




 ▶ BIMINI UPDATES!...2


 ▶ CONFERENCE FUN!...3


 ▶ MEET SFID#070 - SHE NEEDS A NAME...7

The Dolphin gazette

NEWSLETTER FOR THE DOLPHIN COMMUNICATION PROJECT

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

Summer is Almost Here!!

My favorite season is almost upon us! Here in Florida, 2 of the 3 H's of summer have already begun: Hot and Humid (Hazy is delayed!). We have a full issue for you as we head into our busy summer season for field research. Kel has already had one college-level field course completed, with two more "in the wings." Our summer interns (Ellyne & Kali) begin right after Memorial Day and we have had and will have fun conference presentations. Our fundraising efforts have really paid off (thank you!) and we are getting publications into the review system. Phew ... you could say the winter has been busy! You can follow along with our summer research via our Field Research Blog on the DCP web site ... stay connected also through our social media updates!

We are also pleased to announce that DCP's Bimini 2015 video is finished and available for viewing!! Thanks to John, Terramar Productions, for all his effort in filming, editing and producing this great new video showcasing DCP's field and education programs from Bimini!

As always, thank you for your support and Happy Reading!
Cheers!

Kathleen



In this issue

Bimini	2015	Summer
Update	Conference	Mania
Memberships	and fundraising	updates
2015	Publications	RIMS
	Name-A-Dolphin	
	Activity Time	

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FL Solicitation of Contributions
Reg. #: CH42894

Thank you Volunteers & Interns!!

DCP thanks Nicole Danaher-Garcia for your continued help with data processing & field programs. Thank you Lauren Larsen for your data help, too! Without your assistance, DCP's data analysis and processing could not run so smoothly. Well done and thank you!

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.

Bimini Update - And, we're off!

Submitted by Kelly Meillo Sweeting

Summer Research in Full Swing!

I always think the offseason is going to be longer and slower – what will I do with all my time? But, as usual, this offseason has flown by and I now find myself in the fullness of DCP's Bimini research season. The season opener was a fantastic 6-night field course with University of New Brunswick Saint John. For the seventh consecutive year, Dr. Stephen Turnbull brought his students (16 this year!) from still-chilly Saint John to rarely-chilly Bimini. To say I was thrilled to once again have help from Nicole Danaher-Garcia would be an understatement; after experiencing Dr. Turnbull's shark



Bottlenose dolphins, including this pair, made appearances during our recent field course.

course with our friends at the SharkLab, Nicole returned to North Bimini for our course prep. The students arrived on 30 April and were immediately exposed to the challenges of field work: the weather was not good enough to go in search of dolphins. They kept their spirits high and we got ahead of schedule on lectures and played in the surf. Good thing we started out ahead, but the rest of the program was busy!! Boat trip #1 yielded sightings of several Atlantic spotted dolphins, including Leslie (#80). Though we thought it was possible Leslie would have a new calf this year, we are just as thrilled to see her continuing to look after her first calf, #99. Boat trip #2 was a double-length, dolphin-less day on the water, but the students were able to explore the wreck of the Sapona. On boat trip #3, after a Skype visit from Kathleen, we came up empty on dolphins again,



Beach clean-ups are part of every DCP Bimini field course & internship program.

but everyone kept their spirits high. Boat trip #4 followed a Skype talk from Justin and yielded bottlenose dolphins very close to shore! The final day of the course was jam-packed with a beach clean-up, final lectures, photo-ID practice and the best dolphin observations of the week! With as many as 18 spotted dolphins (including Leslie, un-named #99 and Noodle) around us at a time, all the cameras were filled up! It means lots of work for Nicole and me, but we're happy to have it! A huge thank you goes to the UNBSJ group, Sea Crest Hotel & Marina and Bimini Adventures.

With just a few days to regroup after UNB, I'm now busy with more boat trips with Bimini Adventures. Twelve days with a French film crew, including a few days with Kathleen back on the island, will surely mean some great field reports to share and data to process. Be sure to follow our field reports here:

<http://www.dolphincommunicationproject.org/index.php/the-latest-buzz/field-reports-new>

There will be no slowing down in late May or June: On 26 May, we'll welcome back Dr. Deirdre Yeater of Sacred Heart University for a 12-night program. As soon as we say goodbye to her group, we'll welcome Dr. Radhika Makecha of Eastern Kentucky University for her 12-night program. I guess we'll sleep in July...oh, wait! Our summer interns will be here then! Busy, busy, busy. Be sure to keep tabs on all our summer work via our blog or links and photos shared directly on our Facebook page (Dolphin Communication Project) and each Adopt-A-Wild-Dolphin's Facebook pages!

