

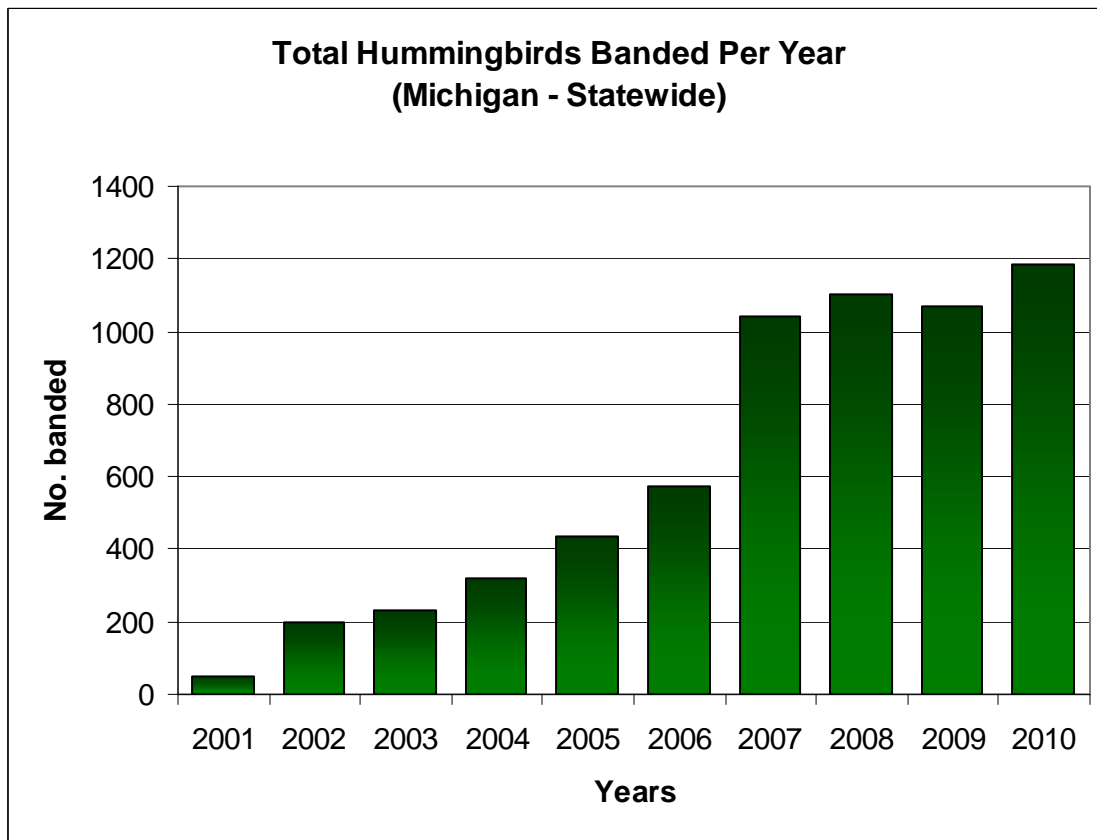
Great Lakes HummerNet 2010 Hummingbird Banding Summary

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The 2010 banding season in Michigan was the best since the project began in 2001. A total of 1210 Ruby-throated Hummingbirds was banded in Michigan between 14 May and 26 November 2010 at 37 locations in 13 counties. This was about a 13% increase from 2009. The number banded seems to have stabilized in the last four years at between 1000 and 1200, with more consistent (and increased) effort.

