

WORLD Tales



As 2018 begins, I want to start the New Year focusing on our members' needs.

- **What does BAMZ and BZS mean to you?**
- **What can the facility provide for your family or school?**
- **How can we partner together to provide an excellent community asset for all?**



Winter/Spring 2018

"WILD Tales" is a publication of the Bermuda Zoological Society, support charity for the Bermuda Aquarium, Museum & Zoo who work together:

"To inspire appreciation and care of island environments"

Website: bzs.bm

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Several weeks ago, I was walking through the Aquarium Hall and stopped to speak to a member. She had some great questions and also ideas for BAMZ! Ideas that would better engage her son, who had a specific interest in lemurs. I asked her whether she would be willing to be part of a focus group to help us with our upcoming Strategic Planning and she eagerly agreed.

This is where you come in!

We will be sending out a survey early this year to all our members and we hope you will participate. Additionally, we would like to create some member focus groups to get feedback and to help us craft a vision for the future. While our Strategic Planning will look at the next five years, we are also starting Master Exhibit Planning looking out 10-15 years to set a road map for the future. If you would be willing to take part, please let us know at the end of the survey. We value your opinions and want to do everything to make your membership the best it can be.

As we look to the future, we are also busy right now. The aquarium

renovation is 99% complete and we have moved on to renovating Local Tails and our popular touch pools. Rest assured these are returning but with a new, improved look and feel, focusing on the amazing stories of Nonsuch and Trunk Island. Our goal is to make these amazing true-life stories more accessible to young people with a goal of empowering them to effect positive social and environmental change while also making them fun. Additionally, repairs to our hurricane damage are almost complete, the seal and turtle pools will be getting a makeover; our new emergency life support generator is online and our museum interactives will be getting a facelift. All this to say, we are not sitting still but striving to make BAMZ and BZS the best they can possibly be.

As 2018 begins, please consider being a part of our **vision** crafting a better BAMZ for your family and for our community. We really want to hear from you.

Ian Walker
Principal Curator

Making an Impact

The mission of the BAMZ and the BZS is: *"to inspire appreciation and care of island environments"*.

The dedicated education staff has designed a range of programmes, classes and field experiences that aim to foster in our young people a love of nature and learning, and a desire to protect our delicate natural environment in Bermuda.

The best way to understand the environment is to be immersed in it. Hands-on interactions are key to this. BAMZ and BZS are uniquely positioned to be the perfect facilitators of this kind of learning. The aquarium and zoo with their living specimens provide the perfect classroom and now with the recent acquisition of Trunk Island, we have our own *'living' classroom* for field study, a place where students can explore different habitats and see restoration ecology in process. "Endurance" and "Callista", our two boats, have greatly enriched our education offerings in marine science.

Nature Encounters for the younger children, the Junior Volunteer Programme, the Nonsuch Camp (run jointly with Audubon Society), the Aqua Camps, Kids on the Reef, Reef Watch, the Natural History Course for adults and the classes for students from preschool to college level make us the biggest providers of hands-on environmental education in Bermuda. This represents a huge reach into the community!

It's interesting and indeed gratifying to see the number of people in the community, who went through our programmes and have gone on to become major contributors to the fields of environmental care in Bermuda and beyond. Just as important though, is the cultivating of individuals in the community, who make informed decisions regarding the environment, and this is what we hope our efforts are fostering.

Mary Winchell
Education Officer (1985 - 2002)

Some of our Graduates



Jorges Sanchez

BAMZ Collector has a Bsc degree in Biology from Dalhousie, Canada.

Nesta Wellman, BAMZ Aquarist is working on completing a degree in Zoo Management at Chester University in the UK. Both Jorges and Nesta are graduates of the Junior Volunteer programme.



Barclay Simmons

Graduate of Nonsuch Island Camp in 1988. Now sitting on one of the BZS Board Advisory committees.



Kate Cooper

Former JV and Nonsuch Camp graduate. Also a summer intern and weekend worker.

Graduate of Bangor University in Wales. Now working at Deep Sea World in North Queensferry, Fife, Scotland

Shane Antonion

Shane is a graduate of the JV programme, Nonsuch Camp and a helper with Kids on the Reef. Presently at Plymouth University undertaking the MSc Environmental Consultancy programme with the hopes of entering into the environmental sector.



