

AN ANALYSIS OF LOUISIANA'S 1973 EXPERIMENTAL  
ALLIGATOR HARVEST PROGRAM

By

Ted Joanen and Larry McNease  
Louisiana Wild Life and Fisheries Commission  
Grand Chenier, Louisiana

and

Greg Linscombe  
Louisiana Wild Life and Fisheries Commission  
Baton Rouge, Louisiana

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Introduction

A report entitled, "An Analysis of Louisiana's 1972 Experimental Alligator Harvest Program" was presented at the twenty-seventh annual meeting of the Southeastern Association of Game and Fish Commissioners in Hot Springs, Arkansas. This report documented background research, legislative and judicial efforts, enforcement undertakings and introduced Louisiana's philosophy in regard to management of the alligator as a most valuable renewable natural resource.

The 1973 season was essentially an expanded version of the 1972 one, taking in additional area in Vermilion Parish and using proven methods and improving upon certain aspects of the 1972 experimental harvest.

The 1973 harvest was extremely successful, especially in terms of hunter success and profits received from the sale of hides. Two thousand nine hundred and sixteen hides sold at public auction for \$268,542.45.

Methods and Materials

Population Distribution and Habitat Preference.

The 1973 coastal alligator survey indicated a total marsh population of approximately 157,000 alligators. A comparison of population densities in three areas of the Louisiana coast revealed

that the marshes of southwest Louisiana had significantly greater alligator populations when compared to those of southeastern and southcentral.

The Chenier Plain (private land) in the southwest comprised 31 percent of Louisiana's privately owned marshland but contained 57.2 percent of the total coastal alligator population. The sub-delta marshes of southcentral and southeastern Louisiana exhibited a reversal of the figures with 63 percent of the acreage and 36.3 percent of the alligators. The active delta occupied 5.4 of the area and contained 6.5 percent of the alligator population. In 1973, Cameron and Vermilion Parishes had a much higher concentration of alligators than did any of the other coastal parishes.

Approximately 54,000 alligators, or 54.2 percent of the total estimated Cameron and Vermilion Parish population were present on privately owned marshlands. State and federal wildlife refuges accounted for 44,914 alligators or 45.8 percent.

A slight shift in nesting effort for Cameron Parish according to marsh type was noted when comparing 1973 data to that collected previously. The brackish and intermediate marsh types showed increases in population levels over the data used to establish guidelines for the 1972 season, while the fresh marsh type showed a moderate decline in population trend. This trend is more in line with that encountered for the remainder of the state.

Cameron Parish intermediate marshes exhibited the highest

alligator population density when compared to fresh and brackish marsh types. Of the total population, 48.2 percent were recorded in the intermediate marsh type. This type occupied only 33.0 percent of Cameron Parish's marshland. Fresh marsh comprised 33.2 percent of the area and 29.4 percent of the alligators. Brackish marshes made up 33.8 percent of the acreage and only 22.4 percent of the alligator population.

Vermilion Parish intermediate marshes exhibited the highest alligator population density when compared to fresh and brackish marsh types. Of the total population, 83.2 percent were recorded in intermediate marsh. This type occupied only 26.7 percent of Vermilion Parish's marshland. Fresh marshes made up 45.7 percent of the area sampled and only 10.0 percent of the alligator population. Brackish marshes made up 27.6 percent of the acreage and 6.8 percent of the alligator population. The above information on distribution by habitat type was used to determine alligator harvest quotas. Table 1 lists alligator population data for both public and privately owned marshlands in the chenier plain marshes of southwest Louisiana.

#### Season Dates and Methods of Taking.

The open season was 19 days beginning at sunrise on September 10, 1973 and extending through September 28, 1973. The taking of alligators was permitted only during daylight hours and only by licensed hunters. The use of poles to remove alligators from their

TABLE 1 - ESTIMATED 1973 ALLIGATOR POPULATIONS IN CAMERON AND  
VERMILION PARISHES, LOUISIANA

Vegetative Type	Private Property		Wildlife Refuges	
	Estimated No.	Percent	Estimated No.	Percent
Brackish Marsh	9,818	18.4	18,405	41.0
Intermediate Marsh	30,405	57.1	17,916	39.9
Fresh Marsh	13,014	24.5	8,593	19.1
TOTAL	53,237	100.0	44,914	100.0

holes was specifically forbidden.

#### Harvest Quotas.

Background information was presented in the report on the 1972 season as to size composition of the alligator population and methods of determining maximum harvest rates for the area to be hunted.

