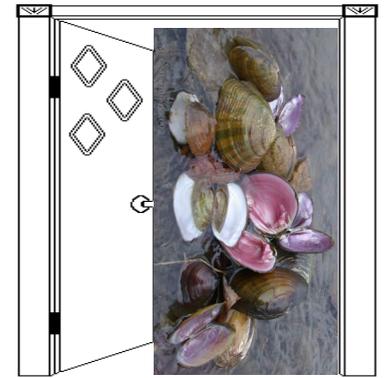


“Looking OUT THE BACK DOOR...”

The Sac County Conservation Board’s Quarterly Newsletter

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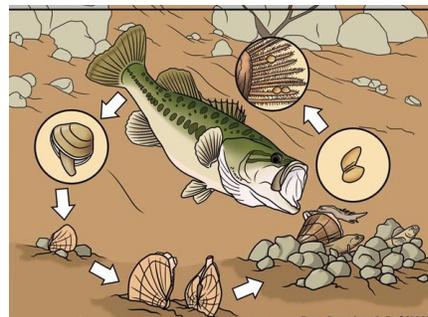


Our Mission: “To initiate an awareness and foster stewardship of nature’s rewards.”

Mussing with Mussels

This summer I was able to attend a training on mussels. These creatures that we find in our streams, ponds and rivers are often overlooked. They have a complex lifecycle and history in Iowa. Historically, there were 300 species of mussels in Iowa. Today 30 of those species are extinct. Iowa has 84 species on the endangered list and 69% are considered at risk. Mussels may not move but they have a very important ecological role. Mussels are filter feeders, this means they take in materials as they float down stream. They mix sediment on the river floor, and provide habitat and nutrients to benthic life. They assist in stream bank stabilization and can effect the hydraulics of a river. Some of the problems facing mussels include historic over harvesting, habitat loss due to siltation, dredging and channeling, and dam construction. Dams that impede fish will impede the spread of young mussels. Pollution such as ammonia and certain metals are a real problem for the young mussels. Older mussels can clamp up and survive for several days, which by that time the pollution has traveled down stream. Exotics such as zebra mussels can over crowd and kill a native fresh water mussel. Natural predators take their toll on mussel populations; they include muskrat (shell will have scalloped edge) and raccoon (shell will have a bite at the end) and sometimes otters. Mussels are often misidentified as clams. The freshwater mussels of Iowa are similar to clams as they are both bivalve mollusks (two shelled-invertebrates).

The main difference has to do with their lifecycle. The broods of young mussels or glochidia are held in special gills of the female mussel, called marcupia. Mussels depend on a



picture from: <http://mussel-project.uwsp.edu/>

host fish to move young while clams do not. The glochidia must attach to the fishes gills and absorb blood.

They will remain there for either a few weeks to over winter. While on their host they continue shell growth and develop their foot. The glochidia can either have teeth or have smoothed edges. Once they have matured they create a basal thread (clams do not do this) that will hold them into the substrate until they are large enough to hold themselves with their foot. The mussels have developed different techniques to lure host fish near the female. Once within range the young are shot into the mouth of the fish. At that time the glochidia



Gills with glochidia attached.
Taken from Ranger Rick Magazine

Chris Barnhart

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Farewell Summer Staff

Fall is coming and it is time for summer staff to go. We will miss them and we appreciate all of their hard work. Diane Page was our campground host at Hagge. Terry and Melissa Rath were our hosts at Grant Park. Our hosts will leave near the time when the campgrounds close. Joel Schwarzkopf, will return to Iowa State University where he is studying for a degree in Animal Ecology. Norm Lewman from Sac City was our other summer technician, he will helping us out from time to time during the rest of the camping season. Our Grant Park attendant is Roger Huster will remain with us until the end of October. A huge thank you goes out to these staff members, as we couldn't have had such a successful summer without them.

Great Grants!

The Sac County Conservation Board was lucky enough to have been awarded two grants. The first is from Humanities Iowa and it will help us bring Connie Mutel to Sac County. She will be our guest speaker during the unveiling of the traveling Smithsonian display: "Listening to the Prairie" This is an interactive exhibit that focuses on agriculture in the North American prairie. It features the human history of the prairies and focuses on 4 farmers who are maximizing their output while preserving the lands. Connie has written two books "The Emerald Horizon" and "Fragile Giants" which she will sign. The day will start at 10 when people can see the display and demonstrations until noon when lunch will be served and Connie will speak shortly thereafter.

