Subject: Project Report No. 2- TU-Dartmouth Trout Research Project

**Since our last report on August 3, 2017, we have captured and tagged an additional 32 fish and assigned sponsors.  The updated list is attached, showing tagging and sponsor assignments through 8-13-17. The newly tagged fish are Numbers 304-335.  We have now captured and tagged 335 fish through 8/13/17.  Once again, to locate the capture site of your assigned fish, move upstream (from the confluence coordinates) the number of meters shown for your fish in Column E.  Also remember that the unique identification number for your fish is the Pit tag Number in Column G. It is anticipated that an additional effort to capture and tag fish will take place in about 10 days, probably using backpack electrofishing.  This is likely to be the last effort to capture and tag fish for 2017. Those of you who volunteered to help with field work are being contacted to assist. If anyone has not contacted me about wishing to volunteer to help, please contact me at** rjpiampiano@gmail.com**.**

**Tracking of tagged fish has also begun on a regular basis and will intensify as the fall spawning season approaches.  This is proving to be quite labor intensive and time consuming, in part because the location of Loomis Valley Brook is not easy to reach, and the bugs and mosquitos this year have just never quit.   Just carrying the large fresh batteries to some of the tag sensor devices is a major chore. Special thanks to TU member Glenn Booma for hours of backbreaking work hauling batteries and other tasks.**

**We have succeeded in tracking and “finding” many of the tagged fish. However, almost all of them have been found in very close proximity to the location at which they were tagged.  For all practical purposes you can assume that your fish have not moved any significant distance. My own theory as to why this has happened (I have not discussed this with the biologists) is that as the summer has progressed, water levels have gone down and temperatures in the main stem of the Dead Diamond have gone up, and these small fish have continued to stay in Loomis Valley Brook where there may be more shade, shelter, and cooler water temperatures due to springs or other factors.  We continue to take temperature and flow data, and it will be interesting to see, when this data is analyzed, if I am correct. For those of you who would like to monitor water levels in the main stem of the Diamond River, go to** [www.waterdata.usgs.gov](http://www.waterdata.usgs.gov/) **and ask for data on USGS Station Number 01052500 Diamond River. In the past few months flows have fluctuated between almost 400 cfs and 65cfs. This site will give you current real time flows as well as historical data.**

**We do not plan to report movement activities of any tagged fish until tracking shows that there has been some significant movement. It remains to be seen if cooler temperatures, shorter days, hopefully more water, and the approach of the spawning season causes these fish to move.  However, as noted in our first Project Report, it may be some time before we have any significant movement data to share with you.**

**Beginning at the end of September, Ian Glass, who is a board member of Sebago Chapter and a fisheries management student at Southern Maine Community College, will be spending almost full time at the Grant assisting Keith Fritschie and Dianne Timmins in tracking fish and monitoring spawning activities.  This will provide the project with a valuable field technician during a critical part of the year, and will provide Ian with some invaluable field experience for educational purposes.**

**The approach of fall will also bring a significant intensification of activity at spawning sites to test some of the theories about spawning site selection that Keith Fritschie is investigating for part of his PhD work at Dartmouth.  Last year, Keith spent many hours in the water with scuba gear observing spawning fish, some of which were over 4 pounds, close up, and taking critical measurements to try to determine where spawning fish are coming from (Will we see any of the fish tagged at Loomis Valley Brook?) why they have selected particular spawning sites, the role that groundwater temperature and upwelling may play in site selection, and how available redds at each site are allocated among several spawning fish. As many of you know, he obtained over 30 hours of underwater video showing spawning activities, and I suspect that he and Ian Glass will be obtaining more footage this fall.  In October, we will also find out whether or not our Embrace A Stream Application to TU national has been awarded any money.**

**In summary we are moving into an exciting and critical time of year to collect data, and will be reporting further. In the meantime, thank you all again for your support and continuing interest in this project.  Please feel free to contact me with any questions, either by email at the above address or by telephone at** 207-721-8512**.**