

Conservation of marine mammals and their habitats through scientific research and educational outreach

Fall 2012

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## Manatee Mania in The Abacos

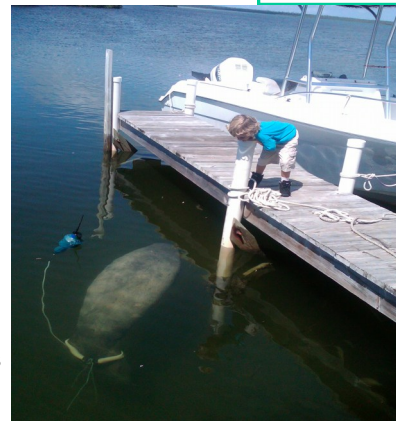
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In April this year two manatees, a mother-calf pair, were released back into the wild with satellite tracking devices, at a location where manatees had been residing for over a decade, the Berry Islands.

In early September, satellite locations received from the calf's tag (Georgie) indicated that she had travelled over 70 miles from The Berry Islands to The Marls in Great Abaco Island! The Marls is known as one of the most productive bone-fishing grounds extending 30 miles north to south and about 10 miles off the west coast of Abaco.

Separating from her mother, Rita, in early June, Georgie is now old enough to survive on her own in the wild. She was born in Spanish Wells, North Eleuthera in June 2010 and spent the first two years of her life with her mother. During the period between April and June of this year, Georgie was taught where and how to find food, fresh water, warmth and shelter by Rita. The separation of a calf from its mother is known as '*weaning*'.



A young boy, of Cherokee Sound, keeps a close eye on Georgie!

Resident Juvenile Male



Having travelled over 50 miles with her mother within their first week of release in Great Harbour Cay, Berry Islands in April, it is no surprise that this swift two year old has covered a tremendous amount of ground around Abaco.

After spending some time in The Marls, Georgie continued to travel north towards Little Abaco before heading along the east side of Abaco. Recently, scientists from Dolphin Cay-Atlantis assisted BMMRO in the search efforts to locate Georgie and replace her old satellite tag with a new tag. A new satellite tag will allow scientists to continue to monitor her movement patterns and health while she continues to travel around the Abacos. Residents of Hope Town had the opportunity to welcome Georgie to the neighbourhood but she quickly continued south to Cherokee Sound where she became the talk of the town!

Watch '*Manatees of The Bahamas*' at [www.conchsaladtv.com](http://www.conchsaladtv.com)

What sparked Georgie to make such a daring trip across deep water is unknown and only she can answer that, but her unexpected relocation to Abaco allows scientists to learn more about manatee habitat use in The Bahamas. This exciting new venture came on the heels of the release of a manatee educational film that will be used by BMMRO's education officer, Kendria Ferguson, during school visits throughout The Bahamas. Produced by Loggerhead Productions, a Bahamian based production company in Hope Town, Abaco, '*Manatees of The Bahamas*,' highlights the story of Rita and Georgie.

### Georgie Explores The Abacos



Map showing areas visited (purple triangles) by Georgie.

This short film starts off introducing the resident juvenile male who resides in The Berry Islands and is very fond of the camera. This male is one of four manatees that have been residing in the Berry Islands and is believed to be the calf of Gina, a known adult female from Florida who was first sighted in Andros in 1999. Gary the Explorer (narrator) then walks us through the transport and release of Rita and Georgie from Atlantis-Dolphin Cay to Great Harbour Cay (GHC), Berry Islands. The mother-calf pair was transported to GHC on April 19th and fitted with VHF data logging satellite tags. For six weeks, scientists monitored Rita and Georgie's adaptation to their new environment and continued to learn more about manatee habitat use from the residential population of manatees. This educational film is one of five species specific films that will be produced and used as supplementary educational tools. This project was funded by a grant awarded to BMMRO from The Lyford Cay Foundation.

**Help support manatee research and conservation here in The Bahamas. For more information please email:**  
[info@bahamaswhales.org](mailto:info@bahamaswhales.org).



