



JUVENILE TRANSITION: JAX'S JOURNEY FROM BOY TO MAN

One of the huge benefits to DRC's big, inter-connected, natural lagoons is that they give us the opportunity to have large and/or variable groups of dolphins living together. We can not only watch young dolphins grow and learn from their mothers in nursery groups, but also observe them as they mature in their social relationships and change their "roommates" appropriately upon growing older.

Dolphins go through two major social transitions throughout their lives. After spending an average of five years nursing in the wild from their mothers and learning important life and survival skills, young wild dolphins transfer into a juvenile pod. These groups include both genders. In this pod they continue to learn and hone those important life skills with dolphins similar in age. Once sexually mature, male dolphins transition to bachelor pods consisting of two or more male dolphins while the females return to maternity groups, sometimes the same ones in which they were born. At Dolphin Research Center, we place our dolphins in groupings similar to those found in the wild, giving them the same chance to

develop social skills they need to grow into well-rounded adults. This also gives our guests an opportunity to understand how dolphins in the wild live and develop socially.

Jax's life journey began in the waters around Jacksonville, Florida. In his first months of life, he received all the nourishment he needed by nursing from his mother. He may have even begun to learn some rudimentary fishing techniques and social skills. At around eight to ten months Jax's life altered dramatically. People in the area spotted him all by himself, missing some of his dorsal fin, part of his pectoral flipper, and part of his tail. As dolphin calves in the wild depend on their mothers for an average



Perhaps Jax and A.J. (pictured l-r) use the buddy system to synchronize this great dive.

of five years, it was clear that Jax was not at a stage to remain on his own. We are all still amazed that as young as he was, he had learned just enough, and luckily survived until he was rescued.

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DRC'S FLIPPERED FAMILY GOES TO CANADA!

Yes, indeed, you read that right. Canada! Our flippered friends took their first excursion to the land of Mounties, maple syrup and hockey by embracing some 21st century technology. With a web cam lagoon side, Kilo, Cayo, Kibby, Tanner and A.J. beamed through the Internet in order to reach children who could not visit us!

Since attending and being inspired by *DolphinLab* herself, France La Fleur, a Canadian citizen, had the dream of

exposing children in her own country to the wonders of marine mammals through Dolphin Research Center. She carried this flame of inspiration for a number of years and together we made this dream come true in April of 2010. Not only did France bring children to DRC for a *DolphinLab*, she worked with Kirsten Donald, DRC's Director of Education, and Jesse Fox, DRC's Information Technology Coordinator to organize three distance learning

events for their classmates back home throughout the course of the week.

Kilo and Mandy Rodriguez, Co-founder & Chief Operating Officer of DRC, were the first to land electronically in Quebec during the *DolphinLab* students' sea lion demonstration. While Kilo showed off the unique features that make him a sea lion and amazingly adapted for land and sea, Mandy spoke

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BECOME PART OF THE ADVENTURE

Dolphin Research Center is a not-for-profit organization that conducts innovative research and education projects. We invite you to join our unique family by becoming a member of the Dolphin Society. As a member, your tax-deductible donation will help us provide the best environment and care humanly possible for the dolphins and sea lions who call DRC home. Your membership will also support our manatee rescue program and provide the educational programs that encourage our guests to become ambassadors for all marine animals and the environment we share. Annual memberships are available in several levels:

Individual (\$40 for adults, \$25 for full-time students with proof of enrollment) – receive a subscription to the *Dolphin Society* newsletter, our e-newsletter, a 10% discount on most gift shop items, free admission for one to DRC for one year, and one free guest pass.

Trio (\$70) – receive all the benefits of an individual membership plus free admission to DRC for up three people for one year.

Gray Cross (\$90) – receive all the benefits of the Trio membership plus a subscription to our quarterly *Gray Cross* newsletter and free admission to DRC for up to four people for one year.

Sponsor (\$150) – receive all the benefits of the Gray Cross membership plus the opportunity to sponsor a narrated session at DRC and admission for up to five people for one year.

Research Team (\$500) – receive all the benefits of the Sponsor membership plus receive a personal tour of the Research Tower (by appointment) and admission for up to six people for one year.

Memberships can be purchased via our website at www.dolphins.org, by phone (305) 289-1121 X229, or by mailing your check or credit card number to DRC, 58901 Overseas Highway, Grassy Key, FL 33050. Please note that memberships are not transferable and the member must present photo identification for admission.



NEWS FROM THE DRC BOARD OF DIRECTORS

Dolphin Research Center's Board of Directors recently met at DRC for the annual meeting of the Board and has exciting news to share. Celie Florence has assumed the position of Chairperson. Joanne Zimmerman continues as Treasurer. Bryan Barker has taken over as Secretary. Peter Lappin now serves as member-at-large.

The Board is also pleased to announce that Rhoda K. Stevenson of Jacksonville has joined as an at-large member. An acclaimed veterinarian since the early 1980s, she is a certified avian specialist and has owned the Exotic Bird Hospital in Jacksonville since 1995. Among her many professional affiliations, she is a member of the Animal Health Committee at the Jacksonville Zoo and a Consultant for Marineland in St. Augustine. Rhoda has long supported DRC, including her tremendous efforts with the special event to benefit Jax in Jacksonville in 2008, as well as regular participation at Founder's events. She is already hard at work with the rest of the committee planning the next DRC event in Jacksonville scheduled for October 7th.

"DRC is truly fortunate to have excellent leaders and very caring people serving on the Board of Directors," states Rita Irwin, President and CEO. Rhoda's addition is one more reason that we look forward to increasing success in our future."

GREAT EXPECTATIONS!

