

## Setting Sail for the Sargasso Sea

By Dr. S.R. Smith  
Curator, Natural History Museum

The sailing research vessel Sea Dragon headed out to sea on Friday, June 5th to gather data on the Sargassum community around Bermuda, sponsored by the BAMZ support charities, the Atlantic Conservation Partnership and the Bermuda Zoological Society.

Dr. Robbie Smith, Curator of the Natural History Museum, led the team of Bermudian and US scientists and students for a three day expedition south of Bermuda. The crew consisted of Amy Harvey of the Bermuda College and two of her students, Joshua Stevens and Gary Taylor, Abbie Caldas of Greenrock, Kyla Smith from BIOS, Hannah Frith, a Bermudian undergraduate from Oberlin College, graduate student Pearce Cooper from the Dauphin Island Sea Lab in Alabama, graduate student Leslie Acton from Duke University and her professor Dr. Lisa Campbell.

The team collected Sargassum and described the diverse community within the seaweed. Pearce hoped to collect many fishes for comparison to his work in the Gulf of Mexico. Leslie is a marine policy student, and she and Lisa wanted a close-up look at Bermuda's EEZ, as part of their study on Bermuda's approach to ocean governance. Other work included surface tows to estimate floating plastic marine debris, night-time plankton tows to catch small vertically migrating deepwater fishes and also the deployment of a vertical longline to catch deepwater fishes and squids. Dr. Smith also kept an eye out for seabirds.

## The Trunk Island Campaign: Investing in the Future

It was once unusual for the formal education of children to occur anywhere besides within the four-walls of the classroom, but today, there is a broader view on how teaching should occur, taking into account the whole child and diverse learning needs.

Creating programmes that meet the needs of the whole child has long been the key component of the educational programmes offered by the Bermuda Zoological Society at the Bermuda Aquarium, Museum & Zoo, which is why the organization is pleased to announce that they have been able to purchase a 2.4-acre lot on Trunk Island. Located in Harrington Sound, the island has already proven beneficial to our summer camp programmes, and now expect to provide classes for 3,000 students.

“We believe that with so many social and environmental challenges impacting our Island, providing a place for students to unplug and learn in a natural island setting can contribute to a young person's knowledge and confidence, and can help them to develop a vision of their own future and that of Bermuda,” shared BZS Education Officer, Dr. Jamie Bacon. “The magic of experiential learning is motivational for students who might otherwise be disinterested in a normal classroom setting; they prefer a hands-on approach and respond well to material and an environment that makes a personal connection. Trunk Island will only enhance our Schools Programme, which is available free to all students from preschool through senior school.”

In addition to the Schools Programme, BZS has also been able to expand their Aqua Camp programme, with more activities for middle school students – the age group thought to be most socially at risk (ages 11-13 years) – and introducing a one-week residential camp for students age 14-15. Through both camp



An ariel shot of Trunk Island  
• Photo by John Singleton

programmes, students explore and participate in conservation projects and develop their understanding of aquatic habitats, all while promoting a passion for protecting our environment.

The island features many of Bermuda's major habitats: Forest, including a rare early palmetto forest; Sandy Coast; Rocky Coast; Sea Grass Beds; Sheltered Bays; and Bio-Erosional Notch, an ecosystem unique to Harrington Sound. This makes it a truly spectacular place for children to learn and grow.

The BZS has also been busy implementing a conservation plan, developed by Dr. David Wingate, for Trunk Island by culling invasive species and working to re-establish native flora and fauna. As a part of this plan, teams of volunteers from a variety of companies, as well as our “Weekend Warriors,” have worked diligently towards this end.

The cost of purchasing Trunk Island, as well as the repairs and restoration work required, has not been insignificant. However, the BZS is also pleased to report that it is now about half-way towards a \$5 million fundraising campaign for the island's purchase and establishing a Living

*Continued on page 7*

## Membership Corner

As a BZS Member you give, you help, you preserve, you sustain, you receive, and ultimately you MAKE A BIG DIFFERENCE and we thank you.

