



Society for Conservation Biology

A global community of conservation professionals

22nd June, 2015

Tim Holloman;

Town Manager,
Town of Oak Island,
North Carolina

Betty Wallace;

Mayor,
Town of Oak Island,
North Carolina

Donald R. van der Vaart;

Secretary,
North Carolina Department of
Environment and Natural Resources

Braxton Davis;

Director,
State of North Carolina Division
of Coastal Management

Dear Sirs and Madam,

On behalf of the Marine Section of the Society for Conservation Biology (SCB), I am writing to discuss the recent events off Oak Island where two teenagers were bitten by sharks. Before going any further, I would like to say that our thoughts are with the victims and their families. Events such as these are tragic and unfortunate, and we hope these children are receiving all the necessary care and support.

However, I would also like to express our concern over the possibility that North Carolina officials may conduct indiscriminate shark culls similar to the one that inspired global condemnation in Western Australia last year (see <http://goo.gl/BWW2IU>) in response to these unusual events. This type of incident is incredibly rare. Multiple bites on the same day in the same location have, to our knowledge, only been documented one time before this, in Egypt in 2010. We believe it is important to keep in mind the relative risk of these



types of incidents when deciding on the appropriate policy response, both in terms of marine conservation and in terms of the best use of public funds.

Millions of people go swimming off of North Carolina's beautiful beaches every year, while only 52 individuals have been bitten by sharks in these waters in the last 80 years. This represents less than one incident a year. Furthermore, of these 52 events, only 3 deaths have been recorded (see <http://goo.gl/YBstpN>), which is considerably less than the mortality rate nationwide (~1 death a year). Moreover, beach goers are more likely to die from heat stroke (~273 annual deaths in the US) or drowning (~3,300 deaths a year nationwide). This is an extremely low rate of occurrence, despite the presence of many sharks in North Carolina waters (see <http://goo.gl/RyZ9YU>), including several larger species, such as bull sharks, tiger sharks, and even the occasional great white shark.

Given these numbers, efforts to kill every shark that approaches the shoreline will not appreciably reduce risk to swimmers. Initiating a shark cull will thus have little impact on the risk of future shark incidents, but it would result in substantial environmental impacts. Sharks play a critical role in the coastal environment that so many North Carolinians depend on for employment, food and recreation. Many species of sharks are already overfished, and 24% of all species of sharks, skates and rays are listed as Threatened with extinction by the IUCN Red List. Accordingly unnecessary culls will further deplete numbers and could jeopardize the health of fragile coastal ecosystems.

Despite the ineffectiveness of culls, there are several other ways to reduce the risk of sharks biting swimmers. David Shiffman, a PhD candidate and shark expert, has proposed the following seven methods: conducting aerial patrols, establishing shark spotters, temporary or permanent closing of beaches, designating swimming areas, moving sharks out of the area and releasing them away from the shore, increasing scientific studies and, last but not least, educating the public about sharks (see <http://goo.gl/jwBXLr>). We encourage you and other North Carolina authorities to consider these actions instead of an indiscriminate shark cull.

Finally, I would like to note that I have not used the term "shark attack" in this letter, as it is inflammatory and inaccurate. These unfortunate events were shark bites – the only means for a shark to confirm the identity of prey items. Following such initial bites, sharks typically leave the accidentally bitten human alone. We thus believe it is important to use the term responsibly. Please see this link for more information: <http://goo.gl/OuGnMr>.

SCB is an international professional organization whose mission is to advance the science and practice of conserving the Earth's biological diversity, support the dissemination of conservation science, and increase the application of science to management and policy. Numbering in the thousands worldwide, the Society's membership comprises of a wide



range of people interested in the conservation and study of biological ecosystems, including but not limited to, resource managers, educators, government and private conservation workers, and students. SCB, through its membership, is capable of engaging diverse constituents and providing many resources necessary for a positive change towards sustainability, from developing new applied methods and techniques for conservation, to advocacy efforts, to science and conservation education.

Sincerely,

A handwritten signature in green ink, appearing to read 'John Cigliano'.

John A. Cigliano, PhD,
President, Marine Section, Society for Conservation Biology