



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Spotted Turtle

Clemmys guttata

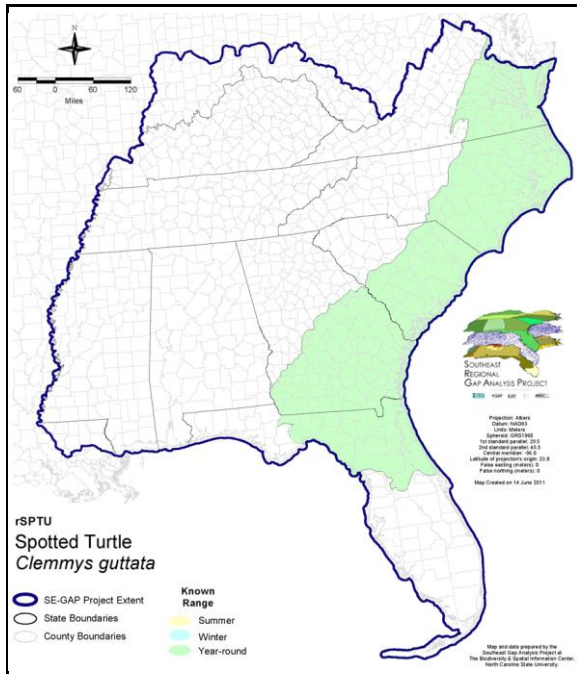
Taxa: Reptilian
 Order: Cryptodeira
 Family: Emydidae

SE-GAP Spp Code: **rSPTU**

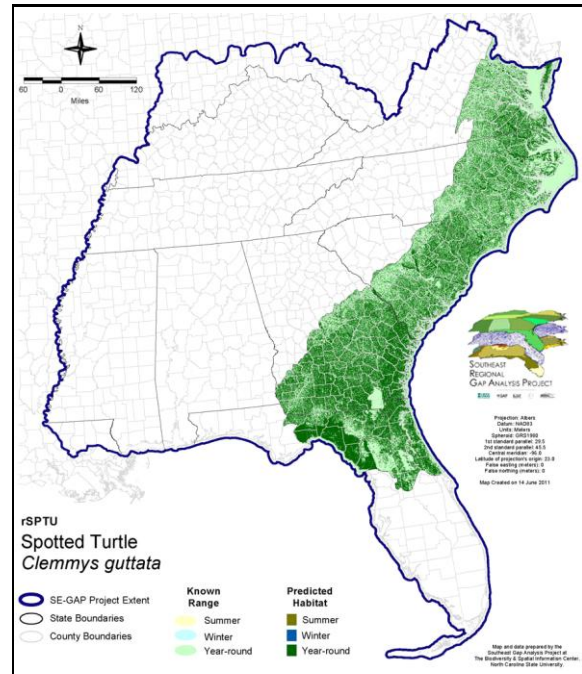
ITIS Species Code: 173771

NatureServe Element Code: ARAAD02010

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_rSPTU.pdf

Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_rSPTU.pdf

GAP Online Tool Link: <http://www.gapservice.ncsu.edu/segap/segap/index2.php?species=rSPTU>

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/rSPTU_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: GA (U), IL (LE), IN (SE), MA (-WL), ME (T), MI (T), NC (W1), NH (T), NJ (SC), NY (SC), OH (T), RI (Protected), SC (ST-Threatened), VT (E), ON (END), QC (Susceptible)

NS Global Rank: G5

NS State Rank: CT (S4), DC (S1), DE (S3), FL (S3?), GA (S3), IL (S1), IN (S2), MA (S4), MD (S5), ME (S3), MI (S2), NC (S3), NH (S3), NJ (S3), NY (S3), OH (S3), PA (S3), RI (S5), SC (S5), VA (S4), VT (S1), WV (S1), ON (S3), QC (S1)

SUMMARY OF PREDICTED HABITAT BY MANAGMENT AND GAP PROTECTION STATUS:

