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Greetings!

Summer is finally here!

What to Expect forSummer 2016 – So last year we saw a respectable re-occurrence (after a40-year absence) of eelflies. And we hada few gobies; many more this year. Lastmonth we learned juvenile gobies dine on emerging insects. A minor hatch of a smaller mayfly startedJune 18. So in July will we not seelarge numbers of the big mayfly?

Skilled anglers are getting walleye in deeper water (30-34FOW) on blade baits, or in the teen depths on jigs and worm harnesses, while the bass are hangingjust inside weeds along shore. Drum andbullhead are laying inside 6 feet. Perch and sunfish are elusive so far. Fishing has been generally slow, especiallyafter the sun rises, but when you find '*THE*'spot, the bite is on! Worm anglers needto adapt to the goby explosion (bait shops are happy!) and get the bait off thebottom by 18-30 inches to reduce theft by the invaders.

If we have a week of calm, hot weather we can expect the now clear waters to cloud up. Rememberthat algal blooms may be short-lived (hours) or long-lived(days). *"Blooms may also be isolated within a specific part of a lake orwidespread throughout the lake. Lakeswith isolated blooms will support recreational activities outside of the bloomarea"* according to NYSDEC-DOW. Keep inmind that algal blooms and bad bacteria are not the same. We must rely on our respective departments ofhealth to distinguish between, for instance, goose poop from human E. coli inrunoff and 'bad algae' when analyzing situations in contemplation of beach closuresand health advisories.

FREE FISHING WEEKEND. June 25-26 (last June weekend each year)…take your family out! If not on a boat, find a stream orshoreline. Here is a nicely done 2015video promoting fishing on nearby Onondaga Lake. https://www.youtube.com/watch?v=9_ZurfU1WcY November 11, 2016 has also beendesignated as a Free Fishing Day. **Introduce your family and friends to thesport, and don't forget to ask them to join our organization.** Memberships can be purchased online at ourwebsite for a mere $5.

NUISANCE GEESE. For many lakeside residents this is the timeof year when not much can beat an after work beverage on the lawn or that firstcup of coffee in the morning on the deck. The disproportionate tax assessment of waterfront owners is almost palatable. For while we have to contend with erosion,weeds in the swim area, moss washing ashore, mussel shell cuts on our feet, andinhalation of emerging swarms of midges, we take pleasure as we watch therobins, English sparrows and exotic starlings feast on our bounty of spidersand lawn insects. Gregarious purplemartins in our communal boxes are a joy to listen to as they feed the nextgeneration from the insects that fly above the niche for the treeswallows.

However, in the past few years the escalating population ofCanada geese has made mornings a bit less enjoyable. One peaceful early June morning91 birds foraged my shoreline. On land,residents and parks have to contend with uprooted vegetable gardens, lawn grassand beaches full of poop that must be shoveled up before the youngsters canplay.

What to do? Lettingthe dog loose and disturbing the peaceful morning by screaming like a Bansheeare options, as are flinging a quantity of non-lethal projectiles in the flock'sdirection. Most likely an adult male standsproud and returns an indignant 'HONK' while leading you away from the hen that herdsa flock of juveniles waddling to pasture at the neighbor's.

According to NYSDEC, *"problems include over-grazed lawns, accumulationsof droppings and feathers on play areas and walkways, nutrient loading toponds, public health concerns at beaches and drinking water supplies,aggressive behavior by nesting birds, and safety hazards near roads andairports. Based on the growing frequency and severity of complaints aboutgeese, DEC biologists have concluded that a more acceptable number of residentgeese in New York would be at or below 85,000 birds - far fewer than thecurrent population estimate of more than 200,000 birds."* Fostered in part by federal and stateregulations dealing with management of storm water runoff, the infamous'detention ponds' are still the favorite device when NYSDOT or developer has toinstall a device to contain highway and parking lot storm flow. This is why the local Walmart resembles agolf course; ponds and adjacent grasses - like our lakefront lawns and parks -are great goose habitat! Nevertheless,NYSDEC appeases the 'animal rights' audience by boldly stating that *"**there are absolutely no plans by DEC or othersto capture, euthanize and bury 170,000 resident geese to achieve the statewidepopulation goal of 85,000 birds**."* But perhaps the USFWS will some years enableNYSDEC to schedule a limited mid-April hunting season.

