

**Great Lakes HummerNet
2014 Hummingbird Banding Summary**



Allen T. Chartier
Permit #23156

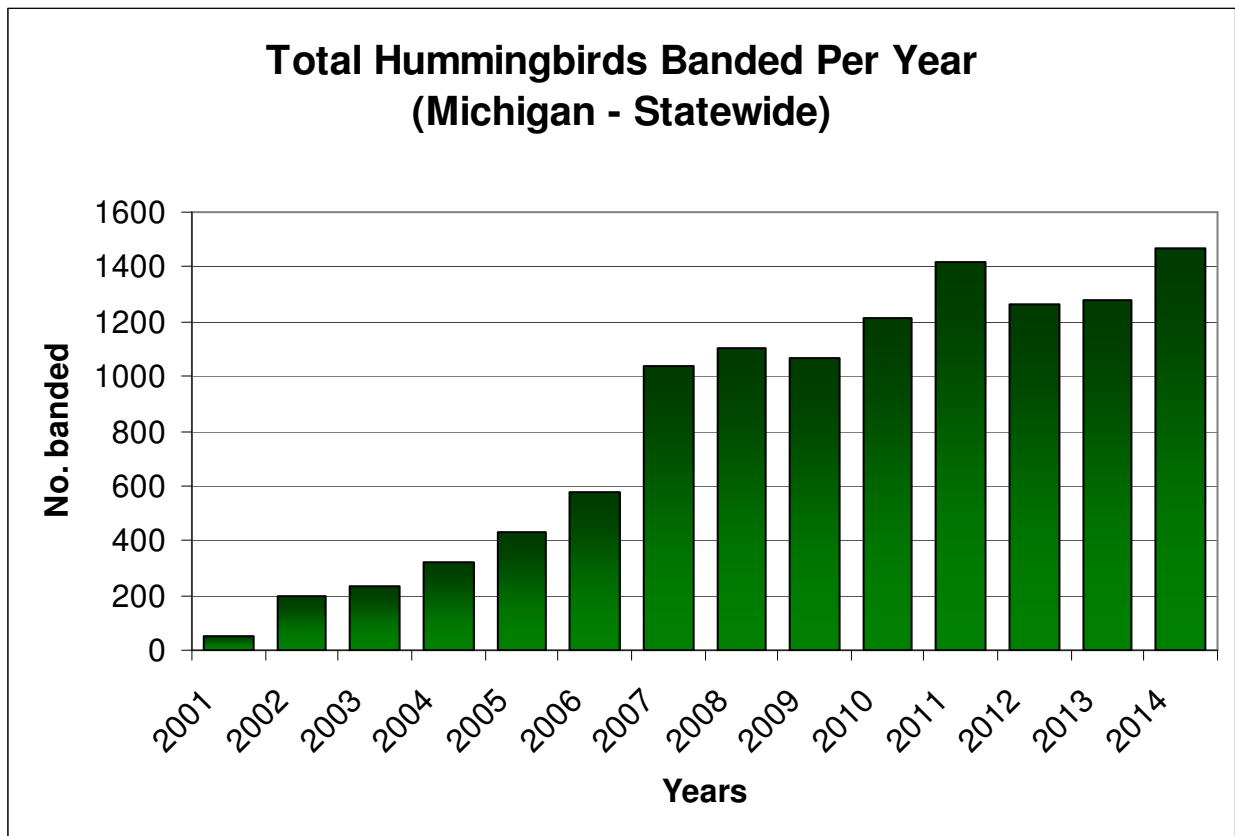
Brenda S. Keith
Permit #23156-A

Rich Keith
Permit #23156-B

The 2014 banding season in Michigan was a bit different from most recent years in that effort in the southern Lower Peninsula was down somewhat, but offset by additional effort in the Upper Peninsula. The wet spring, summer, and fall conditions may have affected their productivity with a decline in proportion of hatch-years to adults for the second year in a row. With Brenda Keith working as a subpermittee since 2007, and Rich Keith added in 2013, a total of 1467 Ruby-throated Hummingbirds was banded in Michigan between 9 May and 28 September 2014 at 32 locations in 11 counties. Chartier banded 801 Ruby-throated Hummingbirds, most in the southeastern Lower Peninsula but with 224 on 4 days in the Upper Peninsula as part of a training program of a new bander to hopefully begin work in 2015. The Keiths banded 666 hummingbirds at various locales in the southwestern Lower Peninsula.

Factoring out those banded in the Upper Peninsula, the total banded was nearly identical to last year, with a 2.9% decrease (see Figure 1 below). The number captured seems to have stabilized somewhat in the last several years with more consistent (and increased) effort.

