



**BERMUDA
ZOOLOGICAL
SOCIETY**

*Support Charity
for the
Bermuda Aquarium,
Museum & Zoo*

WILD TALES

Spring 2017

Aqua Camp: Teamwork makes the Dream work!

625 kids took part in the 8 weeks of Aqua Camps last summer. The summer camps are broken up into 6 different age groups, and the education department ensures that each group is given a focus that creates an eagerness to learn and include a field trips appropriate to their theme.

Aqua Tots, our younger group at 5 years old, spent their week discovering different animal groups and plants each day, such as Amazing Ants, Buzzing Bees and Ocean Creatures. They are kept entertained working on take-home crafts. Aqua Kids, Primary 1 & 2, are able to explore different ponds across the

island. They interact with salt and fresh water ponds, learn about what animals live in each environment and their importance to the ecosystem. Aqua Fun, Primary 3 & 4, explore the mangroves of Bermuda. They get to learn what they are, and how they serve as an important nursery for fish.

Aqua Zoo, Primary 5 & 6, are taught the story of the cahow and Nonsuch Island. The highlight of the week is when the kids get to visit Nonsuch Island for the day. Aqua Explorers, Middle School 1 & 2, have the chance to conduct habitat surveys of various aquatic habitats,

story continued on page 6



Atlantic Conservation Partnership



Introducing Our New President. Tom Hulst is stepping into the Atlantic Conservation Partnership's (ACP) top leadership position, replacing Richard Winchell who has held the post for 18 years.

Former Chief Executive Officer of Bermuda-based insurance and reinsurance company

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
Kali Douglas
Darlene Fortin
Michael Frith
Michael Grayston
Saskia Pearman
Tia Smith
Rob Steinhoff
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

Tom Hulst, President, Bermuda
Richard Winchell, Vice President, Bermuda
George Boggs, Secretary, Virginia, USA
Jim Bistis, New Jersey, USA
Chris Coleman, Bermuda
Todd Fonner, Connecticut, USA
April Galda, Bermuda
Tara Gallagher, New York, USA
Dr. Tom Sleeter, Bermuda
Henry Smythe, Jr., South Carolina, USA
Robert Steinhoff, Bermuda
Dr. Ian Walker, BAMZ, Bermuda
Neil Patterson, BZS, Bermuda
James W. Babcock, Director Emeritus
William J. Loschert, Director Emeritus
Joseph Smetana, Director Emeritus
Susan Ford, Director Emeritus

Ariel Reinsurance Company Ltd., Tom is currently the Non-Executive Director of Neon, and the President/Founder of ReThink Ltd, a consulting firm focused on the reinsurance sector.

THE PURPOSE OF ACP

The ACP supports conservation and research programs focusing on species with habitat ranges that include Bermuda and the Northwest Atlantic - thus encompassing much of the U.S. eastern seaboard. Our objective is to better understand these populations and species in order to protect them. The ACP achieves this mission in partnership with BAMZ and BZS by providing support for:

- research projects and field conservation efforts to address threats to marine and terrestrial biodiversity and to inform policymakers; and
- educational initiatives to train the next generation of environmental biologists, educators, and advocates as well as to raise awareness and build capacity of local communities.

IS MY DONATION TAX DEDUCTIBLE?

Under Section 501 (C)(3) of the Internal Revenue Code your gift is tax deductible. You will receive a tax receipt for your donation.

WHAT HAPPENS TO MY DONATION?

Donations of less than \$500 will be considered unrestricted gifts to ACP. However, the directors are happy to consider recommendations for allocation to specific projects of ACP. Please email acp@gov.bm with your recommendations or to request more information.

Donations of \$500 or more may be restricted to specific projects of ACP. To request that your gift of \$500 or more be allocated to a specific project of ACP, please email acp@gov.bm with your request.

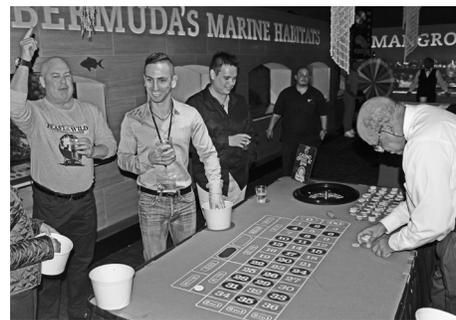
NEED HELP WITH YOUR DONATION?

