



LAKE TIDES

A newsletter for people interested in Wisconsin Lakes

Volume 17 No. 4

Winter 1992

Don't Ever Give Up!

Organizations that are Making a Difference

We live in a complex and precarious world. The Nightly News gives us a daily dose of depression, making us instantly aware of grave issues that we have no control over. It's easy to gripe and slip into a mood of self pity.

Many folks interested in the health and welfare of the state's waterways can appreciate how overwhelming the world can become. But there are growing numbers of the population that have accepted the challenges, no matter the disadvantage. They hold a few traits in common: an unselfish desire to leave the waters of the state better than they found them, an unwavering commitment to a better environment, and a demeanor that declares they "Will Never Give Up." This diverse assortment of volunteers and organizations have rolled up their sleeves and gone to work. And they **ARE** making a difference!

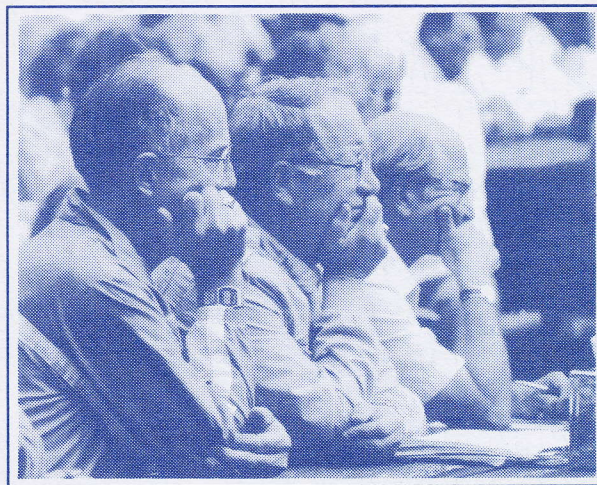
Wisconsin Association of Lakes

The Wisconsin Association of Lakes (WAL) is a statewide organization that acts as a voice for local lake organizations on a state and federal level. This watchdog group promotes public policy, advances education, and acts as a support group to help strengthen local lake leadership.

WAL is an organization conceived by the merger of the Wisconsin Association of Lake Districts and The Wisconsin Federation of Lakes. During the past few years this mix of seasoned veterans have been instrumental in raising

awareness on issues concerning the region's lakes and raising millions in funding dollars.

WAL's success list is too lengthy to show in its entirety but the following are a few of their accomplishments: funding programs like the Planning Grants Program, the Waterway Commission Program (for the purchase of harvesting equipment), and the upcoming Protection Grants and EPA funding have injected millions into the campaign for Wisconsin's lakes, thanks to WAL.



The Wisconsin Association of Lakes was instrumental in developing a sweeping educational agenda and establishing two UW Extension Specialists to assist lake groups with organization and instruction. They also prompted needed technical help by energizing the Lakes Program and effecting the creation of new DNR lake specialist positions in each DNR district.

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WAL is the state chapter of the North American Lake Management Society and represents member lakes in a multitude of public policy decisions both statewide and nationally. A partial list of these issues includes the reauthorization of the Clean Water Act, boating access, phosphorus limits, septic inspections, zoning ordinances, and aquatic nuisance control regulations.

*For more information on how to join
WAL, call 1-800-542-5253.*

County Lake Associations

People are looking beyond their local lakes to address common issues. This is evident in the growing movement to form County Lake Associations. Polk County led the way, forming a county association nearly eight years ago. In the past two years, Waupaca, Burnett, Dodge, Forest, and Waukesha Counties have all formed county associations. Vilas and Washington Counties are exploring the formation of similar organizations. The dominant goal of all these organizations is to protect and enhance the quality of their county lakes and watersheds.

County lake associations are well suited to carry out a number of services for area lake organizations. On a county level, associations can coordinate the assembling of larger audiences to better use the limited staff of professionals available to delivering educational programming. Education can help stake-holders become better stewards of their lakes and keeps them abreast of county and state issues that will affect their lakes. County associations

have played major roles in the development of local "Lake Fairs," conferences, and workshops.

One unique county-wide event occurred this past summer when volunteers from Burnett County's association performed all the acting roles in the production of the educational video "A Tale of Two Lakes."

County associations can furnish a very economical format for the delivery and sharing of information through county lake newsletters and related publications. They can also provide a means to deliver the opinions of local lake groups on county and state issues relating to lakes. These county organizations work on developing good relationships with local and state government and assist in seeking grants and funding for area lake management projects. There are many activities that smaller lake organizations, or unorganized lakes, would be less likely to afford or accomplish without the assistance of county associations.

