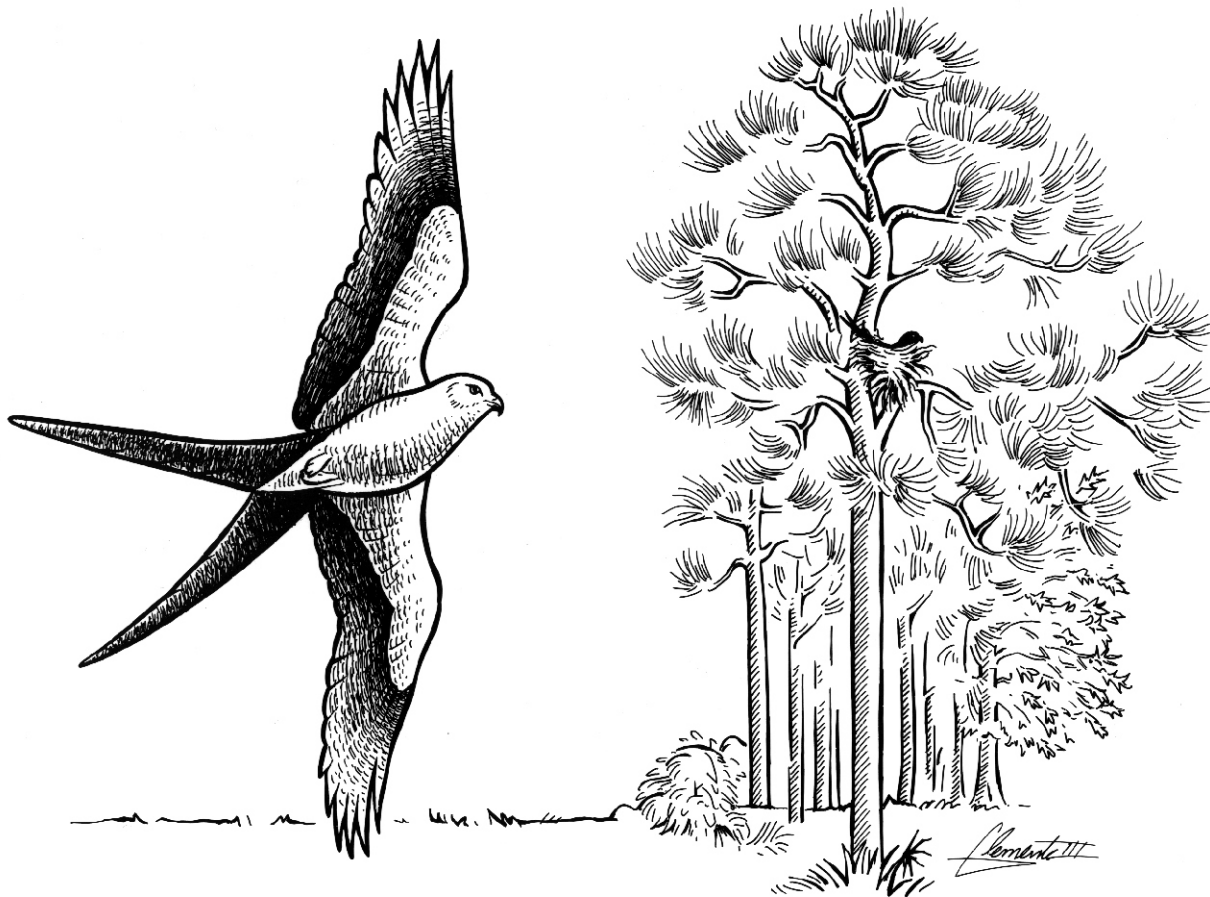


Swallow-tailed Kite in Texas

A Two-year Report



A Survey and Monitoring Project for 1998 and 1999

Compiled and written by

Clifford E. Shackelford and Gael G. Simons

In cooperation with

Joseph F. Hamrick, Raymond E. Brown, Dawn K. Carrie, N. Ross Carrie, and Don R. Dietz

THE QUESTIONNAIRE:

Swallow-tailed Kite

- ✓ Striking black-and-white plumage
- ✓ Deeply forked tail
- ✓ Long, narrow, pointed wings
- ✓ Size: Medium-sized raptor
- ✓ 24" length; 48" wing span
- ✓ Graceful, extraordinary flight
- ✓ Habitats: Bottomland forests and associated open lands (marshes, fields, cutovers, open freshwater)
- ✓ Breeding in Southeast Texas: mid-March thru mid-July

This project is adapted from Georgia Partners In Flight who graciously agreed to share their ideas with this monitoring project.






Questions or comments ?

Contact: State Coordinator
Texas Partners In Flight
3000 IH35 South, Suite 100
Austin, Texas 78704

Ph: 512-912-7045
Fax: 512-912-7058

E-mail: clifford.shackelford@tpwd.state.tx.us



Web site: <http://www.tpwd.state.tx.us/>

4200 Smith School Road
Austin, Texas 78744
PWD BR W7000-315 (02/00)

TEXAS PARKS AND WILDLIFE

HAVE YOU SEEN THIS BIRD?

Swallow-tailed Kite

We want your sightings.

Please complete this postage-paid mailer or submit online on our web page at <http://www.tpwd.state.tx.us> under Nature and then the Birding page.

Both the range and numbers in the U.S. of the Swallow-tailed Kite have been greatly reduced. A partnership that began in 1997 between Texas Partners in Flight, Texas Parks and Wildlife, Temple-Inland Forest and U.S. Forest Service has identified this species as needing conservation attention. You can help in determining the extent and concentrations of these kites in Texas by filling out the attached form and sending it to Texas Partners in Flight.

SURVEY FORM

If you have seen a Swallow-tailed Kite, please return this survey form. Your input in this project is invaluable. Postage has been paid for thanks to *Temple-Inland Forest*.

Date sighted: _____ Time of day: _____ Number seen: _____

Location (as specific as possible*): _____ County: _____

*for example: 1/2 mile north of Hwy. 190 bridge over Steinhagen Reservoir, Jasper Co.; a topo map will be sent to you shortly so you may plot the exact location.

Soaring: _____ or Perched: _____ Nest seen: _____

Carrying nest materials (sticks, Spanish moss): _____

Carrying food (large insects, snakes): _____

Comments: _____

Your Name _____

Mailing Address _____

E-mail Address _____

Phone Daytime: _____

Evening: _____

SUGGESTED CITATION
 Shackelford, C. E. and G. G. Simons. 2000. A Two-year Report of the Swallow-tailed Kite in Texas: A Survey and Monitoring Project for 1998 and 1999. Texas Parks and Wildlife PWD BK W7000-496 (6/00).

INTRODUCTION

This report reflects information sent in by the public on the form shown on the facing page. The information included herein involves only sightings of the Swallow-tailed Kite (*Elanoides forficatus*) for 1998 and 1999 in Texas, unless stated otherwise.

A total of 1,240 kite sightings were reported through this two-year project. In no way does this imply that 1,240 individuals exist in Texas. There is no feasible way to tag or mark these birds to identify them as individuals, so some individuals were undoubtedly seen and reported more than once. The purpose of this project is not to conduct a census of these birds. Instead, this is a project to: (1) gain some basic information and knowledge in Texas on a declining United States species, (2) give interested and concerned people a project to contribute their efforts towards, and (3) quantify and report sightings on this beautiful and graceful bird.

We are continuing this project for one more year (in 2000), thanks to funds provided by Texas Parks and Wildlife and Temple-Inland Forest, Inc. Please let us know about any Swallow-tailed Kites that you see.



ACKNOWLEDGMENTS

We thank Georgia Partners In Flight, especially E. J. Williams, for their cooperation in a similar project they have in their state. Other states have since followed Georgia and Texas (i.e., Mississippi). Dr. Ken Meyer and Chuck Hunter also contributed information to make this project happen. Thanks to Shelly Scroggs and Craig Scofield, both with TPW, for an earlier version of the GIS map on page 10.

A huge thanks goes to Gael Simons who put in a lot of time and effort from April 1998 until the compiling was completed in December 1999. She kept this project very organized and made numerous phone calls, e-mails, and mail-outs in addition to spending many hours glued to a computer as our chief database manager.

Layout by TPW's Creative Services Section. Printed by TPW's Print Shop.

SUBMIT SIGHTINGS ONLINE

The questionnaire is available on the TPW's web site at <http://www.tpwd.state.tx.us>. Go to the Nature page and look under "Birding."

OBSERVERS AND CONTRIBUTORS

We are grateful to the following contributors (over 200 folks!). Without their willingness to contribute their sightings, this report would not exist. In 1998, we printed 4,000 pamphlets and distributed them to various public facilities within the range of this species. We received 160 back that year, which was a 4% return rate. In 1999, over 350 responses came in (not including hawk watches). We would like to thank:

Liz Acree, Keith Aguillard, Kenneth Alexander, Sarah Alsobrooks, Ronnie and Donna Archer, Helen Arnold, John Arvin, Steve Astrich, Ron Atchison, Mike Austin, Jennifer Backo, Don Barker, Robert Bartlett, Bobby Bean, Patty Beasley, Michael Beathard, Dick Benoit, Jerry Berlett, Maxine Blanton, Tom Bledsoe, Hueber and Juanita Blevins, Nick Block, Thad Boudreaux, DeLaine Briscoe, Charles Brooks, Loretta Broussard, Ray Brown, Dan Bryant, Natasha Buchanan, Winifred Burkett, Lesley Bursnall, Mary Ann Calhoun, Eric Carpenter, Chris Carraway, Alvin Cearly, Ann Chen, Jack Chiles, Lanet Coleman, Fred Collins, Sherry Collins, Alice Cornwall, Dan Cornwall, Lois Cornwall, Caroline Cowry, Mary Cox, Charles Craddock, Carolyn Cuthbertson, John Cys, Rich Damron, David Dauphin, Ethel Davis, Freida Davis, Sue Davison, Mary Dougharty, Joe Drescher, Glen Duggan, Paul Dupree, Dana and Gregg Dziezyc, Kim Eckert, Mr. and Mrs. K.W. Eikenhorst, Joan Ellerbee, Harry Elliott, Paul Fagula, Merriwood Ferguson, Harold Fetter, Richard Fielding, June and Emil Fischer, Tony and Phyllis Frank, Dennis Franklin, Brush Freeman, Stuart R. Gary, Richard Gibbons, Elaine Giessel, Gay Gilbert, G.R. Goodall, Peter Gottschling, Mary Lou Grazier, Steven Grubbs, Jim Hailey, Karl Haller, Ken and Linda Hamm, Mary Hannigan, Michele Hannon, Keith Hansen, Alice and Roger Harbin, Peggy Harding, Siew Bee Hartman, Russell Harwood, John Haynes, Raymon L. Hedges, Rhandy Helton, Jose Hernandez, Charles Hilton, Bates Hobbs, Petra Hockey, Gary Hodne, Michael Hoke, Carroll Holt, Charlotte Holt, Jimmy Hoover, Barbara Hortvet, Ken Howard, Stacey Huffman, Charles Hughes, Crystal Hughes, Lee Hutchins, Marshall Iliff, Glen Monroe Irby, Neil Iverson, Sandy Jesperson, Mack Jones, Shelley Jones, Harrison Jordan, Paula Kennedy, Floyd Killen, Nancy Kirschbaum, Greg Lasley, Dan Leger, Winston Leifester, Ray Little, Ronnie Logan, Robert and Kay Lookingbill, Andy Loranger, Matt Luna, Donna Maddox, Lee Malak, Rob Malone, Deborah Markland, Patrick Markland, Mary Jo Martin, C.H. Mayhood, Suzanne McCandless, Mark and Sharon McClelland, Jerry McKinley, Don McNaughten, Mark McQueary, Jim and Pat McKinley, Ray Milentz, Herman Miller, Trent Miller, R.D. Mitchell, Kelly Mizell, Ellen Montgomery, Angel Montoya, Jack Moody, Jack and Elaine Morman, Gretchen Mueller, Jenna Mueller, Walter

Mueller, John Muldrow, Andy Newman, Art and Barbara Olsen, Albert Olson, Brent Ortego, June Osborne, David Paling, John Parsons, R.L. Patterson, Ellen Pickett, Dick Pike, Randy Pinkston, Charles Post, Jackie Post, Jack Pulliam, Mendy Rabicoff, Jo Redden, Brent Reeves, George Regmund, Martin Reid, Larry Rice, Listen Rice, Sherrie Roden, Richard Rosche, Jane Rose, Bob Row, Rod Rylander, David Sarkozi, Willie Sekula, Cliff Shackelford, J.W. Sifford, Gael and Leslie Simons, Grady and Lu Skillern, Jim Smith, Steven Spenser, Johnny Stafford, Judy Stanley, Mark Steuer, Ceal Sterling, Murt Sullivan, Lauren Tierney, Barbara Tilton, Buddy Tilton, Mike Tilton, Shannon Tompkins, Judy Travis, Mary Ann Tucker, Chris and Don Turner, Brenda Tuttle, Jerry Tuttle, John Tuttle, Darrell Vollert, Gary Waggerman, Bill Wagner, Bill Ward, Sam Ward, Lloyd Weaver, Jim Weber, Ron Weeks, John West, Thomas Wharton, Matt Whitbeck, Jane Wicker, Mary Sue Williams, Bennett Willis, Clayton Wolf, Jim Yantis, Tommy Yoes, and Roy Zipp. A special *thanks* goes to Dick Benoit who, while doing various hawk watches in 1998, sighted 41 out of the 277 individuals reported that year. That's almost 15% of all the kites reported to the project that year.

