



Blue whales off the southern coast of Sri Lanka during the southwest monsoon season

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Background

- The narrow Sri Lankan continental shelf, extremely steep slope, submarine canyons and seasonally reversing monsoon supports high productivity¹
- Currently little available data on blue whales in this region during the southwest monsoon (SWM) season
- To date there are only two available records of seven sightings of blue whales recorded off the southern coast of Sri Lanka during the SWM^{2,3}
- Sri Lanka's continental slope coincides with one of the busiest shipping routes in the world with vessel strikes representing a potential threat to the population^{4,5}

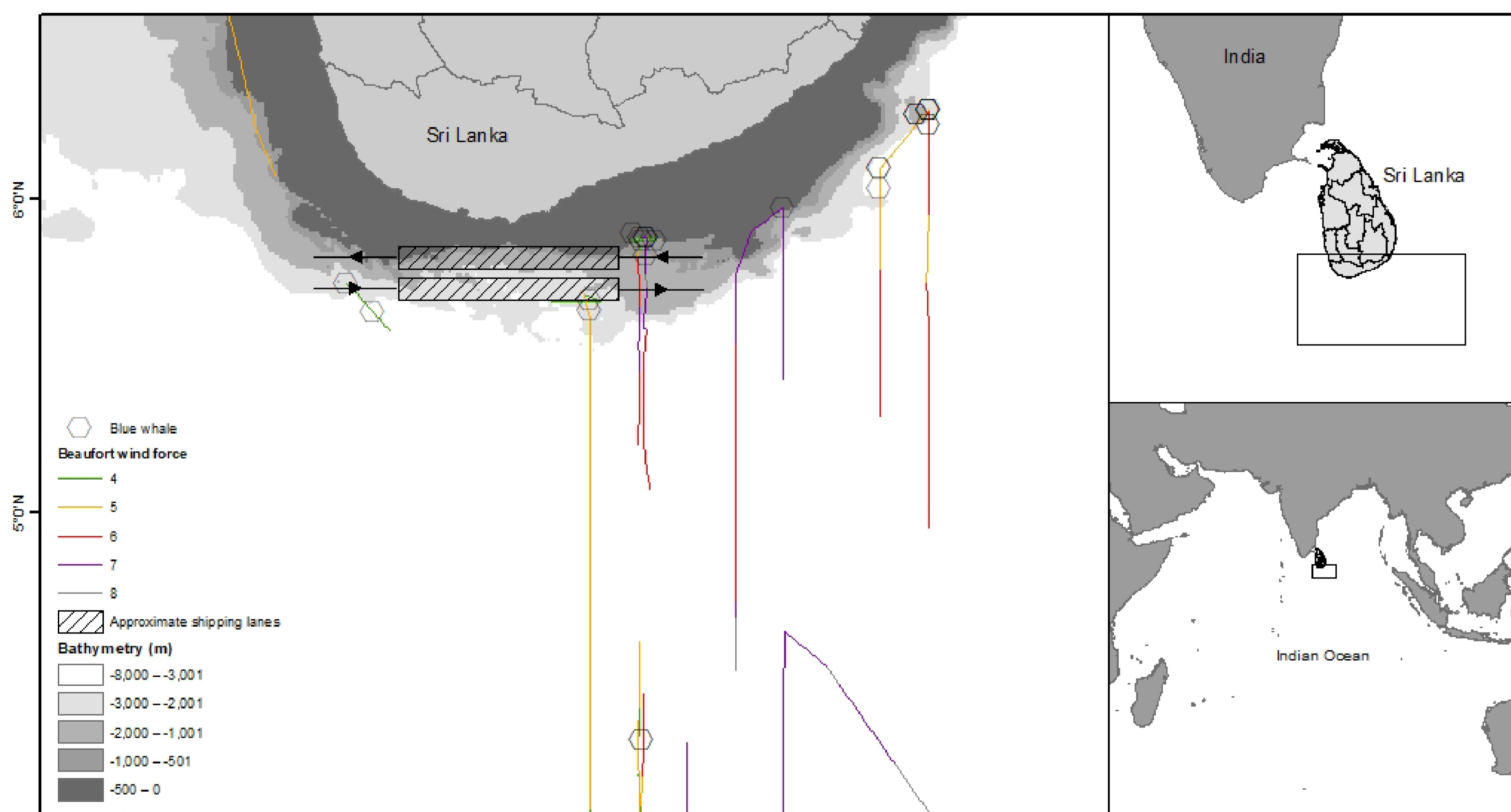


Fig. 1. Sightings of blue whales recorded from a platform of opportunity during a geophysical survey off the southern coast of Sri Lanka, July–August 2017. Approximate area of shipping lane obtained from Priyadarshana *et al.* (2014) (westbound lane 5°47.2'N–5°50.2'N, eastbound lane 5°41.2'N–5°44.2'N).

