

**Great Lakes HummerNet  
2013 Hummingbird Banding Summary**



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Permit #23156

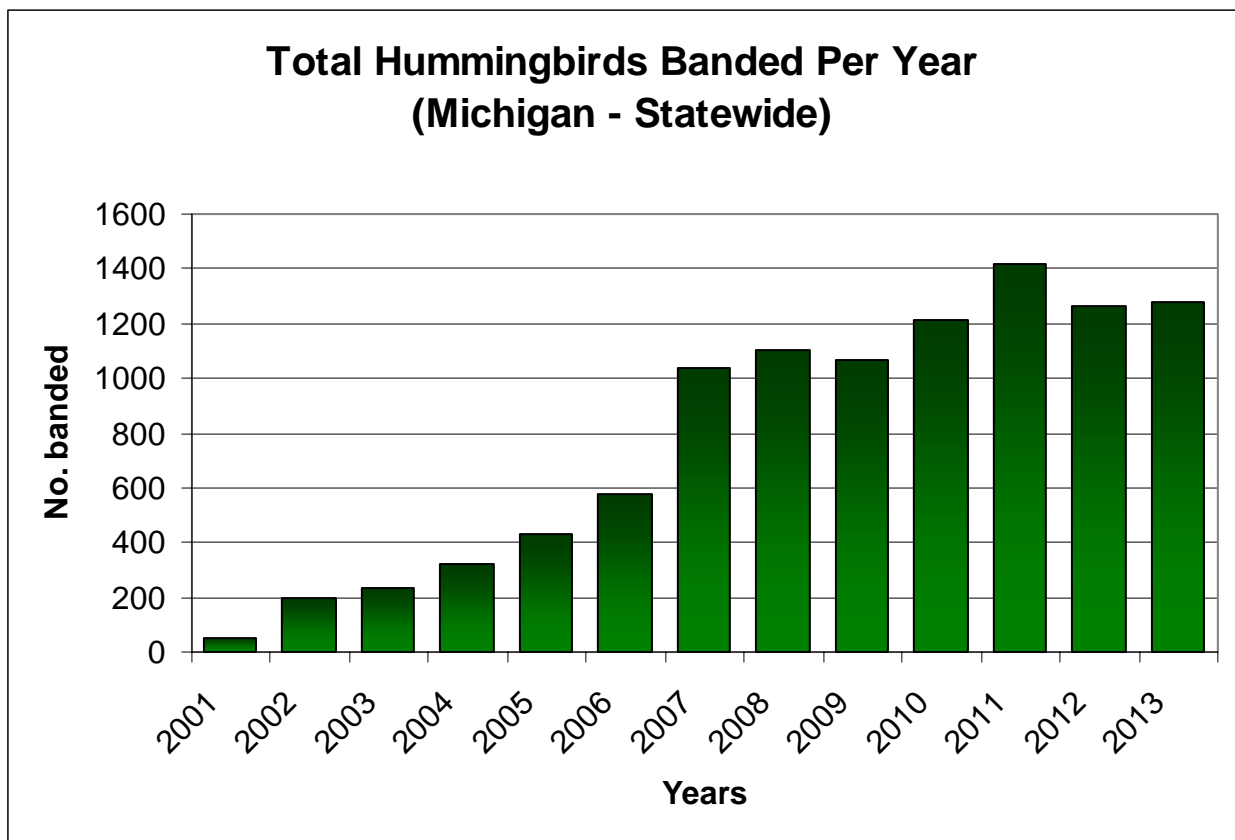
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Permit #23156-A

*Rich Keith*  
Permit #23156-B

The 2013 banding season in Michigan was very similar to the 2012 season. The drought in 2012 may have affected the productivity of hummingbirds, resulting in fewer migrating back north this spring. With Brenda Keith working as a subpermittee since 2007, and Rich Keith added this year, a total of 1281 Ruby-throated Hummingbirds was banded in Michigan between 4 May and 15 November 2013 at 33 locations in 14 counties. Chartier banded 633 Ruby-throated Hummingbirds, most in the southeastern Lower Peninsula but with help from Brenda and Rich at a couple south-central Lower Peninsula locales. The Keiths banded 648 hummingbirds at various locales in the southwestern Lower Peninsula. The 10,000<sup>th</sup> Ruby-throated Hummingbird was banded in Michigan this year, by Brenda at their property in Kalamazoo County. A hatch-year male Ruby-throated Hummingbird was banded on 15 November in Kentwood, Kent County, which remained on site until 7 December, a record late date for the state.

