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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 Upon Us!

This issue of the Gazette is jam packed with exciting new info about DCP-affiliated programs and research. Check out Dr. Marie Trone's essay about her studies of the Amazon river dolphins in Peru! She's using side-scan sonar and other acoustic gear to gain a better understanding of this species. In April, DCP began a partnership with Indian River State College for students to volunteer/intern their time and learn about data analysis techniques! We have 5 students currently participating in a service learning program. On a sad note, the marine mammal and psychology communities lost a colleague. Dr. Stan Kuczaj died on April 14. He was a long-time DCP board member and will be missed. There is much more in this issue ... Happy Reading!!

Cheers!

Kathleen



Photo credit: J. Anderson

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Mailing Address

Dolphin Communication Project
 P.O. Box 7485
 Port St. Lucie, FL 34985
 USA

FL Solicitation of Contributions
 Reg. #: CH42894

Thank you Volunteers & Interns!!

DCP thanks Nicole Danaher-Garcia, for your on-going help. Thanks also to IRSC service learning students (Ashley, Shelly, Sam, Roshni & Anne). 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.

Report from RIMS: Field course with StMU

Submitted by Dr. Kathleen Dudzinski

Spring Break was in Roatan, Honduras, with Saint Mary's University!

March 2016, spring break for 13 students and two professors from St. Mary's University was spent engaged in an intensive field course with DCP's own, Kathleen Dudzinski. The students gave themselves the field blog moniker of "Rattlers in Roatan" as tribute to their mascot and our time in the field. We had a full week of observations, data collection and both formal and informal lectures. We learned about the MVA (and even got to try it out using ourselves to film while snorkeling) and also about focal follow data collection. Of course, we met the dolphins at Bailey's Key and spent time trying to remember their individual scars and marks, as well as trying to follow them at the surface! Paya and Carmella had the most unique dorsal fins!



Happy Students from St. Mary's University!

We learned about the many tropical fish who call the reef around Roatan home, including several crustaceans! The fish ID talk gave us some key traits to look for when we snorkeled. We had our first ever snorkel sessions from the shore and from the boat ... as well as at night! We learned about sea turtle conservation and the dynamics of how they hatch and reach the surface of their nest! Some of us snorkeled among sharks and rays while others collected pH and particulate data from the shallows.

We visited Maya Key and gained some insight into the culture of the indigenous peoples and the region. We watched (and some joined in) as the Garifuna dancers shared with us their native dances. We joined in the crab races and cheered on our little hermits!

Some of us examined the soil samples and water quality while others did small research projects on the dolphins. We experienced first-hand field work and data collection. We discussed methods and approaches. We learned from the dolphin training staff about dolphin care and training. We got to meet the dolphins personally! We had the chance to talk about the details with Drs. Hill, Karlin and Dudzinski! We shared some great meals and met some really neat people at Anthony's Key Resort and at the Roatan Institute for Marine Sciences. It was a fun and educational trip!



The students had great opportunities to observe the dolphins.

This field course was the first time several of the students had traveled outside the USA. It will be remembered for years to come!



Group kayak day!

~Kathleen & the Rattlers in Roatan

The "Rattlers" had a great experience with DCP in the field. DCP also offers office-based programs - like the service learning program currently on-going with Indian River State College. Read about it on page 10!



Join Kathleen at RIMS!

Two Opportunities: October Eco-Tour or Winter Field Course

What: Eco-tour in Roatan!

When: 22 - 29 October 2016

Only a few spaces remain!

Our next field session at the Roatan Institute for Marine Sciences (Anthony's Key Resort) in Roatan, Honduras, is fast approaching. Our group will be limited to 16 participants and we already have 12 participants signed up! The small group size ensures that participants get personal exposure to DCP's research. Learn more about this great program (including the amazingly special price!*) on DCP's Roatan Eco-tour Page (under Get Involved). And, if you're not sure what the week will be like, check out our 2015 field reports on DCP's blog page (under Latest Buzz) for a glimpse!

Cheers,

Kathleen



A trainer checks on a pair of dolphins
Photo credit: J. Anderson

*\$800/per person rate based on double occupancy. For single rate, please contact DCP. Airfare, departure tax, alcohol, bottled water and soda are not included.



RIMS ecotour participants experience DCP's research - and the dolphins - close up!

Photo credit: J. Anderson

What's that? A special price you say?

\$1600 ... drum roll please ... for TWO people!

