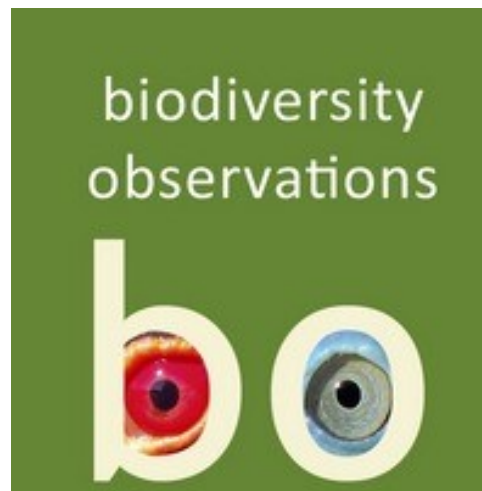


Cetacean sightings from Mozambican waters, including the first records of Rough-toothed Dolphin *Steno bredanensis* and Fraser's Dolphin *Lagenodelphis hosei*

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Rollinson DP 2023. Cetacean sightings from Mozambican waters, including the first records of Rough-toothed Dolphin *Steno bredanensis* and Fraser's Dolphin *Lagenodelphis hosei*. Biodiversity Observations 13: 154–161.

10 March 2023

DOI: 10.15641/bo.1195

Mammals

Cetacean sightings from Mozambican waters, including the first records of Rough-toothed Dolphin *Steno bredanensis* and Fraser's Dolphin *Lagenodelphis hosei*

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Abstract

Opportunistic cetacean sightings were made during a 79-day fishing trip through southern and central Mozambican waters. Notable sightings included the first Mozambican records of Rough-toothed Dolphin *Steno bredanensis* and Fraser's Dolphin *Lagenodelphis hosei*, although both species have been recorded from neighbouring South African and Tanzanian waters. A number of other rarely seen cetacean species, with few Mozambican records, were also recorded.

Introduction

The cetacean diversity off the east coast of Africa is poorly understood with few studies to date. Our best knowledge of cetacean diver-

sity in this region is from South Africa, where numerous studies and observations have provided a fairly thorough understanding of the cetaceans in these waters (Best 2007). In Mozambican waters there have been few dedicated cetacean surveys, however Humpback Whale *Megaptera novaeangliae* surveys have been undertaken (Findlay et al. 1994). In nearby Tanzania, surveys documenting cetacean diversity have recently been undertaken which show a large diversity of cetaceans from this country (Braulik et al. 2016). A previously unrecorded cetacean species, Pygmy Killer Whale *Feresa attenuata*, from Mozambican waters was recently discovered (Allport et al. 2017), highlighting the lack of knowledge of the cetacean diversity in Mozambique.

Methods

Here I present cetacean sightings made during a 79-day fishing trip through southern and central Mozambican waters during winter/spring while conducting research onboard an active longline vessel. Sightings were made opportunistically from 1 August to 17 October 2017, all within the Mozambican Exclusive Economic Zone (EEZ) (Figure 1). GPS co-ordinates were noted for each sighting of a cetacean species, which was confirmed with the use of binoculars and/or a 100–400 mm telephoto lens.

Results and Discussion

A total of 295 cetaceans, representing 11 species were recorded during the trip (Table 1). Details of the sightings of each species as well as their known occurrence in Mozambican waters are discussed below. Locations of cetacean sightings are detailed in Figures 2 and 3.

Humpback Whale *Megaptera novaeangliae*

Humpback Whales were one of the most commonly encountered cetaceans while fishing in Mozambican waters. They were seen from the southerly fishing areas to the most northerly (east of Beira, Figure 2), in waters 300–2,300 m deep. Humpback Whales were seen from

Table 1: Cetacean species recorded from Mozambican water between 01 August and 17 October 2015.

Species name	Scientific name	No. of daily sightings	Daily max	Total seen
Humpback Whale	<i>Megaptera novaeangliae</i>	7	15	38
Beaked whale sp.	-	1	5	5
Rough-toothed Dolphin	<i>Steno bredanensis</i>	1	30	30
Bottle-nosed Dolphin	<i>Tursiops truncatus/aduncus</i>	2	35	43
Pantropical Spotted Dolphin	<i>Stenella attenuate</i>	2	35	37
Spinner Dolphin	<i>Stenella longirostris</i>	1	20	20
Striped Dolphin	<i>Stenella coeruleoalba</i>	4	15	26
Fraser's Dolphin	<i>Lagenodelphis hosei</i>	1	35	35
Risso's Dolphin	<i>Grampus griseus</i>	3	15	26
False Killer Whale	<i>Pseudorca crassidens</i>	4	15	20
Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>	1	15	15

