



*Growing oysters for a cleaner Bay.....[www.oystergardener.org](http://www.oystergardener.org)*

**SPRING**

**NEWSLETTER**

**2012**

## **SPRING OYSTER FAIRS- 2012**

The TOGA-sponsored Annual Spring Oyster Fairs will be held for the *Middle Peninsula on May 12*, and for the *Northern Neck on June 2*. Details are as follows:

**The Middle Peninsula Fair will be at Christchurch School**, 49 Seahorse Lane, Christchurch, VA 23031. The school is just east of Saluda off Route 33. The agenda includes:

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

8:30 to 9:30AM - Vendors of oyster gardening equipment, spat and supplies are invited to display their wares for sale. Spat availability, both diploid and triploid, is dependent upon winter mortality. 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 10:40AM- Educational program begins- Dr. Ryan Carnegie of VIMS will describe his extensive research and findings concerning the recent evolution of disease resistance in the Bay's natural (wild) oyster population. As a primer, you are invited to download and read his 2011 paper (Declining impact of an introduced pathogen: *Haplosporidium nelsoni* in the oyster *Crassostrea virginica* in Chesapeake Bay, Ryan B. Carnegie, Eugene M. Burreson). A link will be at [www.oystergardener.org](http://www.oystergardener.org) under the Spring Oyster Fairs announcement.

10:40 to 11:00AM - Better Safe than Sorry- Dr. Lynton Land (TOGA Board Member) will discuss the presence of bacteria in Bay waters. See the article "Bacterial Concentrations, Little Wicomico River, Northumberland Co., Virginia" below.

11:00AM - The meeting will be adjourned and a short break will be followed an optional viewing of the video "Who Killed *Crassostrea virginica*? The Fall & Rise of Chesapeake Bay Oysters", 59 minutes. Producer/Writer/Director: Michael W. Fincham. The video is related to Dr. Carnegie's talk.

**The Northern Neck Fair will be at St. Andrews Presbyterian Church** (435 East Church Street, Kilmarnock, VA 22482), the same place as the last few years. The Church is located on VA 200 at the north end of town on the west side of the road across from Bluff Point Road. Vendors will be available to sell oyster spat (both diploid and triploid) and equipment before and after the meeting, beginning at about 08:00AM. Spat availability is dependent upon winter mortality. Also a good time to question Master Oyster Gardeners about your gardening issues. The meeting itself will begin at 09:00AM. Coffee and Danish will be provided.

9:00 to 9:10AM - Remarks by the TOGA President and introduction of speakers.

9:10 to 10:10AM- Educational program begins- Dr. Ryan Carnegie of VIMS will describe his extensive research and findings concerning the recent evolution of disease resistance in the Bay's natural (wild) oyster population. As a primer, you are invited to download and read his 2011 paper (*Declining impact of an introduced pathogen: Haplosporidium nelsoni* in the oyster *Crassostrea virginica* in Chesapeake Bay, Ryan B. Carnegie, Eugene M. Burreson). A link will be at [www.oystergardener.org](http://www.oystergardener.org) under the

Spring Oyster Fairs announcement.

10:10 to 10:30AM - Better Safe than Sorry- Dr. Lynton Land (TOGA Board Member) will discuss the presence of bacteria in Bay waters. See the article "Bacterial Concentrations, Little Wicomico River, Northumberland Co., Virginia" below.

10:30AM - The meeting will be adjourned. MOGs will stay later to discuss "How to etc."

### **UPDATE ON THE TOGA FELLOWSHIP ENDOWMENT, AND JUST A THOUGHT**

It was only last May when we established this named endowment with the Virginia Institute of Marine Science (VIMS) Foundation. Thanks to over 85 donors, the endowment is currently funded at approximately \$40,800. Once we reach the \$50,000 minimum required, the income paid out will be used to provide support for one or more graduate students enrolled in the School of Marine Science of the College of William and Mary. The areas of research will include oysters and shellfish and, more broadly, the ecological restoration of the Chesapeake Bay, which ultimately impacts shellfish.

The TOGA Board wishes to express their gratitude to all who have supported this effort.

