

# The Dolphin Gazette

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From the Dolphin Communication Project,  
Mystic Aquarium & Institute for Exploration  
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[www.dolphincommunicationproject.org](http://www.dolphincommunicationproject.org) and [www.mysticaquarium.org](http://www.mysticaquarium.org)

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## A Note from Kathleen:

Wow! It's already in 2006! At DCP, we are already planning for our summer field seasons in four locations (updates in the spring issue to follow). And, there are a few changes - although with each newsletter lately it seems we have changes to announce. The biggest news is that DCP is moving to a new physical site: DCP's office and data processing lab will no longer be located at the aquarium facility but at Pine Point School in Stonington. Don't panic as this is not a far trek - we are only 2 miles from the aquarium. The reason behind our move is to facilitate the development of an educational collaborative with the students (~279 strong) and teachers at Pine Point. In February, we will commence with our new Dolphin Research Trainee (aka DRT) program with a dozen students. The selected kids will learn how to analyze our video data and work closely with Kristy, Darcie and me on video and audio data. We are excited about our new digs and will welcome a column to the Gazette with the spring issue from the Pine Point DRTs. Our mailing address and telephone number remain unchanged as we are still part of the aquarium.

As data are currently being furiously analyzed by all of us, we have a few other items for your reading enjoyment in this issue of the Gazette. John Anderson shares a philosophical point of view. Kristy and I provide a better introduction to the MVA with the first of a two-part series. For all of you dolphin adoptive parents, DCP now provides a copy of our recent DVD, *Dolphin Sense*, when you renew for another year of adoption. And, we also have our regular updates from both of our other adoption programs. This is definitely a packed issue. Thank you for your continued support and Happy New Year!

Cheers, Kathleen

## *DCP Roatan Ecotour Trips*

Dates for the 2006 Ecotours are **10-17 September & 17-24 September**. These trips run from Sunday to Sunday, when there is a direct flight from Miami to Roatan. If you are interested in joining our research at RIMS, contact Deena Fabricant ([dfabricant@mysticaquarium.org](mailto:dfabricant@mysticaquarium.org)) or Bill Sperling ([bsperling@idyllwild.com](mailto:bsperling@idyllwild.com)). Of course, the trip won't be all work - you'll also get to observe and interact with dolphins! Please note: children under 18 must be accompanied by a parent or guardian - absolutely no exceptions!! More details are available at: [www.dolphincommunicationproject.org/ecotours](http://www.dolphincommunicationproject.org/ecotours). We look forward to seeing you in Roatan!

## Mobile Video/Acoustic System (MVA)

Kathleen Dudzinski

*Part one of a two part series. The next installment will be in the July 2006 Gazette.*

What are our Methods? How do we document dolphin signals? The mobile video/acoustic system (MVA) is the long, technical name for my array. It has also been called by several other names ~ the green machine is one of the nicer ones. The MVA was designed and built to permit real-time synchronous recording of the sounds and behaviors of individual, wild dolphins. Manually operated underwater, the system consists of two omnidirectional hydrophones (underwater microphones) cabled through a custom underwater housing into a stereo video camera. The hydrophones are placed on the 'chassis' of the housing and spaced according to the speed of sound in water versus air:



that is, they are scaled to the human inter-aural distance. Sound travels 4.5 times faster in water than in air. So, the

hydrophones are spaced about 68 cm apart ... do the math and you can figure out the width of my head! Determining the location of the vocalizing dolphin is based upon associating visual distribution of animals with directions to sound sources as determined by aural psycho-acoustics.

The first version (MVA1) was built in 1992. The second was built in 1997 in conjunction with the filming of the DOLPHINS large-format IMAX film. Like the bionic woman and man, we made it better, stronger, faster ... well, not faster but better. Added to the original design was a small second housing containing a digital audio recorder together with a pre-processor circuit which detects the highly directional part of a dolphin's echolocation 'clicks' and makes these audible and recordable. This unit is called the echolocation click detector (ECD) and facilitates an examination of how dolphins might use their echolocation socially, not just for investigation and fish finding. For example, we were able to determine that dolphins probably eavesdrop on one another when in large groups; they likely share

information with one another when traveling or socializing.

