Shell Museum News

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Cat Island Adventure

Join Dr. Gary Schmelz on an exciting, one-week, natural history adventure to Cat Island. This expedition, from April 3 to 10, 2008, will include an island tour with lunch at a local restaurant, four Power Point programs on the marine and terrestrial life of the island, field trips to local habitats, a snorkeling trip over a nearby reef, and a land snail collecting outing.

Photos courtesy of Dr. Gary Schmelz.

Sparsely inhabited Cat Island is a naturalist's paradise. Its elevated hills, the highest in the Bahamas, overlook eighty miles of pristine shoreline. For beach walkers and shell collectors, the seldom walked upon sugar sand beaches provide the type of solitude and spectacular beauty that is seldom found in today's crowded and busy world and the island's magnificent shallow coral reefs harbor a plethora of vividly colored fish that will dazzle the senses.

The Shell Museum board invites you to join them on their exploration of this island jewel of the Bahamas. Discover the secret habitats of marine creatures, explore the forest floor for elusive land snails, and

A beautiful stretch of beach on Cat Island – one of the Bahamas most pristine locations.

From the Director: Sanibel Shells and Their Environment

Seashells are made by mollusks, a group of animals that diversified enormously in life habits throughout their long evolutionary history. Mollusks first appear in the fossil record about 545 million years ago in the early Cambrian, and have since made their homes in virtually all of the earth's major environments, inhabiting the rivers and tree canopies of tropical rainforests, hot springs, deserts, the deepest ocean trenches, and coldest mountain streams.

The shores of Sanibel and Captiva provide a snapshot of this global molluscan diversity, with about 300 species found in shallow water (there are at least 80,000 named mollusks on earth). The large abundance (number of individuals) and diversity (number of different species) living in our nearshore, shallow-water areas is at the core of Sanibel's truly deserved reputation as one of the world's best shelling destinations. But is that local molluscan diversity at risk?

Scallops are particularly susceptible to water quality changes Photo by José H. Leal.

The inshore and offshore environments along the barrier islands of Southwest Florida provide a number of distinctive habitats for bottom-living mollusks. However, the majority of molluscan species found in our surroundings are soft-bottom dwellers, living in or on the muddy bay or the sandy, nearshore Gulf bottom. Hard-bottom species are limited to mollusks living on oyster banks, on man-made structures such as bridge pilings, jetties, and on old coral-rock ledges found in deeper water offshore.

With a few exceptions, most bivalve mollusks (clams, oysters, mussels, scallops, to name just a few) found locally live buried in mud or sand. And, except again for a few species, all local bivalves are filter feeders that use their specialized gills to collect and sort nourishing particles, mostly microscopic algae, from the water they suck in.

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Cat Island Continued

spend some quality time with the friendly locals learning about the island's colorful past.

The program is limited to 14 people, on a first come first served basis. The trip fee includes a pre-trip orientation lecture with snacks at The Bailey-Matthews Shell Museum, roundtrip flight from Ft. Lauderdale with departure taxes, taxi fare to and from the hotel, seven days stay at the Greenwood Inn, two meals a day, island tour with lunch, snorkeling trip, field trips and lectures, and a free day for your own island exploration.

Alcoholic beverages and sodas are not included in trip price and you must be a museum member to participate.

Gin-clear waters wait for you on Cat Island!

Passports are required. To participate, fill out the registration form and mail it together with a deposit of $100.00 to the address listed. Full payment due by March 1, 2008. Refunds requested after March 1, 2008, will be dependent upon filling your slot with another participant. Trip insurance is recommended.

Fees are $1,990 for double occupancy, shared king size bed; $2,150 single occupancy. Costs based upon current airfare and taxes.

For more information contact Mary Jo Bunnell at maryjo@shellmuseum.org, by phone at (239)395-2233, or by writing to P.O. Box 1580, Sanibel, FL 33957.

The queen conch is also known as pink conch in the Bahamas

The Raymond Burr Brick Garden

The Bailey-Matthews Shell Museum's Raymond Burr Brick Garden is both a memorial and dedication site on the beautiful grounds of the Museum. Have a brick engraved and placed under the Museum's royal palm trees to make every visit personal. All bricks are engraved by renowned Sanibel Island artist Luc Century. Placement of bricks may take up to six months so plan ahead if you'd like to see your brick when you are visiting Florida.

The bricks are available through the Museum Store. Contact Kim Nealon (store manager) or Mary jo Bunnell (business manager) by calling (239) 395-2233.

Natural Science Lecture Series 2008

This coming year the Museum's second annual lecture series will focus on SW Florida's aquatic environmental issues including estuaries, the Caloosahatchee River, and Estero Bay. (Mollusks will be well represented!) Lectures are on Wednesday evenings, beginning at 7 PM, and last approximately one hour. Admission fees are $5 and $3 (Shell Museum members.) Lectures will be held at The Bailey-Matthews Shell Museum. Questions or suggestions? Email Dr. José H. Leal, at jleal@shellmuseum.org.

