

Habitat Model for Species: Cliff Swallow

Alpha Code: CLSW Status: Breeding

[Distribution Map](#)

[Habitat Map](#)

Landcover Category

0 - Comments

Samuel, 1971

Ramstack et al., 1998
Salmon and Gorenzel, 1983

Johnsgard, 1998

Brown et al., 1992

Brown and Brown, 1996

Brown and Brown, 1995 Map open habitats and riparian forest and woodland within 1.5 km of a river.
Try to map habitats only near bridges and cliff faces in the future.

[KS GAP] 30 m edge of water (82); Selected habitats within 1.5 km of river (82).

Habitat Restrictions

Comments

Nest under bridges or dams, on outside of barns, and inside of open sheds and barns. Essential features include: 1. Open foraging areas, 2. Vertical substrate with overhang for nest attachment, 3. Mud for nest construction.

Nests on outside of barn.

Four basic conditions found in most colonies include: 1. Open habitat for foraging. 2. A vertical surface beneath an overhang or ledge for nest attachment. 3. A supply of mud. 4. A body of fresh water. Over open areas of farmlands, towns, near cliffs, around bridges, and in other areas where mud supplies and potential nest sites exist.

Large lake restricted foraging. In NE cliff swallows feed mostly over upland areas and resort to feeding over water only during extremely poor weather.

Natural colonies were underneath flat overhangs; artificial nest sites included various types of bridges and culverts, buildings, and miscellaneous irrigation structures. Average foraging distance increased significantly with colony size.

Nests predominantly under bridges and highway culverts (thus near river), buildings (urban), and cliff faces. Most foraging (prefer open areas but also over floodplain forest and near town) is confined to areas within about a 1.5-km radius of the colony.

04 - Pecan Floodplain Forest

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

05 - Ash-Elm-Hackberry Floodplain Forest

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

06 - Cottonwood Floodplain Forest

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

07 - Mixed Oak Floodplain

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

08 - Bur Oak Floodplain Woodland

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

09 - Mixed Oak Ravine

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

11 - Cottonwood Floodplain Woodland

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

17 - Tallgrass Prairie

Brown and Brown, 1995 Map within 1.5 km of river (82).

18 - Sand Prairie

Barko, 1994

Brown and Brown, 1995 Map within 1.5 km of river (82).

Associated with prairie dog colonies.

19 - Sandstone Prairie - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

20 - Western Wheatgrass

Brown and Brown, 1995 Map within 1.5 km of river (82).

22 - Mixed Prairie

Brown and Brown, 1995 Map within 1.5 km of river (82).

24 - Alkali Sacaton Prairie

Brown and Brown, 1995 Map within 1.5 km of river (82).

25 - Shortgrass Prairie

Barko, 1994
Brown and Brown, 1995 Map within 1.5 km of river (82).

Associated with prairie dog colonies.

26 - Grass Playa Lake

Brown and Brown, 1995 Map within 1.5 km of river (82).

27 - Salt Marsh/Prairie

Brown and Brown, 1995 Map within 1.5 km of river (82).

28 - Spikerush Playa Lake

Brown and Brown, 1995 Map within 1.5 km of river (82).

29 - Playa Lake

Brown and Brown, 1995 Map within 1.5 km of river (82).

30 - Low or Wet Prairie

Brown and Brown, 1995 Map within 1.5 km of river (82).

31 - Freshwater Marsh

Brown and Brown, 1995 Map within 1.5 km of river (82).

32 - Bulrush Marsh

Brown and Brown, 1995 Map within 1.5 km of river (82).

33 - Cattail Marsh

Brown and Brown, 1995 Map within 1.5 km of river (82).

34 - Fen - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

35 - Acid seep - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

35 - Neutral seep - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

36 - Cottonwood Savanna - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

37 - Winterfat - Blue Grama Prairie - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

38 - Forb Playa Lake

Brown and Brown, 1995 Map within 1.5 km of river (82).

39 - Pondweed Aquatic Wetland - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

40 - Non-native Grassland

Johnsgard, 1998
Brown and Brown, 1995 Map within 1.5 km of river (82).

41 - CRP

Johnson and Schwartz, 1993
Brown and Brown, 1995 Map within 1.5 km of river (82).

43 - Rock Outcrop/Bluff/Cliff - not mapped

Brown and Brown, 1991
Brown and Brown, 1991
Baicich and Harrison, 1997
Dinsmore et al., 1984
Stewart, 1975
Johnsgard, 1998
Brown and Brown, 1996
Brown and Brown, 1995

foraging

Nesting on cliffs
Nesting on cliffs.
Breeds on cliff faces.
Nesting on cliffs.
cliff

Nesting on cliff faces.