NOTES ABOUT SOME OF THE CONTRIBUTORS IN 1998

- Loretta Broussard of Chevron kept people informed about these kites in her area (Orange County) by writing about them in Chevron's Employee Newsletter called *Shades of Orange*.
- Mendy Rabicoff heard that Temple-Inland Forest was a partner on this survey and he wrote that he was very excited and happy to help.
- Several sightings were received from people not necessarily looking for kites, but who were told of this project by U.S. Forest Service personnel.
- Rich Damron was in the right place at the right time when the young birds fledged the nest in Orange County. He described their attempts to stay on a branch, right side up. One adult was bringing food while the other adult watched from nearby.
- Dick Benoit counted 19 Swallow-tailed Kites in one group. He did a Sylvan Beach "unofficial" hawk watch on his own for roughly 5 hours per day for 31 observation days (151 hours of total observation) from March 8 to May 10.
- While conducting a Breeding Bird Survey in Newton County, Cliff Shackelford and Ray Brown saw a tight flock of seven kites at one of their survey stops. This was the largest flock seen away from the coast this year.

NOTES ABOUT SOME OF THE CONTRIBUTORS IN 1999

- June and Emil Fischer of Vidor in Orange County, had a Swallow-tailed Kite nest just outside their front door, literally! Two birds fledged and remained in their yard for quite some time. The fledglings moved from tree to tree while the parents continued to feed them for a period of time.
- Charles Post of Liberty County took the lead in getting other birders in the county on board with this project. He collected sightings for the entire season from members of his community and sent them to us. His efforts, combined with the enthusiasm of the Liberty County birders, have given us a 'great picture' of kite activity in Liberty County. Members of this birding group witnessed adults feeding small prey items to their young kites after they had fledged in July, but no active nest was found.
- Barbara Tilton, also from Liberty County, made the search for kites a family and neighborhood affair. She even got her son, Mike, involved. He found a kite on the Liberty/Hardin county line on September 30, 1999, a very late sighting in the season for the area.
- In Orange County, Dan Cornwall, with the help of his neighbor, Bill Ward, kept a record of almost daily sightings around their neighborhood. Their records drew Gael Simons and Trent Miller, both of Austin, to the area where they found a newly-fledged kite sitting next to a nest with the parents swooping down to feed it.
- Kenneth Howard in Newton County had kites displaying on his property for several weeks. He took wonderful photographs that show kites capturing insects over some fields. The number of kites he saw daily gradually increased until a total of 18 were seen over one of his fields on July 28, 1999.

WHY THE INTEREST IN THIS SPECIES?

Both the range and numbers in the U.S. of the Swallow-tailed Kite have been greatly reduced. A partnership that began in 1998 between Texas Partners in Flight, Texas Parks and Wildlife, Temple-Inland Forest, and the U.S. Forest Service has identified this species as needing conservation attention. Outdoor enthusiasts such as birders, hikers, hunters, anglers and the general public can help in determining the distribution and concentrations of these kites in Texas by filling out the survey form and sending it to Texas Partners in Flight, 3000 IH35 South, Suite 100, Austin, Texas 78704.

WHAT DO THESE BIRDS LOOK LIKE AND WHERE ARE THEY FOUND?

There are three species of kites regularly found in Texas (Swallow-tailed, Mississippi, and White-tailed kites), plus a fourth one (Hook-billed Kite) found only along the Lower Rio Grande Valley and a fifth one (Snail Kite) that has been found once or twice and is considered an accidental. None of them is as elegant as the Swallow-tailed Kite. This species is rarely misidentified due to their size, striking appearance, and graceful aerial displays. During the day, they are typically seen flying low over treetops in search of small vertebrates or diving in pursuit of flying insects over open areas. The silhouette is distinctive with long, pointed wings and a deeply forked tail. Swallow-tailed Kites rarely flap their wings but continuously rotate their tail, sometimes nearly 90 degrees. When flying into the wind, they seem to hang motionless. Recently fledged birds have very short, stubby "scissors." Males and females are indistinguishable by plumage or size. The species' best distinguishing features include:

- striking black-and-white plumage
- deeply forked tail
- long, narrow, pointed wings that allow them to have graceful, extraordinary flight
- medium-sized raptor about 24" body length and 48" wing span
- inhabits bottomland forests and associated open lands (marshes, fields, cutovers, open freshwater, etc.)

In the U.S., the Swallow-tailed Kite currently nests only in the states along the Gulf Coast and other adjacent states; this is less than half of its historical breeding range in the U.S. Occasionally, these kites are seen statewide in Texas during spring and fall migration as well as all along the Gulf Coast. When nesting in Texas, Swallow-tailed Kites are most likely to be seen near large rivers, particularly the lower Trinity, lower Neches and lower Sabine river watersheds and associated bottomland hardwood forests. It is believed that they breed from mid-March through the end of June only in the southeast part of the state where preferred habitat exists. It is also believed that most of the Swallow-tailed Kites nesting in Texas migrate south each fall to the Coastal Prairies and then, surprisingly, head east along the Gulf to Florida. They then *island hop* down to the wintering grounds in South America. Like all migrating raptors, this species rides the thermals that are only produced over land so they do not cross the Gulf waters for long distances. Therefore, it is a circum-Gulf migrant versus a trans-Gulf migrant (the latter is a group which includes most warblers, vireos, tanagers, etc.).

NESTING RECORDS

Before this project, there were only three documented nests in Texas since c.1911: 1994 in Tyler County (discovered by Ray Brown and Howard Williamson) and 1996 and 1997 (the same site) in Chambers County (discovered by Grady and Lu Skillern). Word of this project produced the fourth and fifth known nests of this species in Texas. The fourth nest, surprisingly was found on a high school campus in Orange County in April, 1998 and a Temple-Inland check for \$500 was awarded to their Future Farmers of America (FEA) program. For a look at a video news (media) release on this great story produced by TPW, check out this web site:

<http://www.tpwd.state.tx.us/news/tv/tvnews.htm>. The fifth nest was located in the same county approximately 15 miles due west of the fourth nest, also on private property. Temple-Inland again made a \$500 reward to the owner's of this property.

THE SWALLOW-TAILED KITE WATCH

Sixty folks watched patiently for birds in the heat on the weekend of August 14-15, 1999 all along the Gulf Coast by participating in the first-ever Swallow-tailed Kite Watch! That's right, 60 folks volunteered their time in hopes of spotting migrating Swallow-tailed Kites. Twelve sites were on board that weekend from 9 a.m. to 3 p.m. from Cameron Parish, Louisiana down the coast to two sites in the Lower Rio Grande Valley of Texas; there's over 625 miles of coastline between those two end points. Two of the 12 sites included folks that were already counting migrating raptors for other long-term projects, but we'd like to include them just the same. This Watch! is just a small part of a two-year partnership of Texas Parks and Wildlife (TPW), Texas Partners in Flight, Temple-Inland Forest, and the U.S. Forest Service. Huge thanks to Gael Simons of Austin who co-coordinated this weekend event and is compiling statewide sightings of this species for a second year now.

A total of eight Swallow-tailed Kites was seen at two of the participating sites--seven at the Smith Point Hawk Watch (HW) Tower on the Candy Abshire Wildlife Management Area and one at Brazos Bend State Park. The other 10 sites tallied only zeroes for the Swallow-tailed Kite. Interestingly, both sites that had Swallow-taileds were TPW properties, but the key is that they are located adjacent to major waterways that kites use as travel corridors. Breeding Swallow-taileds funnel out of the Pineywoods from mid-August through September navigating along such waterways, much like humans travel on highways.

Other highlight species seen at one or more of the participating sites were Magnificent Frigatebirds, Wood Storks, Anhingas, lots of swallows, 11 other species of raptors, both vultures and a lot more. The 'other' raptors were: Osprey, Peregrine Falcon, Northern Harrier, Mississippi Kite, White-tailed Kite, Swainson's, Red-tailed, Broad-winged, Red-shouldered, Harris's and Cooper's hawks. Obviously some of the above raptors were non-migrants. Not a single Sharp-shinned was reported.

PARTICIPANT LIST BY SITE

BRAZOS BEND SP:

Karla and John Bouck
John Price
Lynne Ray
Fred Land
Donnie Albetie
Sharon Hanzik
David Heinicke

SEA RIM SP:

John Whittle
Joe Halbrook
Steve Mayes
Ken Sztraky
Sue Davison
Barbara Tilton

SANTA ANA NWR:

Michael Delesantro
Ray Bieber and Lynn Bieber-Weir
Tim Brush

J. D. MURPHREE WMA:

Ray Brown
Chris Collins
Cliff Shackelford

SABINE NWR:

Dawn and Ross Carrie
Roxie Rochat
Sheila Hargis

SABAL PALM AUDUBON CENTER AND SANCTUARY:

Jimmy Paz
Eugene Rouse
Mel Pineda
Lee Zieger

LOWER NECHES WMA:

Gael and Leslie Simons
Laura Karr

HAZEL BAZEMORE COUNTY PARK:

Patty and Bill Beasley
Joel Simon
Fernando Ramos
Glenn Swartz
Bob and Jo Creglow
Harold Fetter

McFADDIN NWR:

Matt Whitbeck
Michele Hannon

FORT ANAHUAC PARK

BOARDWALK:
Terry Turney

SMITH POINT HAWK WATCH TOWER AT THE CANDY ABSHIRE WMA:

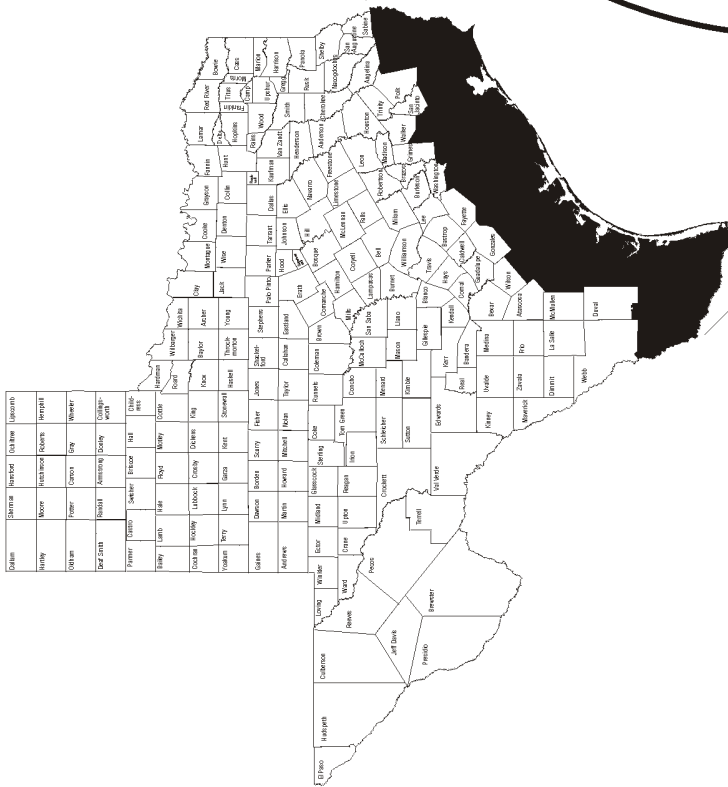
Dick Benoit
Mary Dodson
Sumner Dana
Dave Edwards
Winnie Burkett
Bob Gallaway
Wayne McWhirter
Jerri Kerr
Kyle McCarty

BRAZOSPORT HOSPITAL IN LAKE JACKSON:

Sherry and Tom Collins
Tom Taroni
Warren Pruess
Jim Renfro
Rose Wagner
Olivia and Charles Brower

Participating Sites in the Swallow-tailed Kite Watch

14-15 August 1999



LEGEND

Dots may be approximate locations.