Just a thought: If most of TOGA's current members contributed \$25, this endowment would be fully funded, and start supporting graduate students this year. If you would like to donate on-line, please go to [www.vims.edu.toga\\_fellowship](http://www.vims.edu.toga_fellowship). To donate by mail, checks should be made out to "VIMS Foundation", noting "TOGA Endowment" in the memo section, and mailed to "Virginia Institute of Marine Science Foundation, c/o The College of William and Mary, P.O. Box 1693, Williamsburg, VA 23187-8779. All donations are tax deductible.

#### **A special thank you to the following donors of \$500 or more.**

Anonymous (2)

Mr. Julian F. Cox, Jr.

Community Foundation

Mr. Robert C. Eberle

Mr. Ken Hammond

Mr. Lynton Stuart Land

Mabel Davis Liles Charitable Fund

Mr. Dennis Matt

Shores and Ruark Seafood

Tidewater Oyster Gardeners Assoc.

Mr. and Mrs. David L. Turney

### **NOTES FROM THE 2012 ANNUAL GENERAL MEETING**

The TOGA Annual Meeting was held on January 7, 2012, on the VIMS Gloucester Point Campus, and attended by approximately 85 members and guests. The business portion consisted of a summary of our 2011 accomplishments, goals for 2012, the Treasurer's report, election of the 2012 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..... Dave Turney

Vice President.....Brian Wood

Secretary..... Charles Yarbrough

Treasurer..... Steve Wann  
At Large Members..... Lynton Land  
                                    Ken Hammond  
                                    Rick Griffin  
                                    Amry Cox  
Past President.....Vic Spain  
President Emeritus.....Jackie Partin  
VIMS Advisor.....Karen Hudson

We are grateful for all the time and effort from our retiring members, Kathy Hoffman and Mike Oesterling, and welcomed Charles Yarbrough and Karen Hudson.

Volunteers are so important to the success of TOGA, that the exceptional efforts of several people were acknowledged: Amry Cox (board member, event coordinator for a most successful Oyster Tasting Event); Julian Cox (event coordinator, former board member, author); Ken Hammond (board member, fundraising chair, prolific outreach supporter); Lynton Land (board member; event coordinator; chief scientist; G&L study restart, passionate advocate of harnessing agricultural practices that harm the Bay's ecology); Vic Spain (past president, webmaster, equipment builder extraordinaire, grant writer, event coordinator, whatever else you need done); Steve Wann (treasurer, annual float workshop); Brian Wood & Family (vice president, G&L study and restart, event coordinator, lift builder, caretaker of Big Bertha, admin). The first TOGA President's Award was given to Rolf Zierow, graduate of the 1998 MOG class, event coordinator for 13 years, educated thousands of students on environmental awareness and the benefits of the oyster, and given the "Pearl of the Chesapeake" award by the Mathews Maritime Museum.

The educational program consisted of two keynote speakers. Dr. Stan Allen is a VIMS professor and director of the Aquaculture Genetics & Breeding Technology Center, a leader in developing the disease-tolerant strains and grow-out techniques now being adopted by a growing number of Chesapeake Bay watermen. His presentation, titled "Oyster Aquaculture in the Bay", drew upon his international research of oyster aquaculture methods, successes, failures, and lessons learned, and described how the traditional means of harvesting the Chesapeake Bay's oysters is undergoing a sea-change, as the industry moves from wild harvest to aquaculture. The second presentation was given by Dr. Dan Kauffman of the Virginia Seafood Agricultural Research and Extension Center. Food science research and programs focus on safety and quality issues associated with seafood products. Last winter and spring, a sensory panel of eight people met eighteen times to train their palates and then taste oysters from seven regions of the Virginia Bay and Ocean. The work of the panel resulted in a brochure published by the Virginia Marine Products, characterizing the regional tastes. Dr. Kauffman reported on the work of the panel and publication of the brochure.

After the above, we all enjoyed light snacks and good conversation.

The charts from the meeting are available on our website. Please mark your calendar for the 2013 Annual Membership Meeting, which will be held on Saturday, January 12, 2013. Our VIMS liaison, Karen Hudson, is already working on some interesting topics and keynote speakers.

## JOIN THE FUN!

If you enjoy talking to people about oyster gardening, we need your help at TOGA outreach events. You don't need to be an expert, just someone who can help people interested in oyster gardening get started. We also need volunteers for light administrative duties at outreach events. Please email Mike Sanders at [sndrsmich@gmail.com](mailto:sndrsmich@gmail.com) if you are interested in any of the following volunteer opportunities:

**The Middle Peninsula Oyster Fair** will be held at Christchurch School near Saluda on May 12(see lead article above). Four volunteers are needed to man the registration desk, record new member applications, collect dues and sell tee shirts; as well as two volunteers to man an educational display with our trifolds and handouts.