We use the MVAs to gather data on four groups of dolphins: Indo-Pacific bottlenose dolphins around Mikura Island, Atlantic spotted dolphins off Bimini, and bottlenose dolphins in human care at the Roatan Institute for Marine Sciences in Honduras, and at Dolphin Encounters in the Bahamas. We are learning much about how dolphins share information and communicate with peers.

### Significance & Application of the MVA

Observations of dolphin behavior are enhanced through the use of video recordings; valuable information is preserved and the dynamics of inter-animal relations, associations, behavior, and sociality can be examined. These data can be analyzed for evidence of acoustic, visual, and tactile signal exchange and behavioral coordination within varying social contexts. More importantly, comparisons of specific behaviors between individuals and groups of dolphins are facilitated. Video recordings are especially useful for documentation, and subsequent analysis, of subtle within-group signaling of dolphins underwater, where they spend over 85% of their time. Inter-observer reliability is also possible from videotaped records, thus providing a set of observations able to withstand the rigors of statistical machinations. Video records enable an examination of visually and acoustically described behavior that provide insight on the importance of contextual cues for how dolphin signal-receivers respond to signalers. Conclusions may then be drawn concerning the interplay between vocalizations, social behavior, and contextual variables.

### Into the Future

In 2004, John and I slightly redesigned the MVA to make the controls mechanical, not electronic. This served to let us remove the noise generated by the electronic controls – a very good thing as this increased our signal-to-noise ratio. And, since cameras continue to decrease in size as the minutes pass, we were able to put both the stereo camera and the ECD gear into one housing which is smaller than the first MVA housing. So, we now have four MVAs out there ... three being used by DCP researchers and one under the care and use of the students at USM in the Psychology department.

## *Dolphin Sense*

Renew your Dolphin Adoption between January-June 2006, and receive a copy of the ~22 minute DVD *Dolphin Sense*, produced by Terramar Productions. DCP now has 25 dolphins available to be adopted - see the full list at the end of the newsletter.

If you would like to Adopt-a-Dolphin found in the waters around Bimini, The Bahamas, you can do so by sending in the form at the end of this newsletter, or by going online to:  
[www.dolphincommunicationproject.org/Adopt.asp](http://www.dolphincommunicationproject.org/Adopt.asp).

## *DCP T-Shirts!!*

Short sleeve shirts are available in sizes small through extra large, for \$15 plus shipping. Long sleeve shirts are available in small through large, for \$20 plus shipping. Shirts can be ordered using the order form at the end of this newsletter, from the DCP website, or via email ([dcp@mysticaquarium.org](mailto:dcp@mysticaquarium.org)). Please add shipping charges of \$2.50/shirt.



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## The Glass Block Wall

MAIFE is offering the opportunity to help care for our animals, the upkeep of our exhibits, and the continuation of our wide-reaching education programs, and enable you to make your mark at Mystic Aquarium & Institute for Exploration that will last for years to come! If you are interested in inscribing a glass block to become a part of the the glass block wall at MAIFE, please contact Jessica at [jguidry@mysticaquarium.org](mailto:jguidry@mysticaquarium.org), or Deena at [dfabricant@mysticaquarium.org](mailto:dfabricant@mysticaquarium.org).

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## *Animal Parent Program*

Renew your Animal Parent adoption and receive a FREE thermal travel mug from Mystic Aquarium & Institute for Exploration!  
For more information on the Animal Parent program or to participate in the program, please contact us at [animalparent@mysticaquarium.org](mailto:animalparent@mysticaquarium.org) or (860) 572-5955 ext. 553.

Thanks!

