SABINE RIVER

STATE TEXAS

PROJECT NO. F-3-R-2; Job B-8

PERIOD July 1, 1954 to May 31, 1955

JOB COMPLETION REPORT

by

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TITLE

Inventory of species present in those portions of the Sabine River which lie within and along the borders of Van Zandt, Wood, Upshur, Harrison, Panola, and Shelby counties, Texas.

OBJECTIVES

To determine the distribution of species present, their relative abundance, and the ecological factors influencing their distribution.

METHODS AND PROCEDURES

Water Analysis: The pH, Chlorides, Dissolved Oxygen, Dissolved Carbon Dioxide, Turbidity, and Total Alkalinities were run at various stations. Ecological data were also collected in conjunction with the basic survey.

Seining: The most frequently used method of collecting fish was by seining. Collections were made with a 30 x 6 foot bag seine of $\frac{1}{4}$ inch mesh. The fish were preserved in 10% formalin and later counted, identified and recorded in the laboratory. There were 45 seining stations on the river proper and three on creeks on the watershed. In the upper portion of the river, collections were made at all bridge crossings. Further down it was found that crossings were too far apart, so collections were made by boat at approximate 5 mile intervals in Harrison, Panola, and Shelby counties.

Hoop Netting: Hoop nets were used for collecting larger specimens when the river was on a rise, with fish moving up stream. The nets were 8 to 14 feet long, $3\frac{1}{2}$ to 5 feet in diameter, and 1 to 3 inches mesh. All fish were weighed and counted at the river. Game species were brought back to the lab for stomachs and length-weight studies.

Gill Netting: Gill Nets were used in 10 lakes on the watershed, one overflow lake, and on one occasion in the river when the water was very low. The nets were 125 feet long and 8 feet in depth, with mesh from 1 to 3 inches. All fish were weighed and counted. Game fish were brought back to the lab for stomach and length-weight studies.

Rotenone Collections: Rotenone was used on two occasions for collecting the fish when the river was in holes during the summer months. A few species collected in this manner were not taken by other collection means.

RESULTS

Water Analysis: The results of water analysis are shown by station on

Table #1. Van Zandt and Wood counties, where the river bottom has been invaded by black silt, showed a high turbidity, high alkalinity ($Ca\ Co_3$), and high pH. Chlorides in this area were low. The lower portion, from Upshur through Shelby counties through the sandy, Pine Forest Belt, showed a low pH, low turbidity, and low alkalinity. Chlorides in this area, due to many local oil wells, were relatively high. Water surface temperatures in the river as a whole ran from 44° F. to 96° F., a range of 52° F.

FISH COLLECTION RESULTS

A total of 120,660 specimens made up by 77 different species were collected in the Sabine River and its watershed from Van Zandt through Shelby counties. Table #2 shows the distribution and abundance of each species by station, and the total number of each species collected. A key to collection stations follows Table #2. Map #1 shows the location of each of the 59 collection stations.

The 240 seining collections took 114,184 fish. Notropis lutrensis was by far the most abundant single species, making up 57% of the seining collection. Notropis sabinae, Notropis buchanani, and Pimphales vigilax each made up slightly more than 10% of the total. All other species each made up less than 2% of the seining collections.

The 206 hoop net sets caught 385 fish. The total catch was small, but this was the only method available for catching larger specimens when the river was running.

There were 308 gill net sets taking a total of 5,820 fish. The great majority of these sets were in club and private lakes on the watershed. The species taken here were added to the checklist, but numbers were not compared for relative abundance. The value of these collections was the distribution records of the species collected. The lakes varied in size from 10 to 4,000 acres. The two largest lakes were Cherokee (4,000 acres) and Gladewater (900 acres). Reports on individual lakes were made for lake owners, but will not be included here. All the lakes had an abundance of Spotted sucker and/or shubsucker, black and/or yellow bullheads, and bluegill. Some had large populations of shad. Only one, Gladewater, had a large crappie population.

Two Rotenone collections accounted for 241 specimens. The Eel, blue cat, and two species of darters were not collected by other methods. Both collections showed high buffalo and carp populations, with few bass and crappie.