1. Sabine NWR, LA.
2. Lower Neches WMA: Old River Unit
3. J.D. Murphree WMA near Taylor Bayou
4. McFaddin NWR
5. Sea Rim SP Observational Tower
6. Fort Anahuac Park Boardwalk
7. Smith Point Hawk Watch Tower at Candy Abshire WMA
8. Brazos Bend SP
9. Lake Jackson (Roof top of Brazosport Hospital)
10. Hazel Bazemore County Park and Hawk Watch Site
11. Santa Ana NWR
12. Sabal Palm Grove Audubon Center and Sanctuary

HOW WE ROUND UP THE PARTICIPANTS!

POSTED TO THE TEXBIRDS LISTSERV ON 28 JUNE 1999

Dear TexBirders,

Are you looking for some exciting birding in mid-August along the coast in Texas when it is absolutely miserable with humidity and biting insects? If so, we have just the event. As part of the two-year citizen-science survey and monitoring project on Swallow-tailed Kites sponsored by Texas Parks and Wildlife, Texas Partners In Flight, Temple-Inland Forest and the U.S. Forest Service, we are hosting a Swallow-tailed Kite Watch! on the weekend of August 14-15 all along the coastal prairies of Texas. We hope that other Gulf States will join in as well. We need volunteers to be stationed at one of the many towers/platforms/sites for this survey. We have 10 sites on board so far all along the coast in Texas--from the Sabine NWR (in Louisiana just east of the LA/TX border) all the way to the Lower Rio Grande Valley

Most of our sites are concentrated on the Upper Texas Coast where the majority of the birds are expected to be detected, but that's what this event is all about--to see where they are going and in what kind of numbers! All sites will be expected to watch the skies from 9:00 a.m. to 3:00 p.m. both Saturday and Sunday. We feel that we can capture a good picture of what's going on during this peak time of Swallow-tailed Kite southbound migration. This leaves time in the late afternoon for some extracurricular birding like seeking out shorebirds that will be in good numbers then.

Gael Simons will be coordinating the towers/platforms/sites and will be plugging volunteers into each site as field assistants (more eyes to find those high-flying raptors). There will be a captain or two at each site and they will need some help watching the skies. Things you will need include cold water, bug spray, sun screen, hat, binoculars and some friends or family to join in. We realize that the outdoor conditions will be miserable, but Swallow-tailed Kite Fall Migration peaks a full month or more before the accipiters, broad-wingeds and others. Thanks to a pilot survey in 1998 by Dick Benoit, we feel that we've picked the best date for such an event.

We have lookout points ready to go at the following locations: (1) Sabine NWR in Cameron Parish, LA., (2) J.D. Murphree WMA west of Port Arthur in Jefferson Co., (3) Lower Neches WMA near Bridge City in Orange Co., (4) Smith Point Hawk Watch Tower at the Candy Abshire WMA in Chambers Co., (5) Lake Anahuac area in Chambers Co., (6) Sea Rim SP and/or McFaddin NWR in Jefferson Co., (7) Lake Jackson area in Brazoria Co., (8) Hazel Bazemore Park near Corpus Christi in Nueces Co., (9) on or near the Sabal Palm Grove Sanctuary in Brownsville in Cameron Co., (10) Santa Ana NWR near Edinburg in Hidalgo Co. and hopefully more. If you know of another great vantage point to recommend, please let us know BUT we will hope that you can also be the captain of that site. We need muscle!

Hope to see you out-and-about in the good 'ole Texas summer heat! The Swallow-tailed Kites sure will be. To sign up, please contact Gael Simons at: <lsimons@inetport.com>.

SELECTED READING

(For information on the natural history and biology of this bird)

- Bensen, K. J. 1992. Dynamics of an American Swallow-tailed Kite communal roost at Corkskrew Swamp Sanctuary, Florida. *Fla. Field Nat.* 20:65-71.
- Brown, R. E., J. H. Williamson and D. B. Boone. 1997. Swallow-tailed Kites nesting in Texas: past and present. *Southwestern Naturalist* 42:103-105.
- Cely, J. E. 1973. A nest of the Swallow-tailed Kite at Wambaw Creek, Charleston County, South Carolina. *Chat* 37:23.
- Cely, J. E. 1979. Status of the Swallow-tailed Kite and factors affecting its distribution. Pp. 144-150 *in* Proc. of the first South Carolina endangered species symposium (D. M. Forsythe and W. B. Ezell, Jr., eds.). South Carolina Wildl. and Mar. Resour. Dept., Columbia, SC.
- Kilham, L. 1980. Pre-nesting behavior of the Swallow-tailed Kite, including interference by an unmated male with a breeding pair. *J. Raptor Res.* 14:29-31.
- Lee, D. S., and M. K. Clark. 1993. Notes on post-breeding American Swallow-tailed Kites, *Elanoides forficatus* (Falconiformes: Accipitridae), in north-central Florida. *Brimleyana* 19:185-203.
- Mager, W. 1967. Nestling Swallow-tailed Kite banded in Key Largo, recovered in Brazil. *Fla. Nat.* 40:13-14.
- Meyer, K. D. 1990. The status of four species of kites in the southeastern United States. Pp. 38-49 *in* Proceedings of the southeastern raptor management symposium (B. G. Pendleton, ed.). National Wildlife Federation, Washington, D. C.
- *Meyer, K. D. 1995. Swallow-tailed Kite (*Elanoides forficatus*). *In* The Birds of North America, No. 138 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D. C.
- Millsap, B. A. 1987. Summer concentrations of American Swallow-tailed Kites at Lake Okeechobee, Florida, with comments on post-breeding movements. *Fla. Field Nat.* 15:85-92.
- Snyder, N. F. R. 1974. Breeding biology of Swallow-tailed Kites in Florida. *Living Bird* 13:73-97.

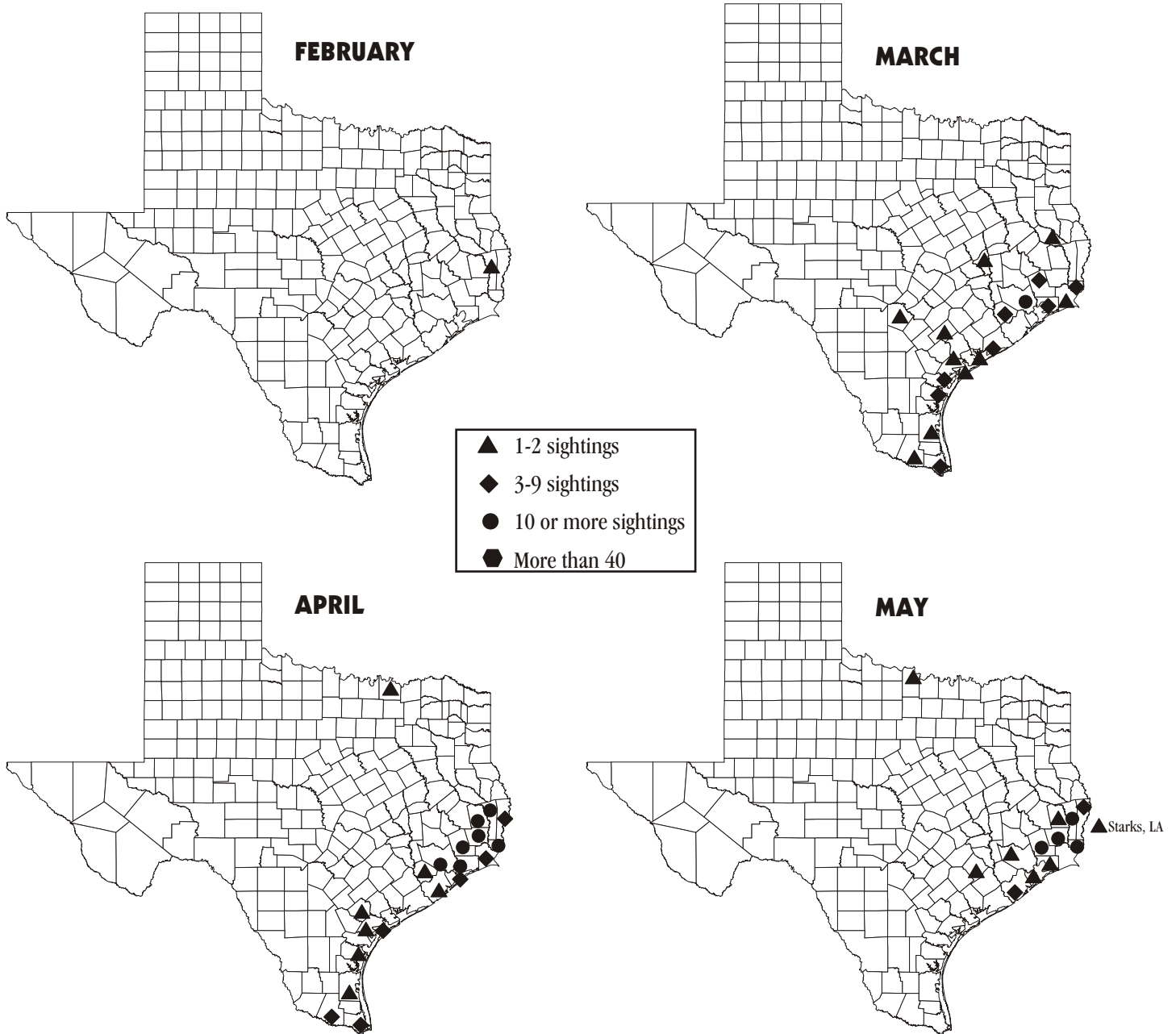
* the References section in this publication is very thorough and inclusive.



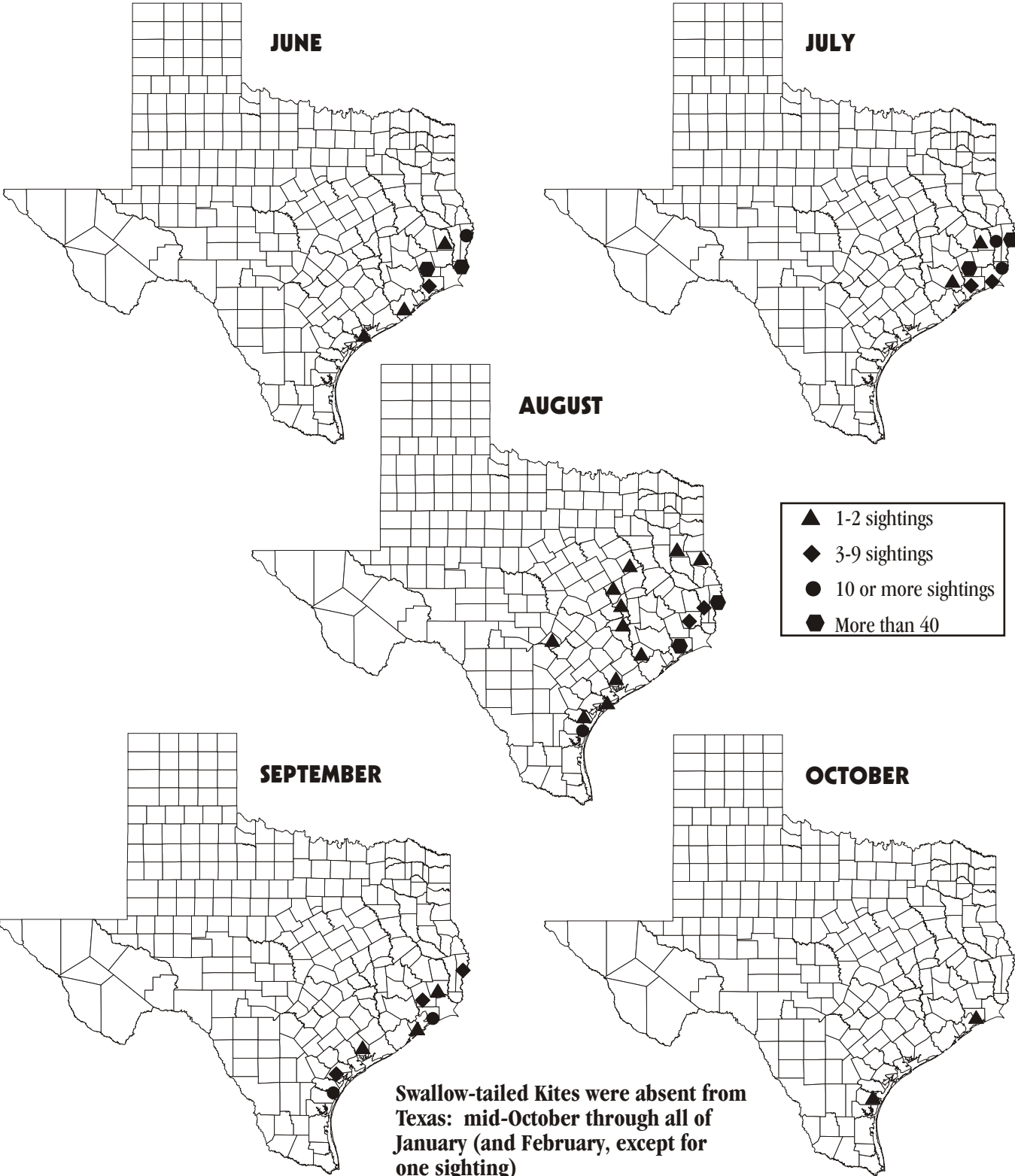
THE EARLIEST AND LATEST DATES OF SIGHTINGS REPORTED FROM 1998 THROUGH 1999 IN TEXAS



