

Juvenile Salmonid Inventory of Baldface Creek, North Fork Smith River Basin, Oregon.

Survey Description

On August 27 and 28, 2012 one technician from the California Department of Fish and Wildlife and two technicians from the US Forest Service Starr Ranger District conducted snorkel surveys for juvenile fish in a reach within Baldface Creek, tributary of the North Fork Smith River. The survey reach was randomly selected using the GRTS algorithm to assess juvenile coho salmon (*Oncorhynchus kisutch*) spatial structure throughout the Smith River basin. Overall, a total of 40 reaches were surveyed out of 115 total. The reach surveyed was approximately 1,300 meters long and located in upper Baldface Creek near Frantz Meadow (Figure 1). Surveys were performed following a standardized protocol where every other pool in a selected reach was surveyed starting at the downstream end of the reach and moving upstream. A pool was surveyed by a diver entering the pool to be sampled at the downstream end, slowly moving upstream searching the entire pool and all cover objects, while identifying and counting all fish observed. The diver would exit the pool at the upstream end and would record all fish observations. The results of this first dive were not disclosed to the second diver to prevent any bias in search effort or counts of fish observed. The second diver would then perform a survey of the pool in the same manner as the first diver. We do not assume that we see every fish an individual pool. Performing multiple independent dives allows us to measure individual diver detection probabilities, especially when Coho Salmon occur in low numbers or in circumstances where stream cover is difficult or impossible to survey.

Results

We observed three species of juvenile salmonids from sampling 22 pools in Baldface Creek including Coho Salmon (*Oncorhynchus kisutch*), Steelhead Trout (*O. mykiss*), and Cutthroat Trout (*O. clarkii*), (Table 1, Figures 2 and 3). Coho Salmon were observed in 14 of 21 pools surveyed (Figures 2 and 3). Steelhead Trout were observed in every pool and Cutthroat Trout were observed in 10 of 21 pools. This portion of Baldface Creek is fairly low gradient (<2%) and has several complex log jams and other woody debris features that create complex underwater cover. Suitable spawning gravel is present throughout the reach but is most abundant in the portion of stream immediately adjacent to Frantz Meadow. Time constraints did not allow for further reconnaissance of Baldface Creek either upstream or downstream of the selected reach, however, from aerial photos it appears similar habitats are could exist upstream of this reach for perhaps another 1,000 meters. A more comprehensive analysis and report for the entire survey is currently in development and will be available in the Fall, 2013.

Contact: Justin Garwood, California Department of Fish and Wildlife, 5341 Ericson Way, Arcata, CA 95521, (707) 825-4723, Justin.Garwood@wildlife.ca.gov