**Deena**

-Deena Fabricant, Development Assistant, MAIFE

## *Guest Column*

John Anderson, Terramar Productions

### *The Journey*

Ever take the time to enjoy the sunrise from 30,000 feet, or a full moon from thirty below? Or, watched and listened to the birds flitting from tree to tree while searching for seeds and chirping a pleasant melody? Have you ever considered a body of water furiously steaming as though it were within a teapot on a stove? How many of us are caught up in the hustle and bustle of our day-to-day grind, controlled by things that we deem important; buzz words like commerce, achievement, and success filling our heads to the point of obsession ... we don't seem to stop for a fresh breath of air. At least, not until it is too late.

I don't believe that we were put on this planet to work away our lives. The journey of life is most important and many of us miss it! Every day is precious ... each tick of the clock, each passing second can never be regained. Work is important, don't get me wrong, but I believe that it should be more of a by-product of our journey and not the sole driving force. I have come to believe that we should find work about which we can be passionate, about what we believe in, and which will make ourselves better.

I was a late bloomer in choosing a career. I was 30 when I figured out that I could turn a childhood photo hobby into a profession and even older when I was able to make a living capturing animals on film. All along though, I knew that I needed to take the time to nourish my mind and enjoy the things that I deemed important, like that sunset that I mentioned earlier. No ... I didn't climb Everest to see it. I simply pulled my nose out of my computer on my last westward airline flight long enough to enjoy a bit of visual candy.

You think trying to figure out which stock to buy next is tough? Or, that selecting the shade of paint for your new car is a dilemma? Try getting a workaholic to notice that the steaming body of water wasn't from a pot on the stove but rather the entire surface of Lake Erie on a sub-zero day.

Someone close to me once told me that they were building wealth too slowly. Building wealth too slowly!?! What does that mean? These words came from a person who had no hobbies with the exception of working and making money. Sadly, I do not think this person will ever take the time to enjoy that full moon, let alone from thirty feet below the sea surface.

The world is full of natural wonders that cost nothing but a brief instant of your time and have no negative impacts on the environment. Your eyes are the windows into your mind: try letting a little sunshine in. It just might brighten your day and add something that you didn't know was missing.

# Marine Animal Rescue Program

Heather Medic, Stranding Coordinator

## Seal Season is approaching once again

The ultimate goal of the Marine Animal Rescue Program is to respond to each and every report of a marine mammal or sea turtle in need of assistance and to provide public education while doing so. Last year in Connecticut and Rhode Island the number of sighting calls (animals that do not come in for rehabilitation) increased to 121 from 64 the year before.

Many people do not know that seals, unlike other marine mammals, need to come up on land to rest. Just because there is a seal on land this does not mean that the animal will need rehabilitation. Seals can stay on land for up to 48 hours without eating or getting wet. Seals are semi-aquatic animals, which means they often spend a portion of each day on land. They haul out of the water for a variety of reasons including to rest, to give birth, and to shed. While out of the water they will not eat. Seals store enough fat in their blubber layer to allow them to go for extended periods of time without eating.

There are four types of seals that are seen in Connecticut and Rhode Island. Since the mid-1990s we have had two species of ice seals visit this region in the winter months. We call these two species "ice seals" because they are from Canada and even further north toward Greenland, where they spend most of their lives on ice floes. These seals are known as harp and hooded seals and are seen in New England from mid-January to early May. The regional seals that we have are harbor and gray seals. Both the harbor and the gray seal make this area their home from September through June, sometimes never leaving at all. However, the majority of seals do leave the area to breed in their northern territory in the summer months.

Most of the seals that people are used to seeing are off shore, hauled out on rocks and sand bars in groups, but many times seals are sighted alone. Ice seals in particular are almost always sighted alone in this region and can be found on docks, floating ice, lawns, beaches, and even up rivers. The regional seals keep their distance from people and haul out together in large groups. The ice seals are social in their northern territory, but they are solitary when we view them. Regional seals usually retreat to the water when approached, unless it is a pup. Ice seals typically are not afraid of people and will not usually retreat to the water when approached. Ice seals can be aggressive. Open-mouth displays and vocalizations are signs that you are too close and they

may bite if they feel threatened.