In general the total banded was nearly identical to last year, with only a 1.5% increase (see Figure 1 below). The number captured seems to have stabilized somewhat in the last several years with more consistent (and increased) effort.

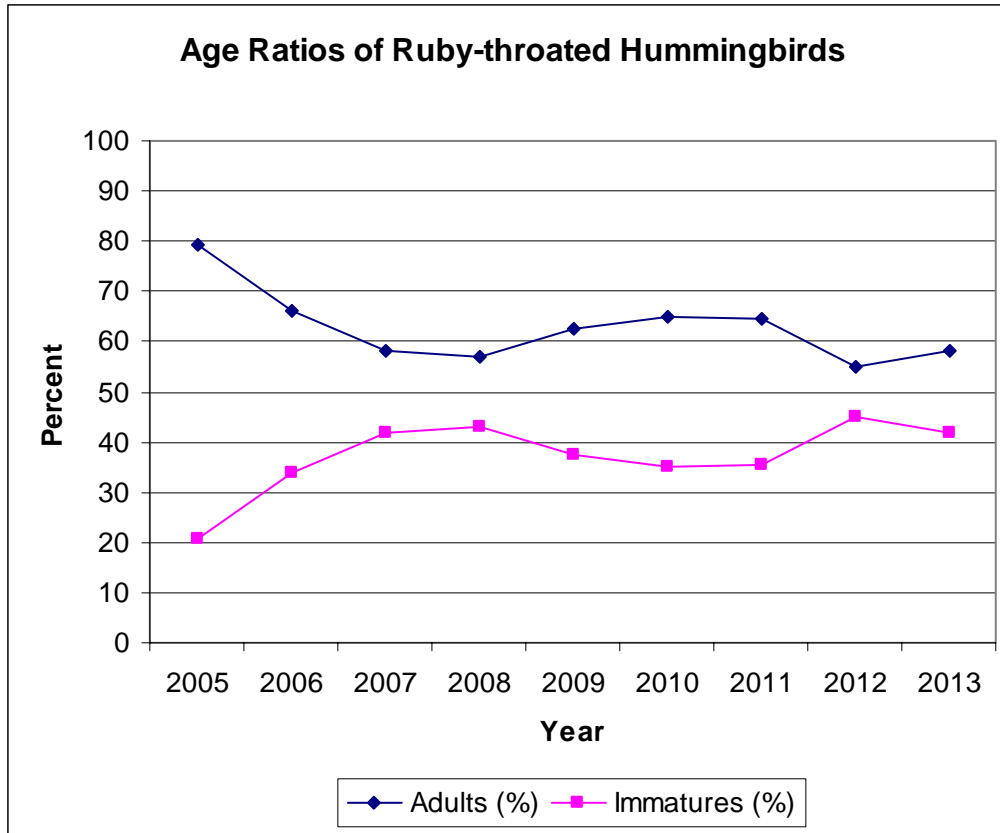
**Figure 1. Total Hummingbirds banded per year in Michigan (n = 10,190).**



## AGE RATIOS

A total of 204 adult males (15.9%), 536 adult females (41.8%), 322 immature males (25.2%), and 219 immature females (17.1%) were banded. The overall age ratio was 58% adult to 42% immature. A comparison of age ratios from 2005-2013 is shown in Figure 2 below, which appears to show a possible cycle (5-6 years?) of increased productivity.

