

A photograph of a rural landscape. In the foreground, a dirt road with tire tracks leads towards the background. To the left of the road, there is a small, dark, rounded object, possibly a turtle. A wire fence runs across the middle ground. In the background, there is a line of trees under a bright sky.

2012 Texas Native Reptile and Amphibian Enthusiast Survey

Results and Analysis

Report Prepared 20 August 2012

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ON THE COVER: Texas tortoise, *Gopherus berlandieri*, McMullen County. Texas tortoises were recognized as a state Threatened species in 1977. Photo by Chris McMartin.

Executive Summary

This report provides detailed results of a first-of-its-kind survey conducted during July 2012. 161 reptile and amphibian enthusiasts (“herpers”) took part in the survey, which covered topics including field observation, collecting activity, economic impact to local communities, and “citizen science.”

Demographics

Those surveyed are predominantly male, 21-59 years old, well-educated, and represent a wide variety of professions. A majority of those surveyed live in Texas; however, 40% live in 23 other states and 2 other countries (but have an interest in the status of Texas reptiles and amphibians).

Economic Impact

Survey participants who did not attend Snake Days indicate they have visited West Texas an average of 6.4 times, averaging 4.2 days per visit, and spend an average of \$137 per person per day in West Texas. This translates to roughly \$3,680 pumped into the West Texas economy per average herper.

Snake Days

“Snake Days” was a herping event held 15-17 June 2012 in Sanderson, Texas. 55 survey participants attended in whole or in part. Based on their inputs, the event drew one fourth of its attendees from outside the state, and contributed an estimated \$30,750 to the economy (72% of which in West Texas). These citizens have typically visited West Texas 8 times prior to the event, averaging 4.5 days per visit, and spent an average of \$125 per person per day while at Snake Days, meaning each herper who attended Snake Days has contributed roughly \$4,500 to the West Texas economy. 40% of attendees brought family and friends with them that would not otherwise have accompanied them to West Texas.

Business owners surveyed who advertised with, and/or sponsored, Snake Days indicated an increase in business during the event of more than twice their normal amount.

76% of those surveyed who attended this year’s Snake Days, and 40% of those who did not attend, say next year’s planned Snake Days makes it more likely they will visit West Texas next year.

Effect on Texas Reptiles and Amphibians

More than three fourths of those surveyed purchased a Texas hunting license, with 69% purchasing both a license and the new Reptile and Amphibian Stamp. The vast majority can be considered “frequent field herpers,” in that over 90% have gone afield to observe and/or collect reptiles and amphibians 5 or more times.

Herpers generally prefer exploring land by hiking and looking under cover objects for their target speices; however, in West Texas road cruising and walking along road cuts are the preferred methods. Road cruising and walking along road cuts was banned by legislative act in 2007, but in 2011 the ability to walk the road cuts was restored (road cruising is still banned). Survey participants overwhelmingly indicate they would be willing to collect specimens (both alive and roadkilled individuals) for academic research if it were once again legal to do so. Though not specifically addressed in survey questions, numerous write-in comments indicate herpers favor lifting the ban on road cruising.

Survey participants generally feel the biggest threat to Texas reptiles and amphibians is habitat destruction and development, followed by invasive species, roadkill, and lethal take, with nonlethal take (live capture) coming in last. The biggest challenge to herpers themselves in pursuing their interests are restrictive laws and limited public-land herping opportunities.

Herpers surveyed have kept or currently keep a wide variety of the state’s reptiles and amphibians, with a handful species more desirable than others. Of the desirable species, many are being domestically bred by enthusiasts. Relaxing restrictions on Texas Threatened and Endangered listed species would increase demand only slightly for most listed species, but significantly for indigo snakes.

Interaction with Law Enforcement

Most herpers surveyed have interacted with various law enforcement agents in the past, with most encounters being either positive or neutral. This year, the majority have not encountered law enforcement while herping, but three fourths of those who had said the experience was positive. The new requirement to wear a reflective vest while herping the rights-of-way is mostly seen as a way to identify herpers as “non-threatening individuals” to law enforcement, but almost half of respondents say the vest make herpers a potential target for additional stops or harassment.

The overwhelming majority of those surveyed support the establishment of a statewide organization to advocate for herpers as stakeholders in the future of Texas reptiles and amphibians.

General Survey Information

1. Chris McMartin, a Texas resident¹ and “herper,”² invited interested people (primarily fellow herpers) to participate in a “Texas Herpers Survey” from 05 to 31 July 2012. The survey consisted of a total of 71 questions, with some questions being branched from previous questions based on responses to those questions (i.e., not all participants were presented with all 71 questions).
 - a. Participants accessed the survey via the URL <http://www.surveymonkey.com/s/snakedays>. One participant reported having difficulty with the online survey; the survey author sent the questions via email and incorporated the responses into the overall numbers.
 - b. All responses were anonymous; individual participants were only identifiable to an IP address, and that information was not subsequently correlated to any individual user.
2. The survey asked forced-choice (only one answer could be selected), multiple-choice (all applicable answers could be selected), and open ended questions, including demographics, in order to gain information potentially useful for the following groups:
 - a. Planning committee for the 2013 “Snake Days” event, tentatively scheduled for next June in Sanderson, TX.
 - b. State herpetological societies.
 - c. Texas Parks and Wildlife Department (TPWD).
 - d. West Texas community Chambers of Commerce.
 - e. Texas State Legislature, in their capacity to enact and amend applicable sections of the Texas Parks and Wildlife Code.
3. Calls for participation in the survey were made beginning 05 July on the following web sites, based on the sites’ target audience providing likely participants:
 - a. “The Forum” and “South Central Chapter—North American Field Herping Association” forums on Field Herp Forum (<http://www.fieldherpforum.com>)
 - b. The “Miscellaneous” forum for the Southwestern Center for Herpetological Research (<http://www.southwesternherp.com>)
 - c. The “Gray-banded Kingsnake Forum,” “Reptile Law Support Center and Forum,” and “Field Notes and Observations Forum” on kingsnake.com (<http://forums.kingsnake.com>).

¹ The survey author is a Federal government employee currently working outside Texas but maintains his residency in the state, and votes in local, state, and national elections as such. The information and opinions expressed in this survey are solely those of the author and do not necessarily represent those of any governmental agency.

² “Herper” is a term generally understood in its broadest sense to mean “a person who enjoys reptiles and amphibians.” For purposes of this report, it primarily means “a person who enjoys looking for reptiles and amphibians in their natural habitat.” The term “herp” is used as shorthand for “reptiles and amphibians” and is derived from the Greek *herpeton*, meaning “creeping things.”

- d. The “Snakedays.com” page on Facebook
(<https://www.facebook.com/groups/294330193927187/>)
 - e. The survey creator’s personal Facebook page
 - f. The survey creator also emailed people on the email list for the Snake Days event to solicit their participation
4. The survey opened with the following instructions:
- ***To avoid potential errors in the survey, please read the instructions at the top of each page!***
- Thank you for participating in the Texas Herp Survey! While the primary focus of this survey is to gather information on the recent Sanderson Snake Days event, the survey also gathers information to get a feel for attitudes of the herping community towards issues affecting herps and herping in Texas.
- The point of contact for this survey is Chris McMartin, and does not necessarily reflect the views or opinions of the Snake Days board or anyone besides himself. Questions, comments, suggestions, and complaints regarding this survey can be directed to chris.mcmartin@yahoo.com.
- NOTE: If you are a member of a family who attended Snake Days, please only have ONE member of the family complete the survey, so as not to skew the data.
- The purpose of this first page is to gather information on who makes up the "field herping" community in Texas and those who support them.
- ALL RESPONSES ARE ANONYMOUS and cannot be tracked to an individual...please be frank with your responses.
5. 161 people participated in the survey, either completely or in part. Because the number of Texas herpers cannot be accurately determined, and some participants self-identified as being “non-herpers,” the 95% confidence interval (margin of error) for the survey results generally cannot be assured better than $\pm 9\%$ (worst-case, for evenly split responses, e.g. if 50% of participants responded with a given option, the result has a 95% chance of falling within $\pm 9\%$ of the response expected from the entire herping population).³
- a. Of the survey participants, 55 were 2012 Snake Days event attendees. Based on a conservative (high) estimate of 300 people attending at least one of the activities associated with Snake Days, the 95% confidence interval for responses to event-specific questions cannot be assured better than $\pm 12\%$ for responses (worst-case).

³ Confidence intervals were calculated using the web site <http://www.surveysystem.com/sscalc.htm>. There is no way to accurately determine the number of herpers who participate in their hobby in Texas (or any other state); although TPWD began mandating a “Reptile and Amphibian Stamp” for individuals wishing to legally hunt reptiles and amphibians within the state, awareness among the herping community is not pervasive, and among those aware of the requirement, some refuse to purchase the stamp for a variety of reasons (e.g. if their goal is photography and not collection), so stamp sales cannot be used as an accurate count of Texas herpers. However, based on 161 survey participants the $\pm 8\%$ value holds true for any size population.

- b. 102 participants identified as non-Snake Days participants (the remaining 4 declined to answer this question). The 95% confidence interval for responses to questions specifically for non-Snake Days attendees cannot be assured better than $\pm 10\%$ (worst-case).
 - c. 9 participants identified themselves as being associated with West Texas businesses. The 95% confidence interval for responses to business-specific questions cannot be assured better than $\pm 37\%$ (worst-case). Results for this set of questions are, understandably, largely inconclusive.
 - d. Percentages used in computing confidence intervals, and the confidence intervals themselves, are rounded to the nearest whole percentage point.
 - e. Confidence interval for specific questions will be listed in the discussion of results. In the case of questions with more than two available response options, the confidence interval listed is that for the percentage response closest to 50% (i.e. worst-case).
- 6. Quantitative Data Analysis Methodology
 - a. Not all survey participants answered each question. Charts and graphs reflect the percentages for each response based on participants who answered the respective questions (i.e., the charts and graphs do not depict a category for “did not answer question”).
 - b. If an available option for a given question was not chosen by any participant, it was not included in the resultant chart/graph for better readability.
- 7. Qualitative Data Analysis Methodology
 - a. For survey data reporting purposes, open-ended response options to a given question are first qualitatively categorized, then quantitatively incorporated to the applicable charts and graphs, where practical. All write-in responses were listed for each question, regardless of their relevance to the question.
 - b. The final survey question was completely open-ended, asking for any additional comments. 34 participants provided comments. However, 6 of the participants’ responses were in the category of “no,” “N/A,” or otherwise immaterial to the subject of Texas herping. The remainder of the responses were qualitatively categorized, then quantitatively analyzed to identify trends; ten categories were identified. Many of the participants answering this question elected to provide more than once issue/topic in their response. A trend for purposes of this survey is formed when 15% or more respond similarly in their comments.
- 8. Format for Analysis of Results/Findings
 - a. Each question from the survey is addressed in the following pages. The questions are grouped according to the following categories:
 - i. Demographics
 - ii. Questions for West Texas Business Owners/Employees

- iii. Questions for Snake Days Participants
- iv. Questions for Non-Snake Days Participants
- v. General-Interest Questions on Herping in Texas
- b. Within the above categories, each question and discussion is presented as follows:
 - i. The question itself as asked on the survey
 - ii. A brief summary of the responses to the question and any amplifying information
 - iii. A graph or chart, as most appropriate, with percentages of participants who chose each response—colors used on the graphs/charts should generally not be construed as having any specific meaning themselves, other than as specified below.
 - 1. green or shades of green are generally used to indicate affirmative responses to questions as worded
 - 2. purple or shades of purple are generally used to indicate negative responses to questions as worded
 - 3. gray is generally used to indicate “neutral/no preference/no opinion”
 - 4. the vertical axis on all bar charts is in percent. Scale varies from chart to chart, but generally charts depicting similar information will use the same scale for easier comparison of values
 - iv. Number of participants answering the specific question and confidence interval for the responses to the question
 - v. A list of the available response options as presented on the survey, in the order they were presented
 - vi. A list of participants’ write-in responses to questions providing that as an option. Comments are listed, in no particular order, as they were input and no spelling or grammatical corrections were made
 - vii. Any other information of note as applicable, including clarifications/concerns regarding the question itself and/or future survey recommendations

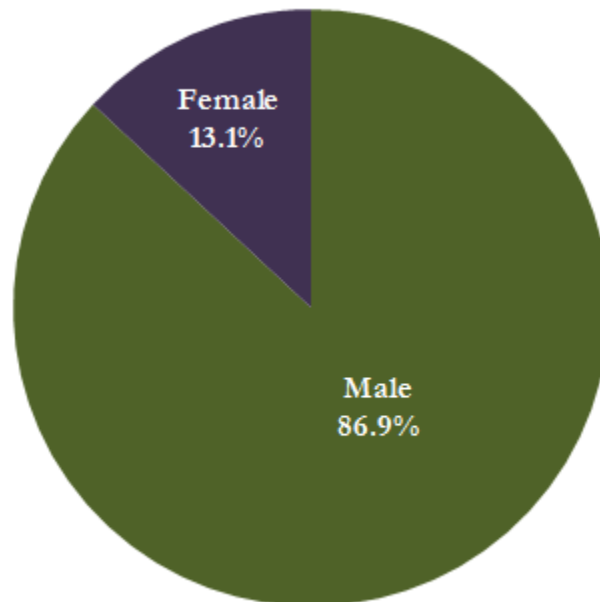
Analysis of Results/Findings

Demographics

General demographic questions were asked as the first 8 questions of the survey. In addition, Question 17 asked whether the participants attended Snake Days and the results are included here in the Demographics category.

1. Are you male or female?

Survey participants were overwhelmingly male.



Number of Responses: 153

Confidence Interval: $\pm 5\%$

Available Response Options:

Male

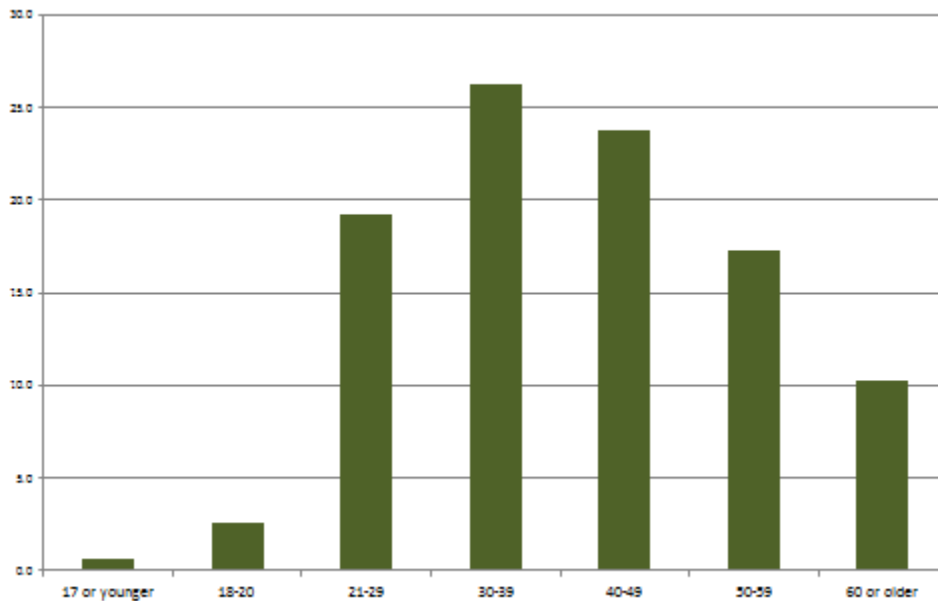
Female

Additional Information:

Nothing to note.

2. Which category below includes your age?

Survey participants were predominantly in the 21-59 age group.



Number of Responses: 156

Confidence Interval: $\pm 8\%$

Available Response Options:

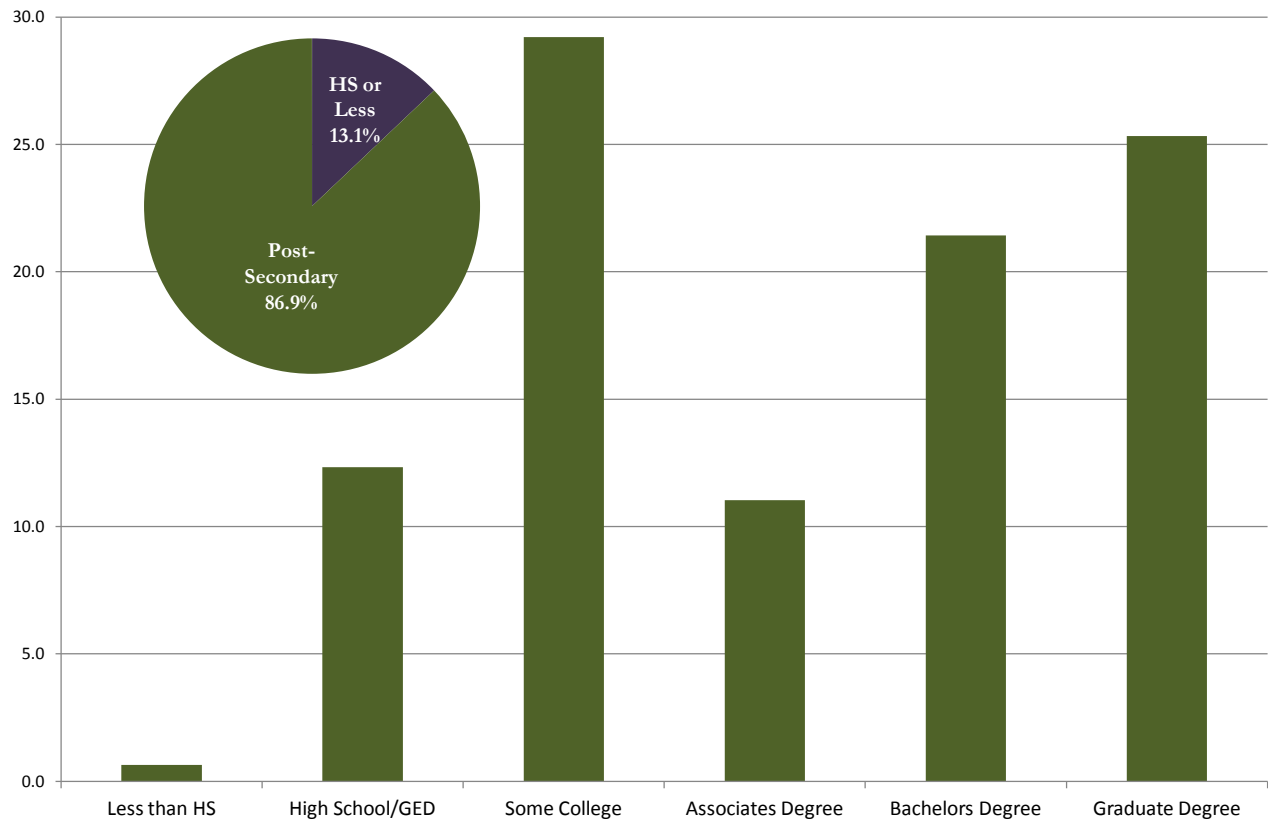
- 17 or younger
- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

Additional Information:

The categories should be refined for future surveys to reflect 16 or younger (in keeping with the TPWD requirements for hunting licenses starting at age 17), 17-25 (to account for the majority of college-age participants in one category), 25-64 (more specificity is most likely unnecessary for this range), and 65 or older (generally recognized retirement age).

3. What is the highest level of school you have completed or the highest degree you have received?

The vast majority (86.9%) of survey participants have at least some college education. This exceeds the national average of approximately 52% for the general public.⁴



Number of Responses: 154

Confidence Interval: $\pm 8\%$

Available Response Options:

- Less than a high school degree [sic]
- High school degree [sic] or equivalent (e.g., GED)
- Some college but no degree
- Associate degree
- Bachelor degree
- Graduate degree

⁴ CY2000 statistics from "Educational Attainment in Population 25 Years and Over, 1990-2000." CensusScope, http://www.censusscope.org/us/s12/chart_education.html.

Additional Information:

Future surveys should correct high school options from “degree” to “diploma,” though this is a minor concern and probably did not affect participants’ responses. The “graduate degree” option should be split to reflect Master and Doctorate degrees. If deemed necessary by feedback to the survey author, a follow-on question could be included to determine area of study for those with degrees (e.g. science/engineering, arts, business, etc.).

4. Which of the following best describes your current occupation?

Survey participants hail from a wide variety of occupational backgrounds. On the following chart, occupations with an asterisk (*) are those which were written in by participants. Where write-in responses were similar, they were categorized and incorporated into broader categories.

Occupation	%	Occupation	%	Occupation	%
Government (Fed/ State/ Local; Including Military)	10.6	Community/Social Service	1.2	Photographer/ Videographer*	0.6
Student (any level)	10.6	Disabled	1.2	Physician*	0.6
Education, Training, Library	9.3	Parts Coordinator*	0.6	Production	0.6
Sales and Related	6.2	Arts, Design, Entertainment, Sports, Media	0.6	Professional Consulting/ Self Employed*	0.6
Life, Physical, Social Science	5.0	At Home Parents and Reptile Removal*	0.6	Self Employed-- Commercial Property Management*	0.6
Healthcare Practitioners and Technical	4.3	Bartender*	0.6	Sell Rodents for Reptile People*	0.6
Retired	4.3	Conservation Biologist*	0.6	Social Journalism*	0.6
Management	3.7	Dog Boarding Kennel Supervisor*	0.6	Stay at Home Mom*	0.6
Farming, Fishing, and Forestry	3.7	Environmental Consultant for Oil/Gas*	0.6	Technical*	0.6
Computer/Mathematical	3.1	Fluids Engineer (Oil Field)*	0.6	Title Examiner*	0.6
Construction and Extraction	2.5	Housewife*	0.6	Transportation and Materials Moving	0.6
Business Financial Operations	1.9	Install Hardi Siding and Work at Wal-Mart*	0.6	University Researcher*	0.6
Installation, Maintenance, and Repair	1.9	Law Enforcement*	1.2	Veterinarian*	0.6
Legal	1.9	Manufacturing*	0.6	Wildlife Educator and Ex-Zookeeper*	0.6
Protective Service	1.9	Non-profit Conservation Organization*	0.6	Wildlife Management*	0.6
Architecture/Engineering	1.2	Office and Administrative Support	0.6	Writing, Herpetoculture*	0.6
Building and Grounds Cleaning & Maintenance	1.2	Pest Control*	0.6	Zookeeper and University Lecturer*	0.6

Number of Responses: 155

Confidence Interval: $\pm 5\%$

Available Response Options:

Architecture and Engineering Occupations
Arts, Design, Entertainment, Sports, and Media Occupations
Building and Grounds Cleaning and Maintenance Occupations
Business and Financial Operations Occupations
Community and Social Service Occupations
Computer and Mathematical Occupations
Construction and Extraction Occupations
Education, Training, and Library Occupations
Farming, Fishing, and Forestry Occupations
Government Employee (Federal, state, or local)
Healthcare Practitioners and Technical Occupations
Healthcare Support Occupations
Installation, Maintenance, and Repair Occupations
Legal Occupations
Life, Physical, and Social Science Occupations
Management Occupations
N/A—Disabled
N/A—Retired
N/A—Student
Office and Administrative Support Occupations
Personal Care and Service Occupations
Production Occupations
Protective Service Occupations
Sales and Related Occupations
Transportation and Materials Moving Occupations
Other (please specify)

Participants' Write-in Responses:

wildlife educator and ex-zookeeper
Title Examiner
Environmental consultant for oil and gas industry
Military
Law enforcement
Pest Control
Student
Sell Rodents for reptile people
retired from telecommunications
writing, herpetoculture
Dog Boarding Kennel Supervisor
stay at home mom

Fluids Engineer (Oil Field)
 install hardie siding during the week and work at the walmart Distribution Center sat-
 mon
 Full time college student, graduating next May.
 Bartender
 Physician
 Housewife
 Conservation Biologist
 school
 Police
 Veterinarian
 Self Employed - Commercial Property Management
 Technical
 Also, parts coordinator
 Military
 Zookeeper and University Lecturer
 Non-profit conservation organization
 Manufacturing
 Photographer/Videographer
 Professional Consulting/ self employed
 College student
 social journalism
 At home parents and reptile removal
 university researcher
 Wildlife Management
 Full time student.

Additional Information:

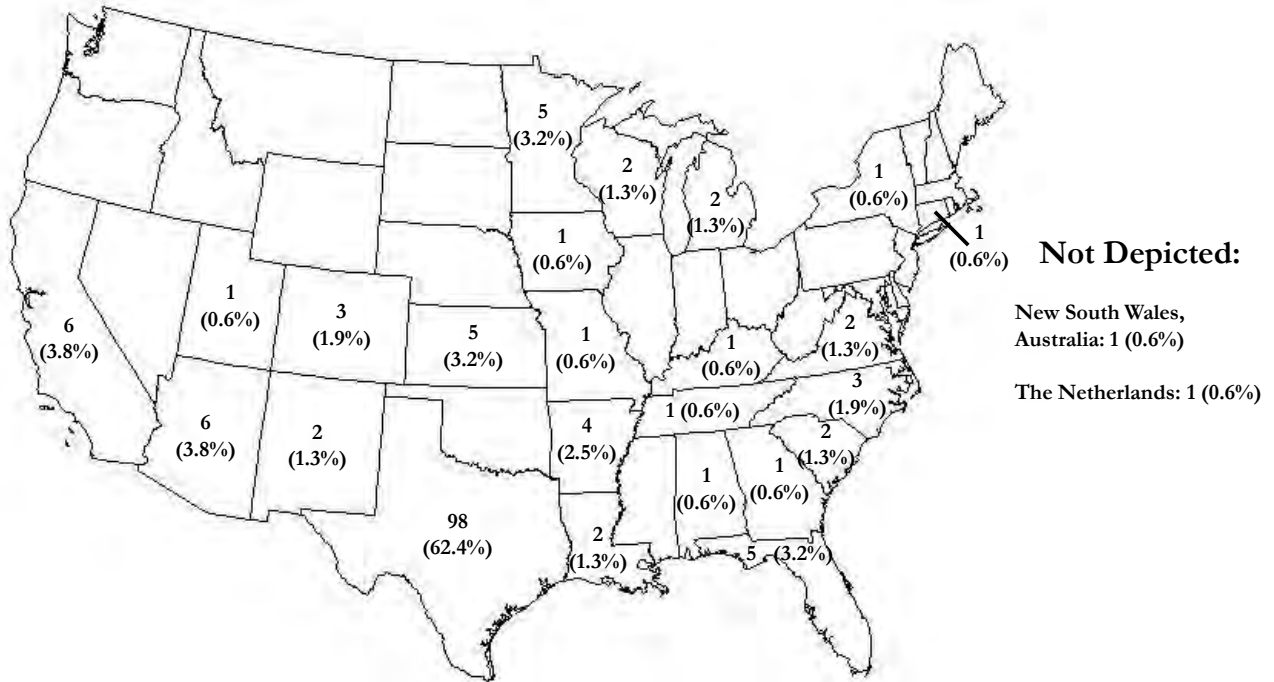
This question's available responses were generated by the survey web site's algorithm and seem to be too vague/confusing, based on participants' responses. Future surveys should reduce the number of options, and stress to select which occupation produces the predominance of household income, as several participants indicated more than one job.

Suggested simplified categories are:

- Government (political or administrative)
- Military (including Guard/Reserve if primary source of income)
- Law Enforcement (including Border Patrol, Police Department, Game Warden)
- Teacher (at any level—primary through graduate-level)
- No Current Occupation (to include full-time student, disabled, stay-at-home spouse/parent)
- Manufacturing (any level, including management)
- Retail Sales (any level, including management)
- Food Service (including preparation and sales)

5. In what state, territory, or country do you currently live?

Survey participants hail from 24 states and 3 countries (counting the U.S.).



Number of Responses: 157

Confidence Interval: $\pm 8\%$

Available Response Options:

Alabama	Florida
Alaska	Georgia
American Samoa	Guam
Arizona	Hawaii
Arkansas	Idaho
California	Illinois
Colorado	Indiana
Connecticut	Iowa
Delaware	Kansas
District of Columbia (D.C.)	Kentucky

Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
North Marianas Islands
Ohio

Oklahoma
Oregon
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Virgin Islands
Washington
West Virginia
Wisconsin
Wyoming
Other (please specify)

Participants' Write-in Responses:

New South Wales, Australia
val verde
The Netherlands

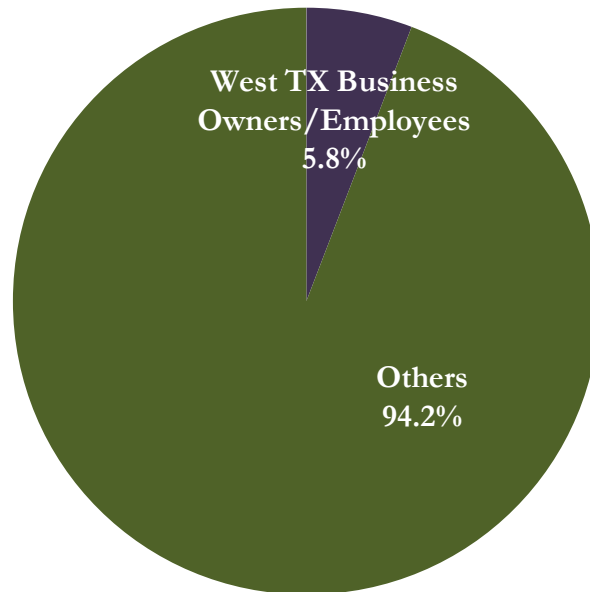
Additional Information:

While the majority of survey participants are from Texas, 38 percent are from outside the state, and presumably have an interest in Texas herping opportunities.

Future surveys may wish to ask where participants vote (e.g. some participants may be Texas voting residents temporarily outside the state for work or school). Knowing where herpers currently live is useful (for purposes of determining where and how they spend their money when pursuing their interest), but equally useful is knowing where they vote.

6. Are you a West Texas business owner or employee? For purposes of this survey, “West Texas” is defined as the area of Texas west of a line running from Odessa to Del Rio.

The vast majority of survey participants do not own or work for a West Texas business.



Number of Responses: 154

Confidence Interval: $\pm 4\%$

Available Response Options:

Yes

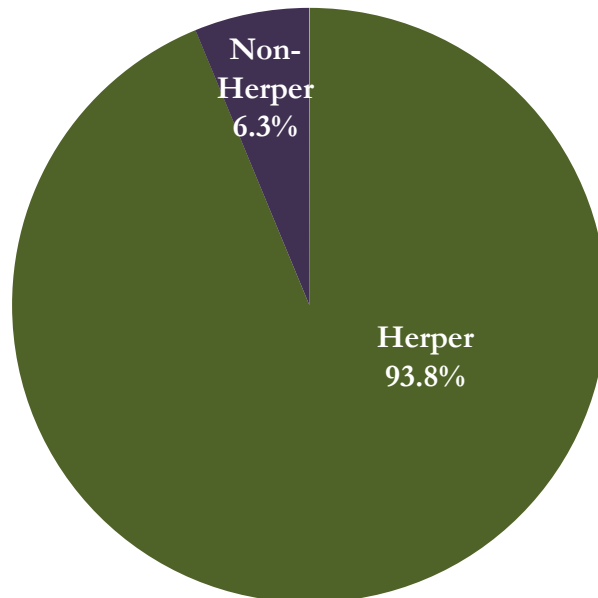
No

Additional Information:

For participants answering “Yes” to this question, the survey redirected them to the next category of questions, “West Texas Businesses” (Questions 9-16; see page 20).

7. What category below best describes you in relation to “field herping” (seeking reptiles and amphibians in their natural habitat, regardless of purpose):

The overwhelming majority of survey participants consider themselves “field herpers.”



Number of Responses: 144

Confidence Interval: $\pm 4\%$

Available Response Options:

Herper: Recreationally or professionally enjoys herping

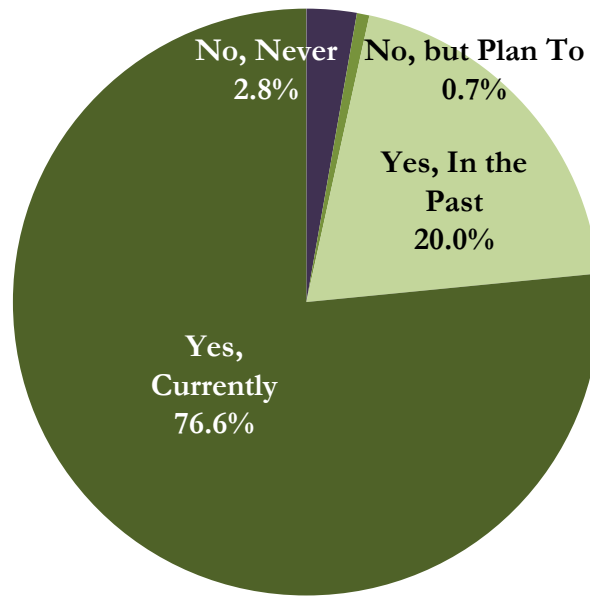
Non-Herper: Someone who doesn't herp, or participates only as an invited guest but doesn't actively seek out personal herping opportunities (e.g. a family member or friend who occasionally tags along)

Additional Information:

The response was to be expected, as the survey was primarily targeted toward field herpers.

8. Do you keep, or have you ever kept, any species of reptile or amphibian, regardless of its origin?

The vast majority of survey participants, in addition to identifying as field herpers, also maintain, or have maintained, reptiles and/or amphibians domestically.



