The Dolphin Communication Project is focused on the dual goals of scientific research and education.

Spring Cannot Come Soon Enough!

We’ve been busy analyzing data this winter by logging videotapes and digitizing dolphin calls. We did visit Nassau in January to collect data, which gave me a brief respite from the cold winter weather, and snow. Can you tell I prefer spring and summer?! We hope you enjoy this issue of the Dolphin Gazette. It’s a pleasure to share our research results and processes with you. And, to inform you of the coming field research trips, and a seminar that Justin is co-organizing. Lastly, for those of you who might remember Umi, the mighty sea beagle who wrote haiku with her nose, we are opening a poetry contest in place of this issue’s puzzle!

I enjoyed this issue of the Gazette and am sure you will too!

Cheers,
Kathleen

Thank you to DCP Volunteers & Interns!!
DCP would like to thank Nicole Danaher-Garcia, Catie Tobin and Pam Lovejoy for all their help this winter. Without your assistance, DCP’s data analysis could not run so smoothly. You do a great job processing data and helping to keep things organized. Well done!

Internships
If you are interested in interning with DCP during a fall, spring or summer semester, more information is available on our website. Please note, most internships are office-based and do NOT include field work. Check out the web site before contacting us at info@dcpmail.org.
Each season of data collection at each of DCP’s four field sites represents a continuation of our research on communication, behavior and acoustics between individual dolphins from the underwater perspective. Dolphins are long-lived social mammals: to best understand their social structure, effect of kinship on interactions, and use of signals to share information requires long-term studies.

The data gathered in January 2013 focused on gaining a better understanding of dolphin hearing capabilities and collecting ambient noise levels during the winter season. Understanding hearing variability within dolphin populations is poorly understood. By examining the dolphins at Dolphin Encounters, we expand the breadth of knowledge by an order of magnitude. We are able to collect data on hearing related to age, sex and possibly to kin relatedness that currently does not exist for any marine mammal.

To understand how an individual will react to man-made noise, the hearing sensitivity of that individual should be known. To date, only a few individuals of several toothed whale species have been examined for their hearing ability. Hearing was investigated by measuring auditory evoked potentials (AEPs) from an individual when sounds were played. The AEP test is similar to when a human has an EEG test done.

A sound pressure level (SPL) meter was used to collect ambient noise levels in all pools at Dolphin Encounters during this visit. These data will be compared to ambient noise level data collected in November 2011, and will provide information on the environment and associated noise levels related to wave action, currents and anthropogenic sources when assessing AEP data.

Hearing thresholds were estimated for 6 dolphins. Dolphins receive sound through their lower jaw; therefore, a “jawphone” was used to transmit sounds to the dolphin. Tonal sounds were presented to the dolphins and the responses of the auditory system were recorded using a ruggedized laptop computer system. Testing began with tones that were likely to be well above hearing threshold, with levels presented at progressively lower levels until no response was detected. The lack of a response from the auditory system indicated that hearing threshold had been reached.

Data are currently being analyzed and we’ll have an update in a future issue of the Dolphin Gazette!
DCP ID#097 is a juvenile female. She was first seen off the island of Bimini, The Bahamas in 2009, but was not added to DCP’s photo-ID catalog until 2011. Because she was already independent from her mother, we do not know whose calf she is. Although she has one faint scar, overall ID#097 is a “clean” young dolphin with no major scars on her body. So, researchers rely on her spot pattern to identify her. Under her left pectoral fin, she has two spots - like a human having two freckles in her armpit! In 2012, ID#097 was seen with fellow juvenile females Tilly (#87) and Noodle (#94) as well as younger dolphins who are too young to be cataloged. Who will she hang out with next year?

Now that you know a bit more about #097, what name do you think suits her best? The cost to give a name to #097 - a rare and unique opportunity - is $750. If you’ve got a name in mind, you can purchase your name-a-dolphin kit today! To name #097, please visit:

http://tinyurl.com/name097

After you make your purchase (using PayPal via the DCP website) we will contact you for more information about the name you’ve chosen.

What you will receive in your Name-A-Dolphin kit

- personal welcome letter
- a certificate of naming
- a photo of your named dolphin suitable for framing
- a biography of your named dolphin
- unique footage of the dolphin you have named (a track on the adopt-a-dolphin DVD)
- a dolphin DVD with footage of the Bimini dolphin group
- a personalized adoption t-shirt showcasing an image of your named dolphin
- information about DCP and our research around Bimini

*Dolphins: The Lighter Side* DVD

A copy of the book *Dolphin Mysteries*, signed by Dr. Kathleen Dudzinski

Dolphin Communication Project note cards and/or postcards (packet of 10)

10% discount on DCP eco-tour (valid for 2 years)

an electronic subscription to the Dolphin Gazette, DCP’s quarterly newsletter
Join DCP’s Dr. Kathleen Dudzinski in The Bahamas. Visit http://tinyurl.com/DCPTrainer for more info!

