



United States Department of the Interior

FISH AND WILDLIFE SERVICE
COLORADO FIELD OFFICE
730 SIMMS STREET
ROOM 292
GOLDEN, COLORADO 80401

IN REPLY REFER TO:

6 July 1989

To: Greenback Cutthroat Trout Recovery Team

Subject: Stocking of 9,221 greenbacks at 6.35 inches in length (1,020 lbs) into Rocky Mountain National Park waters, 30 June 1989.

Dear Team Members:

The long awaited transfer of the 1988 hatchery year class of greenbacks started their journey out of the Bluewater Hatchery the afternoon of 29 June 1989. The greenbacks were transported to Sheridan Wyoming by the Montana Game and Fish Department, and transferred to a CDOW truck by early evening of the same day. Unfortunately, the CDOW truck lost its two-speed axle, and required the use of the Leadville NFH truck that was on standby at Ft. Collins for just such an emergency.

The greenbacks were transferred to the Leadville NFH truck near Kaycee Wy at 0500 30 June, and arrived at Rocky Mountain National Park seven hours later. By using a helicopter, eighty percent of the greenbacks were stocked out of the Leadville NFH truck at Wild Basin by 1330. The remaining greenbacks were transferred to a small FWS truck, for additional helicopter stocking out of Beaver Meadows, and roadside plants. All greenback were stocked by 1730.

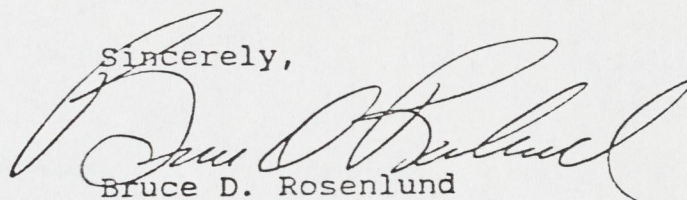
The 1,020 pounds of greenbacks were stocked into RMNP lakes using a helicopter fire bucket equipped with an "R" size bottle of oxygen and a ceramic stone, with up to 200 pounds of fish carried per load (2 lbs of fish/gallon water at 2 lpm flow of oxygen). The operation was extremely efficient since the pilot could stock the fish, refill with water at the lake, and arrive at the fish truck ready for fish.

Despite the fact that the fish were on trucks for over 24 hours, and transferred up to five times, less than 1% of the fish were lost in transit. Needless to say, the Bluewater hatchery did a super job of rearing the fish, with the greenbacks shipped in excellent condition.

Special recognition should be given to Mr. Gary Shaver, Manager Bluewater State Hatchery for the excellent quality of greenbacks reared by his staff, and the all night trucker award goes to Kaymeirer, Thomas and Alcorn for getting the greenbacks to Colorado. Helicopter time for this operation was paid for by Rocky Mountain National Park, and FWE Colorado State Office.

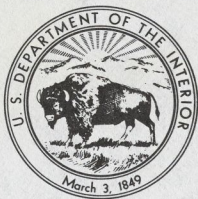
This operation was memorable in the fact that several times more numbers and pounds of greenbacks were stocked by helicopter on 30 June 1989, than were known to remain within Colorado in 1973. Although memorable, the back country stocking of over 9,000 greenbacks exceeding six inches in length should not be considered on an annual basis.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bruce D. Rosenlund".

Bruce D. Rosenlund

CC:
Fisheries
FWE, Endangered Species
Bluewater SFH
Leadville NFH
CDOW
RMNP



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IN REPLY REFER TO:

17 July 1989

Dr. Robert Behnke
Colorado State University
Ft. Collins, Colorado

Subject: Rocky Mountain National Park Cutthroat Trout
Identification, 1988.

Dear Dr. Behnke:

Thank you for your report and letter on the cutthroats we collected during 1988. I sent your bill in for payment the day I received your bill (I'm better at paying bills than writing letters), and you should have your money by the end of July.

Poudre Pass Creek. This fish marked Poudre Pass Creek was taken from the Grand Ditch by the Ranger Station. I'm not sure where the six YOY came from, except from the stomach of the fish, since George Fischer only recorded "1 fish collected".

Haynack Lake, Onahu Creek and Columbine Creek. Too bad that the Haynack Lake and Onahu Creek fish did not prove to be pure. Some of these fish look very good in the wild. The Columbine Creek fish were a pleasant surprise, although I'm not sure what can be done with them right now.

Estes Park Hatchery. My wife found the Leadville records for the years in the early 1900's. I only saw one letter from the Estes Park Hatchery. The letter was complaining about the Leadville hatchery shipping short on an egg shipment, but the letter does not indicate the species. The letter has a nice picture of the Estes Park Hatchery, and I'm not sure if they saved the letter for the letterhead, or for the bitching about the short egg shipment. It may be possible to trace the eggs shipment to species in one of the Leadville reports.

History of Stocking. As you have discussed previously, there is a need to get someone to research the old Leadville records that has a background and interest in the subject. Mr. Douglas Alcorn, the current Asst. Manager at Leadville is interested in obtaining a M.S. degree, and may be interested in working with the Leadville records. Mr. Alcorn is doing a great job at Leadville, and will probably contact you about doing using the stocking history as a possible Masters program.

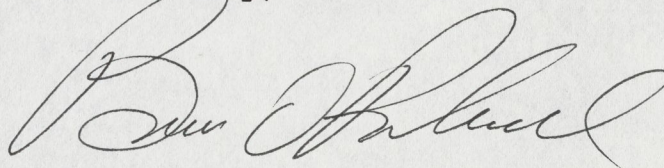
Eagle Lake and Experimental Stockings. Stocking Eagle Lake would be difficult, since it has been fishless so long, and is not adjacent to any current restoration projects. However, we currently have two experimental programs (Big Crystal and Odessa Lakes) that follow your suggestion. These lakes are just upstream of current restoration projects, but were unable to maintain reproducing populations with "other" cutthroats. So far we have not seen any reproduction, but it is early in the process. Please see the 1988 RMNP Report for more details. These lakes may take additional stocking of our current hatchery line, since the Hunters and Poudre line is just starting to produce fish for stocking purposes.

South Fork Poudre River. We are currently collecting eggs from wild fish for a new Colorado based greenback broodstock. We collected about 800 eggs from Como Creek and over 3,600 eggs from Hunters Creek. Hunters Creek is very impressive for a high elevation stream, with one section having over 80 pounds of fish per acre. We started collecting eggs from the Poudre last week, but the greenbacks were just starting to run eggs (1/6 females ripe > 180 mm) on 12 July. We plan to collect more eggs on 20 July.

Currently the eggs from Como Creek, Bear lake, Hunters Creek and the Poudre River are being held at the Bellvue Hatchery. It will be interesting to see if the Poudre fish hatch early at Bellvue.

Thanks again for your report.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bill Alcorn". The signature is written in dark ink and is positioned below the word "Sincerely,".

personally determined Blanca's elevation as 14,475 feet, by far the highest in Colorado.

When the whole affair was over, the U.S. Geological Survey failed to give Blanca any better than fourth place among Colorado's peaks, and Bennett abandoned his efforts once and for all. Interestingly enough, however, on the latest 7½' quadrangle of Blanca Peak, published in 1967, Blanca's elevation of 14,345 feet is printed as an unchecked elevation, the only such occurrence for any Colorado Fourteener mapped by the U.S. Geological Survey — just one more confusing detail in the saga of Blanca Peak's much-disputed elevation.

