

FINAL REPORT

As Required by

THE ENDANGERED SPECIES PROGRAM

TEXAS

Grant No. E-1-9

Endangered and Threatened Species Conservation

**Project 75: Roadside Survey  
for Black-capped Vireo Habitat  
on the Edward's Plateau**

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**FINAL REPORT****STATE:** Texas**GRANT NO:** E - 1 - 9**PROGRAM TITLE:** Endangered and Threatened Species Conservation**PERIOD COVERED:** September 1, 1996 - August 31, 1998**PROJECT NUMBER:** 75**PROJECT TITLE:** Roadside Survey for Black-capped Vireo Habitat  
on the Edwards Plateau**PREPARED BY:** Gareth A. Rowell30 April 1999  
Date**APPROVED BY:** \_\_\_\_\_Neil (Nick) E. Carter  
Federal Aid Coordinator  
Texas Parks & Wildlife Department\_\_\_\_\_  
Date

## **A. Need**

Until recently, knowledge about the distribution of Black-capped Vireo (*Vireo atricapillus*) in Texas has been mostly limited to public lands and road construction/improvement surveys. A better assessment of the distribution of the species was needed: (1) to plan for recovery of the Black-capped Vireo on a metapopulation level, (2) to set management goals for public lands in a realistic framework, and (3) to address some public and professional perception that the Black-capped Vireo may be more abundant than is currently known. This study represents a systematic roadside survey of Black-capped Vireo habitat and occurrence of Black-capped Vireo on the Edwards Plateau. An extension of this report will be given in Section 6 Project 89 Final Report. That report will present results for all counties in Texas where the Black-capped Vireo is known to occur.

## **B. Background**

### **Distribution**

The *Black-capped Vireo Recovery Plan* (U.S. Fish & Wildlife Service, 1991) identifies six principle geographic regions of occurrence for this species in Texas : 1. North-central Texas; 2. Lampasas Cut Plains; 3. Edwards Plateau; 4. Concho Valley; 5. Southwest region; 6. Trans-Pecos. The *Black-capped Vireo Population and Habitat Viability Assessment Report* (U.S. Fish & Wildlife Service, 1996) subsequently recommended that these six regions be combined into four recovery units. The changes would involve combining regions 1 and 2 (north-central Texas and Lampasas Cut Plains), as well as regions 5 and 6 (southwest region and Trans-Pecos ). If

recovery plans are amended according to these suggestions, the recovery units would then be:

1. North-central Texas: Bell, Bosque, Brown, Burnet, Coleman, Comanche, Coryell, Dallas, Erath, Hamilton, Hood, Johnson, Lampasas, McLennan, Mills, Palo Pinto, Parker, Somervell, Stephens, Travis, and Williamson.
2. Edwards Plateau: Bandera, Bexar, Blanco, Comal, Edwards, Gillespie, Hays, Kendall, Kerr, Kimble, Kinney, Llano, Mason, McCulloch, Medina, Menard, Real, San Saba, Schleicher, Sutton, and Uvalde.
3. Concho Valley: Coke, Concho, Irion, Nolan, Runnels, Sterling, Taylor, and Tom Green.
4. Southwest and Trans-Pecos: Brewster, Crockett, Pecos, Terrell, and Val Verde.

For purposes of results and discussion below, we use the four new regions as recommended by the U.S. Fish & Wildlife Service 1996 report.

### **Habitat**

A review of recent literature on habitat characteristics of Black-capped Vireo breeding populations in Texas is considerable (Campbell, 1995; Connally, 1997; Farquhar and Maresh, 1996; Grzybowski, 1995; Rowell, et al., 1998; U.S. Fish & Wildlife Service, 1991; Wolfe et al. 1996). Breeding habitat consists of scrub-type vegetative communities that generally include oak (*Quercus* spp.) and have extensive low-level (< 3 m) brush. Texas persimmon (*Diospyros texana*), Texas mountain laurel (*Sophora secundiflora*), and sumac (*Rhus* spp.) are also important components. Brush canopy is highly variable but usually ranges from 30 - 70% cover. It may include adjacent open areas and woody areas with up to 100% canopy closure. Woody shrubs at zero to 3 m appear to be a critical component of breeding habitat and provide the supporting vegetation for nest sites (U.S. Fish & Wildlife Service, 1991).

### C. Objective

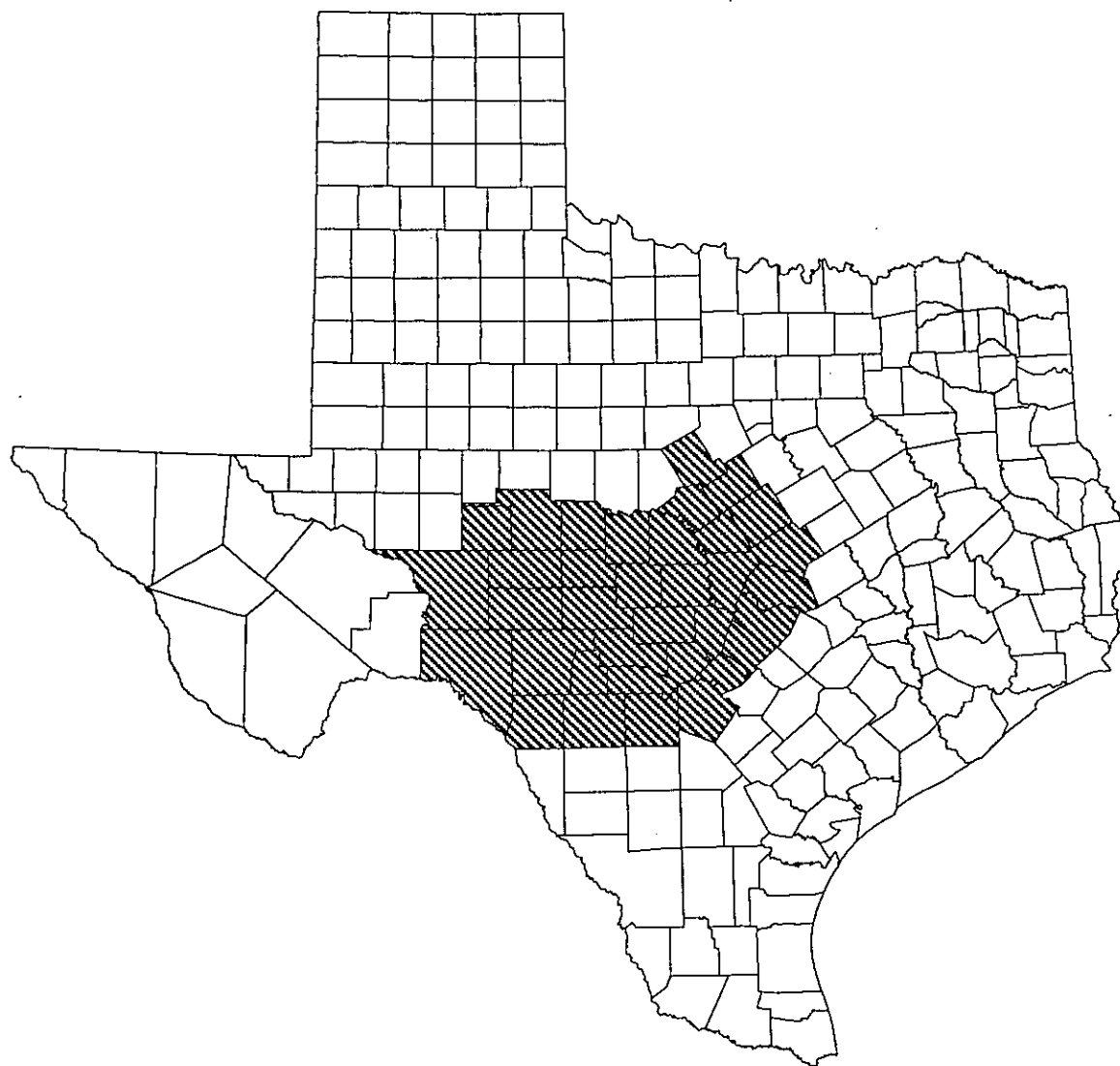
The objective of this study is to assess the availability and occupancy of Black-capped Vireo habitat along public roadways in each county of the Edward's Plateau physiographic region of Texas.

### D. Approach

The spatial extent of this project included the Edwards Plateau in its broadest context (shown in Figure 1). This includes all counties in Recovery Region 2. Edwards Plateau plus *adjacent* counties from Region 1. North-central Texas (Bell, Burnet, Comanche, Coryell, Hamilton, Lampasas, Mills, Travis, and Williamson), Region 3. Concho Valley (Concho, Irion, and Tom Green) and Region 4. Southwest and Trans-Pecos (Crockett and Val Verde). Again, Section 6 Project No. 89 final report will extend this survey to include the state-wide breeding distribution. A strip census along roads and highways was conducted in each county of the study area beginning in July 1996 and ending in June 1998. Two transects, each of 30 miles, were driven per county. Transect locations were chosen from known or "most-likely" habitat whenever possible. The length of the habitat along each route was recorded by odometer to the nearest .10 mile. Strips of roadside were also recorded using differentially corrected GPS. Digital locational data were recorded using a Motorola 6 channel GPS receiver and PC-based GEOLINK GPS software (GeoResearch, Inc). GPS data were differentially corrected using post-processing methods with base data from Texas Department of Transportation Trimble 4000 GPS stations in San Antonio and Austin.

A preliminary assessment of presence or absence of Black-capped Vireos within habitat was

Figure 1: Survey Area



determined by listening for singing individuals (at regularly spaced 0.3 mile intervals). Census of the number of singing individuals within habitat was either conducted during the habitat survey or deferred to site revisits during the 1998 breeding season (see significant deviations, below).

*Significant deviations:*

- I. Due to the large area coverage of this survey (35 counties), preliminary surveys of Black-capped Vireo habitat were conducted during and *after* the breeding season (1996 - 1997). The breeding season for Black-capped Vireo in Texas is late March through June. Sites identified as having Black-capped Vireo habitat after June were revisited during the 1998 breeding season to search for individual vireos.
- II. A single transect was completed for Real County due to the limited number of roads in that county.
- III. Locational data were differentially-corrected and converted into Arc/Info GIS coverages (ESRI, Inc.). GIS coverages for each county are provided as .e00 files on CDROM.

## **E. Results and Discussion**

### **Overall Survey Results by County**

Attachment A gives a summary of the Edwards Plateau roadside survey results by county. A total of 2070 survey miles were driven over the 35-county area. From this, 76.9 miles of potential Black-capped Vireo habitat was observed based on vegetation composition and structure. Using these amounts, approximately 3.7% of the total distance driven was observed to have potential Black-capped Vireo habitat. Total habitat per county ranged from 0.1 miles (Schleicher County) to 10.2 miles (Val Verde County). Counties in the top 20<sup>th</sup> percentile by amount of potential

Black-capped Vireo habitat included Crockett, Gillespie, Kerr, Kinney, McCulloch, Medina, and Val Verde. The number of Black-capped Vireos (mostly males) observed for the entire 35 county survey area was 59 individuals. The number of individuals ranged from 0 (several counties) to 13 (Val Verde County). Counties with three or more observed individuals (the upper 20% of all counties surveyed) included Edwards, Kerr, Mason, Real, Sutton, Tom Green and Val Verde counties. Individual Black-capped Vireos were observed in three of the eight counties needing confirmation (U.S. Fish & Wildlife Service 1996): Comanche, McCulloch, and Medina.

### **Survey Results by Recovery Unit**

Survey effort was complete for Recovery Region 2 *only* -- see Approach section above. Summary of results by Recovery Region are as follows: 6.9 miles of potential BCV habitat was observed in Region 1 (North-central Texas); 53.4 miles of potential BCV habitat in Region 2 (Edwards Plateau); 2.2 miles of potential BCV habitat in Region 3 (Concho Valley); and 14.4 miles of potential BCV habitat in Region 4 (Southwest and Trans-Pecos). Numbers of individuals observed by Recovery Region were 2 individuals for Region 1 (North-central Texas); 36 individuals for Region 2 (Edwards Plateau); 6 individuals for Region 3 (Concho Valley); and 15 individuals for Region 4 (Southwest and Trans-Pecos).

### **Maps and Transect Field Notes**

Attachment B contains maps of all survey counties including the transect roads and location of the observed habitat. Field notes associated with each transect are also given in Attachment B. Field notes include directions necessary to revisit transect and potential habitat observed (with odometer readings in miles).



## **Conclusions and Recommendations**

Results from this study suggest that:

1. The Black-capped Vireo is far from ubiquitous across the Edwards Plateau region. BCVs were not seen in 19 of the 35 counties surveyed in this study. Also, 14 of the 35 counties had less than one mile of suitable habitat along the transects driven.
2. Some counties had much higher number of observed individuals and higher amounts of potentially suitable habitat than others. On the basis of individual sightings and available habitat, several counties in the western and southwestern Edwards Plateau appeared to have the highest potential for management and recovery of Black-capped Vireo populations. These counties include Edwards, Kerr, Kimble, Kinney, Mason, Real, Tom Green, and Val Verde Counties.

In view of these conclusions, we believe that focussed Black-capped Vireo management on public lands in these western and southwestern counties could lead to demonstrable population increases for this species. Successful directed management for local population increase has been documented in at least one instance (O'Neal 1996 -- Kerr County). In addition, private lands initiatives, through incentive programs, conservation planning assistance, and conservation easement and land trust development should be targeted in those counties where habitat and BCV populations are known to occur. Such initiatives could eventually lead to long-term recovery of this rare species.

## F. Acknowledgements

We would like to thank Bill Armstrong, Cal Newnam, and Lisa O'Donnell for assistance in the design of this project. Craig Scofield provided technical support with the GPS and GIS. David Hernandez and Troy Ettel assisted with the transect surveys.

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Attachment A.

*Roadside Survey for Black-capped Vireo Habitat  
on the Edwards Plateau*

*Summary Table*

**Summary of BCV Roadside  
Survey Data**

County	Transect Miles	Habitat Miles	Habitat Proportion	# BCVs	BCV/Habitat Mile	Previous # BCVs reported in USFWS (1996)
Bandera	60.0	0.9	0.015	0	0.0	48
Bell	60.0	1.1	0.018	0	0.0	150
Bexar	60.0	3.3	0.055	1	0.3	16
Blanco	60.0	0.3	0.005	1	3.3	6
Burnet	60.0	1.1	0.018	0	0.0	47
Comal	60.0	0.6	0.010	0	0.0	need confirmation
Comanche	60.0	1.1	0.018	1	0.9	need confirmation
Concho	60.0	0.8	0.013	0	0.0	need confirmation
Coryell	60.0	0.4	0.007	1	2.5	150
Crockett	60.0	4.2	0.070	2	0.5	9
Edwards	60.0	3.1	0.052	10	3.2	67
Gillespie	60.0	5.2	0.087	0	0.0	1
Hamilton	60.0	1.1	0.018	0	0.0	1
Hays	60.0	3.3	0.055	0	0.0	1
Irion	60.0	0.3	0.005	0	0.0	18
Kendall	60.0	0.7	0.012	0	0.0	1
Kerr	60.0	4.5	0.075	7	1.6	602
Kimble	60.0	2.7	0.045	2	0.7	26
Kinney	60.0	4.3	0.072	2	0.5	105
Lampasas	60.0	0.5	0.008	0	0.0	1
Llano	60.0	0.2	0.003	0	0.0	need confirmation
Mason	60.0	3.6	0.060	3	0.8	2
McCulloch	60.0	5.5	0.092	1	0.2	need confirmation
Medina	60.0	4.4	0.073	1	0.2	need confirmation
Menard	60.0	3.1	0.052	0	0.0	need confirmation
Mills	60.0	0.2	0.003	0	0.0	2
Real	30.0	2.1	0.070	4	1.9	23
San Saba	60.0	0.7	0.012	0	0.0	22
Schleicher	60.0	0.1	0.002	0	0.0	need confirmation
Sutton	60.0	3.0	0.050	4	1.3	1
Tom Green	60.0	1.1	0.018	6	5.5	13
Travis	60.0	0.6	0.010	0	0.0	60
Uvalde	60.0	1.8	0.030	0	0.0	4
Val Verde	60.0	10.2	0.170	13	1.3	173
Williamson	60.0	0.8	0.013	0	0.0	13
Totals	2070.0	76.9		59.0		1562.0

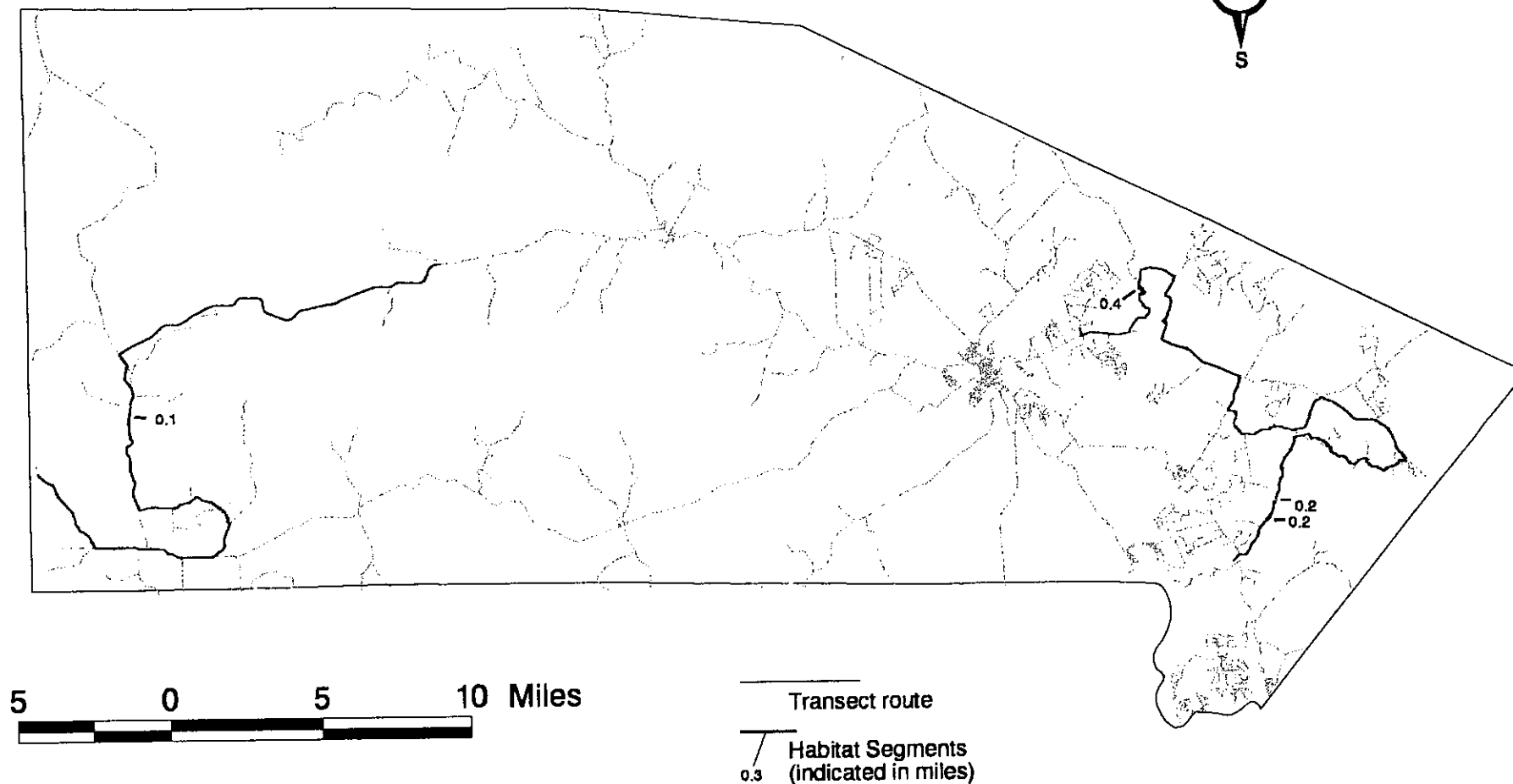
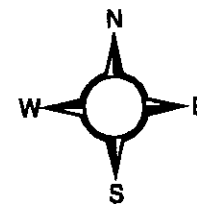
Attachment B.

*Roadside Survey for Black-capped Vireo Habitat  
on the Edwards Plateau*

*County Maps  
And  
Field Notes*

*(All transects driven by J. Maresh except where indicated)*

# Roadside Survey for Black-capped Vireo Habitat



## Bandera County

**Transect name:** BAND\_E

**County:** Bandera

**Date:** 31 July 97

**Time:** 09:54

**Conditions:** Clear and hot. Light winds.

**Directions:** 0.0- At speed limit sign on Bump Gate Rd @ FM 1283  
4.6- Right on Willow Springs Rd.  
7.1- Left on Timber Creek Rd  
9.2- X-sec w/ Geronimo Creek Rd. (Stay left on paved road.)  
9.4- Left on Tx 16  
13.0- Left on Bump Gate Rd.  
14.4- Veer right on Buchaus Rd  
15.9- Veer right  
16.4- Right on Heisler Rd.  
17.5- Right on FM 1283  
18.7- Left on Tx 16  
21.6- Right on Bear Creek Rd.  
24.0- Left on Privilege Creek Rd.  
25.2- Go left  
28.1- Right on Tx 16  
29.7- Right on Polly Peak Dr.  
30.0- End transect

**BCV habitat observed:**

- 1.6-1.8- Scrubby Persimmon. No BCV's heard.
- 2.2-2.4- Persimmon. Pretty good looking hab., but apparently  
goated some, vegetation not all the way to the ground.  
No BCV's heard.
- 25.8-26.2- Scrubby vegetation on slope above creek. No BCV's heard.

**Total habitat:** 0.8 miles

**BCV's observed:** 0

**Transect name:** BAND\_W

**County:** Bandera

**Date:** 1 August 97

**Time:**

**Conditions:** Mostly cloudy and hot. Slight breeze.

**Directions:** 0.0- At cable box just before 'Y' at river on W Sabinal Rd.  
3.2- Curve left  
4.6- Curve left  
4.9- Turn right on FM 187  
6.1- Turn left onto FM 470  
7.2- Turn left on Little Creek Rd.  
8.5- Turn left on B & R Rd.  
12.1- Turn left on FM 187  
17.7- Right on FM 337  
30.0- End transect

**BCV habitat observed:**

15.3-15.4- Sumac on flats a little upslope from river bank.  
No BCV's heard.

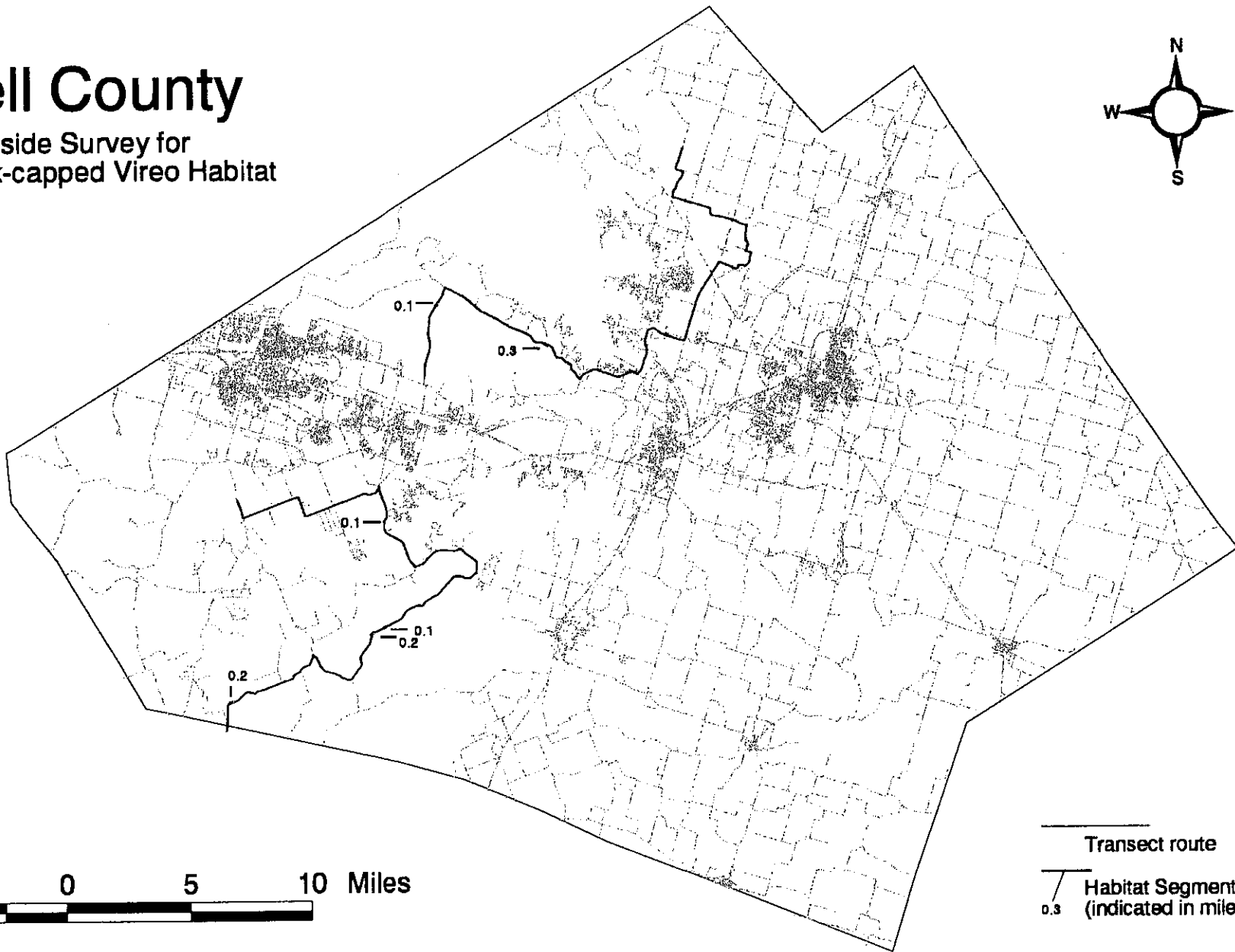
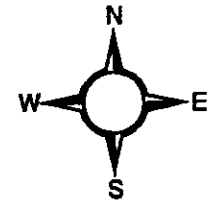
**Total habitat:** 0.1 miles

**BCV's observed:** 0



# Bell County

Roadside Survey for  
Black-capped Vireo Habitat



**Transect name:** BELL\_N

**County:** Bell

**Date:** 6 Aug 97

**Time:** 09:10

**Conditions:** Warm, fair.

**Directions:** 0.0- Quarry @ FM 439 (at first drive on right (at 'Warning' sign))  
3.9- Turn right on Sparten(?) Road (not marked)  
10.9- Left on FM 439  
13.5- Left on FM 2271  
15.4- Veer right onto FM 2305  
17.1- Left on SH 317  
20.7- Right on Little Mexico Road  
21.9- Left at 'T'  
22.5- Left at 'T'  
22.8- Right on Epperson Road  
23.9- Left on FM 1237  
24.5- Cross SH 317 (onto S White Hall Road)  
26.6- Zig across FM 2409  
27.3- Right on Aycock Road  
28.5- Left on Buckhorn Cemetery Road  
30.0- END-T

**BCV habitat observed:**

3.1-3.2- Oak/Sumac. On Fort Hood. No BCV's heard.  
8.6-8.9- Oak/Suamc. On Fort Hood. No BCV's heard.

**Total habitat:** 0.4 miles

**BCV's observed:** 0

**Transect name:** BELL\_S

**County:** Bell

**Date:** 6 Aug 97

**Time:** 07:00

**Conditions:** Warm, fair

**Directions:** 0.0- Stillman Valley Road @ Williamson County line

4.6- Continue left on Stillman

5.5- Right on Cedar Valley Road

7.5- Left on Crows Ranch Road

12.2- Straight (past Eagle's Nest Road)

15.0- Left on FM 2484

18.3- Right on FM 3481

22.3- Left on Chaparral Road

29.0- 'T' w/ SH 195, turn right

30.0- END-T

**BCV habitat observed:**

1.2-1.4- Oak scrub. Fairly marginal habitat. No BCV's heard.

9.6-9.8- Scrub Oak. Pretty good scrub habitat. No BCV's heard.

10.3-10.4- Oak/Persimmon scrub. No BCV's heard.

13.5-13.6- Oak/Persimmon scrub. Marginal habitat. No BCV's heard.