The second grant was from the Barbra and Gilbert Renze Foundation. They are fully funding the birding station. This includes a large custom built feeder, lifetime warranted feeders, an outdoor microphone, bird camera, bird size images and much more! We hope that everyone will come out to see what the grants

Looking into the fact files! *Cylindrical Papershell*

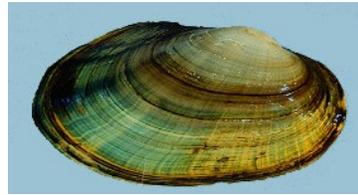


Image from IL Natural History Survey

(Anodontoides ferussacianus)

- Threatened in Iowa
- Can be found in sand or mud
- Likes the small creeks and headwater streams
- Has a very thin shell and the hinge does not have much for teeth.
- The shell is about 3 inches long
- Nacre (the inner part of shell or material used to coat contaminants is silvery to bluish white.
- Host fish include: Bluegill, Black Crappie, Largemouth Bass, Spotfin Shiner and the Tippecanoe darter.

Thank You

- Secondary Roads for grading
- Shelly family for the donation of many mounts
- Sam Wandery for use of the Black Bear
- Everyone who donated their time to help us with our summer camp programs
- Buena Vista County for help with programs and programming materials.
- Judy Wilson for the use of her pond.
- DNR for assistance with fish displays
- Sac County Extension for help with the fishing clinic
- All the volunteers who taught at the Hunter Education Programs
- Pheasants Forever and Sportsman's Clubs for financial assistance with programming.



Upcoming Programs

September 14th– Fishing Club Meeting– From 9-10:30 . Location to be announced.

September 18th Knee High Naturalist– Theme: Butterflies- 4-4:45pm

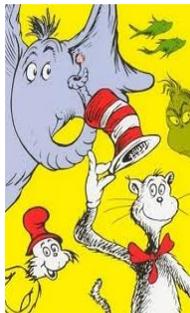
These free programs will be offered the third Wednesday of the month. They are for children aged 2-4 with an adult. We will be learning about nature with hands on activities! There will be stories and much, much more! Call 712-662-4530 to sign up.

October 6th– Naturalist Lunch Box-Owls– 12:30-1 pm

WHOOO wants to learn about owls?!? During this free program a live owl will help with learning as we discuss the unique adaptations of these animals. Bring your lunch a blanket and enjoy. After the program visit the conservation center as this is the last weekend it will be open from 1-3 on Sundays. Call 712-662-4530 to sign up.

October 18th– Pumpkin Carving Contest

Bring your carving tools, pumpkins and creativity as we will carve the night away. The carving contest will take place in the garage at Hagge Park and will start at 6 pm with judging starting at 7 pm There will be candy available after carving and prizes are awarded to three age groups from which winners will be picked. Then you will get to see your pumpkin on the annual Halloween Night Hike.



October 19th– Halloween Night Hike

This year come out to Hagge Park for wonderful environmental skits with characters from Dr Seuss! Also enjoy marshmallows, hot cocoa, popcorn and hotdogs. You will meet characters like Horton, Cat in the Hat and more. After your guided hike warm up in the shelter house and let the kids get their face painted. In order to reserve your spot call 712-662-4530. The hike times run in 10 minute intervals and the hike takes about an hour. Up to 30 people can go at one time. Popular times fill quickly so make sure to get your reservations in.

October 16th Knee High Naturalist- 4-4:45pm– Theme: Creepy Crawlies

These free programs will be offered the third Wednesday of the month. They are for children aged 2-4 with an adult. We will be learning about nature with hands on activities! There will be stories and much, much more! Call 712-662-4530 to sign up.

October 14th– Fishing Club Meeting– From 9-10:30 . Location to be announced.

November 9th– Fall Prairie Harvest Event– And TRAVELING DISPLAY

During this event the center will feature the NEW TRAVELING SMITHSONIAN DISPLAY called “Listening to the Prairie.” Guest Speaker Connie Mutel will speak about the changing landscape of Iowa. She wrote two books. Demonstrations will held in the classroom from 10-12 and a prairie lunch will be served at noon, Connie will speak shortly there after.

November 16th– Fishing Club Meeting– From 9-10:30-11:30. Location to be announced



November Knee High Naturalist- 4-4:45pm-Theme: Turkeys!!

These free programs will be offered the third Wednesday of the month. They are for children aged 2-4 with an adult. We will be learning about nature with hands on activities! There will be stories and much, much more! Call 712-662-4530 to sign up.



Kid's Korner

Late summer/ early fall is a great time to walk sand bars looking for mussel shells. The water is low and it is still warm enough that being wet feels good! Tell or bring an adult anytime you go near water.