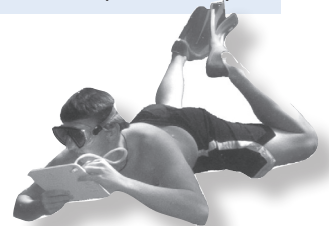
Miguel Mejias

Volunteered at BAMZ for 6-7 years and was a Nonsuch Camp counselor. He has a M.Sc. in

Biology, Memorial University, Newfoundland. He studied the nesting success and migratory movements of "Longtails," in Bermuda. Now in a Ph.D programme where he is studying the evolution, structure and function of songs in a family of birds called the *Vireonidae*, with special emphasis on the Bermuda white-eyed Vireo, or "chick-of-the-village." Dr. David Wingate is his inspiration.

Peter Cooper

Attended Nonsuch Camp and worked at the Aquarium. Now a mechanical engineer with a great interest in alternative energy.



Talley Smith

Participated in BAMZ summer programme during the 1990s. She is now working as a Ranger at the Londolozi Game Reserve in Africa.



Owen Chisnall

A past Aqua Camp and Nonsuch Camp attendee, who also worked and volunteered at

BAMZ/BZS. Now a mechanical engineer and about to join Aecon's airport project as a member of the health and safety team, which includes environmental health as well.

VOLUNTEERING

Thank you to all our Volunteers — because of You, we've accomplished so much!

Since the Bermuda Zoological Society purchase of a portion of Trunk Island in 2015, volunteers have played a major role in the island's rehabilitation and restoration.

Corporate Days of Giving

Our corporate members have embraced the project supporting us with funds and manpower through Corporate Days of Giving. Over the last three years Trunk Island has hosted 42 working visits from our corporate members. Through their generosity, over 4000 manhours have gone into eradication of invasive plants, replanting and lawn maintenance; the cottage has seen a cleanup and painting, as well as clearings and paths managed for visiting school groups, classes, camps and days of adventure on Trunk.

THE WORK NEEDS TO CONTINUE!

Becoming a corporate member of BZS allows you a company day of "give back" to help continue, create and maintain a "living classroom" for all Bermudians.

Joanne Chisnall
Volunteer Coordinator



Weekend Warriors

Weekend Warriors have also been hard at work over the past three years. This group of devoted adults and teens hold work parties one or two weekends a month to help to maintain and create new projects on the island. They have helped with the creation of a butterfly garden, planting seedlings and watering and so much more. Together they have given 1284 hours of their spare time to our backyard.

As Hannah Collins (a Weekend Warrior) has said, "It was hard work, but so worth it to be able to give back to the Earth. It was a beautiful day!"

Want to come out to Trunk as an individual or group?

Contact the the BZS Volunteer Coordinator at volunteers.bzs@gov.bm to join the Weekend Warriors or set up a company give back day on Trunk Island.

TRUNK ISLAND

Increasing the natural beauty and value of Bermuda's "Living Classroom"

The Trunk Island conservation project continues to grow from strength to strength (pun intended). Since the cooler weather arrived we have ramped up our Weekend Warrior Saturday mornings and also had renewed Corporate and school support. We are very fortunate that an anonymous donor supported the hiring of Trevor Rawson for the winter to manage the project. He started with us as a Captain last summer. Trevor has done a fantastic job organizing all aspects of the island, from starting composting, identifying flora and fauna, planning groups and giving tours and maintenance and educating all that have worked with him. We wouldn't be this far along without his hard work.

We are also very fortunate to have Robin Marirea and his plant nursery where we have sourced a lot of native and endemic plants.

Plantings to date include: cedars, yellowwoods, Southern hackberry, 7-year apple (rare), olivewood, palmettos, box briar, turnera, turkey berry, doc bush, Spanish bayonet and prickly pear.

One of Dr. David Wingate's goals this winter is to eradicate the invasive Chinese fan palm and we are confident we will achieve this.

So, I encourage you all to come and have a look, but be warned — we may want some sweat equity in return!

Colin Brown
BZS President



*Junior Volunteers:
Taj Maxwell (l) &
Daniela Buglione
planting a
7-year apple tree*

*Keep up with news on Trunk Island.
Follow us on Facebook and Instagram
[@trunkislandbermuda](https://www.instagram.com/trunkislandbermuda)*

SPECIAL EVENTS

2018 ZOOM



AROUND THE SOUND

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AQUARIUM

An Uncommon Guest

In November 2017, we received an unusual fish from local fisherman Kevin Winter, which he caught a few miles off Bermuda. It was identified as an Oceanic puffer (*Lagocephalus lagocephalus*).

