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# Wildlife

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SOUTH CAROLINA WILDLIFE RESOURCES  
DEPARTMENT  
COLUMBIA, S. C.

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*Conservation, Protection and Restoration of Our Game  
and Fish and to the Education of Our People to the  
Value of Our Natural Resources*

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91 Broad Street, Charleston

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GORDON BROWN..... *Education Chief, Photographer*

ART BUEHLER..... *Information Assistant, Circulation*

#### THE COVER

The Horsepasture, a wild and beautiful stretch of the Carolina mountains, stretches way below Whitewater Falls. (Photo by Buehler.)

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## Fishing Luck

Some fishermen almost never catch anything; some catch fish sometimes; and there's a third class that always catches fish, or almost always. Let's take them up class by class, for the way you fish is about as important as the place you fish.

Members of the first group, from which some persons never graduate, think nothing is necessary except a hook, line and some water; and they also seem to think fish are under a legal obligation to bite their offerings. They'll fish for bream with a line heavy enough to horse out a striped bass and a hook big enough for an eight-pound bass, these made even more ineffective by a too-big cork and a too-heavy sinker; and they wonder why they don't catch fish. Some of these can be helped and may graduate into the second, or even the third class.

The second group is made up of those with one-track memories. They'll go to a certain lake in early spring and catch a nice string off a shallow point. And from then on all through the summer they'll fish the same place with the same methods, although the fish have moved out into deep water, and come into the shallows only in the cool of the evening. Or maybe they've caught some bass trolling out in deep water in midsummer weather. They'll keep trolling over this same area through the year, blaming the fish or an unkind fate for their lack of success. Some of them can handle their equipment expertly but they have no imagination.

Now take the third group, which makes up less than five per cent of those buying licenses. Seeing one of this group cast it is sometimes hard to distinguish him from a member of class number two, except that he's much more apt to have a fish on the end of his line. But as you watch you'll notice that he's often changing. He may change lures, or the speed, depth or angle of his retrieve, and even more the place where he's fishing. Sooner or later he'll hit the right combination and he'll start catching fish—and come into the dock to be greeted with: "You're sure a lucky fisherman."

If you don't catch fish consistently study yourself and your methods and maybe some time in the future you'll hear someone say: "You're sure a lucky fisherman."—E. F.

# Duke Agreement Meets Long Need

Hunters of the northwest corner of the state—long without the good hunting found in the low country counties—are happy over the news of the establishment of the Horsepasture Refuge in Oconee and Pickens counties on land acquired by the Duke Power Company.

An agreement establishing a 68,000 acre game refuge was signed in December by Duke officials and officials of the South Carolina Wildlife Resources Commission. Around 18,000 acres will be devoted to establishing a huntable population of deer, bear, wild turkey and grouse while the remaining 50,000 acres will remain open during the regular seasons for hunting and fishing. The 18,000 acre area—whose exact location has not yet been determined—will remain closed until Department biologists determine huntable populations have been built up, after which managed hunting will be allowed.

The refuge will be under the joint management of the power company and the department, the power company handling the forestry and watershed management and the department managing the area for game and fish.

The land involved is part of over 100,000 acres purchased by Duke Power for a giant steam and hydroelectric power generation project on the Keowee River. The company has applied to the Federal Power Commission for a license to build dams creating two lakes totaling 25,500 surface acres.

The refuge draws its name from Horsepasture River, wild-water trout stream that flows from North Carolina's Transylvania County into Oconee County.

Refuge boundaries follow the North Carolina-South Carolina state line for 14 miles, dipping down into Pickens County for a distance of about eight miles, and extending westward into Oconee County to completely sur-



Officials of the South Carolina National Bank, trustee for the Duke Power Company, and the Wildlife Resources Commission meet in Greenville for the signing of the agreement on the Horsepasture area. Left to right, front row: Director James W. Webb and President W. W. McEachern of SCN; back row, E. Allen Schlipp, Vice-President and trust officer of SCN; Commissioner J. Drayton Hopkins and Commission Chairman Edwin W. Johnson. (Photo by Brown.)

round the proposed upper lake, Lake Jocassee.

Lake Jocassee, the first lake planned, will have a full-pond surface acreage of 7,400 acres, but will be the second deepest lake in the Carolinas with a 310-foot head depth at the dam.

The dam creating the lake will be 385 feet high, second only to Fontana Dam in the Carolinas, and 1,143,000 acre feet will be packed between 75 miles of hilly shoreline. The lake will be fed by the Toxaway River, White-water River and Thompson River, in addition to the Horsepasture. All of these are considered trout streams, particularly on the North Carolina side and in the vicinity of the state line.

Rainbow trout have done well in several mountain lakes in North Caro-

lina. Rainbows require water of not more than 40 degrees with a high oxygen content, and this is likely to exist in some sections of Lake Jocassee. Smallmouth bass are expected to thrive in the lake.

The streams will be stocked this spring as part of the department's regular stocking program.

A Duke Power spokesman said wild-camp areas will be developed around the lake within the refuge, and boat launching areas provided.

The lower lake, Lake Keowee, will extend a short distance into the refuge area on the north. This lake, 18,100 surface acres, will have 300 miles of shoreline and 140 feet head depth at the Keowee Dam. A second dam on the Little River will help form Lake Keowee, diverting water to the Keowee hydroelectric station.

Lake Keowee likely will support both smallmouth and largemouth bass populations, and it is probable that a tailwater fishery for trout will exist where the Little River enters the lake.