**YOU GIVE...** and your Membership support makes it possible for us to provide critical environmental educational opportunities for thousands of Bermuda's young people every year.

**YOU HELP...** to preserve our beautiful island home and the wonderful creatures and wildlife within it.

**YOU PRESERVE...** the legacy of our island, our youth, and our future.

**YOU SUSTAIN...** your support helps sustain our excellent education programmes and our many critical conservation projects.

**YOU RECEIVE...** wonderful benefits such as free admission to BAMZ and great discounts on many fabulous activities and events.

**THANK YOU** for all that you do! Be proud of all that you accomplish through your Membership support!

### BZS Executive Committee

Richard Winchell, President  
Neil Patterson, Vice President  
Stephen Woodward, Treasurer  
Julie McLean, Secretary  
Dr. Ian Walker, Principal Curator, BAMZ  
Terrence Bean  
Colin Brown  
John Burville  
Michael Frith  
Michael Grayston  
Margaret Hallet  
Jeff Manson  
Mark Melvin  
Saskia Pearman  
Tia Smith  
Andrew Pettit, Director,  
Dept. of Conservation Services, Appointed  
Dr. Robbie Smith, Ex Officio  
Patrick Talbot, Ex Officio  
Eric Clee, Director Emeritus

### ACP Board of Directors

Richard Winchell, President, Bermuda  
George Boggs, Secretary, Virginia, USA  
Christopher Fisher, Treasurer, Bermuda  
Jim Bistis, New Jersey, USA  
Todd Fonner, Bermuda  
Susan Ford, South Carolina, USA  
Tara Gallagher, New York, USA  
Bert Golinski, South Carolina, USA  
Tom Hulst, Bermuda  
Dr. Tom Sleeter, Bermuda  
Henry Smythe, Jr., South Carolina, USA  
Robert Steinhoff, Bermuda  
Dr. Ian Walker, BAMZ, Bermuda  
Neil Patterson, BZS, Bermuda

# Preparing for Aqua Camp: It takes a Village

While it would seem that after so many years of running Aqua Camp, it would be a walk in the park for those involved, it actually requires a great deal of time and planning to get ready for it each year. This includes ensuring that there are enough people involved to make sure it runs safely, as well as being fun and educational for each child that attends.

In fact, there are at least three full-time staff members for every age group, as well as our camp director and an interpreter/coordinator's assistant. That means, when there are six different camps running at the same time, we need 20 full-time staff to make sure that everything runs smoothly, not including the numerous part-time staff that are employed as swim assistants to make sure that the children are safe in the water.

"We have a lead teacher for each camp age group and two assistants," explained BZS Education Officer, Dr. Jamie Bacon, who also serves as Aqua Camp Director. "The teacher is either a qualified educator or an exceptional naturalist, and is the one who teaches the academic portion of the camp, while the assistants are extremely important for assisting with swimming, field trips, crafts and ushering campers wherever they need to go. The interpreter will organize animal encounters and give presentations on the animals to the camp groups – we try to have each camp have at least two animal encounters each week."



Students enjoying swimming with their camp teacher • Photo by C. Anderson

Although Aqua Camp is designed as an academic natural history camp, fun and safety are very important.

"We try to have a very creative curriculum for each camp age group, and that requires supervision along with a caring staff who are great at ensuring the campers are engaged and having fun. But we are also very conscious about safety, so we make sure to have adequate staff to keep the children safe no matter what the activity," Dr. Bacon added.

All staff, whether full-time or part-time, undergo an orientation, which prepares them for the summer, outlining what is expected of them, camp rules, as well as camp crafts, as appropriate. Over the last

*Continued on page 4*

## Azu Beastro: Introducing Arugula and Chef Sam Crew

From the fresh local farm produce, to the fresh herbs being grown right on the café's patio overlooking Harrington Sound, diners at the Azu Beastro are certain to be delighted with the delectable options being created by the restaurant's new concession holder, Arugula.