**MOG Refresher:** See last article below. Four volunteer are needed to help with registration and administration.

**Rivafest** will be held in Old Town Tappahannock on June 16. This event is a major Northern Neck festival with a large draw. The event includes arts and crafts, food, talent show, car show, amusement rides, boat sales, crab races, lots of non-profit and awareness groups and live music. We need to staff the TOGA booth with four volunteers. Most of their duties will be educating the public on oyster gardening.

**Hampton Bay Days** is an annual festival held in downtown Hampton the second weekend of September. The festival includes a Bay Education and Children's Area featuring over 20 interactive booths. It is a great way to learn about environmentalism, conservationism and clean water. We need five oyster gardeners interested in sharing with the public how oysters benefit water quality and other marine life in the bay and its tributaries.

**TOGA'S Oyster Gardening Workshop** will be held at the Bethany United Methodist Church, next door to the Reedville Fisherman's Museum, around the second week of September. We need two volunteers to man the registration desk and record new member applications and dues paid and two volunteers to man an educational display with our trifolds and handouts.

**The TOGA sponsored Float Workshop** in September, at the Virginia Institute of Marine Sciences (VIMS) in Gloucester, is a great opportunity for people to learn about and begin oyster gardening, or expand their oyster garden. TOGA will assist members in learning more about oyster gardening and assist with building floats for their personal use. Skills and help needed:

- Materials Day - pick up ordered materials at vendors' locations (2 people)
- Prep Day - preparing float components, cutting PVC and wire (6 people with physical ability)
- Prep Day - preparing posters and story boards for build instructions (2 artistic people)
- Workshop - greeting guests and staffing reception/check-in table (2 people)
- Workshop - staffing information booth and answering questions (3 people)
- Workshop - staffing build centers for flip floats, Taylor floats, etc. (6 people with physical ability)
- Photography (one person)

**Boots, Bids and Barbeque** is a fund raiser for The Northern Neck Land Conservancy (NNLC). It's a fun event in September with good food. Two volunteers are needed to help setup and take down the TOGA tent and exhibits, as well as answer general questions from the public on oyster gardening. The Stratford Hall Trade Fair is held each September at the historical home of Virginia's Lee family. It's

a fun event with wine tastings provided by many of the local wineries and with artists and craftsmen displaying their work. This is a two-day event and two volunteers are needed each day to help setup and take down the TOGA tent and exhibits, as well as answer general questions from the public on oyster gardening.

The annual **Urbanna Oyster Festival** is a "pay-as-you-go" street festival with lots of food vendors, two parades, a shucking contest and other activities and exhibitors. The three-day Festival is held on a Thursday-Friday-Saturday time-span in November. A special area, on the waterfront, is set aside for educational exhibits on the history and ecology of oysters and the other natural resources of the Chesapeake Bay, stressing environmentalism, conservation and Bay restoration. Three volunteers are needed each day to help setup and take down the TOGA exhibits, as well as answer general questions on oyster gardening. Friday and Saturday are open to the public. If you enjoy working with kids, however, Thursday is for you. The whole day is reserved for school children, who briefly visit each exhibit in groups of about 15.

**The Chesapeake Bay Days** event is sponsored annually by the Mathews Maritime Foundation as a way of preserving the maritime heritage of Mathews County. This is typically a 6-7 hour day that takes place inside the middle school on the 2nd or 9th November. For several years, TOGA has been joining about 10 other organizations to teach 6th graders about environmental awareness. We have our usual aquariums demonstrating the filtering of oysters, and use some props geared to students. For 2011, we spent time with a total of 85 students, broken into groups of about 5, rotating about every 20 minutes. The adults put on a skit during the breaks, and lunch is provided. The small group size makes for a great Q&A session. Three volunteers to share in giving the presentation are needed. They can stay the whole time, or work approximately 4 hours each.