For now, landowners can manage geese. But, no single technique is universally effective and sociallyacceptable. In New York, managementresponsibility for Canada geese is shared by the U.S. Fish and Wildlife Service(USFWS), U.S. Department of Agriculture (USDA), and the New York StateDepartment of Environmental Conservation (DEC). It is illegal to hunt, kill,sell, purchase, or possess migratory birds or their parts (feathers, nests,eggs, etc.) except as permitted by regulations adopted by USFWS and DEC. From NYSDEC, here are some generalguidelines:

- *No federal or state permitsare needed to scare, herd, or chase away geese by any means, includingdogs or noisemakers, as long as no birds are physically harmed.*
- *If you only want to destroygoose nests or treat the eggs with corn oil (or puncturing) to preventhatching, simply visit the USFWS's Resident Canada Goose Nest and EggRegistration Site to register on-line (see the Offsite Link in theright-hand column). You do not need any special authorization or permitfrom DEC.*
- *If you are a farmer ormanager of a beach or drinking water supply, and you want permission forthe lethal removal of geese between April 1 (manager of a beach ordrinking water supply) / May 1 (farmer) and August 31, you do not need afederal permit but need written authorization from your local DEC Wildlifeoffice.*
- *In most other situations,including areas where geese are a general nuisance (parks, golf courses,residential or commercial properties, etc.), or to kill geese at othertimes of the year, you need a specific Federal permit. To apply for afederal permit, contact the New York State office of USDA WildlifeServices at (518) 477-4837.*
- *DEC generally does not allowrelocation of geese with or without a permit.*

For moreinsight, try this link: http://www.dec.ny.gov/docs/wildlife_pdf/geeseproblem.pdf

ALSO FROM NYSDEC Information about the SewagePollution Right to Know grant program is also available on DEC's website. For instructions on how tosign up for alerts, visit the Sewage Pollution Right to Know web page at DEC'swebsite.

And,know that it is now illegal to lay fabric on the bottom of the lake to cutsunlight and retard growth of aquatic vegetation. A permit is needed, and it only allows use insituations where new (presence of less than two years) invasive species arediscovered and the property owner wants to curtail dockside spread.

NEW COMMISSIONER - June 16 the State Senate Confirmed Basil Seggos as the New DECCommissioner. Since 2012, Seggos has advised the Governoron environmental policy and overseeing the operations of the state'senvironmental agencies, including DEC, the Office of Parks Recreation &Historic Preservation, the Environmental Facilities Corporation, and theAdirondack Park Agency. Prior to workingin the Governor's office, Seggos served as Vice President of BusinessDevelopment at the clean-tech private equity company Hugo Neu Corporation,Chief

Investigator and Attorney at Riverkeeper, Associate at the NaturalResources Defense Council, and as a legal clerk at the White House.

We welcome aboard the new Commissioner and hope that is new Assistant Kenneth Lynch (former Region 7 Director) will assist him on Oneida Lake matters. We also wish to thank retiring Fish and Wildlife staff Shawn Keeler, Phil Hulbert, and Patrica Riexinger for their years of dedicated services to our state.

DIRECTOR CANDIDATES

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From time to time the Board of Directors has a vacancyto fill. If you know of a memberinclined to serve, please contact any Board member with an avocationalresume. Especially desired are candidateswith a paralegal or regulatory background and the ability to understand,interpret, and communicate pending/proposed bills related to the OLA mission. As we periodically co-host or participate inoutreach workshops, we need persons to help interpret and communicate scientificprojects/papers, and formulate the means to translate them into lay terms foruse in the education of our general membership via our Annual Meeting, Bulletin,newsletters, and show booths.

Donate

Algal Blooms and Beach Closures

In prior newsletters we have introduced somebackground related to algae growth; herein the subject is discussed further. We will, in another newsletter outline how a closureis declared and implemented. Thisnewsletter again cites some of the text from the excellent book ***"OneidaLake: Long-Term Dynamics of a Managed Ecosystem and Its Fishery"***, published bythe American Fisheries Society, and authored by the Cornell team at theShackelton Point Biological Field Station.

Until the establishment of zebra, and subsequentlyquagga mussels, Oneida Lake has been 'green' and classed as eutrophic (old age,overly fertile). Fishermen targetedspecies that thrived in waters full of plankton before the Dreissenid musselsinvaded. Since the late 1980's algae has been filtered from the pelagic (midand upper) water column, nutrients reduced, and biologic energy redirected tobenthic (bottom). Fishes that likeclear water (sight feeders, e.g., pickerel and bass) flourished on crayfish in submergedaquatic vegetation (SAV) at the expense of pelagic foraging yellow perch andwalleye.

The key nutrients controlling planktonic algae andaquatic vegetation (and hence other critters that make up our lake populationdynamic) are Total Phosphorous (P), Soluble Reactive P, Total Filterable P,Nitrate-nitrogen, Nitrite, Silicate, and Chlorophyll a (an algal pigment) . Concentrations

of each of these nutrientschanges with the time of year and annual changes are evident in some,especially the phosphorus complex. Thesechanges may be evidenced by algal blooms, more accurately in specificplanktonic algal species dominance in the water column. For instance, silicate concentrations oftenincrease from June to September, but are depleted in the early spring and fallconsequent to diatom depletion of the dissolved silicate. The silicate pattern is one of the nutrientconcentrations altered by the zebra mussel. Annual nitrate and nitrite trends tend to be the opposite of silicate concentrations.