Number of Responses: 145

Confidence Interval: $\pm 7\%$

Available Response Options:

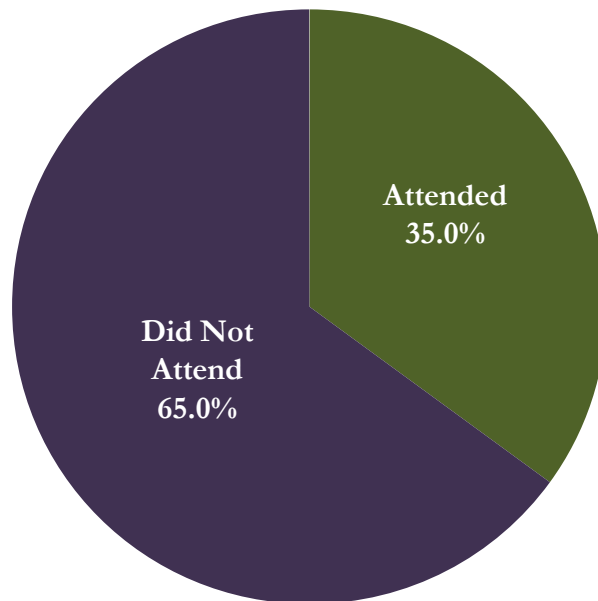
- No, never
- No, but plan to
- Yes, in the past
- Yes, currently

Additional Information:

After Question 8, participants were directed to Question 17 (next page; West Texas business owners/employees were previously directed to the survey page containing Questions 9-16—see page 20).

17. Did you participate in Snake Days events to any extent? Your response will direct you to the appropriate page for feedback.

While this survey was inspired by the 2012 Sanderson Snake Days event, it was open to people who did not attend, as many of the questions were of general interest to herpers. The majority of survey participants did not attend any Snake Days events.



Number of Responses: 157

Confidence Interval: $\pm 1\%$ (based on the total number of survey participants, not herpers in general)

Available Response Options:

Yes
No

Additional Information:

Based on feedback, this question should provide a response option for “did not attend, but donated money or items toward the event.”

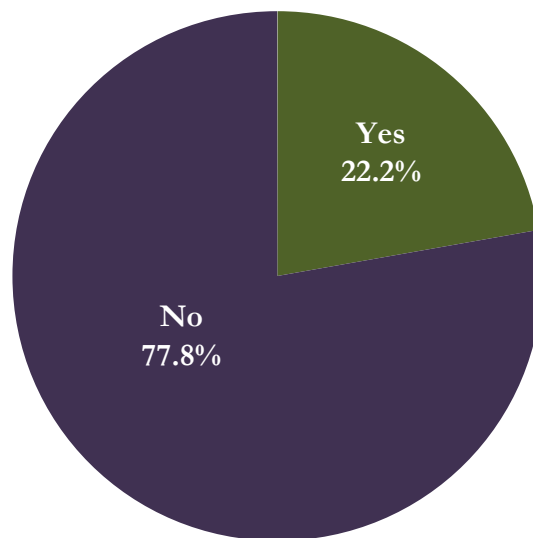
West Texas Businesses

Questions 9 through 16 of the survey were only asked of those participants who answered “Yes” to Question 6 (“Are you a West Texas business owner or employee?”). At the top of the page of questions, the following was displayed:

The purpose of this page is to develop an understanding of the impact Snake Days had on West Texas businesses, and to aid planning for next year's event.

9. Did you sponsor and/or advertise with Snake Days?

Most of the surveyed West Texas Business participants did not advertise the event.



Number of Responses: 9

Confidence Interval: $\pm 27\%$

Available Response Options:

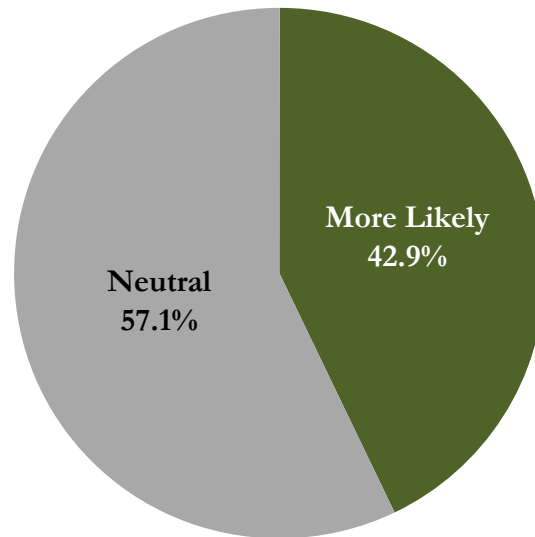
Yes
No

Additional Information:

Nothing to note.

10. After experiencing the Snake Days event, are you more likely, less likely, or neutral to the idea of sponsoring and/or advertising through Snake Days next year?

No business surveyed was *less* likely to sponsor/advertise next year's event.



Number of Responses: 7

Confidence Interval: $\pm 37\%$

Available Response Options:

Yes

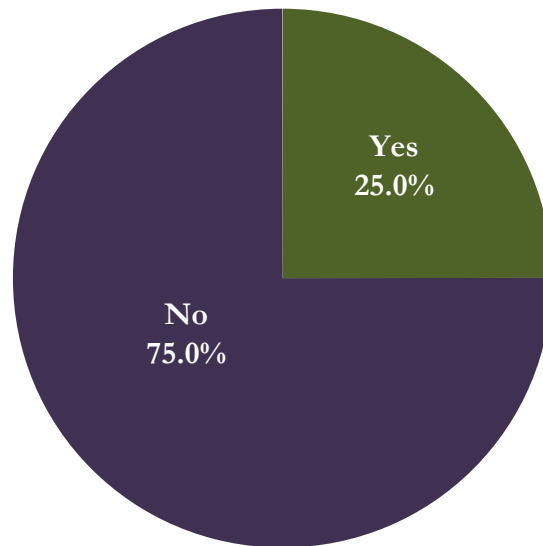
No

Additional Information:

Nothing to note.

11. Did you advertise the Snake Days event itself at your place of business (e.g. posting flyers, printing ads in local media, etc)?

The majority of businesses surveyed did not advertise Snake Days at their establishments.



Number of Responses: 8

Confidence Interval: $\pm 30\%$

Available Response Options:

Yes

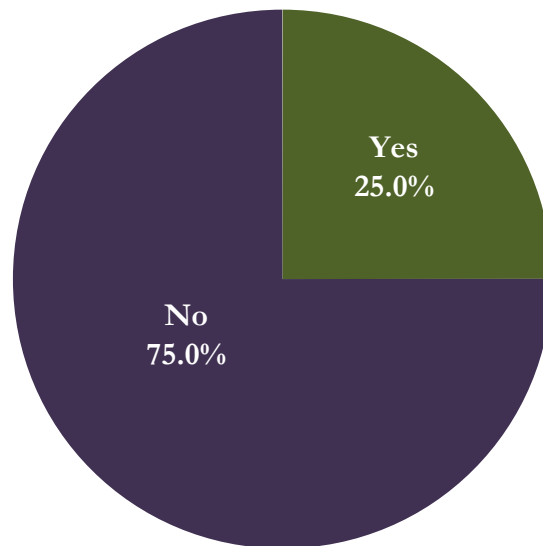
No

Additional Information:

Nothing to note.

12. Did you experience an increase in business/customers during Snake Days (June 15th - 17th) relative to normal activity for this time of year?

The majority of businesses surveyed did not experience an increase in business/customers compared to this time period in other years.



Number of Responses: 8

Confidence Interval: $\pm 30\%$

Available Response Options:

Yes

No

Additional Information:

Future surveys may wish to ask if this time period in June (around the new moon) is more lucrative compared to other times during the summer. With or without a formal event, this time of year is the generally-preferred time for herpers visiting West Texas. That being said, it would be useful to target more businesses in West Texas, particularly Sanderson, to better determine economic impact.

The question should be reworded to ask whether businesses experienced an increase, decrease, or no change to business during Snake Days (to account for customers who may be put off by herps and therefore shun businesses during a herp-oriented event).

13. If you answered “Yes” above, roughly how much of an increase did you experience?

Despite the majority of surveyed businesses saying they didn’t experience an increase in business, of the 2 participants answered this question, both said they experienced “More than twice the normal amount” of activity.

Number of Responses: 2

Confidence Interval: $\pm 14\%$

Available Response Options:

An increase, but less than twice a normal amount

Roughly twice the normal amount

More than twice the normal amount

Additional Information:

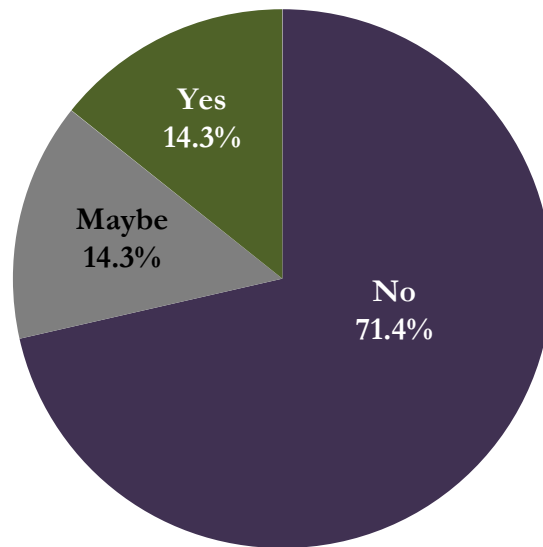
The two businesses who indicated they advertised with/sponsored Snake Days also advertised the event at their place of business, and were the same two who experienced a greater-than-double increase in business during the event.



Coachwhip, *Masticophis flagellum*, Terrell County. Photo by Chris McMartin.

14. Do you or someone you know have property in West Texas they may be interest [*sic*] in opening up to herpers (either for free, or for a small fee) for next year's event? (if so, please contact Jeff Adams via the Snake Days web site www.snakedays.com)

The majority of businesses surveyed were not aware of private landowners who would be willing to allow access to their land for herping during the event.



Number of Responses: 7

Confidence Interval: $\pm 34\%$

Available Response Options:

- No
- Maybe—would have to coordinate access and fee
- Yes, and would allow free access to registered Snake Days attendees
- Yes, and would allow access to registered Snake Days attendees for a small individual fee
- Yes, and would allow access to registered Snake Days attendees if the event pays a blanket fee

Additional Information:

The single “Yes” response was for “Yes, and would allow free access to registered Snake Days attendees.” It is unclear from the survey whether the property owner(s) granted access for this year’s Snake Days attendees; future surveys could address this question.

15. In addition to being a business owner, are you also a herper?

All 7 responses to this question were “Yes” (I am also a herper).

Number of Responses: 7

Confidence Interval: $\pm 7\%$

Available Response Options:

Yes

No

Additional Information:

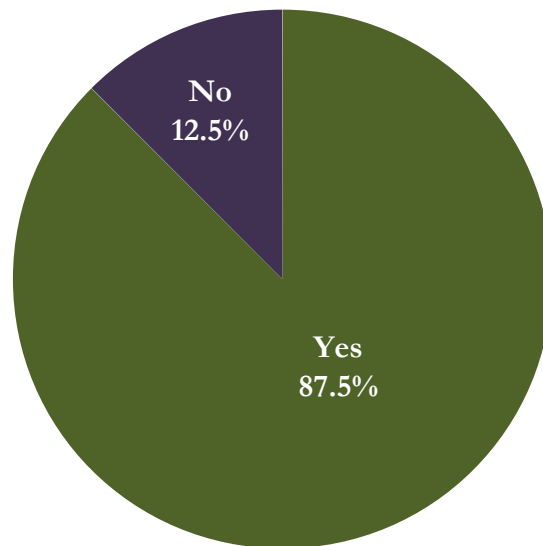
This was a mildly surprising, however not unexpected response, since the primary target of the survey was the herping community, regardless of business ownership.



Female reticulated collared lizard, *Crotaphytus reticulatus*, Hidalgo County. Photo by Chris McMartin.

16. Do you keep, or have you kept, any species of reptile or amphibian, regardless of its origin?

The majority of business participants surveyed have kept, or currently keep, reptiles and/or amphibians.



Number of Responses: 8

Confidence Interval: $\pm 22\%$

Available Response Options:

Yes

No

Additional Information:

After this question, participants were directed to Question 17 (“Did you participate in Snake Days events to any extent? Your response will direct you to the appropriate page for feedback”) and based on their response were directed to either Question 18 (see next page) or Question 39 (see page 58).

Snake Days Participation

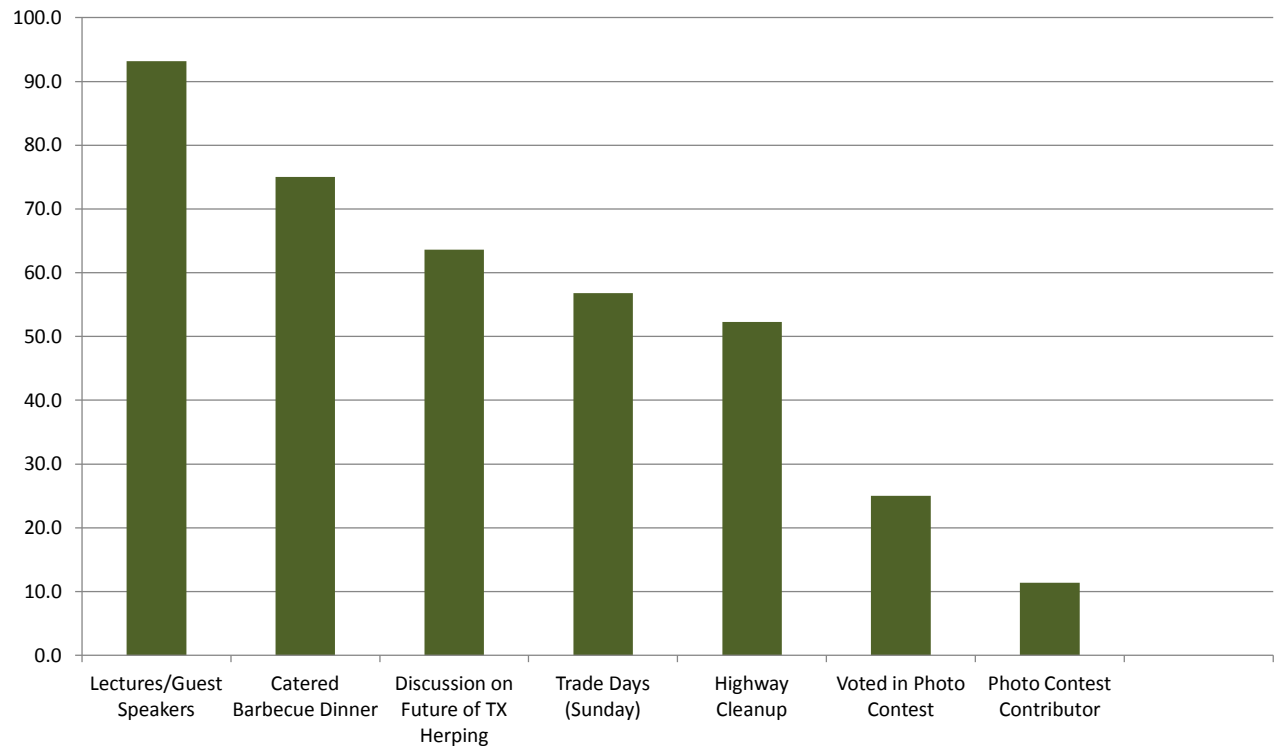
Questions 18 through 38 of the survey were only asked of those participants who answered “Yes” to Question 17 (“Did you participate in Snake Days events to any extent? Your response will direct you to the appropriate page for feedback”). At the top of the first page of questions, the following was displayed:

The purpose of this page is to determine the economic impact Snake Days had on West Texas (and the state); to characterize herpers' activities in the area; and to aid in planning next year's event. If you did NOT attend any Snake Days events, make the appropriate selection on the first question then skip the remainder of the page by scrolling down and clicking "Next."

NOTE: For purposes of this survey, "West Texas" is defined as the area of Texas west of a line running from Odessa to Del Rio.

18. Did you attend/participate in the following Snake Days events June 15th-17th in Sanderson? (check all that apply)

More than half of surveyed Snake Days participants participated in the scheduled events (as well as the highway cleanup project), with the exception of the photo contest (either submitting entries or voting). Chart and further discussion are on the following page.



Number of Responses: 44

Confidence Interval: $\pm 14\%$

Available Response Options:

- Photo contest contributor
- Discussion on the future of Texas herping (Friday night)
- Lectures/guest speakers (Saturday)
- Catered barbecue dinner (Saturday night)
- Trade Days (Sunday)
- Voted in Photo Contest (Sunday)
- Highway cleanup (throughout event)

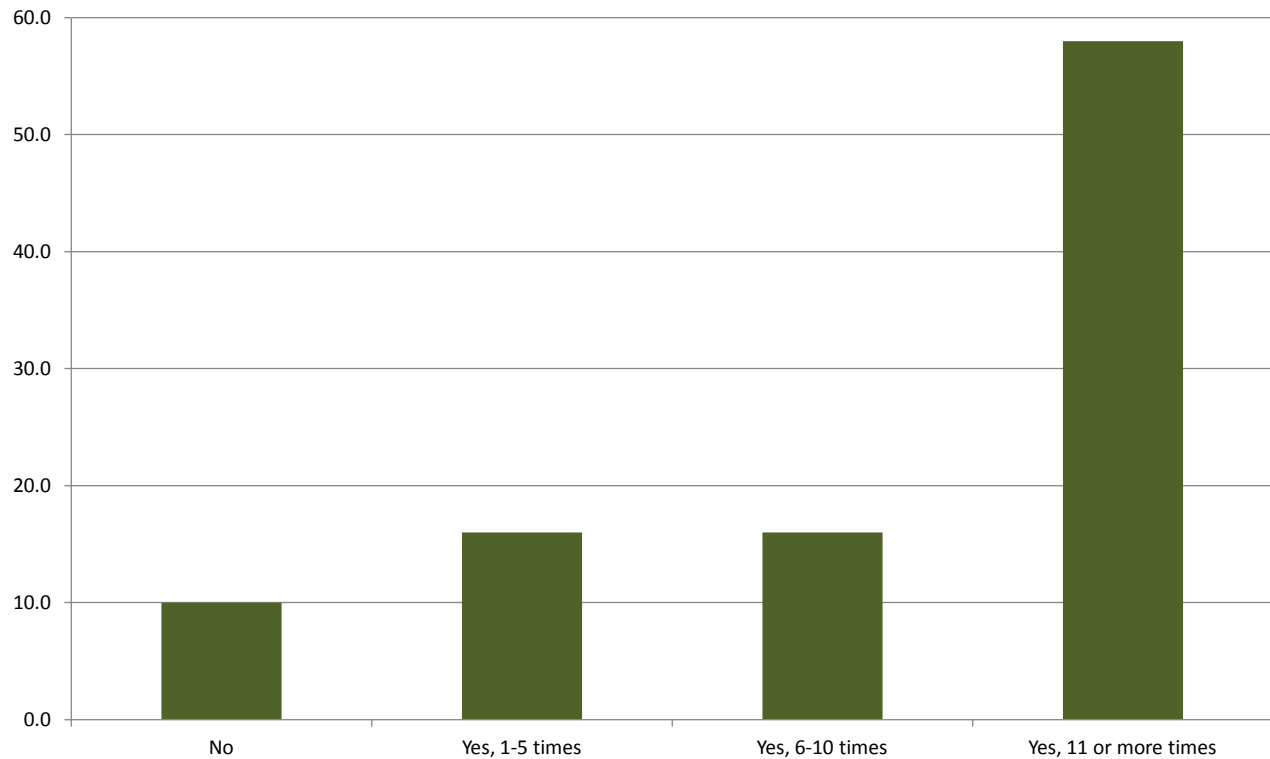
Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

Future surveys could add a response options for the silent auction (whether the participant won an item or not) and for the Data Collection Project (which on this survey was addressed by Question 35).

19. Prior to Snake Days, had you ever visited West Texas before?

90% of Snake Days attendees have visited West Texas prior to the event. The average number of visits prior to Snake Days is 8.14 (assuming median values of 3 and 7 for the “1-5” and “6-10” categories respectively, and a conservative value of 11 for the “11 or more” category).



Number of Responses: 50

Confidence Interval: $\pm 13\%$

Available Response Options:

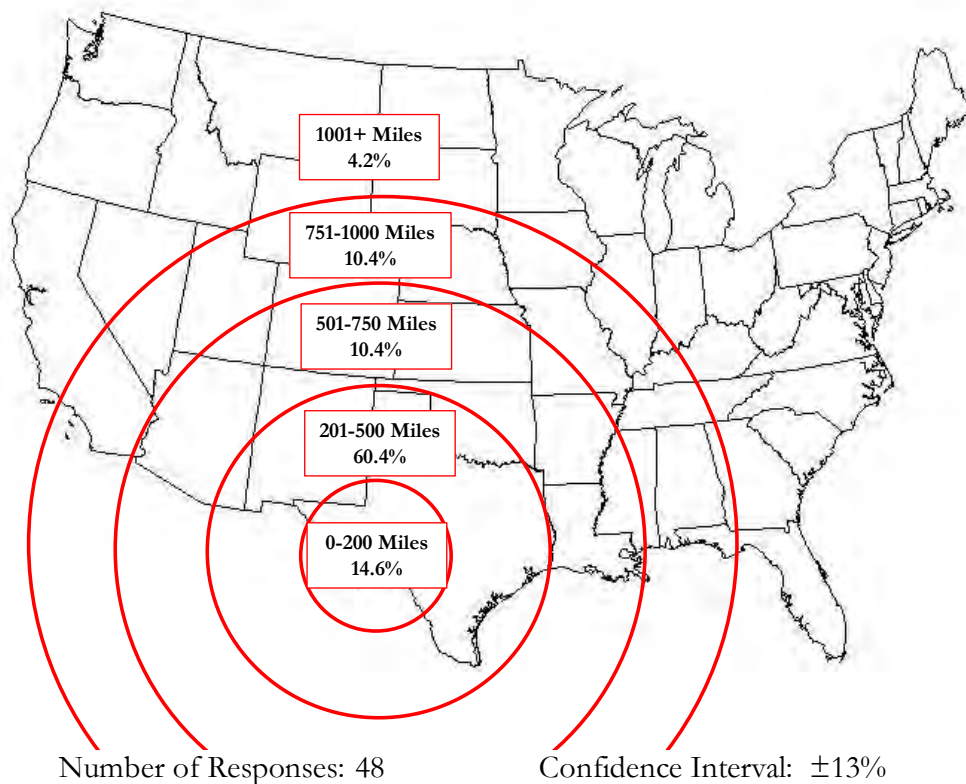
- Yes, 1-5 times
- Yes, 6-10 times
- Yes, 11 or more times
- No

Additional Information:

Nothing to note.

20. How far did you travel (one way) to attend Snake Days? (If unsure, use Google Maps in a separate window to get the approximate distance)

25% of Snake Days attendees traveled more than 500 miles (i.e. from outside the state of Texas) to participate.



Available Response Options:

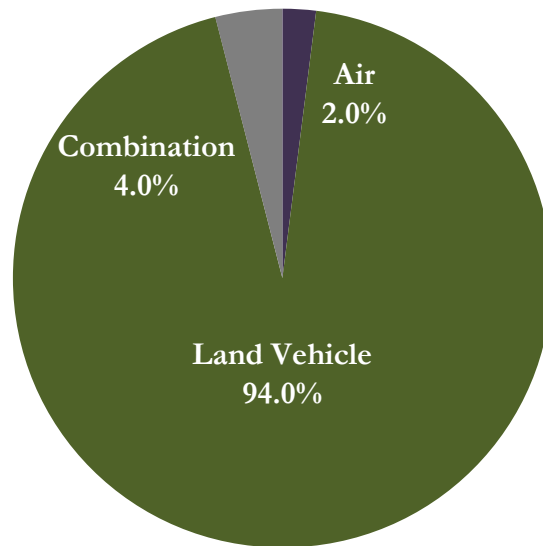
- 0-200 miles
- 201-500 miles
- 501-750 miles
- 751-1000 miles
- 1001 or more miles

Additional Information:

Nothing to note.

21. What was your primary mode of transportation to get from your home to Snake Days?

The overwhelming majority of Snake Days attendees traveled to the event by ground transportation (car, motorcycle, etc).



Number of Responses: 50

Confidence Interval: $\pm 6\%$

Available Response Options:

- Air
- Car
- Other (please specify)

Participants' Write-in Responses:

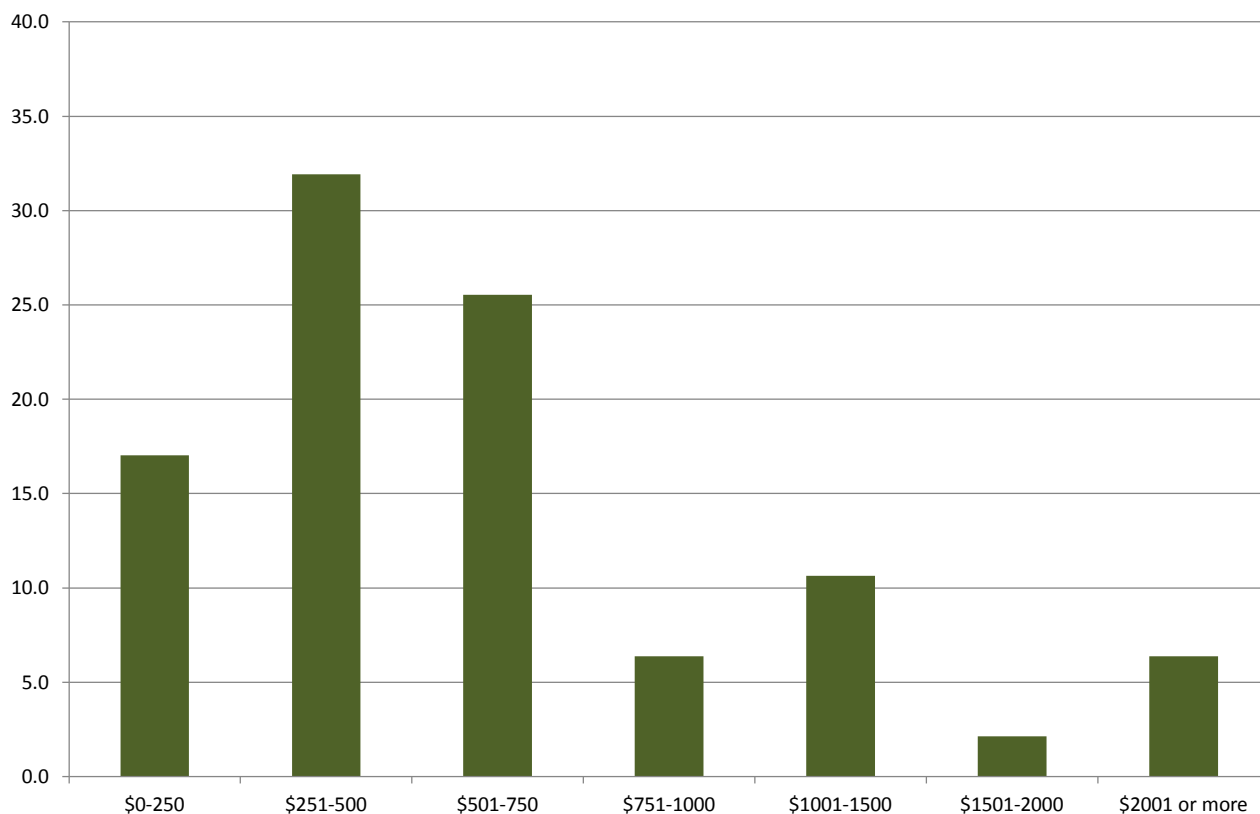
- I live in Sanderson
- Motorcycle
- Both, Flew to ABQ and drove down.
- Air to Austin and Car from there

Additional Information:

The pie chart above lists a category "Combination" to denote those write-in responses indicating they had a roughly even split between flying into a major airport and driving the remainder of the distance. Based on the write-in responses, future surveys should include that category, as well as one for "I live in the city where the event was held" (or explain that such participants should indicate "Ground Transportation"), and change the "Car" option to "Ground Transportation" to account for motorcycles and other vehicles.

22. What is your best estimate of how much you spent on your trip? Include the grand total from start to finish—food, gas, airline tickets, lodging including intermediate stops, licenses, souvenirs, and everything else. Include money spent outside Texas—we will get more specific in later questions. If you live in West Texas, consider only those expenses involved in attending Snake Days events.

The average (mean) amount of money spent by a Snake Days event attendee on their entire trip appears to be \$654 (conservatively assuming \$2001 for the “\$2001 or more” category). Therefore, Snake Days appears to have generated approximately \$30,750 for the economy.



Number of Responses: 47

Confidence Interval: $\pm 12\%$

Available Response Options:

\$0-250
\$251-500
\$501-750
\$750-1000
\$1001-1500
\$1501-2000
\$2001 or more

Additional Information:

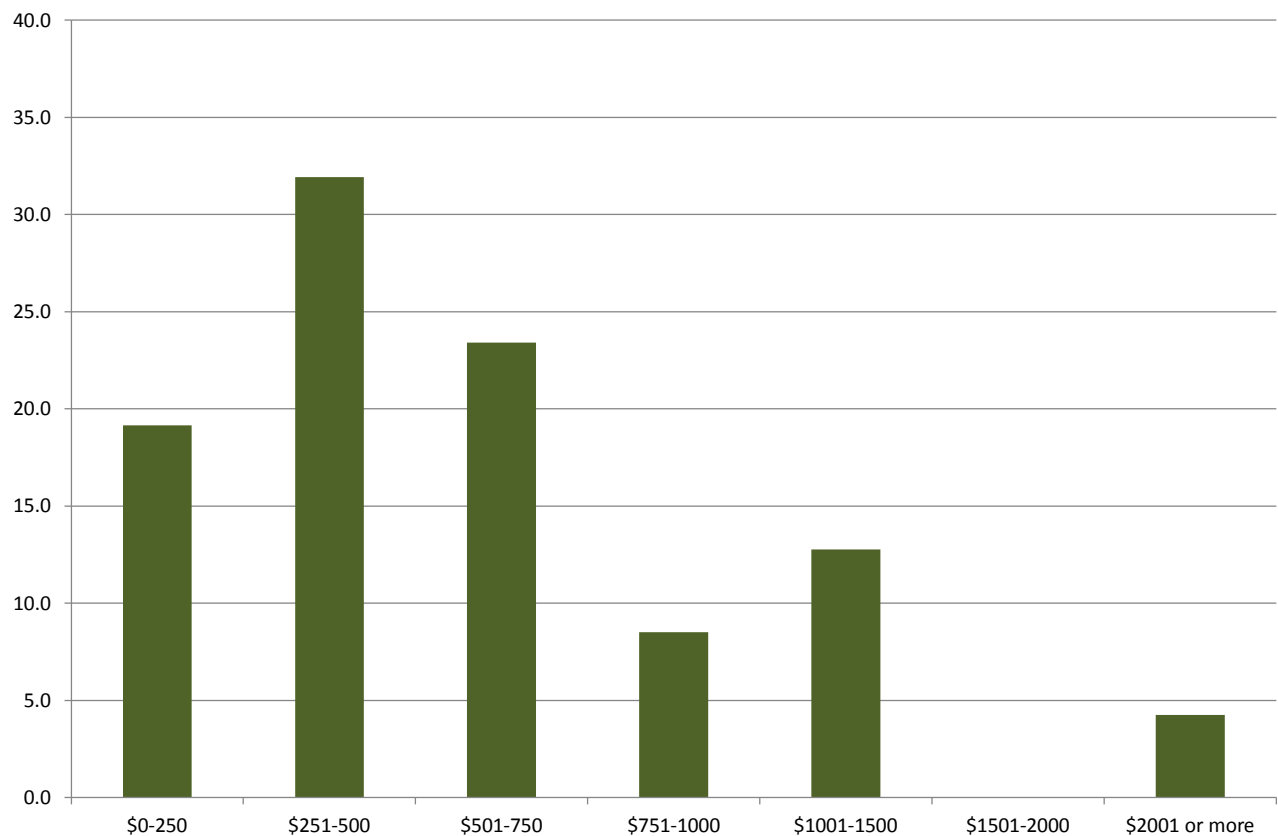
Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.



Juvenile spiny softshell turtle, *Apalone spinifer*, Concho County. Photo by Chris McMartin.

23. Out of that total, what is your best estimate of how much you spent within the State of Texas? Again, include all categories of expenses. If you live in West Texas , consider only those expenses involved in attending Snake Days events.

The average (mean) amount of money spent by a Snake Days event attendee within the state of Texas on their trip appears to be \$609 (conservatively assuming \$2001 for the “\$2001 or more” category). Therefore, Snake Days appears to have generated approximately \$28,625 for the Texas economy.