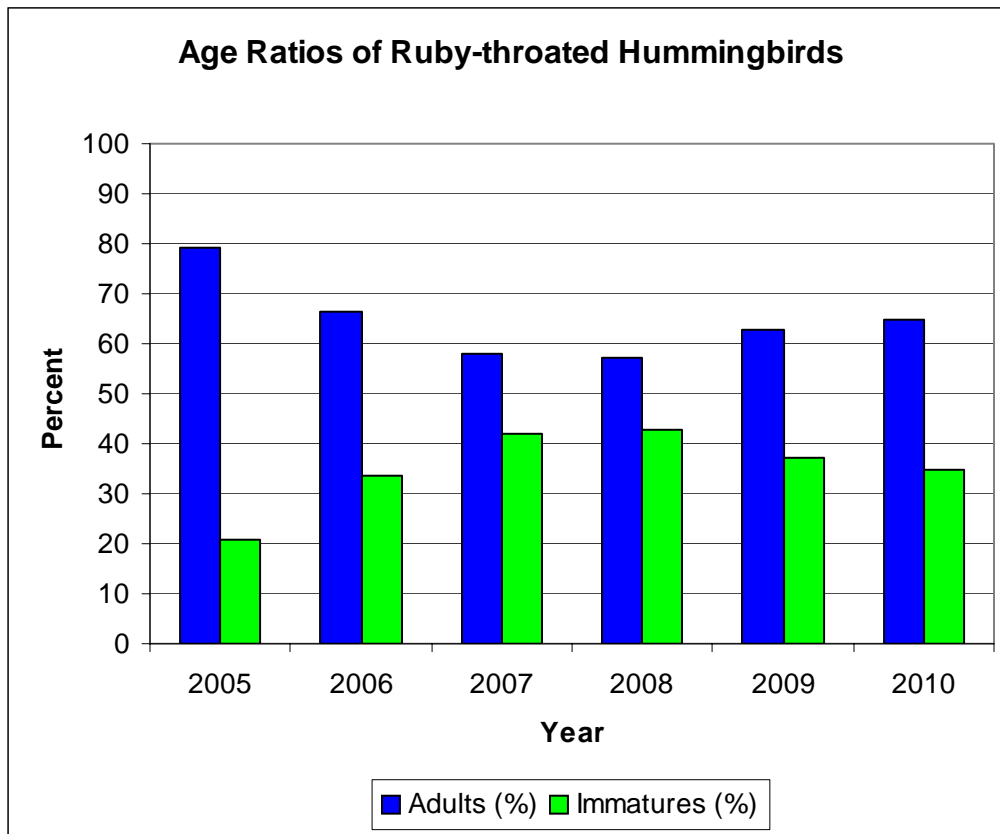
Figure 1. Total Hummingbirds banded per year in Michigan (n = 6232).



AGE RATIOS

A total of 257 adult males (21.2%), 533 adult females (44.0%), 249 immature males (20.6%), and 171 immature females (14.1%) were banded (see Table 2). The overall age ratio was 65% adult to 35% immature, which is very similar to last year, with slightly more immatures. A comparison of age ratios from 2005-2010 is shown in Figure 2 below. Over the past four years, with more consistent effort, this ratio seems to have stabilized at around 60% adults to 40% immatures.

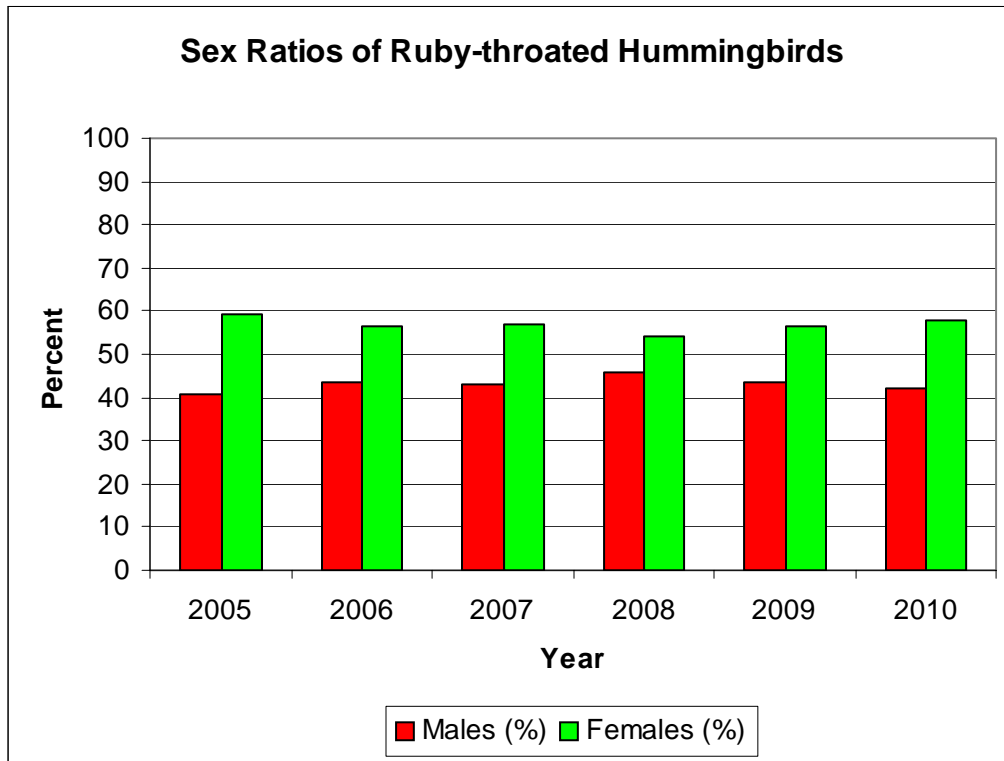
Figure 2. Age Ratios of all Ruby-throated Hummingbirds banded, by year.



