

History of Christmas Bird Counts in Wisconsin

by

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In 1900 **Bird Lore** sponsored the first Christmas Bird Count, an event that traditionally has been carried out every year since. Wisconsin is one of the few states that has participated in every count, the first Christmas Count in Wisconsin being made December 25, 1900 by Alick Wetmore when he censused the North Freedom area in Sauk County and found 12 species and 105 individuals. From 1900 through 1938, 203 Christmas Counts were made in Wisconsin and reported in **Bird Lore**, an average of about 5 counts each year.

The formation of the Wisconsin Society for Ornithology in 1939 gave new impetus to Christmas Counts in Wisconsin by sponsoring these counts and reporting the results in the **Passenger Pigeon**. The growth and distribution of Christmas Counts in Wisconsin since 1939 are summarized in table 1. These counts seem to fall into three distinct eras.

From 1939 through 1948 the number of counts remained small, especially during the war years. Most of the counts were made in the southern third of the state, and counts from the northern third were very rare. Small groups of observers made most of the counts, and a lack of organization often resulted in the same general area being censused by two or more counts.

Interest in the Christmas Counts rose sharply in 1949, and during the 12-year period through 1960 an average of 35 counts were made each year, compared with an average of 11 the previous 10 years. During this 12-year period there was a gradual increase in the number of observers and in counts with 10 or more observers. More counts were made in the northern and central counties, but 50% were still in the southern third of the state. The increased participation, better organization, and greater distribution of counts throughout the state was rewarded by the observation of more species of birds. Prior to 1952, 100 species had never been seen on Wisconsin Christmas Counts, but more than 100 have been sighted every year since.

The year 1961 marked the start of a third era, an era characterized by even greater participation and organization, and perhaps most important, by a fairly well-balanced distribution of counts throughout the state. The larger and better organized counts were still concentrated in the southern two-thirds of the state, but many excellent counts were being made in the northern counties. The observation of 129 species on counts in 1965 was phenomenal, considering that only 115 species had been sighted in the 203 counts made from 1900 through 1938.

From 1939 through 1965, 163 species of birds were found on Wisconsin Christmas Counts, and these are recorded in tables 2, 3, and 4. Table 2 lists the species that were found in 3 or fewer of the last 27 years, and table 3 lists the species that occurred on an average of less than 4% of the counts from 1961 through 1965. The remaining species, those that are normally found every year in some part of the state, are listed in table 4. Emphasis has been placed on the counts from 1961 through 1965, because these were the only years when counts were uniformly distributed throughout the state.

The average percentage of counts on which each species occurred during this 5-year period is recorded and used as a measure of abundance. This percentage indicates the likelihood with which each species will occur on counts throughout the state, but is not necessarily related to the actual numbers of individuals that may be seen. Species such as the Greater Scaup Duck, Herring Gull, Common Redpoll, Lapland Longspur, and Snow Bunting may occur in tremendous numbers in certain areas, but be very unevenly dispersed throughout the state. Based on the average percentage of counts on which they occurred from 1961-1965, each species has been classified in table 4 as either "abundant" (90% or more of the counts), "very common" (70-89%), "common" (30-69%), "fairly common" (15-29%), or "uncommon" (less than 15% of the counts).

A coefficient of variability (CV) was also calculated from the 1961-1965 counts and used as a measure of the regularity with which each species occurs in Wisconsin on Christmas Counts. A high CV indicates irregular occurrence. The regularity of occurrence is classified in table 4 as either "very constant" (CV=1-9), "constant" (CV=10-19), "fairly regular" (CV=20-40), "irregular" (CV=41-60), or "very irregular" (CV=61 or more).

In addition to the 163 species sighted on Wisconsin Christmas Counts, two more have been found during the count period but not on the day of the count. Woodcocks were found at Wautoma in 1965, and a Pine Warbler was sighted at Lake Geneva in 1960.

