APPENDIX J

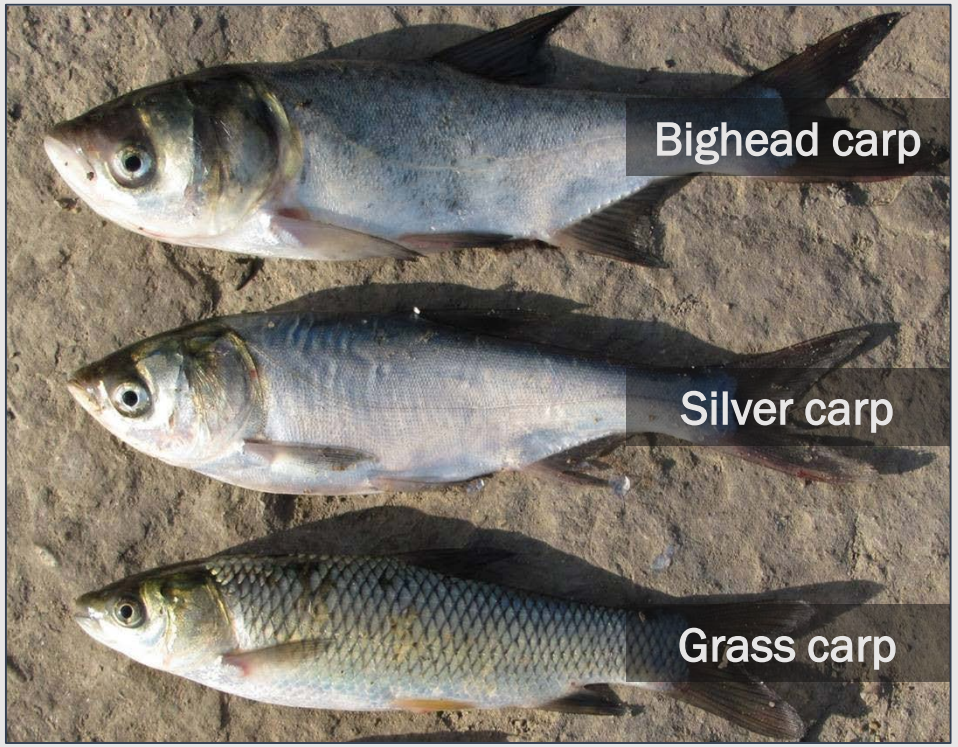
North Dakota's Aquatic Nuisance Species Program

Water Topics Overview Committee

North Dakota Game and Fish Department
September 22, 2016

Background

- Aquatic nuisance species (ANS)
  - Non-native species
  - Spread rapidly
  - Outcompete native species
  - Cause harm (ecological, economic, or social)
- Pathways for spread
  - Natural – downstream drift, upstream migrations
  - Human – movement of organisms or water
    - Accidental – as contaminants (shipping, recreation, etc.)
    - Intentional – aquaculture, pets, horticulture, etc.



Background

- North Dakota Statewide ANS Management Plan (2005)
  - Outlined potential harm to North Dakota
  - Identified strategies to address pathways and issues
- Aquatic Invasive Species Committee (2005)
  - Multiple interests represented
  - Led by the ANS Coordinator (NDGF)
  - Works to implement ANS Management Plan
- NDGF administrative rules
  - In place since 2008
  - 2016 drain plug regulation

Goal: to protect ND's resources for the future

ANS in North Dakota

- Limited populations of four species:
  - **Curlyleaf pondweed (2002)**
    - Missouri River and a few lakes around state
  - **Eurasian watermilfoil (2009)**
    - Sheyenne River, eradicated from Dead Colt Creek
  - **Silver carp (2011)**
    - James River up to Jamestown Reservoir Dam
  - **Zebra mussels (2010)**
    - Established population in Red River since 2015
    - Larvae detected in very low numbers since 2010

