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FILE

SEGMENT COMPLETION REPORT

by

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TITLE

An Inventory and Creel Census of the Fishes of Lake Inks, Texas.

OBJECTIVES

To determine the relative abundance of species present in Lake Inks; to estimate the total catch; and to obtain data regarding the relative abundance of each species in the total catch.

PROCEDURE

Inventory of Species

Regular field trips to Lake Inks were begun in July 1955. On these occasions net and seine collections of specimens were made randomly in all parts of the lake during the study period.

The specimens collected were taken through the use of small meshed seines and experimental gill nets, and on one occasion through the use of rotenone. Seine and rotenone specimens, except gizzard shad, were preserved in a 10 per cent formalin solution for later examination and identification in the laboratory. Netted specimens, on the other hand, were identified, weighed, measured, and examined for their stage of sexual development in the field. The stomachs of game fish found to contain food were removed from the specimens and preserved for later laboratory examination and food analysis. Data was recorded in the field for netted individuals of the game species and in some cases for individuals of the forage and rough species. These data formed the basis for estimating the relative abundance of the various species in the total population in Lake Inks.

In all, eight net and twelve seine collections were made on each of the monthly field trips with the exception of the trip made in January 1956. During the January trip an area of about two surface acres, with a maximum depth of about ten feet, was treated with rotenone for a complete kill of the fish in that area. This rotenone collection of specimens was substituted for the regular net and seine collections, and the specimens thus collected are lumped together with the netted and seined specimens in the data recorded in Tables I and II.

Creel Census

To estimate the total catch by species a census of the angler's catch was begun in July 1955. It was found that virtually all the fishermen using the lake could be interviewed by establishing census stations at the three major commercial docks on the lake.

The total number of fishermen using the lake on census days were estimated by making cruise counts of fishermen along the shore line of the lake.

The census stations were operated throughout July, August, and September. However, the sharp decline in numbers of fishermen after the Labor Day weekend in September soon led to the abandonment of the census stations. From September on, it was necessary to go to the fishermen wherever they were fishing on the lake and interview them on the spot. The cruise count method of estimating the total number of anglers using the lake was continued.

In order to obtain an estimate of the average length of fishing trips after Labor Day it was necessary to mark the census cards for each fisherman as either complete or incomplete trips, depending on whether or not the fisherman when interviewed was still engaged in fishing or had already quit for the day. The average length of fishing trip was then based on the number of completed trips.

Total catch estimates were made for boat and shore fishermen separately and later consolidated. So little trotline fishing took place on Lake Inks that this type of fishing was not included in the total catch data, however, data concerning the success of trotline fishing, based on the sample obtained, have been included.

The formula used in estimating the total catch or total yield for the seven month period included in the study by all fishermen using Lake Inks, excluding trotline fishermen, is as follows:

$$\text{Total yield} = (a \cdot b \cdot d)\left(\frac{f}{g}\right)$$

where a = the average number of fishermen counted on the lake on all cruise counts made during the census period.

b = the average length of the fishing day, i.e. the length of time in hours from when appreciable numbers of fishermen start fishing until virtually all have stopped fishing for the day.

d = the number of days in the census period.

f = the total number of fish caught by the fishermen interviewed.

g = the total effort in hours by the fishermen interviewed.

This formula was derived from:

$$\text{Total yield} = (\text{total fishermen})(\text{average creel})$$

where

$$\text{Total fishermen} = \frac{(\text{avg. no. of anglers counted on all cruises})(\text{avg. length of fishing day})}{(\text{length of average fishing trip})} \times \left(\begin{array}{l}\text{number of days}\\ \text{in census}\\ \text{period}\end{array}\right)$$

and

$$\text{Average creel} = \frac{(\text{Total No. fishermen censused})(\text{Length of avg. trip})\left(\frac{\text{Total fish caught by censused men}}{\text{Total hours fished by censused men}}\right)}{\text{Total number of fishermen censused}}$$

Since

$$\text{Rate of catch} = \frac{(\text{Total fish caught by censused fishermen})}{(\text{Total hours fished by censused fishermen})}$$

$$\text{Average creel} = \frac{(\text{Total fishermen censused})(\text{length of avg. trip})(\text{rate of catch})}{(\text{Total fishermen censused})}$$

or

$$\text{Average creel} = (\text{length of average trip})(\text{rate of catch}).$$

Therefore:

$$\text{Total yield} = \frac{(\text{Avg. no. men counted on cruises})(\text{Avg. length of fishing day})(\text{No. days in census period})}{(\text{length of average trip})} \times (\text{length of avg. trip}) \times (\text{rate of catch})$$

or

$$(\text{Avg. no. men counted on cruises})(\text{Avg. length of fishing day})(\text{No. days in census period})(\text{Rate of catch})$$

Hence:

$$\text{Total yield} = (a \cdot b \cdot d)\left(\frac{f}{g}\right)$$

LAKE DESCRIPTION

Lake Inks is a relatively small reservoir lake of approximately 900 surface acres, containing 16,000 acre feet of water, and is located on the Colorado River in Burnet and Llano Counties, approximately 10 miles west of Burnet.

The area of Central Texas in which Inks Lake is located is known as the Llano uplift region. The surrounding county is unique in Texas in that the soils are derived from the underlying granite instead of from limestone. The area is marked by the bald tops of granitic intrusions and the terrain of the area is generally rugged. The timber of the area is mostly junipers and cedars on the hills and post oak, blackjack, and mesquite on the more level places. The thin soils of the area are coarse gray or moderately heavy chocolate loams which do not adapt well to agriculture, making the area ranch country.

Normal rainfall for this part of Texas should be approximately 30 inches per year but during recent years has been considerably less.

Lake Inks itself is a constant level lake. Fluctuations in water level are slight, varying in a downward direction not more than two or three feet for short periods of time. Only on rare occasions does the lake rise above the so called "normal" level. Because water level fluctuations are slight, submerged aquatic vegetation grows luxuriantly in the lake, providing more than ample cover for the shoreline species of fish. The vegetation at times is a hinderance to anglers, being so thick that most of the shoreline is inaccessible, as are all of the shallow shoal areas.

There are but three major fishing camps on the lake which have a total of about 45 boats for hire. Another smaller camp is little used by the fishermen coming to the lake. Fortunately approximately one fourth of the shoreline of the lake is included in the Inks Lake State Park. This area is accessible to the general public and during the vacation season is much used by fishermen and campers coming from places all over the state.

Much of the shoreline of Inks Lake, in the state park area, is grown up in dense patches of cattails, bulrushes, and saw grass, making the shoreline difficult to fish from. Likewise, the lake bottom in this area is mostly a gentle slope much grown over with submerged aquatic plants during the summer and fall seasons. Parrot feather (Myriophyllum sp.) and coontail (Ceratophyllum sp.) are the most abundant of these plant species.

About one fifth of Lake Inks is much like a river in that water coming through the turbines at Buchanan Dam causes a strong and deep current to move through Lake Inks, from the tail-race of Buchanan Dam to the highway bridge crossing the lake. At a point just downstream from the bridge this current of usually colder water sinks beneath the warmer water of the main lake. Thus, the water from Buchanan Dam to the highway bridge is usually murky and has a strong current while the surface water from the highway bridge to Inks Lake Dam is generally clear.

Since the prevailing winds of this part of Texas are southeasterly, most of the lake is not usually subject to violent wave action due to strong winds, making the lake quite safe for boaters most of the time.

FINDINGS

Inventory of Species

Table I contains a checklist of the fish species found to occur in Lake Inks. In all 66 seine and 48 net collections were made in addition to a single rotenone collection. During the seven-month study period these collections provided a grand total of 4,937 specimens representing 24 species and 10 fish families. The results of these collections are given in Tables II and III.

In Table IV is a record of the gonadal development of some of the more regularly collected species. Gonadal development of these species was rated from one to five with No. 1 representing "ripe", 2 representing "nearly ripe", 3 representing "sexes distinguishable but gonads not well developed", 4 representing "gonads not developed, sexes not easily distinguishable", and 5 representing "spent fish-gonads empty".

Figure I presents the results of analyses made on the food remains found in the stomachs of 30 channel catfish and 10 white bass.

Only four of the largemouth bass collected were found to contain food in their stomachs. This food had a total volume of 111 ml., of which 60.0 ml. was composed of the remains of gizzard shad, 50.0 ml. was composed of white crappie, and only 1.0 ml. was composed of sunfish.

The single spotted bass stomach found to contain food remains held 28.0 ml. of partly digested gizzard shad.