Based on records from 1939-1965, and especially on those from 1961-1965, the occurrence of birds on Christmas Counts in Wisconsin can be summarized as follows:

Loons and grebes—Both the Red-throated Loon and Common Loon have been found, as have 3 of the 5 species of grebes; however, only the Pied-billed Grebe occurs with any frequency, having been reported in 19 of the last 27 years.

Hérons and bitterns—Although the Great Blue Heron is found on a few counts each year, over all it must be considered rare during the Christmas season. The Black-crowned Night Heron occurs even less frequently, while the American Bittern has been found only twice.

Swans and geese—The Canada Goose occurs fairly regularly, but is uncommon, while the Snow Goose, Blue Goose, and Whistling Swan are rare.

Ducks—Three species of ducks occur commonly, the Common Goldeneye being the most abundant and widely distributed. The Mallard and Black Duck also occur in numbers wherever open water is found,

with Black Ducks outnumbering Mallards farther north, but being less numerous than Mallards in the south. Eighteen other species of ducks have been found, and most of them occur on a small percentage of the counts each year.

Scoters and mergansers—Scoters have been found, but are rare. All three species of mergansers are usually found each year, the Common Merganser and the Red-breasted Merganser occurring quite regularly on several counts.

Hawks and eagles—Fourteen species have been found, three of them being distinct rarities. The more common species fall into two categories. The Cooper's Hawk, Red-tailed Hawk, Rough-legged Hawk, Sparrow Hawk, and Bald Eagle occur consistently; the Goshawk, Sharp-shinned Hawk, and Marsh Hawk occur irregularly. The latter two species and the Red-shouldered Hawk normally winter south of Wisconsin and tend to linger in the southern part of the state in mild winters, while the Goshawk invades irregularly from the north. Of the species that occur consistently each year, only the Bald Eagle is found in the northern as well as the southern counties. The other four species are generally confined to the southern two-thirds of the state, being most numerous farther south.

Grouse, quail, partridges, and pheasants—The presence of snow makes all of these birds much easier to find. The irregular occurrence of the Gray Partridge on Christmas Counts may be mostly due to the presence or absence of snow.

Coots and rails—The American Coot occurs fairly regularly each year, but is uncommon. Of the rails, only the Virginia Rail has been found, and it is very rare.

Shorebirds—Only the Common Snipe has been found with any frequency on Christmas Counts, and it is uncommon. Other species of shorebirds are definite rarities.

Gulls—The Herring Gull is common and the Ring-billed Gull is fairly common in the vicinity of larger bodies of open water. The Bonaparte's Gull is sometimes found in numbers along Lake Michigan in the southeastern part of the state, but other species are rare.

Doves—The Rock Dove is abundant, but is not included in the Christmas Counts. The Mourning Dove is consistently found and common in the southern half of the state.

Owls—Nine species of owls have been found. The Screech Owl, Great Horned Owl, Barred Owl, Long-eared Owl, and Short-eared Owl all occur fairly regularly each year throughout most of the state. The Snowy Owl is irregular, being fairly common some years and absent in others. The Saw-whet Owl, Hawk Owl, and Barn Owl are rare.

Kingfishers—The Belted Kingfisher is fairly common, being found irregularly in the southern half of the state.

Woodpeckers—The Pileated Woodpecker, Red-bellied Woodpecker, Red-headed Woodpecker, Hairy Woodpecker, and Downy Woodpecker are common, the latter two species being among the six most frequently encountered species on the Christmas Counts.

Larks—The Horned Lark occurs consistently and is fairly common in the southern half of the state.

Crows and jays—The Common Crow is very common in the southern half of the state and occasionally is found in the northernmost counties. The Common Raven is common only in the northern two or three tiers of counties where it is consistently seen each year; it rarely wanders much farther south. The Blue Jay is one of our most abundant species, especially in the central and southern parts of the state, while the Gray Jay is found only in the far north where it is quite common in some areas.