Number of Responses: 47

Confidence Interval: $\pm 12\%$

Available Response Options:

\$0-250
\$251-500
\$501-750
\$750-1000
\$1001-1500
\$1501-2000
\$2001 or more

Additional Information:

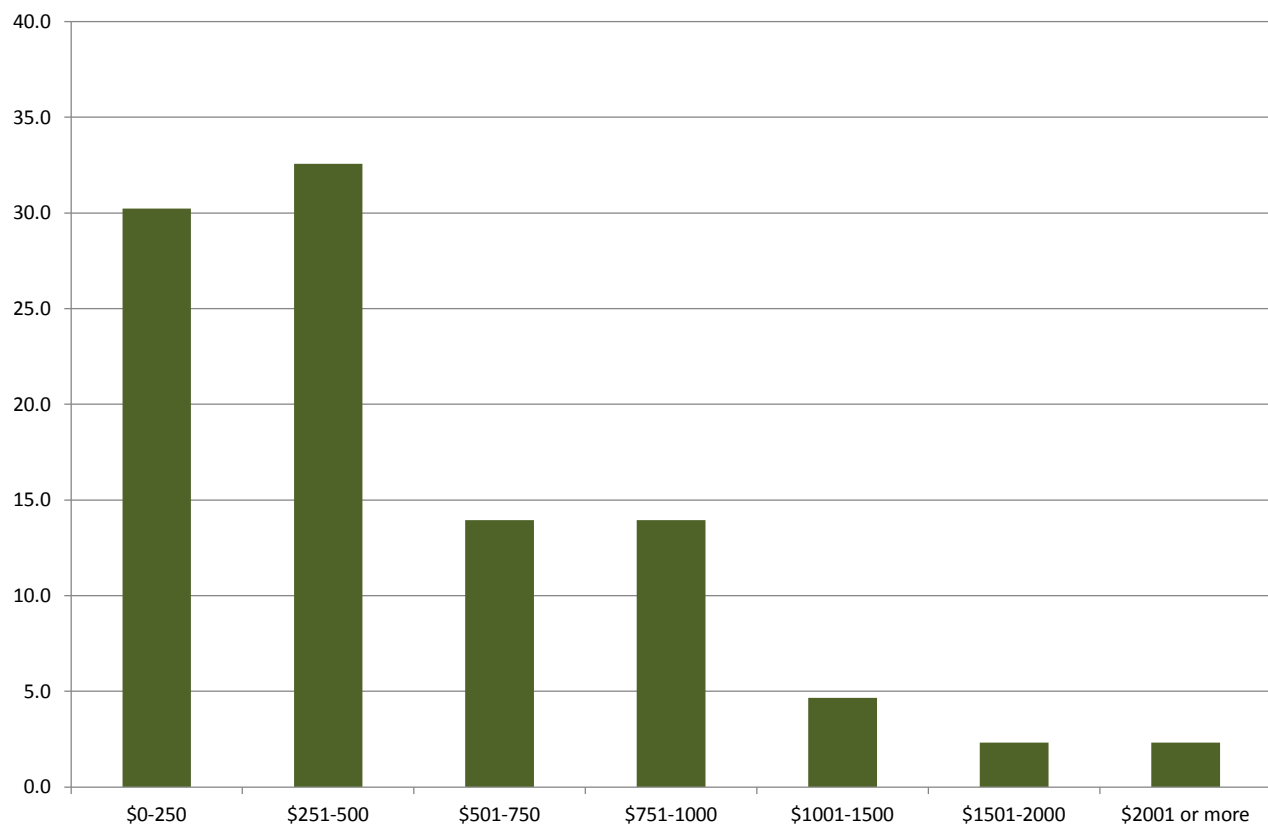
Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.



Rock rattlesnake, *Crotalus lepidus*, Val Verde County. Photo by Chris McMartin.

24. Of that total, what is your best estimate of how much you spent in West Texas? Again, include all categories of expenses. If you live in West Texas , consider only those expenses involved in attending Snake Days events.

The average (mean) amount of money spent by a Snake Days event attendee within the West Texas region on their trip appears to be \$514 (conservatively assuming \$2001 for the “\$2001 or more” category). Therefore, Snake Days appears to have generated approximately \$22,100 for the West Texas economy.



Number of Responses: 43

Confidence Interval: $\pm 13\%$

Available Response Options:

\$0-250
\$251-500
\$501-750
\$750-1000
\$1001-1500
\$1501-2000
\$2001 or more

Additional Information:

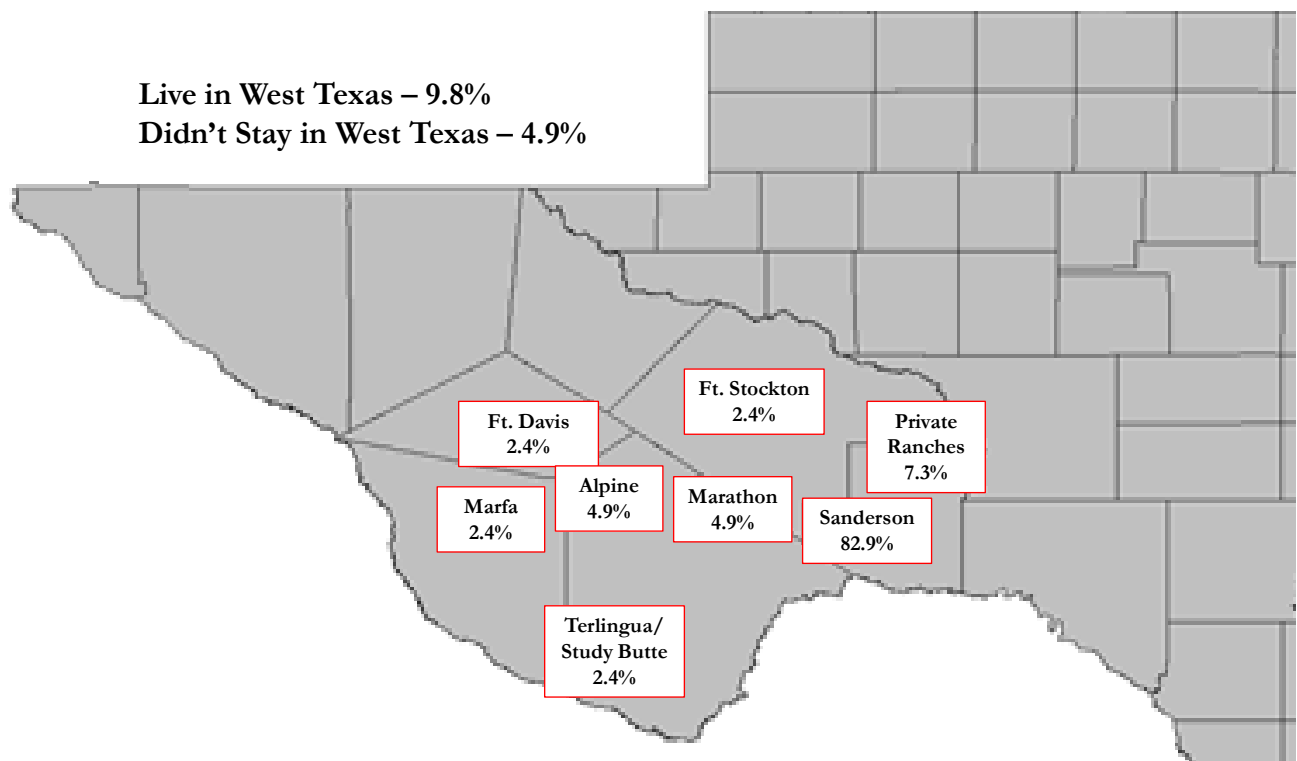
Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.



Male green anoles, *Anolis carolinensis*, in combat, Bexar County. Photo by Chris McMartin.

25. Regardless of your trip length, where did you stay during the actual Snake Days event (June 15th-17th)? Select all that apply; choose the answer(s) which best match(es) your location and/or write in comments as necessary.

For the Snake Days event, the overwhelming majority of survey participants stayed in Sanderson, but several towns and ranches in West Texas also benefited.



Number of Responses: 41

Confidence Interval: $\pm 11\%$

Available Response Options:

I live in West Texas
Alpine
Big Bend NP
Del Rio
Fort Davis
Fort Stockton

Lajitas
Marfa
Ozona
Sanderson
Terlingua/Study Butte
Other (please specify)

Participants' Write-in Responses:

Marathon

Marathon

Birdsong Outpost Ranch

Private ranch north of Dryden

Hotel was so bad in Sanderson, we left on the first afternoon

Only stayed one day and drove home, no overnight. Live near San Antonio

Dryden [*note: this response was assumed to be, and included in, the "Private Ranches" category*]

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

Future surveys should include a "Private Ranch" options. Future surveys should also ask whether lodging was hotel/motel or RV/cabin/camping. It could also be useful to have a separate question to specify the names of preferred hotels/motels and ranches.

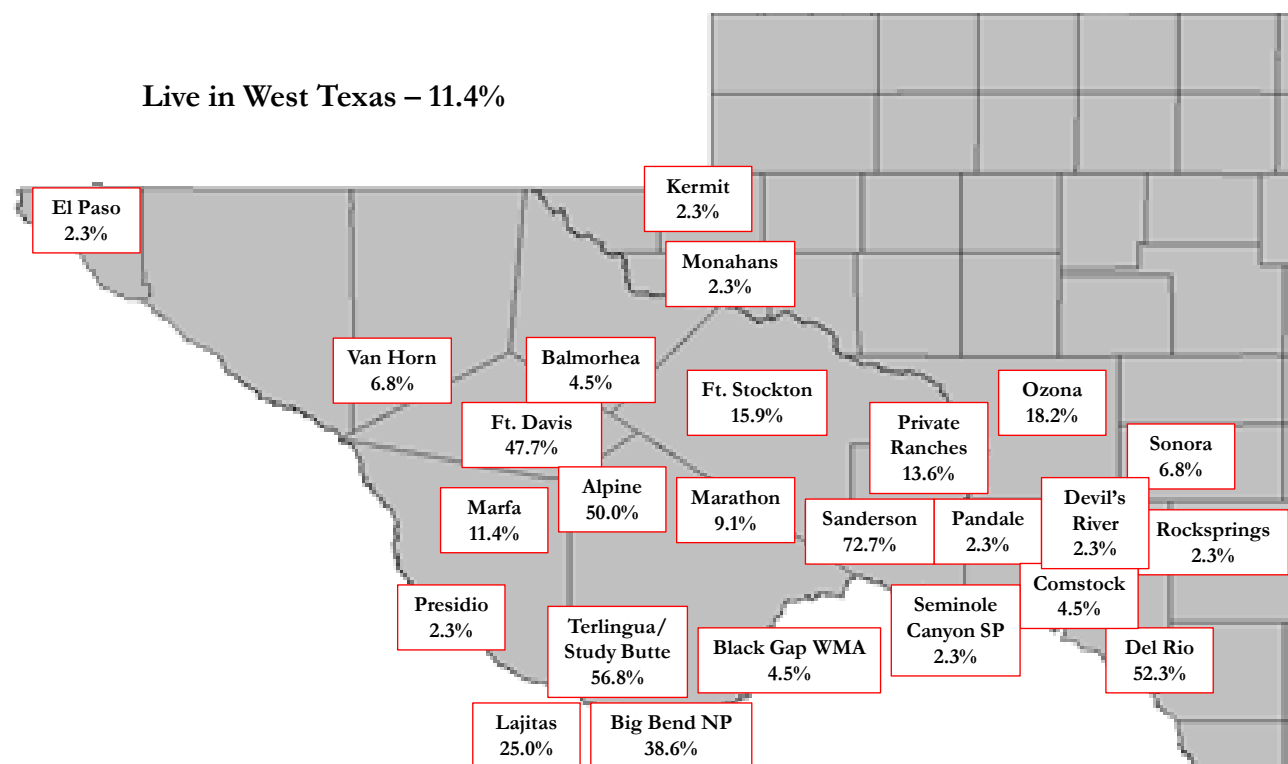
Omission of a given town, campground, or park on the original list of response options was not intended as a slight on any particular location!



Couch's spadefoot toad, *Scaphiopus couchii*, Brewster County. Photo by Chris McMartin.

26. Where have you stayed when visiting West Texas outside the Snake Days time frame, either on this visit or previously? Select all that apply; choose the answer(s) which best match(es) your location and/or write in comments as necessary.

For times outside the Snake Days event (including previous visits), survey participants indicated they stayed in a wide range of towns, private ranches, and parks in the West Texas region.



Number of Responses: 44

Confidence Interval: $\pm 14\%$

Available Response Options:

I live in West Texas
Alpine
Big Bend NP
Del Rio
Fort Davis
Fort Stockton

Lajitas
Marfa
Ozona
Sanderson
Terlingua/Study Butte
Other (please specify)

Participants' Write-in Responses:

Seminole Canyon State Park
Black Gap WMA, Van Horn
Balmorhea, Comstock
Marathon
Stillwell
Marathon
Gries Ranch, and El Paso
Van Horn, Marathon, Sonora, Kermit, Monahans
Devil's River/Juno road
Marathon
Gries Ranch
Private ranches in Terrell and Val Verde
Van Horn
Presidio
Depends on where I am wanting to collect!
Stillwell Ranch/Black Gap WMA
Pandale
Haven't been, previously
first visit
Sonora, Comstock, Rock Springs
Never been out there before
Sonora, Balmorhea, private ranch
Never been before

Additional Information:

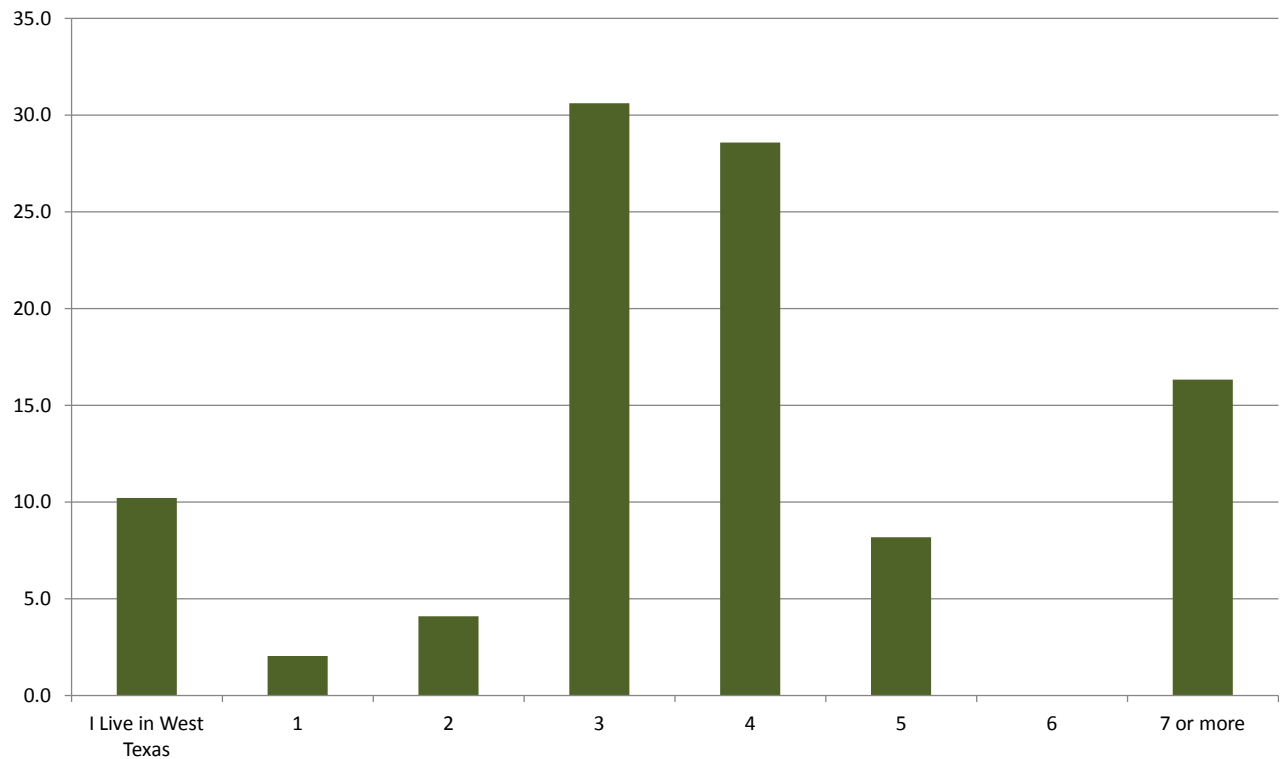
Total percentages on the chart exceed 100% since more than one response could be selected.

Based on the write-in responses, future surveys should include “Never visited West Texas prior to, or outside, Snake Days” and “Private Ranch” options. Future surveys should also ask whether lodging was hotel/motel or RV/cabin/camping. It could also be useful to have a separate question to specify the names of preferred hotels/motels and ranches.

Omission of a given town, campground, or park on the original list of response options was not intended as a slight on any particular location!

27. How many days did you spend in West Texas on THIS TRIP?

The majority of Snake Days attendees spent 3-4 days in West Texas, with the average being 4.1 days (conservatively estimating the “7 or more” category as 7).



Number of Responses: 49

Confidence Interval: $\pm 12\%$

Available Response Options:

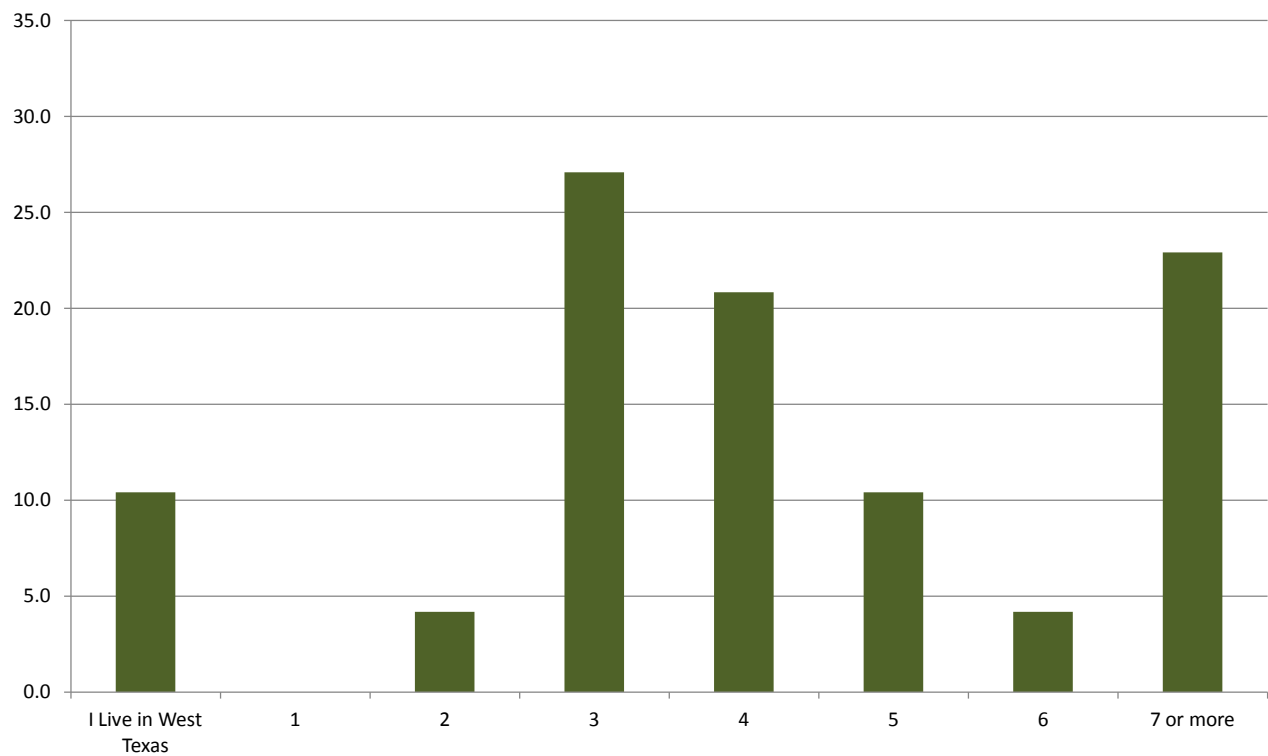
I live in West Texas	4
1	5
2	6
3	7 or more

Additional Information:

For greater fidelity, future surveys should replace the “7 or more” response option with a write-in response for stays 7 days or longer.

28. How many days do you typically spend in West Texas when you visit? If this was your first visit, mark the same answer as you did on the previous question.

The average Snake Days attendee spends 4.5 days in West Texas on a typical trip (conservatively estimating the “7 or more” category as 7).



Number of Responses: 48

Confidence Interval: $\pm 12\%$

Available Response Options:

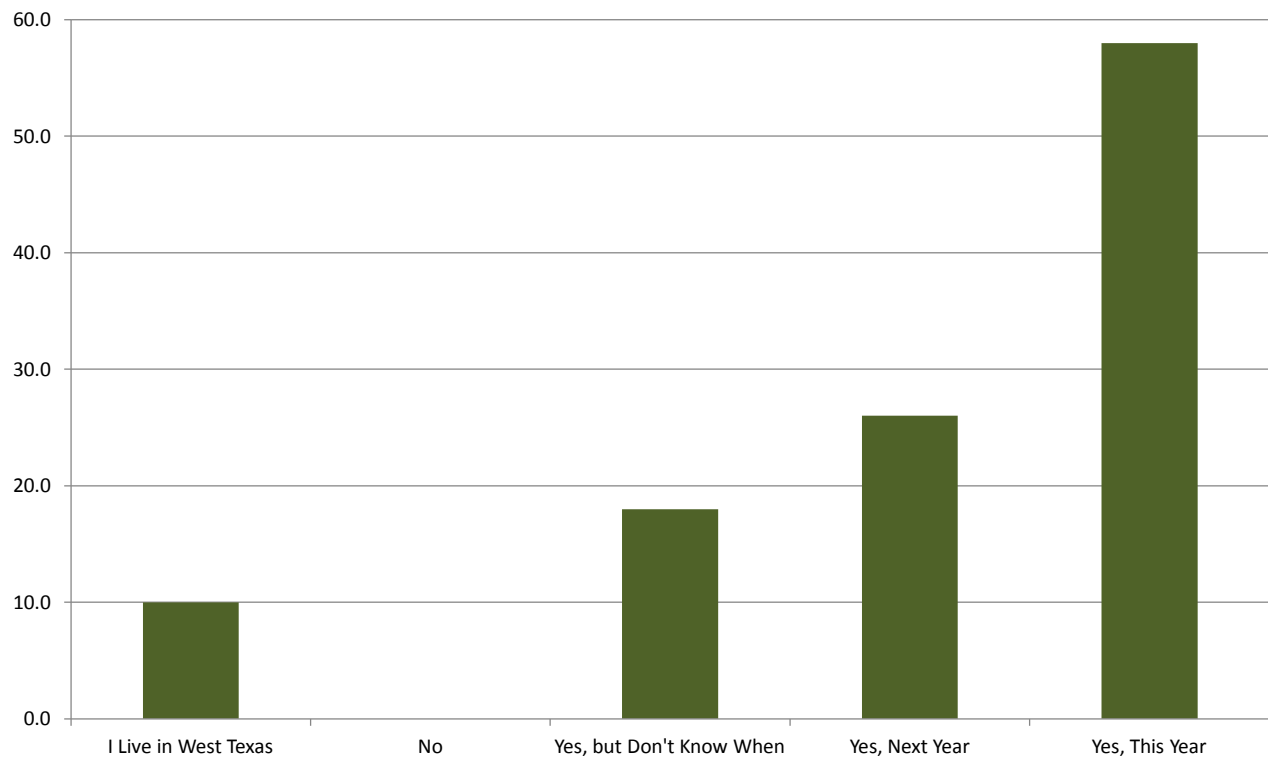
I live in West Texas	4
1	5
2	6
3	7 or more

Additional Information:

For greater fidelity, future surveys should have an “N/A” response option to include both those participants whose first visit to West Texas was for Snake Days, and those who live in West Texas. The “7 or more” response option should also be replaced with a write-in response for stays 7 days or longer.

29. Do you plan on visiting West Texas in the future? Select all that apply.

The majority of Snake Days attendees plan on revisiting West Texas this year, and all survey participants not living in West Texas indicated they will make a return visit in the future.



Number of Responses: 50

Confidence Interval: $\pm 13\%$

Available Response Options:

N/A—I live in West Texas

No

Yes, but don't know when

Yes, next year

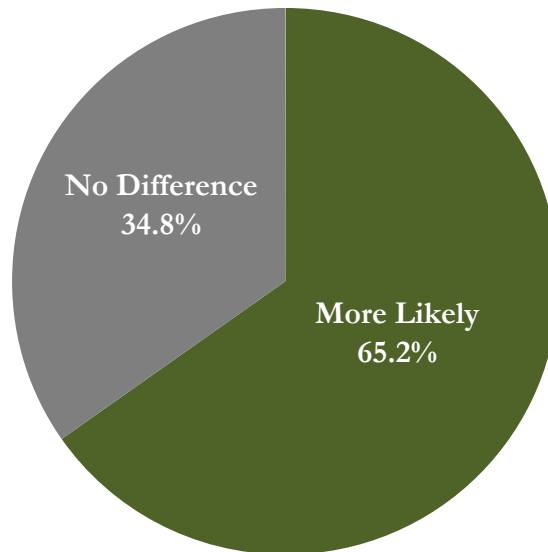
Yes, this year

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

30. Did your experience at this year's Snake Days make it more or less likely you will visit West Texas in the future?

The majority of survey participants say their experience at Snake Days makes it more likely they will visit West Texas again. None said it made them less likely to do so. The Snake Days event can be reasonably called a positive factor to get herpers to visit West Texas.



Number of Responses: 46

Confidence Interval: $\pm 13\%$

Available Response Options:

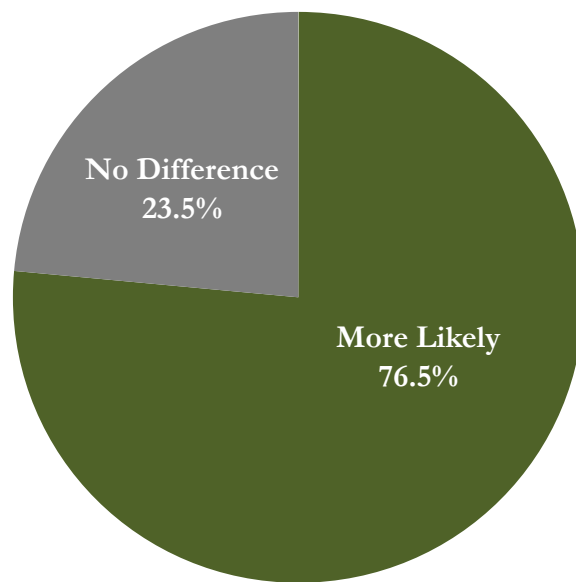
- More likely
- Less likely
- No difference

Additional Information:

An “N/A—I live in West Texas” response option should be added to future surveys for greater fidelity.

31. Does NEXT year's planned Snake Days event make it more or less likely that you will visit West Texas NEXT year?

A strong majority of survey participants say next year's planned Snake Days makes it more likely they will visit West Texas again. None said it made them less likely to do so. The prospect of a second Snake Days event can be reasonably called a positive factor to get herpers who attended this year's event to revisit West Texas.



Number of Responses: 51

Confidence Interval: $\pm 11\%$

Available Response Options:

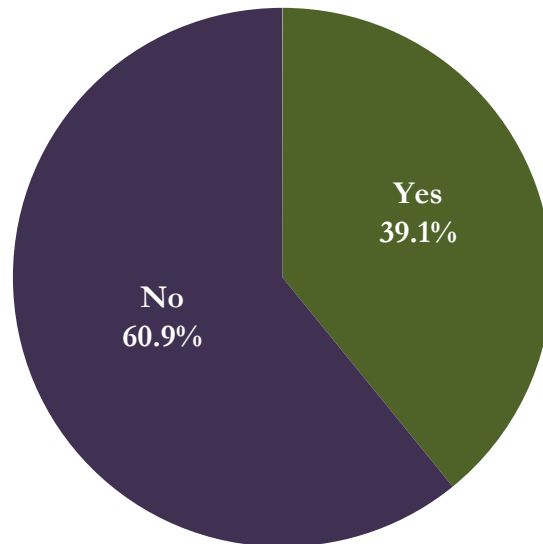
- More likely
- Less likely
- No difference

Additional Information:

An "N/A—I live in West Texas" response option should be added to future surveys for greater fidelity.

32. Did you bring family member(s) and/or friend(s) with you to Snake Days who may not normally otherwise have accompanied you? (If your family members are also herpers, please select “No”)

While the majority of Snake Days attendees did not bring additional people with them to the event, nearly 40% did, which translates to additional people potentially contributing to the West Texas economy to varying degrees.



Number of Responses: 46

Confidence Interval: $\pm 13\%$

Available Response Options:

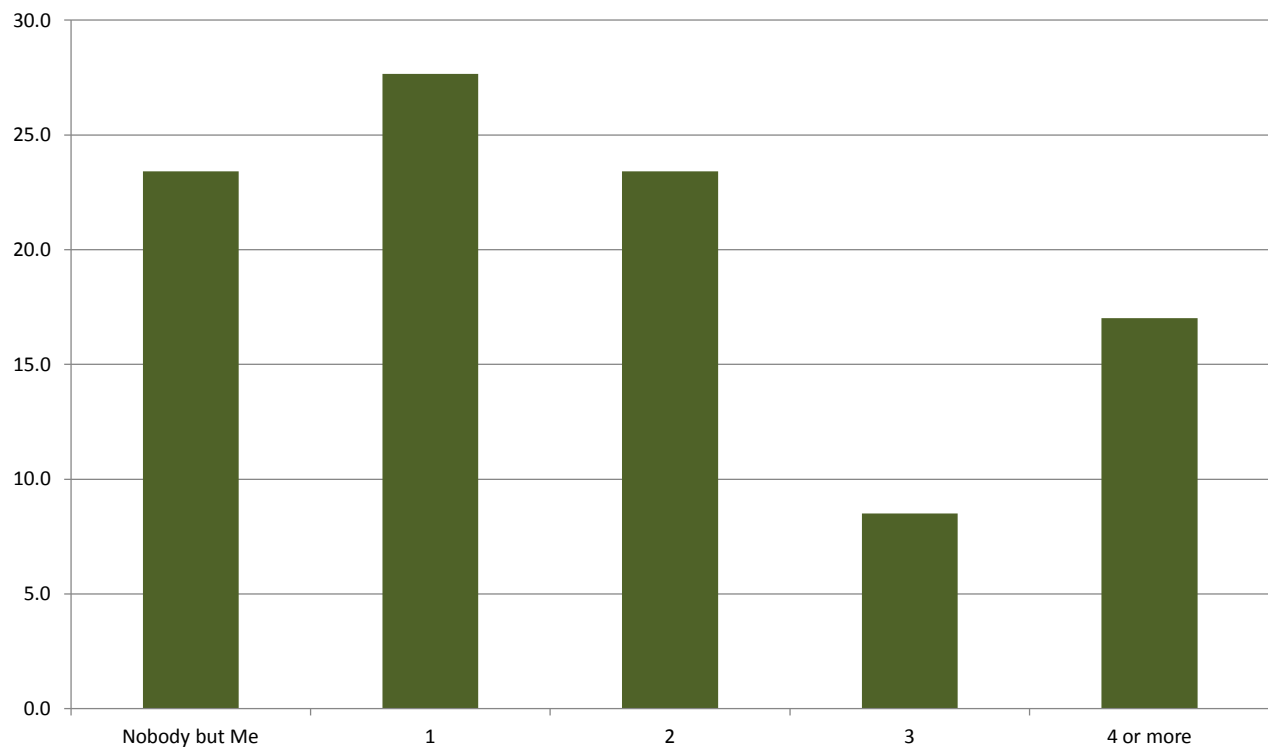
Yes
No

Additional Information:

Nothing to note.

33. How many people traveled with you, whether they were family or friends, herpers or not?

The average (mean) number of guests, whether family members or friends, brought to Snake Days by a survey participant appears to be 1.7 (conservatively assuming 4 for the “4 or more” category).