THE ROUTES

Lake Como Climbers who climb in the Sierra Blanca via the traditional routes usually have one of two basic photos among their records of the climb — either a "this-is-where-we-had-to-walk-from-in-the-middle-of-a-desert" photo or a "this-is-where-the-jeep-broke-down" photo. The Lake Como road is undoubtedly one of the roughest in the state. Its large boulders and sharp ledges have claimed the tires, U-joints, and transmissions of countless jeeps and would-be jeeps driven by even those worthy of a C. W. McCall recounting of their exploits. On Colorado 150, either three miles north of U.S. 160 or 14 miles south of Great Sand Dunes National Monument, turn east on a dirt road running almost directly northeast toward Blanca's summit. After two miles, the decision is usually made as to which type of picture the group will cherish, and the road switchbacks the remaining four and one-half miles up first Chokecherry and then Holbrook Canyons to Lake Como (11,740 feet). The lake has some private cabins around it, and camping is best done about a half-mile farther east up the valley amid some pines at timberline beneath the awesome hunk of Little Bear.

For Blanca and Ellingwood, continue northeast on a pack trail past Crater Lake for two miles and then angle east up the imposing but relatively easy west face of Blanca. For the traverse to Ellingwood, those who are willing to forego the scenic ridge route, which drops sharply off the peaks' north faces, find it easier to descend several hundred feet below the connecting saddle and then scramble up Ellingwood's southeast slopes. Both

Lily L. - greenback?
climbs are relatively easy while affording impressive views, particularly of Little Bear.

Lake Como to Blanca, Ellingwood traverse and return: 5 miles; 3,200 feet.

For Little Bear, climb directly south up the prominent couloir, tricky in late spring snow, to Little Bear's west ridge. Follow the ridge east until a sharp cut interrupts, dropping a steep couloir north into Como Basin. At the cut, leave the ridge and contour south, maintaining elevation and following a hit-and-miss assortment of cairns about a quarter of a mile to a narrow couloir which climbs directly to Little Bear's summit, 600 feet above. The couloir is extremely steep, filled with much loose rock, and is almost certain to have snow and ice in it, even late in the season. Use extreme caution. Once on top, the Little Bear-Blanca ridge is one of the classics, but should be attempted only by experienced parties when weather permits at least three hours on the tighrope.

Lake Como to Little Bear: 1 mile, 2,300 feet, but *tough* climbing!

Little Bear may also be climbed from Lake Como by a couloir and series of ledges leading to the Blanca ridge just north of the summit. Ellingwood and Blanca offer technical north-face routes, while Blanca's southeast face from the Winchell Lakes offers high adventure. These routes must contend with the uncertainty of access through the private lands north of Fort Garland.

Mount Lindsey

14,042 feet (42nd Highest)

Rising only two miles east of well-known Blanca Peak, Mount Lindsey nonetheless retains an individuality in form and history quite apart from the Blanca Massif. While Blanca and its nearer satellites are angular and have some outstanding rock faces, Mount Lindsey is a comparatively smooth, massive cone, rising from the high mountain valleys in a single summit with few intervening foothills. In addition, while Blanca, Little Bear, and Ellingwood Peaks have histories associated with many great climbers, Mount Lindsey was most familiar to primarily one man



Looking east to Mount Lindsey from the summit ridge of Ellingwood—Gary Koontz photo.

who held a deep love for the peak — that man was Malcolm Lindsey.

Mount Lindsey is highly visible from nearby valleys, and it was therefore natural that the peak would become a landmark for early settlers. Showing a remarkable lack of imagination, some observant pioneer noted the absence of trees on much of the peak and christened it "Old Baldy." When members of the Hayden Survey noted Old Baldy on their June 19, 1875, ascent of Blanca, they made no suggestions for changing the name, nor did they decide that an ascent of Old Baldy was necessary for their purposes. However, the peak was climbed by Wheeler men later in the year — the first official ascent. Missing a golden opportunity, the Wheeler Survey also failed to suggest a substitute name for Old Baldy, and the name remained for 78 more years.

In the years that followed, Old Baldy was one of the least climbed of all Colorado's Fourteeners, and it slumbered in relative obscurity until the arrival of Malcolm Lindsey. He was born in Pennsylvania in 1880 but grew up in Trinidad. There he became acquainted with the slopes of the peak that would one day bear his name, and he developed a genuine love for Old Baldy. In 1906, he was admitted to the Colorado Bar and subsequently practiced law in a number of the state's communities. He became legal counsel to the City of Denver in 1925 and then served as City Attorney from 1937 to 1947. Lindsey took an active part in community affairs, and he was a member of the Sons of The American Revolution and a lay leader in the Episcopal Church for 48 years.

Malcolm Lindsey joined the Colorado Mountain Club in 1922 and became a vital force in that organization's junior activities; he led many groups of teenagers to the summit of Old Baldy. Lindsey served very ably on the State Board of Directors of the Colorado Mountain Club for many years, and was President from 1943-1946. It was with great sadness that members of the Colorado Mountain Club and the citizens of Denver noted his death on November 12, 1951.

In remembrance of Lindsey's years of service to the Colorado Mountain Club, members of that organization submitted a proposal to the United States Board of Geographic Names to change the name of Old Baldy to "Mount Malcolm Lindsey." On July 30, 1953, the name change was approved, and the designation of "Old Baldy" became the superbly appropriate "Mount Lindsey." Formal dedication ceremonies were held on July 4,

- all introduced - last year - origins

RMNP

- 5 Columbine Crk. Colo. R. hanging basin
 7 Nannita L. " excellent pop. -
 8 Dream L. " formerly stocked, no fish found 1978
 Columbine most fish 1987 look like greenbacks
- 148, 171, 178, 186, 203 mm

baldly faded - bleached

teeth	4	5	2	5	9	spots - pleuristics size,
	$\frac{7}{12} +$	$\frac{8}{12} +$	$\frac{7}{12} +$	$\frac{8}{12} +$	$\frac{7}{12} +$	ununiform over sides body
	19	20	19	20	19	(lanceolate type + post rakes) -
						but teeth rakes low Tropico L.

spotting uniform among 5 spec. (no suggestion heterozyg-hybrid)

47	49	46	43	42	- rotten inside
178	186	188	183	179	

Dream 2 - all one (Chenobius) others typical greenback

Hutchinson 2

256, 285, 256, 154, 233, 235, 290, 162
8 16 8 16 6 9 10 7
$\frac{8}{14}$ $\frac{7}{11}$ $\frac{8}{12}$ $\frac{8}{12}$ $\frac{9}{14}$ $\frac{9}{13}$ $\frac{8}{13}$ $\frac{8}{11}$
22 18 20 20 23 22 21 19
45 45 42 45 43 44 43 47
206 187 185 190 177 173 186 199

NANNITA

289, 297, 206, 211, 225, 230, 147

mixture greenback x Colo. R. spotting

all at 3 March	0	0	0	10	1	6	3
	$\frac{7}{13} +$	$\frac{8}{12} +$	$\frac{8}{14} +$	$\frac{7}{13}$	$\frac{7}{13}$	$\frac{7}{12}$	$\frac{8}{14}$
largest full unpaired eggs	20	20	22	20	20	20	22
	50	48	48				
	193	180	175				
	47	44					
	172	184					
Orange zipper	33	35	34	43	29	35	eggs in gut

Park as ^{repository} source of remnants at localities
streams pleuritic - Hunter, Hutton,

- Ypsilon, - Tinker L. (Climax - hybrid S.P.)

Trapped C. - Williamson L. ex.

Intriguing - "yellowfin" - ^{1904...} Grand Lakes

Greenback prop. Bozeman - S. Poudre, ^{specimen} Hunter Crk - origin?
- reprod. mix - see how change?

Stock S. Poudre in West Crk.