Arugula is owned and operated by Chef Sam Crew. Her team recently took over the concession and are already delighting people with an offering of fine, fresh food options.

Chef Sam has an amazing background – she has been in the catering business for the last 14 years, during which time she has worked as a corporate and personal chef, catering to corporations, private households and estates in Europe, North America, Australia, the

Chef Sam Crew  
• Photo by  
S. Westhead



Caribbean and the Middle East.

When Chef Sam returned to Bermuda two years ago, she quickly began building relationships with on island providers in order to serve the very best Bermudian sourced food from local farmers (like Tom Wadson of Wadson's Farm), divers and fishermen, and this association soon led to the creation of Arugula, operated with business partner Laura Martin-Stout.

"I like to use good, local food," Chef Sam

*Continued on page 4*

# Creating Innovative Classes to Enhance School Curriculum

There has been increasing interest in educational circles in developing interdisciplinary STEM (Science, Technology, Engineering and Math) programmes that not only teach students about scientific method in the classroom, but also how it can be applied in real life experiences. These hands-on learning experiences are now part and parcel of a number of curricula used around the globe, whether it be the Common Core in the United States, or the Cambridge Curriculum that is in use here in Bermuda.

Hands-on experiences have long been a vital component in the classes offered through the Bermuda Zoological Society's Schools Programme. However, taking students to the next level can require a great deal of creativity, forethought and, most importantly, time – something many classroom teachers simply do not have. As a result, a number of schools have now approached the BZS Education team to assist them in further developing and enhancing their curricula.

Over the past year, the BZS Education staff have stretched even further to accommodate teachers' needs through specially-designed programmes. These primarily come in as requests from teachers, some because teachers have previously brought students for classes, while others are now asking because they have heard from colleagues about the benefits of the Schools Programme at BZS.

Guided inquiries were added to the 'Skeletons and Movement' and 'Pollination and Seed Dispersal' classes, for example, to give students experience in doing experiments and provide opportunities to incorporate math into a science topic. Also, BZS's collaboration with the Bermuda National Gallery's 'Water is Me' art competition spawned the creation of a day-long programme that included a morning class and lab on the water cycle (primary school), over fishing (middle school), or ocean acidification (senior school), followed by an afternoon of snorkeling. A total of 232 students took part in these classes last fall.

But probably the greatest amount of innovation has occurred with classes for senior school students.

BZS's Dr. Alex Amat collaborated with Berkeley Institute and Saltus Marine Science teachers to enhance their existing programmes and, in the case of



*A Saltus student conducts scientific experiments while out on the open ocean aboard The Endurance as a part of the Marine Science programme.*  
• Photo supplied.

Berkeley Institute, was instrumental in the development of a second year for their Marine Science course in order to prevent Berkeley's Marine Science Programme from being cancelled.

Previously, Berkeley had only one year of Marine Science; however, it was decided that as students now have two years after completing the GCSE programme, it would need to be a two-year programme, otherwise the whole course would be cancelled. Thankfully, Dr. Amat, who has a very strong background in marine science, was able to help develop a very comprehensive programme with implementation anticipated for the 2015-16 school year.

Dr. Jamie Bacon also helped enhance a 'Hydrocarbon Pollution and Pond Remediation' class and field trip for Berkeley Institute's Environmental Science II Course and created an Ecological Sampling class and field trip for MSA year 11 students. What had originally started as a lecture on hydrocarbon pollution several years ago has since evolved to become more complex each year. In addition, these classes help students meet curriculum requirements for field work outside of the classroom, which are seen as a vital component in contemporary education practices.

Teachers needing assistance in enhancing current classes or developing new ones are encouraged to contact the BZS Education office at [edofficer.bzs@gov.bm](mailto:edofficer.bzs@gov.bm). However, it is important to note that such programmes require a great deal of time, effort and collaboration between the school and BZS's Education team.