Contact Lynda Johnson, who will be happy to help you out. She can be reached by email at acp@gov.bm or via telephone (441) 293 2727 ext 2136.

ZOOBILEE: Feast in the WILD was a huge success!

The Bermuda Zoological Society would like to extend a huge thank you to everyone who attended our event, Zoobilee: Feast in the WILD, we were glad that you braved the weather.

The event was a hit! We provided a variety of delicious foods for attendees to choose



from and they danced the night away to our band, One SOULution.

Despite the hiccup of stormy weather in the morning, and some of the afternoon, the skies cleared up just in time for the festivities to begin.

From magnificent mermaids in the tanks and serving drinks, to amusing games such as "Spin now, Wine later" and the iceball sling shot game, we hope that our patrons had an amazing time from the moment they arrived until they left.

If you were unable to attend this year, watch out for our next Zoobilee installment in 2019!



Curator's Corner: Growing your membership opportunities

By Dr. Ian Walker, Principal Curator, Bermuda Aquarium, Museum and Zoo

A membership with the Bermuda Zoological Society (BZS) is not only great value for money but it also opens up a whole range of activities at discounted rates that you and your family can take advantage of.

Starting immediately we are doing regular boat tours twice a week around Harrington Sound, including Trunk Island. Narrated by Jennifer Gray and Robert Chandler from Discovery Tours, you are sure to learn many amazing things about this unique body of water while enjoying our incredible home from a different vantage point. As well as a relaxing boat ride on our new vessel Callista, beverages and other refreshments are on offer.

If getting offshore is more your style, take part in our whale encounters with Captain Nigel on the RV Endurance. If you have not done it before, seeing these amazing creatures up close takes your breath away. If you like getting wet, then take a snorkel at North Rock and see our pristine corals close up in some of the remotest parts of our reef system.

On land, BAMZ is always a hit and

committed to change. Currently we are revamping our Local Tails Exhibit after just completing the aquarium hall. Popular for the marine touch pools, we are extending the pools and making the whole exhibit interactive for kids so they can learn about conservation and exploration through the lens of Nonsuch Island and our own Trunk Island. Our education team is working on a science club for our junior members that will link with the exhibit and provide fun and interactive experiments.

No matter your age and interest, BAMZ and BZS has something for you and a membership will ensure that you know about it, get first choice and receive a discount. In addition, membership allows us to continue our great work. Each and every membership allows us to further our mission of providing free, conservation education classes to all our island's school children.

Last year we saw over 7,000 children have experiences at BAMZ, on Trunk Island, on Endurance and throughout the island. Become a member today and help your family and the community enjoy the wild side of Bermuda.

Trunk Island: A story by numbers

2016 STUDENT PROGRAMMES ON TRUNK ISLAND

- Kids on the Reef for spring and fall = 276 students
- Aqua Camp = 625 in total summer 2016
 - 111 Preschool
 - 452 Primary school
 - 54 M1/M2 (Explorers camp)
 - 8 M3/S1 (Conservationists camp)
- 6 land based school field trips (112 students)
- 20 snorkels around Trunk Island (392 students)
- 4 teacher workshops (86)
- 1 Junior Volunteer weekend sleep-over
- Spring Camp (natural history topics to do with Springtime in Bermuda) = 32 primary aged students

CORPORATE VOLUNTEERS/ COMPANIES ON TRUNK ISLAND

- 28 companies held Days of Giving on Trunk Island
- 599 people from those 28 companies
- Gave a total of 3,171 hours
- 900 Weekend warrior hours
- 11 Warrior Weekends
- 166 people
- 845 hours

10% OF ISLAND CLEARED

REPLANTING THE FOLLOWING NATIVE/ENDEMIC SPECIES

- 67 Cedars
- 18 Yellowwoods
- 45 Green Buttonwood
- 1 White Stopper
- 1 Poinciana tree
- 1 Doc bush
- Several Turnera
- 5 Palmetto



HAVE YOU STOPPED BY THE NEW SHOP AT BAMZ?



Take a trip and choose from a unique selection of eco-friendly and educational toys and gifts!

