







# Species Modeling Report

# Virginia Opossum

Didelphis virginiana

Taxa: Mammalian Order: Didelphimorphia Family: Didelphidae

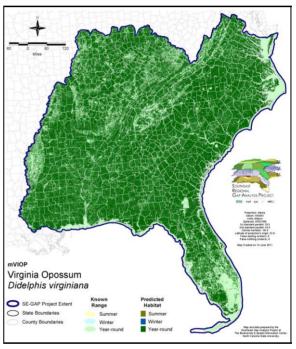
ITIS Species Code: 179921 NatureServe Element Code: AMAAA01010

SE-GAP Spp Code: mVIOP

# **KNOWN RANGE:**

# Virginia Opossum Didelphis virginiana

# PREDICTED HABITAT:



http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Range\_mVIOP.pdf Range Map Link: Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Dist\_mVIOP.pdf GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=mVIOP Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/mVIOP\_se00.zip

# **PROTECTION STATUS:**

Reported on March 14, 2011

Federal Status: ---

State Status: AL (GA, FB), KY (N), NY (GS), RI (Not Listed), UT (None), BC (7 (2005)), QC (Non suivie)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S5), AZ (S2S3), CA (SNA), CO (S1), CT (S5), DC (S5), DE (S5), FL (SNR), GA (S5), IA (S5), ID (SNA), IL (S5), IN (S4), KS (S5), KY (S5), LA (S5), MA (S5), MD (S5), ME (S4), MI (S5), MN (S5), MO (S5), MS (S5), NC (S5), ND (SU), NE (S5), NH (S5), NJ (S5), NM (SNA), NY (S5), OH (S5), OK (S5), OR (SNA), PA (S5), RI (S5), SC (S5), SD (S4), TN (S5), TX (S5), UT (SNR), VA (S5), VT (S4), WA (SNA), WI (S5), WV (S5), WY (S5), BC (SNA), ON (S4), QC (SNR)

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# 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	138,575.0	< 1	16,242.8	< 1	0.0	0	0.0	0
Status 2	225,484.4	< 1	182,696.5	< 1	0.0	0	5,085.0	< 1
Status 3	3,250.2	< 1	1,668,938.9	2	77,142.0	< 1	788,268.7	< 1
Status 4	173.4	< 1	< 0.1	< 1	0.0	0	122.1	< 1
Total	367,483.0	< 1	1,867,878.3	2	77,142.0	<1	793,475.8	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	302,756.8	< 1	496.5	< 1	20,301.8	< 1
Status 2	0.0	0	27,822.0	< 1	31,808.9	< 1	107.1	< 1
Status 3	77,979.5	< 1	343,928.2	< 1	0.0	0	6,131.3	< 1
Status 4	0.0	0	1.0	< 1	0.0	0	0.0	0
Total	77,979.5	< 1	674,508.6	< 1	32,305.4	< 1	26,540.1	< 1
ļ	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,262.6	< 1	63.0	< 1	0.0	0
Status 2	0.0	0	7,257.8	< 1	687,776.1	< 1	573.2	< 1
Status 3	17,856.1	< 1	646,059.7	< 1	217,294.0	< 1	435,308.0	< 1
Status 4	0.0	0	< 0.1	< 1	106,090.4	< 1	49.0	< 1
Total	17,856.1	< 1	654,580.2	< 1	1,011,223.5	1	435,930.2	< 1
į	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	9,248.1	< 1	0.0	0	0.0	0
Status 2	19,749.3	< 1	75,290.1	< 1	7.0	< 1	3,772.8	< 1
Status 3	0.0	0	25,836.1	< 1	37,363.7	< 1	151,608.8	< 1
Status 4	0.0	0	0.3	< 1	4,754.6	< 1	< 0.1	< 1
Total	19,749.3	< 1	110,374.7	< 1	42,125.3	< 1	155,381.7	< 1
į	Private Land - No Res.		Water				Overa	ıll Total
	ha	%	ha	%			ha	%
Status 1	0.0	0	0.0	0			488,946.6	< 1
Status 2	0.4	< 1	0.0	3			1,267,430.9	1
Status 3	1,369.5	< 1	1.2	< 1			4,498,335.7	7
Status 4	77,982,713.6	90	86,188.1	< 1			78,286,010.4	91
Total	77,984,083.4	90	86,189.6	< 1			84,540,723.6	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.

