

## The Gove chirodroid: a box jellyfish appearing in the “safe season”

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**TO THE EDITOR:** Box jellyfish envenomation, particularly from *Chironex fleckeri*, is an important cause of morbidity and mortality across coastal areas of northern Australia.<sup>1</sup> The distribution of *C. fleckeri* extends from Broome (18°S) on the Western Australian coast, across the Northern Territory coast and down the east coast of Queensland, at least as far as Gladstone (26°S).

Another multitentacled box jellyfish (chirodroid) has been found in north Queensland in the Cairns to Townsville region.<sup>2</sup> Smaller than *C. fleckeri*, this box jellyfish has been called *Chiropsalmus quadrigatus*. It has not caused documented fatalities in Australia,<sup>1</sup> and is likely to be a different species to *C. quadrigatus*, which has caused many fatalities in the Philippines and Japan.<sup>1</sup> The Australian species has therefore more recently been referred to as *Chiropsalmus* sp. *C. fleckeri* and *Chiropsalmus* sp. are both present in tropical waters during the summer months, although *C. fleckeri* stings have very rarely occurred in each of the months outside the official “stinger season” (October 1 – June 1 for the Northern Territory).<sup>3</sup>

Over the past 10 years, there have been reports of box jellyfish being present off the beaches of the Gove Peninsula on the northeast tip of Arnhem Land, Northern Territory, during the middle of the year (ie, outside the stinger season). We first obtained samples netted on 2 June 1991 at the Gove mining town of Nhulunbuy (12°S), and in that year the same species was present

throughout June and July. Preliminary analysis at the Museum and Art Gallery of the Northern Territory confirmed the jellyfish to be a multitentacled box jellyfish, similar to the Queensland *Chiropsalmus* sp. The same jellyfish species was netted at Nhulunbuy in June 1992 and September 1993, but not in 1994.

Between 5 May and 6 October 2002, hundreds of Gove chirodroids were netted on weekends at the Nhulunbuy town beach by the local surf life-saving club. They were not present every weekend, but on some days hundreds were present in shallow water, precluding swimming and normal club activities. Contact with the tentacles of the jellyfish during netting caused only mild pain, redness and itching, which usually resolved within two hours. There have been no systemic symptoms suggestive of the Irukandji syndrome.

The appearance of the Gove chirodroid in large numbers during the cooler mid-year months is unprecedented for Australian chirodroids and has implications for public health warnings. To date the Gove chirodroid has not been found during the summer months, when *C. fleckeri* is present in the same location. The distribution, ecology and taxonomy of this jellyfish remain to be elucidated.

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2. Barnes JH. *Chironex fleckeri* and *Chiropsalmus quadrigatus* — morphological distinctions. *North Queensland Naturalist* 1965; 32: 13-22.
3. O'Reilly GM, Isbister GK, Lawrie PM, et al. Prospective study of jellyfish stings from tropical Australia, including the major box jellyfish *Chironex fleckeri*. *Med J Aust* 2001; 175: 652-655. □

### 1: The Gove chirodroid compared with *Chironex fleckeri*



The Gove chirodroid (right) swarms in shallow water and is consistently 5–10 cm in diameter across the bell. This is smaller than *Chironex fleckeri* (left), which can have a bell diameter of up to 22 cm. The Gove chirodroid is quite fragile and tentacles quickly break off when it is netted, but there are often about five tentacles extending from each pedalium.

### 2: Comparison of nematocysts



Nematocysts (original magnification x 400) from the tentacles of the Gove chirodroid are cigar shaped (right) and therefore similar to those of *C. fleckeri* (left).