

U.S. Fish & Wildlife Service

Birding in the United States: A Demographic and Economic Analysis

*Addendum to the 2011 National
Survey of Fishing, Hunting, and
Wildlife-Associated Recreation*

Report 2011-1



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December 2013
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This report is intended to complement the National and State reports from the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The conclusions are the author's and do not represent official positions of the U.S. Fish and Wildlife Service.

The author thanks Sylvia Cabrera, Richard Aiken, and Matthew Fuller for their input into this report.

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Introduction

The following report provides up-to-date information so birders and policy makers can make informed decisions regarding the management of birds and their habitats. This report identifies who birders are, where they live, how avid they are, and what kinds of birds they watch. In addition to demographic information, this report also provides an economic measure of birding. It estimates how much birders spend on their hobby and the economic impact of these expenditures.

By understanding who birders are, they can be more easily reached and informed about pressures facing birds and bird habitats. Conversely, by knowing who is likely *not* a birder, or who is potentially a birder, information can be more effectively tailored. The economic values presented here can be used by resource managers and policy makers to demonstrate the economic might of birders, the value of birding – and by extension, the value of birds.

All data presented here are from the wildlife-watching section of the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR). It is the most comprehensive survey of wildlife recreation in the United States. Overall, about 9,300 detailed wildlife-watching interviews were completed with a response rate of 67 percent. The Survey focused on 2011 participation and expenditures by U.S. residents 16 years of age and older.



Al Milliken/USFWS

Birders

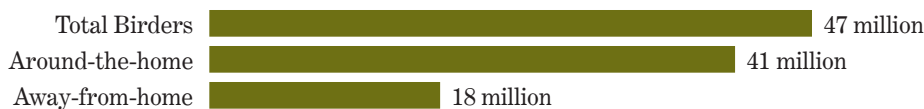
In 2011, there were 47 million birdwatchers (birders), 16 years of age and older, in the United States – about 20 percent of the population. What is a birder? The National Survey uses a conservative definition. To be counted as a birder, an individual must have either taken a trip one mile or more from home for the primary purpose of observing birds and/or closely observed or tried to identify birds around the home. Thus, people who happened to notice birds while they were mowing the lawn or picnicking at the beach were not counted as birders. Trips to zoos and observing captive birds also did not count.

Backyard birding or watching birds around the home is the most common form of bird-watching. Eighty-eight percent (41 million) of birders are backyard birders. The more active form of birding, taking trips away from home, is less common with 38 percent (18 million) of birders partaking.

The average birder is 53 years old and more than likely has a better than average income and education. She is slightly more likely to be female and highly likely to be white. There is also a good chance that this birder lives in the south in an urban area. Does this paint an accurate picture of a birder? Like all generalizations, the description of an “average” birder does not reflect the variety of people who bird, with millions falling outside this box. The tables and charts show numbers and participation rates (the percentage of people who participate) of birders by various demographic breakdowns.

The tendency of birders to be middle-age or older is reflected in both the number of birders and participation rates. Looking at the different age categories in Table 1, the greatest number of birders were in the 55 plus age group. People over the age of 55 had the highest participation rates while the participation rate was particularly low for people ages 16 to 24.

Chart 1. Birders in the United States: 2011
(16 years of age and older.)

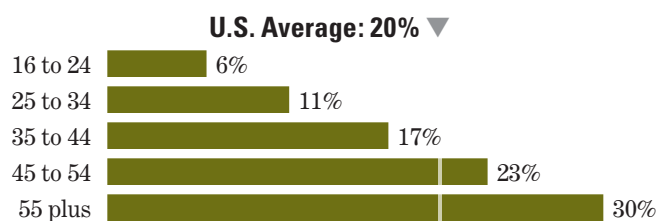


Note: Detail does not add to total because of multiple responses.

Table 1. Age Distribution of the U.S. Population and Birders: 2011
(Population 16 years of age and older. Numbers in thousands.)

Age	U.S. Population	Number of Birders	Participation Rate
16 to 24	34,169	1,939	6%
25 to 34	41,613	4,767	11%
35 to 44	40,779	6,799	17%
45 to 54	46,167	10,396	23%
55 plus	76,586	22,840	30%

Chart 2. Birders' Participation Rate by Age: 2011



The higher the income and education level the more likely a person is to be a birder. Birders with incomes above the median participated at a higher rate than the average birder while birders with incomes below the median participated at a lower rate. Education, which is often highly correlated with income, shows the same trend. People with less than high school education participated at 11 percent – far below the national average – while people with a college degree had the highest participation rate at 28 percent. See Tables 2 and 3 for more information.

Unlike hunting and fishing where men were overwhelmingly in the majority, a larger percent of birders were women – 56 percent in 2011 (See Chart 5).



Steve Hillebrand/USFWS

Table 2. Income Distribution of the U.S. Population and Birders: 2011

(Population 16 years of age and older. Numbers in thousands.)

