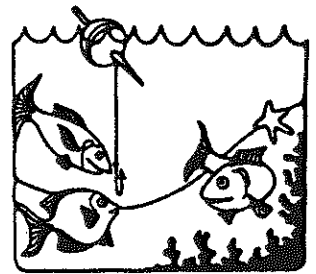


Ten Mile Lake Association



Newsletter



Spring Edition, 1996

Dedicated to the Preservation and Improvement of Ten Mile Lake and its Environment

Results Positive as Lake Tests For Second Season Analyzed

By Jim Schwartz, Member

Environment and Ecology Committee

WE HAVE NOW COMPLETED two successive years of testing and analyzing water samples at various sites on and around Ten Mile Lake. For the most part the news is good: The lake is relatively stable, clarity readings have been holding up well and no major sources of contamination have been detected. We would like to think our observations reflect the commitment residents have made to preserving and enhancing the lake's superior quality.

Here are some of the specifics of what we have observed thus far:

■ Nutrient levels appear to compare favorably with those reported some 20 years ago, the earliest survey done on Ten Mile. That long-term comparison suggests the lake is at least holding its own, despite steady shoreline development.

■ Seasonal clarity averages in the last 5 years have slowly improved, raising the possibility that the Association's campaign for residents to upgrade individual waste treatment systems is having a favorable effect.

■ Peripheral swamps that border Ten Mile continue to register high nutrient levels, nutrients that can be, and often are, delivered to bay and lake areas through culverts. We have targeted nine that we believe discharge the greatest volume of surface swamp water and will continue to monitor them as time goes on.

■ An aquatic plant (Chara) is invading the shallow regions of Kenfield, Flower Pot and Long's Bays. It also appears in the large reed bed outside and south of Lundstrom's Bay and, again, about 200 yards north of the state public access. One of the results is

that boating in some of these areas has become quite difficult. Since Chara is considered beneficial, this "takeover" phenomenon is not necessarily bad, although it's always possible to have too much of a good thing. We will be assessing this situation further, trying to determine whether localized infusions of nutrient-rich ground water are contributing to what is happening.

■ A tour of the lake and its bays was made in September to look for signs of eurasian water milfoil, the undesirable exotic plant that now infests more than 75 lakes and rivers in Minnesota. None was found.

All of our work has been done in collaboration with Del Hogen's Twin Cities company, Instrumental Research, Inc. From May through September monthly samples were taken drawn from the main lake at its deepest spot, Kenfield Bay, Lundstrom's Bay and Long's Bay. We also took surface samples in May from the nine swamps mentioned above and in September from a flowing spring in Kenfield Bay.

THE SAMPLES WERE analyzed for phosphorous and nitrogen concentrations and the lake and bay samples for chlorophyll-a and pheophytin-a, the latter two being indicators of algae numbers and, therefore, water clarity. Testing procedures were done according to EPA or other Minnesota approved methodologies.

This season our basic May through September schedule will be to sample the main lake and three bays (Kenfield, Long's and Robinson's), the usual nine swamps, and the open springs in Kenfield Bay. We also may measure groundwater pressures and nutrient chemistry at selected Chara sites.

Melgaard Helps Find Inscription in Desert

ROSS MELGAARD, former president and board member of the Ten Mile Lake Association, was part of a group that in the fall of 1995 re-discovered a long lost inscription in the desert southwest. The inscription was carved into rock in 1776 by Father Escalante, who was leading a colonizing and exploration party. That inscription was discovered in 1884, then became lost in the mists of time despite efforts at rediscovery. Here is how the story unfolded:

In 1776 two Franciscan friars, Francisco Atanasio Dominguez and Francisco Silvestre Velez de Escalante and a retinue of 20 persons, a horse herd, and larder on the hoof, left Santa Fe, New Mexico, to Christianize, colonize, and find an overland route to the California mission of Monterey. The group went through western Colorado to central Utah, but for some reason abandoned the mission, headed south through Utah and northern Arizona turned toward Santa Fe.

AFTER A DIFFICULT crossing of the Colorado River, they scratched a cross, "1776" and initials on a cliffside. This was later discovered and became well-known in the Southwest as the "Crossing of the Fathers." The site now is covered by the waters of Lake Powell.

In 1884, Harry Baldwin, the first surveyor of the area, found "1776" and initials on a large rockside in the high desert of northern Arizona, a short distance from the Colorado River. In 1939 he read an article about the "Crossing of the Fathers" and realized he probably had seen additional evidence of Escalante's journey. For various reasons he was unable to return for confirmation. Using his description two groups attempted to find it, both unsuccessfully.

IN NOVEMBER 1995, his son, George Baldwin, directed a group under the auspices of the Museum of New Mexico to find the lost inscription. The group consisted of three nuclear physicists, the director and the curator of the Museum, an archaeologist, a nuclear chemist, a dentist-photographer, and a physician (Ross Melgaard of Ten Mile Lake). The chances for discovery were expected to be about 5 percent.

After three days' search, Melgaard located the site and the group found the inscription the next day. Even after two centuries of erosion, enough remains to confirm the find.

The numbers "17" and a faint "7" were deeply inscribed, with a Spanish type cross alongside. The area where the initials probably were had eroded. The full consensus of the search group was that the long lost inscription had been found.

THE ESCALANTE NAME is part of Rocky Mountain history. Utah has a lake, river, town and desert so named. And adjoining states have applied the name as well. Dominguez also has some spots named after him.

