the vermilion sportsman



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Status of the Walleye Population on the West End of Lake Vermilion

The DNR Fisheries office in Tower has been receiving complaints of poor walleye fishing on the west end of Lake Vermilion for several years, especially for keeper sized fish. Anglers mostly catch larger fish that must be released to comply with the protected slot limit (18-26 inches). I wanted to take this opportunity to discuss the status of the walleye population on

the west end of the lake, explain why walleye fishing has been poor, and discuss steps the DNR is taking to address the problem.

The DNR conducts annual fish population assessments on Lake Vermilion as part of the statewide Large Lake Program. Specially designed gill nets are set at standard locations around the lake each year in September. Fish catches from these

nets provide information on species composition, abundance, size, age, and growth. In recent years, walleye gill net catches on West Vermilion have been dominated by larger fish, especially in the Wakemup Bay/Head of Lakes area. Strong year classes of walleye were produced in 2002 and 2003 and those fish dominated the population for a number of years. Most of the larger slot fish caught in recent years came from those two strong year classes. Since 2003 walleye reproductive success has generally been below average, resulting in a population with good numbers of large fish and relatively low numbers of small and medium sized fish. This lack of smaller fish has been most pronounced on the far west end of the lake, especially in the Wakemup Bay/Head of Lakes area. The walleye population on East Vermilion has maintained a wider range of size classes and fishing there has generally been good.

There has been some good news in recent years. A strong

year class of walleye was produced in 2007, especially in the Niles Bay/Wolf Bay area. While the 2007 year class has showed up well in population assessments, anglers didn't seem to catch many of these fish. High forage abundance may have affected angler success. Fish from the 2007 year class are now 17-20 inches long and many are in the protected slot. Based on the

2012 gill net assessment, it also appears the 2011 year class is stronger than average, especially in the Niles Bay/Wolf Bay area. Those fish are now about 10 inches long and should be keeper sized in 2014.

A statewide research study has been underway since 2008 to evaluate put-back fry stocking on lakes where walleye eggs are taken for

hatchery operations, including Lake Vermilion. Because the stocked walleye fry were marked, it is possible to make population estimates of naturally produced fry using the ratio of marked

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SCLV Annual Meeting set for Aug. 10

The Sportsmen's Club of Lake Vermilion will hold its 45th annual meeting and dinner Saturday, Aug. 10, 2013, at Fortune Bay Resort and Casino. All members and their guests are welcome to attend.

This year's featured speaker will be James Lindner, co-host of *Lindner's Angling Edge* and *Lindner's Fishing Edge* television shows. Read more about Lindner and his fishing background on page 19 of this newsletter.

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PRESIDENT'S MESSAGE...

Greetings Friends and Neighbors,

Brrrr! As I sit by our computer writing this message the thermometer outside the window registers 18 degrees below zero. Worse yet, we are nearing the "warmest" part of the day. On the brighter side, however, there is a certain beauty about days like this; the air is crystal clear, the sun is bright, the lake is eerily quiet, and life's pace slows down. There is time to read (or nap), time to re-live the happy times of the past year, and time to ponder the things you would like to do during this upcoming year. And, you can be assured that in a few days it will get warmer.....largely because it can't get much colder at this latitude.

Now, on this cold day here is a thought that should make you feel warmer..... at least on the inside. In early January, I attended the annual Roundtable hosted by the Minnesota DNR in St. Paul. There were approximately 400 citizens in attendance representing virtually every natural resource interest in the state. The keynote speaker at the Friday evening banquet was Dr.

Darby Nelson, aquatic ecologist and author of the recently released book "For Love of Lakes." As Dr. Nelson took the podium, he surveyed the crowd and began by asking those who are members of a lake association to please raise their hands. Dr. Nelson then followed by saying, "Thank you, thank you very much. There is a special place in heaven for lake association members." Truly, this was a "feel good" moment for me and for SCLV members Walt and Marcie Moe who also attended the meeting. Equally so, I trust that as you read this, you too will feel good (warmer) because of your membership in our organization.

We are making progress working with the Minnesota DNR on developing a new shore lunch site within the Vermilion State Park. The new site, which will complement the six existing sites, is located in Mattson Bay south of Raspberry Island. When completed, it will have a floating dock, picnic table, fire ring, and wilderness style latrine. Funding for this new site has been do-

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Status of the Walleye Population... (Continued from front page)

and unmarked young-of-the-year walleye collected during fall electrofishing. These population estimates indicate sufficient wild fry are being produced to make strong year classes, however survival of these fry on West Vermilion is apparently poor during their first summer. Fall electrofishing catches of young-of-the-year walleye have been below average on West Vermilion in recent years even though there were high numbers of fry produced naturally or stocked. Electrofishing catches have been much higher on East Vermilion, indicating fry survival is better in that lake basin.

It is unclear why survival of small walleye has been poor on West Vermilion. There has been some concern that an expanding cormorant population on the lake may be negatively impacting the walleye population. However, it is unlikely that cormorant predation is the major reason for poor survival of small walleye. The walleye problem started before cormorants became abundant and is worse in the far western part of the lake, the area with the fewest cormorants. There is some evidence cormorants may be affecting the perch population on East Vermilion, where perch gill net catches have been unusually low for several years. The DNR Fisheries Research Unit and U.S. Fish & Wildlife Service are currently reviewing data from Lake Vermilion and will soon decide if cormorant control is warranted.

The walleye protected slot limit was modified in 2012 from 17-26 inches to 18-26 inches. The change was in response to angler concerns about catching keeper sized walleye on West Vermilion. The regulation change allows some additional har-

vest while still meeting management goals for the lake. There was also concern that too many large walleye in the population could reduce survival of small fish. The regulation change will allow nearly a year of additional harvest before fish reach the protected slot and should reduce stockpiling of large fish. There are many lakes in Minnesota with protected slot limits and in nearly all cases these regulations have benefited walleye populations.

An extensive review of historical fish survey data was conducted to see if changes in fish populations have occurred that might explain poor survival of small walleye on West Vermilion. Most species have maintained remarkably consistent population levels over time. While there is not a sampling program in place for largemouth bass, data from creel surveys suggests there has been a large increase in the population of largemouth bass on West Vermilion. There is some concern that high largemouth bass numbers could be affecting survival of young-of-the-year walleye.

The current situation on West Vermilion has been very frustrating. While walleye populations often fluctuate in response to strong and weak year classes, it is unusual for walleye population issues to persist this long. DNR Fisheries is committing significant resources and effort to this issue. Please feel free to contact me if you have any questions.

Duane Williams, Large Lake Specialist 218-753-2580 ext. 224: duane.williams@state.mn.us

President's Message continued from page 2...

nated by the C. Wendell Niepagen family in his memory. Mr. Niepagen was a longtime SCLV member who owned property on the west end of the lake. Our goal is to have this site available for use by mid-summer. In addition to this new site, we are working with the DNR to replace the small dock at the Swedetown Bay site with a larger floating dock that will improve the access and mooring at this location.