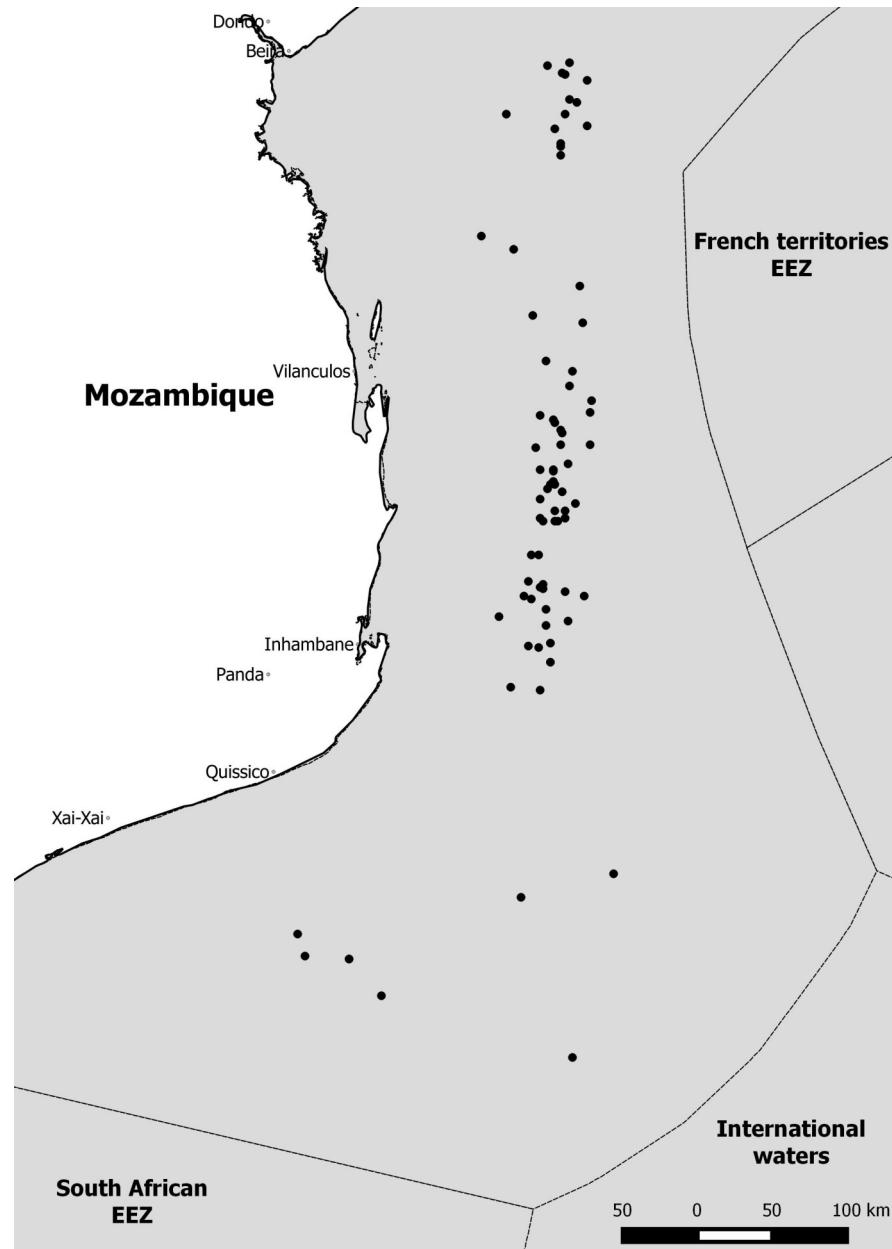


Figure 1: Daily vessel locations between 1 August and 17 October 2015 off southern and central Mozambique. Dotted lines represent national Exclusive Economic Zones (EEZs).

5 August with the last sighting on 18 September. A maximum of 15 Humpback Whales was seen in one day. The Mozambique Channel is considered an important winter breeding ground for Humpback Whales (Best 2007), with large winter congregations noted by Findlay et al. (2011). Therefore, it is unsurprising that I encountered a number of animals during my winter/early spring trip while in Mozambican waters.

Beaked whale sp.

A group of five beaked whales was seen in early October approximately 100 km off the coast of Inhambane, in waters c. 1,800 m deep (Figure 2). A number of pictures was obtained of the animals; however unfortunately the photos were lost before identification could be decided on. The only reference to any beaked whale sightings from Mozambican waters I could find in the literature is of Arnoux's Beaked Whales *Berardius arnuxii* from southern Mozambique in November 2005 (Ryan et al. 2006).