**HAVE AN IDEA FOR A NEW PRODUCT?
STOP BY AND LET US KNOW!**

Open 7 days a week! • 10am - 4pm • Free Parking

All proceeds from the Shop support BZS Conservation Education Programmes

Coral reef research at the Bermuda Aquarium, Museum & Zoo

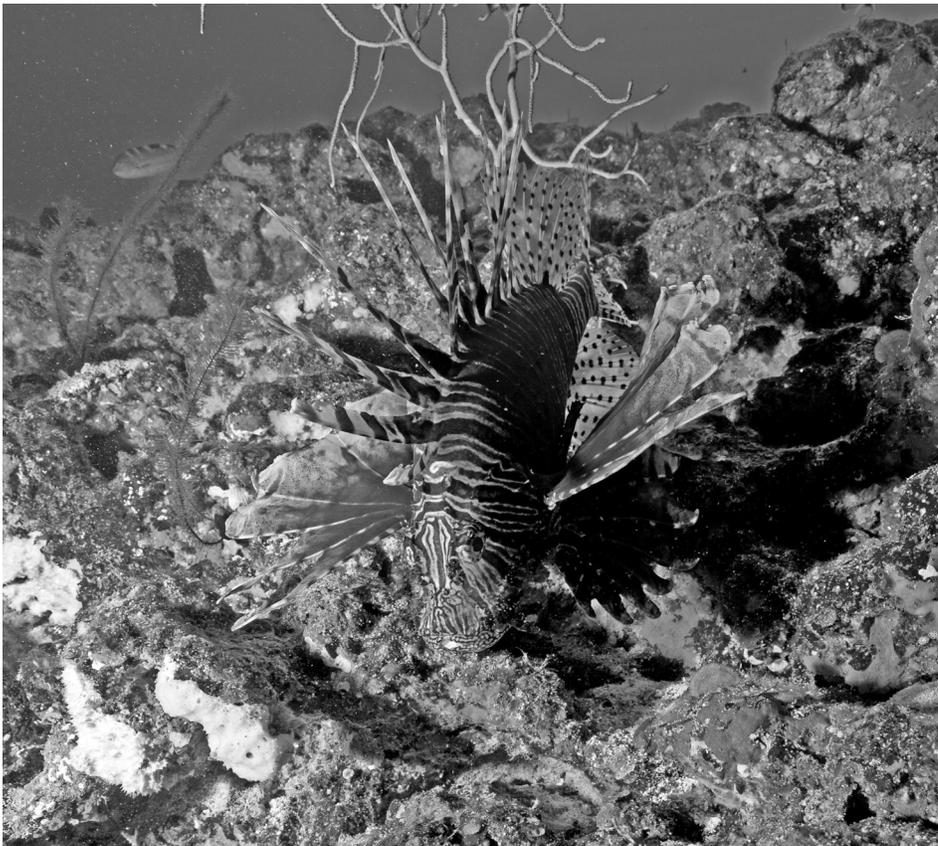
By Dr. Robbie Smith, Curator, Bermuda Natural History Museum

Bermuda's coral reefs are exceptionally valuable to us as a resource for recreation, food and as our natural barrier to storm waves. BZS and BAMZ have supported a number of different initiatives in regard to assessing the health of Bermuda's reefs. Very recently a slew of research papers and reports have emerged. Dr. Thad Murdoch's BREAM project produced a valuable report on the baseline state of Bermuda's corals and fishes in 2010 and 2011, showing generally healthy reefs at 10, 20 and 30m depth across our reef system. Although predatory fishes (groupers and snappers) were very low in abundance everywhere, corals were healthy. Now a new report

from his Long-term Ecological Monitoring project in 2015 shows that conditions seem to be worsening slightly on lagoon reefs and some 10m reefs. This is not news, as each year since 2013 the BZS citizen science Hiscox Reef Watch reports show that the lagoon reefs suffered from declining corals, too much reef algae and very few predatory fishes.