As the population of ice seals increases we will see more and more in this region. The population of harp seals in Canada is over 5.5 million and growing. Young seals that will not be mating tend to spread out to find new territory when hunting for fish. The harp seal can be seen as far south as North Carolina each winter, and last year there were more harp seals seen in Connecticut than in Rhode Island.

We want to provide a quick response to callers' concerns about marine mammals and sea turtles. We encourage people to give us a call when they see a marine mammal or sea turtle. Then we will determine if the animal is in need of medical attention, needs to be moved from a populated area, or just needs time to rest. Seals especially are very resilient and usually just need time to rest. Ice seals are on their own when they are only 12 days old, and our regional seals no longer need to be with their mothers after 5 weeks. Most of the seals that people see are just looking for a place to rest before their next big meal.

Harassment occurs when your behavior changes their behavior. Stay at least 50 yards (150 feet) away from marine mammals and sea turtles. Warning signs of harassment are not what most people expect when they come upon a seal on land. If your presence causes increased vocalizations by seals; shaking or body tremors; a resting animal to lift its head with eyes on you; or a seal on the beach to eat rocks and sand then you are too close. A good thing to keep in mind is that seals do not get cold. They have a thick blubber layer. So when a seal is shaking do not put a blanket on the animal or put the animal in a warm car. This will only cause an animal to over heat or stress, and stress can also kill a wild animal.

MAIFE is a non-profit organization and we rely heavily on the assistance of private donations and grants in order to continue to provide rapid response and medical assistance. The Program operates with a full time Stranding Coordinator, a part time Stranding Assistant and a volunteer force of over 40. The number of volunteers has grown over the last few years and this year will be our biggest year yet. We will have 21 new volunteers to care for in-house rescued seals along with the 16 returning volunteers. Volunteers are also trained to respond to calls from the public or local law enforcement. This year our number of trained volunteers to be able to do this has grown to 50. Without the volunteers' perseverance and dedication, the rehabilitation process would not be possible.



## Other Ways to Support DCP

Videos		DCP T-Shirts \$15 + \$2.50 S&H
Dolphin Sense	\$ 25	DCP Long Sleeve Shirt \$20 + \$2.50 S&H
Dolphin Spirit	\$ 25	Eco-Tours at Roatan Institute for Marine
Bridging the Ocean Divide	\$ 30	Sciences (RIMS) in Roatan, Honduras.
		See page 4 for more information.
Note cards	\$2.50 each	
Postcards	\$1.00 each	
Discounts are available for packets.		

Please send check or money order to DCP. Products can be purchased through PayPal at [www.dolphincommunicationproject.org/support.asp](http://www.dolphincommunicationproject.org/support.asp). For more information, email [dcp@mysticaquarium.org](mailto:dcp@mysticaquarium.org).

*Thank you to DCP Volunteers!!*

Without your effort and assistance, DCP's office could not run so smoothly throughout the year. You all do a great job processing data and keeping things organized. Well done!

If you'd like to become a DCP volunteer, opportunities may be available for processing data and working with DCP's video and sound files in our office. For more details, see the Education page on the DCP web site, or contact Kate Cook, Volunteer Coordinator at MAIFE. Kate can be reached at: 860-572-5955 x209. All DCP volunteers coordinate their time through the Volunteer Coordinator and Kristy.

### Internships:

We offer internships to students for personal development and for college credit. Credit is arranged by each intern with his or her school. For details on internships and the application process, please visit the Education page of DCP's web site: [www.dolphincommunicationproject.org/internships.asp](http://www.dolphincommunicationproject.org/internships.asp), which links to the college internships page on the MAIFE website. Field positions are limited and only available during summer months.

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To:

