

2003-2010 Dove Banding Summary

TPWD Small Game Program



Overview

The management of migratory game birds requires annual information on population status and harvest. These data are gathered through various mechanisms, including banding, call count surveys, the Harvest Information Program, and parts collection surveys (Wingbees). The cumulative effect of these efforts is a better understanding of populations and harvest for overall management of the species, including formulation of hunting recommendations. In order to gain a better understanding of annual population status and harvest Texas Parks and Wildlife started banding mourning dove in 2003 and white-winged dove in 2006.

Mourning dove banding is part of a larger national effort coordinated by the U.S. Fish and Wildlife Service. Data obtained from banding are used to estimate vital rates (i.e., age ratios, survival rates, and harvest rates) which are used in harvest models to aid in evaluation of hunting regulations and proposals for the subsequent year regulations. Only three states are consistently banding white-winged dove, with the Texas banding program being the most comprehensive. Currently, white-winged dove banding is being done in conjunction with a Texas A&M University (TAMU) research project. The research project with TAMU ends in August 2011. Data gathered during this period will be used to further refine banding needs, spatial allocation, and quotas for future banding. Data summarized for this report includes only data collected by TPWD for these banding programs.

Mourning Dove

TPWD staff has banded 14,740 mourning dove from 2003-2010. Dove banded ranged from a low of 966 banded birds (2003, the first year of banding) to a high of 3,322 (2008) (Table 1). Mourning doves banded in Texas have been recovered in Mexico and seven states (including Texas) (Figure 1). A total of 542 mourning dove have been recovered from 2003-2010 (Table 2). Texas has a recovery rate of 0.36, one of the lowest recovery rates in the nation (average of 0.55), even though we have one of the highest harvest rates.

Table 1. Total mourning dove banded by year.

YEAR	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL
NUMBER BANDED	966	1,428	988	1,396	1,318	3,322	3,091	2,231	14,740

Table 2. Recovery locations for TPWD banded mourning dove.

State Recovered	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL
Alabama		1							1
Kansas					1			1	2
Louisiana		1							1
Mexico	3		1	2	1		3	2	12
New Mexico						1	3	1	5
Oklahoma					2		1		3
South Dakota	1								1
Texas	34	53	44	56	79	88	93	70	517
TOTAL RECOVERED	38	55	45	58	83	89	100	74	542

