Kentucky's Species of Greatest Conservation Need and their statuses.

Common name	Scientific name	Federal	Heritage	GRank	SRank
Aves (13 species).					
American Kestrel	*Falco sparverius*	N	N	G5	S5
Black-necked Stilt	*Himantopus mexicanus*	PS	N	G5	N
Black-throated Green Warbler	*Dendroica virens*	N	N	G5	S4
Chuck-will's-widow	*Caprimulgus carolinensis*	N	N	G5	S4
Greater Scaup	*Aythya marila*	N	N	G5	S2
Lesser Scaup	*Aythya affinis*	N	N	G5	S4
Ruffed Grouse	*Bonasa umbellus*	N	N	G5	S4
Sandhill Crane	*Grus canadensis*	PS	N	G5	N
Sora	*Porzana carolina*	N	N	G5	N
Spotted Sandpiper	*Actitis macularius*	N	E	G5	S1
Tundra Swan	*Cygnus columbianus*	N	N	G5	N
Virginia Rail	*Rallus limicola*	N	N	G5	S1
Whip-poor-will	*Caprimulgus vociferus*	N	N	G5	S5

Literature cited

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CLASS Aves

American Kestrel ***Falco sparverius***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S5B,S5N	G5	S5

G-Trend Decreasing

G-Trend Comment Breeding Bird Surveys show a significant decrease of 0.7% survey-wide for the period 1966-2007 with a relative abundance of 0.86 individuals per route (Sauer et al. 2008). An analysis of migration counts of American Kestrels suggest

	declines in the northeastern, midwestern and western regions of the continent (Farmer and Smith 2009). Declines have also been documented in monitored populations of kestrels using nest boxes. Related analyses which take into account the timing of disease and predator population increases suggest that causes for decline may be on wintering/migration grounds (Smallwood et al 2009).
S-Trend	Unknown
S-Trend Comment	Breeding Bird Surveys in Kentucky show a nonsignificant decrease of 0.6% for the period 1966-2007 with a relative abundance of 1.63 individuals per route (Sauer et al. 2008).
Habitat / Life History	American Kestrels are usually found in semi-open and open habitats. They are most abundant in rural farmland where they hunt over fields and pastures (Palmer-Ball 1996). However, they are also found in native grasslands and altered habitats such as urban areas, city parks, golf courses, industrial parks, and reclaimed surface mines.
Key Habitat	Habitat condition throughout Kentucky is FAIR for this species. No key habitat to identify: the species will use appropriate habitat statewide.
Guilds	grassland/agricultural, urban/suburban.
Statewide Map	American_Kestrel.pdf

Conservation Issues

Biological/ consumptive uses

5D Competition from introduced/invasive or native species. Competition for cavities with starlings and other species.

5K Lack of suitable habitat for spawning, nesting, or breeding. Suitable nest site availability- lack of natural cavities.

5Q Declining prey base. Pesticide use, over-grazed pasture and row-cropping.

Terrestrial habitat degradation

3A Row-crop agriculture (conversion to, annual reuse of fields, etc). Results in lower prey populations in open habitat.

3F Urban/residential development

3N Removal of dead trees

3S Fire suppression/fire regime management

CLASS Aves

Black-necked Stilt ***Himantopus mexicanus***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
PS	N	G5	SAB	G5	N

G-Trend	Increasing
G-Trend Comment	Breeding Bird Surveys show a significant increase of 3.04% survey-wide for the period 1966-2007 with a relative abundance of 1.91 individuals per route (Sauer et al. 2008).
S-Trend	Stable
S-Trend Comment	Black-necked stilts first nested in Kentucky in 1993. Since that time, they have nested sporadically in far western Kentucky when proper habitat conditions are present (Palmer-Ball 2003)
Habitat / Life History	Black-necked stilts generally nest in flooded agricultural fields along the Mississippi and Ohio Rivers in western Kentucky. The sporadic nature of this flooding means that habitat may not be available in all years (Palmer-Ball personal communication).
Key Habitat	Habitat condition throughout Kentucky is POOR for this species.
Guilds	No key habitat to identify: the species will use appropriate habitat in western KY.
	standing water.

Statewide Black-neckedStilt.pdf

Map

Conservation Issues

Aquatic habitat degradation

2F Riparian zone removal (Agriculture/development)

2H Wetland loss/drainage/alteration

Biological/ consumptive uses

5B Predation from native species

Siltation and increased turbidity

1B Agriculture. plowing of nesting areas

CLASS Aves

Black-throated Green Warbler ***Dendroica virens***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S4B	G5	S4

G-Trend Stable

G-Trend Comment The Breeding Bird Survey shows a significant increase of 1.2% survey-wide (USA and Canada) for the period 1980-2007. Partners in Flight estimates a population of 9,600,000 individuals (see Rosenberg 2004 for assumptions).

