

The Great Lakes New Zealand Mudsnail (NZMS) Collaborative

Meeting Minutes
November 15, 2018
1:30pm – 3:30pm

Location: Oakland University
312 Meadow Brook Road - 118 Oakland Center
Rochester, MI 48309-4454
Lake Erie Room

<u>Name</u>	<u>E-mail</u>	<u>Affiliation</u>
Jeremy Geist	jgeist@tu.org	TU/OU
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Doug Wendell	wendell@oakland.edu	Oakland University
Kennedy Phillips	kpPhillips@oakland.edu	Oakland University
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Diana Ethaiya	dethaiya@oakland.edu	Oakland University
Seth Herbst	herbstsl@michigan.gov	Michigan DNR
Tim Campbell	tim.campbell@wisc.edu	WI DNR/UW-Ext
Samantha Stanton	tanksama@msu.edu	MSU/GLC

1:30pm – Introductions made.

Updates on Collaborative Partner Activities (J.Geist)

- Partnership Documents
 - States roles, expectations, and goals of Collaborative
 - Identify “Core Team”, add to description
 - Forward to members to provide input or comments

- Website
 - Domain name: www.nzmscollaborative.org
 - Live, structure only, no content yet.
 - Members requested to provide input, specifically regarding management efforts section

- Review Paper Preparation
 - NZMS invasion review article in-prep. Intend to have draft ready in spring. Member feedback and input encouraged.

- Regional Outreach and Education (T. Campbell):
 - WI to expand focus to recreational boaters, and wading anglers
 - Developing outreach materials:
 - Make standardized outreach materials throughout GL basin
 - Signs (100+) in WI & MI, maybe IL, IN, MN
 - Intention to keep messaging general to combat majority of aquatic hitchhikers.
 - Comment made to avoid specific species messaging to avoid extensive updating of materials. General spread prevention recommended
 - Focus on prevention activities for kayakers, boaters, and anglers.
 - Handouts will feature angler-specific messaging and a decontamination checklist.
 - Create 30 sec. outreach videos for social media, again, angler-specific.
 - Video creation/filming in spring-time
 - Scott Tieg working on NZMS-specific decontamination video/materials.
 - Send to members for input

Misc. Items:

- Expand partnership across region
 - Pennsylvania contacted
 - Other state's (e.g., NY)

- Suggested hosting topic-specific webinars
 - Suggested WI DNR efforts
 - Suggested Western US to discuss status, research/mgmt. efforts
 - Suggested Research series for webinar. Researchers share work.
 - Suggested time frame - late winter, early spring

- Noted that NZMS spread in WI-tributaries to Black Earth Creek, in addition to 30 min west and north of Madison. None detected outside of this area, yet.

Update on MISGP grant (J. Geist, S. Tiegs):

- Monitoring Spread of NZMS in Michigan
 - 18 rivers sampled in Michigan – field season 2018
 - Volunteer trainings conducted in MI
 - Rapid detection methods: paired observations and field eDNA samples
 - Methods can be done using volunteer citizen scientists
 - Reaching across TU chapters, good interest from volunteers
 - Still processing summer samples, results by spring

- Au Sable River Watershed - Status
 - Observed range expansion in N. Branch and potentially Big Creek
 - Comment about disseminating new findings – press release, announcement via email.
 - (Scott Tiegs) Big creek tributary (found snails, no eDNA hit)
 - Best to use visual inspection and eDNA methods in tandem
 - (Scott Tiegs) NB site located at a popular fishing spot, compelling evidence for spread via human transport.
 - (Samantha Stanton) Pere Marquette, populations found in highest densities near hunting/gun club

- eDNA Sampling (D. Wendell):
 - Adapted protocol to make reliable
 - Can be performed by volunteers in field
 - Give eDNA kit to volunteers, ship back to Oakland Univ.
 - Working on examining short-and-long DNA fragments as method to determine NZMS location in water bodies

- Oakland University Research Projects:
 - (Emily Bovee): found NZMS grew more on cottonwood leaves.
 - Currently examining snail numbers needed for eDNA detection and how far downstream fragment lengths can be detected.

