

Dolphin Talk

July 2011



Word of the Day

dol·drums [dohl-druh-mz, dol-, dawl-] noun (used with a plural verb)

1. a state of inactivity or stagnation
2. the doldrums,
 - a. a belt of calms and light baffling winds north of the equator between the northern and southern trade winds in the Atlantic and Pacific oceans.
 - b. the weather prevailing in this area.
3. a dull, listless, depressed mood; low spirits.

Source: <http://dictionary.reference.com/browse/doldrums>

Dear TMEA Friends,

TMEA is at a pivotal point. The course we choose to set will determine our fate as a group. One course leads to the doldrums and our demise as an organized group. The other leads to fresh winds in our sails and a revitalized TMEA exploring new shores.

We have a long, illustrious history of "making known the world of water" to professional educators in Texas. Our group was founded by a dedicated core of marine educators in the late 1970's and has continued to fulfill its objective through the ensuing decades. In recent years, many of our key members have retired from the teaching profession, yet continued to be active in TMEA. They now feel it is time to also reduce their responsibility in TMEA's activities and pass the TMEA torch to the next generation.

Circumstances such as reductions in the number of aquatics and marine science classes being taught in public schools, and budget cuts for educator professional development, have caused TMEA membership to drop in the last few years. The average age of our membership has increased. If TMEA is to continue being the dynamic force we all know it can be, we must develop strategies to reverse these trends. This will be a challenging course to navigate.

Which course will we choose?

Will we ALL work together to navigate the currents of change by committing the time and doing the work to fulfill the vision of a dynamic TMEA "making known the world of water?"

Or will we drift listlessly down current to TMEA's demise?

I personally choose to set a course for a revitalized TMEA. I am tossing my name into the hat for TMEA President for the Nov 2011 to Oct 2012 year. But navigating these currents of change requires a full, active crew. I need to hear from each of you which course you choose: navigating change or drifting to the doldrums. If you choose change, what ideas do you have for helping us find fresh wind for our sails? What role(s) are you willing to fill on the TMEA crew? Your responses, or lack thereof, will determine TMEA's fate. I look forward to hearing who will join me in the journey.

Fair wind to each of your sails,

Shelley Du Puy

Shelley.DuPuy@noaa.gov

Office: (409) 621-5151 ext 106 Cell: (409) 370-9525

TMEA roles for 2011-12 (open to additional suggestions):

Executive Committee for 2011-12:

President - Shelley Du Puy has accepted her nomination

President Elect (would then be President for 2012-13) - **NO NOMINATION to date**

Past President - Cindy Ross

Treasurer - Kelly Drinnen has accepted her nomination

Secretary -(takes minutes at meetings; handles registration for two workshops/year, etc.)

NO NOMINATION to date

TMEA representative to NMEA - Marolyn Smith currently serving a term that will carry through 2011-12

AdHoc:

- Newsletter Editor - publish *Dolphin Talk* quarterly: establish submission deadlines and publication dates, gather and edit content, complete the layout, produce hard copies and/or export in the appropriate electronic format (note: Nathan Veatch has volunteered to see that it is printed and mailed if others will assume responsibility for the editing, content development, layout, etc.)
- Contributing authors - write articles for the *Dolphin Talk* and possibly for a monthly electronic "Marine Moment" (or whatever name the team chooses) with a photo and a short paragraph or two that can be easily read in 5 or 10 minutes
- Scholarship Committee Chair and members - coordinate selection of teacher and student scholarship recipients (establish dates for scholarship applications, advertise the opportunity widely, facilitate group selection of recipients, notify recipients, arrange presentations by recipients at a TMEA meeting after their workshop/camp/etc when possible....)
- Membership Chair and Committee members - develop and implement strategies for gaining and retaining new members
- Membership Administrator - maintain current and archived membership list and contact info
- Membership Needs Assessment Coordinator - work with Exec Committee to conduct a needs assessment of TMEA members to determine how we can better serve our members
- Workshop Chair and Committee Members - organize TMEA's two workshops (Spring and Fall) each year
- TMEA at CAST chair and committee members - coordinate TMEA participation in CAST, including booth and strand
- Technology committee chair and members - develop and implement strategy for using technology (e.g. social media, webinars, podcasts, U-tube videos. etc) to advance TMEA's mission; keep web page updated. Trish Lowe has volunteered to be on this committee.

