



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Wood Frog

Rana sylvatica

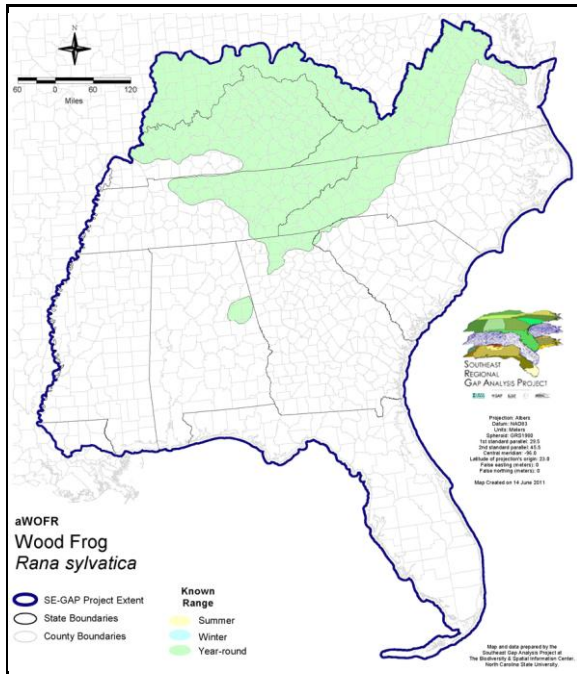
Taxa: Amphibian
 Order: Anura
 Family: Ranidae

SE-GAP Spp Code: **aWOFR**

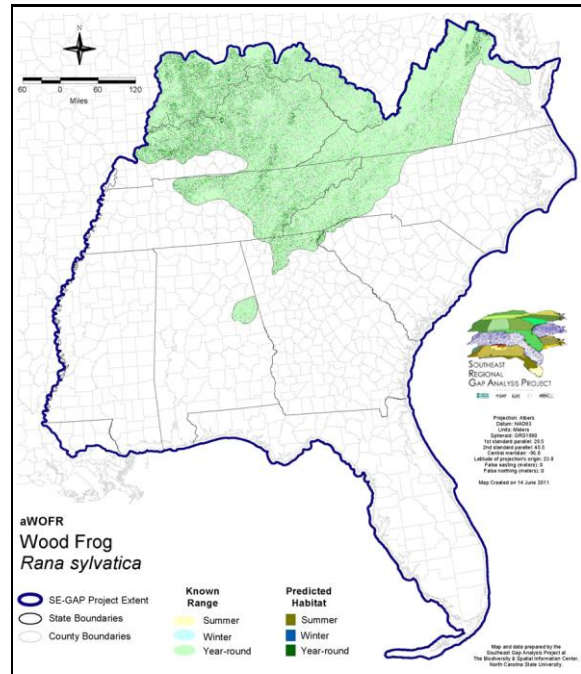
ITIS Species Code: 173440

NatureServe Element Code: AAABH01200

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aWOFR_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: CO (SC), ID (P), KY (N), NJ (S), NY (GS), RI (Not Listed), BC (4 (2005)), QC (Non suivie)

NS Global Rank: G5

NS State Rank: AK (S5), AL (S2), AR (S3), CO (S3), CT (S4), DC (S2?), DE (S4), GA (S4), ID (SH), IL (S3), IN (S4), KY (S5), MA (S5), MD (S5), ME (S5), MI (S5), MN (SNR), MO (S3), MT (SNA), NC (S5), ND (SNR), NH (S5), NJ (S5), NY (S5), OH (SNR), OK (S4?), PA (S5), RI (S5), SC (S3), SD (S1), TN (S5), VA (S5), VT (S5), WI (S5), WV (S5), WY (S1), AB (S5), BC (S4), LB (S4), MB (S5), NB (S5), NF (SNA), NS (S5), NT (SNR), NU (SNR), ON (S5), PE (S5), QC (S5), SK (S4), YT (S5)

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	0.0	0	2,649.9	< 1	0.0	0	0.0	0
Status 2	0.0	0	22,831.9	< 1	0.0	0	553.9	< 1
Status 3	0.0	0	159,463.1	6	8,600.3	< 1	23,146.1	< 1
Status 4	2.3	< 1	0.0	0	0.0	0	0.0	0
Total	2.3	< 1	184,944.9	7	8,600.3	< 1	23,700.0	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	26,402.0	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,334.1	< 1	0.0	0	0.0	0
Status 3	2,913.5	< 1	17,831.0	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	2,913.5	< 1	45,567.1	2	0.0	0	0.0	0
	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	1,255.6	< 1	42,126.7	2	71.7	< 1
Status 3	1,088.0	< 1	8,037.3	< 1	13,353.5	< 1	3,117.2	< 1
Status 4	0.0	0	0.0	0	528.0	< 1	0.0	0
Total	1,088.0	< 1	9,292.9	< 1	56,008.2	2	3,189.0	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	768.1	< 1	0.0	0	0.0	0
Status 2	0.0	0	4,493.3	< 1	4.0	< 1	0.0	0
Status 3	0.0	0	0.0	0	580.1	< 1	130.3	< 1
Status 4	0.0	0	0.0	0	50.5	< 1	0.0	0
Total	0.0	0	5,261.3	< 1	634.5	< 1	130.3	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	29,820.0 1			
Status 2	0.0	0	0.0	0	72,671.0 3			
Status 3	0.0	0	0.0	0	238,260.3 15			
Status 4	2,204,494.2	81	6,436.4	< 1	2,212,037.2 82			
Total	2,204,494.2	81	6,436.4	< 1	2,552,788.5 100			