Income	U.S. Population	Number of Birders	Participation Rate
Less than \$20,000	30,550	4,455	15%
\$20,000 to \$29,999	23,154	3,661	16%
\$30,000 to \$49,999	40,036	7,734	19%
\$50,000 to \$74,999	33,850	8,432	25%
\$75,000 or more	66,177	15,862	24%

Chart 3. Birders' Participation Rate by Income: 2011

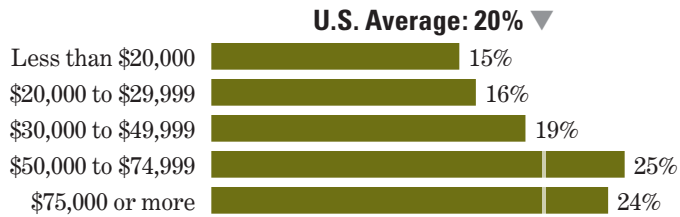


Table 3. Educational Distribution of the U.S. Population and Birders: 2011

(Population 16 years of age and older. Numbers in thousands.)

Education	U.S. Population	Number of Birders	Participation Rate
11 years or less	31,574	3,340	11%
High School Graduate	81,984	12,462	15%
Some College	55,014	10,849	20%
College Graduate +	70,740	20,089	28%

Chart 4. Birders' Participation Rate by Education: 2011

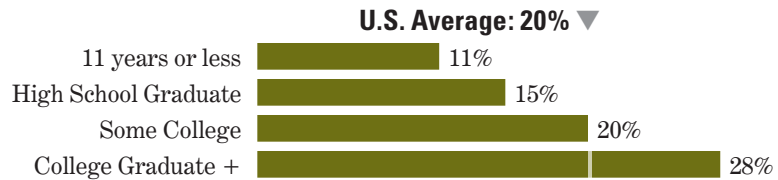
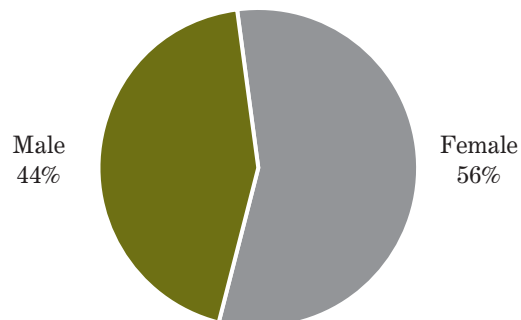


Chart 5. Percent of Birders by Gender: 2011

(Population 16 years of age and older.)



Excluding people that categorize their race as “Other”, birders are not a racially or ethnically diverse group. Ninety-three percent of birders identified themselves as white. The scarcity of minority birders is not just a reflection of their relatively low numbers in the population at large; it’s also a function of low participation rates. The participation rates of Hispanics, African-Americans, Asians, and “Other” were all 8 percent or lower while the rate for whites, 24 percent, was slightly above the 20 percent national average.

The sparser populated an area, the more likely its residents were to watch birds. The participation rate for people living in small cities and rural areas was 22 percent – 2 percent above the national average. Whereas large metropolitan areas (1 million residents or more) had the greatest number of birders, their residents had the lowest participation rate, 12 percent. See Table 5.

Table 4. Racial and Ethnic Distribution of the U.S. Population and Birders: 2006

(Population 16 years of age and older. Numbers in thousands.)

<i>Race</i>	<i>U.S. Population</i>	<i>Number of Birders</i>	<i>Participation Rate</i>
Hispanic	32,557	2,578	8%
White	182,872	43,323	24%
African American	23,402	1,697	7%
Asian	11,647	410	4%
All Others	21,392	1,105	5%

Chart 6. Birders’ Participation Rate by Race and Ethnicity: 2011

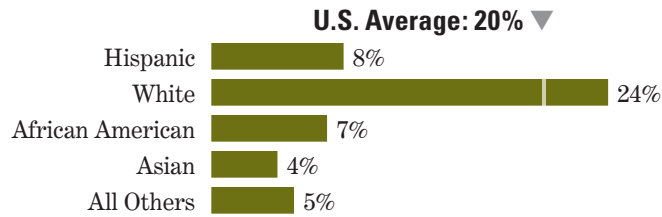


Table 5. Percent of U.S. Population Who Birded by Residence: 2011

(Population 16 years of age and older. Numbers in thousands.)

<i>Metropolitan Statistical Area</i>	<i>U.S. Population</i>	<i>Number of Birders</i>	<i>Participation Rate</i>
1,000,000 or more	127,462	15,141	12%
250,000 to 999,999	48,157	7,479	16%
Less than 249,000	48,406	7,085	15%
Outside MSA	15,288	3,410	22%



Steve Hillebrand/USFWS

Robert Burton/USFWS



Participation rates are varied across the United States. However, the highest participation rates are prevalent in the northern half of the country (with the exception of West Virginia), where the top 5 States include Vermont, Wisconsin, West Virginia, Wyoming, and Alaska. See Chart 7 for more details.