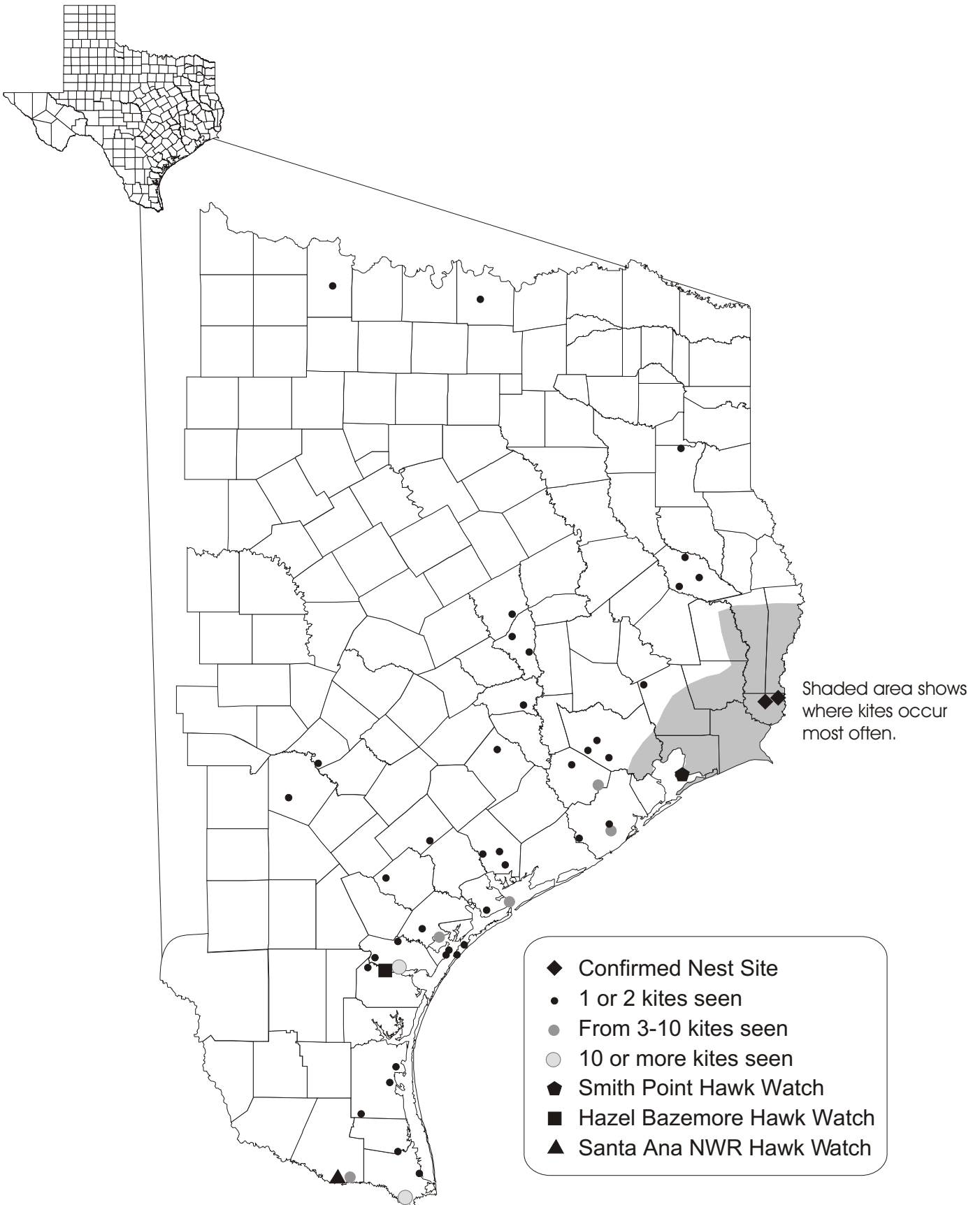
KITE SIGHTINGS BY MONTH



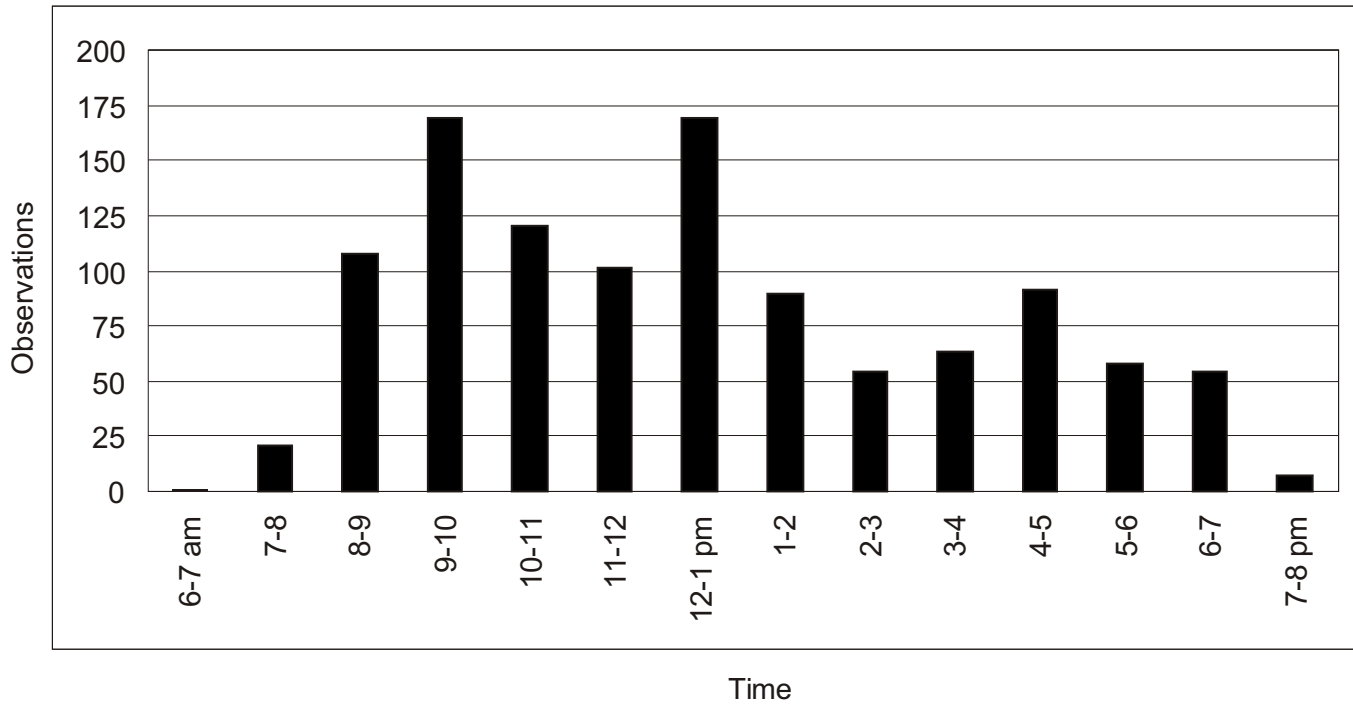
KITE SIGHTINGS BY MONTH



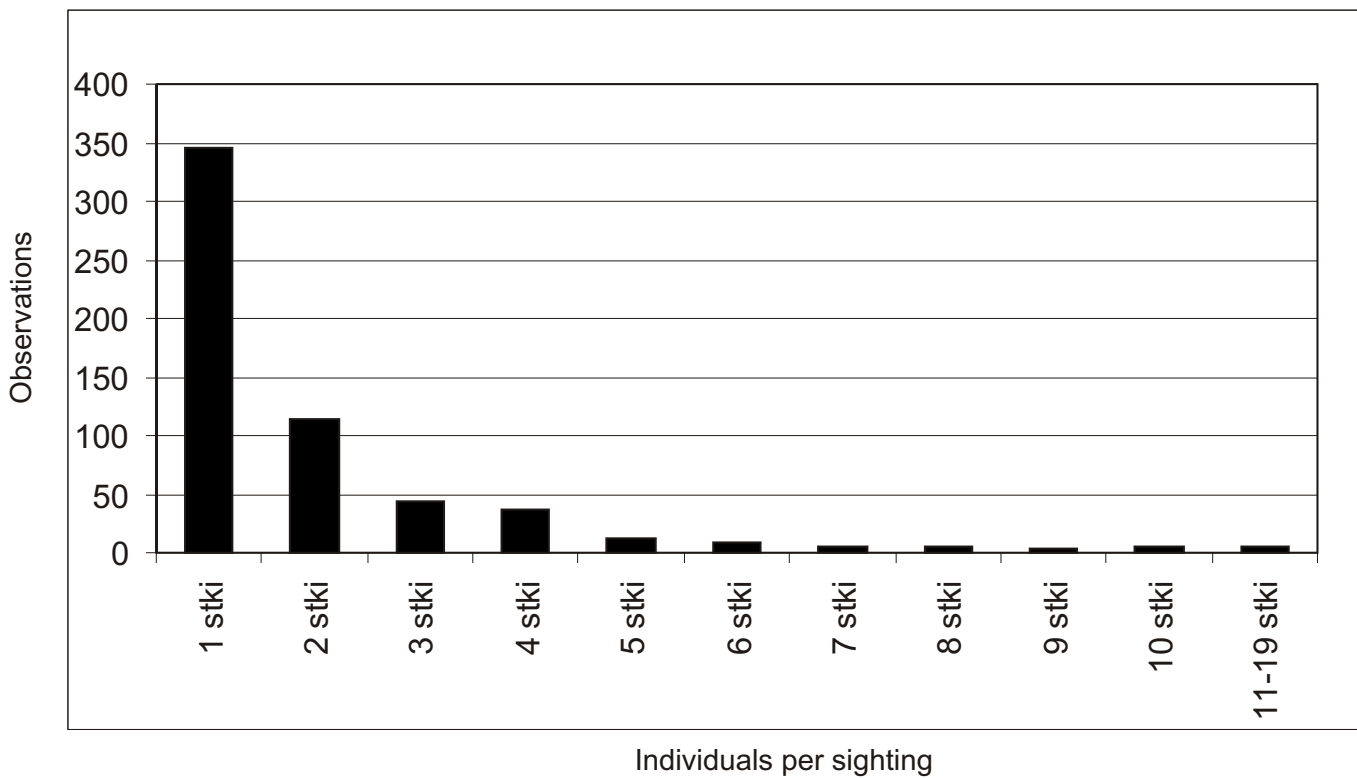
SWALLOW-TAILED KITE SIGHTINGS FOR 1998 AND 1999



TIME OF DAY OF SIGHTINGS

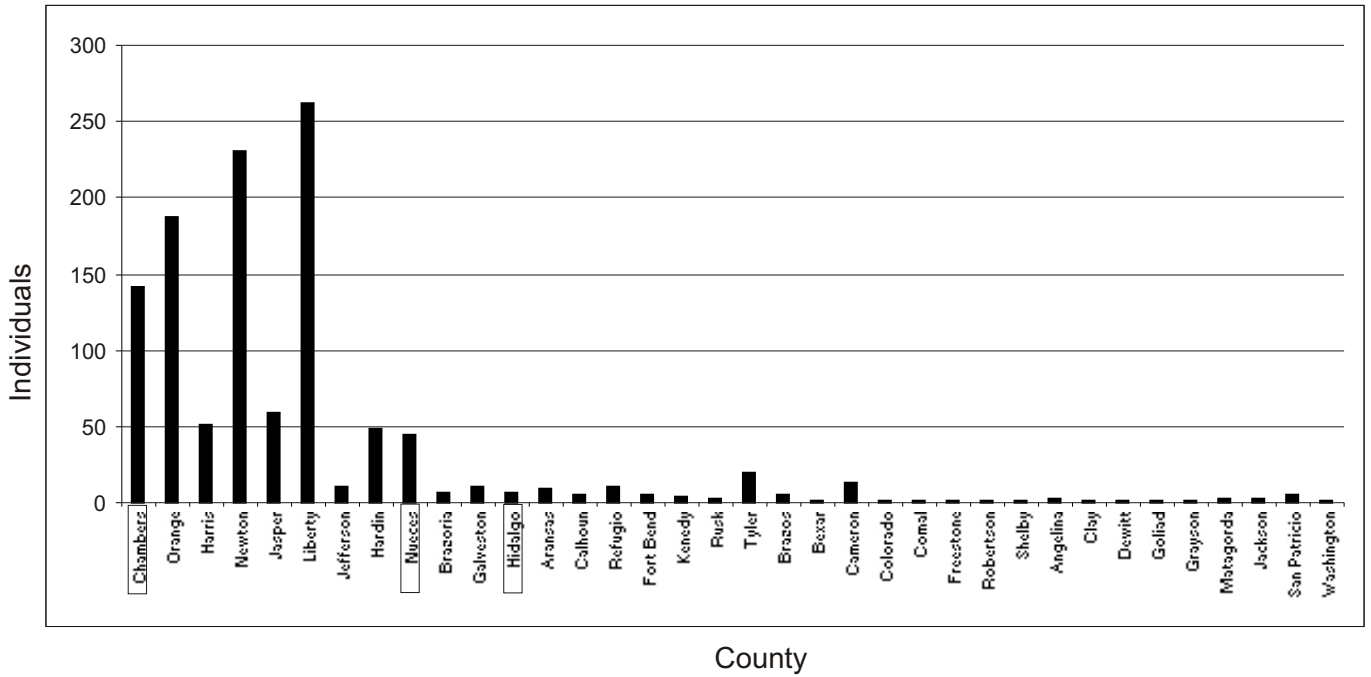


NUMBER OF SWALLOW-TAILED KITES SEEN PER OBSERVATION

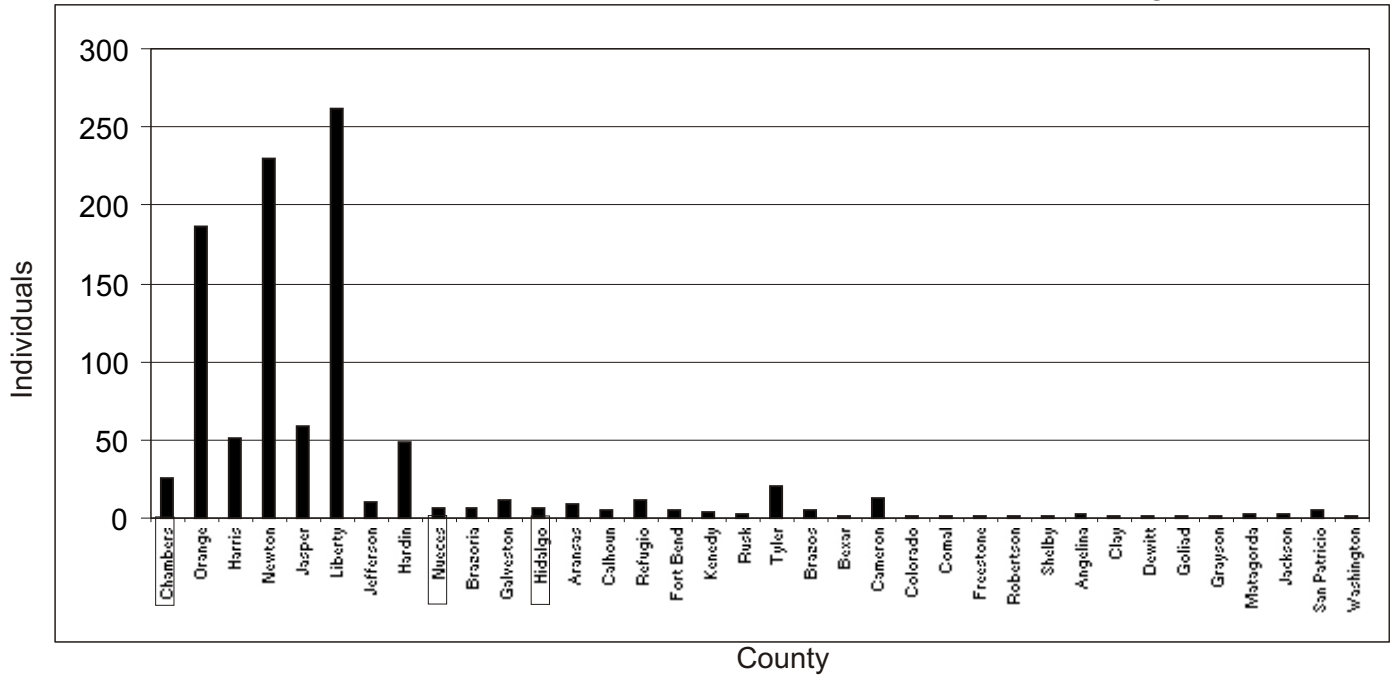


LOCATION OF SIGHTINGS BY COUNTY

Including Hawk Watches



Not including Hawk Watches



Counties in boxes have a Hawk Watch

OFFICIAL HAWK WATCHES

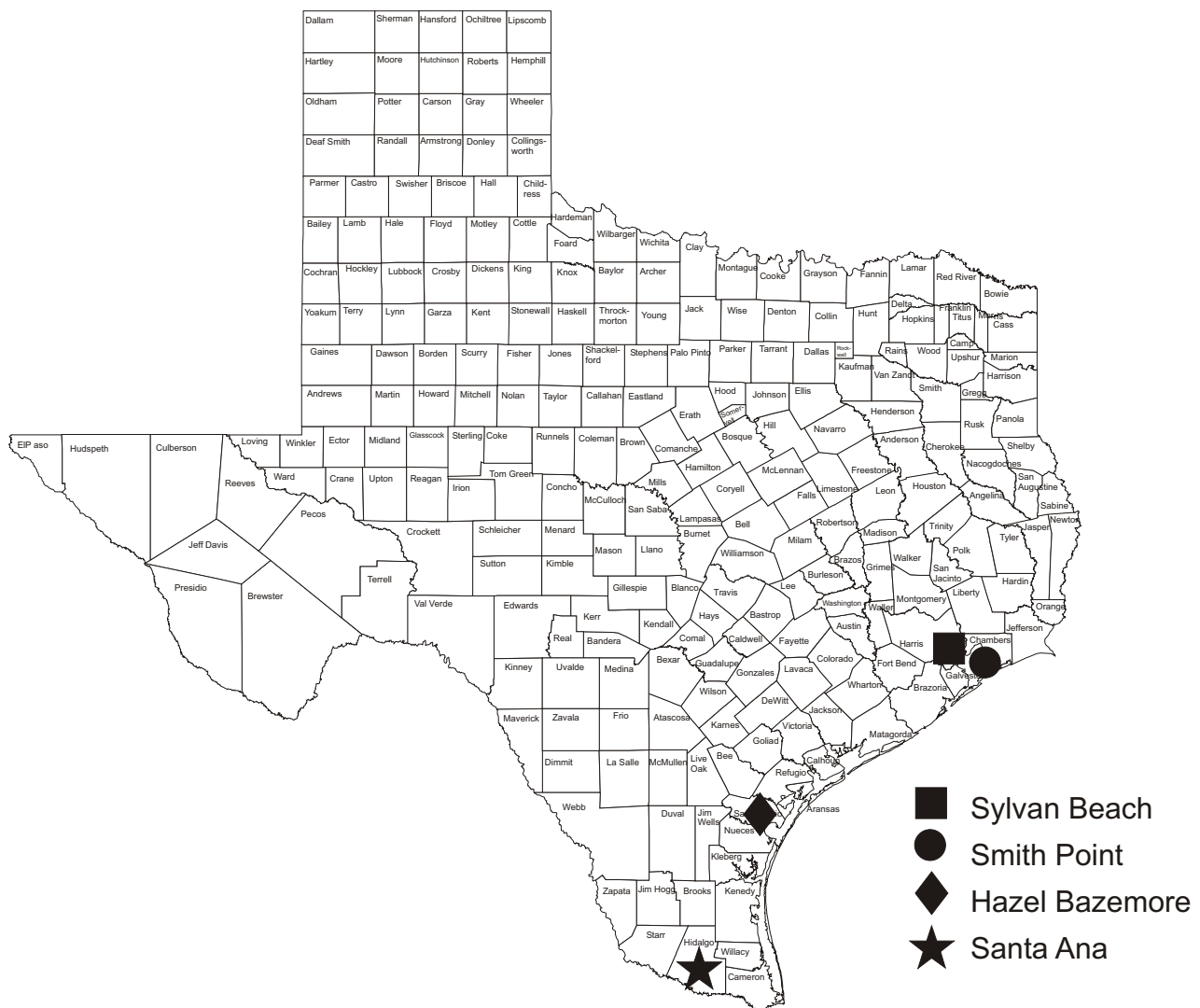
There were only three official Hawk Watches in 1998:

- Smith Point at Candy Abshire Wildlife Management Area near Anahuac with 59 kites seen (21% of the kites reported to this project that year).
- Hazel Bazemore near Corpus Christi with 6 kites seen (2% of the kites reported to this project).
- Santa Ana National Wildlife Refuge near McAllen conducted a spring survey with 2 kites seen (less than one percent of the kites reported to this project that year).
- “Sylvan Beach” (an unofficial hawk watch site, but an important site in La Porte in Harris County reported by Dick Benoit) with 16 kites seen (roughly 6% of the kites reported to this project that year).

There were only three official Hawk Watches in 1999:

- Smith Point at Candy Abshire Wildlife Management Area near Anahuac with 54 kites seen (6% of the kites reported to this project that year).
- Hazel Bazemore near Corpus Christi with 31 kites seen (3.5% of the kites reported to this project).
- Santa Ana National Wildlife Refuge near McAllen conducted a spring survey with 2 kites seen (0.2% of the kites reported to this project that year).
- “Sylvan Beach” had an unofficial spring survey with 5 kites seen (0.6% of the kites reported to this project that year).

For more information on the hawk watches in Texas, go to <http://www.electrotex.com/aoc/hawkwatch.htm>



RESULTS FROM 1998

Observations of a total of 277 Swallow-tailed Kite individuals were submitted to this project in 1998. Detailed information appears in the Appendix.

- The three earliest dates were: February 1, March 4 and 14.
- The three latest dates away from a Fall Hawk Watch were: 26, 28 and 30 of August.
- The three latest dates at a Fall Hawk Watch were: 19, 26 and 27 of September.

RESULTS FROM 1999

Observations of a total of 879 Swallow-tailed Kite individuals were submitted to this project in 1999. Detailed information appears in the Appendix.

