Responsive Management™

# ARCHERY PARTICIPATION AMONG ADULT UNITED STATES RESIDENTS IN 2012

**Conducted for the Archery Trade Association**

**by Responsive Management**

**2013**

# ARCHERY PARTICIPATION AMONG ADULT UNITED STATES RESIDENTS IN 2012

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# EXECUTIVE SUMMARY

This study was conducted for the Archery Trade Association (ATA) to determine adult Americans' participation in archery and to obtain information about archers themselves and their archery participation. The study entailed a telephone survey of randomly selected residents of the United States.

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones (both landlines and cell phones were called in their proper proportions). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

The telephone survey questionnaire was developed cooperatively by Responsive Management and the ATA. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey. The sampling methodology entailed random digit dialing, which ensures that all telephone numbers have an equal chance of being called, and the sample included both landlines and cell phones. The scientific sampling plan entailed obtaining a target number of interviews in each state so that the number of respondents in each state in the sample would be exactly proportional to the state's population within the United States population as a whole. The sample was representative of all Americans 18 years old and older. The survey was conducted in January and February 2013. Responsive Management obtained 8,335 completed interviews. The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management.

Among United States residents as a whole, 8.0% participated in archery in 2012. The Midwest had the highest overall participation rate.

All archery participants can be divided into three subgroups:

- Those who participate in archery but not bowhunting (hereinafter referred to as *target archery only participants*).
- Those who participate in both archery and bowhunting (hereinafter referred to as *target archery and bowhunting participants*).
- Those who participate in bowhunting but not archery outside of bowhunting (hereinafter referred to as *bowhunting only participants*).
    - Note that any references to all archery participants, made up of all three subgroups, will hereinafter be referred to as *all archery participants*.

The total archery participation rate of 8.0% includes 4.4% of all residents who are *target archery only participants*, 2.8% who are *target archery and bowhunting participants*, and 0.8% who are *bowhunting only participants*.

Among *all archery participants*, compound bows are the most popular (75% of archers use them), followed by crossbows (29%) and recurve bows (14%).

The majority of *all archery participants* participate for no more than 5 days (57% gave a response in the range of 1 to 5 days). On the other hand, about a fifth (19%) do so for more than 20 days. The median is 4 days, and the mean is 16.0 days.

The days of participation were examined separately for the three subgroups:

- Among *target archery only participants*, 66% engage in archery in the range of 1-5 days. Their median is 3 days, and their mean is 6.73 days.
- Among *target archery and bowhunting participants*, 25% engage in archery in the range of 1-5 days. Their median is 15 days, and their mean is 30.05 days.
- Finally, among *bowhunting only participants*, 53% engage in archery in the range of 1-5 days. Their median is 2 days, and their mean is 11.69 days.

The majority of *all archery participants* engaged in the activity on either their own land or on a friend's land (72%), at least some of the time.

This question, too, was examined among the three aforementioned subgroups:

- Among *target archery only participants*, 64% do so on their own land or a friend's land at least some of the time.
- Among *target archery and bowhunting participants*, 79% do so on their own land or a friend's land at least some of the time.
- Finally, among *bowhunting only participants*, 68% do so on their own land or a friend's land at least some of the time.

The survey asked *all archery participants* to indicate what had influenced them to become involved in archery. The top influence was a relative or family member—46% gave this response. Two other influences have a relatively high percentage: a friend (17%) and through hunting (16%). The influence that was named and how it influenced the respondent was defined by the respondent. Those who gave a hunting-related response and were coded as being influenced by "hunting" include some who said that they started hunting with firearms and then became interested in bowhunting, some who participated in archery target shooting and became interested in hunting, as well as some who simply answered "Through hunting" or a similar response and did not elaborate further.

As was done with some of the questions above, the question about initiation into archery was also analyzed among the three subgroups:

- Among *target archery only participants*, 48% were influenced by a relative or family member, 17% by a friend, and only 2% through hunting.
- Among *target archery and bowhunting participants*, 42% were influenced by a relative or family member, 20% by a friend, and 21% through hunting.
- Finally, among *bowhunting only participants*, 56% were influenced by a relative or family member, 6% by a friend, and 27% through hunting.

An analysis examining the characteristics correlated with archery participation was conducted. In looking at *all archery participants* in 2012, they are more often male, are typically younger, and are more on the rural side of the continuum.

When looking at the subgroups of archers, these typical demographic characteristics discussed immediately above change a bit.

- *Target archery only participants* are correlated with being female and being on the more urban side of the rural-urban continuum, among other characteristics.
- *Target archery and bowhunting participants* are correlated with living in the Midwest, being male, and being more on the rural side of the continuum.
- Finally, *bowhunting only participants* also are correlated with living in the Midwest, being a young male, and living more on the rural side of the continuum.

In looking at *all archery participants*, more than half of them (55%) do not bowhunt.

In looking at all hunters, including firearms hunters as well, about one-third of all hunters (32%) use archery. Note that this proportion of hunters who use archery equipment (32%) almost exactly matches the proportion found in the *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (33%).

Another analysis looks at all target shooters—those who use archery equipment only, those who use firearms only, and those who use both. Among all target shooters, the majority use firearms exclusively (59.1%). Otherwise, 18.1% use both firearms and archery, and 22.8% use archery exclusively. In total, 40.9% of all target shooters use archery for at least some of their target shooting.

A final analysis looks at all those who went either target shooting (with firearms and/or archery) *or* hunting (with firearms and/or archery). Among this group, 29.0% use archery exclusively, 16.7% use both firearms and archery equipment, and 54.3% use firearms exclusively.

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# INTRODUCTION AND METHODOLOGY

This study was conducted for the Archery Trade Association (ATA) to determine adult Americans' participation in archery and to obtain information about archers themselves and their archery participation. The study entailed a telephone survey of randomly selected adult residents of the United States. Specific aspects of the research methodology are discussed below.

## USE OF TELEPHONES FOR THE SURVEY

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones (both landlines and cell phones were called in their proper proportions). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

## QUESTIONNAIRE DESIGN

The telephone survey questionnaire was developed cooperatively by Responsive Management and the ATA, based on the research team's familiarity with outdoor recreation. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

## SURVEY SAMPLE

The sampling methodology entailed random digit dialing, which ensures that all telephone numbers have an equal chance of being called, and the sample included both landlines and cell phones. The scientific sampling plan entailed obtaining a target number of interviews in each state so that the number of respondents in each state in the sample would be exactly proportional to the state's population within the United States population as a whole. The sample was obtained from Survey Sampling International and DatabaseUSA, companies specializing in providing scientifically valid random digit dialing telephone samples and cell phone samples. The overall sample with landlines and cell phones was representative of all Americans 18 years old and older.

## TELEPHONE INTERVIEWING FACILITIES

A central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of outdoor recreation and natural resources.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted a project briefing with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and

qualifiers for participation, interviewer instructions within the survey questionnaire, reading of the survey questions, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey questionnaire.

## INTERVIEWING DATES AND TIMES

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The survey was conducted in January and February 2013.

## TELEPHONE SURVEY DATA COLLECTION AND QUALITY CONTROL

The software used for data collection was Questionnaire Programming Language (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey questionnaire was programmed so that QPL branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection.

The Survey Center Managers and statisticians monitored the data collection, including monitoring of the actual telephone interviews without the interviewers' knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. The survey questionnaire itself contains error checkers and computation statements to ensure quality and consistent data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness. Responsive Management obtained 8,335 completed interviews.

## DATA ANALYSIS

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. The results were weighted by demographic characteristics so that the sample was exactly representative of residents of the United States (18 years old and older) as a whole.

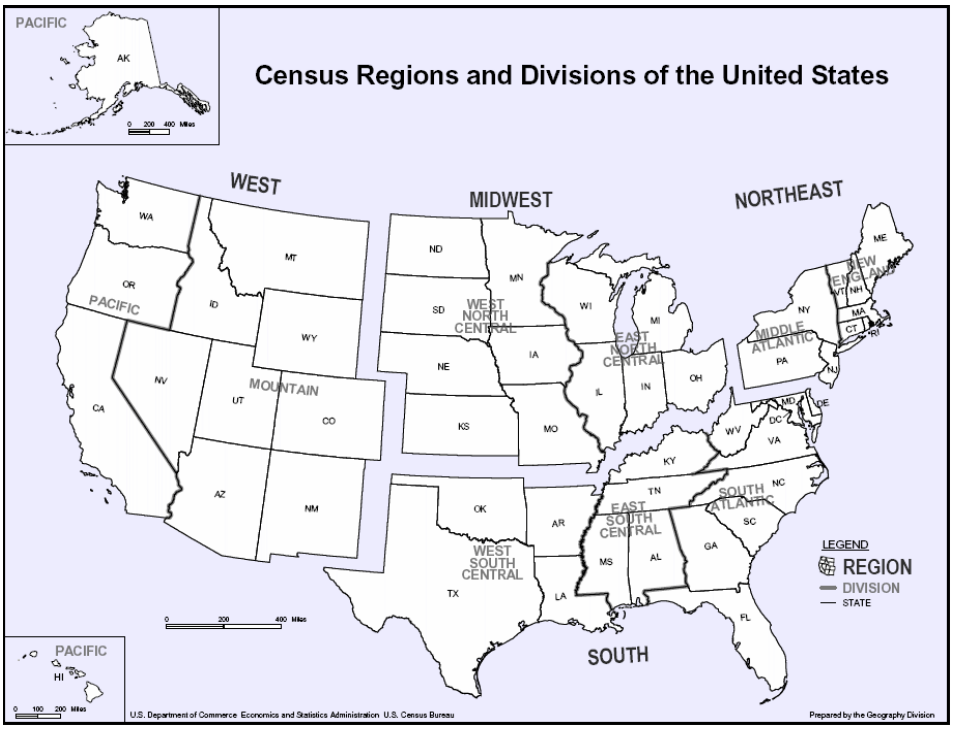
The analysis included a breakdown of all archery participants into three subgroups, with crosstabulations on those three subgroups on many questions:

- Those who participate in archery but not bowhunting (hereinafter referred to as *target archery only participants*).
- Those who participate in both archery and bowhunting (hereinafter referred to as *target archery and bowhunting participants*).
- Those who participate in bowhunting but not archery outside of bowhunting (hereinafter referred to as *bowhunting only participants*).
    - Note that any references to all archery participants, made up of all three subgroups, will hereinafter be referred to as *all archery participants*.

The data analyses and results in the report are based on a nationwide sample of 8,335 randomly selected United States residents, 18 years old and older, 567 of whom participated in archery. The sample size on individual graphs and on individual groups or regions within those graphs varies based on geographical and demographic weighting, as well as survey skip-outs when questions do not apply to certain respondents. Because of the weighting, each respondent actually represents a little more or less than 1 person; for this reason, it would not be statistically valid to simply take the number of respondents in the survey who participated in archery and divide by the entire sample (i.e., 567 ÷ 8335) to arrive at the rate of participation. Only after the weights were applied to the sample was the rate of participation in archery determined.

On questions that asked respondents to provide a number (e.g., number of days), the graph shows ranges of numbers rather than the precise numbers in some places. Nonetheless, in the survey each respondent provided a precise number, and the dataset includes this precise number. Note that the calculation of means and medians used the precise numbers that the respondents provided.

In the data analysis, the states were also grouped into regions to aid in comparison and analysis. Four regions were used that followed U.S. Census Bureau standards. The map below from the U.S. Census Bureau website shows each region:




## SAMPLING ERROR

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample, the sampling error is at most plus or minus 1.07 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or

minus 1.07 percentage points of each other. Sampling error was calculated using the formula described on the following page, with a sample size of 8,335 and a population size of 234,564,071 United States residents 18 years old and older.

**Sampling Error Equation**

$$B = \left( \sqrt{\frac{\frac{N_p(.25)}{N_s} - .25}{N_p - 1}} \right)(1.96)$$

Where: B = maximum sampling error (as decimal)
$N_P$ = population size (i.e., total number who could be surveyed)
$N_S$ = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

**Note**: This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

## ADDITIONAL INFORMATION ABOUT THE PRESENTATION OF RESULTS IN THE REPORT

In examining the results, it is important to be aware that the questionnaire included several types of questions:

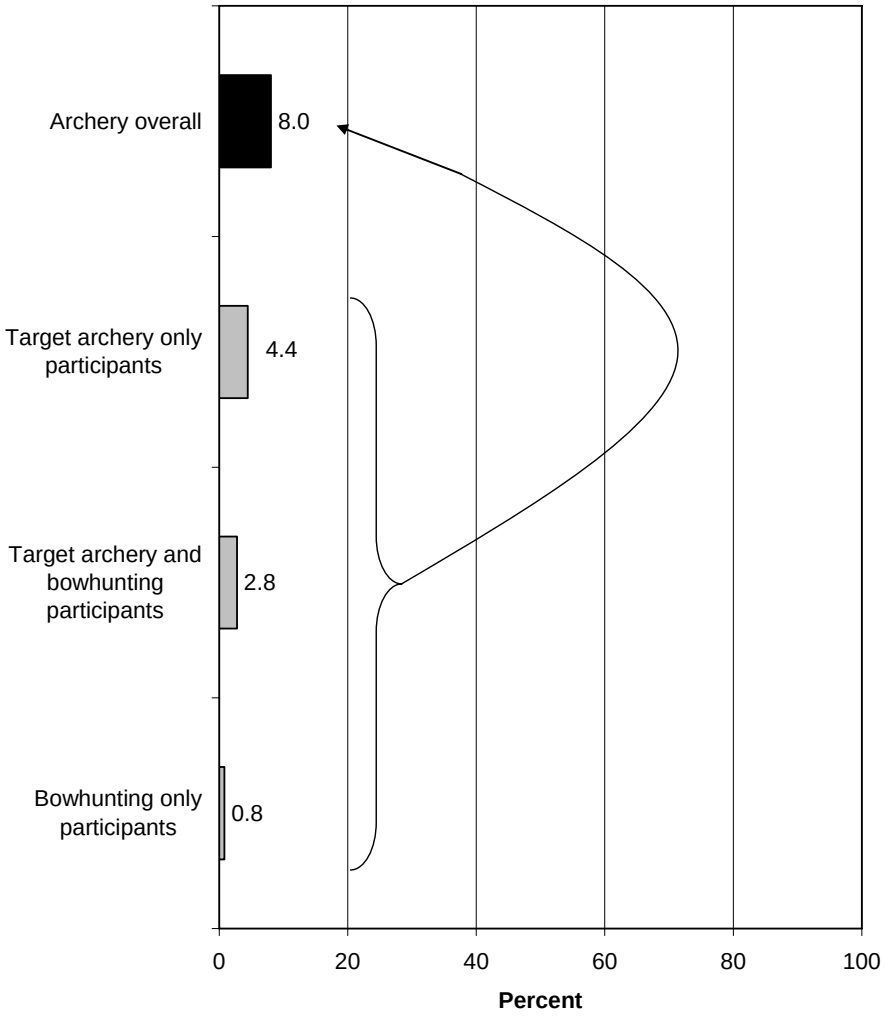
- Open-ended questions are those in which no answer set is read to the respondents; rather, they can respond with anything that comes to mind from the question.
- Closed-ended questions have an answer set from which to choose.
- Single or multiple response questions: Some questions allow only a single response, while other questions allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."

Some graphs or tabulations show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because outliers (extremely high or low numbers relative to most of the other responses) may skew the mean, the median may be shown. The median is the number at which half the sample is above and the other half is below. In other words, a median of 30 days means that half the sample gave an answer of more than 30 days and the other half gave an answer of less than 30 days.