Rough-toothed Dolphin *Steno bredanensis*

Rough-toothed Dolphins were noted on just one occasion when a school of approximately 30 animals were seen c. 100 km southeast of Beira (Figures 3 & 4). The dolphins were seen in approximately 800 m water depth and remained alongside the vessel for a few minutes. The only previous records from southern Africa are stranded animals from South Africa and Namibia (Skinner & Chimimba 2005; Best 2007), with a small group seen at sea in South African waters on BirdLife South Africa's Flock to Marion cruise in January 2022. No previous records are known from Mozambique. Kiszka (2015) refers to a record of Rough-toothed Dolphin from the 'Zambezi region' by Best (1971); however this record is not referred to in Best (2007).

Bottlenose Dolphin *Tursiops truncates/aduncus*

Two schools of Bottlenose Dolphins were sighted during my trip, both off southern Mozambique (Figure 3). They were in water depths of c.

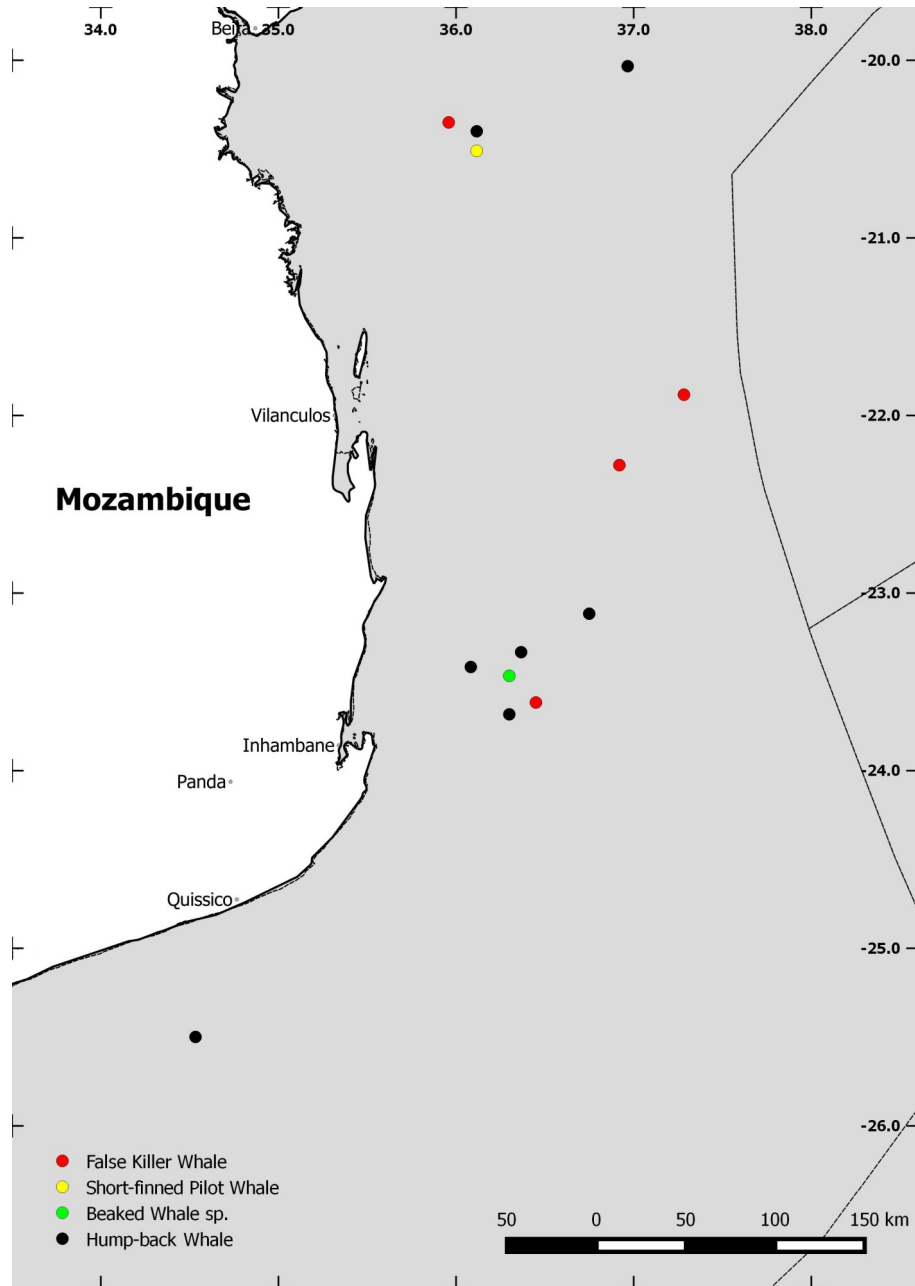


Figure 2: Daily sightings of whale species observed off southern and central Mozambique.

