

Utilization of coastal seagrass beds as nursery areas for economically important reef fish

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Reef fish in general, and grouper and snapper in particular, comprise a significant portion of commercial and recreational finfish landings in the Gulf of Mexico. While these are offshore fisheries, the life history patterns of several species bring their juvenile phases into potential conflict with anthropogenic activities in coastal ecosystems. Gag grouper, gray snapper, and lane snapper utilize inshore and nearshore seagrass beds as juvenile habitat along the majority of Florida's west coast. Others, such as scamp and red grouper, exploit nearshore structure as juveniles. Yearclass strength is nominally set by the end of the juvenile period, a phase denoted by explosive growth, but also reliant upon a dynamic suite of prey items. Each species requires specific habitat and water quality parameters and perturbations which affect key organisms may cascade up the food chain. However, not all seagrass beds offer suitable habitat to juvenile grouper and snapper, and those which do, are not inhabited year round. Knowledge of the timing and location of coastal seagrass habitat utilization by juvenile grouper and snapper could be used by federal project managers to minimize adverse impacts upon these economically important species. Furthermore, juvenile monitoring programs are inexpensive, easily mobilized and offer predictive data for mitigation and management assessments.