







# Species Modeling Report

## **Brown-headed Cowbird**

Molothrus ater

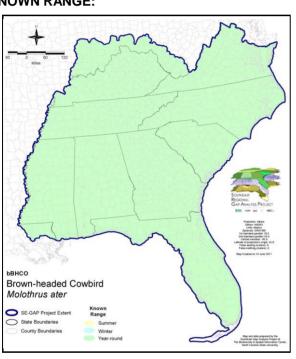
Taxa: Avian Order: Passeriformes

Family: Icteridae

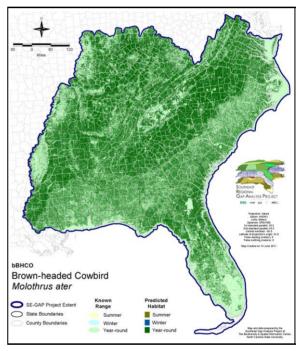
SE-GAP Spp Code: **bBHCO** ITIS Species Code: 179112

NatureServe Element Code: ABPBXB7030

## **KNOWN RANGE:**



## PREDICTED HABITAT:



Range Map Link: <a href="http://www.basic.ncsu.edu/segap/datazip/maps/SE">http://www.basic.ncsu.edu/segap/datazip/maps/SE</a> Range bBHCO.pdf Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Dist\_bBHCO.pdf

GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=bBHCO

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bBHCO\_se00.zip

## **PROTECTION STATUS:**

Reported on March 14, 2011

Federal Status: ---

State Status: ID (P), ID (P), KY (N), NJ (INC/S), NV (YES), NY (PB), RI (Not Listed), UT (None), BC (4 (2005)), QC (Non suivie)

NS Global Rank: G5

NS State Rank: AK (S3B), AK (S3B), AL (S5), AR (S5), AZ (S5), CA (SNRB,SNRN), CO (S5), CT (S5B), CT (S5B), DC (S4), DE (S5), FL (SNR), GA (S5), IA (S5B,S5N), ID (S5B), ID (S5B), IL (S5), IN (S4S5), KS (S5), KY (S5B,S4N), LA (S5), MA (S5), MD (S5), ME (S4N,S4S5B), MI (S5), MN (SNRB), MO (SNR), MS (S5B,S5N), MT (S5B), MT (S5B), NC (S5B,S5N), ND (SNRB), NE (S5), NH (S5B), NJ (S5B,S5N), NM (S5B,S5N), NV (S5B), NY (S5), OH (S5), OK (S5), OR (S5), PA (S5B,S5N), RI (S5B), SC (SNR), SD (S5B), SD (S5B), TN (S5), TX (S5B), UT (S5B,S3N), VA (S5), VT (S5B,S5N), WA (S4N,S5B), WI (S5B), WI (S5B), WV (S4N,S5B), WY (S5B,S5N), AB (S5), BC (S5B), LB (SNA), MB (S5B), MB (S5B), NB (S4B), NF (S1S2B), NS (S4B), NT (SNRB), ON (S4B), PE (S4B), QC (S4B), SK (S5B), YT (S4B)

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## SUMMARY OF PREDICTED HABITAT BY MANAGMENT AND GAP PROTECTION STATUS:

	l	JS FWS	US Forest Service		Tenn. Valley Author.		US DOD/ACOE	
	ha	%	ha	%	ha	%	ha	%
Status 1	75,951.6	< 1	11,974.7	< 1	0.0	0	0.0	0
Status 2	126,173.3	< 1	141,573.2	< 1	0.0	0	4,661.9	< 1
Status 3	2,535.9	< 1	1,172,609.3	2	68,276.2	< 1	449,961.8	< 1
Status 4	98.7	< 1	< 0.1	< 1	0.0	0	101.4	< 1
Total	204,759.5	< 1	1,326,157.2	2	68,276.2	< 1	454,725.1	< 1
	US Dept. of	Energy	US Nat. Park	Service		NOAA	Other Federa	ıl Lands
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	67,532.4	< 1	30.7	< 1	9,505.2	< 1
Status 2	0.0	0	9,156.2	< 1	6,107.7	< 1	24.4	< 1
Status 3	45,518.9	< 1	178,951.6	< 1	0.0	0	3,430.1	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	45,518.9	< 1	255,640.2	< 1	6,138.4	< 1	12,959.6	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	945.9	< 1	59.0	< 1	0.0	0
Status 2	0.0	0	6,295.2	< 1	488,931.1	< 1	572.1	< 1
Status 3	16,047.6	< 1	395,972.2	< 1	157,268.7	< 1	241,787.3	< 1
Status 4	0.0	0	< 0.1	< 1	80,635.9	< 1	15.8	< 1
Total	16,047.6	< 1	403,213.4	< 1	726,894.6	1	242,375.1	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	6,859.1	< 1	0.0	0	0.0	0
Status 2	8,613.9	< 1	51,935.1	< 1	6.8	< 1	2,220.0	< 1
Status 3	0.0	0	15,306.9	< 1	27,238.9	< 1	108,400.9	< 1
Status 4	0.0	0	0.3	< 1	3,815.6	< 1	< 0.1	< 1
Total	8,613.9	< 1	74,101.4	< 1	31,061.3	< 1	110,621.0	<1
	Private Land - I	No Res.		Water		,	Overa	ıll Total
	ha	%	ha	%			ha	rotai %
Status 1	0.0	0	0.0	0			172,858.5	< 1
Status 2	0.0	0	0.0	0			846,271.0	1
Status 3	819.1	< 1	0.0	0			2,884,125.2	6
Status 4	60,999,718.2	92	47,747.1	< 1			61,212,670.3	92
Total	61,000,537.3	92	47,747.1	< 1			65,115,924.9	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:

Brown-headed cowbirds can be found during the breeding season in woodland, primarily deciduous forest edge, city parks, suburban gardens, farms, ranches. Before European settlement of the eastern U.S., cowbirds were apparently limited to the open grasslands of the United States, mostly west of the Mississippi River. However, because the cowbirds need suitable perches for searching for nests to parasitize, the species was probably limited in the breeding season to prairie riparian corridors (Mayfield 1965).

