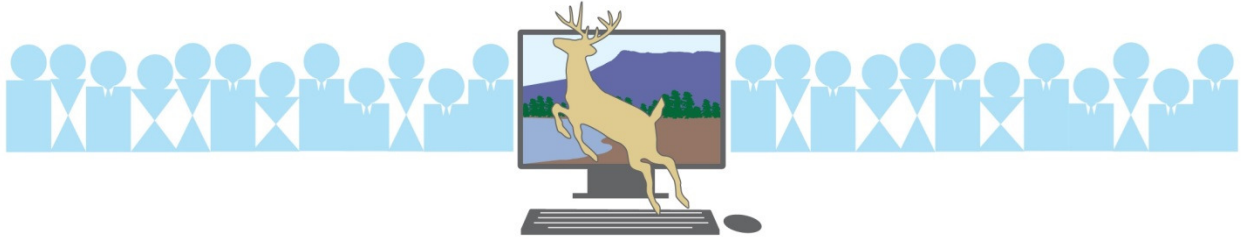# Responsive Management™

ALABAMA HUNTER HARVEST 2017-2018

Conducted for the
Alabama Department of Conservation and Natural Resources

by Responsive Management

2018

ALABAMA HUNTER HARVEST 2017-2018

2018

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Acknowledgments

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INTRODUCTION AND METHODOLOGY

This study was conducted for the Alabama Department of Conservation and Natural Resources (hereinafter referred to as the Department) to determine hunters' participation in hunting various species, their harvest, and other characteristics of their hunting in Alabama in 2017-2018. The study entailed a scientific telephone survey of licensed Alabama hunters. 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 among Alabama hunters (both landlines and cell phones were called). 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 better representation of the sample than do surveys that are read by the respondent (i.e., mail and Internet surveys) because the latter systematically exclude those who are not literate enough to complete the surveys or who would be intimidated by having to complete a written survey—by an estimate of the U.S. Department of Education's National Institute of Literacy (2016), up to 43% of the general population read no higher than a "basic level," suggesting that they would be reticent to complete a survey that they have to read to themselves. Finally, 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 Department, based on the research team's familiarity with hunting and harvest surveys, as well as outdoor recreation and natural resources in general. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

SURVEY SAMPLE

The sample of licensed Alabama hunters was obtained from the Department. The sample was stratified based on resident/non-resident and by lifetime license/non-lifetime license (i.e., any

other type of hunting license). Within each of these sub-samples, a probability-based selection process ensured that each eligible hunter had an approximately equal chance of being selected for the survey. All groups were then proportioned properly in the data analyses, using the proportions in the entire dataset of license holders (resident vs. non-resident, and lifetime license holder vs. any other license holder). Note that this sample of Alabama hunters was not (and will not be) used for any other purpose outside of this survey.

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 surveys on the subjects of outdoor recreation and natural resources in general, specifically including hunter harvest surveys.

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 noon 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 September and October 2018.

TELEPHONE SURVEY DATA COLLECTION, QUALITY CONTROL, AND DATA ANALYSIS

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 contained 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 a total of 3,431 completed interviews with Alabama licensed hunters.

The data were collected and weighted by license type. The sample was divided into three distinct groups: lifetime license holders, resident non-lifetime license holders, and nonresident non-lifetime license holders. Survey interviews from these groups were then obtained in their proper proportions. Once the data were collected, response rates were computed for each of these groups individually, and these were used to estimate the total number of participants and then to weight the final data, as lifetime licensees had a considerably lower rate of participation than the other license categories. The final weighting was slight: the highest weight (resident non-lifetime license holders) being 1.09 and the lowest weight (lifetime license holders) being 0.73.

The analysis of the final data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management. The results were weighted by the aforementioned stratification variables so that the sample was representative of Alabama licensed hunters as a whole. As indicated, residents and non-residents were in their proper proportions, as were lifetime license holders and non-lifetime license holders.

Because the sampling frame and the data analyses, particularly the weighting, differed in this survey markedly over past surveys, no trends graphs are shown this year.

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

SAMPLING ERROR

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of Alabama licensed hunters, the sampling error is at most plus or minus 1.66 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 1.66 percentage points of each other. Sampling error was calculated using a standard formula such as that described below, with a sample size of 3,431 and an estimated population size of 273,628.

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 <u>maximum</u> sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

HUNTING DEER: PARTICIPATION, LOCATION, TYPES OF LAND, EQUIPMENT, DAYS, AND HARVEST

➢ Approximately 200 thousand licensed hunters hunted deer in Alabama during the 2017-2018 deer season.

- They spent approximately 4.7 million days hunting deer.

- They harvested more than 212 thousand deer.

- Modern firearms accounts for the most deer hunters, days, and harvest, followed distantly by archery, with primitive weapons at the bottom.

- Private lands accounted, by far, for the majority of the hunting, days, and harvest.

  o County data are shown starting on the following page.

Deer Hunting: Hunters, Days, and Harvest (2017-2018)

Deer / Equipment / Land / Deer Type	Number of Hunters			Hunter-Days			Number Harvested		
	Estimate	**Lower Bound**	**Upper Bound**	**Estimate**	**Lower Bound**	**Upper Bound**	**Estimate**	**Lower Bound**	**Upper Bound**
Deer-all	202,540	199,903	205,177	4,749,691	4,505,887	4,993,495	212,444	197,064	227,824
Archery	80,979	76,944	85,013	1,370,848	1,195,373	1,546,324	49,206	36,332	62,080
Modern	179,102	175,651	182,553	3,201,076	3,036,895	3,365,258	154,746	142,858	166,634
Primitive	20,454	18,044	22,864	177,767	68,629	286,905	8,460	0	17,062
Private land				4,438,114	4,206,635	4,669,592	201,433	186,163	216,702
WMAs				205,341	162,745	247,937	6,433	0	14,633
Other public				106,238	73,516	138,960	4,549	0	13,488
Buck							94,471	86,958	101,985
Doe							114,116	103,291	124,940

Deer Hunting: Mean Days, Deer Harvest per Hunter, Days per Harvest, and Buck-Doe Percentages (2017-2018)

	Mean Days per Hunter	Deer Harvest per Hunter	Days per Harvest	Percentage
Deer Overall	23.5	1.05	22.4	
Archery		0.61	20.7	
Modern		0.86	27.9	
Primitive		0.41	21.0	
Buck				44.5
Doe				55.5

Deer Hunting: Harvest of Bucks, Does, and Fawns by County (2017-2018)