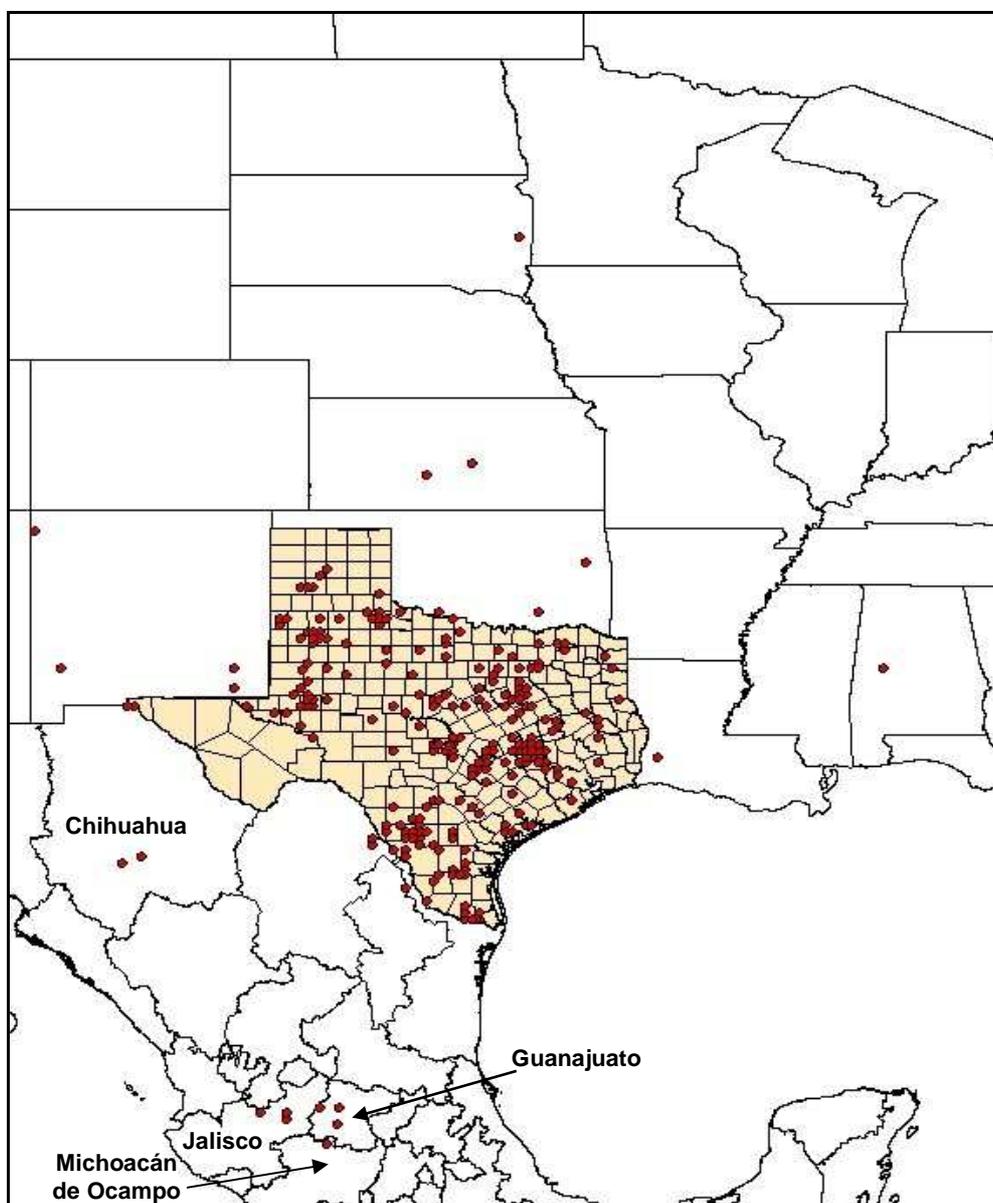


Figure 1. Mourning dove recoveries from 2003-2010.

One important data set we receive from banding is pre-harvest age and sex ratios. The average sex ratio of females to males was 1:2.3. The age ratio of juveniles to adults was 1:1.08 (Table 3).

Table 3. Mourning dove age and sex totals.

YEAR	AHY			AHY Totals	HY	U
	F	M	U			
2003	36	41	426	503	463	0
2004	33	177	347	557	849	22
2005	80	199	242	521	453	14
2006	0	9	551	560	806	30
2007	1	16	510	527	773	18
2008	0	4	1,775	1,779	1,503	40
2009	290	418	1,249	1,957	1,114	20
2010	210	638	653	1,501	723	7
TOTAL	650	1,502	5,753	7,905	6,684	151

Most banded mourning dove in Texas do not survive to see a second year (19%) and extremely few live past three years of age (7%) (Table 4). The oldest dove ever recovered in Texas was 9 years old and the oldest dove ever recovered was banded in Georgia and was a whopping 31 years old!

Table 4. Number of years Texas banded mourning dove survive.

Years Survived	No. Banded Doves Recovered	%
1	323	68
2	91	19
3	34	7
4	12	2
5	9	1
6	1	0.21

The majority of mourning dove recovered in Texas were also banded in Texas (54%). Mourning dove shot in Texas over the seven-year period came from a total of 21 states including Texas, with the most out-of-state banded birds coming from Kansas, Iowa, Oklahoma, and South Dakota (Table 5 and Figure 2).

Table 5. Banding locations for mourning dove recovered in Texas.

Banding State	2003	2004	2005	2006	2007	2008	2009	Total
Alabama					1			1
Arkansas	3	4	1	1	3	3	4	19
Colorado				3				3
Iowa	3	9	17	8	6	6	14	63
Illinois					3		2	5
Indiana		2		1				3
Kansas	6	4	8	16	4	11	21	70
Kentucky				1				1
Louisiana			1	1	3	1	1	7
Minnesota					1	1	3	5
Missouri	7	2	7	3	4	2	5	30
North Carolina					1			1
North Dakota	2	3	3	7	4	1	5	25
Nebraska	3	5	7	3	6	6	8	38
Ohio				1			1	2
Oklahoma	6	2	8	5	6	9	18	54
Pennsylvania			1	1				2
South Dakota	3	7	6	7	6	6	9	44
Texas	34	53	44	56	79	88	93	447
Wisconsin			1					1
Wyoming							1	1
TOTAL	67	91	104	114	127	134	185	822