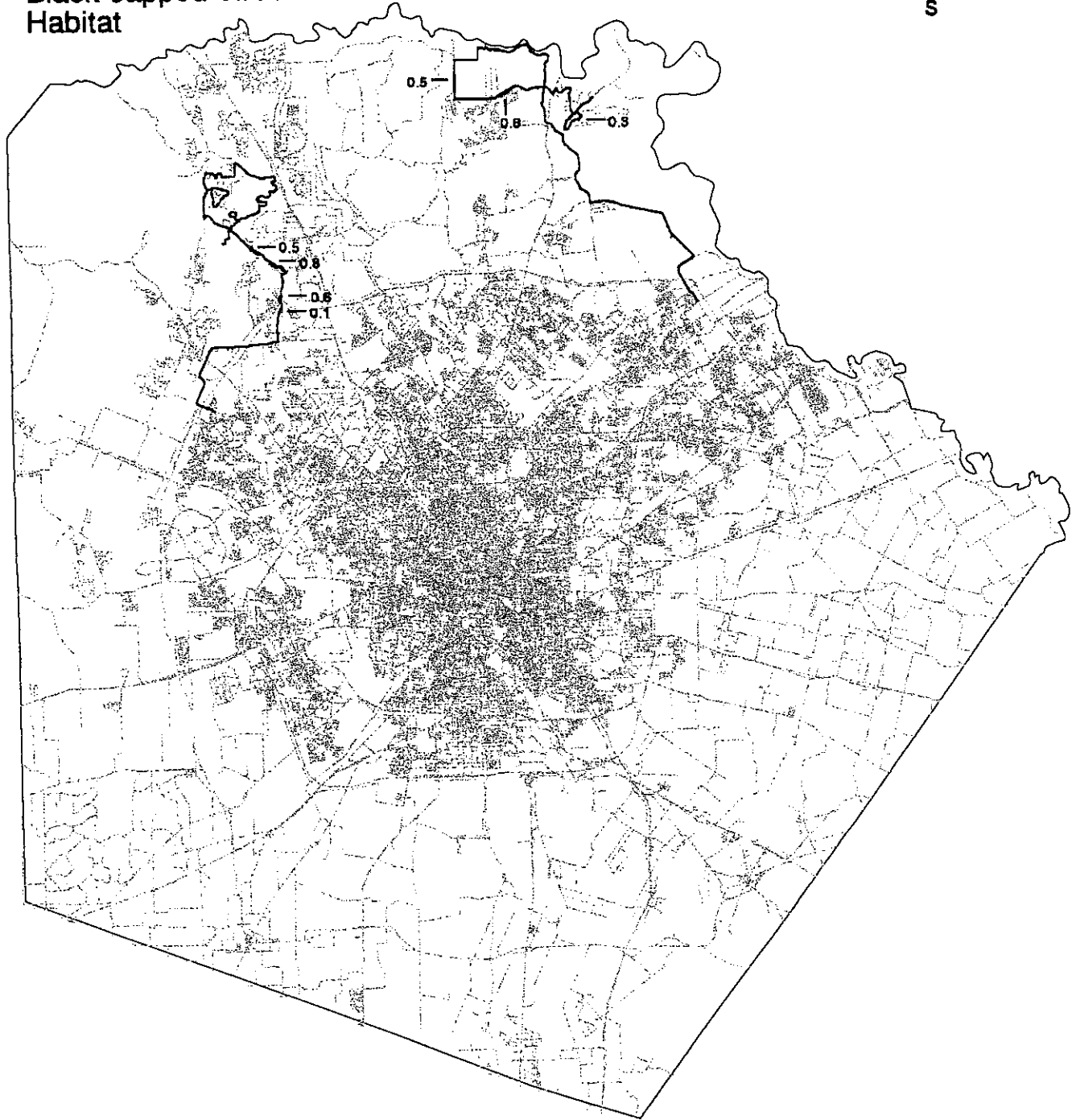
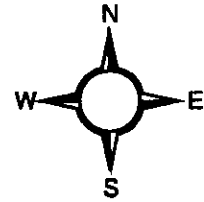
20.8-20.9- Oak/Sumac. Fairly marginal habitat. No BCV's heard.

**Total habitat:** 0.7 miles

**BCV's observed:** 0

# Bexar County

Roadside Survey for  
Black-capped Vireo  
Habitat



5 0 5 10 15 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** BEXA\_E98

**County:** Bexar

**Date:** 7 July 98(Hernandez)

**Time:** 12:12

**Conditions:** Mid 90s, south wind, 20%cc

**Directions:**

Starts on page 519 of the fergusons map of San Antonio

North on Stahl(At Nacogdoches).

.5 - Right on Green Mountain Rd..

2.4 - Left on Evans.

7.4 - Right on Bulverde Rd..

10.7 - Left to stay on Bulverde. There is no sign!!!!

13.0 - Left on Borgfield.

14.4-15 on right.

16.7 - Right on Old Blanco.

17.0 - Right Blanco Rd sign says FM2696.

17.1-17.6 On left over fence(Camp Bullis).

18.3 - Right on Specht.

19.6 - Specht Rd turns into Obst Rd at the Specht store along Cibalo Crk.

Obtst Rd crosses Cibalo Crk into Comal co. for 1.1 miles.

22.7 - Obst Rd turns into Bulverde Rd when you cross Cibalo Crk back into Bexar Co..

24.1 - Left on Bogfield.

24.6 - Left on 281.

24.9 - Right on Ramble Wood, Country Place subdivision.

26.8 - Left on Lower Smithson Valley.

27.0 - Right on Clear Springs Park.

27.2 - Right on Running Spring.

27.3-27.6 on right.

28.1 - Right on Rustic Oak.

28.3 - Right on Smithson Valley.

Ends on Smithson Valley Rd.

**BCV habitat observed:** See above

14.4-15 on right

17.1-17.6 on left over fence(Camp Bullis)

27.3-27.6 on right

**Total habitat:** 1.4 Miles

**BCV's observed:** 0

Transect name: Bexa\_W98

County: Bexar

Date: 7 July 98(Hernandez)

Time: 8:27AM

Conditions: Low 80s at start, no wind, 20%cc

Directions:

Starting West on Braun Rd and Autumn Sunrise, Page 546 of the Ferguson San Antonio map book

.75 - Right on Leslie

Turns into Hausman when you cross 16(bandera rd)

Left at Babcock after 1604

Go under 1604 again and **\*start at 0 miles again\***

.1-.2 Hab along roadside

.4-1.0 Along Contrera CC and ROW???

1.6 - Right at Camp Bullis Rd

1.9 - Left on Lusky

2.0-2.8 Spotted habitat to babcock

2.8 - Right on Babcock

3.1 At creek

**\*\*3.3-3.8 on left**

6.0 - Right on Scenic Loop

7.1 - Right on Cross Mountain Trail

8.7 - Right on Central Prairie

9.4 - Left on Cross Mountain Trail

9.9 - Right on Scenic Loop

10.7 - Right on Saddle Trail

12.6 - Right on Broad Trail

12.65 - Right on Boerne Stage Rd

14.4 - Left on IH 10 Access Rd

14.6 - Right on Cielo Vista Rd

16.3 - Left on Summit

17.0 - Left on Cielo Vista Rd

18.1 - Right on Monarch Pass(No sign)Loop

18.3 - Right at Y

19.3 - Right back to Monarch Pass

Right on Cielo Vista Rd

20.3 - Right on Vista Verde

21 - Left on Luna Vista

23.8 - Right on Camino Del Sol

Dead Ends

**Page two of Bexar\_w2**

**BCV habitat observed:**

After 1604 Reset

0.1-0.2 Hab along roadside

.5-0.9 Along Contrera CC and ROW???

2.0-2.8 Spotted habitat to babcock

3.1 At creek- Cleared

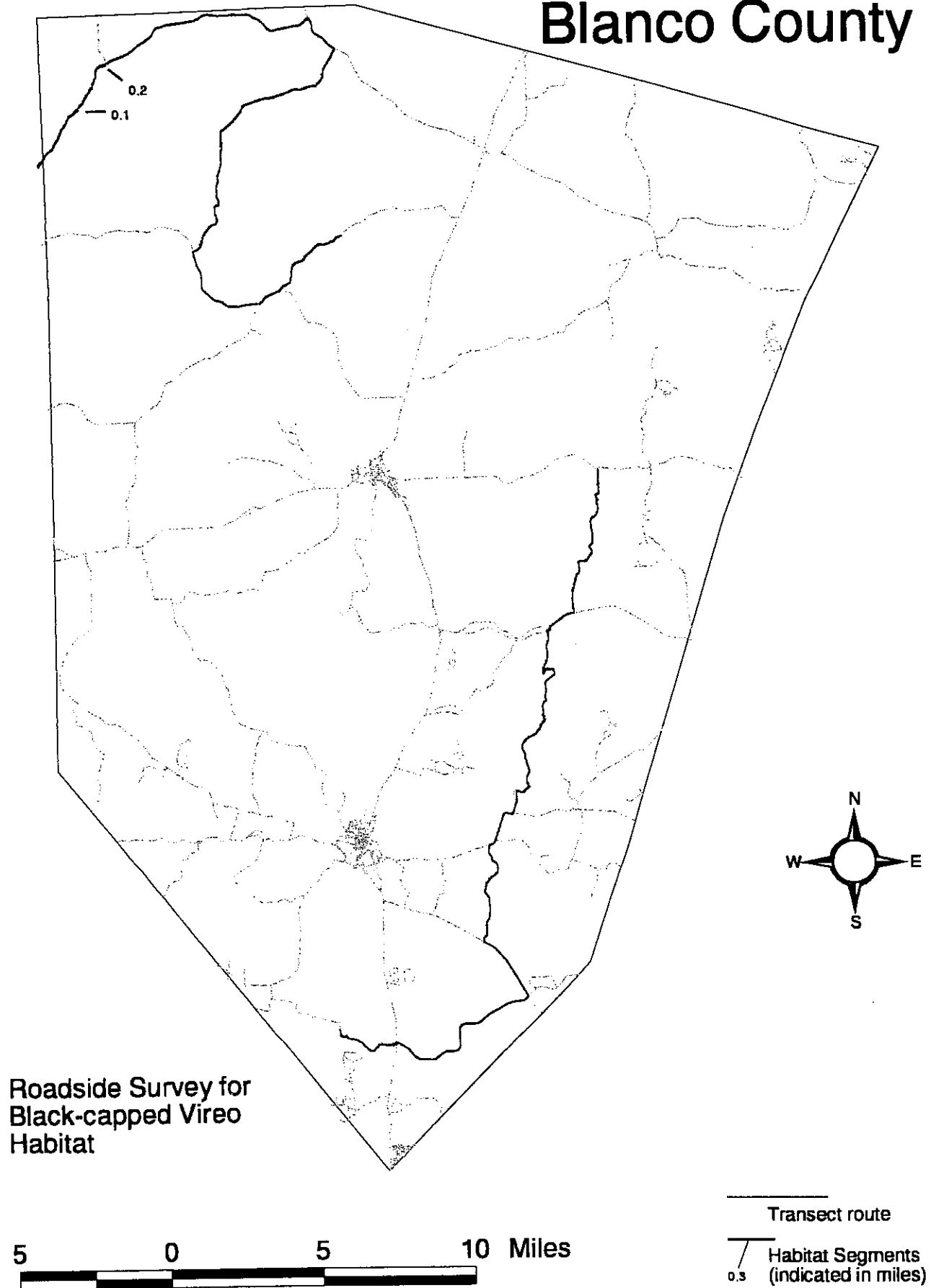
\*\*3.2-3.7 on left

**Total habitat: 1.9**

**BCV's observed: \*\*0**

\*\* During the first Bexar\_w run one BCV was observed at mile 3.7 Before and across the street from the Ridge Rock sign. The computer shut down negating that survey. Was not detected in second 97 or the 1998 transect.

# Blanco County





**Transect name:** BLANCO\_N/  
BLAN\_N98

**County:** Blanco

**Date:** 29 Aug 97/14 July 98(Maresh/Maresh)

**Time:** 08:30/09:41

**Conditions:** Warm, fair, calm./Hot, clear, light breeze.

**Directions:** 0.0- CR 310 @ Gillespie County line  
4.1- Road turns into RR 3347  
11.8- 'T' w/ RR 962, turn right  
13.8- Right on CR 308  
22.7- 'T' w/ RR 1323, turn left  
27.0- Left on CR 307  
30.0- END-T

**BCV habitat observed:**

2.3-2.4- Oak/Persimmon. No BCV's heard.  
4.1-4.3- Persimmon/Oak scrub. One BCV heard in patch on N side of  
FM 3347 at corner of CR 309.

**Total habitat:** 0.3 miles

**BCV's observed:** 1/0

Transect name: BLANCO\_S

County: Blanco

Date: 28 Aug 97

Time: 12:28

Conditions: Hot, fair, slight breeze.

Directions: 0.0- CR 202 (Conell Road) @ RR 2766 (at stop sign)  
5.4- 'T' w/ US 290, turn right  
6.3- Left on CR 410  
14.3- 'T' w/ FM 165, turn right  
15.8- Left on CR 406 (Cox Road)  
19.5- X-sec w/ RR 32, turn left  
21.9- Right on RR 473  
27.5- X-sec w/ US 281, turn left  
27.6- Right on CR 101 (Little Blanco Road)  
30.0- END-T

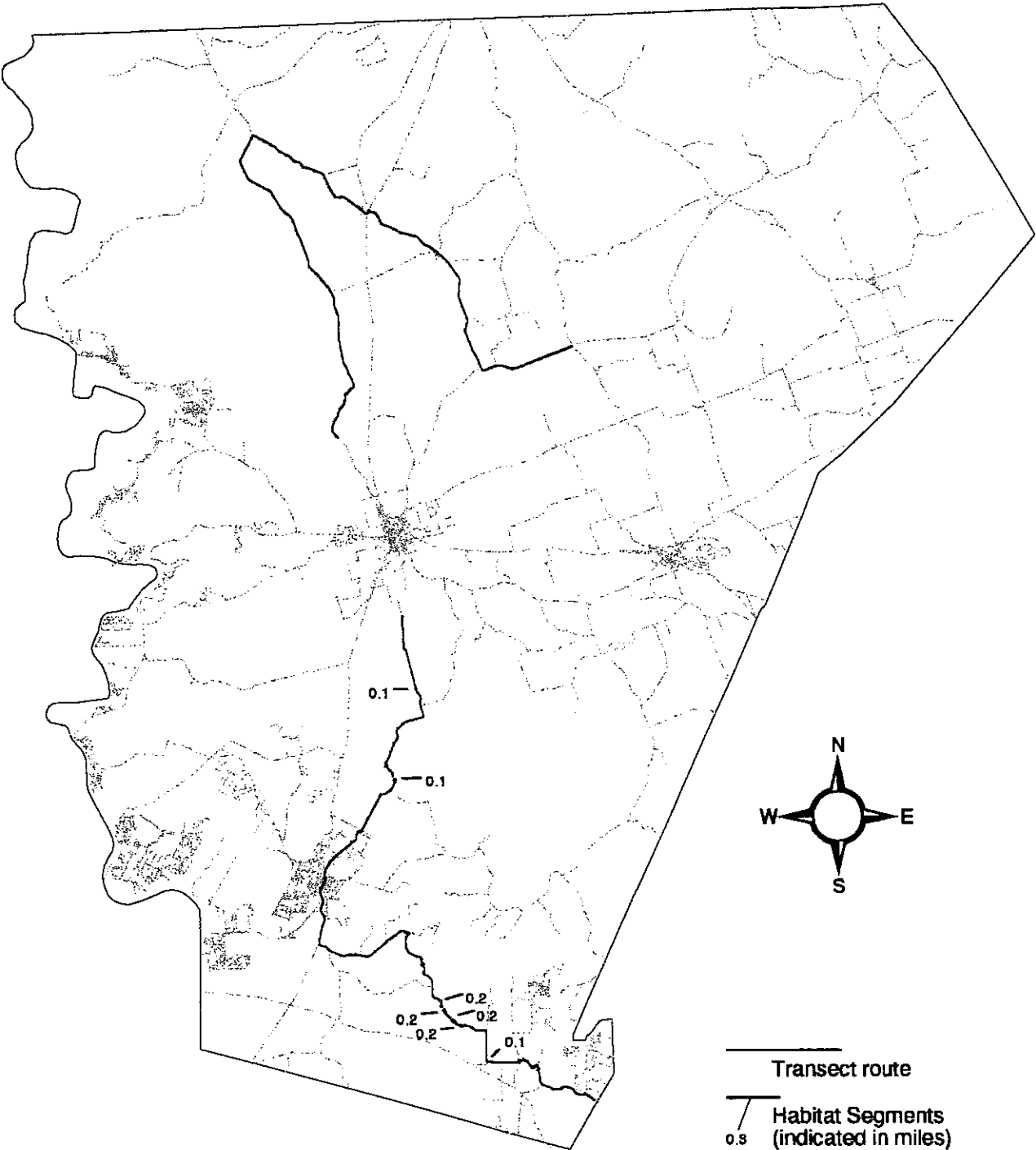
BCV habitat observed:

none

Total habitat: 0.0 miles

BCV's observed: 0

Roadside Survey for  
Black-capped Vireo Habitat



5 0 5 10 Miles

Burnet County

**Transect name:** BURNET\_N

**County:** Burnet

**Date:** 29 Aug 97

**Time:** 15:26

**Conditions:** Hot, fair, light breeze

**Directions:** 0.0- RR 963 W @ x-sec w/ RR1174  
3.5- Right on RR 2340  
8.3- Right on CR 205  
11.5- Left on US 281  
11.6- Right on CR 103  
17.0- Left on CR 108  
30.0- END-T

**BCV habitat observed:**  
none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

Transect name: BURNET\_S

County: Burnet

Date: 30 Aug 97

Time: 08:18

Conditions: Warm, hazy, calm.

Directions: 0.0- CR 404 @ Haynie Flat Road (Barton Creek Lakeside subdivision)  
(at county road sign)  
2.1- Straight (stay on 404)  
3.8- Straight through x-sec (stay on 404)  
5.0- Veer right (stay on 404)  
9.1- Straight  
11.7- X-sec w/ RR2147, turn left  
15.5- Right on US 281  
18.3- Right on Mormon Mill Road (CR 340) (at light, in Marble Falls)  
30.0- END-T

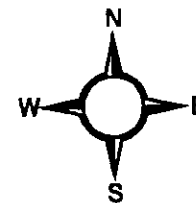
BCV habitat observed:

4.9-5.0- Oak/Persimmon scrub. O.K., but short. No BCV's heard.  
7.0-7.2- Persimmon/Oak scrub. Marginal habitat. No BCV's heard.  
7.4-7.6- Persimmon/Oak scrub. Fairly marginal habitat. No BCV's heard.  
7.9-8.1- Persimmon/Oak scrub. Marginal habitat. No BCV's heard.  
8.2-8.4- Persimmon/Oak scrub. Marginal habitat. No BCV's heard.  
22.9-23.0- Persimmon. On ridge about 25m from road. Good habitat  
patch, but isolated. No BCV's heard.  
27.2-27.3- Oak scrub. No BCV's heard.

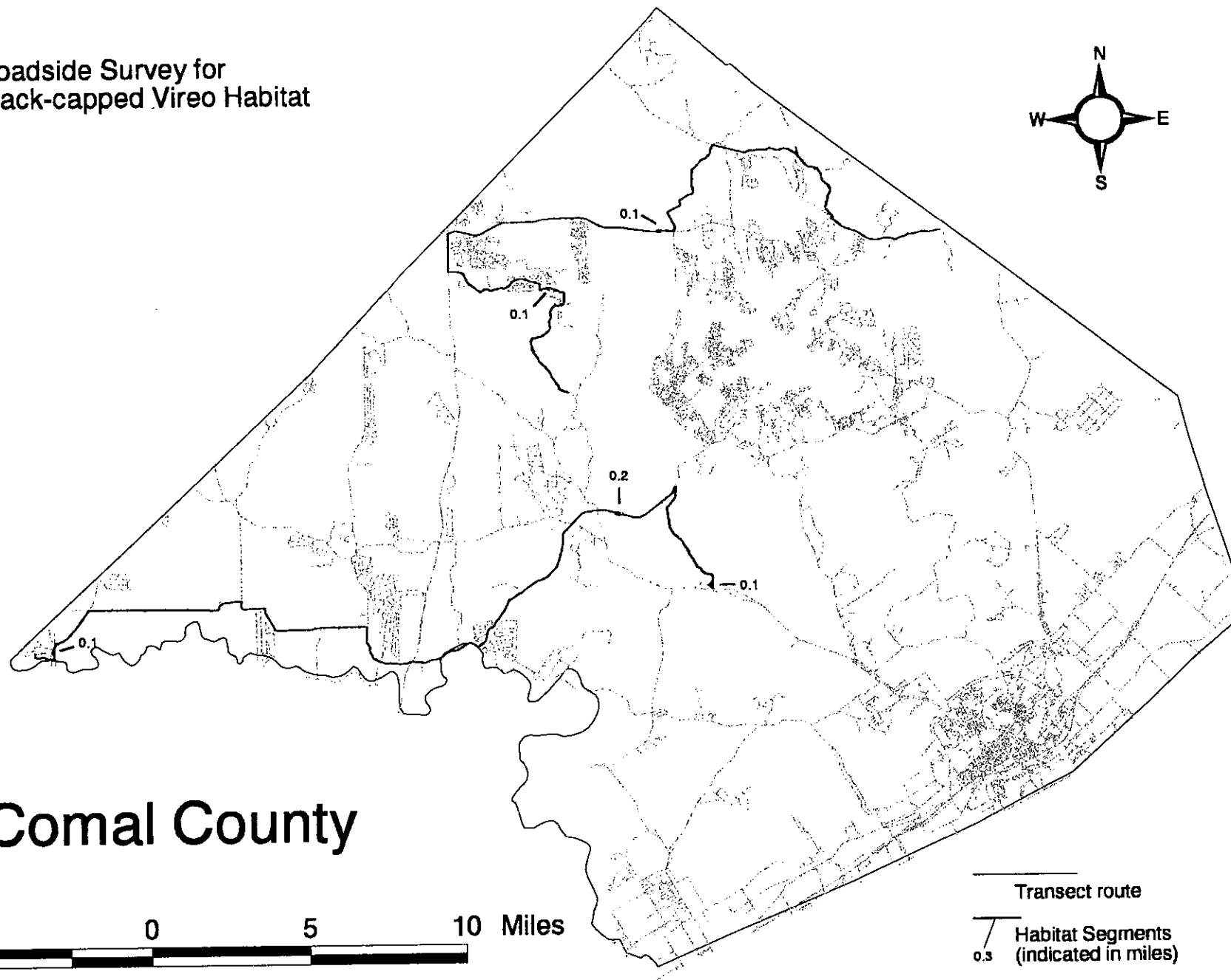
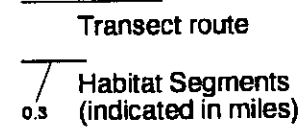
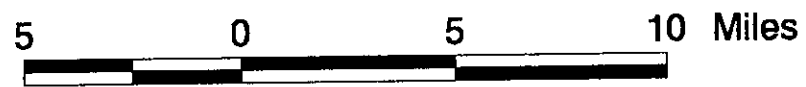
Total habitat: 1.1 miles

BCV's observed: 0

Roadside Survey for  
Black-capped Vireo Habitat



Comal County



**Transect name:** COMAL\_N

**County:** Comal

**Date:** 1 Sept 97

**Time:** 08:03

**Conditions:** Warm, hazy, calm.

**Directions:** 0.0- RR 32 @ Hays County line.  
3.6- Right on Mail Route Road  
8.1- 'T' w/ RR 32, turn right  
9.1- Left on Crane's Mill Road  
12.7- X-sec w/ RR 306, turn right  
20.1- 'T' w/ US 281, turn left  
21.3- Left on Rebecca Creek Road  
30.0- END-T

**BCV habitat observed:**

13.2-13.3- Oak scrub. Marginal habitat. No BCV's heard.  
25.1-25.2- Persimmon/Oak.. Marginal habitat. No BCV's heard.

**Total habitat:** 0.2 miles

**BCV's observed:** 0

**Transect name:** COMAL\_S

**County:** Comal

**Date:** 2 Sept 97

**Time:** 10:45

**Conditions:** Hot, fair, calm.

**Directions:** 0.0- Crane's Mill Road @ SH 46 (in front of speed limit sign)  
3.9- 'T' w/ RR 3159, turn left  
7.8- X-sec w/ SH 46. Go straight (onto Smithson Valley Road)  
13.0- 'T' w/ FM 1863, turn right  
15.2- Cross US 281  
17.6- Left on Amman East Road  
21.2- 'T' w/ Blanco Road, turn right  
22.3- Left on Amman Road West  
27.2- Left on RR 3351  
29.2- Right at Deer Meadow subdivision  
30.0- END-T

**BCV habitat observed:**

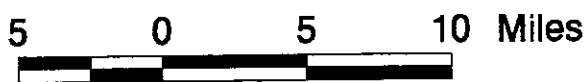
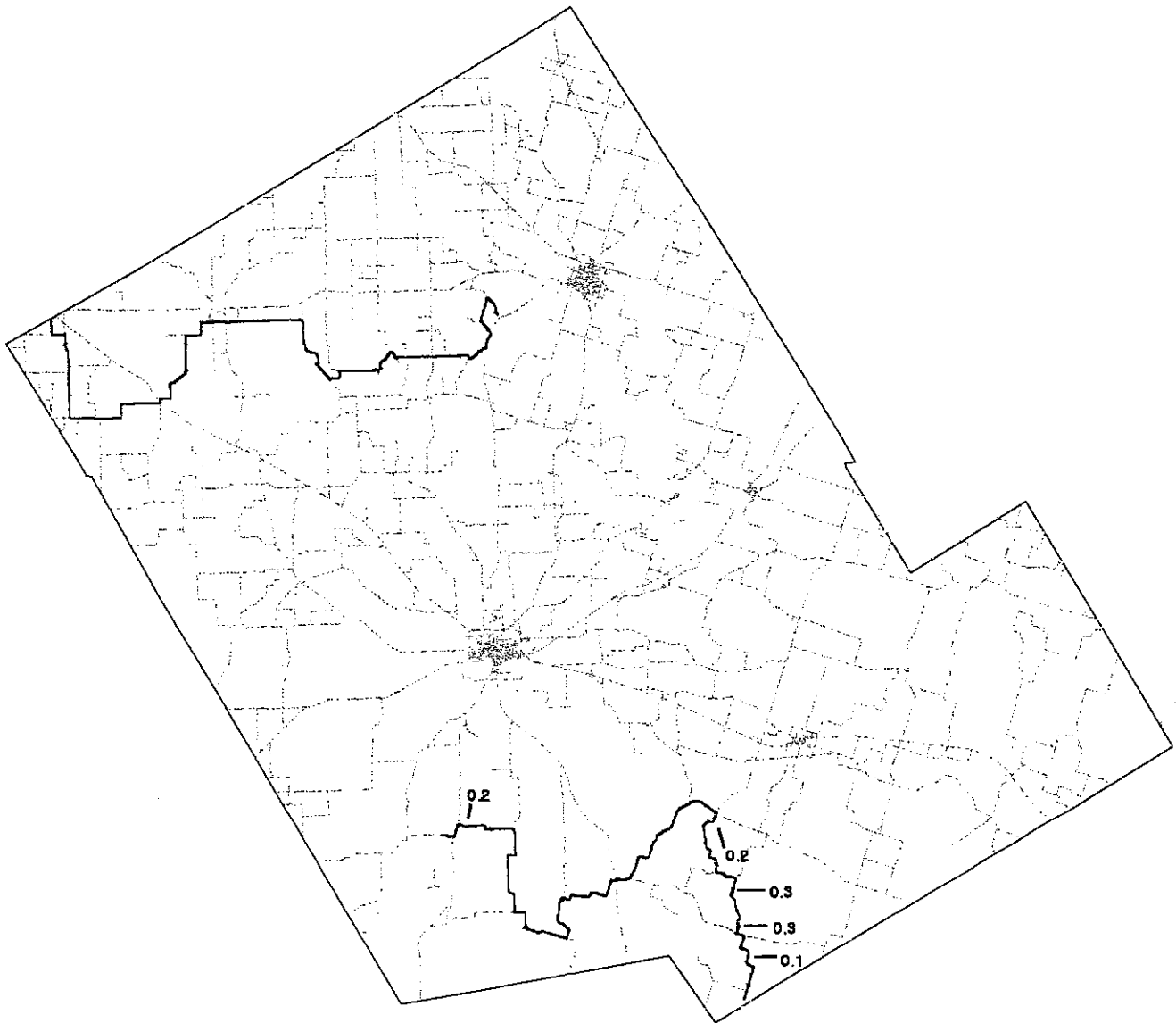
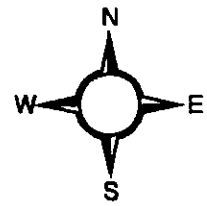
0.1-0.2- Persimmon. Sparse habitat but good woody mix. No BCV's heard.  
6.0-6.2- Oak scrub. Much traffic. No BCV's heard.  
29.0-29.1- Oak scrub. Fairly marginal habitat. Much traffic. No BCV's heard.