January 16: Dr. Aswani Volety, Professor and Department Chair, Coastal Watershed Institute, Florida Gulf Coast University, "Canaries in the Coal Mine: Role of Shellfish in Estuarine Restoration."

January 30: Dr. Gary W. Schmelz, Naples, Florida, Vice-president of the Board of Trustees, The Bailey-Matthews Shell Museum, "Naturalists Adventures in the Solomon Islands"

February 13: Dr. Michael Savarese, Professor and Director of Graduate Studies, Coastal Watershed Institute, Florida Gulf Coast University, "The Geologic History of Estero Bay: The Influence of Sea-level Rise and Climate Change"

February 27: Dr. John Cassani, Deputy Director, Lee County Hyacinth Control District, Fort Myers, "Non-indigenous Fish Communities of Caloosahatchee River Oxbows"

March 12: Dr. José H. Leal, Director, The Bailey-Matthews Shell Museum, "Sanibel Shells and Their Environment"

March 26: Dr. Loren Coen, Director, Marine Laboratory, Sanibel-Captiva Conservation Foundation, "Oysters, More Than "Good Eats""

April 9, April 23: TBA

James Carl VunKannon

The Bailey-Matthews Shell Museum said to goodbye to close friend Jim VunKannon on October 13, 2007. Jim was an avid shell collector who traveled around the world with his wife Carolyn searching for new additions to his extensive collection.

Jim was born in Memphis, Tennessee, on February 11, 1936. His family soon moved to Pensacola, Florida, where James was raised. He had a 31 year career with the United States Navy as a Captain, commanding the USS Thrush, serving in the Pentagon, and becoming part of COMCARIB Forces in Key West, Florida. He also earned a Masters degree in Industrial Engineering and spent years as a yacht manufacturing company executive.

His love of the sea naturally sparked an interest in mollusks and shelling. Jim was a loyal member of the Conchologists of America and three times Past-president of the Broward County Shell Club. Jim was a good friend to the Museum and Dr. José H. Leal.

Jim bequeathed some of his outstanding world-record-size shells to the Museum. He is survived by his wife of 43 years, Carolyn VunKannon and his two daughters, Lisa VunKannon-Roberts and Lori VunKannon. He is missed by all at the Museum.

New Volunteers Join the Museum Team

The Museum staff and volunteer team would like to welcome its newest friends.

Warner Byrum comes to the Museum from Boston, Massachusetts. He is a full-time resident of Florida and heard about the Great Hall volunteering opportunity from his wife, Sue Byrum. He works at the Museum on Monday afternoons and looks forward to the upcoming season. Warner loves to see a big crowd and lots of action in The Great Hall.

Bob Lynd joined the group of curatorial assistants in the Collections Department. Bob lives in Roswell, New Mexico and spends four months on Sanibel during the winter season.

The Museum also welcomes new admissions desk Volunteer Antonia Osgood. Antonia recently moved from the East Coast of Florida to beautiful Sanibel. She is a year-round resident and volunteers at the Museum on Thursday afternoons.

Correction

In the last issue of *The Shell Museum News*, Kathryn Matthews was credited with helping found the Chelsea School in Silver Springs, Colorado. In fact, she did help found the Chelsea School in Silver Spring... Maryland!

From the Director (Continued)

The concentration and type of these microscopic algae in the surrounding water play key roles in the health of local populations of bivalves. Another factor that weighs heavily on their health is the amount of sediments suspended in the water. When feeding, bivalves mechanically sort, on their gills, the "good," nourishing particles (the microalgae and other microscopic sealife) from "bad" ones (suspended clay particles, minute debris, and other undesirable particulate materials.)

Consequently, filter-feeding bivalves may suffer when they suck in excess numbers of non-nourishing particles because of the increased energetic cost associated with sorting "good" from "bad" in a highly inefficient manner. Or, in the worst-case scenario, they may just have their intake systems clogged by too many "bad" particles. This type of human-induced "mechanical pollution" is sometimes neglected in discussions of the different effects of human-induced environmental disturbances on local sea life. Another factor to be added to the equation is the reduction in light penetration in seawater caused by presence of large amounts sediments: more sediments means less light, which in turn inhibits growth of "good" microalgae, resulting in less food for the bivalves.

Coastal areas submitted to repeated, heavy pulses of sediment-loaded, polluted water are likely to have their diversity of mollusks severely reduced. This may now be just the case of the local Caloosahatchee estuary and the shores of Sanibel and Captiva, which have been strongly impacted in recent years from the release of Lake Okeechobee "water" via the Caloosahatchee River. If the input of polluted sediments does not come to a halt or is at least greatly reduced, many of the local species may not be able to handle the combined effects of chemical pollution (nutrients, pesticides, and other chemical waste) associated with the "mechanical pollution" discussed above. One should hope that the "extreme releases from Lake Okeechobee in 2004 and 2005" (in the words of City of Sanibel's biologist Dr. Rob Loflin) will be just bad memories, and that new and better water management practices will be put in place to foster the natural environmental conditions and help preserve the unique and beloved molluscan diversity of the barrier islands of Southwest Florida.

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