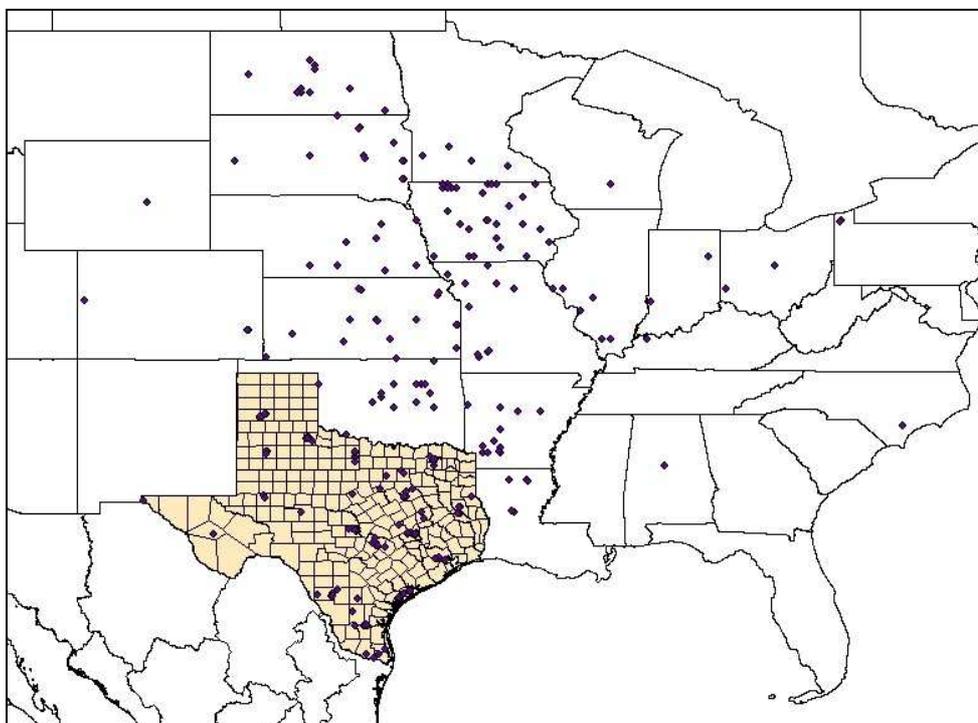


Figure 2. Banding locations for mourning dove recovered in Texas.

In 2010, a total of 2,231 mourning dove were banded from 117 locations throughout Texas (Figure 3).

