



Marine Stinger Management Newsletter

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The life of the beach.



24 Irukandji stings in April

Unfortunately, we saw a late-season bloom of Irukandjis in April, with 24 stings requiring admission to an emergency department in the first three weeks of the month. These were evenly spread onshore and offshore from Trinity Beach (Cairns) to Great Keppel Island. Many questions have arisen as to the cause: was it due to the cyclones, was it different species, was it because of global warming... The bottom line is that the cyclones probably did have something to do with it, and it probably was different species, and global warming probably will have some effect, but at the end of the day, we just don't know yet. This highlights the importance of continued research into the identification and ecology of marine stingers, so that we can predict and prevent them, and the need for improved treatments, for when stings occur.

While Irukandjis have been the primary problem in April, *Chironex* box jellyfish are still being caught in Mackay, and there have been reports of them at nearshore fishing grounds. If the weather becomes favourable, it is possible that we will see an influx coastally (and this late in the season, they are likely to be BIG).

This late-season increase in stinger activity also reminds us that stinger season is not over yet, and we still need to take all the normal safety precautions: swim between the red and yellow flags, wear protective clothing, and talk to a lifeguard or lifesaver before entering the water.

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Mark the Date: Calendar

15 August 2006: Irukandji Task Force Prevention & Response Working Group meeting: To make a submission, contact Marine Stinger Coordinator 0409 627 869 or lisa.gershwin@jcu.edu.au

Seminars and Workshops are being planned for all locations and all management sectors; if you or your organisation would like to arrange a specific public or private session, please contact the Marine Stinger Coordinator, Dr. Lisa-ann Gershwin 0409 627 869

Did you know...

Box jellyfish grow up to a millimetre a day!

They start out as a tiny thimble-shaped jellyfish about 1mm tall, and grow to maturity within just a couple of months. What happens to them after the season is still a mystery.



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.

Current State of Knowledge on Jellyfish Blooms

Many people have been asking about the recent spate of late-season stings, and the implications in terms of projected climate changes. Let's take a brief look at the causes and effects of jellyfish blooms.

WHAT IS A JELLYFISH BLOOM?

Jellyfish, like flowers, spend most of their life in a non-reproductive state, and when conditions are ideal, they "bloom". Thus, most plants flower in the springtime, and the rest of the year we see only the green plant. Jellyfish are similar, spending most of their life as tiny polyps attached to rocks or shells; the "jellyfish" stage is just a short-lived part of the life cycle. A "jellyfish bloom" is an aggregation of many specimens and/or species.

WHY DO JELLYFISH BLOOM?

Scientists are actively studying the causes of jellyfish blooms, but believe the primary causes to be change in temperature, change in daylight length, and chemical cues associated with food availability.

WHAT DOES THIS MEAN IN TERMS OF GLOBAL WARMING?

Because many jellyfish bloom in response to a *change* in temperature, rather than at a set temperature, it is possible that the frequency of blooms will not be affected. However, the latitudinal distribution of species is likely to spread as cooler climates become more hospitable for warmer-water species, and it is also possible that the "jellyfish season" will lengthen in response to warmer sea temperatures. This is a gradual process.

WHAT DOES THIS MEAN IN TERMS OF MARINE STINGERS?

If proper prevention protocols are in place, long-term increases or pulsed events will have very little effect on the number of stings. Stings are preventable; our task is to develop ways to manage stings and fluctuating occurrence patterns in a safe and practical way. Whether jellyfish will increase over time or not is speculative at this point, but we do know that we have a stinger problem now that needs to be managed.

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



Irukandji is not a death sentence

With all the media attention about Irukandjis, many people have come to believe that all Irukandji stings are potentially deadly. In fact, nothing could be further from the truth. The reality is that Irukandji stings are awful – they are painful, they make you sick, and sometimes they produce long-term complications – but as Dr. Michael Corkeron of Townsville General Hospital says, “If all the hospitals closed tomorrow and there was no care available, you would have a really bad night, but you would be highly unlikely to die.”

FACT: Of the 40-50 Irukandji stings per year in Queensland, less than 25% cause medical complications that could lead to death.

FACT: The “common” coastal species, *Carukia barnesi*, does not appear to cause high blood pressure (hypertension), and thus probably cannot kill a healthy person under normal circumstances.

FACT: The offshore forms, including *Malo* species and *Alatina* species, do appear to cause high blood pressure, which can lead to brain haemorrhage or heart failure; however, these species are rare and medical treatment to lower the hypertension is routine.

FACT: Two confirmed fatalities have occurred in Queensland due to Irukandji stings; one of which reportedly had pre-existing circulatory problems. Other fatalities are believed to have occurred as well, but are unproven.

Managing Irukandjis in a balanced way

One of the strongest challenges that we face for stinger management is conveying the message that stingers need to be managed, without freaking people out. If one chooses to focus on the lethality and the pain, then Irukandjis become a scary thing. If one chooses to focus on the low mortality rate, then Irukandjis become much less of an issue.

In fact, Irukandjis are both – they are highly painful *and* they have a low mortality rate. Managing Irukandjis needs to be about preventing injury, and this will be easily accomplished with predictive monitoring and wearing protective clothing. The message that we need to convey is that being afraid is not appropriate management; being pro-active is.

Mainstreaming stinger safety will lead to reduced anxiety, and presumably, reduced stings. Using sun-safety as a model for management, we need to acknowledge stingers as a hazard, manage them reasonably, and integrate stinger safety in how we enjoy the beach and other aquatic activities.



What's coming in Future Issues?

In upcoming issues, we will look at topics including

- Current debates on treatment options: hot water or cold packs?
- Proposed updates for the marinestingers.com website
- What should we be doing now to prepare for the next stinger season?
- Comparative risks of stingers and other usual and unusual hazards
- Lessons learned from the 2005-2006 stinger season

Did you know...

An incredibly rare jellyfish named *Chiropsalmus maculatus* ...

This species of box jellyfish was only just formally classified in 2005, and has only been found once, on the outer Great Barrier Reef following a cyclone. Nobody knows where it normally lives, or how severe its sting might be.

If the species is seen again, it should be regarded as potentially dangerous, and left alone or handled only with great care. If specimens are captured, they would be helpful to science if kept alive or frozen; contact the Marine Stinger Coordinator for advice (mob. 24hrs: 0409 627 869).



Chiropsalmus maculatus, photo courtesy of Russell Hore

Where to get more information

Emergency sting information	'000'
Reports of stings or specimens	24/7: 0409 627 869
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. 0409 627 869
Research info or project ideas	Coord. 0409 627 869
Contributions to newsletter	lisa.gershwin@jcu.edu.au
Add to mailing list	lisa.gershwin@jcu.edu.au

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

<http://www.marinestingers.com.au/marinestingers/default.htm>

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If stung:

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