The refuge area and other lands adjacent to the lakes were once the home of the Cherokee Indian tribes, and a trading trail was located along the banks of the Keowee River.

Fort Prince George was located in the Keowee Valley, and the names of General Andrew Pickens and Chief Attakulla are prominent in the earliest known history of the area.

The area was ceded to South Carolina by the Hopewell Treaty of 1785, and then settled by English, Scotch and Irish farmers. Only a small portion of the mountainous area was ever farmed, however, and through the years the Horsepasture has remained a wilderness area. Some virgin timber still stands.

Logging operations have been carried on in some sections of the Horsepasture for 60 years. The area has experienced rapid timber regrowth, aided considerably by the fact that no forest fires of any consequence have been recorded in the past 30 years.

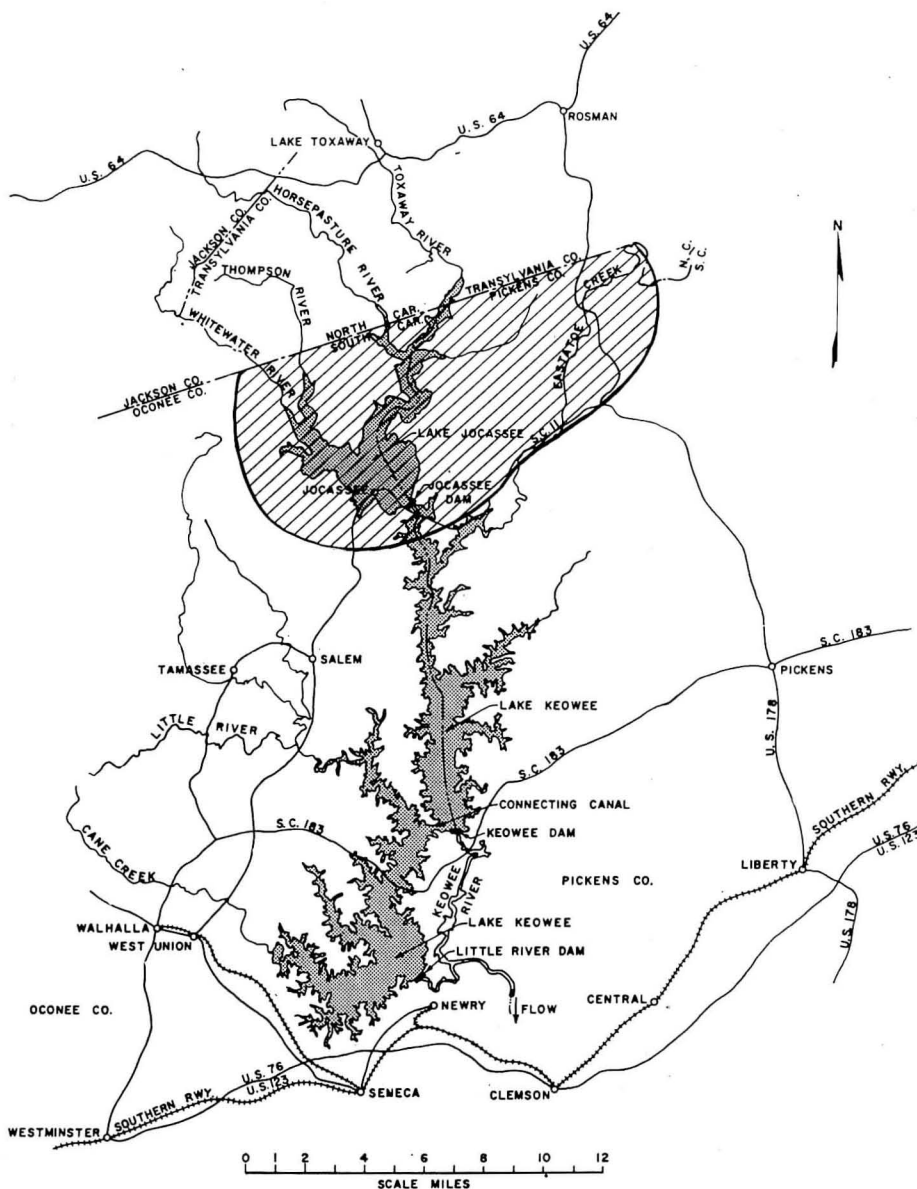
Populations of deer and turkey were said to be abundant until the practice of hunting with dogs was introduced, and since that time the pressures of hunting have reduced the current populations of this game animal and game bird drastically.

Duke Power, in announcing the \$700 million Keowee-Toxaway Project, said that it would continue its longtime policy of making its lands and waters readily available for public recreational use.

Public boat launching areas will be built by the company at Lake Keowee and Lake Jocassee, and sufficient space allocated to parking.

Picnic areas, marinas, hiking and riding trails, and camping within the forest areas, will be made available. It is hoped that private enterprise will develop much of the area's recreational potential.

"We realize that much of the land



The shaded area shows the Horsepasture game management area, including planned Lake Jocassee, while below is Lake Keowee, which will be built later as part of the Duke Power Company's development plans.

surrounding our proposed power impoundments is wild, scenic and attractive to the public," said Carl J. Blades, Duke Power's manager of real estate, "and we intend to continue our policy of making it available for public use."

"Anything that is compatible with good forestry management and the productivity of our lakes is fine with the company, and hunting and fishing and other recreational uses are compatible."