County	Harvest of Bucks			Harvest of Does			Harvest of Fawns		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Autauga	798	247	1,348	1,761	661	2,860	88	0	254
Baldwin	2,815	1,635	3,996	3,315	1,776	4,854	119	0	392
Barbour	1,547	721	2,373	2,196	1,098	3,295	88	0	254
Bibb	915	1	1,829	1,414	448	2,381	88	0	254
Blount	767	279	1,255	1,092	319	1,864	177	0	412
Bullock	1,754	865	2,642	1,964	721	3,207	88	0	254
Butler	2,004	924	3,084	2,803	1,095	4,511	0	0	0
Calhoun	413	0	842	60	0	196	0	0	0
Chambers	1,080	455	1,705	1,926	943	2,908	88	0	254
Cherokee	1,063	284	1,842	650	0	1,328	0	0	0
Chilton	678	112	1,245	1,151	300	2,003	60	0	196
Choctaw	1,339	577	2,101	1,224	329	2,119	0	0	0
Clarke	1,524	607	2,442	2,216	704	3,729	265	0	763
Clay	972	330	1,615	442	3	881	0	0	0
Cleburne	855	242	1,469	678	21	1,335	60	0	196
Coffee	720	59	1,382	920	101	1,740	0	0	0
Colbert	561	82	1,041	681	129	1,232	88	0	254
Conecuh	2,089	482	3,695	2,671	1,089	4,254	0	0	0
Coosa	1,003	354	1,653	1,240	362	2,118	0	0	0
Covington	1,105	410	1,800	1,187	373	2,001	0	0	0
Crenshaw	834	241	1,427	3,953	1,813	6,093	60	0	196
Cullman	1,361	536	2,186	769	147	1,391	0	0	0
Dale	1,623	640	2,607	354	22	685	0	0	0
Dallas	3,357	2,010	4,703	5,564	2,754	8,374	88	0	254
DeKalb	974	332	1,617	1,092	188	1,996	0	0	0
Elmore	961	133	1,788	1,664	617	2,711	0	0	0
Escambia	2,220	936	3,505	3,915	1,673	6,157	0	0	0
Etowah	709	184	1,234	136	0	343	0	0	0
Fayette	1,288	586	1,989	1,173	316	2,029	88	0	254
Franklin	590	48	1,132	1,238	18	2,457	0	0	0
Geneva	1,009	317	1,701	1,364	475	2,254	77	0	231
Greene	859	308	1,411	2,099	593	3,605	88	0	254
Hale	915	167	1,663	592	122	1,063	177	0	509
Henry	2,045	1,026	3,064	2,275	415	4,135	0	0	0
Houston	855	119	1,591	678	0	1,376	0	0	0
Jackson	1,947	899	2,995	1,715	786	2,644	177	0	509
Jefferson	1,032	335	1,729	681	129	1,232	0	0	0
Lamar	3,098	1,078	5,118	3,275	537	6,013	177	0	412
Lauderdale	2,389	1,230	3,548	1,713	603	2,822	148	0	363
Lawrence	709	88	1,331	148	0	363	0	0	0
Lee	905	210	1,601	1,562	100	3,025	0	0	0
Limestone	1,268	335	2,202	473	23	923	0	0	0
Lowndes	2,585	675	4,495	1,144	336	1,952	0	0	0
Macon	944	227	1,660	3,050	922	5,178	0	0	0
Madison	1,657	758	2,556	590	101	1,079	0	0	0
Marengo	1,584	545	2,623	2,203	1,075	3,330	0	0	0
Marion	767	176	1,357	1,830	705	2,955	60	0	196
Marshall	265	0	553	354	0	879	0	0	0
Mobile	1,328	580	2,076	826	36	1,617	0	0	0
Monroe	2,020	973	3,066	2,545	886	4,203	60	0	196
Montgomery	2,308	1,123	3,493	2,441	1,205	3,677	0	0	0
Morgan	88	0	254	325	7	643	0	0	0
Perry	1,271	510	2,031	1,686	603	2,769	0	0	0
Pickens	1,556	715	2,397	1,786	701	2,871	0	0	0
Pike	1,595	618	2,572	2,083	513	3,654	0	0	0
Randolph	530	0	1,105	696	124	1,267	0	0	0
Russell	1,151	481	1,822	3,198	1,436	4,961	0	0	0

Deer Hunting: Harvest of Bucks, Does, and Fawns by County (2017-2018) (continued)

County	Harvest of Bucks			Harvest of Does			Harvest of Fawns		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
St. Clair	1,357	469	2,245	707	133	1,282	88	0	254
Shelby	1,378	350	2,406	1,484	524	2,443	60	0	196
Sumter	1,326	499	2,153	1,480	521	2,439	0	0	0
Talladega	972	423	1,522	1,474	443	2,505	0	0	0
Tallapoosa	1,271	408	2,133	1,522	626	2,418	88	0	254
Tuscaloosa	2,468	1,354	3,581	2,893	1,617	4,168	0	0	0
Walker	1,314	423	2,205	1,326	567	2,085	165	0	392
Washington	1,322	353	2,291	1,781	674	2,888	0	0	0
Wilcox	2,111	978	3,245	4,190	2,143	6,237	196	0	510
Winston	1,034	260	1,808	946	215	1,676	177	0	509

Deer Hunting: Days by County (2017-2018)

County	Days		
	Estimate	**Lower Bound**	**Upper Bound**
Autauga	56,284	33,857	78,712
Baldwin	116,911	81,120	152,701
Barbour	76,225	49,310	103,141
Bibb	59,952	31,273	88,631
Blount	73,860	31,930	115,791
Bullock	63,958	37,779	90,138
Butler	79,267	46,659	111,875
Calhoun	50,694	25,068	76,321
Chambers	85,882	42,643	129,120
Cherokee	42,606	16,895	68,317
Chilton	62,028	33,642	90,413
Choctaw	47,764	25,440	70,088
Clarke	71,371	42,240	100,502
Clay	54,896	26,099	83,693
Cleburne	54,173	26,518	81,828
Coffee	56,711	29,378	84,043
Colbert	49,779	14,297	85,262
Conecuh	88,892	58,086	119,698
Coosa	92,415	57,336	127,493
Covington	58,741	34,831	82,651
Crenshaw	83,213	49,432	116,995
Cullman	33,464	17,794	49,134
Dale	47,125	24,289	69,962
Dallas	143,004	98,594	187,414
DeKalb	41,311	20,595	62,027
Elmore	61,237	30,682	91,792
Escambia	104,703	62,756	146,649
Etowah	64,539	25,756	103,321
Fayette	65,477	36,596	94,357
Franklin	34,183	10,965	57,400
Geneva	45,675	17,316	74,034
Greene	69,775	38,402	101,148
Hale	52,547	26,515	78,579
Henry	57,701	30,141	85,261
Houston	26,930	8,425	45,435
Jackson	111,181	70,796	151,566
Jefferson	89,734	50,852	128,615
Lamar	78,798	42,895	114,701
Lauderdale	84,127	43,519	124,735
Lawrence	40,799	18,031	63,566
Lee	76,801	44,596	109,005
Limestone	54,143	24,986	83,301
Lowndes	44,763	25,532	63,994
Macon	68,212	40,980	95,444
Madison	48,797	28,699	68,894
Marengo	94,560	64,207	124,912
Marion	73,546	42,038	105,053
Marshall	32,782	14,112	51,452
Mobile	72,256	44,939	99,574
Monroe	128,989	78,256	179,722
Montgomery	71,920	38,922	104,918
Morgan	33,431	11,993	54,868
Perry	67,088	34,173	100,003
Pickens	88,664	53,793	123,535
Pike	53,439	30,919	75,959
Randolph	30,719	14,326	47,112
Russell	90,830	56,220	125,440