Four white crappie stomachs contained a total of 3.6 ml. of food remains. This food included the remains of white crappie, minnows, and insects.

Only two bluegill stomachs containing food were examined. The stomachs contained only a trace of unidentifiable insect remains and 0.5 ml. of Diptera larvae.

Two stomachs taken from flathead catfish contained a total of 60.0 ml. of food remains. The bulk of this food (45.0 ml.) was made up of bluegills and the remainder (15.0 ml.) was made up of gizzard shad.

Creel Census

Table V shows the results of boat fishing on Lake Inks. In it are given the number of successful and unsuccessful boat fishermen, the total fish caught, the rate of catch for successful boat fishermen, for all boat fishermen combined, and the per cent of the total boat fishermen who were not successful. These data are given on a monthly basis for the seven months covered by the creel census.

Table VI presents the same data as Table V except that it is for shore fishermen.

Table VII gives the results of trotline fishing on a monthly basis showing the total numbers of trotlines, the total fish caught on trotlines, the rate of catch per trotline hour, and the per cent of trotlines catching fish.

Table VIII is a breakdown of the total fishermen by month, showing the number of parties and the average number of fishermen per party. It also shows the number of trotlines used by fishermen interviewed.

Table IX compares the relative success of the various methods of fishing employed on Lake Inks both in terms of the total numbers of fish taken by each method, and the return per unit of effort in fish per man hour or fish per trotline hour.

In Table X are shown the average rates of catch for ten fish species taken by Lake Inks anglers. These averages are given on a monthly basis and an average is given for the entire seven month study period. Necessarily these data are based only on pure catches where only a single species was involved.

Table XI shows the relative success in fishing with the various types of baits used by fishermen on Lake Inks.

Table XII presents the estimated total yield in numbers of fish for boat and shore fishermen. These estimates are given on a monthly basis and also for the entire creel census period of seven months.

Table XIII is a breakdown of the estimated total catch by species, showing the total number and weight of each species in the sample obtained; and the percentage of the total number and total weight of the sampled catch for each species. In addition the table gives the estimated yield in number and weight for each species taken from the lake during the study period and the estimated number and weight per acre for each species in the estimated total catch. No trotline fish, however, are included in these data.

Table XIV shows the average length in inches for each species in the fisherman's catch both on a monthly basis and on a study period basis.

Table XV presents on a monthly basis the total number of fishermen estimated to have used Lake Inks during the seven months covered by the study.

Figures 2 and 3 give a breakdown by species of the total catch for the entire study period and a breakdown by species for the total catch on a monthly basis.

The map in Figure 4 shows the home towns and home counties of the fishermen interviewed during the course of the study.

DISCUSSION

Inventory of Species

Like the other large reservoir lakes in the chain along the Colorado River, west of Austin, Texas, Lake Inks is plagued with a rough fish problem. In this lake, gizzard shad comprise a very large portion of the total fish population. In population samples taken from the lake, gizzard shad made up 16 per cent of the total seine sample and over 51 per cent of the combined net and rotenone sample (Tables II and III). Other rough fish species including shortnose garfish, river carpsuckers, and carp, though not so numerous in the total sample, accounted for more than 54 per cent of the weight of the total net sample (Table III). Thus, the combined rough fish species including the gizzard shad totaled more than 72 per cent of the weight of the netted specimens taken during the seven months covered by the study (Table III). This is another indication that most of the productivity of the lakes in Central Texas goes into the production of rough fish rather than into the production of game or other desirable fish.

The catfishes, which in this part of the country are classed as game species, accounted for another 6 per cent of the total number of netted specimens (Table III). Unlike species classed as rough or undesirable fish, catfishes play a relatively important part in the anglers' catch.

To aid in building up the catfish population of Inks Lake, six of the flathead catfish, taken in gill nets, were given to the Inks Lake Fish Cultural Station, U. S. Department of the Interior. Mr. Hornbeck, superintendent of that hatchery, indicated his desire to obtain a spawn of flathead catfish for distribution not only in the large reservoirs of the area, but also in some of the farm ponds in the district served by his hatchery. However, in the event that he is successful in getting these fish to spawn under hatchery conditions, it is expected that the bulk of the spawn will be placed in Lake Inks.

It is hoped that propagation of flathead catfish by this hatchery and their subsequent stocking in the Inks Lake Reservoir will be an aid in the reduction of the rough fish population.

White bass, though not abundantly taken in either seines or nets, are apparently quite numberous in Lake Inks. This assumption is based on the effort made by many fishermen to take this species from tailrace waters below Buchanan Dam. Attempts made to determine the extent of spawning success during the study period had little success. Only two small specimens were taken in seine collections during the

seven months the lake was studied (Table II). However, 56 specimens were netted during the same period and these accounted for more than 5 per cent of the total weight of the net samples, though they accounted for only 2 per cent of the total number taken in nets (Table III). Regardless of the small numbers of white bass taken in seine and net samples, the species accounted for more than 31 per cent of the total anglers' catch of those fishermen who were interviewed during the creel census (Table XIII).

Many of the white bass caught by anglers were relatively small, indicating a good spawn during the preceding spawning season. It appears as if the bulk of the white bass population remains in that stretch of water just below Buchanan Dam, where there is generally a strong current. This area, for obvious reasons, has not been extensively seined although nets set in the area have produced white bass.

Though Lake Inks is reputed to produce a great many largemouth bass of "lunker" size, this species did not appear in large numbers in either the seining, netting or rotenone samples taken from the lake. For that matter, they did not appear in very large numbers in the total angler's catch as sampled by the creel census. Regardless of this, largemouth bass are much sought after by anglers who come from many parts of the state.

Even though the largemouth bass has not showed up in numbers in either the population samples or in the creel census, compared to Lake Travis, Lake Inks yielded 1.5 more largemouth bass per acre in the seven months covered by the creel census than Lake Travis did in an entire year. (See Table XIII and Completion Report for Job B-2, Project F-2-R-2).

Two species of spotted bass were found to occur in Lake Inks. These were the so called Kentucky spotted bass, M. punctulatus, and the Texas spotted bass, M. treculi. Combined these species accounted for less then 1 per cent of the total netted specimens and less than 1 per cent of the seined specimens. (Table II and III).

The sunfishes of Lake Inks include six species as shown in Table I. These species, combined, make up a numerous portion of the total fish population as evidenced by the fact that they accounted for nearly 36 per cent of the seined specimens and 25 per cent of the netted specimens taken during the study (Tables II and III).

Of the sunfish species the two most important are the bluegills and the redears (L. macrochirus and L. microlophus). Unlike some of the other lakes in the chain along the Colorado River, Lake Inks apparently has a relatively large population of redear sunfish. This species, however, provided only a small portion of the total anglers' catch, being overshadowed to a very great extent by the bluegill.

The smaller forage fishes include only two cyprinid species, or minnows; two darters, and two topminnows. Combined, these species accounted for 44.24 per cent of the total seined specimens (Table II). The great bulk of these specimens were blacktail or spottail shiners, N. venustus. The paucity of small forage species is probably accounted for in the age of this lake, in the lack of tributary streams, and in the large numbers of sunfish.

Creel Census

The study of Inks Lake fishing under the present segment extended, as did the inventory of species, from July 1955 through January 1956. During the seven months, the creels of 394 boat fishermen and 690 shore fishermen were examined by

Game and Fish Commission personnel. In addition, the catch from 34 trotlines was also examined. In all, boat fishermen took 504 fish, shore fishermen took 1,284 fish, and 122 fish were taken on trotlines, for a grand total of 1,910 fish in the total sampled catch of the fishermen interviewed during the course of the study (Tables V, VI, and VII).

Based on data recorded during the interviews, it was determined that boat fishermen had an average rate of catch of 0.45 fish per man hour, or a fish every 2.2 hours. Similarly, shore fishermen caught fish at an average rate of 0.79 fish per man hour, or one fish every 1.3 hours. Trotlines, as would be expected, caught fish at the slowest average rate with 0.28 fish per trotline hour, or a fish every 3.6 hours. The average creels for boat and shore fishermen were 1.2 and 1.9 fish per fishermen per trip respectively (Tables V, VI, and VII).