**Total habitat:** 0.4 miles

**BCV's observed:** 0



# Roadside Survey for Black-capped Vireo Habitat



Transect route  
Habitat Segments  
(indicated in miles)

## Comanche County

**Transect name:** COMAN\_E

**County:** Comanche

**Date:** 8 Aug 97

**Time:** 09:50

**Conditions:** Cloudy, mild, light breeze.

**Directions:**

- 0.0- CR 254/254A 'T' (at sign)
- 3.0- Right on CR 252
- 5.6- Turn left (not marked)
- 6.5- Turn right at 'T'
- 7.3- Turn right at 'T'
- 9.5- Left on FM 1476
- 15.4- 'T' w/ SH 16, turn left
- 15.5- Right on CR 245
- 18.3- Left on CR 235 at 'T'
- 20.2- Right at 'T' to CR 253
- 23.0- Turn right (stay on 253)
- 26.7- Left on CR 251
- 29.0- 'T' w/ FM 573, turn left
- 29.5- Right on CR 261
- 30.0- END-T

**BCV habitat observed:**

- 1.9-2.0- Sumac/Oak. Marginal habitat. No BCV's heard.
- 3.5-3.8- Sumac. Heard incomplete BCV song, possible HY male.  
On CR 252 0.3mi. from FM 2561. On east side of road, upslope about 20 m. Good habitat stretch along slope of low hill.
- 5.0-5.3- Dense Oak/Sumac. Add this patch to the ARC/INFO file. No BCV's heard.
- 9.3-9.5- Sumac/Oak. No BCV's heard.
- 28.6-28.8- Sumac/Oak. No BCV's heard.

**Total habitat:** 1.1 miles

**BCV's observed:** 1 (probable)

Transect name: COMAN\_W

County: Comanche

Date: 8 Aug 97

Time: 13:48

Conditions: Mostly cloudy, warm.

Directions: 0.0- CR 137 @ Eastland County line  
0.6- Left on CR 133  
1.1- Right on CR 131  
4.4- 'T' w/ CR 127, turn left  
8.4- 'T' w/ CR 125, turn left  
8.5- Cross SH 36 to CR 124  
11.8- Right on CR 192  
13.6- Left on CR 185  
16.9- 'T' w/ CR 184, turn right  
20.2- 'T' w/ CR 152, turn left  
20.5- Curve right (stay on 152)  
22.9- 'T' w/ CR 156, turn right  
24.7- Cross FM 2247 (onto CR 433?)  
26.2- Left on CR 437  
27.0- Left on FM 2318  
27.6- Left on CR 465  
29.2- Right on CR 463  
30.0- END-T

BCV habitat observed:

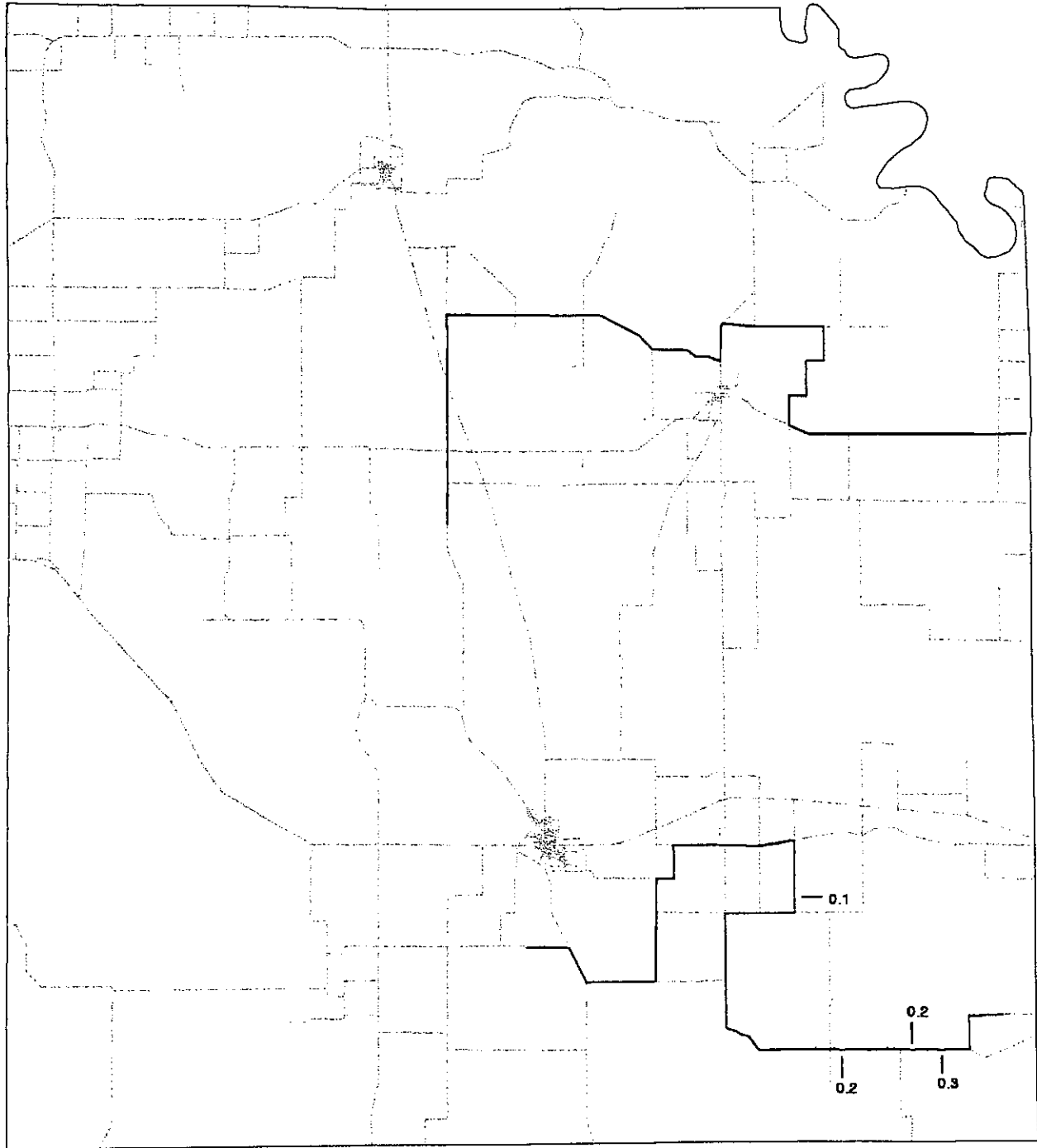
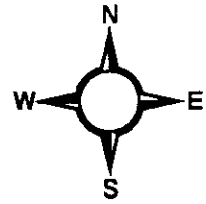
none

Total habitat: 0.0 miles

BCV's observed: 0

# Concho County

Roadside Survey for  
Black-capped Vireo  
Habitat



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** CONCHO\_N

**County:** Concho

**Date:** 3 Sept 97

**Time:** 07:30

**Conditions:** Mild, hazy, calm.

**Directions:** 0.0- CR 4395 @ FM 765 (not marked (at end of pavement))  
2.0- Left on CR 4546  
6.2- Veer left (stay on 4546)  
11.3- Left on FM 2134  
12.4- Right on CR 4506 (not marked)  
14.5- Right on CR 4508  
21.0- 'T' w/CR 1115 (4503 on map). Turn left  
22.9- Cross US 83  
24.9- Turn right on FM 765  
30.0- END-T

**BCV habitat observed:**  
None

**Total habitat:** 0.0 miles

**BCV's observed:** 0

**Transect name:** CONCHO\_S

**County:** Concho

**Date:** 4 Sept 97

**Time:** 07:12

**Conditions:** Mild, foggy, calm

**Directions:** 0.0- CR 3388 @ McCulloch County line.  
2.0- Right on CR 3326  
9.5- Road turns right  
12.9- Right on CR 3136  
15.0- Left on CR 3059  
17.1- Left on CR 3034  
20.7- Left on CR 3120  
22.2- Left on CR 3135  
25.3- 'T' w/ CR 3326, turn right  
27.4- Right on US 83  
28.6- Left on CR 2202 (not marked)  
30.0- END-T

**BCV habitat observed:**

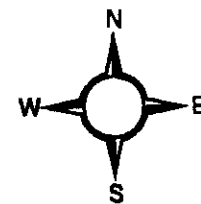
2.7-3.2- Oak/Mesquite. O.K., but sheeped (not much grass). Marginal at West end of patch (3.0-3.2). No BCV's heard.  
3.7-3.8- Shin oak. No BCV's heard.  
5.7-6.0- Persimmon. Marginal, too sparse. No BCV's heard.  
15.4-15.5- Oak/Persimmon scrub. No BCV's heard.

**Total habitat:** 1.0 miles

**BCV's observed:** 0

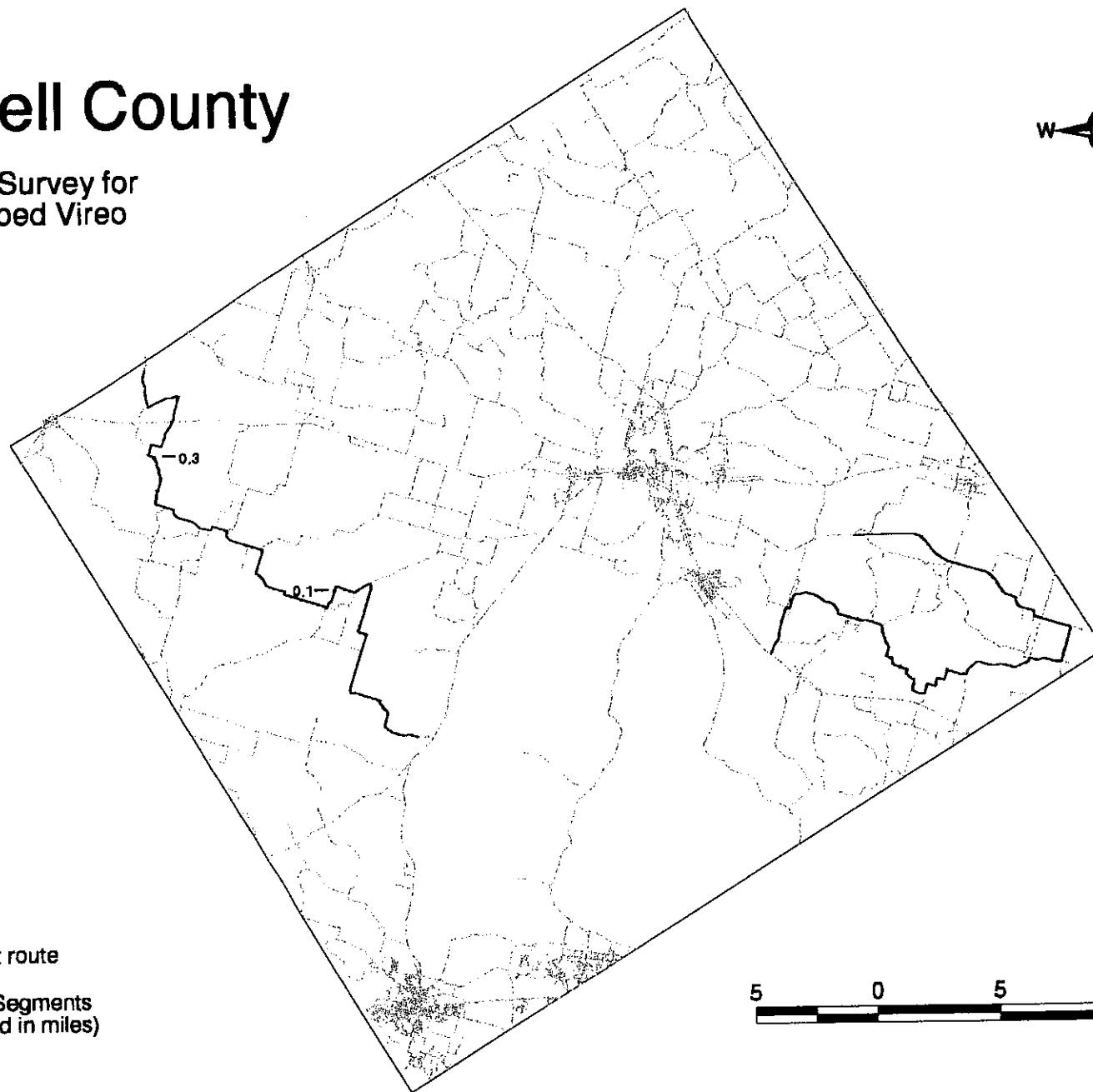
# Coryell County

Roadside Survey for  
Black-capped Vireo  
Habitat



Transect route  
Habitat Segments  
(indicated in miles)

0.3



5 0 5 10 Miles

Transect name: CORY\_E

County: Coryell

Date: 20 Aug 97

Time: 15:00

Conditions: Hot, fair.

Directions:

- 0.0- FM 1829 @ SH 36 (at 'FM 1829' sign)
- 2.0- Right on CR 320W
- 2.1- Curve left
- 2.7- Curve right (onto CR 321?)
- 6.1- 'T' w/ CR 341(?), turn left
- 6.2- Road turns into CR 344
- 6.8- Curve right (onto CR 342 (??))
- 10.9- Road 'T's (w/ CR 341?), turn left
- 13.5- CR 341 'T's w/ SH 236, turn left
- 16.6- Right on CR 338
- 17.8- Turn left at 'T'
- 18.0- Turn left (on CR ???)
- 18.5- 'T' w/ FM 107, turn left
- 29.9- Right on CR 302
- 30.0- END-T

BCV habitat observed:

none

Total habitat: 0.0 miles

BCV's observed: 0



**Transect name:** CORY\_W

**County:** Coryell

**Date:** 7 Aug 97

**Time:** 07:09

**Conditions:** Cloudy, warm.

**Directions:** . 0.0- CR 142 off FM 116 @ Pidcoke cemetery (at flagpole)  
2.0- Veer left  
8.9- 'T' w/ FM 1783, turn left  
9.7- Turn right on CR 143 (King Ranch Road, left fork)  
10.5- Left on King Country road  
11.6- 'T' w/ FM 1783, turn right  
11.6- Right on CR 139  
16.2- Go straight (onto CR 137)  
18.9- 'T' w/ FM 183, turn left  
19.2- Turn right on CR 158(?), (go straight at curve)  
24.2- Go straight  
25.8- Zig right across US 84 (onto CR 159)  
26.9- 'T' w/ CR 162, turn left  
28.3- Right on CR 162  
30.0- END-T

**BCV habitat observed:**

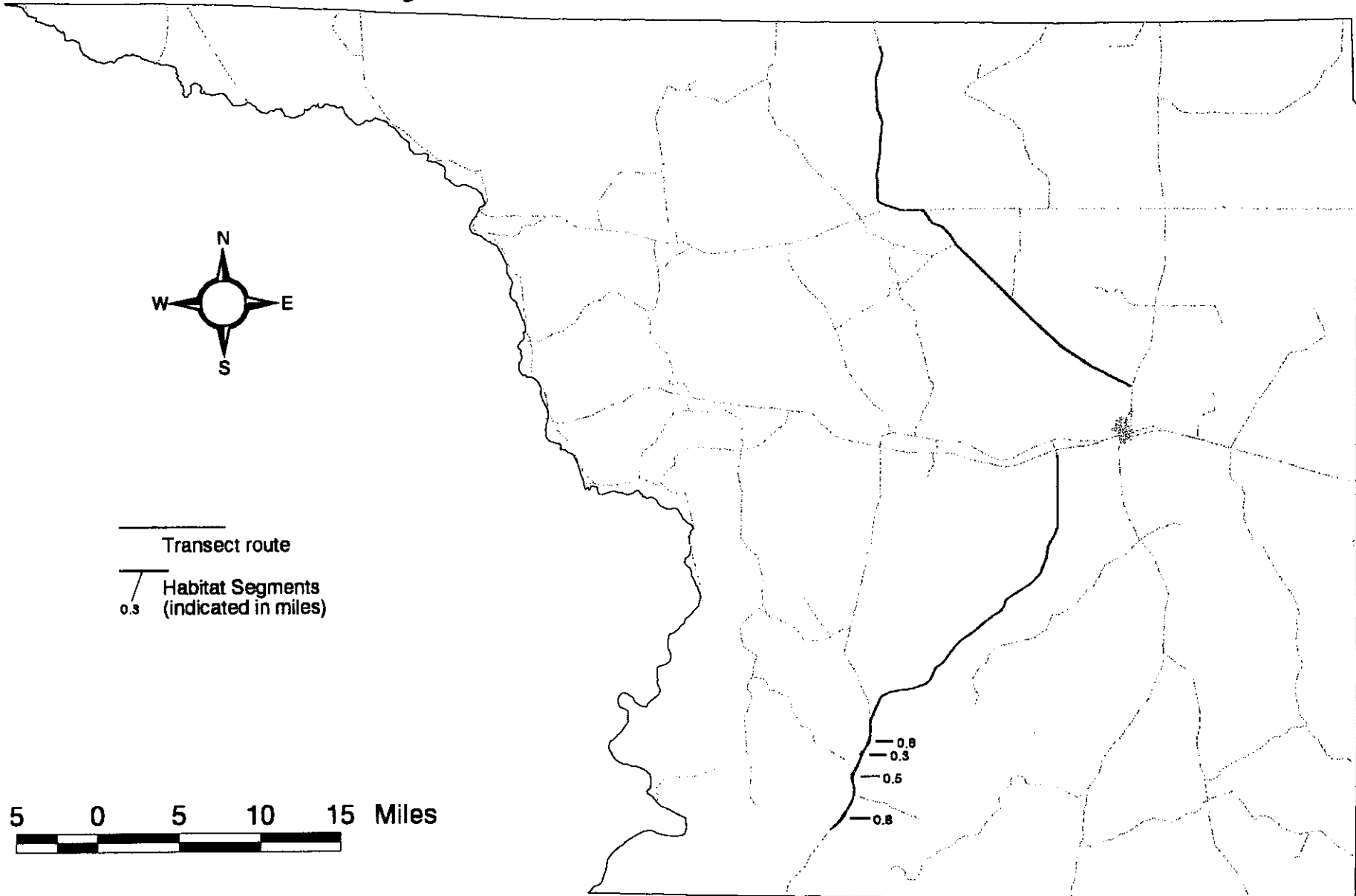
10.6-10.7- Oak/Persimmon. No BCV's heard.

**Total habitat:** 0.1

**BCV's observed:** 0

# Crockett County

## Roadside Survey for Black-capped Vireo Habitat



**Transect name:** CROC\_N98

**County:** Crockett

**Date:** 8 June 98(Maresh,Hernandez)

**Time:** 17:48

**Conditions:** Hot, clear, breezy.

**Directions:** 0.0- TX 137 @ TX 163.  
17.2- Left at 'T' onto US 190/TX137.  
19.0- Straight on TX 137.  
30.0- End transect

**BCV habitat observed:**  
none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

**Transect name:** CROC\_S98

**County:** Crockett

**Date:** 9 June 98(Maresh,Hernandez)

**Time:** 08:12

**Conditions:** Partly cloudy, warm, light breeze.

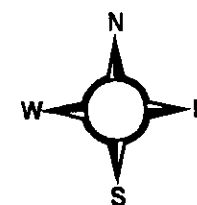
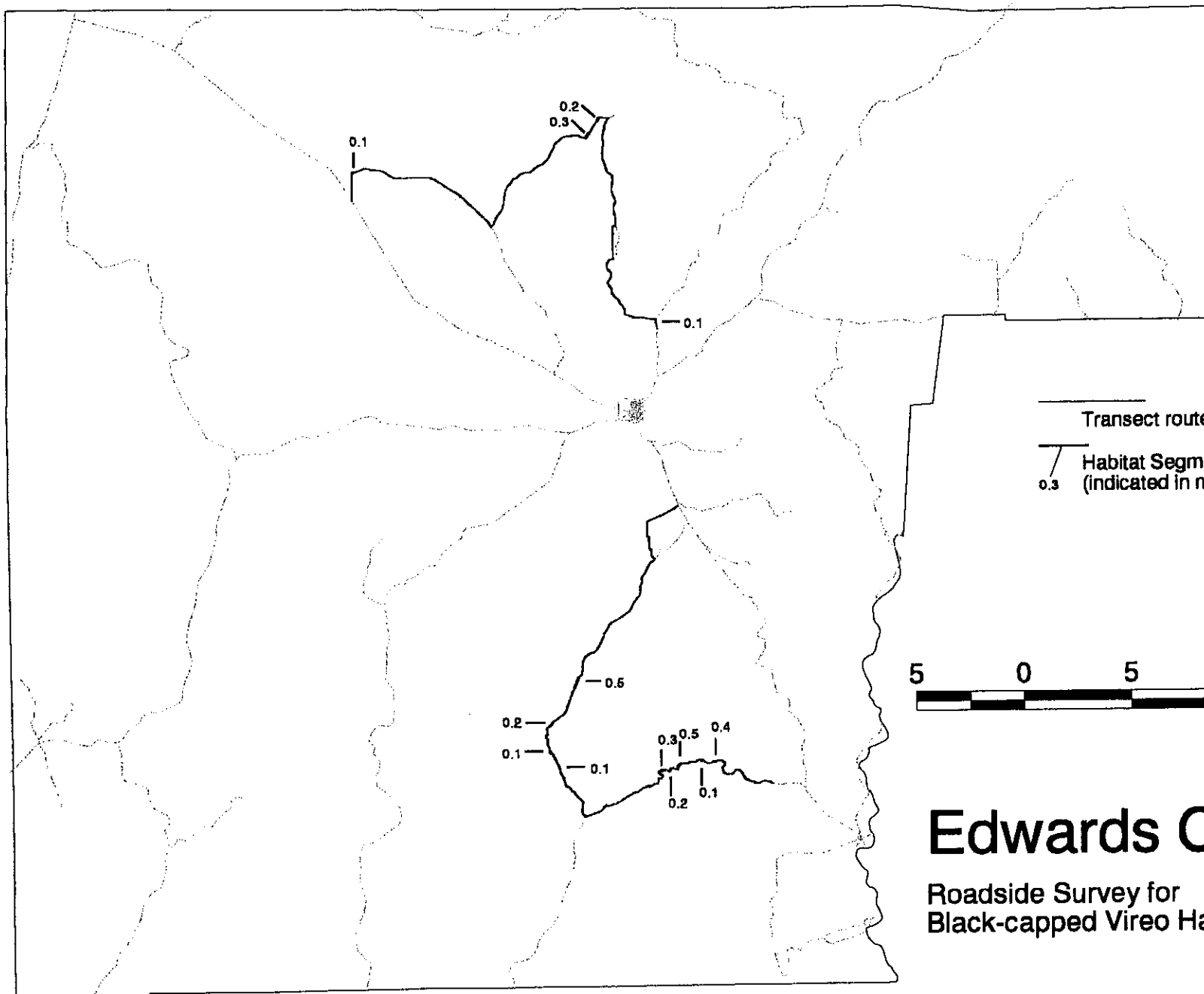
**Directions:** 0.0- FM 2083 @ second (big) power lines.  
30.0- End transect

**BCV habitat observed:**

- 23.3-23.9- O.K. hab. in bands along slope and pretty good up side canyons. Good mix but still a lot of Ashe Juniper.  
No BCV's heard.
- 24.4-24.7- Decent hab. on slope. Good mix but thin.  
No BCV's heard.
- 25.8-26.3- Pretty good hab. along slope and drainage running parallel to road. No BCV's heard. (O'Neal heard 1 BCV 11 July 97).
- 28.5-29.3- O.K. hab. along slopes. 1 BCV heard at 29.0. (O'Neal heard 1 BCV 11 July 97).

**Total habitat:** 2.2 miles

**BCV's observed:** 1 (2 in '96)



Transect route  
Habitat Segments  
(indicated in miles)

5 0 5 10 Miles

# Edwards County

Roadside Survey for  
Black-capped Vireo Habitat

**Transect name:** EDWA\_N98

**County:** Edwards

**Date:** 21 July 98(Maresh)

**Time:** 09:25

**Conditions:** Hot, clear, med. breeze.

**Directions:** 0.0- CR 101 @ TX 55 (across from stop sign) (CR 101 not marked on map).  
1.3- Turn right (still 101?).  
5.9- Straight.  
7.6- Road turns into RR 2995 (at sign).  
8.95- Turn left onto CR ?.  
10.2- Straight.  
12.3- Keep right.  
14.3- Curve right.  
15.6- Straight.  
16.4- Straight.  
16.9- Straight.  
17.55- Straight.  
17.6- Turn right.  
17.95- Straight.  
23.1- Right.  
23.2- Veer left.  
24.2- Straight.  
24.8- Go right.  
29.5- 'T' w/ FM 2630, turn right.  
30.0- End transect.

**BCV habitat observed:**

- 1.4-1.5- Very marginal Live Oak/mesquite scrub. Real scrappy habitat, much mesquite. No BCV's heard.
- 16.0-16.3- Marginal persimmon/Live Oak/mesquite scrub. Scrappy Live Oak/persimmon/mesquite. No BCV's heard.
- 16.9-17.1- Marginal persimmon scrub. O.K. persimmon habitat w/ oak/mesquite/etc., but still pretty marginal. No BCV's heard.
- 29.6-29.7- Marginal shinnery. Very, very quite and hot. No BCV's heard.