You might consider joining or starting a county lake association. County associations make a great format for sharing and utilizing your wealth of experience and the wisdom of other concerned lake users in your county.

For more information on county lake associations call your county UW Extension agent. For information about the following county associations call:

Waukesha:	Ray Grosch	414-966-2774
Burnett:	Dennis Quinn	715-866-8836
Dodge:	Richard Fink	414-349-3500
Forest:	Mary Bierman	715-479-9888
Waupaca:	Pete Hazelwood	414-867-3567
Polk:	Mary Hafner	612-489-7273

A Woman's Place is in the House and the Senate

The story of Alice Clausing certainly fits the "Don't Ever Give Up" mold. Alice was a typical housewife who got exasperated with phosphorus entering her lake. Alice had little interest in politics, but she knew what was needed to effect change. Over the past two years, she became a Tainter Lake Association activist and a member of the Wisconsin Association of Lakes Board. On November 3rd, Alice Clausing defeated incumbent Senator William Berndt to win a four-year term in the Wisconsin Senate.

ON THE WATERS



Finding a Path of Harmony: Outstanding Resource Waters

by Robert Korth

Drive north of Highway 29 and mention Outstanding Resource Waters (ORW) to anyone concerned with the environment or economy and you will probably get a reaction. The past months have witnessed an outpouring of sentiment on the impact and implications of the Department of Natural Resources "Antidegradation Policy." This article will try to supply answers to some of the recent questions being asked by citizens, governments, and commerce all over the "Great North."

How Were Criteria Set?

The amended Federal Clean Water Act of 1987 directed each state to develop an **antidegradation policy** to protect clean water. It is well-established that the quality of our water is directly correlated to the land that drains into

that water body. It is also a certainty that the health of fish, plants and associated wildlife is an indicator of the water quality. With this in mind the department approved a system that classifies state lakes based on their water quality characteristics, fish, wildlife, recreational significance, and aesthetics. Classification on rivers also includes examining potential or existing sources of pollution. The antidegradation rules took effect in March, 1989.

What's Included?

The public had significant input in developing a list of lakes and rivers. At this time there are 150 streams classified as Outstanding Resource Waters (ORW) and 1,407 streams classified as Exceptional Resource Waters (ERW). The reason for the substantial number of streams is the inclusion of most Class One trout streams. The ORW criteria were developed internally at the request and authority of the Wisconsin Natural Resources Board, therefore no administrative rules were required. (See Lake Tides Vol 17 No 2 Summer 1992 for details on classifications.)

At this time there are NO lakes on the list.

Currently, 106 lakes are being considered as Outstanding Resource Waters and 151 more streams are being considered for Outstanding or Exceptional Resource water status. This list of lakes and rivers called the "B List" will be



reviewed by the Natural Resources Board at their January meeting. With a few exceptions, the 106 lakes and 151 streams mentioned complete both the board mandate and federal requirements. Few new candidates are expected and they will be handled on a case-by-case basis.

What Does It Affect?

The antidegradation policy, as described in Chapter NR 102, Wisconsin Administrative Code, is designed to minimize or prevent pollution from reaching surface waters by regulating **point-source** (a pipe or single source) discharges from a municipality or industry. **It deals only with activities requiring a wastewater discharge permit.** In fact, short-term lowering of water quality standards in an ORW could be allowed. It would be consistent with federal regulations and guidance. This would allow for construction or facility maintenance projects and would not be subject to special wastewater discharge permits.

This policy has NO influence on non-point source pollution. No land use related restrictions have ever been submitted and none are currently being contemplated. To expand regulatory authority in managing or protecting water quality would require new administrative rules and significant legislative changes in statutes. Such changes would require extensive board and legislative action plus public input.

Why Do Other States Have So Few ORW?

Wisconsin is blessed with a "Super Natural" treasure--vast tracts of forest, nearly 15,000 lakes, and 13,000 streams and rivers. Wisconsin ranks eighth in the number of rivers ranked ORW among the 20 states with ORW rivers. The 106 "lake candidates" represent less than .07% of our state's lakes.

