Species Status Assessment

Common Name:	Bald Eagle	**Date Updated:**	March 3, 2025
Scientific Name:	*Haliaeetus leucocephalus*	**Updated By:**	MDP
Class:	Aves		
Family:	Accipitridae		

Species Synopsis

(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):

The bald eagle is a member of the family Accipitridae and the order Falconiformes, of the genus Haliaeetus, meaning sea eagle and species leucocephalus, meaning white-headed. It is the only member of its genus regularly occurring in North America, with the largest breeding populations occurring in Canada and Alaska. In the lower 48 states, the highest concentrations are found in the Northwest and the Southeast.

Breeding historically occurred in undisturbed forested areas, near lakes, rivers, or wetlands. Bald eagles are known to breed throughout all of New York, including New York City and they are breeding in just about every type of habitat including some non-traditional places. For example, we now have eagles breeding in agricultural lands, parks, golf courses, and even residential areas. Bald eagles were nearly eliminated in New York by the late 1960s. In 1971, the bald eagle was listed as endangered in the state. An intensive restoration program began in the late 1970s, slowly rebuilding the nesting population. As a result of the restoration program and additional protection and management provided by the New York State Department of Environmental Conservation (NYSDEC), New York's population of bald eagles increased to the point where state down-listing from endangered to threatened occurred in 1999. New York's breeding bald eagle population is experiencing a consistent annual increase, having rebounded from one breeding pair in the 1970s. At the end of the 2023 breeding season, NYSDEC has recorded 841 territories and >1,000 nests since this initial breeding pair in the 1970s.

While current bald eagle numbers are increasing, the species faces continued threats including vehicle/rail-strikes, disease, and lead poisoning.

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**

ii. New York: Threatened

b. Natural Heritage Program

i. Global: G5

ii. New York: S2S3B,S2N **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

New York 2025 SGCN status: Species of Greatest Conservation Need
COSEWIC: Not listed in Canada
IUCN Red List: Least Concern
Northeast Regional SGCN: Not listed

Status Discussion:

In 1967, the bald eagle was listed as an endangered species in the lower 48 states, under the federal Endangered Species Preservation Act of 1966. By 1970, only one active but unproductive bald eagle nest remained in New York. In 1971, New York State listed the bald eagle as endangered. A successful hacking effort, started in 1976 and terminated in 1988 led to a restoration of bald eagles in New York, a program so successful that 16 other states and the Province of Ontario followed suit. In 1995, USFWS down listed the bald eagle's status to threatened, and in 2007 they were removed from the federal list of threatened and endangered species. During that time frame, New York's population of bald eagles increased to the point where state down-listing from endangered to threatened occurred in 1999 (NYSDEC 2016). Bald eagles are also protected under The Bald and Golden Eagle Protection, that was enacted in 1940, but amended multiple times that restrict take of a bald or golden eagle, including parts, nests, and eggs without permit. New York has an analogous law restricting take, selling, purchasing, or transporting a bald or golden eagle without a permit.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend for US		
Northeastern US	Yes	Increasing	Unknown	BBS 1966-2022 trend		
New York	Yes	Unknown	Unknown	BBS 1966-2022 not	T	

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
				credible trend		
Connecticut	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S3B,S3N	
Massachusetts	Yes	Unknown	Unknown	Unknown	S2B,S3N	
New Jersey	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S3B,S4N	
Pennsylvania	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S4B,S5N,S4M	
Vermont	Yes	Unknown	Unknown	Unknown	S1B,S4N	
Ontario	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S4	
Quebec	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S4	

Column options
Present?: Yes; No; Unknown; No data; (blank) or Choose an Item
Abundance and Distribution: Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item
SGCN?: Yes; No; Unknown; (blank) or Choose an item

Monitoring in New York

(specify any monitoring activities or regular surveys that are conducted in New York):

NYSDEC has not been able to monitor all breeding territories every year since 2010 and yearly effort in monitoring is variable. There has been an increasing trend in the number of occupied territories NYSDEC has recorded and been able monitor (Figure 1.)

