

*Photo by Ross Griswold*



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Volume 36 Issue 3**

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**THE TERN TIDE**

is published quarterly by  
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## Scare Crow at Bolsa Chica

California Fish and Game management has installed a scare crow on South Tern Island in Bolsa Bay (see attached photo). Kelly O'Reilly, reserve manager, wanted Bolsa Chica enthusiasts to be aware of this because from a distance, one may think a man is sitting on the Island in a beach chair.

"It's not a man but a scare crow to discourage the black skimmers from nesting there," Ms. O'Reilly said. "The skimmers have already caused the destruction of one least tern nest out there and we are attempting to protect the remaining least tern and plover nests on South Tern Island. Thus far, the skimmers are staying away from our straw man and leaving the smaller birds in peace."

She added, "It is interesting that the little least terns seem to be more tolerant of the scare crow. I'm told scare crows have been used at the Port of L.A. tern nesting sites to scare away larger terns without bothering the least terns. Currently, the skimmers are staying at the opposite side of South Tern Island because they want no part of 'Beachbum Bob'" (the scarecrow's nickname).

*Photo by Kelly O'Reilly*



# Curriculum Developer Progress – It's All Connected

By Thomas Anderson

On Saturday, May 21, 18 Amigos docents and interested members gathered at the Bolsa Chica State Beach Visitor Center to meet Joana Tavares-Reager, Amigos new curriculum developer. After Joana introduced herself and explained her goals for the curriculum developer project, everyone was engaged in some very entertaining exercises designed to help Joana get to know Amigos docents and to give Amigos docents an opportunity to strengthen their skills when leading tours. One activity was designed to see how docents react to various common problems among tour participants, and the other activity helped to build communication skills. See Joana's article about learning and fun in this issue.

Joana has begun developing curriculum that adds age and content appropriate programs, activities and lessons about the interdependency of coastal wetlands and the ocean (it's all connected) to Amigos already excellent education program. She has already created the initial structure for the curriculum that will target students in grades 6 through 9. She has scrutinized California State Department of Education curriculum standards and identified topics pertinent to the theme of "It's All Connected." Some of the programs and activities will be given by Amigos docents at the Visitor Center at Bolsa Chica State Beach, and others will be incorporated into tours, booth events and off site presentations. This is so much more than merely creating lesson plans.

In order to have a complete understanding of who Amigos are and how the organization works, Joana has also been attending tours (with a video camera), and she has met with members who are putting together the Coastal Wetlander Program and members who are revising our offsite presentations. She's also looking for ways to provide docents with more opportunities to continually improve their teaching skills and to communicate with each other. Looking at Amigos de Bolsa Chica as a whole will help her to create activities, lessons and programs, that, when Joana's work is finished, Amigos members can carry out as if they created them themselves.

Joana has also been working with advisory committee members and State Parks personnel to create a Memorandum of Understanding between Amigos and Bolsa Chica State Beach for our proposed use of the State Beach Visitor Center. Along with the much-anticipated interpretive displays that are soon to be installed at the Visitor Center, the new programs and activities will be designed to support the



*Presenter, Donna Starr (Amigos Docent) and Curriculum Developer, Joana Tavares-Reager*



*Curriculum Developer, Joana Tavares-Reager and Amigos Docents*

*Photos by Tom Anderson*

State Beach in its educational outreach efforts and the theme of "It's All Connected."

Joana is an oceanographer and a marine policy expert who teaches oceanography at Fullerton College. She also teaches hands-on science lessons in an after school program at the Discovery Science Center in Santa Ana several times a week. She is a documentary filmmaker and a frequent contributor to the blog 'EARTHactually' ([www.actualearth.org](http://www.actualearth.org)) which was started by a group of young scientists, teachers and activists who study the state of our planet and ways to live in harmony with it. Not only is Amigos lucky to have her, she had been looking for an opportunity to reach the age level of 6th through 9th graders – a perfect match.

The Curriculum Developer project was funded by grants from PIMCO and Ralph's. The advisory committee consists of Donna Starr, Tom Anderson (committee co-chairs), Dave Carlberg, Margaret Carlberg, Jerry Donohue, Lori Donohue, Ross Griswold, Laura Holdenwhite, Lou Murray, Vic Leipzig, Susie Pendelton, Barbara Sentovich, Barbara Stewart, Brian Westcott and Ed Zschoche.