Alligator tags were issued at a different rate for the three marsh types hunted in Cameron Parish than for the three marsh types in Vermilion Parish. Alligator tags were issued at the rate of one tag per 700 acres of brackish marsh, one per 150 acres of intermediate marsh, and one per 100 acres of fresh marsh for Cameron Parish (same as 1972 season). One tag per 700 acres was issued for dewatered natural marshes.

Tags for Vermilion Parish were issued at the rate of one tag per 100 acres of intermediate marsh, one tag per 400 acres of fresh marsh, one tag per 500 acres of brackish marsh, and one tag per 500 acres of reclaimed marsh habitat (pump-off district).

An estimated 54,000 alligators were present in the Cameron and Vermilion Parish marshes under private ownership. Harvest rates were established so that no more than 8 percent of the population could be taken during the season.

#### Open Area.

That area of Cameron Parish opened for hunting included the marshes south of the Intracoastal Canal and bordered by the Gulf

of Mexico on the south, Sabine River and Sabine Lake on the west, and the Vermilion Parish line on the east. The portion of Vermilion Parish open for alligator hunting included that part west of Vermilion Bay, south of Schooner Bayou and Old Intracoastal Canal to White Lake, south and west of White Lake to the Cameron-Vermilion Parish line to the point where the Old Intracoastal Canal departs from the western end of White Lake.

All state, federal, and Audubon Society Refuges were closed to hunting.

#### Tags.

Alligator hide tags were of a tubular rivet design, constructed of copper, which was riveted to a slit in the hide with a special pair of pliers. On the body of the tag appeared the letters "LWLF" for Louisiana, then two series of numbers, the first was "73" for the year and the second the actual number of the tag. A complete tag designation read: LWLF 73-6001. Attached to the tag was a duplicate stub bearing the same numbers as the tag body. This stub was to remain attached to the tag until the skin was shipped from the state. At that time the dealer cut off the stub and returned it to the Louisiana Wild Life and Fisheries Commission along with the required record forms. By removing the stub the tag was destroyed since it was illegal to possess tags with stubs removed. Commission regulations required that only licensed alligator hunters could possess tags and that these tags were to be

firmly attached to the skin immediately upon taking. All unused tags were to be returned to the Commission within fifteen days after the close of the season.

#### Alligator Farmers.

Licensed alligator farmers were allowed to sell animals during the season. Alligators on farms could be killed only under the supervision of Commission personnel. The same rules and regulations which pertained to hunters applied to farmers as well.

#### Validation Procedures.

All alligator skins taken during the experimental season were to be inspected by Commission biologists during a three day period beginning on October 1. Skins were brought to Rockefeller Wildlife Refuge inspected and validated by attaching a second tag to the skin. The validation tag was a self piercing monal tag with the inscription: "La. W. & F., N. O., La." Once the skin was validated it was returned to the hunter ready for sale.

#### Special Skinning Instructions

To avoid the possibility of skins taken illegally prior to the season from entering the legal traffic, hunters were told that special skinning instructions would be issued the day before the season opened. Any alligators skinned contrary to these instructions would be considered illegal. Hunters were contacted by hand carried letter and by personnel of the Commission on the day they