Titmice, nuthatches, and creepers—The Black-capped Chickadee holds the distinction of being the bird most often found on Wisconsin Christmas Counts. Its cousin the Boreal Chickadee, however, is uncommon and normally found only in the north. The Tufted Titmouse is commonly found only in the south. Both the White-breasted Nuthatch and the Red-breasted Nuthatch are found over the entire state, the former being abundant, especially in the south, while the latter is less common and more irregular in its occurrence. The Brown Creeper is common in the southern part of the state, and occasionally is found in the north.

Wrens—All of the species of wrens that occur in Wisconsin have been sighted at one time or another on Christmas Counts, but all are rare during this season. Only the Winter Wren is found with any regularity, often occurring on one or two counts.

Mockingbirds, catbirds, and thrashers—The Brown Thrasher appears irregularly on Christmas Counts, occurring normally on about 5% of the counts. The Mockingbird and Catbird are very rare.

Thrushes—Five species have been seen, but only the Robin occurs with regularity, being fairly common in the southern half of the state. The Eastern Bluebird and Hermit Thrush, however, have been sighted several times.

Kinglets and pipits—The Golden-crowned Kinglet is fairly common and occurs irregularly throughout the state. The Ruby-crowned Kinglet is rare, and the Water Pipit has been seen only once.

Waxwings and shrikes—The Bohemian Waxwing has the distinction of being the most irregular occurring species on Christmas Counts. Some years it is fairly common, while in many years it is entirely absent. The Cedar Waxwing occurs with greater regularity and is much more common. The Northern Shrike is fairly common and fairly regular in its occurrence, and although the Loggerhead Shrike has never been found, it should be looked for.

Starling and House Sparrow—Both of these species are abundant in most areas and are missed only on counts made in wilderness areas.

Warblers—All of the warblers are Christmas Count rarities, but the Myrtle Warbler has been found several times in recent years.

Meadowlarks and blackbirds—None of the species are common, but both species of meadowlarks, the Red-winged Blackbird, Rusty Blackbird, Common Grackle, and Brown-headed Cowbird occur fairly regularly in the southern half of the state. The Yellow-headed Blackbird and Brewer's Blackbird are rare.

Grosbeaks and finches—The Cardinal is very common, occurring consistently throughout the southern half of the state and occasionally in the far north. The American Goldfinch is common and occurs con-

sistently throughout the state, while the Purple Finch is less common and much less consistent in its occurrence. The Pine Grosbeak, Evening Grosbeak, Common Redpoll, Hoary Redpoll, Pine Siskin, Red Crossbill, and White-winged Crossbill are irregular in their occurrence. In years when one or more of the above species occurs in abnormally high numbers, the others may be scarce. Only the Common Redpoll and Pine Grosbeak seem to occur in abnormally high or low numbers in the same years.

Sparrows, longspurs, and buntings—Many species of sparrows have been found, with 8 of them usually found on 4% or more of the counts in an average year. The Slate-colored Junco and Tree Sparrow are very common and occur very consistently over the southern half of the state. The Oregon Junco and Song Sparrow are quite common in the southern half of the state and occur consistently each year. The Field Sparrow, White-throated Sparrow, Fox Sparrow, and Swamp Sparrow are uncommon in the southern half of the state and less consistent in their occurrence. Other species are rare. The Lapland Longspur is very irregular and uncommon, while the Snow Bunting is consistently common, especially in the northern and central parts of the state.

Table 1. Christmas Bird Counts and their distribution throughout the state from 1939 through 1965.

Year	Number of Counts	Number of Observers	Number of Species	No. Counts with 10 or more observers	Distribution of Counts (percent)		
					North	Central	South
1939	12	42	91	1	25	17	58
1940	16	118	75	3	6	13	81
1941	12	56	85	3	8	25	67
1942	8	25	53	0	0	25	75
1943	7	30	53	1	0	29	71
1944	7	23	51	1	0	29	71
1945	11	36	63	1	0	27	73
1946	12	53	82	2	0	25	75
1947	12	59	77	1	0	42	58
1948	13	56	82	3	0	38	62
1949	28	80	94	2	4	38	58
1950	34	136	90	4	16	27	54
1951	18	85	83	3	11	17	72
1952	34	180	111	5	6	42	52
1953	44	240	116	8	14	38	48
1954	41	226	112	6	12	37	51
1955	37	224	109	9	8	38	54
1956	37	268	111	9	11	32	57
1957	36	277	113	11	17	36	47
1958	34	256	106	9	12	38	50
1959	36	282	109	10	17	36	47
1960	47	340	104	15	21	36	43
1961	46	354	107	17	33	35	33
1962	53	466	111	18	30	40	30
1963	68	587	118	18	28	43	29
1964	61	576	116	20	27	42	31
1965	85	709	129	27	26	45	29