Chart 7. Birding Participation Rates by State Residents: 2011

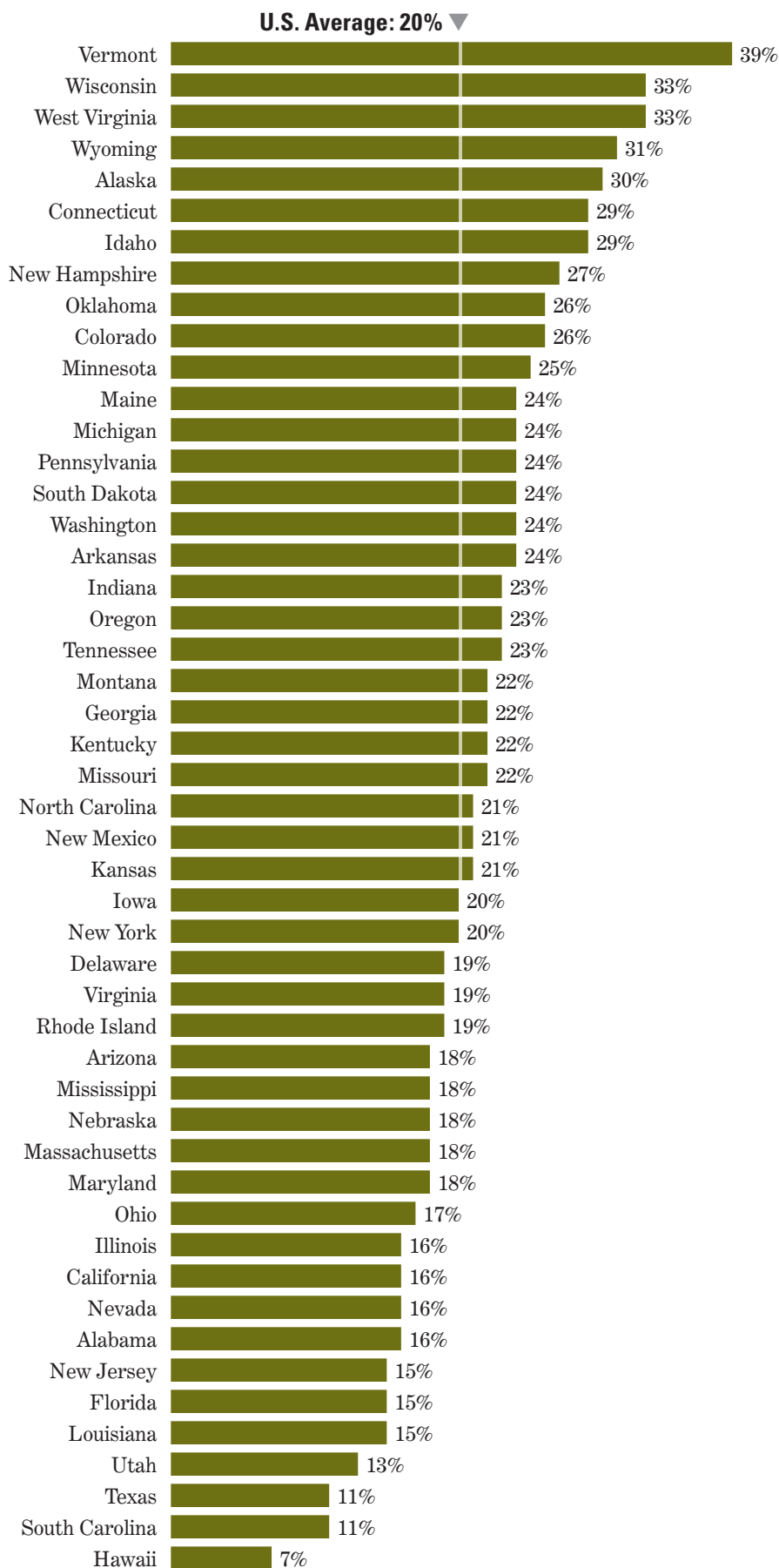
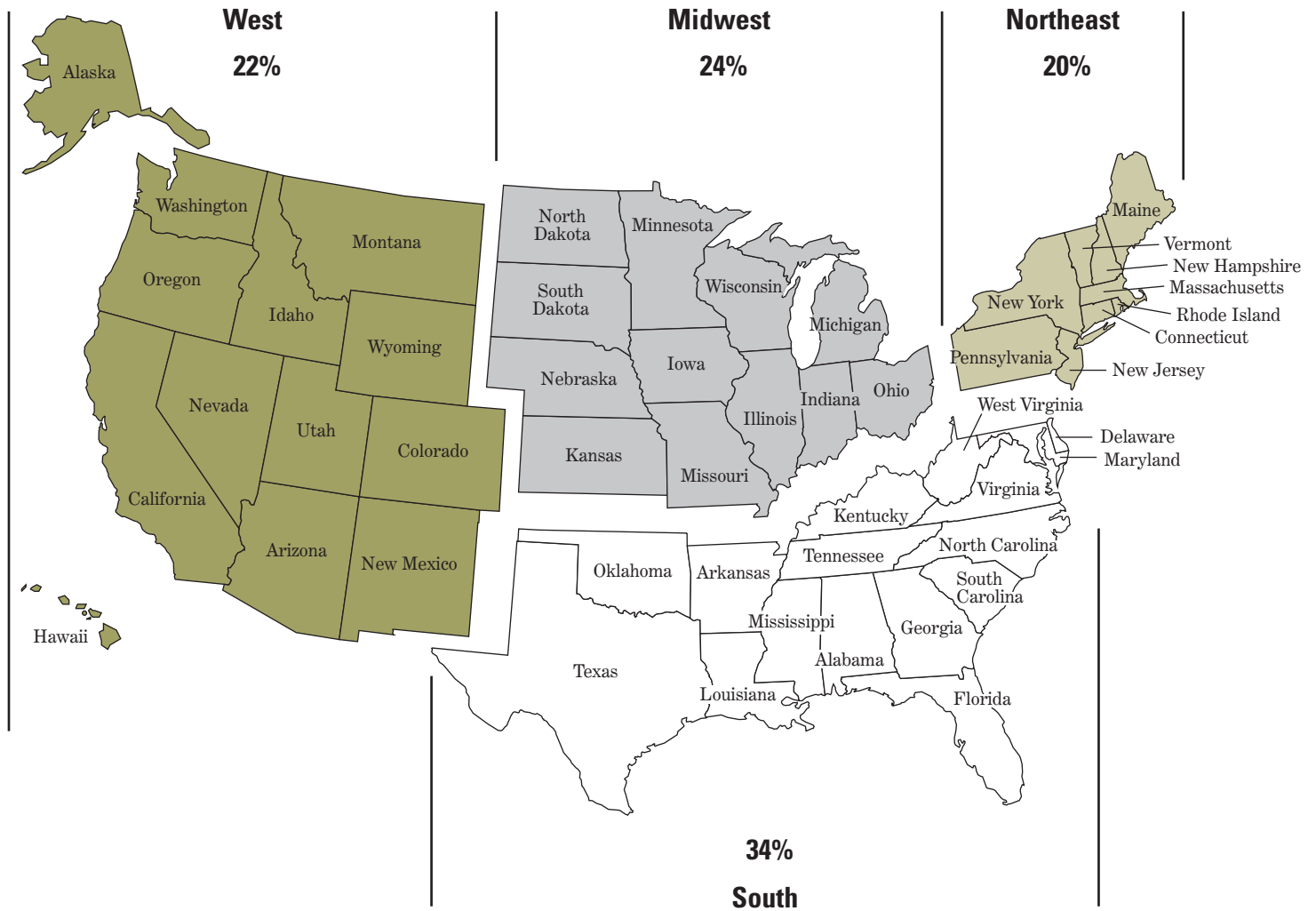


