



# Species Modeling Report

# **Cope's Gray Treefrog**

Hyla chrysoscelis

Taxa: Amphibian

- Order: Anura
- Family: Hylidae

#### **KNOWN RANGE:**



### PREDICTED HABITAT:



 Range Map Link:
 http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Range\_aCGTR.pdf

 Predicted Habitat Map Link:
 http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Dist\_aCGTR.pdf

 GAP Online Tool Link:
 http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=aCGTR

 Data Download:
 http://www.basic.ncsu.edu/segap/datazip/region/vert/aCGTR\_se00.zip

### **PROTECTION STATUS:**

Reported on March 14, 2011

Federal Status: ---

State Status: KY (N), MS (Non-game species in need of management), NE (NC), NJ (E)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S4), DC (S4), DE (S2), FL (SNR), GA (S5), IA (S4), IL (S4), IN (S4), KS (S5), KY (S5), LA (S5), MD (S5), MI (S5), MN (SNR), MO (S5), MS (SNR), NC (S5), NE (S5), NJ (S1), OH (SNR), OK (S5), SC (SNR), SD (S2), TN (S5), TX (S5), VA (S5), WI (S5), WV (S4), MB (S4), ON (SNA)

## 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	35,320.8	< 1	10,002.7	< 1	0.0	0	0.0	0	
Status 2	69,695.8	< 1	98,945.3	< 1	0.0	0	3,497.9	< 1	
Status 3	1,828.3	< 1	830,906.6	3	32,658.8	< 1	240,917.8	< 1	
Status 4	55.2	< 1	0.0	0	0.0	0	71.6	< 1	
Total	106,900.0	< 1	939,854.6	3	32,658.8	< 1	244,487.3	< 1	
	!		I		I		I		
	US Dept. of	Energy	nergy US Nat. Park Service		NOAA		Other Federal Lands		
	ha	%	ha	%	ha	%	ha	%	
Status 1	0.0	0	81,456.3	< 1	0.0	0	0.0	0	
Status 2	0.0	0	2,405.9	< 1	718.8	< 1	0.0	0	
Status 3	21,612.8	< 1	50,432.9	< 1	0.0	0	4,172.9	< 1	
Status 4	0.0	0	0.0	0	0.0	0	0.0	0	
Total	21,612.8	< 1	134,295.0	< 1	718.8	< 1	4,172.9	< 1	
	<u>'</u>		ļ.		1				
	Native Am.	Reserv.	State Park/H	State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%	
Status 1	0.0	0	511.5	< 1	44.6	< 1	0.0	0	
Status 2	0.0	0	8,322.2	< 1	275,805.6	< 1	212.9	< 1	
Status 3	11,656.0	< 1	130,592.1	< 1	88,976.4	< 1	67,477.9	< 1	
Status 4	0.0	0	0.0	0	37,142.5	< 1	10.4	< 1	
Total	11,656.0	< 1	139,425.8	< 1	401,969.2	1	67,701.2	< 1	
			'		1				
	State Coastal Reserve		ST Nat.Area/	Preserve	Other Sta	ate Lands	Private Cons.	Easemt.	
	ha	%	ha	%	ha	%	ha	%	
Status 1	0.0	0	5,201.7	< 1	0.0	0	0.0	0	
Status 2	1,740.2	< 1	33,070.9	< 1	3.9	< 1	937.3	< 1	
Status 3	0.0	0	3,506.8	< 1	10,378.4	< 1	22,664.1	< 1	
Status 4	0.0	0	< 0.1	< 1	1,739.3	< 1	0.0	0	
Total	1,740.2	< 1	41,779.4	< 1	12,121.7	< 1	23,601.3	< 1	
	Private Land -	No Res.	Water				Overall Total		
	ha	%	ha	%			ha	%	
Status 1	0.0	0	0.0	0			132,537.6	< 1	
Status 2	15.6	< 1	0.0	0			495,372.2	2	
Status 3	466.1	< 1	0.5	< 1			1,518,248.3	8	
Status 4	27,460,967.3	90	7,583.5	< 1			27,544,657.2	90	
Total	27,461,449.0	90	7,583.9	< 1			29,690,815.3	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: Cope's gray treefrog, is often associated with hardwood or mixed pine-hardwood forests, woodlands and woodland edges. Breeding typically occurs in small ponds, borrow pits, roadside ditches, beaver ponds, or other standing water. These treefrogs are also found in recently disturbed areas, with abundant shrubs, herbaceous growth, and vines (Wilson 1995). ALS jan 04

