



Growing oysters for a cleaner Bay.....www.oystergardener.org

SPRING

NEWSLETTER

2014

SPRING OYSTER FAIRS

The **TOGA-sponsored Annual Spring Oyster Fairs** will be held for the Middle Peninsula on May 10, and for the Northern Neck on June 7. Details are as follows:

Middle Peninsula

The Middle Peninsula Oyster Fair will be at the Gwynn's Island Civic Center, 1996 Old Ferry Rd, Hudgins, VA 23076.

8:30AM- Registration begins, (Coffee, juice, fruit, Danish)

8:30 to 9:30AM - Vendors of **oyster gardening equipment, spat and supplies** are invited to display their wares for sale. The availability of large spat, both diploid and triploid, is dependent upon winter mortality. Vendors may or may not have small spat set in 2014. This is also a good time to question Master Oyster Gardeners about your gardening issues.

9:30 to 9:40AM - Remarks by the TOGA President and introduction of speakers.

9:40 to 10:10AM - Educational program begins- **Mike Congrove** will describe the work being done at **Oyster Seed Holdings** which is a state-of-the-art producer of oyster larvae and small seed and is located on Gwynn's Island. After his talk and a question-and-answer session, Mike and other OSH employees will lead tours through their facility which is just a few miles away. Mike has asked that we break into groups of about 10 for the tours.

10:10 to 10:30AM - TOGA Board Member Lynton Land will describe the latest results from the ongoing **Growth and Longevity Study** recently completed by TOGA volunteers. He will also introduce plans for a new follow-on study.

10:30 to 11:30AM - **Tours of Oyster Seed Holdings** in groups of 10.

10:30 to 10:50AM - For new oyster gardeners, Vic Spain will discuss **How to Get Started Oyster Gardening**. Details include how to get spat (oyster seed) and when best to deploy, equipment needed (on display) and how to maintain it, how many per cage, how long to harvest, sanitation, how to get help, helpful literature etc. New oyster gardeners can attend this talk and still have plenty of time for the OSH tour. Experienced gardeners may start the tours during this time.

Messages from vendors (One received as follows)

Eastfield Farms (Peter Perina)- Oyster flip float kit \$42 (for 1000 oysters), oyster bags and Bag Floats, cages, cable ties and hooks, shell bag netting by the roll or piece. As a distributor we can offer discount prices for large orders. 30 yrs experience. PO Box 275 Mathews, VA 23109, 804-725-3948, eastfields@rivnet.net

Northern Neck

The Northern Neck Fair will be held June 7, at the Women's Club of Northumberland County, 2890 Northumberland Hwy, Lottsburg, VA 22511. The facility is just west of Allison's Ace Hardware, off Route 360. The agenda includes:

8:30AM- Registration begins, (Light refreshments provided)

8:30 to 9:30AM - Vendors of oyster gardening equipment, spat and supplies are invited to display their wares for sale. This is also a good time to question Master Oyster Gardeners about your gardening issues.

9:30 to 9:40AM - Remarks by the TOGA President and introduction of speakers.

9:40 to 10:15AM- Educational program begins- Dr. Jim Wesson, Virginia Marine Resources Commission, will speak about **Virginia's Oyster Management and Restoration**. "Virginia's oyster harvest has increased more than 10 fold over the past decade. What's different? Now how do we manage oysters into the future."

10:15 to 10:30AM- TOGA Board Member Lynton Land will describe the latest results from the ongoing **Growth and Longevity Study** recently completed by TOGA volunteers. He will also introduce plans for a new follow-on study.

10:30 to 11:00AM- Vic Spain will discuss **How to Get Started Oyster Gardening**. Details include how to get spat (oyster seed) and when best to deploy, equipment needed (on display) and how to maintain it, how many per cage, how long to harvest, sanitation, how to get help, helpful literature etc. This is mainly designed for new gardeners, so folks are welcome to stay or depart as they wish.

11:00 to 11:30AM- Informal discussion, questions and answers.

NOTE: Sales at the spring fairs are from vendors who are responsible to the buyer for the quality of their products. Vendors are asked to provide receipts with contact information to buyers. We also ask that vendors encourage participation in TOGA's educational programs and pass on informational brochures that we provide at these events.

– Vic Spain and Mike Todd

Notes From the 2014 Annual Meeting

TOGA's Annual Meeting was held on January 11, 2014, at the VIMS Gloucester Point Campus. Over 100 members and guests attended. The business portion consisted of a summary of our 2013 accomplishments, goals for 2014, the Treasurer's report, election of the 2014 Executive Board, listed below, and the recognition of several TOGA members who contributed so much during the year.

This year's board, President Emeritus, and VIMS advisor include...

President.....	Brian Wood
Vice President.....	Mike Todd
Secretary.....	Mike Sanders
Treasurer.....	Charles Yarbrough
At Large Members.....	Lynton Land, Natalie Kelly, Bob Morgan, Terry Lewis
Past President.....	Vic Spain
President Emeritus.....	Jackie Partin
VIMS Advisor.....	Karen Hudson

Note: During the business portion, TOGA Treasurer Charles Yarbrough presented TOGA's forecasted budget for 2014 demonstrating a projected shortfall in revenue. A vote was put before the attending membership and the vote was unanimous to raise the current annual dues from \$10 to \$15 annually starting January 2015.