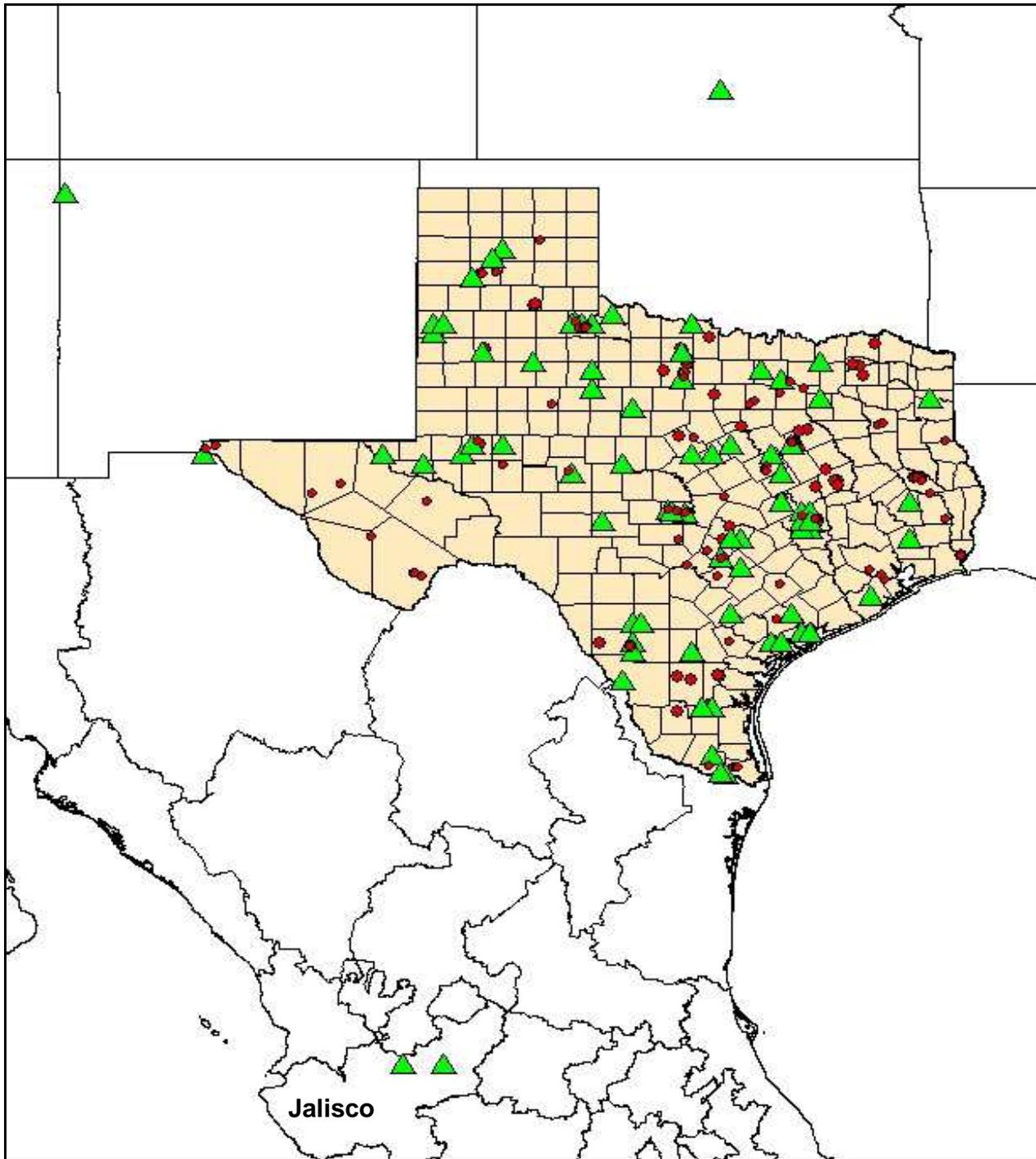


Figure 3. Mourning dove 2010 banding locations (red dot) and recovery locations (green triangle).

White-winged Dove

TPWD staff has banded 52,001 white-winged doves since the inception of the program in 2006. Dove banded ranged from a low of 1,770 banded birds (2006, first year of trapping) to a high of 20,683 (2008) (Table 6). White-winged doves banded in Texas have been recovered in four states (including Texas), four countries, and one in international waters (oil rig) (Figure 4). A total of 2,177 white-winged dove have been recovered from 2006-2010 (Table 7). Texas has a reporting rate of 0.42 which is similar to the reporting rate for mourning dove.

Table 6. Total white-winged dove banded by year.

YEAR	2006	2007	2008	2009	2010	TOTAL
NUMBER BANDED	1,770	11,456	20,683	11,186	6,906	52,001

Table 7. Recovery locations for TPWD banded white-winged dove.

State Recovered	2006	2007	2008	2009	2010	TOTAL
At Sea			1			1
El Salvador				2	2	4
Guatemala			2	1	2	5
Louisiana		1	2		1	4
Mexico	1	54	107	50	9	221
New Mexico		3	1	2	1	7
Nicaragua				3		3
Oklahoma		2	1			3
Texas	85	302	559	560	413	1,919
Unknown		1			9	10
TOTAL RETURNS	86	363	673	618	437	2,177

Only age ratio data is available for white-winged dove since there is currently no way to sex these birds based on any particular morphological characteristic. The average age ratio of juveniles to adults was 1.5:1 (Table 8).

Table 8. White-winged dove age totals.