When is it?

What is it?
A week-long course that combines lectures on marine mammal behavior and cognition, cetacean ecology, observational research methods, and boat-based and in-water encounters with wild Atlantic spotted and bottlenose dolphins near Bimini and common bottlenose dolphins in human care at Dolphin Encounters in Nassau.

Who is it for?
This course is specially designed for marine mammal trainers at any stage in their career, and hailing from any country or facility around the world. Upper-level university students and recent graduates interested in a career in marine mammal training and/or research are also welcome to apply. The course offers opportunities to participate in field research and exchange ideas and information between professional trainers and the next generation.

What does it cost & how do I apply?
US $1970* is the full cost. Interested trainers and students should contact DCP at info@dcpmail.org. A $500 non-refundable deposit is required to hold your space. All payments will be accepted electronically via credit card or PayPal. There are only 10 spaces, so register today!

What is included?
7 nights’ accommodation (up to quad occupancy), most meals, 5 wild dolphin surveys (with drinking water and snack), Bimini airport/hotel transfers, Air travel to Nassau (Day 6), Nassau airport/hotel transfers (Day 6), Entrance to Dolphin Encounters, Course instruction and more!
*Airfare to The Bahamas is not included
Why can't apes and dolphins talk?

Communication and language research with apes and dolphins

seminar

April 13th
Vrije Universiteit Amsterdam
10:00 - 17:00

Part of the Apes and Dolphins Seminar Series

For more information and registration visit
www.apesanddolphins.com

Esteban Rivas, PhD
Join ape language expert Esteban Rivas and dolphin communication researcher Justin Gregg for a day-long seminar addressing the question of why it's so difficult to establish two-way communication with apes and dolphins. What do researchers know about how apes and dolphins communicate with each other, and how similar are their communication systems to human language? Will we ever hold a meaningful conversation with a dolphin or a chimpanzee?

Justin Gregg, PhD
One of the most applied methods for examining and understanding the relationships of non-human animals is to document how much time two individuals spend together over a given period of time and in comparison to the rest of the group. In this way, we (scientists) calculate the “coefficient of association” for pairs of individuals in the groups that we study. But, I’ve often been skeptical about whether the amount of time two individuals spend together is truly an indication of the quality of their relationship. For example, humans spend huge amounts of time working with people but usually have a stronger (i.e., better quality) relationship with kin or close friends than with co-workers. Still, until recently, we did not have the tools to assess quality in a relationship between other animals. Recent work with chimpanzees and ravens provides a rubric by which we can assess social quality in dolphins. (see citations at end of this essay) Additionally, we now have enough data over multiple years to be able to ask questions requiring this type of detail. That is, we have been reviewing all video data from RIMS and Bimini - going backward in time, starting with 2011 and 2012 and analyzing years in reverse chronological order - to assess the quality of the relationships we document between dolphins. By quality, we are documenting interactions and behaviors to assess the value, compatibility and security of each relationship. The quality of a social relationship reflects the history of interactions between two individuals and allows one to predict the outcome of future exchanges. As such, we are documenting all types of contact behavior between any two dolphins from our RIMS and Bimini study groups. As you can imagine our sample sizes are huge since dolphins are very tactile! We are looking at whether those contacts are afflictive or agonistic and whether they are received positively, neutrally or negatively. Because we likely would not document much foraging behavior, we are using object play as a proxy for food sharing. And, we are also documenting details related to vocalizations that might, or might not, accompany these actions. So far, we have documented data from 2010 and 2011 for both Bimini and RIMS. We are hard at work on 2009 data sets and plan to summarize our results for conferences upcoming later this year. Thus, while we are still in the data analysis stage now, we should have some initial results to share with our loyal Gazette readers in an upcoming issue.


Data analysis: Updates from the office!

2: Whistle While you Work?
Submitted by Kathleen Dudzinski, PhD

I wish I could whistle. It would make my talks about dolphin calls, whistles and clicks, much more robust! Alas, I make a very poor dolphin mimic. Much of what you’ve read about DCP research recently has centered on pectoral fin contact or other tactile behaviors. Still, we do document stereo audio with our MVA systems when recording dolphin interactions. This winter, we finally began digitizing the audio channels from our data collected on the dolphins at Dolphin Encounters (DE) at Blue Lagoon Island, in Nassau, the Bahamas. Earlier in this issue of the Gazette you read that we also spent time at DE this January beginning a study to understand better dolphin hearing capabilities.