Lake Inks fishermen, on the average, fish for relatively short periods of time. The average length of fishing trip for both boat and shore fishermen was approximately 2 hours in duration (Tables V and VI). This is probably explained in that the greater number of fishermen who fish on Lake Inks are either campers or people who own or use the large number of lake houses along the shore of the lake. Few people who fish this lake during the summer season come fishing just for the day and then return home that evening. Thus, a large number of short trips are made on the lake by people who fish for an hour or so and then go back to the cabin or camp to rest or get out of the sun, with the intention of going fishing again later on in the day. It should again be mentioned that the summer season, when large numbers of fishermen are on the lake, comes to a rather abrupt close at the end of the Labor Day weekend. This, coupled with the opening of the dove hunting season about the middle of September, drastically reduces the numbers of fishermen on Lake Inks during the fall season. This is further complicated with the opening of the duck and deer seasons. The reduction in numbers of fishermen on Lake Inks is graphically illustrated in Tables V, VI, VII, and XII.

During the winter season, the people who fish on the lake are for the most part those who live close by and fish until they get cold and go home. Generally speaking, wintertime fishermen do not stay on the lake for very long at a time.

Tables V, VI, and VII indicate that persons coming to Lake Inks to fish have a little better than even chance to catch fish, regardless of the fishing method employed. On the whole, it can be said that Lake Inks fishermen are successful in catching at least one fish per trip. In addition, it can be said that fishing parties on Lake Inks are generally small, consisting of not more than two persons in each party (Table VIII).

The most successful method of fishing, whether boat fishing or shore fishing, at least in terms of numbers of fish caught per hour of fishing, was stillfishing (Table IX) and the most successful type of bait to use was live bait (Table XI). The old standbys, minnows and worms, were by far the most successful baits used.

Casting, the method used by most bass fishermen, was moderately successful during the period covered by this report. Casting from the shore, at least during the study period, out-produced casting from a boat as a means of catching fish (Table IX). This might be explained in the numbers of fishermen who fished near the tailrace of Buchanan Dam for white bass. Their success in catching white bass in tailrace waters on feathered jigs probably accounts for the higher rate of catch for shore fishermen using casting as a method of fishing.

The results as shown for fly fishermen are high but only a few fish are involved and these data are not felt to be sufficient to be of significance (Table IX.). Fly fishing is the least popular of the fishing techniques used on Lake Inks. Similarly, so few fish were taken trolling that no significance can be attached to the results as shown for this method except to say that the method was apparently not used on Lake Inks after September 1955. Trotline fishing on the other hand, took a relatively large portion of the catfish in the sampled creels at an average rate of catch of 0.3 fish per trotline hour (Table IX).

As is to be expected in most warm water lakes which contain a sunfish population, this group of species accounted for the largest portion of the total catch. They were taken at the average rate of 1.4 fish per man hour by boat fishermen and 1.6 fish per man hour by persons fishing from the bank. Together, the sunfishes comprised more than 42 per cent of the total catch by all fishermen fishing Lake Inks(Tables X and XIII). The average sizes of the various species included in the sunfish group range from 5 inches to 5.7 inches in total length (Table XIV), and it is estimated that 15,482 sunfish, weighing a total of 2,388 lbs. were harvested from Lake Inks. This is a per acre yield of 17.2 sunfish weighing 2.7 lbs. from each of the 900 acres of Lake Inks (Table XIII).

The most abundantly harvested single species other than sunfish was the white bass. This fish accounted for nearly 32 percent of the total fish in the sampled creels (Table XIII). Shore fishermen took white bass at an average rate of 1.1 fish per man hour and persons fishing from boats took them at the rate of 0.7 fish per man hour (Table X). The average total length for white bass over the seven month period was 11.4 inches while the greatest average total length for any given month was for January when the average white bass caught measured 14.7 inches (Table XIV). It is estimated that fishermen catching this species harvested 11,286 fish weighing 6,793 lbs. The per acre yield for white bass is estimated at 12.5 fish weighing 7.6 lbs. (Table XIII).

Channel catfish, the next most abundantly taken species, made up approximately 11 per cent of the total anglers catch (Table XIII) and were caught at an average rate of 0.6 fish per man hour of fishing by both boat and shore fishermen alike (Table X). Like the white bass, channel catfish were most intensively fished for in the swift waters near the tailrace of Buchanan Dam. Here the fishermen fished mostly from the banks, casting their baited lines out into the swift water and, after letting their bait settle to the bottom, tight-line fished until a channel catfish took the bait. The most frequently used and most successful baits used in fishing for channel catfish were shad gizzards and shad entrails or cut shad, and at times frozen shrimp. This type of still fishing, especially in the swift tailrace waters, provides almost unexcelled sport for the fishermen who have learned to use this technique. The channel catfish caught averaged 13.7 inches in total length for the seven months of study period, however, in November the catfish averaged somewhat longer at 16.4 inches in total length (Table XIV). In all, an estimated 3,825 channel catfish weighing 3,916 pounds were taken by boat and shore fishermen during the census period. This was a per acre yield of 4.37 fish or 4.35 pounds of channel catfish harvested from each acre of Lake Inks (Table XIII). It needs to be again pointed out however, that these estimates do not include the fish taken on trotlines and that the yield of channel catfish is expected to be much higher than these calculated estimates indicate.

Largemouth bass were the fourth most abundantly taken fish from Lake Inks, accounting for more than 6 per cent of the total catch in the creels of the fishermen interviewed (Table XIII). However, so many hours were spent in fishing for this species that the average rates of catch for largemouth bass are relatively low. Boat ishermen took them at the rate of 0.3 fish per man hour and shore fishermen took hem at the rate of 0.2 fish per man hour (Table X). The average total length for largemouth bass was small, being only 11.8 inches during the seven months of the

creel census. Surprisingly, the greatest average total length for this species was for the month of July when the average bass caught measured 16.5 inches (Table XIV). It is estimated that 2,252 largemouth bass, weighing 2,439 lbs., were taken from the lake during the study period by anglers. This was a per acre yield of 2.5 fish weighing 2.71 lbs. (Table XIII).

The only other game fish species taken in relatively large numbers was the white crappie, comprising approximately 5 per cent of the total anglers' catch, and was caught at the rate of 1.4 and 0.5 fish per man hour by boat and shore fishermen respectively (Table X). The average total length for these fish was small, being only 7.3 inches in total length over the seven month study period (Table XIV). In all, an estimated 1,766 crappie, weighing 308 lbs. were taken from the waters of Lake Inks, for a per acre yield of 1.9 fish or 0.34 lbs. (Table XIII).

All other species of fish caught by Lake Inks anglers during the creel census were taken in relatively small numbers and are not treated separately in this report. It is of interest, however, that doughbait fishermen harvested approximately 850 suckers, carp, and smallmouth buffalo from the lake and these fish weighed approximately 3,670 lbs. (Table XIII).

Since the period covered by this report is relatively short, extending for only seven months, no attempt has been made here to state which are the best times of year to fish for any of the species normally sought after by fishermen. Any attempt to do so would certainly be complicated by the sudden drop in fishing pressure during the fall season. The limited amount of data in the sample after September does not lend itself to the formation of what could be considered valid conclusions. However, Figures 2 and 3 show the monthly breakdown of the total anglers' catch in the sampled creels, giving the percentage of the total catch made up by each of the species represented. These data are included only for information purposes and are not intended as the basis for any concrete conclusions.

Based on the data recorded during the interviews with persons fishing on Lake Inks, it is estimated that a total of 35,898 fish were harvested during the period from July 1955 through January 1956. This estimated total anglers' catch is broken down on a monthly basis in Table XII. As is shown in the Table, no fish were taken by boat fishermen during the months of November, December, or January. It is recognized that there is a possibility some boat fishermen, not included in the sample caught fish, but it is felt that these fish were negligible in number and would not materially increase the estimated total yield for the seven month period of the creel census.

In Table XIII, the estimated total catch for the seven month period is broken down by species. In addition, the calculated weight of the total catch for each species is also given. These weights were based on the sample obtained by census personnel. The estimated total catch of 35,898 fish weighed approximately 19,882 lbs. for a total per acre yield of 39.89 fish weighing 22.09 lbs.

The estimated number of man days spent in fishing on Lake Inks during the study period was 8,668 man days for boat fishermen and 12,772 man days for shore fishermen. This was a grand total of 21,440 fishing trips made on the lake during the seven months (Table XV).

In the residential distribution of fishermen using Lake Inks, as shown in Figure 4, it is concluded that, as would be expected, most fishermen come from the surrounding counties of Central Texas although most areas of the state are represented. Only a very few of the fishermen contacted were from out of the state.

SUMMARY

1. Inks Lake, like the other large reservoirs on the Colorado River, contains a huge rough fish population composed principally of gizzard shad and carpsuckers, but includes also the smallmouth buffalo, carp and gars.