SEX RATIOS

The overall sex ratio was 42% males to 58% females, very close to last year. A comparison of sex ratios from 2005-2010 is shown in Figure 3 below. This ratio seems to be fairly consistent over the years at around 55-60 female to 40-45 percent male.

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 2010 was 33% male to 67% 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 about 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.

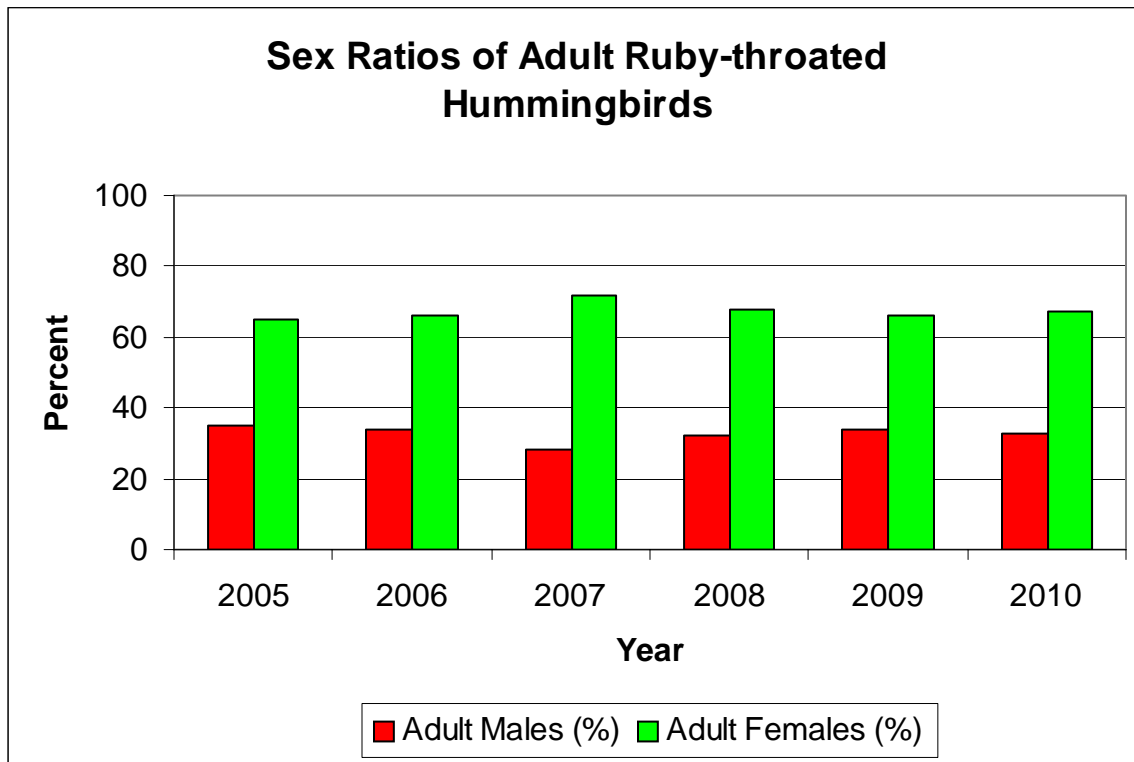
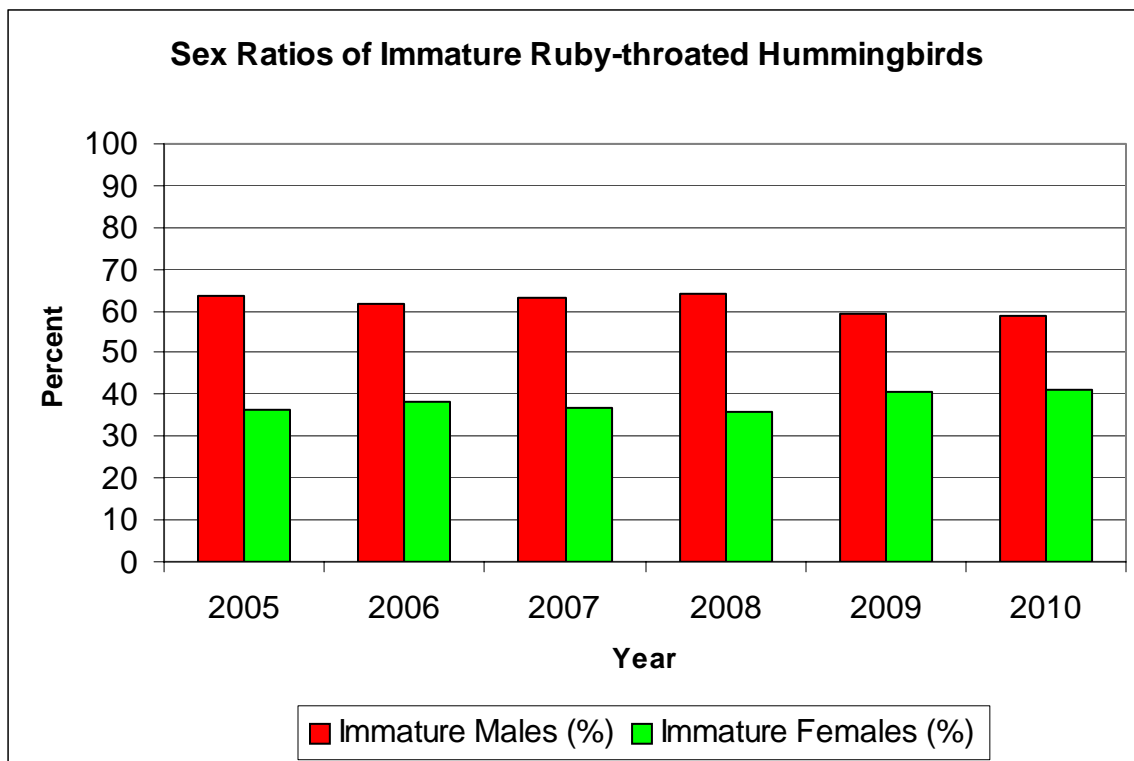


Figure 5. Sex Ratios of Immature Ruby-throated Hummingbirds by year.



STANDARDIZED CAPTURE RATES

A standardized comparison of capture rates and numbers for 2005-2010 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.

Trapping effort in June and July was the highest ever this year, and in August and September was the second highest. Improved habitat at Metro Beach Metropark probably resulted in an increase in birds mist-netted there in August and September. Overall the number banded was the highest yet, but capture rates were lower for trapping (perhaps the use of two traps on many days this year is the cause), while capture rates in mist nets increased somewhat. This likely due to a real increase in birds present at Metro Beach as the number of net hours was lower.

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

Banding Periods/Method	2005	2006	2007	2008	2009	2010
June/July Total	218	240	266	263	364	470
June/July Trap Hrs.	45.00	36.75	38.75	37.25	67.75	104.75
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33
Aug/Sep Total (traps)	188	249	358	419	271	238
Aug/Sep Trap Hrs.	53.50	54.00	64.50	73.50	47.75	70.50
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38
Aug/Sep Total (nets)	28	86	96	74	64	86
Aug/Sep Net Hrs.	669.19	1082.56	828.69	1091.81	1269.00	1089.00
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90
Total Banded	434	575	720	756	699	794
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90

Results from the table above are graphed in Figures 6 & 7 below, and continue to show an overall slight downward trend in capture rates begun after a peak in 2007 and 2008. The decline in birds mist-netted (all at Metro Beach Metropark, Macomb County) does not seem to be following this trend.