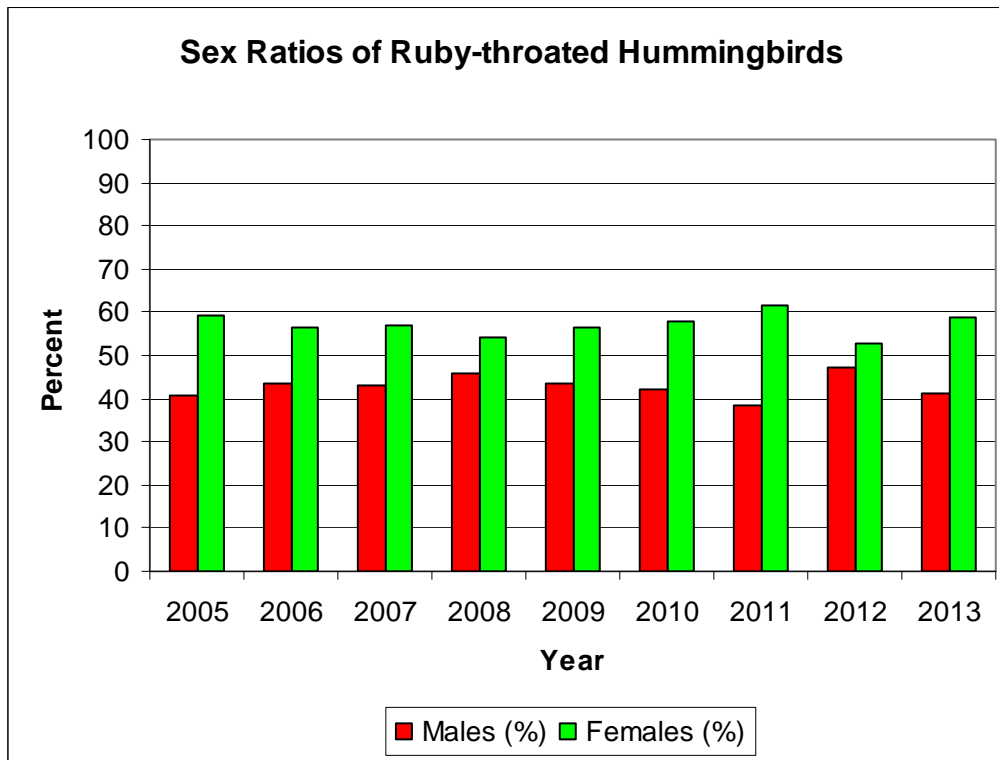
**Figure 2. Age Ratios of all Ruby-throated Hummingbirds banded, by year.**



## SEX RATIOS

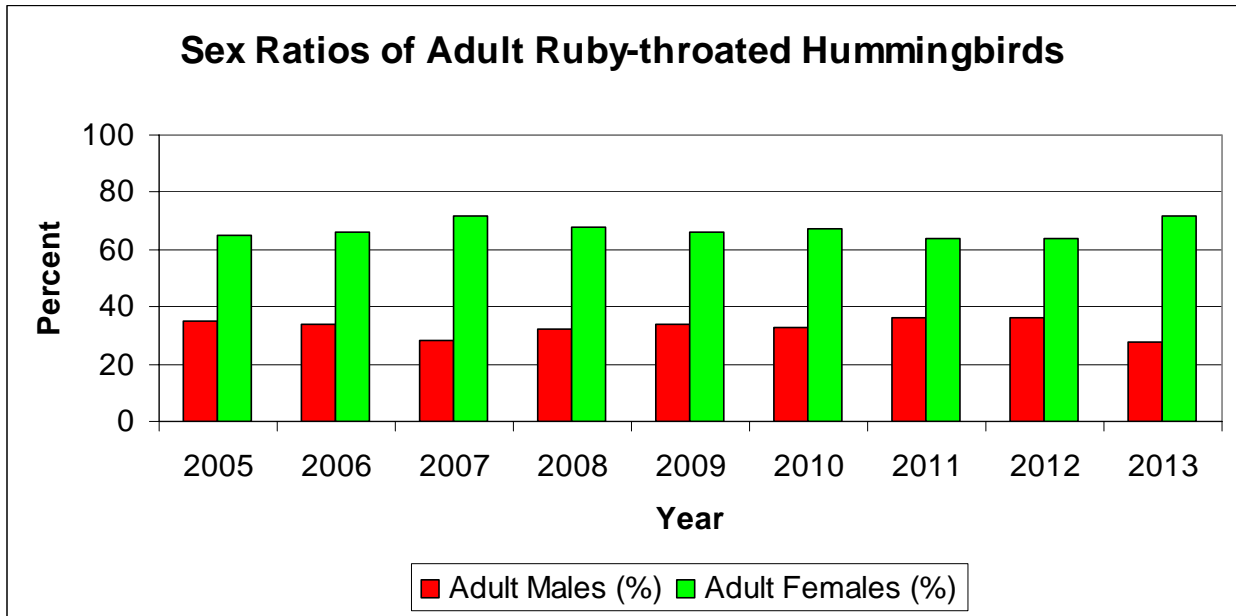
The overall sex ratio was 41.0% males to 59.0% females. A comparison of sex ratios from 2005-2013 is shown in Figure 3 below. This ratio seems to be fairly consistent over the years at around 55-60 percent female to 40-45 percent male.