On its latest power impoundment, 32,500-acre Lake Norman in North Carolina Duke has provided 10 boating-fishing access areas and parking space for 100,000 cars or boat trailers.

The company also made approximately 2,500 lakeside cottage sites available to the public for recreational purposes on a low-cost lease basis.

Some smaller streams in the refuge area which are not now managed for trout, probably will be included in the trout program in the future.

At the time of the agreement, the land involved was being held in trust for Mill Power Supply Co., a wholly owned subsidiary of Duke Power Co., by S. C. National Bank as trustee. The land was formerly owned by the Singer Manufacturing Co.

(Continued on page 18)

# Deer Causing Problem on Highways

By PAT RYAN  
Assistant Director

The disgruntled motorist on the other end of the telephone line had called the Columbia office of the Wildlife Resources Department to report that he had run into an eight-point buck on one of the major highways, killing the deer and damaging his car. He wished to get word to the proper authorities so the deer could be salvaged. He was even more interested in learning if the state of South Carolina—or someone—was responsible for repair of his car.

Unfortunately for the motorist, and for others having the same experience, there is no agency from which the motorist could collect and, unless his insurance could take care of his damages, he was stuck with a sizeable repair bill.

The Wildlife Resources Department does, however, wish persons involved in wrecks with deer to inform the Department of the time, place and circumstances of the wreck, as well as estimate of damage.

With an ever-increasing deer population throughout the state, deer kills on the highways are becoming more common and kills were reported from 28 of the state's 46 counties last year. In many cases the property damages run high but there have been only a few fatalities, the latest occurring near Charleston a couple of years ago.

Most of the accidents occur during the hours of darkness, when deer normally move about and feed, and some of the daytime accidents are undoubtedly due to the deer running to escape some danger. With the long hunting season in South Carolina, deer are sometimes driven from their accustomed range and return after dark, this presenting a hazard to highway traffic.

Until about a dozen years ago the



As deer come back to the Piedmont and mountain areas, motorists must use extra care while driving at night. This doe, captured in the Low Country through the use of drugged food, was transported upstate to the Horsepasture area. Taking a blood sample is James Smith of the University of Georgia's Wildlife Disease Center while Department Biologist Walt Schrader holds the deer. Schrader, incidentally, was active in securing the Horsepasture area for the Department. (Photo by Brown.)

Highway deer kill was confined to the Low Country counties, but due to the success of the upstate stocking program Piedmont drivers must exercise care when traveling along certain routes.

Normally, deer confine their crossings to regular trails and paths, but may change their habits, depending upon conditions.

Most of the western and north-eastern states having large deer populations have been faced with the auto-deer problem for many years and both education and highway notices have combined to keep accidents to a minimum.

When a comparison is made with the number of successful hunts and

the man hours spent in hunting the deer, the percentage of highway kills is very low. The legal harvest continues to climb statewide. Hunter harvest on the six Piedmont Management Areas last fall showed that 15,000 hunters killed 911 deer in two weeks on areas where there were few if any deer 15 years ago. The statewide kill is estimated at over 20,000.

The Highway Department has erected some deer crossings signs on the lower sections of I-26 where deer are known to cross the highway, and it is likely that additional marking will be done in the future. Some states are using a mirror reflector that reflects light from approaching cars back into the woods but the value

of these has not been definitely proved as yet. The reflection is supposed to temporarily blind the deer and keep them from crossing while the car is approaching.

There will possibly never be a sure-fire system able to prevent some amount of property damage and some kills. The Department, however, will continue to work with other state departments in warning the drivers through the use of highway signs in the problem areas.

At the right are the county by county deer kills reported by wardens, but admittedly incomplete:

—SCWRC—

## Conservation Camp Dates Announced

The dates for the eleventh annual South Carolina Conservation Camp will be June 6-12, and it will again be held at Camp Forest, Cheraw State Park.

One hundred boys and girls will be sponsored by the S. C. Garden Clubs and the S. C. Wildlife Federation for the week long program. To be eligible, a camper must be a rising sophomore or junior in high school and possess better than average ability and an interest in conservation and the out-of-doors.

Instruction will be given by specialists from the various conservation agencies of the state and federal governments in the proper use of our soil, water, forestry and wildlife resources.

The camp will be directed by Gordon H. Brown, chief of education for the South Carolina Wildlife Resources Department. Applications for registration may be obtained from Mrs. Victor Murdaugh, 471 Glover St. S. E., Orangeburg and Bartow Culp, 69 King St., Charleston, S. C.

