During hatchery pond experiments various fishing techniques were tested. Reciprocals were found to be vigorous strikers and strong fighters, worthy of gamefish classification. They were caught on many types of artificial lures including top-water plugs, minnow-type plugs, spinners, spoons, and popping bugs. Using surface lures produced the most exciting fishing. Frequently, hybrids would jump completely out of the water to take the plug. Palatability of the hybrid was rated good.

ACKNOWLEDGEMENTS

The author would like to recognize Mr. Wayne Pennington, formerly of the Florida Game and Fresh Water Fish Commission, for his diligent efforts in producing the reciprocal hybrid. Thanks are also due to Mr. Wesley Fish, Mr. Kenneth Jones, and Mr. Harold Revels, Florida Game and Fresh Water Fish Commission, for their worthy assistance.

LITERATURE CITED

Bayless, Jack D., 1967. Striped Bass Hatching and Hybridization Experiments. Proc. 21st Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 233-244.

, 1972. Artificial Propagation and Hybridization of Striped Bass, *Monrone saxatilis* (Walbaum). South Carolina Wildlife Dept. 126 pp.

Bishop, R. D., 1967. Evaluation of the Striped Bass *(Roccus saxatilis)* and White Bass (*R. chrysops*) Hybrids After Two Years. Proc. 21st Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 245-253.

Logan, H. J., 1967. Comparison of Growth and Survival Rates of Striped Bass and Striped Bass X White Bass Hybrids Under Controlled Environments. Pro. 21st Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 260-263.

Stevens, Robert E., 1957. The Striped Bass of the Santee-Cooper Reservoir. Proc. 11th Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 253-263.

, 1965. A Report on the Operation of the Moncks Corner Striped Bass Hatchery. S. C. Wildlife Resources Dept. 21 pp.

, 1969. Landlocked Striped Bass. Proc. 25th Ann. Conf. N. E. Fish and Wildlife Conf. 11 pp.

Ware, F. J., 1970. Some Early Life History of Florida's Inland Striped Bass. Proc. 24th Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 439-446.

, 1974. Striped Bass Culture. Fla. Game and Fish Comm., D-J Report F-12-15. 35 pp.

Williams, H. M., 1970. Preliminary Studies of Certain Aspects of the Life History of the Hybrid (Striped Bass X White Bass) in Two South Carolina Reservoirs. Proc. 24th Ann. Conf. S.E. Assoc. Game and Fish Comm. pp. 424-430.

AN EVALUATION OF STRIPED BASS INTRODUCTIONS IN THE SOUTHEASTERN UNITED STATES

by

William M. Bailey

Arkansas Game and Fish Commission, Lonoke

ABSTRACT

Striped bass have been introduced into many inland waters of the southeastern states in an effort to establish a fishery, and to provide a biological control for clupeoid fishes. The Striped Bass Committee of the Southern Division, American Fisheries Society compiled information on the success of past introductions in 1970 and again in 1973. The information collected by the Committee is used to illustrate the successes and failures of introductions of fry, fingerlings, and adult fishes. Variables, other than size of fish at the time of stocking, were tabulated and analyzed to determine their significance in the success of introductions.

INTRODUCTION

When it became apparent that the striped bass, *Morone saxatilis* (Walbaum), could complete its life cycle in fresh water, as in the Santee-Cooper Reservoir system, several inland states developed an intense interest in this fish. Here, it appeared, was a fish which could be transplanted into fresh water lakes where it could control shad populations, while providing great sport. It should not compete seriously with native game fishes since it occupies the open water of a reservoir, unlike most native species.

The self-establishment of striped bass in the Santee-Cooper Reservoir did not kindle the first interest in transplanting striped bass. Actually, the first known successful transplant came in 1879-1881. Surber (1957) reports that 435 yearling striped bass were seined in New Jersey and shipped by train across the continent to San Francisco Bay, California. This stocking resulted in a commercial fishery for which the net catch was over one million pounds by 1899. By 1953 it was valued at $18,000,000 (Stevens, 1957). New Jersey stocked young striped bass in reservoirs during the mid 1930's without success (Surber, 1957).