**Total habitat:** 0.7 miles

**BCV's observed:** 0

**Transect name:** EDWA\_S98

**County:** Edwards

**Date:** 21 May 98(Maresh)

**Time:** 09:04

**Conditions:** Mod. S breeze, cloudy, mild.

**Directions:** 0.0- CR 201 @ TX 55 (at first (corner) fence post).  
18.3- Turn left (CR ?)  
30.0- End transect

**BCV habitat observed:**

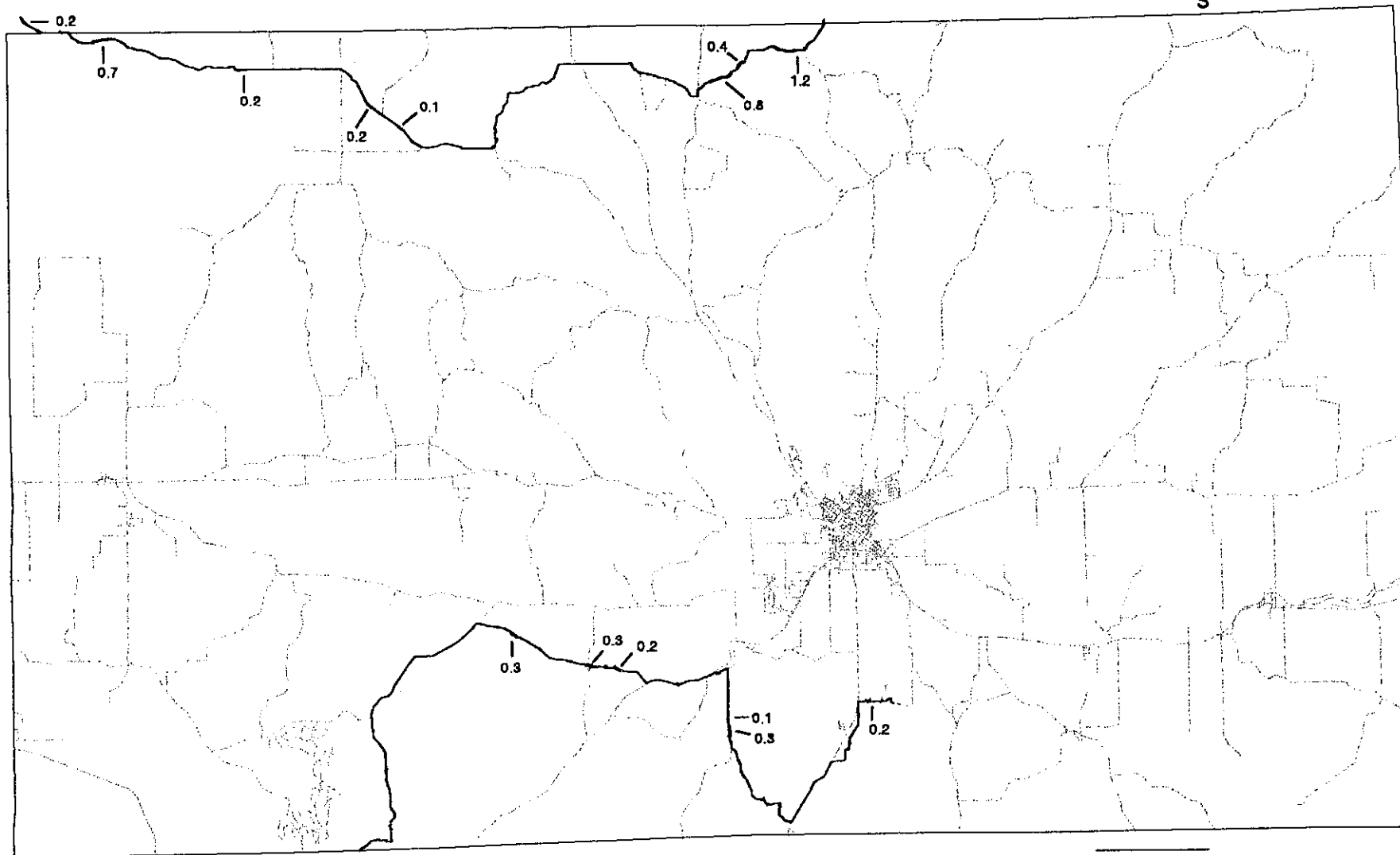
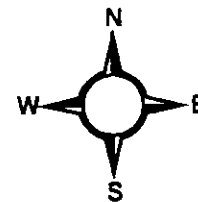
- 10.6-11.1- Very marginal persimmon/mtn laurel scrub.  
1 BCV heard at 10.6, 1 BCV heard at 11.0.  
This stretch really runs from about 10.0-11.3-  
Very thin persimmon/mtn laurel mix. Had been goated  
previously (1-5yrs?)
- 13.1-13.3- Marginal oak/persimmon scrub. This stretch similar to  
previous, but must have a few cows. No BCV's heard.
- 14.7-14.8- Marginal oak/persimmon scrub. Fairly marginal hab., mostly  
too tall. No BCV's heard.
- 15.5-15.6- 1 BCV singing to E- VERY POOR hab., too tall juniper  
and Shin Oak. Gully to E might have O.K. hab..
- 17.2- 1 BCV singing in VERY POOR hab. during scouting (20 May).  
Tall Shin Oak/Live Oak/juniper, heavily goated w/browse line.  
He was singing away about 20-25m E of road. There might  
be hab. I cannot see.
- 23.2-23.5- Marginal oak/persimmon scrub hab in creek bed. No BCV's  
heard.
- 23.7-23.9- Mtn. laurel scrub. Thick mtn laurel scrub along dry creek bed.  
1 BCV heard singing/shradding to S in marginal hab..
- 24.0-24.5- Marginal scrub along creek bank. 1 BCV heard at 24.1,  
1 BCV heard at 24.6 well off to S.
- 24.7- 1 BCV heard upslope >100m from road. Good hab. on slope  
w/pecan w/persimmon understory.
- 25.5-25.6- Very tall persimmon/juniper scrub w/good understory.  
Marginal hab. along stream. 1 BCV heard at 25.5.
- 26.0-26.4- Tall hab. upslope. 1 BCV heard at 26.1 across creek up steep  
slope >150m from road. 1 BCV heard at 26.3 upslope.
- 27.5- GCW heard during scouting (20 May).
- 30.0- 1 BCV heard during scouting (20 May)

**Total habitat:** 2.4 miles +

**BCV's observed:** At least 10. 12+ probable, plus at least 1 GCW

Roadside Survey for  
Black-capped Vireo Habitat

# Gillespie County



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)



**Transect name:** GILL\_N

**County:** Gillespie

**Date:** 24 July 97

**Time:** 08:50

**Conditions:** Warm, clear, slight breeze.

**Directions:**

- 0.0- Keese Road @ Llano County line
- 1.2- Right on Keese-Sagebiel Road
- 5.1- Left on RR 2323
- 5.3- Right on Cherry Spring Road
- 9.3- X-sec US 87, go straight onto Doss-Cherry Spring Road
- 13.7- 'T' w/ FM 648, turn right
- 16.1- Right on Lange's Mill Road . .
- 19.6- X-sec w/ FM 783, go straight onto Salt Branch Road
- 28.4- Go left at Salt Branch Loop
- 29.4- X-sec w/ Eckert, go straight
- 30.0- END-T

**BCV habitat observed:**

- 1.1-2.3- Oak/Persimmon. Good habitat stretch. No BCV's heard.
- 3.3-3.7- Shin oak/Live oak. No BCV's heard.
- 3.9-4.7- Shin oak/Live oak. No BCV's heard.
- 16.9-17.0- Persimmon/Mesquite. No BCV's heard.
- 18.0-18.2- Live oak/Juniper. No BCV's heard.
- 22.5-22.7- Persimmon/Mesquite. No BCV's heard.
- 26.8-27.5- Live oak/Shin oak. No BCV's heard.
- 29.7-29.9- Persimmon/Live oak. No BCV's heard.

**Total habitat:** 3.8 miles

**BCV's observed:** 0

**Transect name:** GILL\_S

**County:** Gillespie

**Date:** 30 July 97

**Time:** 09:16

**Conditions:** Warm, fair.

**Directions:** 0.0- Zenner-Aherns Road @ Kerr County line  
5.2- X-sec w/ White Oak Road, go straight  
10.0- X-sec w/ Morris Ranch Road, go right  
15.6- Left on SH 16  
17.8- Right on Center Point Road  
18.2- Go right (stay on Center Point Road)  
20.7- Left on Bear Creek Road  
24.1- Left on US 87  
26.4- Right on Old Comfort Road  
28.5- Right on US 87  
28.7- Right on Meusebach Road  
30.0- END-T

**BCV habitat observed:**

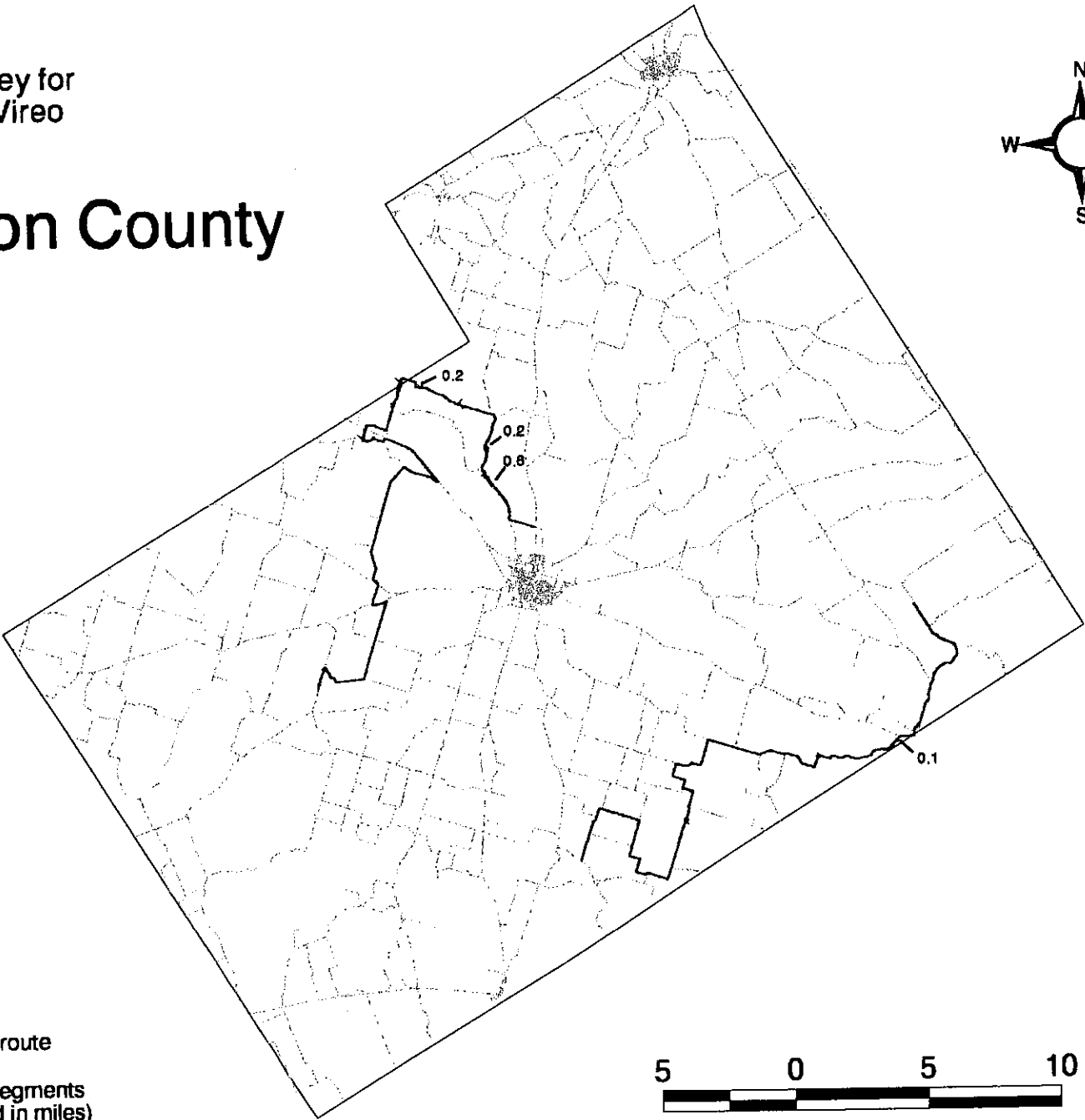
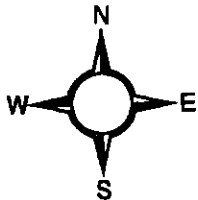
- 0.3 11.0-11.3- Oak/Mesquite. Patchy habitat. No BCV's heard.
- 0.3 13.6-13.9- Oak/Mesquite. Very marginal habitat. No BCV's heard.
- 0.2 14.5-14.7- Oak/Mesquite. No BCV's heard.
- 0.1 19.7-19.8- Dense Oak scrub. Good habitat east of road. No BCV's heard.
- 0.3 20.0-20.3- Scrub Oak. No BCV's heard.
- 0.2 29.0-29.2- Oak/Persimmon scrub. Marginal habitat, but has future potential No BCV's heard.

**Total habitat:** 1.4 miles

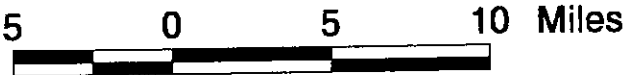
**BCV's observed:** 0

Roadside Survey for  
Black-capped Vireo

# Hamilton County



Transect route  
Habitat Segments  
(indicated in miles)



**Transect name:** HAMIL\_E

**County:** Hamilton

**Date:** 7 Aug 97

**Time:** 08:53

**Conditions:** Cloudy, mild.

**Directions:** 0.0- CR 424 @ FM 1241 (at edge of pavement)  
3.7- 'T' w/ CR 410, turn right  
4.1- Straight  
6.4- 'T' w/ CR 429, turn left  
10.2- 'T' w/ CR 428, turn left  
10.8- Curve left  
11.2- 'T' w/ CR 427 (not marked), turn right  
12.5- 'T' w/ CR 409 (not marked), turn right  
14.6- 'T' w/ FM 932, turn right  
16.4- Straight onto CR 431 (at curve in 932)  
16.6- Veer left  
17.6- Veer left  
23.0- Right on SH 36  
23.5(?)- Left on FM 1602  
25.6- Right on CR 310  
27.3- Left on CR 311  
28.9- Veer left (stay on 311)  
30.0- END-T

**BCV habitat observed:**

22.8-22.9- Oak/Persimmon scrub. Very marginal habitat. This may have been a mistake, perhaps it was supposed to be 20.8- 20.9 (before Leon River), better, but still marginal. No BCV's heard.

**Total habitat:** 0.1 miles

**BCV's observed:** 0

**Transect name:** HAMIL\_W

**County:** Hamilton

**Date:** 8 Aug 97

**Time:** 07:02

**Conditions:** Cloudy, mild, after rain

**Directions:**

- 0.0- CR 102 @ US 281 (at tree line)
- 1.0- Right on CR101
- 5.5- 'T' w/ CR 105, turn left
- 9.4- Left on CR 106
- 11.5- Right on CR 108 (go the long way)
- 12.5- Cross SH 36 (onto CR 608) . .
- 13.0- 'T' w/ CR 607, turn left
- 13.8- Curve left onto CR 309
- 14.0- Right on SH 36
- 16.6- Right on CR 607
- 18.0- Left on CR 606
- 22.6- Left on FM 2486
- 22.8- Right on CR 605
- 23.7- Left on FM 218
- 24.2- Right on CR 604
- 27.3- Right on CR 603 at 'T' (not marked)
- 29.1- 'T' w/ CR 613, turn left
- 30.0- END-T

**BCV habitat observed:**

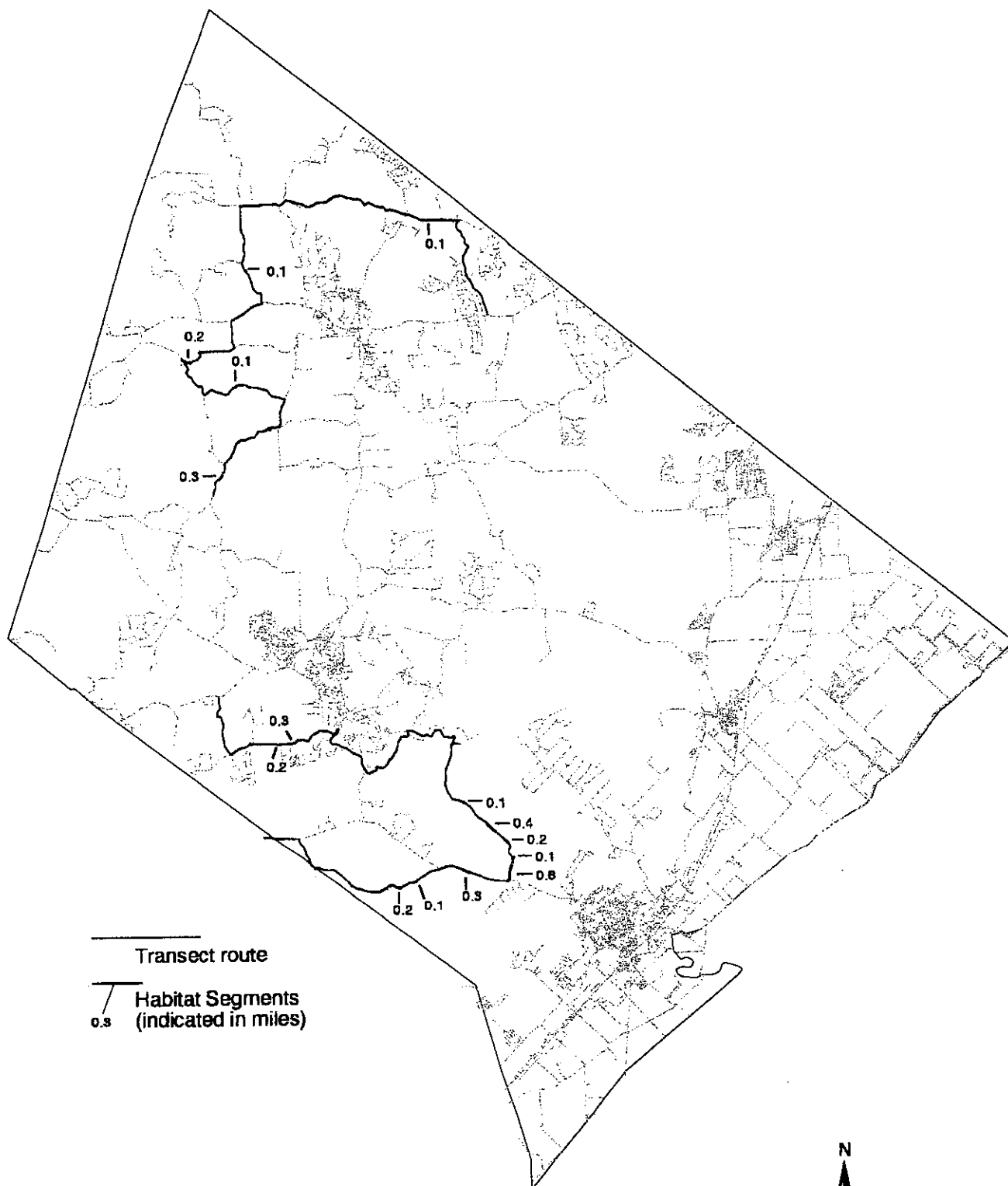
- 2.5-3.1- Sumac/Oak. Nice stretch of good habitat. No BCV's heard.
- 4.1-4.3- Oak/Sumac. No BCV's heard.
- 8.6-8.8- Oak/Sumac. Drove past this patch, backed up and got points.  
So, this will add 0.4mi to transect. Fix in ARC/INFO. No BCV's heard.

**Total habitat:** 1.0

**BCV's observed:** 0

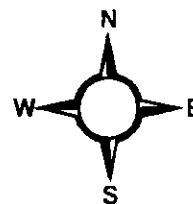
Roadside Survey for  
Black-capped Vireo Habitat

# Hays County



Transect route  
Habitat Segments  
(indicated in miles)

5 0 5 10 Miles



**Transect name:** HAYS\_N

**County:** Hays

**Date:** 27 July 97

**Time:** 07:57

**Conditions:** Warm, fair, light breeze.

**Directions:** 0.0- CR 185 @ radio tower off US 290  
3.8- 'T' w/ Fitzhugh Road (CR 101), turn left  
5.7- Cross RR 12  
12.0- Left on McGregor Road (CR 187)  
15.7- 'T' w/ US 290, turn right  
17.0- Left on CR 187  
17.9- 'T' w/ CR 190, turn right  
20.1- 'T' w/ CR 198, turn left  
21.9- Turn left onto CR 195  
25.1- 'T' w/ CR 220, turn right  
30.0- END-T

**BCV habitat observed:**

4.9-5.0- Live oak scrub. No BCV's heard.  
14.3-14.4- Oak/Sumac. No BCV's heard.  
19.8-20.0- Persimmon/Oak. Pretty good habitat on slope above creek. No BCV's heard.  
23.2-23.3- Oak scrub. Pretty good habitat stretch w/ good mix of woodies. No BCV's heard.  
29.1-29.4- Oak scrub. No BCV's heard.

**Total habitat:** 0.8 miles

**BCV's observed:** 0

**Transect name:** HAYS\_S/HAYS\_S2      **County:** Hays

**Date:** 28/29 July 97      **Time:** 07:30/?

**Conditions:** Warm, clear, calm/ " "

**Directions:** 0.0- FM 32 @ Comal County line  
1.3- Right on Purgatory Road (CR 215)  
2.5- Turn left (still CR 215?)  
7.4- 'T' w/ RR 12, turn right  
9.9- Left on CR 213  
16.5- 'T' w/ CR 174, turn left  
17.8- 'T' w/ CR 173, turn left  
18.6- Left on CR 314  
18.7- 'T' w/ CR 214, turn right (stay on 314)  
21.4- 'T' w/ RR12, turn right  
21.6- Left on CR 1492  
23.1- Right on CR 178  
23.4- Left on CR 280  
23.5- Left on Sagebrush Road  
23.7- Right on CR 279(?)  
27.7- Right on CR 180  
30.0- END-T

**BCV habitat observed:**

5.7-5.9- Oak scrub. Very marginal habitat, several houses in area. No BCV's heard.  
6.4-6.5- Oak scrub. Like above, still pretty marginal. No BCV's heard.  
8.2-8.5- Oak/Persimmon scrub. Pretty good habitat but could not hear very well over almost continuous traffic on RR 12. No BCV's heard.  
10.0-10.6- Oak/Persimmon. Good woody mix w/ lots of *Ilex*. Freeman Ranch, SWTSU. No BCV's heard.  
10.8-10.9- Oak/Persimmon. No BCV's heard.

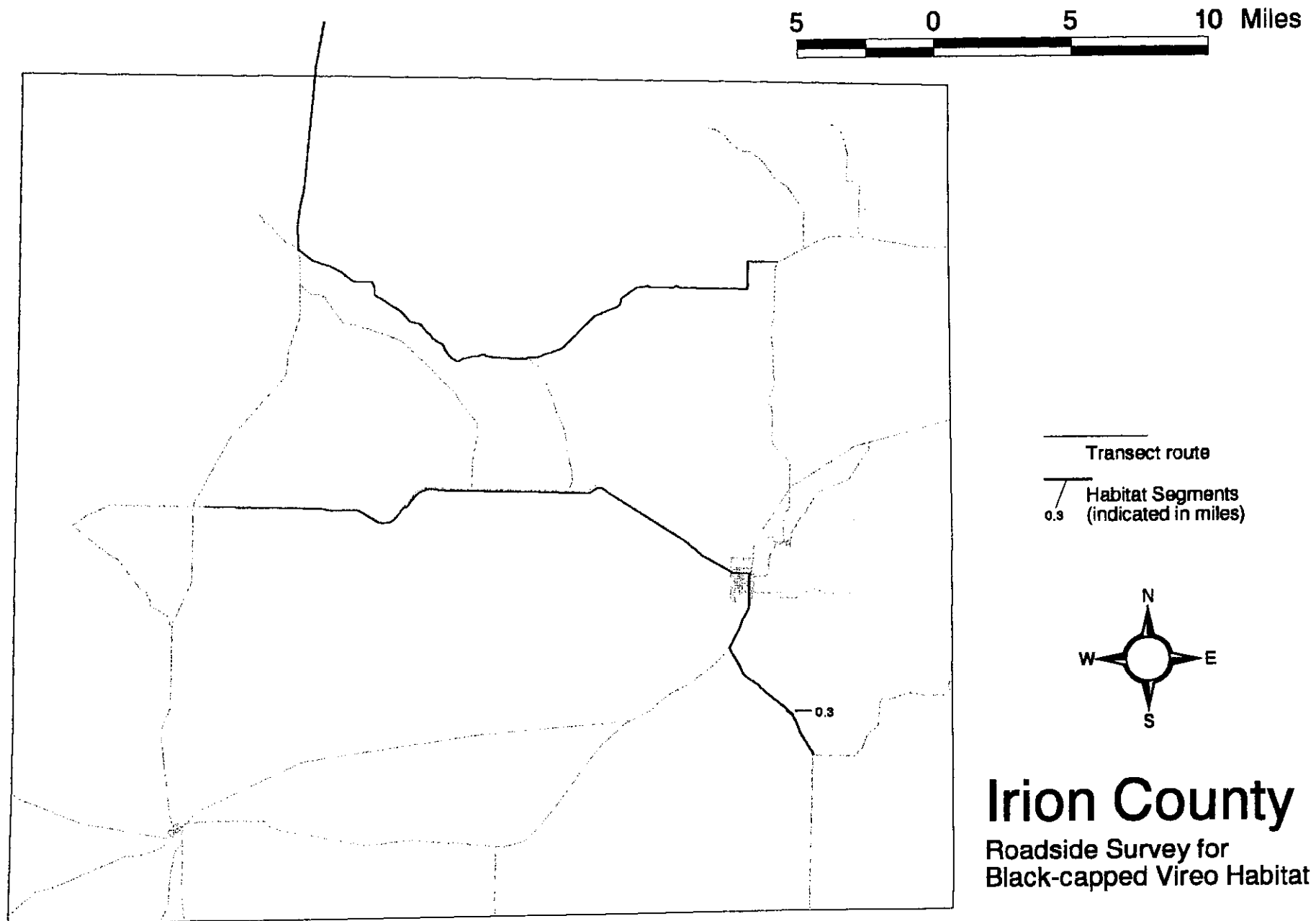
This is where computer crashed. BEGIN-H (10.8) on HAYS\_S, END-H (10.9) on HAYS\_S2.

11.5-11.7- Persimmon/Oak. No BCV's heard.  
12.1-12.5- Persimmon/Oak. No BCV's heard.  
13.6-13.7- Oak/Persimmon. No BCV's heard.  
25.2-25.5- Oak/Persimmon. No BCV's heard.  
25.8-26.0- Persimmon/Oak. No BCV's heard.

**Total habitat:** 2.5 miles

**BCV's observed:** 0





**Transect name:** IRIO\_N98

**County:** Irion

**Date:** 16 July 98(Maresh)

**Time:** 17:43

**Conditions:** Warm, cloudy, windy.

**Directions:** 0.0- CR 411 @ FM 853 (CR 411 not clearly marked) (across from  
'Notice Bitter Weed. . .' sign.  
11.2- Stay more-or-less straight.  
17.1- Stay right (on 411?)  
21.5- Right on TX 163.  
27.9- Enter Tom Green Co..  
30.0- End transect (about 100m from Sterling Co.).

**BCV habitat observed:**  
none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

**Transect name:** IRIO\_S98

**County:** Irion

**Date:** 17 July 98(Maresh)

**Time:** 07:32

**Conditions:** Fair, warm, calm.

**Directions:** 0.0- FM 915 @ CR 113 (at stop sign on 113).  
5.1- Right on US 67.  
8.1- Left on FM 2469.  
30.0- End transect.

**BCV habitat observed:**

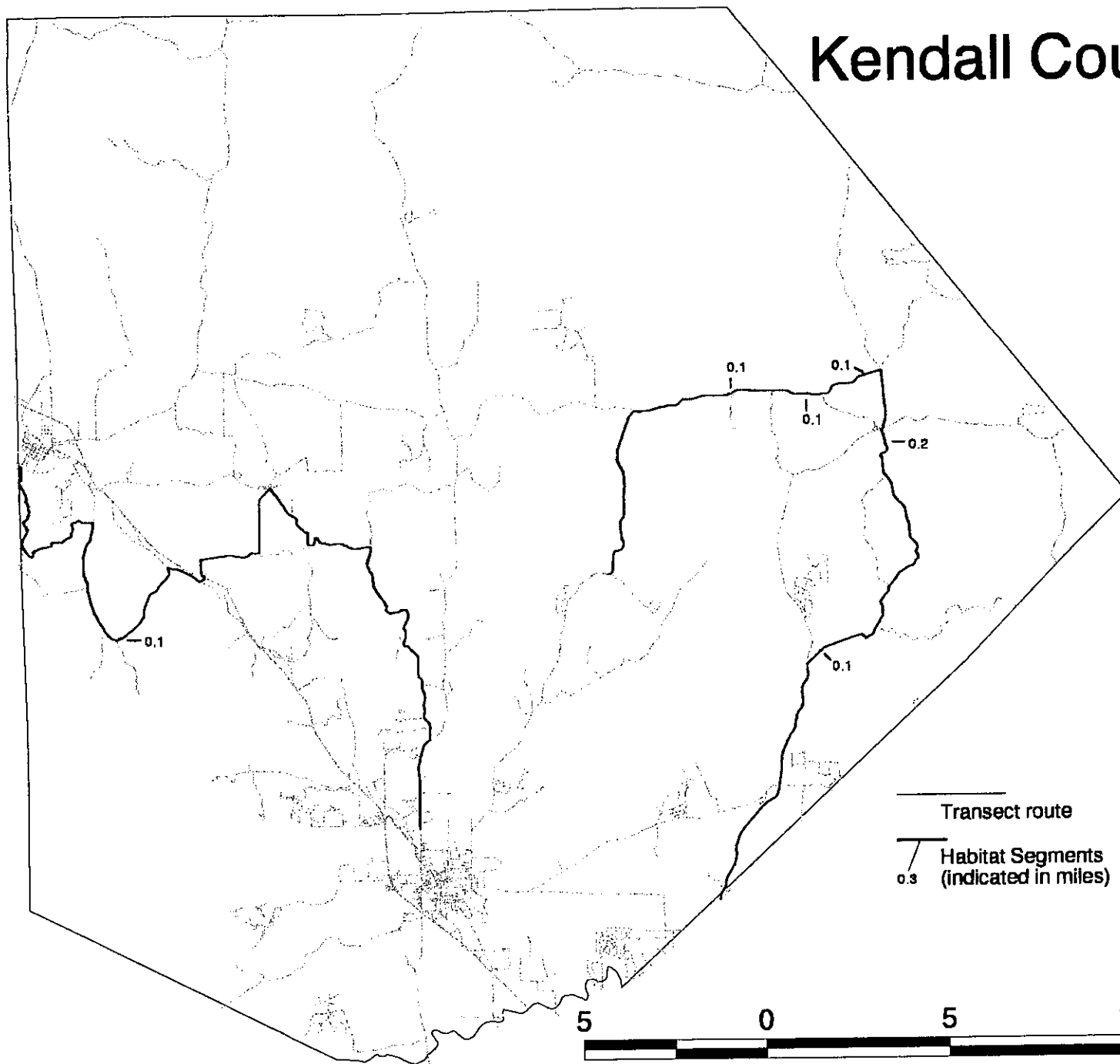
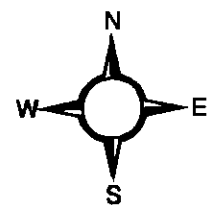
1.7-2.0- One good patch of Shin Oak, but stretch is very marginal overall.  
No BCV's heard.