## Curator's Corner with Dr. Ian Walker

Firstly, we'd like to thank you for your patience over the last several months. The replacement of the Aquarium roof has gone very well and we're extraordinarily happy with the end product.

As always in technical projects like this, there have been unavoidable delays entirely out of our control. Given that we were going to close the hall for the roof project, we felt it was the right time to completely renovate the visitor hall. However, this project soon grew in scope based on the fact that as we ripped out the facades, we found numerous unexpected problems, including structural cracks in some of the tanks that had to be dealt with. Consequently, this caused some delays.

We are now approaching the end of the project and the team and I are extremely happy with the end result. The hall now presents a more enhanced experience for visitors and members. Our new signage is vibrant and tells a more complete story about Bermuda's marine environment and heritage. In addition, they direct our visitors on where to find some of our natural, unique habitats and how best to explore them.

We thank you again, for your patience. We have listened to your wishes and hope you'll enjoy the new Aquarium, and, as always, we welcome your feedback.

## Upcoming Events

June 27 -	BZS REEF Watch 2015
June 29 -	Aqua Camps begins
July 2 -	BZS AGM
July 30-31 -	Cup Match
Aug. 9-21 -	Bermuda Turtle Project In-Water Course
Aug. 17-21 -	Aqua Conservationists Camp; Last week of Aqua Camp
Sept. 7 -	Labour Day

## Aqua Camp

Continued from page 2

few years, the lifeguards have also given a water safety lecture as well. All staff are required to have CPR and First Aid certification.

“It is important because the staff needs to know what is expected of them and to be reminded of how important water safety is. Also, I do try to pair any new assistants with a seasoned assistant, so they have guidance while the camps are running. Many of the assistants, as well as teachers, work for more than one year, which greatly helps maintain the continuity and excellence of our camps.”

## Chef Sam Crew

Continued from page 2

explained. “I want for the produce to speak for itself.” The new menu has been designed to offer diners with seasonally fresh foods and light flavours, so that they can have an enjoyable meal without feeling stuffed at the end.”

“It is nice, healthy food and it is clean. I think that it is a good merge with our new location at BAMZ,” she added, especially as they offer a selection of sustainable, environmentally-friendly and healthy options.

Even the children’s menu has a number of kid-tested healthy options, and she is also going to be offering a selection of fresh juice options. The café is open seven days a week from 9am to 4pm.

### Summer Fun to Help You Explore Your World!



Now Available in the  
**BZS Gift Shop!**

For more information contact [concession.bzs@gov.bm](mailto:concession.bzs@gov.bm)  
or call 293-2727 ext. 2115.

## Scholarship recipient tracking Longtails

BZS/Steinhoff Scholarship recipient Miguel Mejias, a Biology student at Memorial University in St. John’s, Newfoundland, has been undertaking some very interesting and exciting research on White-tailed Tropicbirds (*Phaethon lepturus catesbyi*), better known to most Bermudians as the “Longtail”. Central to his study is the use of small, light-based geolocators to track the movements of Longtails when they are not in Bermuda during the breeding season.

The study will be central to his MSc thesis, where he will be looking at answering three questions: (1) identifying the timing of migration and routes used by Longtails to and from Bermuda; (2) identifying key areas used by Longtails during the non-breeding season; and (3) describing the behavior (i.e., time spent flying, foraging and resting on the water) of Longtails during the non-breeding season.

“I became interested in the project primarily because I knew it was an aspect of Longtail ecology that we knew nothing about. Up until now, we had ‘hunches’ of where Bermuda’s Longtails migrate over the winter, but no definitive proof,” Mr. Mejias said. “Also, Jeremy Madeiros did a similar study with the Bermuda “Cahow” Petrel (*Pterodroma cahow*), so the opportunity to conduct similar research was too tempting to pass up. With this technology, I’ll be addressing the three primary questions of my MSc thesis.”

