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Bottlenose dolphins *Tursiops truncatus*  
strandings in Bocas del Toro caused by  
boat strikes and fishing entanglement

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INTERNATIONAL  
WHALING COMMISSION

## **Bottlenose dolphins *Tursiops truncatus* strandings in Bocas del Toro caused by boat strikes and fishing entanglement**

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The bottlenose dolphins of Dolphin Bay, in the Archipelago of Bocas del Toro are one of the major attractions in the area sustaining the largest dolphin watching industry in Panama. Although the Panamanian government has regulations to minimize the by the industry in the area (Resolution N °01 ARAP 27, 2007) there is a lack of compliance that is resulting in aggressive interactions between tour boats and dolphins. One of the major problems is the annual increase in the number of DW boats interacting with a group of dolphins at a given time (see SC64WW2, SC65bWW09, SC65bWW06). This increase is significantly and directly affecting the local dolphin population. Here we report the death of 12 bottlenose dolphins from Bocas del Toro and provide information about their cause of death.

From 2009-2014 we documented 15 dolphin deaths some of which had strokes by propeller engines boats and other died due to asphyxiation in fishing nets (Fig. 1). As reported by May-Collado et al. SC65bWW06 the high number of boats, speeds at which they approach and leave the area as well as competition between the boat captains to access the dolphins is resulting in fatal encounters. In 2012 we had the highest mortality with a total where in a period of 4 months 7 animals were found dead, the necropsy of 5 of these animals revealed fatal injuries by engine propellers (see photos below). In 2013 we found a juvenile dead in Canero Island and in 2014 one dead dolphin was found in Zapatilla Island. The cause of death for this two dolphins could not be determine due to the high stage of decomposition.

The high demand for dolphin watching activities in the area is having adverse consequences on these dolphins. SC64WW2, SC65bWW09, SC65bWW06 reports to the IWC provide evidence that dolphins are modifying their behavior to avoid interactions with harassing boats. Plans for renovation and expansion of the local airport in the near future may increase the influx of tourists to the area, which is already increasing with the new arrival of cruises ships from Cartagena. There are concerns that this situation will increase demand for dolphin watching boat-tours and consequently will increase the rate of fatal encounters during interactions. The need for government action is urgent. A continuing enlarges of the dolphin watching industry in the area without a management may have serious consequences on this population.

During last year (2014) monitoring we found a number of live dolphins with fresh and healed from propeller wounds and cuts. In addition, we found one dolphin with protuberances resembling tumors of unknown causes. The animal swam on its side and

showed signs of severe malnourished. This year our research team will be collecting biopsy and mucus samples to assess the Boca's dolphins microbial fauna and stress hormones that may provide us with more detain information about their health.

## Acknowledgments

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## References

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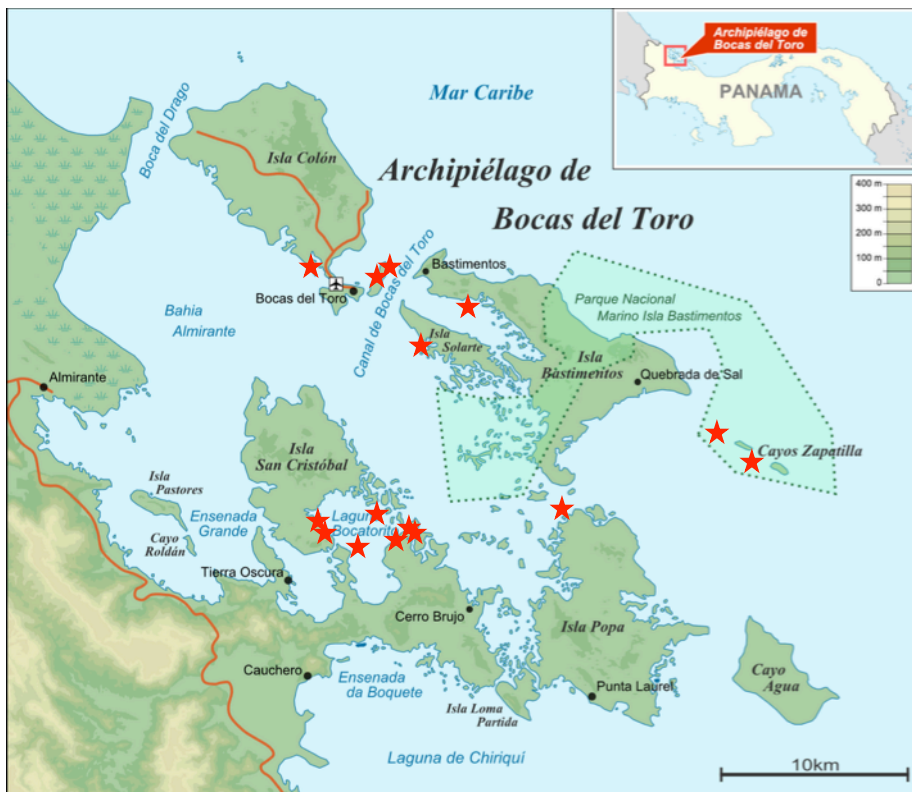


Figure 1. Locations of dolphin strandings in Bocas del Toro in BDT. Note that a number of dolphin casualties has occurred within Dolphin Bay.



Dolphin found within Dolphin Bay between the communities of Nueva Esperanza and Bocatorito. The photos show cut and injuries in the body and dorsal fin.



Dolphin head found floating inside Dolphin Bay near the mangroves: 9°13'23.24"N, 82°13'10.27"W



May 2013, Carenero Island, Body Condition COD 3



July 2013, Juvenile dolphin dead in Carenero Island, Body condition COD 5





2013, Bastimento Islan, body condition COD 5



Zapatilla Cay. 2013



Zapatilla Cay. 2014, floating dead animal



Dolphin with tumor-like protuberances observed in 2014 in Dolphin Bay.



2014, Live dolphins with fresh and healed from propeller wounds and cuts



Dolphin with injuries by engine propellers, 2014, Dolphin Bay