Figure 1. Participation by Region of Residence: 2011

(Population 16 years of age and older.)



There were more participants in the South (34 percent) compared to the rest of the United States (see Figure 1). The Midwest had the second highest participation at 24 percent. The West and Northeast had lower participation of 22 percent and 20 percent, respectively.



Steve Maslowski ©

Bird watching by state residents tells only part of the story. Many people travel out-of-state to watch birds, and some states are natural birding destinations. Hawaii reaped the benefits of this tourism with 73 percent of their total birders coming from other states. Three other states (Alaska, Wyoming, and Maine) had more than 60 percent of their total birders coming from other states. (See Table 6.)



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Table 6. Birding by State Residents and Nonresidents: 2011

(Population 16 years of age and older. Numbers in thousands).

State	Total Birders	Percent State Residents	Percent Nonresidents
Alabama	607	94%	—
Alaska	512	31%	69%
Arizona	1,110	82%	18%*
Arkansas	539	98%	—
California	4,864	94%	6%
Colorado	1,188	85%	15%
Connecticut	873	93%	7%*
Delaware	171	80%	—
Florida	2,966	75%	25%
Georgia	1,903	87%	13%*
Hawaii	254	27%	73%*
Idaho	419	81%	19%*
Illinois	1,811	90%	10%*
Indiana	1,175	99%	—
Iowa	531	89%	—
Kansas	476	95%	—
Kentucky	827	90%	10%*
Louisiana	712	71%	—
Maine	689	38%	63%
Maryland	934	84%	16%*
Massachusetts	1,238	75%	25%
Michigan	2,015	93%	7%*
Minnesota	1,112	93%	7%*
Mississippi	456	87%	—
Missouri	1,110	92%	8%*
Montana	291	60%	40%*
Nebraska	273	89%	—
Nevada	447	72%	28%*
New Hampshire	527	55%	45%*
New Jersey	1,195	87%	13%*
New Mexico	415	78%	22%*
New York	3,272	93%	7%
North Carolina	1,854	84%	16%
Ohio	1,583	97%	—
Oklahoma	773	97%	—
Oregon	892	79%	21%*
Pennsylvania	2,699	89%	11%
Rhode Island	201	80%	20%
South Carolina	536	72%	28%*
South Dakota	235	64%	36%
Tennessee	1,382	82%	18%
Texas	2,238	95%	5%*
Utah	410	69%	31%
Vermont	292	69%	31%*
Virginia	1,425	81%	19%*
Washington	1,516	83%	17%*
West Virginia	547	88%	—
Wisconsin	1,678	89%	11%*
Wyoming	417	31%	69%

Note: A hyphen (—) denotes sample sizes that are too small to report reliably (9 or less). An asterisk (*) denotes an estimate based on a sample size of 10 to 29. This sample size criteria is consistent with the “2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.”

Where and What are They Watching?