~Kel

Conference Updates - recent past & future!

DCP results and programs included at two conferences internationally!

EAAM 2015

The summer is always busy at DCP with our Bimini field season in full swing and our summer internship program usually in June and July. But, this year, our schedule(s) began just a bit earlier than usual with Kathleen attending the European Association for Aquatic Mammals (EAAM) meeting in Kolmården, Sweden, in late March! (Yes, Kathleen still owns cold-weather clothing!) Kathleen attended the meeting wearing both her Aquatic Mammals Journal and DCP hats. She provided an update about the journal to EAAM members and also gave two scientific presentations, representing DCP. The first (co-authored by Chris Ribic) was a summary of her studies examining pectoral fin contact exchanges between dolphins at RIMS (see our EAAM presentation titles and abstracts on page 5). The second was co-authored by Heather Hill (see last issue of the Gazette for a summary of Hill's research as a DCP collaborator) and focused on our comparative study of tactile behavior between dolphins versus between beluga whales. Both presentations were well received. We are now diligently working on drafting the manuscripts from each of these data sets for submission to a peer-review journal for publication consideration. (Hopefully we'll be able to announce their in-review status late in 2015!)



The EAAM meeting was held at the hotel located at the Kolmården Djurpark (zoo & nature park)

NMEA 2015

The second, future conference is the National Marine Educators Association meeting to be held in Newport, Rhode Island in late June/early July 2015. DCP will be giving a presentation about some of our education programs to conference attendees. We are excited to share our online classroom connections program with teachers interested in using dolphin science to engage their students in marine and ocean conservation efforts. We will provide an update about the conference on our web site's blog in early July and also include an update about the meeting in the next issue of the Dolphin Gazette! Stay tuned!!

Our NMEA submitted abstract follows:

Title: **Using Dolphin Science as Teaching and Learning Tools**

The Dolphin Communication Project offers programs that demonstrate real life applications of topics taught in school through dolphins. Students become aware of how science, math, writing, history, and communication (etc.) are utilized in everyday situations. DCP programs work well as both an extracurricular program or as a supplement to in-school lessons. Two example participatory lessons will be presented to demonstrate how DCP's programs can be integrated into both formal and informal science curricula. At the conclusion of our presentation, participants will learn the resources available to use dolphins and marine science to illustrate real world applications of STEM concepts to their students.

NMEA meeting 2015!
29 June - 2 July 2015 in Newport, Rhode Island!
<http://www.marine-ed.org/>

The conference theme is Exploring our World of Water! Learn more about the conference, associated events and details of the National Marine Educators Association on their web site!

Congratulations to Briana Seay Harvey for successfully defending her master's degree from USM this month! Briana's thesis title is: *The Nature of Social Relationships in Bottlenose dolphins (Tursiops truncatus): Associations and the role of Affiliative, Agonistic, and Socio-sexual Behaviors*. Over the next couple of months, Briana will edit her thesis and submit the resulting manuscript to a journal for publication consideration. Stay tuned to the next issue of the *Gazette* for more details on her study!

Fundraising news and thank you!

DCP survives to conduct our studies and education programs because of you!

DCP's Second Bonfire T-shirt Fundraiser - a Success!!

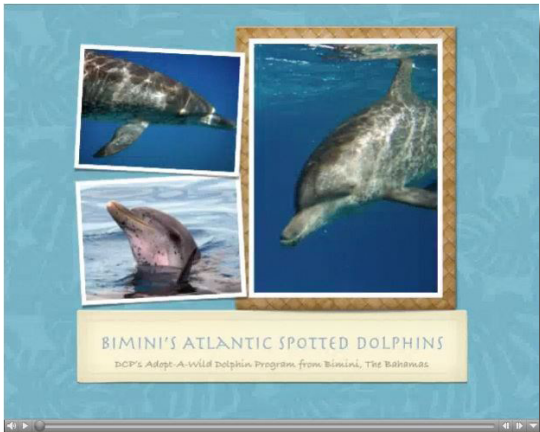
A huge thank you to everyone who supported our spring t-shirt campaign! We are grateful for your financial support and thrilled that a new batch of #teamdolphin shirts are being sported out there. Hope yours is a great conversation starter at your summer picnics!