We are grateful for all the time and effort from our retiring members Ken Hammond, Dave Turney and Steve Wann, and welcome new board members Bob Morgan and Terry Lewis.

Volunteers are so important to the success of TOGA and the exceptional efforts of several people were acknowledged:

Ken Hammond – 3 years on Executive Board (At-Large Member), MOG class of 2009, Chairman of the Fundraising Committee and almost singly responsible for the short time it took to raise the \$50,000 to start the TOGA Fellowship Endowment with the VIMS Foundation. Essential set up coordinator at our annual Virginia half-shell tasting events and vital volunteer for many TOGA functions.

Steve Wann – TOGA Treasurer for six years; obtained our Retail Sales and Use Tax Exemption; the Event Coordinator for our annual Oyster Float Building Workshop for eight years; and supported many other outreach events during his long tenure as an active TOGA member.

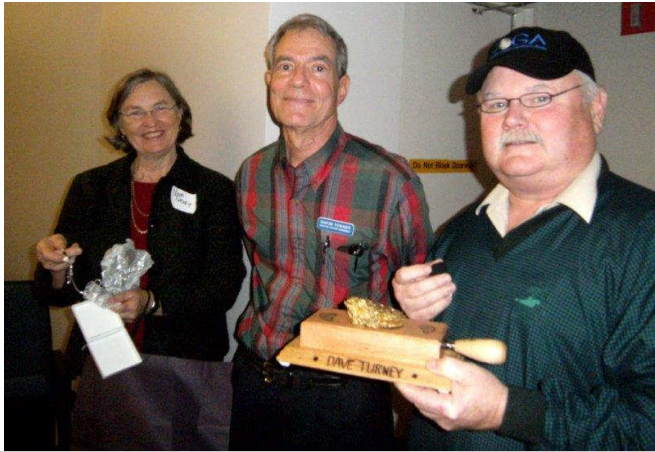
David Turney– Board member for four years, one as Vice President and two as President and a term of Past President. MOG class of 2009; Dave helped orchestrate the formation of the TOGA Fellowship Endowment; was our first Outreach Coordinator; authored our Chesapeake License Plate grant proposal; Co- authored the *TOGA Improvement Plan (TIP)* and supported many, many outreach events.

Mike Todd and his wife Laura – For their incredible efforts in making the 1st annual Stratford Hall Wine and Oyster Tasting a grand event along with a big thanks to all the volunteers that made it possible.

Charles Yarbrough – Assumed the post of TOGA Treasurer this past summer and introduced a greatly improved financial forecasting and reporting tool, Quickbooks.

Vic Spain- With a tremendous amount of patience and hard work developed a friendlier and more informative website for TOGA.

This year's 2013 President's award went to **Dave Turney** for his tireless devotion to making TOGA a much improved



Brian Wood (right) presents gifts to Dave and Nina Turney for their years of service to TOGA.

and better structured organization. Dave's many accomplishments are listed above. Plus he successfully competed for Chesapeake Bay Restoration Foundation grant funding (wrote applications, monitored, EOY reports), and established the first comprehensive documentation for the TOGA President.

For the January meeting at VIMS, much appreciation also goes to Vic Spain for setting up float sales and Charles Yarbrough for displaying and selling our New TOGA apparel. Sales were brisk for combined fundraising of almost \$1,700.

Also to be commended are Ann Wood and Laura Todd for their outstanding job in organizing the pot luck after the meeting of such dishes like oyster pie, oyster casserole, oyster stew, smoked oyster dip and much,

much more. Hearty thanks go to the members who contributed to the feast.

And last but not least our gratefulness goes to Karen Hudson our VIMS Advisor and the folks at VIMS for their support and organization of the facilities in making this meeting possible.

Education Portion

We were delighted to have Mr. Robert Connell as our keynote speaker. He is the Regional Shellfish Specialist of the U.S. Food and Drug Administration and has been involved in shellfish sanitation for over 30 years. Bob is an FDA representative to the Interstate Shellfish Sanitation Conference (ISSC), which meets biannually to "foster and promote shellfish sanitation through the cooperation of state and federal control agencies, the shellfish industry, and the academic community". His presentation was focused on challenges of shellfish sanitation along the East Coast for the aquaculturists, harvesters, reef restorers and oyster gardeners. Bob later said: "I really enjoyed discussions with TOGA members during the dining portion of the meeting. TOGA is a very interesting group of well-informed and motivated individuals." This is a true testament to the dedicated volunteers we have at TOGA!

Additionally, Lynton Land, long time TOGA Executive Board Member and Chair of the Science and Evaluation Standing Committee, gave an especially fascinating presentation on TOGA's Growth and Longevity three year, four oyster strain study (Tripliod vs Diploid), including the Tripliod versus Triploid results, where the growth, mortality and meat weights were compared of over 50 sites. These results can soon be reviewed on our website www.oystergardener.org. Many thanks form all us at TOGA to the incredible amount of work to those volunteers that made these studies possible.