The alkaline turbid waters of Van Zandt and Wood counties contained Etheostoma whipplei, Percina carpodes, Lepomis humilis, Elassoma zonatum, Ictalurus furcatus, Schilbeodes mollis, Schilbeodes noctrunus, Anguilla rostrata, and Notropis umbratilis, which were not found further down stream. The clear, acid waters of Upshur, Harrison, Panola, and Shelby counties contained Lepisosteus platostomus, Hybopsis aestivalis, Notropis amabilis, Notropis maculatus, Etheostoma asprigenis, Amocrypta clara, and Amocrypta vivax, which were not found up stream. Notropis sabinae and Pomoxis nigromaculatus were rarely taken in the turbid alkaline waters.

COEFFICIENT OF CONDITION DATA

All game fish taken in hoop and gill nets in river proper were worked for coefficient of condition. Table #3 lists lengths, weights, and coefficient of condition of the game species. The game fish were in very good condition, probably due to the large numbers of forage fish present.

STOMACH ANALYSIS

A total of 62 game fish stomachs were analized for seven species. All stomachs which were not empty contained one or more forage fish. It is interesting to note that minnows were the only identifiable item found in any of the stomachs. Table #4 shows average results of stomach analysis.

OBSERVATIONS

The Sabine River has a tremendous forage fish population, mostly minnows, and a lack of predators to feed on them. Both spotted and largemouth bass are scattered up and down the river, but are few in number. Both species of crappie are in excellent condition and are probably the most numerous game species in the Sabine River.

Catfish are almost nonexistent in the river as of the time of this writing. Very few of any species were collected in the river itself. Commercial fishermen have caught very few over the past several months. Most people living on the river claim that illegal fishermen using electrical devices cleaned all the catfish out when the water was low in the summer of 1954.

Buffalo, drum, and carpsucker are probably the most abundant of the large species in the river at the present time. They are most frequently taken by commercial fishermen.

SUMMARY

1) 77 species of fish were collected by all methods during this inventory.

2) Watershed lakes have common problem of suckers and bullheads.

3) There were 114,184 specimens taken by seining, with Notropis lutrensis the most abundant species.

4) Certain species were found restricted to the turbid, alkaline waters up stream, while others were restricted to clear, acid waters further down.

5) Minnows and other forage species are very abundant, but few predators present to feed on them.

6) Bass and crappie wide spread but few in numbers.

7) Catfish of all species very scarce.

8) Buffalo, drum, and carpsucker probably the dominant species in the river.

Table No. 1
Sabine River Water Analysis

Sta. No.	pH			Salinity			Alkalinity			Turbidity			Dissolved O_2			Dissolved CO_2			Surface	
	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	Hi.	Lo.
1	7.8	7.4	7.1	14	13	11	130	112	78	400	225	100		9.6					72	56
2	7.6	7.3	7.0	14	14	14	118	90	60	375	220	110		8.4					53	50
3	7.2	7.0	6.9	36	25	14	81	69	54	400	220	110		9.0					73	52
4	7.4	7.2	6.9	71	57	14				350	200	75		10.0			9.5		90	65
5	7.5	7.2	7.0	426	206	57				400	175	50		9.5		8.0	5.5	3.0	83	52
6	7.4	7.1	7.0	142	108	85				375	125	0		8.9			8.5		91	48
7	7.4	7.0	6.4	241	167	70				350	125	0	10.2	9.5	6.8	8.0	5.5	3.0	72	51
8	7.3	6.8	6.2	234	99	43		30.0						10.0			4.5		96	46
9		7.3			92									9.6			6.0			
10					57															
11					28															
12		6.4			43			26											59	
13	6.9	6.9	6.8										9.2	7.1	5.0	5.0	5.0	4.5	94	54
14		6.4			33														49	
15		6.2			56						75								49	
16	7.6	7.3	6.6	319	266	213							11.6	9.8	7.8		4.0		88	46
17	7.6	7.1	6.2	320	258	196							12.2	10.0	8.0				85	51
18	7.6	7.1	6.6	191	191	191							8.0	3.8	0.4				87	
19	8.6	7.5	6.6	298	270	241							8.2	5.4	1.0				80	47
20	7.1	7.1	7.1											3.6					91	
21	7.3	6.8	6.2		568									10.8			6.6			
22																				
23		6.3			14												5.0			
24																				
25	7.4	6.9	6.6	319	203	71		30			257		10.5	8.8	7.0		4.0		70	47
26	6.8	6.8	6.8	213	180	149								8.0					92	47
27	7.4	7.0	6.6	241	212	163								6.9			4.0		93	49
28	7.2	6.9	6.6	284	196	71		29						9.6					94	48
29	7.4	7.0	6.6	241	168	50					100			10.3					60	48
30	7.6	7.1	6.4	199	153	106					300		10.8	9.8	8.6	5.6	4.5	3.0	89	52
31	7.6	7.0	6.4	206	138	71							11.2	9.6	7.4	5.0	5.0	4.0	88	48
32	7.6	6.9	6.2	220	112	57										5.0	5.0	5.0	91	50
33	7.6	7.2	6.4	227	153	78		22						8.6		5.0	5.0	4.0	94	50
34	7.6	7.1	6.4	184	128	78								7.2		5.0	4.0	3.0	92	51
35	7.2	6.7	6.0	234	119	46		14						5.4			10.0		91	48
36	7.4	6.7	6.4	142	99	57		12			90		8.5	8.4	8.2	5.5	5.0	4.0	91	56
37	7.6	6.7	6.0	156	98	43								9.2			6.0		90	48
38	7.4	7.0	6.6	213	135	78								8.6			5.0		93	48
39	7.6	7.0	6.2	142	109	57								8.2		6.0	6.0	6.0	92	48

