



## MUSINGS FROM THE MAIN MOLLUSK

Change is a characteristic of any organization that grows, and SMOCS is experiencing the kind of rapid expansion that requires us to evolve.

While our growth in membership has been significant (from 6 charter members in 2007 to more than 210 members today), the main driving force compelling change is the increase in the number of oysters and spat that we are planting each year.

In 2008, we were excited to plant 8,000 oysters. In 2011, we planted 2.3 million oysters and spat. This year we planted 4.4

million and hope to plant that many again in 2013.

This increase in our program is shifting the focus of our Board members. When SMOCS began, we concentrated on recruiting new members and oyster gardeners to raise spat at their docks.

As the number of gardeners grew and we began to plant significantly more oysters, Board members started to shift more attention to managing operations. In addition, now that we have achieved a significant density of oysters (180 per square yard) on two sites, we believe that

it is time for us to start measuring the size and health of our reefs.

I would like to share with you some insights about the changes occurring in our program:

### *Program Building on MGO Spat by Buying More Spat*

While the more than 400,000 MGO spat that SMOCS obtains each year continues to be the core of our program, we now realize that we can greatly accelerate the timeframe for restoring reefs by also buying and planting spat on shell.

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### Don't Miss These Great Events:

**Through Oct 19:** Hidden Midden, a community eco-art project at Annmarie Sculpture Garden. Guest Artist Kaitlin Pomerantz is constructing a midden that demonstrates the layers communities left behind along the Patuxent River.

**November 2, 7pm:** "An Abundant and Fruitful Land: An Overview of Human Use of the Chesapeake through History" by Dr. Henry Miller, at the College of Southern Maryland, Prince Frederick Campus, Flagship Building. Dr. Miller's lecture evaluates human use and impact upon the Chesapeake.

## SMOCS Initiates Scientific Evaluation of its Reefs

The goal of SMOCS over the past five years has been to build or rebuild oyster reefs. To that end, we have planted almost eight million oysters on nine sites.

As a result of two scuba surveys in which many live oysters in varying sizes were observed, we

know that that our oysters are surviving and that the reefs are growing. Given these preliminary results, we now believe that we need credible scientific data to demonstrate our success.

There are several compelling reasons to sup-

port such a systematic evaluation process. First, we owe our members who have provided funds, boats, back-breaking labor and encouragement an accounting as to the success of their contributions.

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**SMOCS Board Members:**

Len Zuza,  
President

Matt Regan  
Vice President

Karen Zuza,  
Secretary

Dom Raino,  
Treasurer

Jon Farrington

Sue Hu

Robert Willey

**Special Advisors:**

Penny Moran

Dave Moyer

**MUSINGS**

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In 2011, we bought 1.5 million spat. This year we bought nearly 4 million. While the mortality of these young oysters is higher than that of year-old oysters, we believe that we end up with more live oysters in the long run.

Most importantly, we don't need as many volunteers to implement that aspect of the program because the supplier delivers and plants all the spat. All told, the net result is more oyster habitat, more oysters, and little additional board member or volunteer time.

*Managing and Monitoring SMOCS Reefs*

As I attended the oyster "tutorials" provided at the Oyster Advisory Commission over the past five years, I learned many of the best practices scientists identified for restoring oysters. However, I did not learn the methods that they used for reaching their recommendations.

When the SMOCS Board saw the need to manage and monitor our sites more scientifically, we realized that we

needed the guidance of expert marine scientists to evaluate what effects our restored reefs are having. We contacted two scientists to guide our program monitoring efforts.

However, this effort will require both Board members and volunteers to shift some of our focus to new activities. (See "SMOCS Initiates Scientific Evaluation of its Reefs" by Sue Hu for more detail on our scientific monitoring.)

*Need for Volunteers Increases*

The net result of our board members' concentrating more on planning operations and collaborating with scientists is that we need to rely more and more on volunteers for help in conducting operations and monitoring.

We started this process by enlisting Reef Captains who were very active this year in both planting the MGO oysters that we received last year and distributing the MGO spat that we received this year. (See "2012: A Very Good Year" by Matt Regan for the names of Reef Captains.)

In addition, volunteers from the Oyster Bay Condominium, Asbury, and the Calvert Rescue Dive Team conducted scuba surveys of two sites. We plan to accelerate these efforts in 2013 and will need more volunteers to help us.