Deer Hunting: Days by County (2017-2018) (continued)

County	Days		
	Estimate	**Lower Bound**	**Upper Bound**
St. Clair	48,869	27,246	70,491
Shelby	92,838	50,204	135,472
Sumter	52,188	30,147	74,228
Talladega	61,973	37,766	86,180
Tallapoosa	78,126	49,441	106,811
Tuscaloosa	133,076	91,581	174,571
Walker	97,639	62,241	133,036
Washington	66,676	39,339	94,013
Wilcox	104,588	69,783	139,394
Winston	68,311	33,755	102,867

HUNTING TURKEY: PARTICIPATION, LOCATION, SEASONS, TYPES OF LAND, EQUIPMENT, DAYS, AND HARVEST

➢ Approximately 48 thousand licensed hunters hunted turkey in Alabama in the 2017-2018 seasons.

- They spent more than 500 thousand hunter-days hunting turkey.

- They harvested just over 28 thousand turkeys.

- Using modern firearms was the most popular way to hunt turkey, accounting for most of the days of turkey hunting.

- The spring season far exceeded the fall season in participation and harvest.

  ○ County data are shown starting on the following page.

Turkey Hunting: Hunters, Days, and Harvest (2017-2018)

Turkey / Equipment / Season / Turkey Type	Number of Hunters			Hunter-Days			Number Harvested		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Turkey-all	48,626	45,096	52,156	510,907	451,594	570,220	28,093	22,698	33,489
Archery				17,858	0	36,974			
Modern				477,067	422,413	531,722			
Primitive				15,982	5,746	26,219			
Fall	1,563	867	2,260	11,645	4,426	18,864	619	20	1,217
Spring	47,488	44,064	50,912	499,261	441,201	557,322	27,474	22,113	32,835
Jakes							2,236	916	3,555
Gobblers							25,858	20,794	30,921

Turkey Hunting: Mean Days, Turkey Harvest per Hunter, and Days per Harvest (2017-2018)

	Mean Days per Hunter	Turkey Harvest per Hunter	Days per Harvest
Turkey Overall	10.5	0.58	18.2
Fall	7.4	0.40	18.8
Spring	10.5	0.58	18.2

Turkey Hunting: Harvest and Days by County (2017-2018)

County	Harvest of Turkeys			Days of Turkey Hunting		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Autauga	530	0	1,151	9,704	2,879	16,529
Baldwin	177	0	412	8,100	3,116	13,084
Barbour	590	48	1,132	13,585	2,595	24,576
Bibb	88	0	254	7,845	1,152	14,538
Blount	0	0	0	12,023	0	30,111
Bullock	404	0	807	7,460	1,700	13,220
Butler	726	31	1,422	9,890	701	19,078
Calhoun	238	0	572	2,609	697	4,521
Chambers	354	0	760	7,895	2,884	12,905
Cherokee	354	0	760	5,662	858	10,466
Chilton	467	0	1,053	10,987	4,426	17,549
Choctaw	354	0	760	10,228	2,796	17,660
Clarke	681	0	1,418	15,119	6,217	24,021
Clay	354	0	760	4,334	432	8,236
Cleburne	354	0	1,018	6,893	1,768	12,019
Coffee	88	0	254	7,557	863	14,252
Colbert	561	0	1,298	6,003	783	11,224
Conecuh	88	0	254	9,150	2,428	15,872
Coosa	265	0	763	13,189	5,675	20,702
Covington	230	0	694	8,522	2,042	15,003
Crenshaw	855	0	1,728	10,148	1,678	18,618
Cullman	119	0	392	1,281	0	3,443
Dale	319	0	812	7,507	2,256	12,759
Dallas	1,449	216	2,682	19,395	7,358	31,432
DeKalb	148	0	363	1,686	0	3,597
Elmore	88	0	254	3,102	276	5,929
Escambia	177	0	412	8,468	728	16,208
Etowah	915	1	1,829	9,060	2,624	15,497
Fayette	384	0	781	8,511	934	16,089
Franklin	442	0	1,127	4,782	202	9,362
Geneva	0	0	0	3,509	0	7,330
Greene	504	5	1,003	6,340	898	11,783
Hale	177	0	509	5,900	8	11,792
Henry	478	0	980	5,151	988	9,314
Houston	60	0	196	800	0	1,882
Jackson	354	0	760	16,690	6,361	27,018
Jefferson	325	7	643	8,059	2,922	13,197
Lamar	561	0	1,298	8,386	1,214	15,558
Lauderdale	1,238	299	2,176	14,323	2,770	25,877
Lawrence	0	0	0	88	0	254
Lee	2,105	52	4,159	9,445	2,847	16,043
Limestone	0	0	0	884	0	2,544
Lowndes	1,326	0	3,059	8,999	1,830	16,168
Macon	655	0	1,418	12,464	1,119	23,810
Madison	177	0	412	1,768	0	3,828
Marengo	640	0	1,331	4,666	1,412	7,919
Marion	354	0	760	6,758	1,530	11,985
Marshall	0	0	0	442	0	1,272
Mobile	179	0	588	3,845	248	7,441
Monroe	590	0	1,226	15,938	4,551	27,325
Montgomery	413	0	842	5,757	1,097	10,416
Morgan	0	0	0	88	0	254
Perry	296	0	680	6,357	650	12,064
Pickens	313	1	626	8,599	2,944	14,254
Pike	413	0	956	5,880	1,489	10,271
Randolph	0	0	0	1,417	0	3,042
Russell	327	0	700	6,002	1,475	10,529