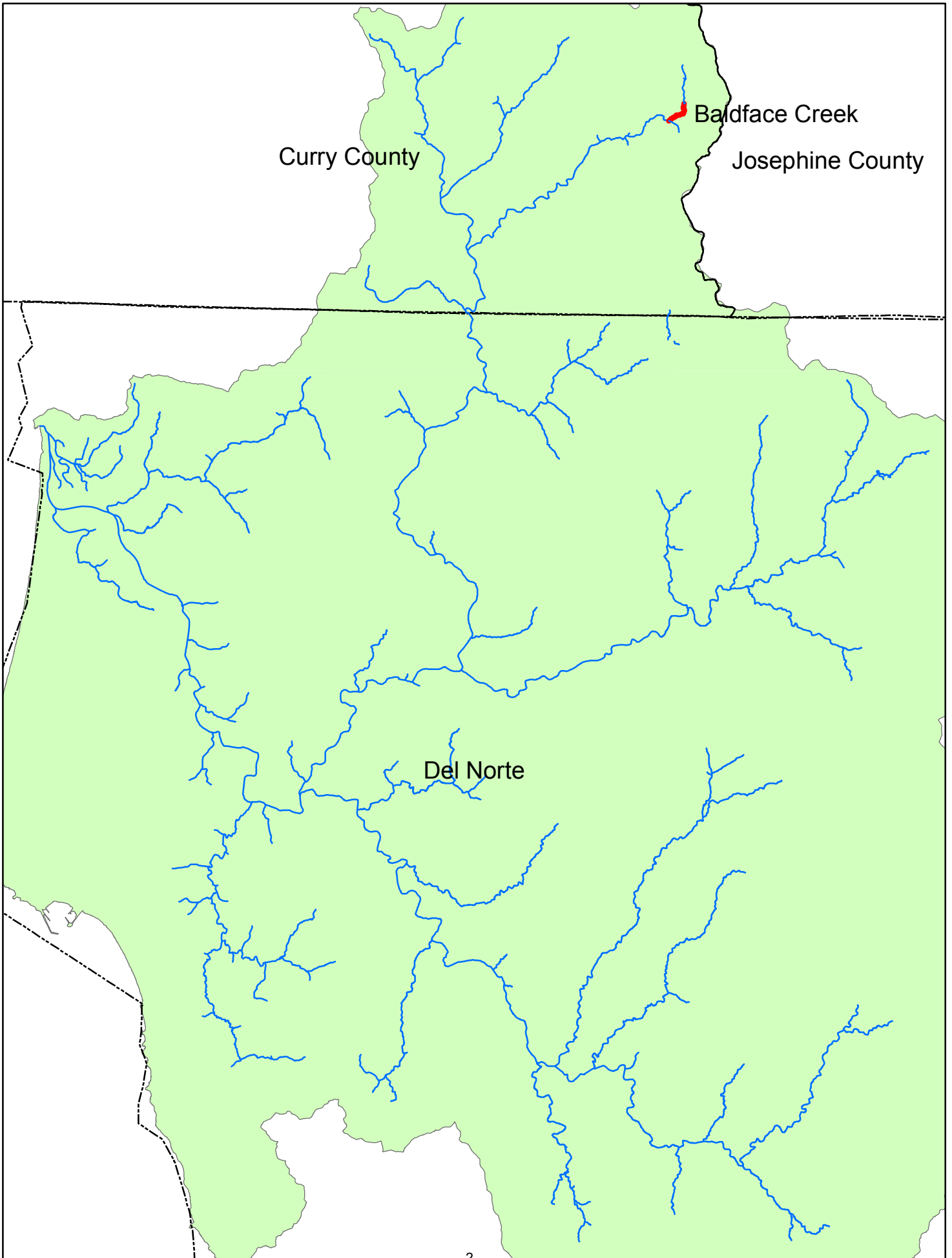


Figure 1. Overview map of the study region and survey reach.

Table 1. Counts of salmonids observed by species and life-stage during of each dive pass in Baldface Creek, Curry County, Oregon 27 and 28 August 2012.

Date: 27-28 August 2012 ML= Monty Larson (CDFW), EP= Eli Polsky (FS), WG= Whitney Gee (FS)

Unit#	Observer	Dive pass	Coho	Coho 1+	YOY trout	1+ Trout	Cutthroat >150 mm	Rainbow >150 mm	YOY Chinook	Salmonid spp.
1	ML	1	0	0	19	1	0	0	0	0
1	WG	2	0	0	18	0	0	0	0	0
2	EP/ML	1	7	0	89	16	0	0	0	0
2	ML/EP	2	3	0	115	9	0	0	0	0
3	WG	1	0	0	11	0	0	0	0	0
3	ML	2	0	0	17	0	0	0	0	0
4	EP	1	0	0	10	0	0	1	0	0
4	ML	2	0	0	18	0	0	0	0	0
999	ML	1	0	0	25	5	0	0	0	0
5	WG	1	0	0	10	0	0	0	0	0
5	ML	2	0	0	30	0	0	0	0	0
6	EP	1	5	0	26	2	0	0	0	0
6	ML	2	1	0	62	1	0	0	0	0
7	WG	1	3	0	31	8	1	1	0	0
7	ML	2	4	0	55	6	0	0	0	1
8	EP	1	0	0	12	1	0	0	0	0
8	ML	2	0	0	19	1	0	0	0	0
9	WG	1	0	0	55	5	1	0	0	0
9	ML	2	12	0	41	4	0	0	0	0
10	EP	1	0	0	11	1	0	0	0	0
10	ML	2	0	0	16	2	0	0	0	0
11	WG	1	0	0	28	6	1	0	0	0
11	ML	2	1	0	34	3	1	0	0	0
12	EP	1	6	0	22	5	1	0	0	0
12	ML	2	8	0	51	3	1	0	0	0
13	WG	1	3	0	43	4	1	0	0	0
13	ML	2	6	0	35	2	0	0	0	0
14	WG	1	3	0	30	2	1	0	0	0
14	ML	2	1	0	35	3	0	0	0	0
15	EP	1	0	0	4	0	0	0	0	0
15	ML	2	3	0	9	2	0	0	0	0
16	EP	1	15	0	45	8	3	0	0	0
16	ML	2	19	0	108	26	2	0	0	0
17	WG	1	3	0	22	3	0	0	0	0
17	ML	2	1	0	32	4	1	0	0	0
18	EP	1	5	0	54	5	1	0	0	0
18	ML	2	9	0	67	19	0	0	0	0
19	WG	1	3	0	29	4	1	0	0	0
19	ML	2	1	0	27	0	1	0	0	0
20	EP	1	0	0	22	1	0	0	0	0
20	ML	2	1	0	40	1	0	0	0	0
21	WG	1	0	0	17	0	0	0	0	0
21	ML	2	0	0	20	0	0	0	0	0

