

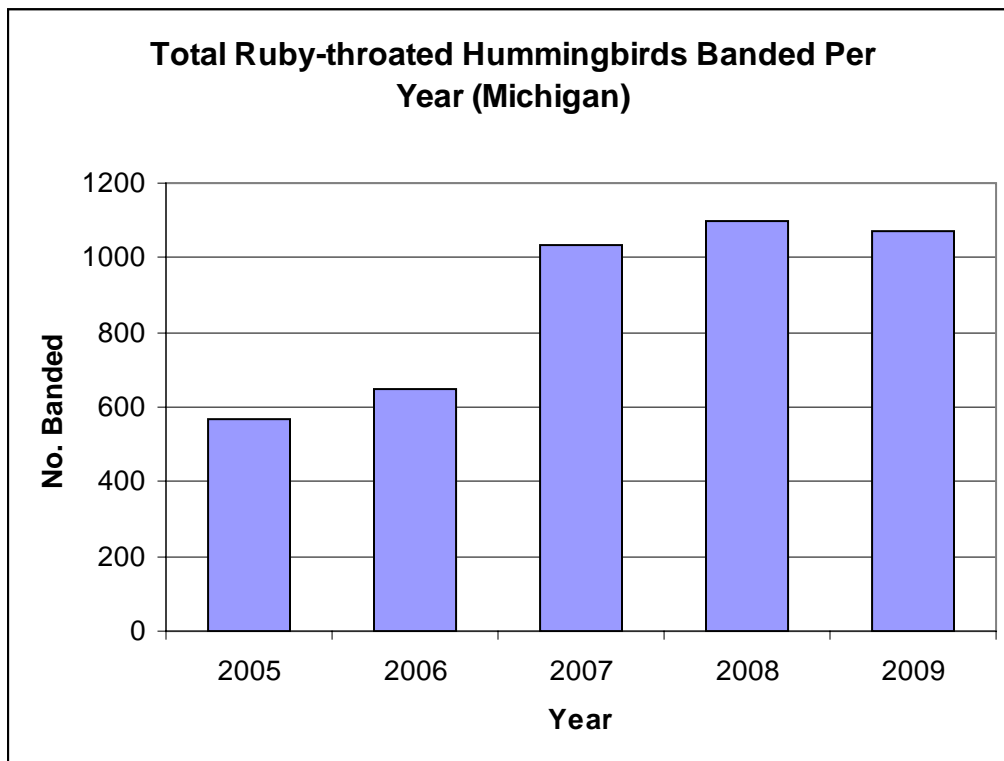
Great Lakes HummerNet 2009 Hummingbird Banding Summary

Allen T. Chartier
Permit #23156

The 2009 banding season in Michigan was the best since the project began in 2001. With Brenda Keith now working hard as a subpermittee since 2007, a total of 1070 Ruby-throated Hummingbirds was banded in Michigan between 10 May and 5 November 2009 at 34 locations in 15 counties. Allen banded 641 Ruby-throated Hummingbirds, most in the southeastern Lower Peninsula but with help from Brenda at a couple south-central Lower Peninsula locales, including covering at the Hummingbird Festival in Branch County while Allen visited the emergency room, and at a productive locale in Calhoun County during Allen's bout with the flu. Brenda banded 429 hummingbirds at various locales in the southwestern Lower Peninsula.

In general there was about a 7.5% decrease in total hummingbirds banded from 2008, but overall the number banded in 2009 was still higher than in 2005 and 2006 (see Figure 1 below). The number captured seems to have stabilized in the last three years with more consistent (and increased) effort.