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#### PREDICTED HABITAT MODEL(S):

#### Year-round Model:

Habitat Description:

Virginia opossums are found throughout most of the United States. They use a wide variety of habitats, but prefer moister, wooded situations (Kissel and Kennedy 1992; Layne et al. 1977; McManus 1974). Found in tropical hammock, coastal mangrove, mixed cypress/flatwoods, prairie, sawgrass with tree islands, longleaf pine/turkey oak, salt marsh, willow, beaches, coastal scrub, suburbia, agricultural, and disturbed areas (Layne 1984; Pearson 1954). They have been trapped in bayheads and river swamps (Moore 1946). They may show a preference for habitat diversity/edge effect and are found in even heavily urban areas. They den in ditch banks, snags, rocky crevices, among windfalls and undisturbed man-made structures. Contrary to suggestions by early naturalists, they have well defined home ranges, (Ryser 1995). The U.S. mating season is January-July. There are commonly 2 litters/year, sometimes 3. Gestation lasts 13 days. As many as 23 offspring may compete for 13 or so teats. An average of 8-9 young are weaned after 10-12 weeks. Sexual maturity is reached at 9 months. Juveniles experience a high rate of mortality (Hossler et al. 1994). Females seldom live through more than one reproductive season. Stacy Smith, 9June05

\*\*\* Maximum home range size reported for Virginia Oppossums was 108 ha. For males in Wisconsin. (Gillette 1980). Edge buffer distance based on the radius of 108 ha (610m).

Mask of Forest/Open Ecotone: Include within 250m of ecotone edge.

Mask of Woodlands and Shrublands: Include all woodland and shrubland interiors and 250m buffer from them.

Anthropogenic Anthropogenic	Deciduous Plantations
Anthropogenic	Deciduous Plantations
	Developed Open Space
Anthropogenic	Evergreen Plantations
Anthropogenic	Low Intensity Developed
Anthropogenic	Medium Intensity Developed
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)
Bald	Central Appalachian Montane Rocky Bald - Herbaceous Modifier
Bald	Central Appalachian Montane Rocky Bald - Shrub Modifier
Bald	Southern Appalachian Grass and Shrub Bald - Herbaceous Modifier
Bald	Southern Appalachian Grass and Shrub Bald - Shrub Modifier
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	Mississippi Sound Salt and Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	South Florida Everglades Sawgrass Marsh
Brackish Tidal Marsh & Wetland	South Florida Mangrove Swamp
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

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Coastal Dune & Freshwater Wetland Atlantic Coastal Plain Northern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland Atlantic Coastal Plain Southern Dune and Maritime Grassland

Coastal Dune & Freshwater Wetland East Gulf Coastal Plain Dune and Coastal Grassland
Coastal Dune & Freshwater Wetland Southwest Florida Dune and Coastal Grassland

Forest/Woodland Alabama Ketona Glade and Woodland

Forest/Woodland Allegheny-Cumberland Dry Oak Forest and Woodland

Forest/Woodland Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier

Forest/Woodland Appalachian Hemlock-Hardwood Forest
Forest/Woodland Appalachian Serpentine Woodland

Forest/Woodland Appalachian Shale Barrens

Forest/Woodland Atlantic Coastal Plain Central Maritime Forest

Forest/Woodland Atlantic Coastal Plain Dry and Dry-Mesic Oak Forest

Forest/Woodland Atlantic Coastal Plain Fall-Line Sandhills Longleaf Pine Woodland - Loblolly Modifier

Forest/Woodland Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Offsite Hardwood Modifier

Forest/Woodland Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Open Understory Modifier

Forest/Woodland Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Scrub/Shrub Understory Modifier

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 Atlantic Coastal Plain Upland Longleaf Pine Woodland
Forest/Woodland Central and Southern Appalachian Montane Oak Forest
Forest/Woodland Central and Southern Appalachian Northern Hardwood Forest

Forest/Woodland Central and Southern Appalachian Spruce-Fir Forest
Forest/Woodland Central Appalachian Alkaline Glade and Woodland