– **Brian Wood**



Our newsletter was paid for by funds generated from the sale of Chesapeake Bay license plates. These funds also help pay for the Spring Fairs and the MOG course.
See <http://dmv.virginia.gov/exec/vehicle/splates/info.asp?idnm=CB>

Ode to TOGA Volunteers

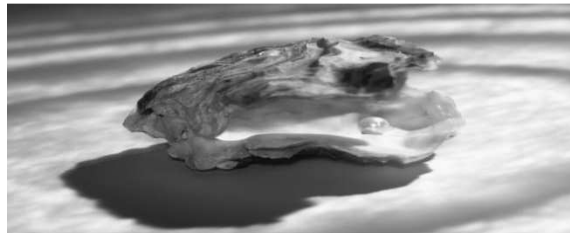
By Ann Wood

Many years we've gathered here
With our vision so very clear
Grow those oysters, bring them back
With your support, we are on track

TOGA folks can really save the day
Improve oysters and clean up the Bay
What you do, we are grateful for
Volunteers are the very core

Devote one day in the TOGA tent
Pick the place and a special event
You'll find yourself having a great time
And don't even have to spend a dime

This is the day, the time is now
Ask us questions, we'll show you how
Involve yourself and have no fear
You will love being a TOGA volunteer



Be a pearl in the oyster of life!

What is on Our Website?

Did you know about the Education Page on our website (<http://www.oystergardener.org/#!education/c117>). The feature of this page is a downloadable comprehensive School Resource PowerPoint file produced by TOGA's Dr. Lynton Land and Marilou McCrosky of King William High School. It is a great resource for teachers and students of all ages. It is our hope the resource will be used by teachers and by volunteers invited into the schools or to other educational events. Users are encouraged to modify the resource to meet their specific needs. We are open to suggestions that might result in improvement. If you do not have PowerPoint on your computer, a link is available on the Education Page so you can download a free PowerPoint Viewer. Also on the page is a very readable and informative article "The Oyster in Chesapeake History" by Dr. Henry M. Miller of St. Mary's College of Maryland. For questions about the School Resource, please contact Lynton Land (jandl@nwwifi.com). If you have a problem downloading or viewing the resource, please contact Vic Spain (vicspain@rocketmail.com).

WWW.OYSTERGARDENER.ORG
is a great source of TOGA information! Please visit often.

TOGA's Growth/Longevity Study

TOGA's Growth/Longevity study began on August 11, 2011, when four kinds of seed oysters were obtained from the VIMS hatchery. Colored cable ties were used to identify the four kinds of oysters, orange for LoLa (low salinity Louisiana) triploids (sterile), purple for LoLa diploids (fertile), green for DeBy (Delaware Bay) triploids and blue for DeBy diploids. Animals about 5/8 inch in size were placed in ADPI mesh bags, which were placed in plastic "Australian" cages TOGA had purchased. Four loaded cages were given to each of 40 volunteers, who were asked to report the number of live oysters and the average length of the oysters in each cage in March, July and November. Most volunteers found it necessary to reduce the numbers in the cages as the oysters grew. Here are our conclusions:

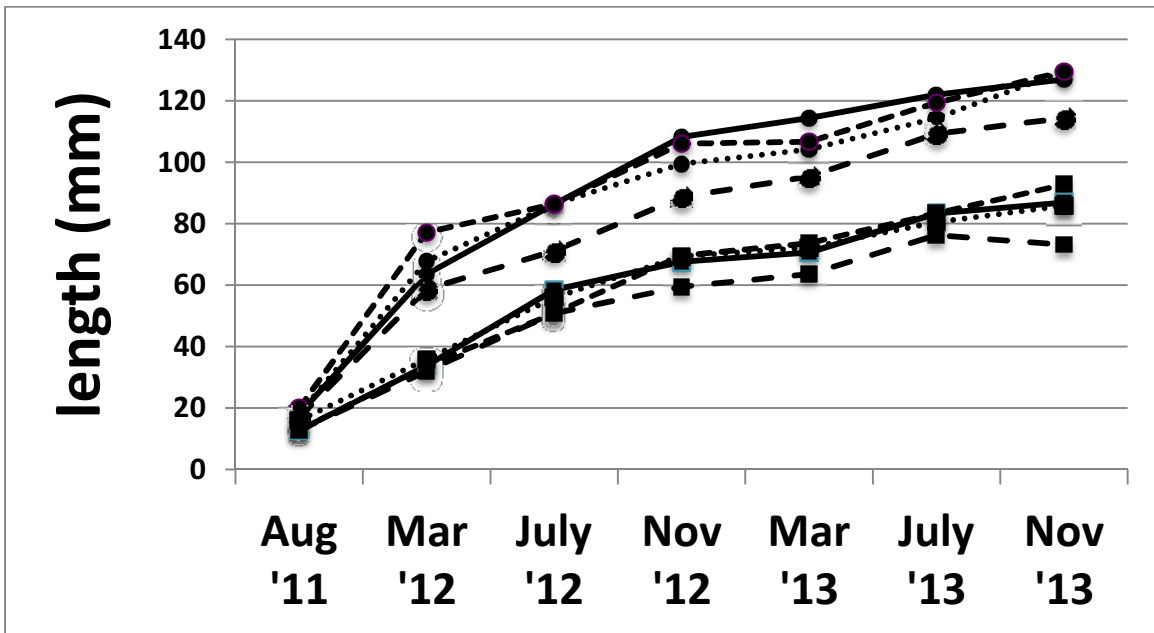
- 1) It makes more difference where oysters are grown than which strain is grown. We were amazed that at some sites, in November, 2013, when the study ended, the average length of the oysters was 125 mm (4.9 inches). Many oysters reached market size (76 mm or 3 inches) by the fall of 2012, but oysters at some sites did not reach market size until the fall of 2013 (Figure 1). Some, but not all, sites with the largest oysters are characterized by excellent circulation. But the reasons oysters grew large at some sites near the head of tidal creeks still eludes us.
- 2) LoLa diploids grew as rapidly as did the two triploids. DeBy diploids grew the slowest, but the differences were small, at most 10 mm for 100 mm oysters.
- 3) Most mortality occurred during the first year, especially in the summer of 2012, when most growth occurred.
- 4) LoLas experienced slightly more mortality than DeBys, but the differences were small and offset by slightly higher growth rate.
- 5) Meat weight was measured at 15 sites. Triploids were about 1/3 meatier than diploids, although a tremendous amount of overlap exists. On average, triploid meat weighed 20.4 grams compared to diploid meat that weighed 14.8 grams (Figure 2). The "Whole Body Weight" of the triploids was larger (131.8 grams) than for the diploids (119.5 grams), so the shells of triploids are slightly heavier than the shells of diploids.

