Habitat Model for Species: American Kestrel

Alpha Code: AMKE Status: Resident

Distribution Map

Habitat Map

Landcover Category

0 - Comments	Habitat Restrictions	Comments
Bortolotti, 1994		Natural nest sites include cavities in trees, woodpecker holes, ledges of cliffs, holes in earthen banks, and magpie nests. Prefer nest boxes over
Olendorff, 1973		Installation of nest boxes on poles, windmill towers, old houses, cliffs and trees increases kestrel
Driscoll et al., 1989		Study area was on a college campus consisting of rank-grass, shrubland, water, forest and agriculture, large lawns and residential areas.
Arnold and Martin, 1992		Females usually use more open areas. Males frequently use fields edges and shelterbelts.
Rohrbaugh, 1994		Nest boxes should be installed at least 180m from human activity, 350m from forested area, in open areas and not in intensively farmed habitats.
Fischer et al., 1984		Found twice as often in grassland as expected, but only one-third as often as expected in sagebrush.
Mathisen and Mathisen, 1959		Most abundant in the Pine Ridge area, a rough escarpment with many buttes and canyons supporting open stands of Pinus ponderosa.
Andres, 1994		Winter study. Diverse to using cropped fields. Used telephone wires or poles most often.
Johnsgard, 1990		Winter habitat needs are similar to breeding season.
[KS GAP]	Map 30 m edge of all listed forests and woodlands.	

04 - Pecan Floodplain Forest

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Olendorff, 1973		
Andrews and Righter, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Rising, 1974		
[KS GAP]	Map 30 m edge.	

05 - Ash-Elm-Hackberry Floodplain Forest

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Olendorff, 1973		
Andrews and Righter, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Rising, 1974		
[KS GAP]	Map 30 m edge.	

06 - Cottonwood Floodplain Forest

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Gutzwiller and Anderson, 1987	Minimum area found acceptable = 1.99ha.	nesting habitat
Kimsey and Conley, 1988	surrounded by short grass pastures	
Olendorff, 1973		
Craig and Trost, 1979		Nesting in nest boxes placed 3 to 8m high in cottonwood trees along river.
Andrews and Righter, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Graber and Graber, 1951		
Rising, 1974		
[KS GAP]	Map 30 m edge.	

07 - Mixed Oak Floodplain

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Olendorff, 1973		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Rising, 1974		
[KS GAP]	Map 30 m edge.	

08 - Bur Oak Floodplain Woodland

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Bolen and Derden, 1980		wintering habitat includes riparian woodlands
Doody, 1994		wintering in wooded bottomlands
Sample and Mossman, 1997		
Andrews and Righter, 1992		
Arnold and Martin, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Johnsgard, 1990		Favors open savanna like areas with a few trees, forest edges near open areas.
Rising, 1974		
[KS GAP]	Map 30 m edge.	

09 - Mixed Oak Ravine

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Sample and Mossman, 1997		
Arnold and Martin, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Johnsgard, 1990		Favors open savanna like areas with a few trees, forest edges near open areas.
Rising, 1974		
[KS GAP]	Map 30 m edge.	

10 - Post Oak-Blackjack Oak Woodland

Sample and Mossman, 1997		
Arnold and Martin, 1992		
Johnsgard, 1990		Favors open savanna like areas with a few trees, forest edges near open areas.
[KS GAP]	Map 30 m edge.	

11 - Cottonwood Floodplain Woodland

Sedgwick and Knopf, 1990		
Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Doody, 1994		wintering in wooded bottomlands
Gutzwiller and Anderson, 1987	Minimum area found acceptable = 1.99ha.	nesting habitat
Sedgwick and Knopf, 1986		
Kimsey and Conley, 1988	surrounded by short grass pastures	
Olendorff, 1973		
Craig and Trost, 1979		Nesting in nest boxes placed 3 to 8m high in cottonwood trees along river.
Andrews and Righter, 1992		
Lingle, 1989		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
Phillips and Beske, 1990		
Graber and Graber, 1951		
Rising, 1974		
[KS GAP]	Map 30 m edge.	