As part of the ongoing effort to protect our waters from aquatic invasive species, a new world-class, invasive species research center has been established at the University of Minnesota. Under the directorship of Professor Peter Sorensen, the Center has the lofty goal of slowing the spread of aquatic invasive species, reducing their abundance, and ultimately eradicating them from Minnesota waters. Funding to launch this new initiative includes \$2 million from the Environmental Trust Fund (lottery) and \$1.8 million from the Clean Water Legacy Fund. Another \$8.7 million could be approved by the Legislature this spring, which would fund the center for six years. Until now, the many AIS activities conducted by our organization under Bob Wilson's leadership have focused on attempting to stop any additional invasive species from entering Vermilion. With establishment of this new research center we will now have some of the leading researchers in the country working in an attempt to discover the "silver bullet" to eradicate these unwanted species from our waters.

In late November, federal wildlife research biologist, Kevin Kenow called with the sad news that loon V4, known as the Rice Bay male, had died. Kevin said the loon never left Vermilion this fall and likely died at freeze up. He hoped to recover the carcass to discover the cause of death, but due to poor ice conditions the recovery was delayed a week and during this delay the bird was totally scavenged. The only thing recovered was the satellite transmitter that had been implanted in the loon in July 2011. Assistance in this recovery effort was provided by the Vermilion Fire Brigade which used their new air boat to reach the site where the loon perished. A more complete de-

"Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire: it is the time for home."

— Edith Sitwell

scription of the recovery is included in the Timberjay newspaper article reprinted in this edition of the newsletter. While the satellite transmitter has been recovered, the geolocator tag attached to the leg, containing valuable information on the loon's diving depths and feeding habits, is still missing. Most likely, the leg containing the tag was carried off by some scavenger and is lying somewhere along the shore of Armstrong Bay or the southeast portion of Big Bay. Lake users traveling in this area are asked to be on the lookout for any remains from loon V4 and for any leg bands or geolocator tags which could have belonged to loon V4. Our SCLV website contains a sample photo depicting a banded leg from a scavenged loon and the specific leg band colors for loon V4. Please report any findings to an SCLV board member or Kevin Kenow at 608-781-6278.

In mid-January, the Minnesota DNR met with the U.S. Fish and Wildlife Service (USFWS) to request a Public Resource Depredation Order (PRDO) to reduce the number of cormorants on Lake Vermilion. To obtain a PRDO, there must be evidence that the birds are negatively impacting game fish populations. DNR lake surveys show six consecutive years of below average perch counts on Vermilion which coincides with the period when the cormorant population has increased tenfold. The DNR estimates that the birds, at the current population level, are removing 7.9 pounds of forage fish per acre from Vermilion each year. Meanwhile, on Leech Lake, the cormorant population is being reduced annually to limit the foraging rate to approximately two pounds/acre. The cormorants may also be impacting fish habitat. DNR surveys on other lakes show an inverse relationship between perch populations and rusty crayfish, i.e. as perch numbers decline, the rusty crayfish population increases. On Vermilion, the crayfish have already eradicated most of the weed beds on the east end and more recently they have started to destroy the weed beds on the west end too. The rate at which the west end weed beds are being destroyed by rusty crayfish is likely connected to the reduced perch numbers brought about by predation losses to cormorants. Thus, the cormorants are not only negatively impacting the perch population; they may be also indirectly causing an adverse effect on fish habitat. The USFWS decision on cormorant control is expected soon. We will post it on our SCLV website when it becomes available.

Membership Coordinator Jeff Lovgren reports that membership renewals have been strong again this year. Further, many members have made monetary donations in addition to their membership dues. Your financial support is very important in allowing us to not only continue but also expand our efforts to protect and improve Lake Vermilion. Thank you very much!

So, on this cold winter day, relax, add another log to the fire, and enjoy the slower pace which is part of living on beautiful Lake Vermilion during this season of the year.

Mel Hintz, President

ICE! ... Blockbuster by Boreas!

Sidney A. Frellson, Director, Division of Waters - Minnesota Department of Conservation Text reproduced from *Conservation Volunteer Magazine*, January-February, 1963



Pressure ridge blocking marked snowmobile trail on Lake Vermilion. (Photo by Lee Peterson)

The elements with which man has to contend are four in number; namely earth, fire, air and water.

Water exists in the atmosphere as a vapor and is precipitated as rain and snow, dew and frost, water and ice. These forms are all chemically related, but physically they have widely different characteristics. Let's consider water which, like the masquerader, is an element of many varied faces.

Most of us are familiar with the behavior of streams and lakes during the summer, but *little thought is given to the winter phase of their annual cycle*. With the coming of cold weather, the water in the lake or stream is gradually cooled. Temperatures within the mass of water tend toward uniformity due to continuous turbulent currents. Cold, dense surface layers sink, and the lighter bottom layers of warm water rise toward the surface.

Gradually the entire mass attains a temperature of 39.2 degrees F. (point of maximum density), and finally the surface film of water is further cooled, and when it approaches the freezing point, needlelike crystals of ice called **FRAZIL ICE** begin to form. On small lakes, or in the sheltered portions of large lakes, ice begins to form when air temperatures fall below freezing, but wind and wave action may pre-

vent the complete freezing of large lakes even when the air temperature falls below 32 degrees F.

Depending upon the degree of turbulence, as well as the temperature, the crystals of frazil ice unite and form little floating masses of ice, which continue to grow by accretion of other similar ice masses. If this growth is accomplished without crushing, there results a clear thin sheet of **RUB-BER ICE**.

The continuous ice cover now formed prevents loss of heat directly from the free water surface to the cold air so that the transfer of heat, the rate of freezing at the bottom ice surface, is retarded, although the ice sheet thickens steadily. Freezing often occurs very suddenly, six inches of ice cover forming in a few days. However, normal winter temperatures in Minnesota rarely produce sheets of ice more than 30 inches thick. Let's pursue this study:

Most of us have some knowledge, varying considerably in its degree of accuracy, about SLEET, HAIL, GLAZE, FRAZIL ICE, ANCHOR ICE and the like, but as to the detailed characteristics of just "plain ice," few bother to inquire.