Forest/Woodland Central Appalachian Oak and Pine Forest
Forest/Woodland Central Appalachian Pine-Oak Rocky Woodland

Forest/Woodland Central Interior Highlands Calcareous Glade and Barrens
Forest/Woodland Central Interior Highlands Dry Acidic Glade and Barrens

Forest/Woodland Cumberland Sandstone Glade and Barrens

Forest/Woodland East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland - Woodland Modifier

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 Shortleaf Pine-Oak Forest - Pine Modifier

Forest/Woodland East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Loblolly Modifier

Forest/Woodland East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Offsite Hardwood Modifier
Forest/Woodland East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Open Understory Modifier
Forest/Woodland East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Scrub/Shrub 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 Dry Upland Hardwood Forest - Offsite Pine Modifier

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 Loess Plain Oak-Hickory Upland - Juniper 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 Florida Longleaf Pine Sandhill - Open Understory Modifier

Forest/Woodland Florida Longleaf Pine Sandhill - Scrub/Shrub Understory Modifier

Forest/Woodland Florida Peninsula Inland Scrub
Forest/Woodland Mississippi Delta Maritime Forest
Forest/Woodland Nashville Basin Limestone Glade

Forest/Woodland Northeastern Interior Dry Oak Forest - Mixed Modifier

Forest/Woodland Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine Modifier

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Forest/Woodland Northeastern Interior Dry Oak Forest-Hardwood Modifier
Forest/Woodland Northern Atlantic Coastal Plain Dry Hardwood Forest

Forest/Woodland Ridge and Valley Calcareous Valley Bottom Glade and Woodland

Forest/Woodland South Florida Pine Rockland

Forest/Woodland South-Central Interior Mesophytic Forest

Forest/Woodland Southeast Florida Coastal Strand and Maritime Hammock

Forest/Woodland Southeastern Interior Longleaf Pine Woodland
Forest/Woodland Southern and Central Appalachian Cove Forest

Forest/Woodland Southern and Central Appalachian Mafic Glade and Barrens

Forest/Woodland Southern and Central Appalachian Oak Forest

Forest/Woodland Southern and Central Appalachian Oak Forest - Xeric

Forest/Woodland Southern Appalachian Low Mountain Pine Forest

Forest/Woodland Southern Appalachian Montane Pine Forest and Woodland
Forest/Woodland Southern Coastal Plain Dry Upland Hardwood Forest
Forest/Woodland Southern Coastal Plain Oak Dome and Hammock
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 - Loblolly Pine 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 Glade and Barrens
Forest/Woodland Southern Piedmont Mafic Hardpan Woodland

Forest/Woodland Southern Piedmont Mesic Forest

Forest/Woodland Southern Piedmont Northern Triassic Basin Dry Forest Forest/Woodland Southern Ridge and Valley Dry Calcareous Forest

Forest/Woodland
Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Forest/Woodland
Southern Ridge and Valley Dry Calcareous Forest - Pine Modifier
Forest/Woodland
Southwest Florida Coastal Strand and Maritime Hammock
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
Prairie Bluegrass Basin Savanna and Woodland

Prairie East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland

Prairie East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland - Herbaceous Modifier

Prairie East Gulf Coastal Plain Jackson Plain Prairie and Barrens
Prairie East Gulf Coastal Plain Jackson Prairie and Woodland

Prairie Eastern Highland Rim Prairie and Barrens

Prairie Eastern Highland Rim Prairie and Barrens - Dry Modifier

Prairie Florida Dry Prairie

Prairie Panhandle Florida Limestone Glade
Prairie Pennyroyal Karst Plain Prairie and Barrens
Prairie Southern Ridge and Valley Patch Prairie
Prairie Western Highland Rim Prairie and Barrens
Rock Outcrop Southern Appalachian Granitic Dome
Rock Outcrop Southern Piedmont Granite Flatrock

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 Peatland Pocosin
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 Atlantic Coastal Plain Xeric River Dune

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 Pondshore
Wetlands Central Florida Herbaceous Seep
Wetlands Central Florida Pine Flatwoods