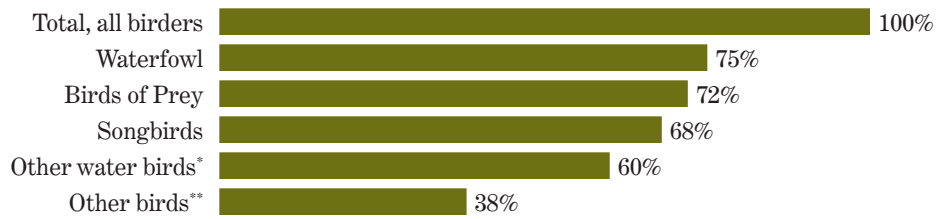
Backyard birding is the most prevalent form of birding with 88 percent of participants watching birds from the comfort of their homes. Thirty-eight percent of birders travel more than a mile from home to bird visiting both private and public lands.

What kinds of birds are they looking at? Seventy-five percent of away-from-home birders reported observing waterfowl (ducks, geese, etc.), making those the most watched type of bird. Birds of prey (hawks, eagles, etc.) were also popular with 72 percent of birders watching them, followed in popularity by songbirds such as cardinals and robins (68 percent) and other water birds such as herons and shorebirds (60 percent). See Chart 8.

Avidity

All people identified as birders in this report said that they took an active interest in birds – defined as trying to closely observe or identify different species. But what is the extent of their interest? In order to determine their “avidity” the number of days spent bird watching was considered.

Chart 8. Types of Birds Observed by Away-From-Home Birders: 2011



* shorebirds, herons, etc.

**pheasants, turkeys, etc.

Table 7. National Birding Trends

	2006	2011	Percent Change*
Total Birders	47,693	46,741	-2%
Around-the-home	41,821	41,346	-1%
Away-from-home	19,860	17,818	-10%*
Total Days	5,473,398	5,161,909	-6%
Around the home	5,202,536	4,923,873	-5%
Away-from-home	270,861	238,036	-12%

Note: An asterisk denotes the change is significant at the 95% level. All other “percent changes” are not statistically significant.



Lavonda Walton/USFWS

Presumably because of the relative ease of backyard birding, birders around the home spent nine times as many days watching birds as did people who traveled more than a mile from home to bird watch. In 2011, the mean number of days for all birders was 110, for backyard birders it was 119, and for away-from-home birders it was 13. Avidity for all birders is shown in Chart 9. Although avidity is varied across the country, birders' avidity in 11 States was higher than the national average. Most notably, Mississippi averaged 155 days per birder.

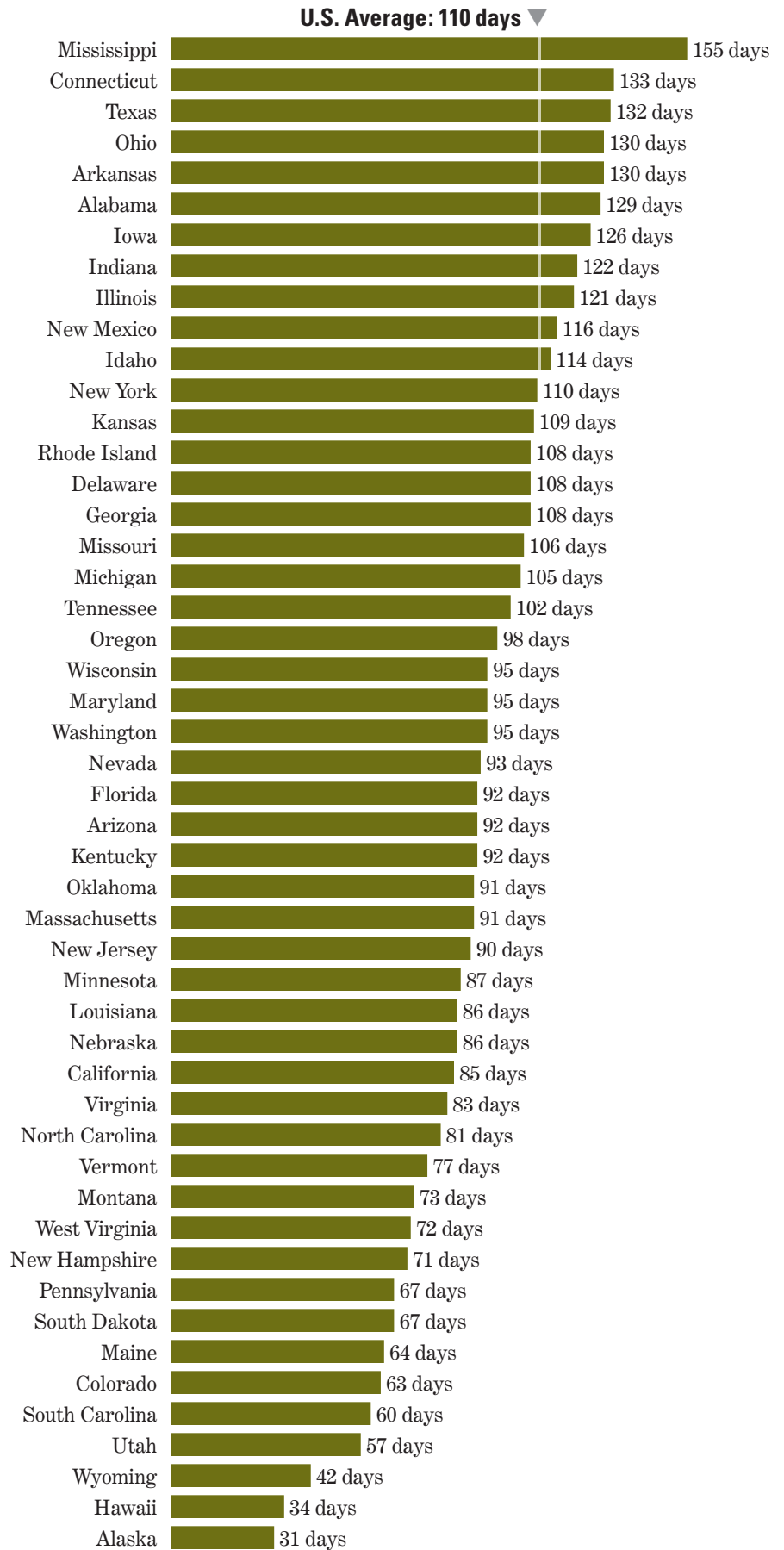
Table 7 shows how avidity has changed from 2006 to 2011. The only change that is significant at the 95 percent level is "Total Away-from-Home Birders." As shown, the number of away-from-home birders has decreased 10 percent as less birders are traveling to observe birds.