**Total habitat:** 0.3 miles

**BCV's observed:** 0

Roadside  
Survey for  
Black-capped  
Vireo

# Kendall County



Transect route  
Habitat Segments  
(Indicated in miles)

5 0 5 10 Miles

**Transect name:** KEND\_E

**County:** Kendall

**Date:** 2 Sept 97

**Time:** 11:47

**Conditions:** Hot, clear, still.

**Directions:** 0.0- FM 3351 @ Comal County line (at drive just past county line sign)  
3.7- Cross SH 46 (stay on 3351)  
7.2- Right on Edge Falls Road  
9.6- 'Y' w/ Acker Road (gated), go straight  
10.9- 'Y' w/ Wengenroth Road, stay right  
16.1- Turn right on FM 473  
16.2- Left on Crabapple Road  
17.8- Left on Old Blanco Road  
19.7- 'T' w/ FM 473, turn right  
25.0- Left on FM 474  
30.0- END-T

**BCV habitat observed:**

7.7-7.8- Oak scrub. Marginal. No BCV's heard.  
15.6-15.8- Oak scrub. No BCV's heard.  
18.2-18.3- Oak/Persimmon. O.K. habitat about 30 m in. No BCV's heard.  
20.1-20.2- Oak scrub (at Rawls Creek). No BCV's heard.  
22.2-22.3- Oak/Persimmon scrub. No BCV's heard.

**Total habitat:** 0.6 miles

**BCV's observed:** 0

Transect name: KEND\_W

County: Kendall

Date: 31 July 97

Time: 07:20

Conditions: Cloudy and warm. Slight breeze.

Directions:

- 0.0- Pankratz Rd @ Tx 27
- 0.0- Turn right on Mill Dam Rd.
- 0.4- Turn left (stay on paved road).
- 2.5- Turn left on Skyline Rd.
- 5.2- Turn right on Holiday Rd.
- 8.4- Pass Below Rd. Continue straight.
- 8.5- Turn left on Big Joshua Creek Rd.
- 11.5- Turn right on RM 289
- 12.4- Turn left on Blaschke Rd.
- 12.6- Pass under IH 10.
- 14.9- Turn left on Waring Rd.
- 16.8- First 4-way x-sec in Waring. Turn right.
- 18.8- Turn left on Cravey Rd.
- 20.8- Turn right onto Walnut Grove Rd.
- 22.4- gate
- 23.3- gate
- 23.4- gate
- 24.1- gate
- 25.0- Straight past North Walnut Way.
- 26.7- Straight past Sabine Way.
- 27.3- Turn right on RR 1376.
- 30.0- End transect

BCV habitat observed:

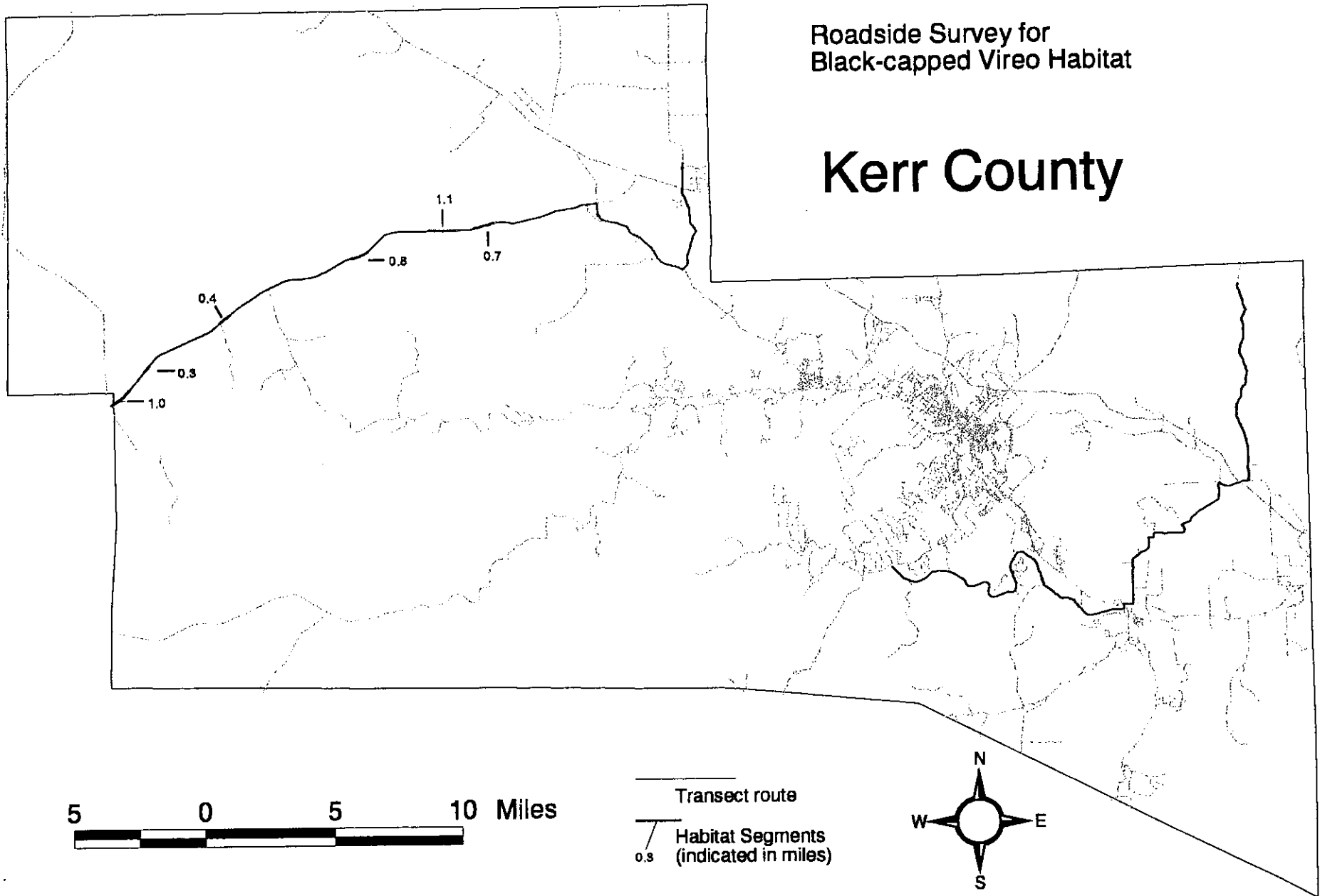
9.0-9.1- Live oak scrub. No BCV's heard.

Total habitat: 0.1 miles

BCV's observed: 0

Roadside Survey for  
Black-capped Vireo Habitat

# Kerr County



**Transect name:** KER809A

**County:** Kerr

**Date:** 9 Aug 96/11 Aug 96(O'Neal)

**Time:** 11:00/07:42

**Conditions:** Wind <5, 80% cloud cover, 26.7C/Wind 0, 80% cloud cover, 23.7C

**Directions:** 0.0- TX 41 E @ Kerr/Real Co. line

TX 27 E

RR 479 N

30.0- End transect. RR 479 1.1 mi. N of IH 10

**BCV habitat observed:**

0.0-1.0- Live Oak mottes, no juniper, 50% canopy.  
1 BCV heard.

1.9-2.2- Same as above.  
No BCV's heard.

5.3-5.7- Shin Oak mottes, some Live Oak, no juniper, 50% canopy.  
No BCV's heard.

10.9-11.7- Live Oak and Shin Oak scattered mottes, no juniper, 65%  
canopy.  
3 BCV's heard.

14.4-15.5- Same.  
2 BCV's heard.

16.1-17.0- Same.  
1 BCV heard.

**Total habitat:** 4.5 miles

**BCV's observed:** 7



**Transect name:** KER808B

**County:** Kerr

**Date:** 8 Aug 96(O'Neal)

**Time:**

**Conditions:**

**Directions:** 0.0- RR 2771 E @ x-sec of RR2771 and TX 16.

Wharton Rd E

Stone Leigh Rd N

RR 1341 E

Bear Creek Rd N

30.0- End transect

**BCV habitat observed:**

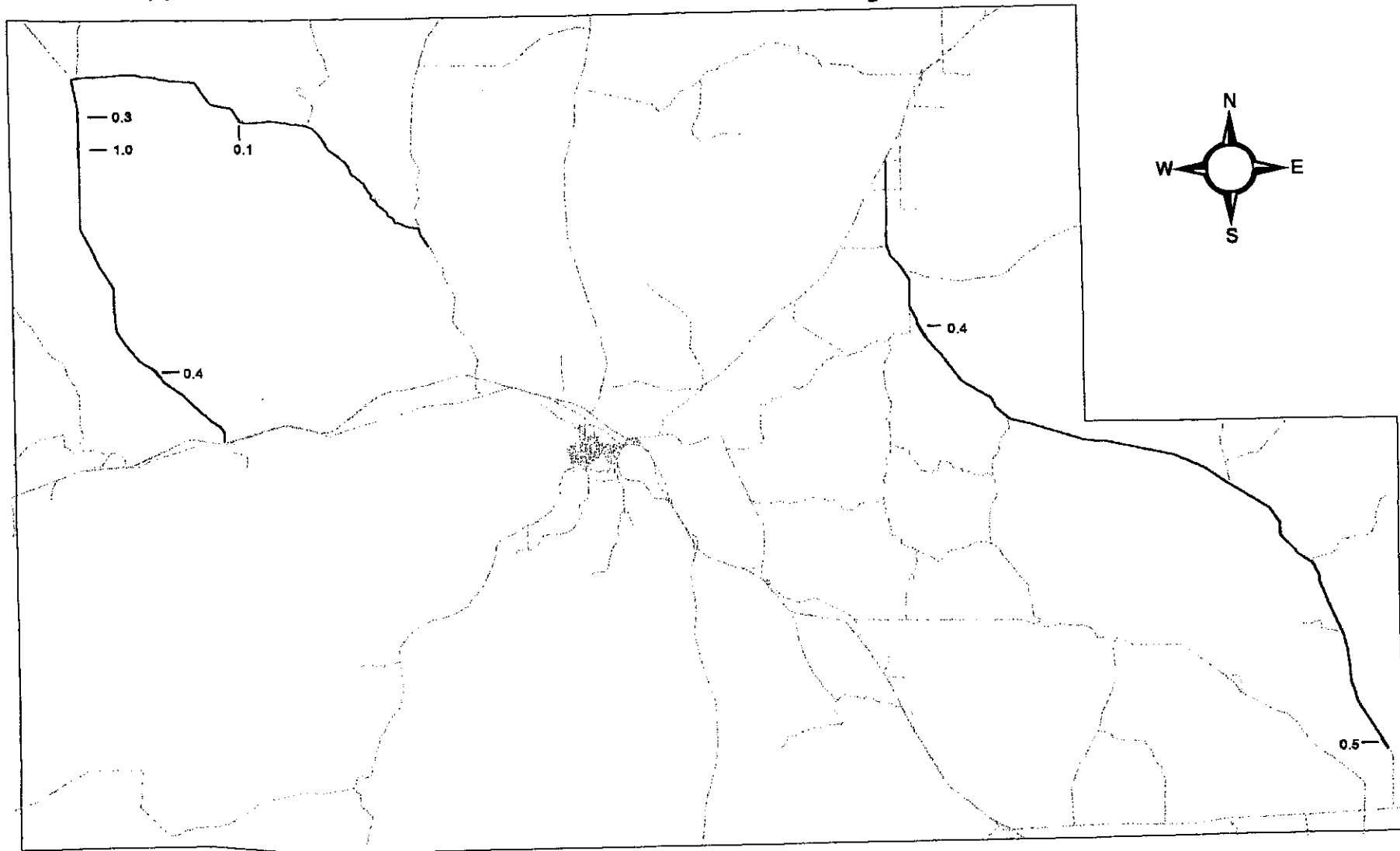
None

**Total habitat:** 0.0 miles

**BCV's observed:** 0

Roadside Survey for  
Black-capped Vireo Habitat

# Kimble County



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** KIM810A

**County:** Kimble

**Date:** 10 Aug 96

**Time:** <08:58

**Conditions:** Wind 0, 70% cloud cover, 24.5C.

**Directions:** 0.0- RR 1674 N @ IH 10

CR 210 E

RR2291 S

30.0- End transect 0.8mi. S of x-sec of RR2291 and CR 210.

**BCV habitat observed:**

3.3-3.7- Persimmon, Live Oak, <5% juniper, cliff side surrounded by mesquite and Live Oak, Ashe Juniper on top of plateau.  
No BCV's heard.

11.5-12.5- Live Oak and Shin Oak mottes, 10% juniper but < 2m in height, ca. 60% canopy, had past burn, but not in recent years.  
2 BCV's heard.

13.2-13.5- Low Live Oak mottes scattered in open areas around large junipers ca. 2m in height, 50% juniper cover, along E running slope, 65% total canopy.  
No BCV's heard.

21.2-21.3- Persimmon, 5% juniper, 50% canopy, hillside that angles NW away from road.  
No BCV's heard.

**Total habitat:** 1.8 miles

**BCV's observed:** 2

**Transect name:** KIM810B

**County:** Kimble

**Date:** 10 Aug 96

**Time:**

**Conditions:**

**Directions:** 0.0- RR385 E @ US 377  
30.0- End transect

**BCV habitat observed:**

5.9-6.3- Persimmon, mesquite.

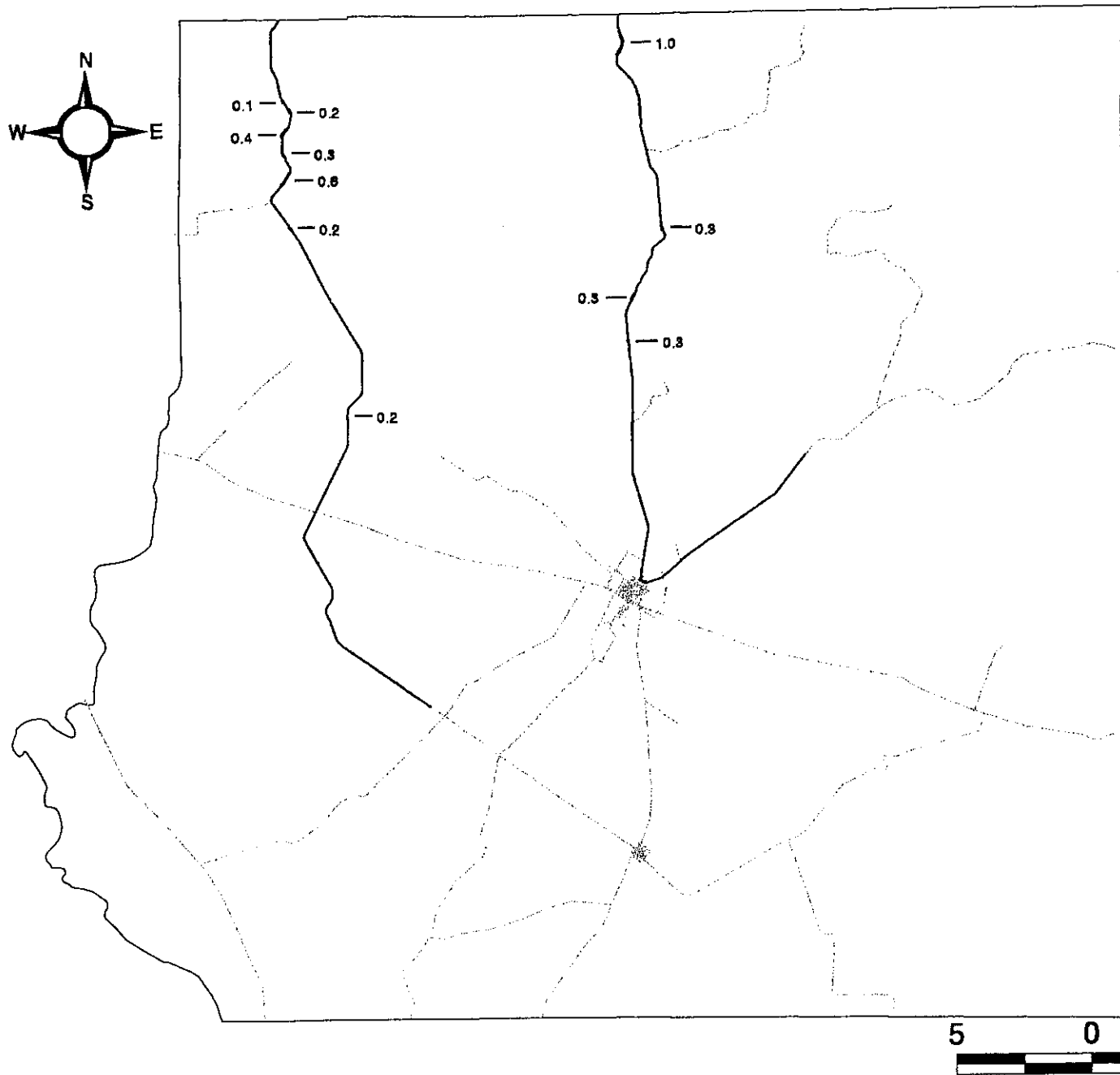
No BCV's heard.

29.5-30.0- Live Oak mottes, Shin Oak mottes, 50% canopy, <5% juniper.

No BCV's heard.

**Total habitat:** 0.9 miles

**BCV's observed:** 0



# Kinney County

Roadside Survey for  
Black-capped Vireo  
Habitat

Transect route  
Habitat Segments  
(indicated in miles)

5 0 5 10 Miles

**Transect name:** KINN\_E98

**County:** Kinney

**Date:** 23 July 98(Maresh)

**Time:** 09:39

**Conditions:** Hot, clear, med. breeze.

**Directions:** 0.0- FM 674 @ Edwards Co. line (at county line sign).  
22.0- Left on FM 334.  
30.0- End transect.

**BCV habitat observed:**

0.5-1.5- Good to very good stretch, a lot of Ashe juniper, but much Shin Oak w/ Live Oak/Mountain Laurel/persimmon/Pinyon/etc..  
Mostly to W (on Kickapoo Caverns SP), but also some good stuff to E (Pinyon Ranch). 1 (SY) BCV at 0.8, 1 BCV at 1.0.

KCSP ends about 3.6. There are good patches inside all along, but also still to E on Pinyon Ranch.

8.2-8.5- Low stands of Shin Oak, other woodies, but fairly sparse.  
No BCV's heard.

10.9-11.2- Some O.K. persimmon/Mountain Laurel stands but pretty scrappy overall. No BCV's heard.

13.0-13.2- Pretty good Mountain Laurel/persimmon stand along wash, but still scrappy. No BCV's heard.

**Total habitat:** 2.3 miles

**BCV's observed:** 2

**Transect name:** KINN\_W98

**County:** Kinney

**Date:** 24 June 98(Maresh)

**Time:** 11:22

**Conditions:** Hot, windy, clear.

**Directions:** 0.0- FM 2523 @ Edwards Co. line (at county line sign).  
7.2- Left on FM 3008.  
20.3- Cross US 90 onto CR ??.  
21.3- Curve left.  
30.0- End transect.

**BCV habitat observed:**

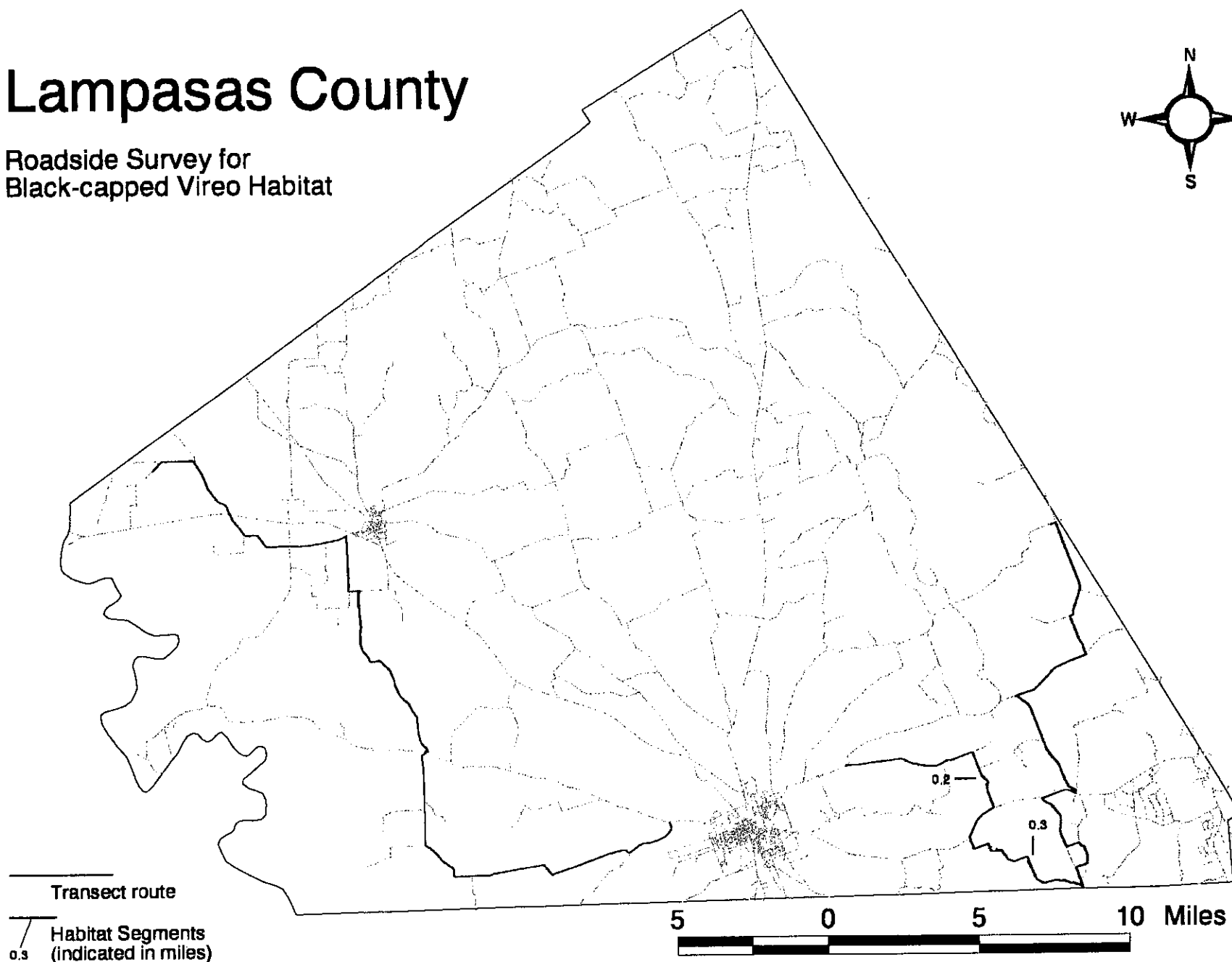
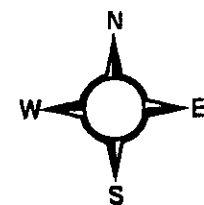
- 3.1-3.2- Fairly marginal Mountain Laurel habitat. No BCV's heard.
- 3.5-3.7- O.K. habitat along dry wash. No BCV's heard.
- 4.3-4.7- Persimmon/mesquite/Mountain Laurel on flats below slopes,  
O.K. habitat. No BCV's heard.
- 5.1-5.4- Like above, but not as good. No BCV's heard.
- 6.1-6.7- O.K. habitat along wash, but mostly marginal persimmon/  
mesquite/etc. on flats above draw. No BCV's heard.
- 8.5-8.7- Good Mountain Laurel habitat along draw. No BCV's heard.
- 16.4-16.6- Pretty good persimmon/oak/mesquite/Mountain Laurel habitat.  
No BCV's heard.

**Total habitat:** 2.0 miles

**BCV's observed:** 0

# Lampasas County

Roadside Survey for  
Black-capped Vireo Habitat





**Transect name:** LAMPAS\_E

**County:** Lampasas

**Date:** 21 Aug 97

**Time:** 07:06

**Conditions:** Warm, fair, almost calm.

**Directions:** 0.0- CR 8 @ FM 580 (at culvert)  
6.4- 'T' w/ US 190, turn right  
7.7- Left on CR 19  
12.7- 'T' w/ FM 3170, turn left  
13.4- Right on CR 20  
13.8- Turn left (still CR 20?)  
15.0- 'T' w/ FM 3170, turn right  
17.0- 'T' w/ US 190, turn right  
18.1- Left on FM 2313  
22.0- Right on CR 27  
24.8- Left on CR 29  
26.2- Curve right (still CR 29?)  
29.6- Left on FM 580  
30.0- END-T

**BCV habitat observed:**

5.2-5.4- Woody scrub. Marginal habitat, too tall, too much Ash juniper.  
No BCV's heard.  
10.4-10.7- Oak/Sumac/Juniper scrub. Fairly marginal habitat, too tall, too much Ash juniper. No BCV's heard.  
12.5-12.6- Oak/Sumac/Juniper scrub. No BCV's heard.

**Total habitat:** 0.6 miles

**BCV's observed:** 0

**Transect name:** LAMPAS\_W

**County:** Lampasas

**Date:** 20 Aug 97

**Time:** 10:32

**Conditions:** Hot, fair, light breeze.

**Directions:**

- 0.0- FM 1494 @ FM 580 (at FM 1494 sign)
- 2.0- Road turns into CR 15
- 9.6- Stay right
- 12.8- 'T' w/ FM 580, turn right
- 12.9- Left onto CR 53
- 17.4- Road turns into 3415
- 19.2- Left onto CR 77
- 19.6- 'T' w/ CR 56, turn right
- 21.4- 'T' w/ FM 581, turn left
- 23.4- Go straight at curve (onto CR 61)
- 25.1- Stay right (on CR 61)
- 25.9- Cross US 190 (stay on CR 61)
- 28.2- Left on CR 354 (63 on map?)
- 29.4- Straight (don't cross RR tracks)
- 30.0- END-T

**BCV habitat observed:**

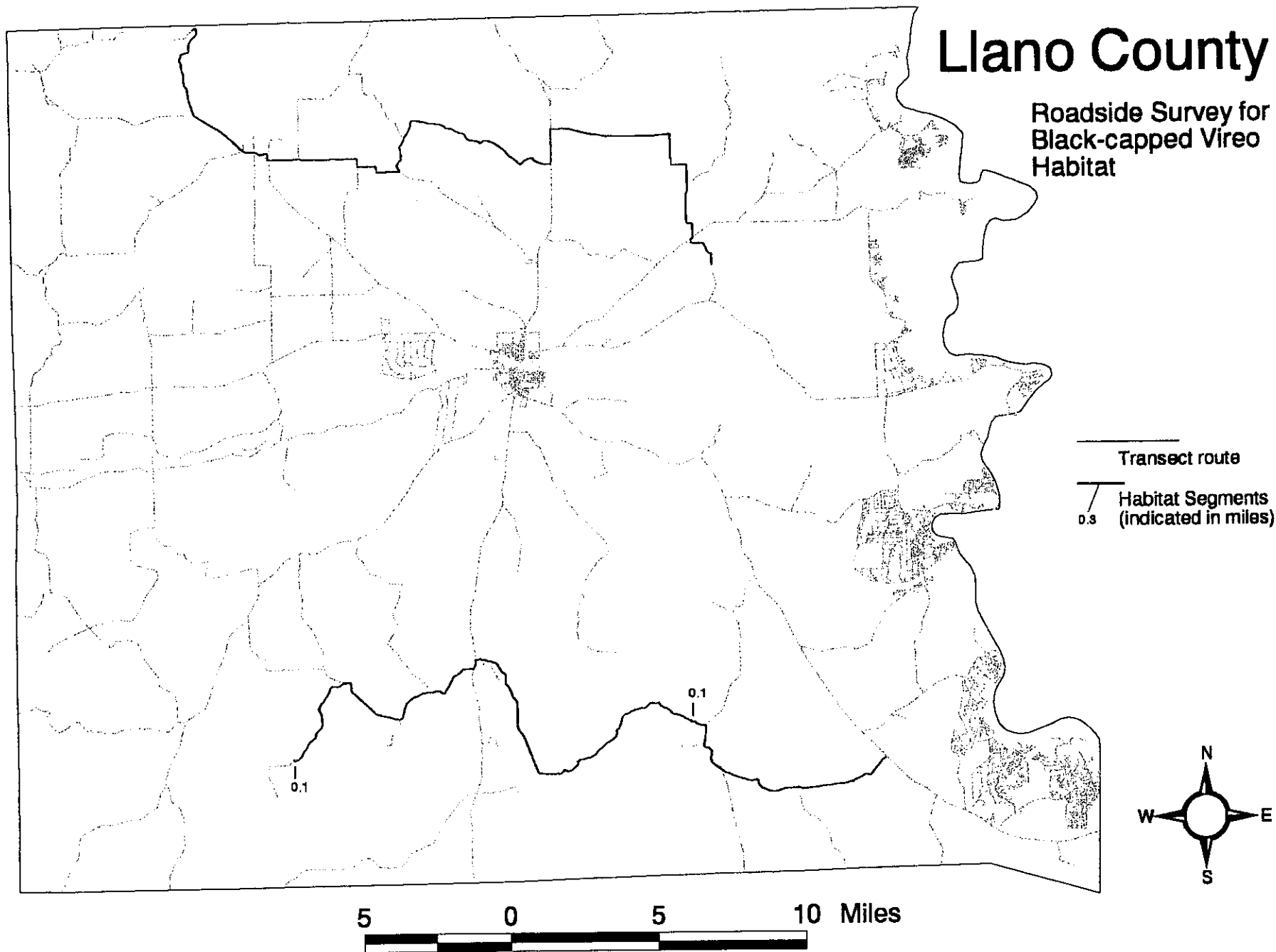
none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

# Llano County

Roadside Survey for  
Black-capped Vireo  
Habitat



**Transect name:** LLANO\_N

**County:** Llano

**Date:** 19 Aug 97

**Time:** 10:30

**Conditions:** Hot, fair

**Directions:** 0.0- CR 410 @ ranch gate (near San Saba County line)  
3.5- Left on SH 71  
6.2- Left on RR 1659  
6.6- Left on CR 408  
7.7- Go straight (onto CR 407)  
9.9- Left on CR 413  
11.6- Left on CR 414  
19.0- Left on SH 16  
20.2- Right on CR 216  
28.4- Right on FM 2241  
28.5- Left on CR 202  
28.6- Turn left (stay on 202)  
30.0- END-T

**BCV habitat observed:**

none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

Transect name: LLANO\_S

County: Llano

Date: 23 July 97

Time: 07:27

Conditions: Clear and warm. Light breeze.