2. White bass and channel catfish are the most abundant game fish species present in the lake.

3. Largemouth bass appear to be present only in limited numbers but the lake has the reputation of producing "lunker" bass and the species is relatively important in the anglers' catch from the lake.

4. Compared with the other lakes in the chain, Inks Lake has a large population of redear sunfish, however, the species is not taken in large numbers by fishermen.

5. The smaller forage species in Inks Lake are few in number and in species, consisting mainly of spottail shiners, darters and top-minnows.

6. Creel census results show that fishermen have a better than even chance of catching fish in Inks Lake, and that the most successful method for taking fish is stillfishing with live bait.

7. Casting, as a fishing method, was found to be moderately successful, particularly in taking white bass near the tailrace below Buchanan Dam at the head of Inks Lake.

8. Largemouth bass were harvested at the rate of 2.5 fish per surface acre during the seven months of the study and the average length of this species taken by anglers was 11.8 inches.

9 Channel catfish figured prominently in the anglers catch, being most intensively fished for in the swift waters near the tailrace of Buchanan Dam.

10. It is estimated that 21,440 fishing trips were made to Inks Lake during the seven months of the study and that 35,898 fish weighing 19,882 pounds were caught, for a per acre yield of 39.89 fish weighing 22.09 pounds.

11. Fishing pressure on the lake was drastically reduced after the Labor Day weekend and with the opening of the dove, waterfowl and deer hunting seasons.

12. Most fishermen using the lake were found to come from the surrounding nearby counties but most regions of the state were represented during the study period.

Table 1. Checklist of Species, Lake Inks.

	Scientific name	Common name
1.	Lepisosteus platostomus	shortnose gar
2.	Dorosoma cepedianum	gizzard shad
3.	Ictiobus bubalus	smallmouth buffalo
4.	Carpiodes carpio	river carpsucker
5.	Cyprinus carpio	carp
6.	Notropis venustus	spottail shiner
7.	Notropis lutrensis	redhorese or red shiner
8.	Ictalurus punctatus	southern channel catfish
9.	Pilodictus olivaris	flathead or yellow catfish
10.	Gambusia affinis	common mosquitofish
11.	Morone chrysops	white bass
12.	Micropterus punctulatus	Kentucky spotted bass
13.	Micropterus treculi	Texas spotted bass
14.	Micropterus salmoides	largemouth bass
15.	Chaenbryttus coronarius	warmouth
16.	Lepomis cyanellus	green sunfish
17.	Lepomis microlophus	redear sunfish
18.	Lepomis macrochirus	bluegill sunfish
19.	Lepomis auritus	yellowbreasted sunfish
20.	Lepomis megalotis	longear sunfish
21.	Pomoxis annularis	white crappie
22.	Percina caprodes	logperch
23.	Etheostoma spectabile	orangethroated darter
24.	Aplodinotus grunniens	freshwater drum

Table 2. Inks Lake Seining Results

Species	July	August	September	October	November	December	January	Total	% of Total
D. cepedianum	69	65	39	15	82	132		402	16.26
N. venustus	139	64	222	161	107	111		804	32.54
N. lutrensis	0	0	0	0	5	11		16	0.65
F. notatus	9	2	5	75	9	4		104	4.21
G. affinis	9	0	1	98	9	0		117	4.73
M. chrysops	1	0	1	0	0	0		2	0.08
M. punctulatus	4	0	1	1	0	0		6	0.25
M. treculi	0	0	0	0	1	0		1	0.04
M. salmoides	40	17	14	9	4	0		84	3.40
C. coronarius	0	0	1	3	0	0		4	0.16
L. cyanellus	0	0	1	1	0	0		2	0.08
L. microlophus	32	36	96	62	25	26		277	11.21
L. macrochirus	70	43	49	71	62	85		380	15.38
L. auritus	48	35	70	30	16	4		203	8.21
L. megalotis	13	0	2	1	0	1		17	0.69
P. caprodes	38	3	5	4	1	0		51	2.06
E. spectabile	* (taken in January rotenone collection)						1	1	0.05
TOTAL	472	265	507	531	321	374	1	2471	100.00

Table 3. Inks Lake Netting and Rotenone Results

Species	July		August		September		October		November		December		January*		Total Num.	Total Wt.	% of Total Num.	% of Total Weight
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.				
L. platostomus			2	9.3	4	27.8	7	32.3	7	40.4	1	4.5			21	114.3	0.85	8.28
D. cepedianum	253	46.0	66	13.6	144	25.9	52	11.3	343	63.8	80	21.1	337	68.5	1275	250.2	51.70	18.13
I. bubalus	30	90.0	11	31.9	9	26.8	5	15.3	14	46.8	5	18.0	5	16.5	79	245.3	3.20	17.78
Carpiodes carpio	13	29.2	38	117.7	39	91.6	26	63.6	26	53.1	15	32.2			157	387.4	6.37	28.08
Cyprinus carpio	1	3.4											3	13.3	4	16.7	0.16	1.21
I. punctatus	16	18.0	12	10.8	19	27.0	22	29.4	23	25.3	48	33.0	2	3.6	142	147.1	5.76	10.66
P. olivaris	1	4.0	3	13.3			2	13.3			1	4.8			7	35.4	0.28	2.57
M. chrysops	11	13.3	8	6.1	8	9.9	4	3.1	20	34.2	5	8.9			56	75.5	2.28	5.47
M. punctulatus					2	3.2	2	3.3							4	6.5	0.16	0.47
M. treculi	1	4.8	3	6.1											4	10.9	0.16	0.79
M. salmoides	1	0.4	4	8.8	3	4.0			2	5.9	1	1.3	37	6.7	48	27.1	1.95	1.97
C. coronarius			1	0.1									10	0.2	11	0.3	0.44	0.02
L. cyanellus													6		6	0.0	0.25	0.00
L. microlophus			1	0.1	5	0.5	3	0.4			7	0.8	207	15.6	223	17.4	9.05	1.26
L. macrochirus			31	3.2	49	5.8	12	1.2	8	1.0	5	0.8	250	11.8	355	23.8	14.39	1.72
L. auritus					1	0.1							17	2.1	18	2.2	0.73	0.16
L. megalotis					1	0.1									1	0.1	0.04	0.01
P. annularis	15	2.3	5	1.5	6	2.2	7	3.9	7	1.9	5	2.3			45	14.1	1.83	1.02
A. grunniens	6	2.8					4	2.6							10	5.4	0.40	0.40
Total	348	214.2	185	222.5	290	224.9	146	179.7	450	272.4	173	127.7	874	138.3	2466	1379.7	100.00	100.00

