



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

### Townsend's Big-eared Bat

*Corynorhinus townsendii*

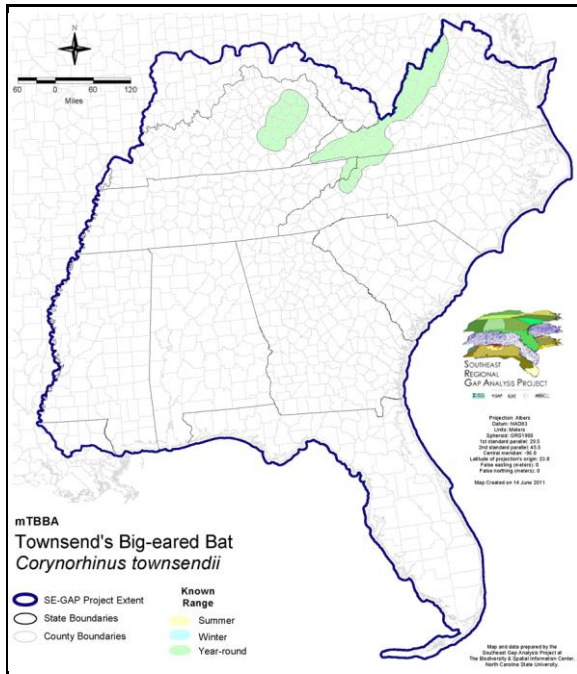
Taxa: Mammalian  
 Order: Chiroptera  
 Family: Vespertilionidae

SE-GAP Spp Code: **mTBBA**

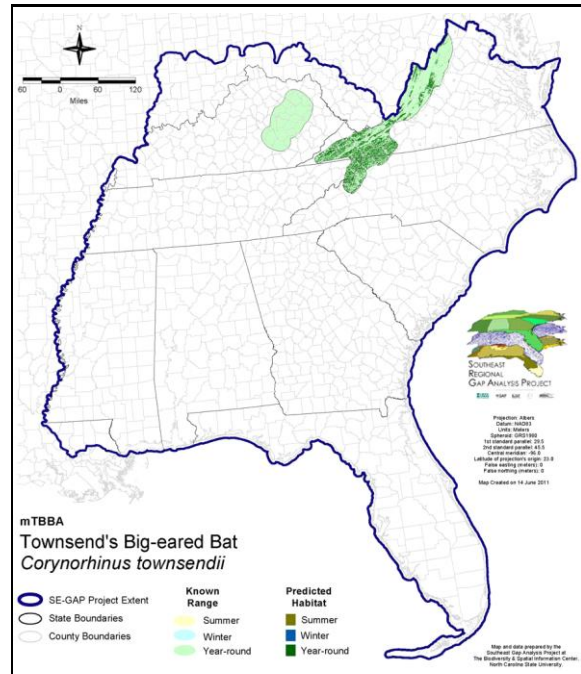
ITIS Species Code: 203452

NatureServe Element Code: AMACC08010

#### KNOWN RANGE:



#### PREDICTED HABITAT:



Range Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Range\\_mTBBA.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_mTBBA.pdf)

Predicted Habitat Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Dist\\_mTBBA.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_mTBBA.pdf)

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/mTBBA\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/mTBBA_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: CA (None), ID (P), KS (C), KY (N), NV (YES), OR (SC), UT (SPC), WA (C), BC (2 (2005))

NS Global Rank: G4

NS State Rank: AR (S1), AZ (S3S4), CA (S2S3), CO (S2), ID (S3), KS (S2), KY (S1), MO (SX), MT (S2), NC (S1), NE (S1), NM (S3), NV (S2), OK (S3), OR (S2), SD (S2S3), TN (SNR), TX (S3?), UT (S3?), VA (S1), WA (S2S3), WV (S2), WY (S2), WY (S2), BC (S3)

**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	5,941.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	25,270.7	2	0.0	0	0.0	0
Status 3	0.0	0	100,444.0	10	113.5	< 1	0.0	0
Status 4	4.1	< 1	0.0	0	0.0	0	0.0	0
Total	4.1	< 1	131,656.1	13	113.5	< 1	0.0	0
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	2,041.3	< 1	0.0	0	0.0	0
Status 2	0.0	0	0.0	0	0.0	0	0.0	0
Status 3	0.0	0	4,364.0	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	6,405.3	< 1	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	0.0	0	8,110.4	< 1	0.0	0
Status 3	0.0	0	4,322.3	< 1	1,142.0	< 1	82.4	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	4,322.3	< 1	9,252.4	< 1	82.4	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	1,295.8	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	41.9	< 1	0.0	0
Total	0.0	0	1,295.8	< 1	41.9	< 1	0.0	0
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	7,982.7	< 1		
Status 2	0.0	0	0.0	0	34,676.8	3		
Status 3	0.0	0	0.0	0	110,468.1	20		
Status 4	789,313.8	76	7.5	< 1	789,363.1	76		
Total	789,313.8	76	7.5	< 1	942,490.7	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: This species roosts in caves year around (Whitaker and Hamilton 1998). Primary roosts (frequently used) are typically deep, 'non-drafty' caves. Secondary roosts (used infrequently or only once) may be in shallow caves or rock crevices, which typically surround the primary roost cave but can be located as far away as the outer limits of the bat's nightly foraging forays. Both limestone and granitic fracture caves are used. Limestone caves may be the only type used as nurseries (Webster et al. 1985). In Kentucky, utilizes limestone caves and prefers hardwood forests, especially mature forests of hickory, beech maple, and hemlock where there is no human disturbance (KY-GAP 2003). Ozark and Appalachian populations inhabit caves mostly in oak-hickory forest (Handley 1959, in NatureServe 2005). This bats is known to forage over open pastures and agricultural fields and have been documented as traveling up to 10.5 km from roosts to foraging areas (Johnson & Strickland 2003).

\*\*\*\*Quotes taken directly from state habitat notes. Amy Silvano 20jun05

Ecosystem Classifiers: Hardwood (Oak-Hickory), Montane & glades & barens with underlying limestone, and Rock Outcrop. Amy Silvano 20jun05

Elevation Mask: > 460m and < 2500m

Avoidance Mask: High - very intolerant of human disturbance.

### Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Rock Outcrop	Allegheny-Cumberland Sandstone Box Canyon and Rockhouse
Rock Outcrop	North-Central Appalachian Acidic Cliff and Talus
Rock Outcrop	North-Central Appalachian Circumneutral Cliff and Talus
Rock Outcrop	Southern Appalachian Granitic Dome
Rock Outcrop	Southern Appalachian Montane Cliff
Rock Outcrop	Southern Appalachian Rocky Summit
Rock Outcrop	Southern Appalachian Spray Cliff

### Selected Secondary Map Units within 5000m of Primary Map Units:

Functional Group	Map Unit Name
Anthropogenic	Pasture/Hay
Anthropogenic	Row Crop

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This data was compiled and/or developed  
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