Wisconsin is ahead of many other states in implementing its antidegradation policy. One of the reasons the Badger State leads the way results from circumstances that occurred in 1985. A petition to the Environmental Protection Agency (EPA) was filed by the National Wildlife Federation, Citizens for a Better Environment, and the Environmental Decade. They noted that Wisconsin's permits were not in compliance with federal water quality standards, including antidegradation. They wanted EPA to withdraw National Pollutant Discharge

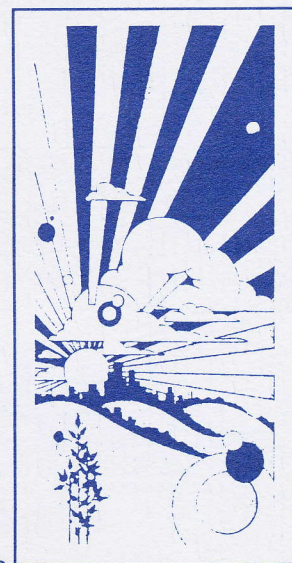
Elimination System (NPDES) permit delegation and asked them to withhold federal funding.

Neighboring states have listed a fraction of their streams and lakes when compared to Wisconsin. Other states will eventually follow Wisconsin's lead and comply with federal law.

A Path of Harmony

The current apprehension with Wisconsin's Antidegradation Policy has created a climate of skepticism and mistrust between groups that believe they represent the best interests of the environment or the economy.

People have lived in what we call Wisconsin for thousands of years. As long as we live here, we will need to use the resources. Upon our generation has fallen the task of finding a path of harmony between short-term gains and long-term vision.



There is no doubt that tourism underpins the economy of northern Wisconsin. "Outstanding" and "Exceptional" designations may be a publicity bonanza drawing the growing company of travelers looking for a "Super Natural" experience. Outstanding Resource Waters designations attest to a county's bounty of rich and unsullied waters.

On the subject of Outstanding Resource Waters, one county Extension agent wrote: "As children, we learned when we borrow something, we should return it in as good a condition as we accepted it. In this case, what we are borrowing is clean water!"

For more information on this subject see ORW: Outstanding Resource Waters (Lake Tides Vol 17 No 2 Summer 1992) or call your area DNR or County Extension Agent.



The Price of Pleasure II: This is the second segment of a two-part article on water quality and powerboating (see Vol 17 No 3 Autumn 1992).

Boating is big business in Wisconsin. A 1990 Recreational Boating Survey conducted by the Wisconsin DNR estimated nearly \$204 million spent during the Badger State's seven-month boating season. The total number of boats licensed increased 63% from 1968 to 1989. The number of inboard motors increased 750% during the same period. Nationally, the average horsepower has increased from 3.6 hp in 1941 to 43.3 in 1982, a 12-fold increase. This escalating use of our waterways leads to many questions about repercussions, both environmental and social.

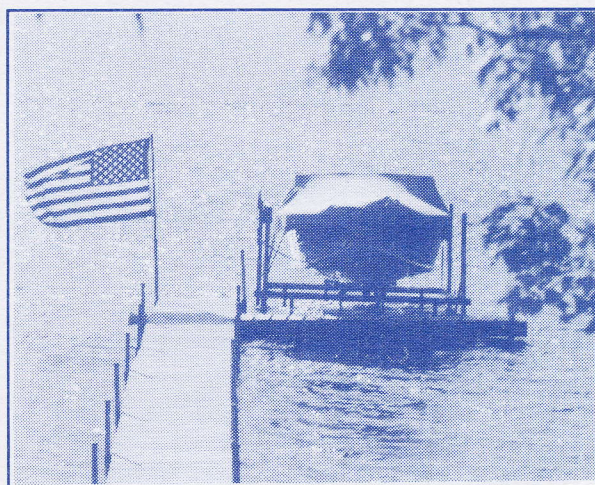
Concern has grown over the consequences of the operation of power boats, especially large power boats on small lakes. Studies have found that the impact of power boats is highly variable. It is determined by both the lake's features and the characteristics of the watercraft.

The differing physical features of lakes and rivers may predispose some to impact and serve to protect others. These physical features include the area; volume of the warm surface layer; the amount of shallow (less than five feet), shoal (less than 20 feet), or deep areas; flushing rate; bottom type; vegetation type; and shoreline shape and composition.

Whether the predominant watercraft are outboard or inboard, propeller or jet propulsion makes a difference when assessing the potential impacts on any given waterway. Engine size and other engine characteristics, such as operational behavior and use patterns, all influence the degree of impact.