The Santee-Cooper population was a dramatic illustration that the species could be established in fresh water and this was the most important factor which brought about the intensive effort to establish landlocked populations of this fish.

METHODS

A questionnaire was drafted by the Striped Bass Committee for use in assimilating information about striped bass introductions. It was hoped that significant factors associated with successful and non-successful introductions could be sorted out, and that a set of guidelines could be developed which would help reduce the number of failures.

Committee members from each agency filled out the questionnaire on each body of water under their jurisdiction. The completed questionnaires serve as the major reference for the information presented here.

RESULTS AND DISCUSSION

Wild Fish (Adult and Sub-Adult) Stocking:

In the mid 1950's it was generally felt that the most feasible method of establishing a landlocked striped bass population was to stock adult fish which could spawn within a year or two, thus gaining the three or four years required for maturity of yearling fish. Since transportation of adult fish would be rather inefficient, wild fingerlings and yearlings were also considered.

When efforts to collect fingerlings with seines and adults with gill nets or hook and line began, problems surfaced immediately. Fingerlings caught by seine died rapidly. Adults caught in gill nets died from shock and handling stress. Those held in ponds prior to shipment died from fungus or when seined. Many did not survive transportation (Gray, 1957).

In spite of the many problems, stocking was accomplished in several states. Arkansas stocked 870 adults, 195 sub-adults, seven yearlings and 27 fingerlings in Lake Ouachita between 1956 and 1960. South Carolina, North Carolina, Kentucky, Maryland, and Georgia also stocked lakes with adult wild fish (Table 1). The stocking of adult fish did not have the desired effect. This species simply does not adapt that readily. The difficulty in transporting large numbers of adults was significant, but was obviously not the only reason a reproducing population was not established. Most subsequent introductions which have resulted in established fisheries, and high population levels of adult fishes, still have not resulted in reproducing self-sustaining populations.

Table 1. Stocking of Adult Striped Bass.

Reservoir	State	Number Stocked	Date of Stocking	Results (Fishery[1] Established?)	Reference - if other than Committee Questionnaire
Ouachita	Arkansas	870	1956-1960	No	--
Narrows (Greeson)	Arkansas	33	1957	No	--
Cumberland	Kentucky	992	1957-1962	No	--
Conowingo	Maryland	12	1955	Unknown	(Surber, 1957)
High Rock Lake	North Carolina	777	1961-1963	No	--
Hickory	North Carolina	104	1956	No	(Stevens, 1957)
Greenwood	South Carolina	293	1955	No	(Stevens, 1957)
Murray	South Carolina	36 (sub-adults)	1957	No	(Stevens, 1957)
Blackshear	Goergia	261	1967-1968	No	--

[1]An established fishery is defined as a situation where fishermen fish specifically for a species, expecting to catch it.

Fry Stocking:

After the initial enthusiasm was dampered by poor success, biologists realized that establishing a striped bass fishery would require more than the stocking of a few adults and allowing nature to build up the population. A striped bass hatchery was in operation in Weldon, North Carolina. Fry hatcheries were set up in South Carolina and Virginia. The desire to get large numbers stocked, the lack of rearing ponds, and the lack of knowledge about pond rearing of striped bass, made fry stocking the order of the day.

During the early and mid 1960's, before the technology of fingerling production was developed, millions of fry were stocked in reservoirs in Arkansas, Kentucky, Louisiana, North Carolina, South Carolina, Tennessee, and Texas (Table 2). It is obvious from the large numbers of fry stocked and the poor success that survival of fry was extremely low. In only two cases did fry stocking alone establish a fishery. One was with hybrid striped bass X white bass, stocked at the rate of 573 per acre. And the other was Kerr Reservoir on the border of Virginia and North Carolina. Kerr Reservoir is about 40 miles above a major natural spawning area of striped bass (Weldon, N.C.) Young of the year fish were found here in 1956 (Surber, 1957) which, it was concluded, had to be natural reproduction of the original introduction of fry in 1953. Since striped bass usually require more than three years to attain maturity, it would seem that other stocking had occurred, either from the river by being trapped behind the dam at the time of impoundment, or by other agencies or sportsmen. At any rate, a fishery has been established and natural reproduction does occur in Kerr Reservoir (Norris Jefferies, 1974, Pers. Comm.).

