

INTERIM REPORT – No. 3
PROJECT: Ecology of the Australian Snubfin *Orcaella heinsohni* and Indo-Pacific Humpback *Sousa chinensis* dolphins in Kakadu National Park

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New born Australian snubfin calf at the mouth of the South Alligator River December 2008 (Photo: Marguerite Tarzia)



Australian snubfin "spy-hopping" South Alligator River October 2008 (Photo: Andrew Davies)



Australian Indo-Pacific humpback dolphin East Alligator River March 2008 (Photo: Carol Palmer)



**Northern
Territory
Government**



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DATE: February 2009

Preliminary results

Between March 2007 and April 2008, 2 day boat-based monthly surveys have been conducted to the mouths of the Alligator Rivers undertaking systematic surveys and / or opportunistic sightings of two rare coastal dolphins: the Australian Snubfin *Orcaella heinsohni* and Indo-Pacific Humpback *Sousa chinensis*. Since April 2008 there has been a further 2 - two day surveys during November and December 2008. This report presents some preliminary results for that period.

The most common sighted dolphin was the Indo-Pacific Humpback *Sousa chinensis* (humpback) (58%) and followed by the Australian Snubfin *Orcaella heinsohni* (42%) (snubfin) (Table 1). During this time a total of 114 humpback dolphins have been sighted ranging in school size from single individuals to school sizes of 7. Snubfin dolphins have been recorded 75 times and ranged from single individuals to school sizes of 12. A proportion of these sightings will be re-sightings of the same individuals. The humpback dolphin has been recorded 3 times with newborn or young calves and the snubfin has been recorded twice with newborn or young calves.

Table 1 Summary of dolphin sightings

Species	Total no. sightings (%)	Total no. individuals (%)	Total no. calves	Group size (mean, sd, range)
Snubfin	25 (42%)	75 (40%)		2 3.0, 2.56, 1-12
Humpback	34 (58%)	114 (60%)		3 3.3, 1.54, 1-7
Total	59 (100)	189 (100)		5 3.2, 2.02, 1-12



Photo-identification of an individual dorsal fin of an Australian Snubfin in the South Alligator River November 2007 (Photo: Carol Palmer)

The Indo-Pacific Humpback dolphin was recorded through-out the survey periods but with a peak in sightings during November 2007, December 2007, February 2008 and March. 2008. The Australian snubfin was not recorded during May, August, September or October 2007 but there is a peak in sightings during November 2007, December 2007, February 2008 and December 2008 (Figure 1).