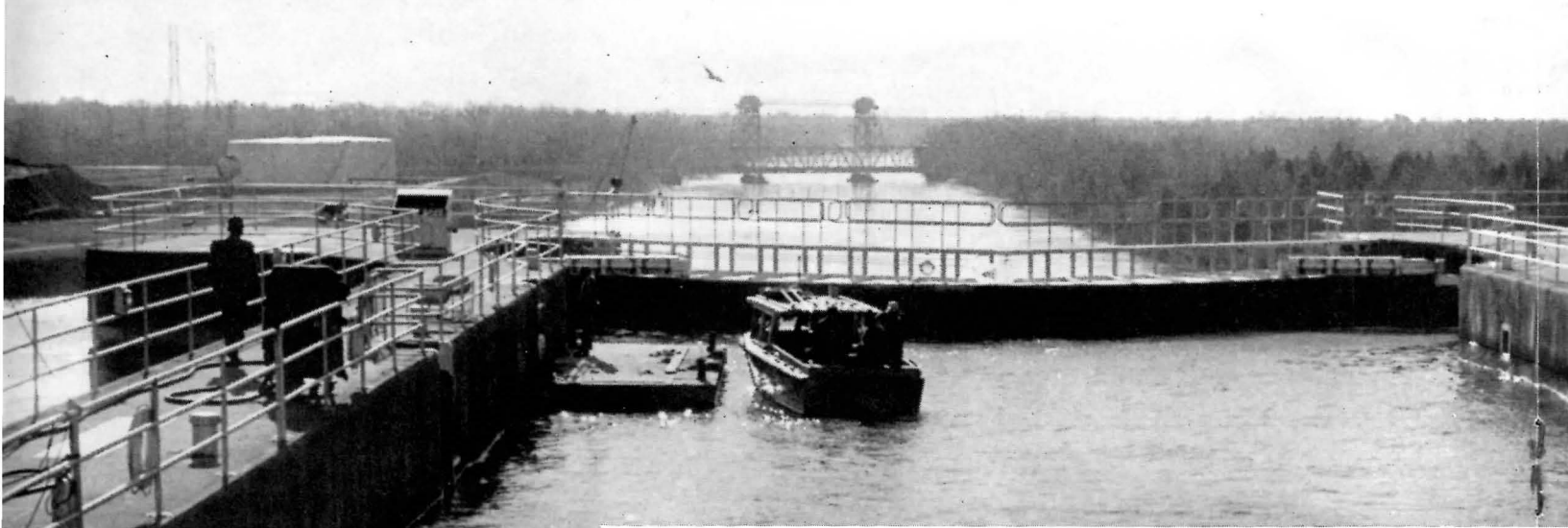
## DEER KILL ON HIGHWAYS AND RAILROADS

(January 1 - December 31, 1964)

County	Highways	Railroads	Total
Allendale .....	6	..	6
Bamberg .....	2	..	2
Barnwell .....	6	..	6
Beaufort .....	12	1	13
Berkeley .....	3	..	3
Calhoun .....	11	..	11
Charleston .....	1	..	1
Chester .....	1	..	1
Clarendon .....	7	..	7
Colleton .....	7	..	7
Dorchester .....	16	..	16
Edgefield .....	2	..	2
Fairfield .....	1	..	1
Georgetown .....	3	..	3
Hampton .....	2	1	3
Horry .....	1	..	1
Jasper .....	41	3	44
Kershaw .....	8	..	8
Laurens .....	1	3	4
Marion .....	10	2	12
McCormick .....	6	1	7
Newberry .....	4	1	5
Oconee .....	1	..	1
Orangeburg .....	2	..	2
Pickens .....	1	..	1
Richland .....	16	1	17
Sumter .....	8	2	10
Williamsburg .....	21	..	21
<b>TOTALS</b> .....	<b>200</b>	<b>15</b>	<b>215</b>



Signs like this one on I-26 are becoming more common over the state. (Photo by Brown.)



The fishing boat enters the Pinopolis locks to be lowered to the Tailrace Canal and the Cooper River,

## Santee Stripers

A striper hits a trolled plug and the battle starts.



Captain Richardson brings the fish aboard.





river, as the lake was too rough for fishing.

The clean hard strike and silver flash of the Santee-Cooper striped bass attracts devoted anglers from all over the country to these famous waters.

Doctors Gordon Birdsong and George Carroll of Virginia are two sportsmen who come here each year to enjoy the fighting, slashing sport, as well as the natural beauty of the lakes and of the Cooper River. They usually fish with Captain Jim Richardson of Moncks' Corner who has settled here and works as a full time fishing guide. The accompanying photos follow some of the action on one of their recent trips.

Fishing this past winter has been the best since 1957 and gives promise of holding up into the spring and summer months.

(PHOTO FEATURE by Gordon H. Brown.)

## ers Attract Many

The tired fish is brought alongside the boat while Captain Richardson waits with the gaff.



The proud angler hefts the fish.

# Striped Bass Outlook is Brighter

By ROBERT E. STEVENS  
Fish Biologist

The one consistent thing about wildlife populations is change. You can count on a deer herd, or a population of rabbits or fish to increase or diminish through the years. Many factors are usually involved in creating change in nature—some very simple and others very complex and as yet not understood.

An excellent example of the phenomenon of change in natural populations is the striped bass of Santee-Cooper. The water was impounded in 1952 and by 1954 it was full of fish, especially shad, and a small but vigorous population of striped bass. Within the next six years, by using the shad as food, the striped bass population exploded and doubled and redoubled its numbers and, as a result, some of the best striped bass fishing in history was enjoyed by a host of enthusiastic fishermen. Now, when you have several hundred thousand striped bass eating shad and growing at a rate of about two pounds each per year, a lot of shad are going to disappear. It isn't too surprising then that shad decreased from 259 pounds per acre in 1954 to 72 pounds per acre in 1960. It is not hard to realize either that 72 pounds of shad per acre isn't going to support the number of stripers that 259 pounds per acre supported. The decline of striped bass in 1960 was similar to the 1929 crash of the stock market—something had to give.

Of course, other factors beside the appetite of the striped bass probably helped reduce the number of shad—such as spawning failure. Also, in 1957 and again in 1959 one type of shad—the threadfin shad—was virtually wiped out by a winter-kill when the water temperature dipped below 40° F.