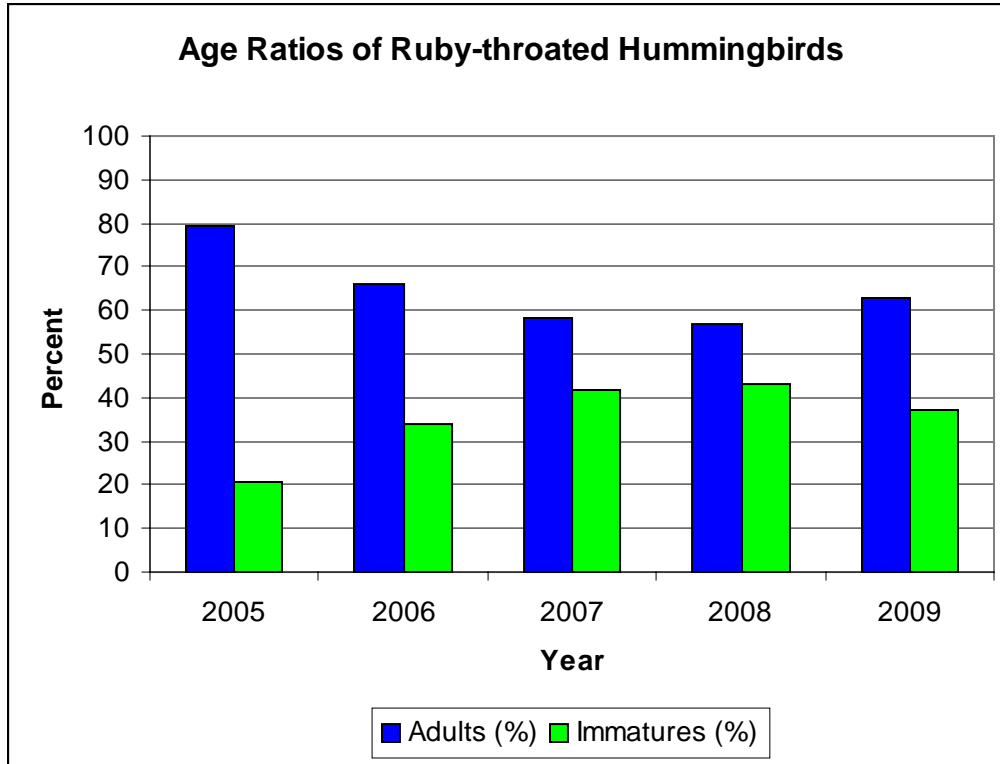
Figure 1. Total Hummingbirds banded per year (2005-2009).



AGE RATIOS

A total of 228 adult males (21.3%), 443 adult females (41.4%), 237 immature males (22.1%), and 162 immature females (15.1%) were banded. The overall age ratio was 63% adult to 27% immature, which is a lower proportion of immatures than last year. A comparison of age ratios from 2005-2009 is shown in Figure 2 below. Over the past three years, with more consistent effort, this ratio seems to have stabilized at around 60% adults to 40% immatures.

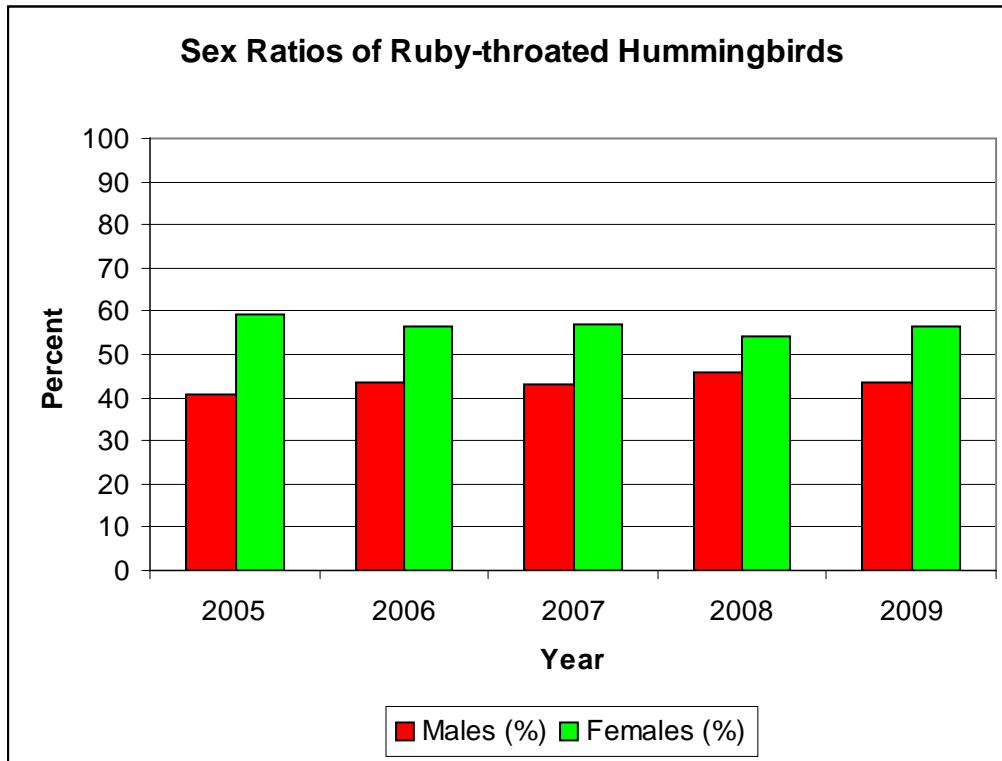
Figure 2. Age Ratios of all Ruby-throated Hummingbirds banded, by year.



