Brief Communication

Fishery for endemic marine clam *Sunetta solanderii* from Kadalundi, Kerala

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The marine clam *Sunetta solanderii* (Gray, 1825) is a venerid bivalve endemic to the southwest coast of India, particularly Kerala. The clam resources of the estuaries along the Kerala Coast have been traditionally exploited by coastal populations. The Kadalundi Estuary in Kozhikode District, supports a traditional clam fishery in the Kadalundi – Vallikkunnu Community Reserve (VKCR), declared in 2007. Spread across an area of 1.5 sq.km, this biologically productive estuary, drains directly into the Arabian Sea, and supports fauna and flora including a total of 13 species of molluscs from 13 genera, under 9 families and 7 orders.

The marine clam *Sunetta solanderii* locally referred to by the populace "Vella erunthu," supports a small-scale lucrative local fishery. The seasonal fishery is observed during April to July in this estuarine system where extensive clam beds occur in the sandy deposits near the bar mouth adjacent to the Kadalundi Bridge (11°07'16.8" N; 75°49'39.0" E). About 5-10 fishermen fish these clams in Kadalundi, besides 20-50 residents who engage in the collection of clams primarily for their subsistence or household consumption. The clams are typically handpicked from the intertidal zone during periods of low tide, when they are fully exposed and easily accessible. The fishermen also employ scoop netting techniques, using a scoop net without a handle, and a mesh size of 22 mm, to sieve through the sediment at knee-depth to collect more clams. This fishery yielded an estimated 27.07t of *S. solanderii* during the 2024 season.

Morphological characteristics noted were a shell that is smooth and glossy, moderately elongated in shape. The hinge teeth are thin and narrow, and the tooth is in front of the cardinals. The lunule is long and narrow and deeply excavated. The locations where the adductor impressions are marked by slight depressions, and the pallial line is deeply sinuate. The inner surface is uniformly whitish, and its margin is finely crenulated all around. Colouration of the external surface is characterized by a pale yellowish or fleshy white shade, while the internal surface is white or pale yellow (Fig. 1.)

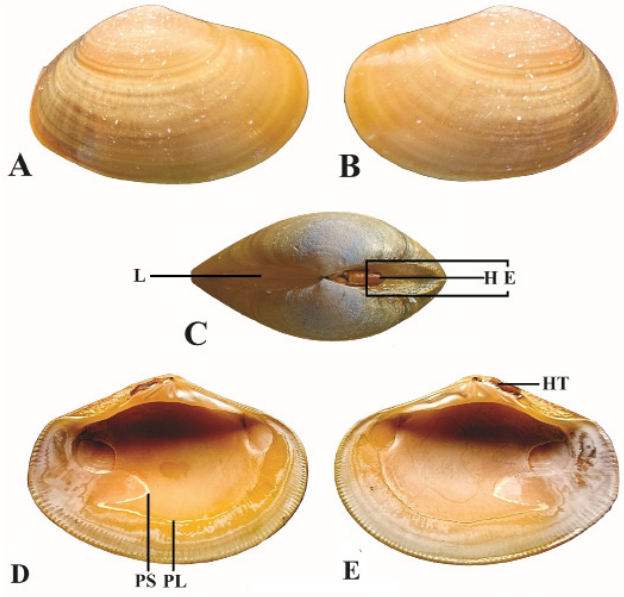

Fig. 1. External view of shell left (A), right (B), view of umbo region (C), internal view of left (D) and right (E) of *Sunetta solanderii* (scale bar= 2 cm); L=lunule; H=hinge ligament; E=escutcheon; PL=pallial line; PS=pallial sinus and HT=hinge teeth

Size of the clams from the fishery ranged from 23.2 to 38.9 mm (mean = 32.4 mm) and weight of the individuals ranged from 0.45 to 14.5 g (mean =5.6 g). Wet meat weight varied between 0.03 and 1.96 g (mean = 0.77 g). The wet meat weight as a percentage of total body weight ranged from 6.7% to 21.7%

(mean=12.6%). The substratum that constitutes the habitat of these clams was comprised by sand, silt and shell fragments. It inhabits the fine sandy substrate on the upper subtidal zone surrounding the mouths of expansive inner bays and is often found alive in the Thooval Theeram Beach (Malappuram District) and Munambam Beach (Ernakulam District) and its populations appear to be unevenly distributed. In India, clams support a small-scale fishery and in order of abundance, *Villorita cyprinoides, Meretrix casta, Paphia malabarica, Marcia opima,* and *Meretrix* are fished from estuaries in Kerala. However, the marine clam *Sunetta solanderii* contributes to a distinct marine clam component of the fishery from open coastal zone near the estuarine mouths.

Clam fishing effort intensifies during the monsoon season, particularly when weather conditions are not conducive for sea-fishing coinciding with mechanized fishing ban (June and July). A fishery for its congener, *Sunetta scripta* in the northern side of the entrance into the Cochin bar mouth and Azhikode areas during 1990s. The wedge clam, *Donax incarnatus* Gmelin, 1791 was fished in significant quantities in the Malippuram area in Vypeen Island, near Kochi (George 2000). However, there were no reports on marine clam fishing in the Kadalundi areas. More extensive and comprehensive studies are required to characterize the ecological role, reproductive biology,

and fishery potential of *Sunetta solanderii*, ensuring its sustainable utilization and conservation within the Kadalundi–Vallikkunnu ecosystem in particular and also along the Kerala coast.