The study began in 2014 with the goal of capturing 30 adults while they were in their nests, and equipping each with a small (less than 1g in weight) geocator on their leg. The start, however, was less than ideal and fraught with challenges. Firstly, the geolocators did not arrive until early July, which is when breeding season is almost finished, during which time the adults spend no more than five to ten minutes in their nests, because the chicks are large enough to regulate their own body temperature and only require infrequent meals. Secondly, Miguel had heard stories that previous attempts to tag Longtails had not been successful as the birds had been known to pull the tags off their feet. In spite of these challenges, the team were finally able to successfully tag 30 late nesting adults by early August, though there was no guarantee that the tags would stay on, let alone whether the birds would survive and/or return to the same nest.

“I returned to Bermuda on April 10th and I’ve been tirelessly revisiting the nests of



BZS/Steinhoff Scholarship recipient Miguel Mejias has been tracking longtails as a part of his MSc thesis. • Photo supplied.

the birds tagged in 2014,” Miguel shared. “I am pleased to say that as of May 15th, I have successfully recovered 21 of the 30 tags I deployed last year – a 70% recovery rate in just a month! All of the tagged birds appeared to be in good health; their weights were taken upon recapture and will be statistically compared to their respective pre-tagging weights for any effects of wearing tags.”

“Just as exciting is that all 21 tags were fully functional and provided exciting tracks of the Tropicbirds movements and data on the amount of time each bird spent on the water versus flying – all very exciting results to report! And from what I can see, none of the tags we deployed last year have fallen off, meaning that the remaining 9 tags are from birds I have yet to encounter in 2015. These birds have either not been in the nest during my checks, have yet to return, or have died over the winter periods.”

It is still too early to determine the full extent of the data being collected, however Miguel and his team are already uncovering some amazing data, particularly in terms of how far these birds actually travel during migration. The information is also helping scientists identify key foraging areas of seabirds during the winter months, allowing them to see where these areas may overlap with ‘danger zones’ and help to identify potential threats to the species.

“Conservation is based largely on a ‘value system’,” Miguel explained. “In other words, we as humans wish to protect the things we deem as precious. The reality is that Bermuda, as a country, will continue to persist, regardless if Longtails were to become extinct or not. However, on the other side of the argument – the side my mentors, colleagues and I firmly stand on – is

Continued on page 6

# Flagler College visits Bermuda for Field Experience

Though only a small private college located in St. Augustine, Florida, Flagler College has some big dreams for their students in regards to protecting and conserving the environment. As a result, in the fall of 2013, the school launched their Coastal Environmental Science programme, which is designed to give students hands-on research experience, including opportunities overseas.

Subsequently, over the last two years the school has been able to offer students a study abroad course set in Bermuda, with the assistance of the Atlantic Conservation Partnership (ACP) and the Bermuda Aquarium, Museum and Zoo.

This year's students arrived on Saturday, May 16th, and spent a full week in lectures and exploring the island through a number of field experiences, including snorkeling and scuba diving excursions, as well as visits to Nonsuch Island and local waste facilities, including Tyne's Bay Incinerator and the Material Recovery Facility. They also enjoyed lectures by some of Bermuda's top scientists and conservationists, including Dr. Jamie Bacon, Stuart Hayward and Jeremy Madeiros.

This year, they were also joined by a group of students from the Bermuda College, who were able to add their perspective and local knowledge to discussions.

"We were teaching two courses: 'An Introduction to Sustainability' and 'A Marine Biology Field Experience'," explained Dr. Jessica Veenstra, who has accompanied this year's students. "Bermuda is a fantastic place for us to conduct this curriculum. It is a great place for our students to explore the issues of sustainability, by trying to answer the questions of how to provide water, energy, and food, while managing the wastes of a growing population in a place that is land and resource limited. We were also able to explore how that growing population is impacting the surrounding marine resources. Bermuda has such an incredible variety of marine habitats in such a small area, and that makes it a great place to learn about these different ecosystems."

