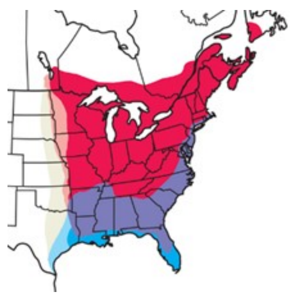
Photo credit: Timberdoodle.org



Current Range
Photo Credit: Audubon.org

Species Highlight: American Woodcock (*Scolopax minor*)

Kris Oja

The American woodcock (*Scolopax minor)* or also known as the "Timberdoodle" are one of Minnesota's smallest upland game birds that inhabits the forested regions within the eastern half of the state. The Woodcock is part of the shorebird family and has evolved over time to abandon the marshes and moved to the uplands. This bird can be recognized in the early morning during the breeding season due to the sound it makes when it flushes, making a "trilling" or "whistling" sound, as well as the males unusual call during the mating season, which is described as a "peent".

The American woodcock can be found in the northern regions of the US during the spring and summer, which are known as the northern breeding areas. These areas range from Atlantic Canada and west to the Great Lakes range, dropping down as far as West Virginia. In the Winter months, these birds migrate to the southern regions, also known as their southern wintering grounds, which ranges from Virginia, all the way south-west to eastern Texas.

Fall migration is highly influenced by weather. Major cold fronts and the setting of frost will drive these birds south starting in October and peaks by mid-November. In the spring, Woodcock migration can start as early as January in the southern most part of their wintering range. They will begin to arrive in Minnesota in mid-March to early April, usually arriving to their same breeding grounds annually.

The diet for these birds consists mainly of earthworms and insects such as ants, flies, beetles, crickets, and various larvae. Woodcock generally feed in the early evenings and just before dawn.

Woodcock begin the nesting process in April. Females will construct nests within 500' of a males occupied singing ground. Typical nesting cover consists of young, open second growth woodlands. Nest construction is a simple small, cup-shaped depression on the ground scattered with dead leaves. The average clutch size is generally 4 light brown and gray mottled eggs. Hens will lay 1 egg per day until the clutch is completed. The eggs will hatch in May after an incubation period of 19 -22 days.

Habitat requirements for the American woodcock change throughout the year. In general, woodcock are attracted to moist, young forests and brushlands and are also dependent on dense woodlands to provide cover and adequate food sources. Edge habitat is also an important component of their habitat requirements. Courtship sites in the spring within their breeding grounds are extremely important. These can consist of forest openings, abandoned fields next to forest edges or brushlands. The size of these sites can vary, but one quarter to half an acre provides sufficient space for this important requirement.

The management of habitat for American woodcock works best on lands with high volumes of aspen, birch, and alder with a mix of uplands and lowlands. High quality Woodcock habitat does not last very long on its own due to its requirement for young deciduous forests, scattered openings of fields and forest openings, and diversity of shrub cover. Active management is very important. Practices for managing these habitats include forest management, early successional habitat management (brush mowing/prescribed burning) and creating and maintaining forest openings. The overall goal is to manage for a diverse-age forest canopy.

Check Us Out Online

Pineswcd.com

And Follow Us on Facebook!

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The Pine SWCD Newsletter

Pine County Soil & Water Conservation District

Volume 32 Issue 1 Spring 2023

A Letter from the Manager - Paul Swanson

As we reach the end of the cold months, most of us are ready for Spring, and the great green up it brings! One cannot help but look forward to prospects of the future this time of year, and Pine SWCD is no different!

2022 was a busy and fast paced year for us here at the district. We are continuing to be successful in securing funding through the Lower St. Croix Watershed Based Implementation Partnership. We assisted in the restoration of two wetlands, and were able to assist a farmer with implementing a three year cover crop plan. The Snake One Watershed One Plan was submitted to BWSR at the end of the year. And now, at the beginning of 2023, it has been approved by the state! We will see watershed based implementation funds become available later this year. We have continued to partner with lake home owners to protect their lakeshores by restoring eroding shoreline, and working to install vegetative buffers to prevent erosion and runoff into our many beautiful lakes. Our new ag. tech position has helped us reach more farmers than ever before, creating outreach opportunities as well as assisting in a handful of best management practice installations. We also saw more farmers being enrolled in the Minnesota Ag Water Quality Certification Program. We were even able to assist landowners restore a patch of native prairie which increased a buffer area near a wetland and created more habitat for our struggling native pollinators. Our staff have also worked with dozens of other landowners, providing technical advice, and preparing projects for 2023. We have been busy, to say the least!