TABLE # 1, continued

STA.	pH			Salinity			Alkalinity			Turbidity			Dissolved O_2			Dissolved CO_2			Surface Temp.	
	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Avg.	Low	High	Low
40	7.2	6.8	6.2	199	123	43		16											89	48
41	7.4	7.0	6.2	142	119	71											9.0		91	48
42	7.4	6.9	6.2	149	111	43		13						7.4			7.0		82	48
43	7.2	6.8	6.4	227	149	71													55	53
44																				
45		6.3			35			19												
46																				
47																				
48		6.1			35			19											48	
49		6.2			35			17												
50		6.2			28														68	
51																			48	
52	6.2	6.2	6.1	35	31	28	20	17	14										79	48
53		6.0			43														58	48
54		6.3			28			22											49	
55		6.2			35			15											78	49
56	6.2	6.2	6.1		28			24											78	49
57																				
58		6.7			28			23		40									74	
59	6.8	6.5	6.0		21		24	15	5										67	44

Table #2. Sabine River Species Distribution & Abundance Checklist

Species	Station No. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	
Ichthyomyzon castaneus												2																															1																	1	4
Lepisosteus spatula											1	1																															1																			3
" producatus				16				12				1	1			2	1					59				9	1				1								6				36																6	151
" osseus				2					2	1	1		12													18																	9																		45
" platostomus																																												13																		13
Amia calva								1														6				3																5				3																		18
Dorosoma cepedianum	3	4		87	1		244	381	5		21	23	12			697						507	4	3		15	3				1									333	1			41					1							1	6	2394
Esox vermiculatus			1	1			2	1								1																																													7
Ictiobus bubalus		10		38					1		5	6	1																		1										12																	1	75
" cyprinellus		1		1																																							11																3	16
" niger		2																																									2																	4
Carpiodes carpio								4																		44	1		42	147	23	68	20	9	4	180	1			7	19	34	9		5	1	1	2			10	9	22	1	2	2	3	670
Moxostoma praecilurum											1					2						3																																								6
Minytrema melanops						7		1				1				189						529																					6																		731
Erimyzon sucetta						12	128	155								15						181	27	57		1												56	25																					657
Cyprinus carpio		2		6					24																	1																	6																	1	40
Notemigonus crysoleucas			10		22	15	8	8				14						4				5							5										4	2																				97
Dorosoma cepedianum	4	1	10	15	2				8	2		42	1	10			4	19											7		1	3			1		5					2			1				1				1						140
Hybopsis aestivalis																										1	7	24		10	4	3	2	1	1	3	10	4			3	66	14	84		17	15	3	2					3	47		19	6	349
Phenacobius mirabilis		4	3								1																				1																													8
Notropis atherinoides		1	2		1				2			16					38	18		2						1	57	4		7	48	15	148	62	32	38	49	28			35	16	25	38			11	21	25	4		2	1	3	32		24	1	7	314
" amabilis																																3																													3
" maculatus																											1																																		1
" Fumeus									7	9		11																															1				1			1												31
" umbratilis	1								1	25			9																																																		36
" chalybeus				8													1	1														8													1															1		20

