

Northwest Cumberland Plateau Conservation Opportunity Area



The Northwest Cumberland Plateau Conservation Opportunity Area (COA) incorporates a region of diverse topography, elevation and geology. Plateau surface elevations average 1800 feet (550m) and are relatively flat. The plateau escarpment is extremely dissected along the margins of the plateau, with nearly vertical rock faces, rock outcrops and boulder fields. This area supports a large number of caves and karst areas due to the limestone bedrock. Karst habitats are extremely diverse with springs, seeps and sinkholes.

Numerous species of Greatest Conservation Need (GCN) can be found throughout this COA. Wetlands support breeding populations of Mountain Chorus Frog and Four-toed Salamander, and migratory habitat for Golden Eagles. Populations of Eastern Woodrat and roosting sites for Eastern Small-footed Bats can be found along the plateau escarpment. Caves located throughout the conservation opportunity area support wintering populations of endangered Indiana and Gray bats, and wet caves support the Southern Cave Crayfish. Streams provide habitat for the Obey Crayfish, Hairyfoot Crayfish, and Mussels such as Cumberland Moccasinshell and Fluted Kidney Shell.

The major threat to aquatic habitats is acid water runoff from historic coal mines throughout the COA. Iron pyrite exposed during these operations oxidizes with rain water, creating toxic runoff that at one time had deadened the river. Incompatible forestry practices can degrade and fragment terrestrial habitats, threatening the associated fauna.

Public Lands within the COA

Alpine Mountain Wildlife Management Area (WMA), Alvin C. York State Park, Pickett State Forest and WMA, Pogue Creek Canyon State Natural Area, Skinner Mountain WMA



Numerous rare or sensitive species find a home in the karst, wetland, and riverine habitats of the this region, which is still recovering from historic mining practices.



Top to bottom: Southern Cave Crayfish - Carl Williams, TWRA; Mountain Chorus Frog - Josh Campbell, TWRA/next page: Pogue Creek Canyon - [Byron Jorjorian](#)

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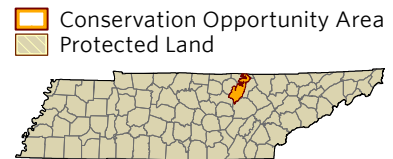
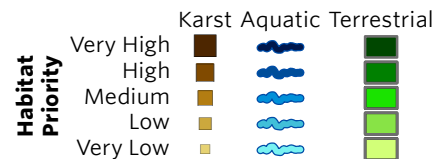
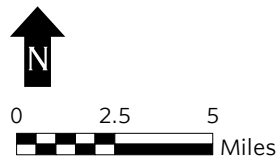
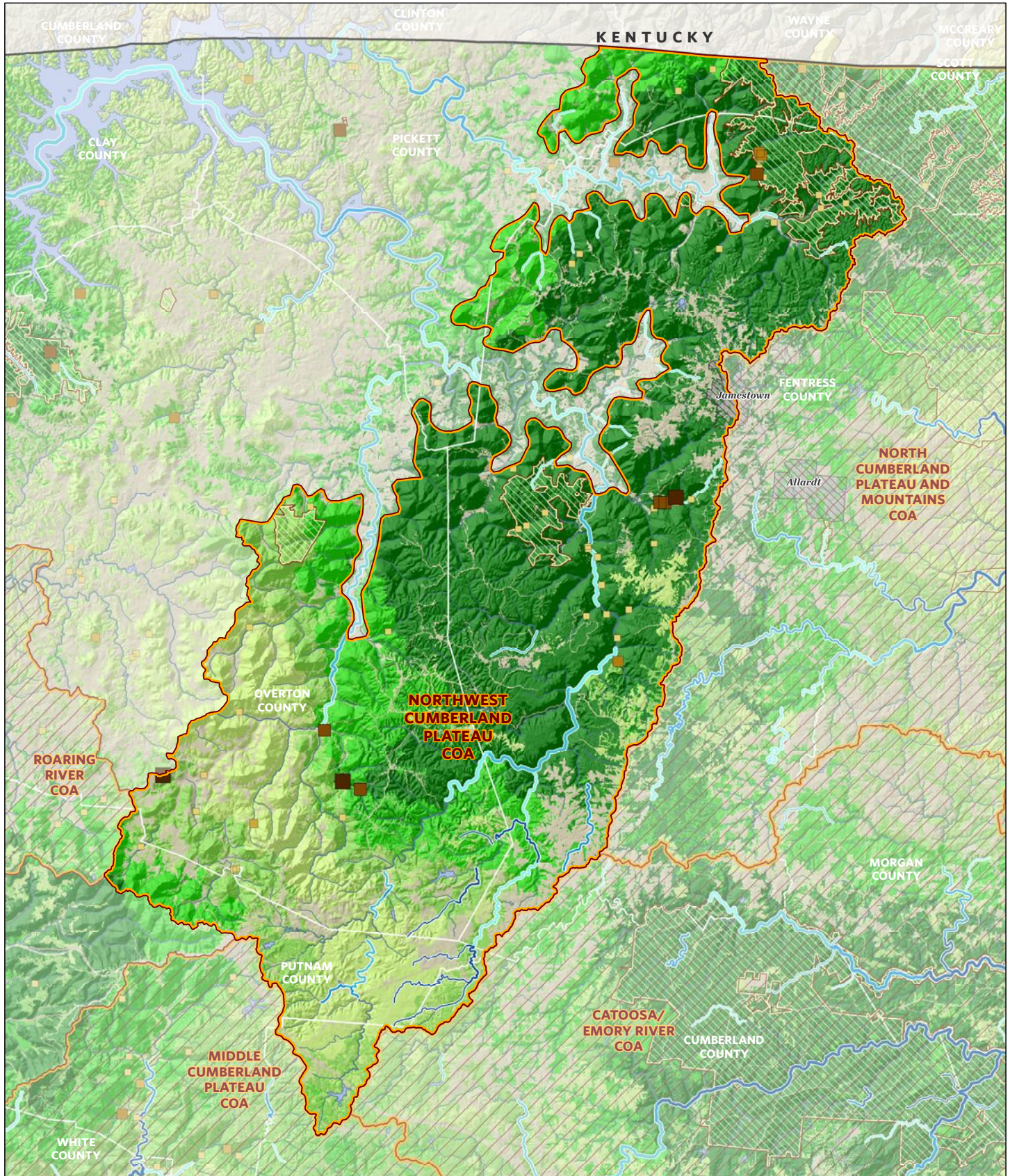
Partnerships