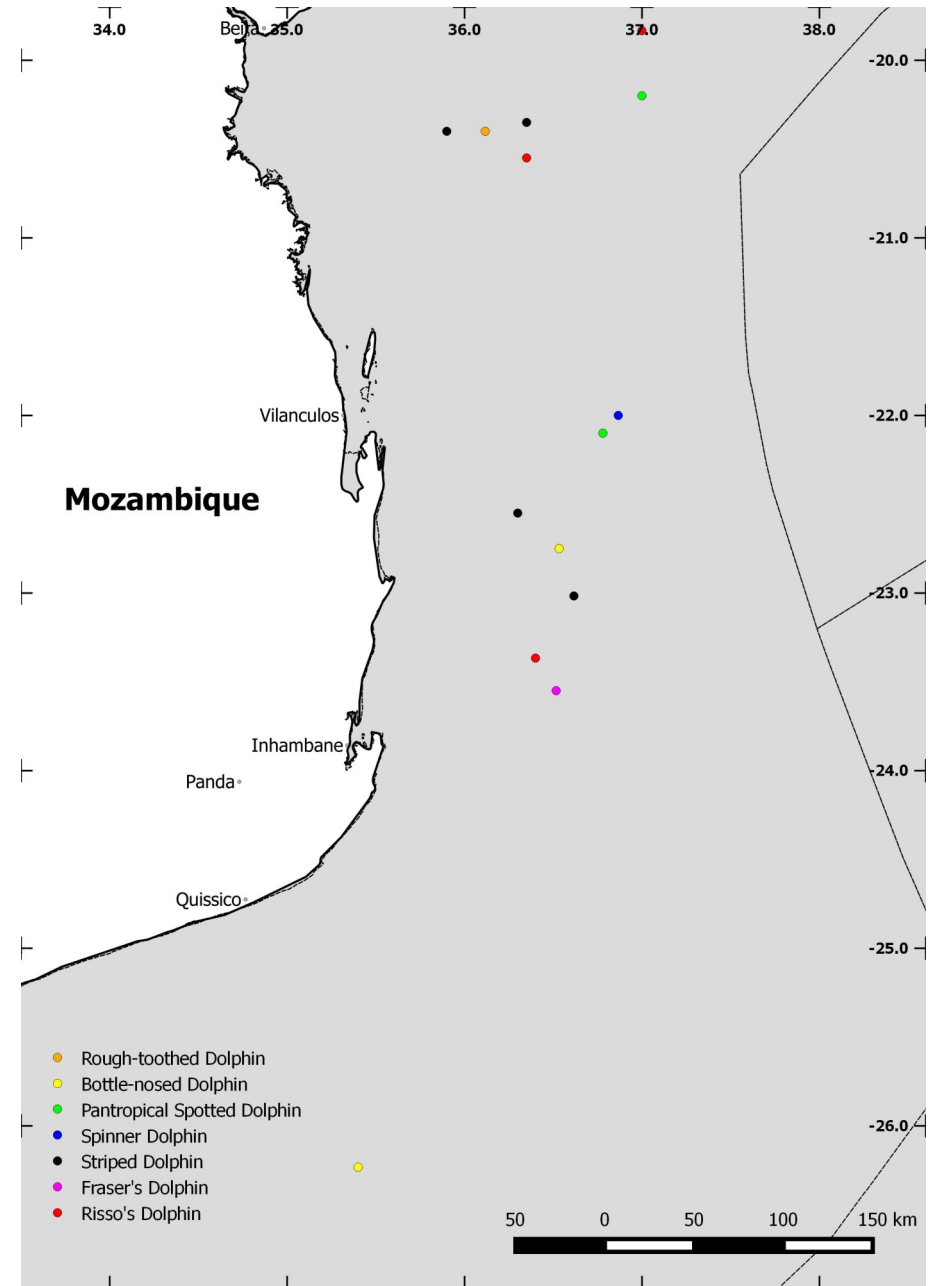


Figure 3: Daily sightings of dolphin species observed off southern and central Mozambique.

1,100 and 2,100 m; unfortunately the species of Bottle-nosed Dolphin could not be determined. Both Common Bottlenose Dolphins *Tursiops tursiops* and Indo-Pacific Bottlenose Dolphins *T. aduncus* have been recorded from Mozambican waters (De Boer et al. 2003; Skinner & Chimimba 2005; Best 2007).