Paradise Crk.

Ester Park Improvement Assn. history 1907.

leased to state 1908 - what first propagated -
perhaps - local greenback? where? 1907 with replant
before local private hotel - barement operation.



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IN REPLY REFER TO:

Dr. Behnke
Colorado State University

Subject: Fish Samples from Rocky Mountain National Park

Dr. Dr. Behnke:

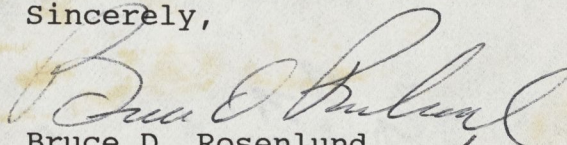
Could you please analyze the following samples

Area	Drainage
✓ Columbine Cr	Colorado R.
- Haynack Lake	Colorado R.
✓ Onahu Cr, below Julian Lake	Colorado R.
- The Loch (lake)	S. Platte
- Glass Lake	S. Platte
✓ Fall River above Cascade Falls	S. Platte
✓ La Poudre Pass Creek below the bridge at La Poudre Pass Ranger Station	S. Platte

No hurry on these, but could use results by May. Please let me know how much this will cost.

Dr Behnke:
Sorry I missed you.
Haven't found much more
on yellow fish, but haven't
had much time to look.
Bruce

Sincerely,


Bruce D. Rosenlund

1/18/89

- all introduced
most = many introd f.p. 100%
+ RB (Columbian, pleuritic, post. dors.) - -

La Poudre Pass Crk.

- native? - fall - prob. pleuritic v.

N=1 Grand Ditch - 1968 - all - Lolo City -

T=5 Willow Crk. - spots - -

21 (14) v2kers - 16 teeth 50/206 -

yoy - 5-7 wks - emergence ||||| - 44-53 (48) mm TL.

Onahu Crk - Sulphur L.

N=2 238 - 273 -

coloration post. v2kers - ϵ - RB - on head -

N=2 Fall R. - few post. red
greenback x pleuritic

N=4 Loch - 223, 235, 246 TL
53 greenback-like and

1 (largest) - 317 mm - S. R. cutt
highest scale, least caeca - RB scutt pattern
not with like but not
all v2kers
21 post. v2kers
well developed

pleuriticus

18	19	20	21	22	23
2	5	2	1	2	1
	5		1	4	3
		19,9			

Col. Crk. well developed

$$\frac{46}{183} \quad \frac{8}{14} \left(\frac{4}{8} \right)$$

$$\frac{46}{194} \quad \frac{7}{12} \left(\frac{4}{2} \right)$$

$$\frac{49}{186} \quad \frac{7}{12} \left(\frac{3}{7} \right)$$

$$\frac{42}{178} \quad \frac{7}{12} \left(\frac{3}{5} \right)$$

$$\frac{48}{188} \quad \frac{7}{12}$$

$$\frac{47}{180} \quad \frac{8}{13} \left(\frac{4}{7} \right)$$

$$\frac{8}{13}$$

$$\frac{21}{21}$$

$$\frac{8}{12} \left(\frac{4}{18} \right)$$

$$\frac{6}{12} \left(\frac{2}{1} \right)$$

$$\frac{6}{18}$$

$$\frac{9}{14} \left(\frac{4}{7} \right)$$

$$\frac{8}{20}$$

$$\frac{8}{14} \quad \frac{8}{22}$$

$$\frac{7}{12} \quad \frac{7}{19}$$

$$\frac{8}{19}$$

$$\frac{7}{11} \quad \frac{7}{18}$$

total

7

2

4

5

4

5

6

9

6

3

3

5

4

cases

33 +4

38 +1

39 +2

29 -8

40 +3

33 -4 -2

18 | 19 | 20 | 21
 1 | 1 | 3 | 2

red Daphnia emm
 (20) .#
 107 7 (19.91)

Haynzelc
 rzkou

L.

teets

coeus

$\frac{8}{12} \left(\frac{3}{2} \right)$

2

39

20

3

40

7

32

$\frac{8}{12} \left(\frac{3}{5} \right)$

12

33

21

3

2

$\frac{7}{12} \left(\frac{3}{2} \right)$

19

~~46~~ 3

~~178~~ 184

$\frac{7}{13} \left(\frac{3}{5} \right)$

20

44 ~~47~~ / 178

8

$\frac{8}{12} \left(\frac{3}{3} \right)$

20

45 ~~46~~ / 178

43

167

$\frac{8}{13} \left(\frac{4}{2} \right)$

21

48 / 182

42 / 168

$\frac{7}{11} \left(\frac{5}{6} \right)$
 18

Loch = 5. Platte

+

G/255 L, 1987 Fischer - smallest

* Uniform - med - large greenback-like - smallest

spec. largest most pronounced spot - all over body

4 perhaps pleuritic-stomach influence - smallest as Hatch. L.

N=5 TL - 277, 279, 271, 280, 223

pleuritic

spots vel. uniform over body - but varying in size - small - med - large - saw w/ larger spots on peduncle

Columbine Crk, Oct 6, 88, Rosenlund/Fischer

N=13 TL - 173, 144, 163, 166, 120, 120, 152, 156, 209, 212, 199, 212, 229

N=7 Hoyneck L, 8/10/88 - Fischer - gillnet catch brightly colored - orange fat - crimson operculum

* largest specimen has red spots below lili. (red deposit also black over melanin)

some med-large spots all over body - largest fish has concentration med. spots on peduncle

TL 276, 282, 211, 227, 161, 236, 353

Columbine - 87

N=5 178-203mm

19-20mm 42-47 178-188

reach 2-9 (5)

large teeth

G/255 L. 7(5) / 12(3) 10 56/215 42
ca 225

* spots on belly of this spec.

19 8(3) / 12(3) 14 49 / 198 29
ca 228 20

7(3) / 12(2) 7 48 / 197 35
17

7(3) / 11(3) 5 44 / 178 25
18

7(3) / 14(4) 11 49 / 203 28
21

most Greenback - spots on belly -

Carbonate Weekly Chronicle
(Leadville) June 17, 1901.

- Trout stocked in Big &
Little Larimer rivers by
Dr. Finrock in early 1870's
from Dale Crk. (greenbook)

- spread throughout drainages
by 1880's .

Mtn. whitefish, Proscopium
williamsoni - Native only to
White & Yampa river drainages
(Green R. Tributaries) - introduced
into Poudre & Roaring Fork -
————— #

Complete Steve Raymond
- R2mbloop jet Winch^{less}

SO.
OFFICE MEMO
DIVISION OF WILDLIFE
LC

Bruce
Resendes

To Bob

Date 8-12-87

From Jim Bennett

Wilby's sources
+ cuts in Colo
The problem was not he was in 1931.

Action:

- Handle
- Answer your signature
- Answer my signature
- See me
- Refer to _____

For:

- Your signature
- Your comments
- Your approval
- Your information
- Initial and return
- Your file

NOTES

Here's a summary of the data
Anita generated on the Williamson's
lobes cutthroats.

Ji

Meristics used in purity analysis of Colorado
 River cutthroat trout collected from Williamson
 Lake #3, Inyo National Forest, California, July
 22, 1987

TL (mm)	Sex	Scales ^a	Pyloric caeca	Basibranchial teeth
246	F	167+	37	2
222	M	183	36	17
237	F	181	37	19
267	M	189	34	16
240	F	196	42	12
229	M	172	40	16
173	F	188	31	14
257	F	229	46	28
225		207		20
158	M	167	39	17
250	F	188	46	22
278	F	201	34	16
276	F	192	36	32
262	F	219	42	20
269	M	195	40	31
251	M		38	3
273	M	196	36	34
255	F	209	38	23
281	F	195	42	11
Range		167-229	31-46	2-34
Mean		193	38.6	18.6

^a counted two rows above the lateral line

- origins - Wiltzius

Feed 4/24 ST

Creech - Hayman

- Yellowstone -

- stocked ??