Dolphin Research Center is thrilled to announce that three of our beautiful lady dolphins are expecting babies! Congratulations to Tursi, who is due in early November, as well as Merina and Calusa who are both due later in November. To say we're excited is a whopper of an understatement for several reasons. For one, Tursi's calf will be another son or daughter for Kibby. Secondly, both Merina and Calusa conceived through artificial insemination (A.I.)

Dolphin Research Center's involvement in artificial insemination research is the ongoing fulfillment of our early vision that began over 20 years ago when Jayne Shannon Rodriguez first attended meetings of the Alliance of Marine Mammal Parks and Aquariums (AMMPA). At those meetings she shared DRC's strong belief that member facilities needed to focus on A.I. capability in order to ensure genetic diversity and the strength of our resident populations far into the future. Although back then A.I. was regularly used with humans and livestock,



Those who know Calusa can already see how she's grown during her pregnancy.

technology lagged when it came to dolphins. The first births of cetaceans conceived through this method did not occur until 2001. At DRC, Cayo's birth in December 2006 marked our first successful A.I. venture!

There are numerous reasons why this science is so important. It's vital to not breed related animals to each other. Inbreeding may lead to serious health problems in future generations. Promoting genetic diversity keeps the family pod strong and healthy, but how do you achieve this when many of the dolphins are related?

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Distance Learning, from page 1

on his behalf to simultaneously inspire both the students onsite as well as those in the cold north.

On the second day of 'Operation Canada' Cayo and Loriel Caprio, Assistant Director of Animal Training, invited *DolphinLab* and their Canadian

classmates dock side to observe new training principles in action. Cayo was eager to show off her progress on her flip in training amidst shouts of excitement coming from *DolphinLab* as well as through the Internet of those watching from the classroom.

The last day of our distance learning adventure gave the school children back home the opportunity to see their friends in *DolphinLab* try their flippers at training. Each student came down on the dock to say hello to Kibby, A.J. and Tanner and ask them for several of their favorite behaviors while Mandy narrated their experience and fielded questions from the students in Canada.

Each presenter wore a headset which allowed them to interact with the students in their home classrooms. They described things as they happened and responded to the inquiries that popped into the brains of those watching. Frequently asked questions included: "How long do sea lions live?"; "How long do dolphins live?"; "What do dolphins eat?"; "How do you recognize different dolphins?"; "Are they mammals or fish?"; "How do they swim so fast?"; and "How smart are dolphins?"

True to our mission, each session included what threats marine mammals



Assistant Director of Animal Training Loriel Caprio (seated left) instructs the class in how to station and signal Cayo while Director of Education Kirsten Donald (standing left on dock) explains the process to the students watching from Canada. France LaFleur, the Canadian educator who organized the group and DRC's IT Coordinator Jesse Fox (right on platform) made sure the technology worked.

face and what everyone can do to help them and their environment, including admiring wild animals from a distance and the importance of "Reduce, Reuse & Recycle". What was most powerful was the connection forged over a vast distance between the students in Canada and the animals and staff of DRC. Though thousands of miles away, technology enabled us to demonstrate the love and respect DRC holds for our marine friends and their environment.

The impact on both *DolphinLab* students and their friends back home was evident in their applause and exclamations upon seeing Kilo, Cayo, Kibby, A.J. and Tanner, as well as the questions they asked. The inspiration they had been given shined through when the visiting *DolphinLab* students ended each session with a personalized cheer about DRC which was then echoed from their classroom counterparts in Canada.

So, where to next? Stay tuned and see. Thanks to modern technology our flippered friends are riding the wave of the future and traveling the world. Who knows? They could land at a school near you!

-Kirsten Donald

Adopt-A-Dolphin

You can sponsor your favorite dolphin or sea lion at DRC through our Adopt-A-Dolphin or Sea Lion program. Experience the warm feeling that comes with knowing that you are helping to provide for the care and feeding of your friend. Your tax-deductible donation for a membership will help us to fulfill our promise to provide the finest home humanly possible for our marine mammal family. Memberships are available in several levels:

E-Dolfriend (\$15) – receive an electronic membership that includes a subscription to our monthly e-newsletter and an e-mailed full-color certificate with your favorite dolphin or sea lion's picture and a biography about your friend you can print out at home.

Dolfriend (\$50) – receive a subscription to the *Dolphin Society* newsletter, our e-newsletter, a 10% discount on most gift shop items, a color certificate with your dolphin or sea lion's picture, a biography about your friend, free admission for two to DRC for one year, and one free guest pass.

Pod Pal (\$100) – receive all the benefits of a Dolfriend membership plus a subscription to our *Gray Cross* newsletter and free admission to DRC for up to four people for one year.

Parent (\$240) – Provide the ultimate support for your friend by pledging \$20 per month to sponsor one of their meals each month. You will receive all the benefits of a Pod Pal membership plus free admission for up to five people for one year and silver bucket stickers for your certificate to represent the meals you provided for your dolphin or sea lion friend.

Adopt-A-Dolphin or Sea Lion memberships make a great gift and can be purchased via our website at www.dolphins.org, by phone (305) 289-1121 X229, or by mailing your check or credit card number to DRC, 58901 Overseas Highway, Grassy Key, FL 33050. Please note that memberships are not transferable and the member must present photo identification for admission.

www.dolphins.org

Innerspace or cyberspace, the dolphins of Dolphin Research Center look forward to your visit.

Pregnancy. from page 2

Take DRC for example, where Merina is the sister of Talon, Aleta, and Santini. Her daughter Pandora is the daughter of Kibby which means that she is both the cousin and the half sister of little Delta, as well as being sister to Calusa and Cayo. Calusa's father is Rainbow who is also the father of two of Tursi's offspring Pax and Gypsi. Ten of the 20 dolphins that live at DRC are descendants of our beloved Delphi! These are just some of our family's ties.