Table 2. Stocking of Fry Striped Bass.

Reservoir	Reservoir Size (Acres)	State	Number Stocked	Date of Stocking	Results (Fishery[1] Established?)	Reference - if other than Committee Questionnaire
Dardanelle	34,000	Arkansas	3,400,000	1965-1966	Masked by[2] Fingerling Stocking	–
Jones Bluff	12,300	Alabama	450,000	1972	Masked by Fingerling Stocking	–
Cumberland	50,250	Kentucky	540,000	1965	No	–
Barkley	--	Kentucky	3,000,000	1966	No	–
Green River	--	Kentucky	200,000	1969	No	–
Dewey	--	Kentucky	500,000	1967	No	–
D'Arbonne	15,000	Louisiana	6,100	1965	No	–
Toledo Bend	181,600	Louisiana	2,538	1965	No	–
High Rock	15,180	North Carolina	1,850,000	1959-1960	No	–
Norman	32,500	North Carolina	3,000,000	1968-1972	Masked by Fingerling Stocking	–
Mattamuskeet	42,000	North Carolina	3,000,000	Pre 1957	No	(Surber, 1957)
Hickory	4,110	North Carolina	20,000	Pre 1957	No	(Dickson, 1957)
Lookout Shoals	1,270	North Carolina	2,000,000	Pre 1957	No	(Surber, 1957)
Kerr	83,000	North Carolina-Virginia	3,000,000	1953-1955	Yes	(Dickson, 1957)
Greenwood	10,500	South Carolina	118,500,000	1962-1969	Masked by Fingerling Stocking	–

Murray	50,000	South Carolina	121,994,000	1962-1970	No	–
Wateree	13,000	South Carolina	65,000,000	1964-1970	No	–
Hartwell	56,000	South Carolina	16,290,000 Hybrid	1967-1973	Masked by Fingerling Stocking	–
Clark Hill	70,000	South Carolina	40,100,000 Hybrid	1967-1973	Yes	–
Wylie	12,455	South Carolina	8,195,000	1965-1973	No	–
J. Percy Priest	14,200	Tennessee	2,500,000	1968	Masked by Fingerling Stocking	–
Norris	34,200	Tennessee	500,000	1967	Masked by Fingerling Stocking	–
Cherokee	4,000-30,000	Tennessee	4,455,000	1965-1970	Masked by Fingerling Stocking	–
Watts Bar	38,600	Tennessee	900,000	1964	No	–
Bardwell	3,570	Texas	300,000	1967	No	–
Navarro Mills	5,070	Texas	576,500	1967-1968	Masked by Fingerling Stocking	–

[1]An established fishery is defined as a situation where fishermen fish specifically for a species, expecting to catch it.

[2]Where results are reported as being masked by fingerling stocking, a fishery has been established or a reproducing population exists, but fingerlings were stocked at about the same time as fry.

Several of the lakes where fry were stocked have developed into striped bass fisheries, but in all cases, except the two mentioned above, large amounts of fingerlings were also stocked. In these cases the result is reported as "masked by fingerling stocking" on Table 2. It is likely that the success is a result of fingerling stocking rather than fry stocking.

Fingerling Stocking:

During the mid sixties, techniques for pond culture of striped bass fingerlings were improved to overcome the obstacle of poor fry survival. The Edenton National Fish Hatchery increased the yield from 30,000 fingerlings in 1964 to 630,000 in 1968 (Stevens, 1969).

