Duck River

Conservation Opportunity Area

The Duck River flows 284 miles from its headwaters in the Eastern Highland Rim, draining much of middle Tennessee, before entering the Tennessee River. The Duck River has a high diversity of freshwater animals, with 151 species of fish, 60 species of freshwater mussels, and 22 species of aquatic snails. Several of these species are considered rare and endangered.

The Tennessee Chapter of The Nature Conservancy has developed and implemented numerous habitat improvement projects along the Duck River in collaboration with TWRA and many other partners. These projects include stabilizing stream banks through the planting of trees and shrubs; providing landowner incentive funds to construct cattle fencing, water stations, and creek crossings; and assisting state and federal agencies with freshwater mussel recovery efforts.

Draining much of middle Tennessee, the Duck River is considered to be one of the most biologically diverse rivers in North America.

The highlands surrounding the headwaters of the Duck River, as well as the forested areas remaining along the river, are important for maintaining water quality and temperature. Stream bank erosion can impact water quality and degrade habitat. The Duck River provides drinking water for over 250,000 people today, and parts of the watershed are experiencing urbanization pressures. Collaborative land and water use planning will be critical to protecting the Duck River in coming years.

In addition, large areas of cedar glades and limestone barren habitats occur throughout this COA. These glades and barrens are susceptible to loss due to natural succession from lack of natural fire and management. Many of these glades are home to rare plant species and also associated with caves and sinkholes. These habitats are all susceptible to illegal dumping and incompatible recreational activities.

Top to bottom: Mussel diversity, Dan Hubbs; Big Falls, Duck River - Brian Stansberry/next page: The Nashville Breadroot only found in Cedar Glades habitats. - Jason Ferrell

Public Lands within the COA

Bedford Lake, Columbia Greenway, Duck River State Scenic River, Henry Horton State Park, Normandy Fish Hatchery, Wilson School Road Forest & Cedar Glade, Yanahli WMA