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- Liquid water is a mixture of several molecular forms of H₂O, only one of which can change into solid ice. Water, upon freezing, increases about one-eighth in bulk, but the resulting ice is less dense than the underlying water, and so it floats.
- Ice has nearly eight times as great a capacity for thermal expansion as steel. Its specific heat is only half that of the water from which it was formed, but its thermal conductivity is twice as great. While the sustaining capacity of ice is not definitely determined, tests indicate that ice two inches thick is considered safe for groups of people. Four inches thick is considered safe for light loads and eight inches thick is considered safe for loads not over 1,000 pounds per square foot.
- Railway trains have been run across ice 15 inches thick. Expansion of a sheet of ice 150 feet in width has been known to move a masonry bridge pier weighing 1,000 tons two inches out of plumb, and in other instances masonry piers on pile foundations have been pushed from two to twelve inches out of line.
- The expansion effect of lake ice, however, does not make itself felt until the ice layer is at least five inches thick. Lake shores are subjected to modification by ice action, in two general ways:
 - o By expansion,
 - o By ice jams.
- A dense snow blanket on top of the ice not only reduces the freezing rate, but prevents penetration of sunlight through the ice into the underlying water. Incidentally, this fact, according to some authorities, is one of the causes of "winterkill" of fish in relatively shallow lakes. The final result of the freezing process is a dense, water-tight sheet of floating ice ranging in temperature from a few degrees above freezing at its bottom surface to as low as -40 degrees F. at the top.
- The ice cover is normally in a state of almost complete flotation with the exception of its edges, which may be frozen solidly to the shores, projecting boulders, piers of bridges, dams, walls or other objects to which it may have had an opportunity to attach itself. If inflow to the lake increases during the winter months, and the level rises rapidly, the center of the ice sheet is lifted.
- A sudden increase in discharge causes the water level to fall below the ice level, leaving the ice temporarily suspended. The latter condition exists for only a short time since the ability of ice to support itself in such instances is limited to spans approximating ten times its thickness, hence cracking of the ice follows, and the normal flotation level is resumed.
- Ice on a lake surface expands or contracts with the rise and fall of the air temperature, and since air temperatures have a considerable range of fluctuation

- in winter, the ice changes in volume. An appreciable drop of temperature causes the ice to contract, producing cracks which refill with more ice [freezing water]. When a subsequent rise in temperature produces an expansion of the whole ice mass, a tremendous force is exerted against the shore.
- If the shore is of such a nature that the ice cannot shove, it may buckle. Buckling is not uncommon, even in very thick ice sheets. Whether or not expanding ice will push up the shore or buckle depends on whether there are enough weak spots in the ice sheet to permit the release of this pressure by the buckling of the sheet or crumbling of its edges, both of these conditions being somewhat dependent on the water depth near the shore.
- If the shores are gently sloping, the expanding ice overrides them, but if the shore materials are of a yielding sort, an irregular ridge called an ICE RAMPART is likely to be formed by shoving a portion of the marginal material to a higher level, and leaving it in the form of a ridge. Such ice ramparts may be several feet in height, and may contain large boulders. Where conditions are such that ice ramparts once formed become permanent, successive shoves may build up a considerable accumulation of displaced materials, thus forming an ICE-PUSH TERRACE.
- Similarly, dropping temperatures cause contraction of the ice layer. As ice is very weak in tension, the stress is usually released by numerous tension cracks. The ice sheet already shoved up on the bank is not retracted, but remains perched on the bank. Contraction of ice is usually harmless. However, the combination of alternate expansion and contraction causes a "ratchet" or "jacking" action that is more severe than either force separately.
- As contraction takes place at colder temperatures, the
 water that rises in the tension cracks freezes at once,
 filling and sealing them. When temperatures rise again,
 the cracks cannot close, and the entire expansion must
 take place at the edges of the sheet. Compression
 cracks due to buckling also freeze solid and are stronger than before. Each cycle of contraction and expansion shoves the edges of the sheet farther up the bank.
- The coefficient of linear expansion of ice, according to Ganot, is 0.000052 per degree of temperature rise, and thus for a 10° F variation in an ice sheet a mile long, the change in length would approximate 2.75 feet while the force exerted is probably not less than 30,000 pounds per square foot.

Editor's Note: "Boreas" is the god of the North Wind (Greek mythology).

VERMILION'S SOUNDS OF SILENCE

Winter's white covers lake and land.
With frozen partner silence, hand in hand.
Like a gauzy mist, descends this silent ballet,
So still lie the reaches of the frozen bay.
Seems nothing but the silence separates shore from shore,
Stillness and solitude, gifts from silence one cannot ignore.

Gaze out on this white expanse, then close your eyes.

Quiet your mind....no words need be said,

Nature's rhythms will show the magic just ahead.

Then...hear... the presence of Vermilion's past,

Vermilion's memories, oh so bright, now recast.

The Anishinaabe, the first people, their voices one can hear.

Voices in the sub-zero wind, strange words, muffled, austere.

But hear the children of this wilderness, like children through all time,

Their sounds cannot be misunderstood, nor denied...oh, so sublime!

As this laughter slowly fades away Dismiss all distractions that come your way.

Then, like the winter ice, hear the groans crackling out from Vermilion's cold The lumbermen, the trappers, the miners all those souls seeking Vermilion gold. Straining, bowed down, overburdened, creaking like a heavy gate, Their silent sounds, mournful sounds, heralding this their long gone fate.

Can it be?

I now hear a laugh, the hardy laugh of brother Jim?

Confidant and mentor, left a hole, never filled-in.

But his voice is there! Like it was yesterday! Its very own style.

Rich and grand and resonating, crowned by a warm most welcoming smile.

"THIS is how you fish"... "IDIOT, TRY NOT to drown," always a gentle shove.

Older brother wisdom, older brother wisecracks, older brother love.

This beguiling presence puts a silent smile on my face,

A warmth deep in my heart that all time passed cannot erase.

And tears always rise when I think of him,

I hope you too have had, a brother Jim.

And then I wonder....

When I travel to the other side of life's great divide,
Will all of my Vermilion whispers too have died?
Will those most dear search for sounds from my silenced being?
Summoning memories from my days on this our beloved lake?
Something of measure that is their's and their's alone to take?

Tom Aro ~~~ Winter 2013

"Invasive Species"

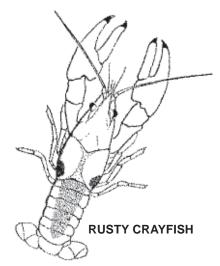
by Bob Wilson



On Thursday, January 24, 2013, yes, a while ago, I drove across the ice in Pike Bay taking my shortcut to Tower and a men's breakfast at the Tower Café. As I climbed out of the car along with two friends picked-up on the way, the car thermometer read minus (-) 31 degrees. Maybe you heard we had a cold week or two in Tower and all around Vermilion at that time. It was definitely true. This old news about the cold and ice in January is a roundabout way of telling you that our SCLV "aquatic invasive species prevention programs" on Lake Vermilion are somewhat relaxed at the moment, but Aquatic Invasive Species (AIS) news, concerns, the formation and revision of policies and programs continue on in the DNR and the Legislature. Invasive species still threaten the general health, fishing and recreational use of every lake in Minnesota.

Rusty Crayfish — Declining or Expanding?

Rusty crayfish in Vermilion have been with us from the "eighties." If you've "wet a line," taken time to closely look around the shoreline in the summer or have been lucky enough to see a mink with one in his mouth, you know the "rusties" have been plentiful in past years, especially around the east end of the lake. Vegetation in both smaller and larger bays on the east end has almost totally disappeared because of these crayfish, with a couple of exceptions. Coincident with these weed-free bays has come a decline in the numbers of crayfish, at least as far as I've been able to determine. I used to see countless crayfish bones on rocky shorelines, probably due to seagulls or some animal, but bone sightings have been few and far between in the past two or three summers for me. Now, according to friends, it appears the west end is probably being more affected by rising rusty crayfish numbers. Fishing, in some areas of the lake has also seemingly declined. Perch counts, for example, have notice-



ably diminished over the past few years, per our DNR friends in Tower probably in part because of aquatic vegetation habitat loss and also because cormorants find them very good eating. Cormorants are an issue in and of themselves of course, so I won't deal with them in this article.