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Imagine yourself in this photo and join us at our next workshop!
photo by Frank Budny

TMEA Fall Workshop
Experiencing Water Through Art and Science
September 17-18, 2011, Galveston, Texas

Join us for a weekend of adventure on the water and in the classroom. On Saturday, we'll explore the back bay waters around Galveston Island State Park in kayaks and learn to express our experience through art. Back in the classroom, we'll engage in additional science and art activities that will help us better know the wonderful world of water. On Sunday, we will learn about fish adaptations using the art of fish printing.

Our guides and instructors for the first day will be the experienced professional staff of Artist Boat, a non-profit organization dedicated to promoting awareness and preservation of coastal margins and the marine environment through the disciplines of science and the arts. Julie Massey, Texas AgriLife Marine Extension Agent, will lead the fish adaptations activities on Sunday.

September 17 - 18, 2011

Sat 9 am - 5 pm with a 2-hour break

Sun 9 am - noon, including a short business meeting

Galveston, Texas

Cost: \$40 for members; \$50 for non-members - includes lunch on Saturday

Lodging: on your own

Registration limited to 25 participants

For more information, contact Shelley.DuPuy@noaa.gov or 409-370-9525

Registration form on page 7!



TMEA Make and Take Workshop UTMSI-March 26, 2011 photos by Nathan Veatch

TMEA presented a “how to” workshop and constructed half-moon aquariums, ghost shrimp slurp guns, sieves, plankton nets and push nets at the UTMSI Wet Lab on March 26th. Thirteen members attended and obtained aquatic science collecting equipment that are not easily obtained commercially.

Members of the Galveston Bay Area Chapter-Texas Master Naturalists and TMEA members helped prepare the workshop materials. Much of the collecting gear has been finely tuned by these volunteers as they worked with the public and schools at Galveston Island State Park while conducting interpretive tours of the beach and bay-shore.

Half-moon aquariums are great for displaying the catch from a minnow seine. The aquariums are constructed from eight inch PVC pipe cut in two inch slices and six inch by nine inch pieces of Plexiglas cemented together with PVC glue. Aquarium sealer was used to seal any leaks. Rick Tinnin shared how to make the half-moon at one of his teacher workshops back in the 1980’s. Nathan Veatch shared this information with the Master Naturalists in 2003 and Mel Measeles has been constructing them and supplying Galveston Island State Park and other Nature Centers ever since. TMEA gives special thanks to Ellen Gerloff for cutting the ropes for the half-moons and sieves, and Tommy and the shop gang for their help with cutting the PVC pipe into two inch sections.



Sieves - These 1-foot square wood frames are used to collect clams, crabs and worms from the sand at the edge of the surf. They are most often constructed with a layer of fiberglass window screen attached to the wood and supported by ¼ inch hardware cloth. The elementary teachers suggested not permanently attaching the window screen to the wood but to just lay it in the sieve when small objects are being separated. Then the larger mesh can be used to separate out larger objects such as separating fossils from sand. Sieves: (Left) Karla Cisneros put together pre-cut 1 x 4 cedar boards to make 12 inch squares and stapled the fiberglass window screen and ¼ - inch hardware cloth with galvanized staples.

Master Naturalist Bill Ashby has researched and modified the ghost shrimp suction pump and named it “Super Slurpers!” The device is made of ¾ inch and 2 inch PVC pipe and the secret ingredient is a rubber gasket that can be



compressed to fit snugly inside the 2-inch pipe. When used quickly, the ghost shrimp can be extracted from its 12 to 18 inch burrow.



TMEA members Cheryl and Len Gilpin also shared their expertise with us. Cheryl demonstrated how to make plankton nets (next page) from knee high hose, embroidery hoops and baby bottles and Len (left) provided us with the materials to make “Discovery Scope” viewing wells.