* rotenone collection

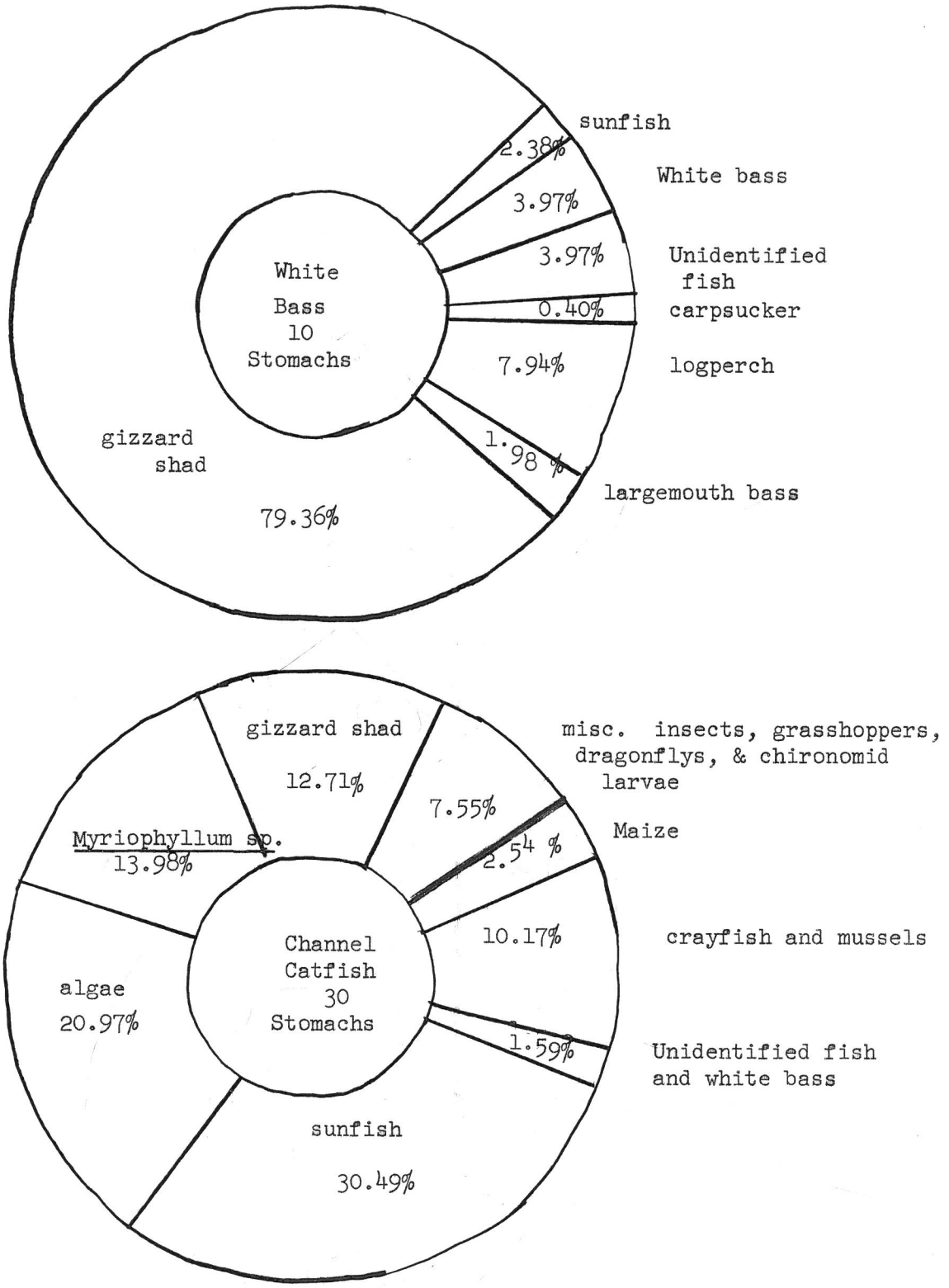
Table 4. Inks Lake - Gonadal Development.

Species	July	August	September	October	November	December	January
Lepisosteus platostomus			1	1	1		
Dorosoma cepedianum	3	3	3	3	3	3	3
Ictiobus bubalus	1-2-5	5	5		1-2		1-2-3
Carpiodes carpio	1-5	5	3-5	2	2		1-2
Cyprinus carpio	1						
Ictalurus punctatus	1-3-4-5	1-3-4-5	4-5	3	3	3-4	2-3
Pilodictus olivaris		5				3	
Morone chrysops	5	4-5	5	3	2-3	1-2	
Micropterus punctulatus	3-4	2-5	5				
Micropterus salmoides		5	5		2-3		3-4
Chaenobryttus coronarius		1					3-4
Lepomis microlophus		2		5			2-3-4
Lepomis macrochirus	1-2	1-2	1-2	5	3		3-4-5
Lepomis auritus		1-3-5					3-4
Pomoxis annularis	3-4-5	3-4-5	3-4-5	3	3	2	
Aplodinotus grunniens	2-5			3-5			

Table 15. Lake Inks Creel Census - Estimated Total Usage of Inks Lake by Fishermen in Man-Days during the Period July 1955 through January 1956.

	Avg. No. of Fishermen Counted on all Cruises	Average Length of Fishing Day	Length of Avg. Fishing Trip	Number day in Census Period	Total Man-Days Fished
BOAT					
July	17.3	14.4	3.5	31	2,206
August	11.7	14.8	2.8	31	1,917
September	14.7	13.8	2.9	30	2,098
October	6.0	11.8	3.1	31	708
November	0.92	3.7	0.2	30	527
December	2.7	7.0	0.8	31	733
January	1.9	6.5	0.8	31	479
Total	7.9	10.3	2.0	215	8,668
SHORE					
July	21.5	14.4	2.7	31	3,555
August	13.0	14.8	3.1	31	1,924
September	19.5	13.8	2.1	30	3,844
October	11.6	11.7	3.1	31	1,357
November	4.6	3.7	1.1	30	464
December	5.6	7.0	1.3	31	935
January	5.5	6.5	1.6	31	693
Total	11.6	1(	2.1	215	12,7[illegible]
				GRAND TOTAL	21,44[illegible]

Figure 1. Results of Stomach Analyses, Lake Inks, July 1955 through January 1956.



COMMON NAME		
SHORTNOSE GAR	01	0.16
SMALLMOUTH BUFFALO	09	1.46
RIVER CARPSUCKER	03	0.49
EUROPEAN CARP	10	1.62
CHANNEL CATFISH	96	15.58
YELLOW CATFISH	0	0
WHITE BASS	97	15.75
SPOTTED BLACK BASS	01	0.16
LARGEMOUTH BLACK BASS	26	4.22
WARMOUTH BASS	05	0.81
GREEN SUNFISH	18	2.93
REDEAR SUNFISH	01	0.16
BLUEGILL SUNFISH	327	53.08
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	01	0.17
LONGEAR SUNFISH	0	0
WHITE CRAPPIE	15	2.43
FRESHWATER DRUM	06	0.98
TOTAL	616	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

JULY 1955

COMMON NAME		
SHORTNOSE GAR	01	0.34
SMALLMOUTH BUFFALO	01	0.34
RIVER CARPSUCKER	0	0
EUROPEAN CARP	16	5.46
CHANNEL CATFISH	23	7.85
YELLOW CATFISH	0	0
WHITE BASS	112	38.22
SPOTTED BLACK BASS	0	0
LARGEMOUTH BLACK BASS	27	9.22
WARMOUTH BASS	06	2.05
GREEN SUNFISH	01	0.34
REDEAR SUNFISH	0	0
BLUEGILL SUNFISH	78	26.62
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	02	0.68
LONGEAR SUNFISH	02	0.68
WHITE CRAPPIE	24	8.20
FRESHWATER DRUM	0	0
TOTAL	293	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

AUGUST 1955

COMMON NAME		
SHORTNOSE GAR	0	0
SMALLMOUTH BUFFALO	0	0
RIVER CARPSUCKER	0	0
EUROPEAN CARP	03	0.68
CHANNEL CATFISH	19	4.36
YELLOW CATFISH	01	0.23
WHITE BASS	116	26.61
SPOTTED BLACK BASS	0	0
LARGEMOUTH BLACK BASS	33	7.56
WARMOUTH BASS	01	0.23
GREEN SUNFISH	0	0
REDEAR SUNFISH	03	0.69
BLUEGILL SUNFISH	239	54.82
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	02	0.46
LONGEAR SUNFISH	04	0.91
WHITE CRAPPIE	12	2.76
FRESHWATER DRUM	03	0.69
TOTAL	436	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

SEPTEMBER 1955

COMMON NAME		
SHORTNOSE GAR	0	0
SMALLMOUTH BUFFALO	0	0
RIVER CARPSUCKER	0	0
EUROPEAN CARP	0	0
CHANNEL CATFISH	50	14.70
YELLOW CATFISH	0	0
WHITE BASS	185	54.41
SPOTTED BLACK BASS	0	0
LARGEMOUTH BLACK BASS	20	5.89
WARMOUTH BASS	0	0
GREEN SUNFISH	0	0
REDEAR SUNFISH	03	0.88
BLUEGILL SUNFISH	65	19.12
ORANGESPOTTED SUNFISH	01	0.29
YELLOWBREASTED SUNFISH	0	0
LONGEAR SUNFISH	0	0
WHITE CRAPPIE	14	4.12
FRESHWATER DRUM	02	0.59
TOTAL	340	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

OCTOBER 1955

Figure 2. Total catch by species of fish taken by anglers interviewed by Texas Game & Fish Comm. personnel.