Turkey Hunting: Harvest and Days by County (2017-2018) (continued)

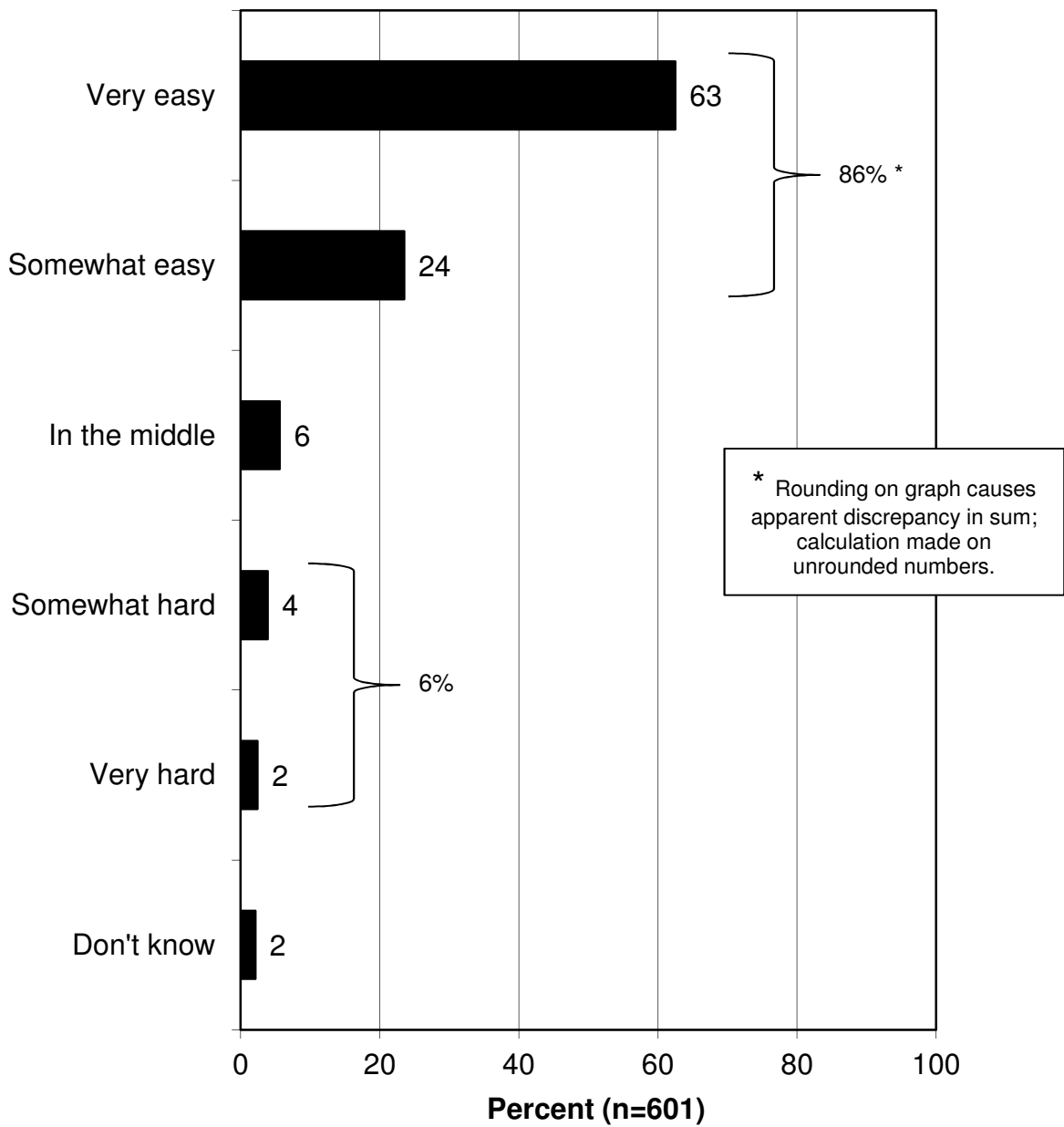| County	Harvest of Turkeys			Days of Turkey Hunting		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
St. Clair	530	0	1,151	6,807	0	14,298
Shelby	1,061	0	2,754	5,757	1,942	9,571
Sumter	0	0	0	3,845	1,152	6,537
Talladega	265	0	636	3,448	357	6,539
Tallapoosa	950	0	2,136	8,567	1,005	16,129
Tuscaloosa	621	87	1,155	14,235	5,474	22,996
Walker	413	0	902	12,364	2,298	22,430
Washington	342	16	668	8,881	3,260	14,502
Wilcox	148	0	363	11,198	2,662	19,735
Winston	265	0	636	5,134	63	10,204

TYPES USED AND OPINIONS ON GAME CHECK METHODS

➢ The phone app is the most popular way to check both deer and turkey. About half of those who harvested each species used the phone app to check their game in the 2017-2018 deer and turkey seasons.

- The survey had hunters rate the ease of use for each method of checking game that they had used. The phone app had the highest ratings for ease of use.

Q269. For the deer that you harvested, tell me all the game check methods you used. For any of the deer, did you use...? (Asked of those who harvested a deer.)

	Percent
The phone app	51
The telephone other than the app	20
The website	13
Don't know / None of these	18