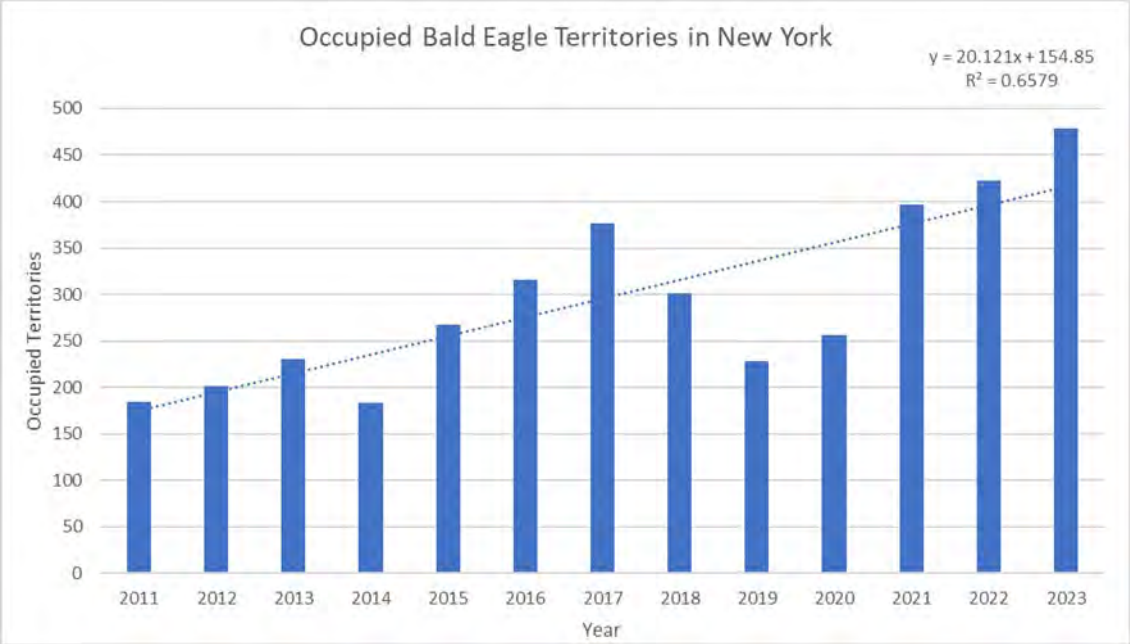

Figure 1: Number of occupied bald eagle territories recorded each year by NY DEC.

Between 1976 and 2010, NYSDEC's Endangered Species Unit led intensive bald eagle monitoring, research and management activities using a network of NYSDEC staff, municipal agencies and volunteers to document activity at all known nests (NYSDEC 2016). These surveys were conducted primarily through remote ground and aerial surveys. Monitoring efforts post 2010 have varied between regions of the state, resulting in a combination of ground and/or aerial surveys.

NYSDEC staff report activity annually and productivity as time permits.

Trends Discussion

(insert map of North American/regional distribution and status):

Reportedly "numerous" in New York during the 19th century, the bald eagle was considered functionally extirpated by 1970 when only one active, but unproductive bald eagle nest remained in the state. An intensive reintroduction program began in 1976. Over 200 eaglets were released as part of the effort, which was terminated in 1988 after the initial goal of reestablishing ten nesting pairs in the state was achieved. Populations continued to increase and in 1999 the state down-listed the bald eagle from endangered to threatened. New York's bald eagle population has experienced a consistent annual increase of 10-15% per year from 2006-2010. In 2023, there were 841 known nesting territories recorded statewide since monitoring efforts began.

Figure 2. Breeding range for bald eagle (eBird).

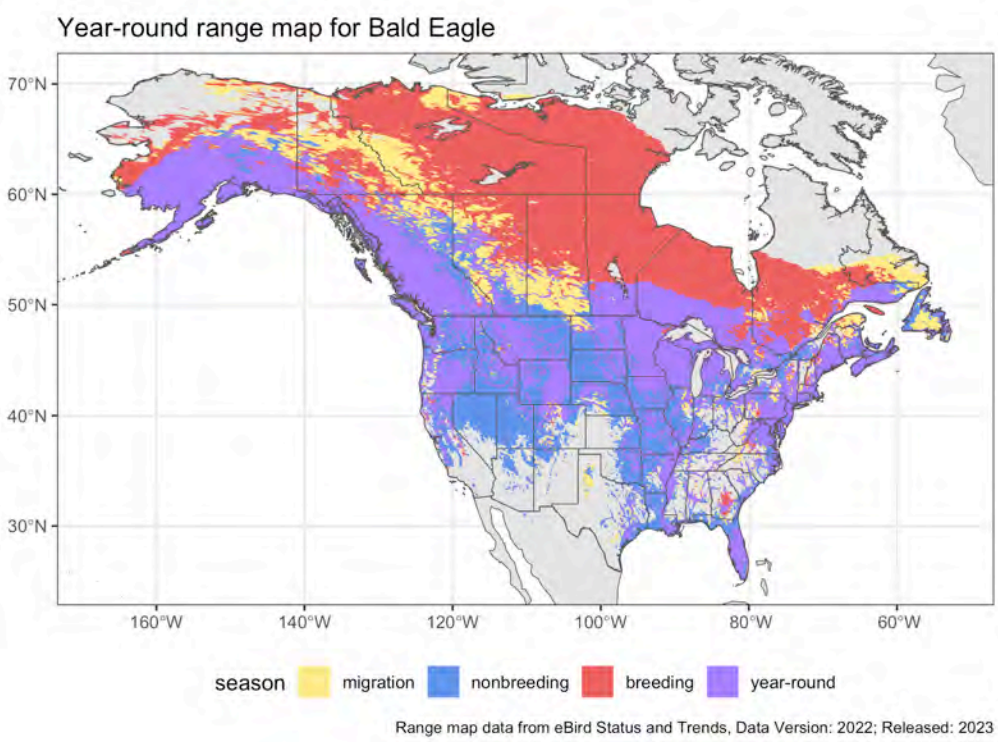

Figure 3. Full (year-round) range for bald eagle (eBird).