Species	Station No. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	Total
Notropis roseus				1					23	1	5	2	1				1															1	1									1		2		3	1								1					44
" sabinae										2		2					47	47	6	2					7	353	671	318	5	157	638	222	983	500	342	393	465	693			621	730	495	310		179	570	150	436	1	5	302	432	108	454	566	477	495	575	12,627
" amnis			2	24	4				62			14					22	6														2	1	34															4			1				1				147
" venustus									7	205	58	22	4				29	33	2	2						1	195	24	1		317	34	19	171	48	63	76	51			41	38	81	14		18	101	30	123	4	6				1	3		4	1,816
" lutrensis	62	84	59	93	28				1233	120	8	110	133	15			2781	1852	180	283					393	1909	4122	1222	243	1281	2220	1134	4291	5246	5706	2757	2659	1702			3030	1827	3110	3365		2741	1793	1040	3907	47	415	235	193	214	188	79	219	370	487	65,108
" deliciosus									1																							2				1									1		2	2												11
" atrocaudalis											1						1																1																											3
" buchanani	9	35	82	49	22				37	1		268					69	289	4						20	422	495	238	85	1662	1232	270	916	568	1032	129	344	484			67	587	414	279		643	345	209	396	10	177	124	235	137	46	32	487	219	184	14,115
Pimephales vigilax	11	29	19	16	15				119	285	14	92	1				531	849	140	2					33	220	496	235	4	73	369	698	769	553	448	253	318	445			235	292	587	1079		387	498	417	729	69	121	139	241	259	110	25	498	217	324	13,208
Hybognathus nuchalis	1	7	5		7				37	1		11					5	65								1	1	2				12	1			9					1	1		1	1	1	2			4			1					175
Cyprinid (?)																												1																															1
Ictalurus punctatus				18		1	1	11	7			19				1		2																				1				1		1	3									1				69
" Furcatus				1																																																							1
Pylodictus olivaris				1							1					1																									1																	1	5
Ameiurus natalis				1			13	24	1							26					1	27	3			2												11																						159
" melas		2	2			34	29						2			91					1	75				4										52	5	1																			1	299
Schilbeodes mollis	1	3	6	14	1				11			3			4																																														48
" nocturnus									2		1																																																	3
Anguilla rostrata				1																																																									1
Fundulus notatus	34	7	16	36	23			5	91	103	49	82	1	22	1		10	4		1					4		89	5	4	7	3	19	13	3	1	8	2	1			1	7	9	8		4	12	6	7	1	11		1	2			1	1	650
" notti												3			13																																													16
" chrysotus															7																																														7
Gambusia affinis	42	19	38	70	114				288	60	4	86			3		244	68	127	10					40	32	36	1		2	3	66	31	13	13	4	14	1			1	7	9	14		12	20	87	28		1				28	1				1,609
Aphredoderus sayanus			1	1	2				3			1																	1																																9
Mugil cephalus											5															6																		1																12
Labidesthes sicculus				2					9	57		30						2																1	1									12	6			2	1	9	3			2	2			1	144

Station No.