BZS has supported Dr. Corey Eddy (Nashua College) who published a new paper on lionfish and their diet, co-authored by Dr. Gretchen Goodbody-Gringley (BIOS), Dr. Joanna Pitt (Dept of Environment and Natural Resources) and myself. We

showed that lionfish eat far fewer juvenile fishes than we expected but they can eat a wide range of invertebrates, like crabs and shrimps. Also, we contributed to a review paper by Dominic Andradi-Brown (Oxford U.) that highlighted how significant invasive lionfish populations are on deep mesophotic reefs (below 30m) in the Western Atlantic. The great reservoir of lionfish beyond SCUBA limits is capable of significant reproduction that sustains lionfish populations on shallow reefs. So, no matter how aggressive we are in culling them on shallow reefs, we can't eliminate them. Cory and Gretchen are finalizing detailed papers on the distribution of lionfish on Bermuda's reefs. BZS has supported Gretchen's deep technical diving work to extend our knowledge of lionfish in this zone.



Lionfish on deep reef at 50m • Photo by Jill Heinerth

Dr. Pim Bongaerts, his colleagues at University of Queensland, and I have a recent paper on corals living on our mesophotic reefs, showing that some corals species found on both shallow and deep reefs are genetically isolated. This implies that if some shallow corals die out due to climate change, they will not be replaced by larvae produced by the deeper colonies, the opposite of the lionfish story. This was the first test of an hypothesis that provided some hope that, over time, deep reef corals could help re-stock shallow reefs. This may not be true for many corals. The study was part of the Catlin Seaview project in 2013. The recent Nekton Project, funded by XL Catlin, further explored our deep reefs this past summer. We will soon have a much clearer picture of how connected our deep and shallow reefs really are. All these studies strive to reveal the state of our reefs and may point to management actions we can take to protect them or prepare us for the future consequences imposed by climate change.



AZU Beastro is open daily from 9:30am to 4:00pm.

Sit, relax and enjoy the gorgeous views overlooking Harrington Sound while enjoying a delicious meal with your family.

THE VENUE IS THE PERFECT PLACE TO HOLD A PRIVATE FUNCTION!

For more information on opening times, and rentals, please call (441) 236-6517.



Watch out for Greens!

The Bermuda Aquarium, Museum and Zoo (BAMZ) is the place to bring injured or ailing wildlife animals found in our island home. Local wildlife encompasses any animal found in the Bermuda environment that is wild. It does not include pests, feral, invasive, pet or domestic animals like chickens, cats or dogs.

The most important reason to bring the injured animals to BAMZ is so that our educated staff can identify the species and decide on the best possible treatment for the animal.

One such example would be the difference between the diamondback terrapin (*Malaclemys terrapin*), which is a native species to Bermuda and the red eared slider (*Trachemys scripta elegans*), which is now considered to be an invasive species due to the public releasing their pets into the wild. Although these turtle species look significantly different, an untrained eye may not be able to identify one from the other. This is why it is important to bring the animals to BAMZ.



Tagged Green Sea Turtle during the Bermuda Turtle Project • Photo by Jennifer Gray

On average, each year, BAMZ has 50 sea turtles delivered to the facility with different varying ailments. The most common sea turtle to be brought in is the green sea turtle (*Chelonia mydas*), but sometimes BAMZ receives loggerhead sea turtles (*Caretta caretta*) or hawksbill sea turtles (*Eretmochelys imbricata*). When the animals are brought to the facility, they can be suffering as a result of human impact, including boat strikes, kite or fishing line entanglements or plastic ingestion. They can also be afflicted with an illness.

All endemic or native species received are examined by our veterinarian, assessed as to their health and released as soon as possible to prevent habituation onto humans. Where possible they are tagged before release back to the wild.

If you happen upon a sick, injured or dead sea turtle, please consider the following:

- A sea turtle at the surface may be basking but if it does not swim away or can't stay down something is wrong.
- Don't put a sick sea turtle in water. Place it on a flat surface, out of the sun if possible, and cover with a damp towel until help arrives.
- We can learn a lot even from a dead sea turtle.

If you find a dead or injured sea turtle call the sea turtle hotline (441) 297 1010, VHF channel 27 or contact the BAMZ at (441) 293-2727.

We want everyone to love BAMZ!

Kids love BAMZ, Moms love BAMZ, Dads love BAMZ and we want to grow our membership family so that everyone loves BAMZ 364 days a year. The animals take Christmas Day off!!

Over the last several months the BZS has been visiting primary school and pre-school PTA's, to share with them opportunities at BZS and BAMZ, and to encourage those families who may not already be members to come on board, so they too can experience all that BAMZ has to offer!