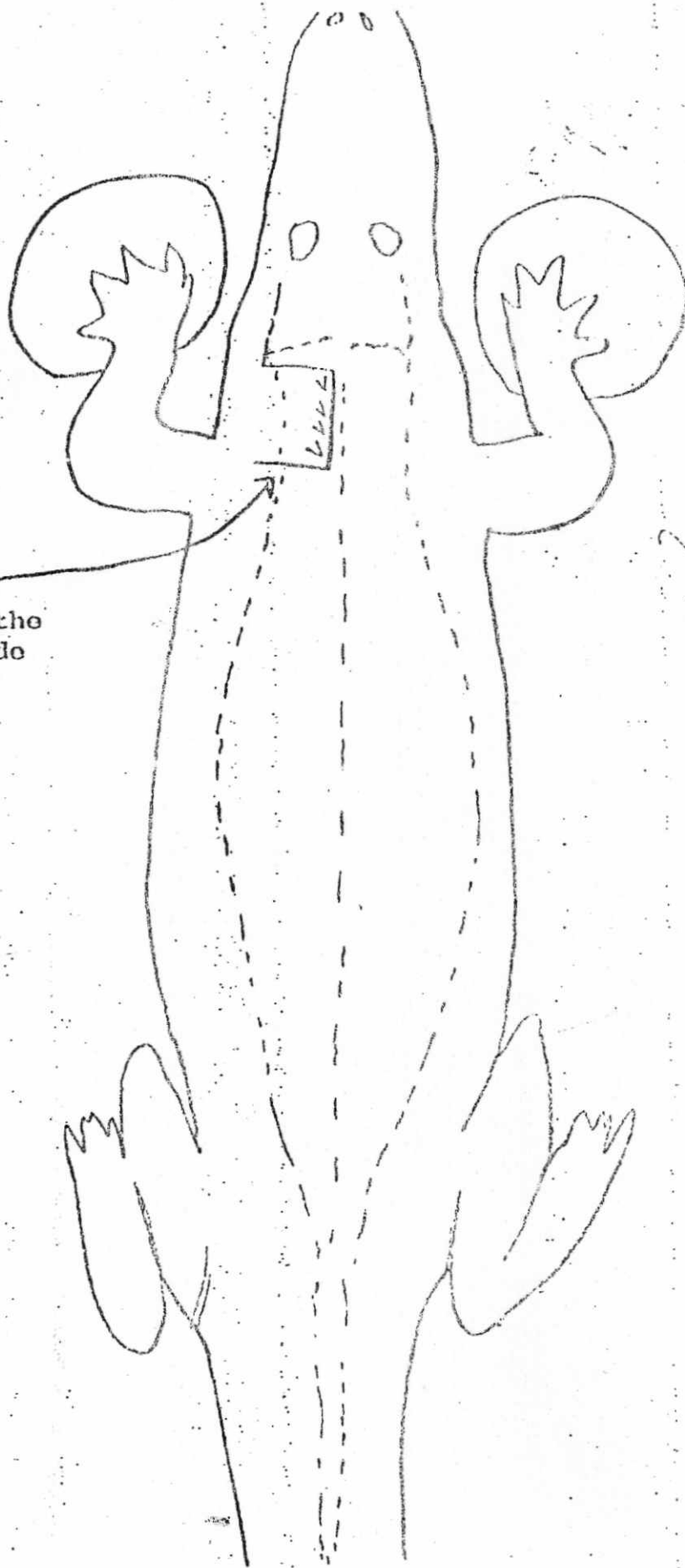
checked in and instructed to leave the skin of both front feet attached to horned-back hides. For belly skins, hunters were instructed to leave the flap of skin from the center line of the carcass immediately back of the head containing the first four dorsal scutes on the left side of the alligator (Figure 1). All skins were inspected during validation to assure compliance with these regulations.

#### Shipping Regulations.

Shipment of alligator skins, both within the state and out of state, was regulated by state statutes. No special regulation were adopted by the Commission for the experimental season.

#### Supervisory Responsibilities.

Since this was only the second year of an elaborate experimental alligator harvest program, the Commission felt it necessary that everyone concerned with the administration of the program have their specific duties clearly defined. Overall supervision was the responsibility of the Director and Assistant Director of the Commission. The Refuge Division was responsible for the compilation of research data into recommendations pertaining to areas to be hunted, harvest rates, application reviews and the gathering of biological data from alligators taken during the experimental season. The Fur Division was to issue licenses and tags, maintain records and reports required of hunters, buyers, and dealers, supervise the shipment of skins and the collection of severance



This flap of skin  
with the first  
four horns back of the  
head on the left side  
of the animal.

Both the  
left and right  
on horned-beat  
skins only.

Figure 1: Special skinning instructions issued for 1973 season.

tax. Enforcement Division was charged with the duties of enforcing the regulations governing the harvest and to serve in a liaison capacity in the event unforeseen problems arose in the field. The public information section was in charge of news releases and informing the various news media which expressed an interest in covering the season.

#### Public Relations.

Again as in 1972, a concerted effort was made to inform the public of the Louisiana Wild Life and Fisheries Commission's background and objectives in establishing an open season on alligators.

#### Results and Discussion

##### Area Hunted.

Applications for alligator hunting licenses were accepted for review from September 3, 1973 to September 9, 1973. Licenses were issued to 107 hunters in Cameron and Vermilion Parishes who were to hunt 541,361 acres. This represented approximately 71.2 percent of the privately owned marshland in Cameron and Vermilion Parishes on which alligator hunting was permitted. Five additional licenses were issued to registered game breeders so that they might dispose of some of their alligators.

