Evaluation of Rainbow Trout stocking in three Hubbard County stream-trout lakes

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MN DNR Fisheries - Park Rapids
Introduction

- Rainbow Trout stocking since 1960 with various strains
  - Arlee, Donaldson, Fish Lake, Madison, Wyoming and Wytheville
- In 1998, stocked annually with Arlee strain fingerlings
- In 2012, annual stocking were split between Arlee and Kamloops fingerlings
Study area

• Blacksmith  
  – 38.5 acres
• Crappie  
  – 23 acres
• Newman  
  – 45 acres
Methods

• Fish population
  – Stocking (mid-Oct)
• Length and weight
Methods

- Fish population
  - Summer survey
    - 2 gill nets / 5 trap nets –
    - Length, weight, strain and scales
Methods

• Zooplankton
  – Monthly (May – Oct)
    • Dissolved oxygen/temperature profile
    • 3 tows - 150 um and 750 um mesh
Methods

- Angler catch

346 postcards - 2014
Methods

• Angler catch

405 postcards - 2015
Length – stocked fingerling

No data collected
Condition – stocked fingerlings

No data collected
Age-1 lengths – summer survey

- Blacksmith
- Crappie
- Newman

2013

2014

2015

2016

2017
Strain ratio – summer survey

Blacksmith  Crappie  Newman

2013

2014

2015

2016

2017
Growth

- ANOVA Model
  - Sample year, Year-class, lake, strain, days of growth
- Strain was significant
  - Biologically (2 mm)
- Lack of data
  - Arlee carry over and 2012 stocking
- Survival of Kamloops

![Graph showing growth over years for different strains and age classes.](image-url)
Zooplankton

- No significant difference in biomass and density
  - 750 um and 150 um
  - Daphnia pulicaria
  - ZPR
- Some higher values observed in 2002/2003
Angler participation results

- Postcards, flyers, press release = 16 anglers
- Angler diaries
  - 30 interviews in 2014 summer
  - 16 interviews in 2015 winter season
Angler participation results

- Postcards, flyers, press release = 16 anglers
- Angler diaries
  - 30 interviews in 2014 summer
  - 16 interviews in 2015 winter season
  - 25 interviews in 2015 summer

<table>
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<th></th>
<th>Blacksmith</th>
<th>Crappie</th>
<th>Newman</th>
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</table>
Fishing pressure (angler hours)
Strain ratio – angler catch

Blacksmith

2014 Summer

2015 Summer

2016 Summer

2017 Summer

Crappie

No angler information

Newman

No angler information
Recommendation

- Continue stocking
  - Kamloops only

- Gill and trap net sampling
  - Back to once every five years

- Zooplankton sampling
  - 2021/2022
Any questions?

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