Number of Responses: 47

Confidence Interval: $\pm 12\%$

Available Response Options:

Nobody but me

1

2

3

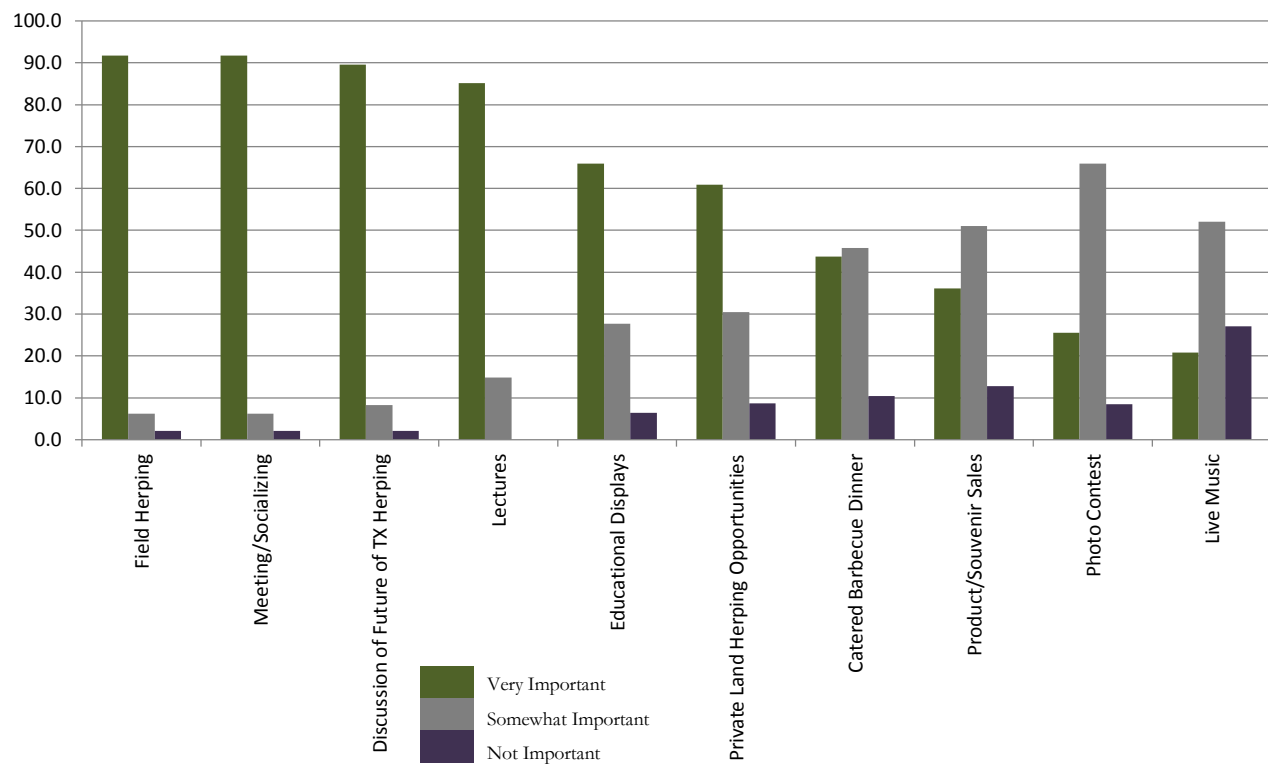
4 or more

Additional Information:

Better fidelity on this question could be achieved by replacing the “4 or more” category with a write-in option for numbers of guests greater than 3.

34. Rate the following Snake Days events as very important, somewhat important, or not important (regardless of whether you participated in any given event):

Snake Days attendees regarded the various activities associated with the event with varying degrees of importance as outlined in the chart.



Number of Responses: 46-48

Confidence Interval: $\pm 13\%$
(varied with individual item)

Discussion continued on next page.

Available Response Options Matrix:

Very important

Somewhat important Not important

Lectures

Educational Displays

Private Land Herping Opportunities

Field Herping

Photo Contest

Meeting/Socializing

Product/Souvenir Sales

Discussion on Future of TX Herping

Catered Barbecue Dinner

Live Music

Highway Cleanup

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

Greater fidelity on this subject may be achieved on future surveys by asking whether attendees knew of various events prior to the event itself, which may have increased participation (e.g. photo contest). In addition, categories for “Silent Auction,” “Data Collection Project,” and “Highway Cleanup” should be included.



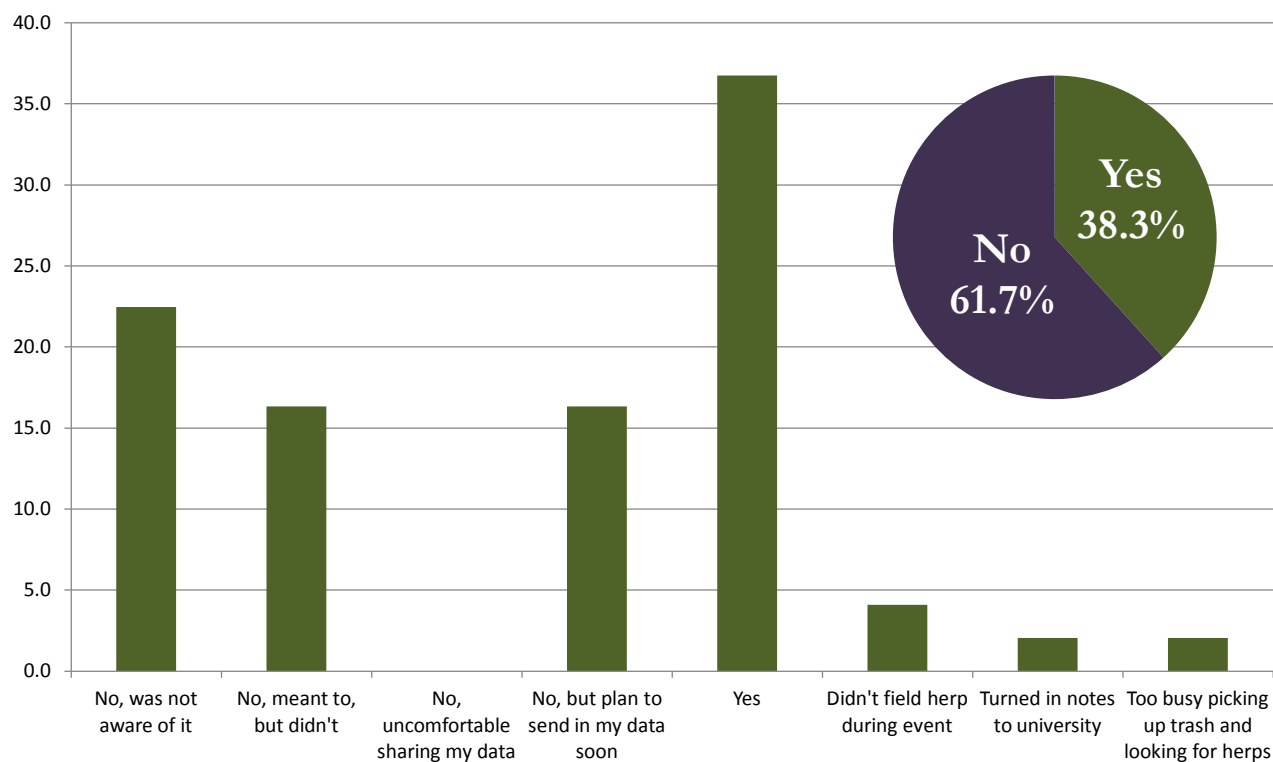
Texas horned lizard, *Phrynosoma cornutum*, Terrell County. Photo by Chris McMartin.

Questions about the Snake Days Data Collection Project

As a continuation of the questions asked of Snake Days Participants, Questions 35-38 specifically referenced the Data Collection Project. This project was an attempt to encourage attendees to record their observations of wild reptiles and amphibians during the event, with associated data such as time and weather conditions, to support both independent research and TPWD management efforts. While the relevant survey page did not preface the questions with an explanation of the Data Collection Project, it was assumed Snake Days attendees knew of the project.

35. Did you participate in the Herp Observation Data Collection Project conducted during Snake Days? Select the most appropriate answer to your situation.

The majority of Snake Days attendees did not participate in the Data Collection Project (a conclusion supported by the number of data forms received for that project, relative to overall event attendees). Interestingly, no survey participant indicated they did not participate due to reluctance to share their data (anecdotally, herpers have indicated this as historically being a reason for not contributing to academic or TPWD data collection efforts).



Number of Responses: 49

Confidence Interval: $\pm 12\%$

Available Response Options:

- No, was not aware of it
- No, meant to, but didn't
- No, uncomfortable sharing my data
- No, but plan to send in my data soon
- Yes

Participants' Write-in Responses:

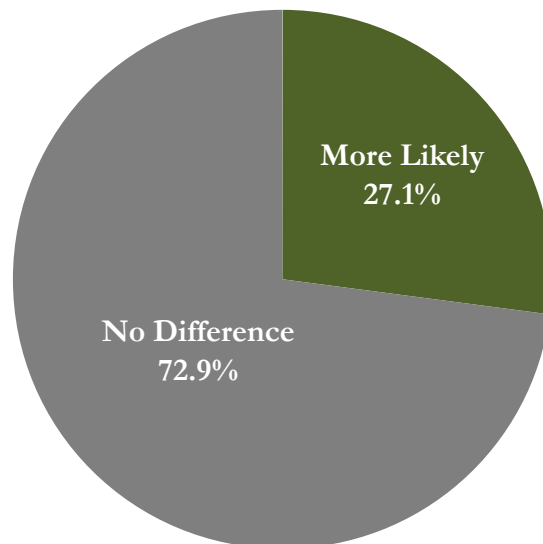
- Turned in notes to the collection at my university.
- Did not get into the field during the event.
- Too busy cleaning up trash and just plain looking for herps.
- did not participate in field herping
- Never made it as far as Herping. Left before the first night. For below.. Giving prizes for top contributor/highest variety essentially sets up a conflict of interest and is not a good idea for collecting meaningful data.
- Still putting info together

Additional Information:

- This question allowed for a write-in response, "Other (please specify)," in addition to selecting a response from the available options, versus having it as its own forced-choice option. This potentially skewed the responses in that participants could select one of the above options and also write in comments, resulting in percentages being (potentially) inaccurate by up to 2%.
- Write-in responses were categorized and incorporated into the chart as appropriate.

36. In your opinion, would prizes or other recognition for data collection efforts (top contributor, highest variety of species found, etc) make it more or less likely you would participate in next year's data collection?

Less than a third of survey participants said incentives would increase the likelihood of their participation in the Data Collection Project; however, nobody said it would decrease the likelihood they would participate.



Number of Responses: 48

Confidence Interval: $\pm 12\%$

Available Response Options:

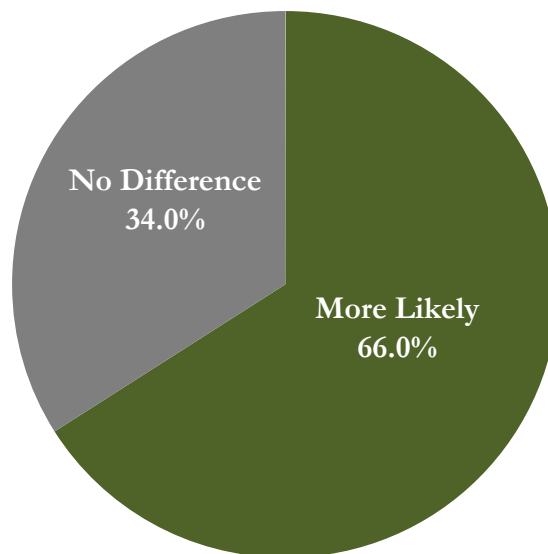
- More likely
- Less likely
- No difference

Additional Information:

One of the write-in responses to Question 35 indicated incentivizing participation in data collection would create a conflict of interest and would be detrimental to collecting meaningful data. Since this survey was anonymous, there is no way to contact the author of the comment for specifics. If the comment author (or anyone else) would like to further discuss the possible negative (or positive) aspects of prizes for data collection, please contact the survey author at chris.mcmartin@yahoo.com as this may factor into next year's event planning.

37. In your opinion, would prizes/recognition make it more or less likely OTHERS would participate in next year's data collection?

Interestingly, two thirds of survey participants said incentives would increase the likelihood of *other* attendees' participation in the Data Collection Project; a nearly exact inverse of the responses to the previous question concerning themselves. As before, nobody said it would decrease the likelihood others would participate.



Number of Responses: 47

Confidence Interval: $\pm 12\%$

Available Response Options:

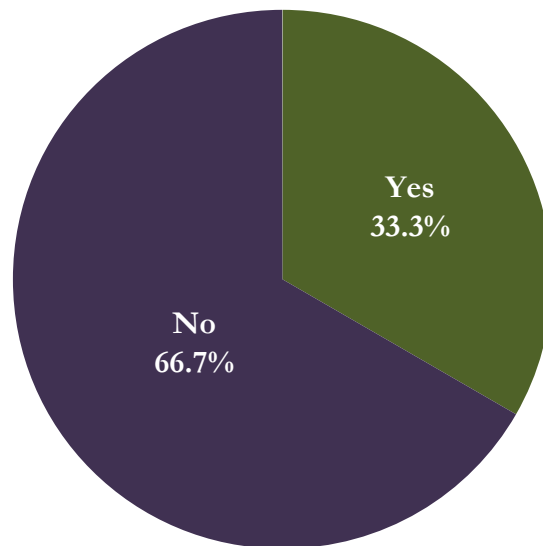
- More likely
- Less likely
- No difference

Additional Information:

One of the write-in responses to Question 35 indicated incentivizing participation in data collection would create a conflict of interest and would be detrimental to collecting meaningful data. Since this survey was anonymous, there is no way to contact the author of the comment for specifics. If the comment author (or anyone else) would like to further discuss the possible negative (or positive) aspects of prizes for data collection, please contact the survey author at chris.mcmartin@yahoo.com as this may factor into next year's event planning.

38. Did you collect any reptiles or amphibians during Snake Days? For purposes of this question, “collect” means “keep for private/personal use,” not specimens donated to sanctioned research projects or museum collections. This is not intended to be judgmental and you are reminded all responses to this survey are anonymous.

One third of survey participants who attended Snake Days indicated they collected reptiles and/or amphibians during the event for personal use.



Number of Responses: 51

Confidence Interval: $\pm 12\%$

Available Response Options:

Yes
No

Additional Information:

Additional questions on future surveys may clarify what species were collected, and in what numbers; while this information is not as detailed as that requested for the Data Collection Project, the raw numbers may be useful to some extent in determining demand for certain species, as well as gross population estimates, especially if this question is asked each year.

After this question, participants were directed to Question 49 (the first of the General Questions about Herpers and Herping in Texas—see Page 71) since Questions 39-48 were for survey participants who did not attend Snake Days.

Questions for Non-Snake Days Participants

Questions 39 through 48 of the survey were only asked of those participants who answered “No” to Question 17 (“Did you participate in Snake Days events to any extent? Your response will direct you to the appropriate page for feedback”). At the top of the first page of questions, the following was displayed:

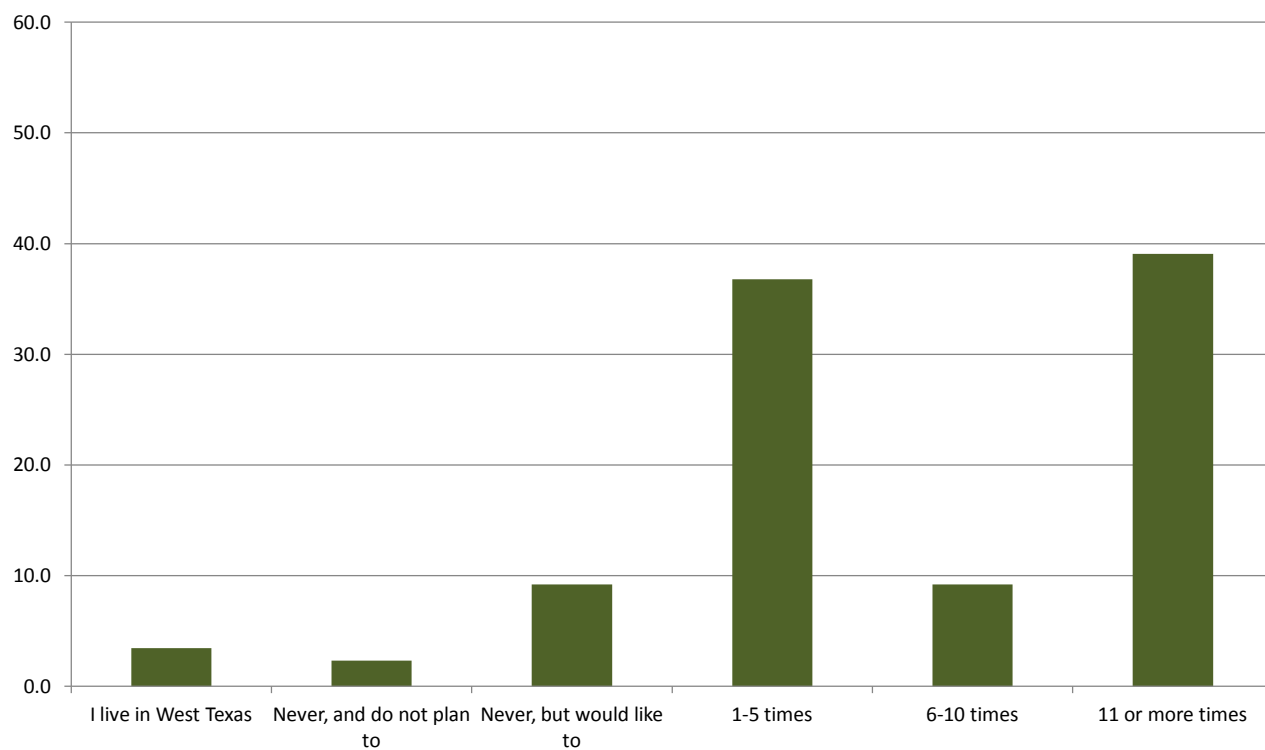
Even though you did not attend Snake Days your inputs concerning West Texas herping are valuable and may aid in planning future events. If you have not visited West Texas, please select the appropriate response to the first question below and then skip the remainder of the page by scrolling to the bottom and clicking "Next."

For purposes of this page, "West Texas" is defined as that area of Texas west of a line running from Odessa to Del Rio.

For future surveys, the first question on this page should be “Have you ever visited West Texas for herping?” with a “No” response potentially directing participants to a separate line of questions detailing what would prompt them to plan a visit, to assist in Snake Days-like event planning as well as inform local Chambers of Commerce.

39. How many times have you visited West Texas?

A large majority of non-Snake Days attendees have visited West Texas at least once, with the average being 6.4 times (counting participants who have never visited, assuming the median value for each category, and conservatively estimating “11 or more times” as 11 times).



Number of Responses: 87

Confidence Interval: $\pm 10\%$

Available Response Options:

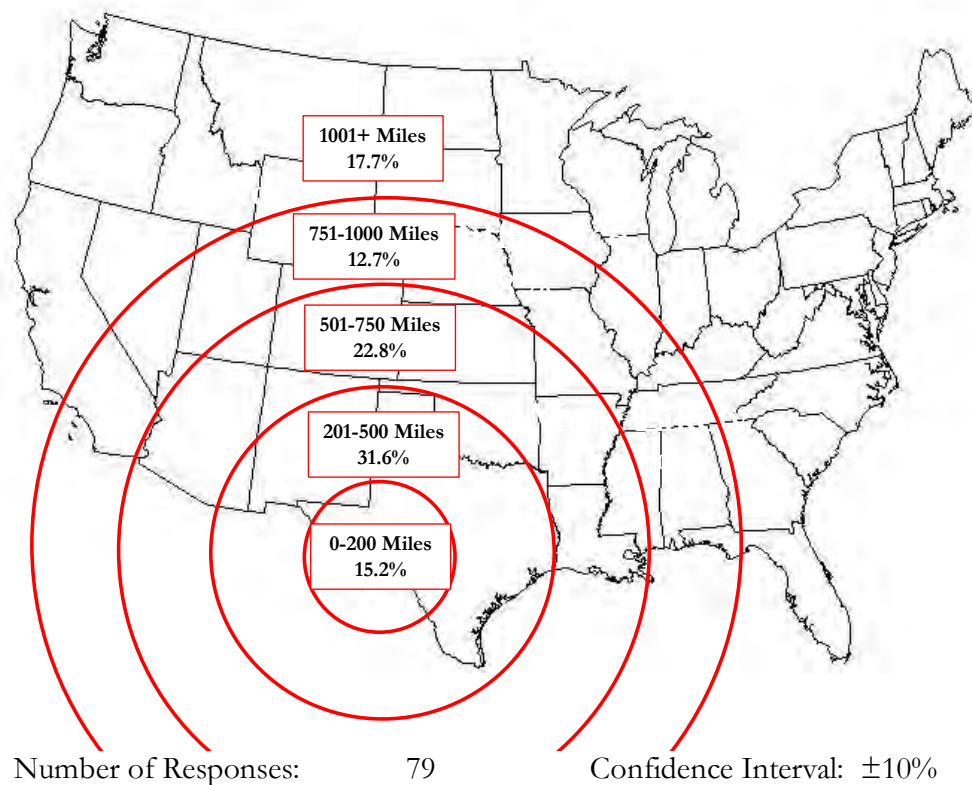
I live in West Texas
Never, and do not plan to
Never, but would like to
1-5 times
6-10 times
11 or more times

Additional Information:

Future surveys may find a question addressing frequency of trips (e.g. number of times per year) to be more useful.

40. How far do you travel (one way) to visit West Texas? (If unsure, use Google Maps in a separate window to get the approximate distance)

Non-Snake Days attendees travel an average (mean) of 568 miles to visit West Texas (assuming the median value for each category, and conservatively estimating 1001 miles for the “1001 or more miles” category).



Available Response Options:

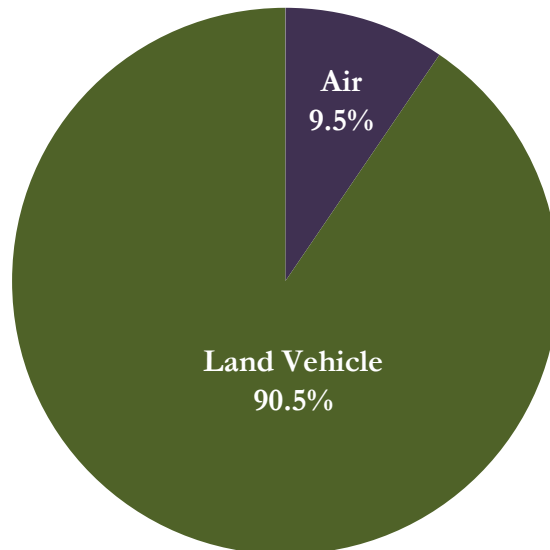
- 0-250 miles
- 251-500 miles
- 501-750 miles
- 751-1000 miles
- 1001 or more miles

Additional Information:

Nothing to note.

41. What is your primary mode of transportation to get from your home to West Texas on a typical trip?

The overwhelming majority of non-Snake Days attendees travel to West Texas by ground transportation (car, motorcycle, etc).



Number of Responses: 84 Confidence Interval: $\pm 6\%$

Available Response Options:

- Air
- Car
- Other (please specify)

Participants' Write-in Responses:

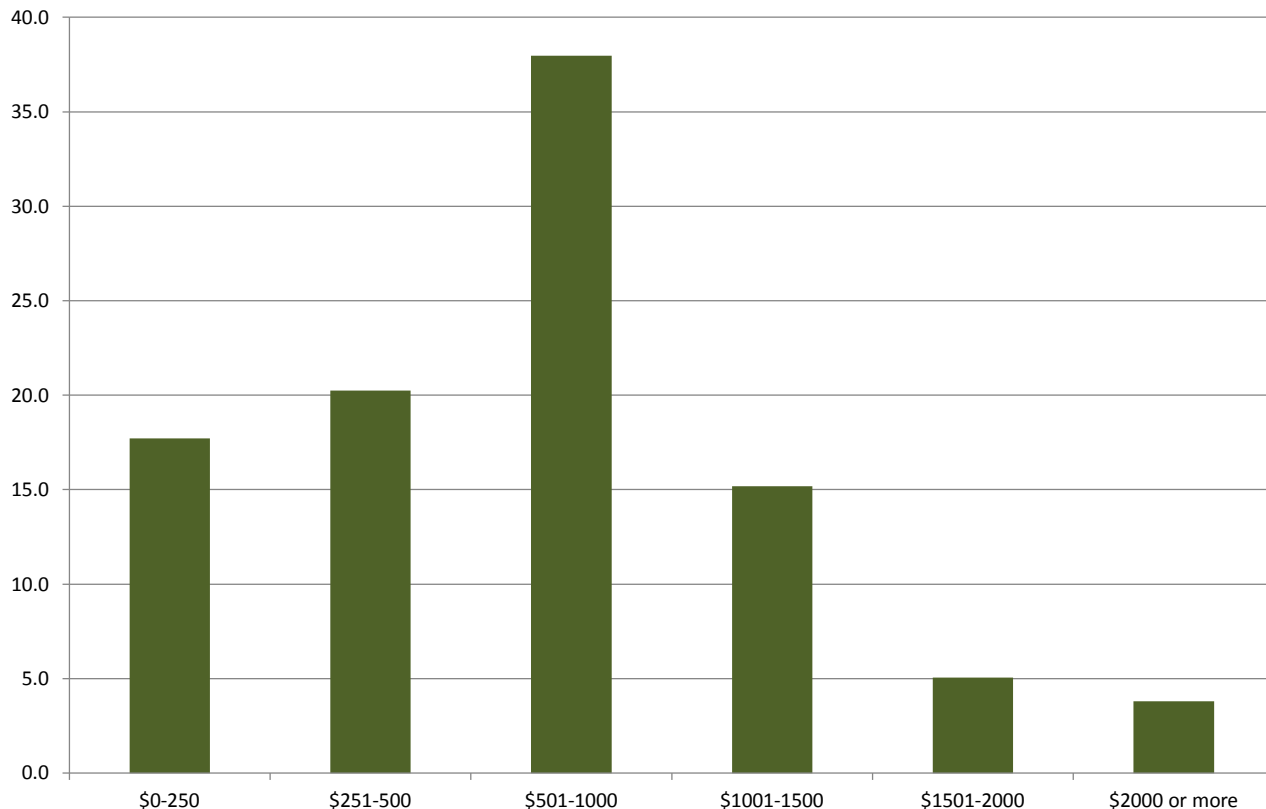
- motorcycle
- I've only visited Texas from within the US (by car), but future flights are possible

Additional Information:

Based on the write-in responses, future surveys should change the "Car" response option to "Ground Transportation" to account for motorcycles and other vehicles.

42. [What] is your best estimate of how much you spend in **TOTAL** on a typical trip to herp West Texas? Include the grand total from start to finish--food, gas, airline tickets, lodging including intermediate stops, licenses, souvenirs, and everything else. Include money spent outside Texas--we will get more specific in later questions.

The average (mean) amount of money spent by a non-Snake Days herper in total on a typical trip appears to be \$737 (conservatively assuming \$2000 for the “\$2000 or more” category).



Number of Responses: 79

Confidence Interval: $\pm 11\%$

Available Response Options:

\$0-250
\$251-500
\$501-1000

\$1001-1500
\$1501-2000
\$2000 or more

Discussion continued on next page.

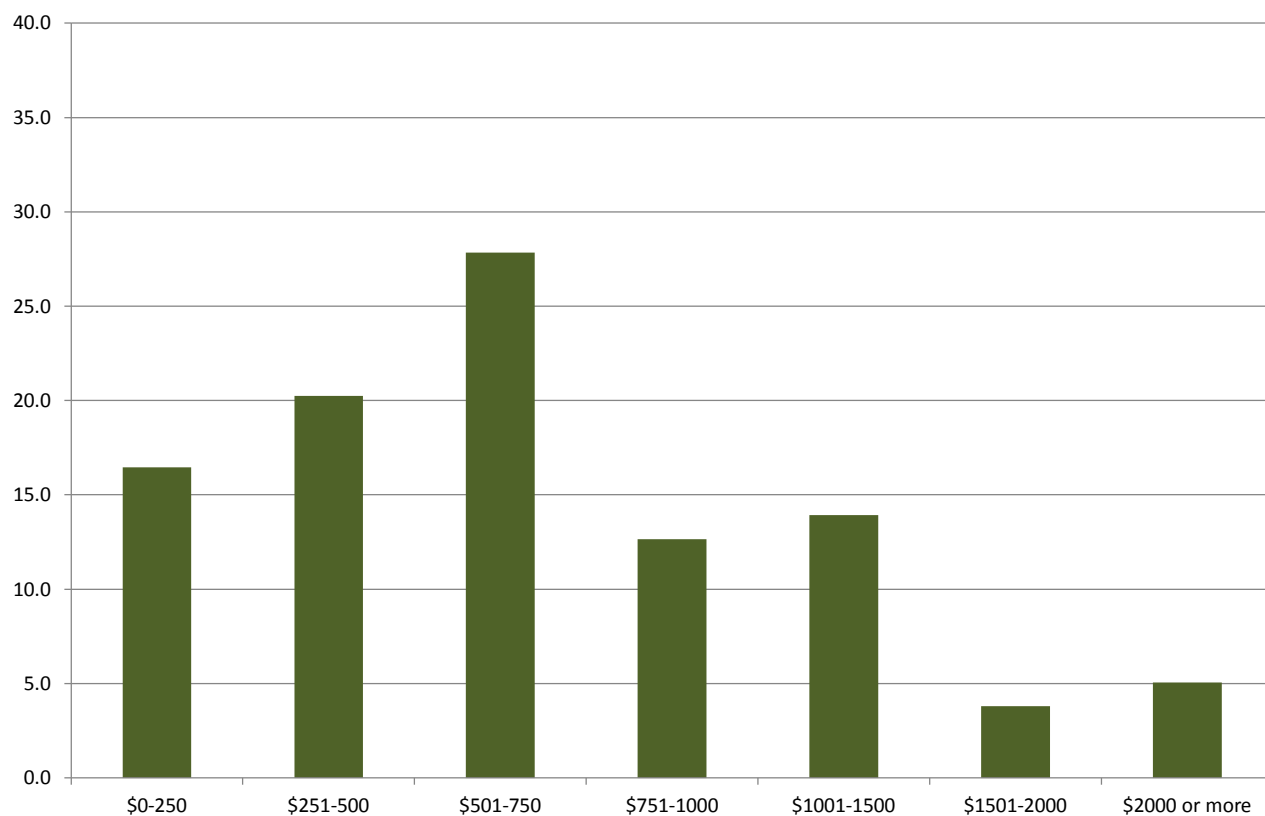
Additional Information:

Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.

This question’s response options need to match up with the available options for the corresponding question for Snake Days participants for a more accurate comparison.

43. Of that total, what is your best estimate of how much you spend within the entire state of Texas on a typical trip? Again, include all categories of expenses.

The average (mean) amount of money spent by a non-Snake Days event attendee within the state of Texas on a typical trip appears to be \$723 (conservatively assuming \$2000 for the “\$2000 or more” category).



Number of Responses: 79

Confidence Interval: $\pm 10\%$

Discussion continued on next page.

Available Response Options:

\$0-250
\$251-500
\$501-750
\$751-1000
\$1001-1500
\$1501-2000
\$2001 or more

Additional Information:

Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.

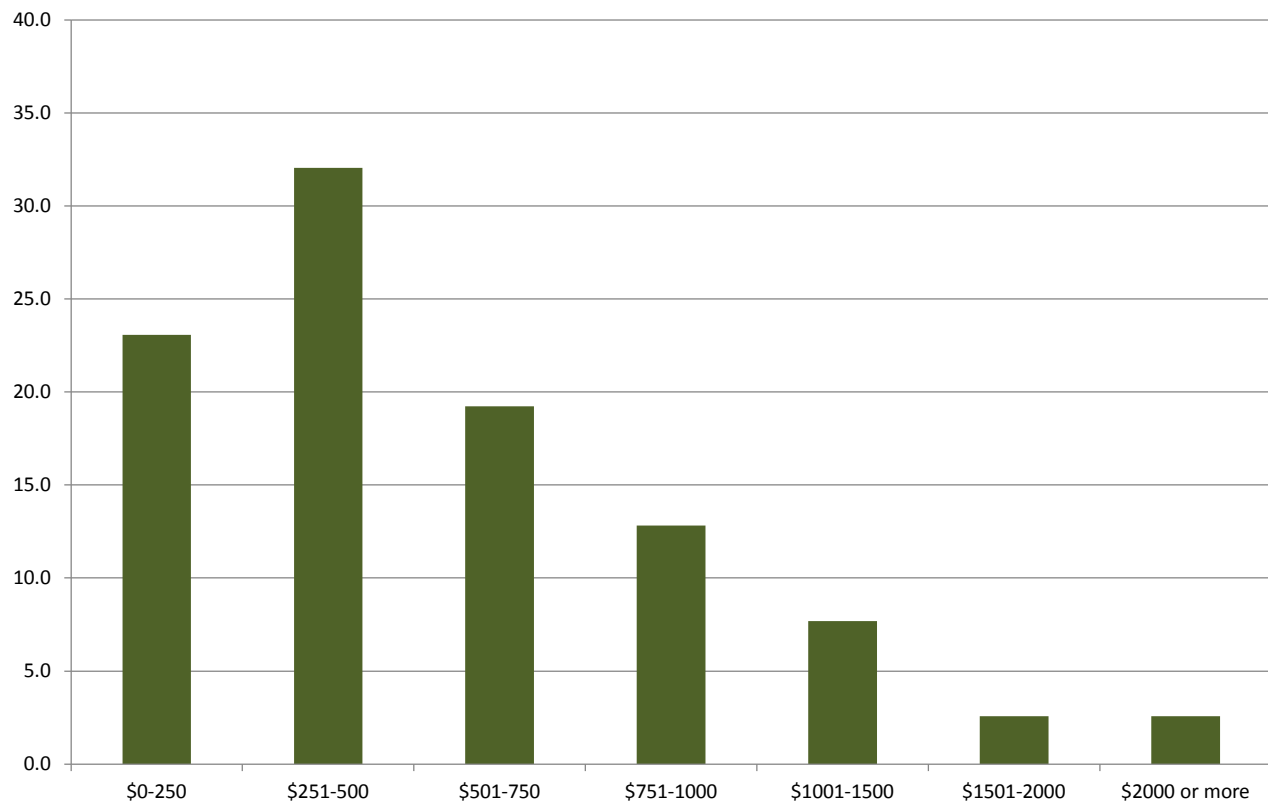
This question’s response options need to match up with the available options for the corresponding question for Snake Days participants (as well as the options for Question 42; this question included a smaller increment between \$501 and \$1000) for a more accurate comparison.



Blacktail rattlesnake, *Crotalus molossus*, Val Verde County. Photo by Chris McMartin.