At first glance it appeared to have little resemblance to its more, well known cousin – *the porcupinefish*. It was torpedo shaped, had a navy blue back, dazzling silver sides and iridescent blue stripes; all the hallmarks of a pelagic lifestyle in the open ocean. However, like all puffers it did have the ability to inflate itself and become a very uncomfortable morsel when grabbed by a predator.

While the greyish-brown porcupinefish is a bulky, cumbersome swimmer covered with spots and spines; this animal had more delicate features. It was built to move

effortlessly through the water and its coloration is a design adopted by many oceanic fish like marlin and tuna. A dark back helps it vanish into the depths when viewed from above and its light-colored belly makes it disappear against the sky when seen from below; this type of camouflage is called countershading. In addition, its flashy, mirrored flanks make it extremely difficult to spot when viewed from the side. Imagine, if you drop a mirror in the open ocean it would be impossible to see unless you were right in front of it!

Unfortunately, oceanic fish do poorly in captivity, especially in small tanks; so, the decision was made to release it back offshore for its own welfare. However, we felt fortunate getting the opportunity to see this uncommon island visitor.

Patrick Talbot
Curator, Aquarium & Zoo

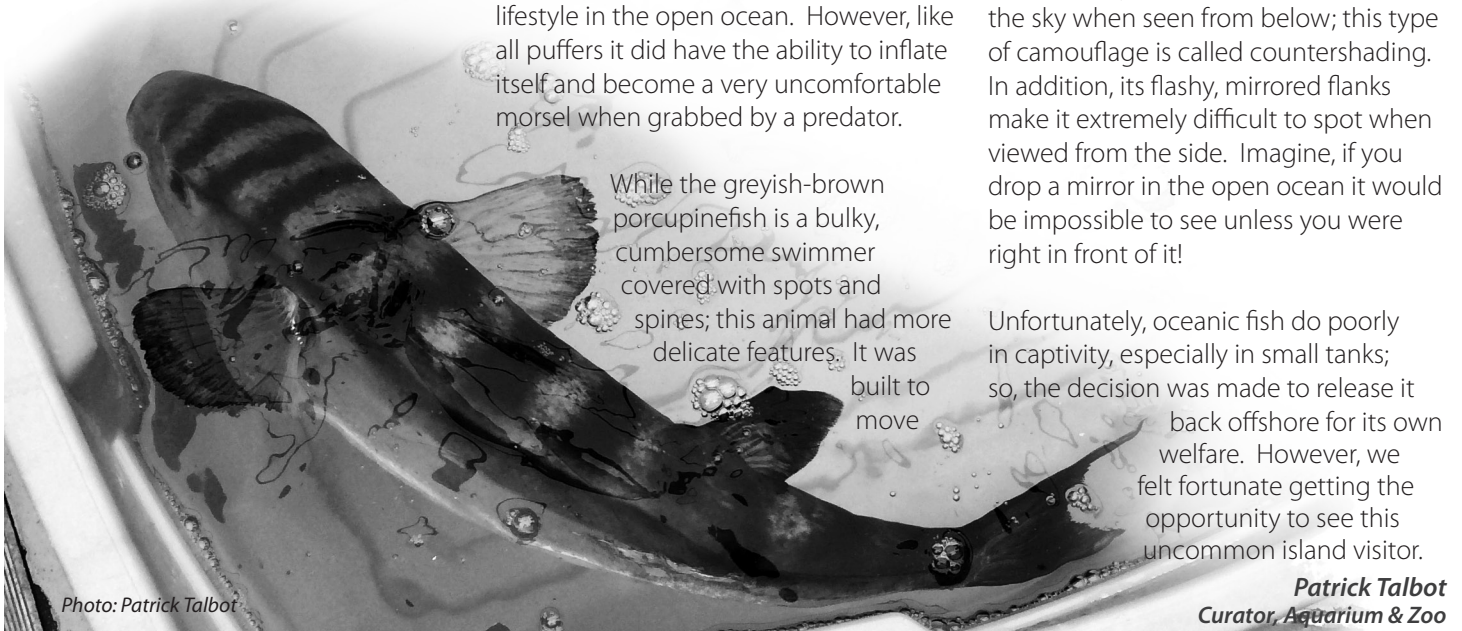


Photo: Patrick Talbot

The Bird Collection in the Museum is just one of many that make up the Natural History Museum, BAMZ

The Bird Collection in the Museum is just one of many that make up the Natural History Museum, BAMZ. Unlike the living collections in the Aquarium and Zoo, the Museum's bird collection is made up of preserved skins, stomach contents, skeletons, parasites, eggs, and fossils – these many hundreds of specimens are physical records of birds that occur naturally in Bermuda, over time, but also at different life stages. A look at the specimens on display in the Museum's Naturalist Room will give you an inkling of what's *"behind the scenes"*, upstairs stored in climate-stable rooms.