- The three earliest dates were: March 4, 14 and 18.
- The three latest dates away from a Fall Hawk Watch were: September 18, 21, and 30.
- The three latest dates at a Fall Hawk Watch were: September 21, October 4, and 10.

INTERESTING STATISTICS

- Only 7% of the birds reported were seen as they were perched, while the remaining 93% were seen in flight.
- Almost 6% of the birds reported were seen carrying items, either food or nest material.
- Observers averaged 2.1 kites per sighting (away from the hawk watches):
 - 57% of sightings involved a single kite,
 - 19% of sightings involved two kites,
 - 8% of sightings involved three kites,
 - 13% of sightings involved four to ten kites, and
 - 2% of the sightings were of groups of 10-18 individuals (a tight, circling flock of 19 kites was seen at Smith Point Hawk Watch in Chambers County by Dick Benoit)

NESTING FACTS ON SWALLOW-TAILED KITES IN TEXAS

- Nest building and initiation: starts in mid- to late March
- Egg-laying and incubation: may begin from late March through early May; incubation lasts 28-32 days
- Nestling period: from approximately late April to mid-June; lasts about 35 days from time of hatching to flying
- Fledging period: young leave nest in May or June, depending on date of initiation; no nests are expected to still be active after the first of July

SUGGESTED LOCATIONS FOR FINDING SWALLOW-TAILED KITES IN TEXAS

From late March to mid-August, go to the town of Liberty in Liberty County. Simply look up in the sky as you are driving through the city and residential areas. A park in northwestern Liberty called Lake Travis Park is a good place to look. Also, look behind the newspaper's office, The Vindicator. The Walmart parking lot is a good place to look as well since you have a nice peripheral view here. The Trinity River bottom between the towns of Liberty and Dayton on Highway 90 is a good place to go in July, but watch for traffic, as it is difficult to pull over. May through mid-August is probably the best time to visit this site.

From late March to mid-July, drive north on Highway 87 from IH-10 about 5-6 miles. Turn onto FM 3247 and search the skies. If this fails, return to Hwy. 87 and proceed further north. Keep your eyes glued to the skies, especially during the hours when kites are most often seen soaring (see page 11). Late April through mid-July is the best time of the year.