Directions: 0.0- CR 310 @ Tx 71  
6.4- Go straight on CR 308  
8.0- Turn left on CR 315  
20.0- Turn left on Tx 16  
20.3- Turn right on CR 113  
??.- Turn left on CR 113A

BCV habitat observed:

8.5-8.6- No BCV's.

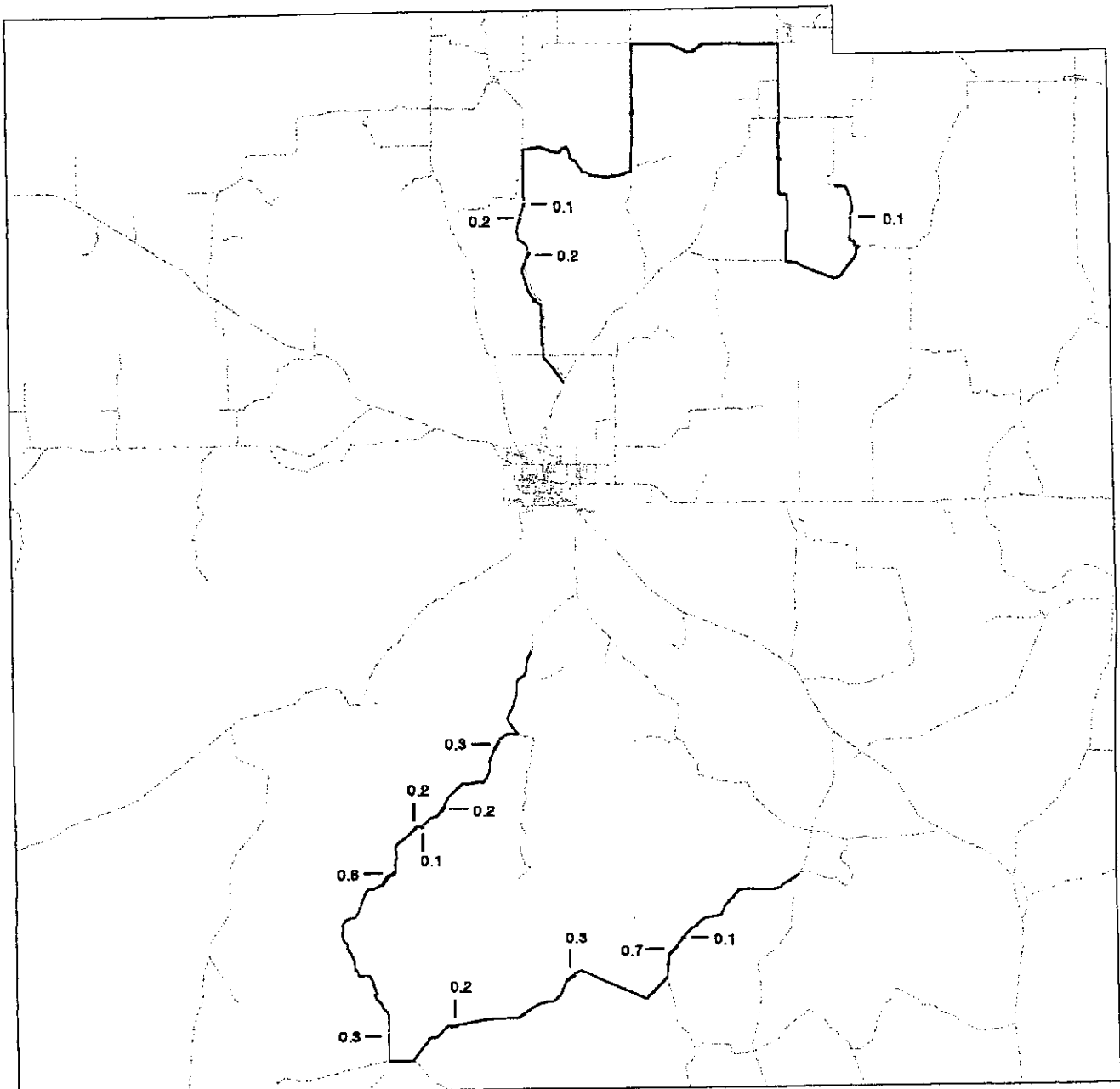
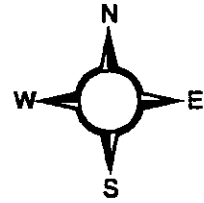
29.9-30.0- No BCV's.

Total habitat: 0.2mi

BCV's observed: 0

# Mason County

Roadside Survey for  
Black-capped Vireo Habitat



Transect route  
Habitat Segments  
(indicated in miles)



**Transect name:** MASN\_N98

**County:** Mason

**Date:** 15 July 98(Maresh)

**Time:** 07:17

**Conditions:** Warm, clear, calm.

**Directions:** 0.0- 'Old Mason Road' @ FM 386 (at end of pavement).  
7.1- Right on 'Lange Polk Road'.  
8.4- Curve right.  
10.7- Left on 'Blackjack Road' (not marked).  
14.3- X-sec w/FM 1222, turn right.  
18.6- Right on FM 386.  
20.7- Straight at curve onto 'Hay Springs Road'  
20.8- Straight.  
23.1- Curve right.  
25.0- 'T' w/ FM 2618, turn left.  
27.7- Turn left onto 'Spiller Mine Road'.  
30.0- End transect.

**BCV habitat observed:**

- 3.9-4.1- Oak/persimmon scrub. Good habitat stretch w/ Live Oak/  
persimmon/good woody mix. Across road to W of Mason Mtn.  
WMA. 2 BCV's heard/seen at 4.0 (1 ASY male, 1 SY(?) male)
- 5.0-5.2- Marginal woody mix on fenceline. Good woody mix (sumac/  
Live Oak/persimmon/etc.) along MMWMA fenceline, heavy  
browse line inside. No BCV's heard.
- 5.5-5.6- Good woody mix on left. Good habitat patch w/ Live Oak and  
very good woody mix. 1 BCV heard at 5.5.
- 28.7-28.8- Live Oak scrub. Pretty good Live Oak/persimmon scrub w/  
other woodies. Road is up on slope. No BCV's heard.

**Total habitat:** 0.6 miles

**BCV's observed:** 3

**Transect name:** MASN\_S98

**County:** Mason

**Date:** 5 August 98(Maresh)

**Time:** 07:25

**Conditions:** Mostly cloudy, warm, calm.

**Directions:** 0.0- 'Salt Branch Loop' @ FM 783 (at end of pavement).  
5.3- Stay right on 'Salt Branch Loop'.  
14.0- Continue (straight) on 'East Mill Road'.  
14.65- Right on 'James River Road'.  
27.5- Curve left.  
27.6- Road turns into FM 2389.  
30.0- End transect.

**BCV habitat observed:**

3.9-4.0- Persimmon scrub. Persimmon/Live Oak/mesquite scrubby stuff. No BCV's heard.  
4.2-4.9- Persimmon scrub w/ Live Oak. Good hab. patch (persimmon/Live Oak/buckeye) from about 4.6-4.8, otherwise, O.K., scrubby persimmon/Live Oak. No BCV's heard.  
8.3-8.6- Marginal persimmon/Live Oak scrub. No BCV's heard.  
12.2-12.4- Marginal persimmon/oak scrub. No BCV's heard.  
15.1-15.4- Marginal persimmon/oak/mesquite scrub. No BCV's heard.  
20.9-21.5- Persimmon/Live Oak scrub. O.K. hab. on slope on E side of James River. Mostly persimmon w/ mesquite and other woodies. No BCV's heard.  
22.8-23.0- Fairly marginal persimmon/Live Oak scrub. No BCV's heard.  
23.1-23.2- Persimmon/Live Oak scrub. No BCV's heard.  
23.9-24.1- O.K. persimmon/oak hab.. No BCV's heard.  
26.5-26.8- Persimmon/Live Oak scrub. No BCV's heard.

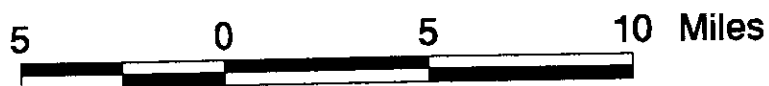
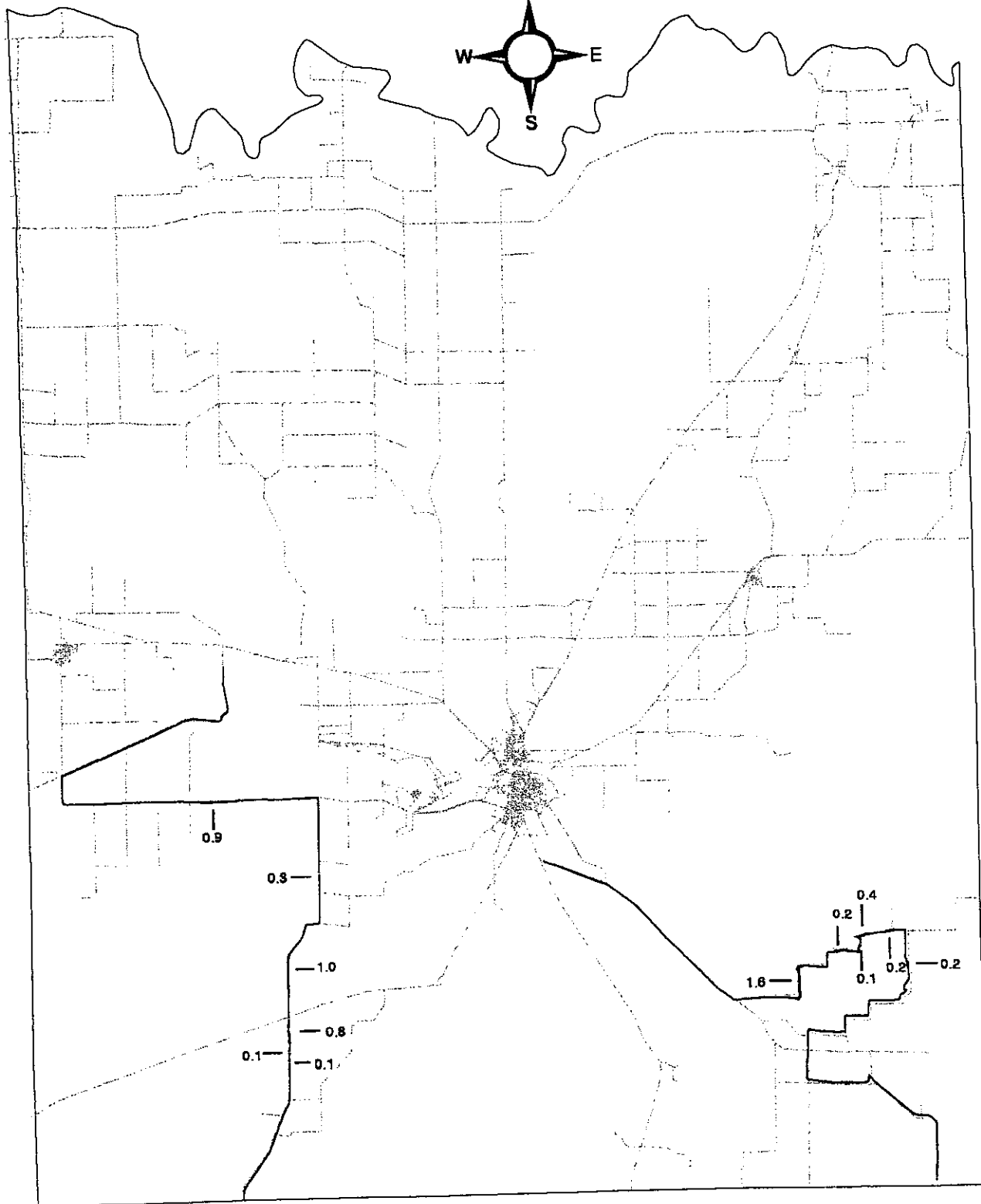
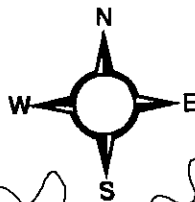
**Total habitat:** 3.0 miles

**BCV's observed:** 0



Roadside Survey for  
Black-capped Vireo Habitat

# McCulloch County



Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** MCCU\_S98/MCC801A

**County:** McCulloch

**Date:** 16 July 98/1 Aug 96(Maresh/O'Neal)

**Time:** 07:05

**Conditions:** Fair, warm. Calm.

**Directions:** 0.0- FM 1311 @ Menard Co. line (at county line sign)  
6.1- Cross US 190 onto CR 112 (not marked).  
9.7- Curve left to stay on CR 112.  
13.8- Left at "T" onto FM 2028.

END-T('98) at 17.9, add on to O'Neal '96.

CR 128 NE

30.0- End transect 0.6mi. S of US 87.

**BCV habitat observed:**

- 4.6-4.8- Pretty good shinnery w/ Live Oak/other woodies.  
No BCV's heard.
- 5.0-5.1- Not as good. No BCV's heard.
- 5.3-6.0- Pretty good shinnery w/ Live Oak/Shin Oak/other  
woodies. 1 BCV heard/seen at 5.8.
- 7.1-8.0- Good Live Oak/Shin Oak habitat, but very few other  
woodies. No BCV's heard.
- 11.0-11.2- Pretty good Live Oak/Shin Oak scrub, but still lacks  
diversity. No BCV's heard.
- 16.7-17.4- Some pretty good patches, but sparse overall (cleared?).  
No BCV's heard.

**Total habitat:** 2.8 miles

**BCV's observed:** 1

**Transect name:** MCC802B

**County:** McCulloch

**Date:** 2 Aug 96(O'Neal)

**Time:** <07:15

**Conditions:** Wind 0, <5% cloud cover, 24.5C.

**Directions:** 0.0- TX 71 S @ US 87

CR 208 E

CR 212 S

FM 1851 W

FM 1851 S

FM 3293 E

TX 71 S

30.0- End transect

**BCV habitat observed:**

9.4-11.0- Mature Live Oak w/ mesquite, understory w/ persimmon,  
Elbow bush, Tickle tongue, bumelia.  
No BCV's heard.

12.4-12.6- Low Live Oak mottes, few mature, >50% open areas.  
No BCV's heard.

13.4-13.5- Live Oak mottes, small patch surrounded by open fields and  
mesquite flat.  
No BCV's heard.

13.7-14.1- Live Oak w/ persimmon mottes, bumelia, Elbow bush.  
No BCV's heard.

14.7-14.9- Live Oak w/ persimmon mottes.  
No BCV's heard.

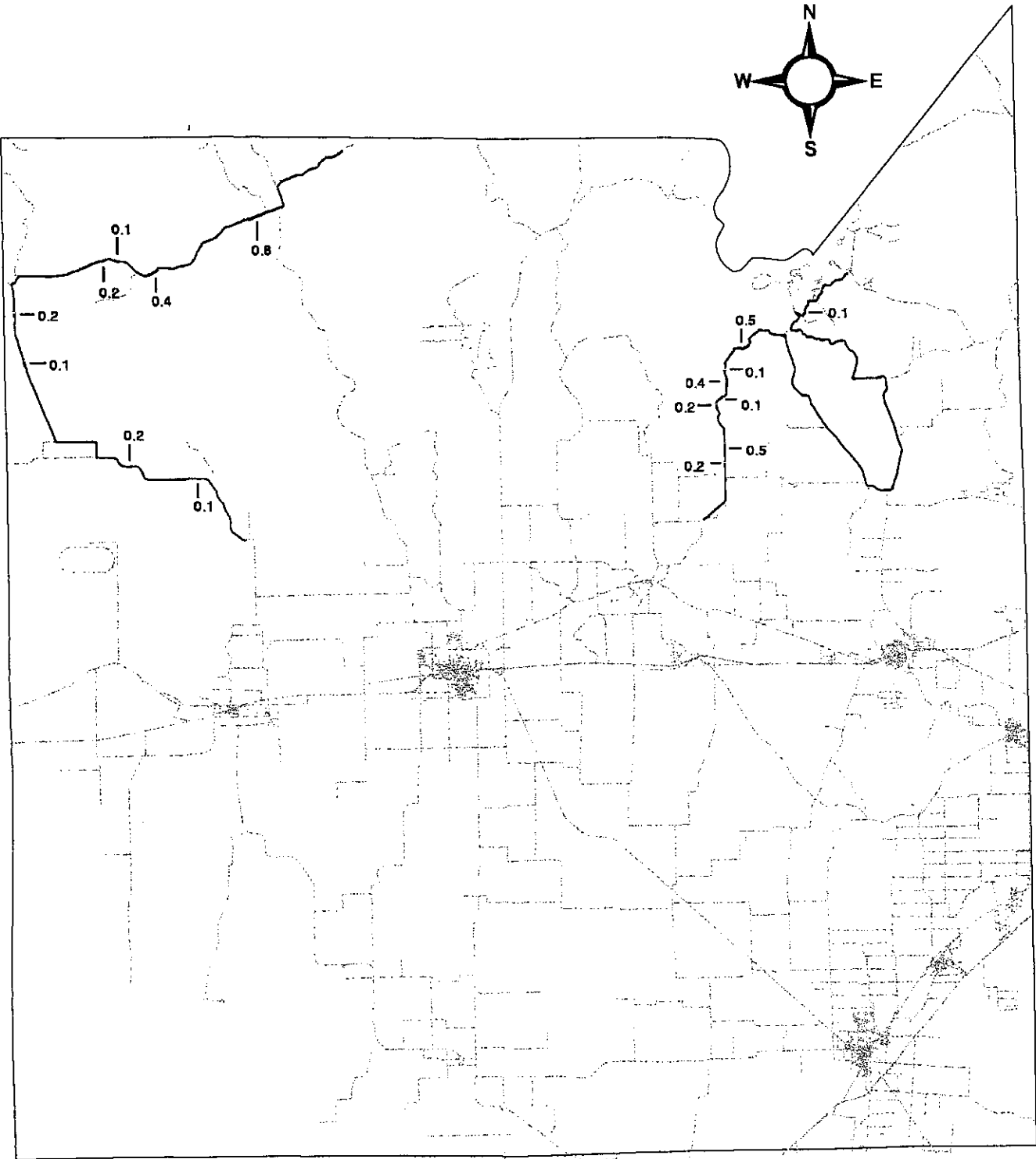
16.2-16.4- Live Oak w/ persimmon mottes, Elbow bush, mesquite,  
ca. 50% open areas.  
No BCV's heard.

**Total habitat:** 2.7 miles

**BCV's observed:** 0

Roadside Survey for  
Black-capped Vireo

# Medina County



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** MEDI\_E

**County:** Medina

**Date:** 2 Sept 97(Maresh)

**Time:** 07:08

**Conditions:** Warm, hazy, calm.

**Directions:** 0.0- CR 271 @ FM 1283 (in front of 'State Maintainace Ends' sign)  
3.6- Left on CR 2615  
11.2- 'T' w/ FM 471. Turn right  
13.1- Right on FM 2676  
14.0- Right on CR 271  
20.6- Left on CR 265  
28.1- 'T' w/ FM 2676. Turn right  
30.0- END-T

**BCV habitat observed:**

2.4-2.5- Sumac/Oak w/ good woody mix on steep slope. This slope is mostly too tall (warblerish), but this is a good patch. I could not stop to get this stretch, but it needs to be added.  
21.6-21.7- Did not get this stretch. Mountain laurel understory under mid-sized Live oaks. Marginal, but may as well be added.  
22.4-22.9- Oak/woody mix. Good woody mix w/ no Ash juniper but heavily grazed. No BCV's heard.  
23.8-23.9- Oak/woody mix. Mostly too tall but has some good patches. No BCV's heard.  
24.1-24.5- Oak/Persimmon. Good habitat stretch. No BCV's heard.  
25.0-25.1- Oak/Persimmon. No BCV's heard.  
25.3-25.5- Oak/Persimmon. Good habitat stretch. No BCV's heard.  
26.8-27.3- Oak/Persimmon. No BCV's heard.  
27.5-27.7- Persimmon/woody mix. No BCV's heard.

**Total habitat:** 2.2 miles

**BCV's observed:** 0

**Transect name:** MEDI\_W

**County:** Medina

**Date:** 1 August 97

**Time:** 07:15

**Conditions:** Mostly clear and warm. Very slight breeze.

**Directions:** 0.0- On cattle guard at entrance to Hill Country SNA on CR 131.  
2.8- Turn left on FM 462  
3.6- Right on CR 211  
14.4- Left thru cattle guard  
14.6- Left after water crossing  
14.8- Straight (CR 111).  
20.7- Turn left on CR 311  
22.8- Turn left on FM 1796  
30.0- End transect

**BCV habitat observed:**

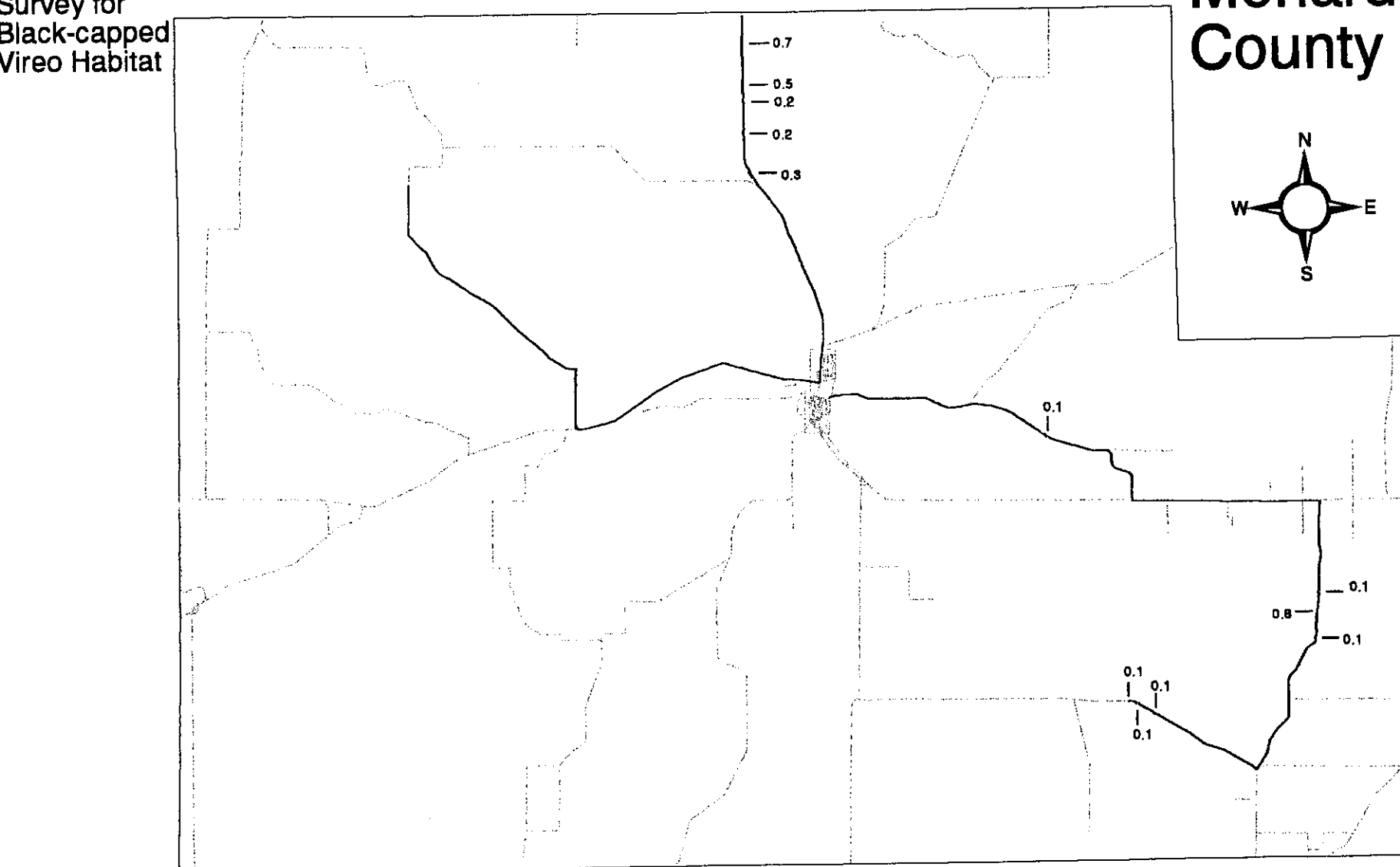
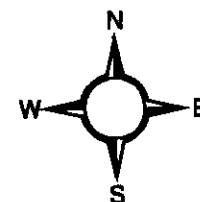
4.2-5.0- Lots of scrubby Live oak w/ other woody veg.  
Listened at 4.3, 4.6, 4.9. No BCV's heard.  
8.9-9.3- Persimmon/Live oak. No BCV's heard.  
10.6-10.7- Live oak/Persimmon. 1 BCV heard.  
11.1-11.3- Live oak/Persimmon. No BCV's heard.  
15.8-16.0- Live oak scrub. Marginal. No BCV's heard.  
17.6-17.8- Persimmon/Live oak. No BCV's heard.  
24.0-24.2- Live oak/Persimmon. No BCV's heard.  
26.8-26.9- Live oak scrub. No BCV's heard.

**Total habitat:** 2.2 miles

**BCV's observed:** 1

Roadside  
Survey for  
Black-capped  
Vireo Habitat

# Menard County



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** MENARD\_N

**County:** Menard

**Date:** 4 Sept 97

**Time:** 08:54

**Conditions:** Mild -> warm, overcast, calm.

**Directions:** 0.0- US 83 @ Concho County line.  
11.8- Right on US 190  
19.9- Right on Waddell Lane  
30.0- END-T

**BCV habitat observed:**

0.6-1.3- Sumac/Oak. Much traffic on US 83. No BCV's heard.  
1.9-2.4- Oak/Sumac. Very good habitat stretch. No BCV's heard.  
2.5-2.7- Oak/Sumac. Good habitat stretch. No BCV's heard.  
3.5-3.7- Oak/Sumac. No BCV's heard.  
4.8-5.1- Sumac/Oak. Very good habitat stretch. No BCV's heard.

**Total habitat:** 1.9 miles

**BCV's observed:** 0



**Transect name:** MENARD\_S

**County:** Menard

**Date:** 4 Sept 97

**Time:** 10:42

**Conditions:** Warm, overcast, light breeze

**Directions:** 0.0- FM 2093 @ Menard city limits  
10.9- Left on SH 29  
16.6- Right on FM 1221  
25.5- Right on FM 1773  
30.0- END-T

**BCV habitat observed:**

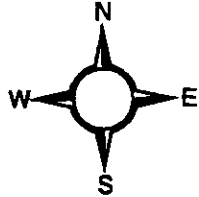
7.0-7.1- Tip of good habitat patch (going upslope). No BCV's heard.  
Went past 7.1. Got 'END-H' at 7.2—Delete 7.1-7.2).  
19.4-19.5- Shin oak scrub (exclusively). No BCV's heard.  
20.0-20.6- Oak/woodies mix. Very good habitat stretch. No BCV's heard.  
20.8-20.9- Shin oak. Good habitat stretch. No BCV's heard.  
29.0-29.1- Oak/Sumac. No BCV's heard. (Took off before averaging complete on 'END-H' point.)  
29.7-29.8- Oak/Sumac. No BCV's heard.  
29.9-30.0- Shin oak. Good habitat stretch, goes on past transect. No BCV's heard.

