



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

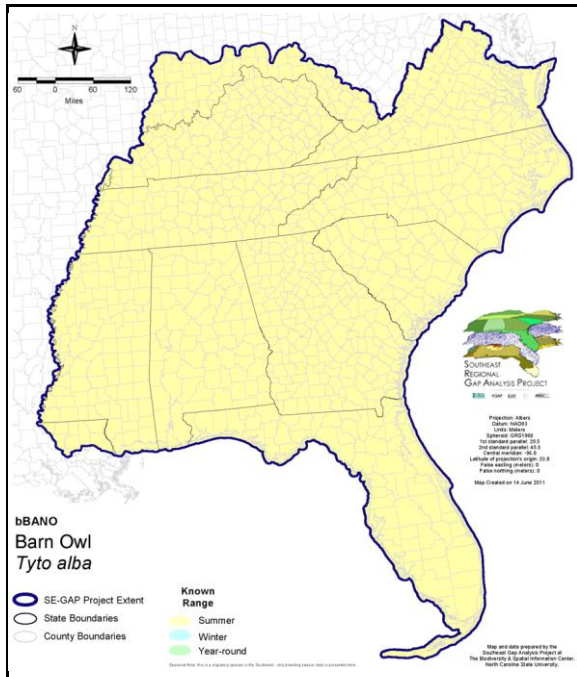
Barn Owl

Tyto alba

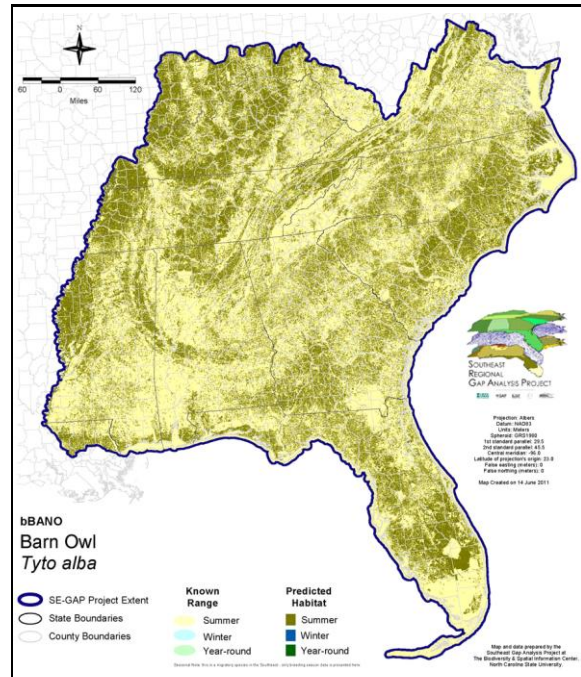
Taxa: Avian
Order: Strigiformes
Family: Tytonidae

SE-GAP Spp Code: **bBANO**
ITIS Species Code: 177851
NatureServe Element Code: ABNSA01010

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bBANO_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: AR (W), CT (E), IA (E), ID (P), IL (LE), IN (SE), KY (S), MA (SC), ME (SC), MI (E), NC (SR), NJ (SC/SC), NV (YES), NY (PB), OH (T), OK (Category II), RI (State Endangered), TN (D), UT (None), VA (SC), WI (END), BC (3 (2005)), ON (END), QC (Candidate)