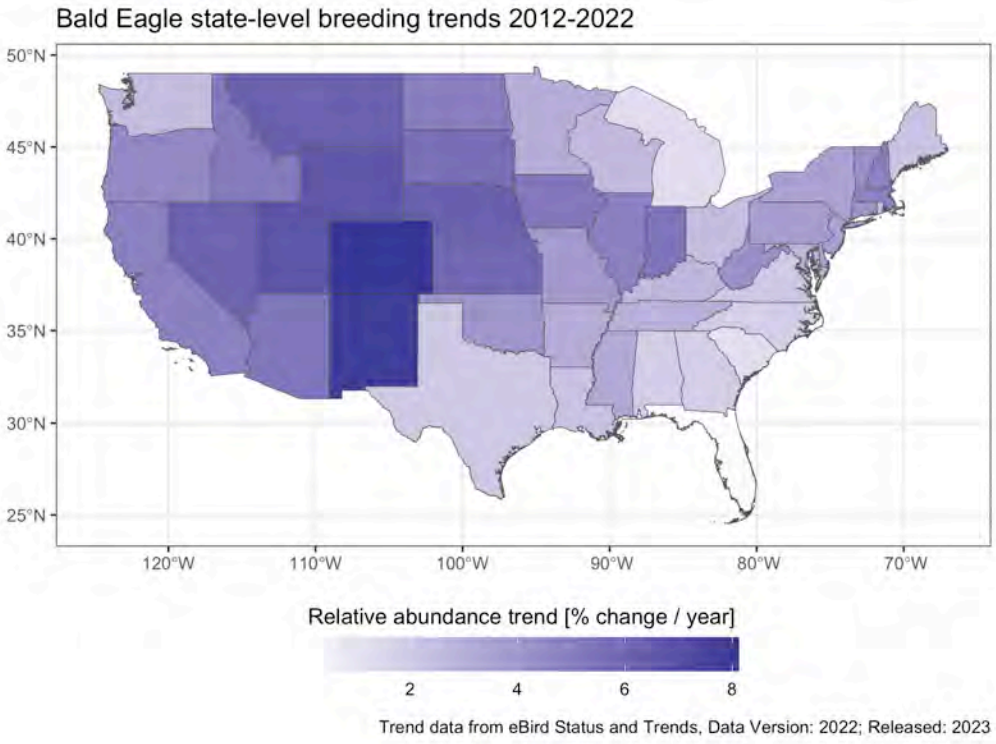

Figure 4. Trends, by state, for bald eagle (eBird).

III. New York Rarity

(provide map, numbers, and percent of state occupied)

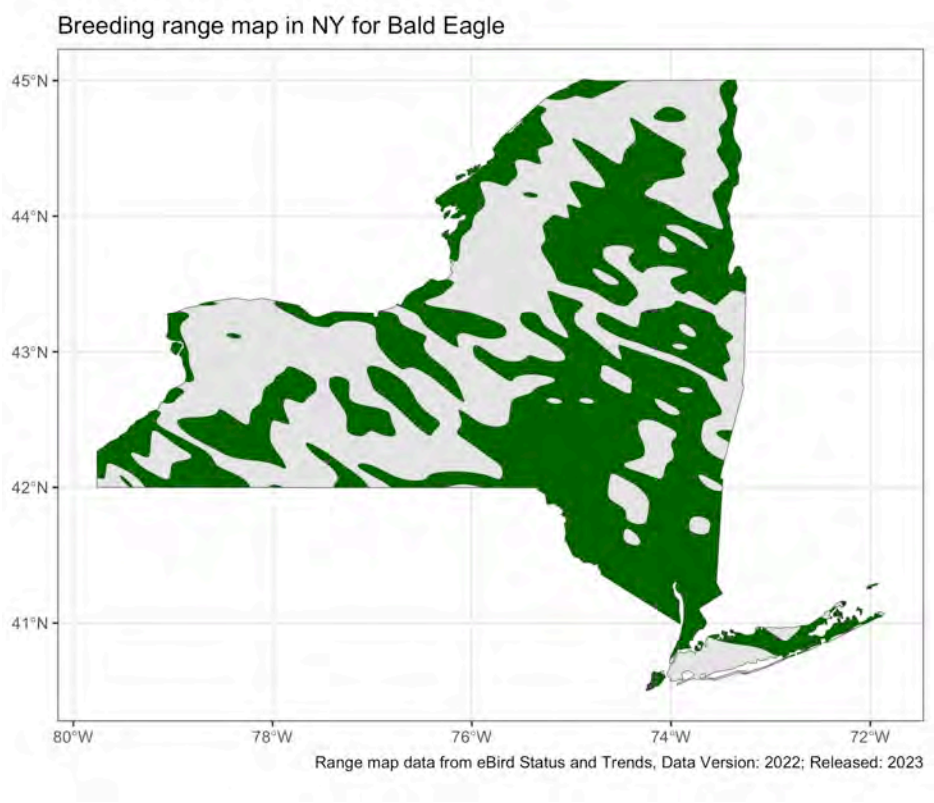

Figure 5: NYS breeding range for bald eagle (eBird).