Except for rescued animals, such as Jax, who could not be released to the wild, facilities in the United States have not taken additional dolphins from the open oceans in almost 25 years. Introducing new genes into existing colonies through the process of "male meets female" isn't a readily available option. Some places share their dolphins by transporting them between facilities. Although this certainly works, and was pretty much the only solution at the time, it is expensive and possibly risky to move dolphins around on a regular basis.

Artificial insemination allows the boys to stay home while only their semen travels. That's easy in theory, but the practice and procedures are really quite involved. Still, DRC recognized the value of committing time, money and other resources to increase our knowledge and experience. When the opportunity arose, we jumped on it! "Mike Muraco, who was curator of the dolphin facility at the Mirage in Las Vegas, approached us with the idea of teaming up with us and some other facilities with small populations," explains Kathy Roberts, DRC's Vice President of Corporate Communications and Special Projects. "He, his wife Holley, and their colleague Dr. Dennis Arn offered to share their

expertise with the process of tracking female dolphin ovulation, in developing protocols for the medical behaviors including voluntary ejaculation, and in how to perform the transcervical inseminations when one of our females was ovulating."

DRC, Miami Seaquarium and Theater of the Sea all began training our male dolphins so that we could

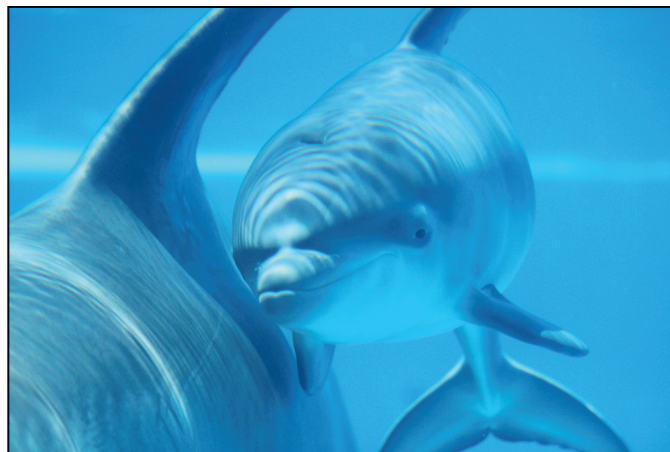
to obtain urine and blood samples for the hormone analysis used to track ovulation in females and, later, to help determine pregnancy. The dolphins are also accustomed to stretching out for full-body ultra sound examinations," explains Medical Director Pat Clough.

Back in 2005 when Merina ovulated, the Mirage team flew into Florida to do the transcervical insemination. Pat, DRC's veterinarian Dr. Mike Renner and our training staff assisted. Last November, Pat, Mike, and the DRC team successfully performed the inseminations of Merina and Calusa without outside mentors present.

Timing is everything. Dolphin behavior often provides the first hints that a female might be ready to cycle. One of the girls might start acting sexy or the males will show increased interest in a female in a neighboring lagoon. At that point, Pat performs an ultrasound examination of the female's ovaries, looking for potential follicles indicating reproductive cycling activity. "She has worked very hard to develop her expertise at spotting and tracking these follicles," Kathy says. When a female is cycling, Pat monitors the growth of the follicles daily and DRC makes plans to receive semen from a previously selected donor male. (More on that later.) "When a follicle is closer to ovulation size, we test the urine for luteinizing hormone (LH). A spike in the LH tells us ovulation is about to occur and it's time to inseminate," Pat adds.

After the insemination, we regularly test blood and urine samples from the female. "An elevated progesterone level that sustains over several weeks may indicate pregnancy," continues Pat. "At approximately 10 weeks, an ultrasound examination can confirm the

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Top: We won't know for some time whether Rainbow or A.J. is the father of Chelsea's calf, but that is one cute baby! Photo by: Sara Wielandt, Six Flags Discovery Kingdom

Bottom: We're thrilled that the science of A.I. permits Talon to become a father. His Flipper genes are now swimming in California! Photo by: Ashley Jackson, Six Flags Discovery Kingdom

voluntarily obtain semen and supply it without charge to our colleagues. Thus, the Free Sperm Trade Agreement was formed!

"Fortunately, DRC has always been proactive in teaching voluntary medical behaviors to the dolphins. In addition to semen from the males, we are able

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Jax was rehabilitated at Gulf World Marine Park in Panama City. Due to his youth and injuries, the government decided that he could not be released back into the wild. Gulf World asked us if we could give him a home and after seeing what a good fit he would be, Jax was adopted forever into the DRC family!

Since Jax was about a year old when he arrived at DRC we thought it would be best for him to go into a maternity group with other dolphins around his same age. Luckily, Tursi, one of the most maternal dolphins at DRC had a daughter, Gypsi, close in age to Jax which created the perfect fit. After acclimating to life at DRC and learning a lot of social behaviors from Tursi and Gypsi, Jax and the girls moved into a bigger maternity group with other females and calves. During this time Jax was able to play with Gypsi and Cayo under the supervision of their moms, Merina and Tursi. Still in a maternity pod, he learned what it was like to live with females, and found out what was, and wasn't proper etiquette.

Calves in human care mature faster than those in the wild as they have no need to spend time learning how to hunt or evade predators. The moms usually provide a number of behavioral cues that let us know they are ready to get back to life with their girlfriends, which subsequently leads to them moving into a child free lagoon. The kids probably thought that was the best thing that could happen to them because now they had free range to play and do whatever they wanted. Everything was play time. They probably didn't realize this was also a great learning time. They especially learned communication with each other through their interactions. They developed a dominance hierarchy, in which it seemed Jax was pretty



Cayo and Gypsi are only a month apart in age, so they make a natural pair, even on great behaviors like this back dive.

submissive to Cayo and Gypsi. After much observation of the kids, we realized Jax seemed a bit more socially advanced and focused on some pretty mature, adult behaviors. At that point we realized that Jax was either an accelerated youngster or that he might be older than he appeared. Either way, he appeared ready to have his first relationship with another male dolphin in a bachelor pod so he could learn how to become an adult male dolphin.