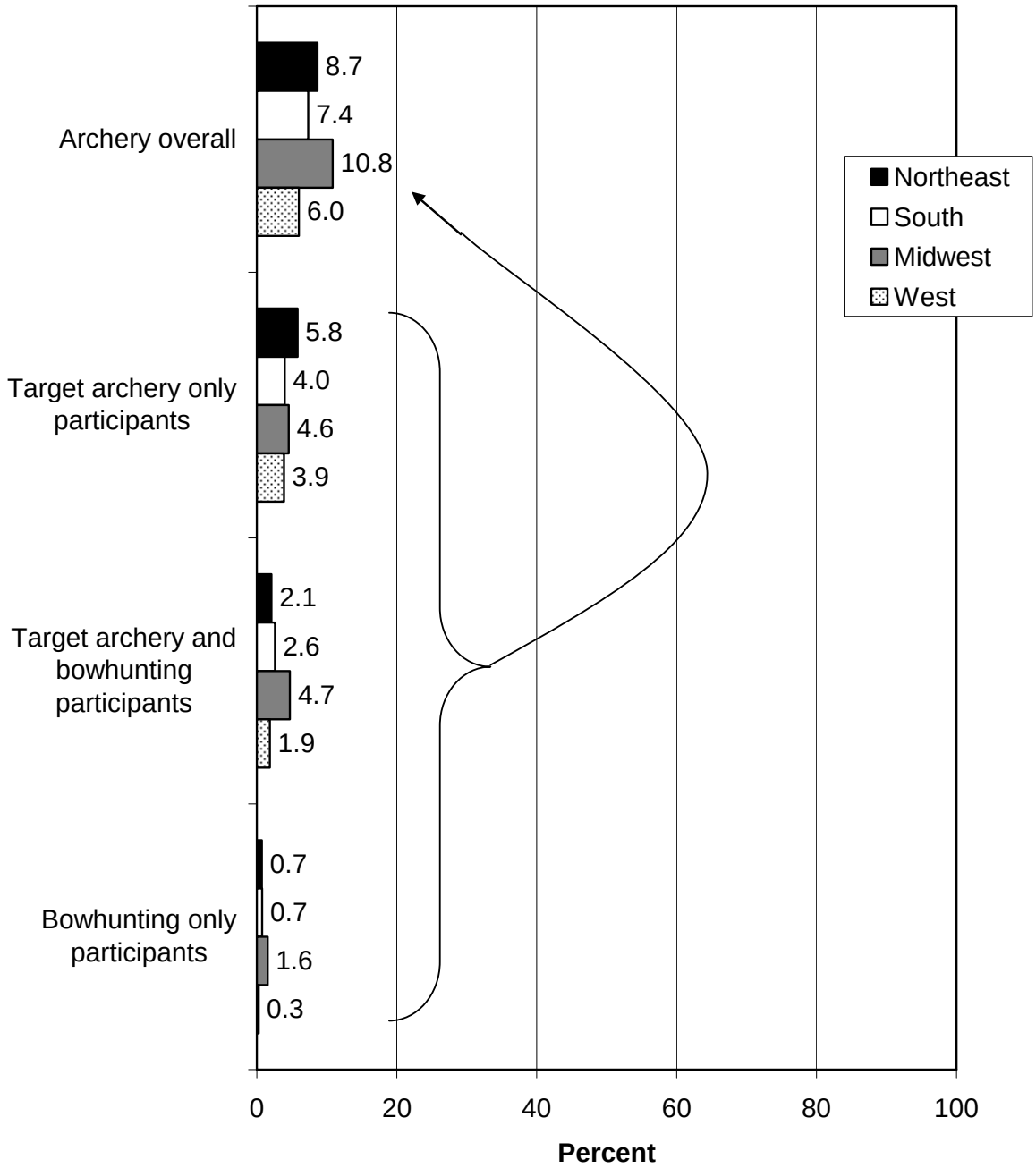
# PARTICIPATION IN ARCHERY

- Among adult United States residents as a whole, 8.0% participate in archery. The total archery participation rate of 8.0% includes 4.4% of all residents who are *target archery only participants*, 2.8% who are *target archery and bowhunting participants*, and 0.8% who are *bowhunting only participants*. (See page 2 for a definitions of these three subgroups.)
  - A regional comparison is also shown. The Midwest has the highest rate of archery participation overall.

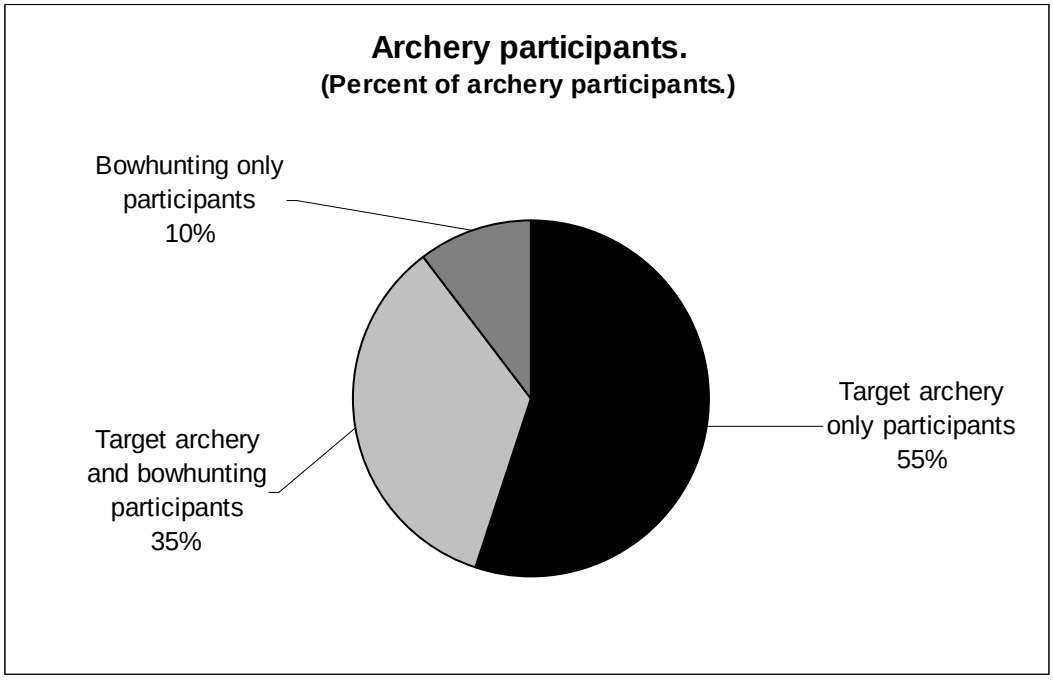
**Percent of respondents who participated in archery in 2012 (and the subgroups making up all archery participants).**



**Percent of respondents who participated in archery in 2012 (and the subgroups making up all archery participants).**

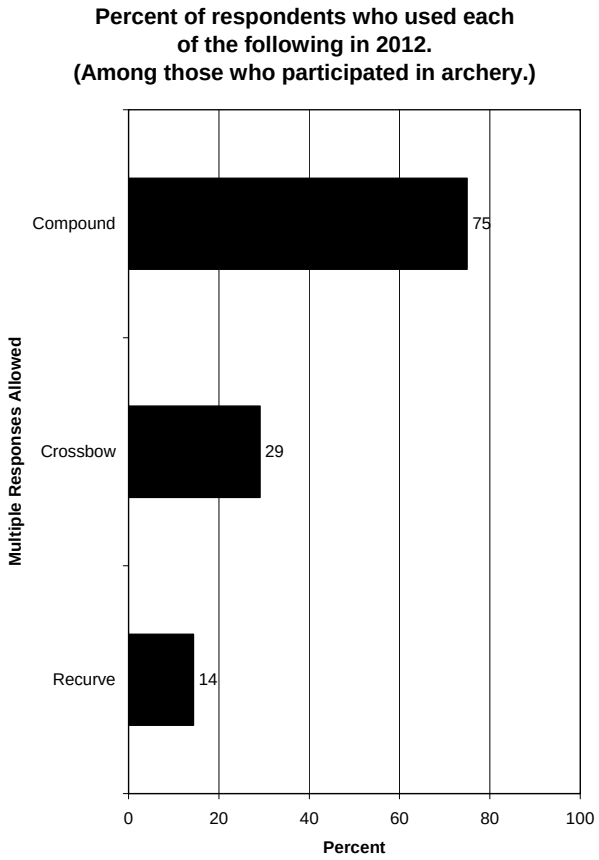


- The data can also be shown in a pie graph.
  - A little less than half of all archery participants (45%) bowhunt.



# EQUIPMENT USED

- The survey asked specifically about use of compound bows, crossbows, and recurve bows. Overall use is shown in the graph below. Not surprisingly, compound bows are the most popular (75% of *all archery participants* use them), followed by crossbows (29%) and recurve bows (14%). (Note that respondents could select more than one type of bow in the survey.)




- It is worth looking at users of the three types of bows in mutually exclusive groups. With three types of bows, there are seven possible combinations of users, as shown in the tabulation below.

| Mutually Exclusive Groups | Archery Participants' Use of the Following Bows: | | |
|---|---|---|---|
| | Compound | Crossbow | Recurve |
| Compound Only | Yes | No | No |
| Crossbow Only | No | Yes | No |
| Recurve Only | No | No | Yes |
| Compound and Crossbow (no Recurve) | Yes | Yes | No |
| Compound and Recurve (no Crossbow) | Yes | No | Yes |
| Crossbow and Recurve (no Compound) | No | Yes | Yes |
| Compound, Crossbow, and Recurve | Yes | Yes | Yes |

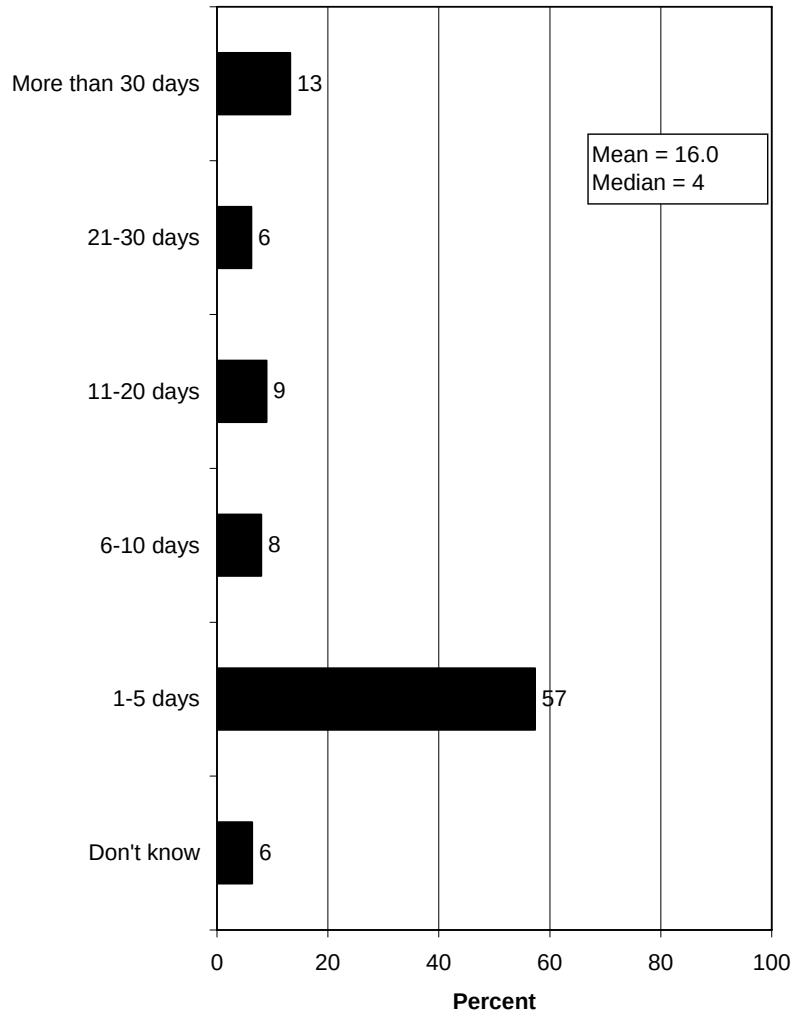
- The tabulation below shows the percent of all archery participants in each of the mutually exclusive groups. The largest group is those who use a compound bow exclusively (61%), followed by those who use a crossbow exclusively (18%) or a recurve bow exclusively (7%). Interestingly, 87% use only one type of bow.

| **Type of Archery Equipment (All Possible Combinations; Groups Are Mutually Exclusive)** | **Percentage in Each Mutually Exclusive Group (All Groups Shown)** | **Compound Total** | **Crossbow Total** | **Recurve Total** |
|---|---|---|---|---|
| Compound Only | **61.1** | 61.1 | | |
| Crossbow Only | **18.3** | | 18.3 | |
| Recurve Only | **7.3** | | | 7.3 |
| Compound and Crossbow (no Recurve) | **6.9** | 6.9 | 6.9 | |
| Compound and Recurve (no Crossbow) | **3.1** | 3.1 | | 3.1 |
| Crossbow and Recurve (no Compound) | **0.0** | | 0.0 | 0.0 |
| Compound, Crossbow, and Recurve | **3.9** | 3.9 | 3.9 | 3.9 |
| **Totals** | **100.0** | **75.0** | **29.1** | **14.4** |

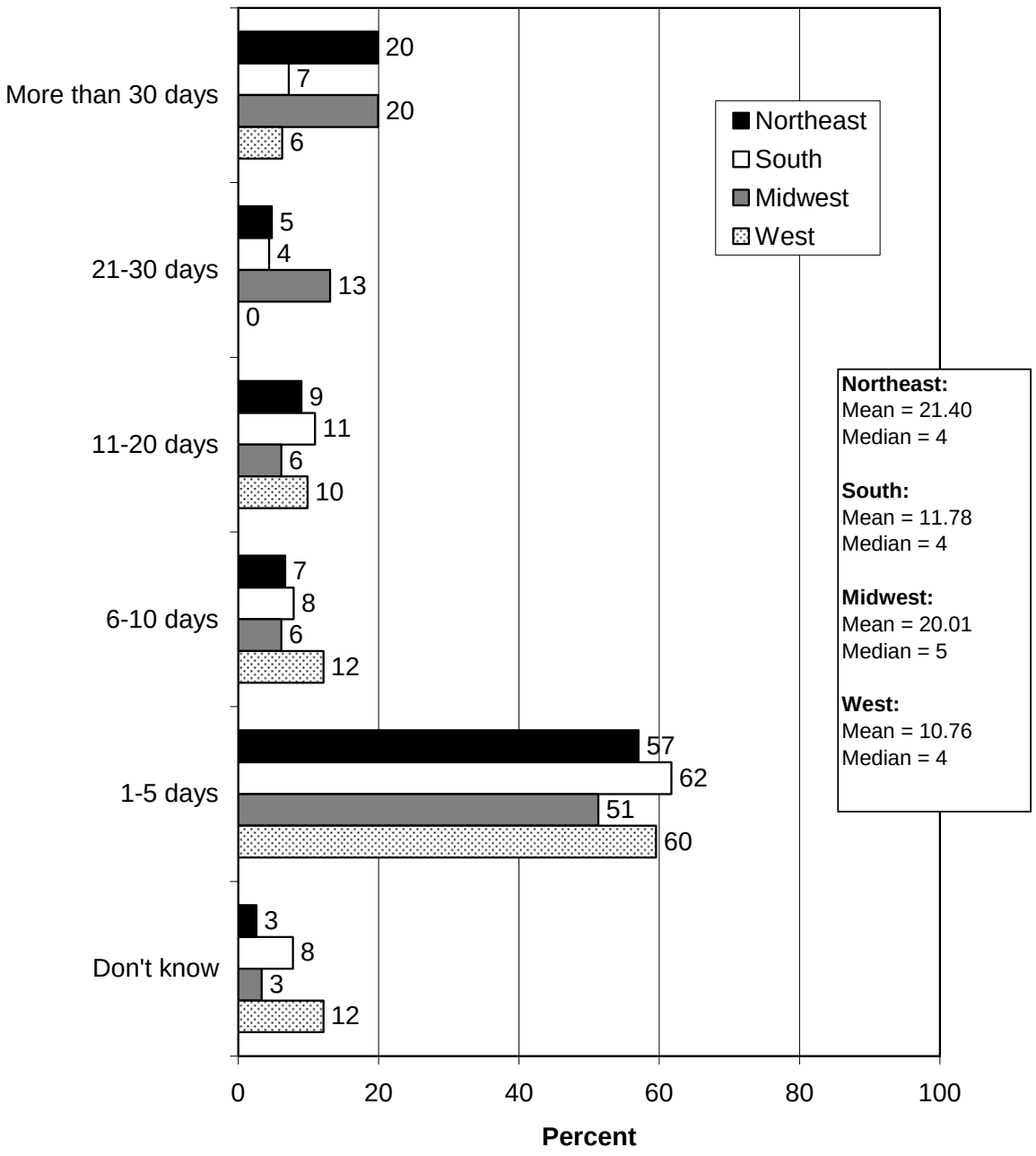
# DAYS OF ARCHERY PARTICIPATION

- The majority of *all archery participants* participate for no more than 5 days (57% gave a response in the range of 1 to 5 days). On the other hand, about a fifth (19%) do so for more than 20 days. The median is 4 days, and the mean is 16.0 days (the mean is somewhat higher than the median because some at the higher end participate in archery for quite a few days each year). A regional breakdown of days of participation is also shown.

