



Montana Cooperative Fishery Research Unit

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RECEIVED
JUN 03 1997
FISHERIES DIV.
MONTANA DEPT. OF FISH, WILDLIFE & PARKS

MEMORANDUM

DATE: 02 JUN 97
TO: Chris Hunter
FROM: Al Zale
RE: Collecting permit

Enclosed please find our reports of fish collected under the Unit's scientific collector's permit (Number 1358) in 1996 and our application for a 1997 permit. Please let me know if you need any additional information. I can be reached at 406-994-2380 or ubiaz@msu.oscs.montana.edu.

Thanks,

Cooperators

1996 reports

Population Structure and Habitat Use of Benthic Fishes Along the Missouri River in Montana, 1997

1996 Collecting Permit Report

Submitted by Lee Bergstedt
Montana Cooperative Fishery Research Unit
Montana State University
12 May 1997

The following species were collected during routine sampling on the lower Missouri River from the confluence of Arrow Creek (47°43'N Latitude, 109°50'W Longitude) to the confluence of Rock Creek (47°36'N Latitude, 108°29'W Longitude). All species were collected using a bag seine, benthic trawl, electrofishing, drifting trammel nets, and stationary gill nets. Fish were collected starting 26 July 1996 and ending 20 September 1996.

<u>Species</u>	<u>Number Collected</u>	<u>Number Kept</u>
Bigmouth Buffalo	1	0
Black Crappie	18	0
Burbot	33	0
Blue Sucker	4	0
Channel Catfish	33	0
Common Carp	45	0
Emerald Shiner	393	191
Fathead Minnow	1	0
Flathead Chub	1611	176
Freshwater Drum	57	57
Goldeye	62	0
<i>Hybognathus</i> spp.	511	76
Lake Chub	1	0
Longnose Dace	55	0
Longnose Sucker	6	0
Mottled Sculpin	4	0
Northern Pike	28	0
River Carpsucker	22	0
Sauger	26	5
Shorthead Redhorse	155	0
Shovelnose Sturgeon	19	0
Sicklefin Chub	21	21
Spottail Shiner	122	0
Smallmouth Buffalo	25	0

- done for age & growth analysis as part of Corps benthic fish study.

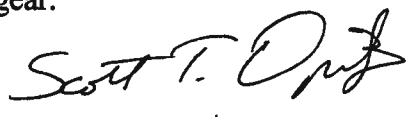
Species List Continued.

<u>Species</u>	<u>Number Collected</u>	<u>Number Kept</u>
Stonecat	5	0
Sturgeon Chub	46	0
Unknown YOY Buffalo	15	0
Unknown YOY Catostomid	115	0
Unknown YOY Cyprinid	46	0
Unknown <i>Stizostedion</i> spp.	9	0
Walleye	5	0
White Crappie	26	0
White Sucker	75	0
Yellow Perch	33	0

Collecting Permit Report for the Ruby River and Poindexter Slough for 1996

Species Collected	Number Collected	Number Kept
Brown Trout	2045	395
Brook Trout	4	4
Rainbow Trout	1	1

All fish were collected using mobile electrofishing gear.



Lee Nelson

Table 1. Species and number caught at trap sites on Sweathouse Creek and Skalkaho Creek, 1996.

SPECIES	TRAP SITE					Total
	SWEATHOUSE LOWER	SWEATHOUSE MID	SWEATHOUSE UPPER	SKALKAHO LOWER	SKALKAHO UPPER	
DV	0	1 (1 ds)	2 (1 us, 1 ds)	0	61 (40 us, 21 ds)	64
CT	2 (2 ds)	28 (4 us, 24 ds)	19 (10 us, 9 ds)	278 (31 us, 247 ds)	152 (108 us, 44 ds)	479
RB	127 (33 us, 94 ds)	1 (1 us)	0	2 (1 us, 1 ds)	0	130
LL	229 (82 us, 147 ds)	33 (12 us, 21 ds)	16 (11 us, 5 ds)	58 (35 us, 23 ds)	12 (1 us, 11 ds)	348
EB	11 (5 us, 6 ds)	116 (81 us, 35 ds)	107 (66 us, 41 ds)	0	1 (1 us)	235
MWF	825 (146 us, 679 ds)	3 (3 ds)	0	0	0	828
DVxEB (hybrid)	0	0	0	2 (1 us, 1 ds)	3 (2 us, 1 ds)	5
CTxRB (hybrid)	2 (1 us, 1 ds)	0	0	6 (1 us, 5 ds)	0	8
LSSU	39 (3 us, 36 ds)	0	0	0	0	39
LNSU	17 (6 us, 11 ds)	0	0	0	0	17
RSS	19 (4 us, 15 ds)	0	0	0	0	19
SS	17 (17 ds)	25 (16 us, 9 ds)	8 (5 us, 3 ds)	32 (8 us, 24 ds)	11 (5 us, 6 ds)	93
LND	80 (3 us, 77 ds)	1 (1 ds)	0	0	0	81
NSQ	20 (2 us, 18 ds)	0	0	0	0	20

us: upstream movement; ds: downstream movement

Species

DV: bull trout; CT: westslope cutthroat trout; RB: rainbow trout; LL: brown trout; EB: brook trout; MWF: mountain whitefish (*Prosopium williamsoni*); LSSU: largescale sucker (*Catostomus macrocheilus*); LNSU: longnose sucker (*C. catostomus*); RSS: redbside shiner (*Richardsonius balteatus*); SS: slimy sculpin (*Cottus cognatus*); LND: longnose dace (*Rhinichthys cataractae*); NSQ: northern squawfish (*Ptychocheilus oregonensis*)