Much of Cameron and Vermilion Parishes is divided into smaller private holdings. The maximum allowable rate of harvest was one alligator per 100 acres. Most of the ownerships were much less than 100 acres. Several hunters pooled smaller tracts of land

into an area large enough to permit an economically feasible number of alligators to be harvested. This was difficult because these areas were often in dewatered "districts" and the allowable rate for this habitat was one alligator per 700 acres which required more than one square mile of land for a single tag!

#### Alligator Harvest.

A total of 3,243 alligator tags were issued. The number ranged from a low of two tags issued one hunter to a high of 218 tags to another. During the 19-day season, 2,821 alligators were taken (Table 2). This represents 86.3 percent of the total number of tags issued. Only 20.5 percent of the hunters did not meet their quota of allotted tags. Alligator farmers took 95 animals which were included in the total.

Since the mean size alligator was seven feet in length, it took the average man nearly an hour to skin, scrape and salt a single animal. Five to seven such alligators per day was the maximum work load one man could accomplish. Only 22 hunters took over 50 alligators during the open season.

#### Size and Sex Composition of Harvest.

Earlier studies (Joanen and McNease, 1970a and 1972a) suggested that an early September hunt which incorporated restrictive harvest regulations would result in a kill composed largely of large males and immature animals of both sexes. Breeding females would make up a very small percentage of the harvest. The results of the

TABLE 2 - LICENSES, ALLIGATOR TAGS AND DISTRIBUTION OF HARVEST FOR 1973 EXPERIMENTAL  
 ALLIGATOR HARVEST, CAMERON AND VERMILION PARISHES, LOUISIANA

	Corporation		Another's		Own		Parish		Total	
	Land	Number Percent	Land	Number Percent	Land	Number Percent	Land	Number Percent	Number	Percent
Alligator Hunter Licenses Issued	53	49.5	42	39.3	11	10.3	1	0.90	107	100.0
Alligator Tags Issued	2,230	66.0	956	28.3	190	5.6	4	0.10	3,380	100.0
Alligators Taken	1,918	65.8	850	29.2	144	4.9	4	0.10	2,916	100.0
Percent of Quota	86.0		88.9		75.59		100.0		86.27	
Average Number Tags Per Licensee	42.1		22.8		17.3		4.0		31.6	
Average Number Skins Taken Per Licensee	36.2		20.2		13.1		4.0		27.2	

1973 season showed that the kill was made up primarily of large animals. The average length of the 2,916 measured skins was 7 feet .01 inches and ranged from 4 feet to 13 feet 11 inches. The modal size class was 6 to 7 feet. Approximately 65 percent of the skins were between 5 and 8 feet (Table 3).

Larger males were most vulnerable during the season because they were found in canals, bayous, and lakes which were readily accessible. Fishing with a baited line appeared to catch the larger size animals. In some instances, the bait was intentionally placed one foot or more above the surface of the water so that only the larger animals could reach it. In tide affected marshes, the trapper had to consider the tide stage when setting his lines. Trappers generally sought the larger animals because with a limited number of tags, the larger the alligator the greater their income.

A sample of 132 alligators indicated that 65.9 percent were caught using a baited hook and line. The remaining 34.1 percent were shot and usually retrieved from the bottom with a grapple hook. A few alligators were temporarily lost but were recovered the following day when they floated to the surface. The rate of crippling loss was not determined but interviews and field observations indicated that it was not significant.

Most of the larger animals were taken by the "fishing" method. Only 28 percent of those taken on lines were less than six feet in

TABLE 3 - SIZE COMPOSITION OF ALLIGATOR HIDES TAKEN DURING  
THE 19 DAY EXPERIMENTAL HARVEST PROGRAM, 1973

Size Class (Feet)	Number Measured	Percent Composition
4-5	271	9.3
5-6	607	20.8
6-7	724	24.8
7-8	564	19.4
8-9	323	11.1
9-10	176	6.1
10-11	139	4.8
11-12	90	3.1
12-13	14	0.5
13-14	2	0.1
TOTAL	2,916	100.0

length. Alligators taken by shooting were generally in the smaller size classes, 49 percent being less than six feet in length (Table 4).

No instances of undersized (less than four feet) alligators were reported caught on lines. Smaller alligators usually remain in the shallow interior marsh ponds and feed on crustacea or small fishes, (Valentine, et al., 1972 and Chabreck, 1971) and it is not likely that they would take blackbirds or the fish suspended well above the water on baited hooks. Chabreck (1966) found that alligators less than four feet in length comprised 60.6 percent of the population. The harvest methods permitted during the experimental season were selective for the larger size classes.