**How many days did you shoot archery in 2012?**

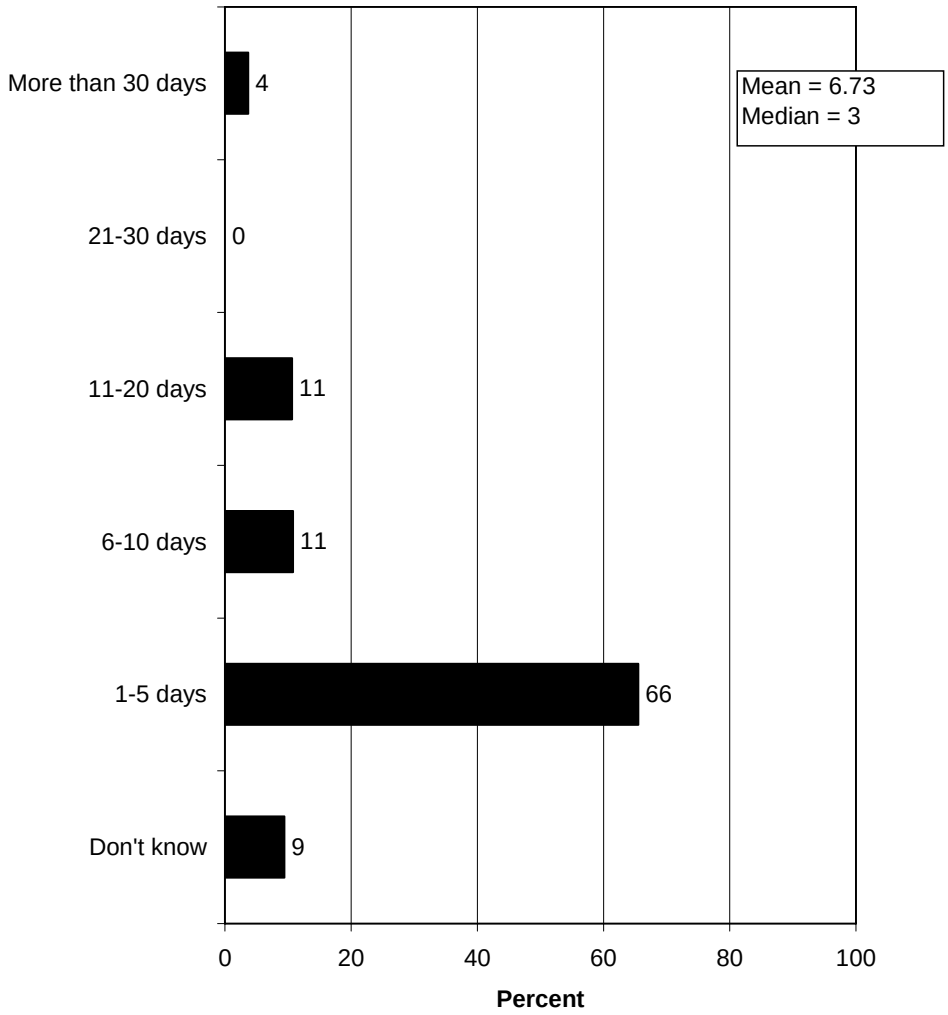


## How many days did you shoot archery in 2012?

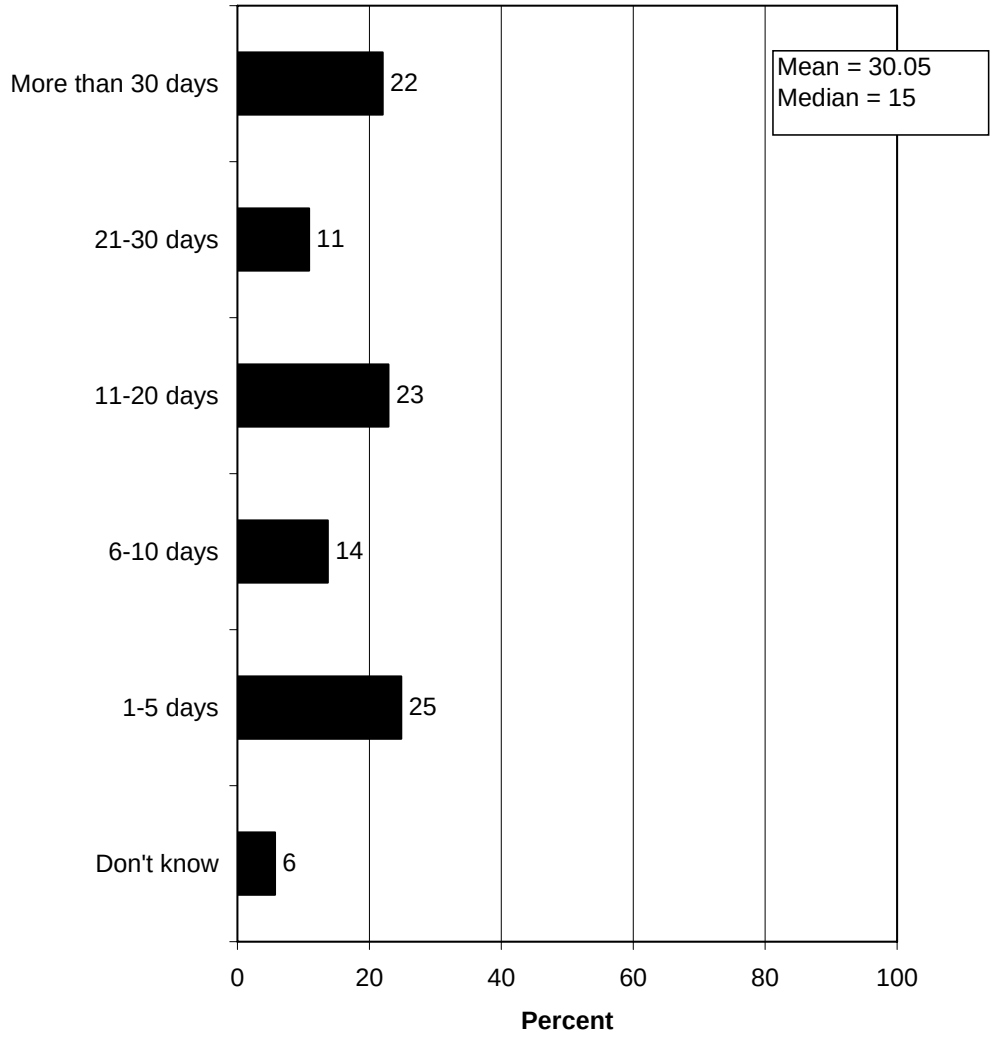


- Because days of archery participation varies somewhat among the three archery subgroups, the days of participation were examined separately for three subgroups:
  - Among *target archery only participants*, 66% engage in archery in the range of 1-5 days. Their median is 3 days, and their mean is 6.73 days.
  - Among *target archery and bowhunting participants*, 25% engage in archery in the range of 1-5 days. Their median is 15 days, and their mean is 30.05 days.
  - Finally, among *bowhunting only participants*, 53% engage in archery in the range of 1-5 days. Their median is 2 days, and their mean is 11.69 days. (Note that for *bowhunting only participants*, all days indicated on the graph were for hunting.)

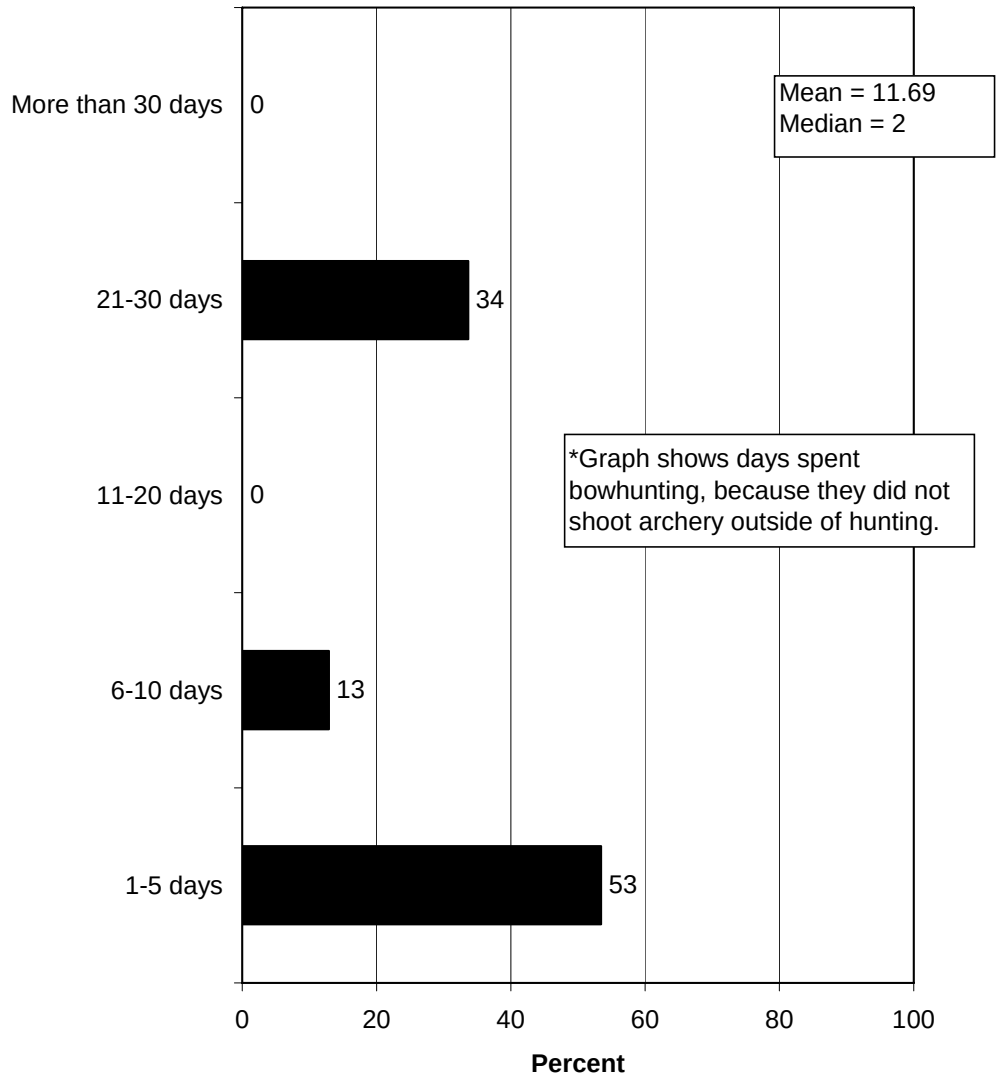
**How many days did you shoot archery in 2012? (Among target archery only participants.)**



**How many days did you shoot archery in 2012? (Among target archery and bowhunting participants.)**

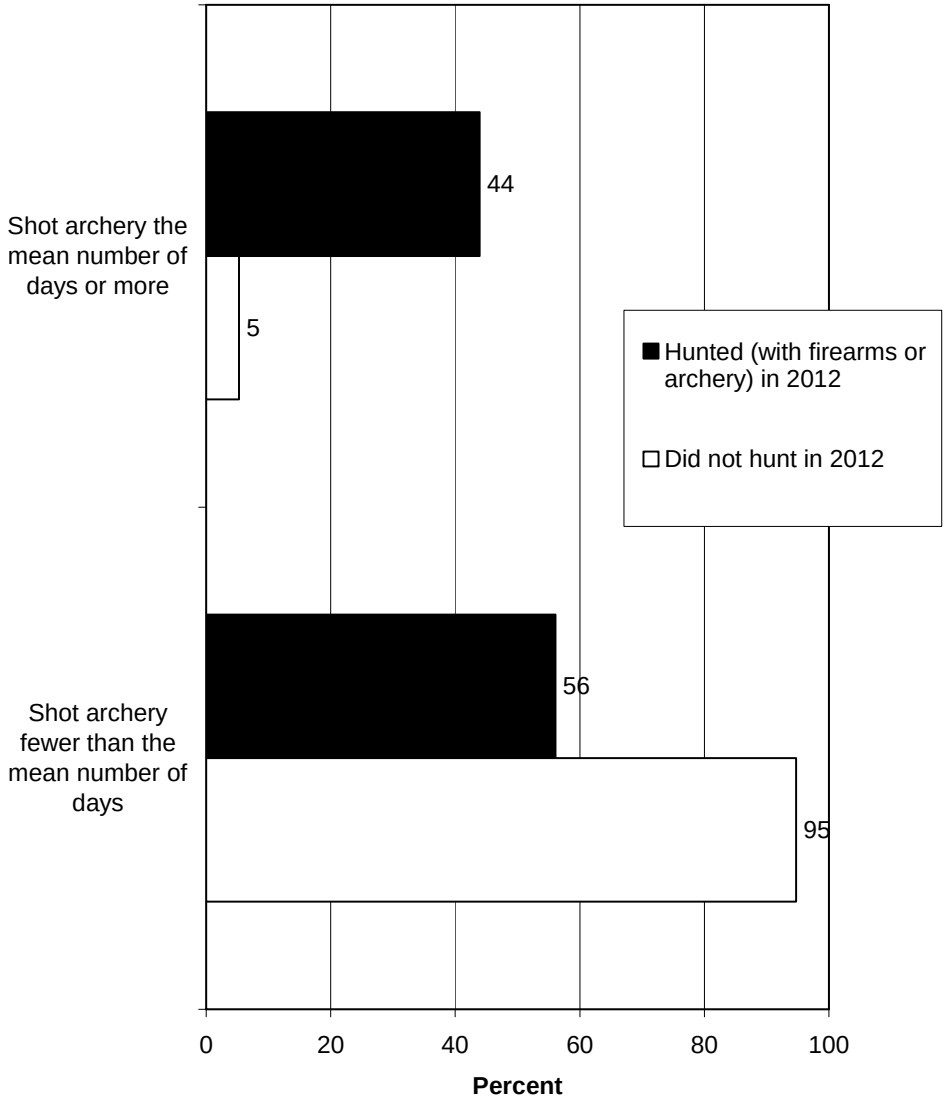


**How many days did you shoot archery* in 2012? (Among bowhunting only participants.)**



- A final graph in this section shows the symbiosis between hunting (with firearms or archery) and archery. Those who hunted in 2012 (with firearms or archery) are more likely to have shot archery the mean number of days or more—in short, hunters are more active archers. (For this analysis, "hunted in 2012" was not restricted to bowhunting but also included any firearms hunting; however, the number of those who target shot archery *and* hunted but did their hunting only with firearms was miniscule.)