	US FWS		US Forest Service		Tenn. Valley Author.		US DOD/ACOE	
	ha	%	ha	%	ha	%	ha	%
Status 1	90,651.1	< 1	4,820.9	< 1	0.0	0	0.0	0
Status 2	119,461.2	< 1	31,633.3	< 1	0.0	0	310.7	< 1
Status 3	1,537.4	< 1	238,463.4	1	0.0	0	192,986.4	1
Status 4	51.8	< 1	< 0.1	< 1	0.0	0	97.2	< 1
Total	211,701.5	1	274,917.6	2	0.0	0	193,394.3	1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	9,035.7	< 1	1,014.1	< 1	806.7	< 1
Status 2	0.0	0	26,557.6	< 1	31,087.4	< 1	0.0	0
Status 3	30,549.9	< 1	5,528.9	< 1	0.0	0	1,284.7	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	30,549.9	< 1	41,122.2	< 1	32,101.5	< 1	2,091.3	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	1,012.7	< 1	243,906.7	1	18.4	< 1
Status 3	0.0	0	166,945.1	1	38,143.5	< 1	89,803.2	< 1
Status 4	0.0	0	< 0.1	< 1	5,469.8	< 1	0.0	0
Total	0.0	0	167,957.9	1	287,519.9	2	89,821.5	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	110.4	< 1	0.0	0	0.0	0
Status 2	17,005.7	< 1	43,783.3	< 1	0.0	0	678.1	< 1
Status 3	0.0	0	2,611.2	< 1	18,490.5	< 1	62,523.0	< 1
Status 4	0.0	0	0.0	0	2,152.7	< 1	0.0	0
Total	17,005.7	< 1	46,504.9	< 1	20,643.2	< 1	63,201.1	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	106,438.9	< 1		
Status 2	0.2	< 1	0.0	0	515,455.0	3		
Status 3	1,176.5	< 1	0.0	0	850,043.5	7		
Status 4	14,587,664.1	89	6,063.1	< 1	14,606,916.8	90		
Total	14,588,840.8	89	6,063.1	< 1	16,078,854.2	100		

GAP Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

GAP Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

GAP Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

GAP Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

PREDICTED HABITAT MODEL(S):

Year-round Model:

Habitat Description: Found in shallow bodies of water providing aquatic vegetation and a soft substrate, such as bogs, fens, marshes, the edges of bays, tidal inlets (Ernst et al. 1994), wet meadows and pastures, swamps, and small streams (Martof et al. 1980).

Mating occurs in the water. Nests are dug in well-drained, sunny areas such as grass tussocks, hammocks of sphagnum moss, and marshy pastures. Forages in the water. Burrows into mud or under vegetation to sleep or else sleeps in the burrow of another animal. In some parts of its range, spends considerable time on land (Ernst et al. 1994).

Quoted directly from state habitat notes. Amy Silvano 2 jul05

Ecosystem Classifiers: All Wetland systems. Amy Silvano 2jul05

Hydrography Mask:

Slow Current Only

Utilizes flowing water features with buffers of 250m from and 60m into selected water features.

Utilizes open water features with buffers of 250m from and 60m into selected water features.

Utilizes wet vegetation features with buffers of 250m from and unlimited into selected vegetation features.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Deciduous Plantations
Anthropogenic	Developed Open Space
Anthropogenic	Evergreen Plantations
Anthropogenic	Pasture/Hay
Anthropogenic	Row Crop
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Central Salt and Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Salt and Brackish Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Indian River Lagoon Tidal Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Sea-Level Fen
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Tidal Salt Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Southern Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	East Gulf Coastal Plain Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	Florida Big Bend Salt-Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Mangrove Modifier
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Marsh Modifier
Coastal Dune & Freshwater Wetland	Atlantic and Gulf Coastal Plain Interdunal Wetland
Forest/Woodland	East Gulf Coastal Plain Northern Dry Upland Hardwood Forest - Offsite Pine Modifier
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Fresh and Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh
Water	Open Water (Brackish/Salt)
Water	Open Water (Fresh)
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Herbaceous Modifier

Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Forested Wetland
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Herbaceous Wetland
Wetlands	Atlantic Coastal Plain Depression Pondshore
Wetlands	Atlantic Coastal Plain Large Natural Lakeshore
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Taxodium/Nyssa Modifier
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Northern Basin Peat Swamp
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	Atlantic Coastal Plain Northern Pondshore
Wetlands	Atlantic Coastal Plain Northern Wet Longleaf Pine Savanna and Flatwoods
Wetlands	Atlantic Coastal Plain Sandhill Seep
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Southern Wet Pine Savanna and Flatwoods
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
Wetlands	Central Florida Herbaceous Pondshore
Wetlands	Central Florida Herbaceous Seep
Wetlands	East Gulf Coastal Plain Interior Shrub Bog
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Herbaceous Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Offsite Hardwood Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Open Understory Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Scrub/Shrub Understory Modifier
Wetlands	East Gulf Coastal Plain Northern Depression Pondshore
Wetlands	East Gulf Coastal Plain Northern Seepage Swamp
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	East Gulf Coastal Plain Southern Depression Pondshore
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
Wetlands	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Coastal Plain Spring-run Stream Aquatic Vegetation
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Large Floodplain Forest - Herbaceous Modifier
Wetlands	Southern Piedmont Seepage Wetland
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest
Wetlands	Southern Piedmont/Ridge and Valley Upland Depression Swamp