Fingerling stocking has become the most common and most acceptable method of stocking striped bass. By 1970, when the first committee questionnaires were filled out, a fishery had been established in seven reservoirs out of 36 reservoirs reported on (19.4 percent). In seven of the 36, too little time had passed since stocking for evaluation. Of the seven where a fishery had been established, three had been stocked with fingerlings only, two had been stocked with fry and fingerlings, and two had been stocked with fry, fingerlings, and yearlings.

In 1973, three more years of stocking fingerling fish, and three more years of growth on the earlier stocking of fingerlings had changed the picture considerably. The questionnaire returns in 1973 indicate that a fishery had been established on 23 lakes out of 53 reported, for 43.3 percent. Too little time has elapsed since adequate stocking for evaluation on 16 lakes. The number of unsuccessful introductions, most of which have surviving fish but in too few numbers to maintain a fishery, was 14, or 26.4 percent. It is theorized that a lesser percentage of unsuccessful introductions was reported on than the percentage of successful introductions. Even so, the increase in the number of fisheries established between 1970 and 1973, from seven to 23, with all receiving fingerling stocking except one, well illustrates the relative success of fingerling introductions. It also illustrates the increase in knowledge of fingerling striped bass rearing techniques. Those states providing information on fingerling stocking (Table 3) were: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, and Texas. Table 3 includes those reservoirs where fingerlings were introduced as reported in 1970 if a questionnaire was not returned on them again in 1973.

Table 3. Stocking of Striped Bass Fingerlings.

Reservoir	Acres	State	Number Stocked	Date	Comments on Fingerling Size	Other Stocking	Results (Fishery[1] Established?)
Martin	40,000	Alabama	52,831	1965-1971	Few advanced	--	Yes
Weiss	30,200	Alabama	275	1972	2"-3"	--	Not evaluated
Neely Henry	11,235	Alabama	300	1972	2"-3"	--	Not evaluated
Lay	12,000	Alabama	12,990	1969-1973	2"	--	Yes
Choctawhatchee River & Bay	100,000	Alabama-Florida	2,569,405	1968-1973	10% advanced	--	Yes
Jones Bluff	12,300	Alabama	79,799	1969-1973	Few advanced	Fry, 1972	Yes
Jordan	6,800	Alabama	42,766	1969-1973	2"-3"	--	Yes
Logan Martin	15,050	Alabama	9,698	1972-1973	2"-5"	--	Not evaluated
Wheeler	67,086	Alabama	85,200	1973	1"-2"	--	Not evaluated
Millers Ferry	17,200	Alabama	10,000	1973	1"-2"	--	Not evaluated
Guntersville	69,100	Alabama	90,000	1973	1"	--	Not evaluated
Mitchell	5,850	Alabama	36,766	1969-1973	2"-4"	--	Not evaluated
Bull Shoals	45,000	Arkansas	112,350	1969-1973	1½"-2"	--	Not evaluated
Norfork	22,000	Arkansas	89,100	1967-1973	1½"-2"	--	Yes (minor)
Beaver	28,000	Arkansas	38,280	1968-1973	Few advanced 1½"	--	Yes
Greeson	7,200	Arkansas	84,500	1967-1973	Advanced 3"-6"	33 Adults Pre 1960	Yes
Ouachita	40,000	Arkansas	250,000	1973	2"	Adults Pre 1960	Not evaluated
Dardanelle[2]	34,000	Arkansas	148,731	1965-1967	Half advanced	Fry 1965-1966	No