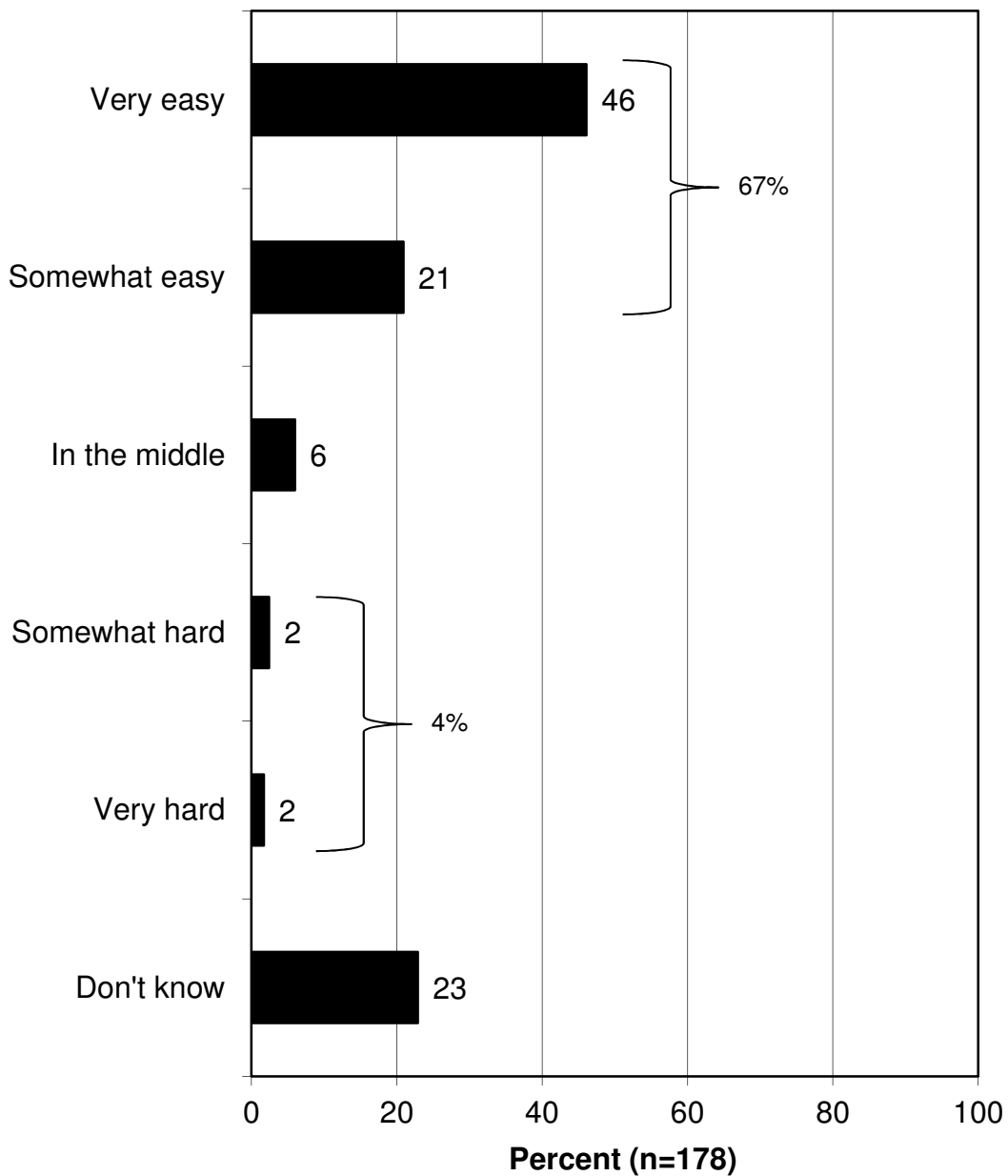Multiple Responses Allowed

Percent (n=1100)
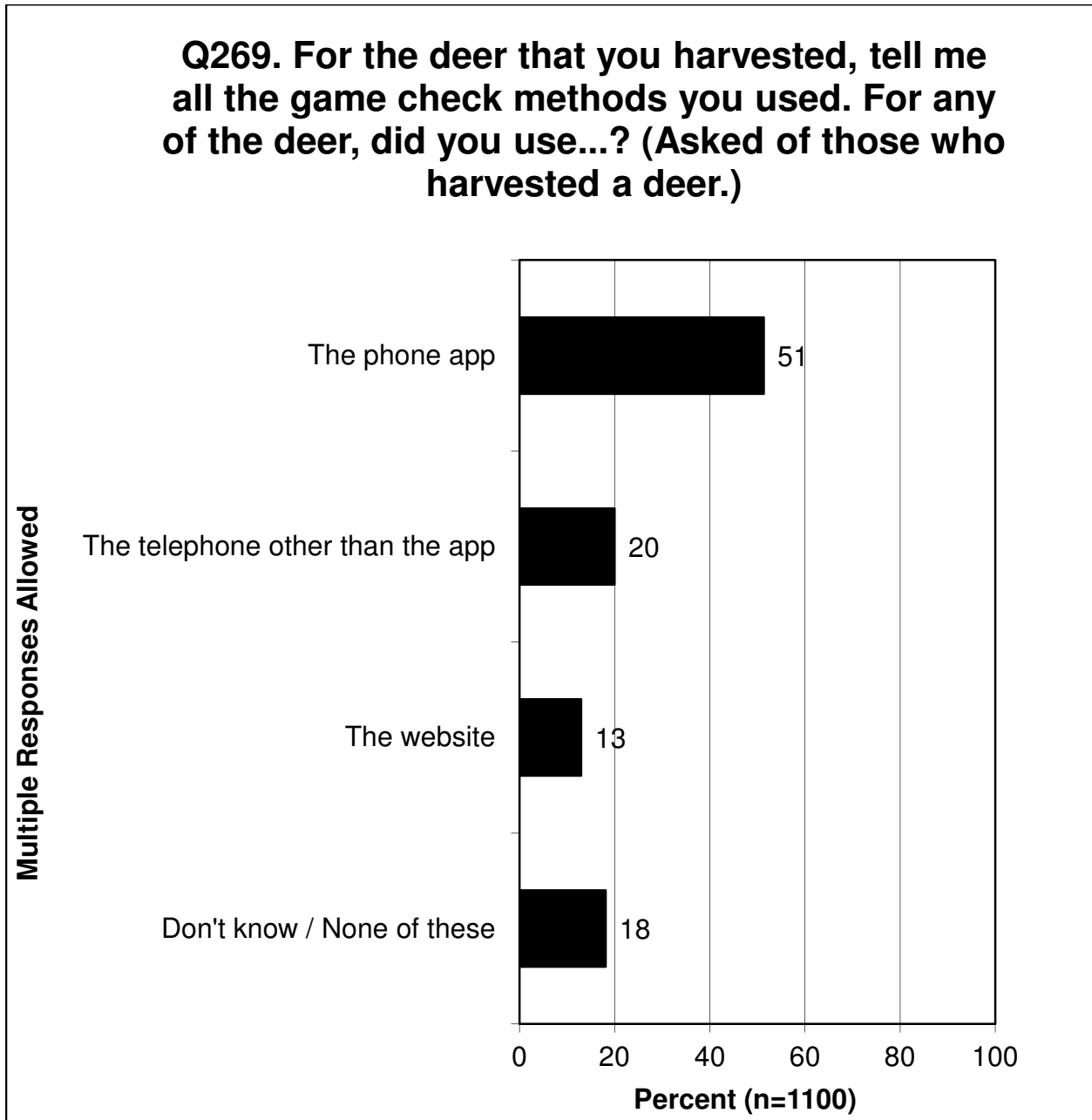
Q510. For the turkey that you harvested, tell me all the game check methods you used. For any of the turkeys, did you use...? (Asked of those who harvested a turkey.)