YEAR	AHY	HY	U
2006	909	804	57
2007	5,115	6,026	315
2008	6,553	13,954	176
2009	4,351	6,747	88
2010	3,595	3,213	98
TOTAL	20,523	30,744	734

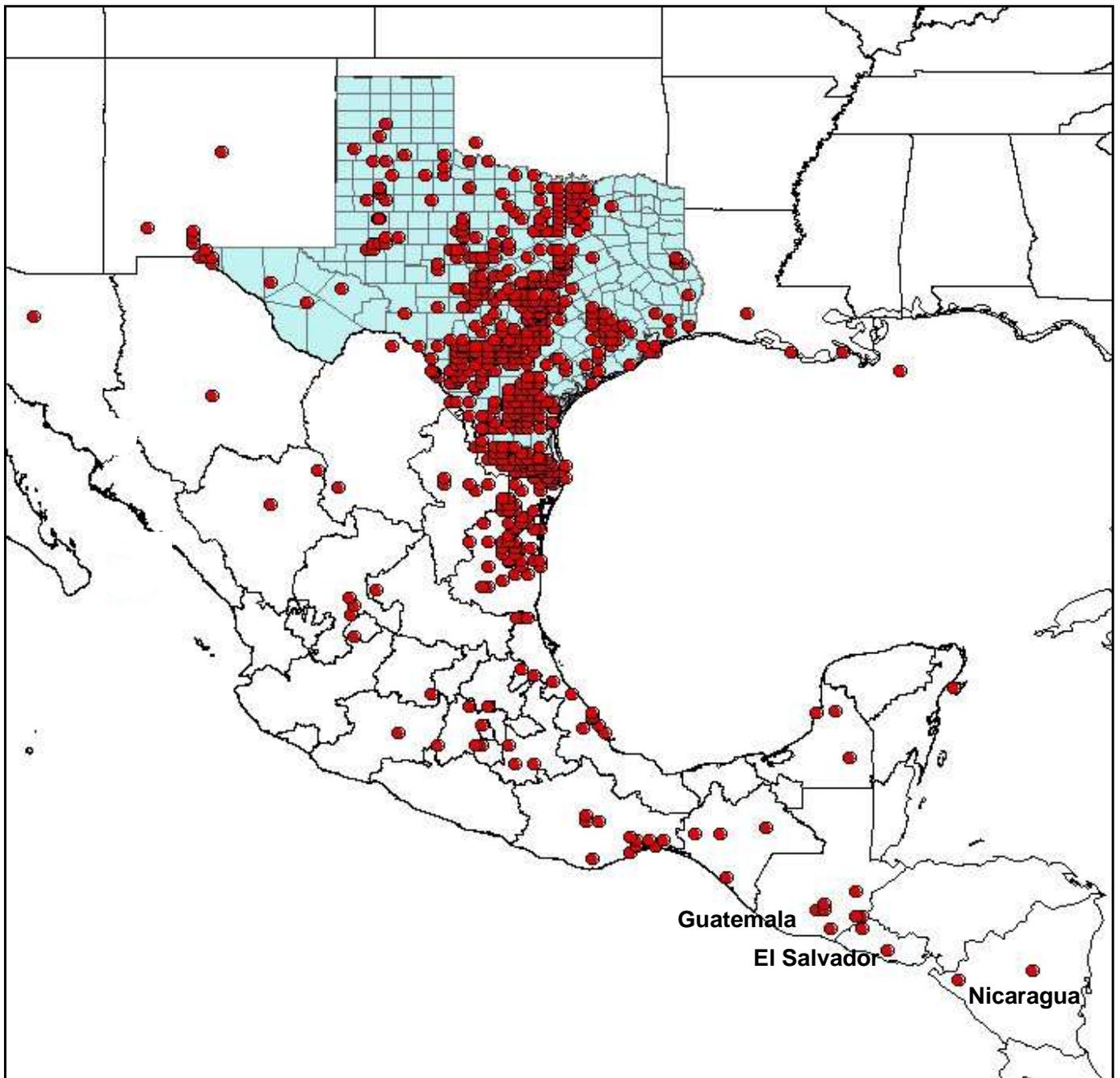


Figure 4. White-winged dove recoveries from 2006-2010.

Most white-winged doves do not survive to see a second year (16%) and few live past three years (2%) (Table 7). The oldest dove ever recorded in Texas was 17 years old and the oldest dove ever recovered was banded in Arizona and was 21 years old!

Table 7. Number of years white-winged dove survive.

