degree of coordination between the plane pilot, spotter, and the ground forces. It was made a matter of policy to locate a field and immediately leave the area unless it was necessary to direct the officers to the field. The later process provided a wider range of coverage and at the same time gave the necessary assistance to the personnel scheduled to do the checking.

Since the plane utilized is in the light aircraft category, we found that the preventive technique is of great importance. We can fly the plane for one or two days and then the other aircraft flying the area will tend to keep a necessary fear on the part of a potential violator to the extent that once he sights any small aircraft, he is ready to discontinue whatever violation he might be committing.

Alabama is a state with many rivers and impoundments, and it is virtually impossible to adequately check for the illegal telephoner or netter unless the plane is utilized. Early morning flights up and down the rivers have been of tremendous value in properly surveying the fishing operations taking place. In many instances illegal nets have been spotted from the air whereby it would have been practically

impossible to have found such nets by a surface search. Although few telephoners have been apprehended as a result of the plane, many have discontinued their violating due to the constant harassment of the plane flying low and looking down on them. Also the plane has been responsible for hundreds of illegal electrical devices being thrown away since the violator first attempts to discard any illegal equipment which he may have. Alabama law makes it a misdemeanor to have such equipment on or near the public waters.

Another important use of the plane is during the deer and turkey seasons. Flights up and down the rivers prevent a great number of people from taking deer from the water and shooting turkeys along the river banks. With the use of walkie-talkies and the plane, an illegal hunter can be quickly spotted and covered by well-positioned officers along the banks. The knowledge on the part of the violator that this situation exists has caused many to admit that it is no longer profitable to violate in this manner.

We have found that the hiring of a full-time pilot is of tremendous benefits since he can be on call at any time. It also allows for the training of the pilot in the enforcement work which he will be doing. The position in Alabama is one of pilot-enforcement officer; and whenever a critical situation occurs, the pilot can be utilized on the ground to assist other officers.

Administrative flying is held to a minimum, and only when time is of the essence does anyone use the aircraft for such purposes. The fact that the plane is available is not justification for utilizing it. In each instance it must be proved that the need for speed, which the plane provides, is great enough to justify its use instead of the automobile.

Since Alabama has the one plane for use in the Game and Fish Program, it has proven valuable to the technical personnel for surveying waterfowl populations, checking sites for possible public hunting purposes, and studying pollution problems where aerial coverage is needed. Even though the plane is utilized for things other than enforcement, the enforcement program has priority and can call on the pilot and plane when necessary. We have made every effort to improve the constructive use of the aircraft and at the same time eliminate the misuse which was prevalent during the early stages. We no longer provide pleasure flying trips for personnel nor do we risk both man and plane by attempting to utilize them during bad weather. We also study to make sure that we are not using the plane to the detriment of other methods of enforcement.

The success of the program in Alabama can best be measured by its popular support by the public. During the last session of the Legislature, we placed in the budget a request for a new airplane and received no opposition from any member of the House or Senate. To the contrary we received many praises from the standpoint that the plane was being used to prevent the violation of the Game and Fish laws just as much as it was being used to apprehend those violators who would not adhere to reasonable warnings.

During the 1965 waterfowl season one plane, Super Club with floats, from the Fish and Wildlife Service was directly responsible for over forty arrests in a three-day period. U. S. game management agents, along with conservation officers working the Mobile Delta area, reported the duck hunters soon learned the aircraft was responsible for their arrests and cut the violations over ninety percent for the remainder of the duck season.

The aircraft is used to familiarize conservation officers with their territory.

The aircraft provides an excellent means for a waterfowl survey. Lands can be rapidly appraised as potential public hunting areas, camping sites for beaver study, and locating lost persons.

Recently we used the airplane to ferry 100,000 fingerlings striped bass from South Carolina to Alabama.

In law enforcement work the plane is one of the most important pieces of equipment you can purchase today, not so much from the standpoint of arrests but the psychological effect of any aircraft in an area will make a violator stop to think, "Is that the Game & Fish plane flying around up there?" It would be hard to estimate in dollars and cents the value of the aircraft in our work.

THE ILLINOIS MUSSEL

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At the turn of the century when mussel shells were raw material for pearl buttons, fishing for freshwater mussels in Illinois was a big business. After World War II the pearl button was replaced by plastic, and mussel fishing declined.

Once again, however, fleets of boats dredge the river bottoms for mussel shells because Japan is using the shells for producing cultured pearls. This is the story of mussel fishing and its relation to cultured pearls.

THE FRESHWATER MUSSEL

Freshwater mussels or clams live in the bottom muds or in sand and gravel bars of most streams and lakes. The mussel's soft body is enclosed in a hard hinged shell which opens to let the animal eat, breathe, and reproduce and which shuts for protection. The mussel moves by expanding and contracting a fleshy foot that is extended through the lower part of the shell and is attached to the bottom material of the stream. Two siphons are extended from the top portion of the shell; one takes in water, the other expels water and waste products. The incoming water passes over the gills and mouth to supply oxygen and food.

The "mantle," a tissue covering the body of the mussel, produces a substance called *nacre* or "mother-of-pearl" which makes up the hard shell. The shells grow larger and thicker each year—the rate of growth depends upon the food supply and species of mussel.

During the breeding season the male mussel discharges sperm into the water through its excurrent siphon, and the female produces eggs which become attached to her gills. Water containing the sperm enters the female through her incurrent siphon and passes over the gills. The fertilized eggs develop on the gills for a period of time and are then shed into the water as minute larvae called glochidia. The glochidia usually attach themselves to the gill of certain species of fish, and there they live for several weeks as parasites. After the glochidia develop, they break loose and fall to the bottom of the stream as tiny mussels to live, feed, and grow to maturity.

There are over fifty major species of freshwater mussels living in our Illinois waters. About a dozen of the thicker shelled ones are of commercial value.

PEARL BUTTONS

In the early 1900's thousands of mussel boats plied the Illinois rivers in search of mussel shells and freshwater pearls. The shells were used in the manufacture of pearl buttons, and the waste portion of the shell was used for poultry grit. Button manufacturing from freshwater mussel shells originated in Europe in 1840. In 1892 the first pearl button factory was established in the United States, at Muscatine, Iowa, by J. F. Boepple, a German immigrant. Muscatine became known as the pearl button capital of the world. Most of the