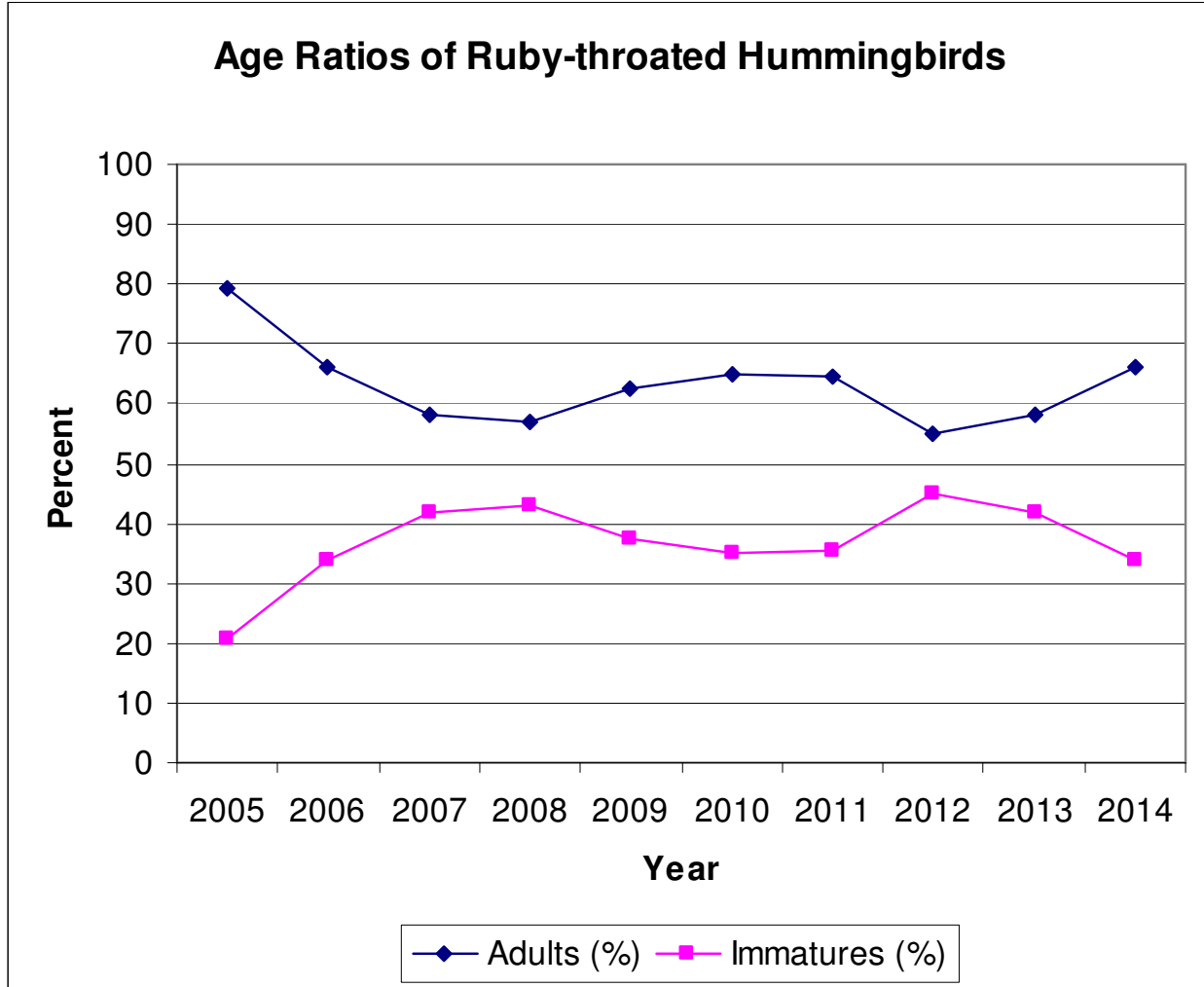
Figure 1. Total Hummingbirds banded per year in Michigan (n = 11,657).



AGE RATIOS

A total of 331 adult males (22.6%), 640 adult females (43.6%), 301 immature males (20.5%), and 195 immature females (13.3%) were banded. The overall age ratio was 66% adult to 34% immature. A comparison of age ratios from 2005-2014 is shown in Figure 2 below, which appears to show a possible cycle; more data is needed though.