Shell wreath— To make this wreath you will need a 10 inch double wire wreath frame. Many shells that have been cleaned up. Though you could paint them if you would like. Hot glue each shell to the frame in any pattern that you like. Tie on a large ribbon after you are done. Have an adult help you with the hot glue.



Shell candles— To make these candles you will need wicks and wax. These items can be found at any craft store (for wax you can melt down old candles). For candles on left you will need to clean and maybe paint your shells. Form cups to hold shells in place out of aluminum foil. In a double boiler have an adult melt the wax. Dip the bottom of the wick tab into the wax and stick it to the bottom of the shell. Let it cool. Then carefully fill the shells with wax.



Shell Collection—After you have gathered a nice collection of shells, scrub them down with an old toothbrush and water. Purchase a shadow box. Arrange shells in the frame. If there are not enough to keep shells in place you may need to glue them in.

Shell Creatures— Clean the shells you have found. Decide on an animal you can create. Use a quick drying glue and stick the pieces together. You will want to lay out pieces before hand to have an idea what it will look like. Use other items like small rocks or plastic eyes for facial features.



Wind chimes— Search for some drift wood. When collecting shells look for ones with holes in them. If there are no holes tie string around shells like you would a present. Tie these and any other items you may have found along the way to the driftwood. Using a long piece of string tie each end to the ends of the driftwood so that it hangs level. Tie off a loop in the center top of the hanging string. You can add second levels with smaller pieces if you wish.



Eyes To The Skies

The sky has a lot going on this fall. Make sure to find time to look up!

- **September 5th– New Moon**
- **September 8th– Conjunction of Venus, Saturn and the Moon!** Early in the evening sky Venus and the thin crescent Moon will be within half a degree of each other. At the same time Saturn will only be 3 degrees from Venus. Look low in the western sky 2 hours after sunset.
- **September 19th– Full Moon–** Also known as the Harvest moon, because it is the closest full moon to the fall equinox.
- **September 22nd– Fall Equinox–** Also known as autumnal equinox as it is the first day of fall.
- **October 3rd– Uranus on closest approach to Earth–**The tiny blue-green planet will be lit up by the sun, however due to distance it will still only appear as a tiny dot in all but the most powerful telescopes.
- **October 5th– New Moon**
- **October 7th and 8th– Draconids Meteor Shower–** This is a very minor meteor shower peaking at about 10 meteors per hour. Meteors can be seen from the 6th– 10th. These meteors are produced as the remnant bits of dust left from comet 21P Giacobini-Zinner. This comet was discovered in 1900. The moon will set early in the evening, this will improve viewing. Meteors can appear anywhere in the sky but will mostly radiate from the constellation Draco. Draco is located between the two dippers.
- **October 18th– Full Moon–** This moon was once called the Full Hunters Moon because at this time of year game animals are putting on fat for the winter. This will be the smallest moon of the year as it is in its furthest point in its orbit from the Earth.
- **October 18th– Prenumeral Lunar Eclipse–** During these types of eclipses the moon passes through the Earth's shadow. This is not a full eclipse the moon will darken slightly, the eclipse will only be visible at moon rise in the US.
- **October 21-22nd– Orionids Meteor Shower–** This shower happens when we enter into the debris left behind by Halley's Comet. Meteors from this shower can be randomly seen from the 2nd of October to the 7th of November. However, when it peaks on the 21-22nd it will produce up to 20 meteors per hour. The waning gibbous moon (Meaning the full moon is entering Earth's shadow so it looks like it is decreasing) will block fainter meteors. Meteors will radiate from the constellation Orion.
- **November 3rd– New Moon–** This is a good time to look for fainter objects in the night sky.
- **November 4-5th– Taurids Meteor Shower–** This shower peaks at only 5-10 meteors per hour. It runs into two streams of space dust. The first was left by Astroid 2004 TG10 and the second was Comet 2P Encke. The shower is very long and runs from September 7th– December 10th. After midnight look for Taurus (Just to the right of Orion). With the new moon most meteors can be seen.
- **November 17th– Full Moon–**This moon was once known as Beaver Moon, as this was the time of year to set beaver traps before the water froze over.
- **November 16-17th– Leonid Meteor Shower–** This shower will peak with an average of 15 meteors per hour. The shower is a result of the dust left by comet Tempel-Tuttle. This comet was discovered in 1865. The shower will run from the 6th of November till the 30th. However due to the bright full moon many of the meteors will not be seen. Finding a dark spot is the best way to go for this shower. Meteors should radiate from Leo the Lion.
- **November 28th—Comet ISON -** This newly discovered comet should be one of the brightest in a long time. Some are estimating that it could be bright enough to see during the day. The comet will be visible to the naked eye starting in October and will continue to get brighter as it approaches the sun on the 28th. If the comet survives its tango with the sun it will be visible in the early morning and evening hours and could be as bright as the full moon. The comet is named after the survey program which assisted in finding it; The International Scientific Optical Network. It was found during September of 2012 by Russian astronomers Vitali Nevski and Artyom Novichonok. Some astronomers are calling it the comet of the century. We will all have to wait and see.