Duck River Highlands and Headwaters Conservation Opportunity Area

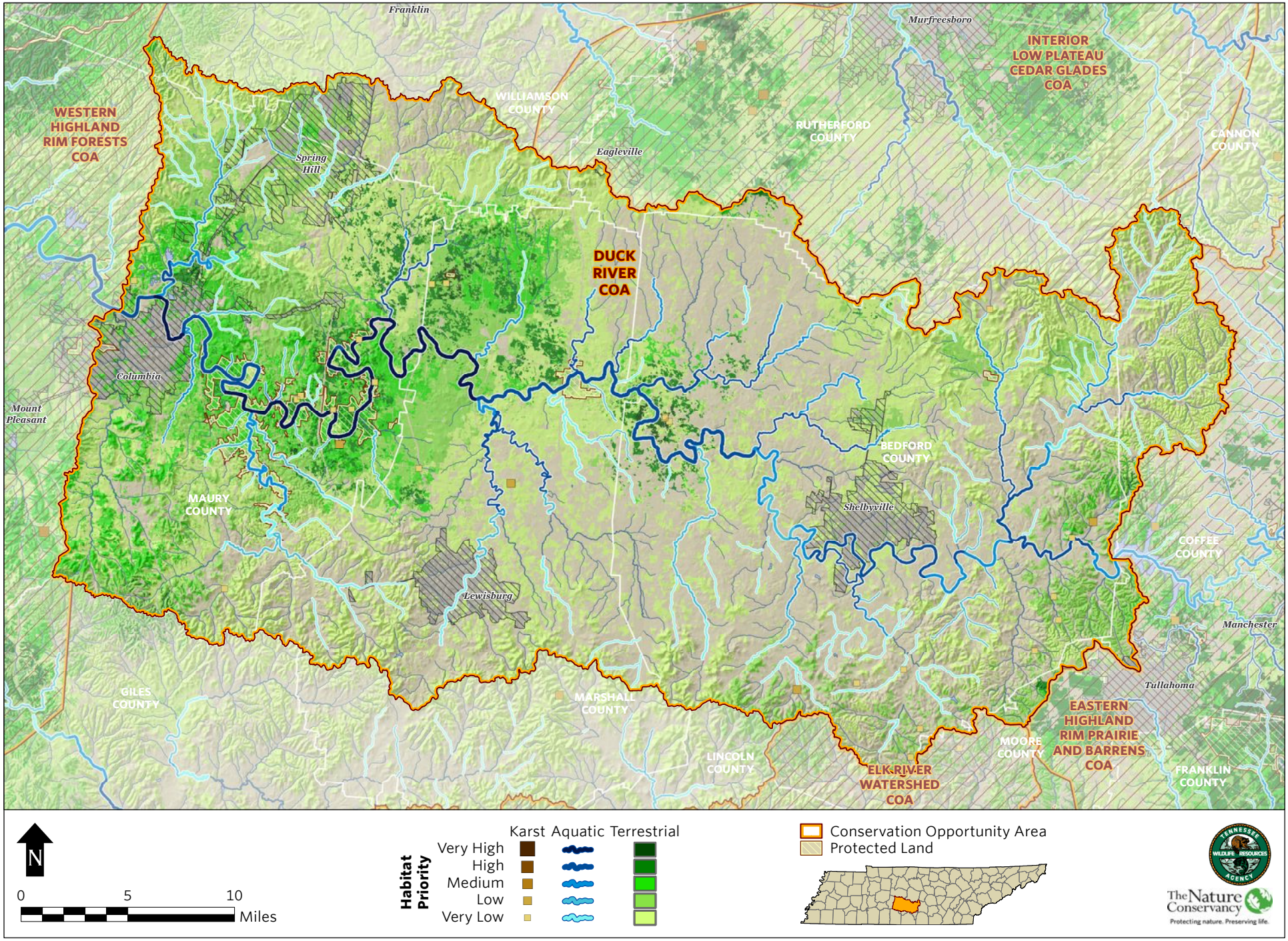
Partnerships

TWRA will continue its collaborations with The Nature Conservancy and others to conserve the natural resources of the Duck River. TWRA will develop and foster partnerships with the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, U.S. Army Corps of Engineers, Tennessee Valley Authority, Tennessee Dept. of Environment and Conservation, universities, and private landowners.

	Desired Change	Units
+	Use government-funded incentive programs to encourage private landowners to restore habitats and protect water quality using Best Management Practices..	number
+	Restore pastures and agricultural lands to native ecosystems, such as forests and grasslands.	acres
+	Restore riparian habitat and physical stream habitat in priority locations throughout the watershed	miles
✓	Conduct research on life history and ecological needs of target species to establish guidelines for determining population viability.	projects
✓	Conduct scientific surveys to discern the geographical distributions of lesser known target species.	projects
+	Increase acres of habitat under permanent conservation management.	acres
+	Improve population viability of native freshwater mussel species.	animals
+	Increase the number of water withdrawal plans created and implemented by appropriate state and local agencies and utilities to protect and improve instream flow for native species	plans
+	Improve forest habitat through development of new forestry Best Management Practice Standards.	assists
+	Improve and protect ecologically important instream flows by engaging in reservoir operational reviews with TVA.	reviews

To learn more about the Duck River Watershed Conservation Opportunity Area, please contact: Josh Campbell, Wildlife Diversity Coordinator, Region 2 (615) 781-6626