# Learning IS Fun

By Joana Tavares-Reager

## ***“What do you think makes a successful teaching-learning experience?”***

This is the question we asked the Amigos de Bolsa Chica docents during our Docent Meeting in May. Many docents answered that a successful teaching-learning experience requires well-prepared teachers as well as interested students. Other docents brought up the importance of having interactive tools that can be used to engage our participants. Invariably, all of our docents agreed that teachers and students should have fun!

I would say our docents are onto something here. Of course, everyone likes to have fun, but could it be that the feeling you get when you are having a good time actually helps you to learn? According to many cognitive development theorists, psychologists and education experts the answer is a resounding “yes”!

Education scholars have known about the importance of enjoyment in the process of learning for a long time. Various researchers have articulated what may seem intuitive to our docents: that students learn more when we combine teaching with enjoyable activities, such as games and role-playing. But why?

Well, although intuitively obvious, the answer to this question is rather complex and presents a continuing challenge to academics. There are many variables when it comes to understanding the connection between enjoyment and learning. For instance, defining “fun” and “enjoyment” can be very difficult, as these concepts may change from culture to culture and even from person to person. “Learning” itself is a multifaceted process that includes various steps, such as the acquisition of knowledge, articulation of understanding, and retention of information, all of which may be difficult to measure.

Nevertheless, there is some scientific evidence that fun has a positive effect on the learning process. ‘Play’ is defined in

the educational literature as an adaptive, organized means by which children learn to make sense of their physical and social environment. Researchers and theorists focused on children’s play have long agreed that enjoyment is the single most important component of a playful pursuit. As educational psychologist Doris Berger put it, “If an activity does not provide some element of fun, it definitely is not play.” Through play, children (and adults!) gain a feeling of control over the bigness and complexities they confront, develop their creativity, and acquire other invaluable intellectual and social skills.

It makes sense that when students enjoy the process used to give them new information they tend to stay on-task, focusing their minds on the topic at hand. Using data from an international survey of science achievement for more than 400,000 15 year old students from 57 countries, Australian researchers found that when students feel that they are having fun, they are more likely to pay continued attention to science lessons and to engage further with topics they had been working on. So, improved student engagement is another reason to incorporate fun into a successful learning activity.

Finally, there is something to be said about what happens in our brains when we are having fun and how that may affect our learning capacity. Research from the relatively new field of educational neuropsychology tells us that when we experience enjoyment and excitement, our pituitary glands and hypothalamus release a group of neurotransmitters called endorphins, which our brains translate as a “feel good” message. Recent studies have shown that some of the endorphins – specifically the beta- and alfa-endorphins – facilitate memory consolidation, which is a crucial step in the learning process.

Based on all this evidence, it seems that the need to include play and fun games into our teaching methods is, indeed, a no-brainer! As the Amigos new curriculum developer, I will make it one of my top priorities, and I hope to count on all Amigos to help me in this endeavor. I am absolutely sure we’ll succeed for one simple reason: the Amigos de Bolsa Chica are some of the most fun people I’ve ever met. And I know a lot of people!

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## **2011 Docent Training Class DVDs Available for Check Out**

Amigos docents and interested members can now check out a 2011 Docent Training Class DVD before you give a tour or anytime you want a refresher. Final editions of the 6 Docent Class DVDs are available for a one week loan from the Carlbergs. To reserve from the following list, call Margaret at 714-842-5619 or e-mail mcarlberg@ix.netcom.com.

- Little Purse – History of Bolsa Chica, with Dave Carlberg
- Native Americans of Bolsa Chica, with Louann Murray (new topic 2011)
- Ecology and Natural History of Bolsa Chica, with Vic Leipzig
- Birds and Endangered Species, with Barbara Sentovich
- Fish and Macroinvertebrates, with Kelly O’Reilly (new topic 2010)
- Restoration of Bolsa Chica, with Dave Carlberg

Thanks very much to Southern California Edison for providing a grant to pay for Jonathan Zschoche and his crew of videographers for these fine training tools.