SEX RATIOS

The overall sex ratio was 43% males to 57% females, fairly close to last year. A comparison of sex ratios from 2005-2009 is shown in Figure 3 below. This ratio seems to be fairly consistent over the years at around 60-40 to 55-45 percent.

Figure 3. Overall Sex Ratios of Ruby-throated Hummingbirds by year.



Looking at the sex ratios separated by age classes can give us additional insight. Among adults the sex ratio in 2009 was 34% male to 66% female, and among immatures it was 59% male to 41% female. In adults (Figure 4), the ratio seems to be fairly stable between years with males at 30-35% and females at 65-70%. This could indicate a lower survival rate of males, or could simply reflect a more wary nature of males thus limiting captures. In immatures (Figure 5), again there seems to be some stability between years, but with the proportions reversed between the sexes with males at about 60% and females at nearly 40%. It is unclear whether this reflects the actual sex ratio of immatures, or whether there is capture bias here as well. But if males have lower survival rates, then perhaps a higher proportion of immature males allows sufficient males to survive to breeding age. Certainly, males are recaptured in subsequent years much less frequently than females, and the maximum known age for males is a full year less than for females.

Figure 4. Sex Ratios of Adult Ruby-throated Hummingbirds by year.

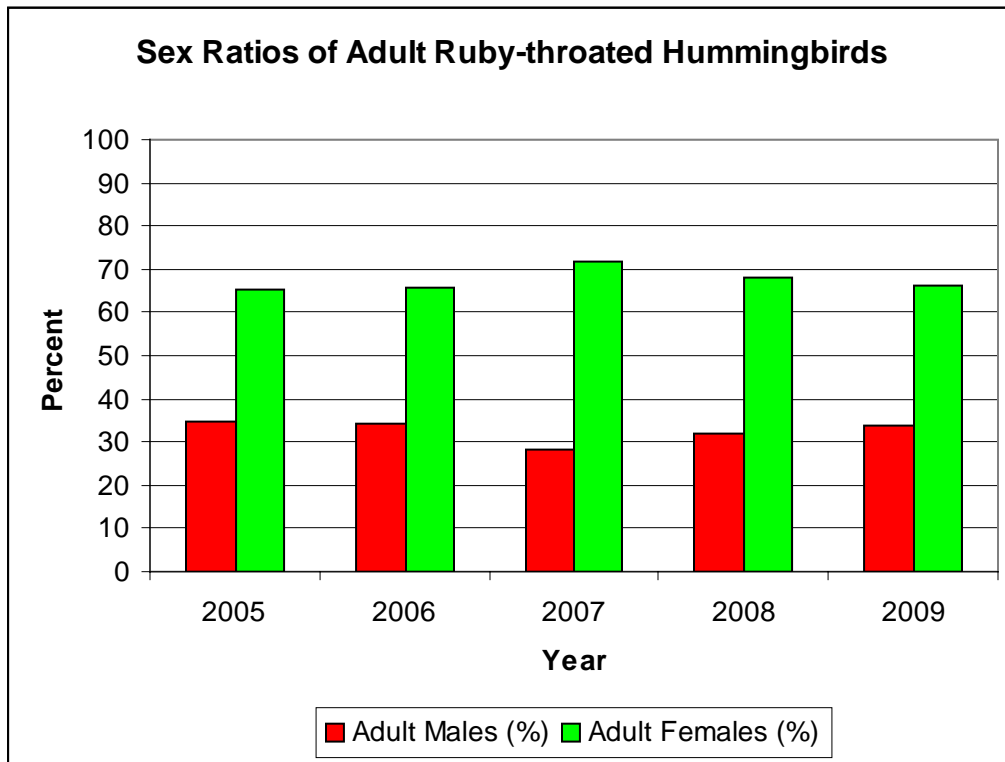
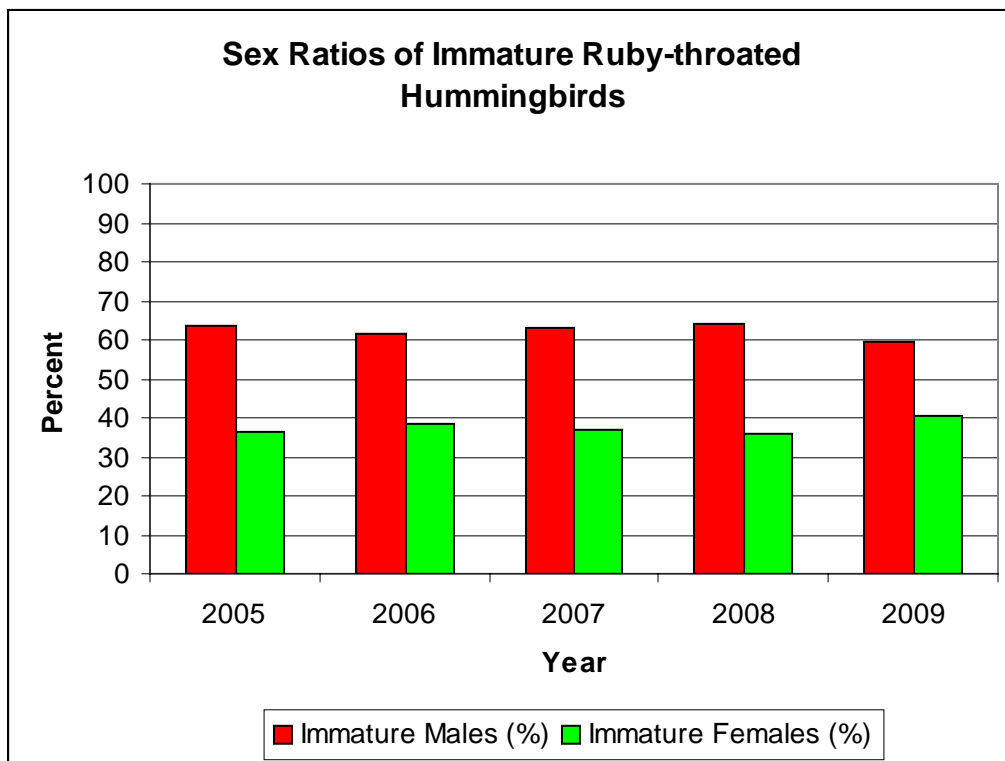