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

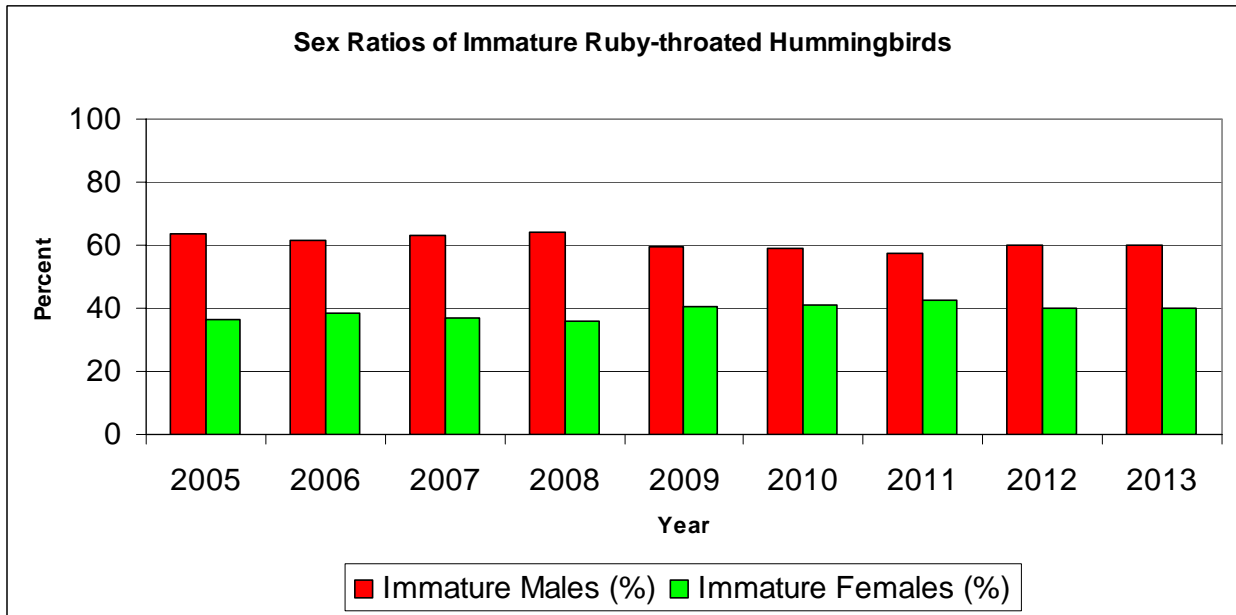


Looking at the sex ratios separated by age classes can give us additional insight. Among adults the sex ratio in 2013 was 28% male to 72% female, and among immatures it was 60% male to 40% female. In adults (Figure 4), the ratio has been fairly stable over all years, with males at 30-35% and females at 65-70%. This could indicate a lower survival rate of males, or could simply reflect a more 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 2005-2013 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. 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.