Fish type lure. Image taken from Ranger

For example Plain Pocket books are generalists and can use a large variety of fish including bass, bluegill and walleye, they can even use tiger salamanders. While some species like the Mapleleaf Mussel use only members of the catfish family. They do this by creating elaborate mimics of prey. Considering these creatures don't have eyes and their only "brain" is a collection of ganglia located in the foot, they are pretty amazing. There is a variety of lure types from ones that look like swimming worms, to fish and even crayfish. To see a video of a mussel in action check out: <http://mussel-project.uwsp.edu/m/about/life-history.html>. As young mussels grow rings develop during each new years of growth. The rings can be counted up to 7 years accurately. The outer shell is made of material similar to our hair and fingernails while the rest of the shell is made of calcium carbonate which breaks down quite quickly. Thick shelled mussels can live up to 100 years, while thin shelled mussels like the giant floaters only live 15-20 years. The shell is held together with a hinge made up of teeth. The size and arrangement of these teeth are important for identification. The survey I was able to help out with is trying to get a better BDI (Biological Diversity Index) for the Raccoon River. Basically, it is taking inventory of what is alive and in the rivers now. We collected many live mussels and scoured sandbars for shells. The shells showed dead species. Some

were what are called relic shells; the outer layer has been worn leaving the pearly inner layers exposed. Each area was given 45 minutes to ensure statistical significance. Listed below are the areas we went to and what we found. Behind each species look for C for common, U for uncommon or T for threatened. If a species comes up multiple times notation will only be on first. In most areas we found shells of the living species, which will not be noted in the

Mucket found at Vogel



Vogel Access:

- Live: 1 Mucket (C)
- 1 Pimpleback (U)
- 11 Plain Pocketbook (C)
- 3 Fragile Papershells (U)

Shells: Wabash Pigtoe (U),

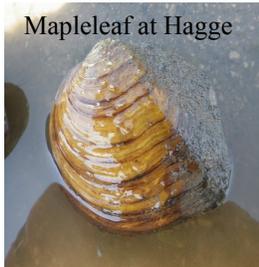


Live mussels found at Hagge

Cylindrical Papershell (T), Giant Floater (U)

Hagge Park:

- Live: 28 Plain Pocketbook
- 1 Mapleleaf (U)
- 5 Fragile Papershells
- 1 Pink Papershell (U)
- 1 Pimpleback



Mapleleaf at Hagge



Pink Papershell @ Hagge



Pimplebacks from White

3 White Healsplittes (U)

Shells: Freshly dead Three Ridge (U),

Whitehorse Access:

- Live: 1 Pink Papershell
- 4 Fragile Papershells
- 2 Pimple Backs
- 21 Plain Pocketbooks
- 1 Mucket

Shells: Fatmucket (U), Mapleleaf. I was not able to go but they surveyed

Grant Park:

- Live: 7 Plain Pocketbooks
- 3 Fragile Papershells
- 1 Mucket

Shells: Pimpleback, Three ridge, White healsplitter, Spike (U), relic shells of Fluted Shell (U) and Monkeyface (U) and a weathered Creeper.

The live mussels were all returned to safe areas of the river. It was a very enjoyable



Sac County Conservation Board

Board Members

- Andy Meredith-Lake View—Chairperson
- Kenny Bentsen-Sac City-Vice Chairperson
- Barb Bloom—Odebolt—Secretary
- Dean Stock—Lake View—Member
- Rich Feilmeier—Early—Member

Staff

- Chris Bass—Executive Director
- Sandi Huster—Secretary
- Rene Stroud—Naturalist

Meetings

Regular board meetings are held the second Thursday of each month at 7:30 PM at the Sac County Conservation Center. These meetings are open to the public.

Hagge Park Office Phone: (712) 662-4530
Email: saccocon@frontiernet.net

The Sac County Conservation Board in the provisions of services and facilities to the public does not discriminate against anyone on the basis of race, color, sex, creed, national origin, age, or handicap. If anyone believes he or she has been subjected to such discrimination, he or she may file a complaint alleging discrimination with either the Sac County Conservation Board Office or the Office of Equal Opportunity, U.S. Department of Interior, Washington D.C. 20240



Collecting mussels at Hagge Park