Changing Lake Levels Can Lead to Damage

By Carl Hertzman, Member
Environment and Ecology Committee

LAST SUMMER considerable damage was done to property on Ten Mile by high water levels. I will discuss the causes of significant fluctuations of lake level and what can be done to lessen the damage. The problem was discussed by the Environment and Ecology Committee. We felt it was not of environmental concern and I will give the reasons for this. The effect on property is another matter and is of concern.

Lake levels have varied significantly on Ten Mile as on other bodies of water, probably since the receding of the glacier. Weather is a major factor, both short and long term trends. During the drought of the mid 1930s the lake was low enough that the reefs across Flower Pot and other bays were out of the water. One had to row carefully across the reef to get into Flower Pot. The deep water channel had to be followed with care to enter Long's Bay.

LOW WATER CAN create a problem for some owners, as they can have considerable difficulty in launching their boats. For the past 20 years, the lake level has varied by at least two feet. A heavy rain, for example, can raise levels by three to five inches, enough to cause damage. Due to the slow current on the outlet (the Boy River -- what we used to call the thoroughfare), drainage can take many days even without obstruction of the flow.

I believe that beaver dams (at present there are three) on the outlet between Ten Mile and Birch Lakes significantly raise the water level and prevent adequate drainage after heavy rains. There is also a dam on the outlet of Birch which is a significant factor. There are property owners on Birch who want to maintain (Continued next page)

Water Fluctuations

an adequate level due to the shallowness of some of the areas on this lake.

BEAVER DAMS HAVE become more of a nuisance in recent years due to their rebounding population in Minnesota as well as in other areas of the country. I have read descriptions of early explorers of extensive areas, as in Oregon and the northeast, being flooded by these dams, making travel difficult. There are estimates of 100 to 200 million beaver in North America before trapping. Neither Indians nor wolves, their chief predators, kept the numbers down. Extensive trapping decimated the beaver population.

Due to several factors, however, including social restrictions on the use of furs for clothing and public censure of trapping, the market for beaver pelts has plummeted. It is not financially worthwhile to trap these animals. We are simply approaching the status that existed before the advent of white man (I understand some counties are initiating a bounty but do not know of its effect). There is no doubt that these dams can cause considerable property damage. The effect is not all bad, however. Beaver impoundments are an important wetland area for a good deal of wildlife, including breeding ducks and propagation of brook trout.

THERE HAVE BEEN EFFORTS to control the problem on the Boy River outlet. The dam next to Highway #6, for example, has been repeatedly taken out, but the beaver quickly rebuild it within a few weeks (remember there are three dams on the outlet and the number may increase). There has been some effort to control these animals, without success. There simply are too many.

I talked with a DNR agent about the problem and he was pessimistic about alleviating the situation. It would take a major, continuing effort of time and money to keep the dams destroyed. Dynamite cannot be used next to the road. While there are tubes that can be placed through the dams, called Clemson levelers, they are expensive and I do not know how effective they would be in lowering a lake the size of Ten Mile. Despite claims for these levelers, animal studies indicate that beavers can learn to obstruct the flow of underwater pipes. I am sure the lake association would welcome any serious suggestion concerning the beaver problem.

THERE ARE STEPS the home owner can take to protect docks and boats. Waves have enormous force, as witnessed by good sized boats be-

ing destroyed and docks wrecked by last summer's storms. If your dock consists of platforms resting on metal poles and cross sections, it can probably be raised by means of a winching device, which can be purchased or fabricated. Or ask your local dock service to raise it out of reach of the waves.

The boat lift can be raised by lengthening its legs or by placing it on cement blocks. I have found it is best to use two columns of blocks under each corner of the lift to lessen the chance of it being pushed off one set of blocks. Lastly, tie your boat either to the lift or dock to lessen the chance of it being swept off the lift. Keep these structures above the reach of the waves.

Community Sewage System Under Study

AN ENGINEERING FIRM has been hired to examine the feasibility of a community waste water treatment system for a portion of the North Shore. The firm, Ayres & Associates of Madison, WI, expected to complete its study by May 15.

Purpose of the investigation was to evaluate the feasibility of such a system for the approximately 22 properties involved. A letter that went to the affected property owners said the study will identify the most appropriate and cost effective facility for the project area, but will not provide cost estimates for actual construction.

AT THE TIME THIS was written, information still needed for the study were elevations of septic tanks in the project area as well as topographic elevations for the drainfield that will serve the properties.

The Wisconsin Company was retained by the Tri-County Leech Lake Watershed Project as part of its long-range program to encourage better land and water stewardship throughout the watershed.

NOT PART OF THIS study, but still relating to Ten Mile Lake, is the ongoing interest of the Hackensack City Council in extending its waste collection and treatment system to include South Shore residents all the way to Kenfield Bay.

Although nothing definite has been decided upon, Attorney Ted Mellby, a Ten Mile resident, says much of the preliminary engineering work has been done. There is even a possibility, he says, that the service could be extended north to Boone Point and across the Long's Bay narrows to North Shore residents.

Lake Shore Transfer Calls for Septic Data

By Mike Schwartz, Attorney
Plunkett, Schwartz, Peterson, P.A.

TEN MILE LAKE property owners are reminded that since 1994 mandatory state and county rules have been in place affecting the status of individual sewage treatment systems when property is sold or changes hands.