Dolphin Adoption Bundle:

All year long, choose a Dolphin Adoption & add the PhotoBook to create a Bundle for just \$50 (*includes shipping within the U.S.*).

That's a \$10 savings versus purchasing these items separately! Our Bimini Atlantic spotted dolphin PhotoBook is a beautiful, 8x6 soft-cover book delivered with the adoption kit. Adoption kits include a personalized certificate, dolphin biography, photos, a DVD and more. Check out the dolphin bios on our web site to order your PhotoBook & Adoption Kit Bundle today!



Bimini's Atlantic Spotted Dolphin PhotoBook:

Our Adopt-A-Dolphin 8x6 soft-cover photobook is available year round - as a bundle or sold separately. For \$30, you can admire the Bimini Adopt-A-Dolphins all year round!

Plus, any adoption renewals, repeat donations or membership renewals received throughout the year will receive a link to our Adopt-A-Dolphin slideshow, FREE!

Become a DCP Member Today!!

The Dolphin Communication Project is a non-profit organization that relies on funding support from grants, sponsorships and members (like you!) to conduct our scientific research and offer education opportunities. Your generosity is the lifeblood of our organization, and we could not operate without the funds we receive through memberships, donations, and our Adopt-A-Wild-Dolphin program. Every scientific article we publish and every student volunteer and internship opportunity that DCP provides was made possible by financial support from generous donors and supporters!

You can become a member of the Dolphin Communication Project by making a one-time donation or becoming a Sustaining Member via a monthly contribution.

Show your support by becoming a member today!

<http://www.dolphincommunicationproject.org/index.php/shop/membership-program>

Hey, I have a question!

Why is your email address written with {at} and {dot} now?

Pesky internet hackers have forced us to take preventative measures against spam and website hacking. So, wherever you see {at}, replace it with @ and where you see {dot} replace it with . and email away! This way, we know it's a real person, and not a malicious computer program sending us love notes!

DCP's Florida Solicitation of Contributions registration number is CH42894.

Conference Updates ... continued

Abstracts from the EAAM meeting in 2015 ...

EAAM titles & abstracts

Dudzinski & Ribic: Pectoral fin contact between bottlenose dolphins - a tool for social bonding among non-kin

Pectoral fin contact among dolphins is a conserved behavior consistently documented between individuals. Social and hygienic functions have been identified with partner preference exhibited. Interactions in a group of captive bottlenose dolphins (*Tursiops truncatus*) were video-documented over 10 years (2003-2011, 2013). Pectoral fin contact between individuals was examined among 41 dolphins, with attention focused on six individuals (3 female, 3 male) as contact initiators over the ten year period to assess developmental patterns. For both sexes, patterns in partner preference were identified, even with adjustment for individual differences: males initiated more contact with other males (76.7%), especially those of different ages (43.9%) whereas females initiated more pectoral fin contact with different aged males (35.5%) rather than different-aged females (25.8%). Immediate reciprocity in pectoral fin contact was observed more among non-kin than between related dolphins, and overall reciprocity was not related to kinship. These results, coupled with conclusions from a comparative study of the same behavior among three distinct populations, suggest that pectoral fin contact is tool used to establish and maintain relationships between individuals, with patterns varying slightly between the sexes and age groups. Contact via the pectoral fin is likely used to send different messages depending on context and dolphin age, sex and personality. Additionally, it seems that young dolphins must learn proper social decorum for application of pectoral fin contact when socializing



Two adult female spotted dolphins share a pec-to-pec fin rub while socializing in a group.