Pollution from Hydrocarbons

Exhaust from boat motors is very similar to auto exhaust, with over 100 possible hydrocarbon compounds released at detectable levels. However, 2-cycle engines such as outboards and lawn mowers are much less efficient--one hour of running produces as many volatile organic compounds as driving a car 800 miles. In addition, hydrocarbon compounds from fuel spills, unburned fuel, lubricant leaks, and the discharge of oily bilge water can find their way into surface waters. Other sources of pollution include gas additives, detergents, anti-icing and anti-rust agents.



Once discharged into the water, these hydrocarbon compounds may remain suspended, concentrate at the surface, or settle to the bottom. Many of these compounds have been shown to be toxic to aquatic organisms in laboratory studies, and at levels as low as one part per billion. Contamination of water by hydrocarbon compounds in excess of established water quality standards has been found in some areas of high boater use (such as marina basins). However, studies have found that most of these pollutants disappear rapidly from the water through natural degradation processes. It should be noted that some scientists suspect that subtle shifts in animal and plant species composition, or relative abundance, have occurred in areas of heavy boat traffic. Hydrocarbon compounds associated with normal levels of boat motor use have not been shown to have distinctly-harmful effects on the aquatic environment.

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Water Odor and Surface Films From Gas and Oil.....

The initial, and most obvious, type of negative impacts to occur from very high levels of motor operation are visual and odor problems. However, power boat operation seldom reaches high enough levels for this to occur. For example, according to a study performed in the early 1970s, at an average fuel consumption rate of half a gallon an hour, it would take over 250 boat hours of operation in a short time period for the waters of a typical 100-acre lake to acquire a detectable odor. A barely-perceptible film covering one square mile of lake surface can be created by 25 gallons of fuel. On the average, it would take about 31 watercraft operating continuously for eight hours on a one square mile lake to produce a barely-evident film. In addition, boat engines are more efficient today than at the time of these studies, suggesting that the level of boat operation would need to be even higher for visual and odor problems to occur today. Of course, localized films and odor problems may occur in the immediate vicinity of operating motors.

Nutrient and Heavy Metal Pollutants.....

Phosphorus (generally, the most important plant nutrient in fresh water) was a very minor component of leaded gasoline, but is present at higher levels in unleaded gasoline. Although several studies have shown that phosphorus from boat engine discharges may be high enough in surface waters to be detectable at times, it is an extremely minor amount compared to the annual input from other sources of phosphorus.

Metals typically accumulate in sediments and can be recycled through biological processes and some chemical reactions.

Probably the most serious pollutants discharged by motor exhaust are toxic heavy metals.

They can kill aquatic organisms and build up in fish flesh, posing a human health risk.

Lead is the metal most commonly associated with motor exhaust. Studies have detected elevated lead levels in the sediments of some waterways having heavy boat traffic. With the widespread use of unleaded fuel, lead emis-

sions have dropped dramatically in recent years. Cadmium, tin, and other metals can also be released. Another source of heavy metals is the special anti-fouling bottom paints that are applied to many boats, both power and sail.

Numerous investigations have shown that the operation of boat engines on shallow lakes (defined as less than 30 feet) can stir up bottom sediments, causing increased turbidity (i.e., "murkiness"). In addition, nutrients associated with the sediments are liberated, causing accelerated algae growth.

Even motors as small as 10 horsepower can produce significant stirring of bottom sediments at depths up to 15 feet; and the larger the engine, the deeper the effective mixing depth. Phosphorous levels have been found to increase up to 73 percent and turbidity levels up to 100 percent during and after power boating activity. Impacts from motor operation are most evident in areas of shallow water depth, fine bottom sediments, and plant cover which is weakly rooted or absent. Mixing currents created by motors have the potential to stir up mats of bottom-dwelling algae, causing unsightly floating masses on the lake surface.

Certainly, internal combustion engines impact our lives and environment; we can determine how powerful those impacts will be. To lessen their influence on the things that draw us to water, we may need to rethink our priorities.

This article was adapted from articles and information from: Doug Fuller, Tip of the Mitt Watershed Counsel, Conway, MI; and Ken Wagner Baystate Environmental Consultants, East Longmeadow, MA.

Convention Corner

April 16-17, 1993, Holiday Inn, Stevens Point

Once again, we invite you to gather in Central Wisconsin for the annual Wisconsin Lakes Convention. Hundreds of lake leaders and concerned citizens from around the region will meet in Stevens Point to discuss issues, increase knowledge, and hone skills.

