

# Exploration of Gorgonian Octocorals at Mesophotic Depths of the Indo-Pacific

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Indo-Pacific coral reefs are centres of marine biodiversity, yet the natural resilience and biodiversity of these ecosystems are under great threat. Research at deeper depths (mesophotic coral ecosystems - MCEs; 30 to >150 m) reveal an unknown reservoir of biodiversity and natural resilience in the face of steep environmental gradients. Gorgonian (sea fan) octocorals typically dominate these dynamic environments; but how these diverse gorgonian assemblages can withstand such challenging environments is unknown. Is this ability an important evolutionary mechanism in gorgonian coral diversification? I seek to understand the biological success of this enigmatic group, to test how species have evolved over time, and how this knowledge can have a powerful impact on ecosystem management strategies through local community collaboration in Pacific Island Nations.

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Dr. Sonia J. Rowley's lifetime of exploration at deeper depths reveals an unknown reservoir of biodiversity and evolutionary novelty. Come armed with questions as she shares her experiences and effective ways to explore and protect these enigmatic deep-reef environments gives us a strong sense of belonging and herein lays the source for conservation.