To decide which dolphins live together, a committee at DRC discusses all of the options and chooses the dolphins whose dolphinities best match up. With little Jax we knew that it would not be the best option to put him in with our big boys, Talon, Rainbow, Sandy, and Pax. Those four males have already formed what we believe are pair bonds (Rainbow & Sandy and Talon & Pax). A newcomer into the group would most likely not "fit" anywhere, and might be seen as an intrusion to their comfortable pairs. It would be easy to imagine that eight year old Tanner would be a good match, being the closest male in age to Jax. However, in the past year Tanner has been making the leap from boyhood to manhood. He is playing rougher with his buddies, and practicing dominance techniques. This is all normal and good for a developing young male, but not

the best time to have a little friend move in. Imagine asking a teenager to entertain a 10 year old all the time!

Looking at all of our possibilities, we chose 21 year old A.J. For the past five years he has lived with his son, Tanner, teaching him how to interact with male dolphins and occasionally showing him his place in the lagoon. A.J. is an extremely gentle dolphin and he is very good at teaching younger males how to "earn their merit

badges" as they become young adult dolphins! This can be seen during sessions as well as in between when he interacts with his buddy: swimming together, teaching respect, rolling around and "playing rough". All this is part of growing up if you're a young boy dolphin.

A.J. and Jax seemed to get along right from the beginning. Not only did A.J. seem excited to meet his new little friend but as an added bonus, some lovely lady dolphins lived in the adjoining lagoons! Jax is now not only learning to interact with A.J., but he is also watching A.J. chat with their neighbors and learning what is like for an adult male to interact with adult females.

Jax and A.J. make such a great pair. They are both very gentle dolphins, not only with each other but with people as well. They love interacting with their trainers and guests. We have noticed Jax is very interested in his next door neighbors, Luna and Delta, our newest additions to the family. Who knows, maybe Jax will someday be a "big brother" role model for Aleta's baby boy, Delta, when it's his turn to transition from boy to man!

-Jamie Stevens

TIDBITS

A.J.: A.J. is helping our little Jax transition to become a grown up male dolphin. You would have thought these two have known each other for years. Our gentle, loving A.J. is very patient with his young friend.

Aleta: Aleta is our super soccer mom, cheering Delta on as he takes fish from his trainers. Aleta lets him know it's ok to play with the snack even though the mangrove snappers may get it!

Calusa: Calusa is our very vocal gal, loudly screaming at guests as they walk by, letting them know she is on the scene. Sometimes if we say "hi" we get a big raspberry, but that's what makes her so unique!

Cayo: Cayo has learned her signature whistle, which sounds so beautiful! She is excited about it and wants everyone to hear it, even outside of sessions. We often see her at the front wall demonstrating her new sound to the crowd!

Delta: Delta is a very active youngster. During sessions, he loves to follow Aleta out for behaviors and is quite the little jumper! Even though he's only around 7 months old, he also does a good job keeping up with Mom during speed runs.

Gypsi: Gypsi, our 'above and beyond' 3 year old, has been learning her voluntary watering medical behavior with trainer Kelly Jayne. Our little girl has even accepted the tube and a small amount of water! Go Gypsi!

Jax: Jax loves his new home and adores his new roommate A.J.! Jax even imitates his new favorite buddy, trying out the fountain behavior. This is one that Jax never did before he moved in with A.J. but he's picking up the action quickly.

Karen: Karen is still becoming familiar with the natural lagoon, but is not afraid to get in the water with trainer Kelly Jayne. She gets so excited and swims side by side with Kelly Jayne, almost hugging her!

Kibby: Kibby, our handsome older



Merina (front) is always eager to grab a quick gelatin snack

man, has not lost his game with the lovely ladies. He has been seen chatting it up with Merina and Gypsi from his lagoon on the other side of the bridge and even takes time out of his sessions to make sure they know he is still there!

Kilo: As Kilo enters mating season, which is called "rut" for sea lions, he is not afraid to show off his big puffy chest as he talks to his girlfriends, Karen and Renee. He likes to spend his afternoons impressing them with his bark.

Luna: Luna, our bright little girl, loves backrubs from trainers and guests. She comes back and swims under their hands again and again and again!

Merina: Merina is making sure her roommates know she is the top dog even when it comes to snack time. During enrichment time, Merina is such a huge fan of the special gelatin squares we offer that she ignores the

ice cubes we toss out, happy to let the others gobble them up.

Molly: Molly, who recently moved to the front lagoon, loves surfboard enrichment time! She pops up alongside a trainer on the surfboard and then swims in front of the board to catch a wave--Surf's Up, Dude!

Pandora: Pandora recently played a matching game with trainers. She did great with the activity, while also keeping a close eye on daughter Luna, who tagged along for the session. This is Luna's first thinking game and, hopefully, she'll continue to be interested when Mom plays.

Pax: Pax must have known how hot it was outside because he decided to get visitors soaking wet with his crowd splash behavior. Pushing huge waves of water up on the causeway, he provided a nice cool down for the audience. Thanks, Pax man!

Rainbow: Rainbow likes to be in on all the action in the lagoon. He enjoys making surprise visits to our guests interacting in the water with his lagoon mates Pax and Talon. Rainbow comes by the program docks to say hello, even if it means slowing down on a speed run to do it!