Blake Pankonien displays his finished plankton net.

After we completed constructing the collecting tools we toured the Wetland Education Center with Rick Tinnin and tried out some of the devices we had made.

John Williams (right) coached us in constructing push nets from 1 inch PVC pipe. It was fascinating to use the ratchet PVC cutter to be able to cut the pipes to length. John cut four 21-inch sections of 1 inch PVC to make the frame for the bag and a 5 foot handle. He ordered mesh from a supply company but finished up using mesh gym bags that worked quite well.



We enjoyed a seafood dinner at Moby Dick's in Port Aransas and finished the evening with a bonfire on the beach to ward off the chilly breeze.

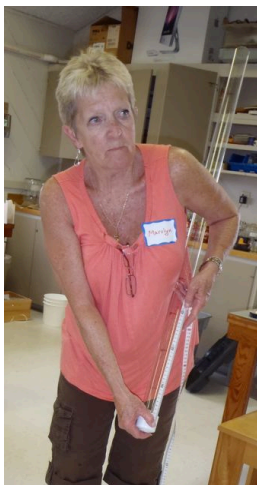
On Sunday morning we were back on the beach to experiment with our new tools and we enjoyed collecting organisms from the massive amount of Sargassum that had washed up on the tide. We even were able to observe bristle worms that had hitched a ride on driftwood encrusted with gooseneck barnacles.

The workshop was interesting and informative and the tools constructed will help reveal many new creatures on a fieldtrip to beach or stream. It was also a lot of fun to visit with old friends and make new ones. This has always been TMEA's forte.

Here are construction details if you wish to make some of this equipment:

Half-moon aquariums - Ask glass companies for "scrap" Plexiglas. Any piece that you can cut 6" x 9" pieces out of will do if it is not too thin. Professional tip: use a \$16 plywood saw blade instead of the very expensive Plexiglas blades.

"Super Slurpers" - Bill Ashby made a few modifications to get better use of the materials without waste. He also replaced all washers and nuts with stainless steel because we were using them in salt water. Our Super Slurpers are shorter than the plans call for at this link: <http://www.limestonemedia.com/fishing/how-to-make-ghost-shrimp-pump.html>



Marolyn Smith showed us how to measure the clarity of the water by making Turbidity Tubes out of fluorescent bulb shipping Tube Guards. The Tube Guards were marked in 1 cm and 10 cm units to one meter with permanent marker. Eight foot tube guards, which would make two turbidity tubes, may be purchased at Lowe's for ~ \$6.00. You also need a 1¼ inch PVC Cap marked with a black marker on the inside to show a black and white pattern. Take a cup of water to be tested and pour into the tube, looking occasionally until you cannot see the bottom pattern. Record the depth of the water from the scale on the tube. This indicates the turbidity of the water.

Contact Nathan Veatch @nveatch@swbell.net with any questions about making this equipment.

Lionfish Invasion!

article and photos by Bill Crowley

Archer City ISD teacher Bill Crowley recently traveled to Grand Bahamas Island in May to gather information and research concerning the lionfish invasion in order to better explain ecological issues to his classes.

“I teach Environmental Systems, and my goal was to help provide some of the newest, cutting-edge data in order to emphasize real issues for my students,” Crowley said.

Lionfish were introduced to the Atlantic through human actions, though the exact mechanism is still being debated. The first sightings of lionfish in the Atlantic were about 1999, yet the lionfish have expanded across the region amazingly fast. They have no known predators in the Atlantic, and they eat virtually any organism they can fit into their mouths. Already, lionfish have decimated reef fish populations in scores of sites throughout the Caribbean and Florida, and there is no practical solution in sight. Scuba divers and people who fish the area are encouraged to eliminate any lionfish they find, though those efforts are stop-gap, at best. The fish simply occur too deep and over too large an area for such small-scale tactics to be effective. It’s a recipe for disaster, ecologically.



“I went to Grand Bahamas Island because I heard of a Bahamian dive charter operator named Fred Riger who has a quite different take on the situation,” Crowley said. “He has noticed that the reef structures in his area were actually improving in health since the lionfish arrived. That’s counter to virtually all the thinking within the diving and marine research world.”