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Chart 9. Birding Avidity by State: 2011

(Population 16 years of age and older.)



Note: North Dakota is not included due to small sample sizes.

The Economics of Bird Watching

Birders spend money on a variety of goods and services for their trip-related and equipment-related purchases. Trip-related expenditures include food, lodging, transportation, and other incidental expenses. Equipment expenditures consist of binoculars, cameras, camping equipment, and other costs. By having ripple effects throughout the economy, these direct expenditures are only part of the economic impact of birding. The effect on the economy in excess of direct expenditures is known as the multiplier effect. For example, an individual may purchase a bird house to enhance birding at home. Part of the purchase price will stay with the local retailer. The local retailer, in turn, pays a wholesaler who in turn pays the manufacturer of the bird houses. The manufacturer then spends a portion of this income to pay businesses supplying the manufacturer. In this sense, each dollar of local retail expenditures can affect a variety of businesses. Thus, expenditures associated with birding can ripple through the economy by impacting economic activity, employment, and household income. To measure these effects, a regional input-output modeling method¹ is utilized to derive estimates for total industry output, employment, employment income, and tax revenue associated with birding.

¹ The estimates for total industry output, employment, employment income, and federal and state taxes were derived using IMPLAN, a regional input-output model and software system.



David Haggard/USFWS



Table 8. Trip and Equipment Expenditures for Birding by Category: 2011

Total Trip and Equipment Expenditures	\$40,942,680,033
Trip-Related Expenditures*, total	\$14,868,424,740
Food	\$4,625,942,734
Lodging	\$3,105,418,864
Transportation	\$5,084,858,642
Other	\$2,052,204,500
Equipment**, total	\$26,074,255,293
Wildlife-watching equipment	\$7,573,105,647
Auxilliary equipment	\$1,034,484,181
Special Equipment	\$9,534,331,263
Other Items	\$7,932,334,202

*Trip-related expenditures include food, drink, lodging; public and private transportation; and other trip-related costs such as guide fees, pack trip or package fees, public and private land use access fees, equipment rental, boating costs, and heating and cooking fuel.

**Wildlife-watching equipment expenditures include: bird food, nest boxes, bird houses, bird baths, binoculars, cameras and camera equipment, photo processing, day packs, carrying cases, special clothing and other wildlife-watching items such as field guides and maps. Auxiliary equipment includes tents, tarps, frame packs, and backpacking equipment, and other camping equipment, and other auxiliary equipment such as blinds and GPS devices. Special Equipment includes big ticket items such as boats and boat accessories, campers, trucks, and cabins. Other items include land leasing and ownership, plantings, membership dues and contributions, and magazine books, and DVDs.

Table 8 highlights birders' trip-related and equipment-related expenditures in 2011.² Birders spent an estimated \$15 billion on their trips and \$26 billion on equipment in 2011. For trip expenditures, 52 percent was food and lodging, 34 percent was transportation, and 14 percent was other costs such as guide fees, user fees, and equipment rental (Chart 10). Equipment expenditures were relatively evenly distributed among wildlife watching equipment (29 percent), special equipment (37 percent), and other items (30 percent) (Chart 11). Auxiliary equipment accounted for only 4 percent of all equipment expenditures.

² The Survey does not have an expenditure category for birding. Therefore, expenditures are prorated by multiplying wildlife watching expenditures by a ratio to derive birding expenditures. For trip-related expenditures, the ratio includes only away-from-home birders and is (total number of away-from-home days watching birds)/(total number of away-from-home days watching wildlife). For equipment-related expenditures, the ratio includes both away-from-home birders and around-the-home birders. The equipment-related expenditure ratio is (total number of days watching birds)/(total number of days watching wildlife).