Renee: Renee is looking good as she shows off her new behavior 'Shame'. She has nothing to be



Rainbow's speed run is spectacular, even when he takes a detour to visit his pals.

ashamed of-- she is a beautiful smart gal!

Sandy: Sandy, who is one of a kind, is bringing up huge rocks to guests and trainers, trying to outdo his partner in crime, Rainbow, who gathers traffic cones from the bottom!

Santini: Santini is a great shopper and she showed off her exquisite taste when she offered a guest an old earring shaped like a fish as a present. What a fashionista!

Talon: Talon celebrated his 20th birthday by participating in the 'Less' research project. Nothing like showing off brains and beauty on your birthday! Happy Birthday, Big Guy!



Tanner makes a great fountain, doesn't he?

Theresa: Theresa is also one of our new ladies in the front lagoon. She has decided to show off some of her old behaviors - such as her signature 'flop'

and spiral dive. It just shows that her memory and agility remain in good shape with age!

Tanner: Tanner has mastered the 'fountain' behavior that he and his trainer have been working so hard on! He now wants to show it off to everyone, which means he does the behavior even without being asked!

Tursi: Tursi demonstrates that you are never too old to learn something new! She is learning the behavior 'repeat' but not on her own. She partners with Merina who shows her how it is done! Before long, Tursi will fly solo on this thinking game, too!

-Erica Wisniewski

WHAT MARINE MAMMALS TEACH US EFFECTS FROM ENVIRONMENTAL DISASTERS

Here at the Dolphin Research Center one of our most important goals is to educate the public about marine mammals. In doing so, we hope to inspire people to care about marine mammals and the environment they live in and share with us. We know that this is working because we receive numerous emails from people telling us that after visiting DRC they returned home to practice "green" living, such as signing up for beach or park clean ups, and practicing the "three R's" of reduce, reuse, recycle. This is very rewarding for us in that it shows that we, along with the dolphins and sea lions, are getting through to people and making a difference. However, what happens when the environmental impact is manmade? How do we protect the animals that rely on the ocean as a way of life? In order to figure this out, we realized we must go to the source -the animals - and once again, they did not let us down.

Everyone, by now, is familiar with the oil spill in the gulf. The amount of oil spilled from the Deepwater

Horizon disaster has now surpassed that of the Exxon-Valdez spill, and experts are saying that the environmental impact will be unprecedented. The threat to marine life is obviously a major concern of marine mammal facilities, especially those that could be directly affected. The main concern is the affect on the dolphins and how they'll react. Since nothing of this magnitude has happened so close to our shore, there is little information to go by. However, thanks to a study conducted at DRC over two decades ago, we have somewhat of a reference point.

The purpose of the study done in 1983 was to see if dolphins could detect an oil slick on the surface of the water. The dolphins viewed a cylinder filled with water and were trained to push a paddle when they detected something besides water in a cylinder. It was shown that the dolphins could detect the difference between oil and the uncontaminated surface of the water.

The next portion of the study showed that dolphins would actually

avoid an oil slick. When encountering oil, either accidentally or as part of the study, the dolphins displayed an overt startle response. The oil was avoided both during the day and at night and their tactile sense played the most important role in their response to the oil. The memory of the oil's location also influenced their behavior, even after it was removed. The strength of their reaction to the oil helped to lessen our fear that they would unknowingly be exposed to oil spills.

Unfortunately, we cannot predict when these disasters will happen, but thanks to our dolphins, we cannot only better prepare, but also learn ways to ensure their safety and well being when these events do occur. As always, our dolphins are playing an important role in educating the public about themselves as well as their environment. It is our job to take all that we learn from them to heart and do our parts to provide a safe environment for them to live.

-Debbie Rose

LEARNING TO TRAIN THE FURRY, “FLIPPERED” RESIDENTS OF DRC

Guests are sometimes surprised when they arrive at Dolphin Research Center to find that we are also home to three California Sea Lions. Although not always as visible as the dolphins, Kilo, Karen, and Renee play an important part in our efforts to educate the public about marine mammals. If you have the opportunity to catch a sea lion training session it is always a real treat as they are very different from the dolphins' sessions. As trainers, one of the questions we get asked the most is, “How is training a California sea lion different from training the dolphins?”

There are several similarities in training the sea lions and dolphins. All of our training at DRC is through positive reinforcement. We give the animal a signal for a behavior, then if they perform the correct behavior we “bridge” and reward. A “bridge” lets them know the exact moment at which they accomplished what we were looking for and that they should return for some type of reinforcement. The bridge however can vary depending on which species you are interacting with. We use a whistle most often with the dolphins. A short blast of the whistle lets the dolphins know they did exactly what their trainer asked and that we wish to share our excitement with them for doing so well.

Kilo is trained to respond to the same whistle as the dolphins, as well as a verbal bridge. With Kilo, Karen, and Renee we use the word “good” to tell them that they correctly performed a behavior. We use verbal signals as well as hand signals to ask the sea lions for a behavior. Verbal cues work really well with them for several different reasons. First, their hearing range is similar to ours, thus they can easily decipher our different words. Second, as sea lions get older they are prone to eye problems due to exposure to UV light. For

example, Karen is completely blind and has been for several years, and Renee is completely blind in one eye and only partially sees out of the other. If sea lions are trained to do their behaviors with only hand signals and then they lose their sight, as a trainer you have lost your ability to communicate with them. Training verbal signals is a proactive way to ensure that behaviors



Sarah adds to her height and size by standing on a sea lion seat when working with Kilo during a session.

aren't lost. While more often done with the sea lions, we have done much the same with our lovely grandma dolphin, Theresa, who also has compromised eyesight.