Rusty Crayfish were first introduced in Vermilion by fishermen using them for bait. The story goes that when our Vermilion fish species were generally unresponsive to this temptation, the remaining bucket of crayfish bait was dumped into the lake. The spread was rapid, almost exponential. A word of advice here, never move rusty crayfish from one lake to another; it's a "Regulated Invasive" Species. Over time many people have asked if something couldn't be done about this "invasive" so we could begin to see Vermilion's weed beds start to rejuvenate. The Eau Claire lake chain in northwest Wisconsin may provide clues and lead the way to a possible solution.

This waterbody saw a 95 percent reduction in its once thriving rusty crayfish population over the past 10 years. Investigating further, the DNR sent a rusty crayfish sample to an aquatic scientist to check for disease. The research revealed a genus of trematode parasite identified as *Microphallus*, inhabiting the crayfish livers. The research sought to determine if the parasite was the cause of the crayfish crash. Subsequently, more work was done and more samples collected from additional lakes. Fourteen of the 38 lakes sampled had a significant presence of *Microphallus*. Most lakes with low densities of rusty crayfish (79%) were found to have the parasite present. Most lakes with high densities (92%) were found to have the parasite absent. The tests suggested the parasite was limiting the rusty crayfish population. Other tests over time also found that the parasite may reduce a crayfish's competitiveness for available cover and make them more susceptible to be eaten by predators.

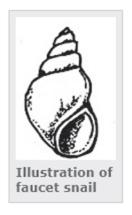
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Invasive Species'... Continued from page 7

With the goal of reducing the rusty crayfish population in Vermilion, our President, Mel Hintz, contacted Dr. Peter Sorensen, the Director currently involved in establishing the new Minnesota Aquatic Invasive Species Research Center at the University of Minnesota. Mel offered to provide partnership help in the form of financial and/or volunteer support from the SCLV if the Research Center could take on this rusty crayfish research project for us. Dr. Sorensen replied that the Center had not yet received their core allocation of funding from the Legislature, but when they do and get their people on board he said "they will be happy to help" and he went on to say, "contact us again in six months to a year." As we have learned, the politics of these situations do take time and cause uncertainty.

Nevertheless, it would be very important for us to have the professionals involved with such a complex project. Many of us remember an incident or two where a counter predator or biologic remedy has been introduced into an invasive species environment and the so-called cure became worse than the original problem. There is reason to believe, however, that a glimmer of hope exists to reduce our rusty crayfish population and possibly improve Vermilion's fishery. We will keep you posted on this subject. In the meantime, we are exploring a number of options to monitor the impact of rusty crayfish on the weed beds in the west end of the lake.

Faucet Snails — Forewarned is Forearmed



The objective of this information is to forewarn our readers about the potential problems an infestation of faucet snails could cause in Vermilion. The phrase "forewarned is forearmed" is a tried and true cliché even used by Cervantes of Don Quixote fame in 1615 and goes back in history before that. I'll bet you didn't know that (do you care?). In any case, it seemed ideal as an attention getter for the introduction of a species of snail most people have never heard of and we absolutely don't want in Vermilion.

Last November, the DNR made an announcement that faucet snails had been discovered in Bowstring Lake in northern Itasca County. While this species of snail is not yet widespread in Minnesota, a few words about it in this column may help you recognize it if

you see it and prevent it from infesting Vermilion *if it can be reported quickly enough.* You may remember the "Chinese Mystery Snail" explained

in the November 2011 issue of this newsletter. They were first discovered in Vermilion's Spring Bay and since then have been spreading outside the bay's boundaries. The mystery snail is a "Regulated Invasive" which can be transported and legal to possess, but cannot be released into public waters. For the most part they are a nuisance species impacting shorelines and shallow waters with crumbling, sharp, smelly shells. The faucet snail, on the other hand, is a "Prohibited Invasive Species," unlawful to possess, import, purchase or transport. We knew very little about the Chinese Mystery Snails when they first appeared, seemingly out of nowhere; the faucet snail would be worse.



CHINESE MYSTERY SNAILS

The faucet snail, an aquatic invertebrate native to Europe, was introduced to the great lakes in the 1870s by ship. This snail is an intermediate host for four different intestinal trematodes, or flukes, that cause death in water-

fowl, particularly scaup (duck) and coots according to the DNR. Faucet snails were also discovered in Lake Winnibigoshish (locals call it Lake Winnie) in 2008, after an extensive die-off of approximately 9,000 waterfowl occurring over the years 2007 & 2008. Waterfowl die-offs continue on Winnibigoshish, but in fewer numbers in recent years. When waterfowl consume the infected snails, the adult trematodes attack the internal organs of the ducks and cause lesions and hemorrhage. Infected birds appear to be lethargic and have difficulty diving and flying before eventually dying. There is no evidence that other wildlife besides waterfowl, including any fish species, is adversely affected. Fish from a faucet snail infested lake can still be eaten, but any ducks or other birds that appear sick should not be consumed.

Faucet snails attached to rock

Where to look: Found on rocky shorelines, river and lake bottoms, aquatic plants, docks and other objects in the water.

Means of Spread: They can spread by attaching to aquatic plants, boats, trailers, anchors, and other recreational water gear.

Identification: These snails can be difficult to identify conclusively. Native snail species and young mystery snails can look similar to faucet snails. Adult faucet snails can grow up to 1/2 inch in length, mystery snails can grow much larger, to golf ball size. Faucet snails are light brown to black; with 4-5 whorls and a cover on the shell opening (see picture). The shell opening is on the right when the shell points up (see drawing). If you suspect you have found a faucet snail, submit it to the Tower DNR ASAP in a small plastic bag. The sooner a faucet snail is discovered and reported the better chance we may have of doing something about it.

Current lakes/rivers with faucet snails: The majority of faucet snail infested lakes are in Itasca County.

<u>Itasca County</u>: Bowstring Lake, Cut Foot Sioux Lake, Egg Lake, First River Lake, Little Cut Foot Sioux lake, Little Winnibigoshish Lake, Pigeon River from the dam to Winnie, Rabbits Lake, Ravens Flowage, Raven Lake, Sugar Lake, Third River and Third River Flowage.

<u>Counties – Cass, Hubbard and Wadena</u>: Lake Winnibigoshish, Leech Lake River, First Crow Wing Lake, Second Crow Wing Lake, Upper Twin Lake and Lower Twin Lake.

Multiple Counties: Parts of the Mississippi, parts of Crow wing River & the Shell River.

As a wind-up for this part of the article: <u>always remove all aquatic plants</u>, <u>animals and mud from boats and equipment before transporting from one water body to another</u>.

KEEP AN EYE OUT!

