

June 26, 41 #1

A small spring run tributary to the La Junta about 1/2 mile above Arrellans Cr. It is 1-2 feet wide 1/2 to 3 inches deep with a fine gravel and silt bottom. It appears to be a fine place for speckled trout spawning. It is not used by the Rio Grande Cutthroat.

8:20 Arrellans Cr. The fish are on the redds. A. 62 W 47°F.
Spring run below W. 46° no fish seen

8:45 Arrellans Cr., 100 yds above mouth.

The water is white and slightly turbid. The stream is about 3 feet wide and five inches deep at the riffles.
Redd #9 The redd is at the lower end of a small but nice pool. The downstream edge is just at the break in the slope of the riffle. Depth 2-5 inches, current moderately strong, bottom gravel and small flat rubble. The redd is in the middle of the stream but to one side of the main channel.

8:50 The trout are beginning to show themselves.

8:52 One entered the redd and left. A male?

8:55 Two are anxious to return.

8:58 One was seen to feed at the lower end of the pool.

8:59 One took a flying leap for a fly.

June 24, 1941 # 9

WJK41-06-26-01

3 PM W60 A 82

Collection - small trout came from Rio La Santa between Palisapiis and Melland canyons. The large trout came from a spring run - SL 145 TL 180., ripe.
Temperature - Rio La Santa W 45 at 4 PM.

2494 2500 2510
1000 1010

Collection Rio La Santa below Palisapiis Cr.

5-6 PM. taken on worms. W 45, A 82

- | | |
|----------------|----------|
| 1) ♂ ripe | 229 TL |
| 2) ♂ very ripe | 205 TL. |
| 3) ——— | 166 T.L. |
| 4) ♂ very ripe | 216 T.L. |
| 5) ♂ ripe | 187 T.L. |
| 6) ——— | 163 T.L. |

preserved immediately.

June 26, 1941 # 8

Redd: [#] Under spruce - described day before yesterday.

Photo - just upstream from large exposed rock.

Redd: [#] In a slower place as semi-pool in a riffle; in the open, come in the stream fair; current moderately strong, to one side of channel, 1 FPS; Bottom gravel - 10 cm. with little fine material; depth mostly 8-13 cm. Photo - just opposite end of stick

Watched a fight. Took several photos. They hit each other at or near the apex.

Redd. Another redd, practically identical with preceding except depth --- 3 feet downstream.

A ♀ entered and remained in the upper redd. Apparently tracks in both as one was seen there before.

photo

Redd - descr. June 25., Photo - flat rock tilted and with stick on it. This is the one in the middle of the stream and nearest to being in the main channel. It is located directly between small stone protruding on left and larger ones on right.

Redd: just above riffle to one side of main channel (in photo just above break in riffle between measuring stick and stick in foreground.) near middle of stream; ~~30~~ 30 x 45 cm.; bottom gravel - 10 cm across; no pits in redd shallow depressions; Current 1 FPS ^{depth 8-11 cm.}; come pool but good shelter nearby upstream;

June 26, 1941 #7

Arrellano Creek -

Redd #10 Area poorly defined. 30 to left of main channel in 5-8 cm. depth, Current moderate (2 FPS), Bottom of gravel with some small rubble. (In photograph - slightly to left of large rock in midstream. (above and below stick)

Redd #11 At edge of stream in 8-10 cm. of water, Current strong but ~~current~~ redd is to one side. Bottom of large gravel; about 25 cm long, 15 cm wide, & 15 cm long; In photograph - opposite stick., photo before also belongs. In sun, little cover, pool above and below only fair for shelter

Redd #12 At edge of main channel; Bottom gravel 2-5 cm; size not exactly determined; 400 cm from edge of stream to center of redd; Current moderately strong, 1 foot per second once redd, much faster in channel; No shore cover, redd in sun; good protective pool just above.

Redd #13 In a position very similar to the preceding, ^{in the pool below} - At end of a short pool and at the head of riffle; Current moderate on the shore side, strong in the middle; ^(average 2 FPS) Bottom of gravel mostly 2-3, some - 8, cm in diameter; Under spruce log in sun; size 23 x 25 cm; depth 6-13 cm. Photos - just above and to right of stick.

June 26, 41 #6

10:11 (cont.) ♂, back - (the two R. G. CT are not visible.)

Disturbed 1

10:30. ♀, returned

10:34 ♀, dug on

" " " left side

10:35 " " " right "

" " " right "

" " " left "

" " " left "

10:36 " " " right "

10:37 " " " left "

10:38 " " " " "

" " " " "

10:39 No ♂s in sight.

10:40 ♀, dug on right side

a ♂ made a momentary appearance at the red.