Details of historic and current occurrence:

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 35 blocks, 0.7% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 445 blocks, 8.3% of the survey blocks statewide (McGowan and Corwin 2008).

The third BBA (2020-25) is currently underway and utilizes a different number and layout of survey blocks across New York, making direct comparison with the first two Atlases difficult. There were 5,333 blocks in the first and second BBAs, and there are 5,710 blocks in the current BBA, of which 1,815 are considered priority blocks. To date, bald eagle has been documented in 1333 priority blocks, 33.1% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

New York's Contribution to Species North American Range:

Based on eBird data, 0.19 percent of the population breeds in New York, while 0.37 percent of the non-breeding population occurs in New York. Among all states with breeding populations, New York ranks 19 of 47.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%		

Column options
Percent of North American Range in NY: 100% (endemic); 76-99%; 51-75%; 26-50%' 1-25%; 0%; Choose an item
Classification of NY Range: Core; Peripheral; Disjunct; (blank) or Choose an item

IV. Primary Habitat or Community Type

(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):

NatureServe broad habitat types: Forest - Hardwood, Forest - Conifer, Cliff, Woodland - Mixed, Woodland - Hardwood, Forest - Mixed, Woodland - Conifer, Forested Wetland, Riparian, Deep water, Shallow water, Bay/sound, River mouth/tidal river, Tidal flat/shore, Lagoon, Big River, Medium River, Near shore.

NY Natural Heritage Communities: Acidic talus slope woodland, Allegheny oak forest, Appalachian oak-hickory forest, Floodplain forest, Black spruce-tamarack bog, Calcareous talus slope woodland, Chestnut oak forest, Rich mesophytic forest, Hemlock-northern hardwood forest, Red maple-hardwood swamp, Oak-tulip tree forest, Spruce-fir swamp, Red maple-tamarack peat swamp, Spruce-northern hardwood forest, Beech-maple mesic forest, Pitch pine-oak-heath rocky summit, Pine-northern hardwood forest, Shale talus slope woodland, Maple-basswood rich mesic forest.

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Unknown	Unknown	Unknown	Unknown

Column options
Habitat Specialist and Indicator Species: Yes; No; Unknown; (blank) or Choose an item.
Habitat/Community Trend: Declining; Stable; Increasing: Unknown; (blank) or Choose an item.

Habitat Discussion:

Bald Eagles are typically found near large bodies of water, such as bays, rivers, and lakes, that support a healthy population of fish and waterfowl, their primary food source. Generally, Bald Eagles tend to avoid areas with human activities. They will perch in either deciduous or coniferous trees. Large, heavy nests are usually built near water in tall pine, spruce, fir, cottonwood, oak, poplar, or beech trees. Non-breeding adults and wintering birds are known to have communal roost sites. During the winter, the roost sites may be farther away from food sources. This may be due to the need for a more sheltered, warmer area. Feeding areas during the winter months usually have a high concentration of fish and waterfowl and open water (NatureServe 2005).

Breeding habitat most commonly includes areas close to (within 4 km) coastal areas, bays, rivers, lakes, reservoirs, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, or seabirds (Andrew and Mosher 1982, Green 1985, Campbell et al. 1990). For example, in Saskatchewan lakes, bald eagle density was positively correlated with abundance of large fishes (Dzus and Gerrard 1993). Nests usually are in tall

trees or on pinnacles or cliffs near water. Tree species used for nesting vary regionally and may include pine, spruce, fir, cottonwood, poplar, willow, sycamore, oak, beech, or others. Ground nesting has been reported on the Aleutian Islands in Alaska, in Canada's Northwest Territories, and in Ohio, Michigan, and Texas. The same nest may be used year after year, or a pair may use alternate nest sites in successive years. See Livingston et al. (1990) for a model of nesting habitat in Maine. See Wood et al. (1989) for characteristics of nesting habitat in Florida (most nests were in live pine trees). In Oregon, most nests were within 1.6 km of water, usually in the largest tree in a stand (Anthony and Isaacs 1989). In Colorado and Wyoming, forest stands containing nest trees varied from old-growth ponderosa pine to narrow strips of riparian vegetation surrounded by rangeland (Kralovec et al. 1992). In Arizona, recent nests were on cliffs or pinnacles, or in large cottonwoods, willows, sycamores, or ponderosa pines, usually within 1 km of a riparian corridor (J. T. Driscoll, in Corman and Wise-Gervais 2005). In winter, bald eagles may associate with waterfowl concentrations or congregate in areas with abundant dead fish (Griffin et al. 1982) or other food resources. Wintering areas are commonly associated with open water though in some regions (e.g., Great Basin) some bald eagles use habitats with little or no open water (e.g., montane areas) if upland food resources (e.g. rabbit or deer carrion, livestock afterbirths) are readily available (GBBO 2010). Wintering eagles tend to avoid areas with high levels of nearby human activity (boat traffic, pedestrians) and development (buildings) (Buehler et al. 1991). Bald eagles preferentially roost in conifers or other sheltered sites in winter in some areas; typically they select the larger, more accessible trees (Buehler et al. 1991, 1992). Perching in deciduous and coniferous trees is equally common in other areas (e.g., Bowerman et al. 1993). Communal roost sites used by two or more eagles are common, and some may be used by 100 or more eagles during periods of high use. Winter roost sites vary in their proximity to food resources (up to 33 km) and may be determined to some extent by a preference for a warmer microclimate at these sites. Available data indicate that energy conservation may or may not be an important factor in roost-site selection (Buehler et al. 1991). Communal night roosts often are in trees that are used in successive years.

