

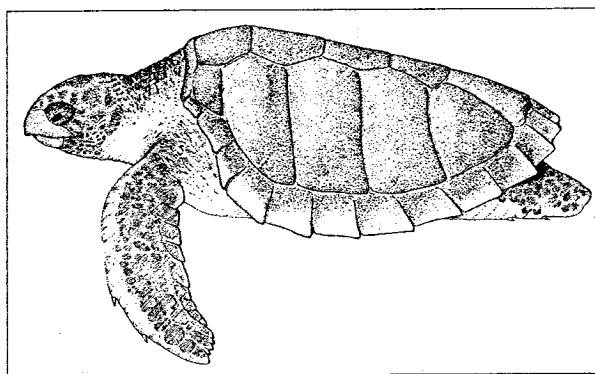
# 76

## Reptiles (Vertebrata: Reptilia) of the Gulf of Mexico

George R. Zug

Six families of reptiles have species living in the Gulf of Mexico (GMx). The 2 families of sea turtles, 5 species, are truly marine animals and spend their entire lives, with the exception of egg laying, in marine water, often distant from shore. Two emydid turtles and 2 snakes also occur regularly in the Gulf, but peripherally, in near-shore and estuarine habitats. The American crocodile is also an estuarine species, but owing to centuries of human predation, it has only a single viable Gulf population in southern Florida, although surviving spottily elsewhere in the Caribbean and South America. In addition, the generally freshwater alligator, *Alligator mississippiensis*, commonly ranges into upper estuaries of the GMx but is not included here as a marine species.

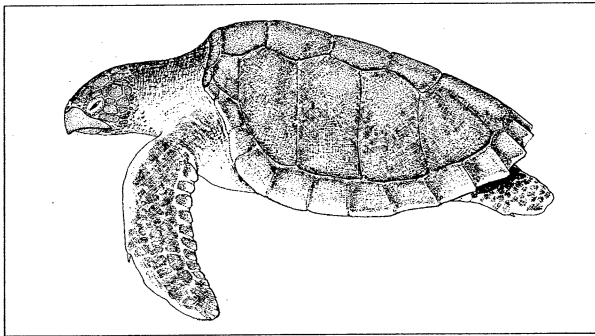
Although 5 sea turtles occur in the Gulf, 2 species, the loggerhead sea turtle (*Caretta caretta*) and the Kemp's ridley sea turtle (*Lepidochelys kempii*), are the most common taxa along the north shore. Green sea turtles (*Chelonia mydas*) occur broadly from north-central Florida coast southward into the West Indies. Hawksbills (*Eretmochelys imbricata*) regularly live on and around coral reefs, hence they occur mainly in southern Florida, Cuba, and southern Mexico. Leatherbacks (*Dermochelys coriacea*) are pelagic animals, spending most of their lives in the open ocean; individuals wander into the Gulf occasionally. The leatherback feeds throughout the water column on assorted "jellyfish," with salps apparently a major item. The other species are bottom feeders, mainly in the shallower (<50 m) portion of the continental shelf; ridleys and loggerheads on crustaceans and larger mollusks, hawksbills on sponges and other sedentary invertebrates, and greens on seagrasses and algae.



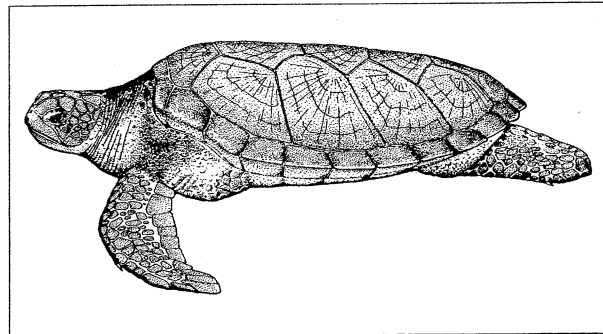
Reptilia. After Musick 2002.

All sea turtles must return to the beaches to reproduce, returning on multiple-year cycles to their birth (hatching) beach. Since the arrival of man, all have experienced major human predation, and all have greatly reduced populations and are now legally considered threatened or endangered. This status makes it illegal to handle or possess even pieces of their skeleton when encountered on the beach. Assorted conservation activities and regulations have slowed population declines and, in the case of Kemp's ridley, have brought it back from the edge of extinction. For a sea turtle, it is as close to a Gulf of Mexico endemic as possible, with its single major nesting beach (Rancho Nuevo) on the Tamaulipas coast and adults confined to Gulf waters.