**Total habitat:** 1.2 miles

**BCV's observed:** 0

Roadside Survey for  
Black-capped Vireo Habitat

# Mills County



Transect route  
Habitat Segments  
(indicated in miles)

0.3

0.2

**Transect name:** MILLS\_N

**County:** Mills

**Date:** 4 Sept 97

**Time:** 15:07

**Conditions:** Warm, overcast, light breeze.

**Directions:**

- 0.0- FM 218 @ Hamilton County line
- 3.1- Right at x-sec w/ SH 16
- 3.2- Left on CR 141 (224 on map)
- 4.4- Curve right
- 4.8- Left on CR 142 (224 on map)
- 6.5- Left on CR 140 (221 on map)
- 8.7- 'T' w/ FM 218, turn left
- 10.1- Right on CR 132 (207 on map)
- 15.6- 'T' w/ CR 130 (217 on map), turn right
- 18.1- Road turns into FM 3484, go straight
- 19.7- Right on CR 128 (202 on map)
- 21.3- Left on CR 133 (201 on map)
- 22.4- Right on FM 573
- 22.9- Left on CR 186 (200 on map)
- 24.1- Right on CR 199
- 27.1- 'T' w/ CR 190, turn right
- 27.6- Left on CR 197
- 29.5- Right on CR 191
- 30.0- END-T

**BCV habitat observed:**

12.0-12.2- Scrub oak (exclusively oak). No BCV's heard.

**Total habitat:** 0.2 miles

**BCV's observed:** 0

**Transect name:** MILLS\_S

**County:** Mills

**Date:** 21 Aug 97

**Time:** 13:50

**Conditions:** Hot, fair

**Directions:** 0.0- CR 515 @ US 183/84 (at end of pavement)

0.2- Curve right

2.3- Left on CR 520

2.8- Left on CR 517 (113 on map)

5.8- 'T' w/ CR 512 (114 on map), turn right.

6.4- Left on CR 508 (116 on map).

9.0- 'T' w/ FM 574, turn right.

9.3- Left on CR 408 (154 on map).

12.7- 'T' w/ SH 16, turn right.

12.8- Left on CR 407 (156 on map)

14.7- 'T' w/ SH 16, turn right.

16.0- Right on FM 3023.

20.0- Road turns into CR 412 (139 on map).

23.3- Left on CR 427 (140 on map).

25.4- Straight (stay on 427).

29.1- Left on CR 423 (141 on map).

30.0- END-T

**BCV habitat observed:**

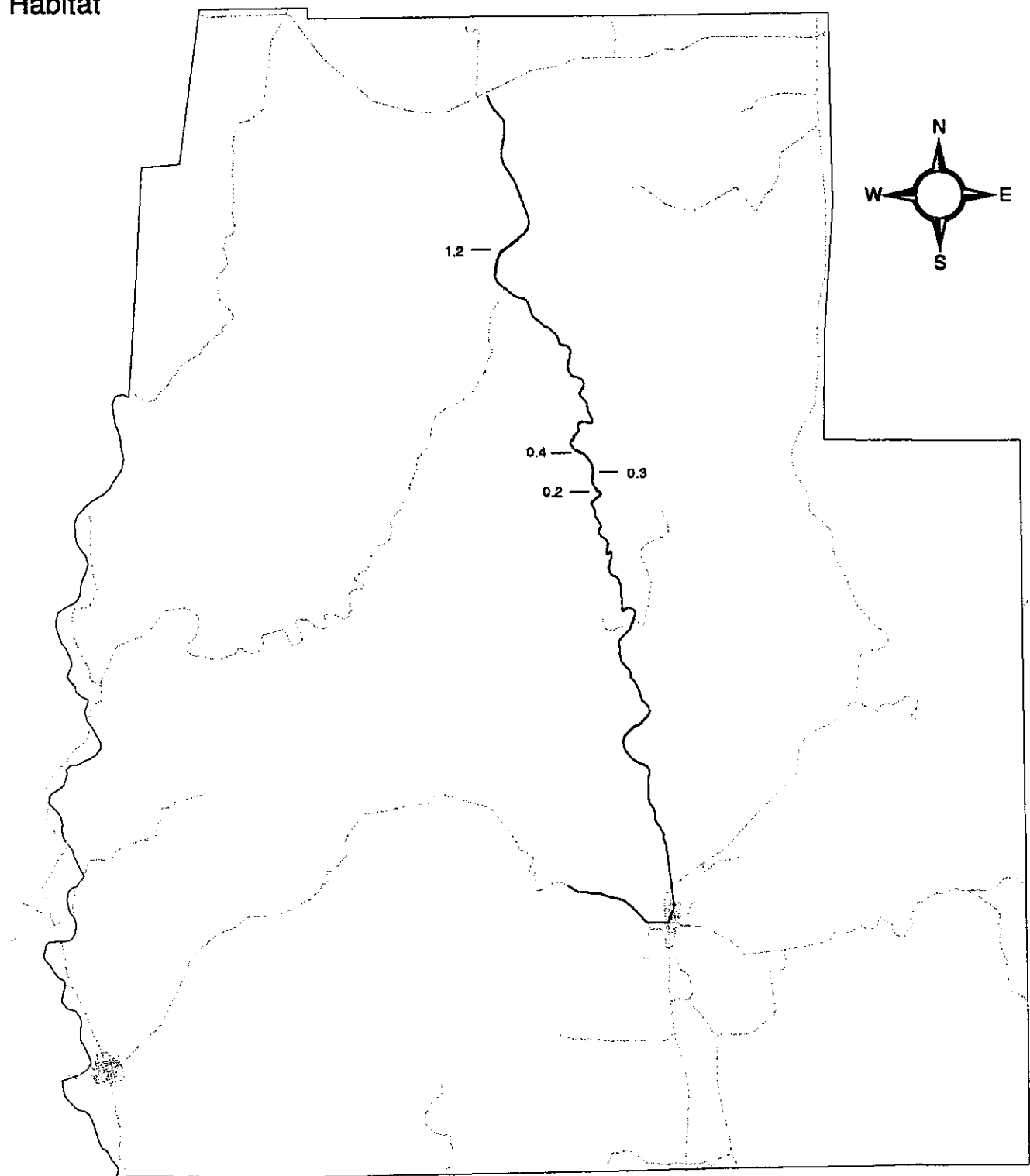
none

**Total habitat:** 0.0 miles

**BCV's observed:** 0

Roadside Survey for  
Black-capped Vireo  
Habitat

# Real County



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** REA809A

**County:** Real

**Date:** 9 Aug 96(O'Neal)

**Time:** <07:30

**Conditions:** Wind <5, clear, 23.4C

**Directions:** 0.0- RR 336 S @ TX 41

US 83 S

RR 337 W

30.0- End transect 3.0 mi. W of US 83

**BCV habitat observed:**

4.2-5.4- Live Oak mottes, some agarito, 40% canopy, 1% juniper.  
2 BCV's heard.

11.9-12.3- Live Oak mature w/ Texas Oak, walnut, Mtn. Laurel along  
slopes of deep draws, 90% canopy.  
1 BCV heard.

12.7-13.0- Mtn. Laurel w/Live Oak, persimmon along slopes of dry wash,  
10% juniper, 40% canopy.  
No BCV's heard.

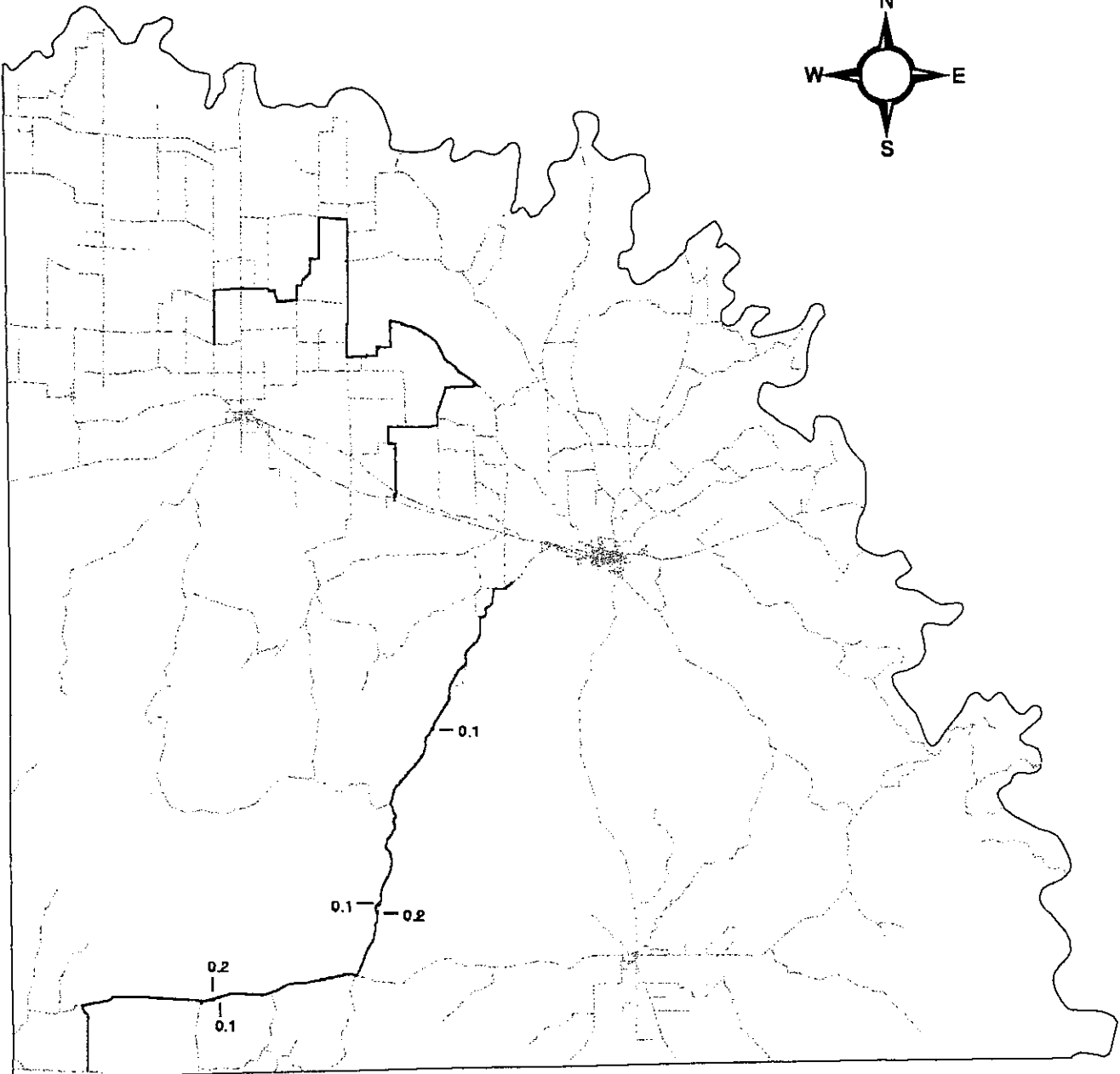
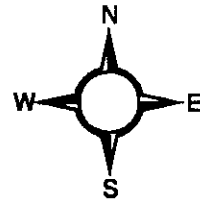
13.1-13.3- Mtn. Laurel w/Live Oak, hackberry slope and shallow draw to  
W, 15% juniper, 60% canopy, W area has had past burn.  
1 BCV heard.

**Total habitat:** 2.1 miles

**BCV's observed:** 5

# San Saba County

Roadside Survey for  
Black-capped Vireo  
Habitat



5 0 5 10 Miles

Transect route  
Habitat Segments  
(indicated in miles)

**Transect name:** SANSAB\_N

**County:** San Saba

**Date:** 19 Aug 97

**Time:** 16:40

**Conditions:** Hot, breezy, partly cloudy.

**Directions:** 0.0- CR 226 (133 on map) @ US 190 (at first utility pole)  
2.5- Right on CR 228  
4.9- Left on CR 224 (132 on map)  
7.6- Left on CR 202 (121 on map)  
14.6- Right on CR 236 (137 on map)  
19.8- 'T' w/ FM 500, turn left  
20.7- Left on CR 117  
24.3- Right on CR 229 (139 on map)  
25.8- Curve left ( onto CR 144 (on map))  
26.8- Cross FM 45 (stay on 144)  
27.8- 'T' w/ CR 260 (153 on map), turn left  
29.8- Cross FM 2997  
30.0- END-T

**BCV habitat observed:**

none

**Total habitat:** 0.0 miles

**BCV's observed:** 0



**Transect name:** SANSAB\_S

**County:** San Saba

**Date:** 20 Aug 97

**Time:** 07:40

**Conditions:** Warm, clear, slight breeze

**Directions:** 0.0- CR 243 @ SH71 (at end of pavement)  
2.5- Right on CR 373 (238 on map)  
6.9- Turn right  
7.0- 'T' w/ FM 501, turn left  
12.9(?)- Left on CR 310 (229?)  
28.0- Road turns into FM 1030  
28.1- Turn left (onto CR 174?)  
29.1- Right on CR 308 (174 on map)  
29.2- 'T' w/ FM 1030, turn left  
30.0- END-T

**BCV habitat observed:**

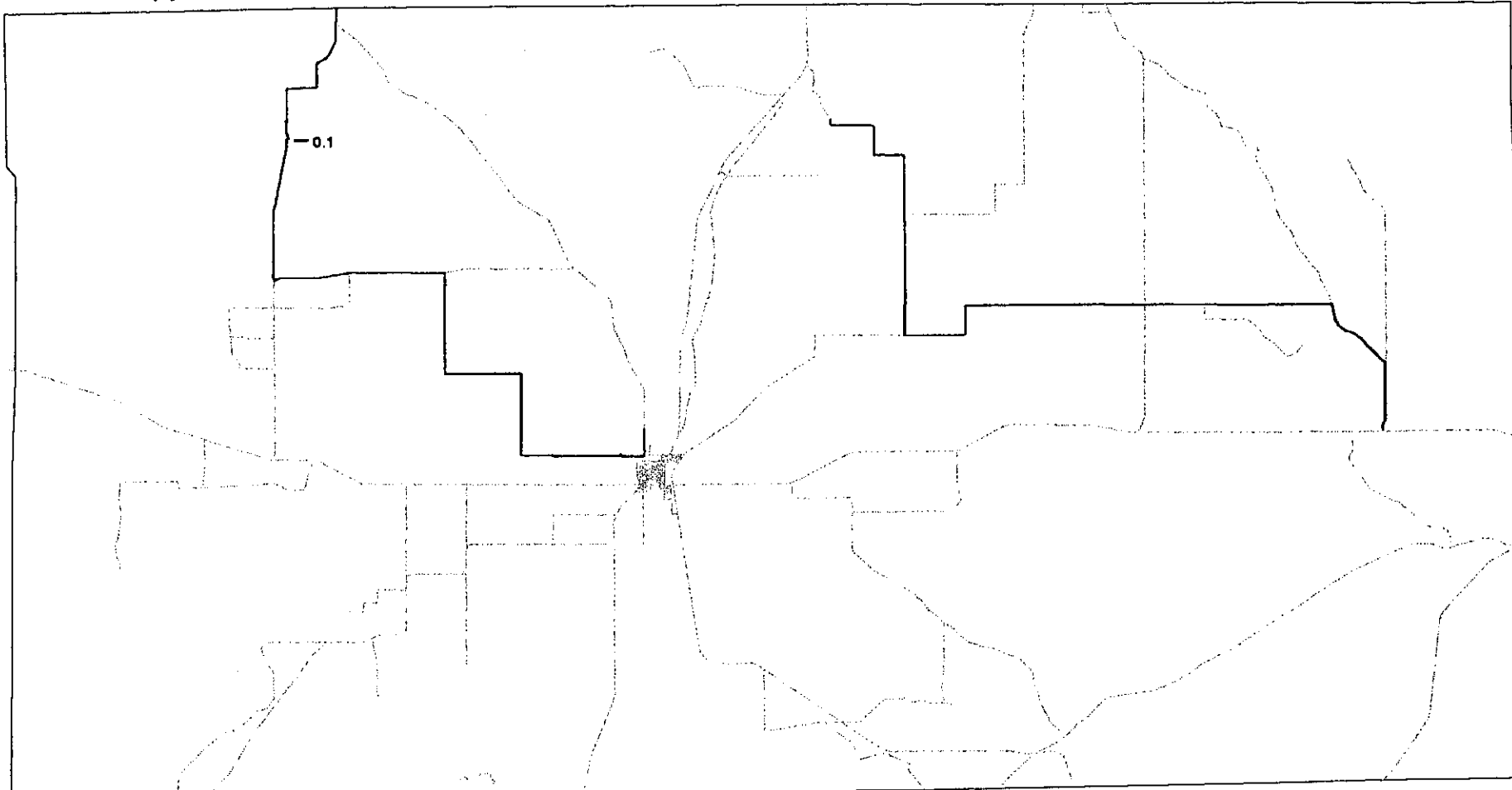
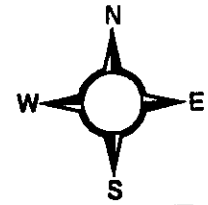
7.4-7.5- Oak scrub. Marginal habitat. No BCV's heard.  
7.7-7.8- Oak scrub. Marginal habitat. No BCV's heard.  
15.4-15.5- Oak scrub. Marginal habitat. No BCV's heard.  
15.8-15.9- Oak scrub. No BCV's heard.  
23.1-23.2- Oak/Sumac. No BCV's heard.

**Total habitat:** 0.5 miles

**BCV's observed:** 0

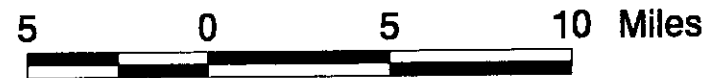
# Schleicher County

Roadside Survey for  
Black-capped Vireo Habitat



Transect route

Habitat Segments  
(indicated in miles)



**Transect name:** SCHL\_E98

**County:** Schleicher

**Date:** 16 July 98(Maresh)

**Time:** 12:40

**Conditions:** Hot, partly cloudy, light breeze..

**Directions:** 0.0- CR 339 @ US 190 (at first utility pole).  
2.2- Straight.  
2.3- Curve left (stay on 339).  
5.1- Left on CR 350.  
11.35- Cross FM 2084(?) onto CR 300(?).  
20.35- Right on CR 316.  
29.8- Curve right (stay on 316).  
30.0- End transect.

**BCV habitat observed:**

A few isolated patches of Live Oak and/or Shin Oak, but all too sparse.

**Total habitat:** 0.0 miles

**BCV's observed:** 0

**Transect name:** SCHL\_W98

**County:** Schleicher

**Date:** 17 July 98(Maresh)

**Time:** 09:15

**Conditions:** Hot, fair, light breeze.

**Directions:** 0.0- FM 915 @ Irion Co. line (at county line sign).  
0.4- Right onto CR427 (not marked).  
10.4- Left on FM 1828.  
16.2- Right on CR 412.  
19.6- Turn left (still 412).  
22.2- Curve right.  
29.1- Left on FM 915.  
30.0- End transect.

**BCV habitat observed:**

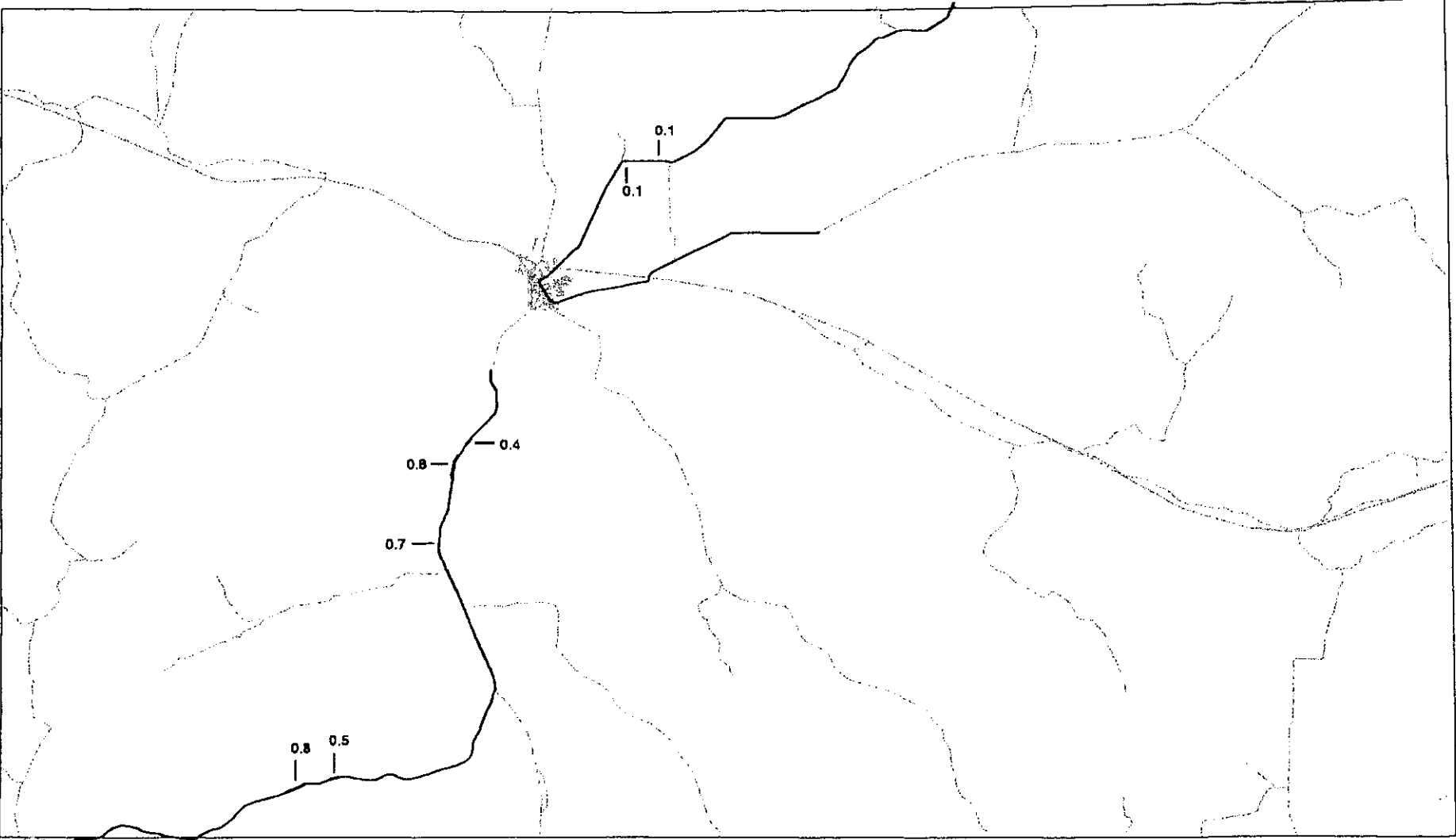
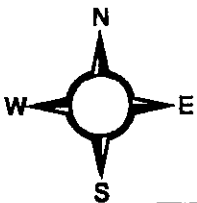
5.6-5.7- Marginal stands of Shin Oak, but mostly juniper.  
No BCV's heard.

**Total habitat:** 0.1 miles

**BCV's observed:** 0

# Sutton County

Transect route  
Habitat Segments  
(indicated in miles)



Roadside Survey for  
Black-capped Vireo Habitat



**Transect name:** SUTT\_N98

**County:** Sutton

**Date:** 17 July 98(Maresh)

**Time:** 11:09

**Conditions:** Hot, clear, calm.

**Directions:** 0.0- CR 202 @ Schleicher Co. line (at county line sign).  
(Schl. CR 245 turns into Sutt. CR 202, it is 245 in both counties on map).  
13.9- Curve left.  
18.35- Cross under IH 10/US290, go through Sonora.  
19.1- Left on 'Crockett Ave.'  
19.4- Straight at light onto Loop 467.  
23.4- Left onto FM 864.  
30.0- End transect.

**BCV habitat observed:**

12.5-12.6- Good Shin Oak/Live Oak/other mix, but still fairly sparse.  
No BCV's heard.

13.7-13.8- (should probably start at 13.6) Good mix but still quite sparse.  
No BCV's heard.

CR 202 has quite a bit of scrubby Live Oak but sparse and virtually all  
goated badly. The two stopslooked O.K. with more Shin Oak and other  
woodies, but still sparse and isolated.

**Total habitat:** 0.2 miles

**BCV's observed:** 0

**Transect name:** SUTT\_S98

**County:** Sutton

**Date:** 21 July 98/13 July 96 (Maresh/O'Neal)

**Time:** 07:24

**Conditions:** Clear, warm, calm.

**Directions:** 0.0- US 377 S of Sonora @ 'Wentworth' historical marker.  
12.3- Right on RR 189  
30.0- End transect

**BCV habitat observed:**

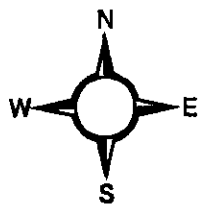
- 0.8-0.9- Scrubby hab. on slopes. Much traffic, bad place to stop, listen.  
No BCV's heard.
- 2.9-3.0- Marginal persimmon/oak hab.. Much traffic. No BCV's heard.
- 3.6-4.4- Live Oak/persimmon scrub w/good woody mix.  
1 BCV seen/heard (O'Neal got 4 in '96).
- 6.7-7.4- Fairly marginal overall. Live Oak/persimmon/mesquite scrub.  
No BCV's heard.

Aborted running transect at RR189, letting O'Neal '96 stand.

- 19.6-20.1- (O'Neal '96) S facing draw, mature oaks w/understory  
of persimmon/mesquite/juniper. No BCV's heard.
- 21.1-21.7- Live Oak w/persimmon/mesquite understory. Shallow draw.  
No BCV's heard.

**Total habitat:** 2.8 miles

**BCV's observed:** 4 in '96 (1 in '98)

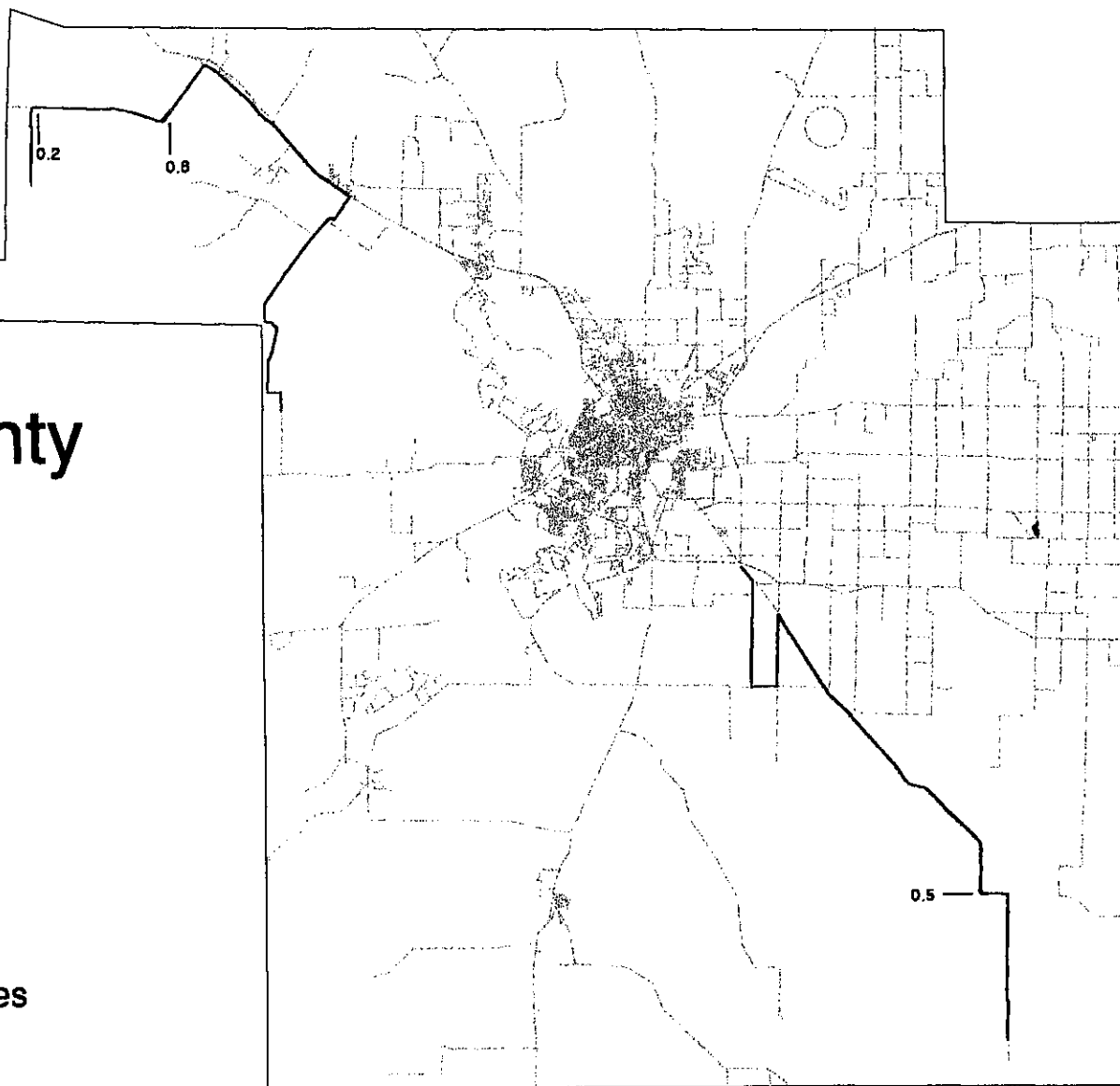


# Tom Green County

Roadside Survey for  
Black-capped Vireo Habitat

Transect route  
Habitat Segments  
(indicated in miles)

5 0 5 10 Miles





**Transect name:** TOMG\_E98

**County:** Tom Green

**Date:** 27 June 98(Maresh,Ettel)

**Time:** 07:03

**Conditions:** Clear, med. breeze, warm.

**Directions:** 0.0- FM 1223 @ US 87 (at median crossover).  
0.8- Right on 'Mikulik Road'.  
5.0- Left on ? (not marked).  
6.0- Left on 'Robbie Jones Road'.  
8.9- Right on FM 1223.  
20.6- Road turns into 'Susan Peck Road' (pavement ends).  
30.0- End transect.