Increasing our members means more fun for families, and it also means more conservation education experiences for Bermuda's young people. Our Education Programmes are dependent on membership support, so as this grows so too does the impact we can have on young hearts and minds to inspire them towards appreciation and care of our island environment.

Membership is truly a Win, Win, Win! Everybody wins! Thank you for your membership support, and please encourage your friends who are not already members to come on board today so they can enjoy fun, fun, fun all year round!

Our library is keeping tabs on published scientific research...

By Alison Green, Librarian, Bermuda Natural History Museum

One of the many resources we maintain in the library is the Bermuda Natural History Bibliography which is part of our Biodiversity Database. The bibliography is a fully searchable database containing over 5,000 references to scientific papers which are historically and/or scientifically relevant to the natural history of Bermuda.

The bibliography is constantly growing as new papers are written and published and historical papers are unearthed. The library holds all of the papers referenced

in the bibliography. Over recent years we have been working toward having this collection completely digitized as part of our commitment to providing a virtual library resource. In the last couple of years we have also been working on upgrading the entire Bermuda Biodiversity Database to enable it to be hosted on the web. This is still a work in progress but in the not too distant future it will become available.

The Bermuda Natural History Bibliography is a useful tool for members of staff, visiting

scientists, students, and members of the public to utilize when undertaking research into the natural history of Bermuda.

You can visit the library by appointment (Monday – Friday, 8am to 4pm) or request materials by contacting our librarian Alison Green at agreen@gov.bm or calling 293-2727. To receive notifications of newly published papers or library acquisitions you can subscribe for updates at - <http://environment.bm/natural-history-library>

Aqua Camp: Teamwork makes the dream work continued...

learning marine biology field techniques using the BZS "living classroom" Trunk Island. The final group is Aqua Conservationists, Middle School 3 & Senior 1. This group has the chance to camp out on Trunk Island for the entire week. During the week they explore and participate in various local conservation projects as well as volunteer in the zoo and aquarium.

Believe it or not, the planning for Aqua Camp starts in January! February sees Dr. Bacon sending bursary applications to all primary, middle and senior school, making sure that every child who wants to come to camp has the opportunity to do so.

By March the interview process starts for new staff and assistants. Applications go live in March as well and from then until the end of May the major preparations for camps are carried out, including stocking up on supplies for the duration of the summer. Finally with only one month left to prepare, the education team organize staff and assistant training and orientation, making sure that each person is first aid, CPR and SCARS trained.

Without you, our dedicated members, our Aqua Camps would not be successful. Teamwork definitely does make the dream work for Aqua Camp!



PLANNING A BIRTHDAY
PARTY? GOLDEN
WEDDING ANNIVERSARY?
OR EVEN AN
AMERICA'S CUP EVENT?

**THE BERMUDA AQUARIUM,
MUSEUM & ZOO**
IS PLEASED TO OFFER SEVERAL
UNIQUE SPACES WHICH MAY
BE RENTED FOR PRIVATE,
CORPORATE AND NON-PROFIT
FUNCTIONS.

The Aquarium Hall is an
extraordinary venue, with our
magnificent North Rock Exhibit
as a backdrop for your evening
event.

AZU Beastro is a
charming location for small
events, with Harrington Sound
as the picturesque backdrop.

The Discovery Green
is located on the coast of the
facility. It provides stunning
views of Harrington Sound and
is the perfect location for an
intimate wedding.

The Zoo Walkway is
an ideal place to host evening
cocktails and buffet-style
dinners. Perfect for all sorts of
celebrations.

To book your rental, email
concessions.bzs@gov.bm



EARTH DAY



**BERMUDA
ZOOLOGICAL
SOCIETY**

Support Charity
for the
Bermuda Aquarium,
Museum & Zoo

APRIL 22ND

HOW WILL YOU GIVE BACK?

The Bermuda Zoological Society and BAMZ support Earth Day to make the public more aware of the role that the environment plays in helping sustain life in on our fragile island home and that we need to take an active role in protecting it.