Dudzinski & Hill: Pectoral Fin Contact between Individuals - bottlenose dolphins and belugas are not the same

Tactile contact between individuals is a hallmark of social behavior among mammals. In a beginning comparative study of bottlenose dolphins (*Tursiops truncatus*) and belugas (*Delphinapterus leucas*), we focused on how individuals exchange contact, specifically with their pectoral fins. From 108 hours of video of bottlenose dolphins, 3,022 pectoral fin contacts were documented with 279 contacts exchanged between mother-calf pairs and 274 contacts between siblings. From 50 hours of focal follow video recordings of beluga calves, 121 pectoral fin contacts were observed: 94.3% (n=114) from calves toward their mothers and the remaining contacts occurring with another calf or allo-adult female. From an additional 60 hours of observation on all beluga age groups, only 2 pectoral fin contacts were observed between calves. It seems that pectoral fin contact is a functional tool for bottlenose dolphins during social interactions and may be one tool specific to the maintenance of bonds. Contact, especially via pectoral fins, seems to have limited application by belugas and may be used primarily by beluga calves during social development.



Heather Hill being greeted by one of her study animals, before observations!

DCP 2015 - in video and film!!

... films, videos and our own Bimini 2015 video ...

DCP has been busy this winter advising on a few soon-to-be released films and programs about dolphins. This includes *Bahama Blue*, which Kel was a part of last summer, which just aired in Canada. Stay tuned for details on a U.S. release. As this Gazette went to press, Kel and Kathleen are collaborating in Bimini with the *Ocean Giants* film crew. But, most exciting of all (yes, we're biased!) is the completion of DCP's own Bimini 2015 video!! You can check out the ~15 minute video at <https://vimeo.com/126303523>.

The program features Kel as well as some college students during a field course and some of our DRT program participants. The footage is stunning (with lots of dolphins underwater!) and the information is engaging! A huge thanks to John Anderson of Terramar Productions for all his hard work! Take a gander and check out the DCP research and education programs ongoing on Bimini!!



Behavior Corner ... a dolphin behavior discussed!



Dolphins are very tactile, social mammals. They are often found in groups and often engaged in either static touch or rubbing behavior. Kathleen has focused on how dolphins share information via touch with their pectoral fins and is wrapping up a study lasting more than a dozen years including five dolphin study groups. Where and how they touch one another can send a different message, depending on who is receiving the information. For example, pec-to-pec contact (flipper to flipper rubbing) might be used like a handshake in people - as a greeting. Putting a pectoral fin on the tail stock (peduncle) of a second dolphin could be a request for assistance. Rubbing a pec fin might also express concern and ease the stress level of a second individual. The messages are varied and

highly dependent on context.

Context is also important in determining whether a group of dolphins might be fighting or playing. Direct or perpendicular angles of approach and harsh contact (bites, rams) are used in fights while oblique or "soft" angles of approach (as in the photo here) and affiliative contact (like pectoral fin rubbing) are often used during play among dolphins. You can probably readily tell the difference between dogs when they are playing or fighting and the same is true for dolphins ... we just have to watch a little longer and maybe pay a little more attention to the subtle details of their behavior!

Name-A-Dolphin: #70

Here's your chance to name a wild dolphin!

DCP ID#070 is an adult female. She was first recorded by DCP researchers off Bimini, The Bahamas in 2002. At this time, #70 was already a young adult and appeared to have a calf in tow. Although she has not been seen every single year since, she is seen very regularly and almost always has a youngster with her. Her most recent calf was a little girl, but with no permanent markings, this little one has not been entered into DCP's ID catalog. Having acquired only mild scarring over the years herself, researchers rely on clear views of #70's well-spotted body in order to confirm her presence in the group. She is typically in groups of sub-adults and adults; most recently she was hanging with Lil' Jess (#35). Who will she be with next?



You can name ID#70 by visiting DCP's name-a-wild-dolphin page at

<http://www.dolphincommunicationproject.org/index.php/shop/name-a-dolphin/name-070>

This dolphin can only receive one name.
Let it be your pick!!