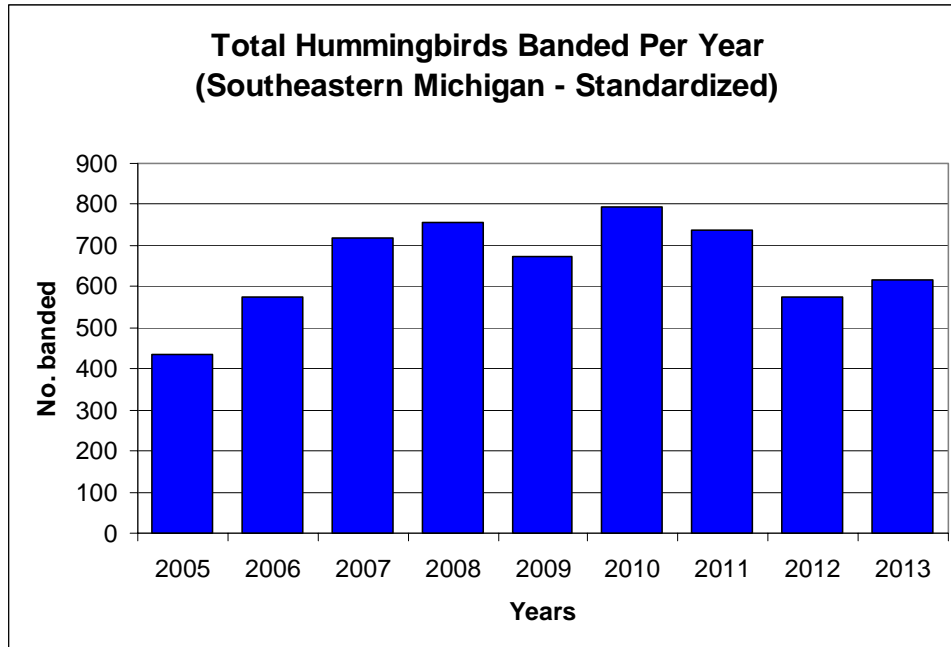
Trapping effort in June and July was the highest ever, and in August and September was the second highest ever. This is likely due to the good weather that allowed more banding days to be conducted, and also that additional traps were run more consistently at most locations. Neither of these increases in effort resulted in particularly high capture rates this year. Good habitat conditions at Lake St. Clair Metropark, Macomb County, only resulted in about an average number banded despite the greatest effort (number of net hours) ever at this site. Overall the number banded was the fourth lowest since 2001.

