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Caption: Stripe-backed Weasel *Mustela strigidorsa*. Medium—digital, Software—procreate, Device—iPad + Apple pencil © Dhanush Shetty.

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NOTE

Are the uplifted reef beds in North Andaman letting nesting Olive Ridley Sea Turtle *Lepidochelys olivacea* stranded?

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Andaman & Nicobar Islands have nesting of four marine turtle species—Olive Ridley Turtle *Lepidochelys olivacea* (Eschscholtz, 1829), Leatherback Turtle *Dermochelys coriacea* (Vandelli, 1761), Hawksbill Turtle *Eretmochelys imbricate* (Linnaeus, 1766), and Green Sea Turtle *Chelonia mydas* (Linnaeus, 1758)—of which Olive Ridley Turtle is reported to exhibit mass nesting (Bhaskar & Whitaker 1983; Namboothri et al. 2012). With major nesting and foraging grounds, North Andaman is among the vital conservation zones for all the four sea turtles (Murugan 2004; Andrews et al. 2006; Sridhar et al. 2019). For example, Interview Island is one of the largest green turtle nesting sites in North Andaman (Namboothri et al. 2012) and an earlier study suggested that the northwestern coast of the North Andaman Island should be conserved as Hawksbill Turtle sanctuary as it provides a potential nesting and feeding ground for this species (Bhaskar & Andrews 1993).

The 2004 Sumatra-Andaman earthquake and the subsequent tsunami have severely affected the entire coastal ecosystems across the Andaman & Nicobar Islands (Andrews & Vaughan 2005; Prabakaran & Paramasivam 2014). The tectonic uplift in the west coast of North Andaman has especially resulted in a huge landmass of coral reefs being exposed, and the altered hydrology resulted in a loss of more than 90% of the mangrove forest (Andrews et al. 2006; Ramakrishnan et al. 2020). Additionally, beaches used by many sea turtles as nesting ground were drastically affected by the mega-disaster (Murugan 2005; Andrews et al. 2006). The high intensity tsunami waves not only resulted in heavy deposition of sand and sediment at the shore, but it also brought a huge pile of sea debris such as plastic, wood, and polyethylene (Murugan 2005; Ramachandran et al. 2005; Rajendran et al. 2013). The turtle nesting across the Andaman Islands severely declined in the subsequent years following the disaster owing to the altered coastal lines (Murugan 2005; Namboothri et al. 2015). Though many turtle nesting beaches were affected by the uplift, the new beaches formed after the tsunami provided some hope for turtle nesting in the North Andaman (Murugan 2005; Namboothri et al. 2015).

During our survey to understand vegetation

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Image 1. The study location in the west coast of North Andaman is largely characterised by the uplifted reef beds that are often 200m to 500m wide. The red line in the centre indicates the study transect (500m).

colonization, focused on mangroves, in the uplifted reef beds near the Radhanagar creek in North Andaman on 10 February 2021 (13.411N & 92.849E), we came across four carcasses of Olive Ridley Turtles within a 500-m transect (Image 1). The carcasses were probably a week old and are characterized by the presence of degenerating flesh and foul smell.

Incidentally, the North and Middle Andaman is known to have some critical nesting beaches of marine turtles, of which the Cuthbert Bay is known to have mass nesting of Olive Ridley Turtles. Mass nesting usually occurs during the third quarter phase of the lunar cycle that coincides with the neap tide phase of the ocean (Forest Department, pers. comm. February 12, 2021). As per the local reports, the mass nesting of Olive Ridley peaked in the middle of the first week (1–7) February 2021 at the Cuthbert Bay, and our observations happened roughly a week later. Olive Ridley Turtles are likely to nest all across the Andaman Islands and during this peak-nesting season, the observed turtles could have approached the coastal line searching for the potential nesting beach but instead ended up stranded in the exposed reef bed. The site has exposed reef beds that are 100–300 m wide, and at some places, it is up to 500 m wide. Most of these uplifted reef beds are partially inundated through the complex water channels in the reef beds during high tides and are often fully exposed during low tides, except for some puddles.

Interestingly, a report that reviewed all the research work on the turtle nesting beaches in the Andaman & Nicobar Islands doesn't record nesting of Olive Ridley Turtles in the west coast of North Andaman (Namboothri et al. 2012). However, many sites especially in the east coast namely Cuthbert Bay, Harguna beach, Rutland Island, Ross & Smith islands, Ramnagar beach of North Andaman, exhibit frequent nesting of Olive Ridley Turtles (Andrews et al. 2006; Namboothri et al. 2012, 2015; Sridhar et al. 2019). Many of such sites were notified as wildlife sanctuaries to exclusively conserve and protect the sea turtles in North Andaman Island.

