Conservation Matters

Quarterly Newsletter of the Mills County Conservation Board
Summer 2009

Mussels!

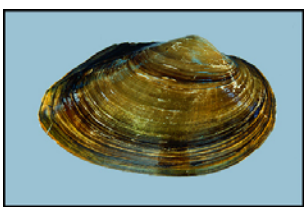
The life cycle of the freshwater mussel begins with a mature male releasing sperm into the water. As the female filters food from the water, she is also taking in the sperm which fertilize the eggs. The eggs take up to several months to develop into larvae, called glochidia. The female will then attract a fish using a specialized lure that resembles something a fish may eat. When the fish bite on the lure, the female ejects the glochidia at the fish. The glochidia then stick to the gills of the fish. When the shells develop, they fall off the host fish to the substrate below. Many mussel species are host specific, meaning if they attach to the wrong host, the glochidia will die. It can take up to 9 years for a mussel to reach maturity.

As filter feeders, mussels may also absorb pollutants from the water. Since mussels are eaten by many native animals (including humans in some areas) this is a concern. The amount of toxins taken into the body will increase with each mussel eaten, and toxins in large amounts can cause injury to local wildlife and people.

There were approximately 55 species of freshwater mussel species found in Iowa when settlers first arrived. Now there are 46 recorded species in the state due to pollutants, encroachment and invading mussel species. Of those 46 species, only 11 of them are classified as common. The invasive mussel species, the Asian and Zebra mussels, are 2 of those common species, so only 9 ***native*** mussels are considered common. The remaining 33 are classified as uncommon, threatened or endangered.

To help mussels, we need to improve water quality by reducing sediment loads. Reduce runoff into the body of water by planting buffer strips and trees; these plants will work to filter sediment & pollutants from the water.

We also need to prevent the spread of the two invasive species. To prevent transferring the invasive species drain anything that holds water on site. Zebra mussels will attach to boat hulls, motors, trailers, docks, buoys, anchors, etc. Clean boats, trailers, gear, decoys, etc, in HOT water (140^{o} F) and allow 4 days drying time before use in un-infested waters.



Rain Gardens

Rain gardens are strategically placed to capture runoff from the nearby impervious surfaces. As rain water moves over roofs, streets, parking lots, lawns and fields, it can carry with it fertilizers, pesticides and other pollutants. The pollutants can end up in creeks, streams, rivers, ponds and lakes. During rain events, a few inches of water flow into the rain garden and then slowly trickle into the ground. This protects water quality and reduces runoff.

Before you start constructing your rain garden, you need to know how large the rain garden needs to be. Rain gardens are typically between 5 and 10 percent the size of the solid surface area. Measure the square foot area (Length X Width) of the impervious surface and then multiply by 0.07 (7 percent). A 2,000 sq. foot parking pad will be multiplied by 0.07 and yield 140 square feet. You would want this rain garden to be 14 feet long by 10 feet wide.

Locate a site to intercept runoff from the lawn and neighboring impervious surfaces (if any). You also need to know if there are any underground lines (gas, electric, etc), building foundations or septic systems in that area. If any of these things are present, you need to relocate the rain garden. The lines can be located by calling 1-800-292-8989 or 811 at least 48 hours prior to all excavation. The service is free.

The typical rain garden is between 4 and 8 inches deep. The soil mix is roughly 60 percent sand, 20 percent topsoil and 20 percent compost. This mix allows for optimum percolation through the soil and will prevent the “garden” from becoming a pond.

Select young plants based on tolerances for light, shade, soil and moisture. Unless you really know your plants, it would be wise to mark the plants with ID stakes so you know what plants NOT to pull. Use wood mulch to cut down on weeds and to retain moisture for dry spells. Lastly you will want to water your rain garden the first season to help it become established.

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Meet Your *WILD* Mills County Neighbors!