V. Species Demographics and Life History

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	Yes	No	Yes	Yes	No

Column options
First 5 fields: Yes; No; Unknown; (blank) or Choose an item.
Anadromous/Catadromous: Anadromous; Catadromous; (blank) or Choose an item.

Species Demographics and Life History Discussion

(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):

Commonly roosts communally, especially in winter. See Curnutt (1992) for information on the dynamics of a year-round communal roost in southern Florida. In Montana, the introduction of shrimp (MYSIS RELICTA) had a cascading effect through the food chain, ultimately causing displacement of bald eagles (Spencer et al. 1991).

VI. Threats

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
8. Invasive & Other Problematic Species	8.4 Pathogens	8.4.2 Viral pathogens	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats for *bald eagle*.

Are there regulatory mechanisms that protect the species or its habitat in New York?

Yes:	✓	No:	Unknown:

If yes, describe mechanism and whether adequate to protect species/habitat:

This species is included in the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) and is protected as a native species under the NYS Environmental Conservation Law. It also receives additional protections as a species listed as Threatened in New York State.

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

Action Category	Action	Description
A.2 Direct Species Management	A.2.1 Stewarding wild individuals	A.2.1.4 Manage wildlife health in the wild

Table 3. Recommended conservation actions for *bald eagle*.

VII. References

This SSA drew heavily from these resources:

eBird. 2024. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. [Accessed: 11/25/2024].

Ziolkowski Jr., D.J., Lutmerding, M., English, W.B., and Hudson, M-A.R., 2024, North American Breeding Bird Survey Dataset 1966 - 2023: U.S. Geological Survey data release, https://doi.org/10.5066/P136CRBV.

New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry. 2024. Element Occurrence and Element Dataset. Albany, New York. [Exported 11/20/2024].

NatureServe. 2024. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. http://www.natureserve.org/explorer. [Accessed 11/20/2024].

Additional references:

American Ornithologists' Union (AOU). 1983. Check-list of North American Birds, 6th edition. Allen Press, Inc., Lawrence, Kansas. 877 pp.

Andrew, J.M. and J.A. Mosher. 1982. Bald eagle nest site selection and nesting habitat in Maryland. J. Wildlife Management 46:382-390.

Andrle, Robert F. and Janet R. Carroll, editors. 1988. The atlas of breeding birds in New York State. Cornell University Press. 551 pp.

Anthony, R. G., and F. B. Isaacs. 1989. Characteristics of bald eagle nest sites in Oregon. J. Wildlife Management. 53:148-159.

Bent, A.C. 1937. Life histories of North American birds of prey. Part 1. Bull. U.S. Natl. Mus. 137. 409 pp.

Bird, D. M., editor. 1983. Biology and management of bald eagles and ospreys. MacDonald. 325 pp.

Bowerman, W. W., T. G. Grubb, J. P. Giesy, A. J. Bath, and G. A. Dawson. 1993. Population composition and perching habitat of wintering Bald Eagles in northcentral Michigan. Canadian Field Naturalist 107: 273- 278.

Brown, B. T. 1993. Winter foraging ecology of bald eagles in Arizona. Condor 95:132-138.

Brown, B. T., and L. E. Stevens. 1992. Winter abundance, age structure, and distribution of bald eagles along the Colorado River, Arizona. Southwestern Naturalist 37:404-435.

Brown, B. T., et al. 1989. Changes in winter distribution of bald eagles along the Colorado River in Grand Canyon, Arizona. J. Raptor Research 23:110-113.

Brown, B. T., P. L. Warren, and L. S. Anderson. 1988. Status of bald eagles in the Rio Yaqui drainage of Sonora, Mexico. Page 321 in Glinski et al., eds. Proc. Southwest raptor management symposium and workshop. Nat. Wildl. Fed. Sci. and Tech. Ser. No. 11.

Buehler, D. A., et al. 1991a. Differences in distribution of breeding, nonbreeding, and migrant bald eagles on the northern Chesapeake Bay. Condor 93:399-408.

Buehler, D. A., et al. 1991b. Effects of human activity on bald eagle distribution on the northern Chesapeake Bay. J. Wildlife Management 55:282-290.

Buehler, D. A., et al. 1991c. Survival rates and population dynamics of bald eagles on Chesapeake Bay. J. Wildlife Management 55:608-613.