Trainers might say another difference of working with the sea lions versus the dolphins is that it is a different experience to have the sea lions up on land with you. As a trainer we have to think about how to move around the habitat with such a large animal. With Kilo we try to have him move first and then follow him, which eliminates him having to walk behind us. However with Karen and Renee we often have to guide them around the habitat due to their limited vision.

It can be intimidating at times to be face to face with such a large animal. So the most important thing I have learned when working with sea lions is

to exude confidence. Sea lions have a natural dominance structure and it is especially typical of the males to want to be “top dog”. When training, we want to be equal partners with them, not dominate them. This is achieved through spending time building a trusting relationship.

In some ways the sea lions can seem more challenging. Trainers have to constantly think on their feet, analyzing each behavioral response, and making appropriate decisions on how to bridge and reinforce. Learning to interact with the sea lions gave me the unique opportunity to be coached by Mandy Rodriguez, DRC's Co-Founder and Chief Operating Officer. Mandy shared his extensive knowledge of working with sea lions. One of the most important things he told me (which is now an inside joke around DRC), is that since I am a very small trainer, I needed to have the “attitude” of a much larger person for “beach master” Kilo to take me seriously.

So before going in the sea lion habitat for every session, Mandy would ask me, “Sarah, how big are you?” I would assertively respond, “I'm 6 foot 5, and two hundred and fifty pounds!” Of course my response had to keep growing the larger Kilo got, too!

When new trainers at DRC start learning to interact with the dolphins, the first thing they do is go down on the docks and play. This introduces them to the dolphins and vice versa, and is the beginning of forming important relationships they will later rely on. The next step is learning to feed the dolphins by “free feeding” which is just feeding while you play. Learning to work with the sea lions is a similar process. First you shadow other trainers, allowing the sea lions to get used to your sight, smell, and voice. Next, you learn to free feed them but it is usually done

See Sea Lions, page 10

OCEAN CELEBRATION DAY 2010

Every spring for the past 10 years, a “tornado” has struck DRC. Not the kind that causes devastation and destruction but one that strikes almost every corner of DRC and leaves an aftermath of environmental stewardship. It’s DRC’s annual Earth Day celebration that we call Ocean Celebration Day.

This energy packed day gives 3rd and 5th grade students from all over the Keys the opportunity to learn about the ocean, its inhabitants and ways to protect it. It feels like a tornado because about a dozen bus loads of students arrive at once in the morning, move through 14 different stations over a

four hour period and are gone by 1:30. In that short time approximately 300 students and chaperones are touched by the activities available at each station. Whew!

In all seriousness, this is one of the best days at DRC because it represents a huge team effort. This day may be organized and coordinated by the Education Department but it could NEVER run smoothly without every department’s involvement. Staff members from all departments as well as volunteers and interns get a change of pace by helping out as time keepers, handling check-in, running educational-interactive stations, directing traffic in the parking lot or monitoring the lunch area. Outside environmental groups also participate and, of course, the dolphins are the highlight of the day!

Subjects from ocean debris, coral reef, sea turtles, key deer, manatees and wild marine birds are explored in a variety of settings. There is even a puppet show about dolphin conservation. Since we are still open to the public

on this day, our general admission guests or guests who have signed up for our interactive programs enjoy visiting the educational stations as well. I had one couple this year tell me they almost didn’t stay when they saw all the school buses in the parking lot. Visiting DRC was what they had planned for that day so they came in, had a fantastic time, and were very impressed with the entire event!

Each year we don’t think we’ll survive it and each year, when it’s all over we immediately start talking about how much fun it was, what went well and how to improve for the next year. We’d like to acknowledge the outside environmental groups who helped out this year: Bahia Honda State Park, Marathon Wild Bird Center, The Turtle Hospital, Reef Relief, Florida Keys National Marine Sanctuary and the Key Deer Refuge. This wide range of presenters, along with the DRC stations such as Manatee Rescue, feeding strategies of baleen and toothed whales, dolphin acoustics and dolphin babies, offered a tremendous assortment of conservation messages for the future caretakers of the environment.

-Jennifer Powell



Young students work on a conservation poster as one of the many activities during Ocean Celebration Day

Pregnancy, from page 4 pregnancy.”

How do we select a male to be the baby daddy? Kirsten Donald, DRC’s Director of Education extensively studied population analysis for her Master’s thesis in Marine Mammal Science and is our “go-to” person for demographic and genetic information. She maintains detailed charts on our own pod as well as candidates at other facilities. “The key to long term survival is to add new non-related genes to the pool,” she says. “Founder males are those who were born out in the open oceans, such as Rainbow, Kibby and Jax here at DRC. We want the Founder animals well represented because they provide the greatest genetic diversity.” The first choices for fatherhood are Founder males with the least number of offspring. Jax is still too young, but

both Rainbow and Kibby have fathered calves here at DRC.

When selecting a potential dad from another facility, we look at the Founder males and how related they are to other dolphins either at their own homes, or here at DRC or other places. Cayo’s father is Noel from Miami Seaquarium. So, for the current A.I. ventures, we selected different donors. The father of Calusa’s calf-to-be is a guy named Merlin from Six Flags Discovery Kingdom in California, where the Muracos now work. Merina was inseminated with semen from JJ at Miami Seaquarium and Stormy from Theater of the Sea. DNA analysis after her baby is born will determine the father’s identity.

“Although we’re acting locally, our actions and advancements make a

positive impact globally in the marine mammal community,” Kirsten adds. This is evident in the recent births of two beautiful dolphins at Six Flags Discovery Kingdom. One, a boy was born to a beauty named Jasmine and his father is our own handsome Talon! The other calf whose gender is not yet confirmed was born to Chelsea. This baby’s daddy is either A.J. or Rainbow.