This year, Phil Pister, California Fish and Game, will provide the keynote. Pre-conference seminars will update the Self-Help Volunteer Program and debate Aquatic Plant Management Strategies. An impressive array of workshops and seminars will be offered in a "stream" concept, allowing participants to follow a particular subject or to choose a variety.

The Wisconsin Lakes Convention has grown from 150 in 1978 to over 600 people in 1992. Exhibits continue to expand; and last year, the Wisconsin Association of Lakes added a successful silent auction and raffle.

But even more important than the program, the exhibits, and the posters, the convention allows community leaders from across the state to share and renew their enthusiasm. You will want to be there. The rooms at the Holiday Inn fill quickly. Call 715/341-1340 and ask for Wisconsin Lakes Convention rates. The rates will be extended in either direction if you want to stay longer.

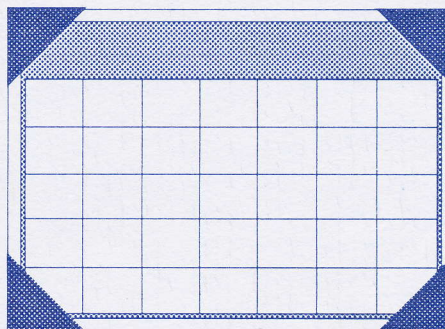
It's That Time Again!

Stewardship Nominations

Nominations should be submitted for individuals or groups that have shown special commitment to the quality of their lake and the quality of life around the lake. Lakeshore property groups, as well as fishing, garden, or other service clubs, are eligible. You are encouraged to nominate your own group or another that has demonstrated what can be done to be a good steward of Wisconsin lakes.

Individuals will be judged separately from groups and one stewardship award will be presented in each category. Other nominees judged worthy by the awards committee will receive a certificate signed by the governor.

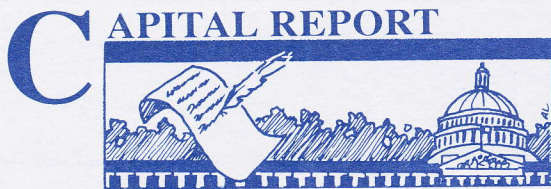
The deadline for submitting nominations to Diane Lueck, College of Natural Resources, University of Wisconsin, Stevens Point WI 54481, is March 1. Don't delay--nominate a deserving person or group now!



COMMUNITY CALENDAR

If you are interested in Wisconsin's lakes, the upcoming year promises to hold plenty of educational opportunities. Look for **Lake Fairs** coming in your area:

- June 5 - Shawano County Park, Shawano Co.
- June 19 - Solon Springs, Douglas Co.
- June 19 - Amherst, Waupaca Co.
- June 26 - Minocqua, Oneida Co.
- June 26 - Webster, Fort Folis, Burnett Co.



Clean Lakes Citizen Education Plan

The US Environmental Protection Agency (EPA) regional office in Chicago is developing a citizen education program in cooperation with the North American Lake Management Society (NALMS) and representatives of statewide lake organizations. The states in Region V are Wisconsin, Minnesota, Illinois, Michigan, Ohio, and Indiana. The new program will provide assistance and strengthen lake organizations in several different ways. It will support statewide lake organizations by reinforcing their efforts, and by assisting citizen groups that are working with state and federal agencies in their efforts to manage lakes and watersheds. State agency clean lake coordinators and citizen lake organization presidents from each state, along with EPA staff, will blueprint the program. The funds to support EPA's Region V Lake/Watershed Management Outreach Program total \$850,000. They will be administered by EPA's Region V Watershed Management Unit under the Clean Water Act. Funds can provide:

- Direct support to statewide citizen lake management organizations.
- International Lake, Reservoir and Watershed Management Symposiums and citizen/professional interactions with nationwide and state lake conferences.
- Issue-specific, targeted workshops in each state focusing on citizen-identified issues important to that state. Locations and topics to be determined.
- Outreach efforts that provide funds for posters, fact sheets, newsletters, documents, manuals, and other publications needed to facilitate citizen involvement.

Use of Public Waters

The Wisconsin Department of Natural Resources (DNR) conducted hearings on its proposed "public access" rule at six locations around the state during late October and early November. The rule addresses several public access issues. Among other items, the rule:

1. Establishes minimum and maximum access standards.
2. Defines "natural resource enhancement services" and provides that DNR will only furnish those services where minimum public access standards have been met.
3. Establishes design and construction standards for facilities subject to DNR permits.
4. Establishes a formula for computing reasonable launch fees.