S-Trend Unknown

S-Trend Comment Only a limited number of Breeding Bird Survey routes exist in the southeast part of the state; thus, the species is detected only on 5 routes. Analysis of these routes show a nonsignificant increase of 5.4% per year for the period 1966-2007 with an average of 0.95 individuals per route (Sauer et al. 2008) . Partners in Flight estimates a population of 24,000 individuals (see Rosenberg 2004 for assumptions).

Habitat / Life History Black-throated Green Warblers are typically found in association with hemlock stands, although they are found occasionally in deciduous or mixed pine-hardwood forests. They are most numerous in fairly mature forest, but will also use regenerating second-growth forests and forest edges (Palmer-Ball).

Key Habitat Habitat condition in eastern Kentucky range is FAIR.

	The species will use appropriate habitat in the Cumberland Plateau and Mountains.
Guilds	Cumberland highland forest, upland forest.
Statewide Map	Black_throated_Green_Warbler.pdf

Conservation Issues

Biological/ consumptive uses

5B Predation from native species

5M Brood parasitism (Brown-headed Cowbird)

5Q Declining prey base. From insecticides

Miscellaneous Mortality Factors

6G Stochastic events (droughts, unusual weather, pine beetle damage, flooding etc.). Potential loss of habitat due to hemlock woolly adelgid infestation.

Terrestrial habitat degradation

3G Shoreline development. Riparian corridor removal/development

3H Habitat loss outside of Kentucky

3K Surface mining. Loss of forest habitat from mining

3M Timber harvest

3R Habitat and/or Population Fragmentation. Forest fragmentation

CLASS Aves

Chuck-will's-widow ***Caprimulgus carolinensis***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S4S5B	G5	S4

G-Trend Unknown

G-Trend Comment Breeding Bird Surveys show a significant decrease of 1.7% survey-wide for the period 1966-2007 with a relative abundance of 1.35 individuals per route (Sauer et al. 2008). Partners in Flight estimates a population of 15,000,000 individuals (see Rosenberg 2004 for assumptions).

S-Trend Unknown

S-Trend Comment Breeding Bird Surveys in Kentucky show a significant decrease of 2.6% for the period 1980-2007 (Sauer et al. 2008). Partners in Flight estimates a population of 310,400 individuals (see Rosenberg 2004 for assumptions).

Habitat / Life History Chuck-will's-widows are found in semi-open and open habitats with scattered tracts of forest. They are usually absent in extensively forested areas. Found more commonly in drier forests with an open mid- and understory, especially in oak and hickory forests with scattered cedars or introduced pines (Palmer-Ball 1996)..

Key Habitat Habitat conditions in Kentucky are generally FAIR

Key Habitat Locations (and their condition):

1. Will use appropriate habitat mostly west of the Cumberland Plateau.

Guilds grassland/agricultural, savanna/ shrub-scrub, upland forest.

Statewide Map Chuck_Wills_Widow.pdf

Conservation Issues

Biological/ consumptive uses

5Q Declining prey base. Pesticide use

Miscellaneous Mortality Factors

6A Traffic/road kills

Terrestrial habitat degradation

3F Urban/residential development

3P Pollution/toxicity (e.g., heavy metals, pesticides, herbicides, acid rain).

Pesticides

CLASS Aves

Greater Scaup ***Aythya marila***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S2S3N	G5	S2

G-Trend Decreasing

G-Trend Comment Populations of both scaup species have seen dramatic declines in recent years. Breeding numbers of scaup have declined 35% from 6.4 million in 1980 to 4.2 million in 2009 (U.S, Fish and Wildlife Service 2009). Reasons for these declines are still largely not understood.

S-Trend Decreasing

S-Trend Comment Little data exists on wintering populations of scaup. Mid-winter waterfowl survey data indicates a 85% decline in the 10-year average (USFWS unpublished data)

Habitat / Life History Scaup are generally open water birds being found in large reservoirs and Rivers statewide.

Key Habitat Habitat condition throughout Kentucky are GOOD for this species.

No key habitat to identify: the species will use appropriate habitat statewide.

Guilds Large rivers in current, Large rivers in slackwater.