We examined 843 alligator carcasses during the season. Adult males (over 6 feet) made up 67.9 percent of the mature alligators harvested. The total percentage of males in the kill was 66.3 percent. Table 5 presents the results of a sample of 843 alligators inspected in the field for which accurate information on the size class, sex, and weight were obtained. Alligator populations appear to have more males than females in the larger size classes (Chabreck, 1966). Although there would appear to be a surplus of males in the population, careful consideration should be given to the long term effects of the harvest of a large segment of breeding size animals.

Adult females constituted 22.6 percent of the alligators



TABLE 4 - METHOD BY WHICH ALLIGATORS WERE TAKEN DURING  
1973 EXPERIMENTAL HUNT

Size Class (Feet)	Hook and Line		Shot-Free Swimming	
	Number	Percent	Number	Percent
4-5	10	11.5	5	11.1
5-6	14	16.1	17	37.9
6-7	25	28.0	13	28.9
7-8	21	24.1	4	8.9
8-9	10	11.5	2	4.4
9-10	3	3.4	2	4.4
10-11	3	3.4	2	4.4
11-12	1	1.1	0	0.0
TOTAL	87 (65.9%)		45 (34.1%)	

TABLE 5 - SIZE AND SEX COMPOSITION OF 843 ALLIGATORS TAKEN  
DURING THE 1973 EXPERIMENTAL HARVEST

Size Class (Feet)	Males		Females	
	Number	Percent	Number	Percent
4-5	45	8.1	29	10.2
5-6	110	19.7	64	22.5
6-7	96	17.2	108	38.0
7-8	100	17.9	61	21.5
8-9	68	12.2	20	7.0
9-10	68	12.2	2	0.7
10-11	49	8.8	0	
11-12	21	3.8	0	
12-13	2	0.4	0	
TOTAL	559		284	

examined in the field. An estimated 550 females over 6 feet in length were taken during the season. Earlier reproductive studies indicated that 66.7 percent of the adult size females were capable of producing young each year. Applying these figures to the harvest, 367 of the 550 females taken were capable of breeding the year of the hunt. Joanen and McNease (1973b) calculated that there was an estimated 2,662 (5% of population) breeding females in the open area of Cameron and Vermilion Parishes. The 550 mature females represent 20.7 percent of the breeding females assuming that 100 percent of them were capable of breeding. A sample of non-productive females taken from Rockefeller Wildlife Refuge showed that 25.9 percent were quiescent (capable of breeding but had not during the year examined) and 7.4 percent were barren (Joanen and McNease, 1973a).

The high kill on females as compared to the 1972 season could be attributed to the flooded marsh conditions as a result of Tropical Storm Delia. Excessive amounts of rainfall coupled with high tides provided hunters with easy access into marshes which were usually not accessible at that time of the year.

#### Validation and Sale of Skins.

At the close of the experimental season all hunters were required to bring their skins to Rockefeller Wildlife Refuge to be inspected and validated. The alligator tag numbers and hide measurements were recorded for each skin and a monel validation tag attached.

The validation process extended over a three day period and 2,916 skins were sold at public auction on October 3, 1973. Five buyers participated in the sale which consisted of sealed bids for each individual trapper's lot of skins. Variation in the care with which each hunter prepared the skins was an important factor considered by dealers in grading their quality. To get a top price the skins had to be clean of excessive amounts of fat and flesh, have no significant holes in the usable part of the skin and lastly, have their maximum width which was achieved by leaving one row of "horns" on each side of the belly skin. Although there was much talk of "buttons" (osteoderms) during the grading process, they were apparently not a major consideration in the ultimate price paid for the skins.

Bids were opened by one of the major land managers who participated in the season. After all the bids were opened, the 2,916 skins netted a total of \$268,542.45 with an average price of \$92.09 per skin. The average price per linear foot was \$13.13; larger skins in top condition brought considerably more. Landowners received 10 to 30 percent of the total value of each lot of skins taken from their land.

#### Shipment.

A major objective of the experimental season was to test the shipping procedures to assure that no illegally taken skins entered the legal traffic. Control on the shipment was accomplished through

a series of shipping tags and report forms which were required of hunters, buyers, and dealers. Hunter report forms were completed at the time of validation and public auction. From these forms the buyer of each skin was identified. Dealers, shipping their skins out of state, were required to complete official shipping tags (Figure 2). The next destination was recorded on the shipping tags. From this point the skins were followed by correspondence and conversations with the persons handling the skins.

