



## WHITE LAKE PRESERVATION PROJECT

### WLPP NEWSLETTER – August, 2017

#### 1. THE SPREAD OF AQUATIC INVASIVE SPECIES or What Could be the Next Nasty in White Lake?

We have already reported on the June 24th Workshop featuring Brook Schryer of the Ontario Federation of Anglers and Hunters. Such an important subject is worth raising again. The presentation describing invasive species was a little surreal, a bit of a horror show. We already have Eurasian water-milfoil, and zebra mussels and possibly phragmites (see below) and are starting to have some idea of what these can do to our lake. For example, the marked increase in filamentous green algae in June/July of this year is likely associated with the changes to the lake caused by zebra mussels. These gelatinous green blobs eventually die and rise to the surface as a bubbly decomposing green mass.

#### **WE DO NOT NEED MORE INVASIVE SPECIES!**

It is up to individuals moving boats between lakes to ensure that their boats are not contaminated by implementing sanitation methods. Because of the zebra mussels and milfoil, boats leaving White Lake to go to other bodies of water must be treated as contaminated. Many of the boats on White Lake come for a day trip or as a part of a tournament and the owners must be made aware of the impact of the contaminants they can spread between lakes and of the consequences of using bait that may present a threat to the lake. There is now a consortium of lakes in Quebec that require a certificate from boat owners launching into the lakes to certify that the boat has been properly cleaned. Those communities got ahead of the zebra mussels. Our Municipalities did not.

Below is a short description of 5 invasive species and a longer description of spiny water flea and round goby as they seem poised to enter the lake soon.

**Water Soldier** - an aquatic plant with razor sharp serrated leaves that can easily cut through skin and chokes out native plants.

**European Water Chestnut** - chokes out native plants, has seeds the size of chestnuts that fall to the lake bottom, have barbed wire type spines as sharp and tough as nails which can easily pierce the soles or heel of your feet.

**Rusty crayfish** - introduced as bait from the Ohio River basin, are now found through much of Ontario where they outcompete native species. It is now prohibited to transport any species of crayfish both alive or dead.

**Asian carp (4 species)** - brought from Asia to North America and are currently migrating north through US waterways towards the Great Lakes. Voracious feeders which could eat the food supply of native species and crowd them out of their habitat, can weigh up to 40 kg. Vibration of boat motors causes silver carp to jump up to 3 metres out of the water and have injured water skiers and boaters around the Mississippi Illinois areas.

**Phragmites** - another Eurasian import, an invasive plant that grows quickly, crowds out native vegetation and provides poor habitat and food supplies for wildlife, lowers water levels, increases fire hazard and can impact swimming, boating and angling. You may have noticed large quantities growing along highway 416 from Ottawa to Prescott and is spreading along the 417 and along highway 2 (White Lake Road).

For more information on these species consult the following websites: [www.invasivespeciescentre.ca](http://www.invasivespeciescentre.ca); [www.ontario.ca/invasivespecies](http://www.ontario.ca/invasivespecies); [www.invadingspecies.com](http://www.invadingspecies.com)

**Round Goby and Spiny Water Flea** – Since these are most likely the next invasive species to take hold in White Lake (in fact there appears to be some indication that spiny water flea is already here) we are describing them in greater detail below:

### Spiny Water Flea and Fishhook Water Flea (Zooplankton)



Small aquatic animals (1 to 1.5 cm), either transparent (fishhook water flea) or orange or blue colouring with red stripe (spiny water flea) which multiply quickly and feed on other zooplankton. Introduced from Eurasia to Lake Ontario in ballast water in 1982 and now in 100 inland lakes in Ontario.

#### *Impact:*

- reduce populations of native zooplankton by up to 40%, thus reducing food supplies for small fish and the young of sport fish such as bass, walleye and yellow perch.
- tail spines catch on fishing equipment, making it difficult to reel in lines, and clogging commercial nets and trawl lines.

*Spread:* easily spread between waterbodies on angling equipment and bait buckets and in live wells and bilge waters.

### Round Goby (see drawing below)

Small bottom-dwelling fish that feed aggressively on insects and other small organisms found near the bottom of lakes and rivers. Also feed on zebra and quagga mussels. They spawn several times each season and multiply rapidly.

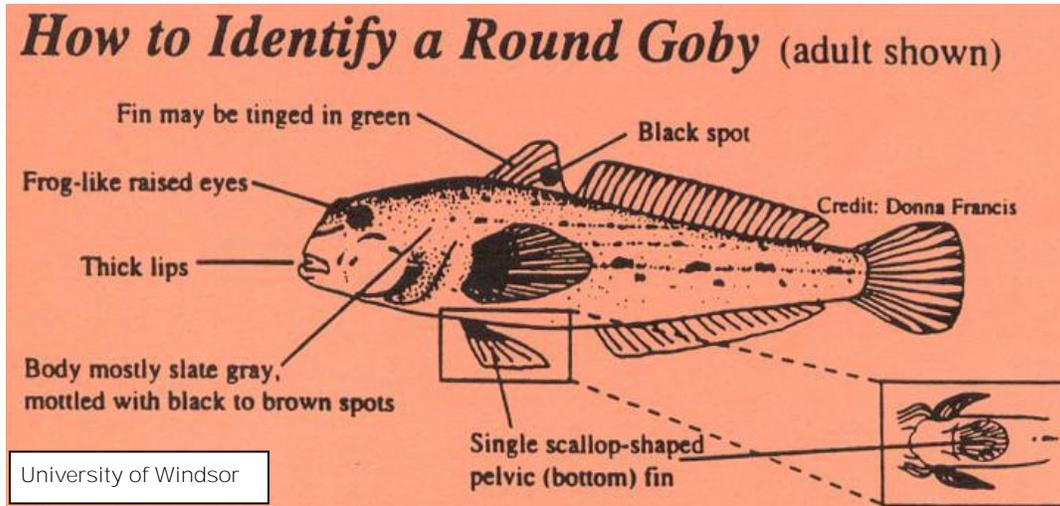
Introduced from the Black and Caspian Seas in ballast water to St Clair River in 1990. Has spread through all 5 Great Lakes and now invading inland waters.