44. Of that total, what is your best estimate of how much you spend in West Texas on a typical trip? Again, include all categories of expenses.

The average (mean) amount of money spent by a non-Snake Days attendee within the West Texas region on their trip appears to be \$574 (conservatively assuming \$2000 for the “\$2000 or more” category).



Number of Responses: 78

Confidence Interval: $\pm 10\%$

Available Response Options:

- \$0-250
- \$251-500
- \$501-750
- \$751-1000
- \$1001-1500
- \$1501-2000
- \$2001 or more

Additional Information:

While the average amount spent by a Snake Days attendee in West Texas was \$514, Snake Days was a three-day event, with the average time in West Texas for participants surveyed reported as 4.1 days. This equates to approximately \$125 per person, per day spent during that single event. The average trip length for a non-Snake Days attendee as described on Question 46 is 4.2. This equates to approximately \$137 per person, per day spent in West Texas. However, the survey did not ask how much money Snake Days attendees spend on a *typical* trip to West Texas, so the comparison is not necessarily an accurate one (comparing a single 3-day event on designated dates to a typical visit). Future surveys should address this concern.

Better fidelity on this question could be achieved by refining the categories to smaller increments (and being more consistent with the increment—above \$1000 the increment on this survey changed from \$250 to \$500), and replacing the “\$2001 or more” with a write-in option for amounts greater than \$2000.

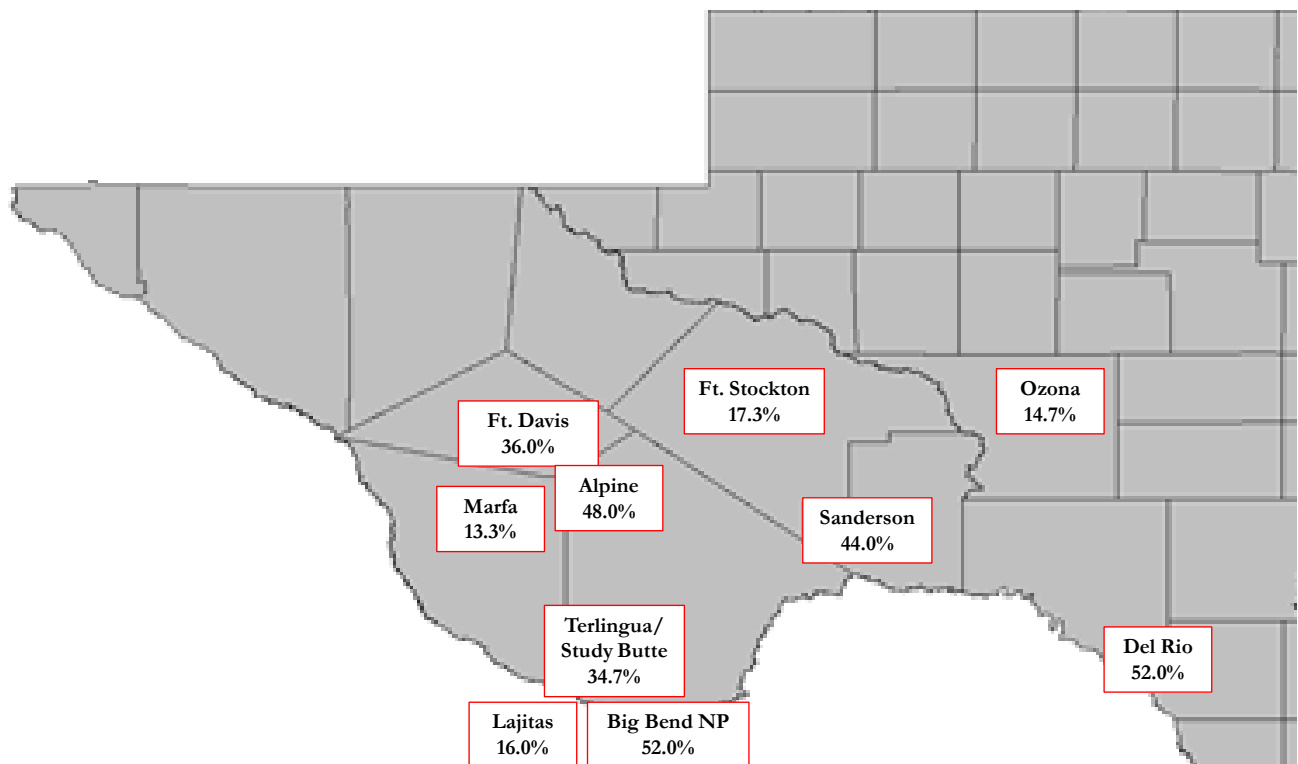
This question’s response options need to match up with the available options for the corresponding question for Snake Days participants (as well as the options for Question 42; this question included a smaller increment between \$501 and \$1000) for a more accurate comparison.



Copperhead, *Agkistrodon contortrix*, Val Verde County. Photo by Chris McMartin.

45. Where have you stayed when visiting West Texas? Select all that apply; choose the answer(s) which best match(es) your location and/or write in comments as necessary.

Survey participants indicated they stayed in a wide range of towns, private ranches, and parks in the West Texas region, though not as diverse as Snake Days attendees (due to a shortcoming on the survey—see discussion below).



Number of Responses: 75

Confidence Interval: $\pm 11\%$

Available Response Options:

Alpine
Big Bend NP
Del Rio
Fort Davis
Fort Stockton

Lajitas
Marfa
Ozona
Sanderson
Terlingua/Study Butte

Discussion continued on next page.

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

Based on the write-in responses to Questions 25 and 26 (similar questions asked of Snake Days attendees), future surveys should include locations listed on write-in responses to those questions, as well as a “Private Ranch” option. Future surveys should also ask whether lodging was hotel/motel or RV/cabin/camping. It could also be useful to have a separate question to specify the names of preferred hotels/motels and ranches.

Omission of a given town, campground, or park on the original list of response options was not intended as a slight on any particular location!

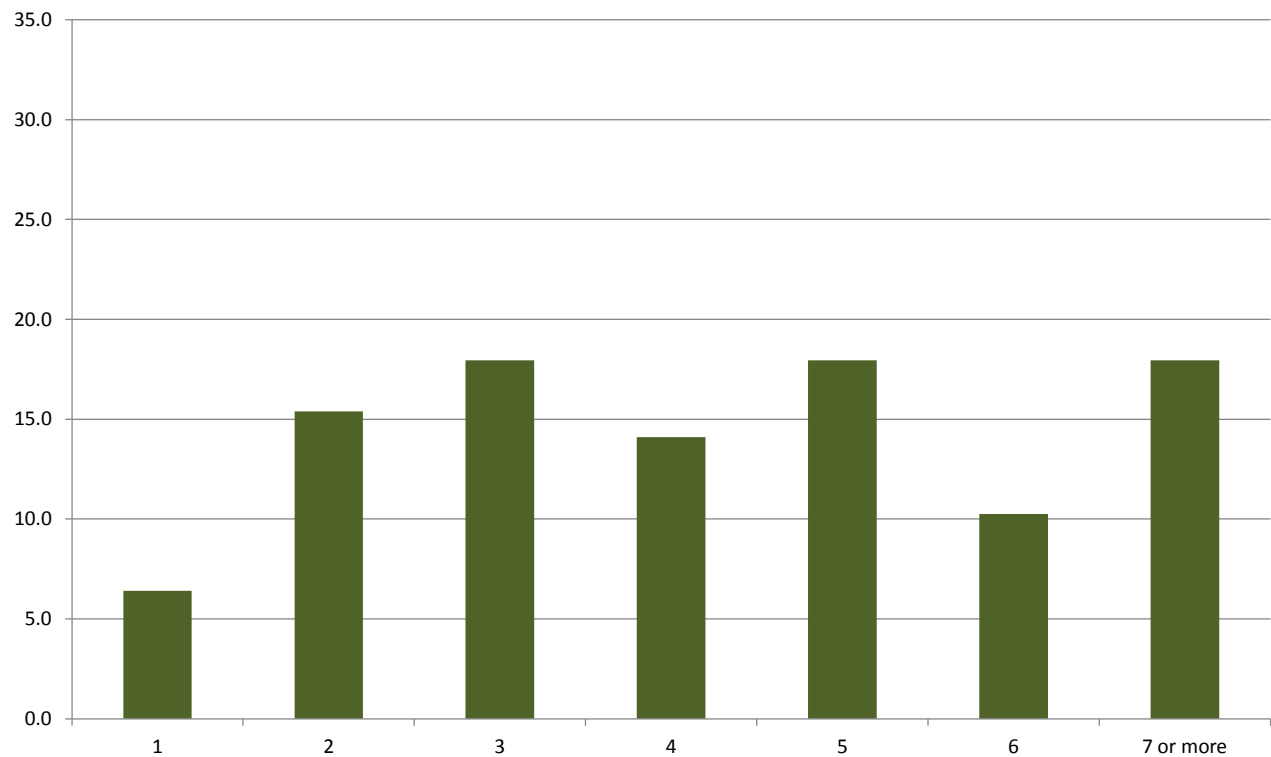
Though the question said to “write in comments as necessary,” no block to do so was provided—an oversight on the survey author’s part. This needs to be remedied on future surveys.



Reticulated collared lizard, *Crotaphytus reticulatus*, Dimmit County. Photo by Chris McMartin.

46. How many days do you typically spend in West Texas when you visit?

The average non-Snake Days attendee spends 4.2 days in West Texas on a typical trip (conservatively estimating the “7 or more” category as 7).



Number of Responses: 78

Confidence Interval: $\pm 9\%$

Available Response Options:

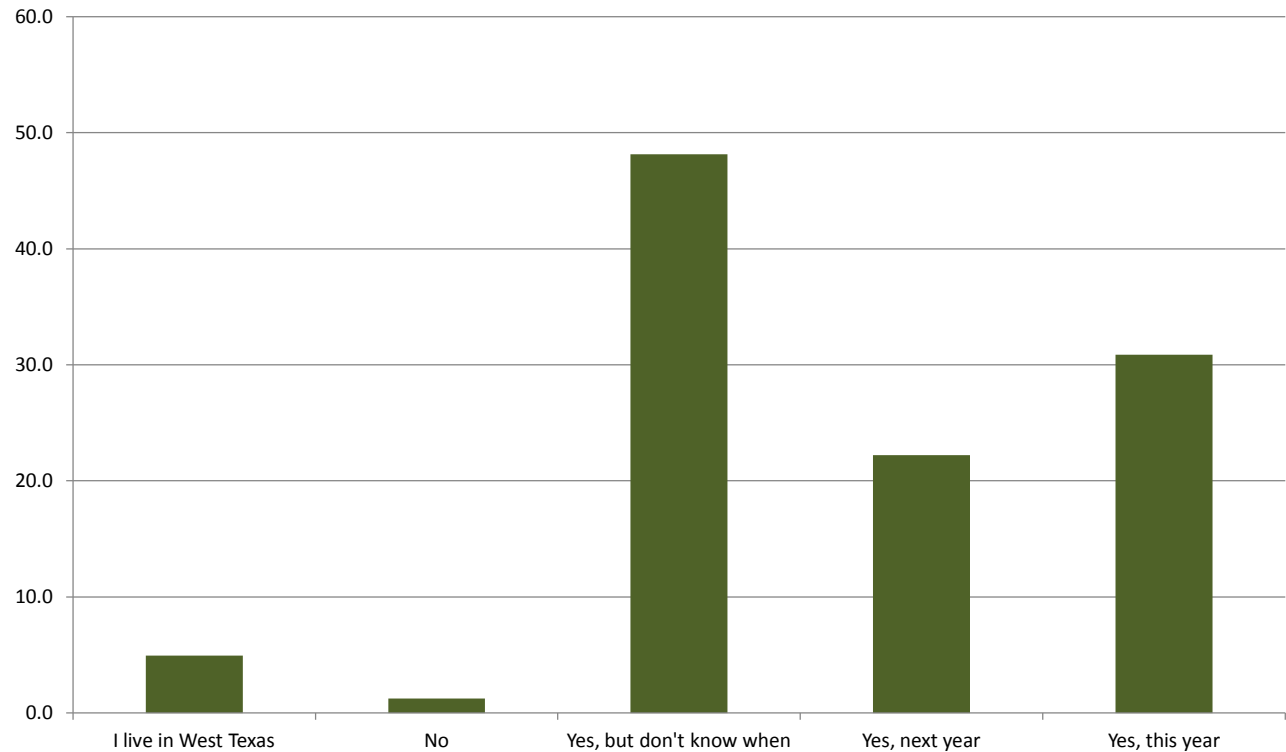
- | | |
|---|-----------|
| 1 | 5 |
| 2 | 6 |
| 3 | 7 or more |
| 4 | |

Additional Information:

See Additional Information on Question 44.

47. Do you plan on visiting West Texas in the future? Select all that apply.

The majority of non-Snake Days attendees plan on visiting West Texas in the future.



Number of Responses: 81

Confidence Interval: $\pm 11\%$

Available Response Options:

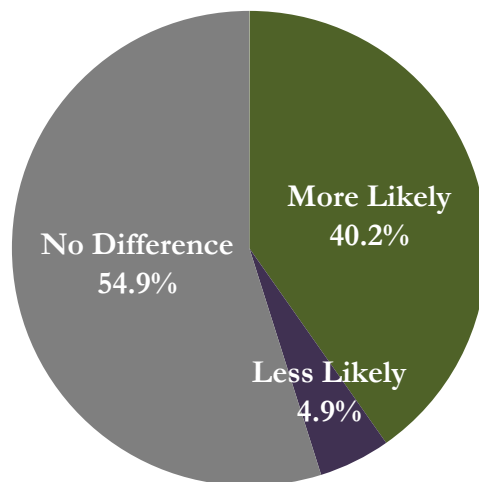
- I live in West Texas
- No
- Yes, but don't know when
- Yes, next year
- Yes, this year

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

48. Does NEXT year's planned Snake Days event make it more or less likely that you will visit West Texas NEXT year?

The majority of survey participants who did not attend Snake Days say next year's planned event makes no difference on whether they will visit West Texas again. Interestingly, nearly 5% said it made them less likely to do so. The prospect of a second Snake Days event can be reasonably called a neutral factor in getting herpers who didn't attend this year's event to visit West Texas.



Number of Responses: 82

Confidence Interval: $\pm 11\%$

Available Response Options:

- More likely
- Less likely
- No difference

Additional Information:

Nothing to note.

After this question, participants were directed to Question 49 (the first of the General Questions about Herpers and Herping in Texas).

General Questions about Herpers and Herping in Texas

Questions 49 through 71 of the survey were asked of all survey participants. At the top of the first page of questions, the following was displayed:

The purpose of this page is to gather information on herper activity in Texas (statewide and in West Texas specifically); ascertain perceived demand on, and/or management options for, herp species; and to explore interest in various proposals and opportunities related to herping.

49. Select the answer which best describes your situation regarding Texas hunting licenses and herp stamps.

Nearly 70% of survey participants indicated they purchased both a hunting license and a reptile and amphibian stamp.

Of note, more than half purchased them *exclusively* to hunt reptiles and amphibians. This is essential to note for TPWD, as a majority of overall herp stamps purchased (at the current \$10 each) may indicate much more money being spent by way of hunting licenses also purchased⁵ which otherwise would not be paid in to TPWD.

For example, 38 participants (31%) who answered this question with “I purchased a hunting license and herp stamp exclusively to look for herps (and not hunt otherwise)” live in Texas. These individuals presumably purchased the Resident Hunting License at \$25⁶ in addition to the Reptile and Amphibian Stamp—thus spending \$35 each, or \$1,330. 27 participants (22%) who replied the same do not live in Texas, and presumably purchased (at a minimum) a Non-Resident Five-Day Special Hunting License at \$48 in addition to the stamp—thus spending \$58 each, or \$1566. This is a minimum amount; those who purchased Non-Resident Special Hunting Licenses would be paying \$142 each (including the stamp).

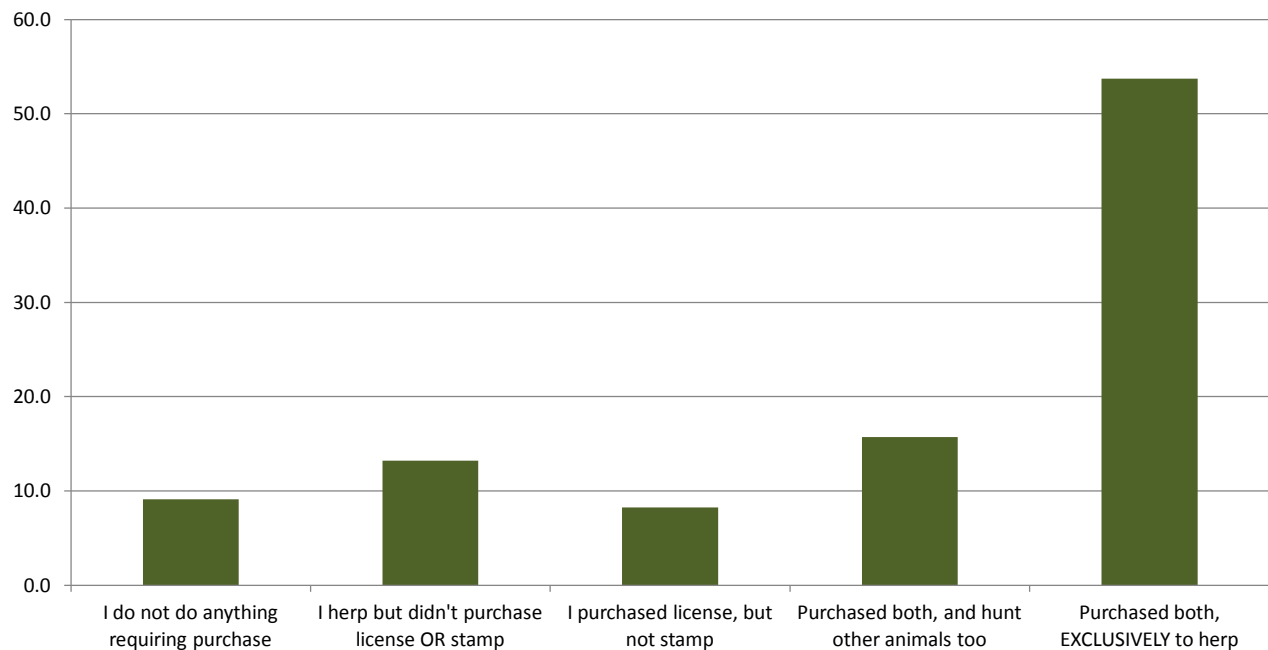
Extrapolating these percentages to the entire number of Reptile and Amphibian Stamps purchased (approximately 600 as of the Snake Days event)⁷ indicates a conservative estimate of \$12,846 going into TPWD coffers from *solely* herpers, as opposed to the \$3,180 this particular category of hunter spent just on the Reptile and Amphibian Stamp.

Chart and additional discussion on next page.

⁵ Purchasing a hunting license is a requirement for purchasing the Reptile and Amphibian Stamp, in accordance with Texas Parks and Wildlife Code, Section 43.903.

⁶ License and stamp fees are current as of survey date according to TPWD web site, <http://www.tpwd.state.tx.us/business/licenses/public/recreational/>.

⁷ According to TPWD figures.



Number of Responses: 121

Confidence Interval: $\pm 9\%$

Available Response Options:

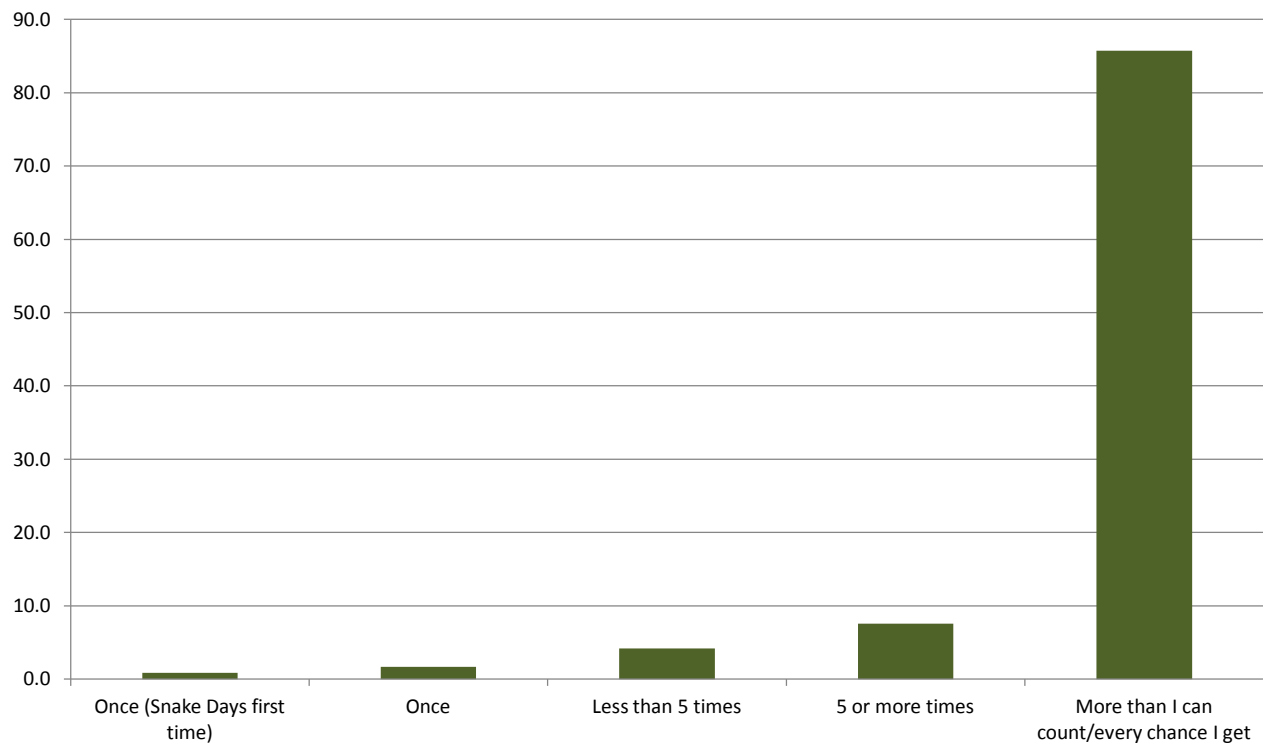
- I do not do anything requiring the purchase of a hunting license or stamp (no handling herps etc)
- I herp, but did not purchase a hunting license or herp stamp
- I purchased a hunting license, but not a herp stamp
- I purchased a hunting license and herp stamp, and I hunt other animals in addition to herps
- I purchased a hunting license and herp stamp exclusively to look for herps (and not hunt otherwise)

Additional Information:

Future surveys should break this question's responses into further categories based on the type of hunting license purchased (resident, non-resident special, non-resident 5-day, etc.) for greater fidelity to the dollar amounts previously discussed.

50. How many times have you been field herping (a trip, regardless of duration, with the purpose of looking for reptiles and amphibians in the wild)?

An overwhelming majority of survey participants could be said to be “avid herpers;” an expected response since the survey itself was targeted towards this audience.



Number of Responses: 119

Confidence Interval: $\pm 6\%$

Available Response Options:

Once—Snake Days was my first time

Once

A few times (less than 5), but not regularly

5 or more times

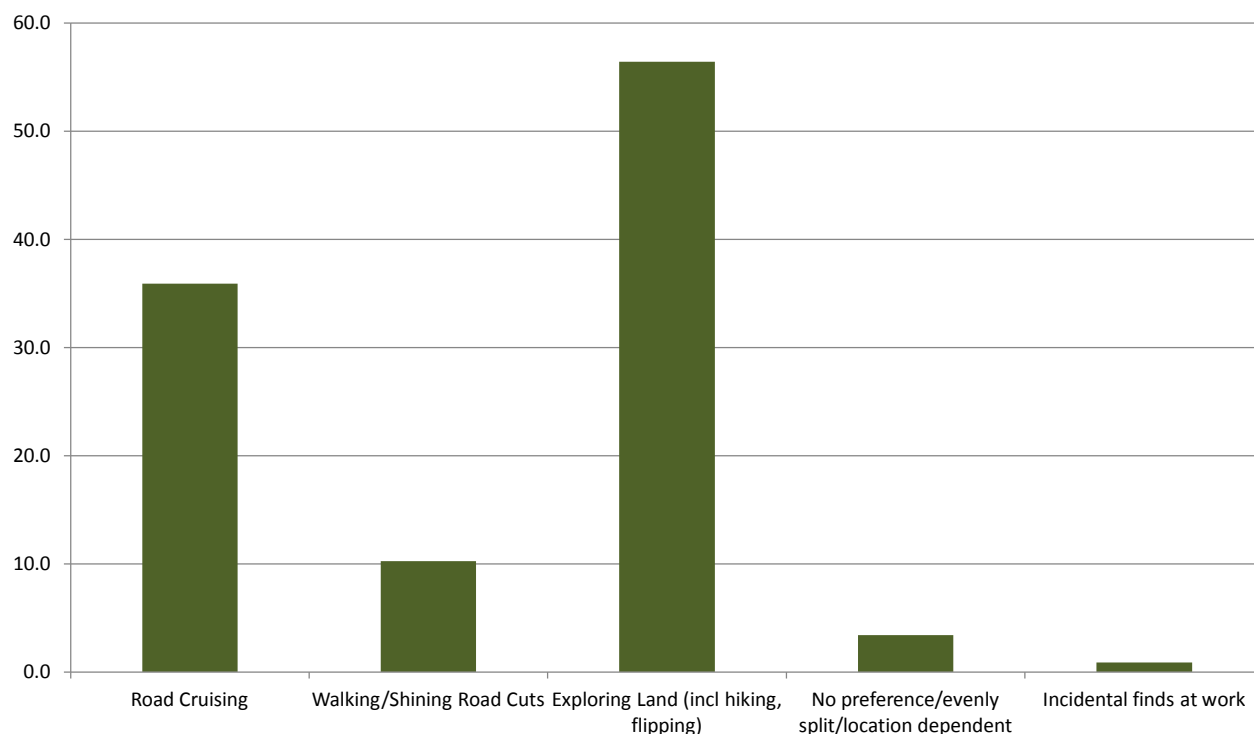
More than I can count/every chance I get

Additional Information:

As with the “number of visits to West Texas” questions, future surveys should ask this question not from a cumulative perspective, but one of frequency (e.g. trips per year).

51. What is your preferred method of herping in general (not only West Texas)?

A majority of survey participants enjoy herping by exploring land, to include observing reptiles and amphibians while hiking and “flipping,”⁸ with road cruising⁹ coming in second. This question includes areas outside Texas itself, where public-land herping opportunities are more prevalent.¹⁰ The chart below excludes participants who have never herped.



Number of Responses: 119

Confidence Interval: $\pm 9\%$

Discussion continued on next page.

⁸ “Flipping” is the practice of lifting up/turning over both natural and artificial ground cover items (e.g. rocks, plywood) to discover animals beneath them.

⁹ “Road cruising” is the practice of driving along a road, typically at night, to discover animals crossing the road or warming themselves on the surface. This practice was made illegal in Texas in 2007 by the State Legislature.

¹⁰ According to TPWD, “more than 94 percent of Texas is privately-owned” and therefore access by herpers is limited. http://www.tpwd.state.tx.us/landwater/land/private/lone_star_land_steward/

Available Response Options:

- Road cruising
- Walking/shining road cuts
- Exploring public and/or private land (to include flipping natural and/or artificial cover)

Participants' Write-in Responses:

- Incidental finds at work are more than 90% of my TX herping
- TX= Road Cruising NM & AZ= Hiking & road cruising
- SPOTLIGHTING AS MUCH AS POSSIBLE!
- and walking, shining cuts, and flipping
- All types and kinds of herping
- have never herped
- MIX - Cruising/Walking -
- I do not herp and never have.
- Walking and shining cuts

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected. This was a problem due to "Other" comments being submitted in addition to the forced-choice options, rather than as a discrete forced-choice option; this was an error incurred when building the survey.

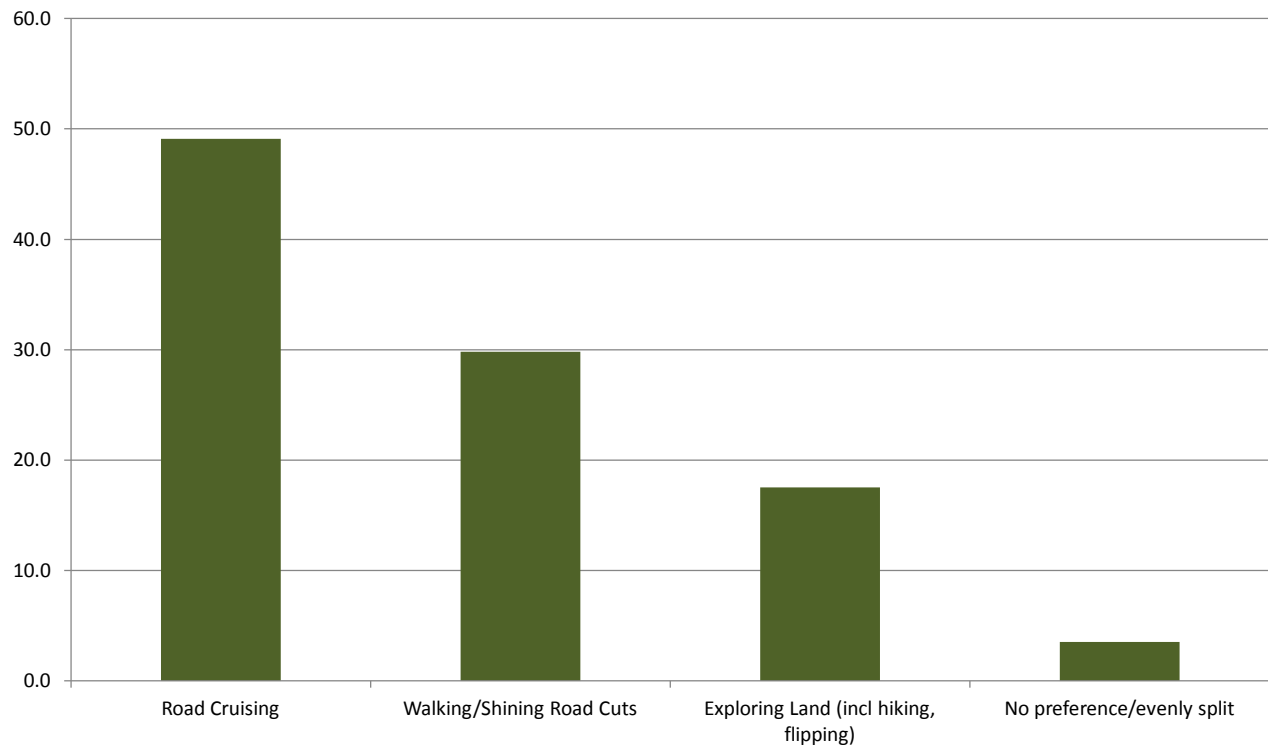
Where write-in responses were similar, they were categorized and incorporated into broader categories for charting purposes.

Future surveys should include an "N/A" response option for those participants who are not herpers. Another option is to frame this question as a rank-order question, with participants listing their herping methods in order of preference.

For clarification, "hiking" should be specifically included in the "exploring land" category.

52. What is your preferred method of herping in West Texas specifically?

Nearly half of survey participants prefer road cruising when herping West Texas specifically, followed by walking and shining road cuts.¹¹ The chart below excludes participants who have never herped West Texas. Of note: road cruising is currently banned in Texas (see footnote on previous question).



Number of Responses: 122

Confidence Interval: $\pm 9\%$

Available Response Options:

N/A—I have never herped in West Texas

Road cruising

Walking/shining road cuts

Exploring public and/or private land (to include flipping natural and/or artificial cover)

Other (please specify)

Discussion continued on next page.

¹¹“ Walking/shining road cuts” is the practice of walking along the face of, or on top of, cuts blasted out of hilly terrain to permit construction of roadways, using a bright light to illuminate the rocky surface and thereby discover animals resting on, or moving about, the rocks.

Participants' Write-in Responses:

as well as road cruising

Road cruise between cuts

poor hunting-land access - limited to road rights-of-way

always spotlighting!

MIX - Cruising/walking

Road cruising and shining cuts are a virtual tie.

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected. This was a problem due to “Other” comments being submitted in addition to the forced-choice options, rather than as a discrete forced-choice option; this is an error incurred when building the survey.