A diagrammatic scheme of the movement of the alligator skins is presented in Figure 3. The primary source of skins was from corporation owned lands which accounted for 65.8 percent of the total harvest and 49.5 percent of the licensed hunters. No state or federally owned lands were hunted; however, four skins (0.1%) were taken from a section of parish owned land. Of the five dealers who participated in the auction, two were successful bidders (Table 6). Mirandona Bros. bought 2,255 skins and Yarbrough Bros. received 661 skins.

Mirandona Bros. had 77.3 percent of the skins which were all shipped to New Orleans on October 4, the day after the sale. On October 12 and October 24, 1973 they were shipped to France by ship. They were processed and out of the tanning plant in France by November 1, 1973, twenty-nine days after the auction in Cameron Parish. Yarbrough Bros. bought 22.7 percent of the skins and shipped them to New Orleans on April 25, 1974. These skins were

**No 83**

**OFFICIAL ALLIGATOR SKIN SHIPPING TAG**  
Louisiana Wild Life and Fisheries Commission

Name of Shipper \_\_\_\_\_  
Address \_\_\_\_\_  
License No. \_\_\_\_\_ Date Shipped \_\_\_\_\_  
No. Alligator Skins \_\_\_\_\_ Weight of Shipment \_\_\_\_\_

Notice to Carrier: Do Not Accept with Erasures  
**This Tag VOID After First Shipment**

-----  
Detach Here  
-----

**No 83**

Name of Shipper \_\_\_\_\_  
Address \_\_\_\_\_  
License No. \_\_\_\_\_ Date Shipped \_\_\_\_\_  
No. Alligator Skins \_\_\_\_\_ Weight of Shipment \_\_\_\_\_  
@ 25c each. \$ \_\_\_\_\_

Number of Alligator Skins in Each Size Class

2 Ft.	3 Ft.	4 Ft.	5 Ft.	6 Ft.
7 Ft.	8 Ft.	9 Ft.	10 Ft.	Over 10 Ft.

List Alligator Tag Numbers Below


Notice of Shipment of Alligator Skins OUT of State  
**NOT TRANSFERABLE**

**NOTICE TO CARRIER  
DO NOT ACCEPT  
WITH ERASURES**

**This Tag VOID After First Shipment**

SHIP TO: \_\_\_\_\_  
ADDRESS \_\_\_\_\_

**OFFICIAL ALLIGATOR SKIN SHIPPING TAG**  
Louisiana Wild Life and Fisheries Commission  
To Be Used Only for Out of State Shipment  
COUPON BELOW MUST BE DETACHED, FILLED OUT  
COMPLETELY AND MAILED AS INSTRUCTED.

Every trapper, dealer or other party is prohibited from shipping and express companies, post offices and common carriers are prohibited by law from accepting shipments of raw alligator skins without proper tag on each package.

RETURN THIS PORTION OF TAG AT TIME OF SHIPMENT

USE SEPARATE TAG FOR EACH THIRTY-TWO (32) ALLIGATOR SKINS SHIPPED.

This tag is numbered and MUST be accounted for. If not used, return to Louisiana Wild Life and Fisheries Commission, New Orleans, La., within fifteen days following the close of season. No further tags will be issued upon failure to return unused tags.

**VIOLATIONS SUBJECT TO STATE AND FEDERAL  
PROSECUTION.**

SHIP TO: \_\_\_\_\_  
ADDRESS \_\_\_\_\_

Figure 2. Out-of-state shipping tag required by state law.