You know the expression, “It takes a village to raise a child”? Well, at DRC it takes all of us cooperating to conceive a calf. In addition to the medical staff and trainers working directly with the dolphins, other staff members and volunteers act as “semen transporters”. They deliver the product packages to Fed Ex for shipping to other facilities. If local males are contributing to our

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Sea Lions, from page 8

through protected contact, which means protective fencing between you and the sea lion. This method is safer for trainers that are just learning, and makes the sea lions more comfortable when meeting new people. Once a bond is formed and both trainer and sea lion are relaxed with one another, the trainer can enter the habitat for feeding sessions.

Trainers often start working with Kilo from a distance, as there are times he can be a little less predictable, such as during breeding season when he is more hormonal and wishing to display his dominance more often. Even from farther away they can give signals and throw him fish for rewards. Gradually, as the trainer becomes more experienced, they can move closer to Kilo until he can be called up directly to their hand target.

Just like building relationships with the dolphins, it is important to get to know each sea lion's personality. Just like our dolphins, they are all unique individuals. Even though Karen, Kilo, and Renee are all the same species, they can be so different at times that it's like starting all over from scratch.

Kilo is super smart, very easy to train, and loves to learn new behaviors. He has been trained over 100 behaviors. Kilo's brain recently served him well as he began special research training! Being the male, he is the dominant sea lion but surprisingly he can sometimes be timid of new objects or changes in his environment. When training Kilo, we constantly watch his behavior and look for precursors that might indicate that he is uncomfortable. If we see certain things such as lip curls, bearing teeth, or open mouth gestures we can send Kilo home to his private pool and end the session by feeding him through protected contact. I have found it very personally rewarding to work with Kilo. Just like with the dolphins, training Kilo is a constantly evolving process that never gets old!

Renee, however, is almost the exact opposite of Kilo. She had spent most of her life at another facility engaged in a feeder pool program. Due to this she had very little formal training when See **Sea Lions**, page 11

Ocean Notions

SUPER SEA LIONS!

Do you have a favorite super hero? A super hero is a person who has special powers that are different from other people. Did you know that there are super heroes living in our oceans, and right here at Dolphin Research Center, too? Kilo, Karen, and Renee are three California sea lions that call DRC their home. California sea lions live on the west coast of the United States where the water and weather are much cooler; but remember, these three are super sea lions. Sea lions have abilities or changes to their bodies that help them live in the place they call home. These super powers are called adaptations.

Sea lions have fur to keep warm in the cool ocean. We put on our winter jackets to keep warm, but sea lions wear their fur coats all year long. Kilo, Karen, and Renee live in the Gulf of Mexico where the ocean is pretty warm all year, so you may wonder how they stay cool in the summer. When sea lions want to cool down on a hot day, they stick their flippers in the water and then hold them in the air. As the water dries, it lets heat leave their bodies so they can stay nice and cool.

Sea lions use their big front flippers

to move through the water. They can swim up to 25 miles per hour! This helps them catch their food and escape from danger. They can live on land, too. Sea lions turn their back flippers around and walk on all fours like a dog! This helps them move on land when they need to rest or have their babies.

Did you know that sea lions can hear? Ear flaps on the outside of their head allow them to hear above and below the water. Sea lions talk by barking or growling.

All of these super hero abilities help them live well in their home. However, one power they do not have is staying away from trash in the ocean. Garbage that we throw away like apple cores, water bottles, and fishing line can really hurt sea lions and other animals that live in the ocean. You can help keep sea lions safe by reducing, reusing, and recycling! Instead of throwing away your old bicycle, ask a friend if he/she can use it. Keep old cottage cheese jars and use them to store your marbles. Recycle all of those plastic water bottles after a baseball game on a hot day. Small things can help sea lions stay safe and happy!

- Courtney Dancer

Kilo

Start

Trash in the ocean can sometimes hurt sea lions.

Help Kilo find a safe way to his friends Karen and Renee.

Renee

Karen

Solution, page 11

DOLPHIN OF THE MONTH: GYPSI

On January 6, 2007 DRC was blessed with a gorgeous little calf named Gypsi. Gypsi is the daughter of the magnificent Tursi and the boisterous Rainbow. Being the daughter of Tursi makes Gypsi a Flipper granddaughter, as Tursi's parents were Little Bit and Mr. Gipper two of the dolphins that starred in the original *Flipper* movie. Gypsi is the third Flipper grandbaby at DRC, joining her older brothers, 20 year old Talon, and 13 year old Pax.

Today, at three years of age, Gypsi is such a well rounded little girl. Nothing seems to bother this kid as she has truly encompasses laid back Keys

“dolphinality”. “Gypsi doodle”, as she is sometimes called, seems to have gotten the best traits from each of her parents. Both Rainbow and Tursi are known for being very strong willed at times but can also be very relaxed, too. Gypsi inherited both of her parents’ amazing athleticism, as she flies high on all of her aerial behaviors! Every time I see her show off I stop and say, “Wow that little girl is just amazing!” She currently holds the title for the best tail-walk at DRC! (Just don’t tell her older brothers. Ha-ha!)

Since my parents, Jayne Shannon and Mandy Rodriguez, were the co-

founders of Dolphin Research Center I had the pleasure of literally growing up on DRC property. I’ve known some of these dolphins for as long as I’ve been alive and that has allowed me to form very strong bonds with them. One of my most unique relationships has always been with Tursi. From the time I was a small child, going out on the docks to play with my flippered brothers and sisters, Tursi always showed a special interest in me. People would comment that Tursi treated me as if she were my second mother! Once I was old enough to officially be an employee of DRC I started as an apprentice

See **Gypsi**, page 12

Sea Lions, from page 10

she arrived at DRC. So all of Renee’s training started out with very basic behaviors. In the past year she has learned to lie down, wait when asked, target on a hand or target pole, stretch, cover her nose with her flipper, inch on her belly, pose for cameras and wave her flipper. She has also been working on critical medical behaviors. We have found that Renee is very intelligent and really enjoys learning new things. Whenever she is trained something new, it becomes her favorite behavior and she will constantly offer it during training sessions. “Ne Ne”, as we have lovingly nicknamed her, is a very sweet lady once you get to know her.

