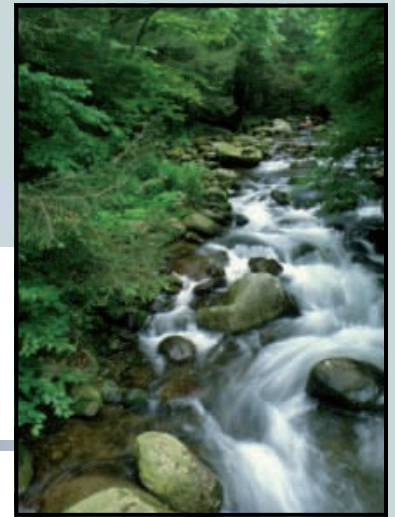


Focus: Nonnative Fish Removal



Research

Technology Transfer

Science Application

Key Findings:

- Early tests suggest that pheromone-based trapping may be a useful tool in control of nonnative brook trout.
- The distribution of captures of juvenile and adult brook trout that were not sexually mature was of the expected number.
- Recaptures of brook trout were rare.
- The greater overall catch rate of ripe males may indicate that males were more mobile at the time of trapping and encountered traps more frequently.

Challenge

Removing nonnative brook trout without harming native cutthroat trout or reducing water quality in Rocky Mountain streams.

Context

Nonnative brook trout have invaded and replaced native cutthroat trout in many Rocky Mountain streams. Methods to remove brook trout, such as chemical treatment and intensive electrofishing, are expensive, time-consuming, and sometimes controversial. An alternative technique used in control of unwanted insects, pheromone lures and traps, may be applicable to fish.

Actions

We ran experiments in Wyoming and Idaho streams in separate years with empty nets and nets seeded with reproductively mature brook trout.

Results

- Seeded nets caught significantly greater numbers of adult brook trout than unseeded nets.
- Captures of adult males greatly exceeded those of females.
- Relatively limited efforts resulted in large proportions of all adult brook trout being captured.
- Because variation in captures is high and captures of female brook trout are low, we are conducting additional work to refine this into an effective management tool.



Nonnative Fish Removal



Figure 1. Hoop nets containing enclosures seeded with mature brook trout were effective in capturing large numbers of adult brook trout.

Publications & Presentations

Young, M. K., B. K. Micek, and M. Rathbun. 2003. Probable pheromonal attraction of sexually mature brook trout to mature male conspecifics. *North American Journal of Fisheries Management* 23: 276-282.

Lamansky, J., Jr., E. Keeley, M. Young, and K. Meyer. 2006. *The use of hoop nets seeded with mature conspecifics to remove brook trout.* Presented at the annual meeting of the Western Division of the American Fisheries Society, Bozeman, MT, 15-19 May.

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