Buehler, D. A., et al. 1991d. Nonbreeding bald eagle communal and solitary roosting behavior and roost habitat on the northern Chesapeake Bay. J. Wildlife Management 55:273-281.

Buehler, D. A., et al. 1991e. Winter microclimate of bald eagle roosts on the northern Chesapeake Bay. Auk 108:612-618.

Buehler, D. A., S. K. Chandler, T. J. Mersmann, J. D. Fraser, and J. K. D. Seegar. 1992. Nonbreeding Bald Eagle perch habitat on the northern Chesapeake Bay. Wilson Bulletin 104:540-545.

Bull, John. 1974. Birds of New York State. Doubleday, Garden City, New York. 655 pp.

Busch, D. E. 1988. Bald eagle. Pages 57-64 in Glinski et al., eds. Proc. Southwest Raptor Manage. Symp. and Workshop. National Wildlife Federation Sci. and Tech. Ser. No. 11.

Byrd, M. A., and D. W. Johnston. 1991. Birds. Pages 477-537 in K. Terwilliger, coordinator. Virginia's endangered species: proceedings of a symposium. McDonald and Woodward Publ. Co., Blacksburg, Virginia.

California Department of Fish and Game (CDF&G). 1990. 1989 annual report on the status of California's state listed threatened and endangered plants and animals. 188 pp.

Campbell, R. W., N. K. Dawe, I. McTaggart-Cowan, J. M. Cooper, G. W. Kaiser, and M. C. McNall. 1990b. The birds of British Columbia. Volume 2. Nonpasserines: diurnal birds of prey through woodpeckers. University of British Columbia Press, Vancouver, B.C. 636 pp.

Caton, E. L., et al. 1992. Characteristics of foraging perches used by breeding bald eagles in Montana. Wilson Bull. 104:136-142.

Chester, D. N., et al. 1990. Habitat use by nonbreeding bald eagles in North Carolina. J. Wildlife Management 54:223-234.

Cornell Lab of Ornithology. 2003. All about birds [web application] Copyright 2003. Available http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide/Bald_Eagle_dtl.html.(Accessed: March 29, 2005).

Curnutt, J. L. 1992. Dynamics of a year-round communal roost of bald eagles. Wilson Bull. 104:536-540.

Drennan, Susan R. 1986. 86th Christmas bird count. American Birds 40(4):575-1117.

Dzus, E., and J. Gerrard. 1993. Factors influencing bald eagle densities in northcentral Saskatchewan. J. Wildlife Management 57:771-778.

Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1992. Birds in Jeopardy: the Imperiled and Extinct Birds of the United States and Canada, Including Hawaii and Puerto Rico. Stanford University Press, Stanford, California. 259 pp.

Evans, D. L. 1982. Status reports on twelve raptors. U.S. Department of the Interior, Fish and Wildlife Service, Special Scientific Report No. 238. 68 pp.

Evers, D. C. 1992. A guide to Michigan's endangered wildlife. Univ. Michigan Press, Ann Arbor. viii + 103 pp.

Fisher, A.K. 1893. The hawks and owls of the United States in their relation to agriculture. Washington U.S. Dept. of Agriculture Bull. no. 6. 210 pp.

Forbis, L. A. 1988. Status and trends of bald eagles breeding in Arizona, 1975-1986. Pages 282-288 in Glinski et al., eds. Proc. Southwest raptor management symposium and workshop. Nat. Wildl. Fed. Sci. and Tech. Ser. No. 11.

Fraser, J. D., et al. 1983. Scheduling bald eagle reproductive surveys. Wildlife Society Bull. 11:13-16.

Fraser, J. D., L. D. Frenzel, and J. E. Mathisen. 1985. The impact of human activities on breeding bald eagles in north-central Minnesota. J. Wildlife Management 49:585-592.

Garrett, M. G., J. W. Watson, and R. G. Anthony. 1993. Bald Eagle home range and habitat use in the Columbia River estuary. Journal of Wildlife Management 57:19-27.

Gerrard, J. M., and G. R. Bortolotti. 1988. The bald eagle. Haunts and habits of a wilderness monarch. Smithsonian Institution Press, Washington, D.C. 194 pp.

Gerrard, J. M., P. N. Gerrard, G. R. Bortolotti, and E. H. Dzus. 1992. A 24-year study of Bald Eagles on Besnard Lake, Saskatchewan. Journal of Raptor Research 26:159-166.

Green, N. 1985. The Bald Eagle. Pp 508-531 in R.L. DiSilvestro, ed., Audubon Wildlife Report 1985. National Audubon Society, New York.

Griffin, C. R., T. S. Baskett, and R. D. Sparrowe. 1982. Ecology of bald eagles wintering near a waterfowl concentration. U.S. Fish and Wildlife Service Special Science Report - Wildlife No. 247:1-12.

Grubb, T. G. 1980. An artificial bald eagle nest structure. USDA Forest Service, Rocky Mountain Forest and Range Experimental Station, Research Note RM-383.