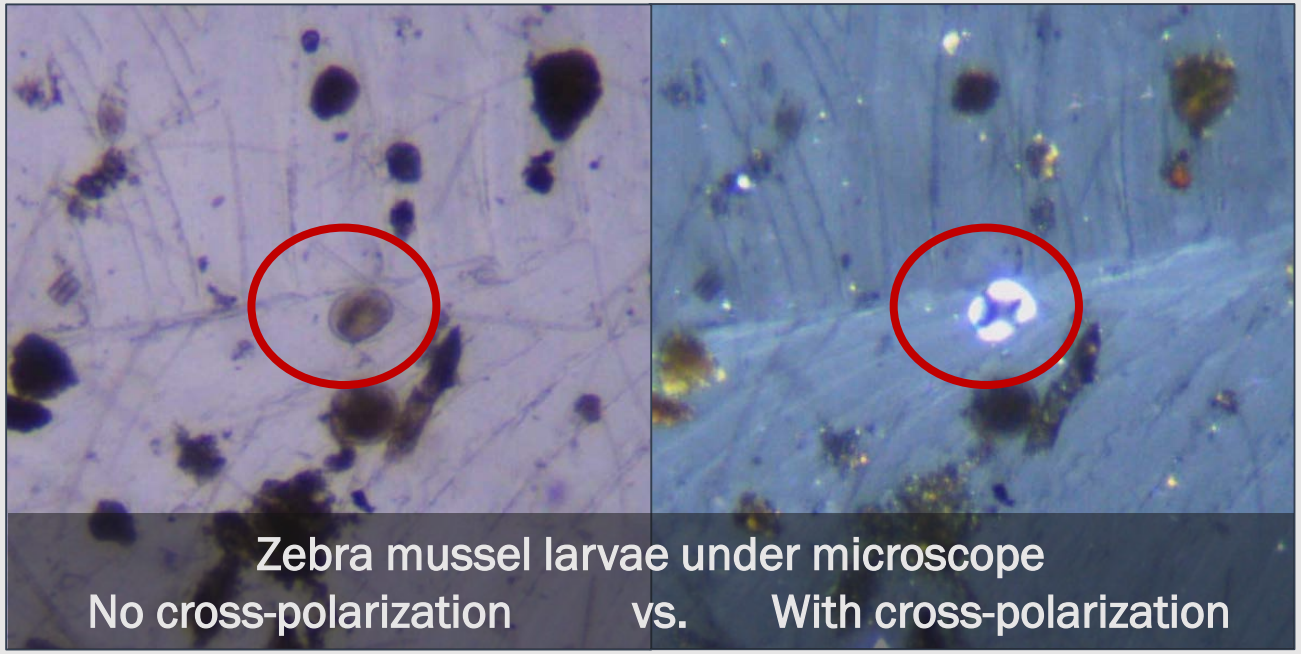

Curlyleaf pondweed


Silver carp jumping in the James River

Red River Zebra Mussels

- Timeline
  - First larvae found in 2010 (one individual)
  - A few larvae found in 2011, then three in 2014
  - 200-6,000 larvae found per sample in June 2015
  - Adults were found in September and October 2015
- Collaboration
  - Manitoba shared results
  - Basin meetings (MB, MN, ND)
  - Red River Basin Commission

Zebra mussels from the Red River



Zebra mussel larvae under microscope
No cross-polarization vs. With cross-polarization

Response to Zebra Mussel Finding

- Emergency rules enacted in 2015
  - Drain plugs must be removed for transport
  - No bait water when leaving Red River
- Water permitting – State Water Commission
  - Specifications for water discharge
    - On dry land, no overland flow
    - Keep Red River water from infesting new areas
  - Equipment cleaning requirements
- Increased educational efforts
  - Focus on regulations and preventative steps
  - Utilize NGO partners to help promote message (FOLS)
  - Multi-media approach (signage, radio, webcasts, billboards, etc.)

2015 Red River signs

Statewide ANS Activities

- Prevention
  - Education – best tool, heavy emphasis
  - Regulation – allows enforcement
- Monitoring
  - Routine work – ~200 waters per year last 3 years
  - Targeted sampling – known populations or high-risk waters
- Control
  - Education – prevent spread of existing populations
  - Regulation – allows enforcement
  - Management efforts –drawdowns, chemicals, etc.
- Coordination
  - Involve interested parties and key authorities

Fisheries biologists sample for ANS

2016 Highlights

- No new infestations detected
- Monitoring – results and analyses pending
  - 120 lake reports entered so far, likely around 200 (previous years)
  - 30 waterbodies, statewide, specifically sampled for zebra mussel larvae
  - Monthly zebra mussel larvae density samples from Red River
- Boater surveys and inspections – in-depth analyses pending
  - Goal was to get and provide information on ANS and regulations
  - Over 430 voluntary surveys and inspections conducted statewide
    - No ANS found on boats, positive feedback to inspectors
    - 71% of boaters were from North Dakota
    - 97% had heard of zebra mussels (only 5% had been impacted), 71% heard of other ANS
    - Support for our outreach efforts and those of neighbor states

Inspection training

Summary

- ANS threaten ND's natural resources
- Limited ANS populations and impacts currently in ND
- NDGF coordinates a strategic effort to address ANS issues
  - Incorporates interested parties and other authorities
  - Heavy emphasis on education with regulations for enforcement
  - 2016 allowed for expansion of ANS efforts
  - Goal is to protect ND's natural resources for the future

For more information, please

visit our website at gf.nd.gov/ans