COMMON NAME		
SHORTNOSE GAR	0	0
SMALLMOUTH BUFFALO	0	0
RIVER CARPSUCKER	0	0
EUROPEAN CARP	0	0
CHANNEL CATFISH	07	13.46
YELLOW CATFISH	0	0
WHITE BASS	37	71.15
SPOTTED BLACK BASS	0	0
LARGEMOUTH BLACK BASS	03	5.76
WARMOUTH BASS	0	0
GREEN SUNFISH	0	0
REDEAR SUNFISH	0	0
BLUEGILL SUNFISH	04	7.70
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	0	0
LONGEAR SUNFISH	0	0
WHITE CRAPPIE	01	1.93
FRESHWATER DRUM	0	0
TOTAL	52	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

NOVEMBER 1955

COMMON NAME		
SHORTNOSE GAR	0	0
SMALLMOUTH BUFFALO	0	0
RIVER CARPSUCKER	0	0
EUROPEAN CARP	0	0
CHANNEL CATFISH	0	0
YELLOW CATFISH	0	0
WHITE BASS	09	25.00
SPOTTED BLACK BASS	02	5.56
LARGEMOUTH BLACK BASS	01	2.27
WARMOUTH BASS	0	0
GREEN SUNFISH	0	0
REDEAR SUNFISH	0	0
BLUEGILL SUNFISH	04	11.12
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	0	0
LONGEAR SUNFISH	0	0
WHITE CRAPPIE	20	55.55
FRESHWATER DRUM	0	0
TOTAL	36	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

DECEMBER 1955

COMMON NAME		
SHORTNOSE GAR	0	0
SMALLMOUTH BUFFALO	0	0
RIVER CARPSUCKER	0	0
EUROPEAN CARP	0	0
CHANNEL CATFISH	01	6.67
YELLOW CATFISH	0	0
WHITE BASS	06	40.00
SPOTTED BLACK BASS	0	0
LARGEMOUTH BLACK BASS	02	13.33
WARMOUTH BASS	0	0
GREEN SUNFISH	0	0
REDEAR SUNFISH	01	6.67
BLUEGILL SUNFISH	02	13.33
ORANGESPOTTED SUNFISH	0	0
YELLOWBREASTED SUNFISH	0	0
LONGEAR SUNFISH	01	6.67
WHITE CRAPPIE	02	13.33
FRESHWATER DRUM	0	0
TOTAL	15	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

JANUARY 1956

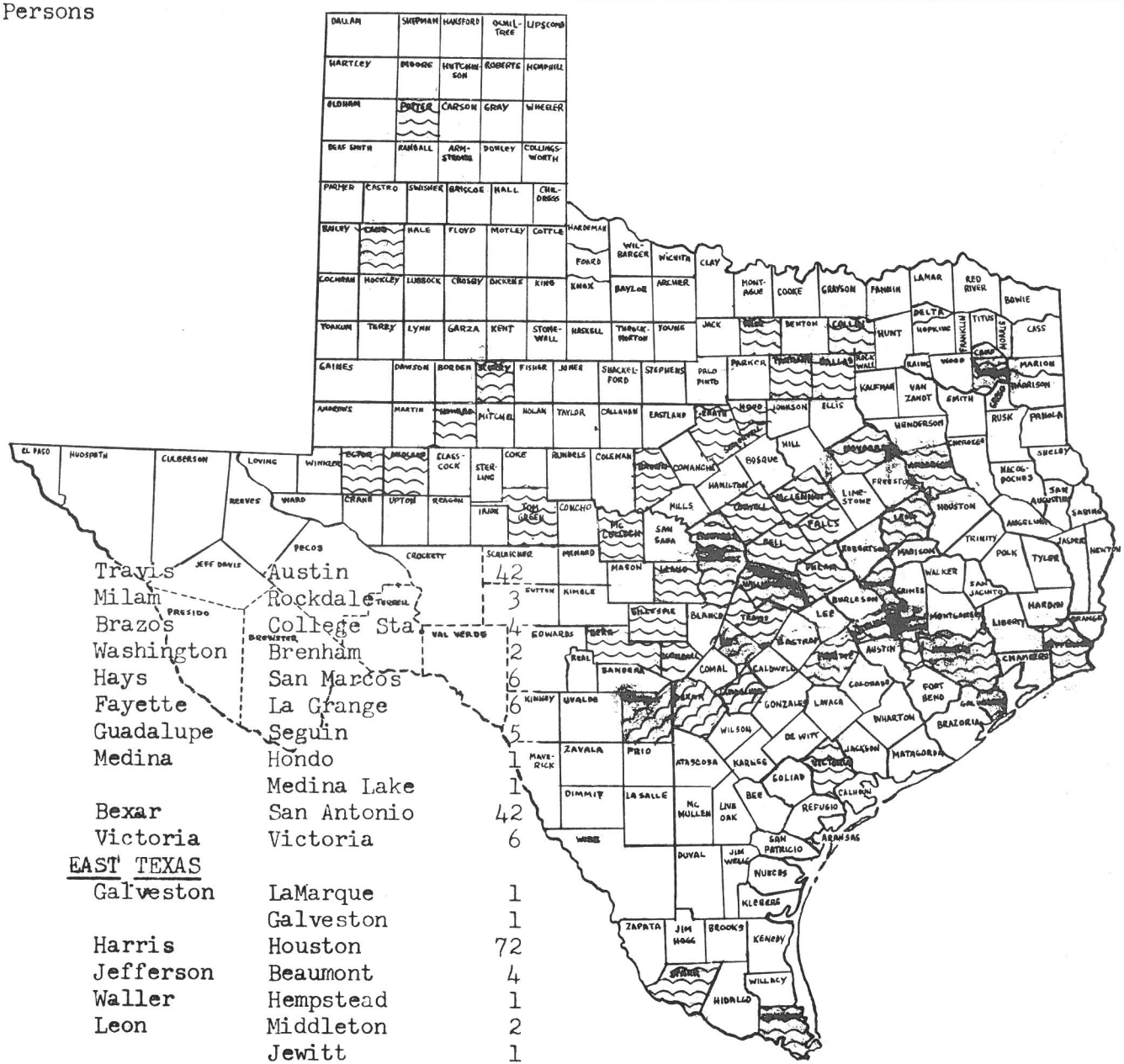
COMMON NAME		
SHORTNOSE GAR	02	0.11
SMALLMOUTH BUFFALO	10	0.56
RIVER CARPSUCKER	03	0.16
EUROPEAN CARP	29	1.63
CHANNEL CATFISH	196	10.96
YELLOW CATFISH	01	0.05
WHITE BASS	562	31.44
SPOTTED BLACK BASS	03	0.16
LARGEMOUTH BLACK BASS	112	6.27
WARMOUTH BASS	12	0.67
GREEN SUNFISH	19	1.06
REDEAR SUNFISH	08	0.45
BLUEGILL SUNFISH	719	40.21
ORANGESPOTTED SUNFISH	01	0.06
YELLOWBREASTED SUNFISH	05	0.28
LONGEAR SUNFISH	07	0.39
WHITE CRAPPIE	88	4.92
FRESHWATER DRUM	11	0.62
TOTAL	1788	100.00

05% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75%

CONSOLIDATED TOTAL-JULY,1955 THROUGH JANUARY,1956.

Figure 3. Total catch by species of fish taken by anglers interviewed by Texas Game & Fish Comm. personnel.

County	Town	No. Persons
PANHANDLE		
Potter	Amarillo	3
SOUTH PLAINS		
Lamb	Littlefield	1
Scurry	Snider	1
Midland	Midland	5
Ector	Goldsmith	2
	Penwell	2
	Odessa	5
Howard	Big Spring	9
NORTH CENTRAL TEXAS		
Collin	McKinney	1
Wise	Decatur	1
Tarrant	Ft. Worth	11
Dallas	Dallas	8
Somervell	Glen Rose	8
Navarro	Corsicana	2
CENTRAL TEXAS		
Erath	Stephenville	1
Brown	Brownwood	2
McLennan	Waco	10
Coryell	Gatesville	3
	Copperas Cove	4
	Evant	1
Lampasas	Adamsville	2
	Lampasas	53
Tom Green	San Angelo	4
Bell	Killeen	89
	Temple	9
Williamson	Taylor	4
	Round Rock	1
	Florence	2
	Georgetown	14
	Liberty Hill	3
	Granger	2
Burnet	Bertram	8
	Burnet	30
Llano	Llano	3
	Lake Buchanan	28
McCulloch	Brady	5
Kimble	Junction	4
Gillespie	Harper	5
	Fredricksburg	7
Kerr	Kerrville	5
Travis	Austin	42
Milam	Rockdale	3
Brazos	College Sta	4
Washington	Brenham	2
Hays	San Marcos	6
Fayette	La Grange	6
Guadalupe	Seguin	5
Medina	Hondo	1
	Medina Lake	1
Bexar	San Antonio	42
Victoria	Victoria	6
EAST TEXAS		
Galveston	LaMarque	1
	Galveston	1
Harris	Houston	72
Jefferson	Beaumont	4
Waller	Hempstead	1
Leon	Middleton	2
	Jewitt	1
Anderson	Palestine	4
Upshur	Gilmer	1
SOUTH TEXAS		
Starr	Rio Grande City	2
Cameron	Brownsville	1



OUT OF STATE

Ardmore, Oklahoma	2
Milwalkee, Wisconsic	2
Kirksville, Missouri	4

Figure 4. Creel Census Lake Inks: Home To[illegible] and Counties of Fishermen Interviewed.