- Nat. Reprod.

- but so fat -

- density low

- food

- Ants

- midgs

- may-caddis

X

RMNP Rosenlund - July 22, 87

"Ten Lakes Park"

Varley 1980 - A history of fish stocking activities in Yellowstone National Park between 1881 and 1950.

- " 1979. Record of egg shipments from Yellowstone fishes, 1914-1955

1890 - D.C. Booth Spasifish hatching - explore ~~1907~~ took eggs - 1901 - station on Little Thumb Crk.

1899-1917 - West Thumb streams trapped - 1912, hatching at Lake.

peak 1940 - 43,455,900 eggs from 14 streams

* Besides Yellowstone L., Trout L. + Buck L. = Soda Butte station.

begin 1910 - then annually 1929-50 - mixed w/ Yellowstone eggs

x shipped from Lake - 1934 - Trout L. to be rainbow lake - 1937-50

shipments from Trout L. = hybrids

Color - U.S. hatch. (Creede - 1912, 13) - 1931-1953 ca. 1/2 mil./yr
B.C. Horreker
private individuals, clubs (wiseman)

- St. hatcheries - Del Norte 1930, Denver - 1912-15, 1938-53
ca 1 mil. +/yr.

Estes Park

G. H. Thomson - 1912 - 400,000

RMNP - 1940 : 1.5 mil,

1942 : 700,000

Yellowstone data

Big Thompson
1922-23

Leadville

1912-17 ca > 1 mil.

1921, 29-32, 1934-36, 1938-43, 1945, 1947-53

Wiltzius

Emerald L. 1890 hybrid

1907-07 Outdoor Libs plks
- rainbow!

- local sources?

R.R. transportation

RMNP intern project

- records - dates, source of fish
sp. -

intern research

* Estes Park hatchery constructed 1907 by Estes Park Improvement Ass. to stock fish in nearby water - leased to state 1908

- Emerald L. first record made 1888 R. Pine R.

by St, Colo,

- Emerald L. 1895-1921 - hybrids

Twin Lks - 1885-95 - greenback
- yellowtail

Grand Mesa - 1899-1940 - pleuriticus
r b. hybrids

Morvine - 1908-15

Trappers L. - 1919

Hypers - Creek - 1926 -

Rio Grande - Bert Hasselkus hatchery near Creede

1912-13 yellowtail

1914 - Fields Run

- Lost Lake in Mineral Co

8,000,000 fry - hatch. - head Clear Crk,
headwater Rio Grande

- ca. 2 mil. fingerlings to Colo. St.

- used to stock tanks on Grand Mesa

- see App E

Treadville egg runs

1896-97 Twin Lks

1892 - Black L. 1-5

93 - Sweetwater L.

97-1900 - Freeman L.

pleuriticus

- Grand Mesa Lake -

1899 - 1940

Grand L. 1905-09 -

Piney L.

- Seven Lks - Pike's Peak } - 1912 - - - present) greenback - yellow
mixture,

Antero Res - 1900 - hybrid

Continental Res - Rio Grande - hybrid

Ten Lakes Park - July 22, 87

- spotting - variable, some Bear R. Utah-like

1 typical hybrid

coloration variable - most w/o color silver -

N29 295, 303^{306, 309}, 312³¹⁷, 320, 331, 338 -

teeth 5=0, 1, 2, 3, 4

rakers 18 | 19 | 20 | 21
 / 3 | 2 | 3 | 1 (19.2)

long well developed distinct fr. 5th lobe

post x mostly 3 upper
 11, 4, 4, 7, 4, 10, 6, 10, 6
 4-11

Transplants
 6.9
 9/28

scales 40, 43, 44, 45 40-45 (42.3)

40, 41, 42, 45 -4
41 = 6 9/160

157 - 162 172 } 178 - 180 (171)

159 164 174 175 +3 +5 = +8
-16 -13 -11 -4

caeca 30 - 38 (34)

no ants

Pikes Peak (7 laker)

chironomids

Wernsmann used fish culture since 1913 (puckering)
written - 1912 - to Leadville

Daphnia

Bever Crk. Ark. R. -
prob barren but 1970 cent. sturgeon hotel - whole greenback

Yellowstone stocking 1909 -
1970 sample

brilliant colors

- LK #5 rakers caeca scales 162-205 * - all 22 w/ teeth
 17-21 32-51 42-48 181.2
 19.4 41.6 44.2

Mid Hudson Aug. 87
 N = 3 262, 329, 336 mm TL
 reprod. ? - prob. not 18, 20, 22 makers

48, 50, 55 - look good -
 196 209 214 scales 4, 6, 9 teeth

Fifth L. RMNP July 21, 87

N = 8 212, 237, 274, 282, 294, 304, 356, 383 mm TL

Spots - some like Hudson L.

most large - blotch-club-like on peduncle
 - dent. on all over above & below

makers

19/10, 19/8, 19/6, 21/10, 21/6, 22/11, 21/10, 21/11
 19-27 (20.4) + 6-11 (9) ^{posterior} 8/13 ⁴ 8/3-6 ⁴

teeth 0, 1, 3, 4, 5, 7, 14 - most microscopic, imbedded.

scales 45, 54, 48 47, 44, 53, 48 44-54 (48.4)
 187 197 198 190 182 194 205 182-205 (193)
_{7 11 20}

coeca - 34, 39, 38, 38, 37, 42, 37, 37 ³ 34-42 (37.5)
₄

→ ants - ^{2-5mm + 4mm} diptera ^{adult} chironomids

x great fat around coeca

- 3 ♂ vrb. post spawning

- ♀ immature eggs - spawned?

- no unspawned eggs
 observed

- every other year

- such fat! - ♂-less fat.

attempt
Trace

sources of mosaic pop. -

- Estes Pk. sportsmen club
- Empire Acc. - Hatch 1907

Years stocked - source? Estes Park Hatch?

outside st. bauxite

- Yellowstone - 1912-13 Creech to B. C. Herrick - (see Wilziny)
- recognized back color Rio Grande cult? hybrids

nich teeth 22

spots in skin

↓
Grand Mesa.

↓
Haypress Lk.

Trappers

Seven Lakes Park

- mainly pleuriticus

- RAN NP - intern like Varley.
- role of Estes Hatch

ABSTRACT

- Three specimens mid batches identical to pure greenback prob just down
 as downstock in - Two side water - " " " " " "
 Fifth Lake and "Five Lake Park" not pure in
 Fifth L. may be pure either, but of more or less, Tenth L. is
 also mixed cult source
 hybrid of rainbow T.

- Trappers - Williamson.

9-28(4)

10 CLKs Park

- fly stacks
- Pileas Peels
- Treppen
- Hoypress

could be
S.C.
W/2h
Beer
R.

