

Memorandum

To : Survey Files

Date: February 26, 1979

From : Department of Fish and Game

Subject: Heather Lake, El Dorado County - Gill Netting

The subject lake was selected as a lake that would not be planted under the USFS agreement of 1972. R. L. Johnson made a recommendation in 1965 that the lake not be planted. However, in 1966, 3,780 BN fingerlings with a Ad fin clip were planted. It is believed these were Mass. strain BN's. Over the years, these fish have been caught in the gill nets set by Department personnel. It is quite possible that some went unnoticed. Growth has been very slow on these fish. In 1967, one BN Ad was caught that measured 5.0 inches, 1968 - 6.0 and 8.1 inches, and 1978 - 15.3 and 15.5 inches. The 1978 fish were thin and in poor condition.

RT were last planted in 1965 and were caught in gill nets set in 1967 and 1968. None have been caught since. The lengths caught ranged from 8.6 - 11.3 and 9.7 - 11.5 inches. Why the RT disappeared is not known. The one inlet stream has a flow of water year around and has limited spawning gravel which the EB utilize and are able to successfully propagate themselves. It may be that when the EB were introduced in 19____ the RT could not compete with them. Past stocking indicates that from 1930 to 1940, 20,000 BN were planted annually. Then from 1941 until 1965 12,000 RT were planted annually. A survey made in 1951 indicates that no fish were observed or caught although it states that "large BN's are known to still exist."

The EB have established themselves and are reproducing on their own without supplemental planting. The net catches indicate a wide range of lengths from 5.0 to 20.0 inches. All of the fish I have seen have been in good condition and the 1978 fish were maturing and would be spawning within a month.

The BN's are hanging in there but are not abundant. Possibly the inlet stream is too shallow for the larger BN's to ascend or they spawn before the EB and their eggs are disturbed. I have observed, and others also, large BN's cruising the shore along the north side of the lake under the trail. The LRS also like this area because of the large rocks underwater.

I do not believe the LRS and DC have increased in numbers over the years. In early summer they are concentrated in the shallows for spawning. Few have been caught in the nets in recent times. They certainly must fall prey to the larger EB and BN throughout the year.

On September 20 - 21, 1978 two monofilament gill nets were set overnight for 18 hours (36 net hours) and caught the following:

EB - 9.8, 10.0, 10.3, 10.5, 10.7, 11.3, 11.5, 11.5, 11.7,
11.8, 12.0, 12.0, 13.8, 14.0 Mean 11.5 inches
BN - 11.7, 14.2, 15.3, 15.3 AD, 15.5 Ad Mean 14.4 inches
LRS - 3.5, 4.2, 4.3, 4.3

All of the fish were in good condition except the BN Ad.

J. B. Richard
for

James B. Richard
Assistant Fishery Biologist
Placerville District

JBR:sw

cc: J. Richard

Summary of Gill Netting in Heather Lake

<u>Date</u>	<u>No.</u>	<u>EB</u>	<u>No.</u>	<u>BN</u>	<u>No.</u>	<u>RT</u>	<u>LRS</u>
9/20 - 21/78	14	9.8 - 14.0	5	11.7 - 15.5	0		4
2 Mono's		$\bar{x} = 11.5$		$\frac{2}{2}$ Ad $\bar{x} = 14.4$			
7/13 - 14/72	13	7.3 - 13.5	1	11.3	0		5
1 Nylon		$\bar{x} = 11.0$					
7/24 - 25/68	41	5.0 - 14.0	5	6.0 - 12.5	4	9.7 - 11.5	28
2 Mono's		$\bar{x} = 9.5$		$\frac{2}{2}$ Ad $\bar{x} = 9.3$		$\bar{x} = 10.8$	
7/11 - 12/68	9	9.3 - 15.0	5	13.2 - 18.5	0		10
3 Nets		$\bar{x} = 10.7$		$\bar{x} = 14.7$			
10/25 - 26/67	39	5.8 - 20.0	6	5.0 - 24.9	10	8.6 - 11.3	5
2 Nets		$\bar{x} = 8.8$		$\frac{1}{1}$ Ad $\bar{x} = 14.1$		$\bar{x} = 10.3$	
8/4 - 5/65	7	5 - 12	0		0		33