44 - Cultivated Land

Johnsgard, 1998
Brown and Brown, 1995 Map within 1.5 km of river (82).

51 - Maple Floodplain Forest

Brown and Brown, 1995 Map within 1.5 km of river (82).

Feeds over floodplain forest.

55 - Deciduous Woodland

Brown and Brown, 1995 Map within 1.5 km of river (82).

60 - Mixed Prairie-Disturbed Land

Brown and Brown, 1995 Map within 1.5 km of river (82).

70 - Weedy Marsh

Brown and Brown, 1995 Map within 1.5 km of river (82).

71 - Weedy Upland

Brown and Brown, 1995 Map within 1.5 km of river (82).

81 - Urban Areas

Knowlton, 1881
Gauthier and Thomas, 1993
Brown and Brown, 1991
Baicich and Harrison, 1997
Dinsmore et al., 1984
Baker, 1962
Gabrielson, 1914
Stewart, 1975
Salmon and Gorenzel, 1983
Johnsgard, 1998
Brown and Brown, 1995

82 - Water (Lake)

Brown and Brown, 1995

Foraging primarily only when cool or rainy weather reduces insect availability and prevents formation of thermals that concentrate insects.

[KS GAP]

Map 30 m edge.

82 - Water (River)

Brown and Brown, 1995

Foraging primarily only when cool or rainy weather reduces insect availability and prevents formation of thermals that concentrate insects.

90 - Riverine Sand Flats and Bars - not mapped

Brown and Brown, 1995

91 - Ozark Sandstone Glade / Prairie - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

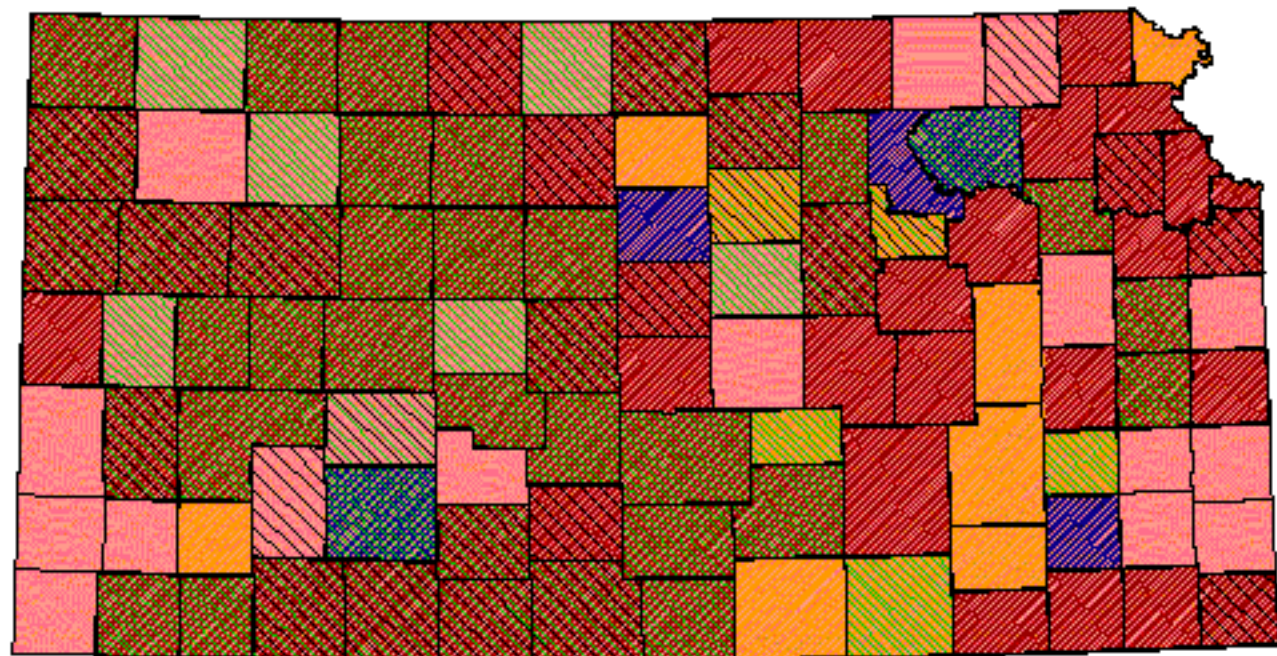
92 - Ozark Limestone Glade - not mapped

Brown and Brown, 1995 Map within 1.5 km of river (82).