As we move into 2023, our work continues to roll on. We continue to work with our partners to find new ways to utilize conservation funds that are coming available. RIM conservation easements, watershed based funding, and new soil health grants are just a few examples.

Continued on page 5

2022 Conservation Cookout

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Land Protection Opportunities - Lauren Nelson

Keeping land resources in natural habitat goes a long way to keep our water resources healthy.

Land Protection can provide opportunities for sustainable management, which can benefit game species.

While Pine County is home to an abundance of natural landcover, a vast majority of it is privately owned which leaves it vulnerable to being developed in the future. If private land is not protected in its natural state, this leaves surrounding public lands vulnerable to degradation as well. Enrolling properties in land protection programs ensures that the quality of natural resources in our county will be maintained for future generations and provides landowners with the knowledge and resources to be the best stewards of their land.

Land protection is of great significance in the efforts towards preserving the quality of local water resources. In the eastern section of Pine County, we are lucky enough to have a portion of the St. Croix River watershed. The My St. Croix Woods program is a fantastic resource available to landowners that will connect you to public and private organizations that will be able to help you plan and execute sustainable land management. The overall goal is to address the needs of the landowner, connect them to the appropriate resources, and fulfill those needs in an environmentally conscious way.

Another great program is the Minnesota Board of Water and Soil Resources' (BWSR) Reinvest in Minnesota (RIM) program. This program compensates landowners that allow BWSR to enroll their property into conservation easements which will ensure wetlands, native grasslands, and shoreline habitats are permanently protected. Conservation easements are voluntary, legally binding documents where the landowner agrees not to develop their land, keeping it permanently in its natural state to maintain the high-quality resources provided by private and public lands. Each easement document is unique based on the land and how the owner interacts with it. Landowners maintain rights of ownership and are allowed to use the land in any way that is compliant with the easement. Existing structures, trails, and hunting or fishing practices can remain.

Throughout the state, the Minnesota Land Trust has protected over 73,000 acres of habitat and over 440 miles of shoreline since 1993. They perform annual visits to monitor easement land and make sure the conditions are being met. Even if the property changes ownership the document is still binding, and terms need to be communicated to the new owner.

The role of forests is critical in keeping watersheds healthy and clean. However, making management decisions can be confusing and implementing them can be costly. There are multiple programs for planning and cost-share opportunities available that can help in the process. The Sustainable Forest Incentive Act (SFIA) aims to address the issue of cost by providing annual payments to private landowners that preserve their wooded lands. To be eligible for these payments, you need a woodland stewardship plan written by a certified plan writer and registered with the DNR. A list of registered plan writers can be found at: Woodland Stewardship Plan Writer | Minnesota DNR (state.mn.us) . The plan writer will evaluate your unique property and give specific recommendations and timelines for management in accordance with what you want to see your property look like in the future.

2022 Lake Survey Highlights - Local Hinckley DNR Fisheries Office

The Hinckley area fisheries office completed lake surveys on 12 lakes throughout the 4-county area in 2022. Lake surveys are done on lakes with public access on a 4, 8, or 12 year rotation depending on factors such as angler use and management activities (stocking, regulations). Lake surveys consist of gill netting, trap netting, electrofishing, and in some cases, nearshore fish sampling. Results of lake surveys are published on LakeFinder on the DNR website by fishing opener the following year. Here are some preliminary observations:

Stanton Lake: This was one of the most interesting surveys in 2022. Stanton, formed by a dam in Willow River, was actually not a lake for years after the dam washed out in the 2016 floods. Stanton became a lake again in 2021 after a rock arch rapids was constructed to replace the dam. This dam alternative allowed for the refilling of the lake while allowing fish passage. We wanted to see what fish naturally repopulated the restored reservoir from its connection with the nearby Kettle River before making any stocking plans.

The results are promising. We found ten species of fish in gill and trap nets. Game fish such as walleye, northern pike, sunfish, and crappie were all present in fishable numbers and sizes, along with perch, redhorse, and suckers. This fishery will continue to develop and change as fish move in and out, and we will consider additional stocking if needed.

Chisago and South Lindstrom lakes: Although these lakes are broadly connected, their different characteristics require separate surveys. Both lakes have good numbers of panfish although sizes tend to be small due to heavy angling pressure. Walleye fingerlings are stocked every other year; numbers in 2022 appeared to show the success of fingerling stocking. South Lindstrom had more walleyes per gill net than Chisago, as is usually the case. We stock both lakes from the same public access, so maybe more fish swim into South Lindstrom.