We conclude that LoLas grow a bit faster than DeBys, but suffer slightly higher mortality. Diploids grow nearly as fast as triploids. Differences in the growth rates of the different strains were small and not meaningful for gardeners. These conclusions apply to the animals we received from VIMS in 2011. We do not know if these conclusions will apply in the future as selective breeding continues to improve the lines.

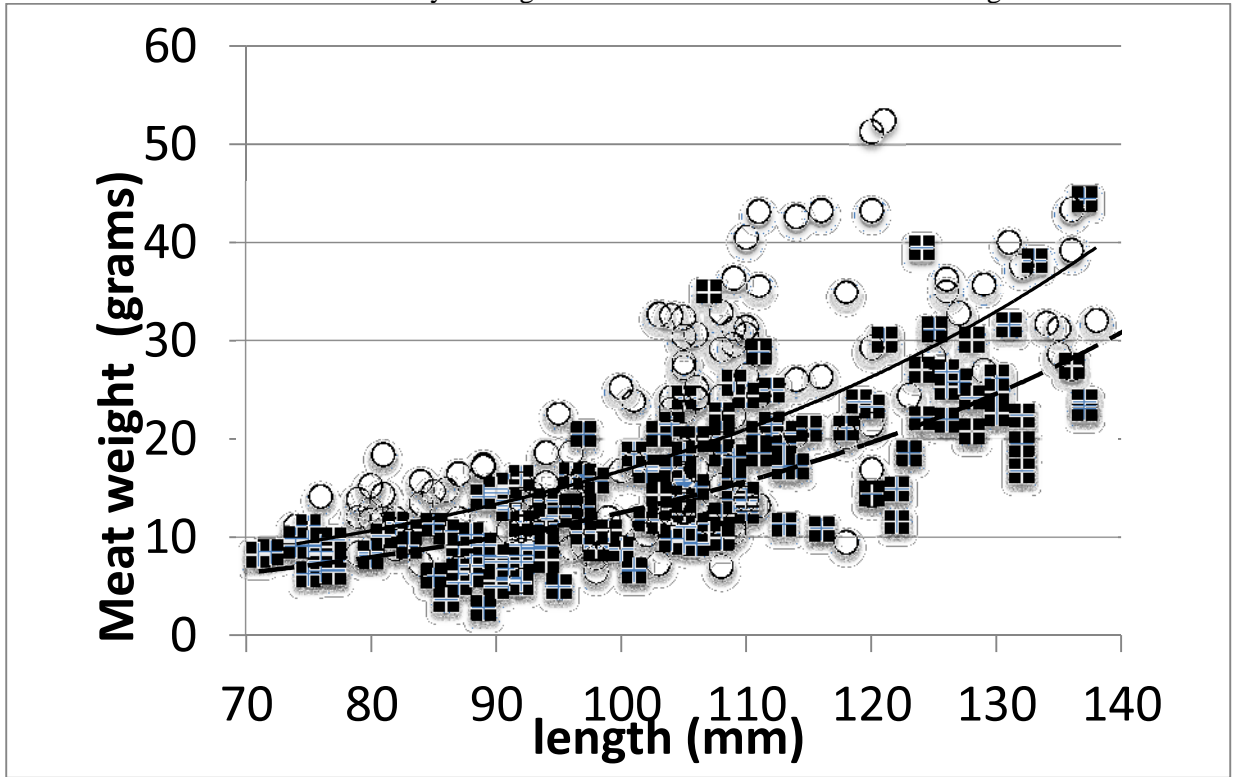
The most important variable, uncontrollable for oyster gardeners, is where oysters are grown. Areas with high tidal flow grow larger oysters, although there exist other unidentified variables. If you can help identify variables that favor faster growth, please let us know so other volunteers can test your conclusions. Gear (floats, cages) that permits good circulation promotes faster growth. Most mortality occurs the first year when the oysters are small. To reduce mortality, keep the crabs out, move the oysters to the coarsest mesh possible as soon as possible, keep the mesh clean, spread the oysters out and keep them in the water, but not in the air or on the bottom, in winter.