We have, at any rate, witnessed since 1954 a dramatic change in two



A crowd watches as rainbow and brown trout from the federal hatchery above Walhalla are dropped down the long pipe into the waters of the Saluda River below the Lake Murray dam. (Photo by Finley.)

wildlife populations—the change in each resulting from an inter-relationship between the two populations. From a small beginning the striped bass population built a mighty legion with shad as a base and, within a

short period, ate itself out of house and home and was reduced by half by that great leveler—starvation.

The period since 1960 has been a time of readjustment in which a new balance is being gained between shad

and striped bass. Striped bass continue to spawn in great numbers and shad, especially threadfin shad, have been able to recoup their numbers to some degree.

Fishing this year has been very satisfactory and December and January set new records for these months in the catch of striped bass. These and other data indicate that the striped bass population is once again increasing. That is not to say that we are approaching the peak numbers of 1959-60. We probably will never again achieve such a peak simply because shad will not be able to enjoy their previous numbers because of the ever-present predation by striped bass.

Even now, however, Santee-Cooper offers high quality striped bass fishing which we hope will improve even though the bonanza of the late fifties probably won't be seen again.

The ability of striped bass to control shad makes it a very attractive species to fish biologists without even considering its excellent sporting and table qualities. Fish biologists in the south would undoubtedly stock striped bass to control shad even if they could not be caught by hook or even if they were inedible. This is true because in most southern reservoirs shad are much too abundant. They frequently account for 90% of both the number and weight of all the fish in a reservoir and when such a situation exists, fishing is very poor. States such as Florida have spent many thousands of dollars in an attempt to control shad population with fish toxicants but this is a very expensive stop-gap measure at best.

Many states, including South Carolina, are attempting to introduce striped bass into shad-filled reservoirs. Unfortunately, striped bass have one trait which limits its wide-spread use and that is a peculiar requirement for successful spawning. Striped bass build no nests, but rather, spawn freely in a current. The eggs must drift until hatching some 48 hours later or they will settle to the bottom

mud and suffocate. Few reservoirs have enough miles of spawning stream above them and although the adult fish thrive in their new home their offspring suffocate. The South Carolina Wildlife Resources Department has been working continuously since 1954 in a vain attempt to introduce striped bass in all of the other reservoirs in the state. Lack of adequate upstream spawning grounds have frustrated the best efforts in every case.

In 1960, however, a new approach was initiated in the form of a striped bass hatchery located at Moncks Corner. It was hoped that by hatching striped bass in captivity enough could be released in the piedmont reservoirs annually to create fishing and to control shad and therefore by-pass the problem of inadequate spawning grounds.

After four frustrating seasons we now have the know-how and facilities to produce striped bass fry by the millions. Although survival of fry in nature even under the best of conditions rarely approaches 1%, we hope to be able to stock enough fry annually to accomplish our mission.

In April and May of last year 100 million fry were released throughout the reservoirs of the state. In order to be better able to measure our results we placed about 60 million in Wateree. In late summer and early fall we were able to seine fingerling striped bass at Wateree with ease and we are, at this point, cautiously optimistic concerning our chances of creating significant striped bass populations in this manner.

The fame of the striped bass of South Carolina continues to spread both nationally and internationally. Recently, biologists from Michigan paid South Carolina a visit in order to look over Santee-Cooper and the striped bass hatchery. They are considering introducing striped bass into some puddles up there by the name of the Great Lakes. Here again shad play a role. It seems that the lamprey eel has all but wiped out the large

predator fishes in the Great Lakes and, as a result, the landlocked alewife herring has exploded. They hope that the lamprey problem is now being solved by a massive effort to control the lamprey by destroying them on their spawning grounds. As of now, however, they have millions of acres of shad and few predator fish to control them. They are considering the striped bass as a solution and they couldn't make a better choice. Last year, incidentally, we stocked landlocked alewife in Santee-Cooper in the hope that they would help alleviate our lack of shad.

Internationally, I understand that the U. S. Fish and Wildlife Service has received an inquiry from Russia about stocking striped bass into her reservoirs—evidently the striped bass is one thing the Russians haven't yet invented. If they do import some, however, they had better hurry and invent some shad!

—————SCWRC—————

Two fulvous tree ducks, a rare specimen for South Carolina, were killed in Georgetown county last season—one on the Pee Dee Game Management Area and the other on a nearby plantation.

The fulvous tree duck is not even mentioned in *South Carolina Birdlife* by Sprunt and Chamberlain but apparently is extending its range northward and eastward from its former range of Central America, Mexico and the Gulf Coast.

—————SCWRC—————

Cottontail rabbits usually do not care for the deep forest and are typically inhabitants of brushy areas and woodland borders.

—————SCWRC—————

Snakes can swallow their victims whole since the upper and lower jaw can "unhook" to encompass large objects.

—————SCWRC—————

The bluegill gets its name from a small blue tab that extends backward from the gill cover.

# Hunter Kill Postal Survey Interesting

By FRANK NELSON  
Chief of Game

A recently completed postal survey of South Carolina hunters disclosed some interesting—and in some cases difficult to believe—statistics regarding the number of hunters for the various game species and their success.

The survey, conducted during the past spring and part of the summer by the Department, and analyzed by the Statistical Division of North Carolina State, consisted of sending a questionnaire to a randomly selected number of hunting license holders. These license holders were asked to provide information on the number of days hunted and the amount of game bagged. A second and third mailing was necessary to prompt those who did not return the completed form within the established time.