Zebra Mussel Note: On January 31, 2013, the DNR announced that two zebra mussel veligers (larval/baby zebra mussels) had been discovered in a water sample in Lake Winnibigoshish. While no adult mussels were found, the two veligers would indicate there is a reproducing population within the lake. As a result, Lake Winnie

ZEBRA MUSSEL

(Continued on Page 10)

Invasive Species ... Continued from page 9

and many of the adjoining and/or connecting lakes and rivers listed previously will be marked as infested as of February 12, 2013. Lake Winnie is the fourth largest lake in Minnesota and is considered a popular destination for 1000's of boaters and anglers all summer long. Unfortunately, this will make it increasingly difficult to stay out of the way of a potential zebra mussel infiltration ourselves. The DNR will no doubt be checking more boats coming out of Lake Winnie and surrounding lakes this coming summer.

SPRING BOAT CHECKS

The upcoming fishing season for Walleye, Northern Pike and Sauger is currently scheduled for May 11, 2013, to February 23, 2014. The first two dates for our annual boat checks will be Friday, May 10th the day before the fishing opener, and again on Friday, May 24th and/or Saturday, May 25th, before Memorial Day on May 27th.

I will contact the people usually involved with boat checks approximately two weeks before the above dates to check their availability. It's particularly important to be stationed at the public ramps on Friday, May 10, just before the opening of fishing, as the number of boats being launched will probably be the most we will see on any single day the rest of the summer. Although most of the boat owners we will visit with on that day are just taking their equipment out of storage it is a good chance to talk with them about Aquatic Invasive Species (AIS) prevention and keeping a clean boat all season long, especially if they trailer it from lake to lake.

If you are a member of the SCLV and would like to become involved in helping to check boats and learn about AIS prevention, please give me a call (218-753-5544) or an e-mail (rwilson2@frontiernet.net) a couple of weeks prior to May 10th.

Habitattitude — Be careful with your exotic pets

Our Director friend at Sea Grant at the University of Minnesota – Duluth, Doug Jensen, has written an article about their campaign called **Habitattitude** that deals with releasing exotic pets or plants into the public waters or into the wild that eventually become an adult invasive species. You may not have known it, but releasing a pet like goldfish, frogs, certain plants, snakes, etc. can cause tremendous problems in the environment. Two results of having done this, even innocently, is for example, the Florida Everglades are now hosting great numbers of Burmese Pythons some as long as 20 feet and weighing 200 pounds. They have a voracious appetite, occasionally swallowing an alligator. Pet owners let them go when the snake became too large for their home, in some cases. Hydrilla, a fast growing plant, following release in the 1960s from aquariums into waterways in Florida has spread to Canada and the southeast, from Connecticut to Texas and California. By the 1990s, control and management were costing millions of dollars each year. Take a look at Doug Jensen's article on page 11. SEE YOU IN THE SPRING!



Get Habitattitude!

Doug Jensen, Minnesota Sea Grant Program, 218-726-8712, djensen1@umn.edu

Do you own an aquarium? How about a water garden? In either case, what do you do with unwanted plants and animals? A new national public education campaign called Habitattitude™ can help provide solutions to this problem.

Many of us have done it — it seems simple and kindhearted enough. We may have disposed of aquarium fish, plants, snails, crayfish, frogs or turtles by releasing them into local waters, flushing them down the toilet or maybe allowing them to escape. However, such actions can lead to unintended and serious consequences. Once released, non-native plants and animals can displace native species, harm habitats, and negatively impact the recreational and economic value of our lakes and property.

Aquarium fish, even if they are not predators like the notorious northern snakehead that has caused problems in the Potomac River, can carry diseases that can kill native fish. Invasive plants can clog waterways and impede recreation by snagging boat propellers. Recent examples of fish and plant releases in Minnesota waters include piranha, pacu, water hyacinth, water lettuce, Amazonian catfish, koi, goldfish, yellow iris, even a cayman!

Habitattitude encourages aquarists and water gardeners to help avoid such problems by promoting simple actions when faced with an unwanted aquatic plant or fish. These include:

- Inspect plant orders and remove seeds, other plant fragments, snails, and fish.
- Give unwanted pets and study specimens to a school, aquarium or zoo.
- Dispose of uwanted aquatic plants in a sealed plastic bag in the trash.
- Contact a retailer for possible returns or a veterinarian for guidance on human disposal of animals.

Habitattitude was launched in fall 2004 to help prevent the release of unwanted aquarium fish and plants. Minnesota Sea Grant co-leads the campaign on behalf of the National Oceanic and Atmospheric Administration's Great Lakes Sea Grant Network and in collaboration with the Pet Industry Joint Advisory Council, and the U.S. Fish and Wildlife Service. Based on a recent grant from the U.S. Environmental Protection Agency through the Great Lakes Restoration Initiative, the campaign is being reinvigorated as part of a regional aquatic invasive species

project by the Great Lakes Sea Grant Network and its partners.

Habitattitude's logo and 'don't release' message are appearing on fish bags, new aquaria, brochures and other print media, newsletters, and ads in hobbyist magazines across the region and beyond. The campaign's Web site, www.habitattitude.net, provides resources to campaign partners and consumers.

Minnesota led a pre-campaign mail survey conducted in two communities each in Minnesota and Pennsylvania, which showed that over a period of three years consumers released unwanted aquarium fish, plants, crayfish, snails or turtles a total of 50 times. Only 20% of consumers were aware of laws or regulations concerning release of aquarium or water garden species. Importantly, most aquarists and water gardeners viewed releases as preventable and an environmental problem. Congruent with these attitudes, over 90% agreed that the Habitattitude campaign's logo and messages were acceptable, easy to understand, attractive, positive, and clear. The new regional effort will capitalize on the power of the campaign's brand.

Campaign partners will continue to staff booths at trade shows, give presentations at society and club meetings, as well as meet with state, federal, and tribal agencies throughout the Great Lakes and beyond to broaden partnerships. This campaign is supported at the highest levels of government:

Look for Habitattitude coming to pet stores and nurseries near you. If you are a member of an aquarium or water garden society or club, please consider joining the campaign. To join, visit the Web site above, contact Minnesota Sea Grant, or the University of Minnesota Extension Service.

Adapted with permission from University of Minnesota Extension's From Shore to Shore, newsletter #71



The Zebra Mussel Battle / Calcium Test Results, Lake Vermilion Versus Mille Lacs And Lake Ore Be Gone

ZEBRA MUSSEL

As you may recall in an earlier SCLV newsletter article, the "SCLV Water Quality Committee" reported to our readers the results of our committee's 2011 Lake Vermilion water testing for calcium.

To refresh your memories, the test results for Lake Vermilion revealed our calcium to be at approximately 7PPM (parts per million) on the west end of Vermilion and 13PPM on the east end of Vermilion

These results were good news in our efforts to prevent Vermilion from becoming a lake infested with zebra mussels as research by biologists has shown that calcium levels under 10PPM may inhibit zebra mussel reproduction. A note of caution is

needed here as we are told zebra mussels may survive at 10PPM, but research indicates hampered reproduction, so our efforts to keep zebra mussels from ever entering our watershed and lake are still critical and must continue.

