

Spiny Lobster (*Panulirus argus*) 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
phyllosome larvae ^{1, 2, 7, 8, 12-14, 33, 34, 37, 51}	ER-1, ER-2, ER-3, ER-4, ER-5	offshore	WCA	year-round (FL Keys; SE FL), Jun-Nov (NE Gulf)	> 24	<i>1-100</i>	plankton	pelagic fish		about 11 molts over 9-12 month larval cycle. Size: 0.5-12 mm carapace length
puerulus postlarvae ^{3, 4, 9-11, 14, 16-25}	ER-1	estuarine, nearshore, offshore	WCA, SAV	year-round, peak: spring, secondary peak: fall	18-33	<i>1-100</i>	non-feeding	nocturnally active, water column feeding fish	predation, physiological stress from temp and salinity extremes	metamorphose into first benthic instar 7-21 d post-settlement
juveniles ^{9, 15, 17, 19-22, 25, 27-32, 36, 42, 43, 48, 52}	ER-1	estuarine, nearshore, offshore	SAV, reefs, hard bottom	year-round		<i>1-100</i>	inverts (esp. mollusks, crustaceans)	elasmobranchs, boney fish, octopods, portunid crabs	mortality primarily via predation, commercial fishery	3-4 mm CL/month during first year, influenced by temp, diet, and injuries
adults ^{8, 28, 30, 38-40, 43, 45-47, 53-55, 57}	ER-1	estuarine, nearshore, offshore	hard bottom, SAV, reefs	year-round		1-100	mollusks, arthropods	elasmobranchs, boney fish, dolphins, loggerhead turtles	mortality from fishery exploitation	S.FL = 0.6 mm CL/month, affected by temp and injuries

Notes: phyllosome larvae: Genetic evidence suggests a pan-Caribbean stock^{7, 35, 36}
Occurrence in Gulf may be associated with loop currents^{7, 35, 36}

Notes cont: puerulus postlarvae: abundance in S. FL associated with wind-forcing, dynamics of ocean gyres, and by Caribbean-wide spawning activity^{3, 24}

juveniles: salinity = 32-36 ppt₅₆
abundance dependent on larval influx and availability of suitable settlement and post-settlement habitat_{37, 41, 49, 50}
experience higher mortality on casitas (artificial) than natural habitats₅₉

adults: salinity = 32-36 ppt₅₆
fishing mortality has decreased as the number of lobster traps in FL fishery have been reduced₅₈
*protected areas enhance spiny lobster production in fished areas*₆₁

Spawning
adults: female reproductive migrations occur between 5 June and 25 August, none detected between 25 August and 19 April₆₀

Bold and italicized font indicates proxy data

Information in asterisks comes from studies conducted outside GMFMC jurisdiction