Results

- 34-days & 436hrs of dedicated survey effort
- 37 individual blue whales
- Distribution of sightings: 4–7°N and 80–82°E (corresponding to the steep continental shelf break and slope)
- 5 individuals sighted within the shipping lanes, 12 individuals within 5km
- Travelling 82%, fluke dives 18%



Fig. 6 & 7. Blue whales sighted during the survey offshore southern Sri Lanka 2017



Fig. 2. Blue whale sighted during the survey offshore near one of the busiest shipping lanes in the world⁵

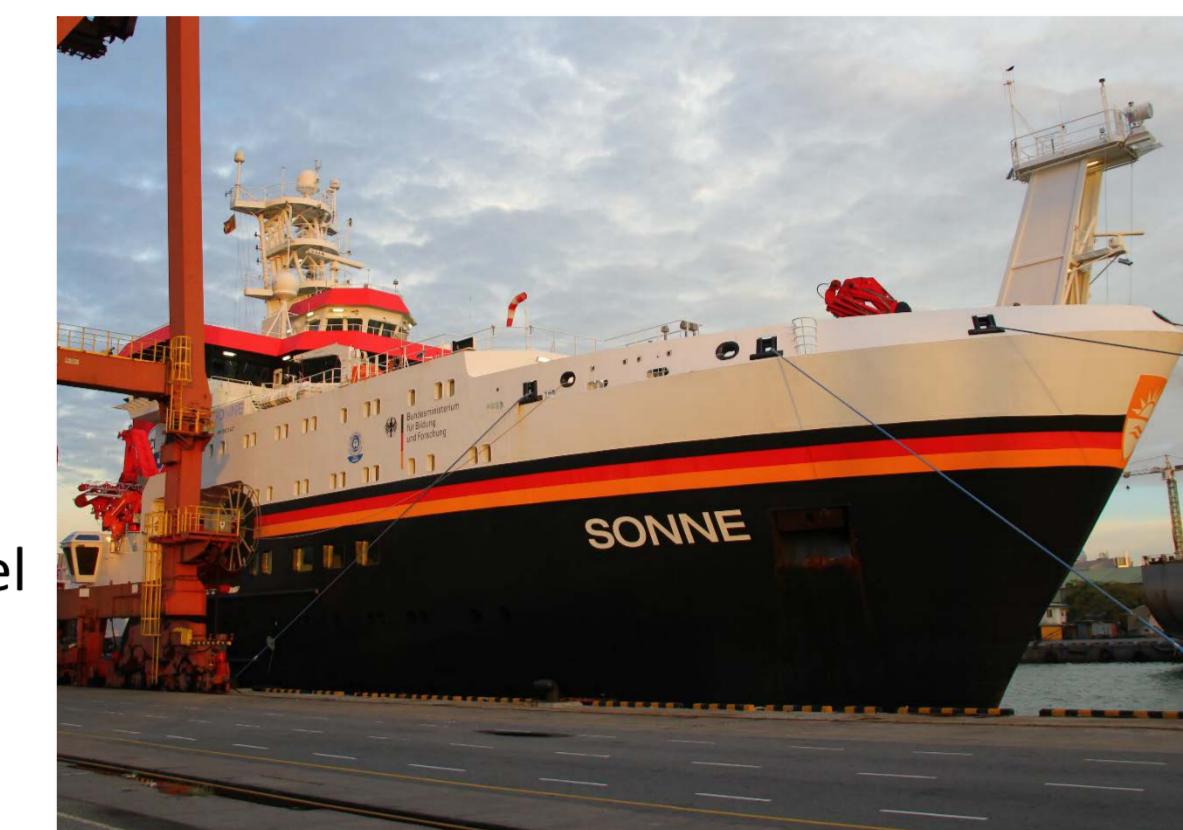


Fig. 3. Research vessel used for survey RV SONNE

Methodology

Study Area

- Southern coast of Sri Lanka (6°59'N–11°59'S and 79°0'E–84°59'E)
- 12 July to 15 August 2017

Field Methodology

- Dedicated observations were conducted during all daylight hours (~12.5hrs/day) from an observation deck 22m in height
- JNCC protocol