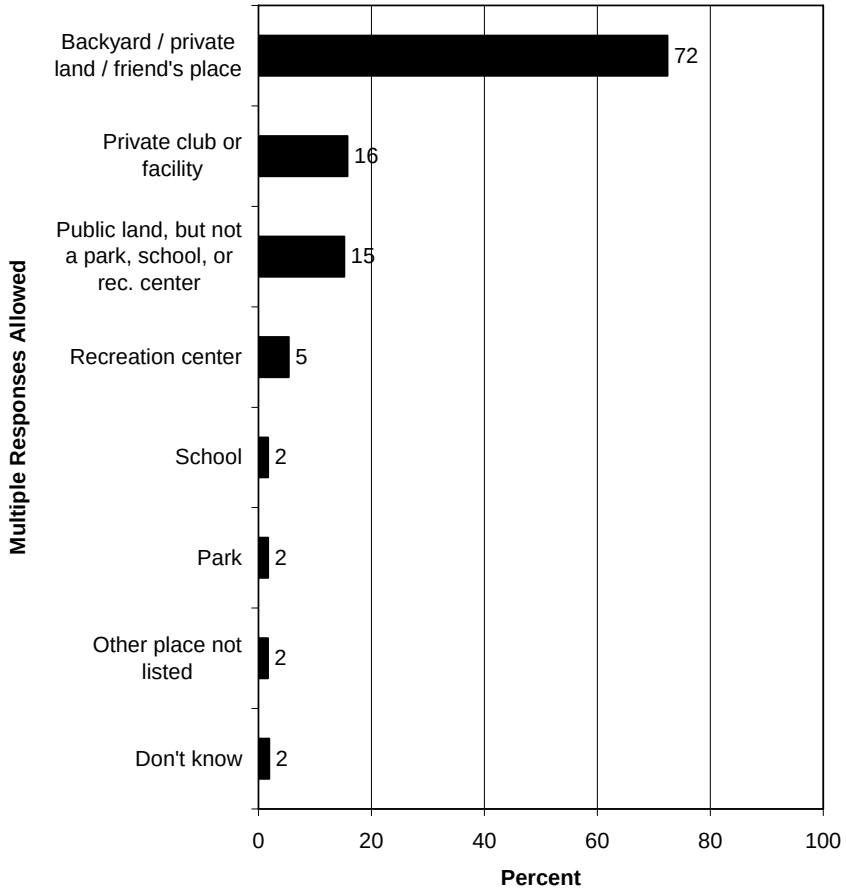
**Archery participation and any type of hunting. (Among those who participated in any archery activities.)**



# LOCATIONS IN WHICH ARCHERS PARTICIPATE IN ARCHERY

- The majority of *all archery participants* (72%) engaged in the activity on either their own land or on a friend's land, at least some of the time. The results are shown regionally, and this question was also broken down by the three subgroups.
  - Among *target archery only participants*, 64% do so on their own land or a friend's land at least some of the time.
  - Among *target archery and bowhunting participants*, 79% do so on their own land or a friend's land at least some of the time.
  - Finally, among *bowhunting only participants*, 68% do so on their own land or a friend's land at least some of the time.

**Where did you shoot a bow and arrow in 2012? I don't need the specific names of places, but just the types of places. Please name all that apply.**



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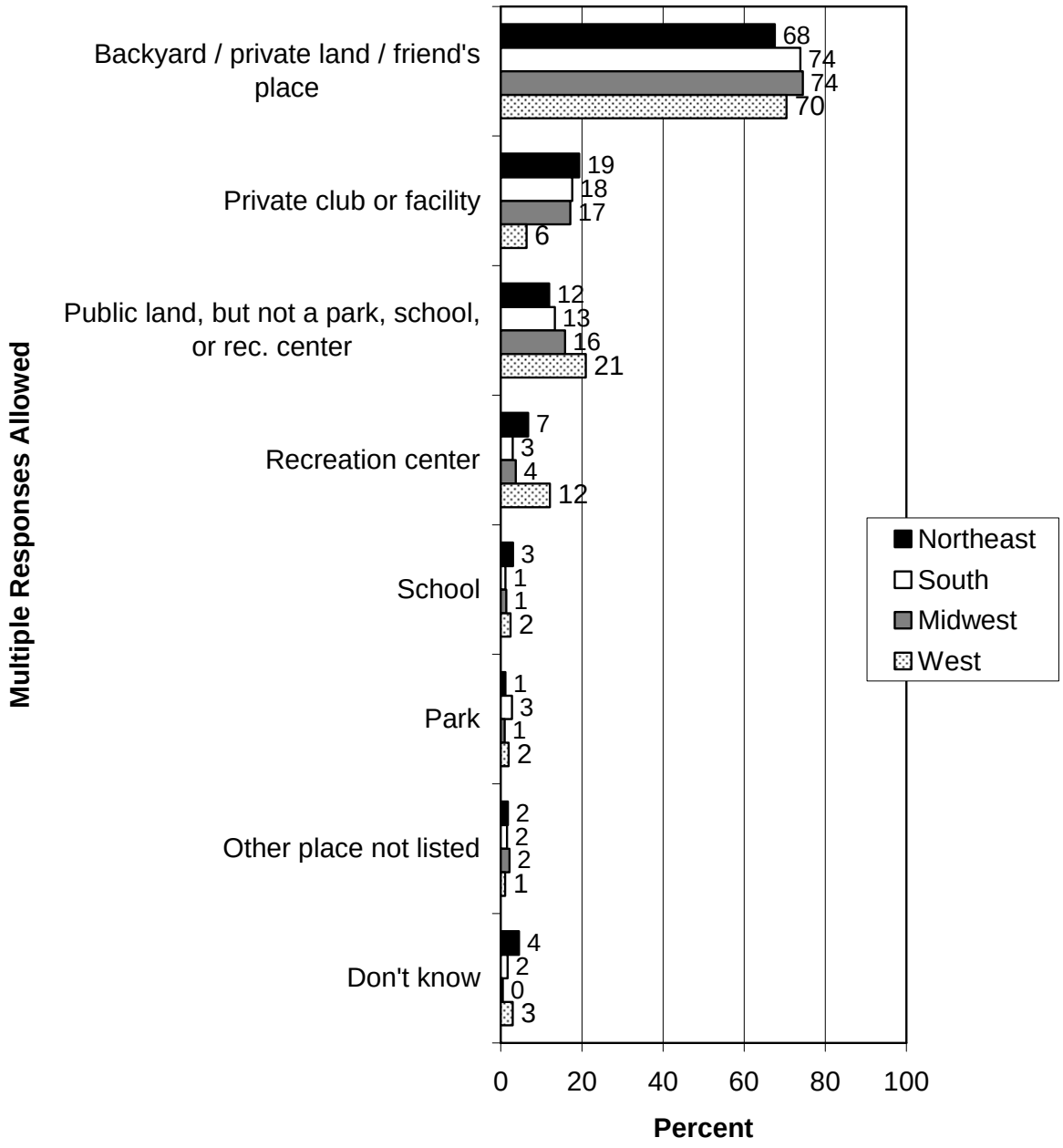
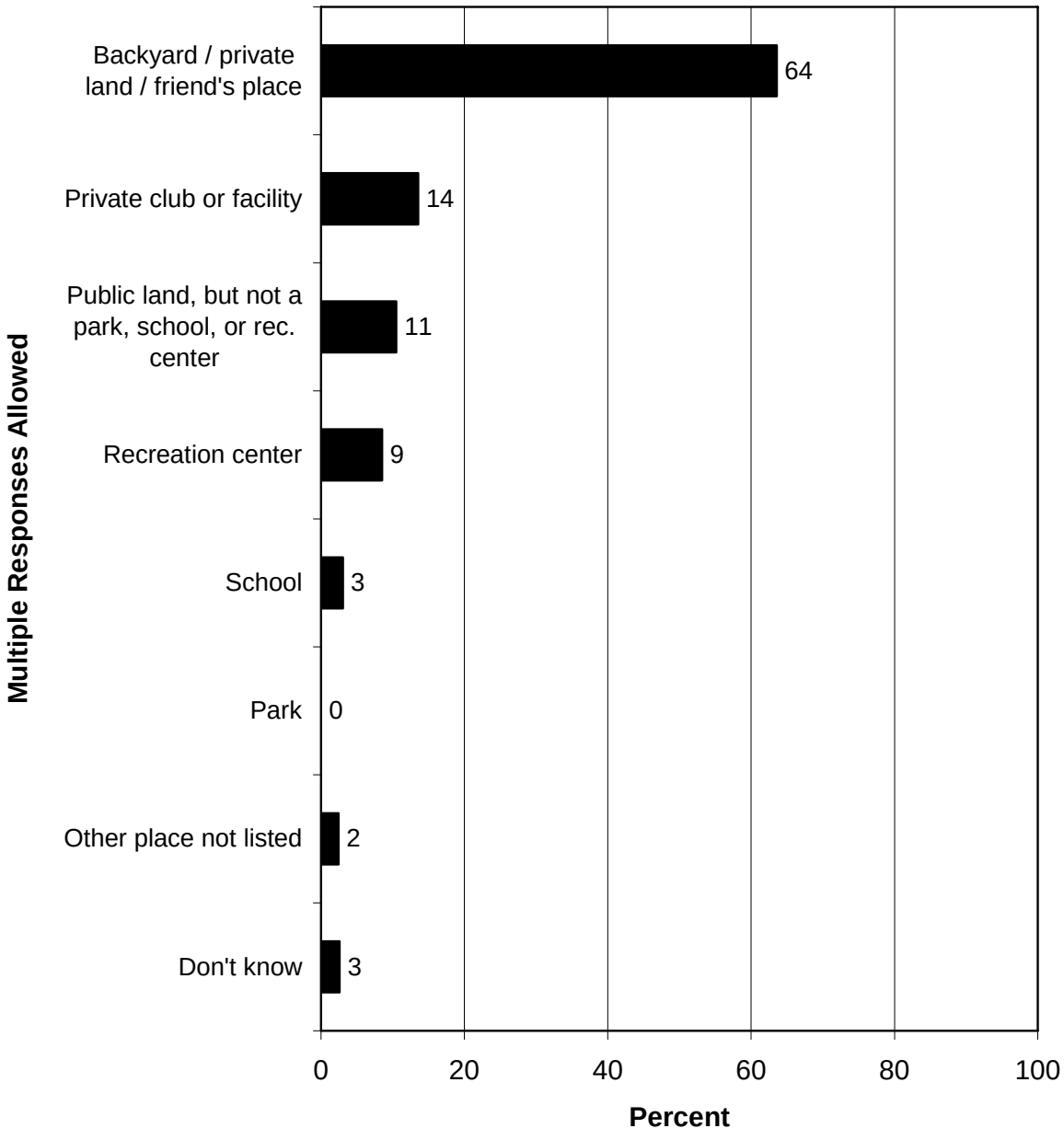
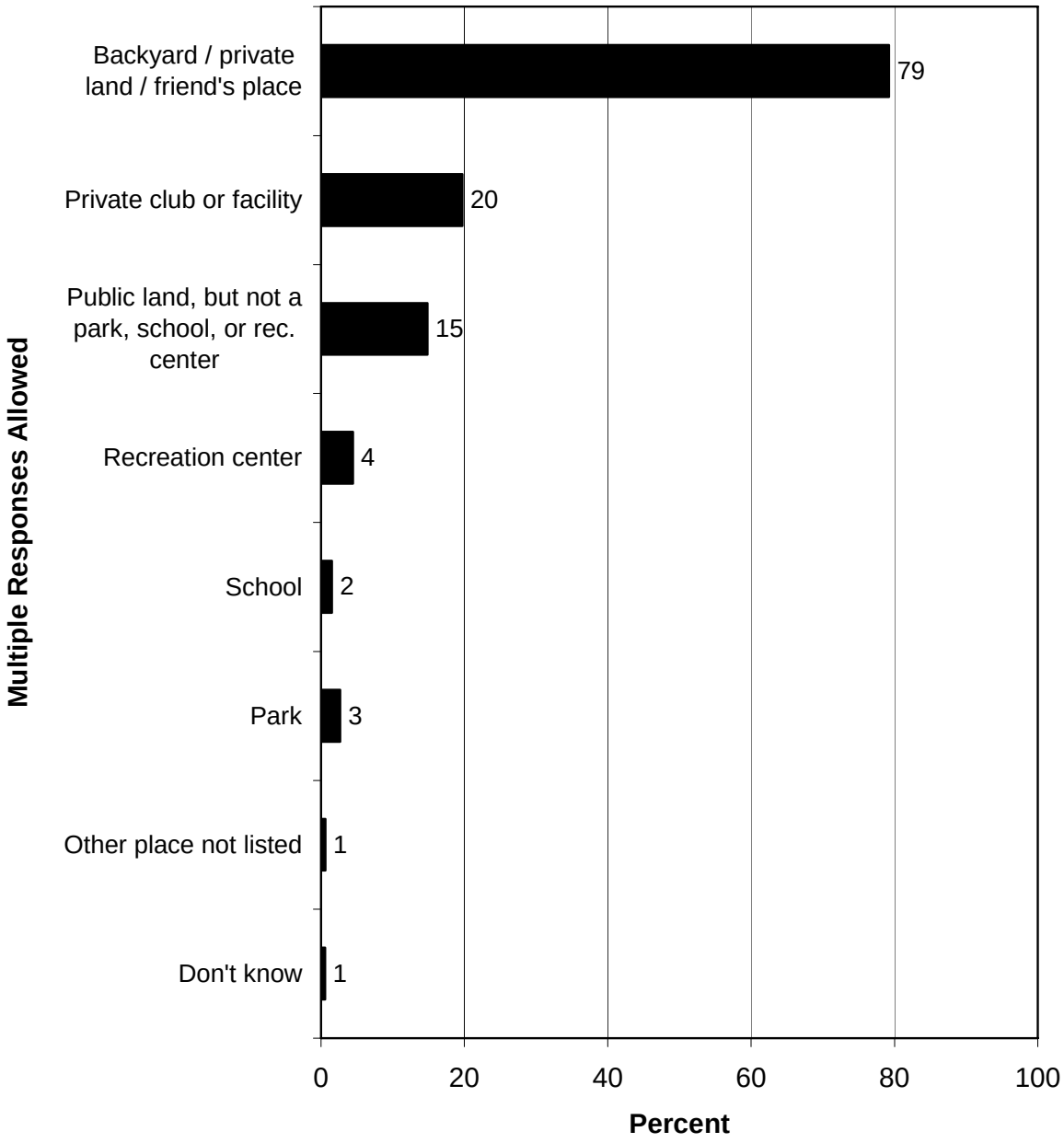