- 7 317
- 8 309
- 9 306

- ① 320mm - plump - greenback-like
- ② 312 - emaciated (post-spunty?)
- more pleuriticus
- ③ 295 - more pl. but spots large
- ④ - 338 - slim } P. - variable
- ⑤ - 303 plump }
- ⑥ - 331 - * hybrid-like

razers longer
better developed

	teeth	weeds	
① $\frac{8}{12} \frac{3}{8} \left \frac{41}{172} \right.$	4	X	fast, chironomid
② $\frac{6}{12} \frac{3}{1} \left \frac{42}{178} \right.$	0	30	spurred?
③ $\frac{8}{12} \frac{3}{1} \left \frac{45}{180} \right.$	0	34	Daphnia
④ $\frac{7}{13} \frac{3}{1} \left \frac{40}{162} \right.$	0	31	spurred ♂
⑤ $\frac{7}{13} \frac{3}{1} \left \frac{41}{157} \right.$	2	34	

$$\textcircled{6} \frac{7}{11} \bigg| \frac{3}{7}$$

Teeth

1

$$\frac{40}{175}$$

color variety

- 8-8-9

silvery

no colors

$$\textcircled{7} \frac{8}{11} \bigg| \frac{4}{2}$$

3

$$\frac{44}{174}$$

$$\textcircled{8} \frac{8}{13} \bigg| \frac{4}{6}$$

0

$$\frac{45}{159}$$

$$\textcircled{9} \frac{7}{12} \bigg| \frac{4}{2}$$

0

$$\frac{43}{164}$$

Fifth Lake - RMNP Aug 87

July 21, 87

Rosenlund

club

Rio Grande-like
Creeks Hatch
Haypress L.

- ① 212 mm - resembles Hutchinson L. greenback
- ② 383 mm - | large sp. peduncle - rel. even
- ③ 356 mm - | dist. ant. above/below e.o.
- ④ - 304 | peduncle -- large
- ⑤ - 274
- ⑥ - 237 - even
- ⑦ - 282 - even
- ⑧ - 294 - very large blotch-like in peduncle

1-3 scales, loose to dermis
↓
not spawn??

- excellent condition

① - $\frac{7}{12} + \frac{4}{6}$ | raker
 $\frac{19}{10}$ | teeth
1K? microscopic tooth embryonic
scales $\frac{45}{177}$ | coeca 32? - great fat deposits
188 gonads immature ♀ - full contents

② $\frac{7}{12} + \frac{3}{5}$ | raker
 $\frac{19}{5}$ | teeth
7 | scales $\frac{54}{197}$ | coeca 39 - fat, full out

③ $\frac{7}{12} + \frac{4}{2}$ | raker
 $\frac{19}{6}$ | teeth
3 microscopic imbedded | scales $\frac{48}{198}$ | coeca 98

④ - * Alizerin used by someone
 $\frac{8}{13} + \frac{4}{6}$ | raker
 $\frac{21}{16}$ | teeth
+ 4 pits (broken off) | scales * too imbedded
- sex mature - spawn 38

♂ prob. spawned recently - mature testes, not turgid.

MEMORANDUM

⑤ - $\frac{8}{13} \frac{2}{4}$ ^{teeth} 14 $\frac{47}{190}$ ²²²² 37
 216 * imbedded

of spent tester
 - no entr-pocked
 w/ larva 2 adult
 Diptera - midges

⑥ $\frac{9}{13} \frac{5}{6}$ | 4 | $\frac{44}{182}$ | 42
 22 11

- many ft
 - caddis 2 cerci
 larvae

⑦ $\frac{8}{13} \frac{4}{6}$ | ^{microspira} 4 | $\frac{53}{194}$ | 35
 imbedded

2 uti, chironomids
 2 green backswimmer
 ♀ extreme fat around
 csecs - spawned?
 - immature rot -

⑧ $\frac{8}{13} \frac{4}{7}$ | 0 | $\frac{48}{205}$ | 37

♀ great mass
 chironomids
 - larva 2-3 mm
 adult 4mm

Mid Hutchison - Aug 87 8/14 - 50/214

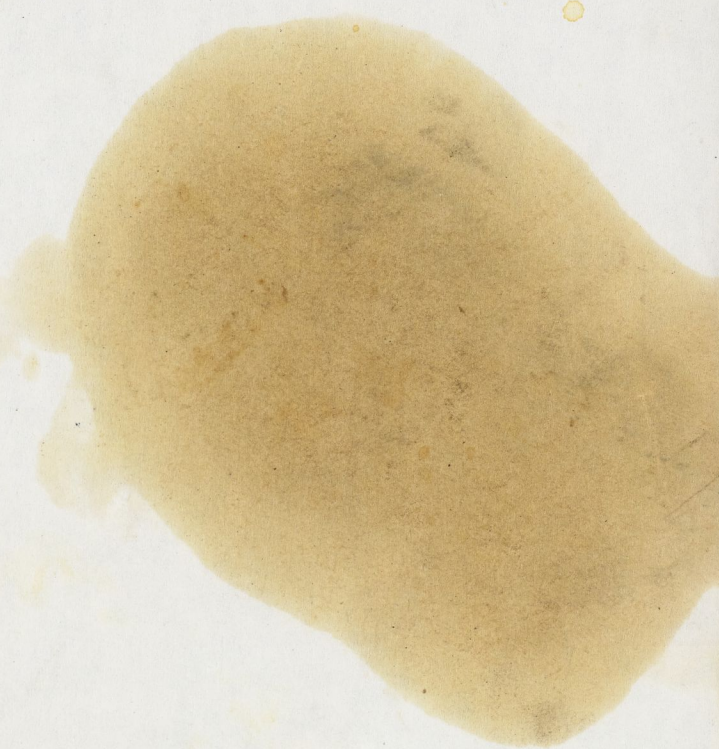
- 336 mm - big, red, even distrib. 7/13 - ⁵⁵200

- 329 mm - most small red, - sparse out.

+ 262 mm - cyan - $\frac{7}{11}$ (but not develop many vestigial) 48/196

- only 3 in out - no reprod, a, 2.

4, 6, 9 teeth



GREENBACK CUTTHROAT TROUT FROM UPPER HUTCHESON LAKE, RMNP

Robert Behnke

October, 1986

ABSTRACT

Based on 27 specimens, the cutthroat trout population found in Upper Hutcheson Lake is identified as a pure greenback cutthroat trout, Salmo clarki stomias. I assume this population is derived from an early transplant from the St. Vrain River drainage. This sample is more "extreme" in their taxonomic characters than the 1985 sample from Hunter's Creek. This may be due to the "founder effect" as no evidence of a hybrid influence was detected.

IDENTIFICATION

The sample of 27 specimens from 196 to 298 mm TL from Upper Hutcheson Lake was collected July 24, 1986 by Bruce Rosenlund, Colo. Field Office, USFWS. The specimens exhibit an "exaggerated" greenback trout appearance with very large spots distributed over the body, by which they sharply differ from all other subspecies of cutthroat trout. Table 1 lists the key diagnostic characters of the sample with previous data from other pure populations of the South Platte basin.

Table 1. Character analysis.

	Gillrakers	Pyloric caeca	Scales above l.l. and in lat. ser.	Basibranchial teeth
U. Hutcheson L. N=27	18 - 25 (21.3)	29-48 (36.6)	48-57 (52.8) 194-214(206.2)	3-18 (9.4)
Hunter's Crk. N=7	18-22 (19.9)	27-35 (31.6)	48-57(51.6) 187-212(195.7)	7-12 (8.9)
Como Crk. N=18	17-21 (19.0)	24-42 (29.4)	46-53(48.4) 174-205(189.3)	1/18 no teeth 17w/3-12(6.0)
Little So. Poudre N=18	19-23 (21.3)	27-50 (35.2)	53-60(56.7) 205-236(216.5)	2-17 (11.1)

Compared with Hunter's Creek fish, the Upper Hutcheson Lake sample has more gillrakers, caeca, and scales. These differences are probably due to the "founder effect", whereby a new population initiated from a few transplanted founders, carry a skewed representation of the parental genotype. As discussed by Hickman and Behnke (1979), based on comparisons of known parental and transplanted populations of cutthroat trout, differences up to about 10% may be found in mean values of meristic characters. The Upper Hutcheson Lake sample has about 15% more pyloric caeca (36.6 vs. 31.6), but the Hunter's Creek sample is small (N=7) and it is not likely that the Hunter's Creek population and the Upper Hutcheson Lake Population were derived from precisely the same parental population in the St. Vrain Drainage.