Of the 101,669 county license holders and the 83,726 state license holders a total of 3,095 stubs were pulled from the central office files. Three hundred and 62 were not deliverable because of insufficient or incomplete addresses or because the addressee had moved or had died. Of the remaining 2,733 questionnaires which were delivered, 1,190 were returned properly filled out, and these were used as the basis for statistical analysis.

Higher mathematics being what it is, no attempt is made to present or explain the formula used in compiling the statistics. It is, however, proper to inform the reader that although exact kill figures cannot be derived from statistical treatment, the figures in the table are within an 80 per cent confidence level. This means for deer, as an example, the lower limit at 80 per cent confidence shows a kill of 33,070 and the upper limit a kill of 56,575; and the actual deer kill will lie between these limits with an 80 per cent guarantee. The midpoint of the top and bottom figures is 44,823,

and this is the assumed deer kill for the season.

(Editor's Note: The 80 per cent confidence level does not mean that the figure is within 80 per cent of accuracy, but that the actual kill will come within the top and bottom estimates 80 per cent of the time.)

Another attempt at estimating the total deer kill during the 1964 season was based on known kills on game management areas and organized hunting clubs, these figures being collected monthly by biologists and game wardens. Additional kills, such as those by non-organized hunting groups and by highway mortality, were also included. Both legal and non-legal kills were included. The total kill, according to this method, was around 13,000 actually accounted for plus 2,000 additional estimated for a grand total of 15,000.

In trying to reconcile the difference between the statistical survey figure of 44,823 and the actual count of 15,000, it must be remembered that questionnaire surveys have a built-in factor of inaccuracy due to hunters' "brag" and lapse of time between the end of the hunting season and receipt of the questionnaires. Also, illegal kills are probably included in the sampling procedure and this might be a more significant factor than it is given credit for.

For several years prior to the 1963 season we have been "guestimating" the annual kill at something over 10,000. If in subsequent years these postal surveys are consistent in indicating a kill of around 40,000 we will revise our thinking on the deer kill.

But let's take another set of figures, for the dove this time. According to the survey a total of 84,724 hunters went out after doves and bagged 2,096,267 with 553,053 man days of effort. This figures out to 3.79 doves per trip, which we believe to be rather close to the actual kill figure. But

now let's combine this kill figure with a survey carried out by 13 southeastern states several years ago, dealing with the number of hunters, amount of kill, hours spent hunting, etc. This survey indicated a minimum of five shells per dove bagged.

Now combining the kill of doves with the shells per dove we come up with 10,481,333 shells or 415,253 boxes fired at the little feathered speedsters. Shells cost 10 cents each which means \$1,048,133 worth were fired at doves. The state tax on shells is eight cents per box, which brings in \$33,220 in revenue. What the federal tax is we don't know, except that it's considerably higher.

(At this point the editor would like to do some figuring of his own, based on actual field observation by a more-or-less active participant and not by a statistician. First of all, let's take the dove kill and level it off at 2,000,000, and also boost the average kill to four doves per trip, which means 500,000 trips. A conservative estimate of liquid consumption—also based on actual field observation—comes to one-third of a pint per trip per hunter—which means that 166,666 pints of beverages were consumed, not counting chasers. The average cost would come to \$3 per pint which means that \$499,998 was spent, which brings in much revenue to the state in taxes).

The bear kill is way off, probably because the sample was too small. The estimated kill figure of 307 is several times the entire bear population of the state, and the annual kill usually runs less than a dozen.

Considering the other species we have no figures which contradict those set forth in the survey. There is every indication that a high degree of reliability is in order and that until some better figures are presented our thinking should be in line with the survey findings.

In further testing the accuracy of the postal survey, let's take the average bag of 3.79 doves per trip. This is somewhat consistent with the results shown in the mourning dove investigations 1948-1956 published by the Southeastern Association of Game & Fish Commissioners where something in the neighborhood of five doves per trip was normal. It should be understood that the dove study was based on dove hunter interviews only and the postal hunter survey probably included a number of hunters who hunted doves only incidentally. This would tend to substantiate the findings of the postal survey.

Conflicting figures arise in estimates of ducks killed. Inasmuch as there were only approximately 10,000 duck stamps sold and the survey indicates a total of 27,959 hunters bagged ducks there appear to be a number of license holders who shot ducks without possessing a duck stamp. There is no way of knowing whether this condition exists as a significant factor of duck mortality or that these non-

## SUMMARY OF POSTAL HUNTER SURVEY ESTIMATES FOR SOUTH CAROLINA 1963-64 SEASON AT 80% CONFIDENCE LEVEL BY COUNTY AND STATEWIDE LICENSES

