

Close Reading: Golden Jellyfish

Golden Jellyfish *Mastigias*

Jellyfish are known for drifting to and fro at the whim of ocean currents—but not all species are so passive. The millions of golden jellyfish that pack Palau’s Jellyfish Lake spend much of their lives on the move during a daily migration that follows the sun’s arc across the sky.

Before sunrise, the jellies cluster along the saltwater lake’s western shore. Each morning around 6, when dawn brightens the eastern sky, they begin to swim toward the light. Pumping water through their bells, these jellyfish use a type of jet propulsion to follow the sunlight until they nearly reach the eastern shore—stopping just short of the shadows caused by lakeside trees.

Sunlight is plentiful on this remote Pacific island, which is a good thing because golden jellyfish don’t just enjoy basking in the sun—they need its light to survive. Solar rays nourish essential, algae-like organisms called zooxanthellae, which live symbiotically in the jellies’ tissues and provide their hosts with energy as a byproduct of their photosynthesis.

Golden jellyfish rest relatively contentedly in place at midday when the tropical sun remains high overhead. But each afternoon, as the sun continues its slow crawl toward the western horizon, the jellies reverse course and return to the western shore to await the dawning of a new day.

This remarkable migration pattern has a crucial consequence: The jellyfish avoid the shaded lakeshore areas where their primary predators, anemones, live.

The daily migration also benefits the



lake, which once had an outlet to the sea but has been long since become isolated. As the gelatinous hordes swim back and forth across the lake they mix its waters—and churn the nutrients and small organisms that form the base of the food chain.

Map



Golden Jellyfish Range

Group name: Smack

Protection status: None

Did you know? Golden jellyfish isolated in Jellyfish Lake have lost their sting.

Size relative to a tea cup:



Fast Facts

Type: Invertebrate

Size: Up to 5.5 in (14 to 16 cm)

Review Questions

1. Describe, in detail, the Golden Jellyfish’s “daily migration” across the lake
2. Why do these jellyfish follow the sun?
3. What major benefit does avoiding the shaded lakeshore do for the Golden Jellyfish?
4. What do the Golden Jellyfish do for Palau’s Jellyfish Lake?