Baldface Creek Juvenile survey pool locations

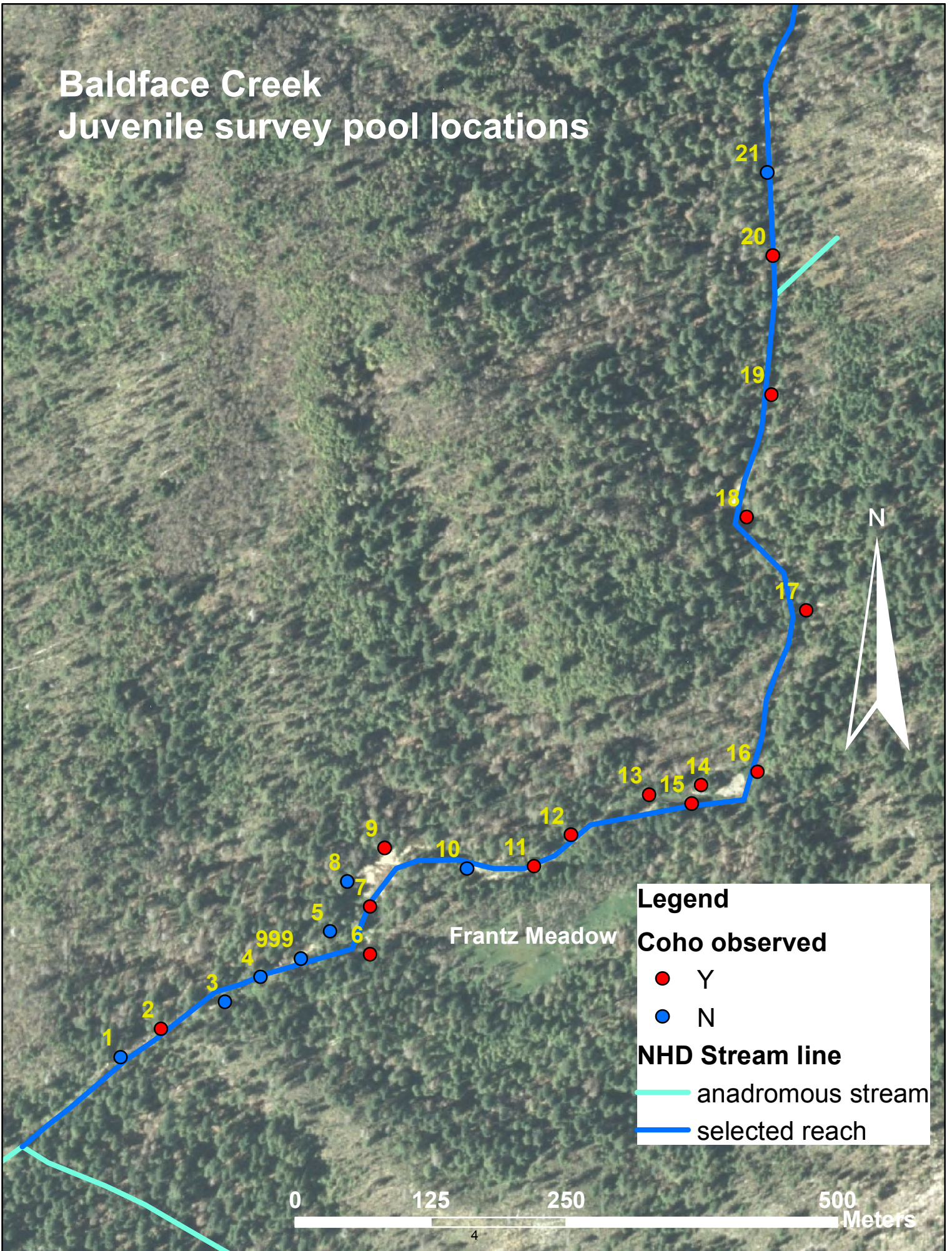


Figure 2. Map of juvenile salmonid survey reach, Baldface Creek, North Fork Smith River, Oregon.