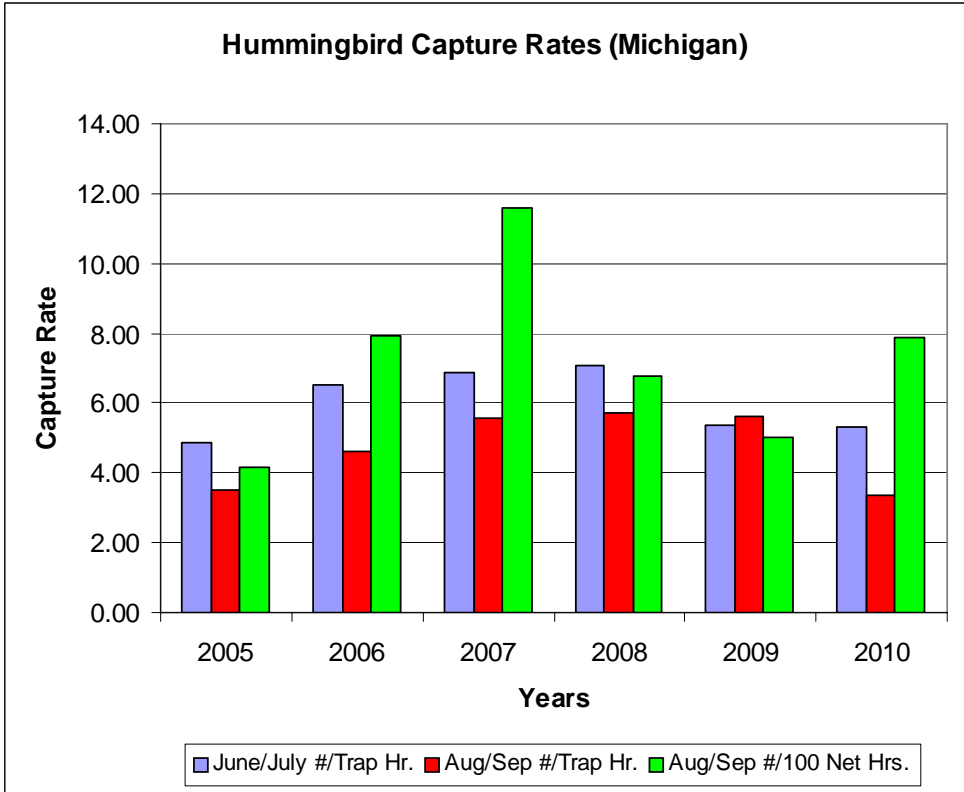


Figure 6. Total Hummingbirds banded per year in southeastern Michigan during standardized dates (1 June to 30 September).