Chart 10. Trip-Related Expenditures

(Total Expenditures: \$14.9 billion)

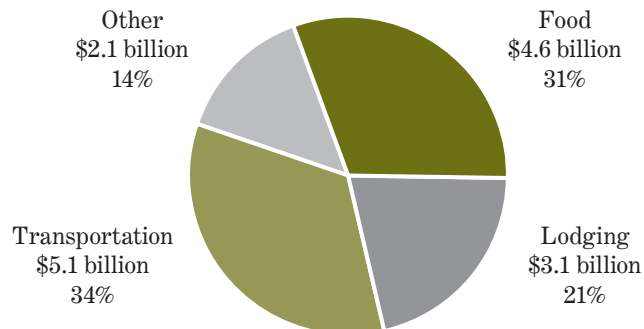
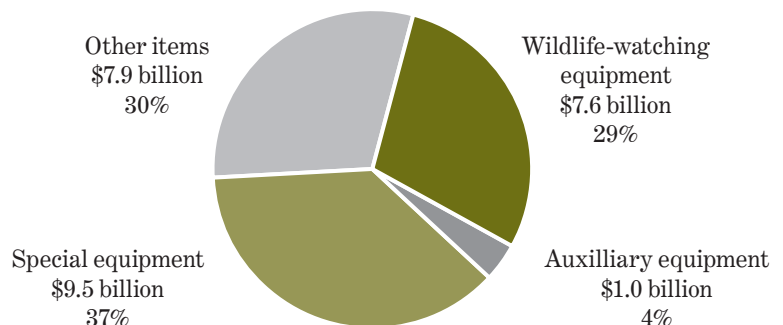


Chart 11. Equipment Expenditures

(Total expenditures: \$26.1 billion)



Total Industry Output

Table 9 lists the economic effect of bird watching expenditures in 2011. The trip and equipment expenditures of \$41 billion in 2011 generated \$107 billion in total industry output across the United States. Total industry output includes the direct, indirect, and induced effects of the expenditures associated with bird watching.

Direct effects are the initial effects or impacts of spending money; for example, an individual purchasing a bird house is an example of a direct effect. An example of an indirect effect would be the purchase of the bird house by a retailer from the manufacturer. Finally, induced effects refer to the changes in production associated with changes in household income (and spending) caused by changes in employment related to both direct and indirect effects. More simply, people who are employed by the retailer, by the wholesaler, and by the birdhouse manufacturer spend their income on various goods and services which in turn generate a given level of output (induced effects).

Employment and Employment Income

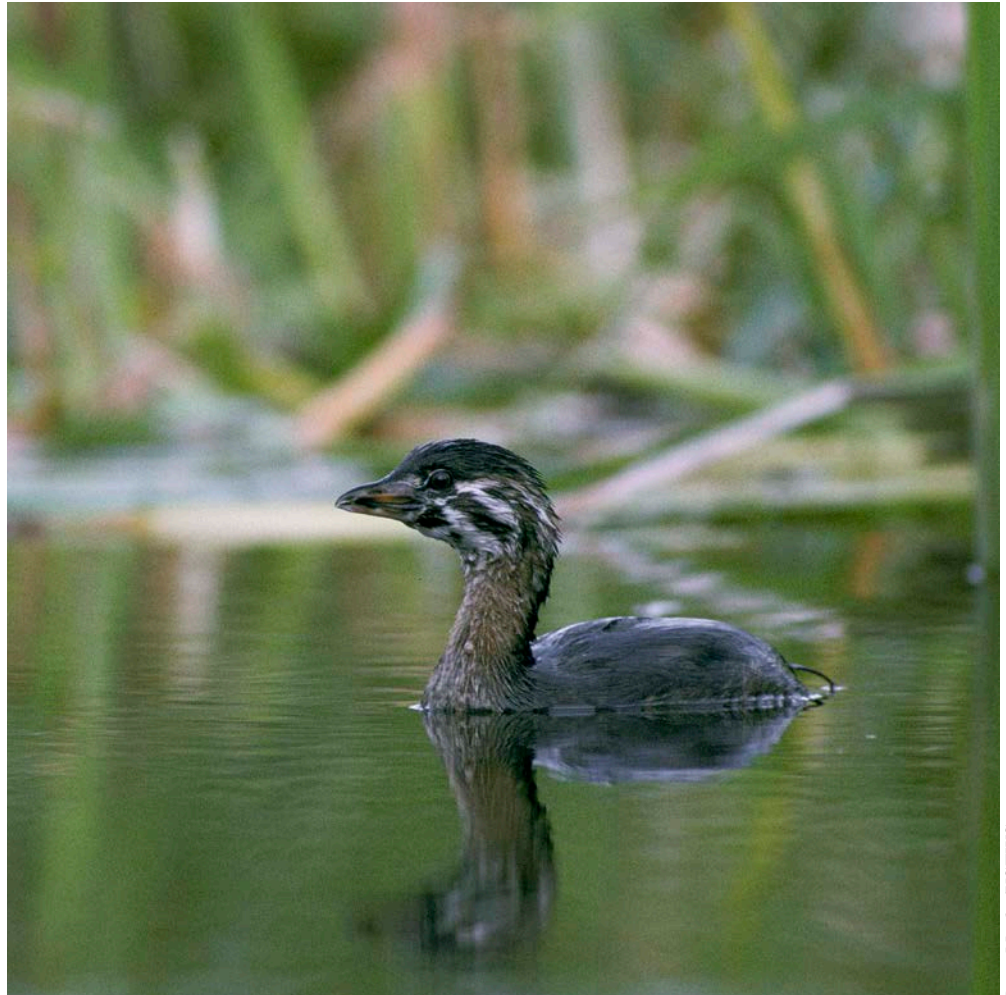
Table 9 shows that birding expenditures in 2011 created 666,000 jobs and \$31 billion in employment income. Jobs include both full-time and part-time jobs, with a job defined as one person working for at least part of the calendar year. Employment income consists of both employee compensation and proprietor income.