Maumelle	9,000	Arkansas	92,420	1967-1973	1/3 advanced	–	Yes
Millwood	29,500	Arkansas	290,000	1973-1974	1"-2"	–	Not evaluated
Blue Mountain	2,910	Arkansas	23,000	1967	Advanced	–	No
Nimrod	3,550	Arkansas	15,740	1967	Advanced	–	No
Horseshoe	2,000	Arkansas	1,500	1967	Advanced	–	No
Hunter	100	Florida	6,000	1970-1973	2"	–	Yes
Julianna	1,000	Florida	72,000	1970-1973	1½"-2"	–	Yes
Talquin	8,000	Florida	445,000	1968-1972	2"	–	No
Griffin	10,000	Florida	300,000	1971-1973	2"	–	No
Parker	2,200	Florida	46,000	1969-1970	1½"-2"	–	No
Underhill	150	Florida	3,000	1968	1½"-2"	–	No
Hollingsworth	356	Florida	15,500	1968	1½"-2"	–	Killed by parasites
Sinclair	15,000	Goergia	426,021	1969-1973	2"	–	Yes
Jackson	4,500	Georgia	168,792	1969-1973	Most 2" 1/6 advanced	–	No
Blackshear	8,515	Georgia	42,122	1969	70% advanced	Adults, 1967	No
Nottely	4,290	Georgia	11,098	1969	Advanced	–	No
Cumberland	50,250	Kentucky	59,327	1969-1972	1½"-3"	Fry, 1965 Adults, 1962	No
Herrington	3,600	Kentucky	70,572	1968-1973	1"-3"	1958-1962 few sub adults	Yes
Toledo Bend	181,000	Louisiana	357,892	1967-1972	1"-3"	Few fry, 1965	Yes
D'Arbonne	15,000	Louisiana	372,052	1967-1972	1/8 advanced	Few fry, 1965	Yes
Ross R. Barnett	30,000	Mississippi	396,769	1968-1973	Few advanced	--	Yes (minor)
Okatibbee	3,800	Mississippi	34,489	1969-1972	Few advanced	–	No

	Sardis	22,500	Mississippi	89,500	1970-1973	2″-4″	--	Not evaluated
	Lake of Ozarks	66,000	Missouri	320,015	1967-1973	2″-4″	--	No
	High Rock	15,180	North Carolina	454,022	1965-1970	1½″-2″ few advanced	Few fry & Adults	No
	Badin[3]	5,973	North Carolina	194,050	1971-1973	1″-3″	--	Yes
	Norman	32,500	North Carolina	408,626	1966-1973	¾″-2″	Fry 1968-1972	Yes
	Greenwood	10,500	South Carolina	1,873,802	1968-1970	2″	Adults & fry Pre 1967	Yes
	Murray	50,800	South Carolina	2,174,775	1971-1973	2″	Adults & fry Pre 1970	Yes
	Hartwell	56,000	South Carolina	121,000	1967-1973	1½″-3″ Hybrids	Fry	Yes
	Clark Hill	70,000	South Carolina	39,100	1968-1973	1½″-3″ Hybrids	Fry	Yes
	Norris	34,000	Tennessee	104,848	1968-1970	---	Fry	Yes (seasonal)
	Cherokee	4,600	Tennessee	286,457	1967-1970	--	Fry & sub adults	Yes

J. Percy Priest	14,200	Tennessee	79,215	1969-1970	Few advanced	Fry	Yes
E. V. Spence	15,000	Texas	202,411	1969-1973	Few advanced	–	Yes
Whitney	23,560	Texas	261,428	1973	1″-2½″	--	Not evaluated
Granbury	8,500	Texas	200,250	1972-1973	1″-2″	--	Not evaluated
Pat Mayse	5,993	Texas	46,313	1973	2″	--	Not evaluated
Bardwell	3,570	Texas	59,026	1968-1970	1½″-6″	Fry	No
Navarro Mills	5,070	Texas	85,780	1969-1971	1″-3″	Fry	Yes
Travis	18,930	Texas	206,148	1973	2¼″	--	Not evaluated
Canyon	8,240	Texas	19,750	1973	2½″	--	Not evaluated

[1]An established fishery is defined as a situation where fishermen fish specifically for a species, expecting to catch it.
[2]Although a fishery has not been established on Dardanelle, a spawning population has been established.
[3]Badin Lake has received stocking by migration downstream of many of the fish stocked in High Rock Lake.