With our acoustic analyses, we are digitizing the audio data from our videotapes to create a catalog of sounds from each dolphin at DE. So, the process is like this … the master data video tape is plugged into a deck that feeds the video to a screen and the stereo audio to our computer line inputs. We watch the video and decide which sections to capture acoustically based on what we hear and see. This is just the digitizing process during which time we identify (when possible) the vocalizing dolphin (and age and sex) and also the activity onscreen (behavior). Once several tapes have been captured, we shift to examining the sounds via their spectrograms - to get an idea of frequency range, duration, and other measures of the sounds.

In association with digitizing the DE data we are putting together information on dolphin acoustics (sound production and hearing), the gear and protocols to document sounds and behavior, and what this all means to the animals and to us. We’ll have this educational information available for DE to use with their visitors and guests for the summer break. And, when we have a bit more data digitized, we will have sample sounds on our web site for your listening pleasure!
Come to Bimini...or just get the t-shirt!

Join us in Bimini, 2 - 8 May 2013

Due to unexpected cancellations, we are now accepting applications from the general public to join our Field Course with University of New Brunswick Saint John. This course includes:

- 6 nights’ accommodation
- 3 meals/day, plus drinking water and boat snacks
- 5 boat trips in search of Bimini’s wild dolphins (weather dependent)
- Course instruction

Cost: $1620 (Due at sign-up)

We do not have long to accept new applicants, so email us (info@dcpmail.org) today for more information!

Each year, we offer gear through Cafe Press to commemorate our annual field work at our Bimini, The Bahamas field site. By making a purchase, you support our field work financially, but also by starting conversations when you sport your cool t-shirt, or drink from your Bimini 2013 mug!

To purchase, visit:

www.cafepress.com/Bimini2013

And remember, you can also get great general DCP Gear at

www.cafepress.com/dcpgear

So, if you are looking for a fun t-shirt or sweatshirt, cute baby gear or even a doggie hoodie, make those gifts for yourself or a loved one count even more. A portion of all orders goes directly to the Dolphin Communication Project.

Already weighed down by stuff?
Considering giving a donation or membership to DCP as a gift for someone!
To donate, please visit

www.tinyurl.com/DCPDonate
Adopt a Wild Dolphin

www.adoptawilddolphins.com

What's in your Adoption Kit?

- An official adoption certificate
- Photograph of your adopted dolphin
- Details on how to download dolphin vocalizations from the Bimini adopt-a-dolphins as a ringtone or audio file
- DVD containing video of the Bimini dolphins
- Biography of your adopted dolphin
- Welcome letter and registration info
- Information Booklet with Atlantic spotted dolphin fact sheet and info about the Dolphin Communication Project
- Dolphin trading card sample

Dolphins currently up for adoption

Adopting a wild dolphin with DCP helps to fund:

- The purchase of new research equipment (e.g., cameras, underwater microphones)
- Conservation and education programs on Bimini, in the US and around the world
- Publication and dissemination of DCP’s research results to the scientific community and the general public
- Maintenance of the DCP website, field reports, and our podcast The Dolphin Pod
- Classroom education programs for school-aged children including DCP Youth Program, Dolphin Research Trainee, Classroom Connections
- Volunteer, ecotour and internship opportunities for the public

Name ID#97 and we’ll add her to this list! Check page 9 and our website for details.

Where does money raised from DCP’s adopt a wild dolphin program go?

- Fundraising 13%
- Education Programs 32%
- Scientific Research 55%

Adopt-a-wild-dolphin t-shirts tinyurl.com/ylfx44v

Holiday gift ideas www.cafepress.com/holidaydolphin

An unusual release of gas bubbles is described in an adult female Indo-Pacific bottlenose dolphin (Tursiops aduncus). We will refer to this gaseous mixture from the respiratory tract as air, although we recognize that it is not the exact composition of atmospheric air after respiration has occurred. This air bubble release was observed under water (~10 m depth, 10 to 15 m clarity) in June 2006 outside Chichi-Jima harbor, Ogasawara, Japan, during an eco-tour program involving swimming with a mixed group of spinner (Stenella longirostris) and bottlenose (T. truncatus) dolphins. Underwater observations of this air release were documented by John Anderson (video) and James Brinck (still frames), both associates of the primary author. The dolphin, which had distinctive scarring that would facilitate re-identification, swam up from the sea floor to the surface. During the ascent, she released a stream of bubbles from the region of her left orbit. Her ascent, air release, and following respiration at the surface were captured on video and transparency. Field-by-field video motion analysis confirmed that the point of bubble emergence was the medial angle of her left eye. The pathway for this unusual air release likely involves a communication with the respiratory tract.
DCP’s Adopt-a-Dolphin Program