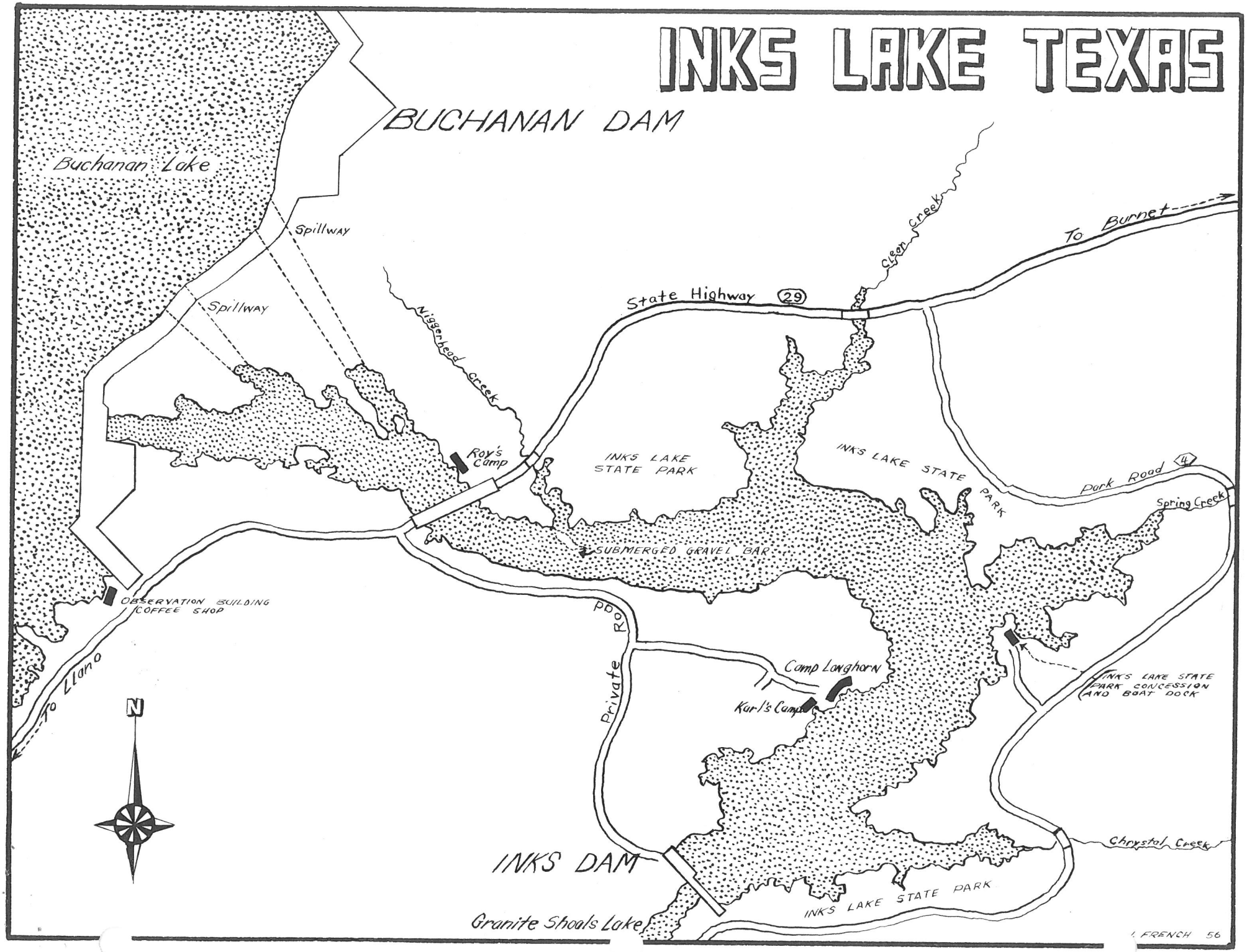

INKS LAKE TEXAS
BUCHANAN DAM
Buchanan Lake
Spillway
Spillway
Niggerhead Creek
Green Creek
To Burnet
State Highway 29
Roy's Camp
INKS LAKE STATE PARK
INKS LAKE STATE PARK
Park Road 4
Spring Creek
SUBMERGED GRAVEL BAR
OBSERVATION BUILDING COFFEE SHOP
To Llano
Private Road
Camp Longhorn
Karl's Camp
INKS LAKE STATE PARK CONCESSION AND BOAT DOCK
N
INKS DAM
Granite Shoals Lake
INKS LAKE STATE PARK
Chrystal Creek
J. FRENCH 56

Table 5. Lake Inks Creel Census -- Boat Fishing Results -- These Data Represent only the Fishermen Interviewed by Texas Game and Fish Commission Personnel During the Period July 1955 through January 1956.

Month	Successful Fishermen	Unsuccessful Fishermen	Total Fish Caught	Successful Hours Fished	Fish/man Hr. Successful Fishing	Total Fisher- men	Total Hours Fished	Fish/man Hr. for all Fishermen	% of all Fishermen Unsuccessful
July	93	55	233	315.25	0.74	148	448.25	0.52	37.16
August	45	36	74	153.50	0.48	81	244.00	0.30	44.44
September	53	57	143	141.25	1.01	110	294.25	0.49	48.18
October	22	13	54	73.00	0.74	35	105.50	0.51	37.14
November	0	2	0	0.00	0.00	2	2.0	0.00	100.00
December	0	13	0	0.00	0.00	13	24.5	0.00	100.00
January	0	5	0	0.00	0.00	5	5.0	0.00	100.00
TOTAL	213	181	504	682.00	0.76	394	1123.50	0.45	45.93

Calculated average fisherman day - hours per fisherman per trip.

Calculated average creel - 1.2 Fish per fisherman per trip.

Table 6. Lake Inks Creel Census - Shore Fishing Results - These Data Represent only Those Fishermen Interviewed by Texas Game and Fish Commission Personnel during the Period July 1955 through January 1956.

Month	Successful Fishermen	Unsuccessful Fishermen	Total Fish Caught	Successful Hours Fished	Fish/man Hr. Successful Fishing	Total Fishermen	Total Hrs. Fished	Fish/man Hr. for all Fishermen	% of all Fishermen Unsuccessful
July	136	74	383	410.75	0.932	210	564.5	0.70	65
August	60	46	219	216.25	1.012	106	258.5	0.85	57
September	79	37	293	211.25	1.386	116	249.0	1.18	68
October	91	27	286	215.50	1.327	118	291.5	0.98	77
November	27	11	52	82.25	0.632	38	105.5	0.50	71
December	19	43	37	41.75	0.455	62	87.75	0.42	31
January	13	27	14	50.25	0.28	40	87.75	0.16	68
TOTAL	425	265	1284	1228.00	1.05	690	1626.50	0.79	44.16

Calculated Average Fishermen Day -- Hours per Fisherman per Trip.

Calculated Average Creel -- 1.9 fish per Fisherman per Trip.

Table 7. Lake Inks Creel Census -- Trotline Fishing Results -- These Data Represent only the Fishermen Interviewed by Texas Game and Fish Commission Personnel During the Period July 1955 through January 1956.

Month	Total Trotlines	Total Fish Caught on Trotlines	Total Trotline Hours Fished	Fish/Trotline Hour	Per Cent of Trot-lines Catching Fish
July	16	23	198.00	0.11	68.75
August	10	23	154.25	0.15	50.00
September	6	58	50.25	1.15	66.00
October	2	18	30.00	0.60	100.00
November	0	0	0	0.00	0.00
December	0	0	0	0.00	0.00
January	0	0	0	0.00	0.00
TOTAL	34	122	432.50	0.28	64.7

Table 8. Lake Inks Creel Census -- These Data Represent Only These Fishermen Interviewed by Texas Game and Fish Commission Personnel During the Period July 1955 through January 1956.

Month	Total Fishermen		Number of Parties		Average Number of Fishermen per Party		Total Trotlines
	Boat	Shore	Boat	Shore	Boat	Shore	
July	148	210	73	90	2.0	2.3	16
August	81	106	40	52	2.0	2.0	10
September	110	116	50	58	2.2	2.0	6
October	35	118	18	62	1.9	1.9	2
November	2	38	1	18	2.0	2.1	0
December	13	62	6	32	2.2	1.9	0
January	5	40	2	21	2.5	1.9	0
TOTAL	394	690	190	333	2.1	2.1	34

Table 9. Lake Inks Creel Census - Returns in fish and the return per unit of effort in fish caught per man hour or trotline hour for the various methods of fishing used. These data represent only those trips where a single method of fishing was employed.

