



The Embro red pine plantation after harvest.

## Embro Forest Undergoes Make Over

In December, UTRCA and the County Oxford worked together to address a red pine plantation that was showing serious signs of decline and mortality. Red pine decline has become a serious problem across Ontario. Many red pine plantations are showing signs of decline at 30 to 40 years of age. Symptoms include chlorosis (yellowing) of needles, reduced growth, crown thinning, dieback and, eventually, mortality.

Decline has been attributed to a nutrient deficiency, specifically lack of iron. The iron deficiency is not necessarily due to low soil iron content; rather, alkaline soil conditions, especially in the upper soil horizons, make the iron insoluble and, therefore, unavailable

to the trees. This, along with drought stress, makes the red pine susceptible to root diseases such as *Armillaria* and *Annosus*.

The three-hectare Embro plantation crosses the boundary of the Embro Conservation Area and the Oxford County Forest. This 60 year-old plantation has been declining for the past 10 to 15 years. The mortality had become so high that last fall the UTRCA and County of Oxford were forced to close the hiking trail that goes through this plantation for liability reasons.

To reduce the liability, all dead and dying red pine were marked for harvest. In late December, a contractor was hired to harvest and salvage the merchantable wood. The unmerchantable red pine was cut and left on the forest floor to decompose. This material, although unsightly to many, will return organic matter and nutrients into the forest soil.

Revenues from the sale of the wood will go into underplanting with a mix of native hardwoods. This spring, 2100 seedlings will be hand planted in the understorey of the remaining red pine. Red oak (1200), northern hackberry (400), bitternut hickory (300) and sugar maple (200) will be planted. This planting will enhance the process of converting the area from an unhealthy monoculture conifer plantation to a diverse, more sustainable hardwood forest.

It is also anticipated that the site will produce a fair amount of natural black cherry regeneration. On the east side of the block there are a number of dominant black cherry trees. The seed of this species can lay dormant in the soil for a number of years until conditions are favourable. To succeed, black cherry requires much light which the newly opened canopy will provide. Planting plus natural regeneration will complete the make over.

The hiking trail will remain closed until early spring when the final trail maintenance will be completed.

*Contact: John Enright, Forester*



Sawlogs salvaged from declining red pine.



The hiking trail through Embro Conservation Area after harvest.



## Where do the Fish go in the Winter?

Have you ever wondered where the fish that live in local streams and rivers go in the winter, when waterways may freeze? Unfortunately, some unlucky fish will not survive and may freeze. The freezing temperature for fish is lower than the freezing point for fresh water because the fluids a fish's body prevent it from freezing sooner (i.e., at a higher temperature). There are a few fish that produce an antifreeze-like substance to help prevent them from freezing; however, these fish are not found in this area.

There are several ways in which fish can survive a cold winter. Generally, fish will go where the water is not frozen or as cold. In some cases this will mean migrating to a larger river or a lake. In other cases, they will move to a deeper pool, pond or reservoir that will not freeze. If lucky, they may already live in a creek or river that does not completely freeze. Some fish might stay in a watercourse that does freeze, but there will usually still be a bit of water for them. Some will burrow in the mud or hide in woody debris or leaf litter that collects in streams. Other fish, such as the gizzard shad, find refuge at sewage treatment outflows in urban areas. Shad populations could be threatened if a non-native invasive species that would not normally survive a cold winter season were to find such an inviting place.

A layer of ice or snow on top of the water will help to insulate the water and prevent it from getting colder and freezing. Colder water also has more oxygen in it than warmer water does and fish can absorb this oxygen through their skin.

The aquatic and terrestrial vegetation found in and around watercourses aids in the winter survival of fish and other aquatic species. Young and small fish need to avoid pools where larger



The Gizzard Shad, identified by its long last dorsal ray, can only survive the winter if they find warmer water, such as the water coming out of a sewage treatment outlet.

fish will go for food. Even the eggs of fish can survive in and around aquatic vegetation or debris until they hatch in the spring. Overhanging vegetation can help to form an insulating layer of ice on the water. Vegetation and woody debris provides important cover for fish, as well as their source of food (invertebrates). This is one reason that watercourses should not be completely cleaned up or cleared out in the summer and especially not in the fall and winter. Clearing some debris and choked sections of watercourses is necessary, but it's important to leave woody debris and vegetation for the survival of fish.