The net result of all the above developments is that SMOCS has a solid base on which to continue building our program in 2013, but we will need your continued support more than ever in the form of renewed membership, cooperation with SMOCS Reef Captains and increased commitment to volunteer when the calls go out for help.

Please be as generous as you can in submitting your renewal fees. We were fortunate in receiving corporate grants last year, but are not confident that they will be repeated. The size of our 2013 SMOCS program will rely principally on your generosity as well as your time and effort.

Len Zuza,  
The Main Mollusk

To volunteer for any of our activities contact Matt Regan.

Email:  
mattregan@  
starpower.net

Phone:  
301-461-0100



## 2012: A Very Good Year

SMOCS had another successful year thanks to the dedication and generosity of our members and supporters.

In 2012, we deposited over 400,000 year-old oysters on seven sites in the lower Patuxent. Members raised these oysters, which were provided by the Marylanders Grow Oysters (MGO) program, at their docks using SMOCS BOCSes and/or MGO cages.

The Board would like to recognize the outstanding contributions of all of the reef captains this year. They recruit and organize volunteers to distribute spat and collect yearlings from almost sixty oyster gardeners. They help clean and maintain equipment, mark reefs, conduct reef surveys and do countless things throughout the year to implement SMOCS' program.

SMOCS could not succeed without their hard work. Thanks to Dick and Sue Hu, John Kelly, Chris Moody, Andy Roscoe, Rick Sass, Al, Janet and Peter Sensenbaugh, Robert Willey and Joe Jenkins,

Bill Wright, Dave Zonderman, and Len Zuzza. And thanks also to the many volunteers who helped them throughout the year.

In addition to the year-old MGO oysters, SMOCS also deposited some four million juvenile spat-on-shell to four sites! Funding for this came from members' dues and generous contributions as well as two grants.

This was the second year we have been able to supplement our plantings of year-old oysters by purchasing significant amounts of spat-on-shell. By doing so, we hope to accelerate reaching target populations for the reefs much sooner than we originally thought possible.

In June, volunteer divers surveyed two reefs to determine how the oysters that we had planted there were doing. Both surveys revealed dense, healthy populations. Of particular interest, both reefs had oysters of varying sizes, including oysters greater than three inches. Moreover, divers

noted that the water near the reef was clearer than in the rest of the creek.

SMOCS will continue to survey and monitor the reefs to determine how well our efforts are succeeding. You may want to log on to [www.SMOCS.org](http://www.SMOCS.org) to see aerial photos of the reefs in Solomon's creeks taken by Chris Moody.

SMOCS experienced one setback in 2012: we had to close our reef in St. Leonard's Creek. Due to its proximity to a commercial marina, DNR notified SMOCS that we could no longer deposit oysters at that location. As of this time, we have not been able to gain DNR approval for an alternate site in St. Leonard's' Creek and, regrettably, have suspended further operations until such approval is granted.

Overall, 2012 was a tremendous success for SMOCS. Due to the continuing generosity and hard work of our members, volunteers, and local supporters, we were able to add significant numbers of native

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Collecting BOCSes in St. Johns Creek



Assembling BOCs for planting

## 2012: A Very Good Year

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oysters to our reefs.

Some 400,000 MGO spat that will be planted in 2013 have already been distributed and are grow-

ing in BOCs and cages at piers on both sides of the Patuxent.

Many thanks to all of you who have pitched in to make this year a

success. See you in 2013!

*Matt Regan,  
SMOCS Vice President and  
Chair, Operations Committee*

## Scientific Evaluation

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Second, SMOCS has received several grants that have allowed us to accelerate our planting schedule. Credible scientific data will support new grant applications and also assist us in guiding planting operations in 2013.

Our data collection will focus on two areas. First, we will conduct scuba surveys on key

sites in the spring of 2013 to determine the density, size and survival of the oysters on our reefs.

Second, we will take representative samples of oysters from each reef to determine the presence and intensity of disease.

SMOCS has obtained the support of Dr. Ken Paynter, the chief oyster scientist at the University of Maryland, and his assistant, Adriane Michaelis to guide our data collection and develop an overall evaluation plan. The core of this phase of our research will be to conduct more systematic scuba surveys to determine density, size, and live/dead count of oysters on our reefs.