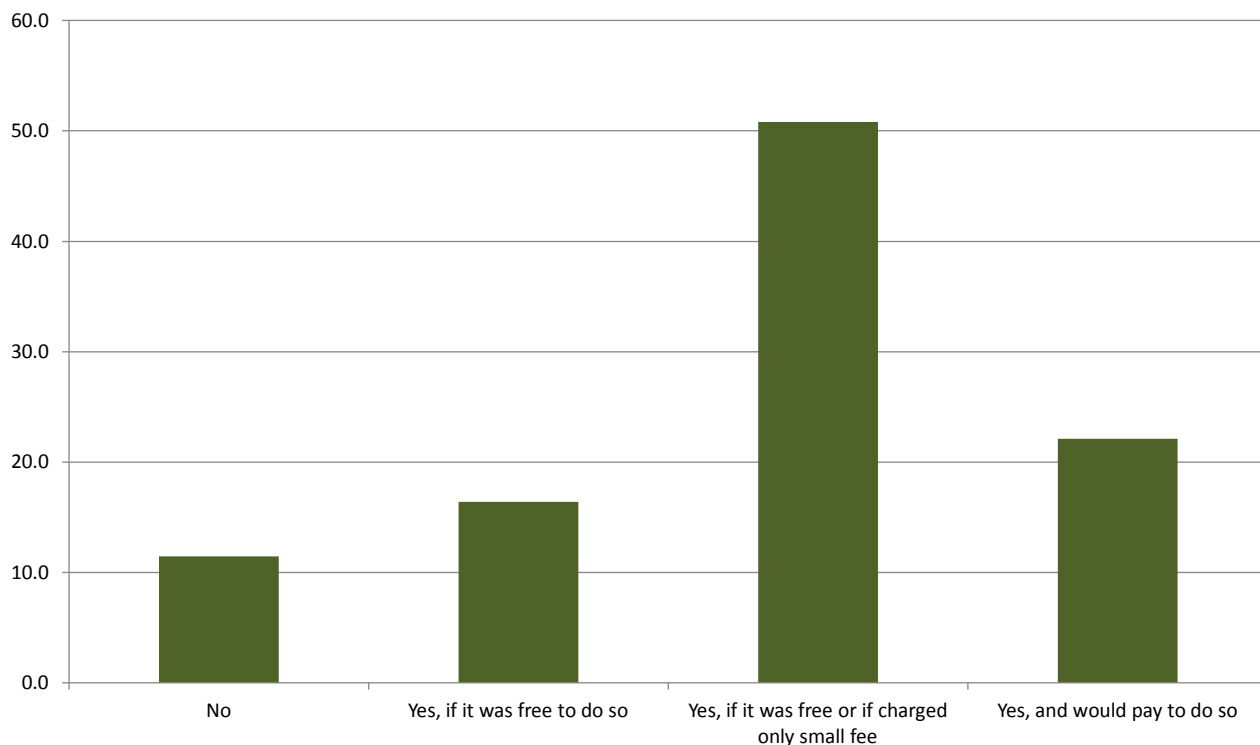
Where write-in responses were similar, they were categorized and incorporated into broader categories for charting purposes. The “Evenly Split” category on the chart includes those write-in responses who mentioned more than one preferred method.



Reticulated gecko, *Coleonyx reticulatus*, Brewster County. Photo by Chris McMartin.

53. If more land (public and/or private) were available to herp in Texas, would you hunt on it? Select the response which most closely aligns with your viewpoint.

The overwhelming majority of survey participants indicate they would enjoy herping on land if it was available, with more than half finding a small fee to do so acceptable. Fee structure was discussed in some of the write-in responses and the resulting chart is on page 80.



Number of Responses: 123

Confidence Interval: $\pm 9\%$

Available Response Options:

No

Yes, if it was free to do so

Yes, if it was free or only a small usage fee was charged

Yes, and would pay to do so (specify your limit below)

Other (please specify)

Discussion continued on next page.

Participants' Write-in Responses:

I have no problem paying, as others do, for my pursuit. I agree that herpers ought to be held to the same standards as other groups of outdoorsmen. But fees for usage ought to be restricted only to applications connected to harvest and/or collection.

Photography should be free and encouraged, including the staging of photographs including live animals.

\$50/for 3 days or something similar

\$50/day

\$50.00

10

\$50

25 for more than 2 days

\$50

Up to a couple hundred if it was for a year lease.

20 to 40 depending how good it looked if it was Ideal for celaenops [note: reference is to the *New Mexico milksnake*] I would pay 50

\$5 per day

Certainly depends

I have paid \$50 per night on Gries Ranch

\$100/day, depending on habitat

\$75 per day with lodging

\$10

I'd probably be willing to pay \$50/day for access to private herping land.

Not in to paying to collect animals that the major public does not like anyway. They should be paying us!

\$50-\$100

More if state completely open

\$20

absolute max of 10 bucks a day at good locations

\$10

\$25.00-\$30.00

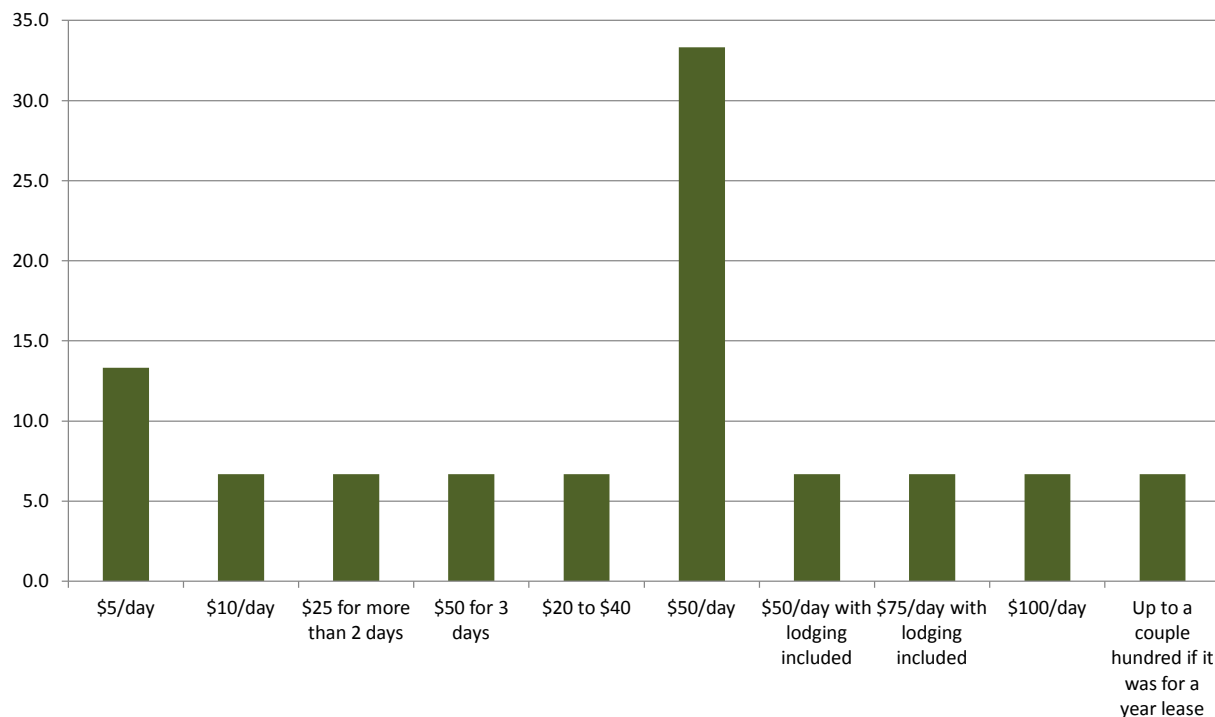
Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected. This was a problem due to "Other" comments being submitted in addition to the forced-choice options, rather than as a discrete forced-choice option; this is an error incurred when building the survey.

Future surveys should include a question on whether herpers would *prefer* herping land, over other options such as road cruising.

Discussion continued on next page.

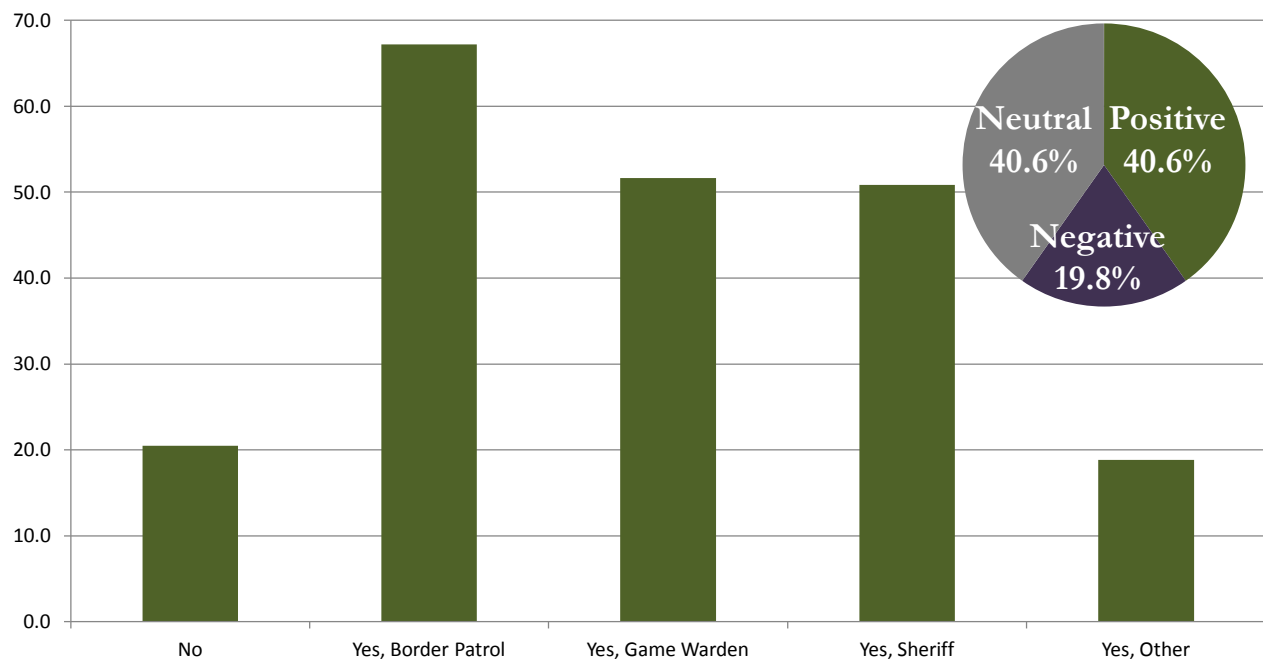
Because of the number of write-in responses, the survey author felt it useful to categorize the write-in responses and depict them in their own separate chart (below). Based on the responses, it appears the “sweet spot” for what herpers may be willing to pay to herp private (or public) land is \$50 per day, but in the case of some of the write-in responses, including those that did not specify lodging (e.g. Gries Ranch), that fee also includes lodging in a hunting-style cabin on the property. Of all the write-in responses, however, the median fee mentioned, regardless of lodging inclusion, is \$30 per day.¹²



¹² Of the write-in responses received, half would fall above this value and half below (vs. an average/arithmetic mean). This is based on price per day. Where responses indicated a price for a range of days, the price per day was calculated. Where responses indicated a range of acceptable prices, the average of the high and low ends of the range were used. The “couple hundred” was assumed to mean \$200; given that favorable conditions do not necessarily exist year-round, this number was divided by 9 months (270 days) to give \$1/day (rounded to the nearest dollar).

54. Have you had any encounters with any Law Enforcement personnel while herping PRIOR to this year? Select all that apply.

The chart below incorporates the data from Question 55 (as a pie chart in the upper-right corner). A large majority of survey participants have had an encounter with some type of law enforcement entity in the past, split evenly between positive and neutral encounters. Of those who have encountered law enforcement in the field, nearly 20% have had a negative encounter of some sort. The most frequently-encountered law enforcement entity is Border Patrol, followed by a tie between Game Wardens and County Sheriffs.



Number of Responses: 122

Confidence Interval: $\pm 9\%$

Available Response Options:

- No
- Yes, Border Patrol
- Yes, Game Warden
- Yes, Sheriff
- Yes, other

Discussion continued on next page.

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

55. If you answered "yes" above, was your experience positive, negative, or neutral? Select "No interaction" if you did not encounter any Law Enforcement while herping PRIOR to this year.

This question's responses are graphed on the pie chart inset to the chart for Question 54 above.

Number of Responses: 109 Confidence Interval: $\pm 9\%$

Available Response Options:

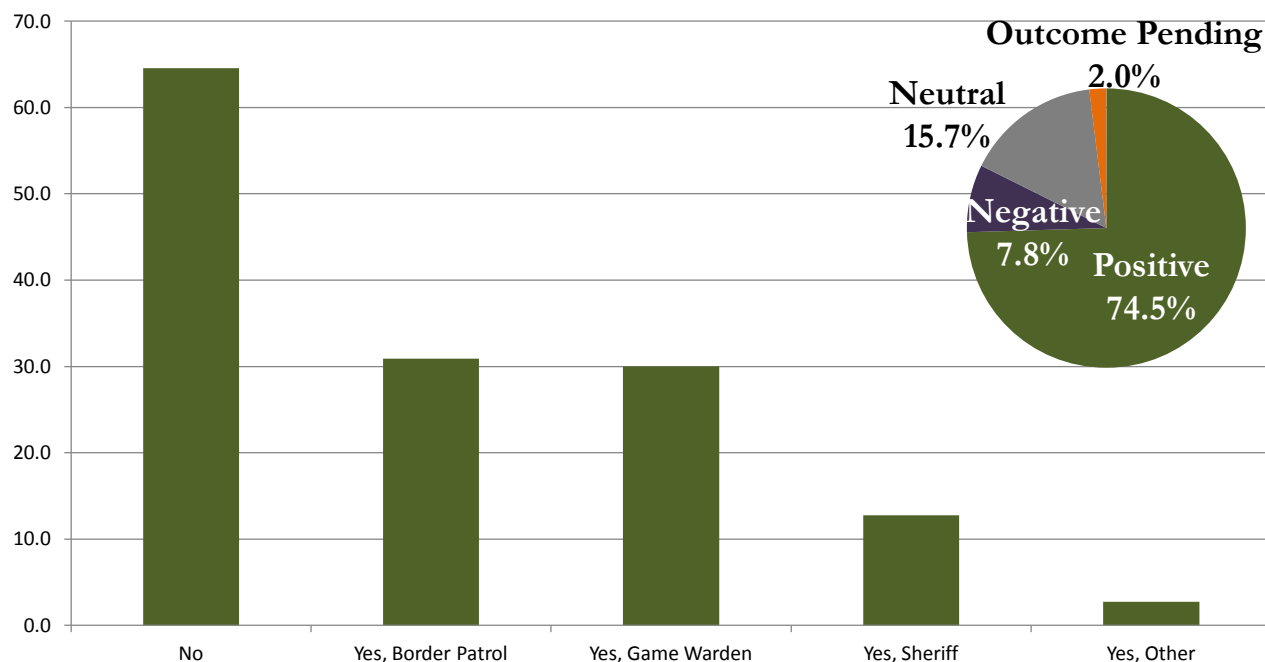
No interaction with Law Enforcement
Positive
Negative
Neutral

Additional Information:

Nothing to note in addition to discussion on Question 54.

56. Have you had any encounters with Law Enforcement personnel while herping THIS year? Select all that apply.

The chart below incorporates the data from Question 57 (as a pie chart in the upper-right corner). A large majority of survey participants have NOT had an encounter with some type of law enforcement entity this year, and the majority of those that have reported a positive experience. The most frequently-encountered law enforcement entity this year is a tie between Border Patrol, and Game Wardens. County Sheriffs seem to be less inclined to interact with herpers this year.



Number of Responses: 110

Confidence Interval: $\pm 9\%$

Available Response Options:

- No
- Yes, Border Patrol
- Yes, Game Warden
- Yes, Sheriff
- Yes, other

Discussion continued on next page.

Additional Information:

Total percentages on the chart exceed 100% since more than one response could be selected.

57. If you answered "yes" above, was your experience positive, negative, or neutral? Select "No interaction" if you did not encounter any Law Enforcement while herping THIS year

This question's responses are graphed on the pie chart inset to the chart for Question 56 above.

Number of Responses: 89

Confidence Interval: $\pm 9\%$

Available Response Options:

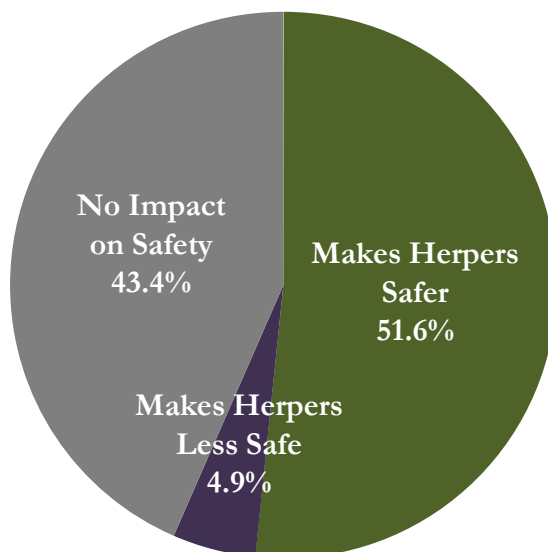
No interaction with Law Enforcement
Positive
Negative
Neutral
Outcome pending

Additional Information:

Nothing to note in addition to discussion on Question 56.

58. In your opinion, what is the impact, with regards to SAFETY, of the requirement to wear a reflective vest while herping public lands?

A slight majority of herpers surveyed indicate wearing a vest while herping public lands makes herpers safer.¹³



Number of Responses: 122

Confidence Interval: $\pm 9\%$

Available Response Options:

- It makes herpers safer
- It makes herpers less safe
- It has no impact on safety

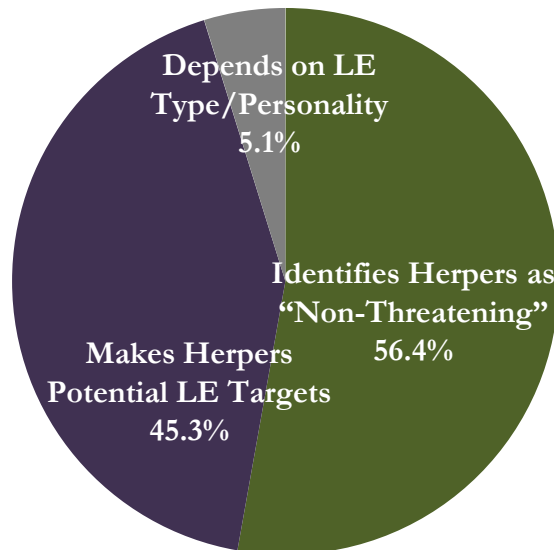
Additional Information:

Future surveys may wish to clarify WHY herpers may feel the vests make them more or less safe by offering a write-in option.

¹³ Legislation enacted in 2011 requires herpers to “wear reflective clothing when engaging in the capture by nonlethal means of a reptile or amphibian under a stamp issued by the department. The clothing must have at least 144 square inches of reflective material on both the front and back of the clothing” according to Texas Parks and Wildlife Code, Sec. 62.0031(d). This is generally interpreted to mean a reflective vest. No vest exists which meets the requirement specified; the closest approximation is the American National Standards Institute (ANSI) Class III safety vest, which exceeds the requirement by featuring a minimum of 155 square inches of reflective material on each side. ANSI Class III vests are available from a variety of vendors catering to traffic-safety and construction customers.

59. In your opinion, what is the impact, with regards to LAW ENFORCEMENT, of the requirement to wear a reflective vest while herping public lands?

A small majority of herpers surveyed indicate wearing a vest while herping public lands makes herpers appear as “non-threatening” in the eyes of law enforcement officials. However, nearly half also think the vests highlight herpers to law enforcement for potential harassment. 18 write-in comments were made (see next page).



Number of Responses: 117

Confidence Interval: $\pm 9\%$

Available Response Options:

- It helps identify herpers as a “non-threatening individual” to LE personnel (not a criminal)
- It makes herpers a potential target for increased stops or perceived harassment [sic] by LE personnel
- Other (please specify)

Participants’ Write-in Responses:

I really don't have enough encounters to speculate and it likely depends on the LE individual. LE (particularly game wardens) have long been able to ID herpers - we're the guys with the ridiculously bright lights.

I am 50/50 on this It all depends on the Warden

Discussion continued on next page.

Participants' Write-in Responses (continued):

Depends on the LE officer, but overall probably not a problem

Although it may make herpers non-threatening, it may automatically signal LE to contact game wardens regardless.

I really have no idea on this one. Either answer could be true, depending of the officer.

Also potentially ids visitors to thieves

As a female who often herps alone, I don't like standing out on the side of the highway if I am walking a cut. It makes it hard to hide if I feel threatened.

tx cops are normally horrible swine to herp collectors

I doubt it would do much of anything.

helps prevent a traffic fatality

I also get stopped less by curious passers by asking if I need help - an unanticipated bonus as I get tired of telling every passing car that everything is OK. I think the vest makes me look official and the simply drive by.

This is a totally absurdity put in place by our money hungry legislators, all in TPWD behalf! Texas is to big to have regulations for most of the herps. All the garbage that G&F put forth cause N.M. to restrict the commercial collecting of herps and they did it without any research. They used the adjacent states research and applied it to N.M. If you want any locality data through the Freedom of Information Act from N.M. Game and Fish they will not give you that data if the data is from research on private lands even though they use taxpayer funds to do that research. I support you only if commercial collecting is allowed and reasonable numbers are allow to be collected.

I am almost split on this, more toward my answer though.

The law is totally stupid. You can walk a cut with artificial light and picks up snakes, but if the snake is in the road and you are on the cut - you commit a crime if you pick it up off the road. STUPID

I think it also helps the public know that the individuals aren't up to "no good" and therefore they don't call law enforcement. I once had a local police officer stop and question me when I was looking for pseudacris in a bar ditch at night and had I had reflective gear on, it MIGHT have made me look less "suspicious". Then again, maybe not.

Actually acts as both - Certain law enforcement now recognize us better, but I have been stopped more frequently by Wardens

I believe it could go either way depending on the attitude of the LE agent involved. Most likely it will ID us as a non-threat.

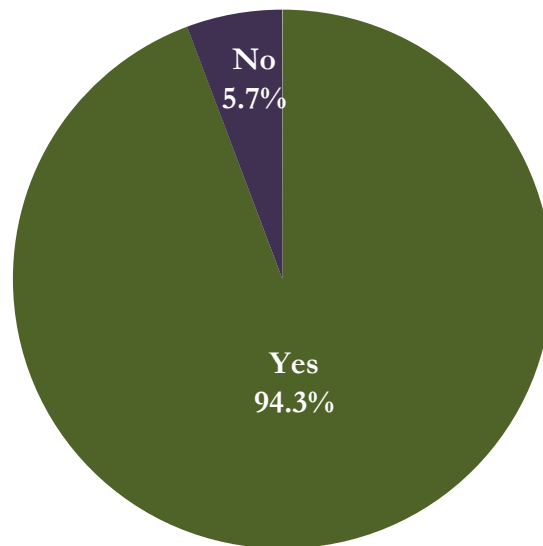
Additional Information:

In future surveys the first response option should be reworded to state "It helps identify herpers as a 'non-threatening individual' (i.e. not a criminal) to LE personnel," to avoid the implication that the response meant "not non-threatening to a criminal."

Total percentages exceeded 100% since more than one response could be selected, but the "other" category was omitted from the pie chart since the comments were mostly in addition to the forced-choice responses. Future surveys should branch this question into a separate question for the write-in responses for greater fidelity in the percentages.

60. Would you support the creation of a statewide herper organization to advocate for more favorable laws pertaining to field herping and/or captive reptiles and amphibians?

Survey participants overwhelmingly supported the concept of a statewide organization to advocate for herpers.¹⁴



Number of Responses:

122

Confidence Interval: $\pm 4\%$

Available Response Options:

Yes

No

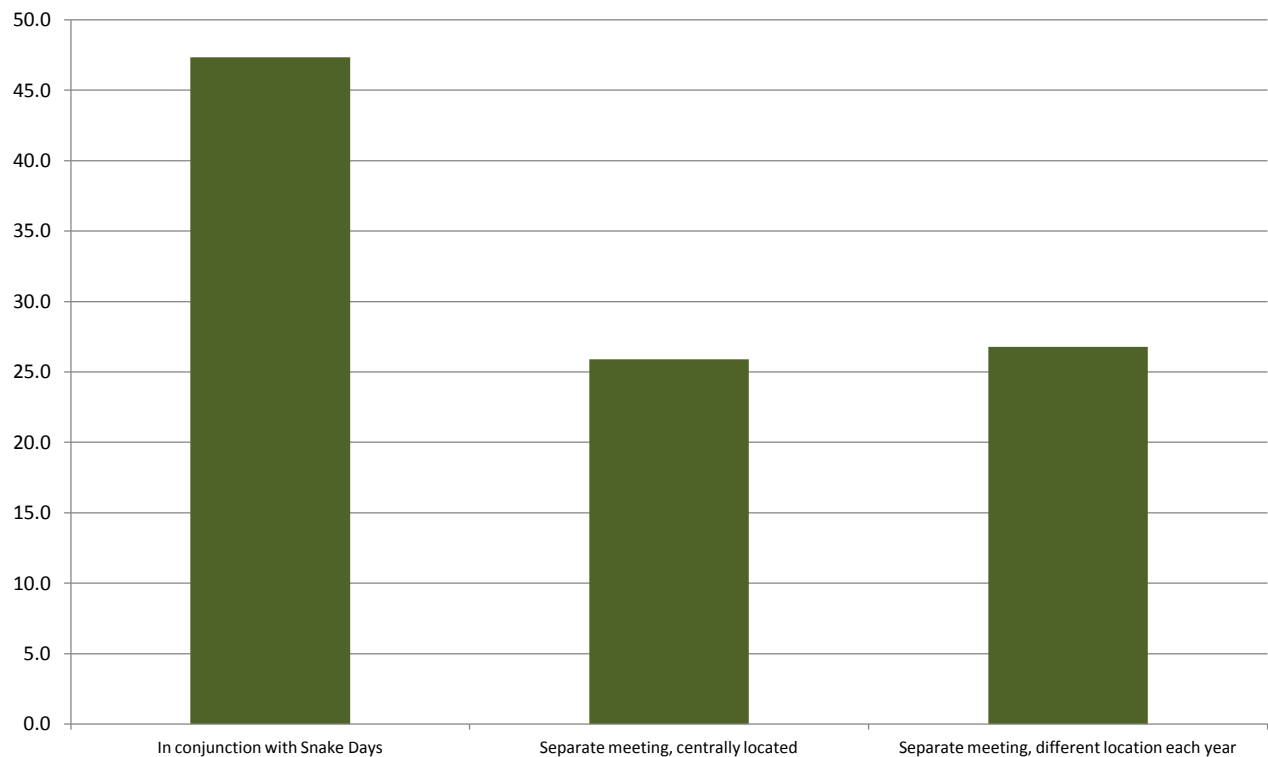
Additional Information:

Future surveys may wish a followup question with *how* participants would support, and to what extent (financially, for example).

¹⁴ Currently, several herper organizations in Texas exist at the city or regional level. Examples include the South Texas Herpetology Association, Dallas/Fort Worth Herpetological Society, East Texas Herpetological Society, West Texas Herpetological Society, and Austin Herpetological Society. There is one statewide organization, the Texas Herpetological Society, which may fulfill the requirements of a society described in this question, but that would be contingent upon concurrence of its current membership.

61. If you answered "yes" above, would you prefer such an organization hold annual meetings in conjunction with Snake Days events or create separate meetings somewhere else?

Roughly half of survey participants said a statewide herper organization should hold an annual meeting in conjunction with Snake Days, while half said it should be separate. Of those saying it should be separate, they were evenly split between having an annual meeting at a fixed location and holding it at a different location from year to year. Somewhat predictably, two thirds of Snake Days attendees were in favor of a statewide herper organization meeting at the Snake Days event, while less than half of non-attendees supported that idea.



Number of Responses: 112

Confidence Interval: $\pm 9\%$

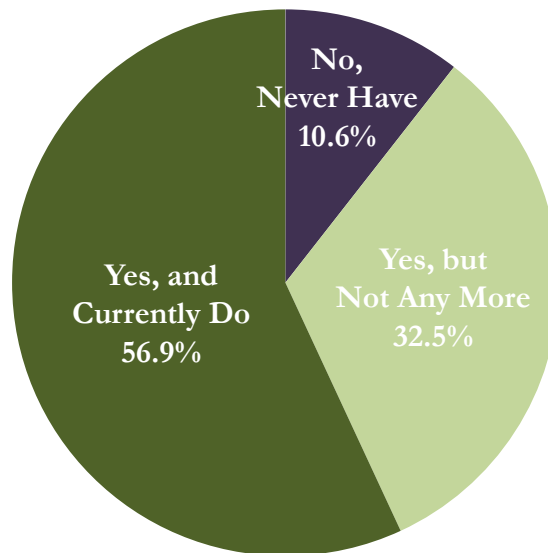
Available Response Options:

- In conjunction with Snake Days
- Separate meeting, centrally located
- Separate meeting, with different location each year

Additional Information: Nothing to note.

62. Do you personally collect ANY reptiles or amphibians, in Texas or elsewhere, for personal use (i.e. not for donation to sanctioned research projects or museum collections)? This question is not intended to be judgmental, and all responses are anonymous.

A large majority of survey participants keep, or have kept, reptiles and/or amphibians in addition to observing them in the field.



Number of Responses: 123

Confidence Interval: $\pm 9\%$

Available Response Options:

- No, never have
- Yes, but do not collect any more
- Yes, and currently do

Additional Information:

Future surveys should further refine the response options to distinguish between Texas native herps and exotics, as well as wild-caught or domestically-produced.

63. Do you keep, or have you ever kept, the following West Texas herp species, regardless of whether you caught them yourself, or whether they were wild-caught or captive-bred, or whether they were from Texas or somewhere else)? Select all responses that apply (including whether yours were wild-caught or captive-bred--you can select both if you had a combination). Responses are anonymous--this is not a trap!

The responses to this question were broken into several charts to facilitate readability: snake species (one chart for keep/have kept, one chart for origin of animals) and lizard/ turtle/ amphibian species (one chart for keep/have kept, one chart for origin of animals). Note that while the following selected Texas Threatened and/or Endangered Species were included on this chart, the survey did not ask whether participants who keep or have kept those species are doing so under permit (e.g. Scientific Collection Permit or Educational Display Permit), so no determination can be made as to the survey participants' legality in keeping these species:

Indigo snake

Trans-Pecos Blackhead Snake (included in "Flathead/blackhead snakes")

Mexican Blackhead Snake (included in "Flathead/blackhead snakes")

Speckled Racer*

Texas (Chihuahuan Desert) Lyre Snake*

Northern Cat-eyed Snake*

Reticulated gecko

Texas horned lizard

Reticulated collared lizard

Sand dune lizard (included in "Spiny lizards [*Sceloporus* sp.]")

Texas tortoise

*not included in the original survey list, but participants mentioned this species in write-in comments

The following information is common to all four charts:

Number of Responses: 108

Confidence Interval: $\pm 9\%$

Discussion continued on next page.

Available Response Option Matrix:

Available Options for Each Item: Kept Previously, Currently Keep; Wild Caught, Captive-Bred

Gray-banded Kingsnake	Blacktail Rattlesnake
Hognose Snake	Rock Rattlesnake
Night Snake	Copperhead
Flathead/Blackhead Snakes	Texas Banded Gecko
Indigo Snake	Reticulated Gecko
Trans-Pecos Ratsnake	Texas Horned Lizard
Longnose Snake	Roundtail Horned Lizard
Desert Kingsnake	Collared Lizard
Baird's Ratsnake	Reticulated Collared Lizard
Great Plains Ratsnake	Spiny Lizards (Sceloporus)
Glossy Snake	Texas Tortoise
Bull/Gopher Snake	Ornate/Desert Box Turtle
Coral Snake	Tiger Salamanders
Western Diamondback	Spadefoot Toads
Other Toads	

Participants' Write-in Responses:

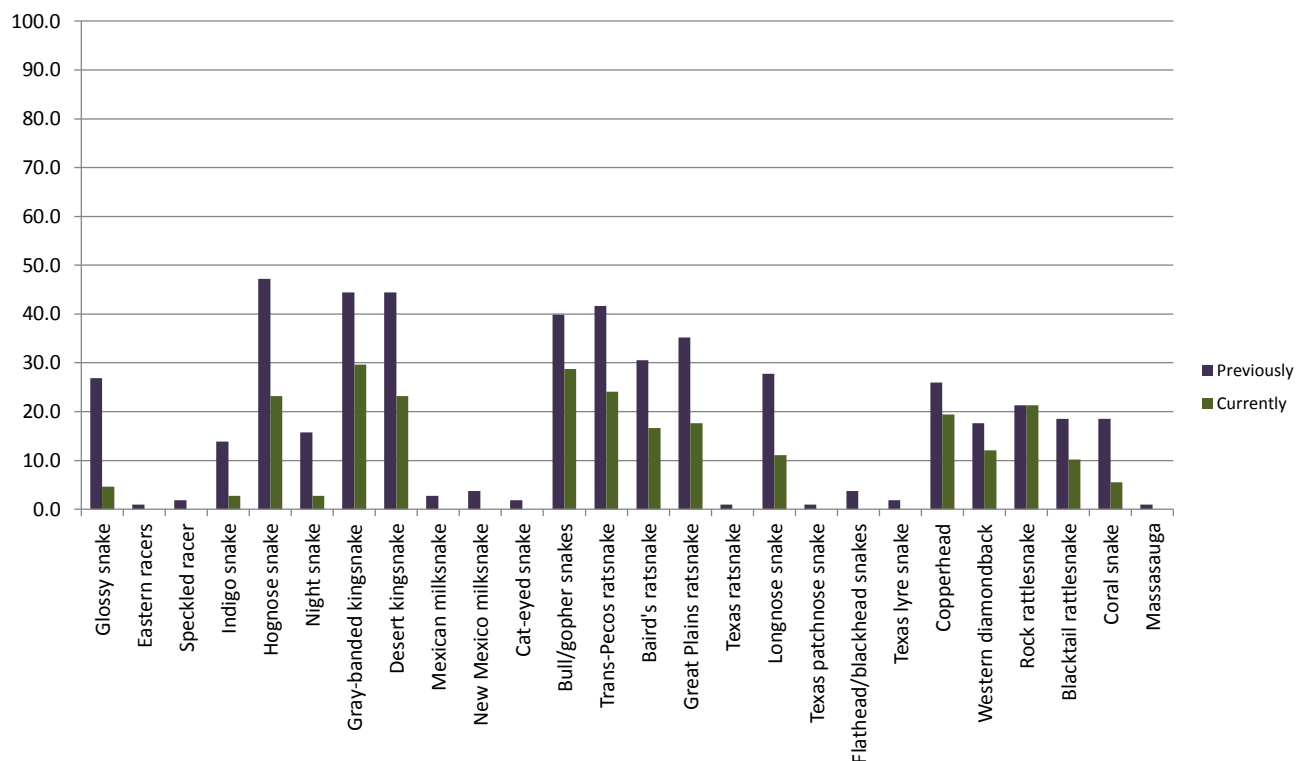
scorpions, eastern diamondback, monocled cobra, massasauga rattlesnake, yellowbellied
racer, texas ratsnake, redhead centipede,
Very rare to collect, mostly for pics only.
rosy boas
green toad, wild caught
I keep Ball Pythons.
several ssp of milk snakes both wc and captive bred
never kept
New Mexico Milksnake and Mexican Milksnake Kept in the past w/c and captive bred
Mexican milk, New Mexican milk
Wild caught New Mexico Milk
Wild caught Texas Patchnose Snake, kept for less than a couple months.
speckled racers, n. cat-eyed snakes, texas lyre snakes
crested gecko

Additional Information:

Total percentages exceeded 100% since more than one response could be selected.
Several of the write-in responses referenced non-native and/or non-herp species and were
thus irrelevant to the question. Future surveys should include scientific names of each
species and ask for the same in any write-in responses, to reduce any potential confusion.
The question should clarify "have you ever kept" as "maintained," to avoid confusion with
"kept" being interpreted as "collected for museums" and other meanings.