These lakes have a 12" maximum length limit for largemouth bass. The regulation was intended to increase the average and maximum sizes of bass. However, electrofishing results did not show exceptional sizes of bass in either lake.

Knife Lake: Walleye numbers were the highest we have seen since 1999. This lake's walleye population is self-sufficient, with no additional stocking necessary unless fall electrofishing finds weak year classes for more than two years. Crappies and sunfish are present with some good-sized individuals.

Spectacle: While gamefish numbers appear to be good, the most notable finding in this survey was the large numbers of yellow bullhead (30/gill net). This led to considerable frustration among the crew members, as bullheads are notoriously difficult to pick out of gill nets, and cause damage to the nets. Sizes ranged up to almost 15 inches; while this might be good news for bullhead anglers, the bullheads themselves might be difficult to catch by angling. They were found in nets set in heavy vegetation, which is present throughout the waters of the lake less than 20 feet deep. On a positive note, yellow bullheads are the bullhead species most likely to be associated with good water quality.

Big Pine and Pine Lakes: These lakes continued to show good, balanced populations of northern pike, sunfish, largemouth bass, and crappie. Walleye numbers were up somewhat in Big Pine from the previous survey. Of interest was the ages of walleye, determined from counting annual rings in otoliths (bony structures in a fish's head). Four of the 11 walleye examined from Big Pine were determined to be from 2019, a non-stocked year class. We don't know if these fish came from the Pine River or a spawning run in Strawberry Creek, but the numbers are encouraging.

"RESULTS OF LAKE SURVEYS ARE PUBLISHED ON LAKEFINDER ON THE DNR WEBSITE BY FISHING OPENER THE FOLLOWING YEAR."

Return of the Elm - Lauren Nelson

American elm (*Ulmus* americana)Photo Credit: Peter M. Dziuk; Minnesota Wildflowers

History and Spread of Dutch Elm Disease

If you were to walk down a Minnesota neighborhood street in the mid twentieth century, there's a good chance it would have been lined with elm trees. Elms were so popular in urban areas because of their resilience; they could withstand harsh environmental conditions such as drought and soil compaction, and they were tolerant to road salts which made their survival rate better than most other species. In 1961 all of that changed when Dutch elm disease was first discovered in St. Paul.

Dutch elm disease (DED) is caused by an invasive fungus that is transferred on the surface of native bark beetles that feed on branches, allowing the fungus to enter the tree's vascular system (i.e., water and nutrient transport) and spread throughout the whole organism, cutting off its water supply and killing the tree. Elm trees form root grafts with other nearby elms, which vectored a quick spread since they were so heavily favored. Once a tree is infected, death often occurs within the same season but can take up to several years. There is a fungicide treatment that has been shown to be successful, but only if used as a preventative measure; once a tree has any symptoms of DED it is no longer viable to be treated. Because of the rapid rate of spread and death, by the mid 1970's elms were dying in masses in the Twin Cities, leaving streets that once had a full canopy of mature trees nothing but dead branches. DED was eventually present in every county in Minnesota. Spread was slower as it made its way into more rural counties but was increased by human action such as transporting infested firewood. Statewide, it is predicted that the total loss of elm trees is in the millions.

"DUTCH ELM DISEASE IS CAUSED BY AN INVASIVE FUNGUS THAT IS TRANSFERRED ON THE SURFACE OF NATIVE BARK BEETLES"

Symptom Identification

The main indicators of DED are yellowing leaves on one or more branches in the outer canopy and fallen leaves on the ground in early or midsummer. Since bark beetles feed on larger branches usually of at least 2-10 inches in diameter, symptoms are not typically seen on smaller elm trees. Because of that, elms are still able to reproduce but in a much smaller capacity than would historically be possible.

Looking Forward

Over time, certain varieties of elms have been found to have a resistance to DED. There has been extensive research and monitoring of growth of these varieties the last few decades that have provided enough confidence to introduce them to the public and re-establish elms in our tree canopy. This year, Pine SWCD is offering the Princeton elm in our annual tree sale. The Princeton elm is a variety of American elm and one that has proven to be resistant to DED. Princeton elms grow to a mature height of 50-70 feet, width of 30-50 feet, and can live 150-300 years. They prefer moist, well-drained soils but can tolerate dry or wet conditions. They grow quickly and attract migrating birds, with yellow leaf color in the fall.

As we navigate the reintroduction of elm trees into our urban and forested areas, it is important that we learn from past mistakes. In general, we have learned that planting a diversity of tree species in an area increases resilience to pests and disease by slowing down the potential of spread. A new invasive species could be discovered at any time that targets any number of different species. While we cannot predict the future, we can prepare for it by planting diverse stands of trees and keeping an eye out for symptoms of new infestations.