That's right, for just \$800 per person,* you can enjoy lodging, 3 meals/day, airport transfers, entrance into Bailey's Key Wildlife Sanctuary, horseback riding, kayaking, hiking, SCUBA diving, snorkeling AND you assist directly with DCP's research. PLUS, a portion of your trip cost comes back to DCP, thereby directly funding our research & education programs.

Submit your \$200/per person, nonrefundable deposit today!

Animal Behavior & Physiology Field Course!

When: 31 December 2016 - 7 January 2017

Where: RIMS, Anthony's Key Resort, Roatan Island, Honduras

What: Field Course in Animal Behavior & Physiology with Drs. Kathleen Dudzinski & Shane Kanatous

College-level students will be given first option to sign up.
Contact Kathleen (info {at} dcpmail {dot} org) for more details!

Amazon River Dolphin Project And Tucuxi Too!

Submitted by Dr. Marie Trone

Marie Trone, PhD, is a Professor of Biology at Valencia College, Kissimmee, Florida and an Adjunct Professor, Brain and Behavior Science at University of Southern Mississippi. Here she shares her exciting research on Amazon river dolphins!

Amazon River Dolphin Project

The Amazon River dolphin (*Inia* sp.) is distributed throughout the Amazon River watershed (Hrbek et al., 2014) and inhabits freshwater exclusively. This genus is an apex predator in this ecosystem, acting as an indicator species. Anthropogenic pressures are intensifying in the Amazon watershed due to increasing deforestation for timber and swidden agriculture, intentional and by-catch mortalities associated with fisheries, erosion, oil extraction, mercury facilitated gold mining, and pollution (Aliaga-Rossel, 2002; Martin and da Silva, 2004; Martin, et al., 2004; McGuire and Henningsen, 2007; Fundación Omacha & WWF Colombia, 2008). However, these animals lack the protection provided by endangered species status, as the International Union for the Conservation of Nature (IUCN) has listed the *Inia* species as “data deficient” in 2013 (<http://www.iucnredlist.org/details/10831/0>).



An Amazon River dolphin; It is rare for this species to leap out of the water as captured here.



The team during active recording.

Strong attempts have been made to obtain Amazon River dolphin population parameters using traditional visual techniques. Photo-identification, as well as line and strip transects, do not provide robust population data due to the *Inia*'s lack of a prominent dorsal fin, shallow surfacing behavior, extreme flexibility, swimming among trees in the flooded forest, and opaque water (Best and da Silva, 1989; Aliaga-Rossel, 2002; da Silva, 2002; Martin and da Silva, 2004; McGuire & Henningson, 2007; Gomez-Salazar et al., 2012).

I am part of a collaborative alliance, The Amazon River dolphin project, along with Hervé Glotin from the Université de Toulon (machine learning), David E. Bonnett from the U.S. Navy (acoustician), and Jerry Blakefield (signal processor). The goals of this group include improving *Inia* census accuracy by using high-frequency acoustical methods (i.e., greater than

1 MHz sampling rate) and identifying trends that may be correlated to anthropogenic stressors. We are exploring the possibility that there may be features in the echolocation clicks produced by *Inia* that would allow for more effective individual counting using automated, unsupervised machine learning methodologies. These techniques would increase data accuracy while decreasing the amount of time, money and manpower needed to conduct population censuses. This work has been featured in BBC Earth (<http://www.bbc.com/earth/story/20160426-why-one-species-of-dolphin-has-turned-pink>).

These goals are being realized by developing advanced digital analog converters and developing algorithms for automatic signal analyses (i.e., JASON box) to be used with commercially available hydrophones. These advances permit up to four hydrophones/microphones to be used simultaneously, sampling at 1 MHz each. In addition, HumminBird side scan technology is being used to obtain dolphin lengths, and to ascertain river bottom topography.

continued on page 5....