#### *Impact:*

- compete with and prey on native bottom dwelling fish, including several species at risk, and have reduced populations of sport fish by eating their eggs and young and competing for food sources.

- linked to outbreaks of botulism type E in Great Lakes fish and fish-eating birds. The disease is caused by a toxin that may be passed from zebra mussels to goby to birds resulting in large die-offs of fish and birds

*Spread:* used illegally as bait. It is against the law to use round goby as bait or to have it in your possession.



**What you can do:** follow the rules about boat cleanliness, buy your bait locally, dispose of it properly, get your Municipal government to start a program of awareness and to monitor boat cleaning at launch sites and bait usage.

## 2. ONTARIO MUNICIPAL BOARD HEARING - White Lake Trailer Park

See the April 2017 WLPP Newsletter for an overview of this subject. The date for the Hearing is Feb or March of 2018. [http://wlpp.ca/linked/2017\\_04\\_april\\_2017\\_newsletter.pdf](http://wlpp.ca/linked/2017_04_april_2017_newsletter.pdf)

## 3. LAKE ORGANIZATIONS

WLPP members have attended meetings of the following two organizations. These meetings provide a chance to meet representatives from other lake organizations and from governments and Conservation Authorities. Many lakes share the same concerns regarding water quality, development and the role of governments. Some are farther ahead than others in trying to implement steps to protect their lakes.

### 3.1 Lake Networking Group

To see reports of the meetings of this Group visit the Otty Lake Association website at [www.ottylakeassociation.ca](http://www.ottylakeassociation.ca)

This Group started with 7 lakes in 2004 and currently draws attendance from over 20 lakes, stretching from the Kingston area, up to the Mississippi Lake area. The White Lake Preservation Project sent 3 individuals to represent White Lake at the last meeting held in April 2017. Presentations were made at

this meeting by representatives of 3 Conservation Authorities (Mississippi Valley, Rideau Valley and Cataraqui Region), by The Ministry of Natural Resources and Forestry, the Federation of Ontario Cottage Associations (FOCA), Watersheds Canada, and by 15 Lake Associations

### 3.2 Lake Links Workshop

This is an annual event held in October in Perth. At these meetings scientists, lake associations and municipal governments provide their perspectives on cooperative lake protection. This fall's upcoming meeting will focus on how "Lake health is impacted by everything that lies beyond the shoreline" and "about the inseparable connection between lakes and upland areas."

## **4. UPDATE ON SCIENTIFIC STUDIES ON WHITE LAKE - 2017**

The WLPP, in cooperation with the Lake Partners Program of the Ministry of the Environment and Climate Change, are completing a significant water sampling program in this year. Water samples are being taken and physical measurements made at nine locations. Total phosphorous, calcium and chloride will be measured once a month and every month during the spring, summer and fall. Secchi depth and temperature readings will also be taken. In collaboration with Watersheds Canada and with funding from the Gottlieb Foundation, we will also be using a multi-probe measuring device which will measure the following parameters with depth: Temperature, oxygen, oxygen saturation, pH, specific conductance and alkalinity. Additionally, Secchi depth and temperature measurements will be taken every two weeks.

This year's analytical work will build on the research done in 2014, 2015, and 2016 and will continue to determine the year to year trends in phosphorous concentrations throughout the lake. We will also gain important information on the relative sources of phosphorous including contributions from sediments. Of interest is the monitoring of White Lake for changes in chemistry and water clarity resulting from the presence of zebra mussels. The significant effects of zebra mussels were first noted in 2016 and it is expected that changes will continue to occur for the next several years. To read the detailed reports on the 2015 and 2016 data, please visit our website at [www.WLPP.ca](http://www.WLPP.ca).

In collaboration with Professor Vermaire from Carleton University a graduate student under his direction will be studying White Lake sediments to determine changes in nutrient loading over time and the contribution of sediments to the phosphorous levels in the water.

Also, we will be taking accurate depth measurements at shallow water sites to monitor lake levels throughout the ice-free season. As part of our 'algae-watch' initiative, we will be looking for algal blooms and the presence of significant blue-green algae populations in the lake which could result in high concentrations of toxins in lake water, which is an important public health issue.

## **5. TICKS**

We have come across a particularly interesting and informative publication on ticks prepared by the Australian Association of Bush Regenerators. Web link below:

<http://www.aabr.org.au/site/wp-content/uploads/2013/12/AABR-Ticks-and-tick-borne-diseases-protecting-yourself1.pdf>