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

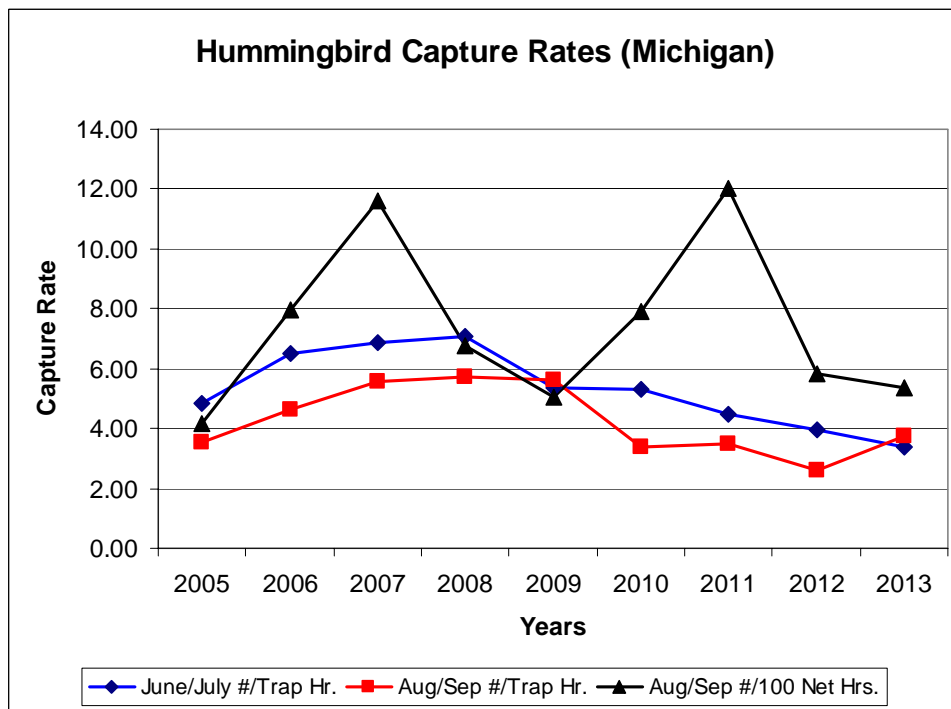
<b>Banding Periods/Method</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
June/July Total	218	240	266	263	364	470	362	278	296
June/July Trap Hrs.	45.00	36.75	38.75	37.25	67.75	104.75	102.50	88.75	111.50
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33	4.50	3.93	3.40
Aug/Sep Total (traps)	188	249	358	419	271	238	216	221	241
Aug/Sep Trap Hrs.	53.50	54.00	64.50	73.50	47.75	70.50	78.25	85.00	81.50
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38	3.50	2.60	3.77
Aug/Sep Total (nets)	28	86	96	74	64	86	158	76	79
Aug/Sep Net Hrs.	669.19	1082.56	828.69	1091.81	1269.00	1089.00	1311.50	1307.38	1472.00
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90	12.04	5.81	5.37
<b>Total Banded</b>	<b>434</b>	<b>575</b>	<b>720</b>	<b>756</b>	<b>699</b>	<b>794</b>	<b>736</b>	<b>575</b>	<b>616</b>
June/July #/Trap Hr.	4.84	6.53	6.86	7.06	5.37	5.33	4.50	3.93	3.40
Aug/Sep #/Trap Hr.	3.51	4.61	5.55	5.70	5.67	3.38	3.50	2.60	3.77
Aug/Sep #/100 Net Hrs.	4.18	7.94	11.58	6.78	5.04	7.90	12.04	5.81	5.37

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 2013, including capture rates and number of recaptures from previous years, is shown in Table 2 below. The first hatch-year birds of the 2012 breeding season in Michigan were captured at Fort Custer, Kalamazoo County on 15 July 2013 (tied the record) and on 23 July 2013 in Sylvan Township, Washtenaw County, which was the earliest ever in southeastern Michigan.

## **RETURNS**

The number of birds returning to Michigan in 2013 was fairly high, with 158 birds returning, including one from 2006, one from 2007, 11 from 2009, 22 from 2010, 45 from 2011, and 78 from 2012. This is 12.4% of the total of new birds banded. The greatest number of returns (24) was from Mary Bird's place in Battle Creek Twp., Calhoun County. Other high return rates were noted from Rhonda Dunithan's in Augusta, Kalamazoo County (22 returns), Taylor/Laux's in Waterloo Twp., Jackson County (20 returns), and Charity Steere's in Waterloo Twp., Jackson County (19 returns). All returns are shown in Table 2 below.

## **RECAPTURES**

An after hatch-year female Ruby-throat banded on 22 June 2012 at Rhonda Dunithan's in Augusta, Kalamazoo County (KAL16) was recaptured on 7 August 2013 at Fort Custer Training Center (FCTC), a distance of 3.2 miles. Another bird, banded as a hatch-year female at Fort Custer on 24 August 2012 was recaptured at Dunithan's on 16 August 2013. An after hatch-year female banded on 17 May 2011 at Fort Custer, which was recaptured on 8 August 2011 at Mary Bird's in Battle Creek, Calhoun County (CAL3), was recaptured again at Mary Bird's on 16 August 2013; a distance of 2.5 miles. Shifts like these have been recorded between these two locations for the past several years. Perhaps most amazing was the movement of two other birds from this area. An after hatch-year female banded on 12 August 2012 at Rich & Brenda's property (KAL10-Pitsfield) was recaptured on 7 August 2013 at Fort Custer, a distance of 13 miles. And, a hatch-year female banded on 13 September 2013 at Fort Custer was recaptured on 15 September at Pitsfield, a distance of 13 miles in two days. Apparently a bird just beginning its migration.