Grubb, T. G. 1995. Food habits of bald eagles breeding in the Arizona desert. Wilson Bulletin 107:258-274.

Grubb, T. G., and R. M. King. 1991. Assessing human disturbance of breeding bald eagles with classification tree models. J. Wildlife Management 55:500-511.

Grubb, T. G., S. J. Nagiller, W. L. Eakle, and G. A. Goodwin. 1989. Winter roosting patterns of bald eagles (HALIAEETUS LEUCOCEPHALUS) in north-central Arizona. Southwestern Naturalist 34:453-459.

Grubb, T. G., W. W. Bowerman, and P. H. Howey. 1994. Tracking local and seasonal movements of wintering Bald Eagles HALIAEETUS LEUCOCEPHALUS from Arizona and Michigan with satellite telemetry. Pages 247-358 IN B.-U. Meyburg and R. D. Chancellor, editors. Raptor conservation today. Pica Press, Moose Jaw, Saskatchewan.

Grubb, T. G., W. W. Bowerman, J. P. Giesy, and G. A. Dawson. 1992. Responses of breeding bald eagles, HALIAEETUS LEUCOCEPHALIS [sic], to human activities in northcentral Michigan. Canadian Field-Naturalist 106:443-453.

Harrison, C. 1978. A Field Guide to the Nests, Eggs and Nestlings of North American Birds. Collins, Cleveland, Ohio.

Haywood, D. D., and R. D. Ohmart. 1986. Utilization of benthic-feeding fish by inland breeding bald eagles. Condor 88:35-42.

Herkert, J. R., editor. 1992. Endangered and threatened species of Illinois: status and distribution. Vol. 2: Animals. Illinois Endangered Species Protection Board. iv + 142 pp.

Hunter, P., and D. Baird. 1994/95. The bald eagle in Ontario’s Great Lakes basin. Bird Trends (Canadian Wildlife Service) (4):17-18.

Johnsgard, P. A. 1990. Hawks, eagles, and falcons of North America. Smithsonian Inst. Press, Washington, D.C. xvi + 403 pp.

King, W. B., compiler. 1979. Endangered birds of the world. The International Council for Bird Preservation. Smithsonian Institution Press, Washington, D.C. [Reprinted in handbook form in 1981.]

Kirk, D. A., D. Hussell, and E. Dunn. 1995. Raptor population status and trends in Canada. Bird Trends (Canadian Wildlife Service) 4:2-9.

Knight, R. L., and D. P. Anderson. 1990. Effects of supplemental feeding on an avian scavenging guild. Wildl. Soc. Bull. 18:388-394.

Knight, R. L., and S. K. Knight. 1984. Responses of wintering bald eagles to boating activity. J. Wildlife Management 48:999-1004.

Kozie, K. D., and R. K. Anderson. 1991. Productivity, diet, and environmental contaminants in bald eagles nesting near the Wisconsin shoreline of Lake Superior. Arch. Environ. Contam. Toxicol. 20:41-48.

Kralovec, M. L., R. L. Knight, G. R. Craig, and R. G. McLean. 1992. Nesting productivity, food habits, and nest sites of bald eagles in Colorado and southeastern Wyoming. Southwestern Naturalist 37:356-361.

Lefranc, M. N., Jr., and R. L. Glinski. 1988. Southwest raptor management issues and recommendations. Pages 375-392 in Glinski et al., eds. Proc. Southwest raptor management symposium and workshop. National Wildlife Federation Science and Tech. Ser. No. 11.

Levine, E. 1998. Bull's birds of New York State. Comstock Publishing Associates, Ithaca, NY.

Lincer, J. L., W. S. Clark, and M. N. LeFranc, Jr. 1979. Working bibliography of the bald eagle. Raptor Information Center, National Wildlife Federation, Washington, D.C. NWF Scientific/Technical Series No. 2. 219 pp.

Livingston, S. A., et al. 1990. Habitat models for nesting bald eagles in Maine. J. Wildlife Management 54:644-653.

Mahaffy, M. S., and L. D. Frenzel. 1987. Elicited territorial responses of northern bald eagles near active nests. Journal of Wildlife Management 51:551-554.

Maniscalco, J., compiler. 1992. HALIAEETUS LEUCOCEPHALUS (Linnaeus) bald eagle: a working bibliography. Available as a printed document or on diskette.

Matthews, J.R. and C.J. Moseley (eds.). 1990. The Official World Wildlife Fund Guide to Endangered Species of North America. Volume 1. Plants, Mammals. xxiii + pp 1-560 + 33 pp. appendix + 6 pp. glossary + 16 pp. index. Volume 2. Birds, Reptiles, Amphibians, Fishes, Mussels, Crustaceans, Snails, Insects, and Arachnids. xiii + pp. 561-1180. Beacham Publications, Inc., Washington, D.C.

McGowan, K.J. and K. Corwin, eds. 2008. The Second Atlas of Breeding Birds in New York State: 2000-2005. Cornell University Press, Ithaca, NY. 688 pp.

Millsap, B. A. 1986. Status of wintering bald eagles in the coterminous 48 states. Wildlife Society Bull. 14:433-440.