Gardeners need to weigh the advantage of slightly higher meat weight for triploids, and better meat quality in the summer, against larval production by diploids. If one of your goals is for oysters to provide "ecological services" to the Bay, then **grow diploids**. After all, the Chesapeake Bay oyster industry did just fine for centuries using diploids.

-- Dr. Lynton S. Land



Comparison between a site with fast growth (circles) and one with slow growth (squares). Colored cable ties were used so the volunteers could not identify the animals. DeBy triploids (purple) are shown by short dashes; DeBy diploids (blue), the slowest growers at almost all sites, are shown by long dashes. LoLa triploids (orange) are shown by a solid line and LoLa diploids (green) by a dotted line. The location of the site was more important in determining growth rate than the kind of animal grown. At the fast growth site, all four kinds of animals reached market size (76 mm) by the fall of 2012. But all four kinds of animals needed another year of growth to reach market size at the slow growth site.



Meat weight (grams) versus length in mm for 15 sites. Triploids (open circles and solid line) are about 30% meatier than diploids (solid squares and dashed line), but there is a lot of overlap.

A New TOGA Study

TOGA's recently completed Growth/Longevity study concluded that oyster growth depends more on where the oysters are grown than on the kind of oysters grown. Gardeners can't control the amount of tidal circulation at their piers, or the amount and kind of food available to the oysters, but they can control the kind of gear used to contain the oysters and the amount of effort expended to maintain them. Our new experiment attempts to determine if the kind of gear makes significant differences in the growth/mortality of the oysters. We will provide 20 volunteers with two cages in late summer, one to be floated and one to be suspended from the pier just off the bottom. The cages will be pre-loaded with about 125 "wild" Chesapeake Bay diploid seed oysters in mesh liners. The growth of these animals will be compared to growth of the diploid strains from the VIMS hatchery used in the previous study. Volunteers will be asked to count the number of live animals and measure their average length in March, July and November, with the experiment ending in 2016. We can provide additional oysters if volunteers want to try different kinds of containment using their own gear. If you are interested in participating in the new study, or have questions, contact Lynton Land at JandL@nnwifi.com, PO Box 539, Ophelia 22530 or (804) 453-6605. We hope to begin distributing loaded cages in late summer.

– Dr. Lynton S. Land

A Project for TOGA Volunteers?

For many years VIMS has employed "shellstrings" in several rivers to monitor the setting or "strike" of oysters. The "shellstrings" consist of 12 oyster shells, each about 3 inches in size, drilled through the center and strung concave side down on heavy wire. The string is deployed 0.5 meter off the bottom and retrieved and replaced with a new string weekly.

In the Fall 2010 Newsletter (on line at www.oystergardener.org) I compiled 34 years of data from the Great Wicomico River. Two things are evident: 1) there are a few good years for strike and a lot of bad years, and 2) strike can occur at any time during the growing season, but the most strike occurs in July +/- one week.



In the Spring 2013 Newsletter I added data from the James and Piankatank Rivers, available for only 13 years. Although each river can exhibit high strike in isolation, in most cases elevated strike is found simultaneously in the three rivers.

TOGA volunteers could contribute to our understanding of oyster strike, especially by extending the data to other rivers, by deploying their own "shellstrings." Here is the protocol I suggest:

1) Construct five similar "shellstrings" with between 6 and 12 shells each. Line can be used instead of wire.

2) Deploy a string in mid June, early, mid and end July, and mid August. Leave the strings in the water.

3) Remove the strings at the end of October and note the size and location of any strike. Report your findings to Lynton Land at JandL@nnwifi.com. Note if strike takes place nearby on rip-rap, bulkhead or your oyster gear. The attached photo shows shells from a spat-on-shell tank that was cycled about every two weeks. The date is the date the larvae were added. These photos will give you an idea of how big the strike should be in late October.



Feel free to try other things. Tires recovered from creeks almost always have dense oyster strike on them, so maybe using tire strips in addition to “shellstrings” would be interesting. Some people use “Chinese hats” to attract strike and an easy way to try it is to coat 4” or 6” corrugated plastic drain pipe with mortar – see photo.

-- Dr. Lynton S. Land

Students at Boy and Girls Club in Kilmarnock Become New Oyster Gardeners

Tidewater Oyster Gardeners Association (TOGA) members Madison Boyd and Nick Ferriter coordinated an Oyster Gardening training program and study for the students at Kilmarnock Boys and Girls Club which started in September 2013. The first two evening classes were focused on oyster cage building where students enthusiastically joined in the construction of Taylor Floats to hold their spat for the study of growth and care of bivalves.