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	Total No
Micropterus salmoides					1	2	4	38	2			5				18					7	64	3	4			3					1							5	3			1		1										1			2		165
" punctulatus			1	1	1				1	2	2	1				1	1									1	9						1	3			2				1	1	3							1								1	1	35
Chaenobryttus coronarius		1	6	14	12	1		8	26			3				8	15	1			1	7		1		11			5																3					1	1						1			126
Lepomis cyanellus				14												3																																						1						18
" punctatus				2											3	1																				1												4	21											32
" macrochirus	4		45	25	6	28	33	170	277	7	1	65	1	9	22	184	1	10	3	36	74	67	24	17	1	2	22		13		6	8	1	2		1	3		22	19	2		6	1	20		5	1	2	5	1			2	3	1	2	1		1261
" humilis	11	15	11	33	11				33			5																																																119
" auritus	10	8	12	20	19				93	11		19					21	3									145	28	47	32	1	26	43	8	13	15	20	2			2	13	3	13		7	15	19	14	2	2									686
" megalotis	3		10	2	4			3	3	13	3	3				3	15	18	13	8					2	42	14	3		1	15	15	3	6	23	18	4[illegible]	11			5	10	12	11	1	9	15	7	32	33	7	1	2					5	5	452
" microlophus				1				32			2	2				2					15	181	8	3															28	16					2									1						293
Pomoxis annularis	1		2	21	2	4		41	7		4	13		1		28					1	5				3	14	1											11	2										1		1						5	5	173
" nigro-maculatus							2	10				1				21	2				3	24		2			7												3	22	1					1												1	3	103
Elassoma zonatum									1																																																			1
Hadropterus maculatus									1																								1																											2
" scierus									4																	1									2	1		1			1	2		1			2	1	6				1							23
" shumardi									1																																															1				2
Percina caprodes									1																																																			1
Etheostoma gracile	1		7	25	13				5	1								1		1						1		5				1			2	2					1			1				1	5											73
" chlorosomum	2		3	7	8				11			3																				5	1													1														41
" artesiae									2																										1	1																								4
" whipplei					1																																																							1
" asprigenis																																																	2											2
Amocrypta clara																											7	1			61	9		8		2	9	1			7	5		6		1	3					5				5	4	6		142
" vivax																												2			11	4		14		4	1	1			1	3		20		1	4					5	10	6	10		33	12	14	156
Aplodinotus grunniens		16	1	13					1		1	14	1													70	5						3								1				2														6	134
TOTAL																																																												120,660

TABLE # 3

Length, Weight, and Coefficient of Condition of Game Species in the Sabine River, 54-55

Species	Number of Specimen	Standard Length Range	Standard Length Average	Weight Range	Weight Average	"K" Range	"K" Average
Largemouth Bass	5	180-225 mim.	205.40	137-280 gms.	208.60	2.23-3.75	2.62
Spotted Bass	10	142-377	216.00	66-1361	322.90	2.16-2.58	2.39
Black Crappie	13	125-215	184.38	44.336	155.38	2.25-4.39	3.39
White Crappie	46	116-248	186.82	41.480	241.40	1.91-4.66	3.20
Drum	27	170-350	254.03	112-1219	431.51	1.78-2.57	2.38
Channel cat	2	361-385	373.00	680-964	532.50	1.45-1.64	1.55
Flathead cat	2	210-272	241.00	135-294	214.50	1.45-1.46	1.45
Bluegill	5	86-133	107.00	19-85	47.00	2.86-4.62	3.54
Warmouth	2	136-166	151.00	90-144	115.00	3.14-3.57	3.35
Longear	3	98-121	109.00	32-72	53.66	3.39-4.53	3.99

TABLE #4

STOMACH ANALYSIS RESULTS

Species	Number	Number Empty	Average Volume	Average No. Forage Fish
Pomoxis annularis	33	15	1.8cc	2.8
Pomoxis nigro-maculatus	9	2	1.3	3.6
Micropterus salmoides	5	5	0	0
Micropterus punctalatus	8	4	1.0	1.5
Lepomis macrochirus	2	2	0	0
Lepomis auritus	1	1	0	0
Aplodinotus grunniens	4	1	1.5	2.7