Special Committee

A special legislative council committee is developing legislation concerning use of public waters. Some of the issues are:

1. Establishment of standards and procedures to review local zoning or other ordinances that unreasonably prohibit or restrict development of public access facilities.
2. Direction for DNR to provide technical assistance for local units of government in the development of boating regulations.
3. Statutes to allow units of government with the majority of lake frontage to adopt boating regulations or to delegate that authority to a lake district.
4. Allowing lake districts to hire enforcement personnel.
5. Clarifying riparian property owner's right to build piers and moor watercraft proportional to the amount of frontage owned.
6. Encouraging regional lake management planning grants that favor comprehensive lake plans and evaluate public access, as well as water quality and other issues.

Nationally, allocations for the Clean Lakes Program have dwindled from \$7 million last year to \$4 million this year. In contrast, the Nonpoint Source Program will be up slightly from \$48 to \$50 million.

Stay tuned on the reauthorization of the Clean Water Act. We will discover in the not-too-distant future the influence of the Clinton Administration.

Is There An Assassin In Your Home?

If you enjoy the song birds around the lake, you may want to think twice before you let "Kitty" out when she meows at the door. A four-year study was just completed at the University of Wisconsin, Madison, on the impact of free-ranging domestic cats. Researchers estimate that *cats may kill 19 million songbirds and 140,000 game birds in Wisconsin in a single year!* Multiplied by 50 states, the numbers are staggering. Cats hunt for the sake of hunting; 82% of cat owners in the study do feed their cats.

Tale of Two Lakes: A New Video

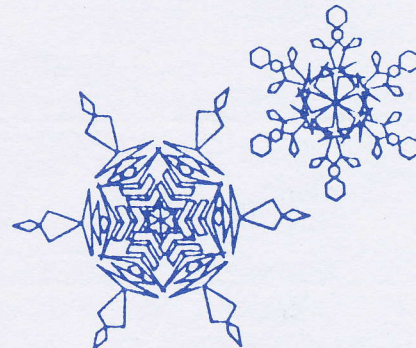
A new video that addresses spiraling lake development and recreational use conflict was produced this summer. "**A Tale of Two Lakes**" was filmed in Burnett County. The video was made possible by the hard work and generous talents of area volunteers who assumed the acting assignments. Entertaining and educational, this 18-minute video recounts everyday people and their struggle with the escalating pressures on the use of Wisconsin's lakes. (Copies are available for loan from your county Extension agent).

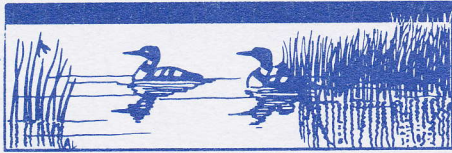
A Rare Find

On September 24, 1992, during a routine macrophyte survey of the Peshtigo Flowage, a bed of Lake Cress (*Armoracia aquatica*) was discovered. According to the Wisconsin Bureau of Endangered Resources, this is only the third verified existence of this species ever recorded in Wisconsin.



The staff at *Lake Tides* and the
members of the Wisconsin Lakes Program
wish you and yours a
Merry Christmas and a Happy New Year!





Compulsion

by Mike Dresen

I wonder if the silvery fishes
Struggling upstream against their wishes,
Pause to ponder in their hurry,
Buffeted by the torrent's fury,

If the price they must pay
To mate and die and fade away,
Is worth all the pain and strife,
The endless sea miles of their life.

One sole purpose on their mind:
To spawn and reproduce their kind.
And do we share some similar spirit,
Taking decades for us to hear it?
Does it in the forests dwell,
Or gurgling brook or rocky dell?

Reflected in the fish's eye,
Who seeks his graveled bed to lie,
Finning nearer his spent mate,



Feigning interest in her fate.
Ignoring midge and nymph and fly
Waiting for his turn to die.

Then drifting downstream with the flow,
Having sown his seed in roe.
Lifeless, still, escaped the creel
Destined for some raven's meal.

I watch him slide slowly by,
Scarred and ragged with cloudy eye.
I wade on further to the brook
Where he and mate their pleasures took,
And find among the stone and gravel
Ripening fruit of their long travel.

After all it was their wishes
That there would always be fishes.



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