Immediately following our Lake Vermilion calcium testing we were asked by several people how Lake Vermilion's calcium levels compared to lakes now infested with zebra mussels. To answer this question we chose to sample water from Mille Lacs Lake and Lake Ore Be Gone (in Gilbert, Minn.). In the case of Mille Lacs Lake, zebra mussels have exploded to nearly 8,000 mussels per square foot (yes, that is not a misprint, this is mussels per square foot). Lake Ore Be Gone is a recently infested lake with zebra mussels now present, but at very low quantities at this point.

We traveled to Mille Lacs and Lake Ore Be Gone this fall and obtained water samples for analysis of calcium by Pace Analytical labs in Virginia, Minn. These samples showed calcium concentrations of approximately 20PPM for Mille Lacs and 35PPM for Lake Ore Be Gone. With Lake Vermilon being in the

7PPM to 13PPM calcium concentrations, this indicates we are fortunate to have calcium levels one-half to one-third those of the infested lakes we sampled.

In discussing our calcium results with Tom Jones (DNR Mille Lacs Lake biologist), I asked if Mille Lacs showed similar zebra mussel concentrations in 2012 versus 2011. He advised that the population is similar in 2012 versus 2011, but a new development is the zebra mussels are now populating softer bottom

areas of the lake versus just rocky areas. Tom said the zebra mussels on this softer bottom are bonded together so tightly you may pick up a solid mat of mussels with no border.

Lastly, in discussions this week with Gary Montz (DNR Ecological Services, St. Paul), there is still no known way to eliminate zebra mussels once they are established in a lake.

In summary, we are really fortunate to have fairly low levels of calcium in Lake Vermilion versus other lakes we sampled that have zebra mussels. HOW-EVER, the experts do not suggest that zebra mussels would not survive in Vermilion, so all our efforts to "KEEP THEM OUT" remain critical.

Gary Whitenack, Board Member

Between newsletters, stay connected with Lake Vermilion

www. Sportsmens Club Lake Vermilion. org

Fond Memories of a Life on Lake Vermilion

by Ed Woolverton

I am now almost 96 and have been asked for more words about my 70 years here on the lake. I still live here on Treasure Island for six months each year, until the COLD WEATHER sends me to Florida.

I always wondered about the true size of the BIG PINE that grew on Jesse Swanson's place near Niles Bay (now known as Swanson's Point). The BIG PINE that I never saw, but intended to, was quite well known and talked about back then. There were even signs on the Oak Narrows Road and on the road into Swansons' to guide you to it. When Jesse bought the property from Mrs. Gates, the first thing he did was to log off a large group of beautiful White Pines, including the BIG PINE. I thought I could find the stump and determine the tree's size. I found my way there only to find a huge sawdust pile. Jesse had evidently started with the biggest tree.

Jesse was quite a character. He was president of the Tower bank, owned Grandview Resort between Oak Narrows and Muskrat Channel, and had seven children (all of them with first names starting with "J"). He gave the boys .22 rifles to shoot any song birds that might come to the property. Jesse loved to "outlaw" and as I was his only neighbor, he often included me on his airplane trips into Canada and the Boundary Waters.

We also kept our car parked at Jesse's. My wife and myself were the caretakers for "Granelda," the Daytons' place for 27 years. Jesse had a huge garage, so our car had a roof over it all winter. For awhile, Jesse had a very protective black dog named "Duke." The Daytons also came to Jesse's to get picked up by us. One time Wallace Dayton arrived, put his leg out of the vehicle, only to have Duke take a good bite out of it! So off he went to the Cook Hospital. Jesse always bragged what a great dog he had because it had Dayton blood in it!

Want to add a seasonal address? Want to change your main address?

Contact Jeff Lovgren 218-753-2413 lovgren@frontiernet.net PO Box 696, Tower, MN 55790



Ed Woolverton in a wooden fishing boat with vintage outboard motor on Lake Vermilion.

My wife had a Jesse story. Jesse gave her a ride to Tower where she had family. On the way back he ran over a wolf with his car and, believing it dead, tossed it in the trunk. Before they got back, there was a lot of noise coming from the trunk. Jesse drove into Cook to the Gustafson garage, where they took a rifle, opened the trunk and shot the wolf!

I met my wife at Jesse's. She was taking care of their youngest child and helping cook, etc. She was born and brought up on a farm three miles from Tower. She was the 10th of 12 children. Her mother died when Marie, my wife, was only seven. The farm had no car, only a horse and cart.

As for the lake itself these days, I feel the muskies are eating up all my crappies. I miss the beautiful spot-tailed shiners we used to fish with for walleyes. And by the way, the biggest White Pine in Minnesota is in Fillmore County, with a circumference of 214 inches at waist height.

Editor's Note: Ed Woolverton is a long-time member of the Sportsmen's Club of Lake Vermilion and over the years has made generous donations to the club for water quality testing.

Is This Minnesota's Future?

Invasive fish fines in British Columbia will bite wallet!

By Tom Fletcher - BC Local News

Published: December 20, 2012

VICTORIA — Releasing a snakehead fish into B.C. waters could cost you up to \$250,000.

The B.C. government has amended its controlled alien species regulation to impose steep fines for releasing invasive fish such as the snakehead, a Chinese import with a voracious appetite and the ability to wiggle across land to get to new waterways.

A snakehead fish discovered in a pond in Burnaby Central Park in June forced environment ministry biologists to pump the water level down so it could be captured. The toothy beasts were being imported and sold alive in Asian specialty food stores.

The new regulations also aim to stop the spread of zebra or quagga mussels that can attach themselves to boats and equipment and infest lakes. Failure to remove those mussels, alive or dead, can trigger a fine of up to \$100,000.

"The impact of the snakehead and zebra mussel in other jurisdictions has been devastating to those local ecosystems," Environment Minister Terry Lake said Thursday, announcing the latest changes.

The regulations also prohibit possession and breeding of identified high-risk aquatic species. They expand the reach of legislation passed in 2009 that restricted ownership and breeding of tigers, snakes, crocodiles and a long list of other exotic animals. Added to the list are species of monitor lizard that grow to more than two metres long or otherwise represent a threat to public safety.

B.C.'s restrictions for private zoos were passed after a woman was killed by a Bengal tiger kept in a cage at an exotic animal attraction on a farm near 100 Mile House in 2007.

The new regulations add definitions for "accredited zoo or aquarium" as well as schools and research facilities that are permitted to possess exotic animals for study purposes.

The regulation requires owners of controlled species to apply for permits. Conservation officers have authority to seize animals that are considered an immediate threat to health and safety of people.

We've Gone Digital!

A New SCLV Document Management Program Has Begun

On April 23, 1968, the State of Minnesota recorded the Articles of Incorporation of the Sportsmen's Club of Lake Vermilion, Inc., in accordance with the Minnesota Nonprofit Corporation Act. It is a handsome document with a '50s / '60s retro look. Soon after, the charter members of the infant organization created its bylaws which stated that it was organized to preserve the natural beauty of Lake Vermilion, improve safety on the lake, and promote sound conservation practices. During the intervening 44 years, the organization has worked diligently to accomplish these goals.