TWRA will develop partnerships aimed at restoring surface water pH levels that have been acidified by runoff from historic coal mines; fostering best management practices associated with timber harvests; and protecting fragile caves and other subterranean habitats. TWRA will develop and expand partnerships with the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Tennessee Dept. of Environment and Conservation, The Nature Conservancy, and private land owners.



Desired Change	Units
+ Increase the application of Best Management Practices to benefit GCN species and habitats on private lands using government funded incentive programs	number
+ Increase forest acres/stream miles of critical habitat by restoring to appropriate ecological system conditions.	acres/miles
+ Improve/restore historic fossil fuel extraction sites to appropriate ecological system conditions.	acres
- Decrease acres of habitat negatively affected by undesirable native and exotic plant and animal species.	acres
- Remove lowhead dams and other obstructions to reclaim free-flowing waters	structures
+ Increase understanding of GCN species' geographical distribution, life history, and ecological needs to improve management aimed at promoting survival over the long-term.	projects
+ Increase acreage of permanently protected habitat to benefit GCN species.	acres
+ Increase and improve the awareness, education, and cooperation of stakeholders/citizens pertaining to GCN species and habitat.	number
- Decrease the negative effects of development on GCN species and habitats by providing data to planning entities in environmental or land use planning.	plans
- Avoid and mitigate impacts from coal mining and oil and natural gas exploration by participating in environmental reviews.	reviews
+ Restore GCN species populations in key habitat areas where numbers are low through propagation/translocation.	animals

To learn more about the Northwest Cumberland Plateau Conservation Opportunity Area, please contact: Chris Simpson, Wildlife Diversity Coordinator, Region 3 (931) 484-9571



NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Amphibian	<i>Aneides aeneus</i> (Green Salamander)
Arachnid	<i>Callioplus pantoplus</i> ((an amaurobiid spider))
Bat	<i>Corynorhinus rafinesquii</i> (Rafinesque's Big-eared Bat)
Bat	<i>Myotis grisescens</i> (Gray Bat)
Bat	<i>Myotis leibii</i> (Eastern Small-footed Bat)
Bat	<i>Myotis lucifugus</i> (Little Brown Bat)
Bat	<i>Myotis septentrionalis</i> (Northern Myotis)
Bat	<i>Myotis sodalis</i> (Indiana Bat)
Bat	<i>Perimyotis subflavus</i> (Tri-colored Bat)
Bird	<i>Accipiter striatus</i> (Sharp-shinned Hawk)
Bird	<i>Ammodramus henslowii</i> (Henslow's Sparrow)
Bird	<i>Ammodramus savannarum</i> (Grasshopper Sparrow)
Bird	<i>Anas rubripes</i> (American Black Duck)
Bird	<i>Aquila chrysaetos</i> (Golden Eagle)
Bird	<i>Bonasa umbellus</i> (Ruffed Grouse)
Bird	<i>Calidris pusilla</i> (Semipalmated Sandpiper)
Bird	<i>Caprimulgus carolinensis</i> (Chuck-will's-widow)
Bird	<i>Caprimulgus vociferus</i> (Whip-poor-will)
Bird	<i>Cardellina canadensis</i> (Canada Warbler)
Bird	<i>Chaetura pelagica</i> (Chimney Swift)
Bird	<i>Chordeiles minor</i> (Common Nighthawk)
Bird	<i>Circus cyaneus</i> (Northern Harrier)
Bird	<i>Cistothorus platensis</i> (Sedge Wren)
Bird	<i>Colinus virginianus</i> (Northern Bobwhite)
Bird	<i>Empidonax traillii</i> (Willow Flycatcher)
Bird	<i>Euphagus carolinus</i> (Rusty Blackbird)
Bird	<i>Falco peregrinus</i> (Peregrine Falcon)
Bird	<i>Geothlypis Formosa</i> (Kentucky Warbler)
Bird	<i>Grus americana</i> (Whooping Crane)
Bird	<i>Haliaeetus leucocephalus</i> (Bald Eagle)
Bird	<i>Helmitheros vermivorum</i> (Worm-eating Warbler)
Bird	<i>Hylocichla mustelina</i> (Wood Thrush)
Bird	<i>Icteria virens</i> (Yellow-breasted Chat)
Bird	<i>Icterus spurius</i> (Orchard Oriole)
Bird	<i>Lanius ludovicianus</i> (Loggerhead Shrike)
Bird	<i>Melanerpes erythrocephalus</i> (Red-headed Woodpecker)
Bird	<i>Nycticorax nycticorax</i> (Black-crowned Night-heron)
Bird	<i>Parkesia motacilla</i> (Louisiana Waterthrush)
Bird	<i>Protonotaria citrea</i> (Prothonotary Warbler)
Bird	<i>Riparia riparia</i> (Bank Swallow)
Bird	<i>Scolopax minor</i> (American Woodcock)
Bird	<i>Setophaga caerulea</i> (Black-throated Blue Warbler)
Bird	<i>Setophaga cerulea</i> (Cerulean Warbler)
Bird	<i>Setophaga discolor</i> (Prairie Warbler)
Bird	<i>Setophaga dominica</i> (Yellow-throated Warbler)
Bird	<i>Setophaga fusca</i> (Blackburnian Warbler)
Bird	<i>Sturnella magna</i> (Eastern Meadowlark)
Bird	<i>Tyto alba</i> (Barn Owl)
Bird	<i>Vermivora chrysoptera</i> (Golden-winged Warbler)
Bird	<i>Vermivora cyanoptera</i> (Blue-winged Warbler)
Bivalve	<i>Medionidus conradicus</i> (Cumberland Moccasinshell)
Bivalve	<i>Ptychobranthus subtentum</i> (Fluted Kidneyshell)
Crustacean	<i>Cambarus crinipes</i> (Hairyfoot Crayfish)

NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Crustacean	<i>Cambarus obeyensis</i> (Obey Crayfish)
Gastropod	<i>Fumonelix wetherbyi</i> (Clifty Covert)
Gastropod	<i>Stenotrema angellum</i> (Kentucky Slitmouth)
Mammal	<i>Martes pennanti</i> (Fisher)
Mammal	<i>Neotoma magister</i> (Allegheny Woodrat)
Mammal	<i>Spilogale putorius</i> (Eastern Spotted Skunk)
Plant	<i>Ageratina luciae-brauniae</i> (Lucy Braun's White Snakeroot)
Plant	<i>Bryoxiphium norvegicum</i> (Sword Moss)
Plant	<i>Carex hirtifolia</i> (Pubescent Sedge)
Plant	<i>Castanea dentata</i> (American Chestnut)
Plant	<i>Hymenophyllum tayloriae</i> (Taylor's Filmy Fern)
Plant	<i>Juglans cinerea</i> (Butternut)
Plant	<i>Lilium canadense</i> (Canada Lily)
Plant	<i>Lilium philadelphicum</i> (Wood Lily)
Plant	<i>Lophocolea appalachiana</i> ((a liverwort))
Plant	<i>Microlejeunea globosa</i> (Cardot's Lejeunea)
Plant	<i>Minuartia cumberlandensis</i> (Cumberland Sandwort)
Plant	<i>Panax quinquefolius</i> (American Ginseng)
Plant	<i>Pellia appalachiana</i> ((a liverwort))
Plant	<i>Scopelophila cataractae</i> (Agoyan Cataract Moss)
Plant	<i>Spiranthes lucida</i> (Shining Ladies'-tresses)
Plant	<i>Tetradontium brownianum</i> (Little Georgia)
Reptile	<i>Crotalus horridus</i> (Timber Rattlesnake)
Reptile	<i>Ophisaurus attenuatus longicaudus</i> (Eastern Slender Glass Lizard)
Reptile	<i>Terrapene carolina</i> (Eastern Box Turtle)
Subterranean - Arachnid	<i>Appaleptoneta</i> sp. 1 ((a cave leptonetid spider))
Subterranean - Arachnid	<i>Bishopella</i> sp. Probably <i>laciniosa</i> (harvestman)
Subterranean - Arachnid	<i>Calymmaria persica</i> (Cave-loving funnel-web spider)
Subterranean - Arachnid	<i>Hesperochernes mirabilis</i> (Southeastern Cave Pseudoscorpion)
Subterranean - Arachnid	<i>Kleptochthonius pluto</i> ((a cave obligate pseudoscorpion))
Subterranean - Arachnid	<i>Kleptochthonius</i> sp. (Sells cave pseudoscorpion)
Subterranean - Arachnid	<i>Liocranoides</i> sp. (Two-clawed spider)
Subterranean - Arachnid	<i>Meta ovalis</i> (American cave orb weaver)
Subterranean - Arachnid	<i>Nesticus stygius</i> ((a cave obligate spider))
Subterranean - Arachnid	<i>Phanetta subterranea</i> (Subterranean sheet-web spider)
Subterranean - Arachnid	<i>Poecilophysis weyerensis</i> ((a cave mite))
Subterranean - Crustacean	<i>Bryocamptus</i> (<i>Limocamptus</i>) sp. (copepods)
Subterranean - Crustacean	<i>Caecidotea stygia</i> ((a cave obligate isopod))
Subterranean - Crustacean	<i>Cambarus tenebrosus</i> (Cavespring Crayfish)
Subterranean - Crustacean	<i>Crangonyx</i> sp. (amphipods)
Subterranean - Crustacean	<i>Diacyclops</i> sp. (Indiana Groundwater Copepod)
Subterranean - Crustacean	<i>Haplophthalmus danicus</i> ((a terrestrial cave isopod))
Subterranean - Crustacean	<i>Ligidium elrodii hancockensis</i> ((a cave obligate isopod))
Subterranean - Crustacean	<i>Miktoniscus barri</i> ((a cave obligate isopod))
Subterranean - Crustacean	<i>Orconectes australis</i> (Southern Cave Crayfish)
Subterranean - Crustacean	<i>Orconectes barri</i> (Cumberland Plateau Cave Crayfish)
Subterranean - Crustacean	<i>Pseudocandona jeanneli</i> (Jeannel's Cave Ostracod)
Subterranean - Crustacean	<i>Sagittocythere barri</i> (Ectocommensal Ostracod)
Subterranean - Crustacean	<i>Stygobromus exilis</i> (Central Kentucky Cave Obligate)
Subterranean - Crustacean	<i>Stygobromus</i> sp. 24 ((a cave obligate amphipod))
Subterranean - Fish	<i>Typhlichthys subterraneus</i> (Southern Cavefish)
Subterranean - Flatworm	<i>Sphalloplana percoeca</i> ((a cave obligate planarian))
Subterranean - Gastropod	<i>Carychium exile</i> (Ice Thorn)