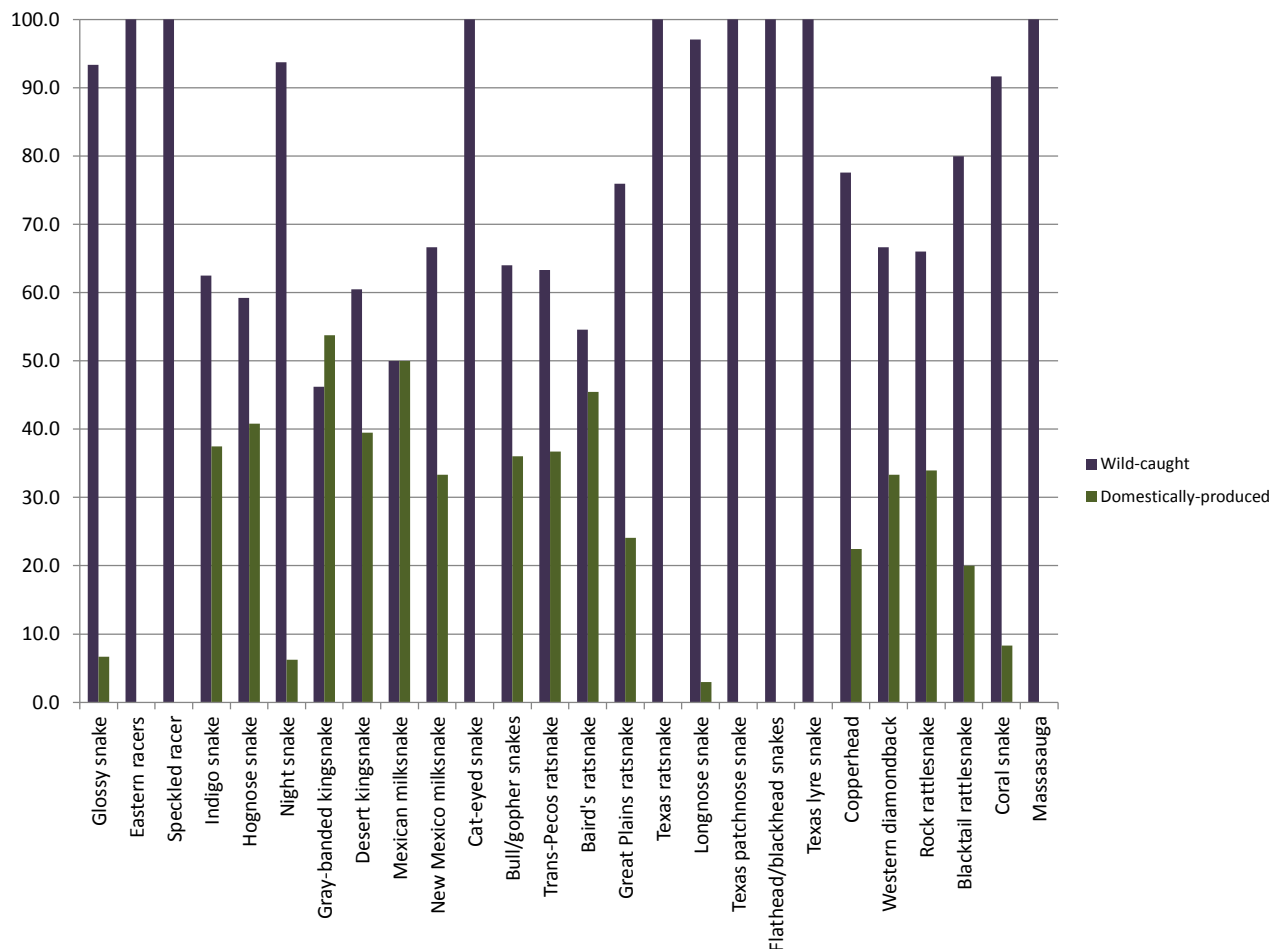
This chart identifies snake species kept, or previously kept, by survey participants. This information may help TPWD ascertain demand for various species. Based on the responses, the most popular snakes for survey participants to currently keep are hognose snakes (*Heterodon* spp.), gray-banded kingsnakes (*Lampropeltis alterna*), desert kingsnakes (*Lampropeltis getula splendida*), bull/gopher snakes (*Pituophis* spp.), and various ratsnakes (*Bogertophis* and *Pantherophis* spp.).

It is essential to note that while the survey asked the origin of the species with respect to wild-caught or domestically-produced,¹⁵ no attempt was made to determine locality of specimens (i.e. some specimens could have been caught in other states besides Texas).



¹⁵ “Domestically-produced” is a term meaning “born/hatched under captive conditions,” and is also known as “captive-bred,” a term with which most herpers are more familiar.

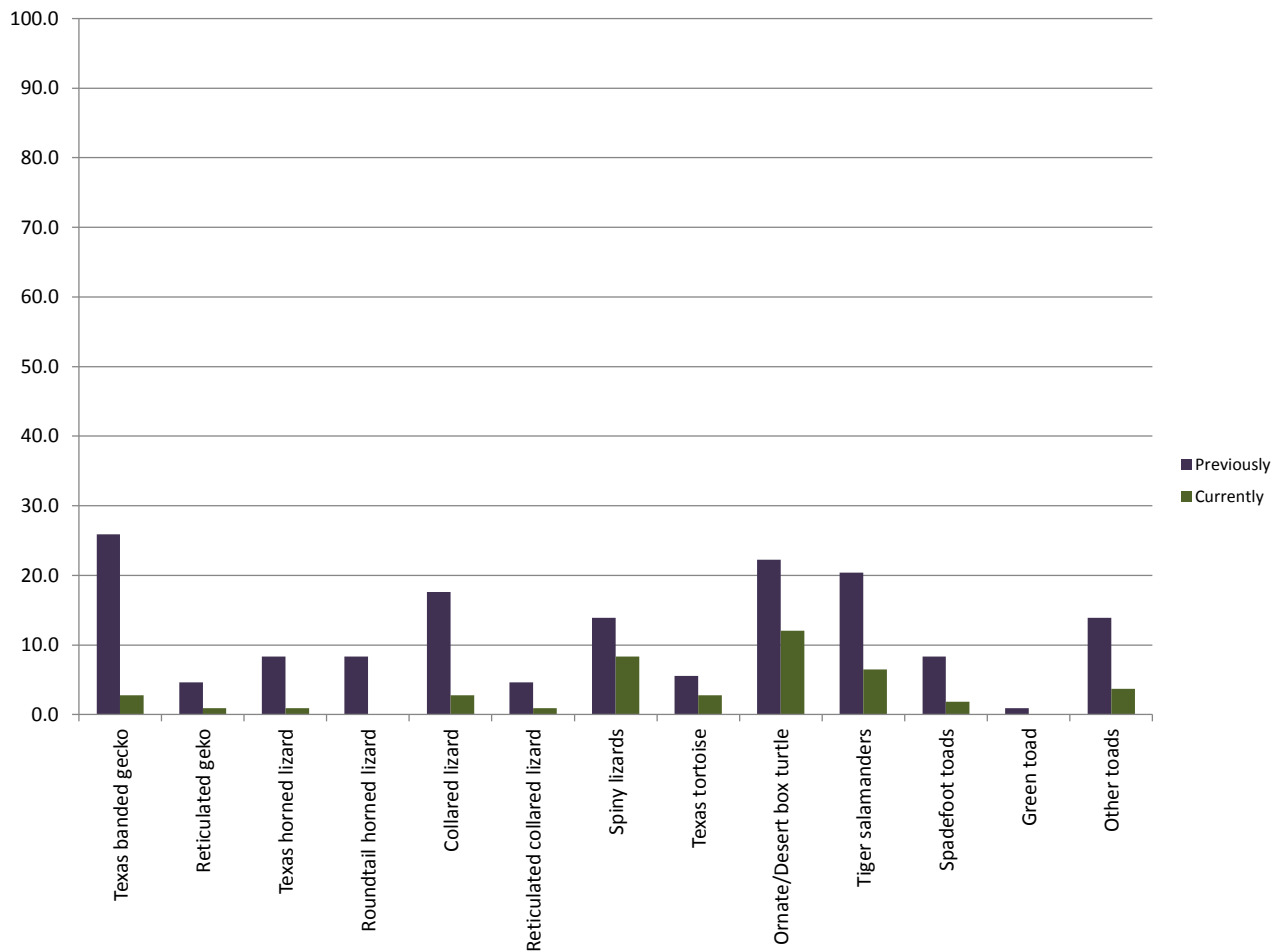
This chart identifies the origin of the snake species kept, or previously kept, by survey participants. This information may help TPWD ascertain demand for wild-caught examples of various species. However, these data may simply mean nobody is producing these species domestically, not necessarily that there is a high demand for these species. Based on the responses, most snakes being kept are wild-caught, with the exception of gray-banded kingsnakes (*Lampropeltis alterna*), Mexican milksnakes (*Lampropeltis triangulum annulata*), and Baird's ratsnakes (*Pantherophis bairdi*). Other species are being captive-bred, but the majority of those species (>60%) seems to come from wild stock.



NOTE: The question did not distinguish between dates particular specimens were kept; future surveys should ask when the wild-caught specimens were captured. The general trend in herpetoculture¹⁶ seems to be towards domestically-produced animals vs. wild-caught, so it would be interesting to see if that pattern holds true for Texas native species as well.

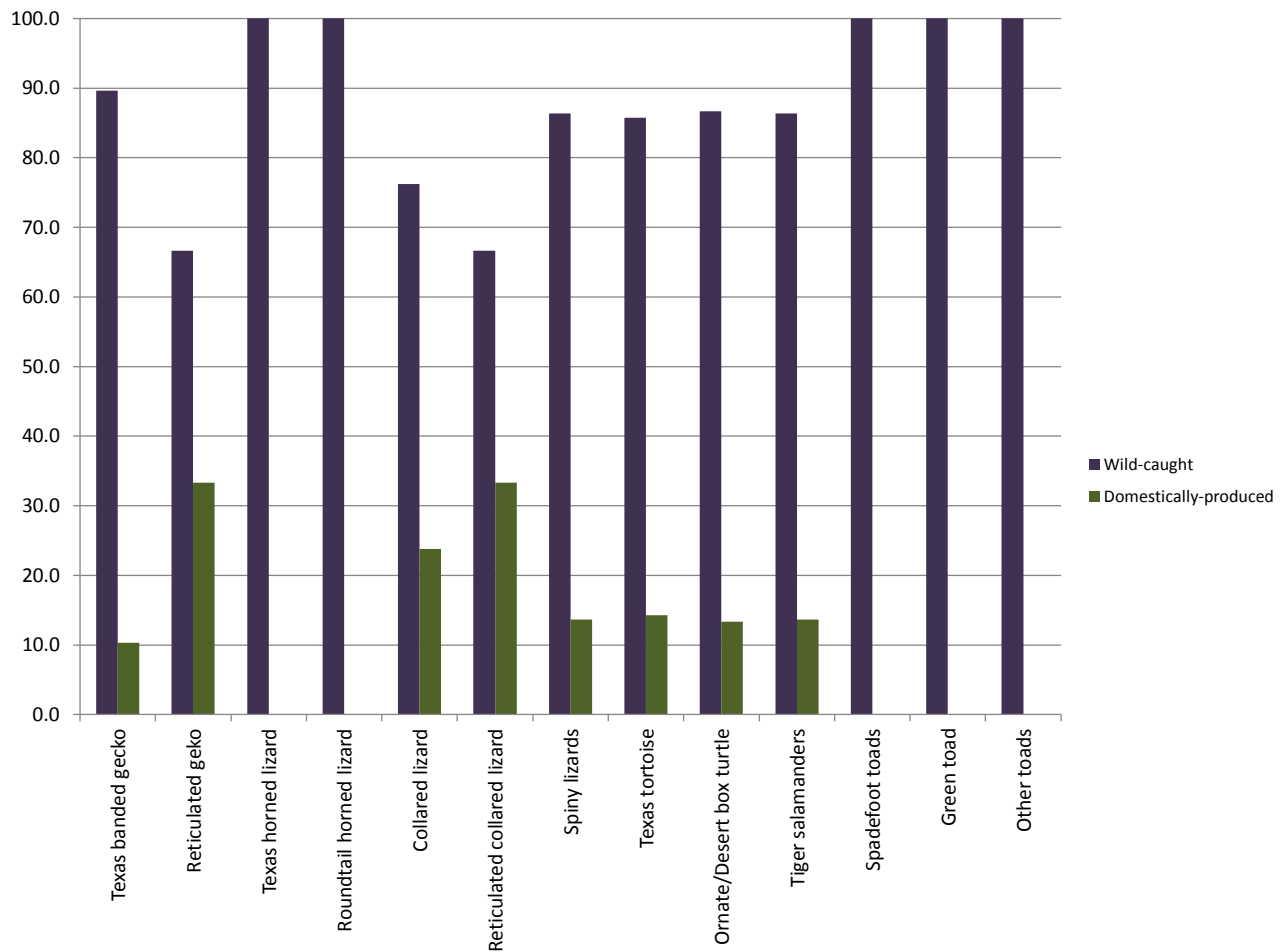
¹⁶ "Herpetoculture" is the art and science of keeping and breeding reptiles and amphibians.

This chart identifies lizard, turtle, and amphibian species kept, or previously kept, by survey participants. This information may help TPWD ascertain demand for various species. Based on the responses, the most popular of these species for survey participants to currently keep are spiny lizards (*Sceloporus* spp.) and ornate/desert box turtles (*Terrapene ornata ornata* and *T. o. luteola*). Even so, keeping these species seems to be much less popular than keeping snakes.



Future surveys should break down the “spiny lizards” category, as it encompasses 9 species, not all of which are necessarily kept by herpers.

This chart identifies the origin of the non-snake species kept, or previously kept, by survey participants. This information may help TPWD ascertain demand for wild-caught examples of various species. However, these data may simply mean nobody is producing these species domestically, not necessarily that there is a high demand for these species. Based on the responses, most lizards, turtles, and amphibians being kept are wild-caught. It is interesting that two threatened lizards, the reticulated gecko (*Coleonyx reticulatus*) and the reticulated collared lizard (*Crotaphytus reticulatus*), have the highest percentage of domestically-produced specimens. While the reason for this is indeterminate from the question asked, it may be the result of approved research projects involving these species; however, this is merely speculative.



NOTE: The question did not distinguish between dates particular specimens were kept; future surveys should ask when the wild-caught specimens were captured. The general trend in herpetoculture seems to be towards domestically-produced animals vs. wild-caught, so it would be interesting to see if that pattern holds true for Texas native species as well.

64. Would you LIKE to be able to keep, or know someone who would, the following species? Select all responses that apply (and assume all species listed would be legal to keep). Responses are anonymous. Add any species not listed in the text box provided as necessary.

This question was asked to help determine current or potential demand for certain Texas native species. The responses purposely included species currently listed as Texas Threatened or Endangered (indigo snake, reticulated gecko, reticulated collared lizard, and Texas tortoise); while it is currently illegal to collect or keep these species without the appropriate TPWD permits, it is informative to see to what extent these species are actually desirable. 9.7% of participants answered “None are of interest to keep for me or anyone I know.”

As with Question 63, the following information is common to all four charts:

Number of Responses: 104

Confidence Interval: $\pm 9\%$

Available Response Options:

None are of interest to keep for me or anyone I know

Gray-banded Kingsnake

Hognose Snake

Night Snake

Flathead/Blackhead Snakes

Indigo Snake

Trans-Pecos Ratsnake

Longnose Snake

Desert Kingsnake

Baird's Ratsnake

Great Plains Ratsnake

Glossy Snake

Bull/Gopher Snake

Coral Snake

Western Diamondback

Blacktail Rattlesnake

Rock Rattlesnake

Copperhead

Texas Banded Gecko

Reticulated Gecko

Texas Horned Lizard

Roundtail Horned Lizard

Collared Lizard

Reticulated Collared Lizard

Spiny Lizards (Sceloporus)

Texas Tortoise

Ornate/Desert Box Turtle

Tiger Salamanders

Spadefoot Toads

Other Toads

Discussion continued on next page.

Participants' Write-in Responses:

Speckled Kingsnake, Corn Snake

Milk Snakes

no preference at this time

milk snakes

Texas Lyre Snake

milk snakes

New Mexico Milksnakes and Mexican Milksnakes

Texas Lyre Snake

Milk snakes

I do not want to keep any other herps.

I would like to keep the ability to keep anything not federally endangered

lyre snake, big bend black-head snake

New Mexico Milk Snake

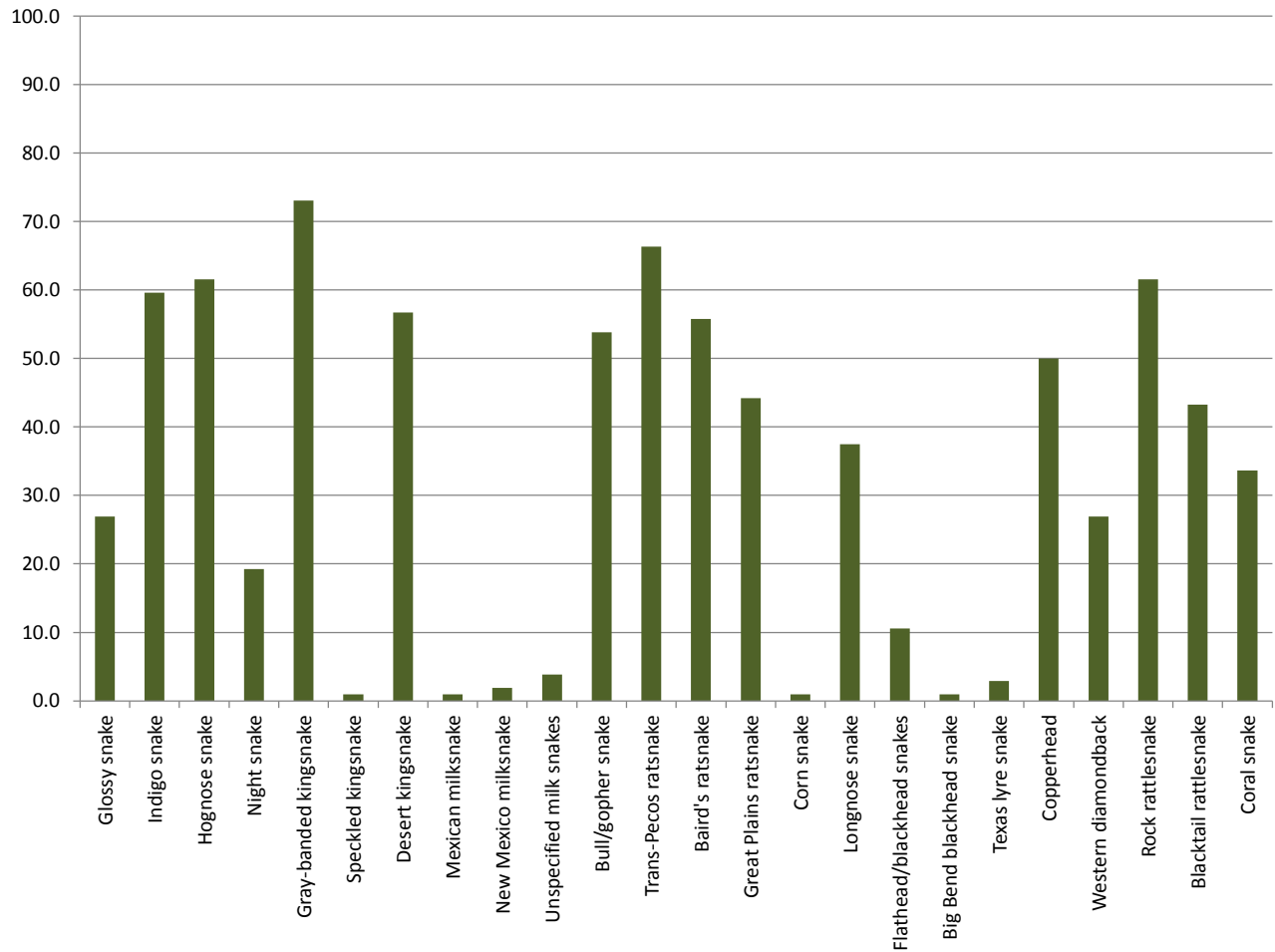
Additional Information:

Total percentages exceeded 100% since more than one response could be selected.

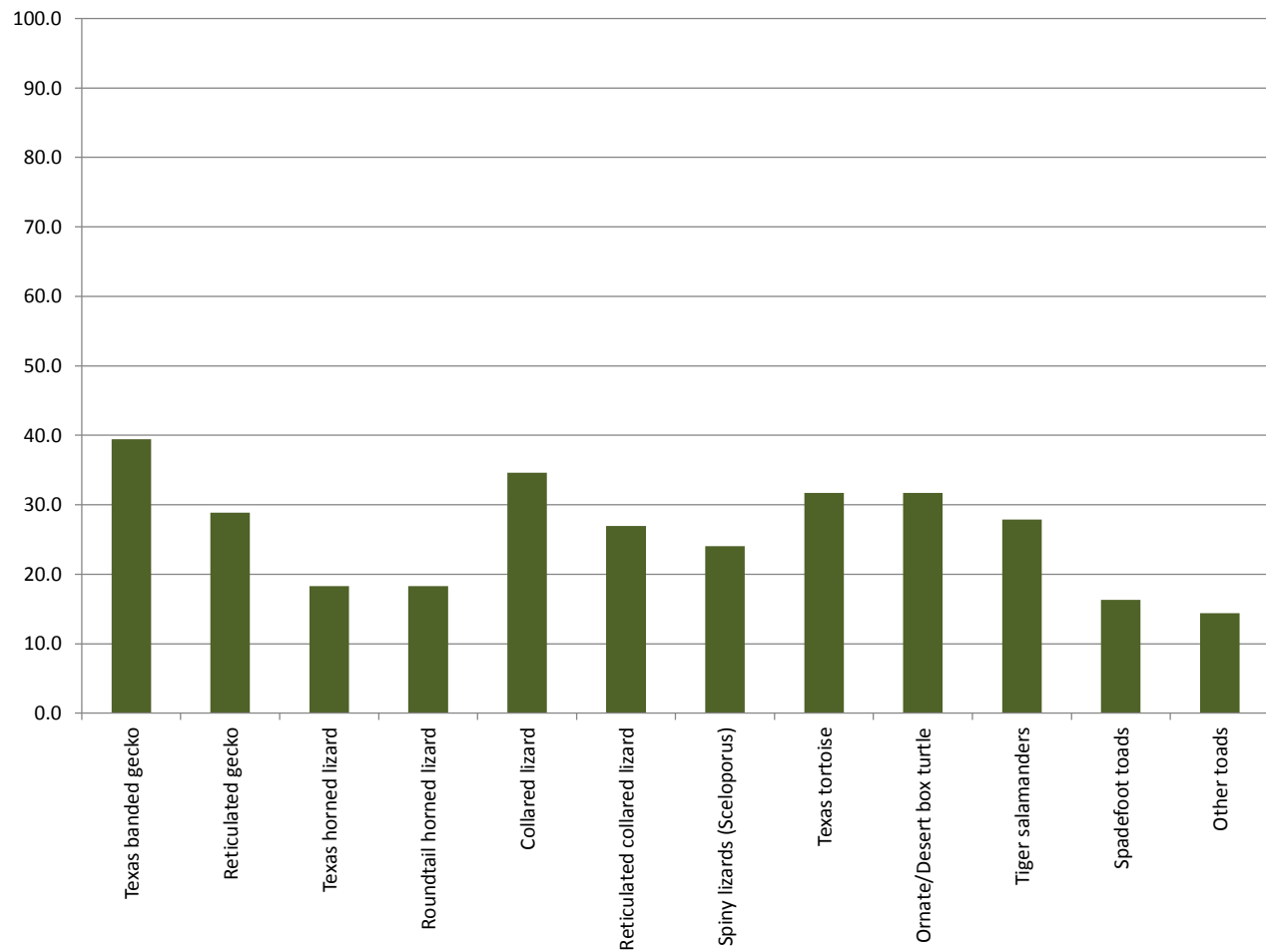
The question did not specify "If you don't currently keep these species," which would have given greater fidelity to the responses. In addition, further comments or an additional question could ask participants to explain *why* they currently don't keep the desired species (such as lack of housing space, currently illegal to do so, difficult to feed/maintain, etc.).

Charts on next two pages.

While the percentage of survey participants who would like to keep various snake species remains consistent for the species most kept (hognose snakes, gray-banded and desert kingsnakes, bull/gopher snakes, and ratsnakes), there is a significant increase in the percentage who would like to keep indigo snakes and many of the venomous species.

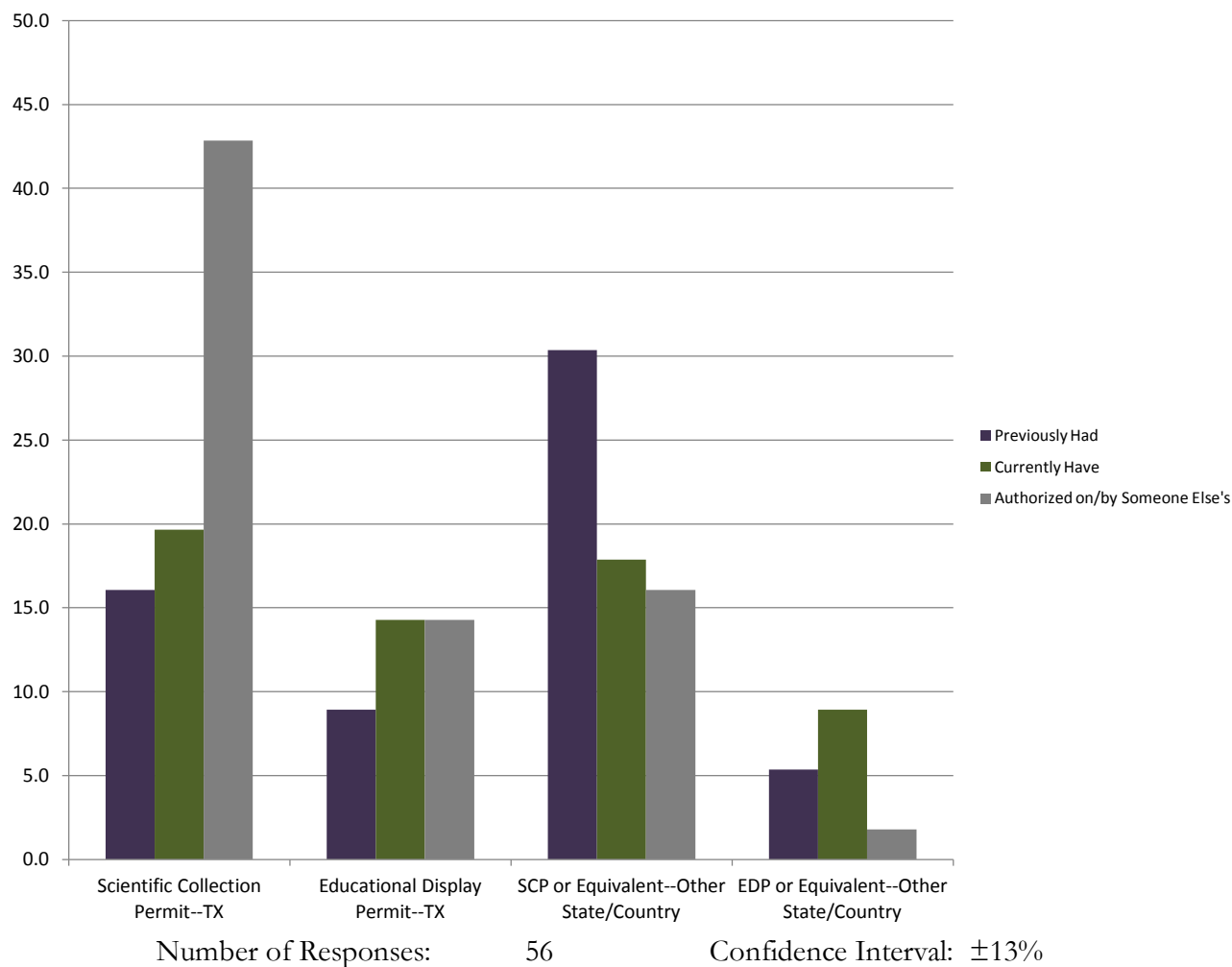


The percentage of survey participants who would like to keep various lizard, turtle, and amphibian species increases significantly for most of the species listed, in no case does the demand exceed 40% of participants.



65. Do you have (or had in the past) a scientific collection permit or an educational display permit for Texas or elsewhere, or herped/collected under authorization of someone (or some organization) who did or does? Select all that apply.

Survey participants generally do not possess (previously or currently) Scientific Collection Permits or Educational Display Permits (either of which would potentially allow them to keep, breed, display, and/or research a wider range of species from either Texas or another state/country).



Available Response Options:

- Scientific Collection Permit—TX
- Educational Display Permit—TX
- SCP or Equivalent—Other State/Country
- EDP or Equivalent—Other State/Country

Discussion continued on next page.

Additional Information:

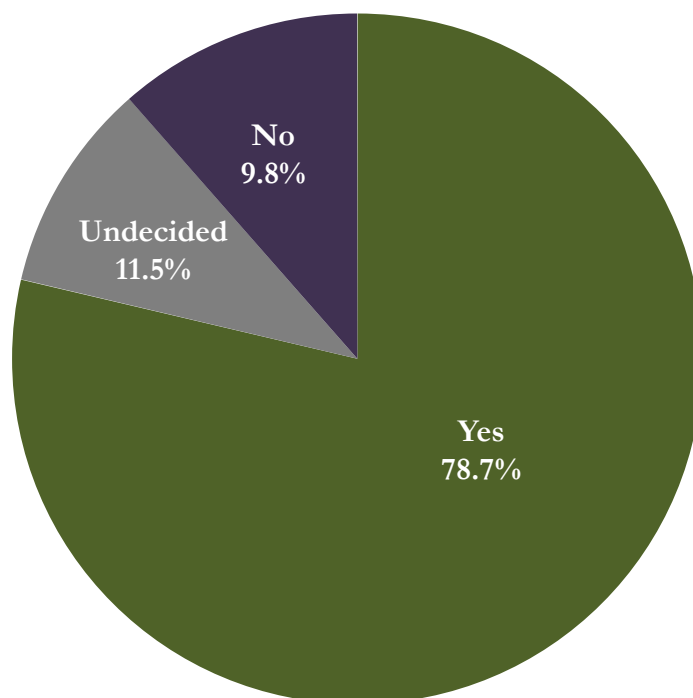
Total percentages exceeded 100% since more than one response could be selected.

Future surveys need to include a “none of the above” or “N/A” as a response option. In addition, the “authorized on/by Someone Else’s” option should also include “or organization,” as anecdotally the survey author knows of organizations claiming to have a blanket SCP or EDP (unverified).

Followup survey questions could ask if participants would like to be issued an SCP or EDP, and why they have not to date. This question would potentially help TPWD in developing procedures fostering mutually-beneficial “citizen science” partnerships.

66. Would you be willing to assist researchers in collecting specimens within the boundaries set by law or special permit, if a list detailing requests was posted at a herper gathering such as Snake Days?