Head here to name ID#70:

<http://www.dolphincommunicationproject.org/index.php/shop/name-a-dolphin/name-070>

As the supporter who names ID#70 you will receive her first ever adoption kit:

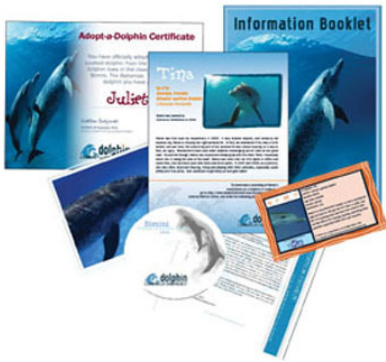
- > An official naming certificate
 - > Photograph of ID#70
 - > Details on how to download dolphin vocalizations from the Bimini adopt-a-dolphins as a ringtone or audio file
 - > DVD containing video of the Bimini dolphins
 - > Biography of ID#70
 - > Welcome letter and registration info
 - > Information Booklet with Atlantic spotted dolphin fact sheet and info about DCP
 - > Dolphin trading card sample
- Plus:
- > Special ID#70 t-shirt
 - > Dolphins: The Lighter Side (DVD)
 - > Signed copy of *Dolphin Mysteries* or *Are Dolphins Really Smart*

The cost of this rare opportunity is \$750.

Adopt a Wild Dolphin

www.adoptawilddolphin.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

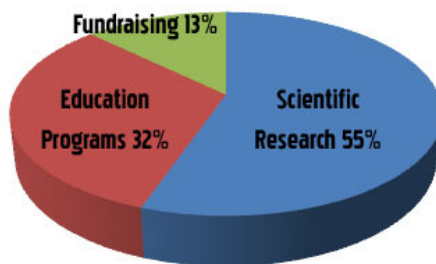
Volunteer, ecotour and internship opportunities for the public

Check page 7 for our current Name-A-Dolphin opportunity!

Holiday gift ideas
www.cafepress.com/holidaydolphin



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



Adopt-a-wild-dolphin t-shirts
tinyurl.com/y1fx44v



DCP Announcements!

Publications

Our recently published (in-press) paper is:
Melillo-Sweeting, K., Yeater, D., Dudzinski, KM. (2015). Dolphin sightings near the coast of Bimini, The Bahamas, 2003 – 2013. *Aquatic Mammals* 41.3: in press.

DCP has three papers currently in review at different journals. Each paper is first authored by a student collaborator with DCP. Congrats to each of them as these papers are the culmination of their Master's Degree programs! The citations for these review-pending manuscripts are:

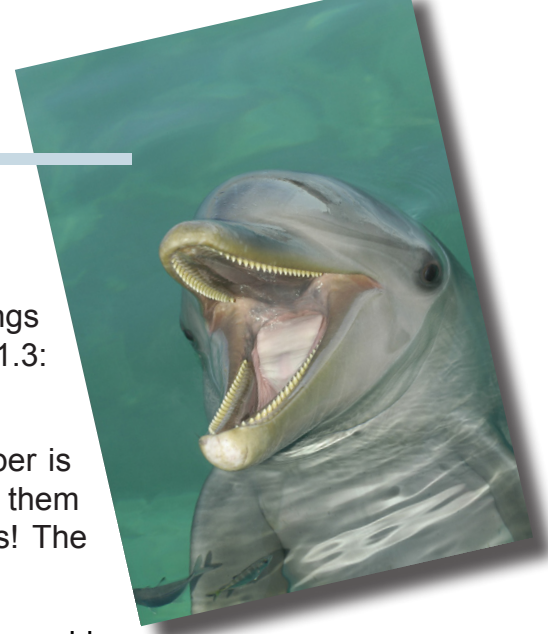
McIntosh, B., Dudzinski, KM., Mercado III, E. (in review). Dolphin whistles provide multidimensional cues to age and sex (Submitted to: *Animal Behavior & Cognition*)

Levengood, AL, Dudzinski, KM., Janik, V. (in prep). Is blood thicker than water? The role of kin and non-kin in non-mother-calf associations of captive bottlenose dolphins (*Tursiops truncatus*) (Submitted to: *Ethology*)

Reily, G., Dudzinski, KM. (in review). Whistle Types in a Captive Bottlenose Dolphin Population (*Tursiops truncatus*). (Submitted to: *International Journal of Comparative Psychology*)

In Other News ...

The eco-tour aboard the *SV Juliet* for August 2015 has been filled! Thank you all who expressed interest. In the autumn issue of the *Gazette*, we'll be sure to provide an update about any dolphins seen near Orange Cay ... way south of Bimini!!