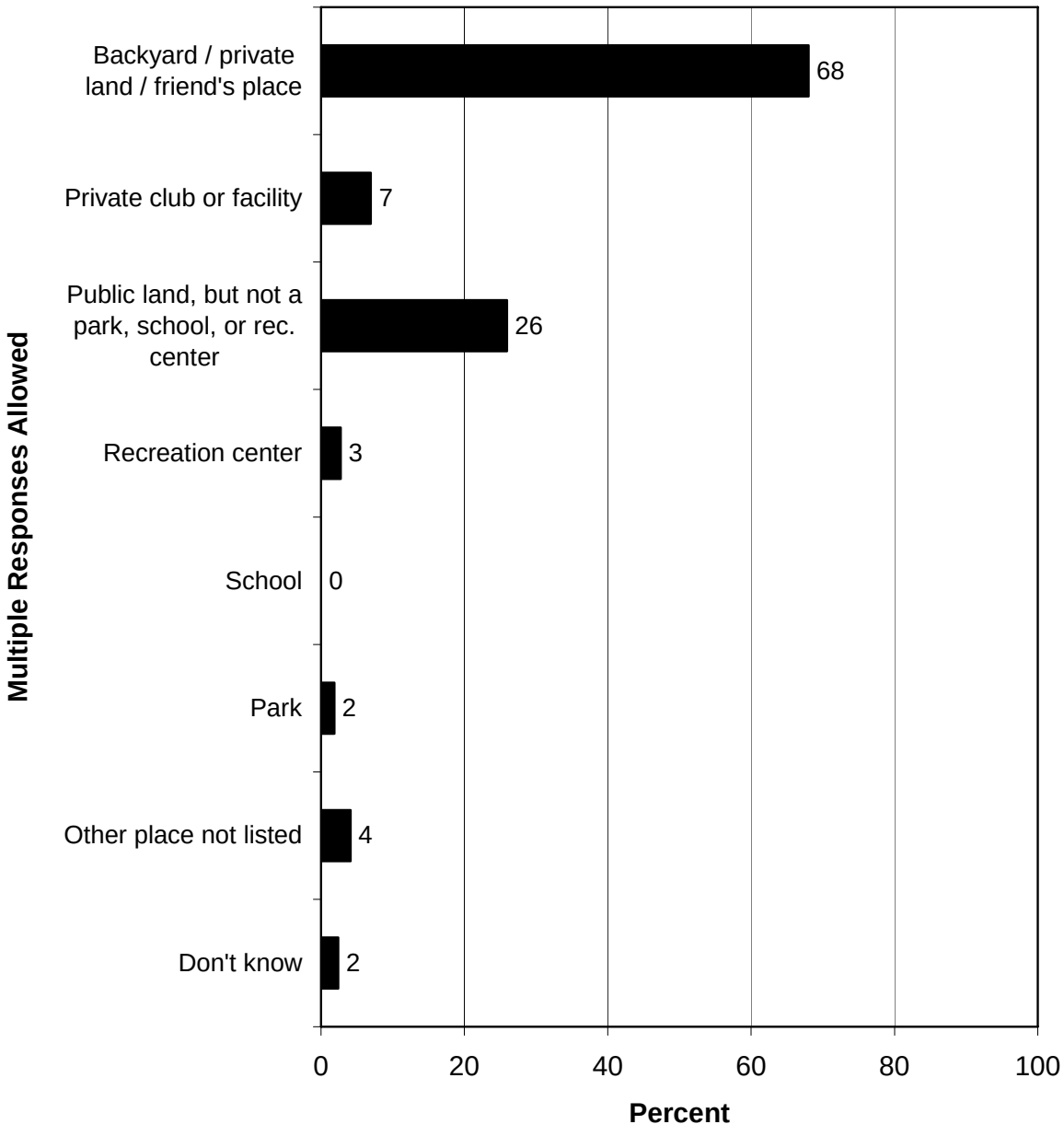
## Where did you shoot a bow and arrow in 2012? (Among target archery only participants.)



**Where did you shoot a bow and arrow in 2012? (Among target archery and bowhunting participants.)**

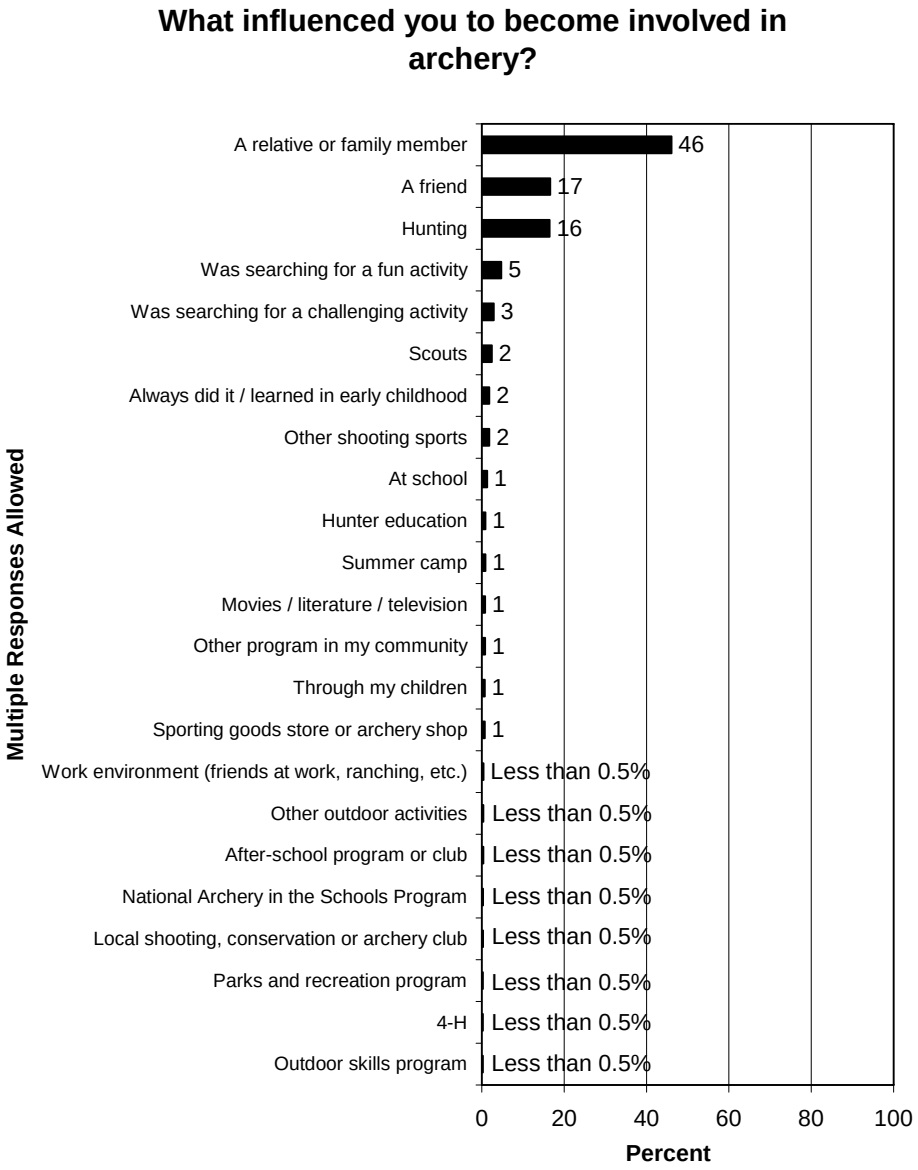


## Where did you shoot a bow and arrow in 2012? (Among bowhunting only participants.)

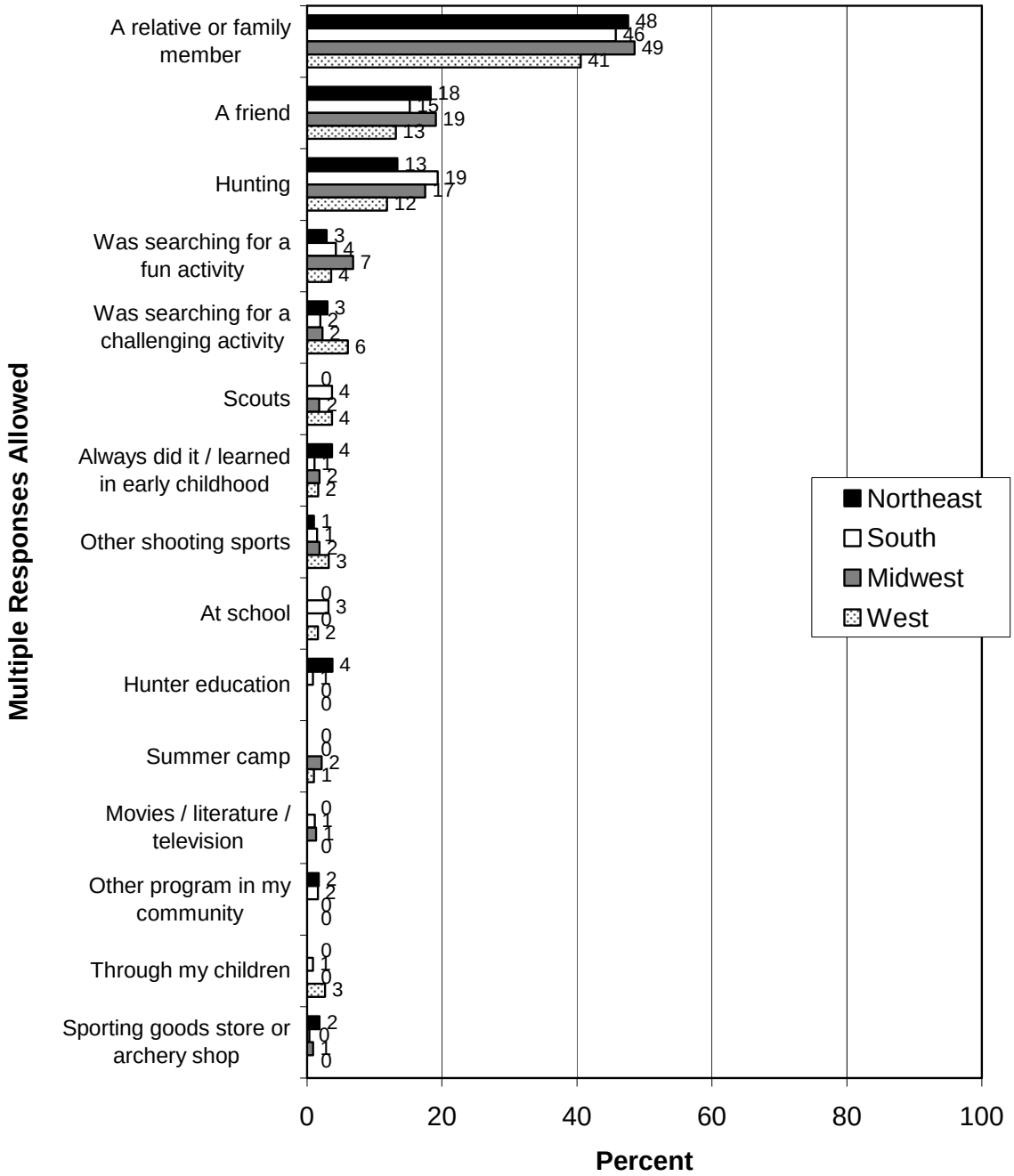


# INITIATION INTO ARCHERY PARTICIPATION

- The survey asked archery participants to indicate what had influenced them to become involved in archery. The top influence was a relative or family member—46% gave this response. Two other influences have a relatively high percentage: a friend (17%) and through hunting (16%). Those who gave a hunting-related response and were coded as being influenced by "hunting" include some who said that they started hunting with firearms and then became interested in bowhunting, some who participated in archery target shooting and became interested in hunting, as well as some who simply answered "Through hunting" or a similar response and did not elaborate further. Other influences are shown in the graph. On the following page are regional results.

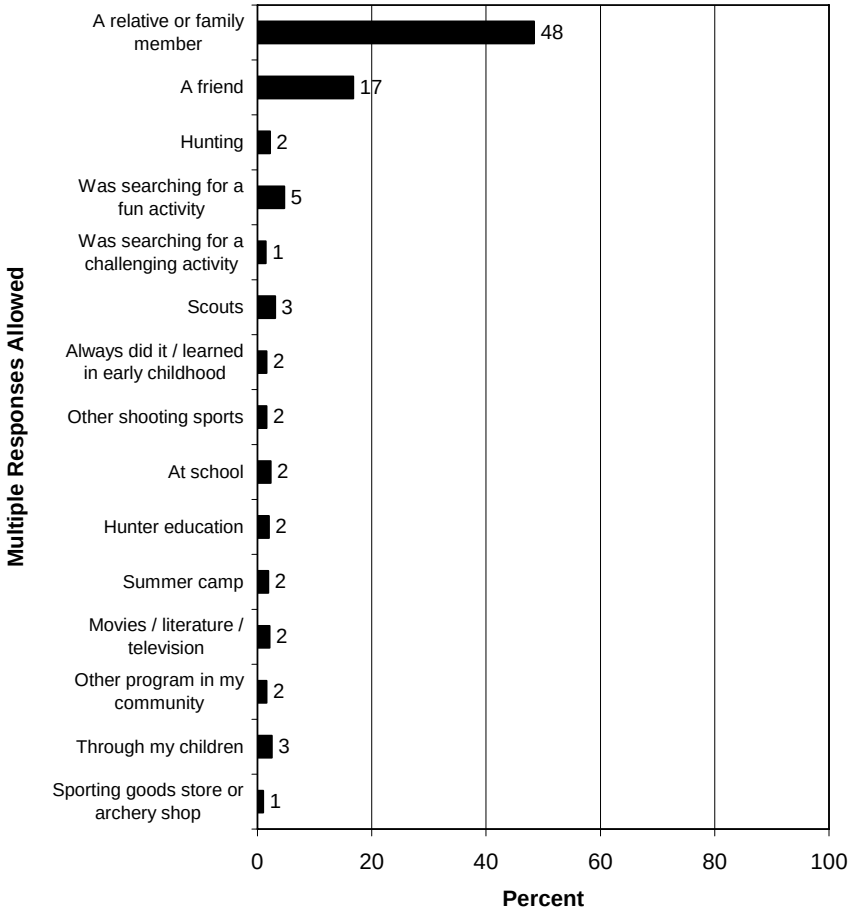


## What influenced you to become involved in archery? (Shows only responses given by more than 0.5% of respondents overall.)