Survey participants strongly support being able to assist researchers with collection efforts.



Number of Responses: 122

Confidence Interval: $\pm 7\%$

Available Response Options:

Yes

No

Undecided/Don't Know

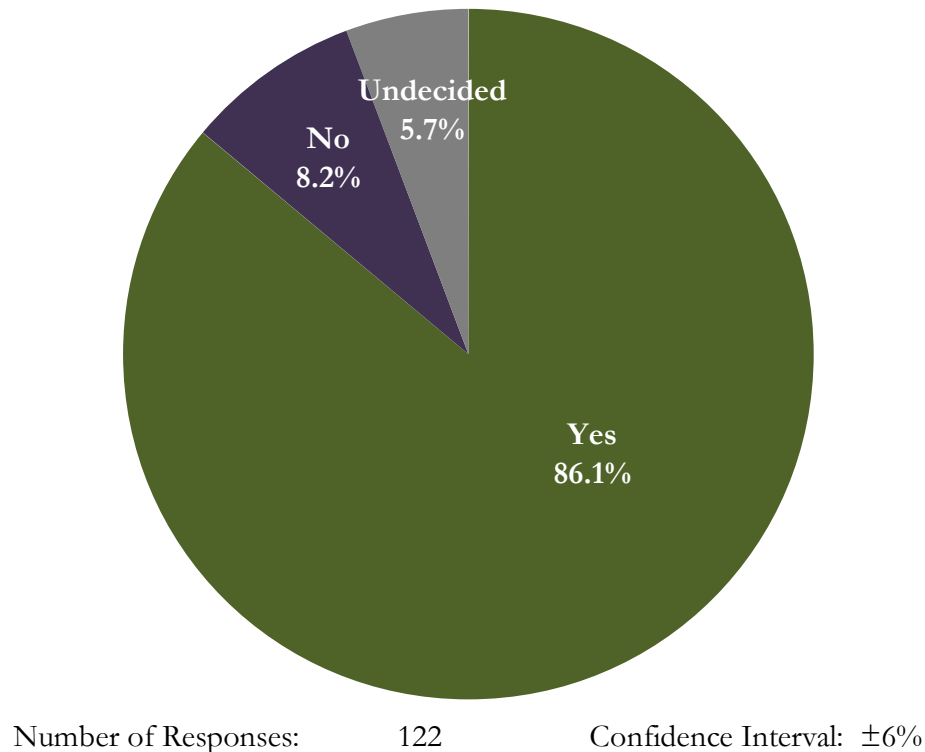
Discussion continued on next page.

Additional Information:

The question was worded to suggest perhaps an event-specific blanket permit could be issued for events such as Snake Days, whereby participants could more freely support researchers.

67. Would you be willing to salvage Dead-On-Road (DOR) specimens for academic or other purposes, if it was legal again to do so?

An overwhelming majority of survey participants would collect DOR¹⁷ specimens. Current law prohibits the general public from doing this.



Available Response Options:

Yes
No
Undecided/Don't Know

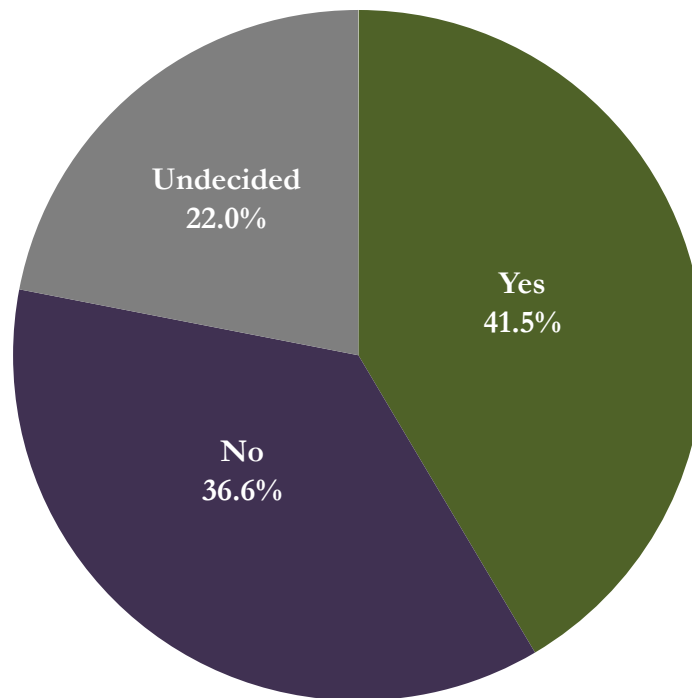
Additional Information:

Interestingly, 8.2% of the responses said “no.” A followup question on future surveys could ask for a reason why not.

¹⁷ “Dead-on-Road” (abbreviated “DOR”) describes specimens found on a road surface, previously run over by other vehicle traffic. Such specimens can still be valuable to academic collections, both as voucher specimens and for further research (DNA comparison, stomach contents, etc.).

68. Would you be willing to collect specimens for private persons (hobbyists) or request specimens be collected for you, within legal restrictions (gifting vs. bartering/selling), if a list detailing requests was posted at a herper event such as Snake Days?

Not unexpectedly, survey participants are more ambivalent about supporting collection on behalf of other private citizens' personal desires than they are about supporting bona fide research efforts.



Number of Responses: 123

Confidence Interval: $\pm 9\%$

Available Response Options:

Yes

No

Undecided/Don't Know

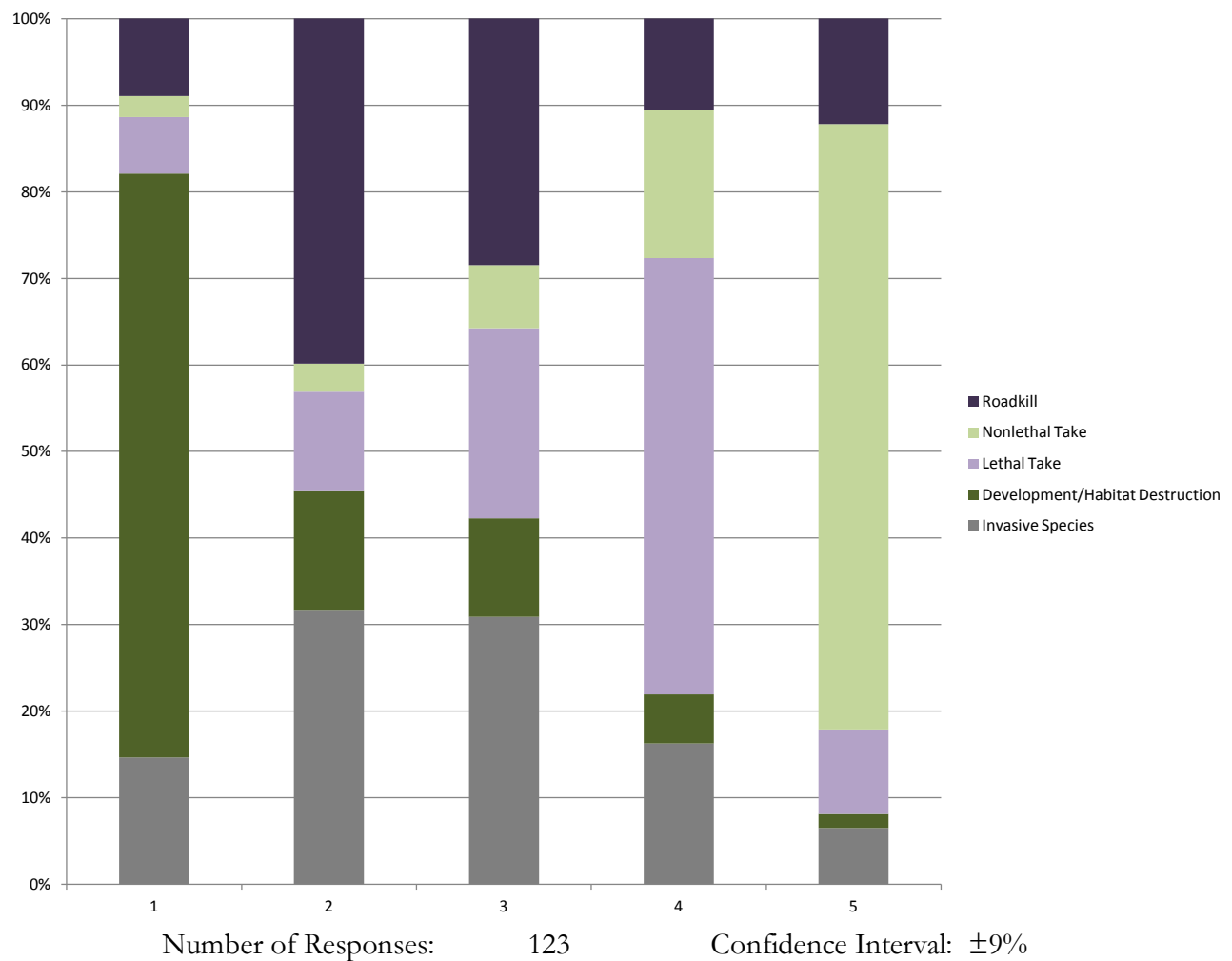
Additional Information:

Nothing to note.

69. Generally speaking, what do you perceive to be the biggest threats to reptiles and amphibians in Texas? Place the following in rank order of your perception, with 1 being the biggest threat.

Each option had a drop-down menu with which to assign a value from 1 to 5. The graph below depicts the percentage response each option received for a given rank-order (each column shows relative percentages each option received). The rating average for each option is listed below, in order from biggest perceived threat to lowest:

Development/habitat destruction	1.60
Invasive species (e.g. fire ants, feral hogs, cats)	2.68
Roadkill (intentional or accidental)	2.77
Lethal take by humans (e.g. food, leather, sport/pleasure)	3.46
Nonlethal take by humans (e.g. pet trade, farming)	4.49



Discussion continued on next page.

Available Response Options:

- Invasive Species (e.g. fire ants, feral hogs, cats)
- Development/habitat destruction
- Lethal take by humans (e.g. food, leather, sport/pleasure)
- Nonlethal take by humans (e.g. pet trade, farming)
- Roadkill (intentional or accidental)

Additional Information:

There is inherently some bias involved in asking such a question. For example, many survey participants keep reptiles and/or amphibians, so they may not perceive nonlethal take as a big threat compared to someone who does not keep any herps. However, when the results are filtered to show only survey participants who never collect herps from the wild, nonlethal take is still the lowest-ranked threat on the list.

This question may have imposed a “false dilemma,” in that responses were limited only to the choices listed. No write-in response was allowed on this question. Future surveys should add a write-in response as an option.

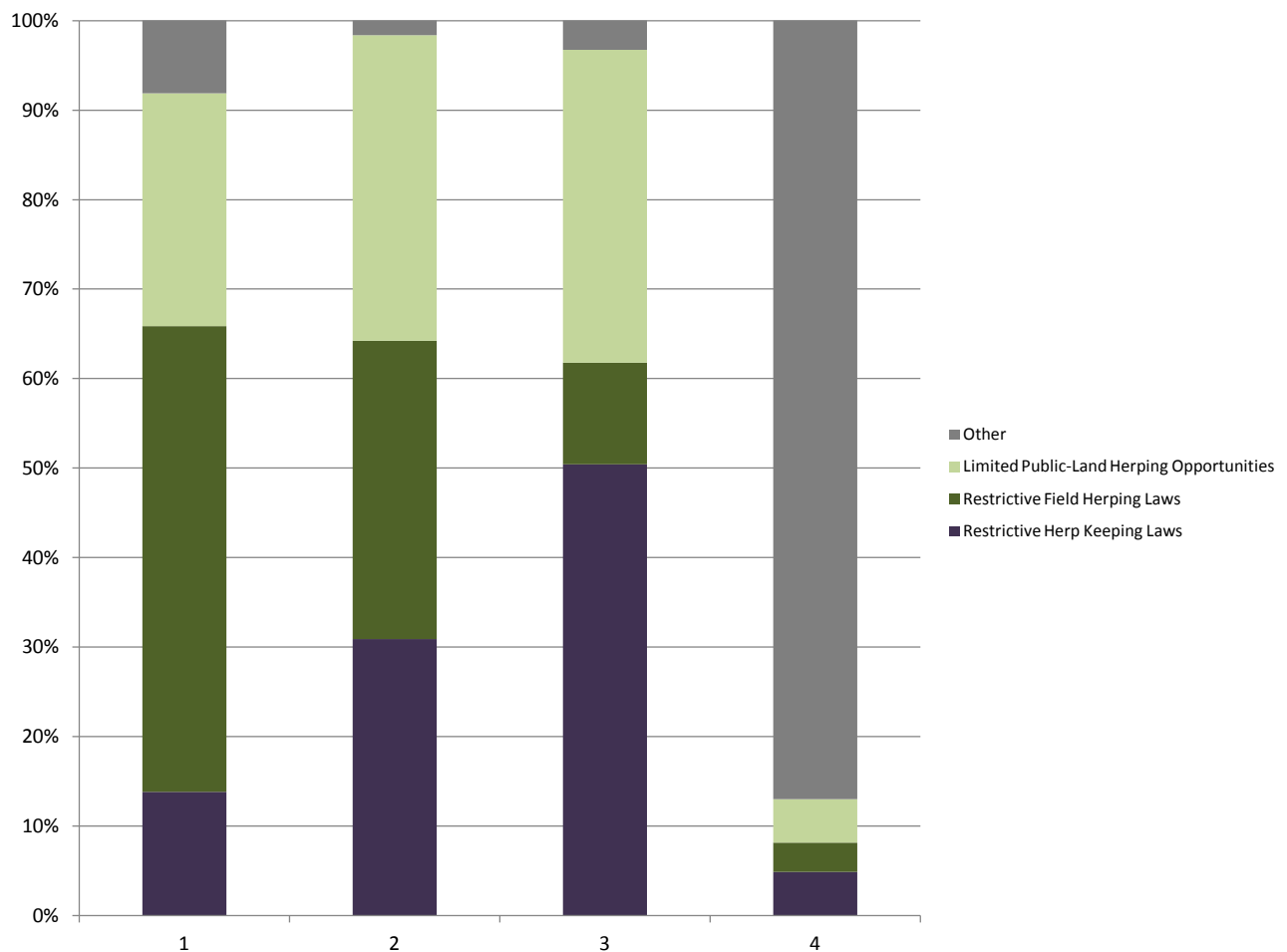


Rat snake, *Scotophis obsoletus*, Taylor County. Photo by Chris McMartin.

70. Generally speaking, what do you perceive to be the biggest challenge for herpers in Texas? Place the following in rank order of your perception, with 1 being the biggest challenge.

Each option had a drop-down menu with which to assign a value from 1 to 4. The graph below depicts the percentage response each option received for a given rank-order (each column shows relative percentages each option received). The rating average for each option is listed below, in order from biggest perceived threat to lowest:

Restrictive laws for field herping	1.65
Limited public-land herping opportunities	2.20
Restrictive laws for keeping herps	2.47
Other (can specify on next question)	3.69



Number of Responses: 123

Confidence Interval: $\pm 9\%$

Discussion continued on next page.

Available Response Options:

- Restrictive laws for keeping herps
- Restrictive laws for field herping
- Limited public-land herping opportunities
- Other (can specify on next question)

Additional Information:

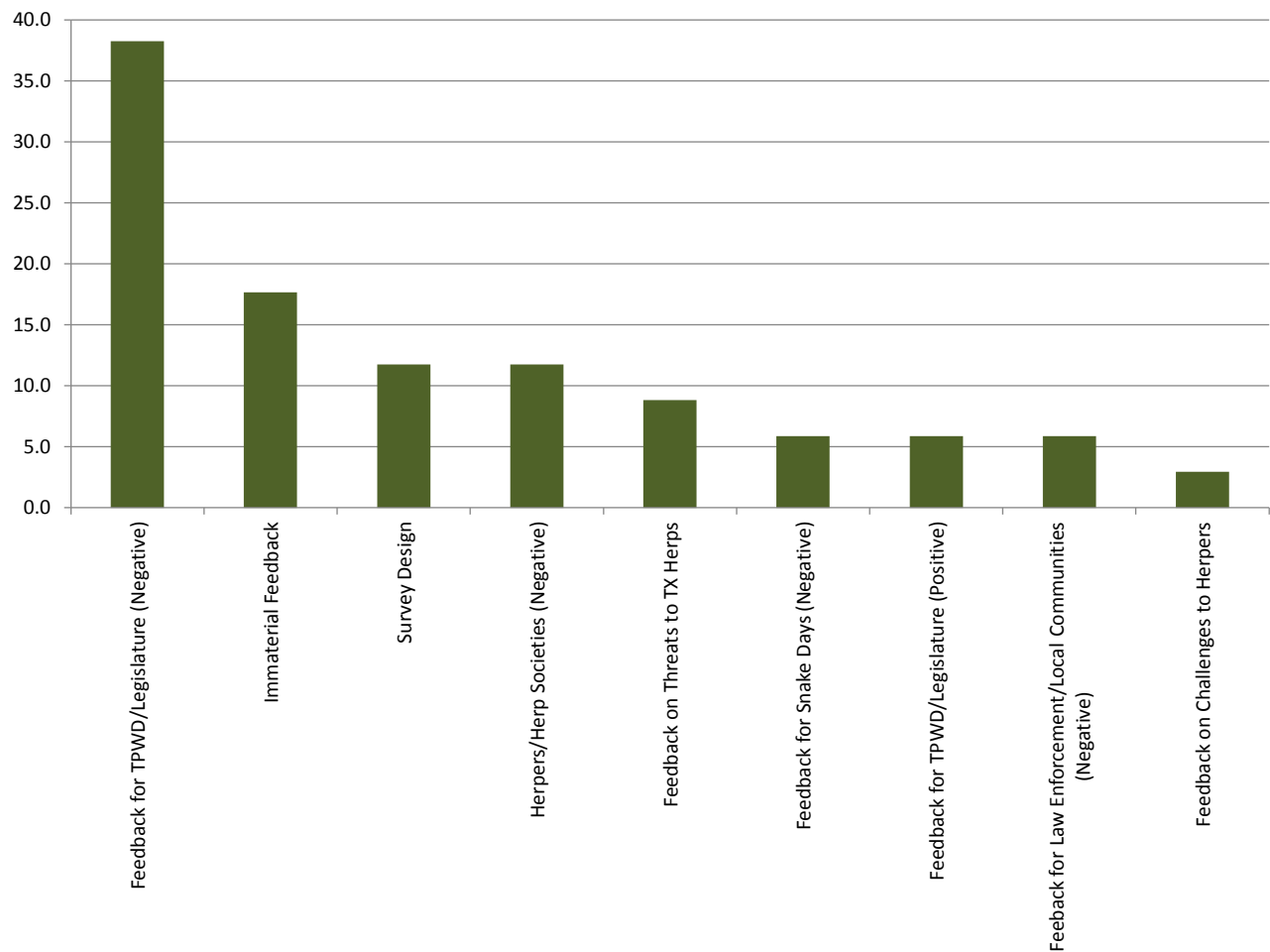
This question would be better broken into two separate questions on future surveys; one from a “field herping” perspective and one from a “herp keeper” perspective, with choices more applicable for each category. Combining both into one question likely provided inaccurate rank-ordering. For example, participants who don’t keep herps would probably not view restrictive law pertaining to herp keeping as a problem.



Graham's crayfish snake, *Regina grahamii*, Bexar County. Photo by Chris McMartin.

71. Is there anything else you would like to have included in the results of this survey? This is a freeform text box for discussing whatever you want, on any herp or herping topic in Texas.

34 survey participants answered this question. Their responses were categorized as depicted on the chart below by presumed target audience and nature of the comment (positive, negative, or neutral) as applicable. From the responses, the survey author identified a total of 37 relevant individual comments (6 were considered immaterial to the topic of Texas herping; see discussion on next page). Most feedback received was directed to TPWD.



Number of Responses: 34

Confidence Interval: $\pm 16\%$

Discussion continued on next page.

Participants' Write-in Responses:

NOTE: In a deviation from the unedited format of participants' write-in responses, the following comments have been broken into their identifiable components and categorized as appropriate (i.e. if a participant wrote a paragraph covering several concerns, the paragraph was split and comments categorized into two or more areas of interest). Also, two negative comments were directed at a specific individual and a specific business; the names have been removed from the comments for purposes of this public report but the individual and business will be contacted with the feedback privately.

Feedback on Survey Design (suggestions for improving questions, response options, etc.)

We did "participate" in snakedays as in donated \$50 for the event since we couldnot attend, we were out of state.

Maybe include something along the lines of what kind of lodging, food, etc. Also, if cruising, morning or night.

I have had BOTH positive and negative encounters with law enforcement.

In some of the areas you need more N/A for people that do not herp or keep snakes.

Feedback for Snake Days (Negative)

Try to pair an experienced herper with inexperienced to where the non experienced herper doesnt feel like a purden and is not over whelmed by the experienced.

My son and I were very disappointed with Snake Days. Hotel room ([XXX XXX]) was terrible and probably the major reason we left the first afternoon. The room had an unbearable stench of bleach, walls dirty, shower a tiny dribble, blood stains on door.... As far as the activities of the conference, we were disappointed that there wasn't more opportunity for learning in the field in an organized way. My son is too young to have interest in the lectures, though I would probably have enjoyed some of them. He's also uninterested in legal concerns of herping and collecting. I am not much into collecting, so that aspect isn't all that interesting to me either. I'm into the discovery aspect, and enjoy getting photos of things we find.

Discussion continued on next page.

Feedback for Herpers and Herp Societies (Negative)

I think more herp societies should offer field herping etiquette, including coverage of laws and hunting/collecting for scientific purposes.

I worry that the voices that speak most loudly for herpers in this state do not necessarily represent the interests of most herpers. There is a vocal minority who feel that any regulation of herping is too much and are carrying emotional baggage about their past experiences into every discussion. They give the rest of us a bad name. We need regulations to protect our wildlife while at the same time allowing reasonable herping practices to those bearing the herp stamp and license.

A very big problem is ignorance. Whether it's by the general public or law enforcement, most non-herpers really are clueless about all things pertaining to our hobby. I think herpers need to do a better job of educating the public and law enforcement needs to be educated before they have the right to stop/judge/harrass anyone.

I believe the biggest challenge to the herp community is a lack of "organized involvement". I also believe that the history of "the government shouldn't tell me what I can and can't do" attitude... or perceived attitude... still hinders efforts to have an active herp community that is taken seriously by agencies legislatively mandated to manage wildlife resources. I would love to see herpers get organized and become involved in conservation of our precious herp resources. They have been ignored for WAY too long. As a community, we have to work hard to ensure that our herp resources are sustainably used and populations are cared for such that they proliferate and are plentiful on the landscape. Lastly, I believe that the herp community should distinguish itself or clearly define what I perceive as "two camps". There are those who mainly keep exotic species and are interested in husbandry, etc. and there are those who are primarily interested in native herp conservation on the Texas landscape. (I suppose there are those who are interested in exploiting herps for profit by collecting and selling them, but I don't consider those types as "herpers"... I consider them business men who happen to deal in herps.) I fully support a herp community that organizes and works to promote conservation of native herps on the landscape. I don't care for other herp interests such as exotics and wild collection for commercial sale.

Comments continued on next page.

Feedback on Threats to Texas Herps (Neutral)

I don't see non-lethal take as a big deal for MOST species, but am worried about localized impacts, particularly habitat degradation.

Biggest challenge - loss of habitat and species by factors including climate change

I believe the lack of rain and chemical plants from Mexico have killed off many reptiles in Big Bend.

Feedback on Challenges to Herpers (Neutral)

Regarding question 41 [NOTE: *following comment does not appear to match up to Question 41; it appears to more closely match up to Question 70*], don't assume equal "distance" between 1 and everything else. With the recent improvements to the "road ban", legal restrictions have been greatly improved (it would still be better to be able to legally road-cruise; cut-walking is ineffective for encountering many species of interest to others). When the original, "full-flavor" road ban was combined with the eternal problem of poor access/availability of places to "hunt" the effect was absolutely devastating - it essentially removed all access to the wildlife resource for those interested in reptiles & amphibians. Limited opportunity and access remains the biggest negative factor, even though some of what was taken away has been returned.

Feedback for TPWD and Texas State Legislature on General Regulation of Herpers (Positive)

Generally I thought TX does a very reasonable/balanced job of limiting the take of this manageable resource, without having an unmanageable prohibition, except for the past ROW restrictions. As with game animals, TX "reasonable take" attitude makes me very likely to report illegal game and non-game violations.

Feedback for Law Enforcement Agencies and Local Communities (Negative)

In the past I have met intimidating obnoxious sheriff's, who made me feel unwelcome despite the fact we were spending \$ and not violating laws. They stopped me with no lawful probable cause, just apparently suspicious of my out of state plate? By contrast, when I go goose hunting in Canada, Alberta province, I am made welcome, and the local folks seem to appreciate the money and interest we have.

I have only ever had negative experiences with Sheriffs, State troopers, Constables and general cops while herping. All other experiences with other LE have been positive.

Comments continued on next page.

Feedback for TPWD and Texas State Legislature on the Reflective Vest Requirement (Negative)

Why do we need a reflective vest when we are shining spotlights everywhere?

Feedback for TPWD on Cooperation between TPWD and Herpers (Positive)

I'm glad to see collaboration.

Feedback for TPWD and Texas State Legislature Regarding the "Road Ban"¹⁸ (Negative)

Would love to see the road ban repealed. Older and handicapped people have a hard time walking cuts. Road cruising has proven to be a safe and productive method for finding reptiles for decades.

I really think the state needs to back the hell off of road cruising. I'm OK with buying a license, but let me collect off the damn road, particularly DORs.

In many respects, TX laws protect herps from the one small group that actually likes herps. There are few restrictions on habitat alteration or destruction (see the Eagle-Ford shale project in S TX for a perfect illustration.) It's ironic and bizarre that one can run over a herp in front of a law enforcement officer without penalty, but to stop and collect, photograph or even just move the animal off the road is illegal. Roads are death zones for herps--all species of herps--and any herps encountered on roads should be exempt from the various restrictions that restrict hunting on public roadways. It is beyond bizarre that one can stop and pick up a can or other trash on the road, but to pick up a dead herp is against the law.

I usually hunt alone. I don't feel safe walking cuts in certain areas close to the border late at night. I feel much safer in my car when hunting alone and wish that cruising/ shining cuts from the car was legal.

I personally don't have a problem with the stamp, but I do feel that the "No hunting from a public right of way, including DOR specimens" is a bit over the top. Roadcruising is one of the most effective ways to herp some areas and it's really unfortunate that, by law, we are required to leave a snake on the road where there's a far better chance of it being killed than if we were allowed to relocate them to the side of the road. As far as I know, Texas is the ONLY state to put an actual ban on roadcruising for snakes. I've dealt with wardens in CA, AZ, OR, and WA, and have herped KS, OK, and FL on top of that and have never had that problem anywhere else.

Comments continued on next page.

¹⁸ The "Road Ban" refers to the 2007 legislation enacted to amend the Texas Parks and Wildlife Code, making it illegal to collect a reptile or amphibian (or salvage a roadkilled specimen) from a road or right-of-way. Prior to 2007, the practice had been legal, as affirmed by numerous communications between herpers and TPWD. Legislation enacted in 2011 restored the ability to hunt the rights-of-way, but not the roads themselves, and specifically outlawed the practice of "road cruising." Texas remains the only state in the country to do so.

Feedback for TPWD/Texas State Legislature on General Herper Regulation (Negative)

In the 80's and 90's, I purchased a license and went to west Texas most years. With the newer laws and harassment towards herpers, I have avoided herping W. Texas. I've been there twice in the last 10 years. I still love going there and hope to start going back sometime.

[XXX XXX] personally, willfully and intentionally stands in the way of field herping.

TPWD does not recognize SUBSPECIFIC status for their permitting system. I have a commercial NONGAME permit. It requires you to list ALL stuff like Cal Kings, Sinaloa Milks, etc and how many you produce (Just because they are *Lampropeltis getula* and *L. triangulum*). TPWD can use this info to say 10,000 *L. triangulum* were produced by Texas Breeders (even though in reality only probably 100 or so Mex Milks were actually produced, ~50 New Mex milks, etc...BUT they are counting the other stuff like pueblans, sinaloans, hondurans, etc.) I believe the inflated #'s make them think (and it does look BIG on paper) TX herpers are exploiting "native" wildlife. Hope that makes sense...

It seems the herping laws were made for those that herd West Texas. In South Texas and other parts of the state the Game Wardens and other LE do not know the laws.

State "protection" does not really protect species or their habitat from real threats - only from us.

The biggest problem are un-informed legislators and law enforcement officials.

We need an impartial board of arbitration. State Game and Fish Departments are in the wildlife business and are the biggest offenders of wildlife and the environment. They make money through government subsidies, fines, sales of hunting and fishing licenses. And their buddies the Department of Forestry make money off the sale of timber and other resources. Both are major polluters in this country and it's completely out of hand. Why are they allowed to make rules for us?

Feedback Immaterial to the Topic of Texas Herping

Drive Friendly!

Good job Chris!

no

No.

N/A

Tx is a cool state, but the people there are typically very strange & disagreeable.

Additional Information:

Total percentages exceeded 100% since comments often contained more than one topic.

Recommendations

Based on the survey data, to include both forced-option and write-in responses, the following recommendations can reasonably be made:

For Future Surveys

To increase the degree of confidence in the responses, it is essential to “cast a wider net.”

- The web sites and emails used to advertise the survey need to be expanded. Several popular herp-related discussion groups were targeted, but there are many more which could be utilized to spread the word.
- Leadership of the various state herpetological societies should be contacted to include the survey information in their newsletters.
- When sending out survey information, the importance of answering each question needs to be stressed. Although several questions branched into a specific subsequent set of questions based on response, many participants skipped questions displayed specifically for them, to the detriment of confidence in the overall percentages.

As noted on several questions, there was an error in designing questions in some cases wherein a write-in “other” comment could be selected in addition to a forced-choice response. This potentially skewed the resultant percentages for those questions. To maintain the integrity of the individual question, a more useful tool may be to provide a separate write-in comment box for each question to clarify answers where needed. Similarly, instructions for the final, open-ended comments box should include specifying to which question number the comment applies.

Next year’s survey should be developed in advance of, and advertised at, the Snake Days event. One option for achieving a higher response rate for the survey would be to offer a small refund of the registration fee for those who successfully complete the survey (via a code displayed upon completion, which could be emailed to the organizers). For better fidelity on the economic impact questions, attendees could be asked to keep all their receipts from their trip to get a better estimate for responding to those questions on the survey.

More than one survey could be developed—one to target West Texas business owners, for example, with the survey sent directly to local area Chambers of Commerce for disseminating to their respective member businesses. Another could target Texas universities with museum herp collections, to ascertain areas where private citizens could assist with data collection, with the survey sent directly to the biology departments. Results from each survey could be pooled to share with all interested parties—for example, questions on herper activity patterns (sleeping all day, herping in the

evening/night/early morning) may be useful to motel and restaurant owners in catering to this clientele.

For Snake Days Planners

Based on the number of non-herping family members and friends who attended, event planners need to explore options for family-friendly activities to include in next year's event. They should also consider incorporating a "help a new herper" program to provide instructional/mentoring opportunities for novices.

For Herpetological Societies

Survey participants indicate they favor an organization to advocate for herpers at the state level. Whether individual city and regional herp societies around the state wish to form a collaborative partnership with such an organization is a topic for further discussion.

For Texas Parks and Wildlife Department

Proceeds from the Reptile and Amphibian Stamp currently go into TPWD's Game, Fish, and Water Safety Account¹⁹ (the same as other hunting and fishing license revenue), as opposed to a more appropriate targeted fund such as the Special Nongame and Endangered Species Account.²⁰ Since the Reptile and Amphibian Stamp is only concerned with nongame reptiles and amphibians, TPWD may wish to consider coordinating with the Texas State Legislature to redirect stamp proceeds accordingly.

For Chambers of Commerce

Herpers generally pursue their quarry when other hunting seasons (such as deer and dove) are closed. Motels and private ranches which cater to hunters can potentially host herpers during the "off-season," realizing an additional revenue stream. Restaurants and gas stations may also see an increase in business during prime months for reptile and amphibian activity (spring and early summer).

¹⁹ "The net revenue derived from the sale of reptile and amphibian stamps shall be credited to the game, fish, and water safety account." Parks and Wildlife Code, Section 43.904.

²⁰ See Parks and Wildlife Code, chapter 11, subchapter D.

As seen in the data presented in this report, herpers in West Texas prefer road cruising as a herping method, but that activity was outlawed in 2007. Based on write-in responses in the survey, this has kept at least some herpers away from the Trans-Pecos region, meaning lost business. West Texas Chambers of Commerce may consider working with the State Legislature to overturn the road-cruising ban during the 2013 session in order to return these paying customers to the area.

For the Texas State Legislature

Based on write-in responses on this survey, a widespread perception among the herping community is that while well-intentioned, the State Legislature was insufficiently/incorrectly informed when they imposed the ban on road cruising in 2007. Many herpers feel unfairly targeted by this legislation and that their opinions as stakeholders were ignored. This report provides unvarnished comments regarding the perceived injustice of the ban, comments regarding the positive aspects of lifting the ban, and implications for not only the advancement of academic research, but improvement to the West Texas economy if the ban were lifted.



Western diamondback rattlesnake, *Crotalus atrox*, George West County. Photo by Chris McMartin.