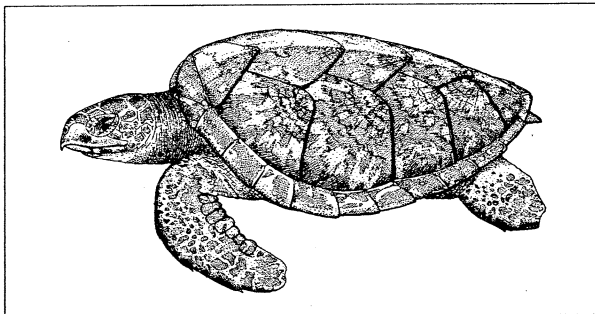
The saltwater crocodile (*Crocodylus acutus*) is also a threatened species. Its elimination from mangroves and the waterways of other coastal forest can probably be attributed to harvest for the leather trade and the human



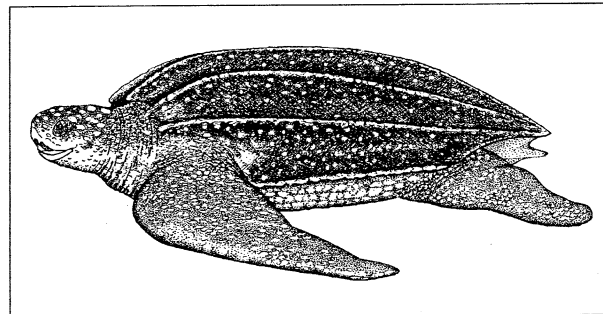
Reptilia. After Musick 2002.



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Reptilia. After Musick 2002.

propensity to remove any large, competing predator. It preys on assorted vertebrates, fish apparently the major prey in most localities. Like sea turtles, it is an egg layer and must lay its eggs in sand or, if lacking, a self-made heap of vegetation and soil. Unlike sea turtles, males and females regularly haul ashore to bask.

Of the 4 smaller species of reptiles, 2 (saltwater terrapin, *Malaclemys terrapin*, and saltmarsh water snake, *Nerodia clarki*) are obligate residents of seaside habitats, even though the water snake is poorly adapted physiologically for living in saltwater. This snake spends much of its time out of water but beneath cover, nocturnally foraging for fish. It is a live-bearer. In contrast, the terrapin spends much of its time in water, even hibernating there in more northerly areas. Terrapins have a catholic diet centered on invertebrates, with bivalve mollusks high on their list of preferences. They are egg layers and require nesting sites in friable soil well above the high-tide line.

The final 2 reptiles, cooters (*Pseudemys*, several species) and cottonmouths (*Agkistrodon piscivorus*), are freshwater taxa with only occasional incursions into marine habitats. Cooters are typically turtles of large bodies of water, and whether accidentally or intentionally, they are found occasionally feeding on marine vegetation in saltwater flats adjacent to river mouths. Cottonmouths are fish-eaters and streamside and lakeside resi-

dents throughout the coastal southeastern United States and, thus, occur in marsh and swamp habitats adjacent to the Gulf. Further, populations of cottonmouths persist on coastal islands where the only source of fresh water is rainwater. Such populations occasionally occur on islands in association with bird rookeries where the snakes apparently feed seasonally on the fish dropped by adult birds as they feed their nestlings.

### Abbreviations

Abbreviations for Habitat-Biology: est = estuaries; msp = mangrove swamps; ner = neritic; plg = pelagic; smr = salt marshes; THR = threatened or endangered; tst = tidal creeks/streams. The classification and nomenclature used herein follows that of the Catalogue of American Amphibians and Reptiles, similar to that used by Smith (1954) in the original Bulletin 89. Genera and species are listed alphabetically within families.

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## Taxonomic summary for reptiles of the Gulf of Mexico.

Orders	Total Species	Number endemic species	Number nonindigenous species
Testudines	6	0	0
Squamata	2	0	0
Crocodylia	1	0	0
Totals	9	0	0

## Checklist of reptiles (Vertebrata: Reptilia) from the Gulf of Mexico.

Taxon	Habitat-Biology	Depth (m)	Overall geographic range	GMx range	References/Endnotes
<b>Order: Testudines</b>					
<b>Family: Cheloniidae</b>					
<i>Caretta caretta</i> (Linnaeus, 1758)	ner, THR	0-20	Worldwide	entire	1, 2, 3, 7, 10, 14
<i>Chelonia mydas</i> (Linnaeus, 1758)	ner, THR	0-20	Pantropic	se, sw	7, 8, 9, 10, 12, 14
<i>Eretmochelys imbricata</i> (Linnaeus, 1766)	ner, THR	0-20	Pantropic	entire	7, 10, 12, 14, 16
<i>Lepidochelys kempii</i> (Garman, 1880)	ner, THR	0-20	GMx and N Atlantic	entire	7, 10, 12, 14, 15
<b>Family: Dermochelyidae</b>					
<i>Dermochelys coriacea</i> (Vandelli, 1761)	plg, THR	0-50	Pantropic	entire	7, 10, 11, 12, 14
<b>Family: Emydidae</b>					
<i>Malaclemys terrapin</i> (Schoepf, 1793)	est, tst	0-5	GMx and W Atlantic USA	se, ne, nw	5, 7
<b>Order: Squamata</b>					
<b>Family: Natricidae</b>					
<i>Nerodia clarki</i> (Baird & Girard, 1853)	msp, smr	0-2	E Florida to Central Texas	ene, nne, nnw	4
<b>Family: Viperidae</b>					
<i>Agkistrodon piscivorus</i> (Bonnaterre, 1790)	msp, smr	0-2	SE North America	ene, nne, nnw	4
<b>Order: Crocodylia</b>					
<b>Family: Crocodylidae</b>					
<i>Crocodylus acutus</i> (Cuvier, 1807)	msp, THR, tst	0-3	Trop. E Pacific, Caribbean	ese, ene	6