

Summary Table of Red Snapper, ( <u>Lutjanus campechanus</u> ) life history for the Gulf of Mexico. Associations and interactions with environmental and habitat variables are listed with citations.												
							Trophic relationships		Habitat Associations and Interactions			
Life Stage	Season	Location	Temp(°C)	Salinity(ppt)	Oxygen	Depth(m)	Food	Predators	Habitat Selection	Growth	Mortality	Production
Eggs	Eggs are found after spawning in summer and fall in the Gulf of Mexico	Found offshore away from reefs				Eggs produced after spawning at depths of 18-37 m			Spawmed over firm sand bottom with little relief			
Citation	2,6	2				1			1			
Larvae	Collected July through November off Texas	Continental shelf waters	Taken at temperatures ranging from 17.3-29.7° C	Taken at salinities ranging from 32.8 to 37.5ppt		Taken at depths ranging from 17 to 183 m	Feed on alga and rotifers in captivity					
Citation	5	5	5	5		5	13					
Post Larvae	Collected July through November off Texas	Continental shelf waters	taken at temperatures ranging from 17.3 to 29.7° C	Taken at salinities ranging from 32.8 to 37.5ppt		Taken at depths ranging from 17 to 183 m						
Citation	5	5	5	5		5						
Early Juveniles	Collected July through November off Texas	Continental shelf waters	Taken at temperatures ranging from 17.3 to 29.7° C	Taken at salinities ranging from 32.8 to 37.5ppt		Taken at depths ranging from 17 to 183 m	Small zooplanktons were the common prey of juveniles up to 150 mm FL		Most observed associated with structures, objects or small burrows, but some observed over barren bottom		Shrimp trawl bycatch is a significant source of mortality	
Citation	5	5	5	5		5	2		16		2,8	Red Snapper, ( <u>Lutjanus campechanus</u> ) cont.
							Trophic relationships		Habitat Associations and Interactions			
Life Stage	Season	Location	Temp(°C)	Salinity(ppt)	Oxygen	Depth(m)	Food	Predators	Habitat Selection	Growth	Mortality	Production

Late Juveniles	Taken year round	Found on shrimp grounds off Texas in shallower water than adults				Found at 20-46 m depth	These fish are carnivorous, with most stomachs containing shrimp		Most observed associated with structures, objects or small burrows, but some observed over barren bottom		Shrimp trawl bycatch is a significant source of mortality	
Citation	12	2				10	3		16		2,8	
Adults	Taken year round	Larger concentration off Yucatan and Texas and Louisiana coast. Concentrated in relatively confined areas of hard limestone bottoms and irregular bottom formations	Taken from areas with bottom temps. ranging from 14 to 30° C	Taken at salinities ranging from 33 to 37ppt		Caught at depths from 7-146 m, and abundant at depths from 40-110 m	Carnivorous eating a large variety of prey including fish, shrimp, squid, octopus, crabs, etc	sharks are known to prey on red snapper	Common in submarine gullies and depressions, and over coral reefs, rock outcrops and gravel bottoms	Red snapper grow to 16 yrs of age and to a size of least 1,025 mm TL	Fishing mortality rates are greatly in excess of those consistent with a healthy spawning stock	Commercial harvest has declined from around 7 mil lbs. in the 1960s and 1970s to 2 to 3 million lbs. in the early 1990's.
Citation	12	3	10	10		10,4,14	2,3	2	9,15	11	7	7
Spawning Adults	Spawning occurs in summer and fall in the Gulf	Spawn offshore, away from reefs				Spawning reported at depths of 18-37 m			Spawning in reported over firm sand bottom with little relief			
Citation	2,6	2				1			1			

## Red Snapper References

1. Beaumariage, D.S., and L.H. Bullock 1976. Biological research on snappers and groupers as related to fishery management requirements. Pages 86-94 in H.R. Bullis, Jr., and A.C. Jones, eds. Proceedings: colloquim on snapper-grouper fishery resources of the western central Atlantic Ocean. Fla. Sea Grant Coll. Rep. 17. 333pp.
2. Bradley, E., and C.E. Bryan. 1975. Life history and fishery of the red snapper (Lutjanus campechanus) in the northwestern Gulf of Mexico: 1970-1974. Proc. Gulf Carrib. Fish. Inst. 27:77-106.
3. Camber, C.I. 1955. A survey of the red snapper fishery of the Gulf of Mexico, with special reference to the Campeche Banks. Fla. Board Conserv. Mar. Res. Lab. Tech. Ser. 12. 64 pp.
4. Carpenter, J.S. 1965. A review of the Gulf of Mexico red snapper fishery. U.S. Fish Wildl. Serv. Circ. 208. 35 pp.
5. Collins, L.A., J.H. Finucane, and L.E. Barger. 1980. Description of larval and juvenile red snapper, Lutjanus campechanus. U.S. Natl. Mar. Fish. Serv. Fish. Bull. 77(4):965-974.
6. Futch, R.B., and G.E. Bruger. 1976. Age, growth, and reproduction of red snapper in Florida waters. Pages 165-184 in H.R. Bullis, Jr., and A.C. Jones, eds. Proceedings: colloquim on snapper-grouper fishery resources of the western central Atlantic Ocean. Fla. Sea Grant Coll. Rep. 17. 333 pp.
7. Goodyear, C. Phillip. 1992. Red Snapper in U.S. waters of the Gulf of Mexico. SEFC, Miami Laboratory contribution: MIA 91/92-70, 156 p.
8. Gutherz, E.J. and G.J. Pellgrin. 1988. Estimate of the catch of red snapper, Lutjanus campechanus, by shrimp trawlers in the U.S. Gulf of Mexico, Mar. Fish. Rev. 50(1): 17-25.
9. Klima, E.F. 1976. Snapper and grouper resources of the western central Atlantic Ocean. Pages 5-40 in H.R. Bullis, Jr., and A.C. Jones, eds. Proceedings: colloquim on snapper-grouper resources of the western central Atlantic Ocean. Fla. Sea Grant Coll. Rep. 17. 333pp.
10. Moseley, F.N. 1966. Biology of the red snapper, Lutjanus aya Block, of the northwestern Gulf of Mexico. Publ. Inst. Mar. Sci. Univ. Tex. 11:90-101.
11. Nelson, R.S., and C.S. Manooch. 1982. Growth and mortality of red snappers in the west-central Atlantic Ocean and northern Gulf of Mexico. Trans. Am. Fish. Soc. 111:465-475.
12. National Oceanic and Atmospheric Administration. 1985. Gulf of Mexico and Ocean Zones Strategic Assessment: Data Atlas. NOAA, National Ocean Service. n.p.
13. Rabalais, N.N., S.C. Rabalais, and C.R. Arnold. 1980. Description of eggs and larvae of laboratory reared red snapper (Lutjanus campechanus). Copeia 1980(4):704-708.
14. Rivas, L.R. 1970. Snappers of the western Atlantic. Commer. Fish. Rev. 32(1):41-44.
15. Stearns, S. 1885. Notes on the red snapper. Pages 92-95 in C.W. Smiley, compiler. Notes upon the fish and fisheries: Bull. U.S. Fish Comm. 5:65-112.
16. Workman, Ian K. and Daniel G. Foster. 1994. Occurrence and Behavior of Juvenile Red

Snapper, Lutjanus campechanus, on commercial shrimp fishing grounds in the northeastern Gulf of Mexico.  
Mar. Fish. Rev.: 56(2):9-11.