Statewide GreaterScaup.pdf

Map

Conservation Issues

Aquatic habitat degradation

2E Stream channelization/ditching

2H Wetland loss/drainage/alteration

Biological/ consumptive uses

5L Parasitism and disease

Terrestrial habitat degradation

3G Shoreline development

3P Pollution/toxicity (e.g., heavy metals, pesticides, herbicides, acid rain)

CLASS Aves

Lesser Scaup ***Aythya affinis***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S4N	G5	S4

G-Trend Decreasing

G-Trend Comment Populations of both scaup species have seen dramatic declines in recent years. Breeding numbers of scaup have declined 35% from 6.4 million in 1980 to 4.2 million in 2009 (U.S, Fish and Wildlife Service 2009). Reasons for these declines are still largely not understood.

S-Trend Decreasing

S-Trend Comment Little data exists on wintering populations of scaup. Mid-winter waterfowl survey data indicates a 85% decline in the 10-year average (USFWS unpublished data)

Habitat / Life History Scaup are generally open water birds being found in large reservoirs and Rivers statewide.

Key Habitat

No key habitat to identify: the species will use appropriate habitat statewide.

Guilds Large rivers in current, Large rivers in slackwater.

Statewide LesserScaup.pdf

Map

Conservation Issues

Aquatic habitat degradation

2E Stream channelization/ditching

2H Wetland loss/drainage/alteration

Biological/ consumptive uses

5L Parasitism and disease

Terrestrial habitat degradation

3G Shoreline development

3P Pollution/toxicity (e.g., heavy metals, pesticides, herbicides, acid rain)

CLASS Aves

Ruffed Grouse ***Bonasa umbellus***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S4	G5	S4

G-Trend Stable

G-Trend Comment "The ruffed grouse is a popular gamebird distributed from Alaska across central and southern Canada and the northern United States to the Atlantic Coast, south into the central Rocky Mountains and Appalachian Mountains. Its distribution coincides closely with that of aspen, except in the Appalachians. Throughout most of the range of the ruffed grouse, aspen is considered a key component of ruffed grouse diet and cover. Limited research conducted in the Appalachian region suggested ruffed grouse ecology and thus potential management differ greatly between the core of the species range (i.e., the Great Lakes and southern Canada region) and the Appalachian Mountains due at least in part to the absence

of aspen. Breeding bird survey data from the U.S. Fish and Wildlife Service show a significant decline in ruffed grouse indices over the last 35 years in both the Ridge and Valley and Alleghany Plateau regions of the Appalachians. These declines coincide with those of other early-successional bird species, and may be in part a result of changes in forest age over the last 35 years." Devers et a. 2008

S-Trend Decreasing

S-Trend Comment	Grouse populations in the Appalachian region have been declining for several decades. Habitat loss is a major cause in these declines, largely due to limited timber harvests and long timber rotations resulting in vast acreages of mature timber. The Appalachian Cooperative Grouse Research Project (ACGRP) was a multi-state cooperative effort initiated in 1996 to investigate the apparent decline of ruffed grouse and improve management throughout the central and southern Appalachian region (i.e., parts of Ohio, Pennsylvania, Rhode Island, Kentucky, West Virginia, Virginia, and North Carolina, USA) (Devers et al. 2008).
Habitat / Life History	Grouse populations in the Appalachian region have been declining for several decades. Habitat loss is a major cause in these declines, largely due to limited timber harvests and long timber rotations resulting in vast acreages of mature timber (Whitaker 2003). The Appalachian Cooperative Grouse Research Project (ACGRP) was a multi-state cooperative effort initiated in 1996 to investigate the apparent decline of ruffed grouse and improve management throughout the central and southern Appalachian region (i.e., parts of Ohio, Pennsylvania, Rhode Island, Kentucky, West Virginia, Virginia, and North Carolina, USA) (Devers et al. 2007).
Key Habitat	Habitat condition is generally POOR for Kentucky.
Guilds	Cumberland highland forest, savanna/ shrub-scrub, upland forest.
Statewide	Ruffed_Grouse.pdf

Map

Conservation Issues

Biological/ consumptive uses

5B Predation from native species

Terrestrial habitat degradation

3C Lack of newly abandoned farmland

3M Timber harvest. Lack of timber harvest

3O Reforestation. Lack of early-successional forest

3R Habitat and/or Population Fragmentation

3S Fire suppression/fire regime management. Limited use of controlled burning as a management tool

3T Suppression of disturbance regimes. Limited timber harvests = even-aged forests

3V Long-term loss of hard mast trees (American Chestnut, poor oak

CLASS Aves

Sandhill Crane ***Grus canadensis***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
PS	N	G5	SZN	G5	N

G-Trend Increasing

G-Trend Comment The eastern population of sandhill cranes, which migrates through and winters in Kentucky, has increased significantly since USFWS Fall surveys began in 1979. Survey numbers increased from 14,385 in 1979 to 59,876 in 2009 (USFWS unpublished data).