"We hope students can visualize the struggles and successes involved with sustainability in both Bermuda and the US," shared Dr. Ed McGinley, also from Flagler. "Each place has its unique issues, but there are lessons to be learned from looking at



Students visiting Nonsuch Island with Jeremy Madeiros. • Photo by C. Stringer

how other communities approach the topic. Both Flagler students, and the Bermuda College students, have a strong connection to the marine environment, and sustainability can help preserve our marine resources."

"It was wonderful to welcome the students from Flagler to Bermuda," said local course coordinator, Camilla Stringer. "The weather was perfect for Marine Biology Field Study snorkels and diving trips. In addition, the group was able to visit various sites around the island, getting first-hand experience related to their studies on conservation and sustainability."

## Students facing their fears through Kids on the Reef

Awakening a sense of the wonder of the natural world in the lives of students is a vital component of the BZS Education programmes. It is no different for our team who, in collaboration with I AM WATER Conservation Trust and the support of XL Catlin, take public middle school students through our "Kids on the Reef" class. Through this two-day programme, students not only learn about the ocean, but also explore by snorkeling and learning to safely freedive.

However, as students are brought face-to-face with Bermuda's marine environments, there is a certain level of fear and trepidation for some, as many of the students have never explored under the water beyond what is accessible from our sandy beaches.

"Kids on the Reef is all about taking kids outside their comfort zones," explained Dr. Alex Amat, BZS educator and Kids on the Reef programme director. "We give them the tools they need to be confident in the water and to learn about Bermuda's coral reefs."

The workshops are open to public middle schools, who are invited to register groups of students, and allows them the unique opportunity to experience the wonders of the deep out on Bermuda's reefs. It includes classroom teaching, covering coral reef ecology, ocean conservation and personal development, as well as confined water and open-water freediving instruction. Through the use of yoga, students learn breath and body control so that they can develop an awareness that will transfer itself into the water as they begin exploring – first through snorkeling, and then in the mind-over-body challenge of freediving.

Beth Neale, I AM WATER's Education and Outreach Manager who taught throughout the month of May, shared: "It has been a great privilege for me to be a part of Kids on the Reef 2015. I AM WATER believes that we need to give children the confidence to explore their beautiful blue backyard. It is only once they understand and appreciate how precious this resource is that they will want to protect it... I am so proud of the young Bermudians who participated in Kids on the Reef, as many of them overcame their fears and became confident snorkelers



Dellwood Middle School student, Al-Shae L., enjoys the wonders of the ocean. • Photo courtesy of I AM WATER Conservation Trust

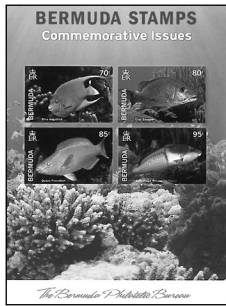
and freedivers. It is incredible to see how quickly they learn and grow, far surpassing their own expectations." The students have even surprised themselves.

Al-Shae L.: "I learned that I shouldn't be

Continued on page 6

## Reef Life HD featured on Bermuda Stamps

The stunning photography that is the focus of the BZS's Bermuda Reef Life HD app will now be featured on letters and parcels posted around the world as the Bermuda Philatelic Bureau launched a new set of Bermuda Reef Fish stamps on May 21st.



The photographs are all the work of long-time BZS supporter, Ron Lucas, and are featured in the Bermuda Reef Life HD app, which can be downloaded for free from iTunes, Google Play and Amazon.com.

"I suggested the idea to some friends, one of whom is a keen collector and happens to be on the Government board," explained Mr. Lucas. "He asked me for some examples and there was interest. In the end, I supplied about 15 different photos for consideration and of these, five were selected by the Bermuda Philatelic Bureau."

The process took several months, including determining which photos to use, reviewing stamp layouts and writing the accompanying information for the first day covers, which Mr. Lucas provided with the assistance of Judie Clec.