The higher scale counts in the Upper Hutcheson Lake trout may be due, in part, to colder waters and slower development during early life (elevation 11,200ft.). The high scale counts of 194-214(206) in the lateral series and 48-57(53) above the lateral line are exaggerated in the "greenback direction"; no other subspecies averages more than 50 scales above the lateral line or more than 200 in the lateral series.

Stocking records indicate that Upper Hutcheson Lake was stocked with 1200, 1-2 inch cutthroat trout in 1952 and 3000, 1-2 inch cutthroat trout in 1964. The origin of the cutthroat trout used for stocking park waters in 1952 and 1964 is not known. The 1952 stocking may have been with Yellowstone Lake cutthroat, *S. c. bouvieri*, and the 1964 stocking with Colorado River cutthroat, *S. c. pleuriticus* based on propagation history. The higher numbers of gillrakers and pyloric caeca in the

Upper Hutcheson Lake trout might be attributable to a Yellowstone cutthroat influence except for the fact that the spotting pattern and scale counts show no sign of intermediacy between greenback and Yellowstone trout, but are exaggerated in the greenback direction. Also, the bright spawning coloration of the Upper Hutcheson fish is typical of greenback and basibranchial teeth number is similar to Hunter's Creek greenback (Yellowstone cutthroat $\bar{X}=22$). A Colorado River cutthroat trout influence would result in smaller spots with spots concentrated on caudal peduncle. The spotting pattern of the Hutcheson Lake fish might be termed "super" greenback. A Hybrid influence from no other subspecies of cutthroat trout (or rainbow trout) can reasonably explain the characteristics possessed by the Upper Hutcheson Lake population. Thus, I assume that the 1952 and 1964 stockings did not survive to hybridize with the established population of greenback trout, or the hybrid influence was so minimal that it is undetectable (it is possible that the 1952 and 1964 stockings were made in Lower or Middle Hutcheson lakes and not Upper Hutcheson).

As with the Hunter's Creek population, I assume that Upper Hutcheson Lake was stocked long ago with fish transplanted from the St. Vrain River (both drainages are tributary to the North Fork St. Vrain), at a time when the St. Vrain had pure greenback trout.

A USFWS survey of Hutcheson Lakes was made in August, 1963. A flourishing trout population was found at that time. The 1963 report mentions the examination of 8 specimens from 8-12 inches in good condition with "fat surrounding the visceral organs". The 1986 sample also represents trout from about 8-12 inches (196 to 298mm TL), and the specimens are in good condition with considerable fat around the pyloric caeca. There are 8 specimens from 196 to 230mm (perhaps II +), 16 specimens from 238 to 273mm (III + ?), and 3 specimens of 281, 294, and 298mm (IV + ?).

In contrast to the typical monotonous forage base in most high elevation lakes (very low invertebrate diversity), Upper Hutcheson Lake, probably due to an extensive littoral area, has a diverse insect fauna (based on stomach content examination and also mentioned in 1963 USFWS report).

The discovery of an "extreme" or "exaggerated" form of greenback trout in Upper Hutcheson Lake is a significant positive event toward the goal of preservation and expansion of genetic diversity in S. c. stomias. As such, this population should be used to establish new populations in Middle and Lower Hutcheson lakes after these waters are treated to eliminate present hybrid populations.

LITERATURE CITED

Hickman, T. J., and R. J. Behnke. 1979. Discovery of the original Pyramid Lake cutthroat trout Prog. Fish Cult. 41(3) : 135-137.

Carbonate Chronicle (Leadville). July 8, 1901

Grand Mesa Lake - most full of trout - long wad by Uter, but longest

lake - Grand Island L. was fishless

about 1882 - Eggleston, a trapper, stocked it.

(from where ??)

- Leadville 1889 - Fed hatch. - Temp. bldg. set up
- Nov. - eggs being taken

* - first eggs from "pure eastern brook trout" -

Mace agreement w/ Dr Laws - got his fish - (yellowfin)

^{E.M.}
Mr Robinson first report of Leadville - expects large
quantity spawn for "2110 trout".

- Laws ~~stocked~~

Greenback stocking

Essex Park

OFFICE MEMO

Rosenlund see photo
yellowfin p. 87

TO:

Date

FROM:

— Lord Dunraven — raised fish

SUBJECT:

Colo. R. Stocking

Bull/Rep. US Fish Comm. — operations on Grand

REMARKS:

Merz

Wiltzius — Theo. Wink (agent) — 1896 — Field & Farm
p. 56 — Dunraven's hatchery —

brook trout
Brodaell 1872
Wisconsin

Bell — 1871
Seth Green N.Y.

N.H. Livingston
1874

STATE 1881
PLUMMA MA
82
Iowa

Wiltzius — state first used Trappers L.
1903

1874
ILL



United States Department of the Interior

FISH AND WILDLIFE SERVICE
COLORADO FIELD OFFICE
730 SIMMS STREET
ROOM 292
GOLDEN, COLORADO 80401

IN REPLY REFER TO:

January 10, 1989

MEMORANDUM

Hidden Valley brook stocked 1922

To: Dave Stevens, Research Biologist
Rocky Mountain National Park, Estes Park, CO

From: Colorado Fish and Wildlife Assistance
Project Leader, Golden, CO

Subject: Stocking in Rocky Mountain National Park

While working on the Leadville Centennial, I found some interesting items pertaining to RMNP.

1. Memorandum by Superintendent Toll, 20 Sept. 1923. Good description of park fisheries and request for additional stocking.
2. Report of fish stocking, 1925. Good account of stocking Nakoni and east inlet.
3. Fish stocking, Estes Park G&F Ass. 1922-23. Shows stocking of several sites within RMNP, including upper Big Thompson.
4. Fish stocking - date unknown but in with 1920's material. Shows stocking of brook trout from the Leadville NFH into several park waters (very difficult to read).

Also talks about 200,000 "native" trout stocked into Forest Canyon above Gage Lakes.

5. Letter from Leadville NFH Superintendent to Superintendent RMNP. Interesting to note that by 1923 all "native" eggs are shipped in from Yellowstone Park".

Do you have any 1988 creel census data? See you at the Greenback Team meeting.

cc: Behnke

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DEPARTMENT OF COMMERCE
BUREAU OF FISHERIES

Leadville, Colo.

November 17, 1923

Superintendent,
Nat'l. Park Service,
Denver, Colo.

Dear Mr. Toll:

In reply to your of the 15th I would say that you have taken the matter of securing rainbow trout eggs up in the proper manner.

So far I have been unable to secure any field station in Colorado for collecting rainbow eggs, last year we had 100,000 shipped in from Oregon, which did not even make a dent in the number of applications we had for rainbows.

We will collect about 6,000,000 brook eggs this fall, our native eggs are all shipped in from Yellowstone Park.

I may be in Denver in a short time and if possible will call on you and get better acquainted.

Respectfully,

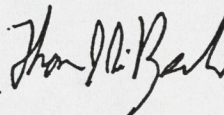
C. H. Van Atta
C. H. Van Atta
Supt.

