

TEXAS  
PARKS AND WILDLIFE DEPARTMENT

OFFICE MEMORANDUM

February 21, 1974

TO: Mr. Bob Kemp  
Director, Fish & Wildlife

FROM: Steve Smith

SUBJECT: Neches River Investigations

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Attached is a report concerning our recent investigation within  
the Neches River below Lake Palestine Dam.

*Steve Smith*

Steve Smith  
Biologist III

cc: Mr. Jack Crabtree, PWD, Tyler  
Mr. Lonnie Peters, PWD, Austin

## NECHES RIVER INVESTIGATION

A fisheries inventory was conducted in the Neches River on February 14, 1974 per a telephone request from Fish and Wildlife Director Bob Kemp, February 13, 1974. This request had originated with State Representative Fred Head and concerned a reported lack of fish within the Neches River below Lake Palestine Dam.

Fish collections were conducted by F-25-R personnel utilizing an electro-fishing unit. Three access sites along the river were chosen as collection sites. These sites are shown in figure 1.

Access site 1 was at the old river channel just below the dam. From all appearances it is a popular fishing location. Two fishermen in this area stated they generally had good luck fishing for catfish, but only had some bullheads when we talked to them. We could not launch our boat because of log obstructions just downstream.

Access site 2 is  $2\frac{1}{2}$  river miles below Lake Palestine Dam. One hour of sampling effort was conducted in this area. Swift water and a brushy river channel prohibited further sampling. Fish collections from this site are presented in table 1.

Access site 3 is a wooden bridge crossing on a dirt road 4 river miles below the dam. This site is near the community of Cuney and is known as the Cuney Bridge Crossing. Sampling effort in this area was  $2\frac{1}{2}$  hours. Fish collections from this site are presented in table 2.

The most evident result of this collection is the absence of catfish species. The Neches River has been known as a good catfish stream. Lake Palestine contains excellent populations of flathead, blue, and channel catfish. Dam B further downstream has always been known for its catfish population. The electro-fishing unit does not always collect a representative sample of catfish because of their deeper water, bottom associated habits. If time permits, additional sampling will be done in the river. Possibly more realistic information on the catfish population within the river can be obtained.

Largemouth bass made up 6.63% and 12.32% by number and weight respectively of the total catch from access site 3. These fish ranged from 19 grams to 2.37 pounds and possibly represented 3 year classes. Game fish percentages were good, 45.62% by number and 21.41% by weight of 121 fish collected from access site 3. Spotted bass are native to the Neches River, but were not collected in this survey.

There is considerable evidence of fishing in the river; set hooks, and markers where set hooks, trot lines, or nets were set. The access points investigated showed evidence of heavy fishermen useage. Ed Baker, Anderson County Game Warden, mentioned the Cuney Bridge area as a popular spot for netting operations.

Chemical water quality was checked with a Hach DR EL portable chemistry kit; no problems were detected.

In my opinion there are no significant fish population problems in the Neches River. It does not appear that fish stocks are lower than would be expected. Admittedly, it is a difficult river to fish. In portions of the river we sampled, boaters would have to exert considerable effort navigating through brush and trees as in many places there is no defined river channel. Bank fishing and boat launching is possible at these three access sites.

Although I feel there are no significant fishery problems within the Neches River, I also feel we should always attempt to improve on what we have. The portion of the river we sampled is characterized by swift flowing water, numerous sand bars, and eddy areas. I discussed with Regional Fish Culturist Billy White the possibility of stocking spotted bass in the river downstream from Lake Palestine Dam. He stated there were spotted bass brooders at the Huntsville Hatchery with evidently no present plans for stocking them. We both agreed that establishing spotted bass below Lake Palestine could create an outstanding river fishery for this species. I think this would be worth our time and effort especially if we can get some publicity about the scenic aspect of the river, the float trip aspect, as well as a spotted bass fishery.