**BCV habitat observed:**

23.0-23.5- O.K. Shin Oak habitat, but much juniper and mesquite (>50%).  
2 BCV heard at 23.3.

**Total habitat:** 0.5 miles

**BCV's observed:** 2

**Transect name:** TOMG\_W98

**County:** Tom Green

**Date:** 26 June 98(Maresh,Ettel)

**Time:** 07:49

**Conditions:** Clear, warm, breezy.

**Directions:** 0.0- 'Hall Lane' @ 'E.V. Hall Ranch' cattle guard (at pullout driveway to unmarked gate).  
3.0- Right on FM 2034.  
11.0- Right on 'Old Sterling City Highway'.  
14.7- Right on US 87.  
18.85- Right on 'Carlsbad Loop'.  
19.6- Straight  
19.95- Straight on 'Burma Loop'.  
30.0- End transect.

**BCV habitat observed:**

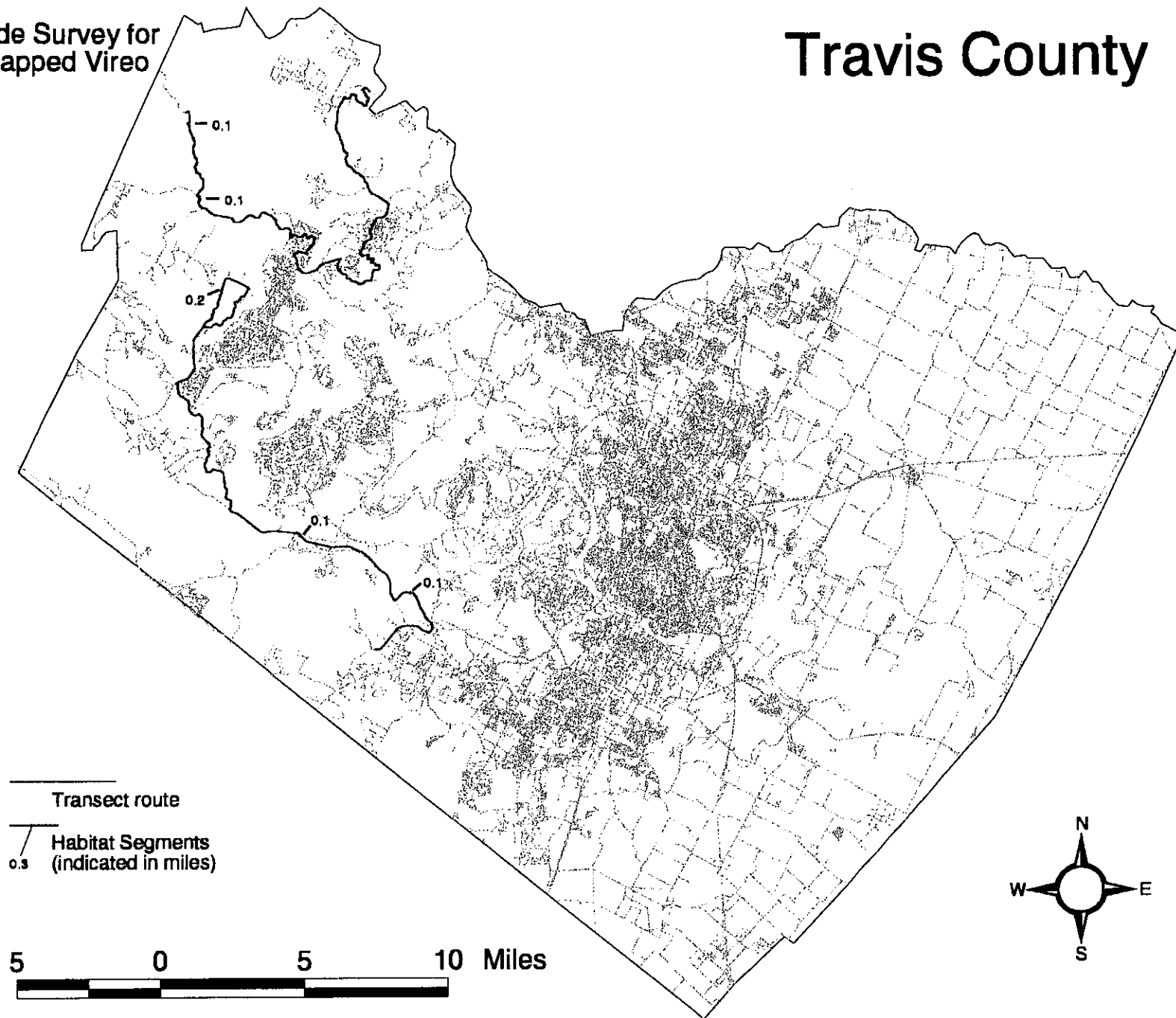
3.1-3.3- Mohr's Oak/juniper. Fairly thin Mohr's Oak scrub.  
No BCV's heard.  
8.2-8.8- Mohr's Oak upslope. 2 BCV heard at 8.3, 2 BCV heard at 8.5.

**Total habitat:** 0.6 miles

**BCV's observed:** 4

Roadside Survey for  
Black-capped Vireo  
Habitat

# Travis County



**Transect name:** TRAVIS\_N

**County:** Travis

**Date:** 4 Aug 97

**Time:** 07:54

**Conditions:** Warm, fair, light breeze.

**Directions:** 0.0- Driveway on left past 4<sup>th</sup> creek crossing(?) on Cow Creek Road (near Burnet County line).  
4.4- Left on FM 1431  
9.3- Left on Bison Trail Road  
9.4- Left (stay on main road (Curry?))  
9.9- Cross Bar K Road  
10.1- Right on Rawhide Trail  
10.5- Right at x-sec (not marked)  
10.7(?) - Right at 'T' (not marked)  
11.3- Continue left  
11.7- Left on Bar K Road  
12.1- Left on FM 1431  
14.6- Right on Reed Parks Road  
19.2- Right on FM 1431  
22.0- Left on Nameless Road  
27.4- Right on Honeycomb Lane  
27.6- Left on Honeycomb Drive (at 'T')  
28.0- Right on Honeycomb Hollow (at 'T')  
29.7- Right on Nameless Road  
30.0- END-T

**BCV habitat observed:**

0.6-0.7- Persimmon/Oak. Pretty marginal habitat. No BCV's heard.  
4.1-4.2- Persimmon. Marginal habitat. No BCV's heard.

**Total habitat:** 0.2 miles

**BCV's observed:** 0

**Transect name:** TRAVIS\_S

**County:** Travis

**Date:** 3 August 97

**Time:** 09:50

**Conditions:** Warm and hazy. Slight breeze.

**Directions:** 0.0- At Grisham or Entry Rd in Pace Bend County Park.  
(First 'marked' road off FM 2322 in the park.)  
2.9- Continue left on FM 2322  
6.2- Looped back by Grisham intersection  
9.1- Left on Bee Creek Rd.  
16.0- Left on Tx 71  
24.4- Left on Southwest Parkway  
26.8- Left on Travis Cook Rd.  
27.3- Right on Old Bee Caves Rd.  
28.3- Cross over Tx 71. Turns into Thomas Springs Rd.  
29.9- Right on Circle Rd.  
30.0- End transect at driveway.

**BCV habitat observed:**

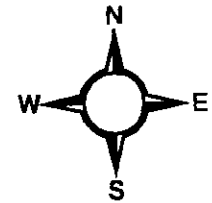
4.3-4.5- Live oak. Marginal habitat. No BCV's heard.  
19.2-19.3- Live oak scrub. Continuous traffic on Tx 71. No BCV's heard.  
25.0-25.1- Live oak scrub. Marginal habitat. Continuous traffic on SW  
Parkway. No BCV's heard.

**Total habitat:** 0.4 miles

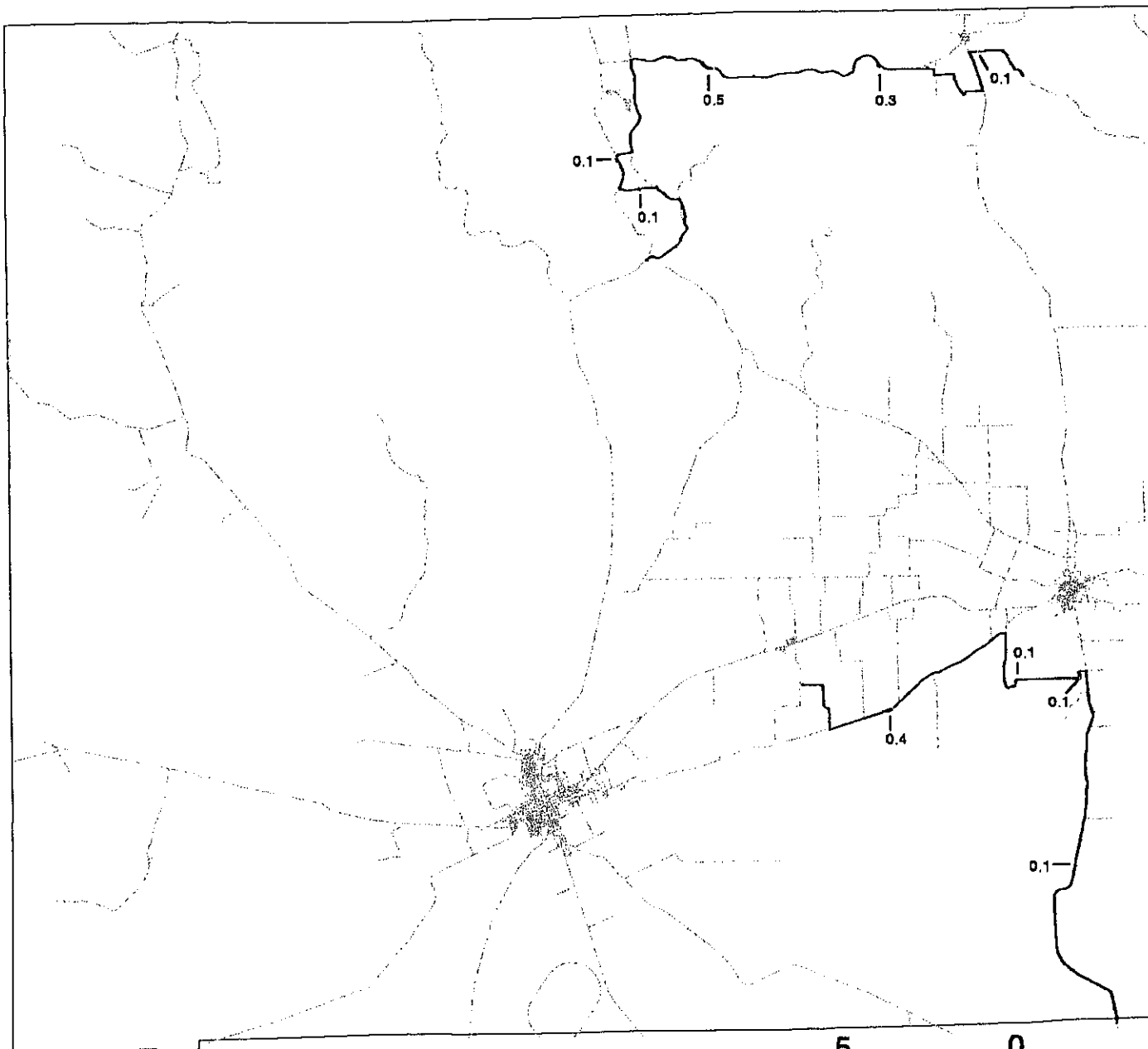
**BCV's observed:** 0

# Uvalde County

Roadside Survey  
for Black-capped  
Vireo Habitat



— Transect route  
T Habitat Segments  
0.3 (indicated in miles)



5 0 5 10 Miles

**Transect name:** UVAL\_N98

**County:** Uvalde

**Date:** 24 July 98(Maresh)

**Time:** 07:29

**Conditions:** Warm, clear, calm.

**Directions:** 0.0- CR 348 @ TX 127 (at speed limit sign).  
5.5- Right on TX 127.  
6.75- Right on CR 350.  
10.9- Right on FM 1050.  
22.6- Right on CR 358.  
23.1- Right on CR 359.  
23.4- Straight onto CR 360 (through gate).  
25.05- Go left over bridge.  
25.55- Go through gate.  
25.6- Straight onto paved road.  
25.9- Left on FM 187.  
27.4- Right on CR 354.  
30.0- End transect.

**BCV habitat observed:**

4.7-4.8- Persimmon scrub on right. Marginal persimmon/Live Oak/  
Ashe Juniper habitat. No BCV's heard.  
6.6-6.7- Slope habitat on left. O.K. stretch along slope. No BCV's heard.  
13.7-14.2- Shin Oak, etc. on steep slope. Good mix along slope.  
No BCV's heard.  
21.0-21.3- Marginal persimmon/oak scrub. Very marginal.  
No BCV's heard.  
27.7-27.8- Live Oak, etc. patch. Good mix, but scrappy, long, narrow  
patch. No BCV's heard.

**Total habitat:** 1.1 miles

**BCV's observed:** 0

**Transect name:** UVAL\_S98

**County:** Uvalde

**Date:** 22 July 98(Maresh)

**Time:** 07:26

**Conditions:** Clear, calm, warm.

**Directions:** 0.0- FM 187 @ Zavala Co. line (at county line sign).  
14.5- Left on CR 309.  
19.9- Turn left onto CR 301(?).  
27.45- Right on FM 1049.  
30.0- End transect.

**BCV habitat observed:**

7.2-7.3- Cenizo/persimmon on right. South Texas brush Huaillo/cenizo/persimmon/etc.. No BCV's heard.  
15.0-15.1- Persimmon on left. Persimmon scrub and other SoTx woodies.  
No BCV's heard.  
17.4-17.5- (?)/persimmon on left. Very marginal SoTx persimmon scrub.  
No BCV's heard.  
24.9-25.3- Persimmon/(?) on left. O.K. persimmon habitat to S, but still SoTx mix. No BCV's heard.

All patches appeared to be in ecotone between Ed.'s Plateau and SoTx brush.  
Therefore, all stops were 'experimental'.

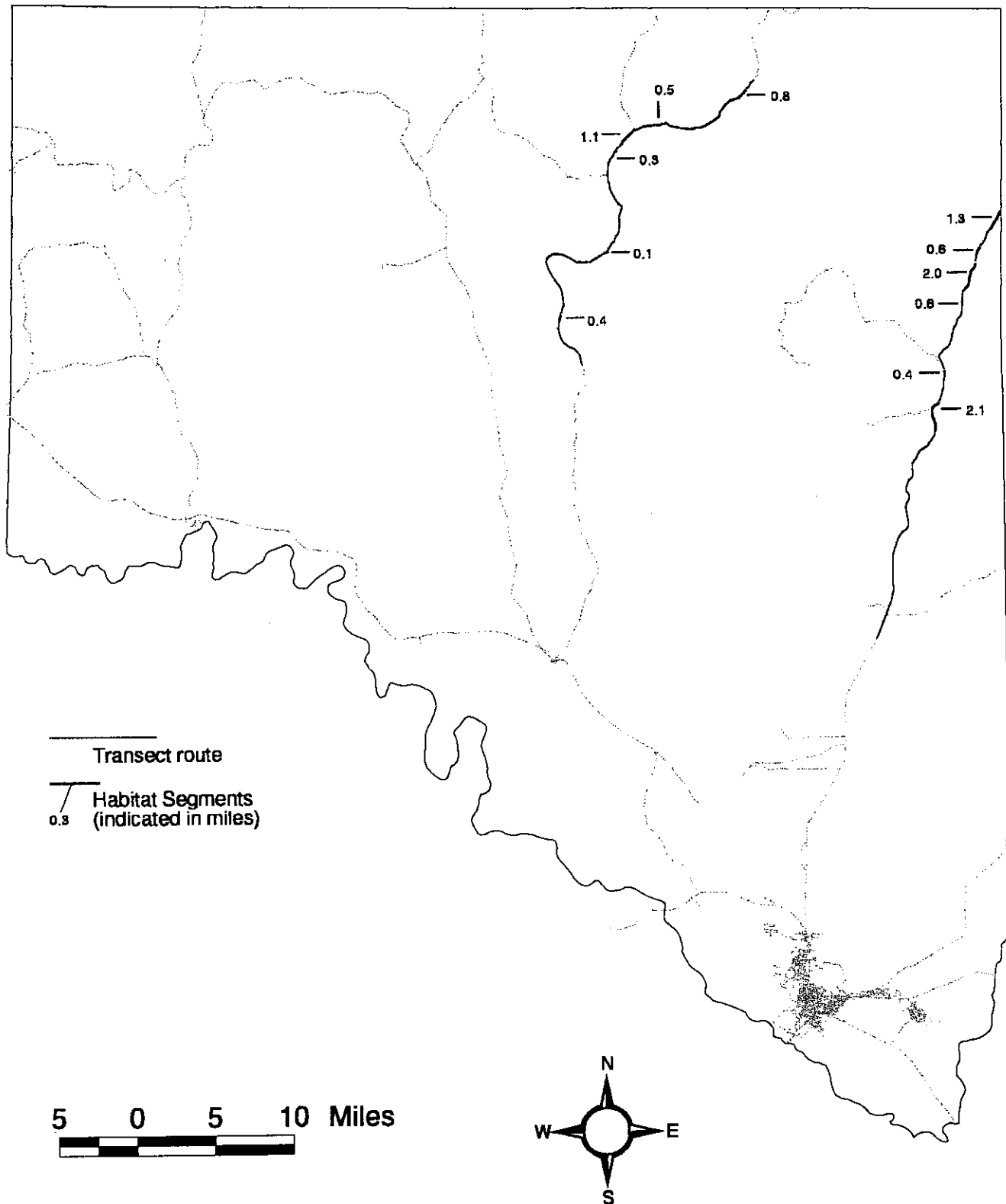
**Total habitat:** 0.7 miles

**BCV's observed:** 0



Roadside Survey for  
Black-capped Vireo Habitat

# Val Verde County



**Transect name:** VAL820A

**County:** Val Verde

**Date:** 21 July 96(O'Neal)

**Time:** <07:25

**Conditions:** Wind 5-10 SE, clear, 25.1C

**Directions:** 0.0- TX 163 N- 20 mi. N of Comstock @ historical marker.

FM 189 E

30.0- End transect- 4.8 mi. S of Sutton/Val Verde Co. line on FM 189 @  
a cattle guard.

**BCV habitat observed:**

3.5-3.9- W facing slope and drainage bottom. Mtn Laurel, large  
oaks, Pecan, persimmon, etc.. Moderate browse line.  
No BCV's heard.

12.1-12.2- NW facing hill that extends NE away from road. A lot of low  
vegetation covering the hill. Hill follows along the Devils River  
bed. No BCV's heard.

19.0-19.3- Hillside w/ many Mtn. Laurel, persimmon, some hackberry.  
<50% juniper (Looks good). No BCV's heard.

19.7-20.8- Same. Area looks as it may have had a past burn.  
2 BCV's heard.

22.3-22.8- Same. No BCV's heard.

28.5-29.3- Same, but low shrubs are dominated by persimmon.  
No BCV's heard.

**Total habitat:** 3.2 miles

**BCV's observed:** 2

**Transect name:** VAL820B

**County:** Val Verde

**Date:** 22 July 96(O'Neal)

**Time:** <06:59

**Conditions:** Wind 5-10 SE, clear, 25.5C.

**Directions:** 0.0- US 277 S @Edwards/Val Verde Co. line.  
30.0- End transect. 1.5 mi. S of x-sec of US 277 and US 377.

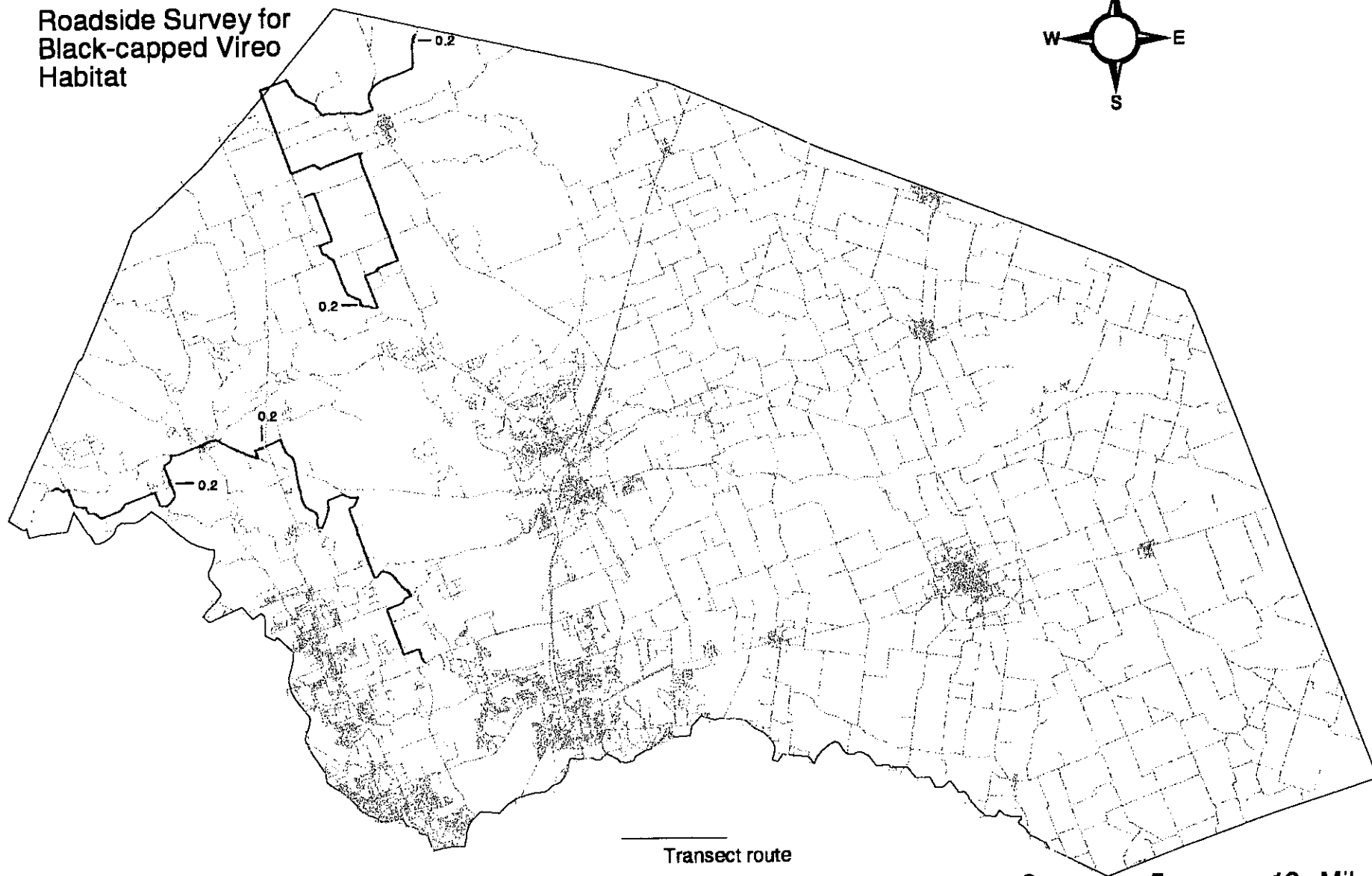
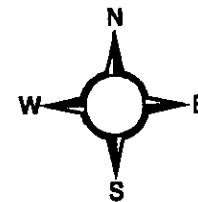
**BCV habitat observed:**

- 0.0-1.3- Low deciduous spp in small draws and on hillsides, many junipers near road though. Slight browseline- grazed by goats. No BCV's heard.
- 2.6-3.2- Same- Evergreen Sumac, Sotol, Acacia spp.. 1 BCV heard.
- 3.7-5.7- Same- Lacey Oak, persimmon, some Mexican Buckeye near road, Mtn. Laurel. 5 BCV's heard.
- 6.1-6.7- Same- Littleleaf Sumac. 1 BCV heard.
- 11.3-11.7- Same- but much more mature juniper. 1 BCV heard.
- 13.4-15.5- Same. 3 BCV heard

**Total habitat:** 7.0 miles

**BCV's observed:** 11

Roadside Survey for  
Black-capped Vireo  
Habitat



Williamson County

Transect route  
Habitat Segments  
(indicated in miles)



**Transect name:** WILLIA\_N

**County:** Williamson

**Date:** 5 Aug 97

**Time:** 09:50

**Conditions:** Warm, clear.

**Directions:**

- 0.0- CR 228 @ Bell County line
- 3.2- Curve left ('Spur 440')
- 3.4- Left on SH 195
- 4.1- Right on SH 138
- 6.1- Right on CR 224
- 6.7- Stay left
- 9.3- Left on CR 223
- 11.2- Cross SH 138
- 12.8- Left on CR 219 (not marked)
- 15.9- Turn right (at stop sign) on FM 970
- 16.7- Veer left onto CR 242 at curve in 970
- 19.4- Straight (past CR 241)
- 20.4- Right on CR 249
- 21.3- Curve left
- 21.4- Turn right (on ??)
- 21.9- 'T' w/ FM 2336, turn left
- 23.3- Right on CR 248
- 26.1- X-sec w/ FM 2338, cross over to CR 250
- 26.9- Right on CR 251
- 29.5- 'T' w/ FM 970, turn left
- 29.9- Straight at curve (CR 215)
- 30.0- END-T

**BCV habitat observed:**

0.1-0.3- Oak scrub. Pretty good looking habitat w/ lots of scrubby Oak and oteher woodies. No BCV's heard.  
23.8- 24.0- Oak scrub. Good mix, but too tall. Marginal habitat. No BCV's heard.

**Total habitat:** 0.4 miles

**BCV's observed:** 0

**Transect name:** WILLIA\_S

**County:** Williamson

**Date:** 5 Aug 97

**Time:** 07:18

**Conditions:** Warm, fair.

**Directions:** 0.0- CR 272 @ FM 1431 (at little pull-out on right)  
1.2- Keep right  
1.6- Keep right  
3.2- Right on CR 177  
4.4- Left on CR 175  
6.0- Left on FM 2243  
6.4- Right on CR 268  
10.5- Left on CR 267  
12.4- Right on CR 266  
14.9- Cross SH 29 (onto CR 200)  
16.4- Left on CR 258  
17.1- Zig to the left across US 183 to CR 213  
17.9- Right on SH 29  
19.6- Left on FM 1869  
21.5- Left on CR 282(?)  
23.9- Right on CR 283  
24.7- 'T' w/ CR 284, turn left  
27.0- Pass Spring Creek Drive (284 turns into dirt road)  
29.0- Left on CR 285  
29.8- Right on CR 286 Spur  
30.0- END-T

**BCV habitat observed:**

17.2-17.4- Live oak scrub. Marginal habitat. No BCV's heard.  
22.7-22.9- Oak/Persimmon scrub. No BCV's heard.

**Total habitat:** 0.4 miles

**BCV's observed:** 0