Reference List


1. Baicich, P. J. and C. J. Harrison. 1997. A guide to the nests, eggs, and nestling of North American birds. Second edition. Academic Press, San Diego, California, USA.
2. Baker, J. K. 1962. Associations of Cave Swallows with Cliff and Barn Swallows. *Condor* 64:326.
3. Barko, V. A. 1994. Effect of the Black-tailed Prairie Dog on avifaunal composition in southern shortgrass prairie. Thesis, Northeast Louisiana University, Monroe, Louisiana, USA.
4. Brown, C. R. and M. B. Brown. 1995. Cliff Swallow. A. Poole and F. Gill, editors. *The Birds of North America*. No. 149. The American Ornithologists' Union and The Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania, USA.
5. Brown, C. R. and M. B. Brown. 1991. Selection of high-quality host nests by parasitic Cliff Swallows. *Animal Behaviour* 41(3):457-465.
6. _____. 1996. *Coloniality in the Cliff Swallow*. University of Chicago Press, Chicago, Illinois, USA.
7. Brown, C. R., M. B. Brown, and A. R. Ives. 1992. Nest placement relative to food and its influence on the evolution of avian coloniality. *American Naturalist* 139(1):205-217.
8. Dinsmore, J. J., K. H. Thomas, D. Koenig, C. P. Petersen, and M. D. Roosa. 1984. *Iowa Birds*. Iowa State University Press, Ames, Iowa, USA.
9. Gabrielson, I. N. 1914. Breeding birds of a Clay County, Iowa farm. *Wilson Bulletin* 26(2):69-81.
10. Gauthier, M. and D. W. Thomas. 1993. Nest site selection and cost of nest building by Cliff Swallows (*Hirundo pyrrhonota*). *Canadian Journal of Zoology* 71:1120-1123.
11. Johnsgard, P. A. 1998. *The Birds of Nebraska*. University of Nebraska-Lincoln, (available from author).
12. Johnson, D. H. and M. D. Schwartz. 1993. The Conservation Reserve Program: habitat for grassland birds. *Great Plains Research* 3(August):273-295.
13. Knowlton, F. H. 1881. Notes on the habits of the Cliff Swallow (*Petrochelidon lunifrons*). *Bulletin of the Nuttall Ornithological Club* 6:55.
14. Ramstack, J. M., M. T. Murphy, and M. R. Palmer. 1998. Comparative reproductive biology of three species of swallows in a common environment. *Wilson Bulletin* 110(2):233-243.
15. Salmon, T. P. and W. P. Gorenzel. 1983. Cliff Swallows. Pages 67-73 in R. M. Timm, editor. *Prevention and Control of Wildlife Damage*. Great Plains Agricultural Council, Wildlife Resources Committee and Nebraska Cooperative Extension Service, Institute of Agriculture and Natural Resources, University of Nebraska, Lincoln, Nebraska, USA.
16. Samuel, D. E. 1971. The breeding of Barn and Cliff Swallows in West Virginia. *Wilson Bulletin* 83(3):213-340.
17. Stewart, R. E. 1975. *Breeding birds of North Dakota*. Harrison Smith, Lund Press, Minneapolis, Minnesota, USA.