17 - Tallgrass Prairie

Ardia and Bildstein, 1997		Females usually use more open areas. Males frequently use field edges and shelterbelts.
Bolen and Derden, 1980		wintering habitat includes grasslands
Berry et al., 1998		Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Sample and Mossman, 1997		foraging
Cink and Lowther, 1989		nesting in Baker Wetlands
Andrews and Righter, 1992		

18 - Sand Prairie

Mathisen and Mathisen, 1968	winter wheat, and other grains
Sample and Mossman, 1997	foraging

20 - Western Wheatgrass

Ardia and Bildstein, 1997	Females usually use more open areas. Males frequently use field edges and shelterbelts.
Bolen and Derden, 1980	wintering habitat includes grasslands
Berry et al., 1998	Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Mathisen and Mathisen, 1968	
Andrews and Righter, 1992	

22 - Mixed Prairie

Ardia and Bildstein, 1997	Females usually use more open areas. Males frequently use field edges and shelterbelts.
Bolen and Derden, 1980	
Bolen and Derden, 1980	wintering habitat includes grasslands
Berry et al., 1998	Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Mathisen and Mathisen, 1968	
Andrews and Righter, 1992	

25 - Shortgrass Prairie

Holmes et al., 1993	Buffer zone of 75m would protect kestrel from flushing due to humans.
Ardia and Bildstein, 1997	Females usually use more open areas. Males frequently use field edges and shelterbelts.
Bolen and Derden, 1980	wintering habitat includes grasslands
Berry et al., 1998	Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Stahlecker and Behike, 1974	
Mathisen and Mathisen, 1968	
Andrews and Righter, 1992	

36 - Cottonwood Savanna - not mapped

Rohrbaugh and Yahner, 1997	Nest area = 0.2ha.
Kimsey and Conley, 1988 surrounded by short grass pastures	
Olendorff, 1973	
Lingle, 1989	
Rohrbaugh, 1994	Nest area = 0.2ha.
Rising, 1974	

40 - Non-native Grassland

Holmes et al., 1993	Study area comprised of ranches and farms. Buffer zone of 75m would protect kestrel from flushing due to humans.
Ardia and Bildstein, 1997	Females usually use more open areas. Males frequently use field edges and shelterbelts.
Verland et al., 1993	pasture, old field, grassy fencerow, woody fencerow, interspersed with cities and towns
Bolen and Derden, 1980	wintering habitat includes grasslands
Berry et al., 1998	Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Doody, 1994	wintering in pastures and open habitat
Bortolotti, 1994	
Toland, 1987	pasture, plowed fields, farmland, woodlots
Stahlecker and Behike, 1974	
Sample and Mossman, 1997	foraging
Kimsey and Conley, 1988	In New Mexico, found mostly in irrigated agriculture (associated with canal), bordering most riparian areas and contained alfalfa, chile and cotton crops; plowed and fallow fields; pecan groves; and
Andrews and Righter, 1992	
Sferra, 1984	pastures, hayfields
Lingle, 1989	pasture, hayfields, shelterbelts/woodlots, and
Driscoll et al., 1989	
Arnold and Martin, 1992	pasture, haylands, apple orchards, shelterbelts
Jacobs, 1981	Pastures and hayfields provide good hunting grounds. Used farms, ranches, cropland and
Toland, 1983	Area was farmland interspersed with woodlots, old fields, and meadows.
Savant, 1998	pasture
Graber and Graber, 1951	Region that is grazing land and plowed and cultivated to mainly wheat.

41 - CRP

Ardia and Bildstein, 1997		Females usually use more open areas. Males frequently use field edges and shelterbelts.
Bolen and Derden, 1980		wintering habitat includes grasslands
Toland, 1987		
Johnson and Schwartz, 1993		
Andrews and Righter, 1992		