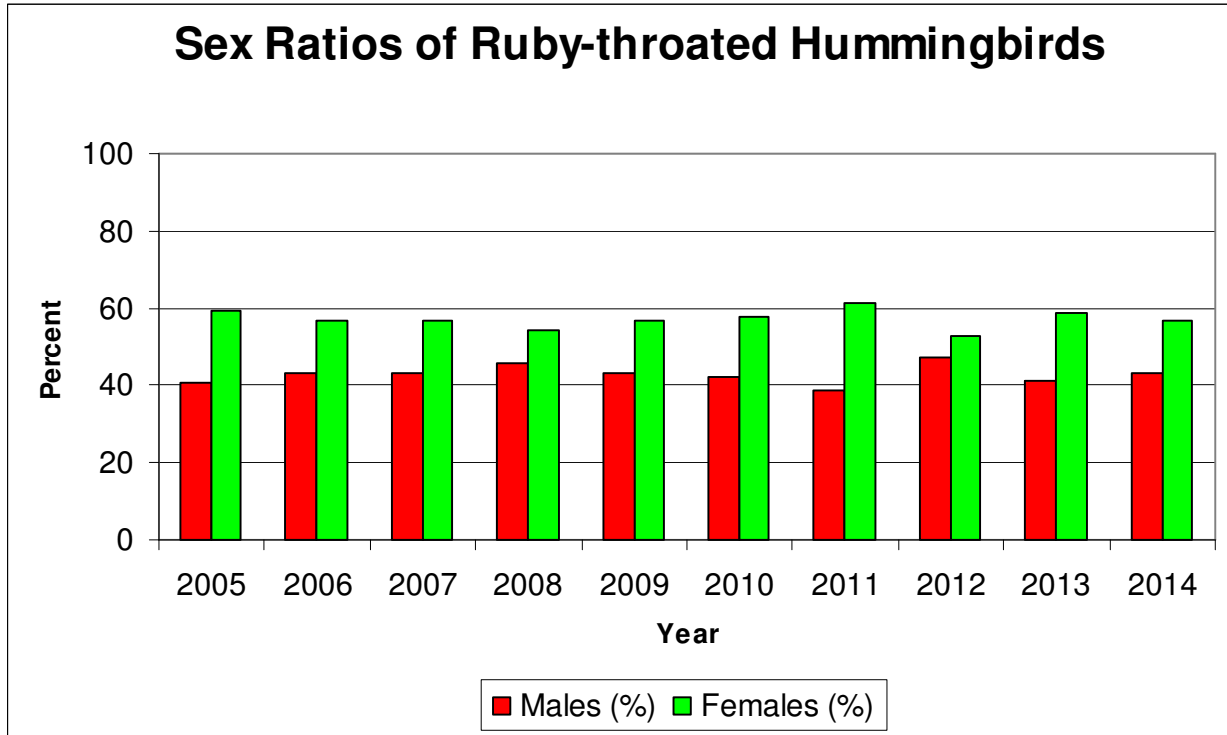
Figure 2. Age Ratios of all Ruby-throated Hummingbirds banded, by year.



SEX RATIOS

The overall sex ratio in 2014 was 43.0% males to 57.0% females. A comparison of sex ratios from 2005-2014 is shown in Figure 3 below. This ratio seems to be fairly consistent over the years at around 55-60 percent female to 40-45 percent male.

Figure 3. Overall Sex Ratios of all Michigan 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 2014 was 34% male to 66% female, and among immatures it was 61% male to 39% female. In adults (Figure 4), the ratio has been fairly stable over all 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 consistently wary nature of males to being trapped, thus limiting captures. In immatures (Figure 5), again there is considerable 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.