Crowley said Riger hypothesizes that lionfish are, indeed, reducing reef fish numbers, but that is allowing other depressed species such as crustaceans and urchins to rebound. This increase in their numbers translates into a decrease in harmful algae species that have for years been harming the coral reefs. Crowley said the ramifications of this novel idea could have huge impacts. “We have to ask what factors make the lionfish successful. Is it because humans have overfished the normal predators that normally keep reef fish numbers in check? If Riger is right, it means that lionfish aren’t so much the problem, but just a symptom of a much bigger crisis concerning the oceans.”

Crowley said he would also be sharing some of what he has found with other educators in November when he represents the Texas Marine Educators Association at the Conference for the Advancement of Science Teaching (CAST) in Dallas. Look for these titles when you receive your CAST Program: *Challenges in the Seas: Crises facing the health of the oceans*, *Chronicles of the Gulf: The Lion, the Beach, and the Microbe*, and *Scuba Science: Using Scuba to teach physical science concepts*.

TMEA WORKSHOP REGISTRATION
“Experiencing Water Through Art and Science”
September 17-18, 2011 in Galveston, Texas

Name:

Title/Affiliation:

Grade level(s)/Subject(s):

Home Address:

Cell Phone:

Home Phone:

*E-mail Address:

*Required for workshop confirmation. Personal email preferred, districts may block emails.

Which newsletter delivery do you prefer?

_____ email notification/web-based OR _____ US mail

September 17 - 18, 2011 in Galveston, Texas

Sat 9 am - 5 pm with a 2 hour break

Sun 9 am - noon, including a short business meeting

Registration and Money Deadline: Saturday, September 10, 2011 Enrollment limited to 25!!!

You are not registered until your check is received!!

Registration Fee: Cost: \$40 for *TMEA members; \$50 for non-members - includes lunch on Saturday

Lodging: on your own

Registration limited to 25 participants

*(Membership is current)

For more information, contact Shelley.DuPuy@noaa.gov or 409-370-9525

Make registration check payable to: Texas Marine Education Association (TMEA)

Mail registration form and check by Sept. 10 to:

Jill Veatch, TMEA Secretary,

15135 McConn St.

Webster, TX 77598-1817

jill15@swbell.net

National Marine Educators Association- TMEA is an affiliate of NMEA. Visit our website <http://statweb.org/TMEA/> and take links to: The National Marine Educators Association (NMEA) <http://www.marine-ed.org/> and to The Bridge <http://www.vims.edu/bridge/>, **Ocean Sciences Education Teacher Resource Center for the latest in lesson plans, activities and links to neat stuff.** Many TMEA members will attend **the next NMEA conference that will be held in Anchorage, Alaska on June 24-28, 2012. Take this link to start making your plans!** <http://www.nmeaweb.org/>

Dolphin Talk, TMEA NEWSLETTER
Luz Tellez, TMEA Treasurer
607 Beckman
Alice, TX 78332

Membership Form TMEA and/or NMEA

Name _____

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Personal e-mail _____

Which newsletter delivery do you prefer? e-mail notification/web-based **OR** US mail copy
Please choose one!

Your TMEA membership includes a quarterly newsletter, *Dolphin Talk*, meetings throughout the year, including an annual meeting at C.A.S.T., plus opportunities for tours, field trips, and workshops.

Your NMEA membership includes a subscription to *Current, The Journal of Marine Education*, a quarterly newsletter, and a national conference.

Joint TMEA (\$10) / NMEA (\$45)

TMEA (\$10)

NMEA (\$50 w/o TMEA)

New TMEA Member



STAT--\$25- <http://www.statweb.org/> and click on Join. TMEA is an affiliate of Science Teachers Association of Texas. Make check out to TMEA for TMEA membership only. A separate check made out to NMEA will be forwarded if national membership is desired. Mail with this form to: **Luz Tellez, TMEA Treasurer, 607 Beckman, Alice, TX 78332**