JEFFCO FIELD OFFICE
730 SIMMS STREET, ROOM 150A
GOLDEN, CO 80401

January 3, 1989

MEMORANDUM FOR: ALL TENANTS
730 SIMMS STREET

FROM: THOMAS J. DIBERNARDO
GSA Buildings Manager



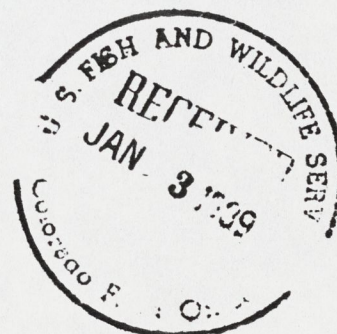
SUBJECT: CAR LICENSE PLATES

As a courtesy to the building tenants, this office keeps a listing of car license plates for all employees located at the Lakewood Office Plaza, 730 Simms Street, Golden, Colorado. Since we are the Government management office for this building, tenants will usually come to our office to report car headlights left on, cars that may have slid into other cars on ice in the parking lot, etc. Therefore, this listing may save some unwanted car problems when finishing work.

We are therefore asking each office to consolidate a listing of employee's car license plates and submit this listing to us so we may contact tenants in case of emergency.

This is strictly for helping you, the tenants, and will be kept confidential.

Thank you for your cooperation.



FISH PLANTING

Two shipments, aggregating 170,000 Eastern brook trout, from the Federal Hatchery, at Lovellville, Colorado, were planted in various parts of the Park, as follows:

Four Lake	11,000
Golden Lake	12,000
Lake of Glass	24,000
Big Thompson River, near Brimwood Hotel	20,000
Gallego Creek, south of Longs Peak	20,000
Lake Clarita	23,000
Total	170,000

Eastern brook trout, from the Estes Park Hatchery, were planted as follows:

Shaw's Mill Pond, west of Deer Ridge	100,000
Wind River	20,000
Retaining Ponds, on Fall River and Big Thompson rivers	20,000
Total	140,000

20,000 native trout, from the same hatchery, were planted in the upper part of Fall River, between Cham Falls and Fall River finger station.

100,000 native trout, from the same hatchery, were planted in the upper end of Forest Canyon, above the intersection with the outlet from Gorge Lake.

_____ fish were also planted in various places adjacent to the park.

The planting of these fish was done by the Estes Park Fish and Game Association, with the active cooperation of the National Park Service and the Rocky Mountain Parks Transportation Company.

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REPORT OF ESTES PARK FISH AND GAME ASSOCIATION

on

Condition and Classification of Stocking of Lakes and Streams in their District.

Water	Distance	Altitude	Tree	No.	Year	Fishing Conditions
Big Thompson (a)	10 mi.	8000-10000	Spotted Native	160000	1922	1st stocking
"	"	"	"	130000	1923	"
"	(b) 5 mi.	7800-8000	Eastern Brook	60000	1922	Fair
"	(c) 12 mi.	7000-7800	Rainbow	50000	1922	Very poor; only stocking since 1917
Fall River (a)	6 mi.	8000-9500	Spotted Native	20000	1922	First Stocking
"	(b) 4 mi.	8000(dams)	Eastern Brook	20000	1922	Good
"	(c) 5 mi.	7500-8000	Rainbow	10000	1922	Poor
"	No. Park 5 mi.	7000	Eastern Brook	30000	1922	Fair
"	"	"	"	50000	1922	"
Cow Creek	6 mi.	7000	Eastern Brook	30000	1922	Fair
"	"	"	"	30000	1922	"
West Creek	3 mi.	8000	Unstocked			
Fox Creek	3 mi.	8000	Unstocked			
Black Canyon Creek	4 mi.	7500-8000	Eastern Brook			Well stocked
Rearing River	3 mi.	8000-10000	"			Fair
Mill Creek (dams)	4 mi.	8000-9500	"	40000	1922	
"	"	"	"	40000	1922	Good
Glacier Creek	9 mi.	8000-9000	Spotted Native	90000	1922	
"	"	"	"	50000	1922	Fair
Wind River	6 mi.	8000-9500	Eastern Brook	20000	1922	
"	"	"	"	70000	1922	1st stocking
Hidden Valley Creek (dams)	5 mi.	8000-9000	"	80000	1922	
"	"	"	"	80000	1922	Good
Cabin Creek	3 mi.	8000-9000	"	80000	1922	
"	"	"	"	30000	1922	Fair
Fish Creek	5 mi.	7500	"	50000	1922	Poor

P+R Dist

Report of planting fish in
Grand Lake District 1925

On August 6th I gave out enough fish applications to cover entire district.

August 7th. Mr. Charlie Fisher and Myself went to Estes Park and got Estes Park fish clubs spiced cans Mr. Fisher donating his car for the trip.

August 8th. I left Pole Creek Sta. at 5:30 A.M. and we packed 25,000 native trout to Lake Nokoni. I took 8 men and thirteen head of horses.

We took horses as far as possible on Lake Manita trail. Then we packed on our backs to Manita then over ridge to Nokoni.

Mr. Charlie Fisher, Lon Osborn
Dr. Davis, Barnie McCoy, Redwood Fisher
Ralph Wescott, Paul Ambrose, and
Myself. the men underlined were
men from trail crew.

On August 10th I took the State Supt. of Fisheries to look over retaining ponds on east inlet he pronounced them first class retaining ponds.

Aug. 11th. Mr. Charlie Fisher and myself took 25,000 native trout up Tonahuta Creek above falls we used 4 pack horses and 2 saddle horses.

Aug. 12th we took 25,000 native trout to Lake on east inlet in sec. 21 T. 3 N. R. 74 W a very hard trip as there was no trail most of the way.

Mr. Charlie Fisher, Len Osborn, Gus Spitzmiller, Redwood Fisher and myself

Aug. 13th we put 50,000 native trout in retaining ponds on east inlet.

Aug. 14th we put 25,000 native trout in retaining ponds on outlet of Grand Lake.

Aug. 17th we put 40,000 native trout in beaver ponds on east inlet.

Ranger McLaren

Sept. 29, 1922.

File No. 124.

The Director,
National Park Service,
Washington, D. C.

Dear Sir:

Heretofore, the efforts to keep the lakes and streams of the Rocky Mountain National Park stocked with trout have been conducted to a very large extent by individuals and agencies other than the National Park Service. This matter was brought to Mr. Mather's attention, when he was here last April, and he said at that time that he believed the National Park Service should use every practicable method to assist in obtaining an adequate supply of fish.

There is located four miles from Estes Park village a fish hatchery, operated by the State of Colorado. This hatchery has a capacity of approximately one million eggs. Fish from this hatchery are distributed to Fish and Game Associations located in Estes Park and in near-by towns, such as Loveland and Longmont. The Estes Park Fish and Game Association is usually assigned the largest number of fish, and this Association has the decision as to the lakes and streams to be stocked. The Estes Park Game and Fish Association usually place from two thirds to three fourths of their fish in the Rocky Mountain National Park, and the remainder in lakes and streams to the east of the Park.

The Estes Park Game and Fish Association is composed of about sixty residents of Estes Park, who take the keenest interest in the betterment of fishing and the protection of game. The dues of the Association are five dollars per year. This gives the Association about \$300 income. This money is spent either in providing equipment for the transportation of fish, or in the construction of small nursing ponds, in which the fish may be kept, until they are more mature, or for other beneficial objects, in line with the Association's work.

Various individuals of the Association have filed with the U. S. Bureau of Fisheries, applications for trout, within the past two years. In 1921, about 20,000 fish were received from this source, and

6

during the present year, something less than 200,000 fish have been received from Federal hatcheries.