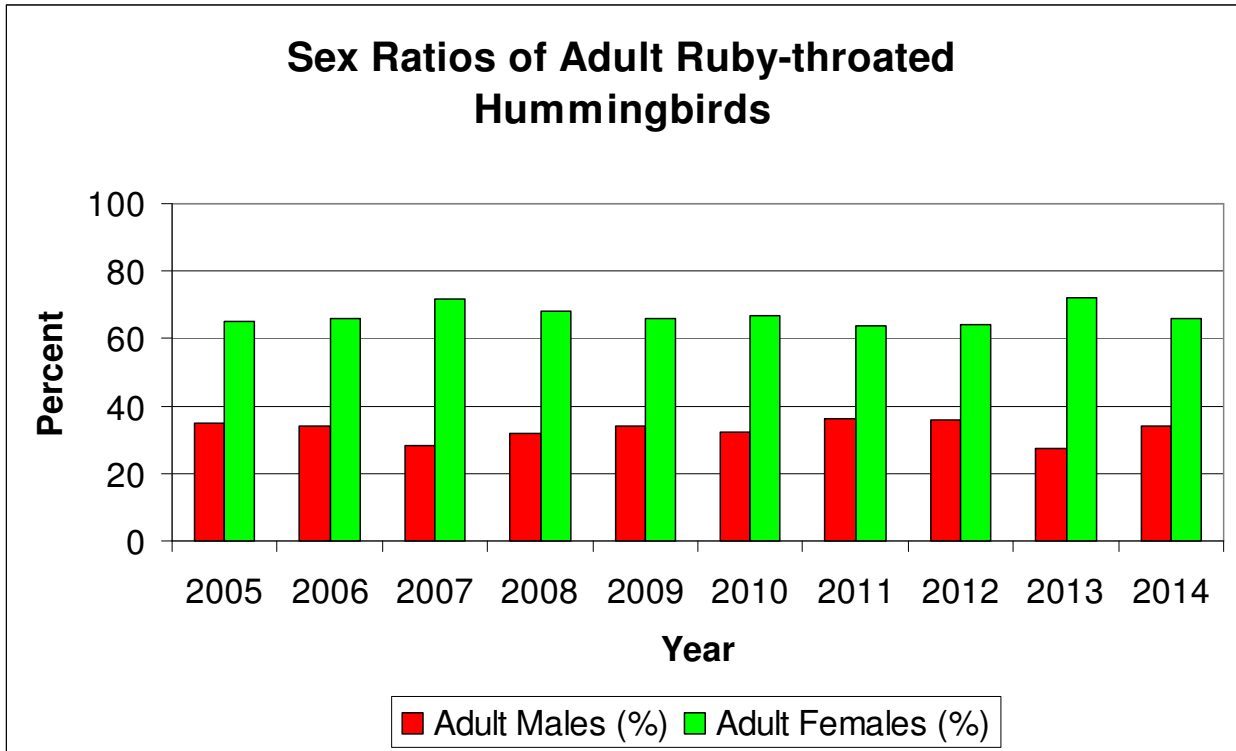
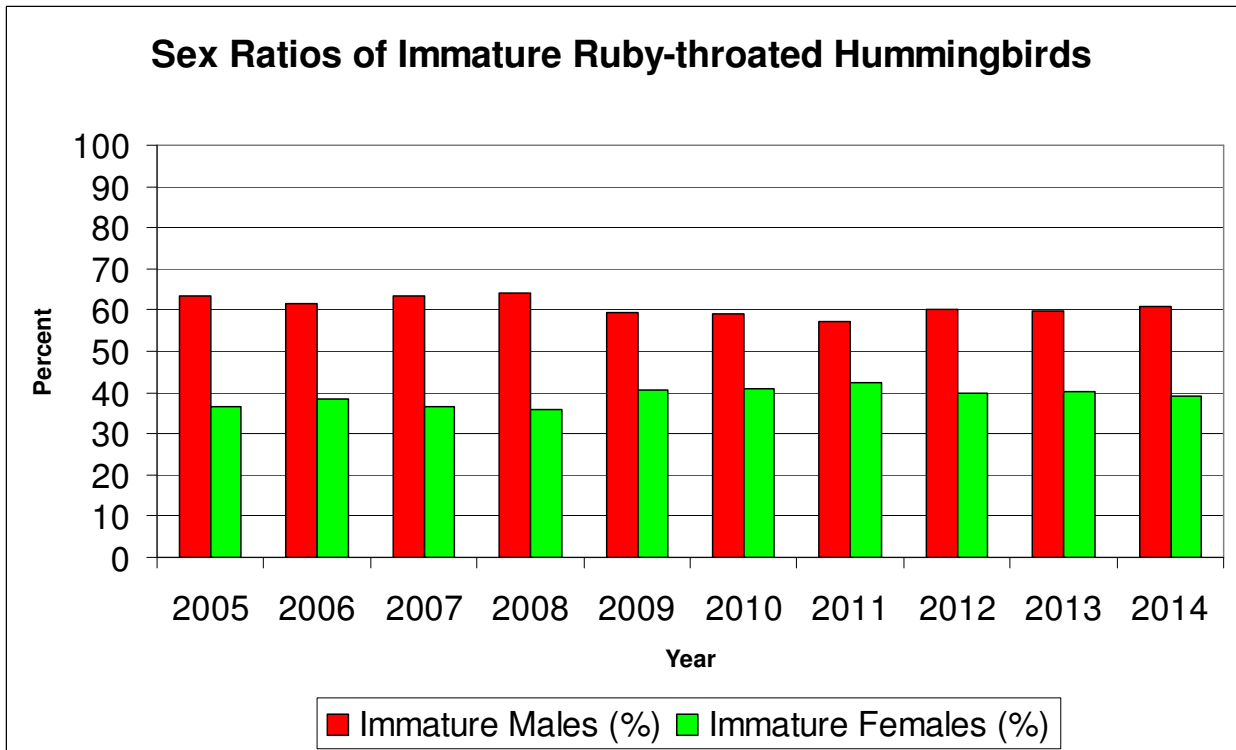


Figure 5. Sex Ratios of Immature Ruby-throated Hummingbirds by year.



STANDARDIZED CAPTURE RATES

A standardized comparison of capture rates and numbers for 2005-2014 is shown in Table 1 below. Only birds banded between June 1 and September 30 in southeastern Michigan are included in this analysis. Banding effort before and after these dates is unpredictable and so is not included. 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 about average, and in August and September was above average. The resulting capture rates were the best in 5 years in June and July, and the lowest ever in August and September. Poor habitat conditions at Lake St. Clair Metropark, Macomb County resulted in the second lowest capture rate despite the second greatest effort (number of net hours) at this site. Overall the number banded was the lowest since 2005, some of which could have been being away from the area for 13 days during June and July while training other banders in Wisconsin and Indiana.

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	2011	2012	2013	2014
June/July Total	218	240	266	263	364	470	362	278	296	334
June/July Trap Hrs.	45.00	36.75	38.75	37.25	67.75	104.75	102.50	88.75	111.50	98.75
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33	4.50	3.93	3.40	4.66
Aug/Sep Total (traps)	188	249	358	419	271	238	216	221	241	165
Aug/Sep Trap Hrs.	53.50	54.00	64.50	73.50	47.75	70.50	78.25	85.00	81.50	75.00
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38	3.50	2.60	3.77	2.21
Aug/Sep Total (nets)	28	86	96	74	64	86	158	76	79	59
Aug/Sep Net Hrs.	669.19	1082.56	828.69	1091.81	1269.00	1089.00	1311.50	1307.38	1472.00	1327.50
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90	12.04	5.81	5.37	4.44
Total Banded	434	575	720	756	699	794	736	575	616	558
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33	4.50	3.93	3.40	4.66
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38	3.50	2.60	3.77	2.21
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90	12.04	5.81	5.37	4.44

Results from the table above are graphed in Figures 6 & 7 below, and show a fairly slow but steady decline in capture rates by traps since the peak in 2007 and 2008. Starting in 2010, the number of traps used at each banding locale was increased by using an average of two (max 6) at each site rather than the average of one in previous years. This should show a fairly stable capture rate since 2010, but the data instead continues to show slight decreases. At this time, there is no good explanation for this. The number of birds mist-netted (all at Metro Beach Metropark, Macomb County, and almost all hatch-year birds) does not seem to be following any trend.