The phone app — 53

The telephone other than the app — 16

The website — 12

Don't know / None of these — 19

Multiple Responses Allowed

0   20   40   60   80   100

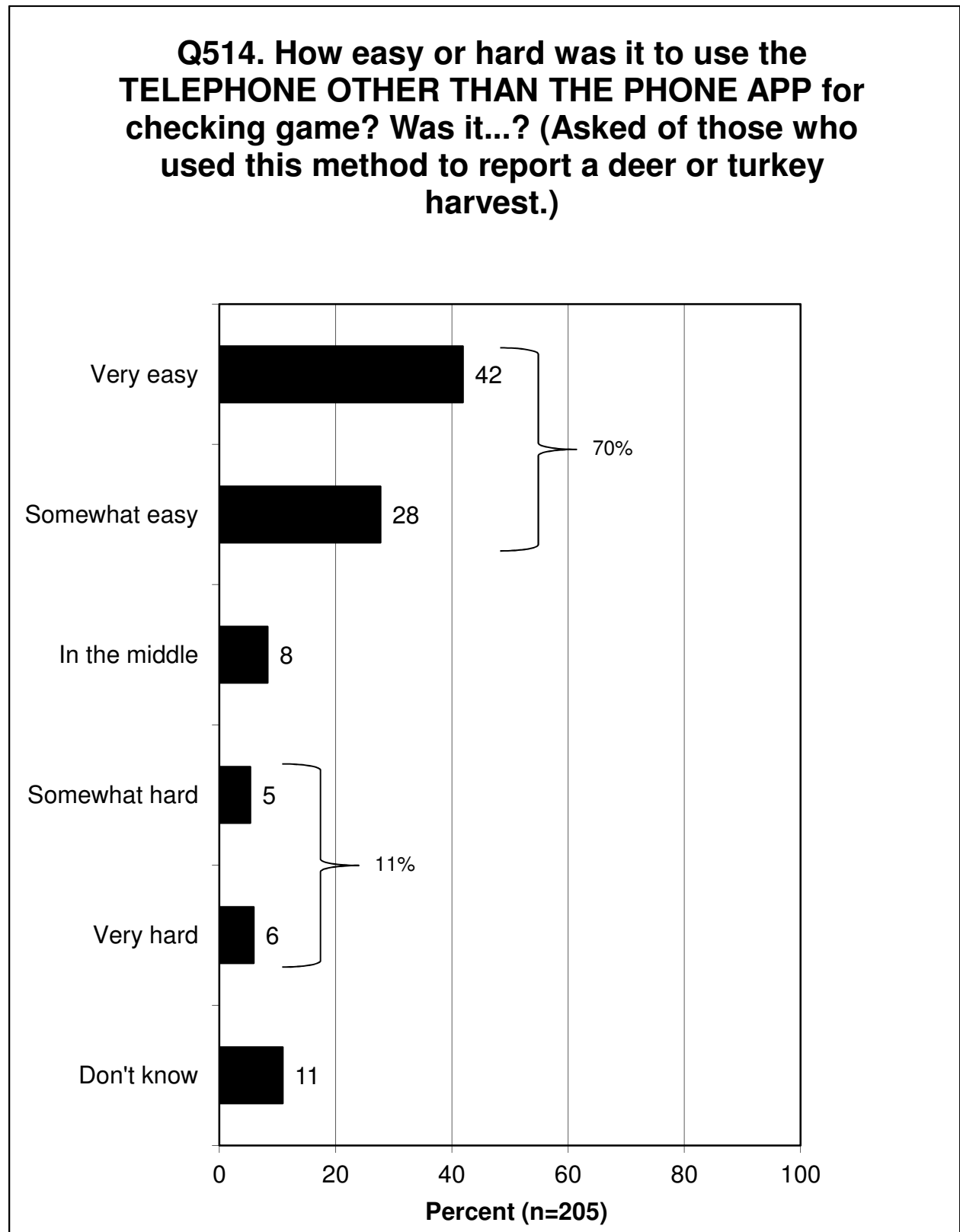**Percent (n=173)**
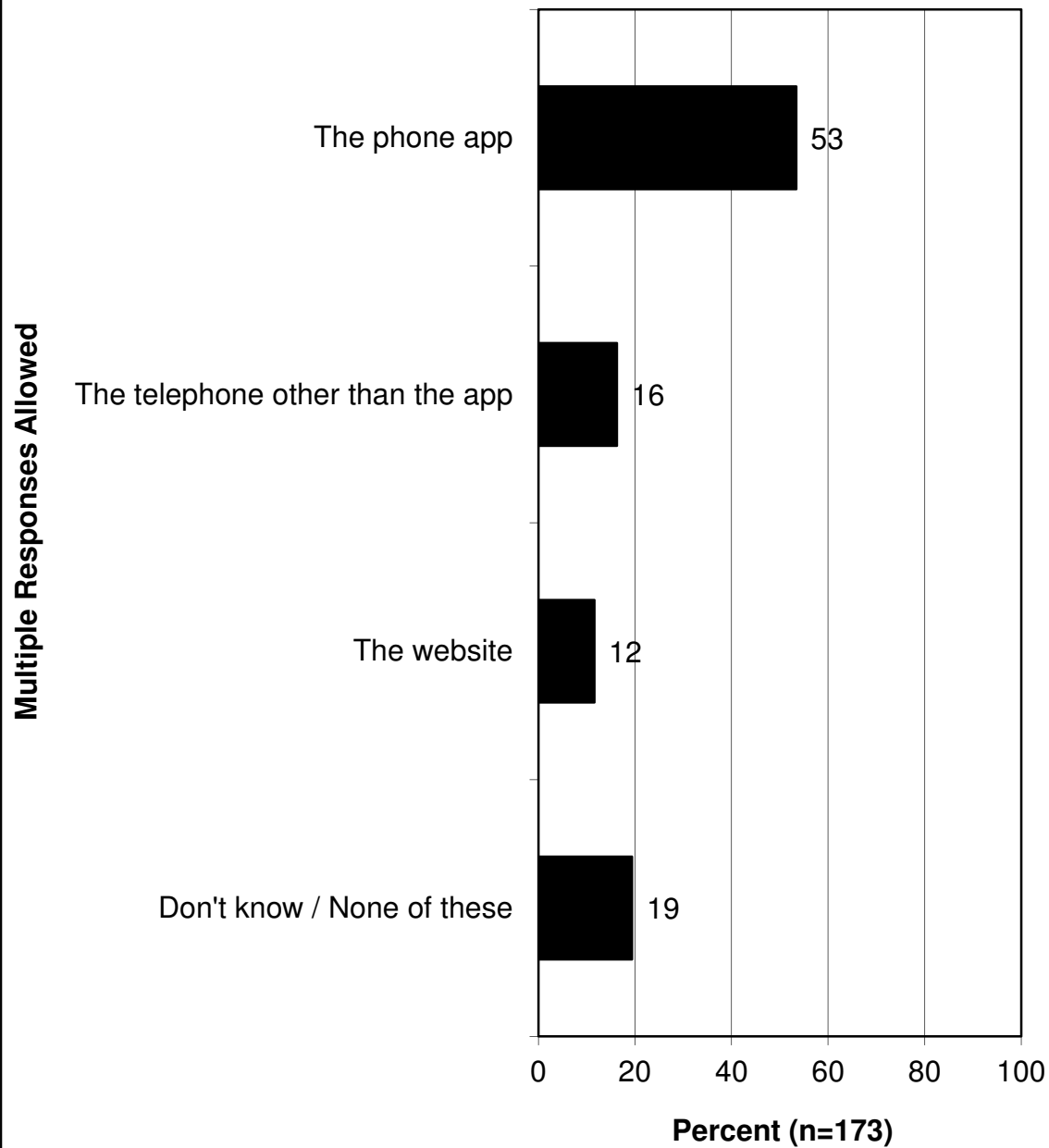
**Q512. How easy or hard was it to use the
PHONE APP for checking game? Was it...?
(Asked of those who used this method to report
a deer or turkey harvest.)**