Recent BZS research grants

DIVERSITY AND ABUNDANCE OF PARASITES ASSOCIATED WITH RESIDENT BERMUDIAN SONGBIRDS

Dr. Renee Carleton (Berry College)

Parasite burdens can be detrimental to songbirds, especially for hatchlings. Two species of mites were found on our bluebirds that appear very similar to ones on North American bluebirds and genetic tests are being conducted. There were few lice on the Gray Catbird and, surprisingly, very few parasites were observed on white eyed vireos or kiskadees.

WIDECAST SEA TURTLE CONFERENCE

Jennifer Gray (BZS)

The WIDECAST conference is the annual meeting of sea turtle biologists in the Atlantic. As the local director of the Turtle Project, Jennifer felt it important to attend and re-establish direct connections with the active scientists and conservationists. Jen will present the Biology and Conservation of Sea Turtles course, planned for the 50th anniversary of the Bermuda Turtle Project.

BERMUDA FUNGI SURVEYS

Dr. Lawrence Millman (Assoc., Harvard Herbarium)

Dr. Millman conducted surveys within Bermuda's woodlands, parks and nature preserves and recorded nearly 90 species of diverse fungi, of which 24 may be new Bermuda records. The great majority of the fungi are inconspicuous but critical to the breakdown and recycling of plant material.

SARGASSUM STUDIES

Dr. Robbie Smith (Natural History Museum)

Partial funding was used to support a 48 hour offshore cruise on S/V Sea Dragon to collect Sargassum, assess levels of plastic marine debris and observe seabirds. No Sargassum was observed or collected, consistent with a virtual absence of Sargassum throughout most of 2015 and early 2016. Plastic marine debris samples again showed high densities of small fragments on the order of 8,000 to 80,000 per sq. km. of the ocean's surface. 43 seabirds were observed, of at least 11 species, with Sooty shearwaters and longtails the most frequently observed. Three Bermudian college students participated on the cruise.

Construction on the BAMZ Shoreline to commence

Over the the last few hurricanes, the Bermuda Aquarium, Museum and Zoo's foreshore has sustained significant damage, with Hurricane Nicole being the worst.

The foreshore of the facility includes the entire area that faces the waterline, with the majority of the damage occurring in the staff parking area, the Discovery lawn and the AZU Beastro.

Plans have been drawn up to protect the BAMZ shoreline that include stabilizing hanging slabs and replacing land that was

lost in the storms in order to make those areas safe again for both visitors and staff.

The work in these areas should commence in the very near future and as a result, areas may need to be temporarily closed off. They will be barricaded from the public and clear signage will be placed, so we request that you stay clear of these areas for your own safety.

We apologize for any inconvenience this may cause, and look forward to making BAMZ great again.



RAFFLE TICKETS
Great prizes to be won!
ON SALE AT BZS GIFT SHOP
Be sure to return your Raffles by Thursday, 27th April!
All proceeds to benefit BZS education programmes

STAFF OF BAMZ: Never can say good-bye

Cameron Rowling-Bridgewater is a Senior Zoo-Keeper at the Bermuda Aquarium, Museum and Zoo (BAMZ). For the average person, this wouldn't seem out of the ordinary, but for Cameron this is the most recent stop for him on a journey through BAMZ that started when he was only 14 years old.

Cameron's BAMZ careers started when he was 14 years old, and he was hired through the government youth employment programme to help with seal feeds and to dive in and clean the Northrock tank. He returned to work at BAMZ every school

holiday for the next 3 years.

Cameron couldn't stay away from BAMZ! At age 18, he found himself working in Marine Operations, being mentored by Leanne Hinton and Chris Flook on how to be a collector for BAMZ

After taking a few years to explore work in other areas, he returned again to work for two years as a temporary staff member in Local Tails and Marine Ops, and finally returned to BAMZ to work between the Zoo and the Aquarium in 2015. It was then that he was given the opportunity to choose to either become a Senior Aquarist or a Senior Zookeeper. He chose the Zookeeper role, as he felt that it was an area he wanted to focus on, after spending so much of his BAMZ career on the aquarist side.



Senior Zookeeper, Cameron Rowling-Bridgewater, and Principle Curator, Dr. Ian Walker, assessing a Flamingo during their yearly check-up. • Photo by Michelle Smith

"Working at BAMZ over the years has been an amazing experience," said Cameron. "I was lucky enough to be given the opportunity to work in multiple areas of the facility, and now have a position that challenges me every day."