Table 2. Very Rare Birds: Species seen in 3 or fewer of the last 27 years, and the Count and year in which each was seen.

Western Grebe—Milwaukee 1951, 1952, & 1953
American Bittern—Caledonia 1953; Waukesha 1965
Harlequin Duck—Racine 1962, & 1965
Surf Scoter—Madison 1952; Lake Geneva 1957
Broad-winged Hawk—Green Bay 1953; Lafayette Co. 1953
Peregrine Falcon—Sauk City 1940; Lake Geneva 1953
Gyr Falcon—Shawano 1964
Spruce Grouse—Sturgeon Bay 1939
Chukar Partridge—Kenosha 1965
Virginia Rail—Waukesha 1956; Madison 1964
Spotted Sandpiper—Cooksville 1965
Knot—Milwaukee 1948
Purple Sandpiper—Racine 1965
Glaucous Gull—Kenosha 1949; Milwaukee 1952; Bayfield 1965; Superior 1965
Black-backed Gull—Kenosha 1949, & 1953
Franklin's Gull—Milwaukee 1950
Barn Owl—Oconomowoc 1961; Racine 1965
Hawk Owl—Wausau 1964
House Wren—Racine 1939
Bewick's Wren—Madison 1959
Long-billed Marsh Wren—Waukesha 1954; Madison 1957
Short-billed Marsh Wren—Madison 1957
Catbird—Waukesha 1952; Antigo 1956; Luck 1956; Madison 1956; Green Bay 1965
Varied Thrush—Chippewa Falls 1961; Grantsburg 1963
Gray-cheeked Thrush—Keshena 1965
Water Pipit—Two Rivers 1952
Ovenbird—Madison 1965
Yellowthroat—Madison 1941, & 1965; Kenosha 1965
Yellow-headed Blackbird—Horicon 1961; Oshkosh 1965
Rose-breasted Grosbeak—Madison 1957
Dickcissel—Oconomowoc 1965
Henslow's Sparrow—Horicon 1942
Harris' Sparrow—Monroe 1953; Beloit 1958
Lincoln's Sparrow—Kewaunee 1963

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Table 3. Rare Birds. Species that normally occur on less than 4% of the Counts.

Species	No. years seen-in		Ave. % Counts in last 5 years
	last 27 years	last 10 years	
Common Loon	7	2	0.7
Red-throated Loon	9	5	0.3
Horned Grebe	8	4	0.8
Pied-billed Grebe	19	8	1.8
Great Blue Heron	15	10	3.3
Black-crowned Night Heron	9	4	3.3
Whistling Swan	5	3	0.6
Snow Goose	5	3	0.5
Blue Goose	7	5	1.2
Pintail	22	8	2.7
Gadwall	21	9	3.6
Green-winged Teal	19	4	0.8
Blue-winged Teal	6	4	0.5
American Widgeon	21	8	2.5
Shoveler	22	8	2.6
Wood Duck	16	10	3.2
Redhead	17	8	2.4
Ring-necked Duck	15	7	2.4
White-winged Scoter	14	8	1.2
Ruddy Duck	21	10	2.9
Golden Eagle	5	4	2.0
Pigeon Hawk	6	2	0.7
Prairie Chicken	4	4	0.3
Sharp-tailed Grouse	9	6	2.1
Killdeer	7	3	1.3
Bonaparte's Gull	16	6	1.6
Saw-whet Owl	7	5	1.4
Black-backed Woodpecker	4	4	1.3
Winter Wren	16	8	1.6
Carolina Wren	4	1	0.0
Mockingbird	6	2	0.4
Hermit Thrush	10	5	0.7
Eastern Bluebird	9	5	0.7
Ruby-crowned Kinglet	10	5	0.7
Myrtle Warbler	9	8	1.4
Brewer's Blackbird	9	6	2.5
Hoary Redpoll	5	4	1.4
Rufous-sided Towhee	11	8	1.2
Savannah Sparrow	6	4	0.7
Vesper Sparrow	8	5	0.6
White-crowned Sparrow	13	6	3.1