Pitcher Plant: A Bug Eating Wonder

Our native pitcher plant (*Sarracenia purpurea*)

Did you know that Minnesota is home to carnivorous plants? One of the most unique is the pitcher plant! This odd plant is found in bogs across Minnesota, including Pine County. Modified leaves form mini pitchers, that collect water. Slick hairs trap bugs inside, where enzymes digest the bug which the plant can then absorb!

One Watershed One Plan Updates - Zach Van Orsdel

The Lower St. Croix 1W1P is currently in implementation phase and has been since 2021. 2023 is the beginning of the plan's third of ten years. Since the beginning of the plan, it has funded 5 projects in Pine County, ranging from wetland restorations to cover crops. The Lower St. Croix Watershed represents ~10% of the county's area in the southernmost portion of the county.

The Snake River 1W1P was approved by the State's Board of Water and Soil Resources on 1/25/2023! Next, the local governmental units are completing an annual work plan which is needed for the State to release funds for implementation. The group expects those funds to be released Fall of 2023. We are looking forward to working with landowners on projects from shorelines to farm fields as this plan begins to be implemented. The Snake River Watershed represents approximately 15% of the county's area and generally covers the part of the county between Hinckley and Pine City.

The Kettle River/Upper St. Croix 1W1P has started the plan writing phase. The local governmental units have been holding topic meetings to hear from members of the public and state entities to gather input as we begin to write the plan. The plan should be completed by the end of 2023. The Kettle River and Upper St. Croix Watersheds represent a majority of the county and represent the parts of the county north of Hinckley to the county line, excluding a small slice of the Nemadji River Watershed to the Northeast of Duquette.

The Nemadji River 1W1P is currently in implementation phase and has been since 2021. No projects have been completed in this part of the county that represents approximately 5% of the land area, much of which is within the Nemadji State Forest. It is located in the Northeastern corner of the county and borders Carlton County and Wisconsin's Douglas County.

If you are interested in any funding opportunities, have input on the plan writing process, or just want to know which watershed you are in, we are happy to help!

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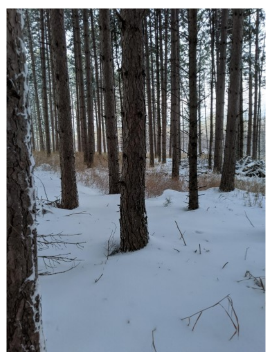
Water Body Spotlight - Zach Van Orsdel

The Kettle River is an 83.6-mile-long tributary of the St. Croix River. Its headwaters are slow flowing bog streams in Carlton County near the city of Cromwell. The river gets its name from the large number of large, rounded holes found in the sandstone in and around the river which were formed by rocks being moved in circles repeatedly by swirling waters. The Kettle River was added to Minnesota's Wild and Scenic Rivers Program in 1975. The stretch of the river from Carlton County to the dam in Sandstone is listed as "scenic" by the state, meaning it is a free-flowing water body with adjacent lands that are largely undeveloped. From the dam in Sandstone to its confluence with the St. Croix River, the Kettle River is listed as "wild", meaning it is a free flowing river with adjacent lands that are essentially primitive. The landscape the river passes through is mostly heavy forests of black spruce, fir, birch, aspen, maple, ash, elm and scattered red, white and jack pine. At times, bluffs along its edge are more than 100 ft tall while the depth of the river also exceeds 100 ft in some locations. Beyond its scenic and wild status, it is also considered one of the best whitewater rafting rivers in the Midwest. Depending on water levels, the Kettle River has rapids ranging in difficulty from Class 1-4 and is a popular destination for rafters, kayakers, and canoers with numerous access sites along its length.

Kettle River at Robinson Park

"A POPULAR DESTINATION FOR RAFTERS"

"OUR FOREST ECOSYSTEMS WILL USE THESE DISTURBANCE EVENTS AS OPPORTUNITIES TO BUILD RESILIENCY."



The After Effects of Major Snow Disturbance - Lauren Nelson

The impressive amount of snow we received this past December created quite a few inconveniences for people and nature alike. The storm covered our area in deep, exceptionally wet snow, which caused a unique disturbance to our forests. Heavy snow was weighing down trees for weeks on end causing them to bend towards the ground or even break in two. More mature trees likely remained standing but may have had large branches snapped off, while the whole stem of younger trees bowed under the weight of the snow. Since they were in this position for so long, it is likely that they will not bounce back to their normal growth form come springtime. If trees on your property have sustained excessive damage from this storm, there are different actions you can take depending on the composition of your woods and what you use it for.