The annual TOGA sponsored **Oyster Tasting Event** will be held in Gloucester on Saturday, November 10. Tickets are sold in advance. Each attendee receives 24 raw oysters on the half shell - four oysters from each of six local oyster farms. The following volunteers are needed to make this popular event successful:

- Two Planning Committee members (June through November – two meetings, email updates)
- Two Marketing and Ticket Sales coordinators (email and calling, attending TOGA events to sell)
- Three Oyster Educators (Saturday, 10 November, noon to 4 PM)
- Ten Shuckers (two shifts, Saturday, 10 November, noon to 2 PM & 2 PM to 4 PM)
- Four General Helpers (Saturday, 10 November, to set up tables, chairs, signs, etc.)

### **BACTERIAL CONCENTRATIONS, LITTLE WICOMICO RIVER, NORTHUMBERLAND CO., VA**

The concentrations of fecal coliform bacteria are monitored throughout tidewater Virginia by the Shellfish Sanitation Division of the Virginia Department of Health in order to ensure that harvested shellfish are safe for human consumption. The source of the bacteria is uncertain. Natural sources from wildlife such as raccoons and birds, and anthropogenic sources from septic systems, pets, livestock and the land application of sewage sludge and poultry litter could all contribute.

A complete daily rainfall record from my pier beginning in 1999 was added to a spreadsheet of the bacterial concentration data for 23 stations sampled monthly from the Little Wicomico River, Northumberland County. Bacterial concentrations were summed for each of 117 sampling dates and the

list sorted according to decreasing total concentration of bacteria. Inspection of the data indicated that when elevated bacterial concentrations occur, they affect most of the stations sampled. This observation requires that the vector(s) of contamination must operate river-wide. The only reasonable variables to operate river-wide are runoff from rainfall and seasonal biological processes.

Several lines of evidence suggest that contamination from wildlife dominates anthropogenic contributions. Wildlife are very much more abundant than people or their pets in Northumberland County where 90% of the land is forested, farmed or wetland. It is always true, without exception, that fecal coliform concentrations increase, and salinity decreases, toward the headwaters of tidal creeks and rivers because of runoff and groundwater discharge. Rarely excepted, there are fewer houses toward the headwaters of the water bodies than near their mouths, largely because of shallow water depths and proximity to open water for view and recreation.

The sample with the most bacteria was taken on 10/29/03 when 2 inches of rain fell the previous day. Hurricane Isabel passed through the area on 09/17/03 and 6.7 inches of rain fell between the passage of Isabel and the sample date. It is likely that soils were relatively saturated after Isabel, so long-term runoff was favored over infiltration and fecal material probably remained moist. The sample with the fifth highest bacterial concentration was taken when no rain fell for a week prior to sampling, but in the previous week 9.2 inches of rain fell associated with hurricane Ernesto on 9/01/06. It is clear that heavy rainfall events as much as several weeks prior to sampling can be responsible for bacterial contamination. Anomalously strong storms may also play a role and spring infestations with Horned Pondweed also correlate with elevated bacterial levels. But high rainfall events do not always cause high levels of bacterial contamination and high levels of bacterial contamination are not always associated with recent rainfall, so some puzzles remain. *Lynton Land*

### **TOGA's GROWTH AND LONGEVITY STUDY**

TOGA is now running two Growth and Longevity studies. The first one involves four different strains of *Crassostrea virginica* oysters that VIMS bred and donated to our study. These special bred oysters are the latest strains developed for commercial aquaculture use. Two strains are Triploid (sterile) oysters, DEBYs (high salinity) and LAs (low salinity) and two strains are Diploid (fertile) oysters, DEBYs (high salinity) and LAs (low salinity). There are currently 41 Volunteers for this program, growing, maintaining and collecting data for growth and mortality of these oysters.

In the second study we call the "T&T Study", Triploid versus Triploid, involves 10 Volunteers growing 2 different strains (DEBYs and LAs) of Triploid *Crassostrea virginica*. These special strain oysters were also developed and donated by VIMS. As the original G&L study the volunteers of the "T&T" will be maintaining and collecting data for growth and mortality of these oysters.

With both programs TOGA has 51 G&L study volunteers from as far South as Hampton Roads to as far North as Patuxent River Maryland. Rivers and bays where oysters are placed include, Chesapeake Bay, Mobjack Bay, York, Rappahannock, Great Wicomico, Little Wicomico, Potomac and Patuxent Rivers and their tributaries.

The oysters for this study started their deployment in August 2011. We received our first reports in November 2011 and are in the process of receiving March 2012 data, with some of the early reports showing some remarkable growth and very little mortality. Soon we will be able to share the data, trends and stories in our Summer Newsletter. This study should prove to have some entertaining data!