Figure 5. Sex Ratios of Immature Ruby-throated Hummingbirds by year.



STANDARDIZED CAPTURE RATES

A standardized comparison of capture rates and numbers for 2005-2009 is shown in Table 1 below. Only birds banded between June 1 and September 30 are included in this analysis, as banding effort before and after these dates is unpredictable. Capture rates are calculated as Birds per Trap Hour and Birds per 100 Net Hours, which seems to provide a reasonable comparison of these two very different capture methods.

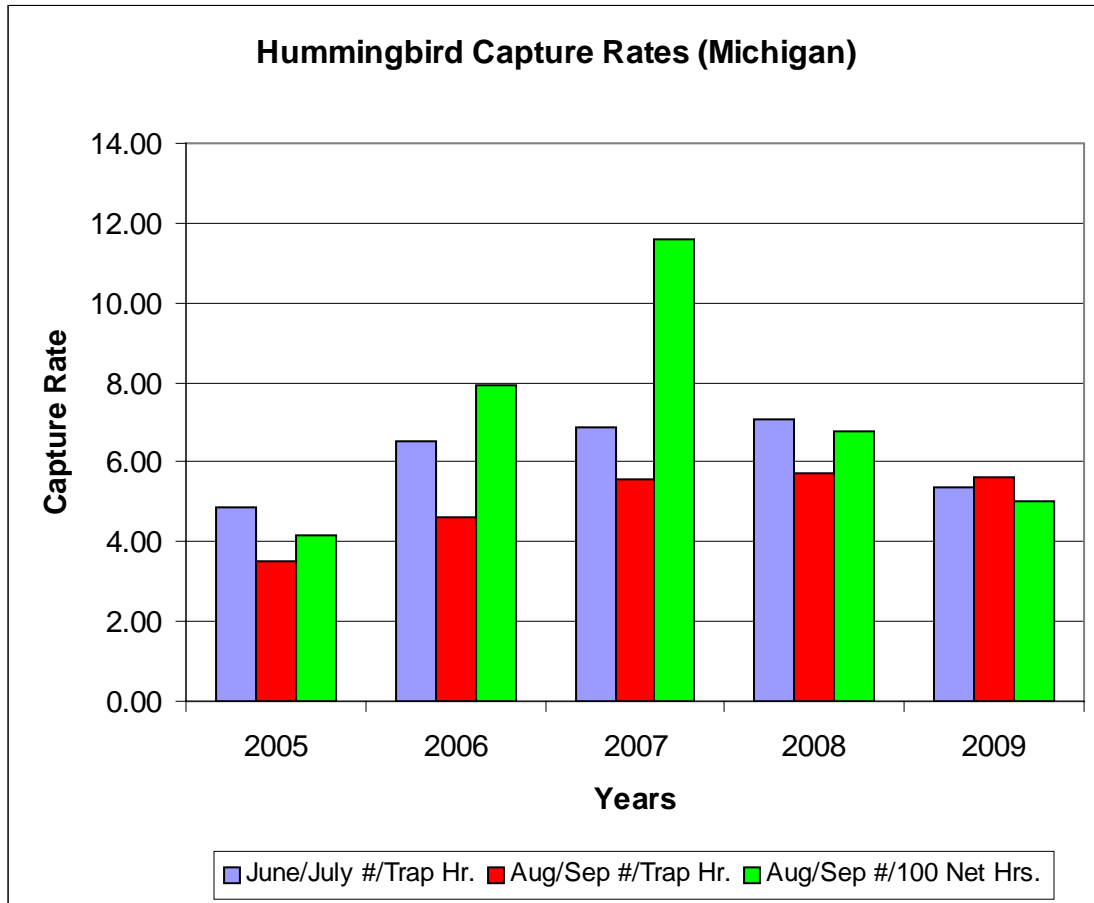
Effort in July was lower this year, especially due to Allen's illnesses, and may be one reason for the slight decrease in captures and capture rates in 2009. Habitat reduction at Metro Beach Metropark also resulted in a decrease in birds banded there in August and September. September was also unusually cool and wet in 2009, with many sites reported earlier than normal departures of hummingbirds. As a result, effort was reduced both by weather causing cancellation of banding days, and by many sites no longer having birds.

Table 1. Standardized totals of Ruby-throated Hummingbirds banded (June 1 – September 30) in southeastern Michigan

Banding Periods/Method	2005	2006	2007	2008	2009
June/July Total	218	240	266	263	364
June/July Trap Hrs.	45.00	36.75	38.75	37.25	67.75
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37
Aug/Sep Total (traps)	188	249	358	419	271
Aug/Sep Trap Hrs.	53.50	54.00	64.50	73.50	47.75
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67
Aug/Sep Total (nets)	28	86	96	74	64
Aug/Sep Net Hrs.	669.19	1082.56	828.69	1091.81	1269.00
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04
Total Banded	434	575	720	756	699