Duck River Conservation Opportunity Area



	DUCK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Amphibian	Ambystoma barbouri (Streamside Salamander)
Bat	Myotis grisescens (Gray Bat)
Bat	Myotis septentrionalis (Northern Myotis)
Bat	Myotis sodalis (Indiana Bat)
Bat	Perimyotis subflavus (Tri-colored Bat)
Bird	Accipiter striatus (Sharp-shinned Hawk)
Bird	Ammodramus henslowii (Henslow's Sparrow)
Bird	Ammodramus savannarum (Grasshopper Sparrow)
Bird	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Asio flammeus (Short-eared Owl)
Bird	Bartramia longicauda (Upland Sandpiper)
Bird	Botaurus lentiginosus (American Bittern)
Bird	Calidris mauri (Western Sandpiper)
Bird	Calidris pusilla (Semipalmated Sandpiper)
Bird	Caprimulgus carolinensis (Chuck-will's-widow)
Bird	Caprimulgus vociferus (Whip-poor-will)
Bird	Chaetura pelagica (Chimney Swift)
Bird	Chordeiles minor (Common Nighthawk)
Bird	Circus cyaneus (Northern Harrier)
Bird	Cistothorus platensis (Sedge Wren)
Bird	Colinus virginianus (Northern Bobwhite)
Bird	Egretta caerulea (Little Blue Heron)
Bird	Empidonax minimus (Least Flycatcher)
Bird	Empidonax traillii (Willow Flycatcher)
Bird	Euphagus carolinus (Rusty Blackbird)
Bird	Falco peregrinus (Peregrine Falcon)
Bird	Geothlypis Formosa (Kentucky Warbler)
Bird	Grus americana (Whooping Crane)
Bird	Haliaeetus leucocephalus (Bald Eagle)
Bird	Helmitheros vermivorum (Worm-eating Warbler)
Bird	Hylocichla mustelina (Wood Thrush)
Bird	Icteria virens (Yellow-breasted Chat)
Bird	Icterus spurius (Orchard Oriole)
Bird	Ictinia mississippiensis (Mississippi Kite)
Bird	Ixobrychus exilis (Least Bittern)
Bird	Lanius ludovicianus (Loggerhead Shrike)
Bird	Limnothlypis swainsonii (Swainson's Warbler)
Bird	Melanerpes erythrocephalus (Red-headed Woodpecker)
Bird	Nycticorax nycticorax (Black-crowned Night-heron)
Bird	Parkesia motacilla (Louisiana Waterthrush)
Bird	Pluvialis dominica (American Golden Plover)
Bird	Protonotaria citrea (Prothonotary Warbler)
Bird	Riparia riparia (Bank Swallow)
Bird	Scolopax minor (American Woodcock)
Bird	Setophaga cerulea (Cerulean Warbler)
Bird	Setophaga discolor (Prairie Warbler)
Bird	Setophaga fusca (Blackburnian Warbler)
Bird	Sturnella magna (Eastern Meadowlark)
Bird	Thryomanes bewickii (Bewick's Wren)
Bird	Tyto alba (Barn Owl)
Bird	Vermivora chrysoptera (Golden-winged Warbler)
Bird	Vermivora cyanoptera (Blue-winged Warbler)

	DUCK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Bivalve	Epioblasma capsaeformis (Oyster Mussel)
Bivalve	Epioblasma triquetra (Snuffbox)
Bivalve	Lemiox rimosus (Birdwing Pearlymussel)
Bivalve	Medionidus conradicus (Cumberland Moccasinshell)
Bivalve	Obovaria subrotunda (Round Hickorynut)
Bivalve	Pleurobema oviforme (Tennessee Clubshell)
Bivalve	Pleurobema rubrum (Pyramid Pigtoe)
Bivalve	Pleuronaia barnesiana (Tennessee Pigtoe)
Bivalve	Pleuronaia dolabelloides (Slabside Pearlymussel)
Bivalve	Ptychobranchus subtentum (Fluted Kidneyshell)
Bivalve	Quadrula cylindrica cylindrica (Rabbitsfoot)
Bivalve	Quadrula intermedia (Cumberland Monkeyface)
Bivalve	Toxolasma lividum (Purple Lilliput)
Bivalve	Villosa iris (Rainbow)
Bivalve	Villosa taeniata (Painted Creekshell)
Bivalve	Villosa vanuxemensis (Mountain Creekshell)
Fish	Carpiodes velifer (Highfin Carpsucker)
Fish	Erimystax dissimilis (Streamline Chub)
Fish	Erimystax insignis (Blotched Chub)
Fish	Etheostoma aquali (Coppercheek Darter)
Fish	Etheostoma cinereum (Ashy Darter)
Fish	Etheostoma denoncourti (Golden Darter)
Fish	Etheostoma luteovinctum (Redband Darter)
Fish	Etheostoma striatulum (Striated Darter)
Fish	Etheostoma tippecanoe (Tippecanoe Darter)
Fish	Fundulus julisia (Barrens Topminnow)
Fish	Hemitremia flammea (Flame Chub)
Fish	Ichthyomyzon gagei (Southern Brook Lamprey)
Fish	Notropis asperifrons (Burrhead Shiner)
Fish	Notropis rubellus (Rosyface Shiner)
Fish	Percina phoxocephala (Slenderhead Darter)
Gastropod	Lithasia armigera (Armored Rocksnail)
Gastropod	Lithasia duttoniana (Helmet Rocksnail)
Gastropod	Lithasia geniculata fuliginosa (Geniculate River Snail)
Insect	Gomphus sandrius (Tennessee Clubtail)
Mammal	Neotoma magister (Allegheny Woodrat)
Mammal	Neotoma magister (Allegheny Woodrat)
Plant	Allium tricoccum (Ramps)
Plant	Ammoselinum popei (Pope's Sand-parsley)
Plant	Amsonia tabernaemontana var. gattingeri (Limestone Blue Star)
Plant	Anemone caroliniana (Carolina Anemone)
Plant	Arabis hirsuta (Western Hairy Rockcress)
Plant	Arenaria lanuginosa (Wooly Sandwort)
Plant	Arnoglossum plantagineum (Fen Indian-plantain)
Plant	Astragalus tennesseensis (Tennessee Milk-vetch)
Plant	Boechera perstellata (Braun's Rockcress)
Plant	Carex davisii (Davis' Sedge)
Plant	Castanea dentata (American Chestnut)
Plant	Cimicifuga rubifolia (Appalachian Bugbane)
Plant	Dalea foliosa (Leafy Prairie-clover)
Plant	Drosera brevifolia (Dwarf Sundew)
Plant	Echinacea tennesseensis (Tennessee Coneflower)
Plant	Gaylussacia dumosa (Dwarf Huckleberry)