Other Stocking:

Recently, 15 day old fry introductions have been made with the hope that the fish are old enough to avoid the high loss rate of three day old fry, and to eliminate problems of pond rearing. This is too new a practice for evaluation at this time.

Other Factors Affecting Success of Introductions:

Many other factors which may affect the success of introduction of non-native fishes were reported in the questionnaire. Most of them seemed to have little bearing on the success or failure of an introduction. From the information received, it is impossible to describe a typical reservoir where successful introductions were made. The variations which were not reported, but which are very important to the success of an introduction, such as handling of fish, stocking procedure, condition of the fish, etc., could very well be the limiting factors. Some things reported which may be significant are noted—Some speices of clupeoid fish in the reservoir is a prerequisite for stocking. All of the introductions into navigation type reservoirs which have been stocked long enough for evaluation (four reservoirs) have been successful in either establishing a sport fishery or a spawning area. All of the lakes evaluated which have a salinity greater than 30 ppm (five lakes) have been areas of successful introduction. Three-fourths of the lakes evaluated, which had (practically) no aquatic vegetation (16 lakes), were areas of successful introduction, while nine out of 21 evaluated, which had vegetation present, were unsuccessful. Pollution, commercial fishing with nets, size and creel limits, reservoir size (length and depth), geographic conditions, temperature and pH range (within reasonable limits), total alkalinity, and total hardness all seemed to have no significance according to the questionnaires (Table 5).

Effects of Established Striped Bass Populations:

The Arkansas River system has proven to be suitable habitat for natural reproduction. This has been verified in Keystone Reservoir (Mensinger, 1970) in Oklahoma and in Dardanelle Reservoir in Arkansas. These reservoirs are both on the Arkansas River. This is the only area reported to the Striped Bass Committee where natural reproduction is successful that did not have a native population or natural spawning run in the River prior to impoundment, such as Santee-Cooper and Kerr Reservoir. Therefore, it is imperative that additional fingerling stocking be done on most reservoirs to maintain the fishery. The failure of the striped bass to spawn in most areas, even where adult populations now exist, further illustrates the futility of the early adult stocking. The average growth rate of introduced striped bass was reported to be two to three pounds per year. This is a much higher rate than is expected in the natural habitat along the North Carolina coast (Frank Yelverton, 1971, Pers. Comm.). It also indicates that stocking rates are generally low enough to allow the forage population to remain at a higher level than required by the striped bass for food.

Table 4. Effects of Established Striped Bass Populations Upon Clupeoid Fishes.

Reservoir	State	Effect on Shad Population
Norfork	Arkansas	None
Beaver	Arkansas	None
Greeson	Arkansas	None
Maumelle	Arkansas	Possible reduction
Martin	Alabama	No data
Lay	Alabama	No data
Jones Bluff	Alabama	No data
Jordan	Alabama	No data
Hunter	Florida	Drastic reduction
Julianna	Florida	Drastic reduction
Sinclair	Georgia	No data
Herrington	Kentucky	None
Ross R. Barnett	Mississippi	None
Badin	North Carolina	None
Norman	North Carolina	None
Greenwood	South Carolina	No data
Murray	South Carolina	No data
Hartwell	South Carolina	None
Clark Hill	South Carolina	None
Toledo Bend	Louisiana	Slight reduction
D'Arbonne	Louisiana	Slight reduction
J. Percy Priest	Tennessee	Significant reduction
Norris	Tennessee	No data
Cherokee	Tennessee	None
E. V. Spence	Texas	No data
Navarro Mills	Texas	None

Table 5. Miscellaneous Factors Affecting Success of Introductions.