DCP Roatan Eco-tour - October 2015

Space is still available to join our research team!

Roatan or Bust!!

Our next field session at RIMS/AKR is in October 2015!! And, there are still spaces available!! This program regularly has an intimate 6-8 participants and we already have 5 sign-ups! Check out the details for this year's week on our web site on DCP's Roatan Eco-tour Page (<http://tinyurl.com/DCPRIMS>). In addition to helping collect data on dolphin behavior and acoustics, you'll get to meet the dolphins up-close-and-personal! One lucky couple from 2014 got to spend some quality time with Maury (at right)! The 2015 research trip dates are from 24-31 October 2015. Details on pricing and what's included can be found on the DCP web site. So, what are you waiting for? Sign up now to join me collecting data on the dolphins who call RIMS home!!



DCP supporters get up close & personal with a DCP research subject!

Cheers,

Kathleen

DCP's Adopt-a-Dolphin Program

DCP currently has ~25 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!

All dolphin adoptions through DCP help support our dolphin research throughout the world, and the creation and implementation of local, national, and international education programs for students of all ages.

Each adoption costs \$30 and lasts for one year. Become a spotted dolphin parent today & support valuable scientific research!

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 | Tootie | 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 7485, Port St. Lucie, FL 34985.
 Credit card payment is available online through our web site at www.dolphincommunicationproject.org

Please **SEND** my adoption package to: _____ If this is a gift, please note gift **GIVER** address: _____

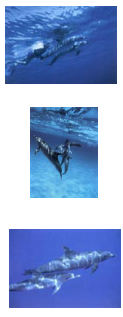
Name: _____ Name: _____
 Address: _____ Address: _____

 City: _____ State: _____ Zip: _____ City: _____ State: _____ Zip: _____
 Email: _____ Email: _____



Postcards

\$1.00 each/ 3 for \$2



Iruka Gear

To purchase Iruka gear visit www.cafepress/irukagear



Membership

Sustaining Memberships:

Donate from \$5 to \$100/month to receive a DCP memo pad and information booklet!

Annual Memberships :

- Student: \$20
- Individual: \$30
- Family: \$45
- Supporting: \$75
- Contributing: \$150
- Patron: \$500

Supporting, Contributing & Patron Members receive a DVD copy of *Dolphins - The Lighter Side*. Contributing & Patron Members also receive a photo album featuring images and information about all of our adopt-a-wild-dolphins. All gifts subject to availability and may change.

Visit www.dolphincommunicationproject.org to become a member today!