	DUCK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Plant	Isoetes melanopoda (Blackfoot Quillwort)
Plant	Juglans cinerea (Butternut)
Plant	Lilium michiganense (Michigan Lily)
Plant	Lycopodiella alopecuroides (Foxtail Clubmoss)
Plant	Neviusia alabamensis (Alabama Snow-wreath)
Plant	Onosmodium molle ssp. subsetosum (Smooth False Gromwell)
Plant	Panax quinquefolius (American Ginseng)
Plant	Paysonia densipila (Duck River Bladderpod)
Plant	Phemeranthus calcaricus (Limestone Fame-flower)
Plant	Polygala boykinii (Boykin's Milkwort)
Plant	Schoenolirion croceum (Yellow Sunnybell)
Plant	Stellaria fontinalis (Water Stitchwort)
Plant	Trifolium calcaricum (Running Glade Clover)
Plant	Zanthoxylum americanum (Northern Prickly-ash)
Plant	Zigadenus leimanthoides (Death-camas)
Reptile	Crotalus horridus (Timber Rattlesnake)
Reptile	Pituophis melanoleucus melanoleucus (Northern Pinesnake)
Reptile	Terrapene carolina (Eastern Box Turtle)
Subterranean - Amphibian	Gyrinophilus palleucus (Tennessee Cave Salamander)
Subterranean - Amphibian	Gyrinophilus palleucus necturoides (Big Mouth Cave Salamander)
Subterranean - Arachnid	Hesperochernes mirabilis (Southeastern Cave Pseudoscorpion)
Subterranean - Crustacean	Caecidotea bicrenata ((a cave obligate isopod))
Subterranean - Crustacean	Caecidotea bicrenata bicrenata ((a cave obligate isopod))
Subterranean - Crustacean	Caecidotea nickajackensis (Nickajack Cave Isopod)
Subterranean - Crustacean	Orconectes australis (Southern Cave Crayfish)
Subterranean - Crustacean	Stygobromus exilis (Central Kentucky Cave Obligate)
Subterranean - Fish	Typhlichthys subterraneus (Southern Cavefish)
Subterranean - Flatworm	Sphalloplana percoeca ((a cave obligate planarian))
Subterranean - Gastropod	Glyphyalinia specus (Hollow Glyph)
Subterranean - Insect	Batrisodes ferulifer ((a cave obligate beetle))
Subterranean - Insect	Litocampa cherokeensis ((a bristletail))
Subterranean - Insect	Litocampa cookei (Cooke’s Cave Dipluran)
Subterranean - Insect	Litocampa davisi ((a bristletail))
Subterranean - Insect	Pseudanophthalmus bendermani (Benderman's Cave Beetle)
Subterranean - Insect	Pseudanophthalmus tullahoma (Duck River Cave Beetle)
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Millipede	Scoterpes jackdanieli ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes musicarustica ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes tricorner ((a cave obligate millipede))

DUCK RIVER COA HABITATS (TN)	
Terrestrial Habitat Type	**Total acres of very high, high, and medium ranked habitat**
Natural habitats	
Nashville Basin Limestone Glade and Woodland	25855
Southern Interior Low Plateau Dry-Mesic Oak Forest	25688
South-Central Interior Mesophytic Forest	7696
Eastern Highland Rim Prairie and Barrens	1720
South-Central Interior Large Floodplain	749
South-Central Interior Small Stream and Riparian	214
Semi-natural habitats	
Pasture	14447
Old Field / Successional	4612
Cropland	125
Aquatic Habitat Type	**Total stream miles of very high, high, and medium ranked habitat**
Headwaters and Streams	131
Small River	70
Medium River	77