Amazon River Dolphin Project

continued from page 4



A tucuxi surfaces

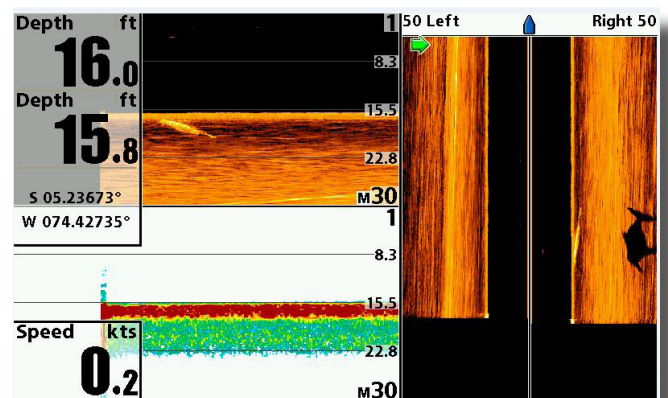
Bioacoustics Lab in the Peruvian Amazon

In conjunction with the Amazon River dolphin project, we are working to establish an international bioacoustics laboratory located downriver from Iquitos on the Peruvian Amazon. In addition to Inia, the tucuxi (*Sotalia fluviatilis*) also inhabits the Amazon River watershed and is amenable to investigations of cetacean bioacoustics. Moreover, this region is characterized by a broad spectrum of biodiversity, resulting in a natural composition of animal calls produced by an ensemble that includes bats, birds, primates, amphibians, insects and fish. The only way to travel to this pristine area of the Amazon is by plane or boat, as there are no roads connecting Iquitos to other cities outside of the Loreto region. Thus, there are fewer impacts resulting from human development when compared to other regions of the Amazon, making

this an optimal location for bioacoustics research. These efforts are being supported in part by the Centre National de la Recherche Scientifique (CNRS), Explorama Lodges, International Expeditions, and the Dolphin Communication Project.

In association with this proposed bioacoustics laboratory, an international Master of Science program in bioacoustics is being proposed to include partners from the Brain and Behavior Science Department at the University of Southern Mississippi, and the Computer Science Department of the Université de Toulon. Graduate students in this program would attend courses in experimental design, statistics and bioacoustics at the University of Southern Mississippi, and acquire computer programming skills at the Université de Toulon. Students would obtain their acoustical data by sampling at any of various locations, including the Peruvian Amazon, Chile, the Mediterranean, Florida, and possibly the Arctic.

In conjunction with this bioacoustics laboratory, a website that unites bioacoustics researchers in Latin America (BRILA) has been launched (<http://sabiiod.univ-tln.fr/brila/>). BRILA's mission is to unite scientists and resources across disciplines engaged in bioacoustical research in Central and South American countries. An auxiliary goal is to launch a citizen science portal within this website. As such, acoustic files obtained from the Peruvian Amazon will be accessible from this website, along with unique signal processing algorithms devised by Hervé Glotin. It is hoped that people residing in the jungle, as well as in developed countries, will access these files and contribute to our understanding of these acoustic emanations.



A screen shot of the HumminBird side scan sonar recording

Finally, this group is in the early stages of planning an international symposium on bioacoustics to be held at in the Peruvian Amazon in 2018.

Phew! We're busy! Thank you for reading!

~Marie

Double Your Donation!

With matching funds, your donation will have twice the impact!

Your Donation + Matching Donation = Double the Support!

Two DCP board members are stepping up to the (fundraising) plate! They will match all donations, received between now and 30 June, dollar for dollar!*

How do I donate?

Pay via credit card or PayPal at <http://dolphincommunicationproject.org/index.php/shop/donate>

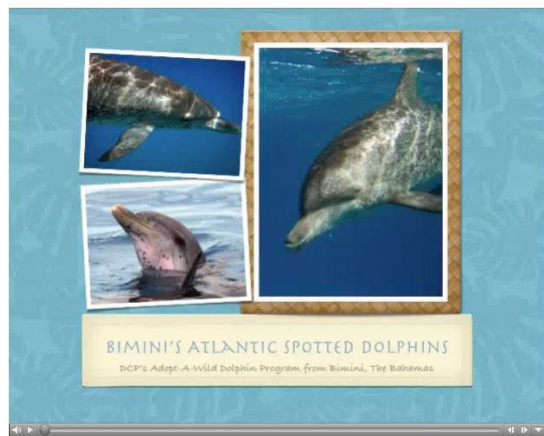
Pay via US\$ check made out to Dolphin Communication Project and mailed to:

Dolphin Communication Project, PO Box 7485, Port Saint Lucie, FL USA 34985

Where will my funds go:

Donations go toward DCP's research and education efforts. We keep our overhead extremely low and our research needs simple. But, we still to keep our website live, our computer programs and software current, and camera batteries charged! And at the moment, we are in need of funds to specifically support our 2016 Bimini research season. Kel still leads the charge, but research-assistant-extraordinaire Nicole makes 1-2 trips each summer to help. Airfare, baggage fees

and lodging all need to be covered. Plus, we needed new hydrophones this year! Your donations help make our programs possible - and therefore, ensure that we can study dolphin behavior, publish papers and reach out to students near and far!