These scientific specimens are an important resource for furthering scientific knowledge and supporting conservation and education (and the BAMZ mission statement). A collection of specimens is often compared to a library because the specimens are organized and stored on a shelf and can be "read" for information. Unlike books however, each specimen is unique and can't be replaced – it represents a unique event at a location, day, time and circumstance. A specimen can also be thought of as a piece of a jigsaw puzzle. If it has good accompanying collection information with it, the "puzzle piece" has lots of colour and detail. When fit together with other pieces of the puzzle, it contributes to the overall picture, telling us (or at least giving a clue) to the very interesting story of Bermuda's natural history. In the future, when our records are digitized, much of that "story" will be available, with just a few clicks, to researchers and students, here and abroad.

A few of our specimens were collected by naturalist John T. Bartram in the mid-1800s, and many were collected or

found and prepared by David Wingate. At least 290 specimens of the Wingate bird collection (including many unusual birds and a lot of first Bermuda records collected as voucher specimens), were sent to the American Museum of Natural History in New York prior to 1980, because BAMZ didn't yet have the facilities to protect them. Most of our recent specimens, however, were found and brought to the Museum by interested members of the public, for which we are very grateful; without these collectors the collection would not be as extensive or valuable.

The Museum has also been fortunate to have, over the years, a number of people who enjoy taxidermy (the process of turning a bird body into a museum specimen); in particular Shirley Tuzo and, most recently, Eva Bottelli who over the last four years has prepared numerous specimens (now bird-skinner extraordinaire!), creating something valuable from something found. With care and attention, these specimens will be a resource far into the future.

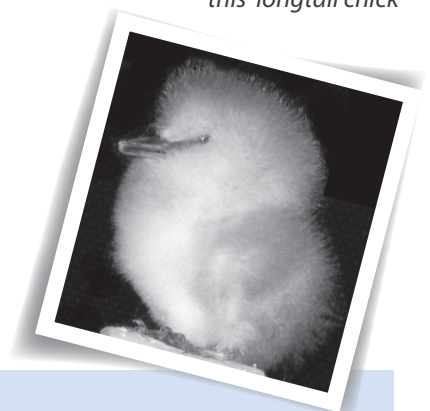
Taxidermy involves preserving the bird body by stuffing or mounting it for the purpose of display or study. Taxidermy is not for everybody but it's surprising how many children, when given the chance, in summer camps at BAMZ, watch the process with interest. Invariably, questions are asked and answered and we all learn. *How great is that!*

Lisa Greene
Collections Officer



Eva Bottelli holding a red-breasted merganser (Mergus serrator) – a recent find by Kevin Carter on a Southampton shoreline and a new species for the Collection.

Eva's skilled hands allow us to delight in the 'magic' of this longtail chick



In case you're wondering:

Our largest specimen: Tundra swan (Cygnus columbianus) | Our smallest: Northern parula (Parula americana)
Most interesting (subjective, of course): Snowy owl (Bubo scandiacus) | Most unusual: Brown skua (Stercorarius antarcticus)
Cutest: Longtail chick (Phaethon lepturus catesbyi)

Farewell Staesha, we shall miss your “sunny disposition”!

At 16 , Staesha Pitcher chose to work at BAMZ, feeling it would be the ideal work environment due to her love of animals.

Now, five years on, she’s leaving to pursue studying Wildlife Biology at the University of South Wales. Asked what she will miss, she was quick to state how much she’s enjoyed interacting with the animals, but will also miss:

“...working with such ‘cool people’. My life will be a lot more ordinary without coming to BAMZ each Saturday. I loved every minute working here; meeting new people; making great friends and experiencing working in a place with so many interesting and odd creatures — anything else would just have been average compared with working in the Zoo”!

She also noted, she learned the value of being *patient with others*; something that is sure to stand her in good stead, as she moves forward in life.

Staesha, thank you for your dedicated help in the Zoo; with your positive outlook on life, you’re sure to go far. Know that we all wish you the very best as you further your dreams.

The Zoo Staff



“Laugh, Kookaburra! Laugh, Kookaburra!”

Bermuda Aquarium, Museum & Zoo would like to welcome two of our newest residents “Adelaide” and “Bondi”!

These siblings came to us all the way from the Dallas Zoo and Aquarium in Texas, USA and can now be found cackling away with their distinct “laugh” in the Australasia exhibit of BAMZ.