Trapping days

Sweathouse: Lower (98 days upstream, 114 days downstream)
 Mid (108 days upstream, 115 days downstream)
 Upper (89 days upstream, 93 days downstream)

Skalkaho: Lower (64 days upstream, 65 days downstream)
 Upper (51 days upstream and downstream)

1996 Collection Information for Hennessey

All locations are tributaries of the Yellowstone River

Species	Number collected	Number kept	Gear Used	Dates	Location	
Yellowstone cutthroat trout fry	13250	50	nylon mesh fry trap	8/01/96 to 9/22/96	Cedar creek, Park County	
Yellowstone cutthroat trout fry	1755	30	nylon mesh fry trap	8/28/96 to 9/22/96	Mol Heron Creek, Park county	
Yellowstone cutthroat trout fry	54	6	nylon mesh fry trap	7/31/96 to 8/31/96	Mill Creek Park County	
Yellowstone cutthroat trout fry	652	31	nylon mesh fry trap	7/23/96 to 9/08/96	Locke Creek, Park County	

Species	Number collected	Number kept	Gear Used	Dates	Location	
Sculpin	50	0	nylon mesh fry trap	8/01/96 to 9/22/96	Cedar creek, Park County	
Sculpin	10	0	nylon mesh fry trap	8/28/96 to 9/22/96	Mol Heron Creek, Park county	
Sculpin	25	0	nylon mesh fry trap	7/31/96 to 8/31/96	Mill Creek Park County	
Sculpin	35	0	nylon mesh fry trap	7/23/96 to 9/08/96	Locke Creek, Park County	

Species	Number collected	Number kept	Gear Used	Dates	Location	
Whitefish fry	65	2	nylon mesh fry trap	8/01/96 to 9/22/96	Mill Creek, Park County	

Collector's Permit Report
 Laura Katzman
 Red Rock Lakes National Wildlife Refuge
 5/96 to 10/96

Gr = Arctic grayling *Thymallus arcticus*
 WS = White sucker *Catostomus commersoni*
 LS = Longnose sucker *Catostomus catostomus*
 Ct = Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* x rainbow trout *O. mykiss* hybrid
 Bt = Brook trout *Salvelinus fontinalis*
 Sc = Mottled sculpin *Cottus bairdi*
 LD = Long-nosed dace *Rhinichthys cataractae*
 Bu = Burbot *Lota lota*
 MW = Mountain whitefish *Prosopium williamsoni*
 yoy = young-of-the-year; otherwise assume adults

<u>Location</u>	<u>Gear Type</u>	<u>Species</u>	<u># Caught</u>	<u># Morts</u>
Red Rock Creek	dip net	Gr yoy	45	9
		WS yoy	638	8
		Sc yoy	12	2
		Sc	14	0
		Bu yoy	1	0
Red Rock Creek	seine	Gr yoy	19	1
		WS yoy	305	0
		Sc yoy	8	0
		Sc	11	0
		Bu yoy	1	0
Red Rock Creek	electrofishing	Sc	737	5
		Ct yoy	5	2
		Bt	29	1
		Gr	2	0
		WS	1	0
Red Rock Creek	minnow trap	Sc	4	0
		Bt	1	0
Red Rock Creek (mouth)	weir	WS	41	2
		Ct	26	1
		LD	1	1
		Gr	14	0
		Bu	4	0
		Sc	2	0

<u>Location</u>	<u>Gear Type</u>	<u>Species</u>	<u># Caught</u>	<u># Morts</u>
Upper Red Rock Lake	gill net	Ct	382	85
		Bu	55	27
		Bt	11	5
		WS	642	1
		Gr	15	0
		LS	1	0
Upper Red Rock Lake	trap net	Bu	597	213
		WS	1064	37
		Ct	38	3
		Bt	5	1
		LS	9	0
		Gr	8	0
Upper Red Rock Lake	setline	Bu	54	53
		Ct	3	2
Upper Red Rock Lake	100' seine	Bu yoy	920	39
		Bu	1	1
		Gr yoy	380	35
		Gr	6	2
		WS yoy	124	27
		WS	41	5
		MW yoy	33	12
		Sc	327	10
		LD	21	8
		Bt <200mm	32	5
		Bt >200mm	25	0

Fish Collected, 1996

Sunny Slope Canal, Teton County, Montana (S. Barndt and C. Kaya)

species collected: Arctic grayling

number collected: 142

number kept: 0

gear used: seines

dates: March through May

**Red Rock Lakes National Wildlife Refuge, Upper Red Rock Lake and Red Rock Creek
(M. Gangloff and C. Kaya)**

no collections