Species	No. Hunters		Total	Total Kill	Total Man Days	Average Results
	County	State				
Deer	18,154	34,847	53,001	44,823	431,345	9.6 days per kill
Turkey	2,700	3,831	6,531	3,687	19,577	5.3 d/k
Bear	376	890	1,266	307	5,747	18.71 d/k
Quail	44,946	51,646	96,592	2,091,571	918,869	2.27 quail/trip
Dove	38,514	46,210	84,724	2,096,267	553,053	3.79 dove/trip
Rabbit	70,941	46,568	117,509	1,501,978	1,153,227	1.3 rab/trip
Squirrel	75,320	46,847	122,167	1,593,795	1,128,439	1.4 sq/trip
Coon	16,844	11,884	28,728	251,996	268,841	1.06 days/coon
Possum	14,690	7,508	22,198	121,055	155,366	1.28 days/pos.
Fox	5,247	4,660	9,907	32,292	90,255	2.7 days/fox
Duck	10,733	17,226	27,959	172,273	169,145	1.01 duck/trip
Goose	452	1,112	1,564	1,359	4,885	3.59 days/goose
Coot	695	1,142	1,837	7,914	11,338	1.4 days/coot
Marsh Hen	1,876	2,879	3,676	83,840	29,416	2.8 hens/trip
Other	1,487	1,800	3,287	50,270	54,352	1.0 days/other

stamp hunters killed ducks incidental to other hunting; in which the bag would be relatively low. Duck stamps are probably purchased only by those hunters who make trips specifically for duck hunting. The total bag of ducks (172,273) appears large when compared to the survey by the Fish & Wildlife Service estimate of approximately 70,000. However, this last

survey was based on reports from duck-stamp holders and would not include results of hunters not holding stamps. In this regard the ratio of all duck hunters with a total bag 172,000 compares favorably with 10,000 duck stamp holders and 72,000 ducks. The two sets of data show an annual bag of 6.1 and 7.2 ducks per hunter respectively.

(Continued from inside back)

## DIVISION OF COMMERCIAL FISHERIES

G. ROBERT LUNZ, *Director*  
91 BROAD ST., CHARLESTON, S. C.      TELEPHONE 722-7297 (Office)  
766-5193 (Home)

NAME AND ADDRESS	TELEPHONE
Allison H. Fickling, Chief, 91 Broad St.— Charleston	722-7297 (Office)
1117 Quail Dr.—Lawton Bluff	795-0698 (Home)
Lucien F. Bryan, P. O. Box 184,— Murrells Inlet	284-2380
John C. Hodge, Bluffton	757-2371
Kirkland H. Howell, 502 May St.— St. George	LO 3-3088 and LO 3-3131
D. J. Into, Jr., Star Rt. 1, Hardeeville	2-750

NAME AND ADDRESS	TELEPHONE
Oscar J. Sullivan, Moncks Corner	825-2852
Fred M. Tuten, Jr., 1716 Greenlawn Park,— Beaufort	524-2506
Will D. Wheeler, 30 Palmetto St.— Georgetown	546-9514
Alexander J. Willis— Cottageville	VE 5-2113
Edisto Beach	869-2202

## DIVISION OF BOATING

JAMES W. WEBB, *Director*  
THOMAS C. WELCH, *Chief of Boating*

CHARLESTON OFFICE, 15 LOCKWOOD BLVD.  
COLUMBIA OFFICE, 933 MAIN STREET

TELEPHONE RAYMOND 3-7925  
TELEPHONE ALPINE 4-2729

## Duke Agreement

*(Continued from page 3)*

Chairman Edwin W. Johnson expressed the appreciation of the Wildlife Resources Commission to the Duke Power Company in the following statement:

"The action of Duke Power Company, through the South Carolina National Bank, in turning over to the South Carolina Wildlife Resources Department, for wildlife management and development, the 68,000-acre tract of land in Pickens and Oconee Counties is highly indicative of the foresight of these two progressive institutions. It is not possible to calculate the benefits which will accrue to the public, the adjacent communities and the State of South Carolina, from this scenic area. The value of the outdoors to the health and welfare of the people is becoming more and more recognized as more and more people participate in and enjoy this wholesome form of recreation. It is most gratifying to the Wildlife Resources Department that its past and present record is such as to justify the confidence now placed in it by Duke Power Company. This confidence is a challenge to the Department, one which we humbly accept and fully intend to carry out, in a manner reflecting credit to Duke Power Company, and to the Department, for the benefit of the citizens of and visitors to this State."

### Gary Hiott, Pickens Sentinel

"The people in our area are understandably elated over the Duke Power Company announcement—not only for what it may mean to the area in economic growth, but also for the development of the 60,000 acres as a sportsman's paradise. It is not unreasonable to think that Pickens and Oconee Counties will be the top attractions in the state for the hunter and fisherman.

"One unusual aspect of the announcement, which has not been given much publicity, is the outstanding cooperation given by hunters toward conservation and fire control, in particular. The small number of fires and the small loss as a result of woods burnings must rate as the very best record in the nation. I'm sure the new owners will be accorded the same cooperation. It only goes to prove that the people of this section are proud of this pristine section of beauty and they go to considerable trouble to care for it."

### Paul League, Seneca Journal

"As you know, the Horsepasture area is 'wild', almost virgin country, the kind that conjures up thoughts of Daniel Boone, perhaps. It is back hill land that has caused many sportsmen in this area to look at it longingly and dream of the day when it might be stocked as is now planned.

"Because this kind of country is fast becoming rare, the Horsepasture reserve should prove to be a favorite for many persons, in addition to those who will come here to hunt and fish. Its scenic beauty should draw many who would roam its vast acreage and perhaps pause at Jumping Off Rock, or other overlooks, for the beauty of the view, or for the pleasure of a tramp through this wild country.

"Sportsmen of our area are enthusiastic about the possibilities. The South Carolina Wildlife Resources Commission and Duke Power Company are to be commended and congratulated on cooperating on this project, which is designed to bring so much pleasure to so many in the years to come."