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04

Results from the table above are graphed in Figure 6 below, and seem to show an overall slight downward trend begun after a peak in 2007. The decline in birds mist-netted (all at Metro Beach Metropark, Macomb County) is most notable, and the decline in birds trapped in June/July is quite pronounced as well.

Figure 6. Standardized Hummingbird Capture Rates, compared by time period and capture method.



Totals for all sites in 2009, including capture rates and number of recaptures from previous years, is shown in Table 2 below. The first hatch-year bird of the 2009 breeding season was captured by Brenda Keith at her yard in Kalamazoo County on 19 July 2009, earlier than normal.

RETURNS

The number of birds returning in 2009 was slightly higher than in 2008, with 109 birds returning, including 1 from 2004, 2 from 2005, 10 from 2006, 36 from 2007, and 60 from 2008. Once again the greatest number of returns was from Mary Bird's garden in Calhoun County, where the second greatest number was also banded (161). Rich and Brenda Keith's yard in Pavilion Township, Kalamazoo County yielded 23 returns (256 banded). A total of 27 returns was tallied from the three locales in Waterloo Township, Jackson County (Clafin's, Steere's, and Laux/Taylor's). And for the first time since banding was begun there in 2005, five returns were captured at the Hummingbird Festival at the River Lake Inn near Colon, Branch County.

The oldest Ruby-throated Hummingbird recaptured in Michigan to date was a female banded in 2004 as after hatch-year, recaptured by Brenda on 4 September 2009 at Mary Bird's garden, making her an after 6th year bird (at least 6 years 3 months old).