"I like to donate my photos to worthy causes, and this was just another one which I hope will support caring for our underwater environment and possibly help tourism in a small way. Bermuda stamps are collected worldwide because of their limited numbers and beauty, so this is good publicity for our reefs," Mr. Lucas shared.

"I am very honoured to have five of my photos selected to appear on Bermuda stamps, and this complements the issue of the Bermuda Commemorative Silver Coin that was produced a few years ago to celebrate the 40th anniversary of the Bermuda Turtle Project, which was also based on one of my photos."

The "Bermuda Reef Fish" stamps are available as first day covers (\$5.50) and as sets (\$3.55) from local post office branches and make lovely gifts for visitors and stamp collectors.

The Bermuda Reef Life HD app is available for free from the iTunes, Google Play and Amazon app stores.

## North Rock Snorkel Experiences

Get ready to dive in and have some fun with our fantastic North Rock Snorkeling trips!

Trips are scheduled for:  
 June 7th, 14th, 27th  
 July 5th, 12th, 18th, 26th  
 August 8th, 16th, 22nd, 30th  
 September 19th, 27th

Please note that dates are subject to change and will not run if there is bad weather.

To book your trip, visit the Island Tour Centre website: [www.islandtourcentre.com](http://www.islandtourcentre.com)

For more information or assistance, contact Captain Nigel Pollard at [endurance.bzs@gov.bm](mailto:endurance.bzs@gov.bm) or by calling 293-2727 ext. 2151.



• Photo by C. Burville

## Miguel Mejias: Longtail Tagging

*Continued from page 4*

that protecting the remnants of Bermuda's native species is extremely important."

"Since the arrival of man in the 1500s, the native flora and fauna suffered extinction, extirpation and severe reduction in population size. In respect to seabirds, the actions of man have reduced the once large number of breeding seabird species on the island to merely three: The Bermuda Cahow, Longtail, and Common Tern (*Sterna hirundo*), the latter, ironically, being the rarest of the three in Bermuda. Humans are solely responsible for the decimation of our island's seabirds."

"Now that species like Longtails are no longer subjected to subsistence hunting, I personally feel that we, as Bermudians, are obligated to help undo the damage done to our biodiversity by our predecessors and hold on to the few things that make Bermuda unique."

## Kids on the Reef

*Continued from page 5*

scared of anything in the water."

Owena R.: "I'm proud of not panicking in the ocean, and I learned how to breathe in the ocean and not to put my snorkel underwater."

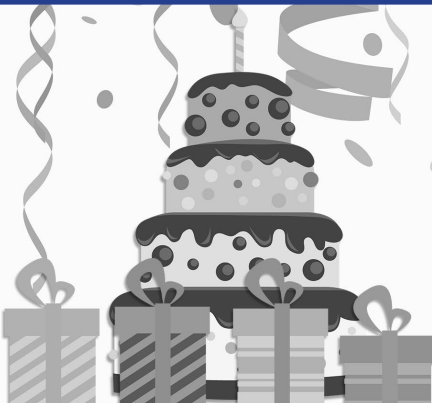
Jai P.: "What I learned is how to freedive more comfortably, and I learned that I don't have to be scared. And I learned a lot about fish."

One teacher from Dellwood Middle School, Mr. Nannini, said: "I'm definitely proud of these students today, a lot of whom dived deeper, did better and faced their fears. Some struggled, but then managed to overcome their fears."



Dr. Alex Amat assists a student with a freediving descent.

• Photo courtesy of I AM Water Conservation Trust.



## Celebrate your birthday with BZS!

For more information, contact Lauren Simons at [concession.bzs@gov.bm](mailto:concession.bzs@gov.bm) or call 293-2727 ext. 2117

# Breeding Success! Tawny Frogmouth Chicks

There has been a lot of excitement in the Zoo over the past few months with the birth of three Tawny Frogmouth chicks.