S-Trend Increasing

S-Trend Comment Wintering/transient numbers are increasing. Winter counts reached their highest levels in Feb 2010 with almost 19,000 birds in two groups in the state (KDFWR unpublished data)

Habitat / Wintering/migrating sandhill cranes roost in shallow water (<20cm deep) at night

Life and feed in waste grain fields during the day. Corn stubble is the preferred feeding

History site (Tacha et al. 1994)

Key Habitat condition throughout Kentucky is FAIR for this species.

Habitat

No key habitat to identify: the species will use appropriate habitat in the central portion of the state..

Guilds Emergent and shrub-dominated wetlands, grassland/agricultural.

Statewide Map SandhillCrane.pdf

Conservation Issues

Aquatic habitat degradation

2F Riparian zone removal (Agriculture/development)

2H Wetland loss/drainage/alteration

Miscellaneous Mortality Factors

6C Powerlines

6D Human disturbance (spelunking, destruction/disturbance of nest sites)

Siltation and increased turbidity

1B Agriculture. impacts on shallow roost ponds

Terrestrial habitat degradation

3D Switch to cleaner agricultural practices

CLASS Aves

Sora ***Porzana carolina***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	SZN	G5	N

G-Trend Stable

G-Trend Comment Breeding Bird Surveys show a nonsignificant increase of 0.9% survey-wide for the period 1966-2007 with a relative abundance of 1.04 individuals per route (Sauer et al. 2008).

S-Trend Unknown

S-Trend Comment No data exists for migrating Sora Rails.

Habitat / Life History Sora rails inhabit stands of emergent vegetation within freshwater wetlands. Shallow water, emergent cover, and substrate with high invertebrate abundance are the most important components of rail habitat (Melvin and Gibbs 1994). High interspersion of water to and emergent vegetation are important. Sora rails avoid emergent stands with high stem densities and seem to select larger size wetlands (Melvin and Gibbs 1994).

Key Habitat Habitat condition throughout Kentucky is FAIR for this species.

No key habitat to identify: the species will use appropriate habitat statewide.

Guilds Emergent and shrub-dominated wetlands.

Statewide Sora.pdf

Map

Conservation Issues

Aquatic habitat degradation

2H Wetland loss/drainage/alteration

Terrestrial habitat degradation

3Q Invasive/exotic plants (including fescue). Phragmities invasion

CLASS Aves

Spotted Sandpiper ***Actitis macularius***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	E	G5	S1B	G5	S1

G-Trend Decreasing

G-Trend Comment Breeding Bird Surveys show a significant decrease of 0.81% survey-wide for the period 1966-2007 with a relative abundance of 0.48 individuals per route (Sauer et al. 2008).

S-Trend Unknown

S-Trend Comment The spotted sandpiper is a rare and sporadic breeding bird in Kentucky (Palmer-Ball 1996) but no survey data exists for the species in the state.

Habitat / Life History Spotted sandpipers utilize a wide variety of wetland habitats statewide from stream and river shorelines, to shores of ponds and large reservoirs, to managed shallow water impoundments (Palmer-Ball 1996). For nesting, spotted sandpipers generally nest in disturbance free areas of thick vegetation close to exposed shorelines, but may nest some distance from water in pastures (Palmer-Ball 1996).

Key Habitat Habitat condition throughout Kentucky is FAIR for this species.

No key habitat to identify: the species will use appropriate habitat statewide.

Guilds Emergent and shrub-dominated wetlands, Lowland Streams in slackwater.