Pantropical Spotted Dolphin *Stenella attenuate*

Pantropical Spotted Dolphins were noted on two occasions off Mozambique (Figures 3 and 5) in water depths of 1,600 and 2,600 m. Best (2007) records a number of sightings of this species from Mozambique, as well as from the east coast of South Africa. This species has been recorded from a number of localities throughout the Mozambique Channel to as far north as Zanzibar (Best 2007).



Figure 4: Rough-toothed Dolphin east of Inhambane (Dominic P. Rollinson).

Spinner Dolphin *Stenella longirostris*

Only one school of c. 20 Spinner Dolphins was seen in Mozambican waters, approximately 150 km east of Vilanculos in c. 2,400 m of water (Figure 3). Best (2007) noted a number of sightings from coastal Mozambique, where this species appears to fairly common in warm waters, as well as further south off northern KwaZulu-Natal which appears to be the southern limit of the species.

Striped Dolphin *Stenella coeruleoalba*

Striped Dolphins were the most abundant dolphin species encountered in Mozambican waters. Small schools (maximum 15) were seen on four occasions on my trip (Figures 3 and 6), all of which were seen in waters north of Inhambane, in waters 50–2,200 m deep. Skinner &



Figure 5: Pantropical Spotted Dolphin east of Beira (Dominic P. Rollinson).



Figure 6: Striped Dolphin southeast of Beira (Dominic P. Rollinson).

Chimimba (2005) recorded beached specimens along the length of the Mozambican coastline, while Best (2007) noted records from Mozambican waters. Ryan et al. (2006) recorded Striped Dolphin on both birdwatching trips into Mozambique waters in 1997 and 2005.

Fraser's Dolphin *Lagenodelphis hosei*

Only one group of Fraser's Dolphins was encountered on my trip; a group of c. 35 individuals of both males and females approximately 100 km east of Inhambane (Figures 3 & 7), in 2,200 m of water. This sighting appears to be the first record of Fraser's Dolphin from Mozambican waters, other nearby records exist from South Africa (Skinner & Chimimba 2005; Best 2007) and further north in Tanzania (Braulik et al. 2016). Kiszka et al. (2007) noted a single large group around the island of Mayotte (Comoros archipelago).



Figure 7: Male Fraser's Dolphin east of Inhambane (Dominic P. Rollinson).

Risso's Dolphin *Grampus griseus*

Three groups (maximum 15) of Risso's Dolphin were observed during this trip, from waters 1,400–1,900 m deep between Inhambane and Beira (Figure 3). Ryan et al. (2006) appears to be the only previous reference to Risso's Dolphins from Mozambiquan waters; they were encountered on two days in November 2005. However Best (2007) suggests they occur throughout the Mozambique Channel. They are regularly recorded off South Africa (Skinner & Chimimba 2005; Best 2007) and off Tanzania (Braulik et al. 2016).

False Killer Whale *Pseudorca crassidens*

False Killer Whales were encountered on four occasions in Mozambican waters, between Inhambane and Beira (Figures 3 & 8), at waters depths 500–3,100 m. Best (2007) notes a number of records from

Mozambique, while Ryan et al. (2006) recorded a single pod of False Killer Whales in November 2005. A number of sightings exist from the east coast of South Africa as well as off Tanzania (Braulik et al. 2016).

Short-finned Pilot Whale *Globicephala macrorhynchus*

Only one group of Short-finned Pilot Whales was seen off Mozambique, approximately 150 km southeast of Beira (Figures 3 & 9) in water c. 600 m deep. Best (2007) did not note any Short-finned Pilot Whale records from Mozambique; however, he suggested that they occur throughout the Mozambique Channel. Ryan et al. (2006) recorded a number of sightings of this species from Mozambican waters. Best (2007) recorded Short-finned Pilot Whales off the east coast of South Africa and Braulik et al. (2016) noted them off Tanzania.



Figure 8: False Killer Whale seen following the vessel southeast of Beira (Dominic P. Rollinson).

Conclusion

This paper sheds light on the occurrence and distributions of a number of cetacean species within Mozambican waters, an area with relatively little understanding of cetacean diversity. Two species (Rough-toothed Dolphin and Fraser's Dolphin), previously unknown from Mozambican waters, were observed on this trip. Knowledge of the cetacean diversity occurring in this region will aid with conservation planning.

Acknowledgments

I would like to thank the captain and crew of the vessel, for welcoming me onboard and making life onboard a pleasant experience.




Figure 9: Short-finned Pilot Whale southeast of Beira (Dominic P. Rollinson).

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*Paper edited by Megan Loftie-Eaton
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