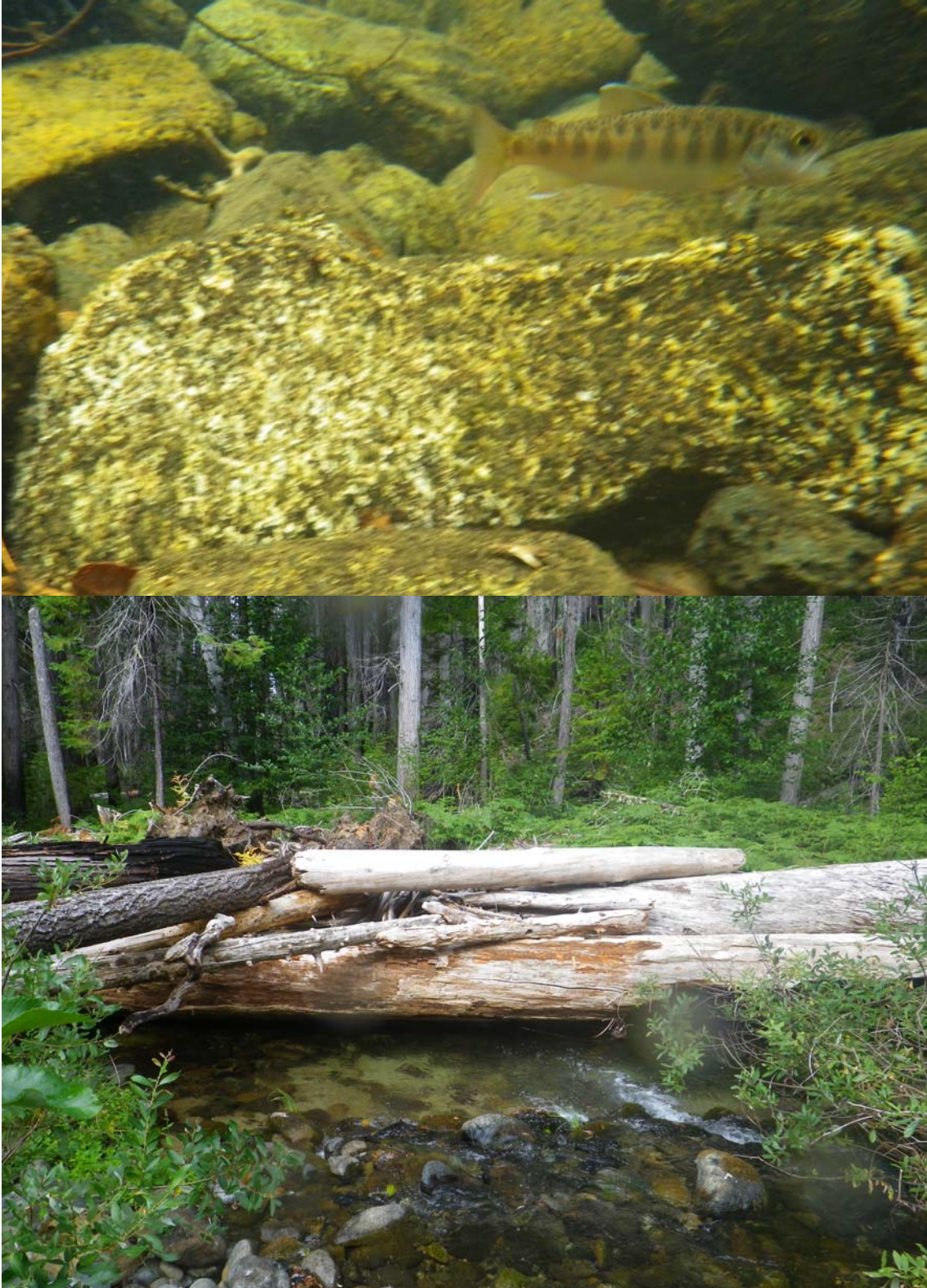


Figure 3. Top image of a juvenile Coho Salmon observed in Baldface Creek, Northfork Smith River, Oregon on 27 August 2012. Bottom image represents typical pool habitats containing juvenile Coho Salmon within the surveyed reach.