Cliff Swallow





Kansas Breeding Bird Atlas


 Confirmed Breeding

 Probable Breeding

 Possible Breeding

 Breeding Bird Survey

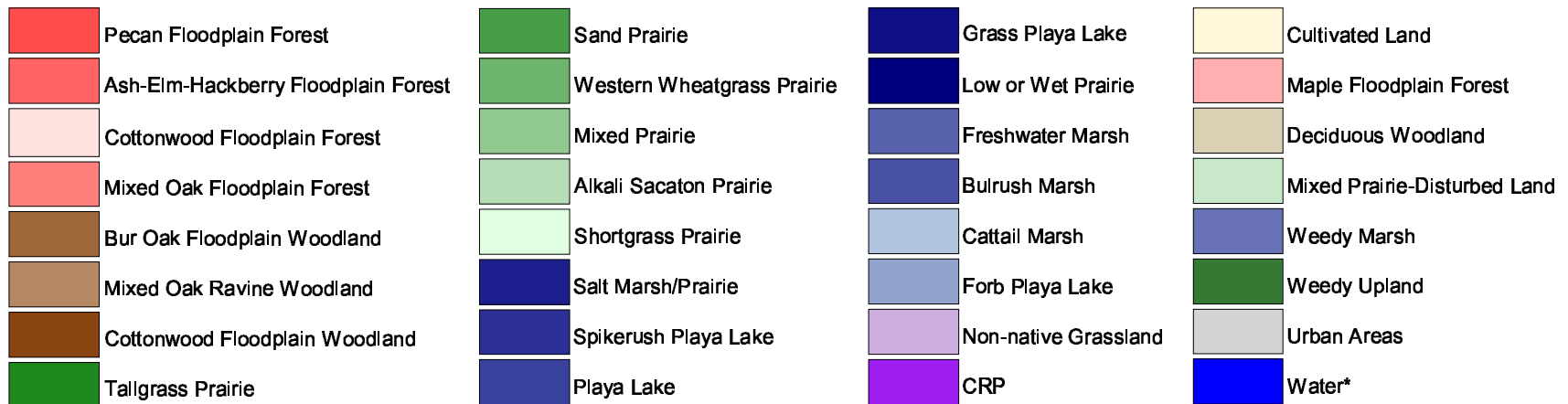
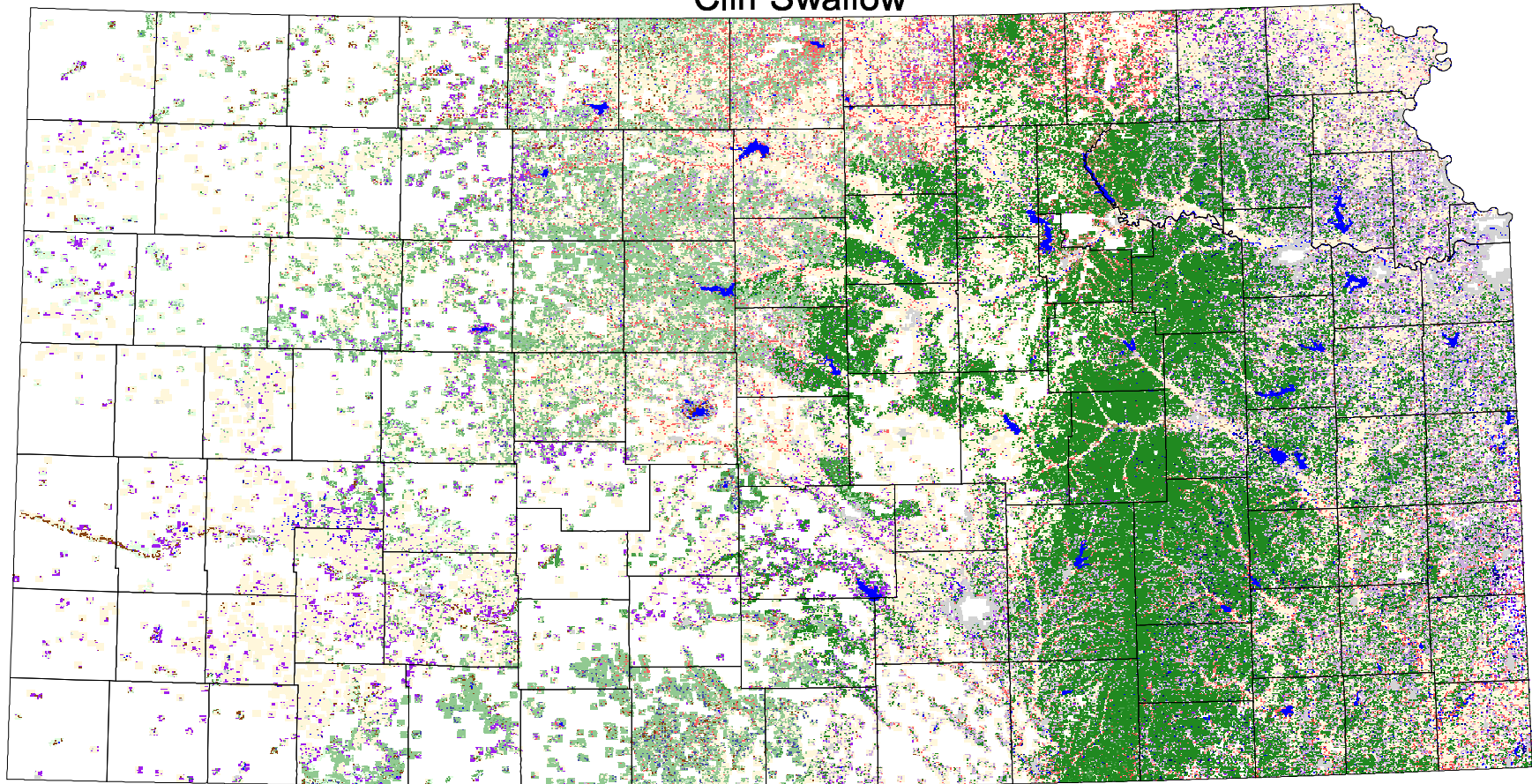
 *Birds of Kansas,*
Horned Lark

 Range from Johnsgard, 1998
The Birds of Nebraska

Habitat

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

Cliff Swallow



All habitats within 1 km of water
* 30 m edge of water