Very easy 63

Somewhat easy 24

86% *

In the middle 6

Somewhat hard 4

6%

Very hard 2

Don't know 2

* Rounding on graph causes apparent discrepancy in sum; calculation made on unrounded numbers.

Percent (n=601)

Q513. How easy or hard was it to use the WEBSITE for checking game? Was it...? (Asked of those who used this method to report a deer or turkey harvest.)

Category	Percent
Very easy	46
Somewhat easy	21
In the middle	6
Somewhat hard	2
Very hard	2
Don't know	23

67% (Very easy + Somewhat easy)

4% (Somewhat hard + Very hard)

Percent (n=178)

Q514. How easy or hard was it to use the TELEPHONE OTHER THAN THE PHONE APP for checking game? Was it...? (Asked of those who used this method to report a deer or turkey harvest.)

Very easy — 42

Somewhat easy — 28

70%

In the middle — 8

Somewhat hard — 5

11%

Very hard — 6

Don't know — 11

Percent (n=205)

HUNTING QUAIL: PARTICIPATION, TYPES OF QUAIL HUNTED, TYPES OF LAND, DAYS, AND HARVEST

➢ Just less than 9 thousand quail hunters harvested approximately 350 thousand quail in the 2017-2018 season.

Quail Hunting: Hunters, Days, and Harvest

Quail / Quail Type	Number of Hunters			Hunter-Days			Number Harvested		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Quail-all	8,821	7,195	10,447				347,308	228,688	465,927
Wild	3,004	2,043	3,966	39,696	15,440	63,953	67,889	22,508	113,271
Pen-raised	8,094	6,534	9,655	53,740	35,878	71,602	279,418	189,286	369,550

Quail Hunting: Avg. Days and Days per Harvest

Quail	
Avg. Days per Hunter	Days per Harvest
10.6	0.3

HUNTING DOVE: PARTICIPATION, SPLIT HUNTED, TYPES OF LAND, DAYS, AND HARVEST

➢ There were 39 thousand dove hunters; they harvested approximately 1.6 million dove in the 2017-2018 season.

Dove Hunting: Hunters, Days, and Harvest

Dove / Split	Number of Hunters			Hunter-Days			Number Harvested		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Dove-all	38,837	35,667	42,007	213,107	184,420	241,794	1,567,042	1,338,467	1,795,617
First split				153,102	134,263	171,941	1,118,151	967,963	1,268,339
Remaining splits				59,747	45,947	73,548	397,517	296,145	498,889
Unknown splits							51,375	22,587	80,162

Dove Hunting: Avg. Days and Days per Harvest

Dove	
Avg. Days per Hunter	Days per Harvest
5.5	0.1

HUNTING OTHER SPECIES: PARTICIPATION, TYPES OF LAND, DAYS, AND HARVEST

➢ Other species are detailed in the tabulations below. Of those other species asked about in the survey, wild hog and duck were the most popular among hunters in the 2017-2018 season.