APPENDIX

1998

HBHW=Hazel Bazemore Hawk Watch
SPHW=Smith Point Hawk Watch

Date	Time	Qty.	County	Observer
2/1/98	10:00am	1	Jasper	Andy Newman
3/4/98	8:30am	3	Orange	Dan Cornwall
3/14/98	8:00am	1	Refugio	Rod Rylander
3/14/98	9:20am	2	Chambers	Charles Craddock
3/17/98	12:30pm	3	Harris	Dick Benoit
3/21/98	unknown	1	Harris	Paul Fagula
3/21/98	4:00pm	1	Chambers	Kelly Mizell
3/26/98	unk	1	Fort Bend	Jim Smith
3/28/98	1:00pm	1	Harris	Mary Jo Martin
3/28/98	12:10pm	1	Chambers	Tony&Phyllis Frank
3/28/98	10:15am	1	Bexar	Mrs. Carolyn Cuthbertson
4/1/98	5:00pm	2	Chambers	David T. Dauphiin
4/1/98	9:30am	2	Orange	Alice Cornwall
4/4/98	12:00pm	3	Harris	Dick Benoit
4/6/98	10:30am	1	Hildago	contact Jenna Mueller
4/6/98	10:00am	1	Jefferson	Matt Whitbeck
4/6/98	10:15am	1	Hildago	Gay Gilbert
4/6/98	12:00pm	1	Harris	Dick Benoit
4/7/98	10:00am	1	Jefferson	Matthew Whitbeck
4/7/98	9:00am	1	Galveston	Mary Hannigan
4/8/98	2:00pm	1	Harris	John Muldrow
4/10/98	11:30am	1	Hildago	G Gilbert
4/10/98	5:20pm	1	Aransas	Nancy Kirschbaum
4/10/98	5:00pm	1	Brazoria	Robert & Kay Lookingbill
4/10/98	12:00pm	2	Orange	Mr. &Mrs. K.W. Eikenhorst
4/13/98	12:00pm	1	Refugio	G.R.Goodall
4/13/98	unk	1	Harris	George Regmund
4/14/98	11:00am	1	Harris	Paula Kennedy
4/14/98	10:30am	1	Cameron	Gary Waggerman
4/18/98	9:00am	1	Hildago	Dan Leger
4/18/98	5:00pm	2	Kenedy	AlvinCearley
4/18/98	4:50pm	1	Harris	Paula Kennedy
4/19/98	1:30pm	1	Refugio	Rod Rylander
4/20/98	2:50pm	1	Harris	AH.LH
4/21/98	11:15am	2	Harris	PK
4/21/98	11:45am	1	Harris	Paula Kennedy
4/21/98	3:30pm	1	Harris	Paula Kennedy
4/22/98	10:50am	1	Harris	PK
4/22/98	11:45am	1	Harris	Paula Kennedy
4/22/98	5:25pm	1	Harris	Paula Kennedy
4/23/98	10:00am	1	Chambers	RL Patterson
4/23/98	1:00pm	1	Hardin	Stuart R Gary
4/25/98	10:30am	1	Jefferson	Judy Travis
4/25/98	9:30am	1	Galveston	Thad Boudreaux
4/26/98	8:30am	1	Brazoria	Richard C. Rosche
4/27/98	6:45pm	6	Newton	Bill Wagner
4/27/98	11:00am	2	Aransas	Rod Rylander
4/27/98	2:00pm	1	Fort Bend	David Paling
4/28/98	11:30am	2	Galveston	Gretchen Mueller
4/28/98	12:00pm	1	Harris	Dick Benoit
4/28/98	3:30pm	1	Harris	Dick Benoit
4/29/98	11:00am	4	Harris	Dick Benoit
4/30/98	1:00pm	2	Harris	Dick Benoit
5/2/98	6:00pm	1	Newton	Bob Row
5/3/98	10:00am	1	Harris	Jim & Pat McKinley
5/4/1998	10:30am	1	Louisiana	Glen Duggan
5/4/98	4:00pm	1	Brazoria	Glynn Monroe Irby
5/7/98	4:00pm	1	Orange	Dan Cornwall
5/9/98	5:55pm	3	Brazoria	Ron Weeks
5/9/98	10:00am	3	Jasper	Rhandy Helton
5/10/98	10:00am	1	Harris	Dick Benoit
5/12/98	6:00pm	1	Hardin	Shelley Jones
5/13/98	5:45pm	1	Colorado	Rob Malone
5/13/98	10:00am	1	Jasper	Roy Zipp
5/19/98	2:00pm	1	Jasper	Tom Bledsoe
5/19/98	4:15pm	4	Jasper	Bill Wagner
5/20/98	10:00am	3	Jasper	Bob Row
5/20/98	12:00pm	2	Orange	Michael Hoke
5/20/98	11:00am	2	Orange	Lanet Coleman
5/21/98	12:15pm	1	Jasper	Bill Wagner
5/22/98	12:30pm	1	Hardin	Michelle Hannon
5/24/98	5:00pm	1	Hardin	Lesley Bursnall
5/26/98	8:20am	2	Orange	Michael Hoke
5/26/98	2:00pm	1	Liberty	Brent Ortego
5/27/98	10:00am	2	Jasper	Rhandy Helton
5/30/98	10:30am	1	Newton	Ronnie & Donna Archer
6/2/98	10:30am	1	Newton	Charles Hughes
6/3/98	12:00pm	2	Orange	Dennis Franklin
6/5/98	9:00am	1	Orange	Sarah Alsobrooks
6/6/98	7:35am	7	Newton	Cliff Shackelford

Date	Time	Qty.	County	Observer
6/6/98	12:00pm	1	Liberty	Ray Milentz
6/7/98	1:00pm	2	Orange	Dr. Kenneth Alexander
6/11/98	12:00pm	2	Orange	Carroll Holt
6/14/98	9:00am	2	Chambers	Shannon Tompkins
6/18/98	4:30pm	4	Orange	Dennis Franklin
6/20/98	6:30pm	2	Calhoun	Helen Arnold
6/22/98	1:00pm	4	Newton	Ken Howard
6/26/98	9:00am	4	Orange	Rich Damron
6/27/98	4:30pm	2	Orange	Dennis Franklin
6/30/98	6:30pm	2	Newton	Listen Rice
7/2/98	4:00pm	1	Harris	Mark Steuer
7/6/98	3:30pm	1	Orange	Sarah Alsobrooks
7/6/98	11:30am	2	Jefferson	Keith C. Hansen
7/7/98	4:00pm	1	Jefferson	Keith C. Hansen
7/15/98	12:00pm	1	Jasper	Steven Spenser
7/16/98	3:00pm	3	Newton	Ken Howard
7/18/98	8:00am	6	Liberty	John Parsons
7/19/98	1:30pm	1	Newton	Harry Elliott
7/19/98	10:30am	3	Liberty	Jose Hernandez
7/19/98	10:00am	1	Liberty	Mike Austin
7/19/98	3:30pm	3	Orange	Loretta Broussard
7/21/98	unk	2	Liberty	Peter Gottschling
7/22/98	1:30pm	1	Orange	Sarah Alsobrooks
7/24/98	3:00pm	1	Jasper	Clayton Wolf
7/24/98	2:00pm	2	Newton	Charles Hilton
7/26/98	2:25pm	2	Tyler	Raymon L. Hedges
7/28/98	11:30am	2	Jasper	Clayton Wolf
7/28/98	12:30pm	1	Newton	Mark McQueary
7/29/98	3:20pm	2	Jasper	Clayton Wolf
7/31/98	10:20am	3	Orange	Sarah Alsobrooks
8/1/98	12:30pm	1	Newton	Charles Hilton
8/3/98	12:03pm	19	Chambers	Dick Benoit
8/3/98	1:00pm	1	Newton	Ron Atchison
8/4/98	4:45pm	1	Jasper	Lanet Coleman
8/5/98	11:10am	6	Chambers	Dick Benoit
8/8/98	7:30am	1	Chambers	Mary Sue Williams
8/8/98	5:25pm	1	Jasper	Lanet Coleman
8/10/98	4:00pm	1	Robertson	June Osborne
8/11/98	11:00am	1	Newton	Ken Howard
8/11/98	11:00am	2	Brazos	Murt Sullivan
8/14/98	1:45pm	1	Jasper	Lanet Coleman
8/16/98	10:30am	2	Hardin	Stuart R Gary
8/18/98	12:00pm	2	Hardin	Stuart R Gary
8/18/98	1:15pm	1	Nueces	HBHW
8/19/98	12:30pm	1	Chambers	SPHW
8/19/98	1:35pm	1	Nueces	HBHW
8/19/98	2:30pm	1	Chambers	SPHW
8/20/98	11:50am	1	Chambers	SPHW
8/21/98	2:40pm	1	Chambers	SPHW
8/22/98	12:30pm	1	Calhoun	Petra Hockey
8/23/98	9:40am	1	Chambers	SPHW
8/23/98	9:45am	1	Chambers	SPHW
8/23/98	11:50am	3	Chambers	SPHW
8/23/98	12:30pm	1	Chambers	SPHW
8/24/98	12:05pm	1	Chambers	SPHW
8/25/98	10:00am	6	Jasper	Rhandy Helton
8/25/98	3:45pm	1	Chambers	SPHW
8/25/98	2:40pm	1	Nueces	HBHW
8/26/98	7:45pm	2	Rusk	Mendy Rabicoff
8/26/98	12:20pm	1	Chambers	SPHW
8/27/98	1:15pm	2	Chambers	SPHW
8/27/98	2:10pm	2	Nueces	HBHW
8/28/98	11:00am	1	Shelby	Peggy Harding
8/28/98	12:30pm	1	Chambers	SPHW
8/28/98	1:05pm	2	Chambers	SPHW
8/29/98	9:05am	2	Chambers	SPHW
8/29/98	12:05pm	1	Chambers	SPHW
8/29/98	12:25pm	1	Chambers	SPHW
8/30/98	2:00pm	1	Comal	Suzanne McCandless
8/30/98	10:30am	1	Chambers	SPHW
8/30/98	1:30pm	1	Freestone	Ed Wetzel
9/3/98	12:45pm	1	Chambers	SPHW
9/3/98	2:35pm	1	Chambers	SPHW
9/13/98	12:00pm	1	Chambers	SPHW
9/17/98	9:05am	3	Chambers	SPHW
9/17/98	11:50am	2	Chambers	SPHW
9/18/98	3:35pm	1	Nueces	HBHW
9/19/98	10:05am	1	Chambers	SPHW
9/26/98	3:05pm	1	Chambers	Winnie Burkett
9/27/98	7:30am	1	Chambers	Winnie Burkett