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

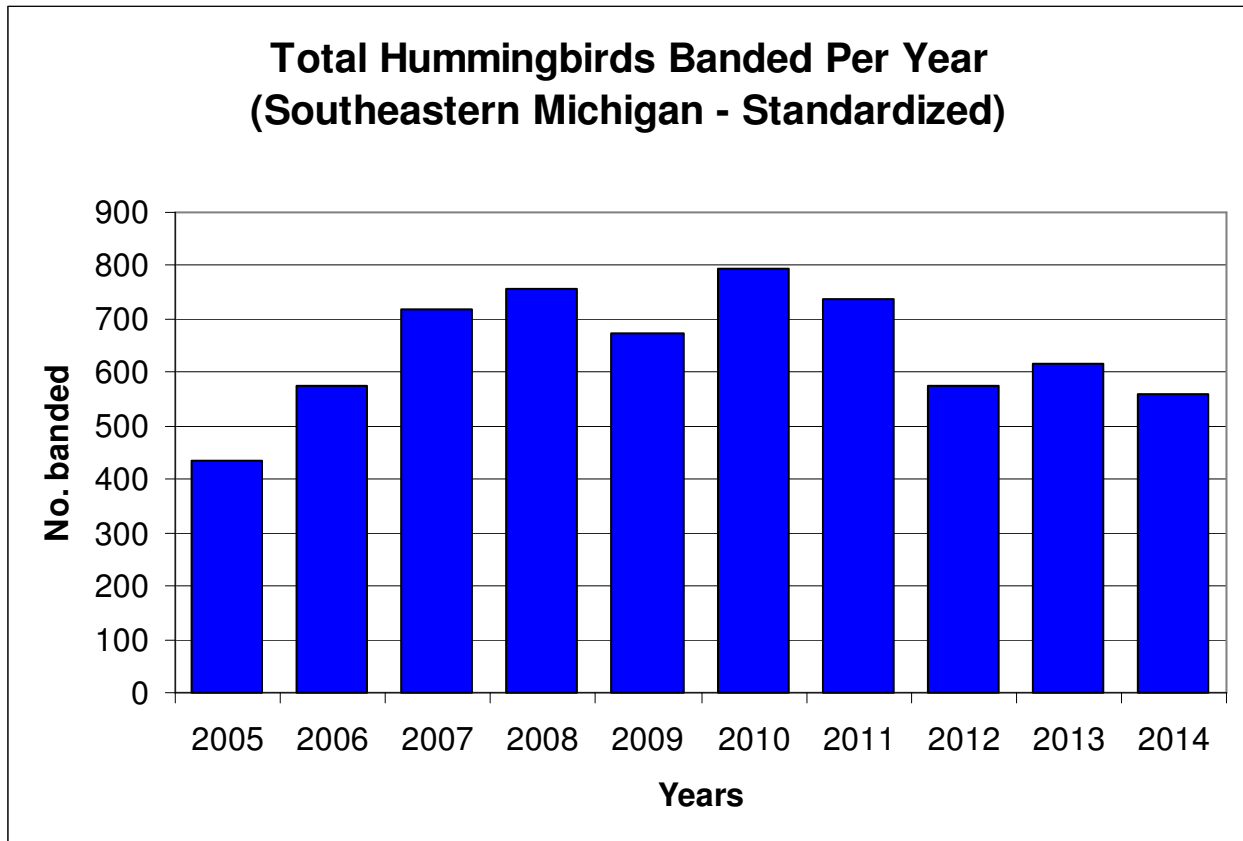
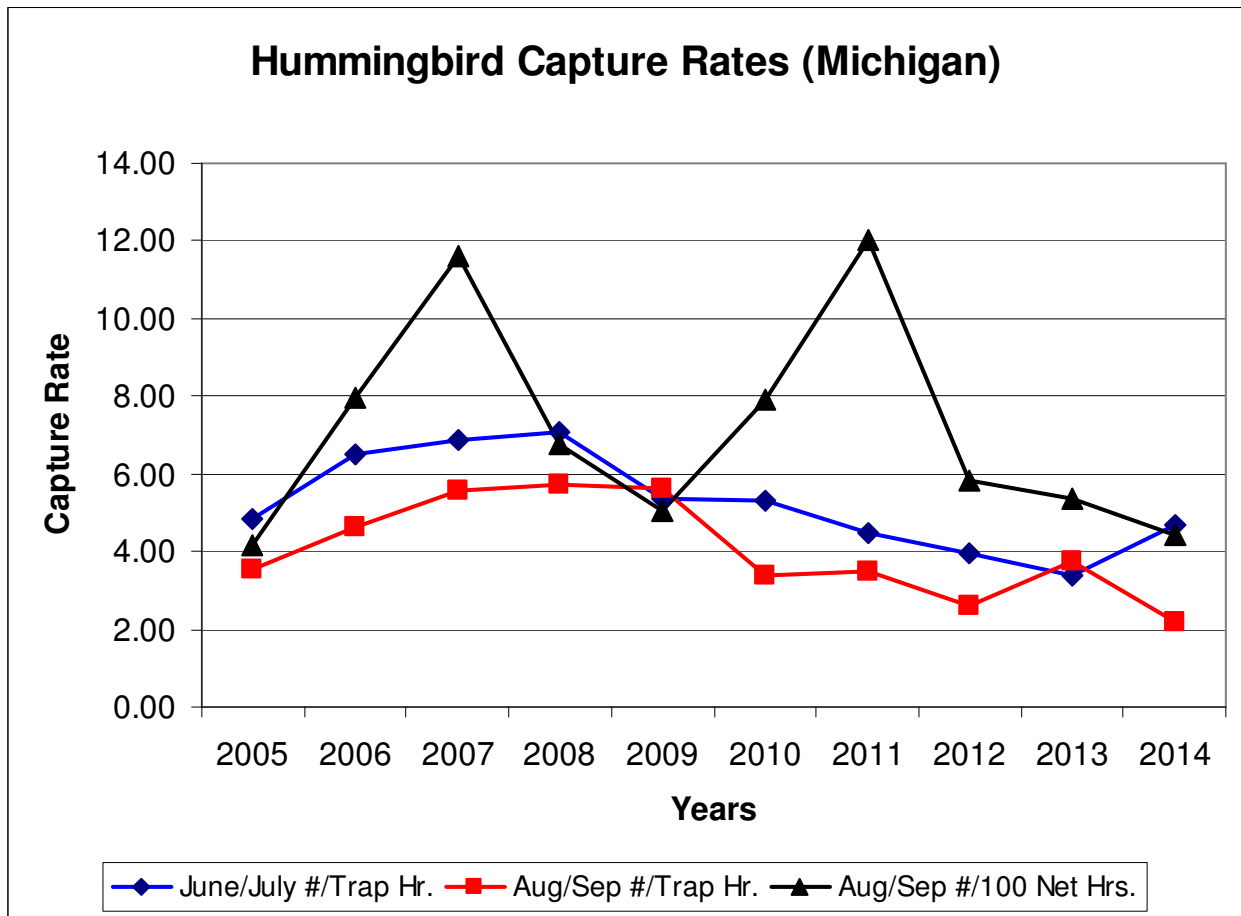