In view of the fact that the National Park covers 397 square miles, and that some 200,000 visitors come to the Park yearly, it is believed that a considerable increase should be made in the number of fish placed in the streams. At the present time, something less than one million fish are being placed in the lakes and streams in the Park each year. It is believed that this number should be increased to two or three million fish, per year, in order to extend the area, as well as improve the fishing.

I would appreciate it, if you would take this matter up with the U. S. Bureau of Fisheries, and let me know the desired method of procedure, for obtaining additional fish. My suggestion would be that the work of the Estes Park Game and Fish Association be continued without change, but that an additional supply of trout be shipped to the Rocky Mountain National Park. I shall be glad to file any applications that they may wish, if they will send me some blank forms. The lakes and streams of the Park vary in elevation from 7,500 to timberline, at 11,500 feet, and there are a number of lakes at 12,000 feet or more which do or could produce a good supply of fish. At present, the varieties of fish in the lakes and streams of the Park are spotted native trout, rainbow trout, and Eastern brook trout. Good use can be made of any of these varieties of trout that may be available, or of such additional varieties as the Bureau of Fisheries may recommend for conditions in this Park.

There are many streams and lakes in the higher elevations of the Park, which have never been stocked, and are without trout, since many cascades and water-falls prevent the fish from reaching these higher levels. A few such lakes have been stocked, and have produced excellent results. It would be greatly to the benefit of the Park, and add greatly to the enjoyment of its visitors, if additional lakes could be stocked, and thus add to the area in which good fishing may be obtained. By enlarging the area, the fishermen may be distributed more evenly throughout the Park, instead of being congested in a few streams in the vicinity of Estes Park village.

Any suggestions which you may have, regarding the part which the National Park Service should take in this matter will be greatly appreciated.

Very truly yours,

Roger W. Toll,
Superintendent.

Columbine Crk. N=5

148-203 mm TL

42-47 (44.3)

178-188 (185)

no cecca - rotten

Waters - 19-20 (19.6)

pleuralis size ~~not~~

Teeth 2-9 (5)

uniform spotting all over body -
- 1000 or so - heavy
lacustrine type (Trappes, Yellowstone
+ post. waters)

no indication for limited det. of hybrid.

Dresson L. N=8 154-290 mm TL

Many specimens strong resemblance Hutchins L. greenback -

1 spec (185mm) obvious hybrid spotting p-keels - prob. cotts - strong developed

basibranch. teeth 7-16 (10)

Waters 18-23 (21.0) - spots - deep body - vs. (21.3)

Scales 42-48 (44.7)

173-206 (187)

NO cecca - rotted - murky - upony 7

F2, 8,

9.4 teeth

(206)

S. p. "

cecca 36

Could be
been old
open back
Jasper
E. P. H. Rk.

42
25 2/7

Nannita N=7 147-297 mm T.L.

Colo. R. x greenback? - variable.

basibr. * all w/ teeth 1-10 (3.3) but 4 of 7 ^{unusual} ~~all~~ ^{3rd one} ~~has~~ ^{found} ~~all~~ ⁱⁿ ~~...~~

19-22 (20.4) - well develop Trappes - Yellowstone - Teeth

* orange fat - orange mesh - Diapomys

44-50 (48.6)

172-193 (181)

cecca 27-43 (34.7)

sim. Fifth L. of 10 L. (20.4) ^{well} ^{develop} ^{had}

75-193

cecca (37.5)

1-14 - 1/3 tiny teeth in base

variable for

↑ great fat deposit - condition

largest
spec.
base small
eggs - but
smaller
eggs in stomach
feeding
date?

Paradise Crk. water 19 Trappes L.

cecca 39

200 L. ren.

Teeth 9, 8

7

Memorandum

To : Everyone concerned

Date : August 25, 1987

From : Department of Fish and Game - Phil Pister

Subject: Successful Reintroduction of Colorado River Cutthroat Trout into Rocky Mountain National Park, Colorado.

During the week of August 17-21, 1987, personnel representing Sequoia and Kings Canyon and Rocky Mountain National Parks, the fish and wildlife agencies of Colorado and California, the Inyo National Forest, and the U.S. Fish and Wildlife Service from Sacramento and Golden, Colorado, joined forces in effecting a transfer of Colorado River cutthroat trout, Salmo clarki pleuriticus, from the Williamson Lakes of California's High Sierra back to a barren drainage in Rocky Mountain N.P. The Williamson Lakes Colorado River cutthroat were planted there from a special shipment of eggs made to Mt. Whitney State Fish Hatchery in 1931 and have remained free of contamination from other trout groups since that time. They have therefore brought back to Colorado perhaps the purest existing group of its native trout. The Williamson Lakes lie within the Inyo National Forest's Bighorn Sheep Zoological Area, a part of the John Muir Wilderness. The area is closed to public access.

Working in a carefully coordinated project involving horses, mules, helicopters, hatchery trucks, and fixed wing aircraft, the specially selected interagency team hiked in over 12,000 foot Shepherd Pass to a camp at 11,760 foot elevation Williamson Lake No. 3 on August 17 and, during the next two days, collected and prepared for shipment approximately 300 trout. On August 20 these fish were flown by National Park Service helicopter to Independence, where they were placed aboard a specially equipped Mt. Whitney Hatchery truck and driven to Bishop Airport.

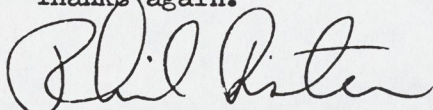
At Bishop, the trout were loaded aboard the California Department of Fish and Game Beechcraft King Air, which had been equipped with special tanks for the trip to Colorado. The trout left the Williamson Lakes by 0730 and not long thereafter were placed aboard the Beechcraft for the 3-hour flight to Kremmling Airport located high in the Rockies adjacent to Rocky Mountain National Park.

At this point they were trucked to a waiting N.P.S. Llama helicopter which took them to their new home. Accompanying the trout aboard the various flights was Bruce Rosenlund, a member of the interagency team and a fish culturist and biologist with the U.S. Fish and Wildlife Service at Golden, Colorado. Coordinating activities from the California end was Phil Pister, DFG fishery biologist at Bishop. Elapsed time between the Williamson Lakes and "the old country" in Rocky Mountain National Park was less than eight hours, including an unexpected hour-long road construction delay enroute to Rocky Mountain N.P.

Because each of you played a special and vital role in this highly important venture, I want you to know how grateful I am for your efforts. Even after spending 35 years in this business, I never cease to be impressed by the extreme versatility and competence of those in the field of natural resource conservation. We are bound together by a great common cause!

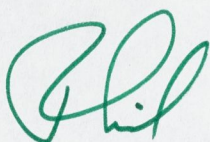
I am in the process of preparing an article covering this project, possibly for publication in Fisheries, a bulletin of the American Fisheries Society. Another possibility would be one of the publications of the National Park Service. Any suggestions you might have would be welcome. The article will be rather lengthy, because I feel it should begin with an episode which occurred in 1953 when as a newly-hired biologist with California, I was taken aside by Lee Talbot, one of the old-timers at Mt. Whitney Hatchery and one of two surviving members of the 1931 planting team. His words to me were prophetic, and are verified by a tape I made in 1974, shortly before his death: "There's something I want you to know about a special bunch of fish from Colorado that we planted in the Williamson Lakes back in 1931. I have a hunch them little fellers may be valuable to somebody someday." And the story goes on from there.

Thanks again.

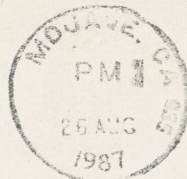


E. P. Pister
Associate Fishery Biologist

Bob: This had to be one of the most traumatic experiences of my career!



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