TO LEARN MORE, PLEASE VISIT OUR WEBSITE: [www.bahamaswhales.org](http://www.bahamaswhales.org)

# President's Update



Charlotte Dunn

This summer provided us with some wonderful encounters with dolphins and whales, both in Andros whilst on a project at the AUTEK range, see story below, and at home with our whale campers (see story on page 4). It is always such a pleasure to show Bahamian children what lies beneath the surface of our beautiful waters and witness a strengthening in their passion to pursue a career in marine biology, because they have seen the animals first hand. I wish them all the best for their futures and of course hope that we will see some of them working towards conservation of marine life in the Bahamas.

One of my highlights this summer was being on the water off Sandy Point during the full moon. This allows us to witness the spectacular diversity of the dolphins' feeding behaviours, as they chase and herd jacks and other schooling fish that aggregate on the banks during these weeks. The dolphins porpoise in unison out of the water towards their prey and deliver some beautiful aerial displays in the process.

The big news this summer of course is following young Georgie around the northern Bahamas (page 1) as she explores unknown territory. This incredibly interesting journey is being monitored as best we can, however we have no budget for this important work and in an aim to be able to continue this project I have put a 'paypal' button on our homepage to encourage donations. For the meantime, all donations will go directly towards the manatee work we are undertaking.

Unfortunately the summer ended with the tragedy of losing our oldest four legged friend at the research centre, Bruno. Bruno was killed by a sting ray at the end of August, we will miss him dearly, as will Harry and Legacy Patterson, who still provide us with unconditional love and loyalty.



If you would like to receive an e-copy of BMMRO's newsletter, please contact us at [info@bahamaswhales.org](mailto:info@bahamaswhales.org) to be added to the list.

## Stress Study Continues at AUTEK

During July BMMRO scientists spent a month collecting biopsy samples and deploying satellite tags on deep diving odontocetes around the Atlantic Undersea Testing and Evaluation Center (AUTEK), off Andros Island. This work is an ongoing study aiming

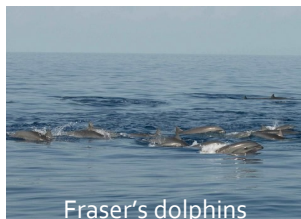


A biopsy dart is used to extract a skin and blubber sample from a Blainville's beaked whale.

to compare the stress levels of whales frequently exposed to sonar and to monitor their movements and behavioral responses during military exercises.

The effects of sonar on whale populations are of particular interest because of concurrent strandings of whale species, especially beaked whales, during military exercises. In 2000, seventeen cetaceans (fourteen of which were beaked whales) stranded in the northern Bahamas as a result of military exercises in the area. By collecting blubber samples from whales at AUTEK, scientists are able to measure blubber cortisol levels and examine if there are higher stress levels in these whales compared to those in other parts of The Bahamas. They are also able to examine population health by looking at progesterone levels and pregnancy rates.

Species encountered were Blainville's beaked whales, Fraser's dolphins, rough-toothed dolphins, melon-headed whales, and sperm whales.



Fraser's dolphins

## Sperm Whale Density in the Tongue of the Ocean



Recently, a scientific paper highlighting an algorithm used to estimate sperm whale density in the Tongue of the Ocean (TOTO), Andros has been published in the journal *Marine Mammal Science*.

TOTO is a deep water trough currently being utilized by the U.S. Navy's Atlantic Undersea Test and Evaluation Center (AUTEK) as a testing range for navy exercises. An increase in ocean noise levels can have both short and long term effects on marine mammals. Studies have found that anthropogenic noise such as navy sonar can disrupt their diving and feeding behavior and potentially have an impact on reproduction rates and population status. To assist in understanding how marine mammals are affected, the Navy implemented a Marine Mammal Monitoring program on all navy ranges. Using bottom-mounted hydrophones on navy ranges, marine mammal presence can be monitored and detected acoustically. With the use of this acoustic monitoring system, an algorithm was developed to estimate the average sperm whale density at AUTEK during a 42 day period in 2007.

It was found that there is a low density of sperm whales on the AUTEK range. These deep diving odontocetes are known to travel up to 70km in a day and the range represented a small but important portion of their habitat range.