Prepared by Steve Smith  
Biologist III

Figure 1: Neches River downstream from Lake Palestine

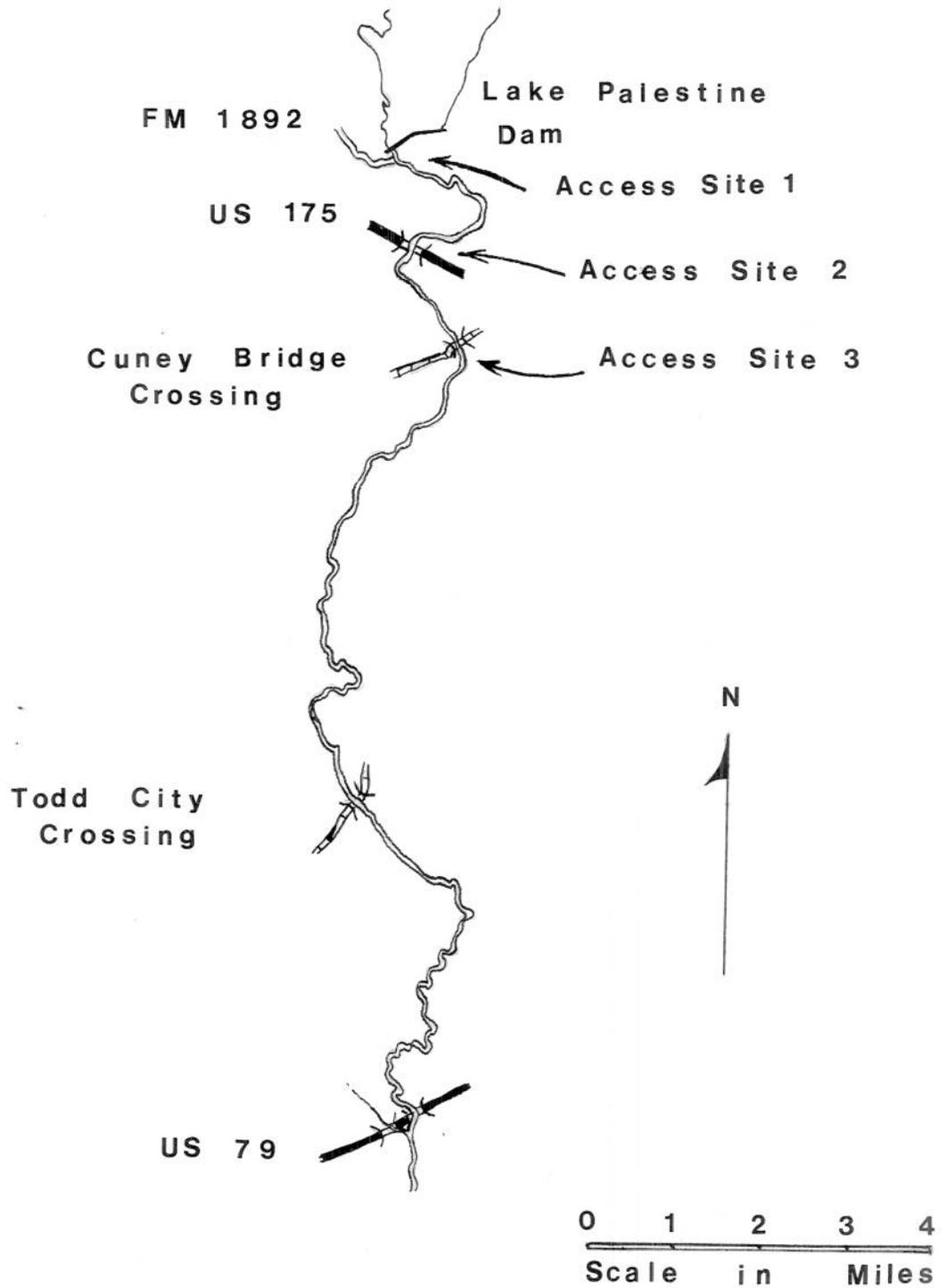


Table 1: Electro-fishing collection from the Neches River, U.S.  
 Highway 175 Crossing, February 14, 1974. Access site 2.

SPECIES	NUMBER	PERCENT NUMBER	POUNDS	PERCENT WEIGHT	AVERAGE WEIGHT
threadfin shad	2	8.69	-	-	-
gizzard shad	11	47.84	2.75	34.36	0.25
smallmouth buffalo	2	8.69	4.69	58.63	2.34
brook silverside	4	17.39	-	-	-
*warmouth	1	4.35	0.06	0.75	-
*redeer sunfish	1	4.35	0.13	1.63	-
*bluegill	2	8.69	0.37	4.63	0.18
*game fish species	4	17.39	0.56	7.01	
other fish species	19	82.61	7.44	92.99	
TOTAL FISH SPECIES	23	100.00	8.00	100.00	

Table 2: Electro-fishing collection from the Neches River, Cuney Bridge Crossing, February 14, 1974. Access site 3.

SPECIES	NUMBER	PERCENT NUMBER	POUNDS	PERCENT WEIGHT	AVERAGE WEIGHT
bowfin	1	.83	5.69	5.58	
threadfin shad	5	4.18	0.13	0.36	0.03
gizzard shad	31	30.30	5.75	15.74	0.19
carp	2	1.67	6.94	19.00	3.47
golden shiner	1	0.83	0.06	0.16	-
smallmouth buffalo	3	2.48	7.88	21.58	2.62
spotted sucker	6	4.95	1.00	2.74	0.16
lake chubsucker	1	0.83	0.25	0.69	-
yellow bullhead	1	0.83	1.00	2.74	-
brook silverside	9	7.48	-	-	-
*largemouth bass	8	6.63	4.50	12.32	0.56
*warmouth	2	1.67	0.25	0.69	0.12
*spotted sunfish	1	0.83	0.06	0.16	-
*reardear sunfish	12	9.94	1.00	2.74	0.08
*bluegill	17	14.10	0.88	2.41	0.05
*redbreast sunfish	1	0.83	0.255	0.69	-
*longear sunfish	11	9.14	0.44	1.20	0.04
*white crappie	3	2.48	0.44	1.20	0.15
*game fish species	55	45.62	7.82	21.41	
other fish species	66	54.38	28.70	78.59	
TOTAL FISH SPECIES	121	100.00	36.52	100.00	

APPENDIX

Checklist of Fish Species Mentioned in This Report

(American Fisheries Society, 1970)

bowfin	<u>Amia calva</u>
gizzard shad	<u>Dorosoma cepedianum</u>
threadfin shad	<u>D. petenense</u>
carp	<u>Cyprinus carpio</u>
golden shiner	<u>Notemigonus crysoleucas</u>
lake chubsucker	<u>Erimyzon sucetta</u>
smallmouth buffalo	<u>Ictiobus bubalus</u>
spotted sucker	<u>Minytrema melanops</u>
blue catfish	<u>Ictalurus furcatus</u>
yellow bullhead	<u>I. natalis</u>
channel catfish	<u>I. punctatus</u>
flathead catfish	<u>Pylodictus olivaris</u>
brook silverside	<u>Labidesthes sicculus</u>
redbreast sunfish	<u>Lepomis auritus</u>
warmouth	<u>L. gulosus</u>
bluegill	<u>L. macrochirus</u>
longear sunfish	<u>L. megalotis</u>
redear sunfish	<u>L. microlophus</u>
spotted sunfish	<u>L. punctatus</u>
spotted bass	<u>Micropterus punctulatus</u>
largemouth bass	<u>M. salmoides</u>
white crappie	<u>Pomoxis annularis</u>

