PERFORMANCE REPORT

STATE: MONTANA

PROJECT NO.: SE-7-2 **STATEWIDE ENDANGERED SPECIES PROGRAM**
STUDY/JOB NO.: TE-6 **MISSOURI RIVER PALLID STURGEON**
LOCATION:

Northcentral Montana

Job Duration: July 1, 1995 through June 30, 1996

Cost: All $10,000 in federal funds were expended, along with the state's 10% matching share, for a total of $11,111.

Principal Investigator:

Bill Gardner **Lewistown, MT**

Job Objectives:

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1. Determine habitat preferences, movements, abundance, feeding and growth of pallid sturgeon in Montana. Progress was made on this objective and results are reported below.

RESULTS

The study area was confined to a 180 mile of Missouri River/Fort Peck Reservoir located approximately between Fort Benton and Lewistown Montana. Pallid sturgeon sampling was confined to 3 sections of the Missouri River. A total of 17 trammel net drift sets sampled 104 fish, none of which were pallid sturgeon (Table 1). Forty-one shovelnose sturgeon were included in this catch indicating that this species is fairly common here.

An attempt was made to locate sturgeon rearing areas by trawling for young-of-the-year (YOY) sturgeon. A total of 197 hauls sampled 817 fish, representing at least 16 species (Table 2). Young-of-the-year channel catfish were the most abundant fish sampled in the main channel run and side channel pool habitats, while sturgeon chub were most common in the main channel pool habitat. All of the 28 YOY shovelnose sturgeon sampled by trawling were found in an eight-mile reach encompassing the delta area and immediately above the headwaters of Fort Peck Reservoir.

Sturgeon radio telemetry studies were continued under this project. The objectives were to test small transmitters of

suitable size for juvenile sturgeon for host acceptance and evaluate the radio performance of the transmitter. The results from this evaluation indicated that these 2.5 gram transmitters performed satisfactorily for the purposes of this study. The radios transmitted a signal over a period of 91 days during 3, 20-day cycles, or a total on-time of 41 days. The signal could be reasonably received in water depths up to 10 feet. Transmitters were surgically implanted into two small (0.85 and 1.05 lbs.) shovelnose sturgeon. The sturgeon seemed to accept the transmitters well, maintaining their location and eventually moving slightly upriver.

An attempt was made to radio track 3 pallid sturgeon during this period, however, no suitable pallid sturgeon were captured.

RECOMMENDATIONS

Continue sampling in the delta section of the study area to better determine if this area is pallid sturgeon habitat.

Continue sampling sturgeon chub and sicklefin chub populations for one more year so that the distribution and habitat preferences can be better defined.

Benefits:

Results of pallid sturgeon study will be used to better understand the relationship between river flow and sturgeon life history requirements. This report will aid in devising a management plan and /or recovery plan designed to maintain or enhance populations of this rare fish.

Results of the sturgeon chub and sicklefin chub study will be used to determine their population status in Montana and will aid with the decision for recommending these two species for federal listing.

Table 1. Number of fish sampled drifting 2-inch mesh trammel nets in three study sections of the Missouri River, 1995-96.

	Sampling Station		
	Loma	Stafford Ferry	Robinson Bridge
Species			
Carp	0	1	1
Goldeye	26	0	0
Longnose sucker	8	4	0
River carpsucker	2	1	0
Sauger	0	1	0
Shovelnose sturgeon	6	11	24
Shorthead redhorse	6	11	1
Smallmouth buffalo	0	0	1
Total catch	48	29	27
No. of drifts	8	4	5

Table 2. Average catch per trawl (number) for fish sampled in the Robinson Bridge section, 1995. (Only fish less than 8 inches were included.)

Channel type	Main channel Run	Main channel Pool	Side channel Pool	Total
# hauls	161	28	8	197
Carp	<0.1	0	0	<0.1
	(8)			(8)
Channel cat	1.5	0	8.3	1.6
	(247)		(66)	(313)
Emerald shiner	<0.1	0	0	<0.1
	(1)			(1)
Flathead chub	0.4	0.3	0.9	0.4
	(58)	(8)	(7)	(73)
Freshwater drum	<0.1	0	0	<0.1
	(3)			(3)
Goldeye	<0.1	0	0	<0.1
	(2)			(2)
Western silvery/ plains minnow	0.1 (13)	0	0	0.1 (13)
Longnose dace	0.3	0.2	0	0.2
	(41)	(5)		(46)
River carpsucker	<0.1	0	0	<0.1
	(2)	(0)	(0)	(2)
Sauger/walleye	<0.1	0	0	<0.1
	(6)			(6)
Shorthead redhorse	0	<0.1	0	<0.1
		(1)		(1)
Shovelnose sturgeon	0.2	0	0	0.1
	(28)			(28)
Sicklefin chub	0.7	0.4	0.8	0.6
	(106)	(11)	(6)	(123)
Stonecat	0.2	<0.1	0	0.2
	(35)	(1)		(28)
Sturgeon chub	0.8	1.0	0.1	0.8
	(133)	(27)	(1)	(161)
White crappie	<0.1	0	0	<0.1
	(1)			(1)
Total catch	4.2	1.9	10.0	4.1
	(684)	(53)	(80)	(817)
# species	15	6	4	16