Table 4. Uncommon to Abundant Birds: Species that normally occur on more than 4% of the Counts.

Species	Yrs. seen last	Last 5 years			Abundance	Regularity
		% of Counts		CV %		
		Ave.	Range			
Canada Goose	21	12	9-17	31	uncommon	fairly regular
Mallard	27	43	38-49	12	common	consistent
Black Duck	27	32	26-37	14	common	consistent
Canvasback	23	7	2-9	40	uncommon	fairly regular
Greater Scaup Duck*	18	6			uncommon	
Lesser Scaup Duck*	22	9			uncommon	
Common Goldeneye	27	51	43-57	10	common	consistent
Bufflehead	26	10	6-15	40	uncommon	fairly regular
Oldsquaw	24	13	9-16	22	uncommon	fairly regular
Hooded Merganser	26	5	2-7	82	uncommon	very irregular
Common Merganser	27	30	25-41	22	common	fairly regular
Red-breasted Merganser	27	12	8-13	20	uncommon	fairly regular
Goshawk	17	8	4-13	45	uncommon	irregular
Sharp-shinned Hawk	17	9	7-16	44	uncommon	irregular
Cooper's Hawk	22	15	11-17	16	uncommon	consistent
Red-tailed Hawk	27	50	44-57	11	common	consistent
Red-shouldered Hawk	24	14	9-20	28	uncommon	fairly regular
Rough-legged Hawk	25	40	34-44	10	common	consistent
Bald Eagle	24	17	15-20	15	fairly common	consistent
Marsh Hawk	22	20	9-28	43	fairly common	irregular
Sparrow Hawk	26	29	24-37	19	fairly common	consistent
Ruffed Grouse	26	38	27-42	17	common	consistent
Bobwhite	26	9	3-20	69	uncommon	very irregular
Ring-necked Pheasant.	27	50	40-59	13	common	consistent
Gray Partridge	26	11	7-20	47	uncommon	irregular
American Coot	26	9	7-13	24	uncommon	fairly regular
Common Snipe	20	8	0-12	60	uncommon	irregular
Herring Gull	27	34	26-44	19	common	consistent
Ring-billed Gull	24	15	11-22	28	fairly common	fairly regular
Mourning Dove	26	50	42-59	12	common	consistent
Screech Owl	26	12	8-15	23	uncommon	fairly common
Great Horned Owl	25	24	13-34	37	fairly common	fairly regular
Snowy Owl	16	8	5-16	58	uncommon	irregular
Barred Owl	26	21	10-26	30	fairly common	fairly regular
Long-eared Owl	23	11	6-15	31	uncommon	fairly regular
Short-eared Owl	22	5	3-7	33	uncommon	fairly regular
Belted Kingfisher	27	17	7-25	43	fairly common	irregular
Yellow-shafted Flicker	23	18	12-24	24	fairly common	fairly regular
Pileated Woodpecker	23	33	21-49	33	common	fairly regular
Red-bellied Woodpecker	27	52	45-62	13	common	consistent
Red-headed Woodpecker	25	36	19-52	32	common	fairly regular
Yellow-bellied Sapsucker	14	5	2-10	65	uncommon	very irregular
Hairy Woodpecker	27	89	85-91	3	very common	very consistent
Downy Woodpecker	27	90	89-92	1	abundant	very consistent
Horned Lark	24	28	23-32	15	fairly common	consistent
Gray Jay	12	9	6-11	24	uncommon	fairly regular
Blue Jay	27	96	90-99	4	abundant	very consistent
Common Raven	14	21	16-26	17	fairly common	consistent
Common Crow	27	80	70-87	9	very common	very consistent
Black-capped Chickadee	27	98	97-99	1	abundant	very consistent
Boreal Chickadee	13	5	4-10	22	uncommon	fairly regular
Tufted Titmouse	23	28	20-37	25	fairly common	fairly regular
White-breasted Nuthatch	27	94	91-96	2	abundant	very consistent
Red-breasted Nuthatch	27	42	28-57	24	common	fairly regular
Brown Creeper	27	36	29-48	23	common	fairly regular
Brown Thrasher	14	5	2-7	46	uncommon	irregular
Robin	27	27	19-41	31	fairly common	fairly regular