Figure 7. Standardized Hummingbird Capture Rates, compared by capture method.



Totals for all sites in 2014, including capture rates and number of recaptures from previous years, is shown in Table 2 below. The first hatch-year birds of the 2014 breeding season in Michigan were captured on 17 July in Waterloo Township, Jackson County, which was the earliest ever in southeastern Michigan, and at Constantine, St. Joseph County on 21 July.

RETURNS

The number of birds returning to Michigan in 2014 was high, with 166 birds returning, including one from 2006, one from 2007, 2 from 2008, 5 from 2009, 13 from 2010, 19 from 2011, 32 from 2012, and 93 from 2013. This is 11.3% of the total of new birds banded. The greatest number of returns (24) was from the Summers' in St. Joseph County (STJ2). Other high return rates were noted from Mary Bird's (20) in Calhoun County, Taylor/Laux's (20) in Jackson County, and Fort Custer (14) in Kalamazoo County. An after hatch-year female recaptured on 17 July 2014 at Taylor/Laux's (JAC2a) in Waterloo Twp., Jackson County, had been banded as an after hatch-year female at that location on 8 June 2006, making her at least 9 years, 1 month old; a longevity record for the species (by 1 month)! Also noteworthy was an after hatch-year female recaptured on 19 July 2014 at Steere's in Waterloo Twp., Jackson County, that had been banded there as an after hatch-year female on 27 August 2007, making her at least 8 years, 1 month old. All returns are shown in Table 2 below.

RECAPTURES

Several Ruby-throated Hummingbirds were recaptured in 2014 at locations away from where they were originally banded. As they were also returning in a different year, they are included in the returns totals in Table 2.

- An after hatch-year female [L(4100)-11296] banded on 31 May 2010 at Fort Custer Training Center (FCTC-SABO) was recaptured on 30 June 2014 at Mary Bird's home (CAL3); a distance of 1.5 miles.
- An after hatch-year female [J(5100)-21485] banded on 16 August 2013 at Mary Bird's home (CAL3) was recaptured on 31 July 2014 at Fort Custer Training Center (FCTC-MOTT); a distance of 2.4 miles.
- An after hatch-year female [L(4100)-66557] banded on 7 July 2011 at the Moulthrop's home in Paw Paw, Van Buren County (VAN7), was recaptured on 3 July 2014 at the Koons' home in Litchfield Township, Hillsdale County, on 3 July 2014; a distance of 60 miles.
- An after hatch-year female [J(5100)-21175] banded on 20 July 2013 at the McKibben's home in Montgomery, Hillsdale County (HIL4), was recaptured on 17 July 2014 at the Claflin's home in Waterloo Township, Jackson County (JAC2); a distance of 48 miles.