KEY TO SABINE RIVER COLLECTION STATIONS IN TABLE #2

1. Sabine River at State Hwy. 47, 9 mi. NE Wills Point, Van Zandt County
2. Sabine River at State Hwy. 19, 8 mi. NE Edgewood, Van Zandt County
3. Sabine River at County Rd. --, 5 mi. NNW Grand Saline, Van Zandt County
4. Sabine River at State Hwy. 17, 4 mi. W Golden, Wood County
5. Sabine River at U.S. Hwy. 80, 4 mi. W Mineola, Wood County
6. Kim-Juan Club Lake, 3 mi. NW Mineola, Wood County
7. Rockfall Club Lake, 5 mi. NE Mineola, Wood County
8. Woodvale Club Lake, 5 mi. E Mineola, Wood County
9. Sabine River at Hwy. 69, 3½ mi. S Mineola, Wood County
10. Sabine River at State Hwy. 14, 2 mi. S Hawkins. Wood County
11. Sabine River 6 mi. NE Lindale, Smith County
12. Sabine River at State Hwy. 155, 2 mi. SW Big Sandy, Upshur County
13. Lake Fork Creek at Hwy. 182, 5 mi. E Alba, Wood County
14. Lake Fork Creek at Hwy. 80, 8 mi. W Hawkins, Wood County
15. Little Sandy Creek at Hwy. 80, 2½ mi. W Hawkins, Wood County
16. Gladewater City Lake 3 mi. NW Gladewater, Upshur County
17. Sabine River 1 mi. S Longview, Harrison County
18. Sabine River 3 mi. SE Longview, Harrison County
19. Sabine River 7 mi. S Hallsville, Harrison County
20. Sabine River 10 mi. SE Hallsville, Harrison County
21. Overton City Lake 1 mi. W Overton, Rusk County
22. Cherokee Lake 6 mi. NW Tatum, Rusk County
23. Long-Glade Lake 11 mi. NW Tatum, Rusk County
24. Nix Club Lake 10 mi. SW Tatum, Rusk County
25. Sabine River 12 mi. S Marshall, Harrison County
26. Sabine River 13 mi. S Marshall, Harrison County
27. Sabine River Hwy. 43, 5 mi. NE Tatum, Panola County
28. Sabine River 7 mi. NE Tatum, Panola County
29. Sabine River 9 mi. NE Tatum, Panola County
30. Sabine River 8 mi. ENE Beckville, Panola County
31. Sabine River 8 mi. NE Beckville, Panola County
32. Sabine River 7 mi. ENE Beckville, Panola County
33. Sabine River 8 mi. N Carthage, Panola County
34. Sabine River 6 mi. NX Carthage, Panola County
35. Sabine River 6 mi. NE Carthage, Panola County
36. Sabine River 7 mi. NE Carthage, Panola County
37. Sabine River 8 mi. NE Carthage, Panloa County
38. Sabine River 7 mi. ENE Carthage, Panola County
39. 3-H Club Lake, 3 mi. W Carthage, Panola County
40. Dixie Club Lake, 3 mi. SW Carthage, Panola County
41. Sabine River 8 mi. E Carthage, Panola County
42. Sabine River 8½ mi. ESE Carthage, Panola County
43. Sabine River 9 mi. SE Carthage, Panola County
44. Sabine River 13 mi. Se Carthage, Panola County
45. Fish Lake Slough, Sabine River, Panola County
46. Sabine River 7 mi. NW Joaquin, Panola County
47. Sabine River 4½ mi. NW Joaquin, Panola County
48. Sabine River 3 mi. NNW Joaquin, Panola County
49. Sabine River 2 mi. N Joaquin, Panola County
50. Sabine River 5 mi. ESE Joaquin, Shelby County
51. Sabine River 8 mi. SE Joaquin, Shelby County
52. Sabine River 11 mi. SE Joaquin, Shelby County
53. Sabine River 13 mi. SE Joaquin, Shelby County
54. Sabine River 14 mi. E Shelbyville, Shelby County
55. Sabine River 16 mi. E Shelbyville, Shelby County
56. Sabine River 9 mi. NE Goober Hill, Shelby County
57. Sabine River 7 mi. ENE Goober Hill, Shelby County
58. Sabine River 7 mi. ESE Goober Hill, Shelby County
59. Sabine River 7 mi. SE Goober Hill, Shelby County

Map 1.
Sabine River Collecting Stations
RAINS
VAN ZANDT
WOOD
SMITH
UPSHUR
GREGG
RUSK
PANOLA
SHELBY
HARR
Sabine Ri.
Wills Point
Mineola
Grand Saline
Quitman
Winnsboro
Lindale
Tyler
Big Sandy
Gilmer
Gladewater
Kilgore
Longview
Henderson
Carthage
Tenaha
Center
Hallsville
Beckville
Timpson
Joaquin
Shelbyville