Table 4. (continued)

Species	Yrs. seen last	Last 5 years			Abundance	Regularity
		% of Counts		CV %		
		Ave.	Range			
Golden-crowned Kinglet	26	26	16-47	49	fairly common	irregular
Bohemian Waxwing	12	8	0-26	133	uncommon	very irregular
Cedar Waxwing	20	21	15-33	33	fairly common	fairly regular
Northern Shrike	25	27	16-41	35	fairly common	fairly regular
Starling	27	94	91-99	3	abundant	very consistent
House Sparrow	27	93	89-99	4	abundant	very consistent
meadowlark spp.	23	20	13-25	25	fairly common	fairly regular
Red-winged Blackbird	26	29	17-36	24	fairly common	fairly regular
Rusty Blackbird	22	5	4-7	25	uncommon	fairly regular
Common Grackle	21	28	16-37	32	fairly common	fairly regular
Brown-headed Cowbird	16	7	6-9	22	uncommon	fairly regular
Cardinal	27	76	70-79	6	very common	very consistent
Evening Grosbeak	21	48	21-74	48	common	irregular
Purple Finch	26	47	30-68	38	common	fairly regular
Pine Grosbeak	20	27	7-57	78	fairly common	very irregular
Common Redpoll	24	35	13-59	50	common	irregular
Pine Siskin	21	26	15-47	48	fairly common	irregular
American Goldfinch	27	64	52-76	15	common	consistent
Red Crossbill	15	4	2-7	49	uncommon	irregular
White-winged Crossbill	13	7	0-13	68	uncommon	very irregular
Slate-colored Junco	27	75	65-81	8	very common	very consistent
Oregon Junco	15	19	17-21	9	fairly common	very consistent
Tree Sparrow	27	70	61-77	10	very common	consistent
Field Sparrow	14	4	2-5	24	uncommon	fairly regular
White-throated Sparrow	22	12	9-15	25	uncommon	fairly regular
Fox Sparrow	15	5	2-10	73	uncommon	very irregular
Swamp Sparrow	20	9	7-12	24	uncommon	fairly regular
Song Sparrow	26	27	24-30	10	fairly common	consistent
Lapland Longspur	19	7	0-13	69	uncommon	very irregular
Snow Bunting	26	38	33-45	15	common	consistent

*Identified only as scaup spp. in 1943, 1945, 1963, and 1964.

PASSENGER PIGEON FLIES AROUND THE WORLD

A while back I overheard a conversation between two WSO members. The older member was explaining to the newer member that our publication was a "basically non-technical magazine of interest only to the members of the society."

This statement can be refuted on at least one account. In the 1963 summer issue of *The Passenger Pigeon*, I had a paper published, "The Visitometer, A Simplified Mechanical Counter." Since then I have honored 22 requests for reprints of the paper from universities and other research organizations in 15 states from Maine to California, and three foreign countries including three from Canada and one each from England and Australia.

Granted this may be a menial contribution to an ever expanding world of ornithological knowledge, but it does give the publication a national, even an international, flavor. You might say "our" *Passenger Pigeon* has flown around the world.—Donald J. Hendrick, Tomahawk Junior High School, Tomahawk, Wisconsin 54487.