Years Survived	No. Banded Doves Recovered	%
1	1260	76
2	271	16
3	43	2
4	6	0.36
5	2	0.12
6	4	0.24
7	1	0.06

White-winged dove recovered in Texas over the four-year period were almost entirely banded in Texas with a few dove (12 birds) banded in Mexico (Figure 5).

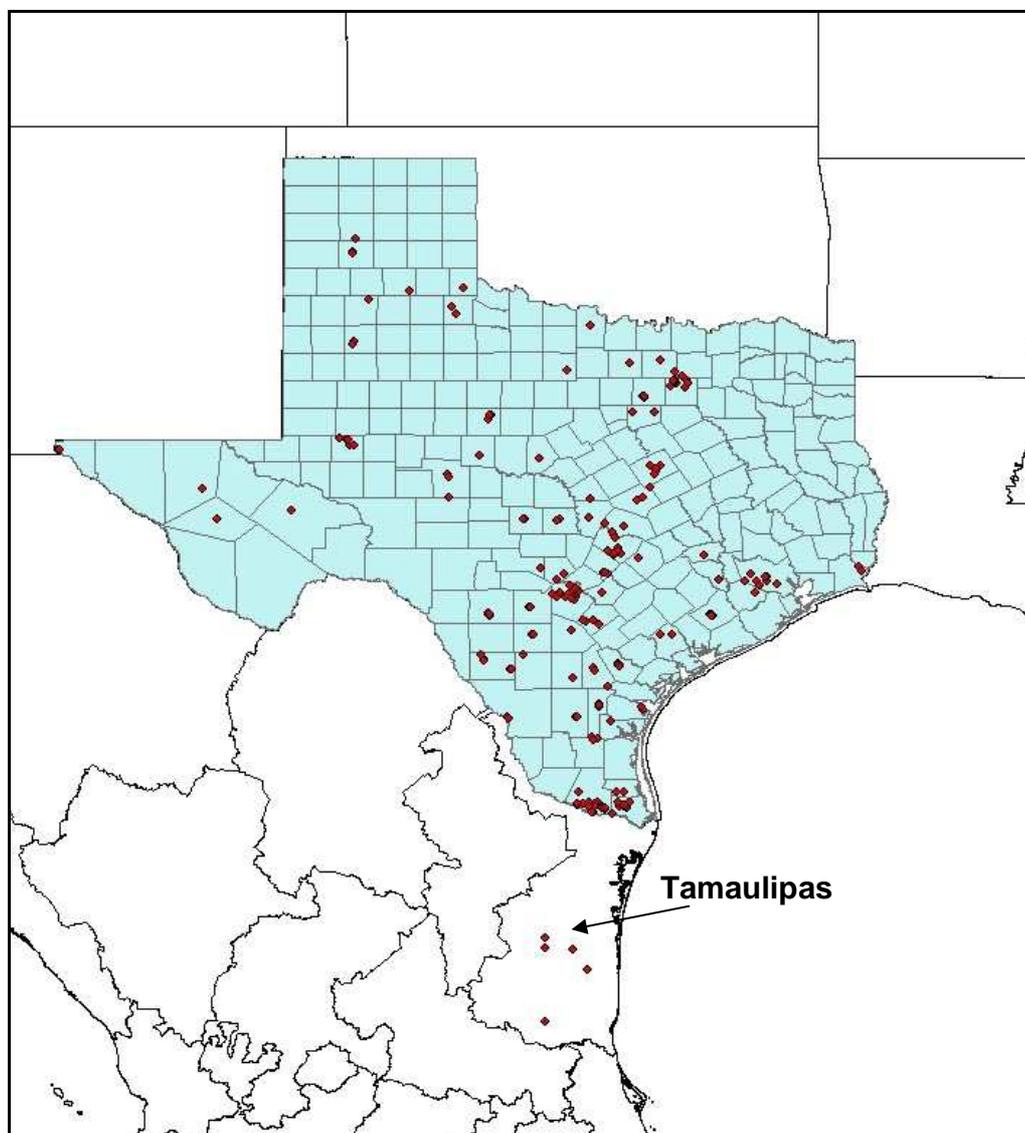


Figure 5. Banding locations of white-winged dove recovered in Texas from 2006-2010.