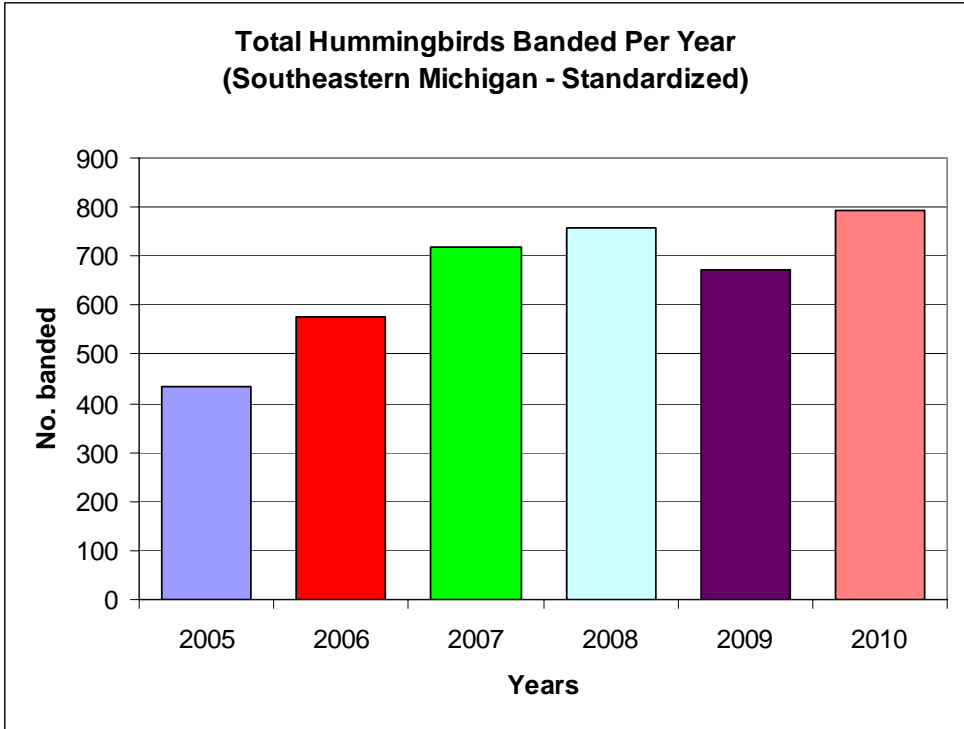


Figure 7. Standardized Hummingbird Capture Rates, compared by capture method.

Totals for all sites in 2010, including capture rates and number of recaptures from previous years, is shown in Table 2 below. The first hatch-year bird of the 2010 breeding season in Michigan was captured by Brenda Keith at her yard in Kalamazoo County on 18 July 2009, earlier than normal and one day earlier than last year.

RETURNS

The number of birds returning to Michigan in 2010 was notably higher than in both last year and the year before, with 130 birds returning, including 1 from 2003, 3 from 2006, 16 from 2007, 33 from 2008, and 73 from 2009. Once again the greatest number of returns (34) was from Mary Bird's garden in Calhoun County, where the second greatest number was also banded (148). Rich and Brenda Keith's yard in Pavilion Township, Kalamazoo County yielded 21 returns (234 banded). A total of 36 returns was tallied from the three locales in Waterloo Township, Jackson County (Claflin's, Steere's, and Laux/Taylor's). Claflin's provided the greatest range of returns, with birds from 2003, 2006, 2007, 2008, and 2009. Four 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 on 11 July 2003 as an after hatch-year, recaptured on 15 June 2010 at Lathe and Kathy Claflin's in Waterloo Twp., Jackson Co., making her an after 8th year bird (at least 8 years 0 months old). She was only 1 year, 1 month shy of the all-time record for the species. She was also recaptured in 2004, 2005, 2006, and 2008. I'll definitely be looking for her in the next couple of years!

Three birds apparently shifted their breeding areas this summer, based on recaptures. An after hatch-year male recaptured on 31 May 2010 at Fort Custer Training Center, was originally banded as a hatch-year male on 14 August 2009 at Mary Bird's garden in Battle Creek, about 2.5 miles to the Southeast. An after hatch-year female recaptured on 19 July 2010 at Fort Custer Training Center, was originally banded on 14 August 2009 at Mary Bird's garden in Battle Creek as an after hatch-year female. An after hatch-year female recaptured on 14 July 2009 at the Taylor/Laux home in Jackson County was recaptured at the Claflin home on 29 June 2010, about 1.5 miles to the West. Such between-year shifts have been recorded before in southeastern Michigan, twice by a females (1-2 miles), and twice by males over longer distances (35-65 miles).

RECAPTURES

An adult- female banded on 16 June 2010 at Mary Bird's garden in Battle Creek was recaptured on 5 August 2010 at the Fort Custer Training Center, a distance of about 2.5 miles to the NW. This is an unusual distance for an adult female to wander within the same breeding season, suggesting that feeding territories may be larger than has been thought (or published).

RE-ENCOUNTERS

Since 2001, only two of the 5000+ Ruby-throated Hummingbirds banded in Michigan have been encountered out of state, and none from elsewhere have yet been encountered here. This rare occurrence did not happen in 2010 with this species, but see Rarities below.