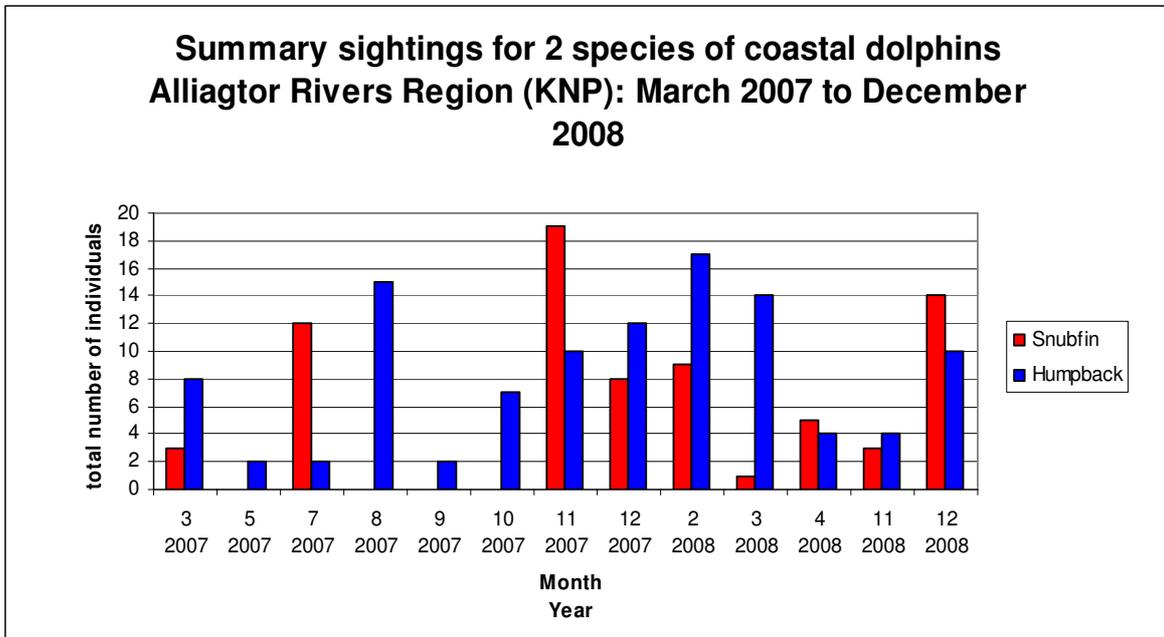


Figure 1. Summary sightings by month (and year) for the Indo-Pacific-Humpback dolphin (Humpback) and the Australian snubfin dolphin (Snubfin) in the Alligator Rivers region.



Photo-identification of an individual dorsal fin of an Indo-Pacific Humpback in the East Alligator River February 2008 (Photo: Carol Palmer)

The Australian Snubfin has been recorded 40 km upstream in the South Alligator River (and is would be an Australian first for that dolphin species to be recorded that far upstream). The Indo-Pacific Humpback has been recorded 22 km upstream in the South Alligator River. The preliminary data indicates there could be semi-resident populations of coastal dolphins which utilise many different sections of the tidal rivers seasonally and / or population separation with some animals only using the rivers and others using coastal waters. Both species have been recorded inside and outside the Park boundary (Figure 2).

Water depth recorded at sighting locations for both dolphin species ranged from 1.0 m to 8.9m. To date, all recorded dolphin sightings were either:

- i) Within a river
- ii) Within 2km of a river mouth; or
- iii) < 4km from land

The sighting data is highlighting that these rare, elusive and shy coastal dolphins are a significant part of the Kakadu National Park mammal fauna (Figure 2).



Storm approaching at anchor South Alligator River November 2008 (Photo: Trish Flores).