The regulations provide for a disclosure, certification and compliance process that involves both seller (transferor) and buyer (transferee). It goes like this:

1. Prior to transfer or sale, the property owner shall have a licensed and certified site evaluator examine the existing sewage treatment system to determine whether it complies with county requirements. A report on the findings must be filed with the Cass County Environmental Services Department (ESD). If there is no sewage treatment system on the parcel, the owner may provide an affidavit to that effect to the ESD and need not have the property examined by a site evaluator. Lack of a sewage treatment system would be unlikely at Ten Mile Lake.

2. Also before sale, the seller must disclose in writing to the buyer the use, general description, compliance or non-compliance, and location of any sewage treatment system on the property -- if one exists. A standardized disclosure form and map of the property should be used (the same map may be used to disclose the location of any wells on the property). Failure to make the required disclosure could lead to the seller's being liable to the buyer for sewage system upgrade costs and attorney fees.

3. At the time the property is sold, if the disclosed system is not in compliance, the buyer must apply to the ESD for a land use permit or variance, as well as any other applicable permits, to bring the sewage system into compliance with county standards. The buyer has one year from the permit date for completion of the necessary work.

4. The seller may contract with the buyer to bring the waste system into compliance before the property is transferred, but regardless of any such agreement, it remains the buyer's responsibility to have the work performed within the specified time frame.

5. Once the work is done, the buyer shall file a certificate of completion with the ESD.

6. Failure to comply with any of these re-

quirements is a misdemeanor unless otherwise punishable as a felony or gross misdemeanor under state statute, in which case the state regulation shall apply.

Realtors and the Cass County ESD should be familiar with these regulations. They apply to virtually all parcel transfers in lake country.

MLA Members Want Local Access Input

A SURVEY OF MEMBERS by the Minnesota Lake Association brought some strongly-held views from the 225 individuals who responded. The questionnaires went to 300 persons. Here is a summary of the findings:

- Lake associations, the DNR and lakeshore owners, in that order, should be the primary interests involved in the management of public access facilities.

- Fishing, boating, swimming, viewing, water skiing and canoeing were the main lake uses cited.

- Recreation needs most wanted were quiet lake areas, wild shoreline, public access restrooms and areas set aside for water and jet skiing.

- Slightly fewer than half (91) said they had visited lakes or rivers during the year that had exotic species in them.

- Motor boats (194), canoes (121), sail boats (63), paddle boats (66) and pontoons (61) were the watercraft most likely to be owned by the respondents.

- The sampling was about evenly divided on the question of whether the 100-foot separation between wake-creating boats and docks is sufficient (79 yes, 84 no).

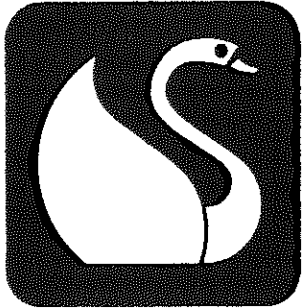
- As public waters become more congested, respondents felt certain restrictions would be fair. Most often mentioned: No wake areas (118), no jet boats (99), water skiing zones (80), quiet lakes (67), fishing zones (47).

- Problems created by watercraft were listed as high noise levels (159), buzzing/driving too close (135), excessive speed (123), chasing wildlife (73), operating in sensitive areas (72), operating in swimming areas (69), exotic species (34), and operating at night (24).

- Respondents overwhelmingly (180 yes, 20 no) supported developing local guidelines and plans with agencies and local players to assist in managing new and existing public access sites and recreational lake usage. -- Jim Schwartz.

From the Notebook By Jim Schwartz

I'VE ALWAYS THOUGHT crows were among our most intelligent birds and an article in the Science section of the January 30 *New York Times* adds some evidence to that hypothesis. A biologist who has studied a breed of crows in the South Pacific has found these canny birds actually make tool kits for collecting food. The crows strip a twig from a particular tree in such a way as to fashion a hook at the end, then use the tool to snag and pull worms and other prey from crevices and holes in trees and dead wood. Come to think of it, that's essentially the same approach I use to snare stuff I drop down the maddeningly inaccessible space behind my water heater. If that suggests my smarts and those of the South Pacific crow species are on similar tracks, well, I hope the crow doesn't mind.



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SUSTAINABLE DEVELOPMENT, I am pleased to report, appears to be catching on. Almost every day I read or hear some reference to the concept, most of it supportive in tone. Whether it's from President Clinton's Council on Sustainable Development, a Northern Minnesota entrepreneur, a group of Catholic bishops, a representative of the Izaak Walton League, a University of Minnesota economics professor, a long-time conservationist, or whomever, the common theme is that sustainable development is the only viable policy for the future. As those of you who heard or read my remarks to the TMLA membership at the annual meeting last fall could guess, I couldn't agree more. If we are to preserve what is still here, we simply must adopt that philosophy.

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GRAZING CATTLE NEAR streams is a bad idea. Right? Well, maybe. *Tidings*, the Mississippi Headwaters Board newsletter, reports in the February 13 issue that one farmer has grazed 40 to 75 head of cattle on a Minnesota stream for years. He has found that by rotating the cattle on and off, letting the cattle graze the upstream creek area for a few days each month, then resting the area for the remainder of the month, trout populations thrived. Moreover, he found that portion of the stream looked better to him:

banks were grassy and stable, trees appeared and the water was as deep as it was wide.

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CLEAR WATER HAS LONG been a goal of those who monitor Minnesota's lakes, Ten Mile included. Some new research, however, suggests that acid rain, global warming and ozone depletion could combine to improve clarity but degrade lake water quality. In a nutshell, here's what happens: Warming and acidification improve clarity which, in turn, allows greater penetration of the higher concentrations of ultra violet rays bombarding earth because of ozone depletion. The ultra violet rays interfere with photosynthesis, reducing aquatic populations and, in extreme cases, actually resulting in "sunburned" fish. The research was done in Canada. Fortunately for us, the phenomenon doesn't seem to occur in alkaline-buffered lakes like Ten Mile. The importance of the study, however, is that it looked at combinations of effects rather than examining just one factor at a time.