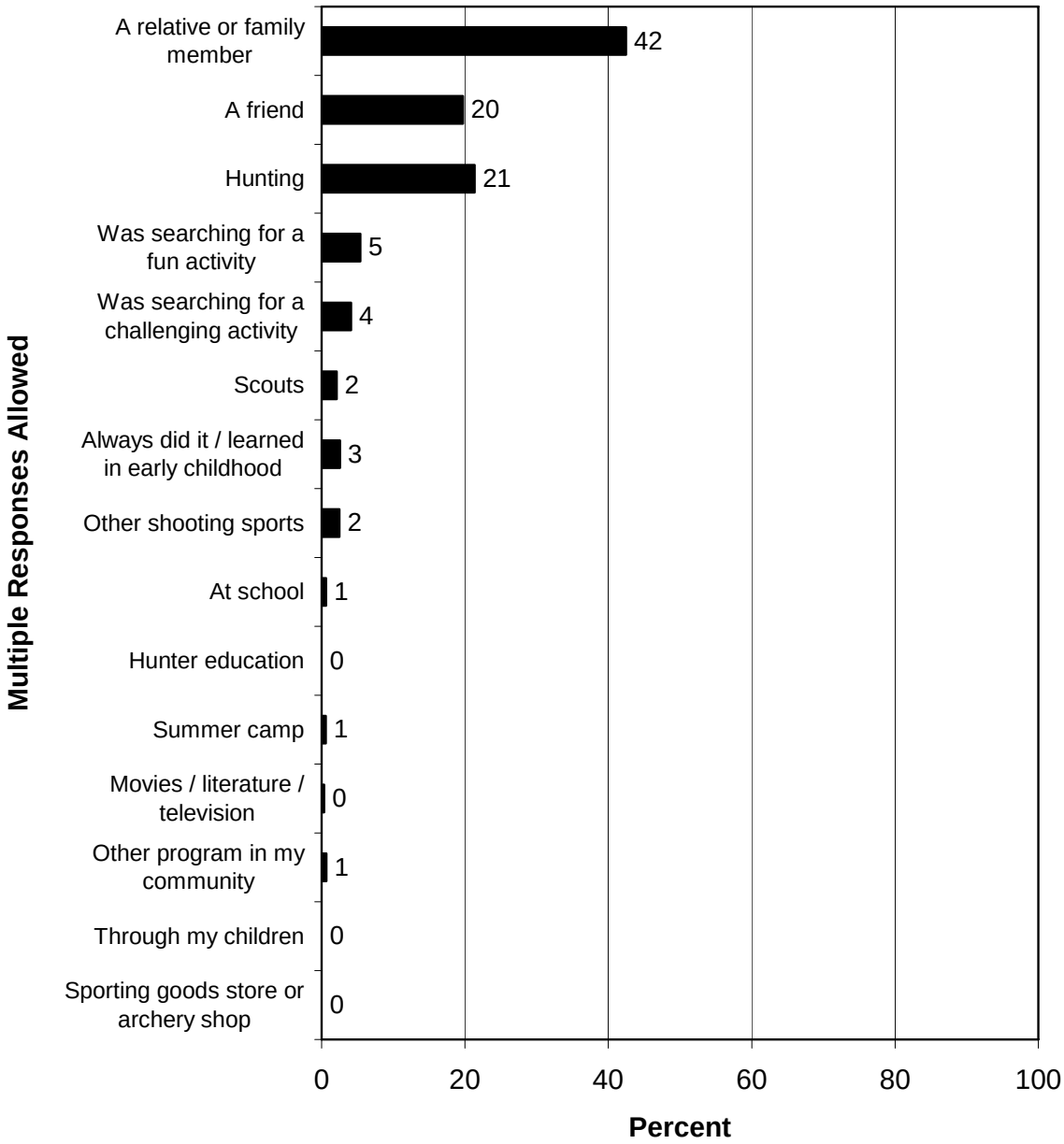


- The question about initiation into archery was also analyzed among the three aforementioned subgroups:
  - Among *target archery only participants*, 48% were influenced by a relative or family member, 17% by a friend, and only 2% through hunting.
  - Among *target archery and bowhunting participants*, 42% were influenced by a relative or family member, 20% by a friend, and 21% through hunting.
  - Finally, among *bowhunting only participants*, 56% were influenced by a relative or family member, 6% by a friend, and 27% through hunting.

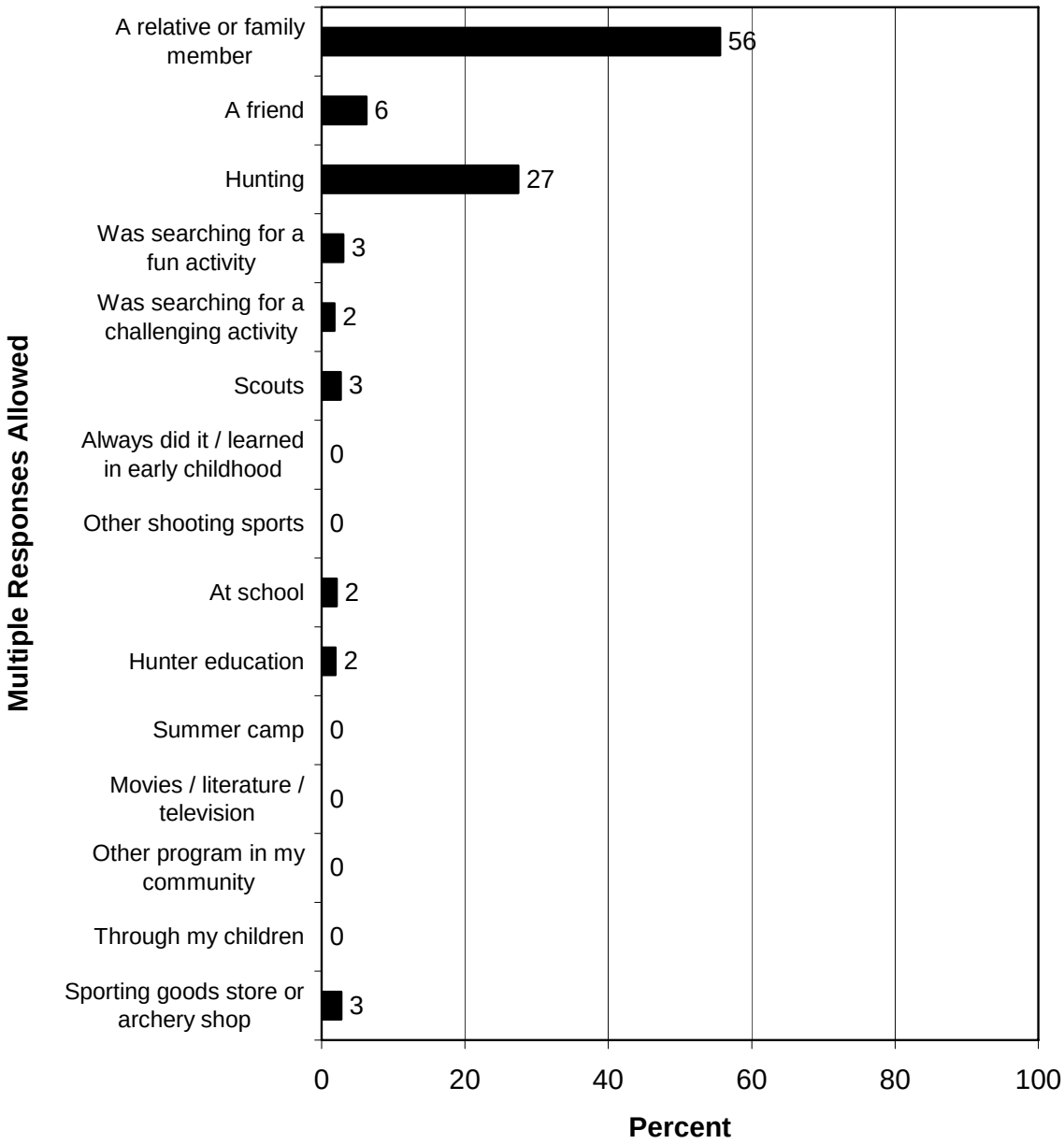
**Q119. What influenced you to become involved in archery?**
**(Among target archery only participants.)**



## Q119. What influenced you to become involved in archery? (Among target archery and bowhunting participants.)



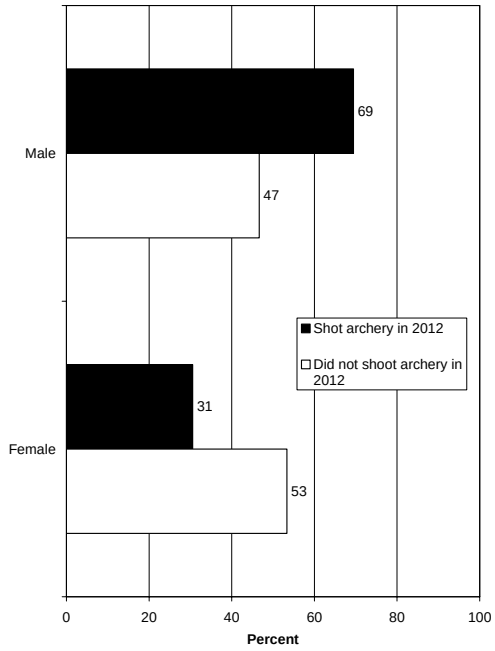
## Q119. What influenced you to become involved in archery? (Among bowhunting only participants.)



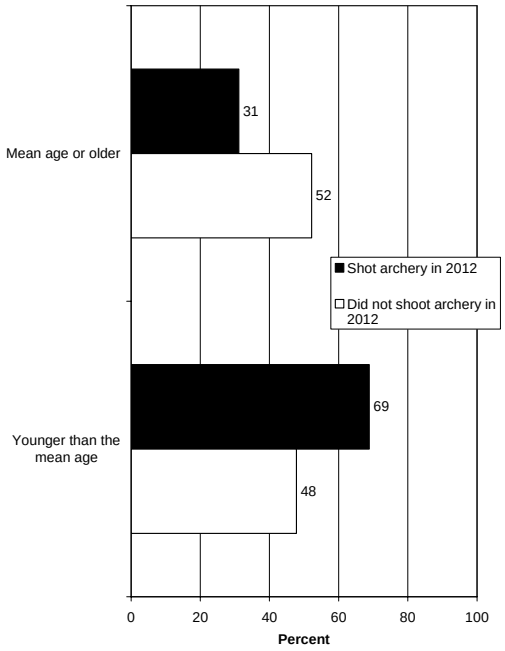
# DEMOGRAPHIC CHARACTERISTICS OF ARCHERY PARTICIPANTS

- The following graphs are among all respondents in the survey, including those who did not participate in archery. Specifically, the graphs that follow compare those who shot archery in 2012 (asked at the beginning of the survey as one of the basic participation questions) and those who did not. The survey quantifiably defines the basic characteristics of typical archery participants. On each graph, the black bars represent *all archery participants* in 2012; the white bars represent non-archers among the general public.
  - In looking at *all archery participants*, archers in 2012 were more often *male* than female by about a 2:1 margin: 69% of 2012 archers were male, and 31% were female (upper left graph on the next page).
  - Archers in 2012 were typically *younger* than non-archers. Two graphs pertaining to age are included on the next page, one split by the mean age, and the second broken into three age groups. These graphs show that people older than 55 were particularly low in archery participation.
  - The fourth graph on the next page shows gender and age together: nearly half of *all archery participants* (47%) were male and younger than the mean age in 2012.
  - An additional page shows graphs that suggest that archers were more on the *rural* side of the continuum rather than the urban side, and that they had a strong *Midwest* presence.

