

# Tide Turning for Kimberley Crocodiles

Written by Kandy Curran for ScienceNetwork WA on Monday, 31 October 2016



Freshie hatching. Dr. Ruchira Somaweera

The tide is turning in different directions for the two species of crocodiles in the Kimberley region.

CSIRO freshwater crocodile biologist Dr Ruchira Somaweera, and Parks and Wildlife estuarine crocodile scientist Dr Andrew Halford, presented their research findings to more than one hundred people at the University of Notre Dame campus on September 20, 2016, for the popular Science on the Broome Coast series.

Whilst Dr Somaweera predicts a likely severe decline in freshwater crocodile numbers in some parts of the Kimberley with the invasion of cane toads, Dr Andrew Halford's research shows estuarine crocodile numbers increasing steadily since full protection in 1997.

Dr Somaweera said that although cane toads are the biggest threat to freshies, other threats include invasive weeds such as exotic passionfruit vine that can choke river bank nesting habitats, bycatch in fishing, and predation by their saltwater relatives. Two studies in the Northern Territory along the Daly and Victoria River systems showed significant population declines (77% and 60% respectively), highlighting the concern for the Kimberley freshie.

However, Dr Somaweera said there is hope for *Crocodylus johnstoni*. Recent studies show freshwater crocodile hatchlings are intelligent and can develop a taste aversion for toxic toads if they experience a non-fatal experience from eating a juvenile that has made them ill. "I think we will see a phase of severe decline, and then those that have adapted will form a stronger population," he said.

Dr Halford is finding a steady increase in numbers of larger crocodiles as the population matures over time. Surveys conducted along the Roe and Prince Regent Rivers show a significant increase in the population of salties. "Numbers are up in a range of a 100 to 300 per cent increase since 1997 - when their numbers were estimated to be as low as 2,500. It's been 30 years, so it's a very clear example of what happens when you take human predators out of the equation," he said.

Dr Halford said that increased population density is forcing younger males to move south, hence the increase in sightings around Broome in recent years. It's not clear if these animals will

establish breeding populations around Broome and further south as this will depend on the availability of suitable nesting habitat.

The final Science on the Broome Coast presentation for 2016 is [Mudflats and Moving Pictures](#) on October 21 at Town Beach Reserve in Broome. The outdoor event includes a showing of artworks depicting the quirky fascinating invertebrates in the soft warm mud of Roebuck Bay and re-screening of the Mud and Saltwater Short Film Fest.

This innovative Science on the Broome Coast series is hosted by the [Roebuck Bay Working Group](#) and Yawuru Land and Sea Unit in Broome, and supported by [Inspiring Australia](#), Rangelands NRM through the Federal Government Landcare program, State NRM through Royalties for Regions, Western Australian Marine Science Institution, Department of Parks and Wildlife and University of Notre Dame Broome.