The number of hatch-year females banded in 2008 and recaptured this year by Brenda at Pavilion Township (KAL10) was an exceptionally good number, and as many as Allen has recaptured overall in the last few years!

An after hatch-year female banded on 8 July 2008 at Mary Bird's garden in Battle Creek, Calhoun County was recaptured on 4 August 2009 by Rich Keith at the Fort Custer Training Center. This is a distance of 2.4 miles to the NW, and apparently was a bird that was shifting its breeding area. Such between-year shifts have been recorded before in southeastern Michigan, once by a female (1 mile), and twice by males over longer distances (35-65 miles).

RECAPTURES

A hatch-year female banded on 4 September 2009 by Brenda at Mary Bird's garden in Battle Creek was recaptured only 4 days later on 8 September 2009 at the Kalamazoo Nature Center, Kalamazoo County; a distance of 16.5 miles to the WNW. This is a very puzzling movement for a young bird, possibly initiating migration.

RE-ENCOUNTERS

A Ruby-throated Hummingbird banded as a HY-M on 16 September 2008 at Hudson Mills, Washtenaw County (Ben and Linda Colman's yard), was found in Eileen Golden's garden in Yantis, Texas on 12 September 2009, a distance of 911 miles to the SW. It was alive but injured when found, and unfortunately soon died. The specimen was donated to a local university.

RARITIES

- An albino Ruby-throated Hummingbird was seen at a Paw Paw, Van Buren County, Michigan on 5 September 2009 (and present before then), but unfortunately could not be captured for banding.
- Rufous Hummingbird, (AHY-F) banded on 20 October 2009 at Green Twp., Ashland Co., Ohio. First observed by the homeowner on 17 October and last observed on 12 December.
- Rufous Hummingbird (AHY-M) banded on 29 October 2009 at Shreve, Wayne Co., Ohio. First observed by the homeowner on 24 October and last observed on 9 November.
- Rufous Hummingbird (AHY-M) banded on 13 November 2009 at Carmel, Hamilton Co., Indiana. First observed by the homeowner in mid-October and last observed on 2 January 2010.
- Rufous Hummingbird (AHY-F) banded on 14 November 2009 at Hartford, Van Buren Co., Michigan. First observed by the homeowner in late September and last observed on 29 December.
- Rufous Hummingbird (AHY-F) banded on 6 December 2009 at Flushing, Genesee Co., Michigan. First observed by the homeowner in late September and last observed on 29 December.
- Allen's Hummingbird (HY-M) banded on 11 December 2009 at Walnut Creek Township, Holmes Co., Ohio. This first state record was first discovered by the homeowner in late September, and was last seen on 27 December 2009 (she had 500-600 birders visit her home to see the bird).

Table 2. Michigan totals of Ruby-throated Hummingbirds banded for all sites (May-November 2009), sorted by total number banded. AHY=after hatch-year, HY=hatch year, M=male, F=female