—————SCWRC—————

The eastern brook trout is native to the United States and formed a staple food of the early settlers.

Turtles have no teeth, but their jawbones are often very sharp and their jaw muscles extremely powerful.

## Department Will Have Big Role in Any Emergency

If a nuclear attack or natural disaster ever comes to South Carolina, Department personnel will have specific duties to perform in warning and recovery actions.

A training program is currently being conducted which will qualify all law enforcement personnel to perform these duties to the fullest extent. All will take a twelve-hour Civil Defense Adult Education Course. The training emphasizes personal and family survival. Subjects discussed in the classes are:

Administrative structure and responsibilities of national, state and county Civil Defense agencies;

the national warning systems;

warning, communications and police services (responsibilities of war-dens);

detonations of nuclear weapons and hazards associated with these detonations;

community and family fallout shelters;

special Civil Defense problems on the farm.

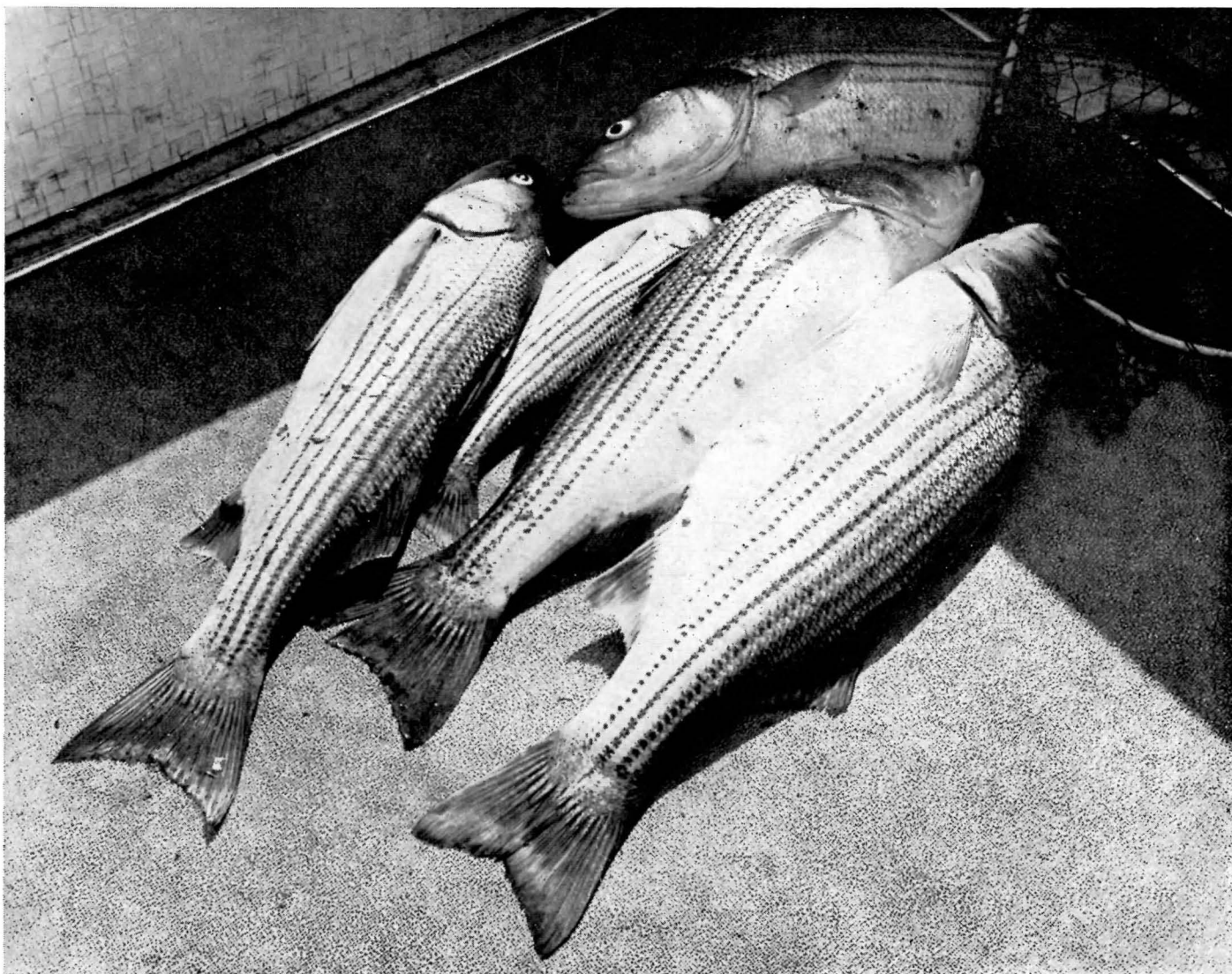
In event of an emergency, the Department's communications network—five base stations and approximately 200 mobile units—would be used almost entirely for the transmission of emergency information and instructions to field personnel.

—————SCWRC—————

New federal regulations extend to golden eagles the same protection as had been granted the bald eagle by Congress in 1940. The golden eagle, a western bird that occasionally visits this State, has been badly hurt by hunting from airplanes and by poisoning.

Mr. A. T. Wilson, Jr.  
Box 94  
Statesburg, S. C. 29006

## *Striper Haul*



The striped bass were hitting better last winter than at any time since the peak of 1957, when over 300,000 were caught, and anglers are hopefully looking forward to good fishing this spring and summer.

(Photo by Brown.)