Wetlands Central Interior Highlands and Appalachian Sinkhole and Depression Pond

Wetlands Cumberland Riverscour

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 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 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 Florida Bayhead Swamp
Wetlands South Florida Cypress Dome

Wetlands South Florida Dwarf Cypress Savanna

Wetlands South Florida Freshwater Slough and Gator Hole

Wetlands South Florida Hardwood Hammock
Wetlands South Florida Pine Flatwoods

Wetlands South Florida Pond-Apple/Popash Slough

Wetlands South Florida Wet Marl Prairie
Wetlands South Florida Willow Head

Wetlands South-Central Interior Large Floodplain - Forest Modifier

Wetlands South-Central Interior Large Floodplain - Herbaceous Modifier

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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 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
Wetlands	Western Highland Rim Seepage Fen

# **CITATIONS:**

Baker, Rollin H. 1983. Michigan mammals. Michigan State University Press. 642

pp.

Conover, M. R. 1990. Reducing mammalian predation on eggs by using a conditioned taste aversion to deceive predators. J. Wildl. Manage. 54:360-365.

Fitch, H.S. and H.W. Shirer. 1970. A radiotelemetric study of spatial relationships in the opossum. Am. Midl. Nat. 84:170-186.

Gardner, A. L. 1982. Virginia opossum. Pages 3-36 in Chapman, J. A., and G. A. Feldhamer, eds. Wild mammals of North America. Biology, management, and economics. Johns Hopkins Univ. Press, Baltimore.

Godin, A.J. 1977. Wild Mammals of New England. Johns Hopkins University Press, Baltimore. 304 nn.

Hall, E. R. 1981. The Mammals of North America. Second edition. 2 Volumes. John Wiley and Sons, New York, New York. 1181 p.

Hamilton, William J., Jr., and John O. Whitaker, Jr. 1979. Mammals of the eastern United States. Cornell Univ. Press, Ithaca, New York. 346 pp.

Hartman, C.G. 1962. Possums. Univ. Texas Press, Austin. 174

Hossler, R. J., J. B. McAninch, and J. D. Harder. 1994. Maternal denning behavior and survival of juveniles in opossums in southeastern New York. J. Mamm. 75:60-70.

Keefe, J.F. 1967. The world of the oppossum. 144

pp.

Kissell, R. E., Jr., and M. L. Kennedy. 1992. Ecologic relationships of co-occurring populations of opposums (DIDELPHIS VIRGINIANA) and raccoons (PROCYON LOTOR) in Tennessee. J. Mamm. 73:808-813.

Lay, D.W. 1942. Ecology of the opposum in eastern Texas. Jour. Mammal. 23:147-159

Layne, J. N. 1984. The land mammals of South Florida. Environments of South Florida, Past and Present II. P. J. Gleason ed. Coral Gables, Florida: Miami Geological Society; pp. 269-295.

Layne, J.N.; Stallcup, J.A.; Woolfenden, G.E.; McCauley, M.N.; Worley, D.J. 1977. Fish and Wildlife Inventory of the Seven-County Region Included in the Central Florida Phosphate Industry Area-Wide Environmental Impact Study. Volumes I and II. Also avai

Llewellyn, L.M. and F.H. Dale. 1964. Notes on the ecology of the opossum in Maryland. Jour. Mamm. 45:113-122.

McManus, J.J. 1971. Activity of captive Didelphis marsupialis. (sic) Jour. Mamm. 52:846-848.

McManus, J.J. 1974. Didelphis virginiana. Am. Soc. Mammalogists, Mammalian Species No. 40 pp. 1-6

Moore, J. C.1946. Mammals from Welaka, Putnam county, Florida. Journal of Mammalogy. 27(1):49-59

Pearson, P. G. 1954. Mammals of Gulf Hammock, Levy County, Florida. The American Midland Naturalist. 51(2):468-480

Ryser J. 1995. Activity, movement and home range of Virginia opossum (Didelphis virginiana) in Florida. Bull Florida Mus Nat Hist 38: 177-194

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Schwartz, Charles W., and Elizabeth R. Schwartz. 1981. The wild mammals of Missouri. University of Missouri Press, Columbia. 356

For more information:: SE-GAP Analysis Project / BaSIC

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

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