Location/Host	AHY-M	AHY-F	HY-M	HY-F	Total	Capture Rate	Re-captures
Kalamazoo Co., Pavilion Twp. (Rich & Brenda Keith) [KAL10]	23	45	114	74	256	2.1/ 100 NH 2.6/ Trap Hr	2007 (10) 2008 (13)
Calhoun Co., Battle Creek (Mary Bird) [CAL3]	54	68	24	15	161	6.4/ Trap Hr	2004 (1) 2005 (1) 2006 (3) 2007 (10) 2008 (18)
Livingston Co., Hamburg Twp. (Jim & Melissa Pappas) [LIV11]	23	27	21	11	82	8.4/ Trap Hr	2006 (1) 2008 (2)
Macomb Co., Metro Beach Metropark [MBMP]	4	11	28	27	70	5.0/ 100 NH	-
Kalamazoo Co., Augusta (Rhonda Dunithan) [KAL16]	4	51	7	5	67	5.0/ Trap Hr	-
Jackson Co., Parma Twp. (Aaron & Danielle Potts) [JAC13]	18	30	8	5	61	10.2/ Trap Hr	2008 (2)
Jackson Co., Waterloo Twp. (Charity Steere) [JAC10]	11	35	4	2	52	11.6/ Trap Hr	2005 (1) 2006 (1) 2007 (6) 2008 (4)
Branch Co., River Lake Inn (Marv & Anita Bliss) [RLI]	9	40	0	2	51	8.0/ Trap Hr	2006 (1) 2007 (1) 2008 (3)
Jackson Co., Waterloo Twp. (Arlene Taylor & Matt Laux) [JAC2A]	8	27	2	3	40	10.7/ Trap Hr	2006 (1) 2007 (2) 2008 (2)
Washtenaw Co., Hudson Mills (Ben & Linda Colman) [WAS21]	5	23	4	3	35	4.8/ Trap Hr	2006 (1) 2007 (2) 2008 (4)
Jackson Co., Waterloo Twp. (Lathe & Kathy Clafin) [JAC2]	12	11	2	0	25	5.0/ Trap Hr	2007 (3) 2008 (7)
Washtenaw Co., Salem Twp. (Sheila Boyer) [WAS22]	5	7	3	4	19	6.9/ Trap Hr	-
St. Clair Co., Cottrellville (Renee Render) [STC3]	6	8	0	1	15	4.6/ Trap Hr	-
Jackson Co., Waterloo Twp. (Frank & Rose Blackwell) [JAC11]	4	10	0	0	14	3.1/ Trap Hr	2008 (1)
Oakland Co., West Bloomfield (Carl Pascoe & Rachel Powless) [OAK1]	3	6	2	1	12	3.0/ Trap Hr	2006 (2) 2008 (2)
Allegan Co., Allegan (Jim & Darlene Smith) [ALL1]	4	6	1	0	11	2.8/ Trap Hr	-

Table 2. Cont'd.

Location/Host	AHY-M	AHY-F	HY-M	HY-F	Total	Capture Rate	Re-captures
Oakland Co., Milford (Barb Jensen) [OAK13B]	4	7	0	0	11	4.4/ Trap Hr	-
Wayne Co., Inkster (Allen & Nancy Chartier) [WAY1]	4	2	5	0	11	0.7/ Trap Hr	2008 (1)
St. Clair Co., Port Huron SGA [PHSGA]	7	3	0	0	10	0.3/ Trap Hr 5.8/ 100 NH	-
Jackson Co., Dahlem Center [JAC-DC]	4	3	1	1	9	6.0/ Trap Hr	-
Kalamazoo Co., Fort Custer Training Center [FCTC]	2	3	4	0	9	3.3/ 100 NH 0.7/ Trap Hr	-
Jackson Co., Waterloo Twp. (Bill & JoAnne Darwin) [JAC12]	3	5	0	0	8	6.7/ Trap Hr	2007 (2)
Berrien Co., Fernwood Nature Center (Wendy Jones) [FNC]	1	6	0	0	7	5.6/ Trap Hr	-
Hillsdale Co., Hillsdale (Tim Tyler) [HIL2]	3	2	1	1	7	4.7/ Trap Hr	-
Van Buren Co., Paw Paw (Jim & Joyce Moulehrop) [VAN7]	0	1	3	2	6	2.4/ Trap Hr	-
Oakland Co., Milford (Stella & Vaughn Koshkarian) [OAK13]	2	0	2	2	6	2.4/ Trap Hr	-
Kalamazoo Co., Kalamazoo (Karen Amsbury) [KAL15]	1	2	0	1	4	8.0/ Trap Hr	-
Kalamazoo Co., Scotts (Rod & Kathy Rhoades) [KAL12]	1	1	0	1	3	1.6/ Trap Hr	-
Washtenaw Co., Eddy Discovery Center [EDC]	1	2	0	0	3	3.0/ Trap Hr	-
Livingston Co., Hamburg Twp. (John & Karen Lowry) [LIV12]	0	0	1	1	2	2.0/ Trap Hr	-
Macomb Co., Harrison Twp. (Margaret Fallone) MCO10	0	1	0	0	1	4.0/ Trap Hr	-
Oceana Co., Little Point Sable Nature Sanctuary [LPSNS]	1	0	0	0	1	0.7/ Trap Hr	-
Washtenaw Co., Superior Twp. (Susan Falcone) [WAS8]	1	0	0	0	1	1.0/ Trap Hr	-
Jackson Co., Waterloo Twp (Judy Gray) [JAC3]	0	0	0	0	0	1.0/ Trap Hr	2008 (1)
TOTAL OF ALL LOCATIONS	228	443	237	162	1070	-	2004 (1) 2005 (2) 2006 (10) 2007 (36) 2008 (60)
	21.3%	41.4%	22.1%	15.1%			