

# The Irukandji Syndrome

THE PERENNIAL ENIGMA OF NORTH AUSTRALIAN WATERS.

Special Report by Dr David Hopley

This is one of 'those' stories we don't really want to publish, and most readers would surely prefer not to read. But we all have to deal with a particularly deadly menace called 'irukandji' that is being found in ever-increasing numbers in our northern, tropical waterways in WA, NT and QLD.

We urge all northern boatowners and fishermen - especially families - to read this report very carefully. Families planning to go north; fishermen planning the ultimate adventure - all should read this very carefully. It could save your life, or the life of someone you love.

**I**n January 2002 a tourist swimming off Hamilton Island in the Whitsundays died after being stung by a jellyfish. Four months later, in April, another tourist also suffered a fatal sting whilst swimming at Opal Reef off Port Douglas.

Although in at least one of these cases, a pre-existing medical condition aggravated the effects of the sting, all the characteristics of the two fatalities fitted the "Irukandji syndrome" with onset of the symptoms occurring after about 30 minutes after the stinging and involving increase in blood pressure, severe lower back pain and intense muscle cramping in the limbs. With the value of the Queensland marine tourism industry estimated at \$4269 million, the 2002 fatalities once again focused attention on the risks of deadly jellyfish in northern Australian waters. In May 2002 the State Government called together all interested parties and a Queensland Irukandji Jellyfish Response Taskforce was set up.

## Not a New Phenomenon

Awareness of deadly jellyfish stings is not new in Queensland, although until recently the greatest attention was given to the equally, or even more

dangerous box jellyfish. However, greater understanding of the box jellyfish and success of stinger proof enclosures and stinger suits has highlighted the lack of knowledge of much smaller jellyfish responsible for the Irukandji syndrome. Being much smaller they can swim through the netting of enclosures. They also have a much wider distribution being found in waters close to the mainland, around the high continental islands and even out to the Great Barrier Reef. This is in contrast to the box jellyfish which is normally found only close to the mainland, in calm northerly weather during summer. Whilst summer months are also the time the irukandji are mostly reported, they have been recorded in every month of the year.

Before the 1940s there had been many reports of severe stings whilst swimming in northern Australian waters during summer. Some deaths were reported - possibly the earliest record being for two children at Townsville in the summer of 1884-5 and for a 17 year old teenage boy at Lamaroo Beach in Darwin also in the 1880s. However, no one could identify the responsible organism. Sometimes, mucous strings attached to the sting area were found, and as these

resembled those left by the more common and far less lethal Portuguese Man-o-War jellyfish, it was suggested that this was the culprit, with victims being particularly allergic to the sting.

The Second World War saw many troops stationed in northern Australia, and, with sea swimming a popular pastime, many marine stinging incidences were reported. For example, between December 1943 and January 1944 a doctor with the Army Medical Corps, Ronald Southcott noted 70 cases in North Queensland. Southcott was the first of a number of interesting and highly dedicated characters who became involved in stinger research. Before being moved on to New Guinea, in the New Year of 1944 a seaman brought Dr. Southcott a jellyfish in a bully beef can which he could not preserve, but he sketched it and tested its sting on his arm. Eleven years later in 1955, he matched his sketch to another specimen, and a new species, the box jellyfish or *Chironex fleckeri* was declared.

Also working in Cairns on marine stings from 1935 was a local medical practitioner Dr. Hugo Flecker. He saw marine stings as a public health problem for northern Australia and established an invaluable record of



*Irukandji jellyfish - greatly enlarged*

Sort of makes your skin 'crawl' just looking at them, doesn't it? These remarkable photographs are from Dr Jamie Seymour, one of the leading irukandji researchers at the Cairns campus of James Cook University, show the irukandji (above) and the larger box jellyfish below. The small irukandji jellyfish is transparent, just over 2cm across the bell, and all but invisible in even clear offshore waters. The larger box jellyfish, *Chironex fleckeri* is about 25cm across the bell and there can be up to 60 tentacles stretching for 2 metres in the water (Photos, Dr Jamie Seymour).



*Box jellyfish - chironex fleckeri*