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THE GROUNDWATER ARTICLE that appears elsewhere in this issue should provoke considerable thought. If, during high runoff periods, at least 69% of the water reaching the lake comes from groundwater and wetlands, as the study suggests, we face a serious challenge. And that's true in even low runoff spells when the figure is 57% from groundwater and not much at all from wetlands. Why is that a challenge? Because groundwater can carry septic effluent and other contaminants into the lake. And wetlands, by nature, have high nutrient levels, the goodies that stimulate plant growth. In short, preserving the lake means we all have a responsibility to modernize septic systems and use only best management practices as we care for our lake properties.

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MOST OF THE LATTER are just common sense: Avoid fertilizing your lawn, use pesticides sparingly, maintain a buffer strip of native plants along the bank, don't burn leaves or toss them into the lake, cherish your trees as the valuable plants they are, have your septic system pumped regularly, be extremely careful of what gets flushed into your waste treatment system, don't use septic additives (they'll likely do more harm than good), use phosphorous-free washing materials, conserve on your use of water. I could go on but you get the point: Think about what you do. When you weigh the stakes, it's not much to ask.

Study Sheds Light On Nutrient Sources

A STUDY COMPLETED last summer has yielded important information on groundwater flow and other hydrologic data pertaining to Ten Mile Lake. The investigation was a cooperative project between the Minnesota Pollution Control Agency (MPCA) and the Ten Mile Lake Association and was a part of the Boy River Clean Water Partnership project. The work was done by Joe Magner, MPCA specialist.

The project was undertaken as a follow-up to the 1991 MPCA lake assessment research on Ten Mile. Its goal was to describe the lake watershed and to understand more clearly the connections between Ten Mile and the routes by which water reaches the lake.

AS THE PROJECT report pointed out, watersheds not only carry water to the lake, they can deliver pollutants as well. Understanding these connections can be useful in devising lake protection strategies as shoreline development continues.

The report lists four sources of water for Ten Mile, percentages depending upon weather and other conditions:

- **Spring runoff** -- 0 to 5% of the annual total.
- **Wetlands** -- 10% or slightly above.
- **Groundwater** -- 43% to 52%, both shallow (the likeliest conduit for septic effluent to reach the lake) and deep semi-regional flow.
- **Precipitation** -- 44% to 49% (the water source over which we have almost no control).

THE USUAL CYCLE is for water to flow into the lake in the spring, flow out during summer due to evaporation and shoreland plant and tree transpiration, and then reverse the process in the fall and early winter. This water movement explains why lake levels tend to rise in the spring, drop during the summer and then rise again in the fall.

Magner calculated that during low runoff periods Ten Mile gets 57% of its phosphorous (a key plant nutrient) from groundwater, 42% from precipitation and the rest from other sources. During high runoff periods the figures are 30.4% from groundwater, 39.3% from wetlands, 24.9% from precipitation and the remainder from other sources.

HE CONCLUDED his report with the following recommendations:

1. Protect shoreline trees. Do not allow anyone to clear cut large numbers of trees

along or adjacent to the shoreline.

2. Limit development on the west side of Ten Mile. Any significant land use change in the western or even northwestern portion of both the surface and subsurface watershed will add more contaminants to Ten Mile.

3. Protect the wetlands from alterations.

4. Limit the number of year-around homes. More year-around homes means an increase in septic system discharge to the sub-surface.

5. Limit any activities that will increase direct surface runoff to Ten Mile Lake. Inspect construction activities to evaluate any changes to the ground surface that might lead to higher concentrations of phosphorous reaching the lake. -- Jim Schwartz.

Yacht Club Announces Season's Race Schedule

The season's race schedule sponsored by the Ten Mile Lake Yacht and Tennis Club will be as follows:

July 6	Fourth of July
July 13	Fun Sail
July 27	Memorial Cup
August 3	Fun Sail
August 10 ...	Moxness and Award Ceremony

Start time: 1:30 p.m. Should Mother Nature fail to cooperate, the Saturday races will be postponed until the next day with an earlier (10:30 a.m.) start time.

Highway 71 Project Dropped for Present

THE COUNTY HIGHWAY 71 reconstruction project is at a standstill, with no expectation that it will be revived any time soon, says County Engineer Jim Worcester. The County and the U.S. Forest Service have reached an agreement on standards for those portions of the road that cross Chippewa National Forest property. Since the project has been taken off the active list, however, no discussions on specifics are under way between the county and the federal agency.

Worcester did say that the county is considering the possibility of encouraging the Forest Service to designate the road as a Forest Service Highway. If such an approach could be worked out, he said, some level of county/federal cost-sharing likely would be involved.

Diver Says Walleye Like a 'Biker Gang'

By Eric Wright, Scuba Instructor

AS A SCUBA DIVER I feel privileged to have the knowledge and ability to learn about the various inhabitants of Ten Mile on a more personal, face-to-face, or maybe face-to-fish, level than other water sports enthusiasts. Oftentimes, my writing tends to reflect this familiarity in the form of blatant anthropomorphism. I make no apology for my rather unscientific approach to reporting but I do offer an explanation.

