

MAR-SUP for

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FIELD NOTE
Halleck Creek
Marin County

An inspection was made of the silver salmon fingerling plant area approximately three weeks after the plant was made. They are extremely abundant in the gravel pit pond where it is understood 10,000 were planted. There is, however, no evidence of any downstream movement. Although they could physically escape, the stream flow is limited and there seems to be no reason for their wanting to leave the gravel pit area. An inspection was also made of the area where the lower plant occurred. It is understood that approximately 20,000 were planted in this portion. The fish had moved up and down about equally for a quarter mile area from the point of planting. They were concentrated by the hundreds in each suitable pools. In other words, the fish had scattered from a single planting spot up and down stream for a total distance of one-half mile.

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WAE:bg-3/1/65

MAR-546-707

FIELD NOTE
Halleck Creek
Marin County
February 13, 1965

Hiked upstream about one and one-half miles from just below gravel pits to the first redwood area. Estimated flow 7-10 cfs. Gravel pits have all been filled in by winter storms. Silver salmon yearlings were seen scattered both above and below the gravel pit area in all large pools. They were found in schools of 20 to 200 fish. The stream consists primarily of riffles. No fish were seen in the riffles. The water was clear, but fish are quite difficult to see in these areas. However, they were readily visible in large schools in all of the pools. No adult fish were seen. These are yearlings which have survived from the planting made prior to the heavy floods.

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MAR-SUE J. J.

FIELD NOTE
Halleck Creek
Marin County

July 18, 1965:

The stream was surveyed on this date to determine the number of areas that were supporting juvenile salmonids at this time of year.

The stream was dry from the gravel area to 100 yards below the forks near the end of the road. Where flow was first noted, the pools were full with young salmonids, 50 to 100 in each pool 20' x 10' x 1' deep.

I hiked up the North Fork. For the first 1/8 mile above the mouth the stream was intermittent. Pools were loaded with young of the year salmonids. One-eighth to 1/2 mile above the forks the stream had permanent flow. Pools appeared loaded to capacity with 40 to 50 fish per pool or approximately 100 salmonids per 100 feet of stream. Estimated flow 1/10 cfs. clear, cool. Nearly all fish seen were young of the year, appeared to be silver salmon. Those some might have been steelhead. Large fish which might have been yearling size (3 to 6 inches) made up less than one per cent of the fish present.

Upstream 3/4 mile a small tributary, barely flowing, comes in from the north. No fishlife were observed in this tributary. Just below this point there seems to be a boulder barrier. Fish were found in much less abundance above this point. Above this point the stream goes through a series of "roughs," with larger boulders and the pools being smaller. Fewer fish were seen, perhaps 2 to 3 in each pool, where below there were 40 or 50 per pool. These appeared more like native trout or steelhead. One large pool contained an 11 to 12 inch rainbow.

Approximately one mile up the North Fork is a spring seepage area on the north bank. At 1 to 1 1/2 miles up is a beautiful redwood forest area with trees up to 3 feet diameter. Few fish seen in pools. Frogs were abundant. Above here the stream leaves the redwoods and is more open but still well shaded. Hummocks of sedge grow abundantly in the stream channel bottom. Flow is still good at about 1/10 cfs. estimated. Trout young of the year present but only 1 to 3 per pool. Stream appears to go on in this type for at least another mile.

In summary, no specific barriers to fishlife noted except the one mentioned at the abrupt change in the abundance of the salmonids right at the "roughs." Under present conditions this means that there is primarily about one mile of stream used for carry-over of salmon and steelhead in this North Fork above its mouth.

In rechecking the "roughs" for possible barriers, I noted one bedrock falls with a drop of 3 to 4 feet. This is located approximately 50 yards below the first tributary on the north. Efforts should be made this fall to blast out this barrier. In the upper North Fork, air temperature 72 degrees, water temperature 60 degrees, 1100, clear, warm.

I hiked up the South Fork for the lower $\frac{1}{4}$ mile above its mouth. Estimated flow $\frac{1}{20}$ cfs. This is a cool, shaded redwood canyon; however, the stream is rocky and only a few good pools were found. No fish were seen. At several places about one hundred yards above the mouth are possible barriers which would be difficult for a fish to surmount. I doubt if their removal is warranted. Spawning areas appear poor. If anything it is more of a resident trout stream. The main value of this tributary is for its water supply.

The rancher in the upper canyon has a small earth dam in the stream. Below this point the stream is flowing continuously. In the open areas the algae clogs the stream and few salmonids are found, stickleback abundant. In the shaded areas young of the year salmonids are present 8 to 10 per pool or 25 per 100 foot section of stream. They are not real abundant, however. Estimated flow $\frac{1}{5}$ - $\frac{1}{10}$ cfs. It appears that these sections will carry the fish all through the summer. The conclusion is that the shaded areas with large alders and other trees provide suitable habitat for salmonids while the open spaces do not. It therefore appears that a tree planting program may be in order.

Above the triple-barreled concrete arch bridge the stream is 10 to 15 feet wide. Air temperature, 82 degrees Farenheit, water temperature 70 degrees Farenheit, clear, warm. Estimated flow $\frac{1}{4}$ cfs., 1400. Stream clogged with algae. An occasional salmonid seen but primarily roach and stickleback in the open areas.

Further downstream in the open section where the fork from the north enters the main stream and the gravel removal area is, there are open sections clogged with algae and few salmonids. However, the shaded areas have a good salmonid population. It is strongly recommended that tree planting be considered.

WA

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