

Losses during transportation were reduced to an insignificant level in 1966, following high losses in 1964 and 1965. This reduction was attributed to more careful handling, maintaining temperatures in the tank between 34 and 40 instead of between 42 and 50°F., and reducing the concentration of fish in the tank from between 4.7 and 7.1 to about 3.5 per gallon.

In addition to the ripe adults, an estimated 250,000 eggs were artificially taken and fertilized at Bear Lake during the three collection years. About 205,000 were released directly into shallow rocky areas in Lake Tahoe. The remainder were held at Nevada's Verdi Fish Hatchery, and those that survived were released later as eyed eggs (25,000) and alevins (3,000).

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—Ted C. Frantz, Nevada Fish and Game Commission, Reno, Nevada and Almo J. Cordone, Inland Fisheries Branch, California Department of Fish and Game, September 1966.

### A 1955 RECORD OF PINK SALMON, *ONCORHYNCHUS GORBUSCHA*, SPAWNING IN THE RUSSIAN RIVER

Definite records of pink salmon in California coastal streams are uncommon. Scofield (1916) reported "several" in the San Lorenzo River, Snyder (1931) listed it as present but rare in the Klamath River, and Smedley (1952) reported a specimen from Prairie Creek. The only report mentioning the Russian River was that of Taft (1938), who recorded an influx of some numbers of pink salmon in 1937 into the Russian, Garcia, and Ten Mile rivers and a single specimen taken in Mad River.

In the Sacramento River system, the species has been reported more often, the latest paper being that of Hallock and Fry (1967).

After some seasons of hearing occasional rumors of pink salmon in the Russian River, some Department of Fish and Game staff members made a one-day trip to the vicinity of Duncans Mills in 1953. Several gill net drifts were made near the upstream end of tidewater, but no salmon of any kind were obtained. However, while on this trip we talked to several people who told very convincing stories of encountering pink salmon.

On the weekend of October 8-9, 1955, a sportsman landed two pink salmon, a male and female, and took them to King's Sporting Goods Store in Guerneville. Mr. King, who had been arguing that there were no pink salmon in the Russian River, was overjoyed to see them and promptly traded two larger king salmon for them. He then notified the Department of Fish and Game.

Charles Meacham, with two salmon, then went immediately downstream for about 2 hours but then started looking for females, all of which I apparently been caught.

On October 14, 1955, pink salmon spawning was being used was fine king salmon normally spawning more than 2 inches in girth in the center is coarser, fine material near the edge failed to disclose any net.

The females would disappear. They frequently stay a while. It is possible that the writer and three anglers dart about made it difficult certainty. There were, the bank and could be seen.

The females were not going on, but there were one badly decomposed. While the writer was with them, using either one of the first fish stayed hooked for considerable time and exhausted. No gaff or landing attempts to beach it. It was a female in deep water. It was a female was fishing for (and catching).

Hallock, Richard J., and Fry, H. 1967. *Oncorhynchus*, in the Sacramento River. Calif. Fish and Game, 53 (1): 5-22.

Scofield, N. B. 1916. The pink salmon in California. Calif. Fish and Game, 2 (1): 1-10.

Smedley, S. C. 1952. Pink salmon in California. Calif. Fish and Game, 38 (2): 275.

Snyder, John O. 1931. Salmon in California. Calif. Fish and Game, Fish Bull., (34): 1-10.

Taft, A. C. 1938. Pink salmon in California. Calif. Fish and Game, 24 (1): 1-10.

—Donald H. Fry, Jr., California Department of Fish and Game, 1967.

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Charles Meacham, who was then with the Department, obtained the two salmon, then went to the spot where they had been caught, a riffle immediately downstream from the mouth of Austin Creek. He fished for about 2 hours but was unable to obtain any additional specimens, then started looking for carcasses and found four, two males and two females, all of which had apparently spawned and all of which had apparently been caught by snagging.

On October 14, 1955, the writer visited this same riffle and watched pink salmon spawning on at least six different nests. The gravel which was being used was fine and sandy by comparison with that in which king salmon normally spawn; the majority of the larger rocks were no more than 2 inches in greatest diameter. The riffle is a wide one, gravel in the center is coarser, but the pinks appeared to prefer the relatively fine material near the edges. Wading around in the middle of the riffle failed to disclose any nests in the coarse gravel.

The females would dig very briefly, then stop for a fairly protracted period. They frequently swam away from the redd and disappeared for a while. It is possible that they were made nervous by the presence of the writer and three anglers who were in the area. This tendency to dart about made it difficult to identify each female or each redd with certainty. There were, however, four nests which were very close to the bank and could be seen clearly.

The females were not accompanied by males while the digging was going on, but there were some males in the area.

One badly decomposed carcass (female) was found.

While the writer was watching the salmon, one angler hooked two of them, using either one or two salmon eggs on a single No. 12 hook. The first fish stayed hooked only a second or two but the other was played for considerable time and brought into shallow water almost completely exhausted. No gaff or landing net was available and the fish was lost in attempts to beach it. It had enough energy to work its way back to deep water. It was a female of perhaps 5 pounds. The angler in question was fishing for (and catching) small trout.

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