Once a diver begins to accumulate dive time in a particular environment, insight into the intricate behavior patterns of different fish species begins to pile up during each successive dive. After awhile a diver begins to notice that certain species react differently to certain situations than do other species. Inevitably these reactions are interpreted as being emotionally motivated, thereby giving each species its own personality. The following is my own interpretation, and a who's who in Ten Mile Lake.

I'LL BEGIN WITH the Minnesota state fish, the walleye. Walleye are truly the free-roaming equivalent of a biker gang. They are large, intelligent and powerful fish that, once grown, have almost no natural enemies. They are extremely sure of themselves and are both feared and respected by the other fish that share their domain. Their smaller cousins, the perch, though lacking the physical stature of their relatives, attempt to carry around an equivalent-sized ego that I imagine often gets them into trouble. Perch are, nonetheless, efficient predators that have certainly taken the role of "juvenile delinquent" to new heights.

Bluegill and pumpkinseed are, without a doubt, the good-natured children of fish society. Always playful and curious, they never hesitate to come forward and greet a scuba diver entering the water. Their curiosity never fails to get the best of them, whereas most fish will eagerly accept a free handout under water, bluegill are often so engrossed with inspecting a diver's equipment that food will be completely ignored.

THEIR LARGER COUSIN, the rock bass, are equally curious and good-natured, but generally seem to possess an intellect equivalent to a pile of sand. When I say they're stupid, understand that I mean that in the nicest possible way. Their presence is always

welcome, both by me and by other fish in society. They are also the most trusting members of society. On numerous occasions I have been able to coax a sleeping rock bass on to my hand at night where they will allow themselves to be petted without objection.

Even the rock bass, with its perpetual curiosity, seems to possess some undeveloped intellect, a sort of rain-man personae. To look at the face of a carp, however, is truly to look into the face of the Forrest Gump of the fish world. Though its physical size renders it fairly safe upon reaching adulthood, I imagine growing up for a young carp to be a very trying experience. Most likely they are the brunt of most of the sunfish's and perch's pranks; always being tricked out of their lunch, leaving them to eat junk off the bottom, and always having to check for those damned "Hook Me" notes on their backs.

BETWEEN ALL THE youthful exuberance of the smaller sunfish and the outright lawlessness of the large members of the perch family, it becomes obvious that there needs to be some sort of law enforcement and judicial system in order for a fish society to be complete. This role I feel is filled quite effectively by the northern pike. Using the largemouth and smallmouth bass as its officers and jury, the northern serves as both judge and prosecutor.

The pike is Ten Mile's only fish large enough to keep the walleye and perch gangs at the outskirts of society. Occasionally, I can even picture a perch standing trial in some weedy courtroom, the northern asking if the perch has anything to say on its behalf, and the perch responding with indifference. GULPH. "Next!"

THE FINAL FISH I wish to mention lurks in the darkest reaches of every fish's nightmares. It is a fish of prehistoric design with the head and jaws of a snake and the body of an eel. Razor-sharp teeth insure that once prey has been struck, there will certainly be no escape. The fish is known as the bowfin and its lineage extends back to the days of the dinosaurs. It thrives in the stagnant pools of society and strikes without warning, leaving no clues for the ever vigilant pike and bass to use to help track it down. Truly, the serial killer of the aquatic realm.

At this point you are either wondering how such insight into the private lives of fish could be gained by one so young, or you're convinced that I've spent entirely too much time under water and have finally lost it. Either way, don't knock it 'til you try it.

Remembering Our Ten Mile Lake Friends

Mary Lou Willis

Mary Lou Willis, 68, Indian Rocks Beach, Fla., and a longtime summer resident of Ten Mile Lake, died Nov. 7, 1995, in Largo, Fla.

She was born in Des Moines, IA, and moved to Florida in 1993 from Iowa. She summered at Ten Mile Lake since 1957 and was an associate member of Union Congregational Church, Hackensack, and a member of Plymouth Congregational Church of Des Moines.

A graduate of Stephens College, she was a member of Junior League, Alpha Phi sorority, P.E.O., Frisbe, and the Des Moines Club.

Mrs. Willis is survived by her husband of 48 years, Donald; two sons, Jeffrey and D. Joseph; and a daughter, Nancy.

Arthur E. Kayser

Arthur E. Kayser, 76, of Rio Verde, Ariz., and formerly of Galesburg, Ill., died Nov. 2, 1995, in Rio Verde. He and his family summered at their south shore Ten Mile Lake home on the property once known as Woock's Resort.

Mr. Kayser was area manager for Illinois Power in Galesburg from 1964 to 1981. During his professional career he was president of the Galesburg Area Chamber of Commerce and held memberships in the First United Presbyterian Church and the Galesburg Rotary Club.

He is survived by his wife, Irmgard; one son, Gene, and two daughters, Sandy Anderson and Cristine Clark.

Alice Fleischer

Alice Fleischer, 88, of Hackensack, died Dec. 6, 1995, at Whispering Pines Good Samaritan Center in Pine River. For many years she and her husband, Jake, made their home in the south shore area of Ten Mile Lake.

Mrs. Fleischer was born in 1907 at Wau-beek, Ia. She was a member of the Walker, MN, Order of the Eastern Star and of the Hackensack Legion Auxillary.

She was preceded in death by her husband, Jake, who served as president of the Ten Mile Lake Association from 1968 to 1971, and by a brother, Richard Miell.

Eleanor Dorothy Indall

Eleanor Dorothy Indall, 93, died March 7, 1996, at Meadow Lane Health Care Center in Benson, Minn. She was born in De Smet, S.D., in 1902.