The threesome are the offspring of Kermit and Duane, who have resided in the Australasia exhibit for the last one and a half years, having arrived in October, 2013.

Natives of Australia and Tasmania, Tawny Frogmouths are most closely related to oilbirds and nightjars. They are carnivorous, dieting mostly on nocturnal insects, as well as small mammals, reptiles and amphibians. They do much of their hunting at dusk.

In the wild, they typically breed from August to December, however, because Bermuda is located in a different hemisphere, this has been reversed to January through May. They typically form partnerships for life and will take turns incubating eggs on the nest, rarely leaving the nest unattended.

*The first two chicks hatched from BAMZ residents Kermit and Duane.*  
• Photos by S. Westhead



What makes these chicks particularly special is that Kermit, our male, has not previously been genetically represented in the tawny frogmouth population. His offspring are important as they will contribute to genetic diversity within the population that are in human care.

Also significant is the fact that Kermit is 18 years of age. In the wild, Tawny's will usually live between 10 to 14 years, and in human care, there are only eight recorded males that have reproduced after the age of 17 years.

The oldest two chicks were born on March

21st, 2015 and March 28th, 2015, and are already on display in the Australasia exhibit, however they have been placed in an enclosure for their protection. The third chick was born on May 5th, 2015, and will hopefully be big enough to join its siblings in the near future.

The tawnies are a part of a Species Survival Protection breeding programme and the manager of that programme will recommend where the new chicks should be placed, in order to best maintain the breeding population. Those recommendations are generally issued annually, so for the next few months, they will still be calling BAMZ home.

## Trunk Island Project 101 - Clearing the Invasives

By Colin Brown  
Trunk Island Sub-Committee

The BZS purchase of the cottage and 2.4 acres on Trunk Island is a visionary achievement that compliments the educational mission of the BZS in so many ways.

Of the many potential projects on Trunk Island, clearing of the invasives and replanting endemics has been one of the first to receive priority. It will be a legacy project that will take time, which is good since our many volunteers are able to see and experience what Trunk Island has to offer.

The vision of this project is to create a "Nonsuch Island" type habitat in Harrington Sound. Over time with the educational sessions that are held on the island, the children (and adults) will see the progress and transformation that takes place. There will be quadrats established so that the scientists can monitor and compare habitats that hasn't been touched with the landscape that has been replanted.

Within the last six months the BZS has purchased a Vermeer BC600XL 6-inch

chipper, four Stihl chainsaws and safety gear. A core group of volunteers have been trained in the proper use of this equipment and are leading the "Weekend Warrior" parties. These groups visit the island once a month on a Saturday, usually from 9am to 1pm. Our last session was held on 20th June and I encourage you to come out to future groups – we have all the safety gear and provide refreshments, so all you need are sensible work clothes and an empty water bottle.

There has also been a lot of interest for corporate volunteer days. Some companies have already visited, contributing many volunteer hours, which have made a huge difference.

Heading up the Trunk Island sub-committee has been a fantastic opportunity for me. I had been looking for a way to give back to the community and this project fits me to a "T". As I said earlier I look at this as a legacy project that will establish an educational environment of endemic Bermuda for our generation and generations to come.

For information or to volunteer, contact Joanne Chisnall at [volunteers.bzs@gov.bm](mailto:volunteers.bzs@gov.bm).



*Weekend Warriors' and Corporate volunteer groups have made a significant impact on culling efforts at Trunk Island • Photo supplied.*

## Trunk Island Campaign

*Continued from page 1*

Classroom and implementing Dr. Wingate's conservation restoration plan.

"We are grateful to the organisations and companies that have already made contributions towards this important education campaign, in particular, our lead donors, the Stempel Foundation and Stempel Family," said BZS President, Richard Winchell.

"We want to keep this small island in our 'backyard' the kind of place that this, and future, generations will want to come back to," added Mr. Winchell. "Together, we can build on what is best about BZS Education and make it even better for our Bermuda community."