RARITIES

- Anna's Hummingbird, (AHY-F) was banded on 20 April 2010 at Harrison Twp., Howard Co., Indiana. The bird was first observed on 5 November 2010 and was taken into captivity (not recommended) about a month later, and released back at the home on the day banded, where it was last seen on 21 April 2010. This was a first state record for Indiana.
- Rufous Hummingbird, (AHY-M) banded on 13 September 2010 at Apple Creek, Wayne Co., Ohio. First observed by the homeowner on 24 July 2010 (record early for the state) and last observed on 21 September 2010.
- Rufous Hummingbird (HY-F) banded on 10 November 2010 near Irons, Lake Co., Michigan. First observed by the homeowner in early August 2010 and last observed on 13 December 2010. This was a first county record.
- Rufous Hummingbird (AHY-F) banded on 20 October 2009 in Green Twp., Ashland Co., Ohio, was recaptured on 18 December 2010 at Pensacola, Escambia Co., Florida by Fred Bassett, 758 miles SSW.
- Ruby-throated Hummingbird (AHY-F) banded on 26 November 2010 at New Boston, Wayne Co., Michigan. This bird, present from October, stayed until 1 December 2010, a record late date for Michigan.

OHIO & INDIANA BANDING

During 2010, banding in Indiana was limited to one hummingbird, the state's first Anna's Hummingbird described among the Rarities above.

In addition to a trip to Wayne County, Ohio, to band the adult male Rufous Hummingbird described above, two annual banding events were again conducted. A hummingbird program and banding demonstration was done on 10 July 2010 at Lake Hope State Park, Vinton County, for the 5th consecutive summer. A total of 25 were banded in about two hours, one more than the previous record of 24 in 2008 (zero banded in 2009), bringing the total banded here since 2006 to 61. Also, three returnees from 2008 were captured. Another hummingbird program and banding demonstration was done on 8 August 2010 at the Shawnee Prairie Nature Center, Darke County, for the 8th consecutive summer. Four hummingbirds were banded, bringing the total since 2003 to 24. None have yet been recaptured here from previous years.

Table 2. Michigan totals of Ruby-throated Hummingbirds banded for all sites (May-November 2011), 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]	11	29	118	76	234	1.6/ 100 NH 1.0/ Trap Hr	2007 (2) 2008 (3) 2009 (16)
Calhoun Co., Battle Creek (Mary Bird) [CAL3]	48	67	25	8	148	4.1/ Trap Hr	2007 (2) 2008 (11) 2009 (21)
Kalamazoo Co., Augusta (Rhonda Dunithan) [KAL16]	31	52	6	4	93	4.0/ Trap Hr	2009 (12)
Macomb Co., Metro Beach Metropark [MBMP]	4	17	34	36	91	5.5/ 100 NH	-
Branch Co., River Lake Inn (Marv & Anita Bliss) [RLI]	20	47	11	5	83	4.0/ Trap Hr	2008 (1) 2009 (3)
Washtenaw Co., Sylvan Twp. (Jocelyn Granger) [WAS23]	1	42	4	11	58	9.7/ Trap Hr	-
Jackson Co., Waterloo Twp. (Charity Steere) [JAC10]	15	37	3	1	56	6.2/ Trap Hr	2007 (5) 2008 (5) 2009 (6)
Hillsdale Co., Litchfield Twp. (Bill & Marlene Koons) [HIL3]	2	38	3	4	47	7.8/ Trap Hr	-
Jackson Co., Waterloo Twp. (Frank & Rose Blackwell) [JAC11]	16	22	3	1	42	4.9/ Trap Hr	2009 (1)
Kalamazoo Co., Fort Custer Training Center [FCTC]	4	21	8	6	39	6.8/ 100 NH 0.3/ Trap Hr	-
Livingston Co., Hamburg Twp. (Jim & Melissa Pappas) [LIV11]	13	15	9	2	39	3.0/ Trap Hr	2007 (2) 2008 (3) 2009 (1)
Jackson Co., Waterloo Twp. (Arlene Taylor & Matt Laux) [JAC2A]	6	27	4	1	38	4.2/ Trap Hr	2006 (1) 2007 (1) 2008 (1) 2009 (4)
Jackson Co., Waterloo Twp. (Lathe & Kathy Claflin) [JAC2]	15	17	0	2	34	2.6/ Trap Hr	2003 (1) 2006 (1) 2007 (4) 2008 (5) 2009 (2)
Jackson Co., Parma Twp. (Aaron & Danielle Potts) [JAC13]	15	11	3	2	31	2.6/ Trap Hr	2008 (3) 2009 (1)
Jackson Co., Sandstone Twp. (Lynn Ward) [JAC15]	9	13	3	4	29	4.8/ Trap Hr	-
Washtenaw Co., Hudson Mills (Ben & Linda Colman) [WAS21]	1	18	1	2	22	3.7/ Trap Hr	2006 (1) 2009 (1)