43 - Rock Outcrop/Bluff/Cliff - not mapped

Phillips and Beske, 1990		

44 - Cultivated Land

Holmes et al., 1993		Farms consisted of alfalfa and winter wheat. Buffer zone of 75m would protect kestrel from flushing due to humans.
Ardia and Bildstein, 1997		Females usually use more open areas. Males frequently use field edges and shelterbelts.
Verland et al., 1993		corn, soybean, alfalfa,
Rohrbaugh and Yahner, 1997		corn, soybeans, wheat, alfalfa, pasture, mixed grasses for hay. Nest boxes placed throughout area. Nest area = 0.2ha.
Bortolotti, 1994		
Toland, 1987		wheat, corn, oats, tobacco, soybean, milo
Stahlecker and Behike, 1974		
Mathisen and Mathisen, 1968		
Sample and Mossman, 1997		foraging
Kimsey and Conley, 1988		In New Mexico, found mostly in irrigated agriculture (associated with canal), bordering most riparian areas and contained alfalfa, chile and cotton crops; plowed and fallow fields; pecan groves; and
Andrews and Righter, 1992		
Sferra, 1984		corn stubble and plowed field
Lingle, 1989		corn, wheat, sorghum and other small grain
Driscoll et al., 1989		
Arnold and Martin, 1992		corn, small grain
Jacobs, 1981		Pastures and hayfields provide good hunting grounds. Used farms, ranches, cropland (Medicago sativa, Avena sativa, Zea mays) and pastures.
Toland, 1983		Row crops interspersed with woods, pastures and meadows.
Rohrbaugh, 1994		corn, soybeans, wheat, alfalfa, pasture, mixed grasses for hay. Nest boxes placed throughout area. Nest area = 0.2ha.
Graber and Graber, 1951		Region that is grazing land and plowed and cultivated to mainly wheat.
Schwilling, 1956		Prefer open and sparsely timbered areas. Orchards.

51 - Maple Floodplain Forest

Rohrbaugh and Yahner, 1997		Nest area = 0.2ha.
Olendorff, 1973		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Rohrbaugh, 1994		Nest area = 0.2ha.
[KS GAP]	Map 30 m edge.	

55 - Deciduous Woodland

Doody, 1994		wintering in wooded bottomlands, pastures, barns and sheds
Stahlecker and Behike, 1974		
Sferra, 1984		
Arnold and Martin, 1992		
Jacobs, 1981		Nesting in tree hollows and wood duck boxes.
Savant, 1998		farmsteads
Johnsgard, 1990		farmsteads
Schwilling, 1956		Prefer open and sparsely timbered areas.
[KS GAP]	Map 30 m edge.	

60 - Mixed Prairie-Disturbed Land

Toland, 1987		disturbed grasslands
Mathisen and Mathisen, 1968		
Driscoll et al., 1989		In Missouri, shows preference for "disturbed grasslands" where they were nesting in urban areas.
Rising, 1974		along roadsides

71 - Weedy Upland

Verland et al., 1993	
Bolen and Derden, 1980	wintering habitat includes grasslands
Toland, 1987	
Sample and Mossman, 1997	foraging
Sferra, 1984	old field
Lingle, 1989	pasture
Driscoll et al., 1989	Showed preference for "disturbed grasslands".
Arnold and Martin, 1992	old fields
Jacobs, 1981	prime hunting area
Toland, 1983	
Savant, 1998	old field

81 - Urban Areas

Verland et al., 1993	
Berry et al., 1998	Wintering and summering in grasslands and riparian corridors of an urbanized landscape.
Doody, 1994	Winter roosts by females include man-made structures (barns and sheds). Kestrels also used trees (Quercus, Carya illinoensis, and Salix nigra) that flanked the ditches of roads.
Bortolotti, 1994	ledges of tall office buildings of big cities
Bortolotti, 1994	nest boxes, drain pipes, chimneys, abandoned
Toland, 1987	woodlots, disturbed grasslands
Jackson et al., 1996	Use nest boxes erected along interstates and
Sutton, 1977	On wires and poles along highways, nesting on campus buildings, and found on bridges.
Dinsmore et al., 1984	Utilize buildings and bridges. Also nests in cavities and trees in open areas.
Sample and Mossman, 1997	golf courses, foraging
Kimsey and Conley, 1988	Included housing along sites of road, with small agricultural fields interspersed among houses.
Andrews and Righter, 1992	
Sferra, 1984	highways, urban areas
Driscoll et al., 1989	Urban environments provided appropriate habitat: (vacant buildings, airfields, athletic fields, cemeteries, highway and railway right-of-ways, and power line corridors).
Arnold and Martin, 1992	roadside-right-of-ways, fencerows, waterways,
Jacobs, 1981	commercial business-retail stores and services, industrial-manufacturing and storage, transportation-highways, roads, airports, railroads, communication and utilities-electric, telephone, radio, television facilities, transmission lines,
Jacobs, 1981	multi family units and mobile homes, fairgrounds, tennis courts, cemeteries, churches, hospitals, playgrounds, schools, arenas, city parks, public swimming pools, athletic fields, shooting ranges and
Toland, 1983	Occupy buildings and nest boxes on utility poles.
Savant, 1998	fence, telephone poles, parks, suburbs,
Johnsgard, 1990	suburbs or parks in cities
Rising, 1974	found along roadsides
Schwilling, 1956	Prefer open and sparsely timbered areas. Often found in heart of large cities, on large buildings.
Wolhuter, 1970	Usual nesting site includes tree cavities or in man-made structures such as Purple Martin houses or eaves of buildings.