Gay YOUR lives must be.....

ANIMAL REGISTRATION

The many nuances of animal importation: A Registrar’s Story

According to zooregistrars.org, the responsibilities of our Animal Registrar, Barbara Outerbridge, are to “include managing the institution’s animal records and related policies, validating the quality of recorded data and ensuring the legal compliance of all animal transactions.

The Registrar also serves as liaison to relevant government agencies, other zoological institutions and conservation organizations, including Association of Zoos and Aquariums (AZA).“Yet, being a smaller facility means that the responsibilities of the Animal Registrar, here at BAMZ, also include the sourcing and importing of new animal species to the facility.

As BAMZ is an AZA accredited zoo, we focus on the conservation of animals and participate in several AZA species survival plan (SSP) programmes; these

programmes oversee the population management of select species and to enhance the conservation of this species in the wild.

For every SSP species, there is a “studbook keeper” who manages the captive breeding population for that species. Facilities that hold the species need to report to the studbook keeper any changes in the collection (births, deaths, changes in social groups) and be willing to act on recommendations from the studbook keeper regarding breeding or transfer of animals. The studbook keeper makes those recommendations to ensure the genetic diversity is maximized. When BAMZ is interested in acquiring a new species, the first step often involves contacting the studbook keeper for that species. The studbook keeper then considers the current captive population of the species, what BAMZ needs and resources



Barbara Outerbridge, BAMZ Animal Registrar

Photo: Michelle Smith

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and identifies specific animals that would be suited for BAMZ. In some instances, an animal is selected for our facility that, although part of the SSP programme, is not sent to us as a breeding recommendation. Our fossa is part of an SSP but we are unlikely to be given a breeding recommendation for her as we are not physically set up to house two fossas and they are a solitary species with pairs only housed together for immediate breeding purposes.



BAMZ's Fossa, "Orana"

Photo: Chris Burville

Once an agreement has been reached for the transfer of an animal to BAMZ the work begins on obtaining the required permits and making the needed shipping arrangements. When scheduling the shipment there are three prime considerations;

- **Weather:** Weather during a flight can be problematic as it is unsafe for many species to be exposed to extreme heat or cold. Shipment windows are fall & spring, with many airlines putting embargos on animal transportation during the summer and winter months.
- **Permitting process:** The permit process is very complex and varies depending on the species and the other country involved but in every instance the permits have delineated expiry dates so transport must be arranged in consideration of the permit's validity.
- **Route:** Over and above the restraints of flight, routes as set by the airlines, animals on international shipments can only depart their country of origin through certain approved airports, so it is important to map out a route that is minimizes the number of connections (to reduce stress on the animals) while still travelling through the correct designated airport

The fossa, mentioned earlier, is an interesting story because it reflects some of the many factors that can impact an animal transaction. In May 2007, when designing the Madagascar exhibit, we approached the fossa SSP studbook keeper expressing interest in acquiring a fossa. There were lots of emails exchanged over the next couple of years as the exhibit was finalized and built. By September 2010 we had been recommended to receive an older male fossa from Omaha Zoo who had a vision problem. All the necessary paperwork was drafted between BAMZ and Omaha Zoo and we awaited the issue of the US government export permit. Unfortunately,

while we awaited the permit, the fossa experienced further vision problems with his 'good' eye and in early June 2011 the decision was made that it was no longer feasible for him to be sent our way.

This meant we were right back to the starting line. Permits are issued for specific animals, and cannot be used for substitutes, even if they are of the same species. After having invested so much time and work in that transaction, the fossa studbook keeper really wanted to ensure we received a fossa, and at the end of June 2011 she recommended that we receive a young female fossa that had been born that year at Omaha Zoo.

Although an entirely new export permit was needed, the fact that the parties involved in the transaction were the same as the original permit request sped up the process. We had a new permit in place in early August 2011 and we had started planning for a September shipment when it was discovered a mistake had been made on the newly issued permit and it had to be sent back to the issuing body to get corrected. The corrected export permit was received at the end of September and the Bermuda government import permit was received on 17 October 2011. Finally the flights could be booked.

Animals leaving the USA need to be inspected at their last point of departure from US soil and only certain of Bermuda's gateway cities have US Fish and Wildlife service designated inspection points. The flight booking involved her departing Omaha late in the day of 19 October, and overnighting in Newark where she was cleared for export and flew onto us on 20 October 2011.....a full 4 years after the initial discussions regarding acquiring a fossa.

Michelle Smith,
Marketing