# Monitoring the Western Snowy Plovers and California Least Terns

(The President's Tern) By Jennifer Robins

I am taking advantage of a unique opportunity this year that allows me to observe Western Snowy Plovers and California Least Terns courting, mating, building nests, sitting on eggs and fledging their babies. I signed up for the EONS (Eyes on Nest Sites) Program being administered by the Bolsa Chica Conservancy (BCC) and the Department of Fish and Game (DFG) at the Bolsa Chica Ecological Reserve (BCER). I also signed up with a similar Least Tern monitoring project at Huntington State Beach with the California State Parks Department. The task of volunteers is to monitor the nest sites. I have been spending two hours every Tuesday and Thursday from 9 to 11 with Patti Cacho-Negrete, watching the sites for bird activity and any disturbances that may occur. Disturbances can be from predators such as coyotes, gulls, crows, ravens, Peregrine Falcons, American Kestrels or other birds of prey. The other part of our monitoring is to educate the public about the birds, their Threatened and Endangered status, and their life cycle. We also talk about the BCER and answer questions from the public. Occasionally we have school groups visiting the BCER who are met by docents from the Amigos, the BCC or the Bolsa Chica Land Trust. The docents take the groups on a fun, educational and informative tour of the wetlands. It is always exciting to get the chance to help them learn about habitats, what it means when living things are classified as "Endangered" or "Threatened" and why, and how each of us can help to make a difference in their survival. Other Amigos Volunteers with the EONS Program are Ross Griswold, Donna Starr and Jerry and Lori Donohue.

There are three nesting sites at the BCER, but Nest Site 1 is the only one visible to the public. Peter Knapp from DFG, as well as monitors from Merkel and Associates, are allowed behind the fence to record the location and number of active nests, eggs and hatched eggs, along with the location and number of nests, adults and chicks lost to predation. A cage called an "exclosure" is placed over Snowy Plover nests to protect them from predators. The exclosure has been built to dimensions that keep even the paws of coyotes from reaching the eggs. When the babies hatch the exclosure is removed. Snowy Plovers are precocial so the tiny chicks are never fed by a parent and they must feed on their own. If you see a wire looking cage in the nesting area behind the fence you are seeing an active Snowy Plover nest. This season Snowy Plover nests were seen on both sides of the service road. They like the sandy soil for their nests, as do the Least Terns. With binoculars or a scope you may be lucky and get a view of a parent sitting on its eggs.

The semi-circular black or white painted clay tiles you see throughout Nest Site 1 at BCER are places where Least Tern or Snowy Plover chicks can hide from predators or be shaded from hot sun. They are painted black or white to designate the grid sections of Nest Site 1 making the reporting of area activity easier and more accurate. The birds don't nest under these tiles. They will scrape an indentation in the sandy soil and gather shells and small rocks to make their nests. The Least Tern Preserve at the Huntington State Beach is a fenced-in area at the south end of the beach by the inlet to the Santa Ana River basin. This is a favorite spot for surfers. They are curious about what is behind the fence, so our education of the public continues. The monitoring of this preserve is the same as at the BCER. Located on a power pole across PCH from the preserve is a Great Blue Heron nest with 3 babies. It's hard to call them babies anymore because they are adult size now. They are another predator we have to watch for as they may hunt chicks and fledglings for their food too.

If you've been to the BCER and have seen the hundreds of terns rise up from one of the islands, you know the feeling this elicits. I'm just in awe of the numbers of the birds and the cacophony of noise. When this happens while we are monitoring we have to be on the lookout for any disturbance that may have upset the nesting birds. If we see a predator, as we did one day at Huntington State Beach when a Peregrine Falcon flew overhead, we have phone numbers to call to alert BCER or CA State Park Dept. authorities. The time of disturbance, predator and predator behavior must be reported. If a raptor or crow is persistent they can be trapped and relocated.

Sometimes our morning is free of disturbances and we get to see the Least Tern's courting behavior where the male tries offering a fish to his prospective mate in hopes she will accept. If she does, they formally become a pair and mating can commence respectfully and immediately. It is so immediate she is still trying to eat the fish during and after the mating, so I guess the word "respectfully" should be omitted from the previous sentence. It can be funny at times when the male is so persistent, but the female is so uninterested. Perhaps she wants a different fish, so he has to go fishing again for a bigger fish. He flies off and returns a short while later with what could be a new fish, or the same rejected fish if he is not the sharpest tern in the preserve, to try to gain her attention once more.

It is truly a unique opportunity to get up close and personal to the precious nature surrounding us.

# Earth Day 2011

By Jerry Donohue

Thanks to all 24 Amigos that helped make our participation in Earth Day a memorable event. On Saturday, April 9, Amigos members began arriving at 7:30 AM to set up canopies and tables in the north parking lot at Bolsa Chica to celebrate Earth Day. Our information/merchandise volunteers included Jennifer Robins, Patti Cacho-Negrete, Fran Pike, Gail Vize and Mary Ellen Houseal. The history booth was staffed by Jim Robins, Donna Starr, Tom Livengood and Jim Aldridge. 675 participants, 90 volunteers and exhibitors representing 18 organizations all contributed to the great success of this year's Earth Day celebration at Bolsa Chica.