NS Global Rank: G5

NS State Rank: AL (S3), AR (S2B,S3N), AZ (S5), CA (SNR), CO (S4B), CT (S2), DC (S1), DE (S3), FL (SNR), GA (S3S4), IA (S1B), ID (S3?), IL (S1S2), IN (S2), KS (S3), KY (S3), LA (S5), MA (S2B,S2N), MD (S3), ME (SNA), MI (S1), MN (SNA), MN (SNA), MO (S3), MS (S3), MT (S1), NC (S3B,S3N), ND (SNA), NE (S3), NH (SNA), NJ (S3B,S3N), NM (S4B,S4N), NV (S4), NY (S1S2), OH (S2), OK (S3), OR (S4?), PA (S3B,S3N), RI (S1B,S1N), SC (S4), SD (S2B), SD (S2B), TN (S3), TX (S5B), UT (S3), VA (S3B,S3N), VT (S1B,S1N), WA (S4), WI (S1B,S1N), WV (S2B,S2N), WY (S2), AB (SNA), BC (S3), MB (SNA), NB (SNA), NF (SNA), NS (SNA), ON (S1), PE (SNA), QC (S1B), SK (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	56,454.0	< 1	1,761.9	< 1	0.0	0	0.0	0
Status 2	130,439.0	< 1	19,006.8	< 1	0.0	0	499.5	< 1
Status 3	814.3	< 1	206,670.6	< 1	24,032.7	< 1	212,644.8	< 1
Status 4	16.7	< 1	< 0.1	< 1	0.0	0	73.7	< 1
Total	187,724.0	< 1	227,439.5	< 1	24,032.7	< 1	213,218.0	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	14,948.9	< 1	0.0	0	8,190.5	< 1
Status 2	0.0	0	8,841.2	< 1	5,674.3	< 1	39.9	< 1
Status 3	7,813.6	< 1	20,144.1	< 1	0.0	0	5,987.9	< 1
Status 4	0.0	0	1.0	2	0.0	0	0.0	0
Total	7,813.6	< 1	43,935.2	< 1	5,674.3	< 1	14,218.2	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	112.8	< 1	17.2	< 1	0.0	0
Status 2	0.0	0	625.4	< 1	255,748.1	< 1	18.4	< 1
Status 3	2,311.2	< 1	339,865.8	< 1	64,701.6	< 1	125,149.0	< 1
Status 4	0.0	0	0.0	0	11,468.8	< 1	0.5	< 1
Total	2,311.2	< 1	340,604.0	< 1	331,935.8	< 1	125,167.9	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	2,020.6	< 1	0.0	0	0.0	0
Status 2	8,355.8	< 1	24,735.8	< 1	1.5	< 1	2,156.9	< 1
Status 3	0.0	0	11,404.0	< 1	9,398.5	< 1	95,660.8	< 1
Status 4	0.0	0	0.0	0	2,685.2	< 1	< 0.1	< 1
Total	8,355.8	< 1	38,160.4	< 1	12,085.3	< 1	97,817.8	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	83,505.9	< 1		
Status 2	0.0	0	0.0	0	456,142.5	1		
Status 3	26.6	< 1	0.0	0	1,126,625.5	3		
Status 4	39,817,752.6	95	27,373.9	< 1	39,870,824.8	96		
Total	39,817,779.1	95	27,373.9	< 1	41,537,098.6	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.

PREDICTED HABITAT MODEL(S):

Summer Model:

Habitat Description: Barn owls forage in open and partly open areas with low ground cover such as fields, cemeteries, hedgerows, and pastures, open forest, marshy areas (Adams et al. 1986, Hamel 1992, Nicholson 1997). They use young forest plantations, where they hunt for small mammals (Johnsgard 1988). They are often found in or near towns, where they may nest in man-made structures (AOU 1983, Ehrlich et al. 1988). Dense grass fields are the chief foraging habitat, including salt marsh, wet meadows, lightly grazed pastures, grass hayfields, and recently abandoned agricultural fields (Colvin 1980, 1984, 1985; Rosenberg 1986; Gubanyi 1989). Radiotelemetry studies indicate that these habitats are actively selected (Colvin 1984, Rosenberg 1986, Gubanyi 1989). Furthermore, the quantity and quality of dense grass habitats are significantly correlated with nest activity (Colvin and Hegdal 1988). Other habitats occasionally used include alfalfa/grass (Colvin 1984), small grain (Ault 1971, Rosenberg 1986), fencelines, and roadsides (Ault 1971, Byrd 1982). In an intensively farmed area in eastern Virginia where grass availability was very low, barn owls foraged in small grain, a five-year-old clearcut, barnyards, and a pine plantation used as a blackbird roost (Rosenburg 1986). Cultivated habitats in general are of little importance to the barn owl because of low prey populations and/or dense protective cover (Colvin 1984, Rosenberg 1986). Foraging habitat limited by nest site availability such as hollow trees, riverbanks, nestboxes, and human structures (Marti 1992). Nest site habitat features are fine scale and we can not model them directly.

It appears that barn owls will use any preexisting large natural or man-made cavity for nesting. Barn Owls require fairly large cavities for nesting (Nicholson 1997), although they appear to be adaptable in the types of nest sites they find acceptable (Marti 1988). They have been reported to nest in a variety of cavities and/or protected sites such as: abandoned buildings, belfries (Hamel 1992), tree cavities, cliff crevices, nest boxes (Ehrlich et al.), under-ground burrows, sides of old wells, and abandoned mining shafts (Bent 1938). They may also be found nesting in the steep walls of ravines (Konig 1999). Although cut bank burrows and cliff recesses are frequently used in the western U.S. (Otteni et al. 1972, Martin 1973, Rudolph 1978, Millsap and Millsap 1987, Gubanyi 1989), only a few cases of the use of such sites have been reported in the Northeast. R. Ferren (pers. comm.) described barn owl nest holes in the steep bluffs on the north and south ends of Block Island, Rhode Island. Recesses in a clay embankment along the Patuxent River in Maryland supported a breeding pair during the late 1980s (S. Smith, pers. comm.). Exposed barrels in a cut bank along the Rappahannock River of eastern Virginia supported approximately 15 nesting pairs in the late 1970s (S. Doggett, pers. comm.).