Just like Renee, Karen came to DRC from Gulf World in Panama City, FL. Karen however, was previously an “old show gal” from Universal Studios. Now, she is completely blind but still knows many of her show behaviors on verbal or tactile signals. Training Karen is also a different experience because you have to learn how to guide a blind sea lion around the habitat. Karen is a very gentle, loving girl. She really enjoys getting back scratches, hugs, and kisses from her human friends. She is the star of DRC’s *Hug a Sea Lion* program, and she is currently learning to do in-water sessions with her trainers!

Trainers at DRC will most often say their favorite thing about working

with the dolphins is forming personal relationships with such wonderful animals. The same definitely holds true for the sea lions as we consider them members of our own family. So, the next time you come to visit the dolphins, definitely don’t forget to stop by and get to know our three fantastic sea lions. You may find yourself asking the age old question, “Who’s smarter?” Most people would assume the dolphins as they often get recognized as the most intelligent species after primates. However, if you ask a sea lion trainer they might beg to differ. Just don’t tell the dolphins that as we don’t want to bruise their egos!

-Sarah Brignac

Pregnancy, from page 9

efforts, DRC personnel picks up the specimens from Miami Seaquarium or Theater of the Sea and brings it home.

Dolphin Research Center is excited to take such an active role in artificial insemination research and to advance our own capabilities. Not only does this practice ensure a positive future for our colony of dolphins, but we’re also benefitting science as a whole. Working closely with our colleagues around the country, as well as within our own team, we definitely bring a greater meaning to being “in the family way.”

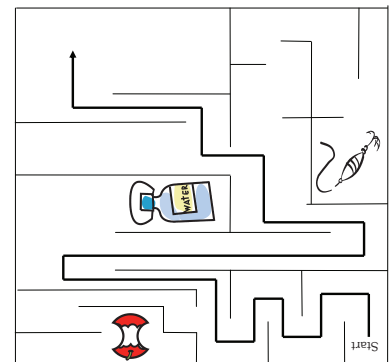
-Mary Stella

PITCH IN TO HELP CLEAN THE KEYS



DRC staff, volunteers and family members show off multiple bags of debris they collected during a bridge clean-up in April.

Ocean Notions Solution, from page 10





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Gypsi, from page 11

trainer. Tursi was always a pleasure to train, and we started working together on her back-flip behavior. Tursi would always get super excited whenever she saw me come down on the docks with the target pole. She always tried her hardest and then screamed for joy when she got the whistle that meant she did the behavior correctly. I briefly left DRC to pursue other personal goals but I always missed the dolphins and eventually came back home. When I did, not only did Tursi welcome me as her long lost child returned, but she also remembered her back-flip. After four years of not practicing it, we picked up the training right where we had left off.

Having such a deep affinity for Tursi, it is no surprise that when I saw her daughter Gypsi it was love at first sight! In 2009, I was given the honor of being Gypsi's first medical trainer. I was a little nervous as she was the first dolphin for which I had this responsibility. Having a strong relationship with both Gypsi and Tursi helped in our training. Gypsi's relaxed personality is an asset in training medical behaviors. She really isn't scared of much so she doesn't get antsy as some dolphins do about new training. However, the stubborn side of her personality made things difficult at times. Gypsi has always been very giving to me, trusting that no matter what we are doing, it will be ok. Today Gypsi is almost fully trained to do all of her husbandry behaviors. She gives

gastric, fecal, and chuff samples like she has done them for years. Gypsi has always enjoyed beaching up on the dock playing "king of the mountain" with the other kids, so training her to beach and eventually get up on the scale was something she loved. I am extremely happy to say that she is now finished with her voluntary weighing behavior! The only voluntary medical behavior Gypsi has not quite perfected is giving blood. But I guess I can't quite blame her for that. Who isn't squeamish at the thought of giving blood?

Gypsi has many friends at DRC.



Even though she's one of the youngest dolphins, Gypsi already does a spectacular back tail walk!

She is quite the "social butterfly" and really gets along well with all the other dolphins. Between sessions she is usually seen playing with Cayo, as they are the same age. Some of their favorite games include slip and sliding across the docks, chasing iguanas that are brave enough to swim across the lagoons, and playing with their favorite toys: hula hoops, balls, and discs. We also see these two practicing some adult social behaviors. Like most juvenile dolphins, Gypsi and Cayo are figuring out their place in the pod. Sometimes they appear to play rough with one another, but it is all part of their natural behavior. They are practicing taking on the role of a dominant dolphin and may do things like chase one another or act as the guarder of the gate. Other times Gypsi enjoys hanging out with the adults. Outside of sessions, we often see her pair-swimming with Tursi. Her favorite dolphin to be partnered with for Encounters is none other than "Nana" Theresa. These two are quite the fun pair, as Gypsi helps the blind Theresa figure out what behaviors the guests are doing!

Even at only three years of age, it is clear to see that little Gypsi has inherited her mother's gentle spirit as well as her father's animated flair. Still constantly learning new things, Gypsi is truly a joy to train. We at DRC know that Gypsi will proudly carry on her Flipper heritage with soaring dives, and always keep us in love with her beautiful soul!

-Kelly Jayne Rodriguez