

Habitat usage of a groundwater-fed coastal inlet by the iconic and endangered queen conch *Strombus gigas*, Yucatan Peninsula, Mexico.

Submarine groundwater discharge from shallow karst aquifers is the dominant process delivering terrestrial water to the ocean along the Yucatan coastline. Groundwater-fed coastal inlets ('caletas') have a large diversity in aquatic environments (freshwater swamp to fully marine ecosystems) as a result of large salinity gradients. Not widely recognised, significant populations of the queen conch *Strombus gigas* - one of the most important fishery resources of the region - are found in these caletas. These 'un-accounted' nearshore habitats may constitute an important refuge for this species, which is most commonly reported to inhabit offshore seagrass beds. Although it is widely recognized that a good understanding of an animal's usage of its habitat is essential to successful fisheries management, little is known on the animals' usage of the caletas, and their relation to the hydrology.

Preliminary observations of the conch population in a groundwater-fed caleta suggest that the 'upstream' section of the caleta with greatest influence of groundwater appears to be preferentially populated by juvenile conch, whereas adults dominate the population at the mouth. An acoustic animal telemetry study, together with a hydrological monitoring program, is now underway to study the conchs' movements and their relation with the salinity gradient. Initial results indicate distinct patterns of conch movement within the caleta in relation to the hydrological gradient. Potential hydro-ecological drivers of the movement ecology of the animals, including food availability and predation in response to the groundwater-supported salinity gradient, are discussed.