10:41 ♀, dug on her left side

10:42 " " " " right "

" " " " left "

" " " " " "

10:43 ♂, trying to return

10:45 ♂, on

10:47 ♂, and ♀, on nest

♀, dug on her left side.

10:50 " " " " " "

♂, shook twice

Disturbed again - This time so badly, that the first and I gone up.

June 26, 41 #5

9:54 No fish on redd. ♀, off, ♂s are chasing each other about the pool. No combats or ceremonies.

9:55 ♂, on redd.

9:56 ♂, took something from surface and churned it vigorously.

9:58 A tagged fish came up to the redd, he and ♂, went off downstream. ♂, returned.

9:59 ditto

no ♀ about.

10:05 ♀, is just to the left of the redd, apparently feeding. ♂, herded her onto the redd.

She dug feebly on her right side.

10:06 ♀, dug on ~~the~~ her right side and a little later on the redd.

10:07 ♂₃? challenged ♂₁, and both drifted downstream. ♀' dug right.

♂₁, shook.

10:08 ♀₁ and a small ♂_? are on the redd while ♂₁, chases ♂₃.

10:09 small one chased by ♂₁,

10:11 A new arrival? ♀ R.G.C.T about same size as ♂₁, but more deeply colored, arrived and one took possession in a wild free for all. They battled each other as ♂₁, battled ♀₁.

Am losing track of individuals. There are at least two small and 3 large specimens about the redd from time to time.

June 24, 41 #4

A 5 inch trout (see?) trying to enter. Chased by σ_1 .

9:36 σ_1 , chased a small trout from just ahead of the redd.

9:37 σ_1 is constantly busy chasing the smaller σ 's.

When he does get a few seconds peace, he attempts to stimulate the ϕ by shaking.

9:40 σ_1 does not tolerate other fish except ϕ , within 2 feet of the redd.

9:42 Another Y.C.T.? σ_3 almost the duplicate of σ_1 , now making attempts.

9:44 σ_3 made a lunge at σ_1 , and drove him off the nest temporarily. Looks like he will take over soon.

9:45 ϕ_1 is on with a small (5 inch) σ that was just driven off by σ_1 .

9:46 σ_1 on with ϕ_1 . σ_3 is on the ~~same~~ right side of the redd in the σ channel. σ_1 & 4 in shallow water near redd.
 ϕ dug left.

9:47 σ_1 chased σ_3

9:48 ϕ_1 dug on left side then right.

9:50 ϕ_1 off, σ_1 on driving off other σ 's.

9:52 σ_1 on redd, dropped down into the pool below.

σ_3 came on and also dropped down.

Both σ_1 & σ_3 are off and on - they are hard to tell apart.

June 26, 41 #3

colored and the spots extend pretty well forward.

9:22. ♀ entered

9:23. ♂₂ entered and was chased by ♂₁,
♂₁ and ♀₁ are on the redd.

♂₁ gave ♀₁ a sharp reduncie butt with his head against her opercle which shook her up.

He made several stabs at her and she dug feebly once.

9:24 ♂₁ shook and the ♀ dug on her right side.

♂₁ is generally higher off bottom than the ♀. He is usually somewhat back of the ♀ although sometimes ahead.

9:25 ♀₁ dug on her left side.

9:26. ♂₁ shook.

The ♂₁ occasionally makes feints - starts forward toward the ♀, apparently aiming at her vent, then stops short just before hitting her.

9:28 ♂₁ shook, later flinched

♂₁ chased ♂₂ who returned and hesitatingly offered combat but who ran when the former started for him.

9:30 A beautiful R.G.C.T. came up from downstream. I rather suspect that ♂₁ is a yellowstone C.T.

9:35 have been reading my camera. In general events appear to be as outlined above - ♂₁ & ♀₁ on the redd, ♂₂ trying to enter and maintain a position

June 26, 91 #2

- 9:02 Two almost on redd.
- 9:04 One entered and remained. It looks like a ♀ and is moving just enough to maintain position.
- 9:05 Another came and went in a flash.
One leaped after a fly.
- 9:06. The first one that entered the redd just moved forward out of it.
- 9:07 Two are on the redd.
One left - downstream.
- 9:08 Other left - upstream
- 9:09 One back.
Three close, but none are on.
- 9:10 Two moved slowly out into the main channel and were washed downstream - tail first.
- 9:12 The one mentioned first, a 7 inch ♂, entered the redd and left.
- 9:14 Two are on the redd. ♂₁ is now "shaking" apparently to stimulate the (6 inch) female. He was on her left side. The shaking starts with a small forward dart toward the ♀.
- 9:16 A ♂ came on and then left.
- 9:21 ♂₁ chased ♂₂ downstream toward redd. [??]
♂₁ is on the redd, ♂₂ is off. The former is leg 2 &