Table 2. Cont'd.

Location/Host	AHY-M	AHY-F	HY-M	HY-F	Total	Capture Rate	Re-captures
Washtenaw Co., Salem Twp. (Sheila Boyer) [WAS22]	10	8	2	0	20	4.4/ Trap Hr	-
Hillsdale Co., Hillsdale (Tim Tyler) [HIL2]	5	11	3	0	19	9.5/ Trap Hr	-
Van Buren Co., Paw Paw (Jim & Joyce Moulthrop) [VAN7]	2	6	2	3	13	3.2/ Trap Hr	-
Wayne Co., Inkster (Allen & Nancy Chartier) [WAY1]	4	3	4	2	13	1.4/ Trap Hr	2009 (1)
Oakland Co., Milford (Barb Jensen) [OAK13B]	5	7	0	0	12	4.8/ Trap Hr	-
Berrien Co., Fernwood Nature Center (Wendy Jones) [FNC]	1	6	1	1	9	9.0/ Trap Hr	-
St. Clair Co., Port Huron SGA [PHSGA]	4	4	0	0	8	0.6/ Trap Hr	-
Oakland Co., Oxford (Nancy Gleisner) [OAK34]	6	0	0	0	6	6.0/ Trap Hr	-
Washtenaw Co., Ann Arbor NW (Rick Neubig & Laura Liebler) [WAS1a]	1	4	0	0	5	1.7/ Trap Hr	-
Oakland Co., Oxford (Robin & Kevin Jickling) [OAK34a]	1	3	0	0	4	4.0/ Trap Hr	-
Oakland Co., West Bloomfield (Carl Pascoe & Rachel Powless) [OAK1]	1	3	0	0	4	2.0/ Trap Hr	2008 (1) 2009 (1)
Jackson Co., Waterloo Twp (Judy Gray) [JAC3]	0	2	1	0	3	0.8/ Trap Hr	-
Livingston Co., Hamburg Twp. (John & Karen Lowry) [LIV12]	1	1	0	0	2	1.0/ Trap Hr	-
Washtenaw Co., Scio Twp. (Susan & Dave Horvath) [WAS3]	2	0	0	0	2	1.0/ Trap Hr	-
Kalamazoo Co., Kalamazoo Nature Center [KNC]	0	0	1	0	1	1.6/ 100 NH	-
Oakland Co., Milford (Stella & Vaughn Koshkarian) [OAK13]	1	0	0	0	1	1.0/ Trap Hr	2009 (1)
Wayne Co., New Boston (William & Cherie Sirois) [WAY21]	0	1	0	0	1	1.0/ Trap Hr	-
Washtenaw Co., Scio Twp. (Barbara Hogdon & Richard Abel) [WAS3b]	1	0	0	0	1	1.0/ Trap Hr	-
Washtenaw Co., Scio Twp. (Micki Crawford [WAS3a]	0	1	0	0	1	1.0/ Trap Hr	-

Table 2. Cont'd.

Location/Host	AHY-M	AHY-F	HY-M	HY-F	Total	Capture Rate	Re-captures
Kalamazoo Co., Pavilion Twp. (Rod & Kathy Rhodes) [KAL12]	1	0	0	0	1	0.5/ Trap Hr	-
Jackson Co., Dahlem Center [JAC-DC] – rained out	0	0	0	0	0	0.0/ Trap Hr	-
TOTAL OF ALL LOCATIONS	257	533	249	171	1210	-	2003 (1) 2006 (3) 2007 (16) 2008 (33) 2009 (71)
	21.2%	44.0%	20.6%	14.1%			