Statewide SpottedSandpiper.pdf

Map

Conservation Issues

Aquatic habitat degradation

2E Stream channelization/ditching

Biological/ consumptive uses

5F Low population densities

Siltation and increased turbidity

1B Agriculture

CLASS Aves

Tundra Swan ***Cygnus columbianus***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	SZN	G5	N

G-Trend	Increasing
G-Trend Comment	Breeding populations have increased during the period 1980 -2009. Populatins have increased 25% from 164,500 in 1980 to 205,400 in 2009 (U.S, Fish and Wildlife Service 2009).
S-Trend	Stable
S-Trend Comment	Little evidence exists for abundance of wintering populations in Kentucky. Christmas Bird Count data has recorded Tundra Swans in 5 years since 1980.
Habitat / Life History	This is a wintering bird that uses shallow water wetlands with submerged vegetation (poor) as well as larger lakes, rivers, and ponds (good).
Key Habitat	Habitat condition ranges from POOR (shallow water wetlands) to GOOD (large lakes, rivers, and ponds).
	No key habitat to identify; the species will use appropriate habitat where available statewide.
Guilds	Emergent and shrub-dominated wetlands, grassland/agricultural, standing water.

Statewide Map TundraSwan.pdf

Conservation Issues

Aquatic habitat degradation

2E Stream channelization/ditching

2H Wetland loss/drainage/alteration . Draining of shallow water wetlands

Biological/ consumptive uses

5D Competition from introduced/invasive or native species. introduced mute swans and resident Canada geese

Terrestrial habitat degradation

3A Row-crop agriculture (conversion to, annual reuse of fields, etc). of shallow water wetlands

3G Shoreline development

3H Habitat loss outside of Kentucky

CLASS Aves

Virginia Rail ***Rallus limicola***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S1B?, SZN	G5	S1

G-Trend Stable

G-Trend Comment Little data exists for population trends in the secretive marsh birds. The best piece of information for Virginia rails is the Breeding Bird Survey . Breeding Bird Surveys show an increase of 2.16% survey-wide for the period 1967-2007 with a relative abundance of 0.04 individuals per route (Sauer et al. 2008). Unfortunately, the BBS is not designed to detect marsh birds so data is lacking.

S-Trend Unknown

S-Trend Comment No data exists.

Habitat / Life History Virginia rails inhabit stands of emergent vegetation within freshwater wetlands. Shallow water, emergent cover, and substrate with high invertebrate abundance are the most important components of Virginia rail habitat (Conway and Eddleman 1994). Moderate water to cover ratios are important. Virginia rails avoid emergent stands with high stem densities and seem to select larger size wetlands (Conway and Eddleman 1994).

Key Habitat conditions in Kentucky are likely FAIR.

Habitat

No key habitat to identify; the species will use appropriate habitat range wide.

Guilds Emergent and shrub-dominated wetlands.

Statewide VirginiaRail.pdf

Map

Conservation Issues

Aquatic habitat degradation

2H Wetland loss/drainage/alteration . Wetland Losses

Terrestrial habitat degradation

3Q Invasive/exotic plants (including fescue). Phragmities monocultures in wetlands

CLASS Aves

Whip-poor-will ***Caprimulgus vociferus***

Federal Status	Heritage Status	GRank	SRank	GRank (Simplified)	SRank (Simplified)
N	N	G5	S5B	G5	S5

G-Trend Unknown

G-Trend Comment Breeding Bird Surveys show a significant decrease of 2.1% survey-wide for the period 1966-2007 with a relative abundance of 0.25 individuals per route (Sauer et al. 2008). Partners in Flight estimates a population of 2,100,000 individuals (see Rosenberg 2004 for assumptions).

S-Trend Unknown

S-Trend Comment Breeding Bird Surveys in Kentucky show a nonsignificant decrease of 2.3% for the period 1980-2007 (Sauer et al. 2008). Breeding Bird Surveys in Kentucky Partners in Flight estimates a population of 86,200 individuals (see Rosenberg 2004 for assumptions).

Habitat / Life History Whip-poor-wills are found in areas with greater forest cover than Chuck-will's-widows and in a greater range of habitats, from mesic slopes to subxeric, upland forests. They are found more commonly in disturbed forests and forest edges where they can forage in openings for insect prey (Palmer-ball 1996).

Key Habitat Habitat conditions in Kentucky are likely FAIR.

No key habitat to identify; the species will use appropriate habitat range wide.

Guilds grassland/agricultural, savanna/ shrub-scrub, upland forest.

Statewide Map Whip_poor_will.pdf

Conservation Issues

Biological/ consumptive uses

5Q Declining prey base. Pesticide Use

Miscellaneous Mortality Factors

6A Traffic/road kills

Terrestrial habitat degradation

3A Row-crop agriculture (conversion to, annual reuse of fields, etc).

Conversion of forests to agriculture

3F Urban/residential development

3M Timber harvest

3P Pollution/toxicity (e.g., heavy metals, pesticides, herbicides, acid rain).

Pesticides

3R Habitat and/or Population Fragmentation

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