

Goliath Grouper (*Epinephelus itajara*) life history for the Gulf of Mexico. Associations and interactions with environmental and habitat variables are listed with citations as footnotes.

Life stage	Eco-region	Habitat Zone	Habitat Type	Season	Temp (°C)	Depth (m)	Prey	Predators	Mortality	Growth
eggs _{1, 2, 13}	ER-1, ER-5	offshore	WCA	late summer, early fall		36-46				
larvae _{1, 13, 20}	ER-1, ER-5	offshore	WCA	late summer, early fall		36-46				pelagic larval duration: 30-80 d
postlarvae _{5, 20}	ER-1, ER-5		mangroves							pelagic larval duration: 30-80 d
early juveniles _{1, 2, 6, 7, 8, 11, 16, 19}	ER-1, ER-5	estuarine, nearshore	SAV, mangroves, emergent marsh	Nov-Jan		0-5	crustaceans			growth rate ~ 0.300 mm/d
late juveniles _{1, 2, 15, 16, 19}	ER-1, ER-5	estuarine, nearshore	SAV, mangroves, emergent marsh, reefs, hard bottom			0-5	crustaceans			emigrate from mangroves btwn age 5 and 6 (1000 mm TL); growth rate ~ 0.300 mm/d
adults _{1, 2, 3, 6, 10, 12, 14, 16, 17, 18, 21}	ER-1, ER-5	nearshore, offshore	reefs, hard bottom, banks/shoals		20-25	0-95	crustaceans (esp. lobster), fish, molluscs (cephalopods)		$Z = 0.85$, $F = 0.70$, $M = 0.15$ Vulnerable to overfishing	$L_{inf} = 2221$ mm TL, $K = 0.0937$, $t_0 = -0.6842$, max. age = 37 yrs; Slow growth rate

spawning adults _{1, 2, 4,} 16	ER-1, ER-5	offshore	reefs, hard bottom	Jun-Dec peak: Jul-Sep	25-26	36-46				
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Notes: adults, spawning adults: use artificial reefs (esp. wrecks) as habitat_{2, 4}
Bold and italicized font indicates proxy data