Nitrate is typically highest in the spring, decliningto summer minimums under 100 micrograms per liter of water (3-5 times lowerthan after ice-out). Nitrite is theproduct of oxygen-requiring ammonia-oxidizing bacteria, and concentrations tendto be higher in the summer. Under theice, nitrate arises through aerobic metabolism of sediment-generated ammonia,and tends to be higher in deep winter water when mixing is minimal. Oneida Lake bottom mud is rich in nutrients likephosphorus. In summers that are verywarm and waters are calm, phosphorus is often released from lake sedimentsleading to a buildup of this nutrient in the lake's deeper waters. Once storm event induced wind mixes OneidaLake's waters, phosphorus in surface waters often increases resulting inincreased algal bloom activity.

Finally, the type of algal blooms can be dictatedby the ratio of nitrogen and phosphorus concentrations in the lake's waters. Some algal species, for example, like morenitrogen than phosphorus while others do well when phosphorus levels arehigh. Consequently, the nature of algalblooms in Oneida Lake is driven by a complex of chemical, biological, andphysical interactions that often varies seasonally, annually, and with thedominating critters in the lake (like zebra and quagga mussels, for example).

After the turn of this century, in-lake totalphosphorous (TP) declined to 40-50 micrograms per liter (µg/l) then droppedfurther to the 15-25 µg/l range. Thecontemporary level is at the lower end of this range due to regulationsmandating phosphorous abatement combined with the unanticipated establishmentof the zebra and quagga mussels. Tomany, the nutrient chemistry change is manifested in the surrogate Secchi discdepth. One can now see not 3 feet, but30 feet. "Weeds" (submerged aquaticvegetation or SAV) once limited to 8-12 feet by algal blooms (reduced lightpenetration) now cover much of the bottom, approximating the estimated coverageof the 1920's before the dam and induced popularity of Oneida Lake.

The biological character of Oneida Lake,particularly the planktonic and vegetative plant communities, have changeddramatically in the last century. Currentlyover 40% of the lake bottom >21 feet deep supports SAV, a substantialincrease associated with improvements in water clarity, due to decreasenutrient loading from the watershed and the invasion of zebra mussels. Aquatic vegetation – planktonic and rooted –affects the structure and function of lake ecosystems by modifying the physicaland chemical nature of the water and sediments. The production of organic matter, nutrients therein, and the conversionof energy at the soil/sediment-water interface all affect the dynamics of thelake ecosystem. Shoreline scour by ice and waves, winter drawdowns, waterclarity, light penetration, and a host of other interactions influence and areinfluenced by lake vegetation.

Old photos show lake near-shore waters (<3mdeep) with reasonably dense growths of water willow, bulrush, cattail, wildcelery, water weed, and pond weeds. Thiswas the lake's appearance when it supported a commercial eel fishery yielding100 tons annually. After WWII it appearsthat Oneida Lake's emergent and submerged aquatic vegetation (SAV) has declineddue to increased inland sedimentation due to urbanization of the watershed, shorelinedevelopment and dredging, water level regulation, and increased turbidity dueto phytoplankton blooms. By then thecommercial fishery was largely limited to carp and catfish, and the fish piracyfor walleye fostered formation of OLA. About25 years ago another change took place in the lake's vegetation and fishery.

The arrival of the Dreissenid mussels has caused oliiotrophication and benthification of the lake. Primary energy transfer has shifted from the upper water column to the bottom processes. It is possible that the goby-mussel dynamic willfurther change the lake system, but more likely some new invasive species willalter that dynamic. It will likely notbe a phytoplankton, but the lake algal bloom characteristics could change. The point is that blooms will happen. When they do, members should appreciate someof the significance, for reactions to blooms may or may not have coincidingscientific and political rationales in the popular media.

SCUBA DIVERS. Whereare Oneida Lake's dive sites? There isan airplane engine on the bottom just north west of Chapman Park, an oldoutboard on Brazee Bar, 3 shotguns off Philips Point, scores of old ice spudsrising vertically from the lakebed, a few snowmobiles, maybe an old car or two,a few boats, several fishing poles, interesting manganese nodules(pancakes), and who knows whatelse? Diving in the late 1960's when thelake visibility was 3-6 feet was interesting when the bass and carp stayed justout of reach. Post zebra mussel claritymust now make for real nice diving, but all those artifacts probably are notencrusted. Still, if you dive, or knowthe approximate latitude and longitude of a destination, let us know. We will compile a list and post it on the OLAwebsite for divers.

Call for volunteers: Calendar a day in your kayak and **help us pullwater chestnut Friday July 29** (rain day is Saturday 30th). If you can volunteer from 0830-1100 pleasecontact a Director.

Our plan is to have3 groups working. One will scout theshoreline between Wedgeworth Point Doris Park Drive, a second to concentrate inthe canals off Shaw Road, and a third to concentrate in the Big Bay Creek area. We need one or two open motor boats towkayaks a mile or so to the creek mouth and to collect the harvest. If you are not available on this day, buthave an interest in helping, know that a couple of other groups are conductingweed pulls earlier, at various locations in the west end of the lake and downthe Oneida River. Contact any Director of the organization (emails are on **our website, as are photosof the plants – look under *"Publications – Articles on Oneida Lake"* and findBob Johnson's Plant ID Field Guide**).

Website Who We Are What We Do How to Help