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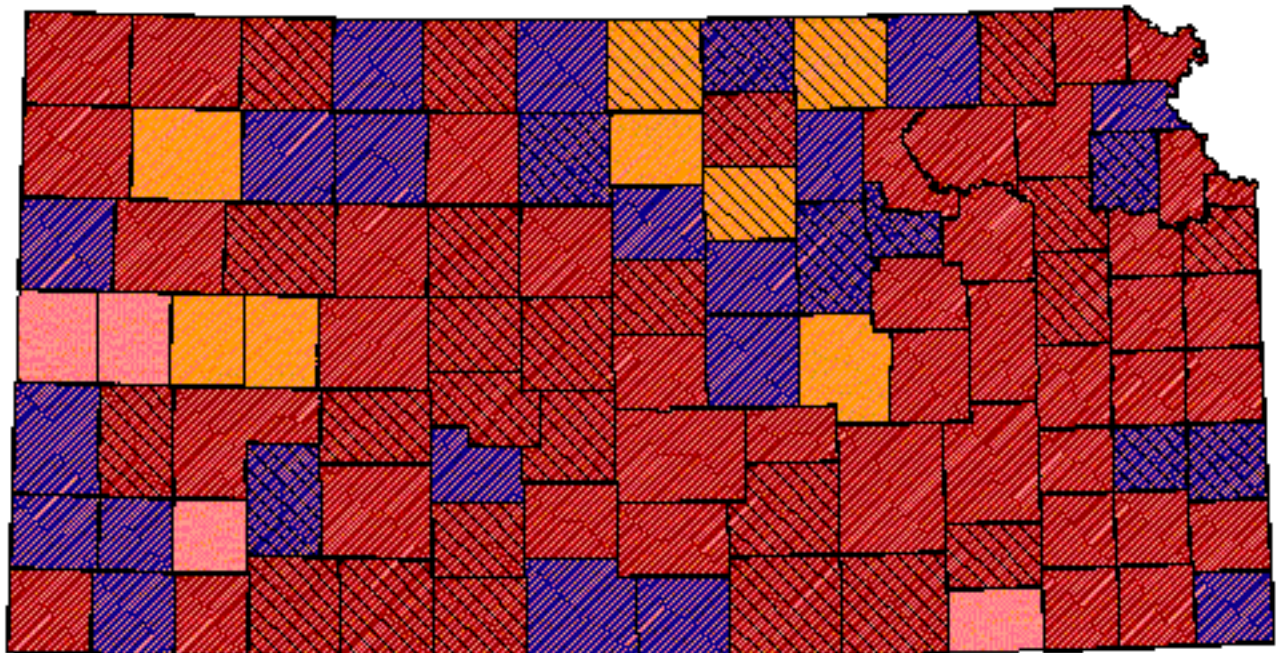
American Kestrel