MICHIGAN UPPER PENINSULA HUMMINGBIRDS

As part of a training program for a new hummingbird bander, who will work in Wisconsin and Michigan's Upper Peninsula, banding was conducted at the residence of Bob Anderson in Marenisco, western Gogebic County. Banding had been done here in 2005. Two trips were made, and banding was done on 13-14 June and 28-29 July. A total of 224 was banded; 33 on 13 June, 35 on 14 June, 98 on 28 July, and 58 on 29 July.

OHIO RUBY-THROATED HUMMINGBIRDS

The primary focus of hummingbird banding in Ohio is on documenting rarities. Ruby-throated Hummingbirds are banded in Ohio primarily as part of public education events. During 2014, two public hummingbird banding demonstrations and programs were done. One on 12 July was at the Lake Hope State Park Nature Center, Vinton County, where such programs have been conducted annually since 2006. A total of 13 Ruby-throated Hummingbirds were banded here, and 7 were recaptured, with 2.0 hours of effort (6.0 trap hours). On the way home on 13 July, a fairly new banding location in Muskingum County was visited for the third year, where only 13 were banded and 1 was recaptured in 2.0 hours of effort (4.0 trap hours). On 2 August a public banding demonstration and program was given the Shawnee Prairie Nature Center in Darke County for the 12th year in a row, but for the second year in a row here, no birds were captured or banded.

INDIANA RUBY-THROATED HUMMINGBIRDS

The primary focus of hummingbird banding in Indiana is on documenting rarities. A public hummingbird banding demonstration and program was conducted for the third year at the Indiana Dunes State Park on 9 August, where 12 Ruby-throated Hummingbirds were banded. Banding was also conducted at the Mary Gray Bird Sanctuary, where training was conducted of a new hummingbird bander. On 21-22 June a total of 60 Ruby-throated Hummingbirds were banded there.

RARITIES

After three good years in a row, it was a poor year for Rufous Hummingbirds in the region, with only one in Michigan, one in Indiana, and two in Ohio. Michigan also had two Green Violetears in 2014 (neither banded), one in July in Newaygo County, and one in September in Presque Isle County, the 8th and 9th state records respectively. But most noteworthy was the first Costa's

Hummingbird for the Great Lakes region, banded on 3 November, and the first eastern U.S. record of Berylline Hummingbird (not banded) from Michigan's Upper Peninsula!

Michigan Costa's Hummingbird

- Costa's Hummingbird, (HY-M) banded on 3 November 2014 in Onekema, Manistee Co., Michigan. First observed by the homeowner in early October 2014, it was last seen there on 18 November 2014. First state, and regional record.

Michigan Rufous Hummingbird

- Rufous Hummingbird, (AHY-M) banded on 5 October 2014 near Romeo, Macomb Co., Michigan. First observed by the homeowner on ~20 September 2014, and last observed on 20 October 2014. First county record.

Ohio Rufous Hummingbirds

- Rufous Hummingbird (AHY-M), banded on 12 November 2014 near Malaga, Monroe County, Ohio. First observed by the homeowner on 5 October 2014, and last observed on 16 November 2014. First county record.
- Rufous Hummingbird (AHY-F) banded on 12 November 2014 near Kinsman, Trumbull County, Ohio, right on the Pennsylvania state line. First observed by the homeowner on about 16 October 2014 and last observed on 18 November 2014. Second county record.

Northern Indiana Rufous Hummingbirds

- Rufous Hummingbird (HY-M) banded on 5 November 2014 in Granger, St. Joseph County, Indiana. First observed by the homeowner on 22 October 2014 and last observed on 17 November 2014. Second county record.

Other Rare Hummingbird Reports (not banded)

- BERYLLINE HUMMINGBIRD (apparent adult male, photographed) on 17-22 September 2014 at Grand Marais, Alger County, Michigan. First record away from AZ, NM, and TX.
- GREEN VIOLETEAR (apparent adult, photographed) on 13-14 July 2014 at White Cloud, Newaygo County, Michigan. 8th state record and first county record.
- GREEN VIOLETEAR (apparent adult, photographed) on 2-3 September 2014 at Presque Isle, Presque Isle County, Michigan. 9th state record and first county record.
- Rufous/Allen's Hummingbird (imm. male, photographed) was observed by the homeowner on 10-29 September 2014 in Clio, Genesee County, Michigan. Permission to band this bird was denied, but visitation to view the bird was allowed. No photos show anything diagnostic to allow a specific identification.
- Rufous/Allen's Hummingbird (female?) was first observed (and photographed) by the homeowner on 13 November 2014 in Granger, St. Joseph County, Indiana, only 3 miles from the HY-M Rufous banded there earlier in the month! It was last observed on 18 November 2014, the day before I was scheduled to make a banding attempt.
- Rufous/Allen's Hummingbird (female?) was photographed near Coshocton, Ohio on an unknown date. Photo was posted to Facebook (which I can't access) and forwarded to me by Liz McQuaid. Homeowner never contacted me back with any details.
- Rufous/Allen's Hummingbird (age/sex unknown) was reported to me by Steve McKee as present in early October near Ashland, Ashland County from early October until mid-November. Health issues of the homeowner made scheduling a banding visit difficult between their visits to the hospital in Cleveland, so ultimately the bird departed before it could be banded.