As the colder weather approaches, fish will pay attention to environmental cues and get ready for the coming winter by migrating to a larger body of water and preparing to slow down their bodies, similar to hibernation. Fish such as smallmouth and largemouth bass will not be very active in the winter and their need for food and oxygen is reduced as they slow down. They will live off of their fat reserves from the warmer months.



Smallmouth Bass is one of the species that go into a semi-dormant or hibernation state for the winter. Its metabolism slows down, reducing the need for food and oxygen. The fish survives on fat reserves and by absorbing oxygen from the water.

Even though fish have slowed down some, such as northern pike and yellow perch, do still move about and feed in the winter. You may have seen someone out fishing on a frozen body of water in the middle of winter. Ice fishing is a popular sport, where and when it is safe to do so. Ice fishing can help to add oxygen to the water underneath the ice and reduce the number of fish competing for a limited supply of resources (food and oxygen).

Contact: John Schwindt, Aquatic Biologist, or Cathy Reeves, Aquatic Biology Technician



Northern Pike (above) and Yellow Perch remain active and forage for food under the ice. They are popular fish for those who ice fish.





Monitoring for pesticides in Masonville Creek.

## The Results Are In!

In 2008, the Ontario Ministry of the Environment (MOE) initiated a study to measure the effect of the provincial cosmetic pesticide ban on 10 streams in urban residential areas across the province, including one in London. The UTRCA has been monitoring pesticides at Masonville Creek as part of this study since 2008.

Two or more pesticides were present in the 168 stream samples taken across the province, but mainly at very low concentrations. Water testing before and after the ban, which went into effect in April 2009, showed concentrations of three commonly-used herbicides, which accounted for more than half the total lawn care volume used, dropped significantly.

The MOE report is entitled “Changes in Urban Stream Water Pesticide Concentrations One Year after a Cosmetic Pesticides Ban.” It can be viewed at [www.ene.gov.on.ca/en/publications/water/index.php#8b](http://www.ene.gov.on.ca/en/publications/water/index.php#8b) (document #7879e).

Contact: Karen Maaskant, Water Quality Specialist

## New Tourism Oxford Video

The UTRCA is featured in a new Tourism Oxford video, entitled “Oxford County - Naturally Yours.” Both Wildwood Conservation Area and Pittock Conservation Area are highlighted for their outdoor opportunities. The Canadian Heritage River status of the Thames is also mentioned.

The video is posted on the Tourism Oxford website, at [www.tourismoxford.ca/Home/mediagallery/video.aspx](http://www.tourismoxford.ca/Home/mediagallery/video.aspx)

Contact: Steve Sauder, Marketing Specialist

## Family Fishing Weekends

The first of two Family Fishing Weekends scheduled for 2011 will take place on February 19-21. These weekends are occasions for Canadian residents to explore Ontario’s fabulous fishing opportunities licence free. Conservation licence limits outlined in the Ontario Fisheries Regulations are still in effect on these weekends. For more information, go to [www.familyfishingweekend.com](http://www.familyfishingweekend.com).

## Upcoming Events

- February 3: UWO All Campus Jobs Expo, London
  - February 9: College Career Fair, Fanshawe College, London
  - February 15: UTRCA Annual Meeting, Forest City National Golf Club, London
  - February 16: Sifton Bog Community Meeting, London
  - February 19: Fish Show, Western Ontario Fish and Game Club, London
  - March 9-11: Western Fair Farm Show, London
  - April 7: Thames Talbot Land Trust Annual Meeting, London
  - April 16: Thames River Clean Up and London Clean & Green
  - April 17: Earth Day London
  - April 22: Fanshawe, Wildwood, and Pittock CAs open for the season
  - April: Greening our Community, White Oaks Mall, London
  - April: Stoney Creek Community Day, London
  - April: Upper Avon River Conservation Club Planting Day, Stratford
  - April-May: Community Forestry Program
- Contact: Steve Sauder, Marketing Specialist

## On the Agenda

The following items will be presented at the UTRCA Board of Directors meeting on January 25<sup>th</sup>, 2011. Board meeting minutes are posted at [www.thamesriver.on.ca](http://www.thamesriver.on.ca); click on “Downloads.”

- Members’ Orientation
  - Annual General Meeting
  - Budget Overview
  - Election Overview
  - Members’ Per Diems and Mileage Rates
  - Board Governance
- Administration and Enforcement - Section 28 Report
- 2011 Conservation Area Fees
- Property Assessment Report
- Schedule of 2011 Board of Directors and Hearings and Personnel Meetings

Contact: Susan Shivas, Executive Assistant