

# Bullidae

*Bulla gouldiana* (Pilsbry, 1895)

**Common Name:** California Bubble Snail.

**Distribution:** From Coastal San Luis Obispo County, California, becoming common south of Point Conception, extending the length of the Baja California Peninsula of Mexico and much of the Gulf of California.

**Habitat:** Most commonly observed in bays and lagoons on sand and in eel grass beds. Off-shore they are found on sand in water deep enough that the disturbance to the sand caused by surface swells is minimal.

**Size:** There are up to 4 age classes. In Mission Bay only 1% of the population survives to age class 4, and at that time the shell length is approaching 60 mm.



**Color:** The animal is yellow to orange-gold with white flecks. The shell may be gray to gray-purple with darker blotches and off-white markings.

**Notes:** The shell is bulbous and thin, and the animal is too large to withdraw into its shell. Fifty percent of the shell length develops during the first year, but that is only 10% of the total shell weight of age class 4 shells. Rapid growth in the first year is an adaptation to become too large to be swallowed by the predatory slug *Navanax inermis*. Shell deposition is notable during the 2<sup>nd</sup> and 3<sup>rd</sup> years. Other predators include, the California cone, Festive Murex, and Kellet's Whelk. When exposed at low tide, bubbles are hunted by multiple species of shore birds. Reproduction occurs in clusters and yellow egg strings are often deposited on eel grass. Adults are active both day and night, and may burrow into the sand during strong tidal currents and if exposed at low tide, to remain hidden and moist. Adults of his species are neither scavengers or obvious predators, they consume microflora and fauna on the sand, and fine algae often found on eel grass.

**References:** Tuskes, P. M. 2011. Observations on the Biology of the Bubble Snail *Bulla gouldiana* in Mission Bay, San Diego, California. *The Festivus*. 43(7):69-75. Additional photographs: Berschauer & Clark. 2018. *Marine Shells of the California Province*.