Mrs. Indall grew up in various towns and

took her degree at South Dakota State College in Brookings. In 1926 she was married to Harold Indall and later taught at Valley Springs and at Wahpeton, N.D., State School of Science.

She and her husband and family summered at their Ten Mile Lake home in the north shore area. She was a member of P.E.O., the American Association of University Women, the Federated Women's Club and the National Federation of Music Clubs. She enjoyed sewing, knitting, music, rifle shooting and travel.

Mrs. Indall is survived by her daughters, Priscilla Shrimpton and Nancy Peterson. She was preceded in death by her husband, Harold, in 1985.

Frank J. Reisz

Frank J. Reisz, 77, of Panama, Ia., died July 19, 1995, at Bishop Clarkson Hospital in Omaha, Neb. He was born at Elmer, Minn., and attended St. Mary's school in Panama. He and his family have been vacationing at Ten Mile Lake for almost 40 years. Their home is in the Chariton Beach area.

Mr. Reisz and his wife of 52 years, Rita, farmed in the Panama area until 1975. He also sold fertilizer and later owned the Panama Fertilizer Co., retiring in 1982. He was a director of the telephone company and a member of the Panama Community Club, which he served as president and vice-president. He also was a member of the St. Mary's Catholic Church of Panama.

Mr. Reisz is survived by his wife, Rita, four daughters, Mary, Barbara, Phyllis and Francene; and two sons, Michael and Gene.

Alvina Agnes Kubo

Alvina Agnes Kubo, 85, a North Shore resident of Ten Mile Lake, died March 29, 1996, at her home.

She was born in Hay Springs, Neb., and after her schooling there was married to Spencer Kubo in 1930. They made their home in Hay Springs until 1934 when they moved to the Walker-Hackensack area. She was active in the Community Church in Walker, the Union Congregational Church in Hackensack, and was a member of the Heartland Quilters.

Mrs. Kubo was preceded in death by her husband, Spencer, who was president of the Ten Mile Lake Association in 1967. She is survived by a daughter, Dorothy Mills, of Ten Mile Lake.

WHAT'S NEW?

A brief review of changes, local and otherwise, since the Fall Newsletter

■ **SINCE MAY 1** children under age 13 are no longer permitted to operate personal watercraft (jet skis). Also children under 12 may not lawfully operate a boat with a motor of more than 75 horsepower.

■ **A TEN MILE LAKE** institution, Bromley's Ten Mile Inn, has been sold, remodeled, re-named Arthur's Ten Mile Lake Inn, and opened for business April 16. On April 20, some 60 Ten Milers gathered at Arthur's for a "season opener" dine-in. They agreed that doing so again in 1997 would be a great idea.

■ **NEW LEGISLATION** is designed to help the Department of Natural Resources deal more effectively with the control of exotic animals and plant species. The laws designate thirteen exotic species as "prohibited" and make it unlawful to possess, import, transport or introduce any of them except under certain carefully controlled conditions. Violations are a misdemeanor with fines ranging from \$50 to \$500. For copies of the new rules call the DNR Exotic Species Management Program at (612) 296-2835. In the meantime, the best plan is to keep your boat rig clean of *all* aquatic plant or animal species. And that rule applies to your live well and bait buckets as well as the boat and trailer.

■ **WHILE WE ARE ON** the topic of exotic species, the DNR reports that no new lakes outside of the seven-county metro area had infestations of eurasian water milfoil. Seven new lakes in the metro area, however, have been invaded, bringing the total to 77 lakes and streams in the state now harboring the alien plant. No new water bodies had zebra mussels in 1995, but populations in the Mississippi River south of St. Paul have grown rapidly. Other exotic species on the "watch list" include purple loosestrife, flowering rush, water chestnut, sea lamprey, spiny waterflea and three fishes -- the ruffe, white perch and round-nosed goby. The latter fish has showed up in Lake Superior. If it reaches inland lakes, the goby could be a threat to such native species as walleye because it eats their eggs and young.

■ **BEAVER CONTROL** has some state money behind it this year. The Legislature appropriated \$75,000 for trapping beaver and razing

their dams, but counties must pony up matching money if they want to participate in the program.

■ **STATE PARK PERMIT** fees are going up from \$18 to \$20 and second vehicle stickers go to \$15 from \$12.

■ **BOATERS ARE NOW REQUIRED** to have a Coast Guard approved wearable life vest (PFD) on board for every passenger. That long-time staple, the boat cushion, won't satisfy the new requirement, although boats 16 feet long or more (except for canoes and kayaks) must have one such cushion or a ring buoy aboard in addition to the life vests.

■ **SEASONAL CABIN OWNERS** got a modest break on property taxes from the 1996 Legislature, effective next year, but higher valuations probably will wipe out any real gains.

■ **WHERE LAKE DWELLERS** have had, in recent years, one magazine devoted exclusively to their interests, now there will be two. The original, *Focus 10,000*, was affiliated with the Minnesota Lakes Association, with dues and subscription folded into one price. That no longer is the case. *Focus 10,000* is now independent of the MLA, which will sponsor its own quarterly magazine/newsletter. Both will contain information bearing on matters of concern to lake and stream residents.

■ **JIM AND LISA TULLY**, residents of Long's Bay, have bought Swanson's Bait Shop, Hackensack, from Ed and Marcia Swanson, also of Ten Mile. The Swansons will continue to operate their gift shop, which eventually will move across the highway into expanded quarters.