> Ecosystem Classifiers: Hardwood Forest/Woodland (excluding xeric), Mixed Forest, All Mesic Forests including maritime and some montane, Wetlands-excluding Lakes/Rivers/Pondshore- emergent vegetation). ALS Jan 04

Hydrography Mask:

Freshwater Only

Utilizes flowing water features with buffer of 250m from selected water features.

Utilizes open water features with buffers of 250m from and 30m 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	Developed Open Space
Anthropogenic	Low Intensity Developed
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)
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Atlantic Coastal Plain Central Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Dry and Dry-Mesic Oak Forest
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest
Forest/Woodland	Atlantic Coastal Plain Northern Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest
Forest/Woodland	Atlantic Coastal Plain Southern Maritime Forest
Forest/Woodland	Central and Southern Appalachian Montane Oak Forest
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Hardwood Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Mixed Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Offsite Hardwood Modifier
Forest/Woodland	East Gulf Coastal Plain Limestone Forest
Forest/Woodland	East Gulf Coastal Plain Maritime Forest
Forest/Woodland	East Gulf Coastal Plain Northern Dry Upland Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Plain Oak-Hickory Upland - Hardwood Modifier
Forest/Woodland	East Gulf Coastal Plain Northern Mesic Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Southern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Southern Mesic Slope Forest
Forest/Woodland	Mississippi Delta Maritime Forest
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest-Hardwood Modifier
Forest/Woodland	Northern Atlantic Coastal Plain Dry Hardwood Forest
Forest/Woodland	South-Central Interior Mesophytic Forest

Forest/Woodland Southeast Florida Coastal Strand and Maritime Hammock Forest/Woodland Southern and Central Appalachian Cove Forest Forest/Woodland Southern and Central Appalachian Oak Forest Forest/Woodland Southern and Central Appalachian Oak Forest - Xeric Forest/Woodland Southern Appalachian Montane Pine Forest and Woodland Forest/Woodland Southern Coastal Plain Dry Upland Hardwood Forest Forest/Woodland Southern Interior Low Plateau Dry-Mesic Oak Forest Forest/Woodland Southern Interior Low Plateau Dry-Mesic Oak Forest - Evergreen Modifier Forest/Woodland Southern Piedmont Dry Oak-(Pine) Forest - Hardwood Modifier Forest/Woodland Southern Piedmont Dry Oak-(Pine) Forest - Mixed Modifier Forest/Woodland Southern Piedmont Dry Oak-Heath Forest - Hardwood Modifier Forest/Woodland Southern Piedmont Dry Oak-Heath Forest - Mixed Modifier Forest/Woodland Southern Piedmont Dry Oak-Heath Forest - Virginia/Pitch Pine Modifier Forest/Woodland Southern Piedmont Mesic Forest Forest/Woodland Southern Ridge and Valley Dry Calcareous Forest Forest/Woodland Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier Forest/Woodland Southwest Florida Coastal Strand and Maritime Hammock 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 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 Wet Longleaf Pine Savanna and Flatwoods Wetlands Atlantic Coastal Plain Peatland Pocosin 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 Appalachian Floodplain - Forest Modifier Wetlands Central Appalachian Floodplain - Herbaceous Modifier Wetlands Central Appalachian Riparian - Forest Modifier Wetlands Central Appalachian Riparian - Herbaceous Modifier Wetlands Central Florida Herbaceous Seep Wetlands Central Florida Pine Flatwoods Wetlands Central Interior Highlands and Appalachian Sinkhole and Depression Pond Wetlands East Gulf Coastal Plain Interior Shrub Bog Wetlands East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Open Understory Modifier Wetlands East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Scrub/Shrub Understory Modifier 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 Seepage Swamp Wetlands East Gulf Coastal Plain Small Stream and River Floodplain Forest Wetlands East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods Wetlands East Gulf Coastal Plain Treeless Savanna and Wet Prairie Wetlands Lower Mississippi River Bottomland and Floodplain Forest Wetlands Lower Mississippi River Bottomland Depressions - Forest Modifier Wetlands Lower Mississippi River Bottomland Depressions - Herbaceous Modifier Wetlands Mississippi River Low Floodplain (Bottomland) Forest