The second phase, disease testing, is best done in the fall and is already underway. Samples from five sites have been collected and

are currently being tested at the Smithsonian Environmental Research Center in Edgewater, Maryland under the direction of Dr. Denise Breitburg and her head technician, Rebecca Burrell.

The results of these tests are expected in November. We anticipate repeating this testing again next year.

SMOCS will be recruiting and training volunteers to assist in counting and recording the number of live and dead oysters and the sizes of the live oysters in each sample. Dr. Paynter's Lab will assist us in summarizing and utilizing our data for most effective planning.

Stay tuned for opportunities in which YOU can help in this exciting evaluation process!

*Sue Hu,  
SMOCS Board Member*



Scuba diver preparing to pass oysters to Len Zuza.



## SMOCS Money Matters

The financial needs of SMOCS have become more complex as our program has grown in size and scope. With SMOCS's shift of focus, accounting, fundraising and budgeting all require more attention. (See "Musings from the Main Mollusk" by Len Zuza for more.) We are actively addressing these needs.

The goal to plant more oysters and do it efficiently complements the SMOCS core program of members raising oysters at their docks, but that increases the importance of contributions from our members.

Your membership dues and generous dollar contributions have given SMOCS the financial

stability and means to continue to grow our program. These contributions and your many hours of volunteer work will remain essential for future success of the SMOCS program.

We will pursue large corporate grants and donations again this year, but know that many donors do not repeat from year to year.

Purchasing spat on shell again is contingent upon receiving the necessary funding. So is our goal of ensuring quality outcomes by establishing scientific monitoring and evaluation of our reefs.

SMOCS has established a fundraising goal to have the cash available by the end of next year to fund

the next summer's spat purchases and monitoring activities. We can plan better if our fundraising success is known in January when planning begins for operations in the summer and fall.

As SMOCS Treasurer, I believe a small volunteer advisory group meeting occasionally to support our accounting and budgeting activities would be useful to the Board and those involved in planning.

If anyone has any ideas or would be interested in being part of such a group, please let me know via email. My email address is [dbraino@comcast.net](mailto:dbraino@comcast.net).

*Dom Raino,  
SMOCS Treasurer*

### You Can Make a Difference!

*Adopt one spat  
(and 3,499 more)  
with your \$35  
membership fee.*

*Every penny buys  
a spat!*

*Donate even more  
and help us  
restore local reefs.*

**MAKE IT EASY:**  
*Join or donate online at  
[www.smoocs.org](http://www.smoocs.org).*

## Collaboration Strengthens SMOCS Program

Although the SMOCS program is realizing significant growth using our own resources, our efforts to restore oysters in local waters are being reinforced by collaboration with other organizations engaged in oyster restoration.

Because we had prepared

more bottoms for oysters than we were able to use two years ago, we welcomed the oysters that members of the Coastal Conservation Association and the Chesapeake Bay Foundation had raised at their docks for planting on our reefs.

Last year, sites that SMOCS prepared with shell substrate received some 132,000 oysters from CCA and 121,000 oysters from CBF. We anticipate and will deeply appreciate similar collaboration this year.

*Len Zuza,  
President of SMOCS*



*We grow good oysters!*



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*Cleaning local waters...one oyster at a time.*

**Are you a SMOCS  
supporter?  
Renew your  
membership  
today!**

## How Oysters Help Clean the Water

The management of nutrient runoff is an important factor in reducing the polluting nutrients from entering the Chesapeake Bay.

Excess nitrogen and phosphorus cause algae blooms and the decay of dead algae absorbs oxygen out of the water,

thus creating dead zones.

How does this relate

to oysters helping to clean the water?

Oysters derive their nutrition by filtering algae out of the water. The nutrition they get from these organisms enables oysters to build muscle and shell. They then excrete the remains of the digested algae as feces.

Other organisms and material are also filtered; however, they are not digested but coated in mucus and excreted.

These oyster excretions provide a nutritional basis for worms, mud crabs, and sub-aquatic

vegetation.

Other organisms thrive and convert some nitrogen to its gaseous form that escapes into the atmosphere. These bottom dwelling organisms also support fish populations.

If you are a fisherman, you will have noticed that the fishing is usually better over an oyster bed. So oysters help restore water quality in many ways.

*Robert Willey,  
SMOCS Chair, Program  
Evaluation Committee*



*A thriving reef in St. Johns Creek.*