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: Wood frogs typically inhabit moist, lowland deciduous forests (Regosin et al 2003). They are explosive breeders, generally breeding in pools lacking fish, slow moving portions of streams, and roadside ditches, and marshy wetlands (Wilson 1995, Conant and Collins 1998). After the breeding period, individuals typically disperse to moist woods, and can often be found far from surface water (Martof et al. 1980, Wilson 1995, Conant and Collins 1998). Amy Silvano 12apr05

Ecosystem classifiers: Mixed, Mesic, & Cove hardwoods, Montane, Wetlands (Shrub/srub, Depressional, Floodplain/Riparian). 12apr05

Hydrography Mask:

Freshwater Only

Slow Current Only

Utilizes flowing water features with buffers of 250m from and 30m into 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
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	Central Interior Highlands Calcareous Glade and Barrens
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern Appalachian Low Mountain Pine Forest
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Mixed 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 - Pine Modifier
Water	Open Water (Fresh)
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 Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	North-Central Appalachian Seepage Fen
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	Southern and Central Appalachian Bog and Fen
Wetlands	Southern Appalachian Seepage Wetland
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: Bagdonas, K.R. and D. Pettus. 1976. Genetic compatibility in wood frogs. J. Herpetol. 10:105-112.

- Barbour, R. W. 1971. Amphibians and reptiles of Kentucky. Univ. Press of Kentucky, Lexington. x + 334 pp.
- Berven, K. A. 1988. Factors affecting variation in reproductive traits within a population of wood frogs (*RANA SYLVATICA*). *Copeia* 1988:605-615.
- Berven, K. A., and T. A. Grudzien. 1991. Dispersal in the wood frog (*RANA SYLVATICA*): implications for genetic population structure. *Evolution* 44:2047-2056.
- Collins, J. T. 1990. Standard common and current scientific names for North American amphibians and reptiles. *SSAR Herpetol. Circular No.* 19. 41 pp.
- Conant, R. and J.T. Collins. 1998. A field guide to the reptiles and amphibians: eastern and central North America. Houghton Mifflin, Boston. 616 p.
- Corn, P. S., and F. A. Vertucci. 1992. Descriptive risk assessment of the effects of acidic deposition on Rocky Mountain amphibians. *J. Herpetol.* 26:361-369.
- DeGraaf, R. M., and D. D. Rudis. 1983. Amphibians and reptiles of New England. Habitats and natural history. Univ. Massachusetts Press. vii + 83 pp.
- Green, N. B., and T. K. Pauley. 1987. Amphibians and reptiles in West Virginia. University of Pittsburg Press, Pittsburg, Pennsylvania. xi + 241 pp.
- Guttman, D., J. E. Bramble, and O. J. Sexton. 1991. Observations on the breeding immigration of wood frogs *Rana sylvatica* reintroduced in east-central Missouri. *Am. Midl. Nat.* 125:269-274.
- Hammerson, G. A. 1982. Amphibians and reptiles in Colorado. Colorado Division of Wildlife, Denver. vii + 131 pp.
- Heatwole, H. 1961. Habitat selection and activity of the wood frog, *Rana sylvatica* Le Conte. *Amer. Midl. Nat.* 66(2):301-313.
- Hopey, M. E., and J. W. Petranka. 1994. Restriction of wood frogs to fish-free habitats: how important is adult choice? *Copeia* 1994:1023-1025.
- Karns, D. R. 1992. Effects of acidic bog habitats on amphibian reproduction in a northern Minnesota peatland. *J. Herpetol.* 26:401-412.
- Martof, B. S. 1970. *Rana sylvatica*. *Cat. Am. Amph. Rep.* 86.1-86.4.
- 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.
- Martof, B.S. and R.L. Humphries. 1959. Geographic variation in the wood frog, *Rana sylvatica*. *Amer. Midl. Nat.* 61(2):350-389.
- Minton, S. A., Jr. 1972. Amphibians and reptiles of Indiana. *Indiana Academy Science Monographs* 3. v + 346 pp.
- Porter, K.R. 1969. Description of *RANA MASLINI*, a new species of wood frog. *Herpetologica* 25:212-215.
- Regosin, J. V., Windmiller, B. S. and Reed, J. M. 2003. Terrestrial habitat use and winter densities of the wood frog (*Rana sylvatica*). *J. Herpetol.* 37, 390-394.
- Riha, V. F., and K. A. Berven. 1991. An analysis of latitudinal variation in the larval development of the wood frog (*RANA SYLVATICA*). *Copeia* 1991:209-221.
- Sadinski, W. J., and W. A. Dunson. 1992. A multilevel study of effects of low pH on amphibians of temporary ponds. *J. Herpetol.* 26:413-422.
- Smith, H. M. 1978. A guide to field identification Amphibians of North America. Golden Press, New York.
- Stebbins, R. C. 1985. A Field Guide to Western Reptiles and Amphibians. Second Edition. Houghton Mifflin Company, Boston, Massachusetts. xiv + 336 pp.
- Vogt, R. G. 1981. Natural history of amphibians and reptiles of Wisconsin. Milwaukee Public Museum. 205 pp.
- Wilson, L. A. 1995. The Land Manager's Guide to the amphibians and reptiles of the South. Chapel Hill, NC: The Nature Conservancy.
- Zeyl, C. 1993. Allozyme variation and divergence among populations of *RANA SYLVATICA*. *J. Herpetol.* 27:233-236.