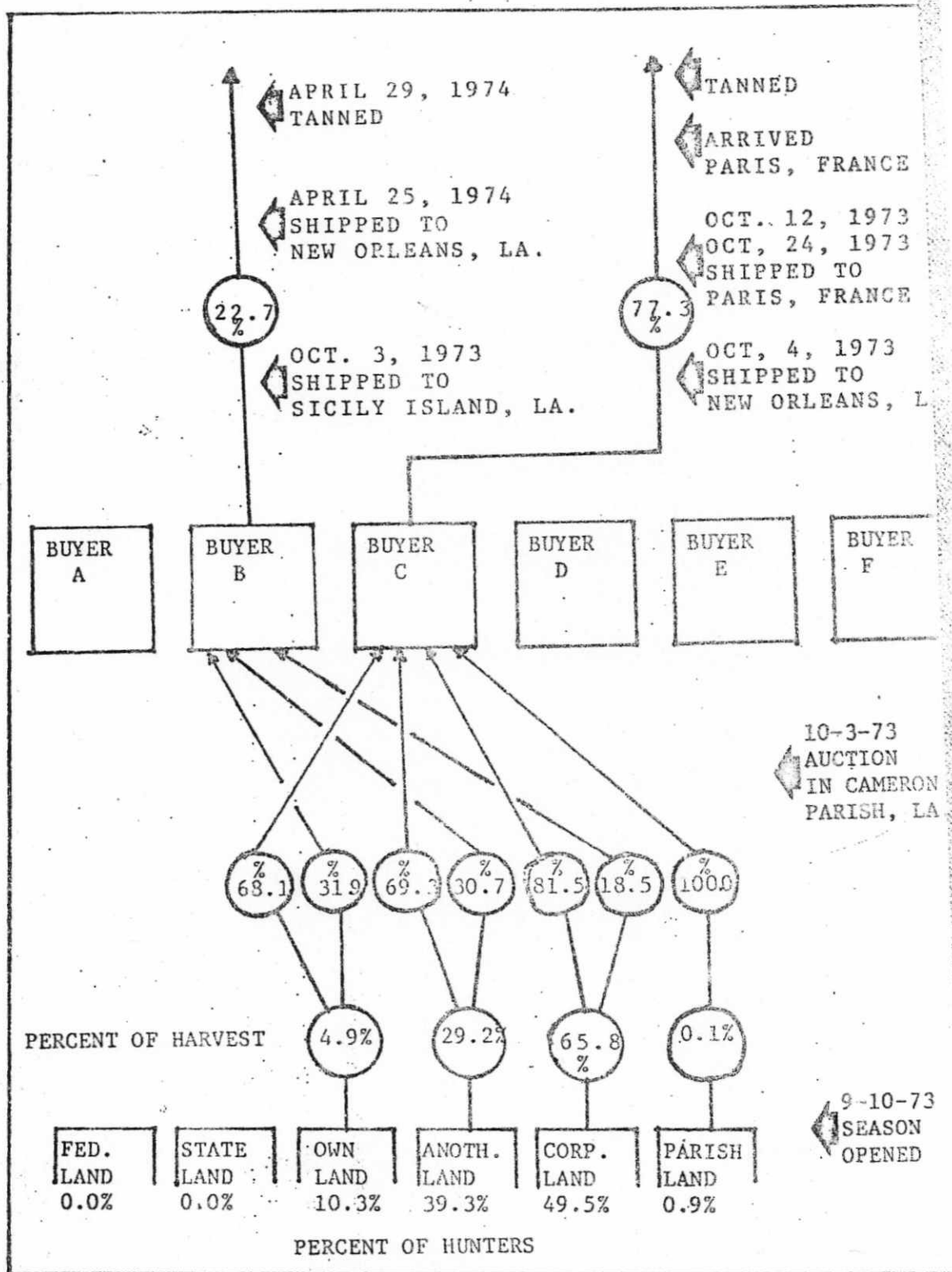


Figure 3. Diagrammatic scheme of the movement of alligator skin taken during the 1973 experimental harvest program conducted in Louisiana.

TABLE 6 - RESULTS OF THE SALE OF ALLIGATOR SKINS FROM THE 1973 EXPERIMENTAL SEASON  
HELD IN CAMERON AND VERMILION PARISHES, LOUISIANA

Dealer	ALLIGATOR SKINS PURCHASED									
	Corporation		Another's		Own		Parish			
	Land	Number Percent	Land	Number Percent	Land	Number Percent	Land	Number Percent		
	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Number Percent	Total		
Mirandona Bros.	1,564	81.5	589	69.3	98	68.1	4	100.0	2,255	77.3
Yarbrough Bros.	354	18.5	261	30.7	46	31.9	0		661	22.7
TOTAL	1,918	100.0	850	100.0	144	100.0	4	100.0	2,916	100.0



processed. The tanning process was initiated on April 29, 1974.

Shipments out of Louisiana were closely supervised with no evidence of illegal skins entering the legal traffic.

#### Enforcement Effort

Enforcement effort was used to determine the effect of the experimental alligator harvest on the rate of violations. Information on man hours expended and cases filed was requested for federal and state agents as well as state refuge wardens for calendar years 1971 and 1973.

Federal agents expended a total of 3,948 man hours on alligator oriented enforcement in 1971 and filed 21 alligator cases. This amounts to 188 man hours per case. In 1973, 1,640 man hours were expended and 7 cases filed; approximately 234 man hours per case. These figures indicate that 1.2 times the effort was required to file a case in 1973 as compared to 1971 (Table 7). Man hour figures do not include out of state investigations originating in Louisiana or preparation for court and travel time to testify.