Notecards

\$2.50 each/ 3 for \$6



DCP Gear

To purchase DCP gear, visit www.cafepress/dcpgear



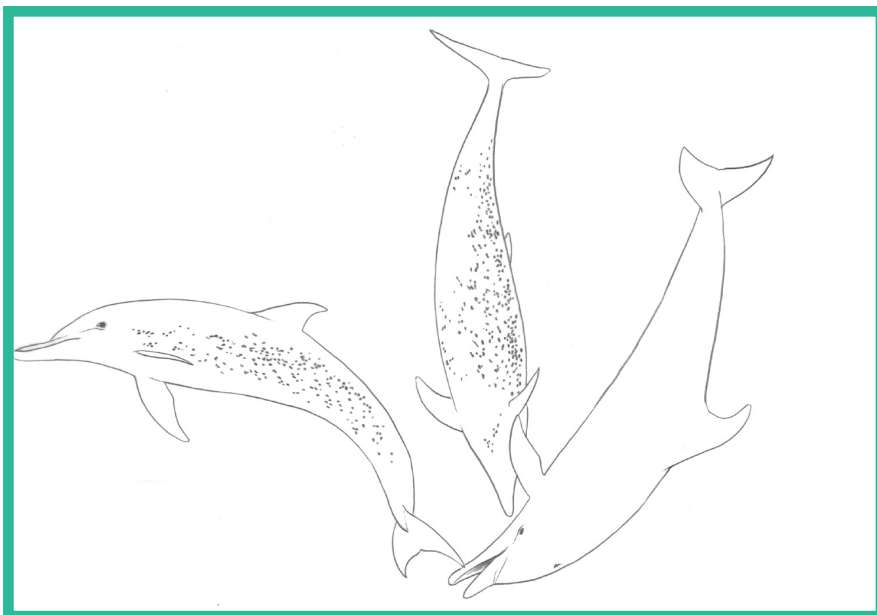
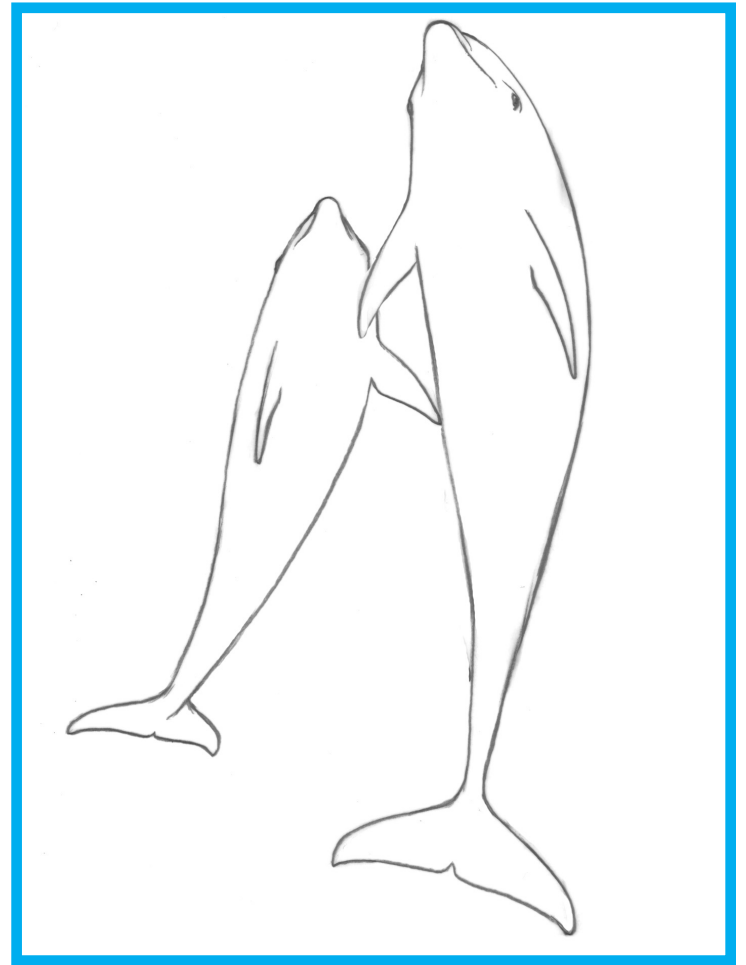
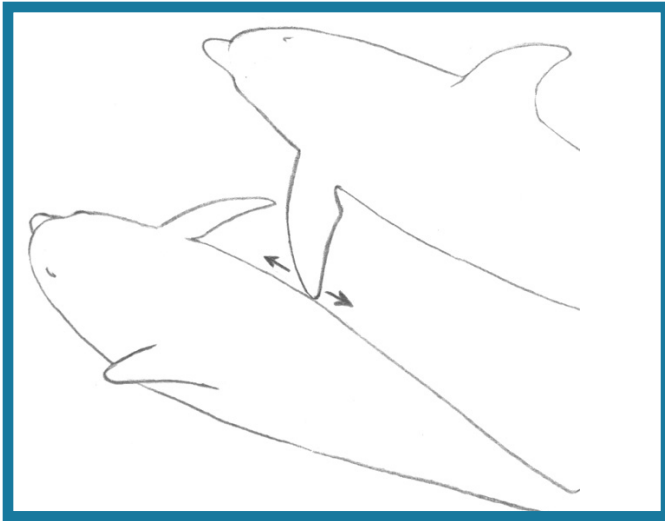
Support DCP's research efforts buy purchasing some of the many products that we offer for sale. All products seen here are also available on our website: www.dolphincommunicationproject.org All profits from the sale of these products will directly fund DCP's research and education efforts. DCP is a nonprofit organization.



Puzzle Time!

Coloring Time!

The images below are early versions of sketches from “Dolphin Mysteries” by Dudzinski & Frohoff. Each depicts a behavior discussed on page 6!



In the sketch to the left, can you tell the different in ages between the three dolphins drawn? What marking allows you to tell the difference?