Table 2. Michigan totals of Ruby-throated Hummingbirds banded for all sites (May-September 2014), 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	Re-captures
Kalamazoo Co., Pavilion Twp. (Rich & Brenda Keith) [KAL10]	17	35	132	93	277	2009 (1) 2010 (1) 2011 (1) 2012 (3) 2013 (6)
Gogebic Co., Marenisco (Bob Anderson) [GOG1]	89	130	3	2	224	-
St. Joseph Co., Constantine Twp. (James & Nancy Summers) [STJ2]	55	123	9	5	192	2013 (24)
Calhoun Co., Battle Creek (Mary Bird) [CAL3]	36	39	10	4	89	2009 (1) 2010 (3) 2011 (3) 2012 (5) 2013 (8)
Kalamazoo Co., Fort Custer Training Center [FCTC]	14	39	19	14	86	2011 (1) 2012 (6) 2013 (7)
Kalamazoo Co., Kalamazoo NC (Rich & Brenda Keith) [KNC]	4	11	38	29	82	-
Macomb Co., Metro Beach Metropark [MBMP]	6	7	30	27	70	2013 (1)
Jackson Co., Waterloo Twp. (Arlene Taylor & Matt Laux) [JAC2A]	16	23	5	3	47	2006 (1) 2009 (2) 2010 (2) 2011 (1) 2012 (3) 2013 (11)
Hillsdale Co., Litchfield Twp. (Bill & Marlene Koons) [HIL3]	6	39	2	-	47	2010 (1) 2011 (5) 2012 (2) 2013 (4)
Washtenaw Co., Lyndon Twp. (Mike & Becky Wise) [WAS25]	8	34	4	-	46	2013 (1)
Washtenaw Co., Sylvan Twp. (Jocelyn Granger) [WAS23]	5	29	2	1	37	2010 (1) 2011 (5) 2012 (5)
Hillsdale Co., Montgomery (Diana & Mark McKibben) [HIL4]	8	20	7	2	37	2013 (12)
Jackson Co., Waterloo Twp. (Lathe & Kathy Claflin) [JAC2]	11	24	1	-	36	2010 (1) 2012 (2) 2013 (6)
Jackson Co., Waterloo Twp. (Charity Steere) [JAC10]	9	23	1	-	33	2007 (1) 2009 (1) 2010 (3) 2011 (3) 2012 (1) 2013 (2)

Table 2. Continued

Location/Host	AHY-M	AHY-F	HY-M	HY-F	Total	Re-captures
Kalamazoo Co., Augusta (Rhonda Dunithan) [KAL16]	15	14	-	-	29	2012 (4) 2013 (2)
Wayne Co., Inkster (Allen & Nancy Chartier) [WAY1]	2	4	11	2	19	2013 (2)
Jackson Co., Waterloo Twp. (Frank & Rose Blackwell) [JAC11]	2	8	4	4	18	2008 (1)
Livingston Co., Hamburg Twp. (Jim & Melissa Pappas) [LIV11]	-	-	11	3	14	-
Jackson Co., Parma Twp. (Aaron & Danielle Potts) [JAC13]	5	4	3	2	14	2008 (1) 2010 (1) 2013 (2)
Jackson Co., Sandstone Twp. (Lynn Ward) [JAC15]	4	6	2	-	12	-
Washtenaw Co., Salem Twp NE (Amy Donoghue) [WAS24]	1	3	2	3	9	-
Hillsdale Co., Hillsdale (Tim Tyler) [HIL2]	2	4	3	-	9	2013 (1)
Oakland Co., Milford (Stella & Vaughn Koshkarian) [OAK13]	2	3	1	1	7	2012 (1)
Washtenaw Co., Salem Twp. (Sheila Boyer) [WAS22]	4	2	-	-	6	-
Oakland Co., Milford (Barb Jensen) [OAK13B]	1	5	-	-	6	2013 (1)
Washtenaw Co., Hudson Mills (Ben & Linda Colman) [WAS21]	-	5	-	-	5	2013 (1)
Jackson Co., Dahlem Center [JAC-DC]	2	1	1	-	4	-
Livingston Co., Fowlerville (Craig & Heather Wise) [LIV15]	3	-	-	-	3	-
Kalamazoo Co., Kellogg Bird Sanctuary [KBS]	1	2	-	-	3	-
Jackson Co., Waterloo Twp. (Gary Siegrist) [JAC16]	1	1	-	-	2	2013 (1)
Oakland, E.L. Johnson Nature Center (Dan Badgley) [ELJ]	2	-	-	-	2	-
Kalamazoo Co., Heronwood Field Station (KNC) [HERN]	-	1	-	-	1	-
TOTAL OF ALL LOCATIONS	331	640	301	195	1467	2006 (1) 2007 (1) 2008 (2) 2009 (5) 2010 (13) 2011 (19) 2012 (32) 2013 (93)
	22.6%	43.6%	20.5%	13.3%		