State agent enforcement effort followed a similar trend. Information provided for District 8, a vast area of coastal marsh in southeastern Louisiana, indicated that in 1971, 1,981 man hours were spent and 25 cases filed. The enforcement effort more than tripled in 1973 and 28 cases were made. It required 3.2 times as many man hours to make a case in 1973 as compared to 1971.

State refuge wardens accounted for much of the alligator

TABLE 7 - ALLIGATOR ENFORCEMENT EFFORT IN LOUISIANA FOR 1971 AND 1973

Year	Federal Agents			State Agents*			State Refugee Agents		
	Man Hours	Cases Filed	Man Hours Per Case	Man Hours	Cases Filed	Man Hours Per Case	Man Hours	Cases Filed	Man Hours Per Case
1971	3,948	21	188	1,981	25	79	9,316	2	4,658
1973	1,640	7**	234	6,400	28	228	14,500	1	14,500

\* - Only District 8 - coastal parishes of southeastern Louisiana. Does not include approximately 3,000 man hours in Cameron and Vermillion Parishes during the period of the open alligator season.

\*\* - Assisted state agents.

enforcement effort in coastal Louisiana. Their time was not necessarily confined within the boundaries of the refuge. Only one case was filed by refuge wardens in 1973. In 1971 it required 4,658 man hours to make a case and 14,500 man hours in 1973. Enforcement effort indicated that there was a significant reduction in the number of alligator violations in 1973 when compared to 1971.

#### Population Trends

An aerial inventory of nesting alligators in Louisiana coastal marshes has been conducted since 1970 (Joanen and McNease, 1972b). The survey was designed to determine alligator population densities by region and vegetative type and also to monitor annual population trends. The effects of the experimental harvest program on the alligator population was of primary concern since the harvest rates were designed to allow for a continued increase in the population while at the same time allowing an economically feasible harvest.

Population estimates for privately owned marshlands in Cameron and Vermilion Parishes exhibited significant increases in 1974 when compared to previous years (Table 8). Figures for 1974 showed a 48.5 percent increase over the previous four year average (Joanen and McNease, 1974).

#### Summary and Conclusions

The Louisiana Wild Life and Fisheries Commission, acting on the recommendations made by research and administrative personnel,

TABLE 8 - ALLIGATOR POPULATION ESTIMATES FOR PRIVATELY OWNED MARSHLANDS IN CAMERON AND VERMILION PARISHES

Year	ESTIMATED POPULATION		
	Cameron Parish*	Vermilion Parish	Total for Chenier-Plain
1970	36,760	17,060	53,820
1971*	18,880	13,931	32,811
1972	36,240	21,820	58,060
1973	39,734	13,503	53,237
1974	54,522	18,977	73,499

\* Small portion of Calcasieu Parish included.

\* Extremely dry nesting conditions in 1971 resulted in a low nesting effort.

established a short experimental alligator harvest season in a small area of southwestern Louisiana during September, 1973. The primary objectives of the program were to evaluate a complex system of quotas, tags, and report forms which was felt necessary to a controlled harvest of surplus alligators and to measure the effects of this harvest on alligator populations. Secondary objectives were to gather biological information relative to food habits, tag recovery rates, body condition factors, aging techniques, reproductive biology and pesticide and parasite levels of alligators.

The system worked smoothly with 107 licensed alligator hunters being issued 3,243 tags. A total of 2,821 alligators averaging slightly over 7 feet were taken during the 19 day season. Two thousand nine hundred and sixteen skins were sold at public auction for \$268,542.45, an average of \$92.09 per skin. As predicted, males comprised the majority of the harvested animals (66.3%). An estimated 550 females over 6 feet were taken during the season which represented approximately 20.7 percent of the nesting population in the open area. Skins were followed through commercial channels with no evidence of illegal skins entering the legal traffic. Population levels appeared unaffected by the experimental harvest program and there was no indication of an increase in poaching activity.

It is felt that Louisiana's alligator management program is

an excellent example of modern, goal oriented, wildlife research, enforcement, and management. Approximately 15 years of comprehensive research, a dedicated state and federal law enforcement effort, enactment of effective state and federal laws and the cooperation of many agencies and individuals were incorporated into the program. The impetus for setting the season went beyond established concepts of management often based on carrying capacity, predator-prey relationships, economic incentives, and the like. In fact, the program was initiated because the alligator is a renewable resource which has exhibited a remarkable response to management and the primary function of the Louisiana Wild Life and Fisheries Commission is to manage our wildlife resources.

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