Most of the Olive Ridley nesting sites are from the east coast of Andaman Islands due to the upheaval of reef flats that resulted in beaches becoming inaccessible for nesting in the west coast of North Andaman (Andrews et al. 2006). Our observation suggests that the nesting turtles are either stranded in the reef beds, or there may be other factors contributing to such mortality. Note that the observation pertains to just one site in the otherwise long coast line that is usually uninhabited by humans and with a high potential for turtle nesting. In addition, utilization of the uplifted reef beds and the adjacent beaches by the nesting marine turtles is largely unknown. Therefore, a focused survey on turtle stranding in the uplifted reef beds across the North

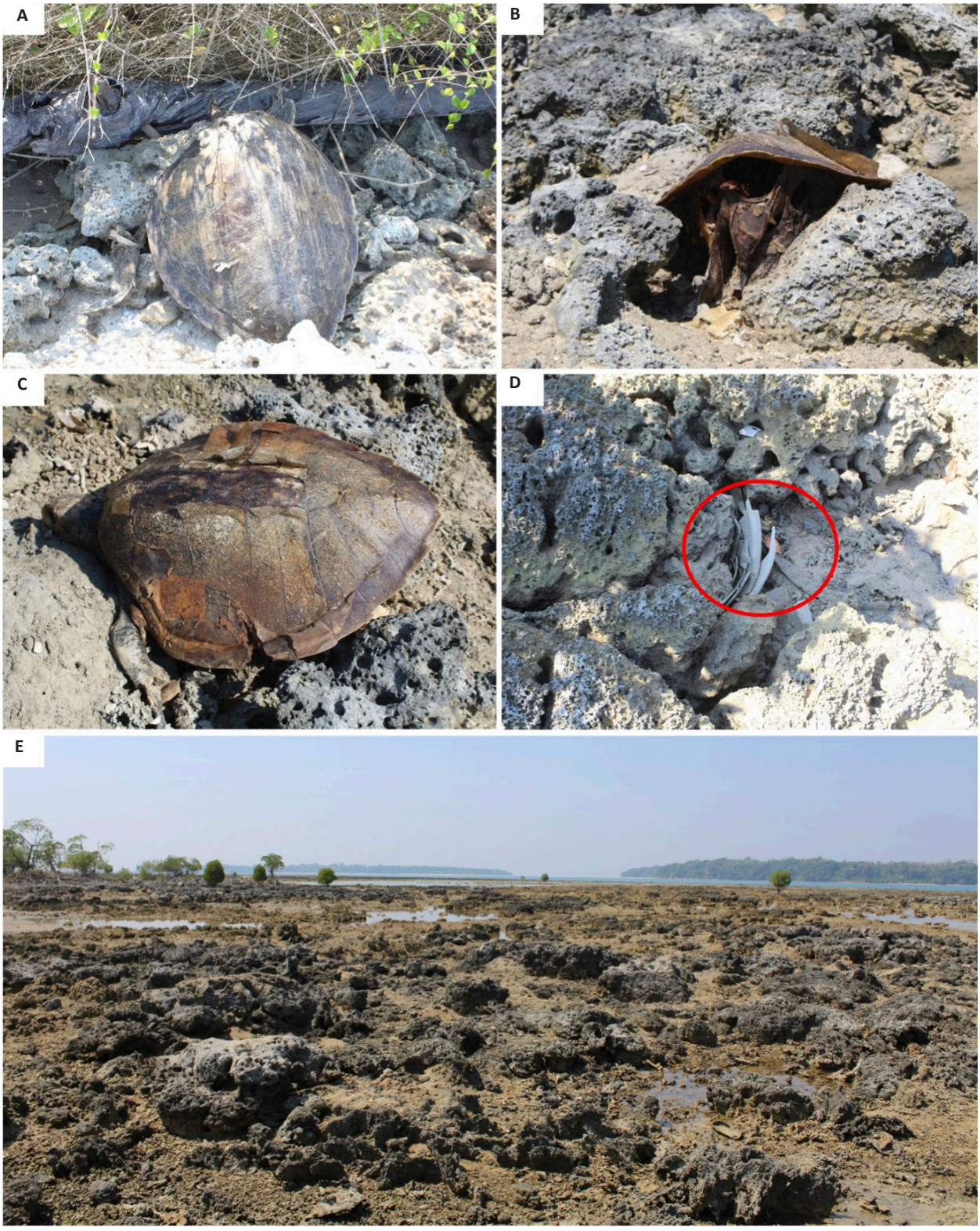

Image 2. A–C—The carcases of Olive Ridley Turtle *Lepidochelys olivacea* (Eschscholtz, 1829) observed in the study location | D—Old remaining's (bones) of the sea turtle carcase found between the exposed reef beds | E—Panoramic view of the exposed reef beds in the study site.
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Andaman during the peak-nesting season may provide better insights on the turtle mortality incidences.

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