MANY THEORIES ARE BEING BANDIED ABOUT AS TO THE CAUSE FOR THIS STATISTICALLY HIGH NUMBER OF FATAL SHARK ATTACKS IN ONE AREA IN A RELATIVELY SHORT TIME FRAME AND JUST AS MANY NEW AND SUDDEN 'SHARK EXPERTS' ARE EMERGING.

Wildside turned to someone who has been working with sharks for 16 years, who has supported numerous scientific studies on sharks and is a renowned free diver - Mark Addison. Mark and his wife Gail run a unique marine adventure business based at Rocky Bay on the KwaZulu-Natal South Coast where qualified divers are able to dive with sharks – including bull sharks and tiger sharks. And no, not in a cage.

Wildside put the following questions to Mark.

▶ There is an increase in shark attacks in a particular area. What do you believe are the reasons?

The reasons for an increase shark activity in any area, worldwide, can be many and varied. Some examples include:

- Seasonal baitfish abundance which brings predators (e.g. Sardine Run) as shown by Vic Peddemor's work
- River flows bringing carrion and in the case of bull sharks a necessary opportunity to rid itself of salt water parasites (e.g. in Brazil where an abattoir was disposing of product into the river thus attracting sharks upstream)
- Areas such as estuaries and river systems which have been used by various species of shark for a part of their life history and others who would take advantage of this as a food source (Dr Gruber's work in Bimini and Vic Peddemor's work in Sydney Harbour)
- Decrease in fish abundance (e.g the Hawaii issue with tiger sharks coming up to the shallows in the late afternoon to feed until the morning - Kim Holland's work)
- Thermic and other shallow water advantage such as the white sharks in False Bay in the summer
- Dead whales and other olfactory sources buried on beaches (e.g. Van De Riet's example).

▶ What thoughts do you have on the prevention of shark attacks?

Prevention is not straightforward. People look for absolutes and a one size fits all approach. I see the logic in each location as related to the points mentioned above. The potential species and size class makeup of any shark population near an area of water use will determine the risk profile and the number of factors that will influence an encounter:

- **Don't enter if the water is dirty** – this has been the main failing at Port St. Johns as there is enough time to warn of a shark in the area if the visibility is reasonable. In 4m water depth you need at least 3m visibility to be able to see a shark approach a bathing area. Surfers are the most exposed user group as they are further out and have no opportunity for eye contact. The typical behaviour of a shark entering any area is a series of movements and not a polaris style attack on an unsuspecting water user from a distance out.

- **Don't swim if there is heightened baitfish activity** in the area currently. Although this is a factor on the east coast of Australia and Florida we have the Sardine Run which brings with it a host of predators. Ironically it is a favoured time for surfers and an excellent time for spearo's. I've spent countless hours in the water spear fishing in and around the Sardine Run and although have seen many sharks and had some close encounters all of them were aimed at the sardines or the fish I had speared.

  I've never once had a bite or heard of any spearo who got bitten and yet it can hardly get any more antagonistic. At certain times of year sharks species feed on different prey types and in the case of an abundance of sardines, are clearly not interested in humans.

- **The "don't swim at dawn or dusk"** has had relevance but on analysis of many of the bite incidents reported most are in fact early afternoon rather than late. Perhaps this is also species specific. At Aliwal the tigers and blacktips head offshore to feed at night and not a factor inshore. The tigers return to the area late in the morning but the blacktips make a much earlier appearance in the area surrounding the Aliwal Shoal.

Having been in water all my life I

Mark has used his freediving skills to assist various scientists and scientific institutions to study sharks and in this picture Mark is placing a specially designed animal borne video recording device on a 3.2m (precaudal measurement) female tiger shark at Shark Park. The camera unit pops off after a predetermined time and is retrieved by the boating team. The review of the footage provided many great insights into the behaviour of the sharks as they swim about doing their daily activities.
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Right: Photographs by Fiona Ayerst Underwater Photography. www.fionaayerst.com