The main reason for cowbird expansion outside of the Great Plains appears to be the fragmentation of once unbroken forest tracts into small pieces of forest interspersed with fields, pastures, roads, and towns (Mayfield 1977b, Kerlinger and Doremus 1981). Cowbirds often are associated with forest-field edge habitat and clearings in forests.

Feedlots, pastures, and fields with livestock also attract cowbirds, especially in predominately forested areas. In the Sierra Nevada of California, cowbirds feed in horse corrals, meadows with herds of cattle, and at bird feeders in towns, and few cowbirds are found more than 10 km from these food sources (Verner and Ritter 1983). In this same area, the number of cowbirds in meadows decreases as the distance of the meadow from pack stations and horse corrals increases.

Quoted from Nature Serve - K. Cook - 5-27-05

#### Additional information:

Brown-headed cowbirds select ecotones between forest and open habitat for breeding, rather than using extensive open area and forest edge (Gates and Gysel 1978, Brittingham and Temple 1983, Johnson and Temple 1990). Curson et. Al (1999) found that females commute > 20 km from pasture lands into mixed coniferous forest and woodland to lay eggs. Brittingham and Temple (1983) found that cowbirds parasitized nests 300 m into the interior of forests from gaps > = 0.2 ha. Best (1978) and Johnson and Temple (1990) found that cowbirds parasitized nests in grassland habitat 100 m from forest edge into grasslands. K. Cook - 5-27-05

Elevation Mask: < 1066m

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

Functional Group	Map Unit Name			
Anthropogenic	Deciduous Plantations			
Anthropogenic	Developed Open Space			
Anthropogenic	Evergreen Plantations			
Anthropogenic	Low Intensity Developed			
Anthropogenic	Pasture/Hay			
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)			
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	Appalachian Hemlock-Hardwood Forest			
Forest/Woodland	Appalachian Serpentine Woodland			
Forest/Woodland	Appalachian Shale Barrens			
Forest/Woodland	Atlantic Coastal Plain Dry and Dry-Mesic Oak Forest			
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Offsite Hardwood Modifier			
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest			
Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest			
Forest/Woodland	Central Appalachian Alkaline Glade and Woodland			

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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 Upland Longleaf Pine Woodland - Offsite Hardwood Modifier

Forest/Woodland East Gulf Coastal Plain Limestone 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 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 Peninsula Inland Scrub
Forest/Woodland Nashville Basin Limestone Glade

Forest/Woodland Northeastern Interior Dry Oak Forest - Mixed Modifier
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-Central Interior Mesophytic Forest
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 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 - 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

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

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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

Wetlands Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier

Wetlands Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Herbaceous Modifier

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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 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 Atlantic Coastal Plain Peatland Pocosin Wetlands 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 Streamhead Seepage Swamp, Pocosin, and Baygall 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 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 - Scrub/Shrub Understory Modifier East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier Wetlands 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 Northern Seepage Swamp Wetlands East Gulf Coastal Plain Small Stream and River Floodplain Forest 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 Hardwood Hammock South Florida Willow Head Wetlands Wetlands South-Central Interior Large Floodplain - Forest Modifier Wetlands South-Central Interior Large Floodplain - Herbaceous Modifier Wetlands South-Central Interior Small Stream and Riparian Wetlands Southern and Central Appalachian Bog and Fen Wetlands Southern Appalachian Seepage Wetland Wetlands Southern Coastal Plain Blackwater River Floodplain Forest Southern Coastal Plain Hydric Hammock Wetlands Wetlands Southern Coastal Plain Nonriverine Basin Swamp Wetlands Southern Coastal Plain Nonriverine Cypress Dome

## **CITATIONS:**

Wetlands

Wetlands

Wetlands

Wetlands

Wetlands

Wetlands

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Southern Piedmont/Ridge and Valley Upland Depression Swamp

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Southern Coastal Plain Seepage Swamp and Baygall

Southern Piedmont Seepage Wetland

Southern Piedmont Large Floodplain Forest - Forest Modifier

Southern Piedmont Small Floodplain and Riparian Forest

Southern Piedmont Large Floodplain Forest - Herbaceous Modifier

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Weatherhead, P. J. 1989. Sex ratios, host-specific reproductive success, and impact of brown-headed cowbirds. Auk 106:358-366

Woodward, P.W. 1983. Behavioral ecology of fledgling Brown-headed Cowbirds and their hosts. Condor 85:151-163.

For more information:: SE-GAP Analysis Project / BaSIC 127 David Clark Labs Dept. of Biology, NCSU Raleigh, NC 27695-7617 www.basic.ncsu.edu/segap

Compiled: 15 September 2011

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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