Caution! Some Dreissenid "Early Detection" Methods Are Actually "Early Deception" Methods

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Sampling for "Early" Detection of a Dreissenid Introduction in Open Waters: Its Value is Real, But Typically Overestimated

WARNING

The following presentation contains potentially disturbing information about the value of the vast majority of “early” detection dreissenid programs. Listener discretion is advised.

EXAMPLES OF “EARLY” DETECTION METHODS

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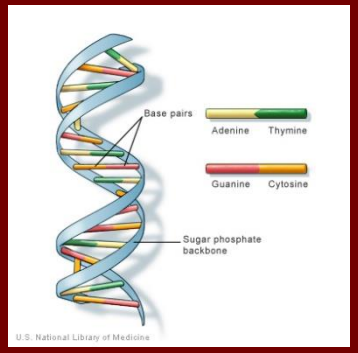

eDNA

THIS IS NOT A TALK ABOUT PREVENTION METHODS

(Stopping dreissenid introductions into a water body)

Although PREVENTION is the best bang for the buck to combat AIS, I am only speaking today about EARLY DETECTION

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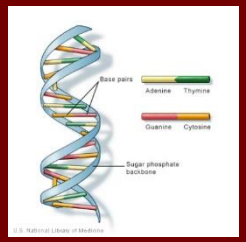
A question I would like to pose to you…..

Why are lakes that you are familiar with doing <u>early</u> dreissenid detection programs?

*Why do most people think it is so valuable to **<u>initially discover</u>** dreissenids using these methods below?*



In open waters … like lakes and rivers….
what is often the stated value of doing an “early” detection monitoring program for dreissenids?

Value as perceived by public = “early” detection programs hopefully will spot a dreissenid introduction “early” enough to have a **reasonable** chance of:

1. CONTAINMENT: the dreissenids could possibly be contained to a **limited region** within the water body

2. ERADICATION: after containing them, we can have chance of eliminating them

…..BUT THE PUBLIC DOES NOT REALIZE THAT IN THE VAST MAJORITY OF CASES THEIR LOCAL “EARLY” DETECTION PROGRAM HAS LITTLE CHANCE OF LEADING TO CONTAINMENT …. WHICH IS THE KEY PREREQUISITE FOR ERADICATION

Am I suggesting not doing dreissenid detection programs??? No.

What I see as their real value:

To be able to declare your water body as dreissenid-infested and take actions subsequently to try to contain the mussels from spreading to other water bodies.

To provide a reasonably early warning to:
--- the public of potential impacts to their activities
--- infrastructure managers to prepare for impacts

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-- an **established (reproducing)** population of dreissenids is present

-- the chance is miniscule that a mussel collected on an artificial substrate or in a plankton net was an "introduced" mussel
-- no, that mussel that was collected was born in the water body (or an interconnected waterbody) = you have a reproducing population that cannot be contained (it's unfortunately too late)

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TAKE HOME MESSAGE

The public is misled/overpromised on the overall value of early dreissenid detection efforts. In the vast majority of cases, when a water body is initially discovered to be infested with dreissenids, containment and possible eradication are not options.