Quoted directly from existing state habitat notes - K. Cook, 17Feb05

Contiguous Patch Minimum Size (hectares): 100

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Low Intensity Developed
Anthropogenic	Pasture/Hay
Anthropogenic	Row Crop
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Coastal Dune & Freshwater Wetland	Atlantic and Gulf Coastal Plain Interdunal Wetland
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	Central Appalachian Pine-Oak Rocky Woodland
Forest/Woodland	East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland - Woodland 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
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	Central Interior Acidic Cliff and Talus
Rock Outcrop	Central Interior Calcareous Cliff and Talus
Rock Outcrop	East Gulf Coastal Plain Dry Chalk Bluff
Rock Outcrop	North-Central Appalachian Acidic Cliff and Talus
Rock Outcrop	North-Central Appalachian Circumneutral Cliff and Talus
Rock Outcrop	Southern Appalachian Montane Cliff
Rock Outcrop	Southern Interior Acid Cliff
Rock Outcrop	Southern Interior Calcareous Cliff
Rock Outcrop	Southern Piedmont Cliff
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 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 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	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 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 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	North-Central Appalachian Seepage Fen
Wetlands	South Florida Freshwater Slough and Gator Hole
Wetlands	South Florida Hardwood Hammock
Wetlands	South Florida Wet Marl Prairie
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 Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Piedmont Seepage Wetland
Wetlands	Southern Piedmont/Ridge and Valley Upland Depression Swamp

Selected Secondary Map Units within 60m of Primary Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Mixed Modifier
Forest/Woodland	Ridge and Valley Calcareous Valley Bottom Glade and Woodland
Forest/Woodland	Southern Piedmont Mafic Hardpan Woodland
Forest/Woodland	Southeastern Interior Longleaf Pine Woodland
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Large Floodplain Forest - Herbaceous Modifier
Forest/Woodland	Southern Piedmont Glade and Barrens
Forest/Woodland	Southern Appalachian Low Mountain Pine Forest
Forest/Woodland	Nashville Basin Limestone Glade
Forest/Woodland	Cumberland Sandstone Glade and Barrens
Forest/Woodland	Alabama Ketona Glade and Woodland
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 Mesic Forest
Forest/Woodland	Appalachian Serpentine Woodland
Forest/Woodland	Southern and Central Appalachian Mafic Glade and Barrens
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Pine Modifier
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Northern Triassic Basin Dry Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	Northeastern Interior Dry Oak Forest-Hardwood Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Appalachian Shale Barrens
Forest/Woodland	Central Appalachian Alkaline Glade and Woodland
Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Floodplain - Herbaceous Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Central Appalachian Riparian - Herbaceous Modifier
Forest/Woodland	Central Interior Highlands Calcareous Glade and Barrens
Forest/Woodland	Central Interior Highlands Dry Acidic Glade and Barrens
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Large Floodplain - Herbaceous Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Forest/Woodland	Southern and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Forest/Woodland	South-Central Interior Mesophytic 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	Florida Peninsula Inland Scrub
Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest

Wetlands	Mississippi River Riparian Forest
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Forest/Woodland	Atlantic Coastal Plain Dry and Dry-Mesic Oak Forest
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest
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 Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
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 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 Central Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Upland Longleaf Pine Woodland
Forest/Woodland	Florida Longleaf Pine Sandhill - Open Understory Modifier
Forest/Woodland	Atlantic Coastal Plain Northern Maritime Forest
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Taxodium/Nyssa Modifier
Forest/Woodland	Northern Atlantic Coastal Plain Dry Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Southern Mesic Slope Forest
Forest/Woodland	East Gulf Coastal Plain Northern Mesic 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 Loess Plain Oak-Hickory Upland - Juniper Modifier
Forest/Woodland	East Gulf Coastal Plain Northern Dry Upland Hardwood Forest
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Herbaceous Modifier
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Lower Mississippi River Bottomland Depressions - Herbaceous Modifier
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Forest/Woodland	Southern Coastal Plain Oak Dome and Hammock
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 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 Limestone Forest
Forest/Woodland	East Gulf Coastal Plain Maritime Forest
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Mixed 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 - Pine Modifier
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Forest/Woodland	Mississippi Delta Maritime Forest
Wetlands	Atlantic Coastal Plain Northern Basin Peat Swamp
Forest/Woodland	Atlantic Coastal Plain Southern Maritime Forest
Forest/Woodland	East Gulf Coastal Plain Southern Loess Bluff Forest
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Forest/Woodland	Southern Coastal Plain Dry Upland Hardwood Forest
Wetlands	South Florida Bayhead Swamp
Forest/Woodland	South Florida Pine Rockland
Forest/Woodland	Southwest Florida Coastal Strand and Maritime Hammock
Forest/Woodland	Southeast Florida Coastal Strand and Maritime Hammock

CITATIONS: Adams, WF, Pke CS III, Webster WD, Parell JF. 1986. Composition of Barn Owl, *Tyto alba*, pellets from two locations in North Carolina. The Journal of the Elisha Mitchell Scientific Society. 102(1):16-18.

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