Small Game Hunting: Hunters, Days, and Harvest (2017-2018)
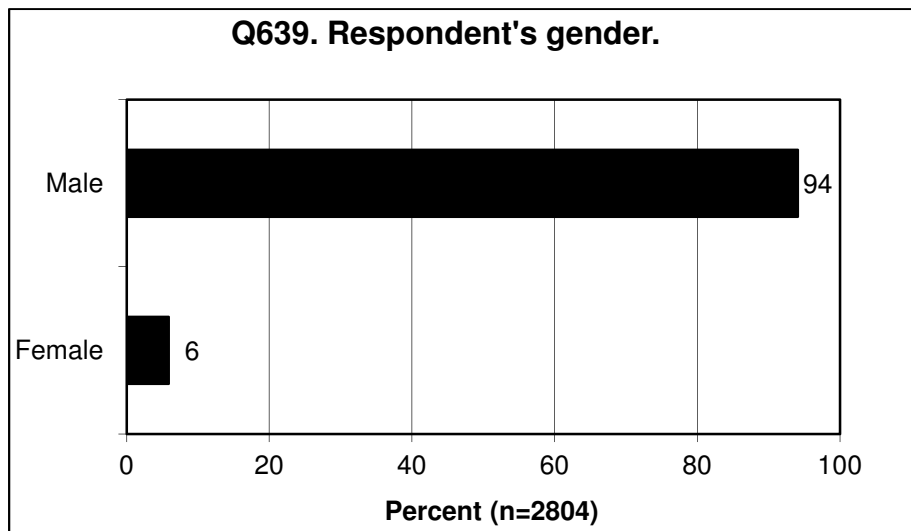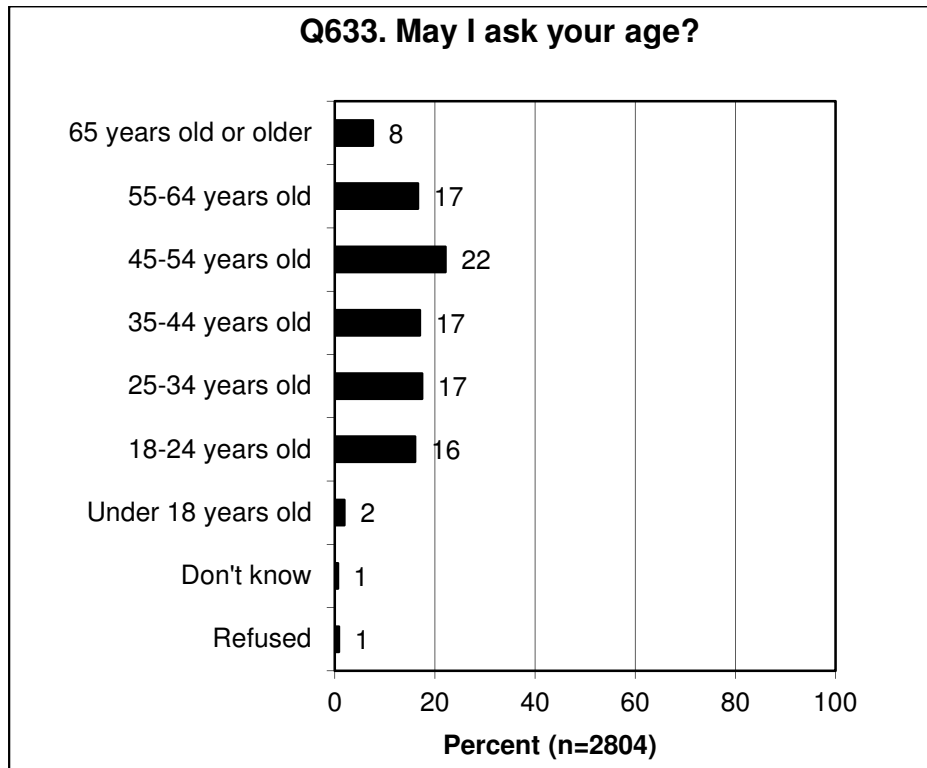
Species	Number of Hunters			Hunter-Days			Number Harvested		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
Bobcat	2,760	1,833	3,687	11,365	0	28,106	3,071	1,726	4,416
Coot	649	194	1,104	2,029	0	4,877	5,070	740	9,399
Coyote	15,667	13,536	17,799	114,299	72,880	155,718	61,108	40,563	81,652
Duck	27,114	24,384	29,843	307,016	255,352	358,680	674,362	528,091	820,633
Fox	893	354	1,432	893	0	1,887	943	308	1,578
Goose	5,277	4,013	6,540	32,796	19,105	46,487	47,012	24,741	69,283
Opossum	487	100	875	649	0	1,382	1,418	138	2,698
Rabbit	5,439	4,150	6,728	34,988	17,994	51,982	41,897	21,572	62,222
Raccoon	5,601	4,295	6,907	98,469	47,033	149,906	80,732	33,986	127,478
Snipe	81	0	250	244	0	741	884	0	2,544
Squirrel	17,210	14,977	19,443	122,417	92,895	151,939	240,929	185,537	296,321
Wild hog	28,737	25,940	31,534	241,343	186,149	296,537	344,407	242,956	445,859
Woodcock	162	0	373	2,029	0	5,391	534	0	1,417

Small Game Hunting: Mean Days and Days per Harvest (2017-2018)

	Mean Days per Hunter	Days per Harvest
Bobcat	4.1	3.7
Coot	3.1	0.4
Coyote	7.3	1.9
Duck	11.3	0.5
Fox	1.0	0.9
Goose	6.2	0.7
Opossum	1.3	0.5
Rabbit	6.4	0.8
Raccoon	17.6	1.2
Snipe	3.0	0.3
Squirrel	7.1	0.5
Wild hog	8.4	0.7
Woodcock	12.5	3.8

DEMOGRAPHIC DATA

➢ The survey gathered data on the age and gender of licensed hunters for the 2017-2018 seasons.

Q633. May I ask your age?

Age	Percent
65 years old or older	8
55-64 years old	17
45-54 years old	22
35-44 years old	17
25-34 years old	17
18-24 years old	16
Under 18 years old	2
Don't know	1
Refused	1

Percent (n=2804)

Q639. Respondent's gender.

Gender	Percent
Male	94
Female	6

Percent (n=2804)

ABOUT RESPONSIVE MANAGEMENT

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

Since 1985, Responsive Management has conducted telephone, mail, and online surveys, as well as multi-modal surveys, on-site intercepts, focus groups, public meetings, personal interviews, needs assessments, program evaluations, marketing and communication plans, and other forms of research measuring public opinions and attitudes. Utilizing our in-house, full-service survey facilities with 75 professional interviewers, we have conducted studies in all 50 states and 15 countries worldwide, totaling more than 1,000 projects and almost $60 million in research.

Responsive Management has conducted research for every state fish and wildlife agency and most of the federal resource agencies, including the U.S. Fish and Wildlife Service, the National Park Service, the U.S. Forest Service, the Bureau of Land Management, the U.S. Coast Guard, and the National Marine Fisheries Service.

We have also provided research for many nonprofit and nongovernmental organizations, including the National Wildlife Federation, the National Shooting Sports Foundation, the National Rifle Association, the Archery Trade Association, the Izaak Walton League, the Rocky Mountain Elk Foundation, Ducks Unlimited, SCI, and Dallas Safari Club. Other nonprofit and NGO clients include Trout Unlimited, the Sierra Club, the American Museum of Natural History, the Ocean Conservancy, the National Association of State Boating Law Administrators, and the BoatUS Foundation.

Responsive Management conducts market research and product testing for numerous outdoor recreation manufacturers and industry leaders, such as Winchester Ammunition, Vista Outdoor (whose brands include Federal Premium, CamelBak, Bushnell, Primos, and more), Trijicon, Yamaha, and others.

Responsive Management also provides data collection for the nation's top universities, including Auburn University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Stanford University, Texas Tech, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, West Virginia University, and many more.

Our research has been upheld in U.S. Courts, used in peer-reviewed journals, and presented at major wildlife and natural resource conferences around the world. Responsive Management's research has also been featured in many of the nation's top media, including *Newsweek*, *The Wall Street Journal*, *The New York Times*, CNN, and on the front pages of *The Washington Post* and *USA Today*.

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