Under Madison and Nick’s watchful eyes the students cut the cage wire, formed the cages to a box figure and using hog rings, fastened the wire boxes together. Next the students participated in the art of gluing the four inch PVC pipes together for the buoyancy element of the cage; and those that have done this procedure know this is not an easy task. If the primer and gluing is not properly done the float will leak and go to the bottom. Also if the pipes are not put on quickly and precisely, they will seize or become crooked; rendering the tube useless.

On the second day the students’ task was to finish the lids for the cages. Now with their fresh learned skills, the students cut the cage wire to dimension, glued the one inch PVC top frame stiffeners and fastened the new lids to their Taylor float cages.



Madison Boyd and the new oyster gardeners from the Kilmarnock Boys and Girls Club launch their oysters on Indian Creek at Camp Kekoka in Kilmarnock, VA.

As the day was eagerly awaited to launch the Taylor floats with spat filled cages, another evening was spent on teaching the students the interesting history of oystering on the Bay, the crafty watermen, the varied boats, the special equipment, the once abundance of bivalves, and then sadly the collapse of the wonderful resource through overharvesting and disease. To round off the education, some fresh oysters were shucked for an anatomy lesson; and the students learned that nothing went to waste when the instructor was pleased to eat up the opened bivalves (they were from his own dock, after all).

Then the fun day came to fill the three cages with spat and float them at their new home on Indian Creek at Camp Kekoka in Kilmarnock, VA. On November 11, 2013 the class gathered at Camp Kekoka with the TOGA team and filled the mesh bags with diploid oyster spat. They secured the cages at the four pylons outside the camp dock with the help of Madison Boyd on his skiff. The launched Taylor floats project floated beautifully and the students masterfully passed

the float building test.

Thanks to Madison Boyd, Nick Ferriter and Kilmarnock's Boys and Girls Club for making this project possible. TOGA appreciates these opportunities to teach young people about oysters and what they mean for the health and well-being of the Chesapeake Bay. TOGA members will continue these lessons monthly with the students, cleaning these cages, sorting and measuring oysters, discovering predators and friends of the oysters and much more. TOGA has also pledged to give lessons during the two week long summer camp at Kekoka.

If you have and questions or comments regarding this or any TOGA project please contact us through the website contact page -- www.oystergardener.org or Brian Wood -- awood45858@aol.com

4th Annual Virginia Half Shell Tasting Event at Kelsick Market

Outstanding weather, fantastic oysters, great crowd and a wonderful host: Kelsick Market helped make TOGA's 4th Annual Oyster Tasting Event on November 9, 2013 another huge success with approximately 150 oyster lovers attending. Main Street Gloucester, Virginia provided a perfect venue for this event.

We were very fortunate to have six oyster growers from around the Bay supplying four of their best oysters to each ticket holder to sample and taste the difference of the waters from which they are grown. What a treat!

Our six growers were: Chapel Creek Oysters, Chessie Oyster Company, Mobjack Bay Seafood, Rappahannock River Oyster Company, Seaford Oyster Company and Shooting Point Oyster Company.

We were delighted to have the Virginia Marine Products Board present with Deborah Pratt and her sister Clementine Macon for shucking demonstrations and shucking support for the growers.

Much appreciation to Beth and her crew at Kelsick Market for their support in supplying other scrumptious food choices, handy utensils, complimentary condiments, many ticket sales, and the beer & wine concession that greatly aided in the fund raising for TOGA.

Another big effort on fund raising was Ann Wood's donated beach glass art work (with an oyster theme), fun jewelry and special TOGA caps & aprons that were raffled off with the help of Brenda Sanders leading the charge on ticket sales (like any Marine would do). Much thanks to them both! Also congratulations to TOGA member, Mary Ann Lewis in winning the grand prize!

Everyone at TOGA knows and appreciates Ken Hammond and his skilled sons that were essential to this event. With precision and swiftness these guys came in, organized the area and arranged the tables so that the participants could easily enjoy their oysters. Ken's crafty crew members were the first ones there and the last to leave. A great and greatly valued effort!

We deeply appreciate the help of Karen Hudson, our VIMS Advisor, and Jackie Partin, TOGA Founder, for their guidance to make sure the event went off without a hitch, and also to Jeff Odell who organized volunteers for the event.

Special thanks to all the volunteers that assisted with the set-up, those who shucked, managed the ticket booth, aided with beer and wine sales, attended the TOGA booth and completed the tear down and cleanup activities. Thank you all! We are looking forward to the 5th Annual Oyster Tasting Event. Maybe with a few more twists.... Got any ideas to improve this event? Please comment on our TOGA webpage or send us a line.

Brian Wood email: awood45858@aol.com

-- Brian Wood

TOGA Apparel On-Line

TOGA offers apparel for sale at some of our events; and sometimes the color, size or style that you may desire is not available. TOGA now has an on-line apparel store so you can purchase what you want, when you want, with the TOGA logo embroidered on it. The website is <http://oystergardeners.qbstores.com>. The store offers the same high quality products that are sold at our events.

