



# Marine Stinger Management Newsletter

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# Marine Stinger Management Newsletter

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## Launch of the Marine Stinger Management Newsletter!

Welcome to the new Marine Stinger Management Newsletter – designed to create a more unified approach to marine stinger management in North Queensland. The aim of this newsletter is to reach as many interested parties as possible in order to accomplish the following objectives:

- Disseminate safety information
- Improve pro-active management practices
- Provide a consistent public safety message
- Manage marine stingers for the mutual benefit of all interested parties

As the Editor of this project, I gratefully welcome all contributions, ideas, insights, comments, and requests. It is my hope that as this newsletter matures, it will become a valuable resource for all interests, directed by the needs of all interests.

I hope that you will take the time to browse the features that apply to your particular needs, and take on board ideas about working together toward reducing the risks of marine stingers in our waters.

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### Mark the Date: Calendar

Seminars and Workshops are being planned for all locations and all management sectors; if you or your organization would like to arrange a specific public or private session, please contact the Marine Stinger Coordinator, Dr. Lisa-ann Gershwin 0438 105 358

### Did you know...

The chances of being killed by Irukandji are less than the chances of being killed by a falling coconut?

But the sickness is highly unpleasant, so it's worth taking a few reasonable precautions!



## Resources for coastal concerns

Major improvements have been made in the last few years toward box jellyfish and Irukandji safety for coastal regions, with about a 75% decrease in sting numbers at patrolled beaches since 2002.

Currently, box jellyfish remain North Queensland's primary stinging risk, because of the short time frame in which severe, or even life-threatening symptoms can appear. In severe envenomations, death can occur in as little as 2-3 minutes in previously healthy children and adults. Some people who do not fully understand the differences between box jellies and Irukandjis and their management, have suggested removal of the stinger-resistant swimming enclosures, but this could have tragic results in terms of a marked increase in the number of box jellyfish envenomations.

Coastal Irukandji envenomations have reduced dramatically in the last two years, since Surf Life Saving Queensland began a daily pro-active monitoring process during stinger season. Irukandjis can now be effectively detected with simple one-man sampling procedures that are conducted at least twice daily at all patrolled beaches between Port Douglas and Sarina. On the rare occasions that Irukandjis are detected, the beach of concern is closed until the following day, with intensive sampling being conducted during the closure.

## Resources for reef or island concerns

Currently, reef and island sting prediction is a hot topic of research. Recently completed PhD research at the Australian Institute of Marine Science and James Cook University in Townsville indicates that many of the offshore Irukandji stings are likely to be from species other than the coastal *Carukia barnesi* species. So far, four offshore Irukandji species have been identified in North Queensland, three of which appear to be very rare, but very potent, stingers. One of these new species will be formally named and classified this month.

One of these new species appears to congregate in breeding swarms on the 8<sup>th</sup>-9<sup>th</sup>-10<sup>th</sup> nights after each full moon. This species is so far only known from the Outer Great Barrier Reef region, and is relatively rare.

Other reef and island Irukandji species are less well known, but research is active in developing prediction methods to reduce the number of stings. Sightings, stings, or suspicions should be reported to the Surf Life Saving Marine Stinger Advisor, and this information will be passed along to all appropriate researchers. Databases are currently used to track specimens and stings, as well as ecological and environmental conditions, in order to better understand the factors that lead to increased and decreased risk conditions.



## Focus on Research

A large number of marine stinger researchers are currently working on effective techniques for prediction, prevention, and treatment of marine stings. Each month, we will showcase a particular researcher, research group, or research innovation, in order to keep stakeholders informed of some of the exciting things being done behind the scenes.

### *Focus on Research: Who's doing what?*

This inaugural issue is a great opportunity to give an overview of the different aspects of marine stinger management that various scientists are studying. Some have received more media coverage than others, but all are important parts of improving public safety.

#### **PREDICTION**

Ecology (the science of how animals interact with each other and their environment) is being studied by several scientists based at JCU Cairns.

New species are still being discovered, and their relationships to each other are being studied using innovative DNA techniques, at JCU Townsville and AIMS (Australian Institute of Marine Science).

#### **PREVENTION**

Uninet works closely with local Councils and Surf Life Saving to continually improve barriers (nets) to protect from marine stingers, and to develop more efficient ways of detecting the presence of marine stingers so that preventative actions can be taken. Surf Life Saving continues to work closely with scientists to set standards for personal protective equipment such as wearing Lycra body suits. Active awareness campaigns in schools and community groups are conducted by Surf Life Saving and Queensland Ambulance Service.

#### **TREATMENT**

An antivenom is being developed by two separate (but collaborative) laboratories, the JCU Townsville lab using newly developed techniques to clone the venom proteins, and the Australian Venom Research Unit in Melbourne using traditional methods of monitoring experimental stings.

Treatment improvements are being researched by doctors at all major local hospitals, as well as by University students working closely with Surf Life Saving.

**Drop us a line and tell us what you'd like to hear more about!**



## What's coming in Future Issues?

In upcoming issues, we will look at topics including

- The benefits of protective clothing
- Ideas for improvements to the public safety message
- Funding issues for research
- How researchers are using the jellyfish's DNA to predict sting complications
- Clearing up myths about stingers

### *Did you know...*

The Queensland Government established an Irukandji Jellyfish Response Task Force following two fatalities in 2002. Representatives of all the major marine stinger interest groups meet periodically to evaluate further improvements to Irukandji safety.

Not all jellyfish are dangerous. Approximately 200 species of jellyfishes have been recorded in North Queensland waters, and less than 10 cause any medical concern.

Irukandji syndrome is not just a North Queensland problem. It has also been confirmed in the waters off Broome, Sydney, Brisbane, Melbourne, Perth, Japan, Thailand, the Philippines, Papua New Guinea, Hawaii, Florida, and North Wales!

Box jellyfish and Irukandjis have well-developed eyes with lenses, retinas, and corneas, and can form images, but the jellyfish have no brain to interpret the information!

### Where to get more information

Emergency sting information .....	'000'
Reports of stings or specimens .....	24/7: 0438 105 358
General safety information .....	SLSQ (07) 3846 8000
General jellyfish information .....	SLSQ (07) 3846 8000
Media enquiries .....	SLSQ (07) 3846 8044
Signage enquiries .....	SLSQ (07) 3846 8020
Requests for brochures, posters, etc .....	SLSQ (07) 3846 8000
Requests for speaking engagements .....	Coord. 0438 105 358
Research info or project ideas .....	Coord. 0438 105 358
Contributions to newsletter .....	<a href="mailto:lisa.gershwin@jcu.edu.au">lisa.gershwin@jcu.edu.au</a>
Add to mailing list .....	<a href="mailto:lisa.gershwin@jcu.edu.au">lisa.gershwin@jcu.edu.au</a>

<http://www.reef.crc.org.au/publications/brochures/Moreinformation.htm>  
<http://www.marinestingers.com.au/marinestingers/default.htm>

### If stung:

- Call for help (dial '000' or send someone for a lifeguard)
- Treat the victim (Provide emergency care - CPR if necessary)
- Treat the sting (flood with vinegar)
- Seek medical assistance