

## Beaching behaviour during shallow water feeding by humpback dolphins *Sousa plumbea*

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Humpback dolphins *Sousa plumbea* are widely distributed in the coastal waters of the Indian Ocean (Ross, Heinsohn and Cockcroft, in press); however, primarily due to their cryptic behaviour, little research has been conducted on this inshore dolphin species. An apparently low stranding rate throughout its range has resulted in very sparse information regarding the biology of the species, including its feeding habits. In southern Africa it is generally accepted that humpback dolphins feed primarily on estuarine associated fish (Cockcroft and Ross,

1983; Ross, 1984; Barros and Cockcroft, 1991) and that there may be niche partitioning through prey selection between humpback dolphins and bottlenose dolphins *Tursiops truncatus* (Peddemors and Cockcroft, in press). Humpback dolphins are often found in close association with turbid waters at river mouths and regularly enter estuarine systems and river deltas (Peddemors and Cockcroft, in press). Consequently, they may have adapted their sonar capabilities and feeding strategies to suit shallow, low visibility water conditions. This note

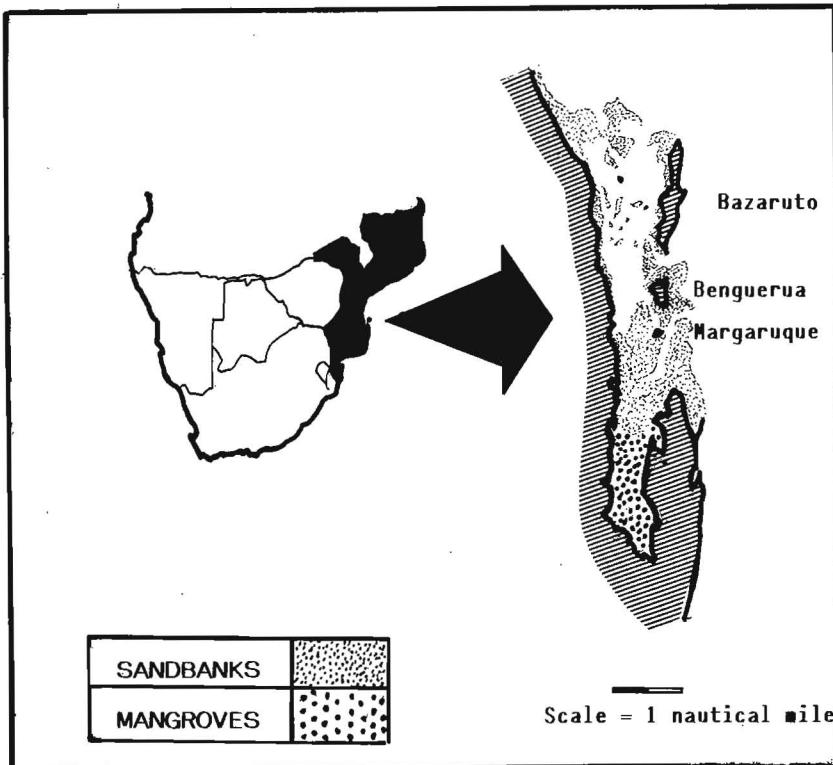


Figure 1. The Bazaruto Archipelago on the coast of Mozambique, southern Africa.

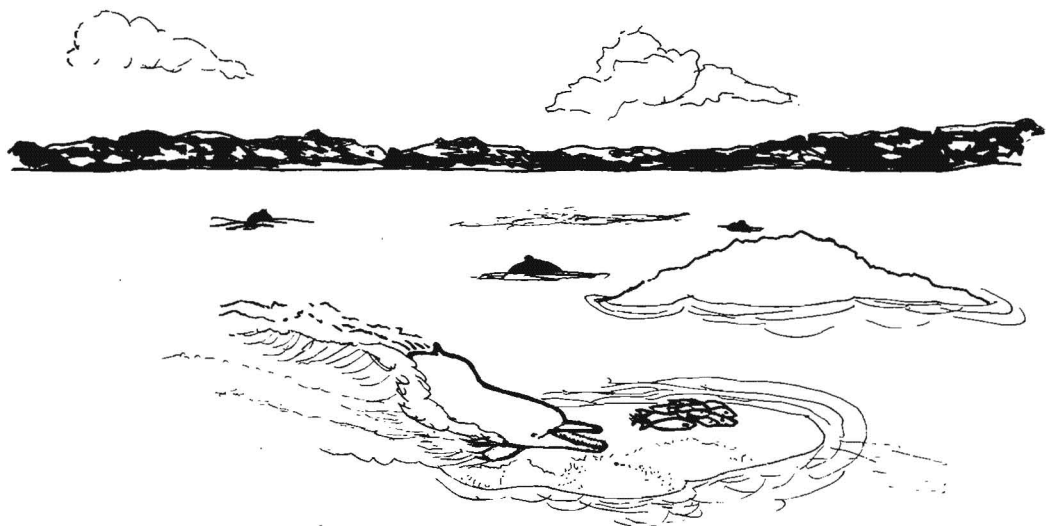


Figure 2. A humpback dolphin beaching during shallow water feeding.

describes shallow water feeding behaviour observed at Ilha Margaruque in the Bazaruto Archipelago off Mozambique (Fig. 1).

During ebb tides, between two and six humpback dolphins were observed to feed in the channels created between sandbanks by the low tide. Both co-operative and individual feeding were observed and usually involved the trapping of fish against a sandbank and then charge at them, causing the fish to be washed onto the sandbank by the wave of water associated with the dolphin's beaching (Fig. 2). The agility of their neck region enabled the dolphins to reach for the stranded fish, before sliding back into the water. During one of these feeding sessions one of the authors (GT) managed to catch one of the prey items and identified it as a bonefish *Albula vulpes*, a fish species known to occur over shallow estuarine mudbanks (Van der Elst, 1981).

The activity patterns of humpback dolphins in Bazaruto Bay are unknown; however, other studies have indicated that humpback dolphins tend to move inshore and into mangrove deltas to feed during the rising tide (Burton, 1964; Maigret, 1981). Studies of humpback dolphins in South African waters have indicated that feeding increases during the rising tide (Saayman and Tayler, 1979) a strategy that may be linked to prey availability (Peddemors and Cockcroft, in press). Saayman and Tayler (1979) investigated humpback dolphin feeding behaviour but did not record beaching in the predatory behavioural repertoire of *Sousa* from this region. This may be attributed to a lack of large

shallow bays and river deltas on the east coast of South Africa. The extensive, tidally influenced, shallow bays and river deltas found in Mozambique may have effectuated the beaching behaviour recorded here for humpback dolphins inhabiting Bazaruto Bay.

Although this is the first record of such feeding behaviour for humpback dolphins, beaching during feeding has been observed for bottlenose dolphins *Tursiops truncatus* frequenting shallow water estuaries in Georgia (Hoese, 1971) and South Carolina (Rigley, Vandyke, Cram, and Rigley, 1981). These dolphins appear to occupy a similar habitat to that occupied by humpback dolphins on the east African coast. In all instances where beaching behaviour has been observed the dolphins beached themselves only during low tide feeding bouts. The only other cetacean species for which beaching behaviour is described during feeding is the killer whale *Orcinus orca* which may beach itself when catching hauled-out seals (Jefferson, Stacey and Baird, 1991). In these instances, the behaviour appears localised and the killer whales beach themselves only on gently sloping beaches (Lopez and Lopez, 1985). Such feeding adaptations highlight the behavioural plasticity in cetaceans to suit the prevailing environment conditions.

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