TOGA will continue to add products to the store, so if there is something you desire then let us know and we will add it. Periodically QBStores runs discounts and specials in the store, so checking the store frequently can save you on the price of the apparel. Your on-line purchases are directly from Queensboro.com and TOGA does not make any commission or profits from those purchases.

– **Charles Yarbrough**

List of TOGA Events for 2014

Colonial Beach Oyster Seminar and Float Building Event -- Event Coordinator: Natalie Kelly, nshokie@aol.com

Location, St Mary's Episcopal Church Parish Hall Date: Saturday, March 22 Times: 9:00 a.m. – 1:00 p.m.

Earth Day at Fort AP Hill -- Event Coordinator: Mike Sanders, snrsmich@gmail.com

Location: Fort AP Hill Date: Thursday, April 17 Times: 10:00 a.m. – 2:00 p.m.

James River Festival -- Event Coordinator: Mike Sanders, snrsmich@gmail.com

Location: James River Park Date: Saturday, April 26 Times:

Thinking Outside the Sink -- Event Coordinator: Nick Ferriter, ferriter@aol.com

Location: Belle Isle State Park Date: Wednesday, April 30 Times: 9:00 a.m. – 2:00 p.m.

Middle Peninsula Oyster Fair -- Event Coordinator: Vic Spain, vicspain@rocketmail.com

Location: Gwynn's Island Civic Center Date: Saturday, May 10 Times: 8:00 a.m. – 12:00 noon

Mid-Year Educational Event and MOG Refresher Course -- (See article below.) Saturday, May 31 Times: 9:30 a.m. – 4:00 p.m. Location: Virginia Institute of Marine Sciences, Gloucester Point, VA

Northern Neck Oyster Fair -- Event Coordinator: Mike Todd, mtodd.nc@gmail.com

Location: Lottsburg Women's Club Date: Saturday, June 7 Time: 8:00 a.m. – 12:00 noon.

Hampton Environmental Summit -- Event Coordinator: Grady Wesson, weswind714@yahoo.com

Location: Sandy Bottom Park, Hampton, VA Date: Saturday, June 7, 2014 Times: 10:00 a.m. – 3:00 p.m.

Rivahfest -- Event Coordinator: Brian Wood, awood45858@aol.com

Location: Old Town Tappahannock. Date: June 21 Times: 9:00 a.m. – 8:00 p.m. www.rivahfest.com

Gwynn's Island Festival -- Event Coordinator: Mike Sanders, snrsmich@gmail.com

Location: Gwynn's Island Date: Saturday, June 28 Times: 9:00 a.m. – 3:45 p.m.

Northern Neck Fall Oyster Gardening Workshop -- Event Coordinator: Mike Sanders, snrsmich@gmail.com

Location: Lottsburg Women's Club Date: Saturday, TBD Times: 8 a.m. – 12:00 noon

TOGA Float Workshop -- Event Coordinator: Charles Yarbrough, caspery@verizon.net

Location: VIMS. Date: Saturday, September 13 Times: 8:00 a.m. – 3:00 p.m.

Stratford Hall Wine and Oyster Festival -- Event Coordinator: Mike Todd, mtodd.nc@gmail.com

Location: Stratford Hall Dates: September 20-21 Times: 9:00 – 6:30 Saturday and 9:00 – 5:30 Sunday

Urbanna Oyster Festival -- Event Coordinator: Lou Castagnola, clouis710@cox.net

Location: Urbanna, VA Dates: November 6, 7 and 8 Times: Thursday – 8:00 a.m. – 2:00 p.m.; Friday – 8:00 a.m. – 5:00 p.m.; Saturday – 8:00 a.m. – 7:00 p.m.

Half Shell Oyster Tasting -- Event Coordinator - Brian Wood, awood45858@aol.com

Location: Kelsick Market, Gloucester, VA. Date: November TBD. Times – 9:00 a.m. – 4:00 p.m.

Middle School Writers Encouraged to Enter Writing Contest

The Tidewater Oyster Gardeners Association (TOGA) is sponsoring the First Annual Middle School Writing Competition, with three prizes of \$150, \$100, and \$50 for first, second and third place respectively. The theme of the essays must be "Consider the Oyster" a wide open category that must include an essay based on oysters. The competition is open to all Virginia students in Middle School. Home-schooled students are welcome to enter.

Prizes will also include gear from outdoor sports businesses and Supporting Members of TOGA. Winners will be announced and awards presented at the Tidewater Oyster Gardeners Association annual membership meeting at the Virginia Institute of Marine Sciences in January, 2015. The winner's parents, a mentor, or a teacher may be guests of TOGA for the presentation event. The winning entries will be read by the students at the awards program during the Annual Meeting.

The three top winners will be published on the TOGA Web site, and may be published in other publications or web sites. The article should be written in WORD format and attached to an e-mail. The submissions can be made between now and the December 15, 2014, deadline. For more information go to www.oystergardener.org.