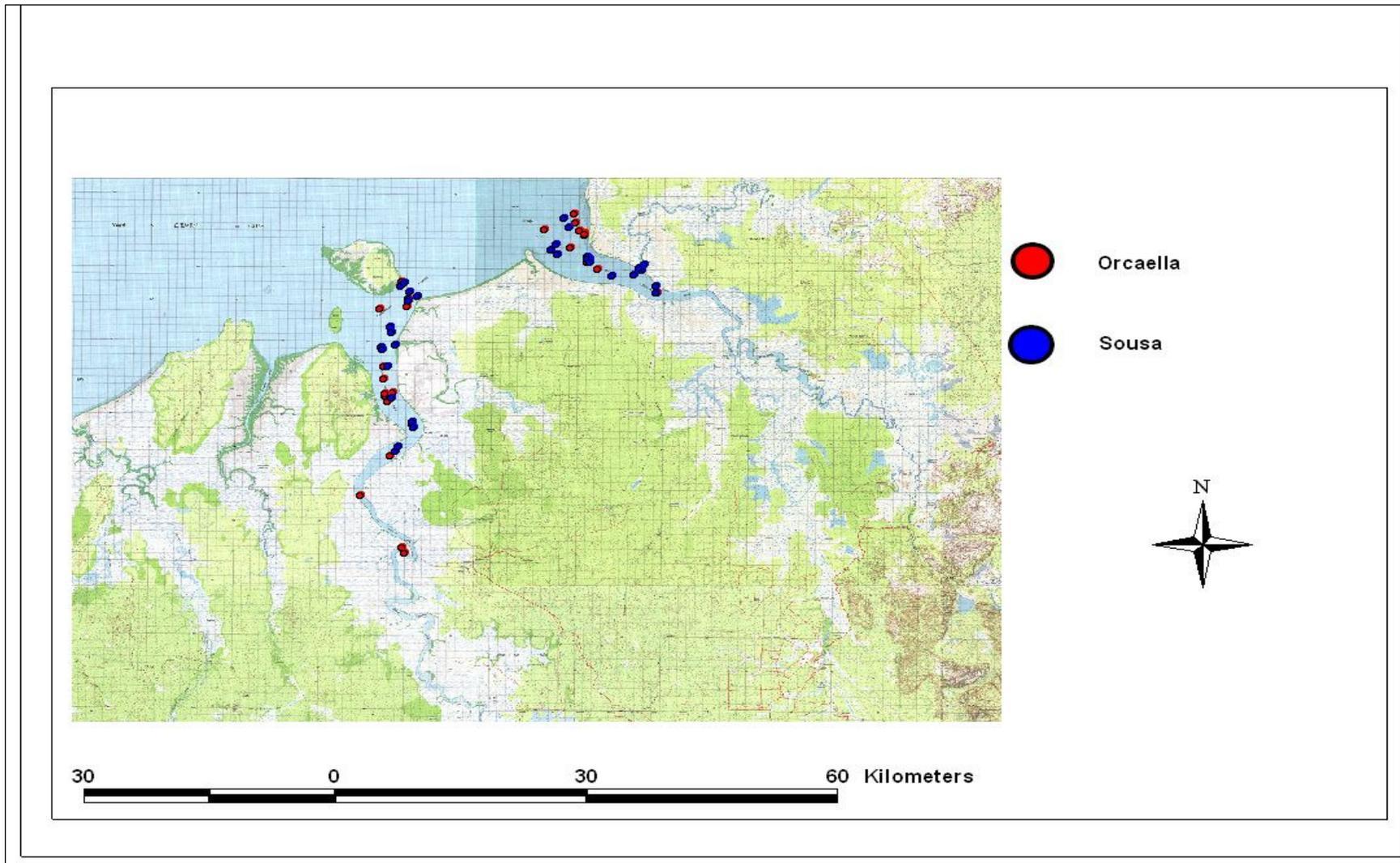


Figure 2. Summary sightings for the Australian Snubfin (Orcaella) and the Indo-Pacific Humpback (Sousa) dolphin in the Alligator Rivers region – March 2007 to December 2008

Nineteen Kakadu staff have participated in the surveys and 6 different boats have been used from March 2007 to December 2008. During the surveys, four commercial barramundi fisherman while anchored in the study site (but outside the Park boundary) have been interviewed on interactions and / or mortality of coastal dolphins due to gill netting operations. One fisherman reported 2 Snubfin dolphins drowning in gill nets and in the 2005 wet season the fisherman observed 6 dead Snubfins floating in the South Alligator River. In relation to law enforcement, one commercial fisherman was found to be illegally fishing (outside the park) and reported to authorities.

Table 2 Summary of Kakadu staff involved in the surveys and the Kakadu boats used

Date	Boat	Crew
Mar-07	Parks 1/quintrix (recon trip)	CP, Andrew Wellings, Fred Baird, Lucas Patterson
Apr-07	River boat	CP, Mick Gorst, Anna Pickworth
May-07	River boat	CP, Mick Gorst, Kym Brennan
Jun-07	River boat / Kullari	CP, Craig Ward, Fred Baird, Lucas Patterson, ABC Catalyst film crew
Jul-07	Swamp Dog	CP, Craig Ward, Gary Lindner, Sean Nadji
Aug-07	Swamp Dog	CP, Steve Winderlich, Gary Lindner, Jonathon Nadji, Craig Ward
Sep-07	Swamp Dog	CP, Mick Gorst, Brett Manders
Oct-07	Swamp dog / Kullari	CP, Calvin Murakami, David Brown, Fred Baird, Terry Mahney + Catalyst crew
Nov-07	River boat	CP, Kathy Wilson, Mick Gorst
Dec-07	River Boat	CP, Paddy Cahill, Paul Van Nimwegen
Feb-08	River Boat	CP, Mick Gorst, Patrick O'Shannasey
Mar-08	Quintrix	CP, Fred Baird, Sean Nadji
Apr-08	River Boat	CP, Mick Gorst, Terry Mahney
Nov-08	Betty Boo	CP, Terry Mahney, Trish Flores
Dec-08	Swamp Dog	CP, Fred Baird, Steve Johns