For more publications on marine mammal research throughout The Bahamas, visit [www.bahamaswhales.org/resources](http://www.bahamaswhales.org/resources).



## 'Friendly' Dolphin visits Hope Town

Residents and visitors of Hope Town, East Abaco, have had the rare opportunity of seeing a 'friendly' bottlenose dolphin in close proximity to the Hope Town Harbour Lodge beach. Scientists believe that this is an adult female that is no stranger to the area as BMMRO scientists and associates have been tracking her since she was a calf (ID number Tt416).



What is strange is her recent behavior. She spends endless hours swimming in the shallows, just off the beach in an area frequently used by human swimmers. This has afforded opportunity for people to don their snorkel gear and observe her underwater. While we don't discourage watching her, for the ensured safety of dolphin and swimmers (remember she is a wild animal weighing about 400 lb!), we have the following advice:

**Never swim towards wild dolphins (let them approach you), never try to touch a wild dolphin, and never attempt to feed them.**

### Test your whale knowledge!

- Sperm whales are found:
- A) Only in equatorial latitudes
  - B) In all latitudes
  - C) In polar latitudes
  - D) In temperate latitudes



Turn to page 4 for the answer!

## Pygmy Sperm Whales Strand in North Eleuthera

On August 19th a single pygmy sperm whale live-stranded in Surfer's Beach, off the Atlantic side of North Eleuthera. In an effort to return this animal to deeper waters, onlookers attempted to push the animal out but it later died. Surprisingly, a second pygmy sperm whale stranded on the 27th in Lower Bogue, North Eleuthera. Upon initial observation, this 6-ft whale appeared to have been dead for at least 3 days. Tissue samples were collected from both animals for genetic analysis to assess stock structure.



Pygmy sperm whales are often found solitary or in small groups in extremely deep water, and have adapted numerous ways to avoid predators such as killer whales. Their behaviour while at the surface is very cryptic, and they are most typically seen logging, or lying motionless. When a vessel approaches them, they tend to dive and swim away, making them very difficult study subjects!

Adult males can reach up to 3.8m (12.4 ft) in length, with females being slightly larger. Since our efforts began in 1991, BMMRO has recorded over 100 sightings of pygmy sperm whales in The Bahamas.

BMMRO would like to thank Tom Glucksmann, Maurice Issacs, Lionel Fernander, and Elizabeth Bryan for their assistance with these stranding events.

## 2012 Fall Cetacean Sightings in The Bahamas

There have been 55 sightings of 10 different species of whales and dolphins throughout the Bahamas from July-September 2012, including:

### Sirenians

West Indian manatee (*Trichechus manatus latirostris*)-FL subspecies

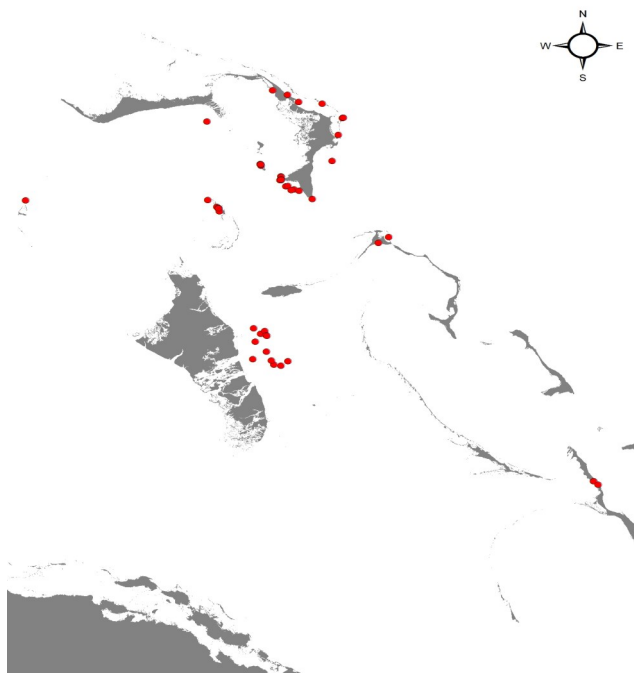
### Toothed whales

- Atlantic spotted dolphin (*Stenella frontalis*)
- Blainville's beaked whale (*Mesoplodon densirostris*)
- Bottlenose dolphin (*Tursiops truncatus*)
- Dwarf sperm whale (*Kogia sima*)
- Fraser's dolphin (*Lagenodelphis hosei*)
- Melon-headed whale (*Peponocephala electra*)
- Pygmy sperm whale (*Kogia breviceps*)
- Sperm whale (*Physeter macrocephalus*)

Many of these records are from sightings reported to BMMRO by the public.