-- Terry Lewis

The Green Menace

Risks posed by *Carcinus maenas* to shellfish industries and possible solutions

As I had mentioned in the last newsletter, Loosanoff's introduction in Maine and Connecticut of the *O. edulis* in the 1940s was part of an effort to save the shellfishing industry of New England which, at that time, was on the very edge of total collapse. One of key causes driving the clam beds to extinction then, as now, was the European green crab (*Carcinus maenas*). Having arrived from Europe in two waves, most likely in the ballast of ship, their populations recently, perhaps due to climate change, have exploded in many of the areas critical to shellfish growers. Listed among the 100 world's worst alien invasive species (<http://www.issg.org/>) the newest waves of green crab invasions have been determined by Columbia University to pose potential "astronomical" losses to clam, mussel and oyster industries.

To begin to tackle this problem, this past December 16, the University of Maine in Orono with sponsorship from Sea Grant Maine, Maine DMR, Maine Coastal Program and USGS, held the Green Crab Summit, which I was fortunate enough to be able to attend. More than 600 people braved the winter storm to learn and share at what was easily one of the best organized conferences I have ever attended. Participants included shellfish growers, researchers, government representatives, legislators, policy makers and even a group of concerned elementary school students. The presentations began with summary of current crisis and risks and concluded with several brainstorming panels whose task was to propose solutions.

The reports from the field were staggering: for 2013 alone, losses of 40% in shellfish harvests and the loss of 303 jobs in harvesting and processing were determined to be directly attributable to green crab predation (Mach ME, Chan KM (2013)). *C. maenas* are voracious and, for oysters, they pose a particular threat in that they attack habitat, gorge on villagers, and can easily decimate entire beds of adults. One green crab can destroy the contents of a floating cage in a matter of days.

Sadly for now there seem to be few solutions other than vigilance. Many experiments to fence out the aggressive predator have failed and if you consider that in some areas it takes only 20 minutes to fill three traps with 100 pounds of green crabs, the population densities are reaching the point that without a concerted and coordinated effort by public and private organizations we risk witnessing the collapse of the east coast shellfish industry. One of the more popular solutions is eat them. In other words, you want to keep being able to eat delicious oysters, you better eat a heap of green crabs too; or maybe, to save our industry, would you like a side of green crabs with your oysters?

I am grateful that the summit brought together many from growers to policy makers and am hopeful that comparable summits could and should be held in each of the states where shellfish industries exist. Working together this problem can be overcome, and the future of our favorite bivalves can be more secure.

– N. Mulcahy

Save the date – Educational Event and MOG Refresher Course -- Saturday, May 31, 2014!

TOGA and VIMS will be hosting a Mid-year educational event and Master Oyster Gardener (MOG) Refresher Course on Saturday, May 31. The event will be held on the VIMS, Gloucester Point campus and all TOGA members are invited to register.

This is an opportunity for Master Oyster Gardeners and all TOGA members alike to stay committed to education and learn about the latest research applicable to oysters and Bay ecology. This year's program is 2-fold; a general session in the morning and a focused afternoon session. The morning session will cover presentations on general oyster topics (stay tuned!). The afternoon session is sponsored by the VIMS Center for Coastal Resources Management (CCRM) and is entitled: "Living Shorelines for Erosion Protection – Where do oysters fit in?". This workshop will examine how oysters are used in living shoreline projects for erosion protection along tidal shorelines. These applications include the use of loose oyster shell, bagged shell, oyster castles, and oyster reef structures. Presentations and facilitated discussions will include exploring how successful these various approaches have been, what ecosystem service contributions are made, and what outreach messages are appropriate for TOGA to share with the general public.

Registration will open April 1 and remain open until May 24. You may use the form on the next page to register. Registration forms and instructions will also be available on the Major Annual Events page at www.oystergardener.org.

We hope you can join us for this opportunity to learn! We ask that members pre-register for the event as lunch will be included. We are requesting a \$15 donation (for lunch and beverages) to TOGA for your attendance. Registration will begin at 9:30 am and the session will start at 10:00 am. If you have questions, please contact our VIMS Advisor Karen Hudson (khudson@vims.edu).

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REGISTRATION FORM

TOGA Mid-year educational event and Master Oyster Gardener (MOG) Refresher Course

Please complete form below and mail along with \$15.00 (payable to TOGA) to:
Tidewater Oyster Gardeners Association, PO Box 2463, Gloucester, VA 23061

*Please register by May 24, 2014

Name _____

Address _____

Telephone _____ email _____

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Please Share this TOGA Membership Form

You are invited to become a member of the Tidewater Oyster Gardeners Association, a group of people interested in growing oysters for fun, for delicious food, and to help restore the health of the Chesapeake Bay.

Members...

- Receive newsletters with the latest oyster gardening information
- Participate in educational events sponsored by TOGA
- Learn about innovations in oyster gardening techniques
- Benefit from the expertise of hundreds of others interested in growing oysters

Membership is \$10.00 for one year, individual or family. This ensures that you will receive regular newsletters and notice of upcoming events.

NOTE- In 2015, annual membership increases to \$15.

Fill out membership form below and send to **TOGA, PO Box 2463, Gloucester, VA 23061** with a check for \$10.00 membership dues, payable to TOGA.

TOGA Membership

Check New member or Renewal

Name _____

Address _____

City, State, and Zip _____

Phone _____

Email _____

Body of water where oysters will be grown _____