- (Kennedy Phillips): Conducted leaf litter assay on EB and MB of Au Sable. Sites had significantly different decomposition rates that were not correlated with NZMS density. Found no significant difference between bag mesh-size types
 - Current study: 4 leaf types, 4 treatments for NZMS. Examining density-dependent NZMS rates impacted decomposition rates
 - Work to come on stable isotope analysis using C13 and N15 signatures compare NZMS food resource preference
 - Determine what NZMS are eating in Au Sable river ecosystem
- Additional research being conducted (i.e., NZMS/native invertebrate population dynamics, trout diet analysis, etc.) more results to come.

Spread Prevention via Wading Gear Decontamination

- Recent OU research results showing Formula 409 as effective NZMS decontaminant
 - Poster created, can share with group if not received. Coupling with Angler survey results currently in circulation.
- OU/TU Angler Survey
 - Sent to MI-TU and the Fly Fisher International list serve
 - Approx. 30 question survey
 - Double interests in providing knowledge/raising interest of NZMS to anglers, while assessing routine habits/behaviors.
 - Pair results with decontamination results to determine most effective prevention methods
 - Survey just released, currently 135 responses from TU members, not yet assessed
 - T. Campbell requested word-copy to be forwarded
 - Similar survey sent historically to TU-WI
 - Less than one-fourth of respondents willing to use Formula 409
 - More willing to use physical removal, buy another pair or waders, or freezing
 - 3-4 years since the survey results
 - Concerns about gear deterioration and polluting river systems
- MSU Pere-Marquette River Angler Survey Results (Samantha Stanton):
 - Found a small percent of respondents use Formula 409, due to concerns of damaging equipment and voiding manufacturer warranties.

- No significant correlation between awareness and action.
 - Mentioned unawareness of potential for ecosystem harm, do not perceive species invasion as much of a problem
 - Mentioned lack of understanding in NZMS dispersal methods contribute to lack to decontamination care.
 - Mentioned unwillingness can stem from perceiving the problem of aquatic invasive species as overwhelming. Mindset that even if they take the steps, others will not, and the problem will persist. So why try?
 - Mentioned those who already decontaminate, tend to for general awareness of other aquatic issues.

- Individuals may not take same amount of decontamination care in rivers outside “home-waters”
 - Mentioned issue of possession. Personal care, appreciation, and intrinsic values for “home-waters” not related to other water systems. Lack of caring if other networks are invaded.

- Studies reporting decontamination not necessarily effective for removal rates. However, still an effective tool for prevention.
 - Individuals take steps (such as visual inspection) that may not be the most effective, unaware of more effective methods

- MI DNR spread prevention/decontamination comments:
 - Seth Herbst mentioned knowledge-deficit model. Behavior-change studies show knowledge alone does not change the behavior. Community-change mindset is needed. Behavior change needs to be implemented through training or taking simplistic steps to change behaviors overall.
 - Status-quo bias in changing behaviors, especially in well-established angling routines.
 - Moving efforts from awareness to modifying behavior
 - Of aware individuals (50%+), less than (1/4th) take action to prevent spread of invasive species
 - Information to modify behavior among angler community
 - Restrictions on what DNR can promote, due to labels. Cannot promote off-label usage. Careful wording in press releases.

- Oakland University Decontamination Video:
 - Created for step-by-step instructional video (approx. 4 min)
 - Fly fishers and anglers are audience for video. Provides information about NZMS spread and recommended decontamination methods.
 - Send out link to unfinished video
 - Tim’s videos focus on promoting behavior changes

Future Efforts/ Actions

- Broaden participation from other collaborating members
 - Suggested creating a collaborative core-team, to initiate involvement and keep track of goals and expectations

- Prioritize for later progress, reach out to industry to potentially evaluate gear exposure to Formula 409 and other decontamination methods.
 - Mentioned to look for evidence of Formula 409 damaging waders. Investigate if wader manufacturers accept Formula 409 usage.
 - (Seth) Investigate water craft decontamination in western states. Internal components, such as engines, are not tested for decontamination conditions. Examine long-term impacts on boat parts when consistently exposed to decontamination procedures.

- Upcoming meeting in spring. Hold in a central and/or relevant place, such as Grayling. Intention to hold two collaborative meetings a year in the spring and fall

Meeting adjourn 3:30pm