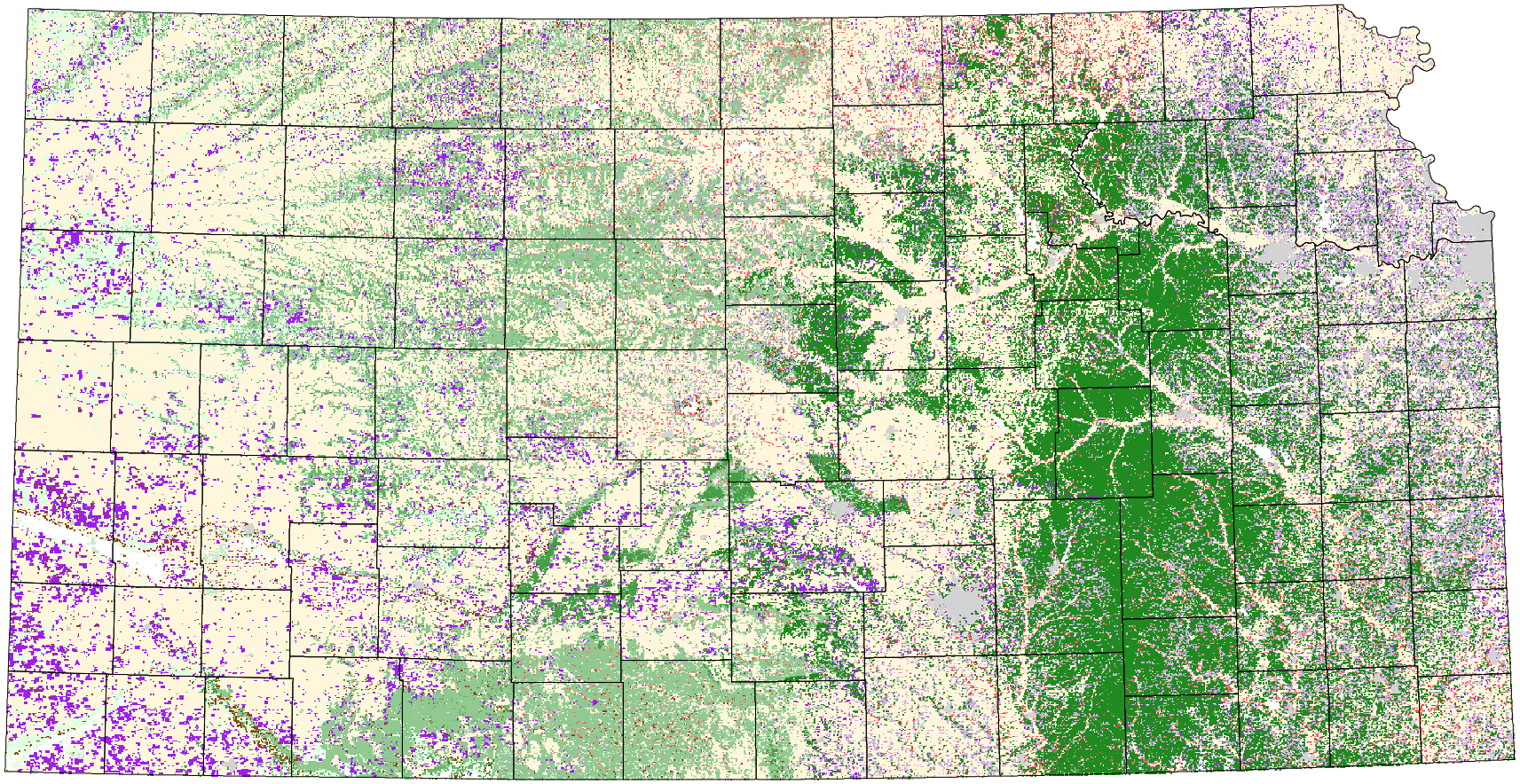
Kansas Breeding Bird Atlas

- Confirmed Breeding
- Probable Breeding
- Possible Breeding
- Breeding Bird Survey
- *Birds of Kansas*, *Horned Lark*
- Range from Johnsgard, 1998 *The Birds of Nebraska*

Habitat

All shaded counties will be included in the possible distribution of the species.

American Kestrel



Pecan Floodplain Forest*
Ash-Elm-Hackberry Floodplain Forest*
Cottonwood Floodplain Forest*
Mixed Oak Floodplain Forest*
Bur Oak Floodplain Woodland*
Mixed Oak Ravine Woodland*
Post-Oak-Blackjack Oak Woodland*
Cottonwood Floodplain Woodland*
Tallgrass Prairie
Sand Prairie
Western Wheatgrass Prairie
Mixed Prairie
Shortgrass Prairie
Non-native Grassland
CRP
Cultivated Land
Maple Floodplain Forest*
Deciduous Woodland*
Mixed Prairie-Disturbed Land
Weedy Upland
Urban Areas

* 30 m edge