Show your support by donating today!

<http://dolphincommunicationproject.org/index.php/shop/donate>

*All donations will be matched, with a maximum board donation of \$1,000

Prefer to shop to show your support? We have options for that, too!

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!

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!

DCP on Vimeo!!

Have you checked out the latest?



Latest Video: Innovation Study!

Check out the link below to see our latest Vimeo post. This video showcases the Innovative Study we conducted at Dolphin Encounters at Blue Lagoon Island in The Bahamas in late January/early February 2016!

<https://vimeo.com/160286950>

Other videos available for viewing:

Bimini Video 2015

DCP & Wildlife Acoustics

DCP 2015 Research Trip (RIMS)

RIMS Video 2013

Videos posted to the DCP Vimeo page are different from the video provided with Adopt-A-Wild-Dolphin kits. Adoptive parents who order a hard copy kit receive a DVD with footage of the Bimini adopt-a-dolphins. Ordering an electronic kit? You'll receive a link to the video! For more information on these videos, check out page 10.

If you are a YouTube user, you can still find DCP here!

<https://www.youtube.com/user/dolphincommproject>

Enjoy and Happy Watching!!



Your DCP Membership is Waiting!

Memberships go a long way to help DCP continue our research and education efforts and we are pleased to offer two ways to become a member: via a one-time donation or automatic monthly payments!

Sustaining memberships:

Choose your increment: \$5, \$7.50, \$10, \$15, \$20 or even \$100/month. Sign up once and your credit card or PayPal account will automatically be charged each month. No fuss. No muss. You can even choose a cool gift (dolphin memo pad or trading card!) as a thank you!

One-time memberships:

With membership levels accessible for all budgets, this membership options allows you to make your entire annual contribution in one go.

Name-A-Dolphin: #70

Why not surprise a special someone this holiday with a “Name-a-Dolphin” gift?

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:

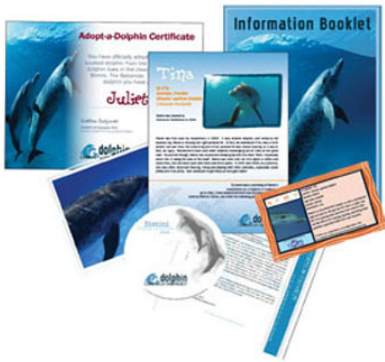
- > Special ID#70 t-shirt
- > Dolphins: The Lighter Side (DVD)
- > Signed copy of *Dolphin Mysteries* or *Are Dolphins Really Smart*

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

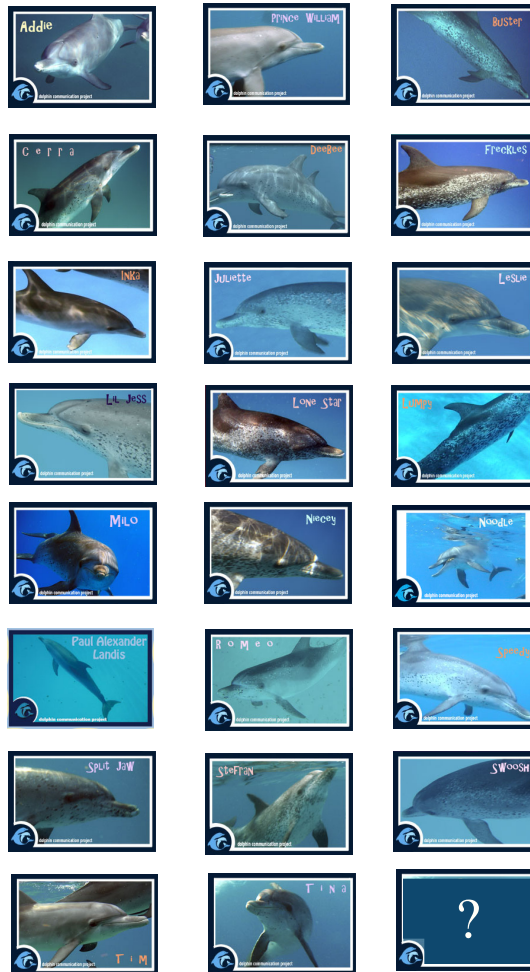
Biography of your adopted dolphin

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

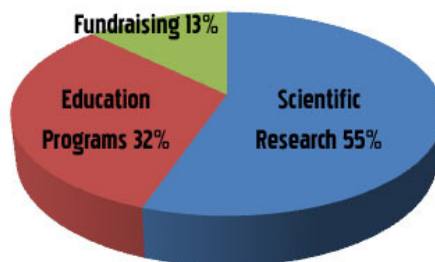
Volunteer, ecotour and internship opportunities for the public

Check page 8 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!