IN MEMORIAM

Signe H. Kneeland

Signa H. Kneeland, 100, of St. Peter, died April 2 at the Community Health Care Center. Mrs. Kneeland and her family spent many summers at their vacation home on the southeast shore of Ten Mile Lake.

She was born in Kasota and was married to Harry Kneeland shortly after World War I. Her husband and their two children, Frederic and Marylou, preceded her in death. For over 50 years Mrs. Kneeland was a P.E.O. and Eastern Star member and for many years was active in the Presbyterian Church.

Mrs. Kneeland is survived by a grandson, the Reverend Steven Kneeland and his wife, Becky, of Duluth; a granddaughter, Kathy and her husband, Frank Dietz, of Cloquet, and six great grandchildren.

Darters and Sculpins At Home in Ten Mile

By Eric Wright, Scuba Instructor

WALLEYE, LARGEMOUTH, smallmouth, northern pike, etc., etc. Sure, we all know about Ten Mile's large gamefish, so I'm not going to give you a rehash of what you already know. What I would like to tell you about are some of the smaller cousins of these mighty gamefish, the unseen players that also make Ten Mile their home.

In an effort to keep this article under 20 pages, I will only discuss the fish species that the casual observer will likely have noticed. These fish consist of several smaller cousins of the walleye, grouped into their own subfamily known as darters and the mottled sculpin.

THE DARTERS CONSIST of a fascinating group of small, rugged, opportunistic fish with 95 species occurring throughout North America. Most darters tend to prefer fast-flowing rivers and streams where very few other fish would even consider trying to make a home. As an adaptation to this environment, darters have all but lost their swim bladders, and with that, their ability to remain suspended in the water column.

Several species have decided to attempt an existence in the shadow of the larger lake-dwelling fish. Ten Mile is fortunate to play host to at least three species of these fish (though I have my suspicions about several other species). The most commonly seen is probably the johnny darter.

THE JOHNNY DARTER reaches a maximum length of about 3.5 inches, which, as darters go, is pretty darn big. They prefer shallow, sandy habitats with sparse weed cover. However, like the rest of their cousins, they can and do exist in other habitats. Johnny darters spend most of their time doing a pretty good impersonation of sand, lying perfectly still and allowing themselves to blend in with the sandy substrate which they resemble.

When they do move, however, they generally do so by making lightning quick dashes from one resting place to another (hence the name "darter"). They rarely bother with setting up any sort of territory or, if they do, they make no attempt to chase away house guests or even other johnny darters.

THE IOWA DARTER, though less commonly observed than the johnny darter, is an abundant little darter that seldom exceeds 2.5

inches in length. This is definitely one of the most colorful of the fish to be found in northern lakes. A breeding male Iowa darter is sand colored with alternating blotches of red and blue along its side. The dorsal fins are also extremely colorful, with various bands of red, orange, blue, green and yellow.

These fish are most commonly found around large rock piles in two to twenty feet of water and, like johnny darters, have no formal territorial boundaries. These handsome little fish breed in early spring and have a habit of choosing rather odd nesting sites. The male then protects the eggs until the young hatch, at which time they are abandoned. Often, even the casual observer may have the opportunity to watch these little fish vigorously defending a pop can or soda bottle nesting chamber from all intruders, truly a testament to the extraordinary adaptability of these creatures.

THE FINAL SPECIES of darter discussed here that inhabits Ten Mile is the logperch. This is truly a giant among the darter family, sometimes exceeding seven inches in length, large enough to occasionally be caught on a baited hook. These fish are often mistaken for young perch, which they superficially resemble, and go largely unnoticed. They are generally light green or yellow in color with 14 or so dark vertical bands. They have the curious habit of using their elongated snout to continually flip over small rocks in search of food.

These darters also spend a proportionally greater amount of time actually swimming rather than darting from place to place and are extremely curious. This curiosity seems to heighten whenever a scuba diver enters the scene. If the diver remains close to the bottom and digs in the sand, these fish will swim directly to the diver to see what is going on, sometimes even assisting in the excavation by flipping a few small stones out of the way.

THE LAST FISH I wish to introduce to you is the mottled sculpin. Unlike the colorful and good-natured darters, sculpins, I imagine, avoid mirrors at all costs. They are also voracious predators that will viciously enforce territorial boundaries with other sculpins, spending most of their time peering out from under rocks waiting for anything small enough to fit in their enormous mouths to swim by.

Sculpins, as a family of fish, are primarily oceanic. A few species have decided to take up residence in (Continued next page)

Darters and Sculpins

fresh water are generally quite small. The mottled sculpin is one of the larger species to be found in fresh water and can exceed 7 inches in length. The largest I have found in Ten Mile, however, was barely 4 inches long.

They are generally stream dwellers and are commonly found in association with trout, for which they are an important food source. You can imagine my surprise when, while div-

McCleery, Carlson Members of Environment & Ecology Body

Two names should be added to the roster of the Environment and Ecology Committee: Martin McCleery and Bruce Carlson. Both bring to the committee valuable technical backgrounds and many years of Ten Mile Lake residency. We are delighted to have them aboard.

ing off Ten Mile's south shore, I flipped over a rock on the bottom only to find one of these miniature monsters glaring right back at me.

SCULPINS ARE MASTERS of camouflage. Their large, broad heads, oversized pectoral fins, and bug eyes all blend surprisingly well into the background. In fact, sculpins have come to rely almost exclusively on their ability to remain undetected as a means of defense. Even after their stone roof has been removed they will remain motionless on the bottom. If you don't know what to look for, you absolutely will not see them. Only when it becomes obvious that they have been spotted, and that they are in danger, will they dart for cover under another rock in their territory.