CITATIONS: Bickham, J. W., T. Lamb, P. Minx, and J. C. Patton. 1996. Molecular systematics of the genus CLEMMYS and the intergeneric relationships of emydid turtles. *Herpetologica* 52:89-97.

DeGraaf, R. M., and D. D. Rudis. 1983. Amphibians and reptiles of New England. Habitats and natural history. Univ. Massachusetts Press. vii + 83 pp.

Ernst, C. H., and R. W. Barbour. 1972. Turtles of the United States. Univ. Press of Kentucky, Lexington. x + 347 pp.

Ernst, C. H., R. W. Barbour, and J. E. Lovich. 1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington, D.C. xxxviii + 578 pp.

Ernst, C.H. 1972. *Clemmys guttata*. Catalogue of American Amphibians and Reptiles. SSAR NO. 124:1-2.

Ernst, C.H. 1976. Ecology of the Spotted Turtle, *Clemmys guttata* (Reptilia, Testudines, Testudinidae), in southeastern Pennsylvania. *J. Herpotol.*, 10(1):25-33.

Fichtel, C. Vermont Nongame and Natural Heritage Program. Vermont Fish and Wildlife Department. 103 S. Main St. Waterbury, VT 05671-0501. (802) 241-3700.

- Herkert, J. R., editor. 1992. Endangered and threatened species of Illinois: status and distribution. Vol. 2: Animals. Illinois Endangered Species Protection Board. iv + 142 pp.
- Hunter, M. L., J. Albright, and J. Arbuckle. 1992. The Amphibians and Reptiles of Maine. Maine Agricultural Experiment Station Bulletin 838. 188 pp.
- Iverson, J. B. 1991. Patterns of survivorship in turtles (order Testudines). Canadian J. Zoology 69:385-391.
- Klemens, M. W. 1993. Amphibians and reptiles of Connecticut and adjacent regions. State Geological and Natural History Survey of Connecticut, Bulletin 112. xii + 318 pp.
- Lovich, J. E. 1988. Geographic variation in the seasonal activity cycle of spotted turtles, *CLEMMYS GUTTATA*. J. Herpetol. 22:482-485.
- Lovich, J. E., et al. 1991. Relationships among turtles of the genus *CLEMMYS* (Reptilia, Testudines, Emydidae) as suggested by plastron scute morphology. Zoologica Scripta 20:425-429.
- Martof, B. S., W. M. Palmer, J. R. Bailey, and J. R. Harrison, III. 1980. Amphibians and reptiles of the Carolinas and Virginia. University of North Carolina Press, Chapel Hill, North Carolina. 264 pp.
- McDowell, S. B. 1964. Partition of the genus *CLEMMYS* and related problems in the taxonomy of the aquatic testudinidae. Proc. Zool. Soc. London 143:239-279.
- Merkle, D. A. 1975. A taxonomic analysis of the *CLEMMYS* complex (Reptilia: Testudines) utilizing starch gel electrophoresis. Herpetologica 31:162-166.
- Minton, S. A., Jr. 1972. Amphibians and reptiles of Indiana. Indiana Academy Science Monographs 3. v + 346 pp.
- Smith, D. W. 1961. The amphibians and reptiles of Illinois. Illinois Natural History Survey Bulletin 28(1):1-298.

For more information:: SE-GAP Analysis Project / BaSIC
127 David Clark Labs
Dept. of Biology, NCSU
Raleigh, NC 27695-7617
(919) 513-2853
www.basic.ncsu.edu/segap

Compiled: 15 September 2011

This data was compiled and/or developed
by the Southeast GAP Analysis Project at
The Biodiversity and Spatial Information
Center, North Carolina State University.