Federal and State Taxes

Federal and State tax revenue are derived from birding-related recreational spending. In 2011, \$6 billion in State tax revenue and \$7 billion in Federal tax revenue were generated.

Table 9. Summary of Economic Impacts

Birders	46,741,000
Total Expenditures	\$40,942,680,000
Total Output	\$106,977,730,000
Jobs	666,000
Employment Income	\$31,391,977,000
State Tax Revenues	\$6,000,203,000
Federal Tax Revenues	\$7,089,387,000



Dave Menke/USFWS

Conclusion

This report presented information on the participation and expenditure patterns of 47 million birders in 2011. Trip-related and equipment-related expenditures associated with birding generated nearly \$107 billion in total industry output, 666,000 jobs, and \$13 billion in local, state, and federal tax revenue. This impact was distributed across local, state, and national economies.

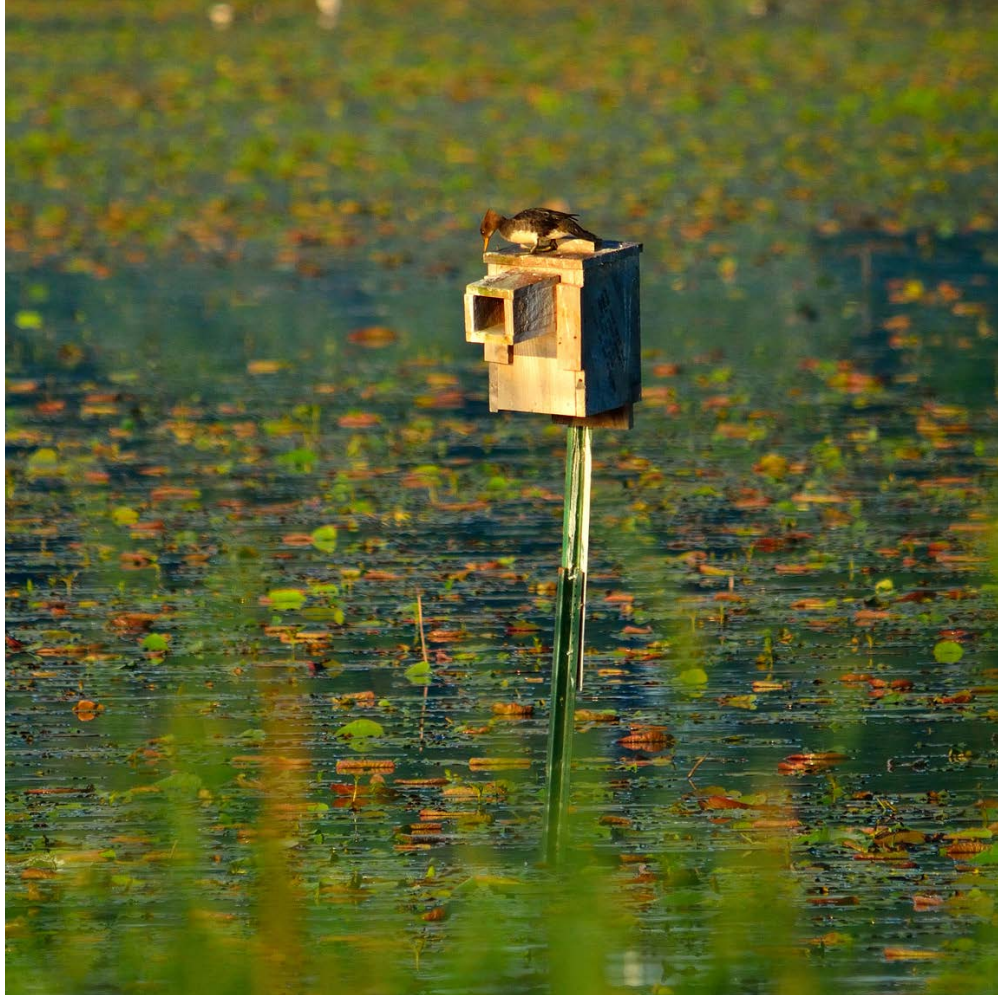


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References

MIG, Inc. *IMPLAN System (2008 Data and Software)*. 1940 South Greeley Street, Suite 101, Stillwater, MN 55082. 2008.

U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.



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December 2013