There you have it then. A brief look at some of the smaller inhabitants of the rich waters of Ten Mile Lake. Next summer, take the time to strap on a mask and snorkel or, better yet, learn how to properly use scuba gear and join me in exploring Ten Mile's greatest treasures.

Question: Where's Global Warming?

By Al Hoover

LIKE MUCH OF THE COUNTRY, Northern Minnesota has not received word that global warming is upon us and this winter at Ten Mile was one to remember. As Jim noted in the fall newsletter, the first snowfall was September 21 just two days after summer ended.

That all melted and we only had one snow in October which also melted. On November 3 we awoke to find the ground covered and did not see the grass again until April. Month by month totals were:

September (first 9/21/95)80"
October	4.50"
November	22.45"
December	26.20"
January	24.50"
February	10.30"
March	18.30"
April	2.40"
Total	109.45"

THIS WAS ONE of the coldest winters ever. At Tower, MN, the lowest temperature ever recorded in Minnesota occurred: 60° below. The temperature on that day around Ten Mile varied from -42° to -54°. Living in the "banana belt" of the lake, we only saw -44°.

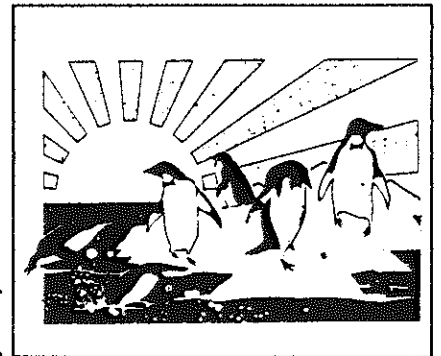
Many were sure the temperature was below

-43.7° as propane boils at that temperature to form gas, and that shut down hundreds of furnaces. February 2 was the coldest day of the year (-44°), but January was the coldest month with 25 days of below zero readings. From 3 p.m. on January 28 to noon on February 4 the temperature never went above zero, bringing nice daytime highs of -19° to -22°.

BY USING DEGREE heating days as a measure (the average daily temperature measured from 65°), the winter was 6.4% colder than the average and 19.4% colder than the moderate winter of 1994-'95.

The lake froze over November 28. As this was written (May 6) it still was not ice

free -- and the fishing opener was only two and a half days away! At that rate, by the time you got a hole chopped in the ice big enough for your boat, you were too tired to fish. Or if that doesn't appeal to you, perhaps you could just put the boat license on your fish house.



TEN MILE LAKE ASSOCIATION
TREASURER'S REPORT
 For the Fiscal Year Ended July 31, 1995

	Total	Interest Bearing		Kemper Government Portfolio	
		Checking	Money Market	Unrestricted	Restricted
INCOME					
Dues & Contributions..	\$ 12,094	\$ 11,919	\$ 175		
Dividend & Int. Inc..	7,314	50	880	\$ 6,384	
Fair Mkt Value Incr..	1,737			1,737	
Total Income	\$ 21,145	\$ 11,969	\$ 1,055	\$ 8,121	
Expenses					
Projects	\$ 6,351	\$ 5,583	768		
Secretarial	1,622	1,622			
Annual Meeting	157	157			
Contributions	1,400	940	460		
Directory	1,941	1,941			
Meetings	297	297			
Memberships	40	40			
Newsletter	1,045	1,045			
Office Supplies	397	373	24		
Postage	1,727	1,727			
Real Estate Taxes ...	106	106			
Total Expenses	\$ 8,895	\$ 7,667	\$ 1,228	\$	
Income Over (Under) ...	\$ 6,062	\$ (1,862)	(197)	8,121	
Transfers In (Out)		2,500	(2,500)		
Beginning Balance	104,037	894	20,216	32,273	\$ 50,654
Ending Balance	\$ 110,099	\$ 1,532	\$ 17,519	\$ 40,394	\$ 50,654
Asset Location:					
First National Walker		\$ 1,532	\$ 16,346		
First National Walker			787		
Piper Jaffray			386	\$ 40,394	\$ 50,654
Total		\$ 1,532	\$ 17,519	\$ 40,394	\$ 50,654

--Jim Miller, Treasurer

Here's Do-it-Yourself Property Tax Formula

RISING PROPERTY TAX levels are a hot conversation topic whenever lake residents get together. You've probably seen these computation formulas so many times that you are sick of them, but at the risk of offending you even more, here they are again.

For homesteaded property, 1% of the first \$72,000 of taxable value, plus 2% of the remainder, times the local tax rate (96.97% for Hiram, 101.052% Shingobee, 100.204% Turtle Lake and 104.907% Birch Lake townships.)

FOR SEASONAL PROPERTY it's 2% of the first

\$72,000, plus 2.5% of the remainder, times the local tax rate (see above).

You also may be interested in learning how 1996 property assessments (basis for the tax you'll pay in 1997) changed in the townships bordering Ten Mile lake. Check this table:

Township	Land	Bldgs.	The County Assessors' Office says increases reflect higher values of properties sold.
Hiram	+10%	+20%	
Shingobee ..	+10%	0%	
Turtle Lake	+20%	0%	
Birch Lake .	+10%	+5%	

Seven species of oak -- northern red, bur, white, northern pin, black, swamp-white, and scarlet -- grow in Minnesota. (From *The Minnesota Volunteer*, DNR publication.)