In 2010, a total of 6,906 white-winged doves were banded in 185 locations throughout Texas (Figure 6).

The farthest recovered bird was banded by Stephen Benn in Hidalgo County and was recovered in Nicaragua, 1,242 miles from the original band site.

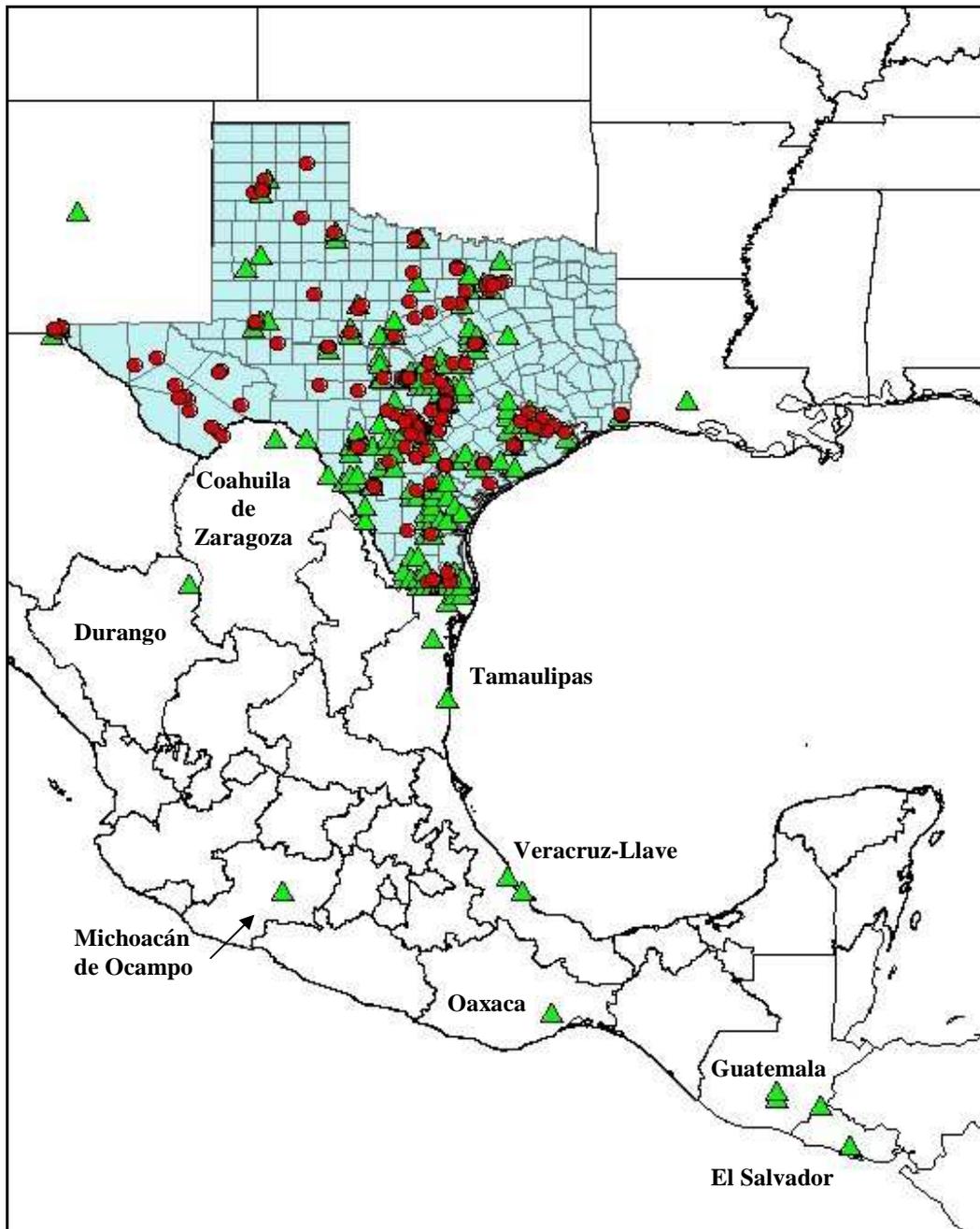


Figure 6. White-winged dove 2010 banding locations (red dots) and recovery locations (green triangle).