

REPORT TO  
COMMITTEE FOR ATLANTIC STEELHEAD TROUT  
NEW JERSEY STATE COUNCIL FOR TROUT UNLIMITED

Summary for period  
April 10, 1981 to April 9, 1982

by

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We have maintained steelhead trout in our flow through salt water tanks for one year. We conclude that they are capable of surviving in the waters of Sandy Hook Bay in the New York Bight. The surviving fish were subjected to a period of extreme stress.

Ninety steelhead trout (Salmo gairdneri) were brought to the laboratory by Trout Unlimited in two groups and introduced to salt water as smolts. The second group was in conjunction with the release of fifty thousand into the Navesink River, Red Bank, New Jersey. Our object was to maintain the fish and monitor their growth and health; performing autopsies on moribund fish. At no time were any prophylactic measures or treatments taken regarding diseases or temperature control.

During the first month, 30% of the fish died, half as a result of jumping out of the tank. Approximately half of all those that died showed signs of a myxobacterial gill disease although only in two cases was this determined to be the cause of death.

After the first month the population stabilized and there were no losses until problems developed with the water supply, and there was no circulating water for one week. The fish were subjected to NNP levels of 300  $\mu\text{M/L}$  (normal 25  $\mu\text{M/L}$ ),  $\text{PO}_4$  levels of 10  $\mu\text{M/L}$  (normal 2  $\mu\text{M/L}$ ) and temperatures of 23°C. During this time, 60% of the fish died, some showing severe signs of disease. Furunculosis and myxobacterial gill disease were positively identified and the pathological state of some fish strongly indicated *Vibrio*.

Once normal conditions were restored, the population again stabilized with five fish remaining. There have been no deaths since September 1981. Growth rate has been reasonably good. The fingerlings arrived weighing

approximately 20 g and were 15 cm long. As of the last weighing and measuring (January 19), the fish weighed from 200-500 g and ranged from 26-34 cm in length.

Had we not had water problems, we feel that a high percentage of the fish would have survived without any special care in our tanks and we feel that this should be an encouragement to Trout Unlimited.

Personnel costs for the period covering January 29, 1982 to March 31, 1982:

Ms. Toni Gahn.....\$100

Ms. Vicky Kasper.....\$100

Dr. Joanne Stolen to  
pay Mr. Peter Kaiser  
for the catching of  
killies.....\$ 20  
          \$220