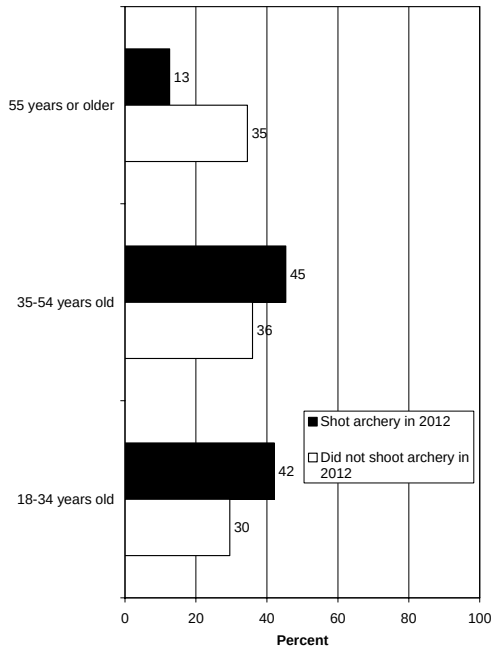
**Respondent's gender.**



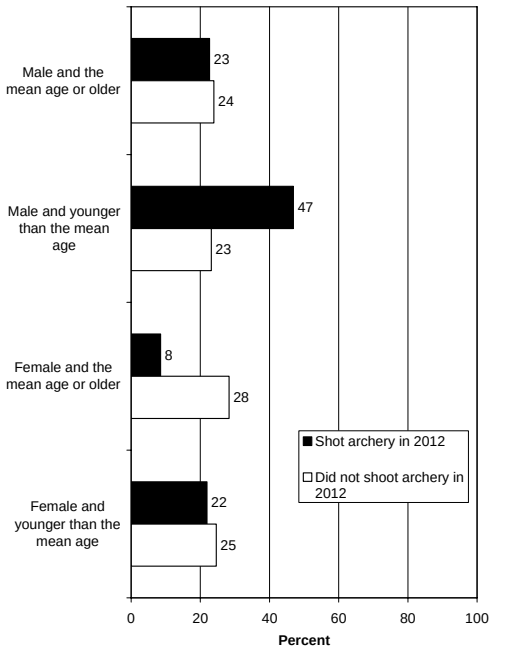

**Respondent's age.**



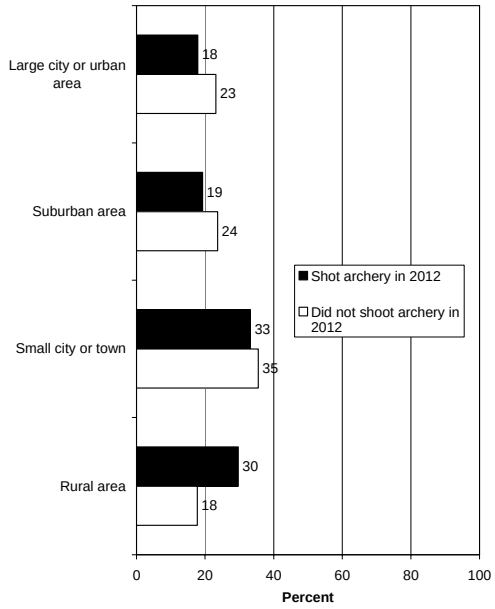

**Respondent's age.**




**Gender / age crosstabulation.**

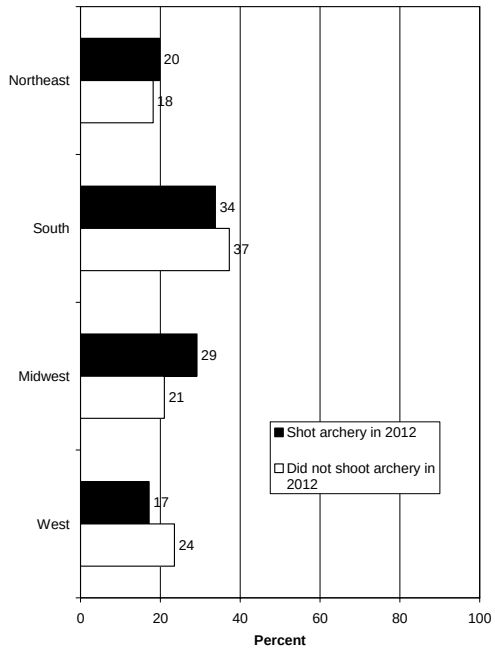


**Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?**



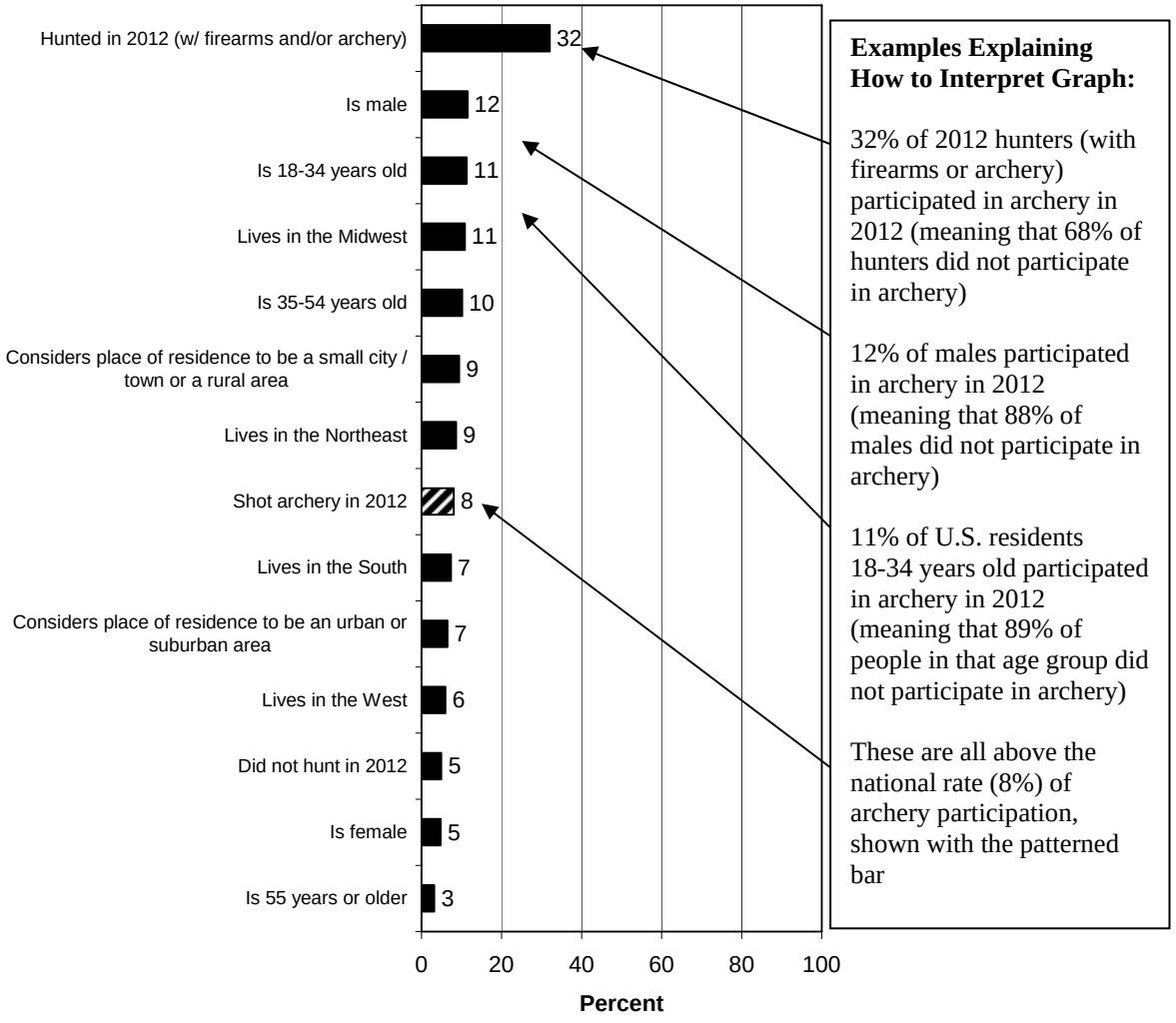

**Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?**


**Region of residence.**



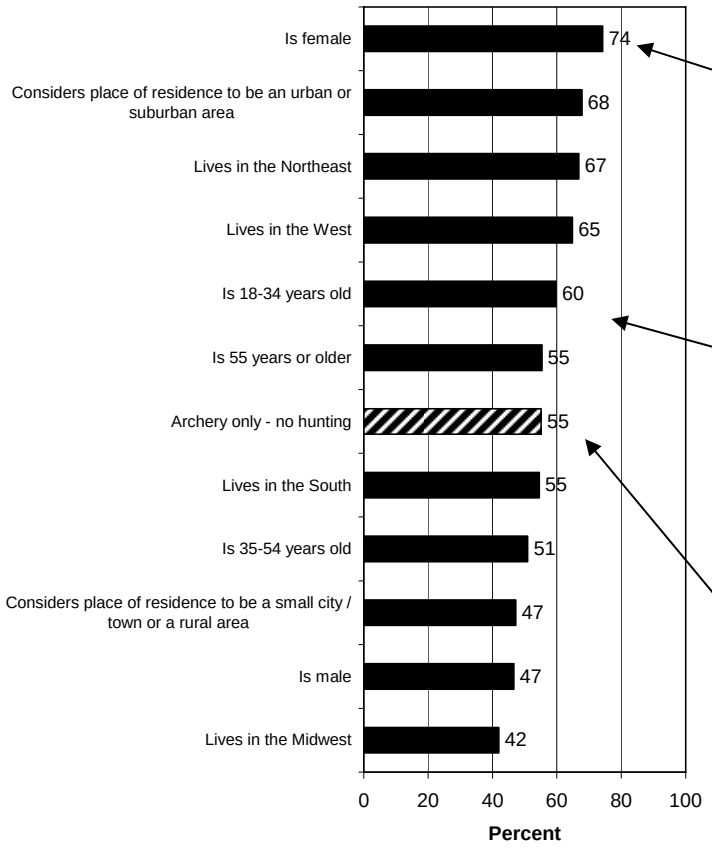
- Another way to examine demographic characteristics of archers is to compare all of them together, as shown below. The top of the graph shows those demographic correlations that are the most important—the groups that are most likely to have participated in archery. The bottom of the graph shows those groups that participate in archery at lower than the average rate among the population as a whole.
  - As shown below, participation in archery is strongly correlated with hunting participation (firearms or bowhunting), with target shooting participation (firearms or bowhunting), and being a young male.

**Percent of each of the following groups who participated in archery in 2012:**



- Similar graphs are included starting below. Unlike the graph on the previous page, which shows the percentages out of all U.S. residents, the next three graphs show the percentages out of those who participated in archery in 2012.
  - One shows the demographic characteristics of *target archery only participants*. They are correlated with being female and being on the more urban side of the rural-urban continuum, among other characteristics.
  - A second graph shows the demographic characteristics of *target archery and bowhunting participants*. They are correlated with living in the Midwest, being male, and being more on the rural side of the continuum.
  - The last graph shows the demographic characteristics of *bowhunting only participants*. They also are correlated with living in the Midwest, being a young male, and living more on the rural side of the continuum.

**Among all archery participants, the percent of the following groups who were target archery only participants:**



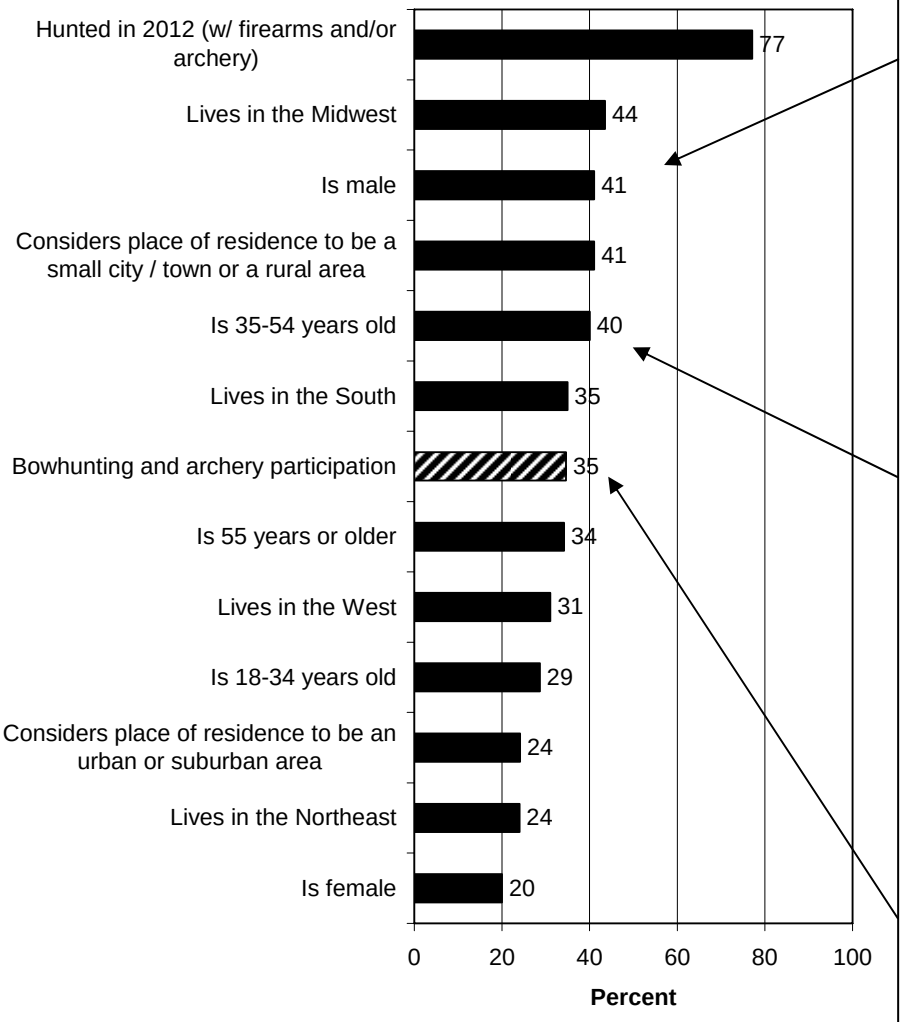

**Examples Explaining How to Interpret Graph:**

74% of female archery participants were *target archery only participants* (meaning that 26% of female archery participants participated in archery and hunting—i.e., were in either of the other two subgroups)

60% of archery participants who are 18-34 years old were *target archery only participants* (meaning that 40% of archery participants in that age group participated in archery and hunting—i.e., were in either of the other two subgroups)

These are all above the national rate among archery participants (55%) who participated in archery but not hunting, shown with the patterned bar

**Among all archery participants, the percent of the following groups who were target archery and bowhunting participants:**



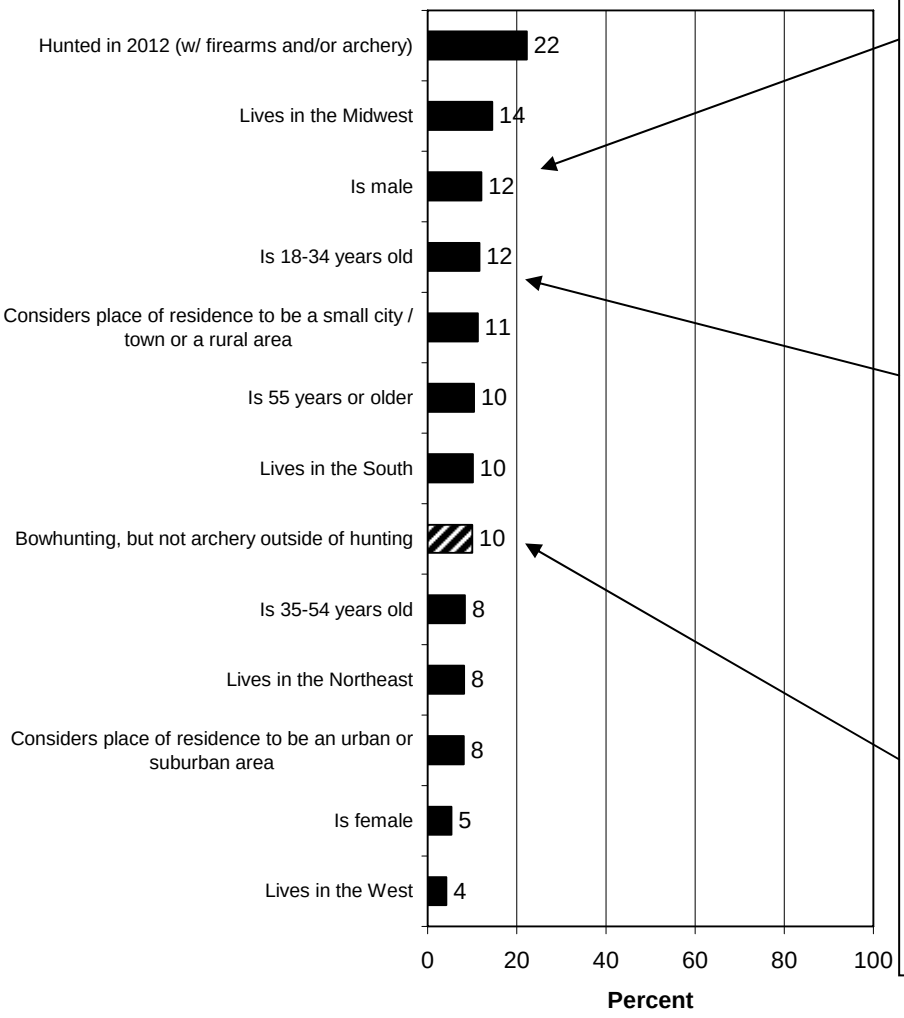

**Examples Explaining How to Interpret Graph:**

41% of male archery participants were *target archery and bowhunting participants* (meaning that 59% of male archery participants either did not participate in bowhunting or did not participate in archery outside of hunting—i.e., were in either of the other two subgroups)

40% of archery participants who are 35-54 years old were *target archery and bowhunting participants* (meaning that 60% of archery participants who are 35-54 years old either did not participate in bowhunting or did not participate in archery outside of hunting—i.e., were in either of the other two subgroups)

These are above the national rate among archery participants (35%) who were *target archery and bowhunting participants*, shown with the patterned bar

**Among all archery participants, the percent of the following groups who were bowhunting only participants:**




**Examples Explaining How to Interpret Graph:**

12% of male archery participants were *bowhunting only participants* (meaning that 88% of male archery participants either did not participate in bowhunting or participated in archery outside of hunting—i.e., were in either of the other two subgroups)

12% of archery participants 18-34 years old were *bowhunting only participants* (meaning that 88% of archery participants 18-34 years old either did not participate in bowhunting or participated in archery outside of hunting—i.e., were in either of the other two subgroups)

These are above the national rate among archery participants 18-34 years old (10%) who were *bowhunting only participants*, shown with the patterned bar

- The tabulation below compares the three subgroups on a variety of demographic characteristics.

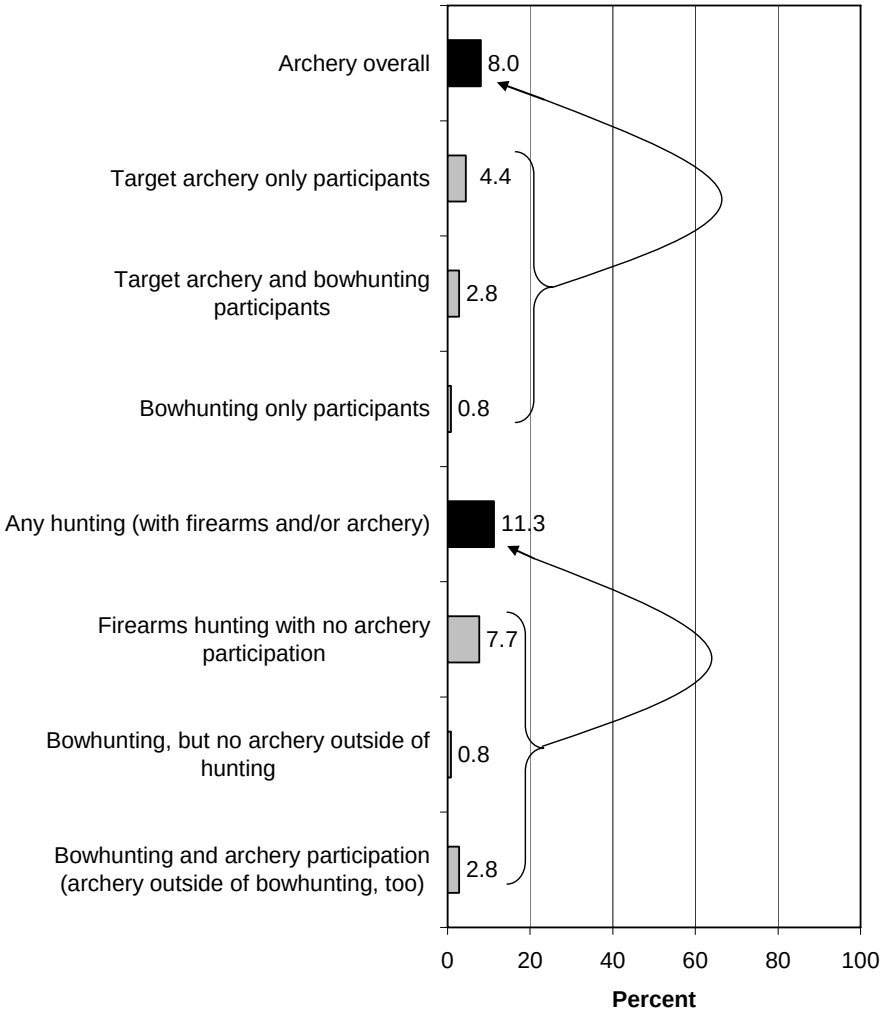
| | Subgroup 1: Target Archery Only Participants | Subgroup 2: Target Archery and Bowhunting Participants | Subgroup 3: Bowhunting Only Participants | All Archery Participants (All Three Subgroups) |
|---|---|---|---|---|
| **Gender** | | | | |
| Percent Male | 59 | 82 | 84 | 69 |
| Percent Female | 41 | 18 | 16 | 31 |
| | | | | |
| **Residence** | | | | |
| Percent Urban and Suburban | 45 | 26 | 30 | 37 |
| Percent Rural | 54 | 74 | 70 | 62 |
| | | | | |
| **Mean Age*** | 37.33 | 39.63 | 36.75 | 38.07 |
| | | | | |
| **Equipment** | | | | |
| Percent Compound Only | 45 | 61 | 63 | 56 |
| Percent Crossbow Only | 18 | 9 | 14 | 12 |
| Percent Recurve Only | 18 | 5 | 6 | 9 |
| Percent Compound and Crossbow | 4 | 9 | 5 | 7 |
| Percent Compound and Recurve | 3 | 10 | 5 | 7 |
| Percent Crossbow and Recurve | 0 | 0 | 1 | 0 |
| Percent All Equipment | 4 | 4 | 4 | 4 |
| | | | | |
| **Participation Length** | | | | |
| Mean Number of Days | 6.73 | 30.05 | 11.69 | 16 |
| Median Number of Days | 3 | 15 | 2 | 4 |

*Note that only people 18 years old and older were interviewed. Mean age is among adults.