From then until now, some 170 quarterly newsletters, *The Vermilion Sportsman*, have been written and published; boats have been inspected and educational materials distributed every summer at boat launching sites to prevent aquatic invasive species from entering the lake; board members have spoken to organizations and distributed materials to educate residents and visitors about aquatic invasive species; water quality has been monitored; loons have been counted and cormorants surveyed; six shore lunch sites for day use have been created and maintained with a seventh in the works; night navigation lights around the lake have been installed and maintained by the Club; annual sucker sales have been held; membership has grown from approximately 312 charter members to over 2,000 dues paying members; and an excellent website has been created and maintained to educate and inform its current and potential members, volunteers, lake residents, and visitors at http://www.sportsmensclublakevermilion.org.

To accomplish these goals the organization has worked with many government agencies including: St. Louis County, State of Minnesota Department of Natural Resources, U.S. Forest Service, Bureau of Land Management, Minnesota Pollution Control Agency, Minnesota Sea Grant program, and other organizations and businesses in its effort to learn, educate and protect Lake Vermilion.

In the process it has created, received and accumulated boxes of documents, correspondence, reports, educational materials, and newsletters, etc. The documents were stored in file folders, boxes and safe deposit boxes with the Club's board members. Information stored this way makes it almost impossible to readily access, easily use, or archive its 44 years of documentation. Until now, the SCLV struggled to find a way to preserve and access this rich history.

It became a goal of our President, Mel Hintz, to move the Club's records from their various storage containers as well as its current and future documents to a digital repository. In 2010-2011, four SCLV members: Terry Jones of Metamora, IL, along with Walt Moe, Sheri Sawatzky, and Renee Aro from Lake Vermilion, gathered the documents and electronically scanned them to PDF and JPG formats thereby digitally preserving the history of the Sportsmen's Club.

Storage options for these newly digitized documents included external hard drives, compact discs, flash drives, or the Cloud, a networked computer system to store data. After looking into the pros and cons of each, it was decided to go with Google Docs, a searchable Cloud computing program.

The organization's documents are now uploaded and saved to the Cloud where board members can access them from a computer anywhere. Currently the documents can only be viewed, but eventually the Sportsmen's Club could take advantage of online collaboration which allows multiple users to create and edit documents.

(Continued on page 16)

We've Gone Digital!

(Continued from page 15)

The program is very cost effective as there is no charge for storage up to 1050MB, with laddered minimal charges for additional storage. Because we exceeded the minimum storage amount, the Club now pays \$5.00 per year for an additional 20GB of storage space. In addition to the Cloud and to ensure the safety of our documents, we have also backed them up on computers and flash drives.

Unfortunately, we may not be in possession of all SCLV documents created since 1968. We especially would like to find *The Vermilion Sportsman* newsletters missing from our collection. Would those of you who may have related documents allow us to help clean your closets and cubbies? We'll pick up the documents, reimburse you for shipping, scan them, and if you wish, return them to you. Please contact Renee Aro at 218-753-2129 / reneearo@me.com or Sheri Sawatzky at 218-666-5512 / bubba@accessmn.com if you have documents to share with us. Your contributions will be greatly appreciated.

Renee Aro, Board Member

RECIPE CORNER

SALMON DIP

1 8 oz. package Cream Cheese 2 Tbsp. Grated Onion 1 Tbsp. Lemon Juice 1 tsp. White Horseradish 1/2 tsp. Salt 1/4 tsp. Pepper

Mix above ingredients together.

Stir in:

1-1/2 to 2 cups Smoked Salmon
Dash of Liquid Smoke (add or omit depending on taste)

Form into ball and roll in Chopped Green Onions or Chives, until all sides are covered.

Refrigerate an hour or more before serving.

Eat with crackers. Enjoy with wine or other beverage of choice.

Billy Rosner, Board Member

Substitution: Try smoked whitefish or sucker instead of salmon.

BOARD OF DIRECTORS and OFFICERS 2012-2013

TOWER (55790)

(All phone numbers are Area Code 218)

COOK (55723)		
Sheri Sawatzky, Secretary Phone 666-5512	· •	
Dale Lundblad, Vice President Phone 666-2316		
Gary WhitenackPhone 666-2153	•	
Ed Tausk Phone 666-5418	•	
Bill Rosner Phone 666-2880		
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Walt Moe	3331 Nisen Drive
Phone 753-3816	Email: walmoe@frontiernet.net
Mel Hintz, President	•
Renee Aro	
Phone 753-5544	Email: rwilson2@frontiernet.net 2113 Birch Point Road
Howard Ankrum	1878 Everett Road South

Phone 753-2936 Email: howiela@yahoo.com

SCLV Board Meetings are held monthly on the second Wednesday, and are open to all SCLV members. Check with a board member for time and location.

Fire Brigade assists in Loon Recovery

(Reprinted with permission from The Timberjay)

LAKE VERMILION—Researchers working on a study of the region's loons got an assist this week from members of the Lake Vermilion Fire Brigade and the organization's new airboat.

Kevin Kenow, with the U.S. Geological Survey, has been tracking the movements of loons from northern Minnesota in recent years, using satellite transmitters that were surgically implanted in dozens of birds, including some that summered on Lake Vermilion and Burntside Lake.

When one of the Lake Vermilion study birds, named V4, died recently on Big Bay, Kenow headed north in hopes of recovering the transmitter and, if possible, determining why the loon died. But mild weather conditions have delayed the formation of good ice on the lake, so Kenow enlisted the help of the fire brigade, which used its new airboat to get Kenow to the scene of the dead loon.

The boat had little trouble on the limited ice and using tracking equipment the assembled team had little difficulty in finding the transmitter, which was lying on the ice. The loon itself was virtually gone, having already been scavenged, so Kenow said there's no way to determine how the loon might have died. He said loons can fall victim to predators, like bald eagles, diseases like aspergillosis, or to hunters who sometimes mistake them for other waterfowl. Kenow acknowledged that the transmitters themselves could pose some risk of infection to loons, but he noted that some of them have survived multiple years with transmitters with no apparent ill effects.

A separate geo-locator tag that had been attached to the loon's leg was missing and the team was not able to recover it. Kenow said that tag would have had a significant amount of useful data about the feeding habits of the loon, so recovery of the tag is a high priority. Kenow said local volunteers may mount a search of the area soon to try to locate it.

The loon V4 was first captured by Kenow's team last year on Vermilion's Rice Bay. The loon traveled to the Gulf Coast, off Florida, over the winter before returning to Vermilion this spring. The bird was spotted during the annual loon count conducted by the Lake Vermilion Sportsmen's Club, on the southeast side of

Big Bay and appeared to be alive well into the fall. At some point, Kenow said he became concerned that the bird was not migrating and eventually he concluded it was dead.

The ongoing study is part of a federally-funded effort to learn more about where and how avian botulism affects loons and other waterfowl. Botulism annually kills thousands of loons and other waterfowl, mostly on the Great Lakes, and Kenow and his fellow researchers are trying to learn more about the causes of this significant source of bird mortality.