Wetlands	Mississippi River Riparian Forest	
Wetlands	North-Central Appalachian Acidic Swamp	
Wetlands	North-Central Appalachian Seepage Fen	
Wetlands	North-Central Interior and Appalachian Rich Swamp	
Wetlands	South-Central Interior Large Floodplain - Forest Modifier	
Wetlands	South-Central Interior Large Floodplain - Herbaceous Modifier	
Wetlands	South-Central Interior Small Stream and Riparian	
Wetlands	South-Central Interior/Upper Coastal Plain Wet Flatwoods	
Wetlands	Southern and Central Appalachian Bog and Fen	
Wetlands	Southern Appalachian Seepage Wetland	
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest	
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog	
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp	
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall	
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	
Wetlands	Western Highland Rim Seepage Fen	

CITATIONS: Collins, J. T. 1982. Amphibians and reptiles in Kansas. Second edition. Univ. Kansas Mus. Nat. Hist., Pub. Ed. Ser. 8. xiii + 356

pp.

Gerhardt, H. C., et al. 1994. Hybridization in the diploid-tetraploid treefrogs HYLA CHRYSOSCELIS and HYLA VERSICOLOR. Copeia 1994:51-59.

Godwin, G. J., and S. M. Roble. 1983. Mating success in male treefrogs, HYLA CHRYSOSCELIS (Anura:Hylidae). Herpetologica 39:141-146.

Jaslow, Alan P. and Richard C. Vogt. 1977. Identification and distribution of Hyla versicolor and Hyla chrysoscelis in Wisconsin. Herpetologica 33(2):201-205.

Johnson, T. R. 1977. The amphibians of Missouri. Univ. Kansas Mus. Nat. Hist., Pub. Ed. Ser. 6. ix + 134 pp.

Little, M. A., B. L. Monroe, Jr., and J. E. Wiley. 1989. The distribution of the HYLA VERSICOLOR complex in the northern Appalachian highlands. J. Herpetol. 23:299-303.

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.

Matson, T. O. 1990. Erythrocyte size as a taxonomic character in the identification of Ohio HYLA CHRYSOSCELIS and H. VERSICOLOR. Herpetologica 46:457-462.

Mount, R. H. 1975. The Reptiles and Amphibians of Alabama. Auburn University Agricultural Experiment Station, Auburn, Alabama. vii + 347 pp.

Ralin, D. B., M. A. Romano, and C. W. Kilpatrick. 1983. The tetraploid treefrog HYLA VERSICOLOR: evidence for a single origin from the diploid H. CHRYSOSCELIS. Herpetologica 39:212-225.

Ritke, M. E., and J. G. Babb. 1991. Behavior of the gray treefrog (HYLA CHRYSOSCELIS) during the non-breeding season. Herpetol. Rev. 22:5-6, 8.

Ritke, M. E., J. G. Babb, and M. K. Ritke. 1990. Life history of the gray treefrog (HYLA CHRYSOSCELIS) in wetsern Tennessee. J. Herpetol. 24:135-141.

Ritke, M. E., J. G. Babb, and M. K. Ritke. 1991. Breeding-site specificity in the gray treefrog (HYLA CHRYSOSCELIS). J. Herpetol. 25:123-125.

Vogt, R. G. 1981. Natural history of amphibians and reptiles of Wisconsin. Milwaukee Public Museum. 205 pp.

Wiley, J. E. 1983. Chromosome polymorphism in HYLA CHRYSOSCELIS. Copeia 1983:273-275.

Wilson, L. A. 1995. The Land Manager's Guide to the amphibians and reptiles of the South. Chapel Hill, NC: The Nature Conservancy.

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.