This issue's "*neighbor"* is one that many of us do not care for. Playing in the yard, spring picnics, hikes and outdoor activities can lead us into contact with these small creatures. I know the moment you read their name you'll cringe, start feeling tingly and start looking for them: the tick.

There are more than 12 species of ticks in the state of Iowa, both hard and soft bodied, and all of them feed on blood. The three most commonly encountered species are 'hard ticks' due to their having a hard shield structure on their back. These are the deer tick (black legged tick), the wood tick (American dog tick) and the lone star tick.

A mated and fed female will lay a mass of a thousand eggs or more on the ground in the late summer or fall. Next spring larvae will emerge from the eggs. Larvae are tiny and only have 6 legs. Larvae will feed on small animals and develop into nymphs. The nymph, with eight legs and a larger body, will feed on a larger animal and become an adult tick. The adult female will find a mate, and then attach to another large animal, take a blood meal and then fall off, lay its eggs and die. The life cycle usually completes in 2 years.

Ticks do not jump or drop on people. They climb up a piece of vegetation and hold on with their back legs while waving their front legs around waiting to climb onto anything that's passing by.

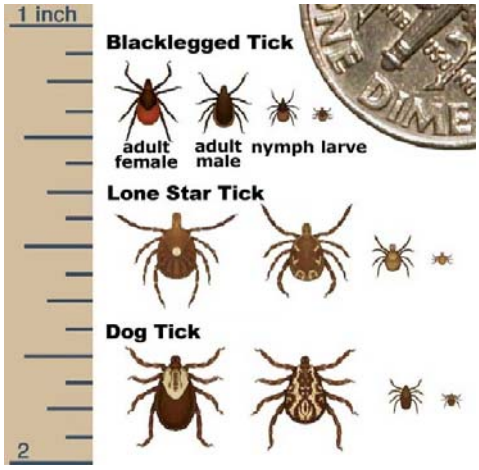
If you'll be outside for prolonged periods of time, wear long sleeved shirts, pants and tuck your pant legs into your socks to form a barrier. It may not win you a fashion award, but it can help prevent ticks from feeding on you. There are many suggestions about removing ticks: use Vaseline to smother it, use fingernail polish to gas it, burn it off and many others. Do not use these methods, they do not work. To remove a tick, get tweezers as close to the mouthparts as possible and pull straight away from the skin. Mouthparts may break off, but the main goal is to remove the tick. Clean the wound and disinfect the bite site.

Ticks pick up bacteria and viruses by feeding on previously infected animals. This is how tick borne illnesses get passed around. The bacterial cause of Lyme disease needs approximately 36 hours to transfer through a feeding. However, there are many more illnesses that could be passed through a tick bite so always send a tick in to be analyzed. If you start to feel ill or develop a rash where the tick was pulled, seek medical attention.

If you have had contact with a tick and wish to know more about it, place the tick in a small Ziploc bag with one blade of grass and send it to:

Lyme Disease Surveillance Program
Iowa State University
Science II Rm 436
Ames, IA 50011

Be sure to include your name, address, where the tick was found (City & County), if it was attached to an animal or human, and any other related information. You will receive an informational post card in return.



UPCOMING EVENTS

JULY
7/17/09 – 7/22/09
Mills County Fair
Visit our booth at the Mills County Fair!

AUGUST
8/22/09 1pm – ?
Lazy Afternoon Canoe Float!
Join us for a canoe trip down the Nishnabotna River. Space is extremely limited. You must register by calling James at (712) 527-9685 before August 12th. This program is dependent upon cooperative weather.

SEPTEMBER
9/19/09 7pm -?
Evening Canoe Float! @ Mile Hill Lake
Join us for a relaxing evening canoe float to celebrate the coming fall season. Space is extremely limited. You must register by calling James at (712) 527-9685 before September 16. This program is dependent upon cooperative weather.

To register for MCCB programs or to ask questions, please call James at (712) 527-9685. Thank you.