Amigos de Bolsa Chica had 3 interactive, kid-friendly booths. Birds and Tides, where we correlated bird presence with mudflat exposure, was busy the entire day even though they were stationed 50 yards away from the rest of the booths. Mick Siroy, Al Vari, Dave Vize, Jamie Pavlat and Sanford Adelman informed nearly 100 visitors as to how tidal fluctuations affect bird numbers. Birds and Beaks, where youngsters discover the relationship between beak shape, beak length and food source, kept docents Stephanie Rubio, Dean Elder, Lori Donohue, Betty Murphy, and Ed Zschoche busy.



Photos by Ross Griswold

## Monthly Help Needed - Volunteer Opportunities

### Monthly Trash Clean Ups

**Last Saturday of each month, 9:00 -11:00 am.** Wear closed shoes, old clothes. Tools provided. This Amigos project is to clean up the area around the south parking lot and footbridge for our 1st Saturday of the month free public tour. Call Margaret at 714-842-5619 for more information, or to RSVP.

### Native Plant Landscaping Maintenance at Bolsa Chica State Beach Visitor Center

**2nd Sunday of each month, 9:00 am -12 noon.** Located just north of the entrance to BC State Beach, across from BC Ecological Reserve South parking lot. Light weeding, some planting, general tidying. Wear closed shoes, jacket. Tools and instructions are provided. Joint project between Amigos and Bolsa Chica Stewards. Call Margaret at 714-842-5619 for more information, or to RSVP.

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# Mysterious Migration

By Dave Carlberg

May 14 marked International Migratory Bird Day, an observance created in 1993 by the Smithsonian Migratory Bird Center for the purpose of providing the public with greater understanding, appreciation, and protection of the phenomenon of bird migration. The migration of birds is one of the great mysteries of the natural world. Our understanding of bird migration took a great step forward with the development of bird banding in the early years of the 20th century. Bird banding involves placing lightweight metal or plastic bands on the legs of wild birds. Birds are harmlessly captured in order to attach the bands, which do not hinder the birds in any way. Codes are stamped on the bands often along with a contact such as a phone number or website. Records of the codes are kept together with the locations and dates of the banding and other information about the birds. These records are frequently deposited in on-line databases. When banded birds are recaptured or found dead, the finders report their information to the original banders, who can then deduce the movements of the birds. With the advent of bird banding, ornithologists have been able to trace the migration of birds over distances that may span continents.

Frederick Lincoln, an ornithologist for the U. S. Biological Survey (now U. S. Fish and Wildlife Service), spent over two decades starting in 1920 banding birds and following their migration across North America. While the method was not new, Lincoln developed it into a science. His banding work eventually led him to propose the concept of flyways, that is, defined routes that migratory birds repeatedly follow in their seasonal movement. There are four major flyways that have been identified in North America. They are the Atlantic, Mississippi, Central and Pacific Flyways. Bolsa Chica happens to be located along the coastal branch of the Pacific Flyway (see map). This is like a freeway in the sky along which migrating birds travel from as far north as North- Western Canada, Alaska and even Siberia to points south and return. The main branch of the Pacific Flyway follows the central valleys of California and down the west coast of Mexico. Another minor branch of the Pacific Flyway starts in Canada and generally follows the Rocky Mountains before merging with the main branch. Some birds continue on to Central and even South America before turning around and retracing

their flight back to North America. The Arctic Tern, the champion traveler, logs about 22,000 miles round trip in its annual migration between its Arctic breeding grounds to the Antarctic and back again, a discovery that was made possible through banding.

Migrating birds do not fly continuously but understandably must break periodically for resting and feeding before continuing along their routes. For waterfowl that generally means wetland stopovers. Considering the enormous loss of wetlands over the last 100 years, opportunities for migrating water birds to rest and feed have diminished significantly. President Theodore Roosevelt recognized the need for such refuges in 1908 and established over 50 bird refuges during

his terms in office. For example, Klamath Lake Bird Reservation in Northern California was one of the first such refuges to be set aside.

