

First aid teaching must remain simple if it is to work. The Surf Life Savers in North Queensland will be taught to continue the life saving technique of

Vinegar + Resuscitation = Life

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A letter to the Medical Journal of Australia (1986 ii: 174) on this subject from these authors appeared in August. This paper is published to bring the information to a wider audience.

#### THE MORBAKKA -

#### ANOTHER SPECIES OF BOX JELLYFISH

Peter J Fenner

#### SUMMARY

There is a large cubomedusan in the family Carybdeidae that has previously been known as *Tamoya haplonema* or fire jelly. It has been reported throughout Queensland from Port Douglas to Moreton Bay where it is known as the "Moreton Bay stinger". After a recent case of severe envenomation in South Queensland and the examination of two specimens caught in Mackay Harbour, it has been recognized as being a new species.<sup>1</sup>

Until it is formally identified, the name 'morbakka' has recently been suggested by Dr Ron Southcott<sup>2</sup> after "Moreton Bay carybdeid medusa" the area in South Queensland where they were first reported.

Vinegar has been shown to inactivate the undischarged nematocysts (stinging cells) of this species and is recommended as the initial first aid treatment.<sup>1</sup>

#### INTRODUCTION

On 18 and 23 April 1985, two large specimens of a morbakka were found in Mackay Harbour. The larger specimen was 130mm in diameter across the body of the bell, and the height of the bell was 180mm (Figure 1). The other specimen was 120mm in diameter and had a bell height of 150mm.



Figure 1. Morbakka caught in Mackay Harbour. Note the gloved hand. Nematocysts are present on the bell as well as on the tentacles.

Each specimen had four large mauve tentacles, one attached to each corner of the bell. The tentacles on the larger specimen were well preserved and reached a length of 600mm when extended, they contracted to a length of 200mm. After preservation in 10 per cent formalin and sea water they contracted even further to a length of 60mm. The tentacles were ribbon shaped 10mm wide but only 3mm thick. They had a multiple transverse bar pattern similar to, but much larger than those of the *Chironex fleckeri*. Unlike those of *Chironex* the central canal in the pedalium did not have the "hook" or "rose thorn" appearance.<sup>3</sup>

Also, unlike *Chironex*, the bell was covered with numerous warty mauve mamillations. Each of these contained hundreds of nematocysts which were capable of causing even the thick skin of the palm to tingle when the animal was picked up. The bell is

transparent in the natural state but after preservation in formalin sea water becomes completely opaque.

### An envenomation in Moreton Bay

At 11:00 am on 20 January 1984, whilst swimming at Margate Beach, Moreton Bay, in one metre deep murky water, a 12 year old girl was stung by a "Moreton Bay Stinger". At the time there was a strong on-shore wind.

On surfacing from a dive under the water she received a large sting from a tentacle of a morbakka that stretched over her shoulder and down the front of her chest and her back. The predominant symptom at this time was a severe "burning" pain, which felt like the skin was on fire. Within a few minutes the skin had raised white wheals with a surrounding red flare where the tentacles had touched and within half an hour she had developed a cough, backache and a feeling of a lump in the throat, symptoms which lasted for the next 24 hours. Oral paracetamol 500 mg and dexchlorpheniramine 2 mg were given but had little effect apart from that of sedation.

24 hours later the skin lesions were still red and raised but had stopped burning and become somewhat itchy and tender to touch. The lesions became paler by the third day and had a papulo-vesicular appearance which lasted another week before settling with no scarring.



Figure 2. Sting on the chest of a boy soon after he left the water. The raised white wheal is surrounded by a bright red flare.

### Use of vinegar

Experiments have been carried out by Dr Robert Hartwick which showed that weak (3-10 per cent) acetic acid solution (vinegar) inactivated the unfired nematocysts in the tentacles and bell of this species.<sup>1</sup> These tests were patterned on previous work by Hartwick et al,<sup>4,5</sup> for nematocysts of *Chironex fleckeri* and *Physalia physalis*.

## DISCUSSION

As the morbakka is of the Class Cubozoa (formerly called the Order Cubomedusae) it is a type of box jellyfish although not to be confused with the deadly *Chironex fleckeri* which is THE Northern Australian box jellyfish.

It has previously been incorrectly referred to as *Tamoya haplonema*, but as it lacks gastric cirri, one of the identification features described by Muller in 1859 for the Genus *Tamoya*<sup>6</sup> it has to be classified as a species of its own. However until it can be formally identified, Dr RJ Southcott suggested the name morbakka derived from Moreton Bay carybdeid medusa as it is from that area that several specimens have been described and a number of envenomations reported.<sup>2</sup> However specimens have also been caught as far north as Port Douglas as well as in Mackay and with a growing number of hearsay reports it is becoming obvious that this species is more prevalent than is generally known.

Vinegar has been shown to be efficient in disarming undischarged nematocysts in the adherent tentacle, thus preventing further envenomation. This role of vinegar is already proven for other species of jellyfish.<sup>4,5</sup> As it is non-flammable it is safe to use, and being cheap and readily available it has to be recommended as the immediate first aid treatment on the beach.

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## A NEW HYPERBARIC UNIT FOR VICTORIA

John Knight

The hyperbaric unit maintained by the National Safety Council of Australia, Victorian Division (NSCA) at Morwell has closed.

This closure was dictated by economics (the NSCA carried all the costs of treatment without any contribution from the Victorian government) and medical considerations. The chamber at Morwell was approximately 145 km from the nearest hospital with full intensive care facilities. There has been a need for