# HUNTING AND ARCHERY PARTICIPATION

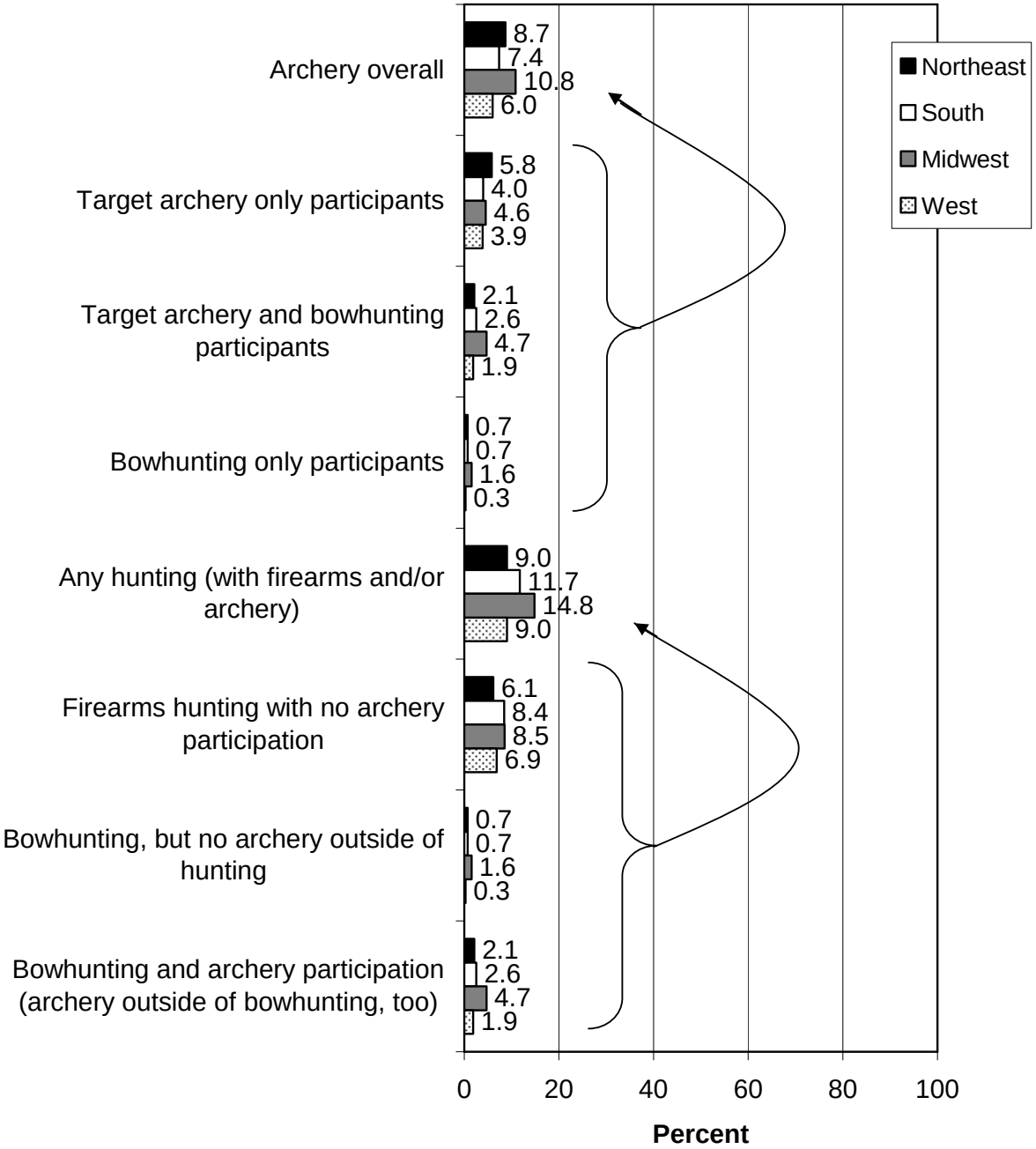
- Because hunting participation is of interest, the graph below shows participation rates in archery and hunting (with firearms and/or archery). It also shows how both of those activities break down in the overlap with each other. It is worth noting that the participation rate in hunting (with firearms or archery) found here (11.3%) almost exactly matches the rate found in the National Survey on Recreation and the Environment in 2008 (11.9%).[1]
  - A regional comparison is also shown.

**Percent of respondents who participated in each of the following in 2012.**

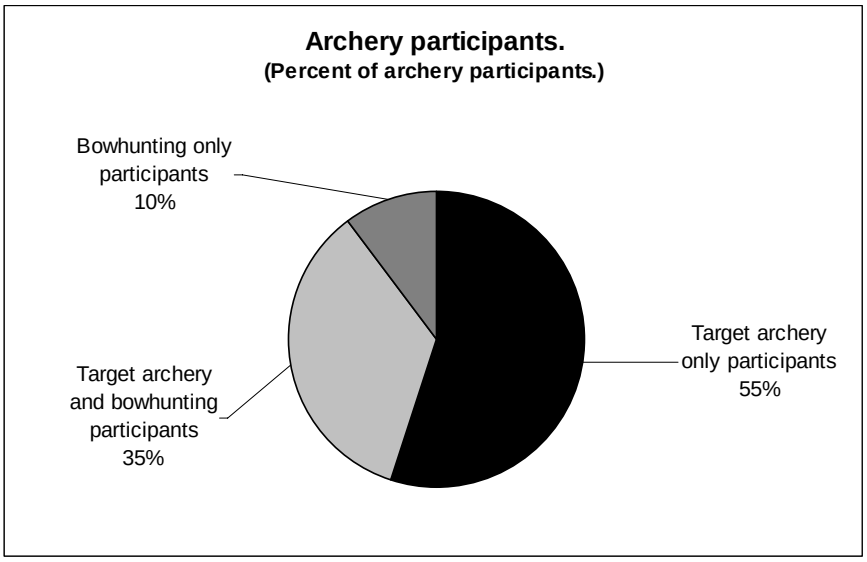



[1] National Survey on Recreation and the Environment (NSRE). The Interagency National Survey Consortium, Coordinated by the USDA Forest Service, Recreation, Wilderness, and Demographics Trends Research Group, Athens, GA and the Human Dimensions Research Laboratory, University of Tennessee, Knoxville, TN.

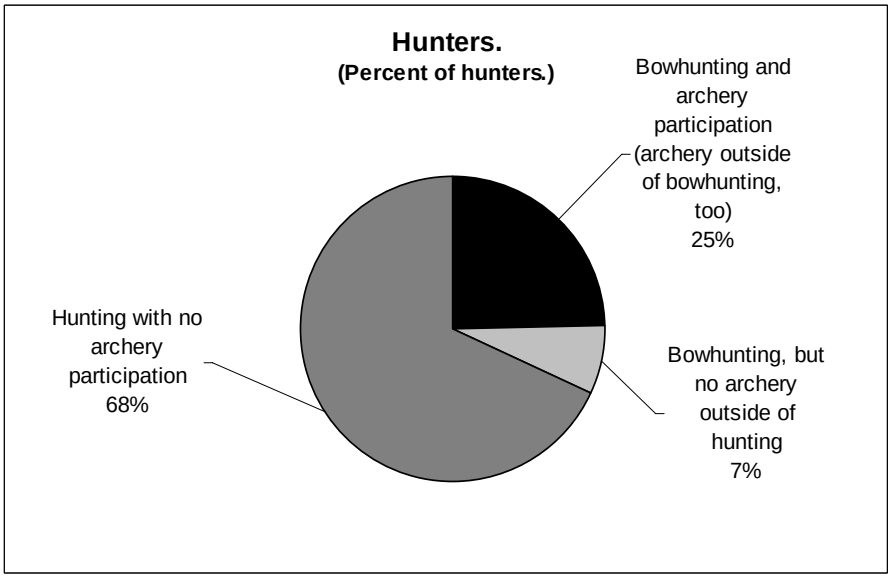
**Percent of respondents who participated in each of the following in 2012:**



- Pie graphs show the breakdown of *all archery participants* (immediately below) and the breakdown of all hunters (with firearms and/or archery) (bottom of page).
  - A little less than half of *all archery participants* (45%) bowhunt.

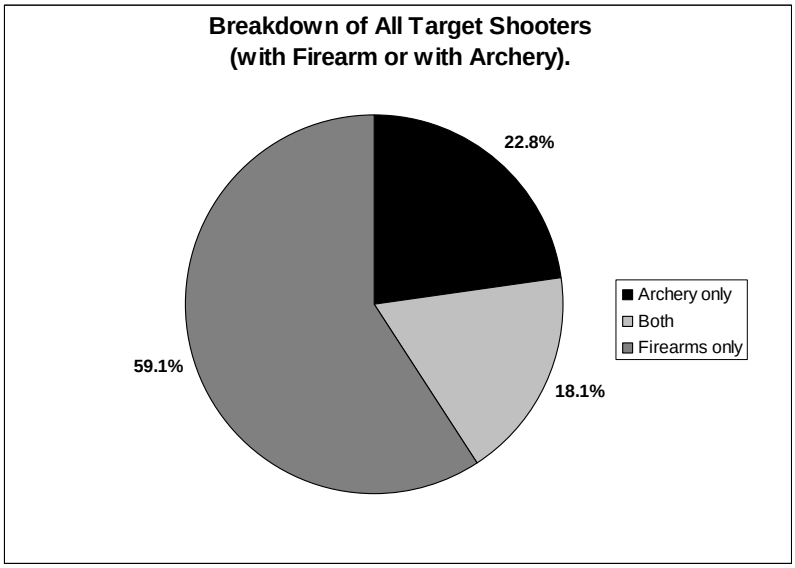



  - In looking at all hunters, including firearms hunters as well, about one-third of all hunters (32%) use archery. Note that this percentage proportion of hunters who use archery equipment (32%) almost exactly matches the proportion found in the *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (33%).

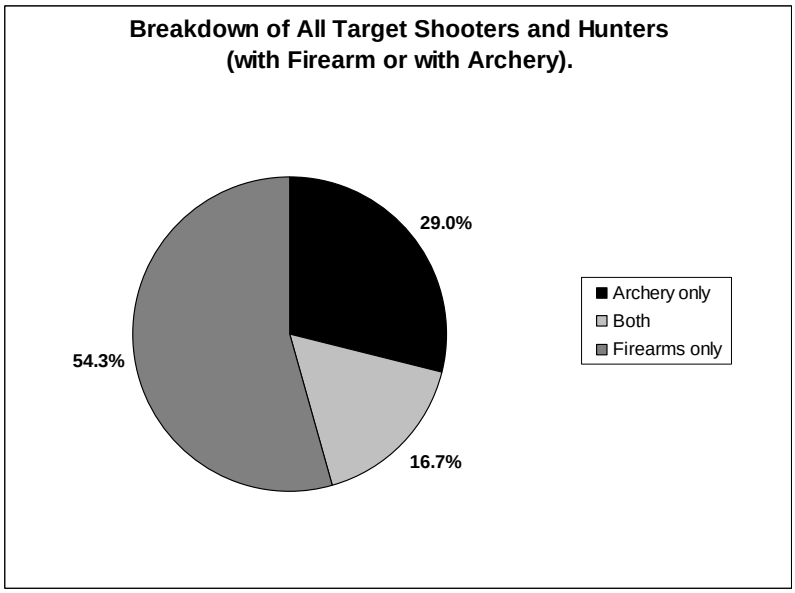


# TARGET SHOOTING AND HUNTING WITH FIREARMS AND WITH ARCHERY EQUIPMENT

- Another analysis looks at all target shooters—those who use archery equipment only, those who use firearms only, and those who use both. Among all target shooters, the majority use firearms exclusively (59.1%). Otherwise, 18.1% use both firearms and archery, and 22.8% use archery exclusively. In total, 40.9% of all target shooters use archery for at least some of their target shooting.




- A final analysis looks at all those who went either target shooting (with firearms and/or archery) *or* hunting (again, with firearms and/or archery). Among this group, 29.0% use archery exclusively, 16.7% use both firearms and archery equipment, and 54.3% use firearms exclusively.



# ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing our in-house, full-service telephone, mail, and web-based survey center with 50 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

Clients include the federal natural resource and land management agencies, most state fish and wildlife agencies, state departments of natural resources, environmental protection agencies, state park agencies, tourism boards, most of the major conservation and sportsmen's organizations, and numerous private businesses. Responsive Management also collects attitude and opinion data for many of the nation's top universities.

Specializing in research on public attitudes toward natural resource and outdoor recreation issues, Responsive Management has completed a wide range of projects during the past 22 years, including dozens of studies of hunters, anglers, wildlife viewers, boaters, park visitors, historic site visitors, hikers, birdwatchers, campers, and rock climbers. Responsive Management has conducted studies on endangered species; waterfowl and wetlands; and the reintroduction of large predators such as wolves, grizzly bears, and the Florida panther.

Responsive Management has assisted with research on numerous natural resource ballot initiatives and referenda and has helped agencies and organizations find alternative funding and increase their membership and donations. Additionally, Responsive Management has conducted major organizational and programmatic needs assessments to assist natural resource agencies and organizations in developing more effective programs based on a solid foundation of fact.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management has also conducted focus groups and personal interviews with residents of the African countries of Algeria, Cameroon, Mauritius, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe.

Responsive Management routinely conducts surveys in Spanish and has conducted surveys in Chinese, Korean, Japanese and Vietnamese and has completed numerous studies with specific target audiences, including Hispanics, African-Americans, Asians, women, children, senior citizens, urban, suburban and rural residents, large landowners, and farmers.

Responsive Management's research has been upheld in U.S. District Courts; used in peer-reviewed journals; and presented at major natural resource, fish and wildlife, and outdoor recreation conferences across the world. Company research has been featured in most of the nation's major media, including CNN, *The New York Times*, *The Wall Street Journal*, and on the front pages of *USA Today* and *The Washington Post*. Responsive Management's research has also been highlighted in *Newsweek* magazine.

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