Date	Time	Qty.	County	Observer	Date	Time	Qty.	County	Observer
3/14/99	early afternoon	1	Aransas	Wicker, Jane	4/30/99	5:00 pm	1	Tyler	Zipp, Roy
3/18/99	6:10 pm	1	San Patricio	Hutchins, Lee	4/30/99	4:30 pm	5	Tyler	Zipp, Roy
3/19/99	12:30 pm	1	Angelina	Pike, Dick	5/1/99	unk	1	Hardin	McKinley, Jerry
3/20/99	unk	1	Harris	Benoit, Dick	5/1/99	late	6	Tyler	Zipp, Roy
3/20/99	12:30 pm	1	Jackson	Giessel, Elaine	5/2/99	unk	1	Hardin	McKinley, Jerry
3/20/99	5:30 pm	1	Kenedy	Maddox, Donna	5/2/99	late	1	Jasper	Zipp, Roy
3/21/99	9:00 am	2	Aransas	Mueller, Walter	5/2/99	4:30 pm	1	Orange	Cornwall, Dan
3/21/99	3:30 pm	2	Harris	Redden, Jo	5/3/99	3:30 pm	9	Hardin	McKinley, Jerry
3/21/99	4:30 pm	1	Harris	Redden, Jo	5/3/99	unk	1	Hardin	McKinley, Jerry
3/21/99	10:00 am	1	Nueces	Fetter, Harold	5/3/99	3:00 pm	10	Jasper	Aguillard, Keith
3/23/99	7:00 am	1	Hildago	Santa Ana HW	5/3/99	6:45 pm	1	Nueces	Blevins, Hueber & Juanita
3/25/99	2:30 pm	1	Harris	Benoit, Dick	5/3/99	11:00 am	2	Orange	Ward, Bill
3/25/99	2:45 pm	1	Harris	Benoit, Dick	5/3/99	3:00 pm	1	Orange	Ward, Bill
3/25/99	10:50 am	1	Harris	Benoit, Dick	5/4/99	unk	1	Hardin	McKinley, Jerry
3/25/99	10:50 am	1	Harris	Redden, Jo	5/4/99	8:00 am	4	Liberty	Leifester, Winston
3/25/99	10:30 am	1	Harris	Redden, Jo	5/6/99	12:28 pm	3	Galveston	Burkett, Winifred
3/25/99	8:30 am	1	Nueces	Montoya, Angel	5/6/99	unk	1	Hardin	McKinley, Jerry
3/26/99	9:30 am	1	Harris	Benoit, Dick	5/6/99	5:30 pm	2	Liberty	Post, Charles
3/26/99	9:00 am	2	Liberty	Weaver, Lloy H	5/7/99	unk	1	Hardin	McKinley, Jerry
3/26/99	8:30 am	1	Matagorda	Bryant, Dan	5/7/99	6:30 pm	1	Liberty	Post, Charles
3/26/99	10:00 am	1	Orange	Cornwall, Dan	5/7/99	9:20 am	2	Orange	Cornwall, Dan
3/27/99	3:00 pm	1	Calhoun	Hockey, Petra	5/7/99	10:00 am	2	Orange	Cornwall, Dan
3/27/99	3:30 pm	1	Harris	Markland, Patrick(9)	5/8/99	unk	1	Hardin	McKinley, Jerry
3/27/99	9:00 am	2	Matagorda	Grazier, Mary Lou	5/8/99	9:45 am	2	Jasper	Helton, Rhandy
3/27/99	10:00 am	2	SanPatricio	Hailey, Jim	5/8/99	6:00 pm	1	Liberty	Tuttle, Jerry
3/28/99	12:15 pm	1	Fort Bend	Jespersen, Sandy	5/8/99	12:00 pm	1	Orange	Stanley, Judy
3/29/99	10:00 am	1	Cameron	Harbin, Roger & Alice	5/9/99	unk	1	Hardin	McKinley, Jerry
3/29/99	10:00 am	1	Dewitt	Freeman, Brush	5/10/99	unk	1	Hardin	McKinley, Jerry
3/29/99	afternoon	1	Nueces	Beasley, Patty	5/14/99	6:45 pm	4	Liberty	Post, Charles
3/29/99	9:30 am	1	Nueces	Elliott, Lee	5/14/99	3:00 pm	1	Liberty	Tilton, Barbara
3/29/99	9:30 am	1	Nueces	Sekula, Willie	5/15/99	1:45 pm	2	Liberty	Post, Charles
3/29/99	9:30 am	1	Orange	Cornwall, Dan	5/16/99	10:00 pm	1	Clay	Hoover Jimmy
3/29/99	9:00 am	1	San Patricio	Sekula, Willie	5/16/99	5:30 pm	12	Hardin	Gary, Stuart
3/30/99	10:30 am	1	Cameron	Hamm, Ken&Linda	5/16/99	12:30 pm	1	Orange	Cornwall, Dan
3/30/99	9:30 am	1	Cameron	Weber, Jim	5/16/99	11:45 am	1	Tyler	Barker, Don
3/30/99	9:30 am	1	Harris	Markland, Deborah	5/18/99	6:00 pm	1	Liberty	Tuttle, Jerry
3/30/99	7:30 am	1	Jefferson	Roden, Sherrie	5/19/99	9:45 am	1	Liberty	Post, Charles
3/31/99	4:00 pm	1	Aransas	Little, Ray	5/19/99	4:00 pm	1	Liberty	Tuttle, Brenda
3/31/99	4:00 pm	1	Liberty	Skillern, Grady, Lu	5/19/99	6:00 pm	1	Liberty	Tuttle, Jerry
3/31/99	12:45 pm	1	Orange	Franklin, Dennis	5/21/99	4:30 pm	1	Orange	Cornwall, Dan
4/1/99	8:30 am	1	Angelina	Carraway, Chris	5/22/99	9:30 am	1	Orange	Cornwall, Dan
4/1/99	unk	1	Cameron	unk	5/22/99	7:00 pm	1	Orange	Cornwall, Dan
4/2/99	3:00 pm	1	Brazos	Yantis, Jim	5/22/99	10:30 am	5	Orange	Rice, Larry
4/2/99	2:45 pm	1	Cameron	Montgomery, Ellen	5/23/99	12:00 pm	2	Chambers	Fielding, Richard
4/2/99	8:00 am	1	Cameron	Montoya, Angel	5/23/99	11:40 pm	1	Hardin	Simons, Gael
4/2/99	early	2	Cameron	unk	5/23/99	12:00 pm	2	Hardin	Simons, Gael
4/2/99	4:00 pm	2	Harris	Block, Nick	5/25/99	11:40 am	1	Orange	Cornwall, Dan
4/2/99	11:30 am	1	Harris	Hartman, Siew Bee	5/26/99	5:40 pm	3	Liberty	Tilton, Barbara
4/2/99	afternoon	1	Harris	Steuer, Mark	5/26/99	10:30 am	4	Orange	Chen, Ann
4/2/99	9:30 am	1	Kenedy	Mitchell, R.D.	5/27/99	7:45 am	1	Orange	Cornwall, Lois
4/2/99	9:00 am	2	Liberty	Post, Charles	5/27/99	3:00 pm	1	Orange	Cornwall, Dan
4/3/99	9:30 am	1	Cameron	Harwood, Russell	5/27/99	11:00 am	1	Orange	Cornwall, Dan
4/3/99	8:30 am	1	Chambers	Elliott, Harry	5/29/99	1:00 pm	1	Liberty	Tilton, Barbara
4/3/99	3:30 pm	1	Jefferson	Sarkozi, David	5/29/99	9:00 am	1	Orange	Cornwall, Dan
4/3/99	7:30	3	Orange	Cornwall, Dan	5/29/99	9:55 am	1	Orange	Ward, Sam
4/4/99	2:00 pm	1	Liberty	Milenz, Ray	5/31/99	4:00 pm	1	Liberty	Tuttle, John
4/4/99	1:00 pm	2	Liberty	Post, Charles	5/31/99	9:15 am	2	Orange	Cornwall, Dan
4/4/99	unk	1	Orange	Cox, Mary	6/1/99	6:30 pm	1	Hardin	McKinley, Jerry
4/6/99	8:40 am	1	Aransas	Rose, Jane	6/1/99	11:00 am	2	Newton	Howard, Kenneth
4/6/99	5:40 pm	1	Chambers	Loranger, Andy	6/2/99	unk	1	Hardin	McKinley, Jerry
4/6/99	unk	1	Liberty	Milenz, Ray	6/2/99	6:00 pm	1	Liberty	Tuttle, Jerry
4/7/99	1:30 pm	1	Cameron	Tierney, Lauren	6/2/99	all day	4	Orange	June & Emil Fischer
4/7/99	11:20 am	1	Harris	Redden, Jo	6/3/99	unk	1	Hardin	McKinley, Jerry
4/7/99	9:30 am	1	Harris	Tucker, Mary Ann	6/4/99	unk	1	Hardin	McKinley, Jerry
4/8/99	12:00 pm	1	Orange	Ward, Bill	6/4/99	4:40 pm	1	Liberty	Post, Charles
4/9/99	unk	1	Cameron	Renaudier	6/4/99	10:30 am	1	Newton	Wagner, Bill
4/10/99	5:30 pm	1	Jefferson	Freeman, Brush	6/4/99	12:30 pm	1	Newton	Wagner, Bill
4/11/99	10:30 am	1	Jefferson	Haynes, John	6/4/99	9:20 am	1	Orange	Cornwall, Dan
4/13/99	12:00 pm	1	Grayson	Chiles, Jack	6/5/99	5:45 pm	1	Liberty	Huffman, Stacy
4/14/99	6:30 pm	1	Liberty	Pickett, Ellen	6/5/99	12:00 pm	1	Newton	Howard, Kenneth
4/14/99	5:45 pm	2	Liberty	Reeves, Brent	6/5/99	8:30 am	3	Orange	Cornwall, Dan
4/15/99	unk	1	Fort Bend	unk	6/5/99	3:00 pm	1	Orange	Post, Charles
4/15/99	2:50 pm	1	Harris	Block, Nick	6/6/99	9:00 am	1	Liberty	McClelland, Mark and Sharon
4/15/99	12:30 pm	3	Orange	Holt, Charlotte	6/6/99	3:30 pm	2	Orange	Ward, Bill
4/16/99	12:00 pm	1	Chambers	Helton, Rhandy	6/6/99	5:45 pm	1	Orange	Ward, Sam
4/17/99	4:00 pm	1	Chambers	Hortvet, Barbara	6/8/99	10:00 am	2	Liberty	Bartlett, Robert
4/17/99	6:45 pm	1	Hildago	Drescher, Paul	6/9/99	unk	2	Newton	Wagner, Bill
4/17/99	1:40 pm	1	Hildago	Gilbert, Gay	6/11/99	10:00 am	2	Liberty	Bartlett, Robert
4/17/99	unk	1	Jefferson	unk	6/11/99	10:30 am	1	Liberty	Tilton, Mike
4/17/99	10:00 am	1	Jasper	Iliff, Marshall	6/11/99	12:54 pm	2	Orange	Cornwall, Dan
4/18/99	2:20 pm	1	Chambers	Loranger, Andy	6/11/99	8:55	1	Orange	Ward, Sam
4/18/99	unk	1	Hardin	Arvin, John	6/12/99	10:30 am	1	Orange	Cornwall, Dan
4/18/99	9:55 am	1	Orange	Simons, Gael & Leslie	6/13/99	2:00 pm	1	Liberty	Dupree, Dana and Gregg
4/18/99	4:00 pm	2	Tyler	Stafford, Johnny	6/13/99	7:30 pm	3	Orange	Cornwall, Dan
4/20/99	12:30 pm	1	Aransas	Iliff, Marshall	6/14/99	9:00 am	1	Liberty	Dupree, Dana and Gregg
4/20/99	afternoon	1	Chambers	Huffman, Stacy	6/14/99	11:45 am	3	Liberty	Post, Charles
4/21/99	1:30 pm	1	Chambers	Morman, Elaine & Jack	6/14/99	2:30 pm	1	Liberty	Tilton, Barbara
4/21/99	9:30 am	1	Hardin	Lasley, Greg	6/14/99	1:30 pm	2	Orange	Cornwall, Dan
4/21/99	6:20	1	Orange	Ward, Bill	6/14/99	7:30 pm	1	Orange	Cornwall, Dan
4/22/99	5:30	2	Orange	Cornwall, Dan	6/14/99	4:00 pm	6	Orange	Miller, Trent
4/23/99	6:30	1	Orange	Ward, Bill	6/14/99	4:00 pm	6	Orange	Miller, Trent
4/24/99	6:30 pm	1	Cameron	Gibbons, Richard	6/15/99	10:00 am	2	Liberty	Bartlett, Robert
4/24/99	3:45 pm	1	Liberty	Stirling, Ceal	6/15/99	6:40 am	1	Orange	Cornwall, Dan
4/24/99	2:00 pm	1	Orange	Ward, Bill	6/16/99	4:26 pm	1	Liberty	Milenz, Ray
4/25/99	midday	1	Galveston	Backo, Jennifer	6/16/99	12:00 pm	2	Liberty	Post, Charles
4/25/99	10:00 am	1	Galveston	Olson, Albert	6/17/99	unk	1	Brazoria	Willis, Bennett
4/25/99	unk	1	Galveston	Sifford, J.W.	6/18/99	unk	1	Brazoria	Collins, Sherry
4/25/99	10:50 am	1	Orange	Ward, Bill	6/19/99	2:30 pm	2	Chambers	Tilton, Barbara
4/30/99	2:30 pm	1	Liberty	Stirling, Ceal	6/19/99	2:30 pm	2	Chambers	Tilton, Mike