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Taxa Group	Scientific & Common names
Subterranean - Gastropod	Glyphyalinia sp. (terrestrial snails)
Subterranean - Gastropod	Glyphyalinia wheatleyi (Wheatley's glyph)
Subterranean - Gastropod	Helicodiscus barri (Raccoon Coil)
Subterranean - Gastropod	Helicodiscus hadenoecus (Cricket Coil)
Subterranean - Gastropod	Helicodiscus sp. (terrestrial snails)
Subterranean - Insect	Aleochara lucifuga ((a rove beetle))
Subterranean - Insect	Aloconota laurentiana ((a rove beetle))
Subterranean - Insect	Anillinus sp. 5 (Flag Trail Cave Beetle)
Subterranean - Insect	Arrhopalites benitus ((a springtail))
Subterranean - Insect	Arrhopalites marshalli (Marshall's Cave Springtail)
Subterranean - Insect	Arrhopalites pavo ((a cave springtail))
Subterranean - Insect	Arrhopalites pygmaeus ((a springtail))
Subterranean - Insect	Atheta trogliphila ((a trogliphilic rove beetle))
Subterranean - Insect	Batrisesodes clypeospecus ((a cave obligate beetle))
Subterranean - Insect	Bembidion lacunarium (ground beetle)
Subterranean - Insect	Ceratophysella sp. (springtails)
Subterranean - Insect	Ceuthophilus stygius (cave cricket)
Subterranean - Insect	Darlingtonia kentuckensis ((a ground beetle))
Subterranean - Insect	Hadenoecus opilionides ((a cave obligate cricket))
Subterranean - Insect	Lesteva pallipes (rove beetle)
Subterranean - Insect	Litocampa cookei (Cooke's Cave Dipluran)
Subterranean - Insect	Litocampa sp. 1 (undescribed cave dipluran)
Subterranean - Insect	Litocampa sp. 6 (Buffalo Cove Cave Dipluran)
Subterranean - Insect	Litocampa sp. 7 (Mill Hollow Cave Dipluran)
Subterranean - Insect	Litocampa sp. 8 (Mountain Eye Cave Dipluran)
Subterranean - Insect	Megaselia cavernicola (cave hump-backed fly)
Subterranean - Insect	Nelsonites walteri ((a cave obligate beetle))
Subterranean - Insect	Platynus tenuicollis (ground beetle)
Subterranean - Insect	Pseudanopthalmus beakleyi ((a cave obligate beetle))
Subterranean - Insect	Pseudanopthalmus robustus ((a cave obligate beetle))
Subterranean - Insect	Pseudanopthalmus sp. (cave ground beetles)
Subterranean - Insect	Pseudanopthalmus sp. (Sells cave ground beetle)
Subterranean - Insect	Pseudanopthalmus sp. 29 (Falling Springs Cave Beetle)
Subterranean - Insect	Pseudanopthalmus sp. 30 (Ace in the Hole Cave Beetle)
Subterranean - Insect	Pseudanopthalmus valentinei ((a cave obligate beetle))
Subterranean - Insect	Pseudosinella alba (White springtail)
Subterranean - Insect	Pseudosinella christianseni (Christiansen's Cave Springtail)
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Insect	Pseudosinella orba ((a cave obligate springtail))
Subterranean - Insect	Psyllipsocus ramburi ((a cave barklice))
Subterranean - Insect	Rhadine caudata (ground beetle)
Subterranean - Insect	Sinella cavernarum ((a springtail))
Subterranean - Insect	Spelobia tenebrarum (Cave dung fly)
Subterranean - Insect	Stenoponia americana (flea)
Subterranean - Insect	Tomocerus bidentatus (Two-toothed springtail)
Subterranean - Insect	Tomocerus dubius (springtail)
Subterranean - Insect	Tomocerus flavescens (Golden springtail)
Subterranean - Insect	Trechus cumberlandus (Cumberland Ground Beetle)
Subterranean - Millipede	Pseudotremia garlandae (Garland's Cave Millipede)
Subterranean - Millipede	Pseudotremia manni (Mann's Cave Millipede)
Subterranean - Millipede	Pseudotremia roebuckorum (Roebuck's Cave Millipede)
Subterranean - Millipede	Pseudotremia sp. (cave millipeds)
Subterranean - Millipede	Pseudotremia sp. 5 (Three Forks cave milliped)

NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Subterranean - Millipede	Scoterpes copei ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes ventus (Eastern Tennessee Cave Millipede)

NORTHWEST CUMBERLAND PLATEAU COA HABITATS (TN)	
Terrestrial Habitat Type	Total acres of very high, high, and medium ranked habitat
Natural habitats	
Southern Ridge and Valley / Cumberland Dry Calcareous Forest	97227
South-Central Interior Mesophytic Forest	44571
Allegheny-Cumberland Dry Oak Forest and Woodland	31257
Southern Interior Low Plateau Dry-Mesic Oak Forest	11524
Appalachian (Hemlock)-Northern Hardwood Forest	10411
Southern Appalachian Low-Elevation Pine Forest	6354
South-Central Interior Small Stream and Riparian	2876
Cumberland Acidic Cliff and Rockhouse	117
Central Interior Acidic Cliff and Talus	4
Semi-natural habitats	
Old Field / Successional	1559
Pasture	409
Cropland	8
Aquatic Habitat Type	Total stream miles of very high, high, and medium ranked habitat
Headwaters and Streams	28