Editor's Note: For more information on the death of Lake Vermilion V4 loon, please go to the Sportsmen's Club website at: www.SportsmensClubLakeVermilion.org



New License Fees Benefit Lake Vermilion

The price of Minnesota hunting and fishing licenses will increase in March 2013 for the first time in 12 years. This action was critical to maintaining the world class fishing and hunting enjoyed in Minnesota. The DNR appreciates all the efforts of organized groups such as SCLV and individual hunters, anglers, trappers and others who supported new license prices, which were approved with bi-partisan support in the Legislature and signed into law by Gov. Mark Dayton in 2012.

This increased revenue will be seen in our Fish and Wildlife budget starting in the coming fiscal year as of July 1st, 2013. As you may or may not know, we're still in the middle of making our budget which eventually has to be approved by the Legislature. I can comment, however, in a general sense of what the license fee increase means for the Fisheries budget.

For the Tower area office, our base budget will remain the same, but this is sufficient for us to continue our regular accomplishments. We have a fisheries specialist position vacant right now due to a recent retirement. Thanks to the fee increase we expect to fill this in July. In the past few years, holding vacancies open for long periods of time was common, but our wait will be short. Since it has been so long since our budget grew — a lot of the funds will go towards restoring fisheries programs - and there won't be any large new program changes. Vacant fisheries research positions will be filled. This office has benefited from asking research staff to look more closely at issues on Lake Vermilion. With new staff, they will be able to respond more quickly to immediate management needs while also pursuing some long-range research that will help us manage our fish better in the future.

"A lot of people like snow.
I find it to be an unnecessary
freezing of water."

— Carl Reiner

Our Fisheries Division Chief, Dirk Peterson, has made fisheries habitat a high priority. Included in the habitat initiative are monies for habitat improvement projects to protect shoreline and improve habitat in lakes and streams. Fortunately in this area, there is not a high need for restoration projects. However, climate change affects fish habitat by changing the suitability of lakes for different species, so understanding these systems falls under this initiative. For example in our area, trout, tulibee, and well-oxygenated cold water are concerns. Collecting data in these habitats is important to help us to manage under change and understand what actions we can take to help keep our lakes and their fish populations resilient.

Another activity that has gotten short shift in recent years has been angler creel surveys. Although our lake survey sampling data does a good job in tracking how our fisheries are doing, data collected from nets and electrofishing can't tell us much about what anglers are catching, what sizes they keep or throw back, and how successful they are in catching fish. With the new license fee monies, we will be able to creel interview anglers and measure fish on more lakes. Lake Vermilion's creel survey is expected to start on schedule in spring of 2014, but we'll also see some surveys on smaller lakes in this region. Creel surveys are especially important in understanding how special regulations are working.

The changes to license fees can be found on the DNR website: http://www.dnr.state.mn.us/heritage/index.html.

There are some new types of licenses and combination packages, but I won't take up space here trying to list them. One other small change is that the fishing license year will return to being 12 months; valid March 1, 2013 to Feb 28, 2014.

Again, thank you to all the anglers, sportsmen and women who supported our license fee increase.

Edie Evarts, DNR Tower Area Fisheries Supervisor

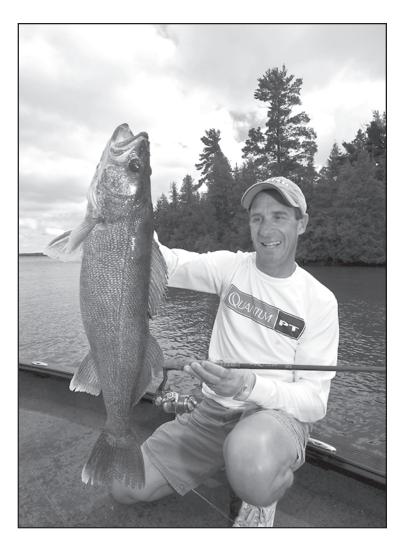
Sport Fishing has been James Lindner's life

Growing up in the world of sport fishing, James Lindner has filmed and fished from the Arctic Circle tundra to South American jungles and from the Atlantic to the Pacific coasts and every state in between. As a multi-species fisherman, James has few equals and his prowess in the world of musky fishing is legendary. Recognized as one of the best directors and producers in the outdoor industry, James is the son and nephew—respectively — of Ron and Al Lindner.

In 2008, James was inducted into the Freshwater Fishing Hall of Fame as a Legendary Communicator for his outstanding achievement in the realm of sport fishing. In 2003, he was honored as the Rapala Angler of the Year.

Today, James is at the helm of Lindner Media Productions, which specializes in producing educational fishing programs, educational DVDs, national TV commercials, product sales presentations, point of purchase product DVDs shown in sporting goods stores, as well as providing their trademark underwater footage and photography to the sport fishing industry. James is co-host of "Lindner's Angling Edge" and "Lindner's Fishing Edge" television shows.

A top-grade tournament bass fisherman in his own right, James has dominated the Canadian American Smallmouth Bass circuit, with multiple first-place wins on the KBI and FFBC. James has wins and high placing in many other events. Each year he accepts a limited, yet highly attended series of speaking engagements.



North St. Louis SWCD 2013 Tree Program

The North St. Louis Soil & Water Conservation District 2013 Tree Program is accepting orders for a variety of trees and shrubs through April 12, 2013. The shrubs and deciduous trees are being sold in bundles of 10 and conifers in bundles of 25, all for a cost of \$35 per bundle. They are all hardy varieties which will do well in our climate and in a range of soil types and degrees of sun exposure. They are excellent for revegetation of the shoreland buffer zone of your lake lot, as well as attracting wildlife and providing shade or screening.



Call the NSLSWCD at (218)749-2000 or download the order form from the website: www.nslswcd.org.

Sportsmen's Club of Lake Vermilion, Inc. Jeff Lovgren, Member Records · P.O. Box 696 · Tower MN 55790 lovgren@frontiernet.net · (218) 753-2413		
Membership year runs from Jan 1st through Dec 31st ☐ 2013 New Member ☐ 2013 Renewal		
Membership level ☐ \$10.00 Individual ☐ \$20.00 Family ☐ \$15.00 Couple ☐ \$50.00 Business or Organization		
Member Name		
Spouse Name		
Street		
City State Zip		
Email (optional) Phone (optional)		
Please clip or copy this form and send to the address above.		

Become a Member

Join those who love Lake Vermilion as much as you do. Help us continue the many activities you've just read about.

Not sure? Check us out at our website www.SportsmensClubLakeVermilion.org. We're pretty sure you'll like our vision for the future and the work we have under way now to make Lake Vermilion even better.

Please use the form on this page or the form on our website. Make checks payable to the "Sportsmen's Club of Lake Vermilion." The Sportsmen's Club is a 501(c)(3) non-profit organization.

Join us as we work to improve this great lake. Together we can have an even bigger impact!

Membership Renewal for 2013

In early December 2012, you received a letter requesting that you renew your membership for 2013.

Please check your dues status and contact information shown in that letter. Your dues status is also shown on this newsletter label. Please let us know of any errors.

HELP US MAKE A BEAUTIFUL LAKE EVEN BETTER!



Sportsmen's Club of Lake Vermilion, Inc. PO Box 696 Tower MN 55790-0696

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