1999

Date	Time	Qty.	County	Observer	Date	Time	Qty.	County	Observer
6/19/99	8:30 am	4	Orange	Cornwall, Dan	8/4/99	12:00 pm	3	Liberty	Calhoun, Mary Ann
6/19/99	7:30 am	3	Orange	Cornwall, Dan	8/4/99	10:30 am	2	Liberty	Davison, Sue
6/19/99	8:30 am	4	Orange	Cornwall, Dan	8/4/99	11:30 am	1	Liberty	Davison, Sue
6/19/99	6:00 pm	4	Orange	Rice, Larry	8/4/99	8:45 am	7	Newton	Howard, Kenneth
6/20/99	8:30 am	4	Orange	Cornwall, Dan	8/6/99	1:30 pm	4	Jasper	Bean, Bobby
6/20/99	9:45 am	1	Orange	Cornwall, Dan	8/6/99	12:00 pm	3	Liberty	Calhoun, Mary Ann
6/21/99	10:00 am	1	Liberty	Post, Charles	8/6/99	1:15 pm	3	Liberty	Davison, Sue
6/22/99	12:00 pm	2	Liberty	Post, Charles	8/6/99	2:30 pm	1	Liberty	Tilton, Mike
6/23/99	12:00 pm	1	Orange	Cornwall, Dan	8/6/99	9:30 am	8	Newton	Howard, Kenneth
6/23/99	12:00 pm	5	Orange	Dougharty, Joe	8/7/99	12:30 pm	1	Liberty	Davison, Sue
6/24/99	12:45 pm	1	Chambers	Huffman, Stacey	8/7/99	11:15 am	3	Liberty	Tilton, Mike
6/25/99	12:00 pm	1	Liberty	Grubbs, Steven	8/7/99	9:30 am	3	Newton	Howard, Kenneth
6/27/99	4:00 pm	2	Liberty	McClelland, Mark & Sharon	8/7/99	6:00 pm	10	Newton	Howard, Kenneth
6/27/99	9:00 am	4	Liberty	Post, Charles	8/8/99	9:30 am	5	Newton	Howard, Kenneth
6/27/99	6:40 pm	1	Orange	Ward, Bill	8/9/99	1:00 pm	3	Liberty	Tilton, Barbara
6/27/99	5:51 pm	5	Orange	Ward, Bill	8/9/99	9:00 am	8	Newton	Howard, Kenneth
6/27/99	9:45 am	1	Tyler	Carpenter, Eric	8/10/99	9:45 am	7	Newton	Howard, Kenneth
6/28/99	unk	1	Liberty	Milentz, Ray	8/11/99	11:30 am	3	Liberty	Tilton, Barbara
6/28/99	11:00 am	2	Orange	Cornwall, Dan	8/11/99	9:45 am	6	Newton	Howard, Kenneth
6/28/99	2:15 pm	1	Orange	Logan, Ronnie	8/11/99	5:45 pm	9	Newton	Howard, Kenneth
7/1/99	11:30 am	1	Liberty	Post, Jackie	8/11/99	unk	2	Newton	Wagner, Bill
7/1/99	9:30 am	2	Newton	Howard, Kenneth	8/12/99	11:35 pm	1	Liberty	Tilton, Barbara
7/2/99	unk	2	Liberty	Brooks, Charles	8/12/99	11:35 pm	5	Liberty	Tilton, Barbara
7/2/99	9:15 am	1	Orange	Rice, Larry	8/12/99	9:30 am	4	Newton	Howard, Kenneth
7/3/99	unk	4	Liberty	unk	8/13/99	3:00 pm	1	Brazos	Collins, Fred
7/4/99	3:00 pm	4	Newton	Howard, Kenneth	8/13/99	morning	1	Brazos	Dziedzyc, Joan
7/5/99	10:00 am	8	Liberty	Turner, Don & Chris	8/13/99	1:46 pm	4	Liberty	Beathard, Michael
7/5/99	9:30 am	8	Orange	Cornwall, Dan	8/13/99	3:00 pm	1	Liberty	Blanton, Maxine
7/5/99	12:30 pm	1	Orange	Cornwall, Dan	8/13/99	4:45 pm	4	Liberty	Tilton, Barbara
7/5/99	10:00 am	1	Tyler	Wharton, Thomas	8/13/99	9:30 am	2	Newton	Howard, Kenneth
7/7/99	8:45 am	1	Liberty	Post, Charles	8/14/99	2:45 pm	1	Chambers	SPHW
7/7/99	9:30 am	2	Newton	Howard, Kenneth	8/14/99	3:20 pm	1	Chambers	SPHW
7/8/99	unk	2	Jasper	Wagner, Bill	8/14/99	10:00 am	1	Fort Bend	unk
7/8/99	2:00 pm	1	Liberty	Davison, Sue	8/14/99	10:00 am	1	Liberty	Blanton, Maxine
7/8/99	12:30 pm	1	Newton	Howard, Kenneth	8/14/99	3:20 pm	3	Liberty	Tilton, Barbara
7/8/99	4:00 pm	3	Orange	Pulliam, Jack H.	8/14/99	10:30 am	1	Newton	Howard, Kenneth
7/9/99	1:30 pm	2	Orange	Holt, Carroll	8/15/99	10:01 am	2	Chambers	SPHW
7/9/99	1:22 pm	1	Orange	Logan, Ronnie	8/15/99	11:01 am	3	Chambers	SPHW
7/10/99	12:00 pm	5	Liberty	Cowry, Caroline	8/16/99	10:50 am	1	Nueces	HBHW
7/10/99	9:00 am	5	Liberty	Pinkston, Randy	8/18/99	1:20 pm	10	Chambers	SPHW
7/11/99	1:00 pm	10	Liberty	Dodson, Mary	8/19/99	5:45 pm	1	Liberty	Tilton, Barbara
7/11/99	4:30 pm	4	Liberty	Tilton, Barbara	8/20/99	1:45 pm	4	Liberty	Pickett, Ellen
7/11/99	4:00 pm	5	Orange	Holt, Carroll	8/20/99	11:10 am	1	Nueces	HBHW
7/12/99	4:30 pm	2	Chambers	Jones, Mack	8/20/99	12:15 pm	1	Nueces	HBHW
7/12/99	2:30 pm	1	Newton	Howard, Kenneth	8/22/99	11:01 am	1	Chambers	SPHW
7/13/99	5:15 pm	2	Liberty	Davison, Sue	8/22/99	5:00 pm	1	Hardin	Stafford, Johnny
7/13/99	6:00 pm	4	Liberty	Post, Charles	8/22/99	4:00 pm	1	Washington	Vollert, Darrell
7/13/99	2:00 pm	3	Newton	Howard, Kenneth	8/23/99	3:45 pm	1	Liberty	Luna, Matt
7/14/99	5:30 pm	2	Liberty	Ellerbee	8/23/99	11:10 am	1	Liberty	Tilton, Barbara
7/14/99	12:30 pm	4	Liberty	Iverson, Neil	8/24/99	12:01 pm	7	Chambers	SPHW
7/14/99	12:00 pm	1	Liberty	Tilton, Barbara	8/24/99	1:01 pm	2	Chambers	SPHW
7/15/99	8:00 am	4	Liberty	Benoit, Dick	8/24/99	10:30 am	1	San Patricio	Reid, Martin
7/15/99	2:30 pm	1	Liberty	Berlett, Jerry	8/25/99	10:33	3	Nueces	HBHW
7/15/99	11:30 am	1	Newton	Howard, Kenneth	8/27/99	11:01 am	1	Chambers	SPHW
7/16/99	4:00 pm	2	Liberty	Malak, Lee	8/27/99	12:01 pm	4	Chambers	SPHW
7/16/99	unk	2	Liberty	Tilton, Barbara	8/27/99	4:00 pm	3	Liberty	Calhoun, Mary Ann
7/16/99	12:30 pm	12	Liberty	Tilton, Barbara	8/27/99	4:05 pm	1	Nueces	HBHW
7/16/99	1:40 pm	2	Liberty	Tilton, Barbara	8/28/99	8:30 am	1	Calhoun	Hockey, Petra
7/17/99	11:15 am	1	Jasper	Barker, Don	8/28/99	6:05 pm	3	Nueces	HBHW
7/17/99	11:45 am	3	Liberty	Benoit, Dick	8/28/99	3:46 pm	1	Nueces	HBHW
7/17/99	9:30 am	1	Liberty	Benoit, Dick	8/29/99	12:40 pm	1	Nueces	HBHW
7/17/99	10:00 am	4	Liberty	Benoit, Dick	8/29/99	2:00 pm	2	Nueces	West, John
7/17/99	4:25 pm	1	Orange	Broussard, Loretta	8/29/99	3:20 pm	1	Nueces	HBHW
7/17/99	2:00 pm	2	Orange	Cornwall, Dan	8/30/99	8:01 am	1	Chambers	SPHW
7/19/99	11:40 am	4	Liberty	Astrich, Steve	8/30/99	9:01 am	2	Chambers	SPHW
7/19/99	12:30 pm	6	Liberty	Iverson, Neil	8/30/99	12:01 pm	1	Chambers	SPHW
7/19/99	9:00 am	1	Newton	Howard, Kenneth	8/30/99	10:01 am	2	Chambers	SPHW
7/20/99	5:00 pm	2	Chambers	Jones, Mack C.	8/30/99	11:15 am	1	Nueces	HBHW
7/20/99	10:30 am	2	Liberty	Tilton, Barbara	8/30/99	1:45 pm	1	Nueces	HBHW
7/20/99	10:30 am	2	Liberty	Tilton, Barbara	8/31/99	11:01 am	1	Chambers	SPHW
7/20/99	4:30 pm	3	Liberty	Tilton, Barbara	8/31/99	1:00 pm	1	Jackson	Hockey, Petra
7/20/99	5:00 pm	4	Newton	Howard, Kenneth	8/31/99	11:45 am	2	Nueces	HBHW
7/21/99	4:00 pm	4	Liberty	Tilton, Barbara	9/1/99	12:25 pm	1	Nueces	HBHW
7/21/99	11:30 am	1	Newton	Howard, Kenneth	9/2/99	9:35 am	1	Chambers	SPHW
7/21/99	1:30 pm	2	Orange	Cornwall, Dan	9/3/99	11:01 am	1	Chambers	SPHW
7/22/99	12:45 pm	1	Liberty	Davison, Sue	9/6/99	11:55 am	1	Chambers	SPHW
7/24/99	10:55 am	2	Liberty	Tilton, Barbara	9/8/99	10:01 am	2	Chambers	SPHW
7/24/99	11:10 am	1	Liberty	Tilton, Barbara	9/8/99	2:50 pm	1	Nueces	HBHW
7/25/99	9:00 am	2	Liberty	Benoit, Dick	9/9/99	4:15 pm	3	Chambers	SPHW
7/25/99	10:00 am	3	Liberty	Calhoun, Mary Ann	9/9/99	10:25 am	2	Nueces	HBHW
7/25/99	9:00 am	3	Newton	Howard, Kenneth	9/9/99	1:15 pm	1	Nueces	HBHW
7/25/99	12:00 pm	1	Orange	Yoes, Tommy	9/10/99	12:30 pm	1	Nueces	HBHW
7/26/99	12:00 pm	3	Liberty	Calhoun, Mary Ann	9/10/99	6:20 pm	2	Nueces	HBHW
7/26/99	9:40 am	7	Newton	Howard, Kenneth	9/12/99	9:00 am	2	Chambers	SPHW
7/28/99	11:00 am	3	Newton	Howard, Kenneth	9/13/99	11:30 am	2	Nueces	HBHW
7/29/99	1:00 pm	4	Jasper	Bean, Bobby	9/15/99	9:30 am	1	Chambers	SPHW
7/29/99	12:00 pm	4	Liberty	Post, Charles	9/15/99	11:20 am	1	Nueces	HBHW
7/29/99	12:10 pm	2	Liberty	Post, Charles	9/17/99	10:01 am	2	Chambers	SPHW
7/29/99	8:35 am	9	Newton	Howard, Kenneth	9/17/99	9:00 am	4	Refugio	Wicker, Jane
7/30/99	11:15 am	3	Jasper	Hughes, Crystal	9/18/99	10:30 am	1	Chambers	SPHW
7/30/99	8:00 am	10	Newton	Howard, Kenneth	9/18/99	8:00 am	4	Refugio	Wicker, Jane
7/30/99	2:30 pm	3	Newton	McNaughten, Don	9/21/99	11:15 am	1	Nueces	HBHW
7/31/99	11:30 am	1	Jasper	Hughes, Crystal	9/21/99	5:30 pm	1	Nueces	HBHW
7/31/99	8:30 am	14	Newton	Howard, Kenneth	9/30/99	unk	1	Liberty	Tilton, Mike
8/1/99	8:30 am	18	Newton	Howard, Kenneth	10/4/99	2:33 pm	1	Nueces	HBHW
8/1/99	2:30 pm	1	Newton	McNaughten, Don	10/10/99	3:45 pm	1	Chambers	SPHW
8/2/99	9:30 am	15	Newton	Howard, Kenneth	7/14/99	11:00 am	1	Newton	Howard, Kenneth
8/3/99	9:30 am	8	Newton	Howard, Kenneth	July	3:30 pm	1	Liberty	Buchanan, Natasha
8/3/99	2:30 pm	5	Newton	McNaughten, Don	March	midmorning	1	Jackson	Briscoe, De Laine
8/3/99	1:00 pm	1	Tyler	Davis, Ethel	March	12:00 pm	2	Newton	Miller, Herman E.

This project is a partnership among:



4200 Smith School Road
Austin, Texas 78744