Long-term impacts of this event are still to be seen, but it is likely that this will decrease the regeneration potential of trees such as aspen, which re-sprout by suckering from their roots. If the main stems are still intact, suckering will not occur and the trees should be manually cut down to initiate that growth. In forests that are used for timber, this will likely decrease the amount of production since they will lose all those years of growth. Since the event was so widespread, this could have major economic impacts to Minnesota's forest products industry.

The news is not all bad, however. Our forest ecosystems will use these disturbance events as opportunities to build resiliency. Weak or diseased trees were likely the first to go, which will improve the genetics of the next generation of growth. Having tree canopies drooping towards the ground can benefit wildlife such as deer that have limited browse options in the winter months. Fallen trees provide habitat for animals that make dens such as bear and fox, create thermal cover for grouse, and increase soil richness if left to decompose back into the forest floor. During the growing season, more light will reach the ground in gaps left by fallen trees, allowing seeds that have been waiting in the shade the chance to germinate, increasing age and species diversity.

Equipment Rental

The no-till drill
Working Width 12 feet
Travel Width 16 feet
Rental Rate is $14 per acre 3/4 ton truck for transportation, and at least a 75 horsepower tractor for use.
A 50% deposit of estimated acres is needed to hold your place.

Wildlife plot equipment
Can be used behind an ATV or small utility tractor.
Includes:
small field disc
broadcast seeder
drag harrow
Rental Rate is
$80 per weekday
$225 for the weekend

The 2023 Annual Tree Sale

Our 2023 Tree Sale is well under way! We have had many orders come in, but we still have trees available to purchase! Please get a hold of us or check out our website to see an updated availability list.

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The conservation world is seeing more funding than it has in decades. Pine SWCD is doing all they can to make sure we can use these funds to help the landowners of this county protect their resources, and the resources so many Minnesotans come to use every year.

As more conservation efforts are being taken on by the state and their local partners, challenges of getting these efforts out the door come with them. To help better facilitate that in our county, our Pine SWCD Board of Supervisors are working on building up staff. Along with the new ag. position last year, the district has successfully partnered with Kanabec SWCD to create a shared services forester position. This position will help assist the needs of landowners in both Pine and Kanabec counties, and help implement goals that have been laid out in the new Snake River Comprehensive Watershed Management Plan. We hope to see this position filled this Spring.

With these two new positions, along with our current staff, we hope we can continue work with more landowners in the county. Through one on one visits, workshops, and educational materials, we hope to empower landowners to take action and conserve the resources of their properties. We are happy to assist, but no one knows your property, your resources, and your needs, better than you. Together we can make a difference.

And it is not just your local Pine SWCD staff that are out their working to protect your resources. Your elected Pine SWCD Board of Supervisors are doing their fair share as well. The board of supervisors hold monthly meetings to keep things running, make adjustments where needed, and provide direction for district staff. Through various committees and assignments, they work with various partners to oversee collaborative planning efforts, build strong partnerships, and advocate for Pine SWCD and soil and water districts as a whole. They also work with our local state representatives to advocate at a state level, and to convey needs and concerns of districts.

We have also seen a new face on our board of supervisors this year. Mike Cummins took office in January of this year, and is excited to learn and help convey the message of conservation to the people of Pine County. Along with Mike, Jerry Telker, Kelly Henry, Doug Odegard, and Dan Benzie are working to ensure the people of Pine County that our natural resources are important and worth protecting. They work to understand the conservation needs of the county, and turn that into action.

As time goes on, the resource needs of the county have changed. We at Pine SWCD work to meet those ever changing needs. We want to stay at the forefront, so we can take on new challenges that await. We want to take lessons from the past, so we can apply what we learned for today. We want to play our part in protecting what we have so we can continue to enjoy them in the future.

If you have a resource concern on your property, we are more than happy to see if we can help. Our staff is always willing to meet you out on your property or at our office in Sandstone. Feel free to drop in and say hi! You can find our contact information on the back page of the newsletter, or you can visit our website at pineswcd.com.

Paul Swanson
District Manager
Pine SWCD

"WE AT PINE SWCD WORK TO MEET THOSE EVER CHANGING NEEDS."

Supervisors Mike Cummins, Jerry Telker, and Doug Odegard being sworn in to their new terms.

Great Blue Lobelia
(*Lobelia siphilitica*)