Montopoli, G. J., and D. A. Anderson. 1991. A logistic model for the cumulative effects of human intervention on bald eagle habitat. J. Wildlife Management 55:290-293.

National Geographic Society. 1987. Field guide to the birds of North America. National Geographic Society, Washington, DC.

New York State Breeding Bird Atlas. 1985. Final breeding bird distribution maps, 1980-1985. New York State Department of Environmental Conservation, Wildlife Resources Center. Delmar, NY.

New York State Department of Environmental Conservation. 2016. Conservation Plan for Bald Eagles in New York State. Available from https://www.dec.ny.gov/docs/wildlife_pdf/nybaldeagleplan.pdf .

New York State Department of Environmental Conservation. Checklist of the amphibians, reptiles, birds, and mammals of New York State, including their protective status. Nongame Unit, Wildlife Resources Center, Delmar, NY.

Nye, Peter E. 1982. Restoring the bald eagle in New York. The Conservationist. July-August 1982.

Nye, Peter E. 1986. Restoration of bald eagles in New York State: Phase III, 1986-1990. Final draft. New York State Department of Environmental Conservation, Endangered Species Unit. Delmar, NY.

Nye, Peter E. and L.H. Suring. 1978. Observations concerning a wintering popultion of bald eagles on an area in southeastern New York. New York Fish and Game Journal Vol. 25(2):91-107.

Nye, Peter E., D. Mildner, and E. Leone. 1994. An assessment of the status of bald eagles on Iona Island, New York and reccommendations for their management.

Nye, Peter. 1998. Annual efforts and outcome of New York State nesting bald eagles.

Nye, Peter. 2003. Annual efforts and outcome of New York nesting bald eagles.

Nye, Peter. 2005. Species group report for bald eagle. Pages 2-7 of Appendix A1, Species group reports for birds in: New York State comprehensive wildlife conservation strategy. New York Department of Environmental Conservation. Albany NY.

Nye, Peter. 2007. Annual efforts and outcome of New York nesting bald eagles.

Palmer, R. S., editor. 1988a. Handbook of North American birds. Vol. 4. [Diurnal raptors, part 1]. Yale University Press, New Haven, CT. vii + 433 pp.

Pendleton, B. A. G., B. A. Millsap, K. W. Cline, and D. M. Bird. 1987. Raptor management techniques manual. National Wildlife Federation, Sci. and Tech. Ser. No. 10. 420 pp.

Root, T. 1988. Atlas of wintering North American birds: An analysis of Christmas Bird Count data. University of Chicago Press. 336 pp.

Sauer, J.R., J.E. Hines, and J. Fallon. 2007. The North American breeding bird survey, results and analysis 1966-2006. Version 10.13.2007. US Geological Survey, Patuxent Wildlife Research Center, Laurel, MD.

Sibley, C.G., and B.L. Monroe, Jr. 1990. Distribution and Taxonomy of Birds of the World. Yale University Press, New Haven, CT. xxiv + 1111 pp.

Singer, F.J. 1974. Status of the Osprey, Bald Eagle, and Golden Eagle in the Adirondacks. N.Y. Fish and Game Journal Vol 21(1):18-31.

Spencer, C. N., B. R. McClelland, and J. A. Stanford. 1991. Shrimp stocking, salmon collapse, and eagle displacement. BioScience 41:14-21.

Stalmaster, M. V. 1987. The bald eagle. Universe. 227 pp.

Steenhof, K. 1978. Management of wintering bald eagles. U.S. Fish and Wildlife Service, FWS/OBS-79/79, 55 pp.

Terres, J. K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

Titus, K., and M. R. Fuller. 1990. Recent trends in counts of migrant hawks from northeastern North America. Journal of Wildlife Management 54:463-470.

U.S. Fish and Wildlife Service (USFWS). 1990. Endangered and threatened species recovery program: report to Congress. 406 pp.

U.S. Fish and Wildlife Service (USFWS). 1999. Proposed rule to remove the Bald Eagle in the lower 48 states from the list of endangered and threatened wildlife. Federal Register 64:36453-36464.

Vermeer, K., and K. H. Morgan. 1989. Nesting population, nest sites, and prey remains of bald eagles in Barkeley Sound, British Columbia. Northwestern Naturalist 70:21-26.

Watson, J. W., M. G. Garrett, and R. G. Anthony. 1991. Foraging ecology of bald eagles in the Columbia River estuary. J. Wildlife Management 55:492-499.

Wiemeyer, S. N., et al. 1989. Environmental contaminants in blood of western bald eagles. J. Raptor Res. 23:140-146.

Witmer, G., and T. A. O'Neil. 1990. Assessing cumulative impacts to wintering bald eagles in western Washington. Pages 144-150 in Mitchell et al., eds. Ecosystem management: rare species and significant habitats. New York State Museum Bull. 471.

Wood, P. B., T. C. Edwards, Jr., and M. W. Collopy. 1989. Characteristics of bald eagle nesting habitat in Florida. J. Wildlife Management 53:441-449.