Type of Fishing		July	August	September	October	November	December	January	Total Fish Caught	Avg. Rate of Catch
Still Fishing Boat	Total Fish	198	50	118	45	*	0	0	411	
	Rate of Catch	0.6	0.4	0.7	1.0	*	0.0	0.0		0.6
Still Fishing Shore	Total Fish	377	213	271	201	45	36	13	1,166	
	Rate of Catch	0.7	0.9	1.14	1.0	0.8	0.4	0.2		0.8
Casting Boat	Total Fish	12	16	16	7	0	0	*	51	
	Rate of Catch	0.2	0.3	0.2	0.2	0.0	0.0	*		0.2
Casting Shore	Total Fish	2	4	19	58	6	1	1	91	
	Rate of Catch	0.4	0.6	2.4	1.0	0.2	0.2	0.1		0.7
Fly Fishing Boat	Total Fish	6	3	*	2	*	*	*	11	
	Rate of Catch	6.0	0.4	*	0.4	*	*	*		0.8
Fly Fishing Shore	Total Fish	0	2	*	*	*	*	*	2	
	Rate of Catch	0.0	4.0	*	*	*	*	*		1.3
Trolling	Total Fish	3	5	8	*	*	*	*	16	
	Rate of Catch	0.1	0.2	0.4	*	*	*	*		0.2
Trotline	Total Fish	23	23	58	18	*	*	*	122	
	Rate of Catch	0.1	0.2	1.2	0.6	*	*	*		0.3

* indicates months during which the concerned method of fishing was not used by interviewed fishermen

Table 10. Lake Inks Creel Census - Returns Per Unit of Effort in Fish Per Man Hour or Fish Per Trotline Hour for the Various Species in the Sampled Catch. These Data are Based only on Pure Catches, Where only a Single Species was Involved. The Average Rates of Catch Include Only the Months the Species Were Caught.

Species Caught		July	August	September	October	November	December	January	Average
Sunfish (all species)	Boat	0.7	1.1	2.0	6.0				1.4
	Shore	1.8	1.0	1.3	1.8	4.0	0.3	1.2	1.6
White Crappie	Boat	0.6			3.7				1.4
	Shore			1.0			0.4	0.8	0.5
Largemouth Bass	Boat	0.3	0.3	0.5	0.2				0.3
	Shore		0.7	0.2		0.3		0.2	0.2
White Bass	Boat	0.9	0.4		0.3				0.7
	Shore	0.6	1.2	2.2	1.0	0.6	1.1	1.0	1.1
Channel Catfish	Boat	0.6	0.3	0.2	2.4				0.6
	Shore	0.3	1.3	0.7	1.1	0.5			0.6
Channel Catfish	Trot-line	0.2	0.2	1.5	0.6				0.4
European Carp	Shore	0.1	0.5	0.6					0.4
Freshwater Drum	Shore	0.2							0.2
Smallmouth Buffalo	Shore	0.9							0.9
Garfish	Boat		0.1						0.1
	Shore	2.0							2.0
Spotted Bass	Shore						0.3		0.3

Table 11. Inks Lake Creel Census -- Results of Fishing Showing the Relative Success with the Various Types of Baits Employed.

Fish Caught On Various Baits	July	August	September	October	November	December	January	Totals	Grand Total
Live Baits									
minnows	86	163	101	145	39	19	9	526	
crayfish				1				1	
grasshoppers			20					20	
worms	294	28	38	46		1	3	411	
Total	380	191	159	192	39	21	12		994
Dead Baits									
doughbaits	29	17	3					49	
bloodbait			65					65	
shad gizzard	33	4		13	2			52	
stinkbait	1							1	
shrimp	12	40	106	28	2			188	
cut fish	2	19	1	8				30	
snails	2							2	
Total	79	80	175	49	4				387
Artificial Baits									
Lures	16	23	25	22	1	1	1	89	
spinners			2	17				19	
flies	6	5						11	
Total	22	28	27	39	1	1	1		119
Mixed Baits*	158	17	133	78	8	15	1	410	
GRAND TOTALS	639	316	494	358	52	37	14		1,910

* The fish shown for mixed baits are those caught for which it was impossible for census personnel to determine the type of bait.

Table 12. Inks Lake Creel Census - Estimated Monthly Yeilds in Total Numbers of Fish Taken by Boat and Shore Fishermen During the Period July 1955 through January 1956.

MONTH	BOAT	SHORE	TOTAL
July	4,008	6,726	10,734
August	1,628	4,845	6,473
September	2,957	9,500	12,457
October	1,123	4,128	5,251
November	0	252	252
December	0	554	554
January	0	177	177
TOTALS	9,716	26,182	35,898

Table 13. Inks Lake Creel Census - Results of Boat and Shore Fishing and the Estimated Yields of Fish Taken by those Methods During the Period July 1955 through January 1956. (Acre yields are based on an Estimated 900 Surface Acres.)

Species	Total Number	Per cent of Total	Estimated Total Catch	Estimated Yield Per Acre	Total Weight in Lbs.	Per cent of Weight	Estimated Total Weight in Pounds	Estimated Yield Per Acre in Lbs.
Shortnose gar	2	0.11	40	0.04	4.5	0.45	89.47	0.10
Smallmouth buffalo	10	0.56	202	0.20	47.9	4.84	962.30	1.07
River carpsucker	3	0.16	57	0.06	4.9	0.49	97.42	0.10
Carp	29	1.63	585	0.65	129.9	13.12	2,608.57	2.89
Channel catfish	196	10.96	3,935	4.37	195.1	19.70	3,916.83	4.35
Yellow catfish	1	0.05	19	0.02	4.4	0.44	87.48	0.10
White bass	562	31.44	11,286	12.54	338.3	34.17	6,793.81	7.54
Spotted bass	3	0.16	57	0.06	3.3	0.33	65.61	0.07
Largemouth bass	112	6.27	2,252	2.50	121.5	12.27	2,439.57	2.71
Warmouth	12	0.67	241	0.27	1.5	0.15	29.82	0.03
Green sunfish	19	1.06	381	0.42	2.2	0.22	43.74	0.05
Redear sunfish	8	0.45	162	0.18	0.9	0.09	17.89	0.02
Bluegill sunfish	719	40.21	14,435	16.04	111.8	11.29	2,244.72	2.50
Orangespotted sunfish	1	0.06	22	0.02	0.1	0.01	1.98	0.002
Yellowbreasted sunfish	5	0.28	101	0.11	0.9	0.09	17.89	0.02
Longear sunfish	7	0.39	140	0.16	1.6	0.16	31.81	0.03
White crappie	88	4.92	1,766	1.96	15.3	1.55	308.17	0.34
Freshwater drum	11	0.62	223	0.25	6.2	0.63	125.25	0.14
TOTALS	1788	100.00	35,898	39.89	990.3	100.00	19,882.33	22.09

Table 14. Lake Inks Creel Census - Average Total Lengths in Inches of Fish Taken by Anglers, Excluding Trotline Fishermen, during the Period July 1955 through January 1956.

FISH SPECIES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	AVERAGE LENGTH
Largemouth bass	16.5	12.6	11.1	12.8	12.7	10.0	12.0	11.8
Spotted bass	9.0					14.5		12.7
White crappie	7.5	6.7	7.2	8.5	6.0	7.3	6.0	7.3
Channel catfish	13.2	13.7	13.3	13.6	16.4		12.0	13.7
Yellow catfish			17.0					17.0
White bass	11.8	9.1	8.5	11.3	8.4	7.8	14.7	11.4
Freshwater drum	11.8		9.7	9.5				10.8
Shortnose gar	27.0	29.0						28.0
Smallmouth buffalo	21.2	18.0						18.9
·opean carp	19.7	21.4	23.0					21.4
River carpsucker	15.3							15.3
Orangespotted sunfish				5.0				5.0
Yellowbreasted sunfish	5.0	6.5	6.0					6.0
Redear sunfish	6.0		5.7	5.3			4.0	5.4
Warmouth bass	5.0	5.0	5.0					5.0
Green sunfish	5.2	7.0						5.3
Bluegill sunfish	5.6	6.2	5.7	5.4	5.5	6.5	4.0	5.7
Longear sunfish	4.0	6.0						5.6