DCP currently has ~20 dolphins from our catalog of Atlantic spotted dolphins residing around Bimini, The Bahamas available for adoption. While adoptive parents do not get to take their dolphins home, they will receive a certificate of adoption, a photo of their adopted dolphin, some facts about Atlantic spotted dolphins, information about DCP and our research around Bimini and a dolphin video. They will also receive the most recent edition of the Dolphin Gazette, DCP’s quarterly newsletter, announced quarterly by eblast. Be sure to send us your email address, or subscribe online at the newsletter page!

Yes! I want to adopt a dolphin!

Some of our dolphins are listed below. For a complete list & all dolphin biographies, check out www.adoptawilddolphin.com

Juliette | Niecey | Tilly | Swoosh | Milo | Lone Star | Trudy | Tina | Lumpy | Lil’ Jess | Freckles | Split jaw | Noodle

I would like to adopt a dolphin: $30 for one year. **Dolphin name:**

Please cut out and mail your order form, with check, to DCP at P.O. Box 711, Old Mystic, CT 06372-0711.

Credit card payment is available online through our web site at www.dolphincommunicationproject.org

Please **SEND** my adoption package to:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City:</th>
<th>State:</th>
<th>Zip:</th>
</tr>
</thead>
</table>

If this is a gift, please note gift **GIVER** address:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City:</th>
<th>State:</th>
<th>Zip:</th>
</tr>
</thead>
</table>

Email: __________________________

---

### Postcards

$1.00 each / 3 for $2

<table>
<thead>
<tr>
<th>Postcards</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Postcard Image]</td>
</tr>
</tbody>
</table>

### Iruka Gear

To purchase Iruka gear visit www.cafepress/irukagear

<table>
<thead>
<tr>
<th>Iruka Gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Iruka Gear Image]</td>
</tr>
</tbody>
</table>

### Bookmarks

$0.25 each / 5 for $1.00

<table>
<thead>
<tr>
<th>Bookmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Bookmark Image]</td>
</tr>
</tbody>
</table>

### Notecards

$2.50 each / 3 for $6

<table>
<thead>
<tr>
<th>Notecards</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Notecards Image]</td>
</tr>
</tbody>
</table>

### DCP Gear

To purchase DCP gear, visit www.cafepress/dcpgear

<table>
<thead>
<tr>
<th>DCP Gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>![DCP Gear Image]</td>
</tr>
</tbody>
</table>

### Membership

- **$100 Binini**: Calendar, 6 Dolphin Trading Cards, DCP Info Booklet, Personal welcome letters from Kathleen Dudzinski and from Kelly Melillo Sweeting
- **$100 DE**: DE adopt-a-dolphin kit, Dolphin calendar, DCP Info Booklet, Personal welcome letter
- **$100 RIMS**: DVD about RIMS dolphins, Dolphin calendar, DCP Info Booklet, Personal welcome letter
- **$1,000 Research**: Adopt-A-Wild-Dolphin kit, Calendar, Water bottle, DCP Info Booklet, Personal welcome letter, Update following dolphin survey
- **$500 Education**: Dolphin Activity Guide and DVD, Calendar, DCP Info Booklet, Personal welcome letter, Signed copy of Dolphin Mysteries. A visit from a DCP researcher OR a free Classroom Connections program
- **$200 Dolphin Pod**: Calendar, Water bottle, DCP Info Booklet, Personal welcome letter, Involvement in the podcast episode
- **$150 Conservation**: Calendar, Water bottle, DCP Info Booklet, Personal welcome letter, Personalized update following Bimini beach clean-ups

Support DCP's research efforts buy purchasing some of the many products that we offer for sale. All products seen here are also available on our website: www.dolphincommunicationproject.org All profits from the sale of these products will directly fund DCP’s research and education efforts. DCP is a nonprofit organization.
Calling all poets! DCP is holding our first ever haiku contest! We are looking for original dolphin-themed haikus written in the famous 5-7-5 syllable structure. Writers of our favorite three haikus will each receive a 5-pack of Dolphin Trading Cards.

Here is an example haiku written by Umi the Mighty Sea Beagle:

My leash is too short,
The end is always too near.
That's where smells begin

Have you got a dolphin haiku that can top that? Email your submission to info@dcpmail.org by 30 April 2013.

The three winning haikus will be announced in May, and will appear on the DCP website and Facebook page. We look forward to reading your entries!