We at TOGA believe that this Growth and Longevity Study will prove to be an extremely valuable tool for Oyster Gardeners. We imagine for the first time that we will know the best available oyster seed (DEBY or LA) to select to achieve the least mortality and fastest growth for your region of the Tidewater. But there exist other strains of oysters, like XB and “wilds” so we may need to start another study in a year or so. *Brian wood and Lynton Land*

### **A LITTLE HISTORY- THE OYSTER DREDGE**

According to Dr. Henry Miller, Director of Research at St. Mary's College, MD, the dredge was first used in Virginia waters in the early 1800s, but not by Virginia waterman. New Englanders had the dredge which helped them deplete a large portion of their own oyster beds, so they showed up in the Chesapeake Bay. Virginia, whose watermen did not then have the dredge, banned the dredge in 1811. A wise conservation move or protection of livelihood? Whatever the reason, the ban lasted only until the end of the Civil War when the oyster economy started expanding rapidly. By 1868, the completed Trans-Continental Railroad meant San Francisco folks could get fresh Virginia oysters (alive, alive, oh!) So the use of the dredge and a growing market led to destruction of natural oyster reefs, encouraged over-harvesting and resulted in damage to and the loss of shell from the Bay and river bottoms. Read more at <http://www.stmaryscity.org/Archaeology/Oyster%20in%20Chesapeake%20History.html>. *Vic Spain*

### **WHAT HAVE YOU BEEN READING?**

**A few titles from the bookshelf of Amry Cox**

Consider the Oyster by MFK Fisher  
A Geography of Oysters by Rowan Jacobsen  
The Big Oyster by Mark Kurlansky  
Sex, Death & Oysters by Robb Walsh  
The Oyster by William K. Brooks  
The Oyster Wars of Chesapeake Bay by John R. Wennersten  
*Added by Vic-* The Living Shore: Rediscovering a Lost World by Rowan Jacobsen

*If you would like to send us your recommendations and comments about these or other books of interest to TOGA folks, please email [vicspain@rocketmail.com](mailto:vicspain@rocketmail.com). We'll create a "Readers Page" at [www.oystergardener.org](http://www.oystergardener.org).*

***Please visit [www.oystergardener.org](http://www.oystergardener.org) for the latest on oyster gardening.***



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.

**TOGA MASTER OYSTER GARDENERS REFRESHER COURSE**

**Tuesday, June 12, 2012, 9:30 am - 3:30 pm**

**Virginia Institute of Marine Science, Gloucester Point, VA**

TOGA and VIMS traditionally conduct a Master Oyster Gardeners Course in June on the odd years, and a refresher course on the even years. This year the Master Oyster Gardener (MOG) Refresher Course will be on Tuesday, June 12, 2012. The event will be held at VIMS, Gloucester Point. If you are not a graduate MOG, but are interested in becoming an MOG in the future, you may audit the course if you are a TOGA member. MOGs are asked to be active volunteers in supporting TOGA and other oyster gardeners.

This event is designed to complement MOG training with the latest research and techniques applicable to oysters and Bay ecology. This is an opportunity for Master Oyster Gardeners and TOGA members alike to stay committed to education. Presentations this year will center on the latest information regarding shellfish public health topics including harmful algal blooms and vibrio bacteria. Please stay tuned on TOGA's website for more detailed agenda information. We hope you can join us for this opportunity to learn! **We ask that everyone planning to attend pre-register by May 15** for the event as lunch will be included. We are requesting a \$10 fee for lunch and incidentals. Registration will begin at 9:30 am and the session will start at 10 am. If you have questions please contact Karen Hudson (VIMS, khudson@vims.edu, 804 684-7742) or Julian Cox (TOGA, jfcoxjr@verizon.net, 757 868-9362.

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**REGISTRATION FORM**

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

Please complete form by May 15 and mail along with \$10.00 (payable to TOGA) to:  
Tidewater Oyster Gardeners Association, PO Box 2463, Gloucester, VA 23061

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_ email \_\_\_\_\_

MOG Graduate \_\_\_\_\_ Yes, Class of \_\_\_\_\_ No \_\_\_\_\_



**TOGA**  
Tidewater Oyster Gardeners Association  
**PO Box 2463**  
**Gloucester, VA 23061**

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