Factor	Successful Introductions	Unsuccessful Introductions
Reservoir Type	Navigation 4, Main Stream 9, Flood Control or Storage 11	Navigation 0, Main Stream 3, Flood Control or Storage 9
Reservoir Size Range	100 - 181,000 Acres	356 - 66,000 Acres
Geography of Area	Hills-21 lakes, Plains-3 lakes	Hills-10 lakes, Plains-3 lakes
Shad Principal Forage	All lakes	All lakes
Aquatic Vegetation	Present-12 lakes, Absent-12 lakes	Present-9 lakes, Absent-4 lakes
Pollution	None-11 lakes, Slight to heavy-11 lakes	None-5 lakes, Slight to heavy-9 lakes
Salinity Range	0 - 330 ppm	0 - 20 ppm
Temperature Range	33°-93° F.	35°-93° F.
pH Range	5.5 - 9.1	6.0 - 9.5
Total Alkalinity Range	13 - 175 ppm	10 - 150 ppm
Total Hardness Range	10 - 375 ppm	8 - 180 ppm
Turbidity Range	1.5 - 170 jtu	3 - 61 jtu
Commercial Net Fishing	Yes-6 lakes, No-17 lakes	Yes-4 lakes, No-9 lakes
Size Limit Range	None to 15"	None to 15"
Creel Limit Range	1 - 30	1 - 30

The effects of established striped bass populations upon the pelagic forage fishes has been varied. In most cases it has been insignificant or unnoticed. Of all the reservoirs which have an established fishery, on only two is a drastic reduction in the shad population reported. These are reservoirs of 100 and 1,000 acres, which were stocked at the rate of 60 and 72 fingerlings per acre. One large reservoir had a significant reduction in the shad population and three others had slight or possible reductions (Table 4).

The striped bass introductions have had no noticeable effect on other native fishes in any reservoir to date. This was occasionally reported as "unknown", but it is generally felt that a significant change would have been noted during routine population monitoring.

CONCLUSION

The major purposes for introducing striped bass into inland waters - to create a highly desirable sport fishery, and to control shad populations - have been at least half accomplished. More than 30 inland fisheries are established and the fishermen in areas where a 'striper' fishery has been established are generally pleased. The possibility of landing a 20 pound, or more, trophy has heightened enthusiasm for fishing. The fact that shad populations have not been reduced may indicate that the population is being held stable rather than increasing to undesirable proportions. If so, then both purposes have been achieved.

It was felt that this introduction could be made without adversely affecting native game fishes, and this appears to be the case.

Fingerling stocking is far more effective than stocking adults or fry. Survival of two inch fingerlings generally has been good. Of course, the larger the fingerlings the better the chances of survival, but the losses incurred while rearing them to the larger size may outweigh that advantage. Arkansas has had considerable success, however, in using nursery ponds to rear the fish to a larger size before release. The practice of stocking advanced fry (15 days old) is too new for evaluation at this time.

A wide range of reservoir types and water quality was proven to be suitable for striped bass. It appears that healthy fingerlings stocked in adequate numbers in a lake which has an acceptable forage crop, will have a good chance of survival if handled properly.

ACKNOWLEDGMENTS

Appreciation is extended to members of the Striped Bass Committee, Southern Division, American Fisheries Society, during the past four years. Without their diligent participation this information could not have been compiled.

LITERATURE CITED

Dickson, Arthur W. 1957. The Status of Striped Bass, *Roccus saxatilis* (Walbaum), In North Carolina Waters. Proc. Southeast Ass. Game Fish Comm. 11:264-268.

Gray, D. Leroy. 1967. Striped Bass for Arkansas? Proc. Southeast Ass. Game Fish Comm. 11:287-289.

Mensinger, Gary C. 1970. Observations on the Striped Bass, *Morone saxatilis*, In Keystone Reservoir, Oklahoma. Southeast Ass. Game Fish Comm. 24:447-463.

Stevens, Robert E. 1957. The Striped Bass of the Santee-Cooper Reservoir. Southeast Ass. Game Fish Comm. 11:253-264.

1969. Landlocked Striped Bass. Northeast Fish and Wildlife Conf. 25. (mimeo. 11p.).

Surber, Eugene W. 1957. Results of Striped Bass, *Roccus saxatilis*, Introductions into Fresh Water Impoundments. Southeast Ass. Game Fish Comm. 11:273-276.