These data are vital to understanding the distribution and abundance of these species and is greatly appreciated.

**THANK YOU !!!!**



### Three ways to report sightings:

1. Complete our sighting report form to [www.bahamaswhales.org/sightings](http://www.bahamaswhales.org/sightings)
2. Email the sighting information directly to us at [info@bahamaswhales.org](mailto:info@bahamaswhales.org)
3. Post on our Facebook page

**Don't forget to send us your marine mammal sightings!**

## Bahamian Students Attend Whale Camp



Back row (L-R): Kerwin Mullings, Charlotte Dunn, and AJ McIntosh. Front row (L-R): Jurique Russell, Pachancia Knowles, Kendria Ferguson and Annabelle Cartwright.

During August, BMMRO welcomed eight Bahamian students for Whale Camp. Whale Camp was created to introduce young Bahamians to Abaco's whales and dolphins to help develop a better understanding and appreciation for the marine environment and its inhabitants.

The students had the opportunity to experience dolphins and whales in their natural habitat and gain hands-on experience in the field of marine mammal science such as scientific

data collection, acoustic monitoring of a local population of Atlantic Bottlenose dolphins and photo-identification.

Countless hours were spent on the water searching for marine mammals. Once we found animals, the work began. Data on their group composition, age class and habitat use were collected, and identification photos of all animals were taken. Later, the students entered this data into BMMRO's database and our photo identification catalogue was used to identify the individuals seen.

Some of the species encountered during Whale Camp included Atlantic spotted dolphins, bottlenose dolphins, dwarf sperm whales, pygmy sperm whales, and sperm whales. For most of the campers, this was their first time seeing a whale or dolphin in the wild.



Atlantic Spotted Dolphin

BMMRO would like to thank our interns for their assistance with Whale Camp, Annabelle Cartwright of Nassau and Donovan Sankey Jr. of Kingston, Jamaica.

**To our sponsors:** *Young Marine Explorers, Friends of the Environment, Disney Animal Programs and Environmental Initiatives and Rotary of Abaco, thank you for your support.*



Back row (L-R): Diane Claridge, Charlotte Dunn, Donovan Sankey Jr., Kendria Ferguson, and Annabelle Cartwright. Front row (L-R): Noah Hanna, Devynne Charlton, Karissa Maycock, and Gabe Hudson.

### **Our Mission:**

**To promote conservation of marine mammals and their habitats through scientific research and educational outreach.**

### **Our Vision:**

- 1) To conduct scientific field studies in the Bahamas that increase understanding of species' biology and inform conservation management decisions.**
- 2) To disseminate results that raise awareness and appreciation of marine mammals in the Bahamas and ultimately influence policy makers.**
- 3) To remain a small professional non-profit organisation, proportional to the needs of the Bahamas.**



### BMMRO's Board of Directors & Staff

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### **WE APPRECIATE YOUR HELP!**



Thank you to all who have helped BMMRO by reporting sightings, volunteering your time, providing financial support, and donating resources. Without your valuable contributions, the scientific research AND educational opportunities created for young Bahamians, would not be possible.

### **Test Your Whale Knowledge!**



Adult female Sperm Whales form nursery groups that can be found in the Abacos year-round, while the mature males frequent the islands only during the winter breeding season and spend the rest of the year in more productive Arctic waters to feed.

**Trivia Answer: B) In all latitudes**

### Contact Us

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And don't forget to look us up on Facebook!

BMMRO is a registered Bahamian non-profit organisation and accepts US and Canadian tax-deductible contributions through its partnership with PERC, a US registered 501(c)3 organisation.