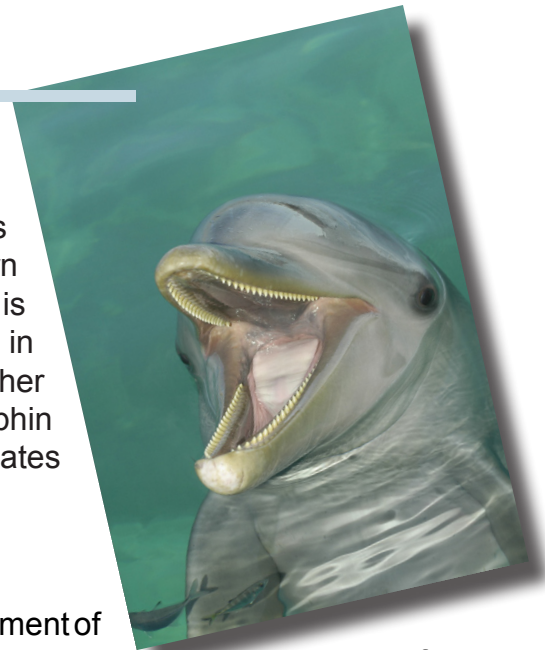
Welcome Sarah!

We are pleased to welcome Sarah Walkley to the DCP team. Sarah is a Master's of Science degree candidate at the University of Southern Mississippi, in the Psychology/Brain and Behavior Department. Sarah is examining vocalizations that might be associated with mouthing behavior in the bottlenose dolphins at RIMS. Kathleen looks forward to serving on her graduate committee. Sarah will spend the next 1-2 years analyzing dolphin vocalizations and behavior! Stay tuned to future Gazette issues for updates from Sarah on her research project.

In Other News ...

During April, I coordinated with Dr. Kelly Caffery, in the Social Sciences Department of Indian River State College (IRSC), to develop an internship/service learning program interested IRSC students. We had an information meeting and several pre- sessions. Students interested in developing their scientific method skills (e.g., critical thinking, data analysis, research question formation) were encouraged to participate. Several students joined our training sessions to learn how to recognize individual dolphins via naturally occurring scars and marks, to examine video data for dolphin IDs and preliminary behaviors, and to review still photographs for individual ID confirmation. I am quite pleased that five students registered through IRSC for the first DCP/IRSC Internship and Service Learning Class for the first summer session (May-June, 2016)! Welcome to Ashley, Shelly, Sam, Roshni, and Anne! I look forward to working with you and Kelly over the next several weeks and into the future.

~Kathleen



In Memory of Stan Kuczaj

1950 - 2016



On April 14, 2016, the world said goodbye to Dr. Stan Kuczaj, professor at the University of Southern Mississippi and Director of the Marine Mammal Behavior and Cognition Lab. Stan was not only a mentor the many students who passed through his lab, but he was a long-time member of DCP's Board of Directors.

A heartfelt essay of memories can be found in the *Aquatic Mammals* Journal: http://www.aquaticmammalsjournal.org/index.php?option=com_content&view=article&id=1415:memories-stanley-stan-a-kuczaj-ii&catid=148&Itemid=157

Learn more about the Marine Mammal Behavior and Cognition Lab: <https://www.usm.edu/brain-and-behavior/marine-mammal-behavior-and-cognition-laboratory>

American Foundation for Suicide Prevention <https://afsp.org>

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:

Name: _____
 Address: _____

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

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

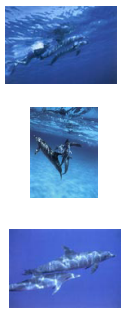
Name: _____
 Address: _____

 City: _____ State: _____ Zip: _____
 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.



Happy Coloring

Thank you to Ranke de Vries for your amazing and fun artwork!