Bolsa Chica is one of the few coastal wetlands in Southern California that provide migratory birds with a place to rest and feed during their long journeys. That fact alone makes Bolsa Chica among the most popular bird watching sites in our part of the state. One of the joys of spending time at Bolsa Chica is spotting a rare species that apparently had drifted off its usual migratory route.

The National Audubon Society has designated Bolsa Chica as part of the Orange Coast Wetlands Important Bird Area (IBA). Writing in the fall, 2010 Tern Tide, birding expert Sylvia Gallagher observed that while Bolsa Chica is only a part of a larger IBA, it meets all of the criteria to qualify it as an IBA on its

own, which makes the Amigos' role in saving the Bolsa Chica wetlands all the more gratifying.

Some species, such as the California Least Tern, the Snowy Plover and the Black Skimmer, complete their migration in Bolsa Chica and nest there. Then, as fall approaches, the adults and their fledglings head south to warmer regions only to return the following spring to begin the cycle again.

There are many speculations that attempt to explain how migratory birds are able to navigate their incredible journeys. The theories include the possibility that the birds use the sun or stars as guides. Another theory proposes that birds are able to follow Earth's magnetic field, that is, the birds possess some kind of a biological compass. Each of these and other theories appear to be supported by various scientific experiments, but so far none of the theories is truly convincing. Exactly how migratory birds navigate still remains a mystery.





# Save the date – Sunday, July 24, 4:00-7:00 pm Amigos de Bolsa Chica PICNIC

Celebrating the 5th anniversary of the opening of the tidal inlet; the 35th year since Amigos incorporation; and the 170th anniversary of the naming of “Bolsa Chica”.

Hearty sandwiches and salads by Suzanne’s Catering, with desserts and sodas by Amigos Board of Directors at Lake Park, 1000 Main Street, Huntington Beach.

The cost is \$15 per person. Pay at the Event – BUT – **Reservations are REQUIRED – by July 15** (Do it now—it’s not too early!) to Amigos office 714-840-1575, info@amigosdebolsachica.org, or to Margaret Carlberg at 714-842-5619, mcarlberg@ix.netcom.com.

*Wear your favorite Amigos shirt or hat, and tell us your favorite Bolsa Chica stories.*

# Save the date – Bolsa Chica Science Symposium Saturday, August 27

Mark your calendars now for the third Bolsa Chica Science Symposium coming up on Saturday, August 27, 1:00 to 5:00 p.m. This year’s symposium will be held at the Grace Lutheran School located at 5172 McFadden Avenue (previously the Robinwood School) just east of Bolsa Chica Road. A panel of experts will present the results of their ongoing research and monitoring efforts at the Bolsa Chica Ecological Reserve.

*For online Tern Tide subscribers, look for a “Current Tide” email with information on the panel of experts and their topics later this summer.*

## Amigos Appreciates Donors, New and Current Members

The Amigos thanks the many who made generous year-end donations, including the following:

### Amigos Donors

Thomas Andrusky	Ed Hirsch
Maria Buhbe	Mary Ellen Houseal
Dave and Margaret Carlberg	Larry and Karen Lee
Marvin Carlberg	Judy and John Rothman
W.J. and Marilyn Harris	Roger and Ellen Scott
Ann Harmer	Keith Senechal
Bob and Betty Hogan	Raymond Sherrard
Trude Hurd	Carol Swanson

### New Amigos

Derin Allard	Jim Nowell
Gary Charlton	Stephanie Rubio
Susan Hardgrave	Ronnie Simpson
John Hayes	Mick Siroy
Greg Leo	Laura Yu and family
Ritchie McLaren	

Commendation to the following members renewing this quarter who have paid their dues on time for every year— Since May 1976--Larry and Karen Lee of Long Beach Since November 1976—Rita Simonton of Huntington Beach Since April 1986—Bob Johnson of Fountain Valley Since January 1988—Peter Knapp of Long Beach



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## THE TERN TIDE

Volume 36, Issue 2  
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## AMIGOS DE BOLSA CHICA MEMBERSHIP APPLICATION

I support the specific and primary purpose of Amigos de Bolsa Chica, which is to advocate the preservation, restoration and maintenance of the Bolsa Chica, to encourage the public acquisition of all the wetlands and sufficient surrounding open space to create a viable ecosystem, and to provide education about the importance of wetlands.

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No goods or services were provided in consideration of this gift.*

*Return application to: Amigos de Bolsa Chica, P.O. Box 1563, Huntington Beach, CA 92647*