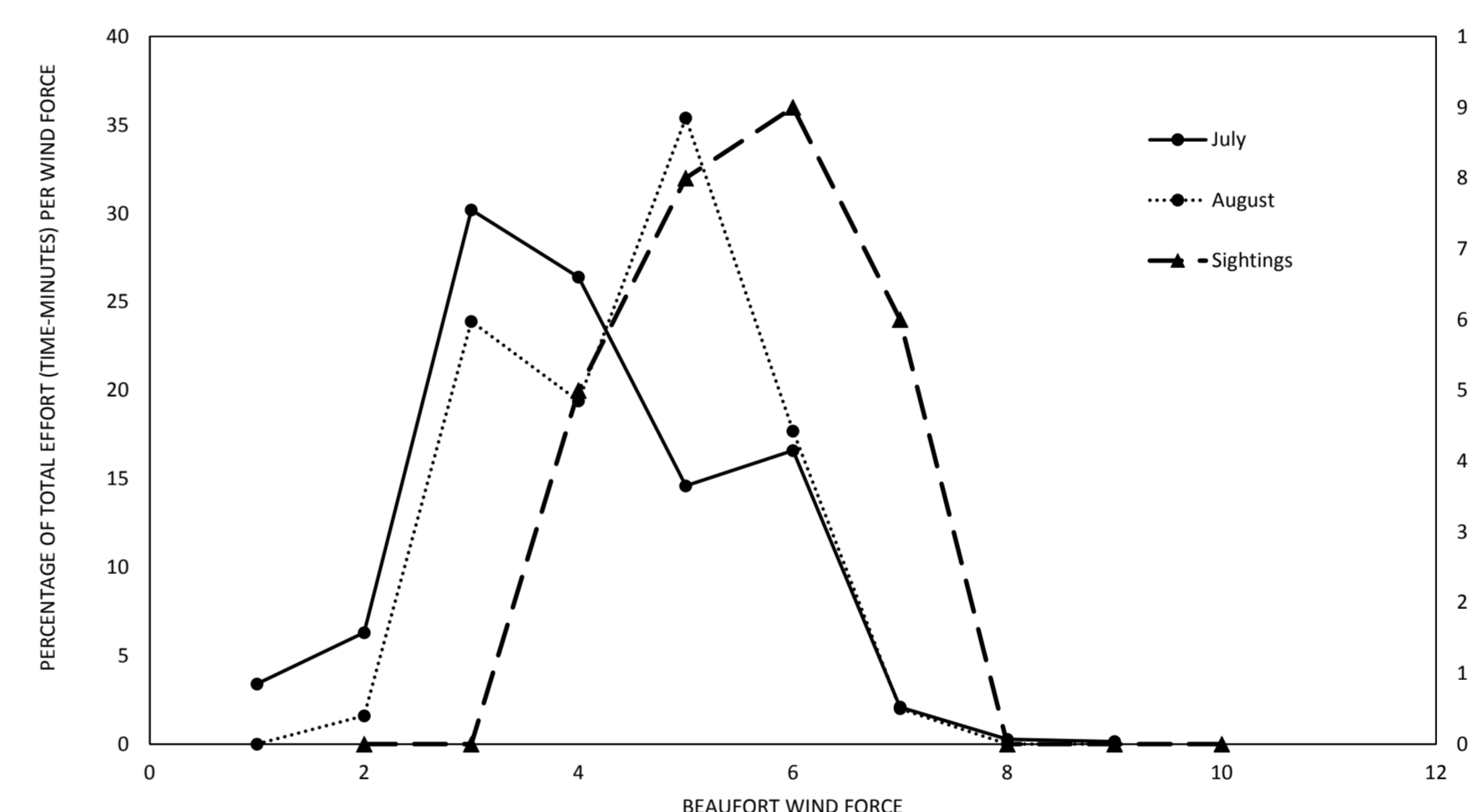


Fig 4. Percentage of total effort completed per Beaufort wind force category (1-10) for survey months July and August 2017



Fig. 5. MMO team: Marcus Bridge and Emma Hayes

Discussion

- Lack of sightings off southern Sri Lanka in the SWM may not be a true representation of the abundance, rather a consequence of rough sea conditions due to the strong monsoonal winds that make cetacean surveys difficult
- Previous sightings show an apparent trend between 4–7°N and 78–82°E. 35 out of 37 sightings occurred here.
- Availability of prey and productivity may present sufficient feeding opportunities to support an undefined number of blue whales during the SWM.

References

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