## **OHIO RUBY-THROATED HUMMINGBIRDS**

Ruby-throated Hummingbirds are banded in Ohio primarily as part of public education events. During 2013, two public hummingbird banding demonstrations and programs were done. One on 13 July was at the Lake Hope State Park Nature Center, Vinton County, where such programs have been conducted annually since 2006. A total of 33 Ruby-throated Hummingbirds were banded here, and 4 were recaptured, with 1.5 hours of effort (3.0 trap hours). In addition, two were banded at the cabins and one was recaptured on 12 July. On the way home on 14 July, a fairly new banding location in Muskingum County was visited for the third year, where 26 were banded and 2 were recaptured in 2.0 hours of effort (4.0 trap hours). On 3 August a public banding demonstration and program was given the Shawnee Prairie Nature Center in Darke County for the 12<sup>th</sup> year in a row, but for the first time ever here, no birds were captured or banded. The primary focus of hummingbird banding in Ohio is on documenting rarities.

## **INDIANA RUBY-THROATED HUMMINGBIRDS**

A public hummingbird banding demonstration and program was conducted for the second year at the Indiana Dunes State Park on 10 August, where 25 Ruby-throated Hummingbirds were banded. The primary focus of hummingbird banding in Indiana is on documenting rarities.



## **RARITIES**

It was a very good year for Rufous Hummingbirds in the region, with a record number in Michigan, and good numbers in Ohio, though fewer than last year. Indiana had slightly higher numbers than in recent years, with three in the northern half of the state.

### Michigan Rufous Hummingbirds

- Rufous Hummingbird, (AHY-M) banded on 2 September 2013 in Victor Twp., Clinton Co., Michigan. First observed by the homeowner on 1 September 2013, it went missing until it was relocated at a neighbor's feeder (<0.25 miles away) on 24 Sep, and it remained at both feeders until 24 Nov. Second county record.
- Rufous Hummingbird (HY-M) banded on 5 December 2013 in Spaulding Twp., Saginaw Co. Michigan. First observed by the homeowner on 8 September 2013 and last observed on 14 December 2013. Second county record.
- Rufous Hummingbird (adult male), not banded, in Gilmore Twp., Benzie Co., Michigan. Observed by the homeowner on 21-22 September 2013. First county record.
- Rufous Hummingbird (AHY-F) banded on 15 November 2013 in Holt, Ingham Co., Michigan. First observed by the homeowner on about 1 October 2013 and last observed on 9 December 2013. Third county record.
- Rufous Hummingbird (AHY-M) banded on 28 October 2013 in Pipestone Twp., Berrien Co., Michigan First observed by the homeowner on 4 October 2013 and last observed on 11 December 2013. Seventh county record.
- Rufous Hummingbird (AHY-M) banded on 25 October 2013 near Cadillac, Wexford Co., Michigan. First observed by the homeowner on 6 October 2013 and last observed on 12 November 2013. First county record. This same individual (verified by band number) turned up on 14 November in Ann Arbor, Washtenaw County, where it was last observed on 10 December 2013. Second county record.
- Rufous Hummingbird (AHY-F) banded on 20 November 2013 in Traverse City, Grand Traverse County, Michigan. First observed by the homeowner on about 5 November 2013 and last observed on 23 November 2013. First confirmed county record.
- Rufous Hummingbird (HY-M) banded on 15 November 2013 in Kentwood, Kent County, Michigan. First observed by the homeowner on 10 November 2013 and last observed on 8 December 2013. Second county record.

### Ohio Rufous Hummingbirds

- Rufous Hummingbird (adult male), not banded, was first observed (and photographed) by the homeowner on 6 October 2013, and last observed on about 21 October 2013, near Oxford, Butler County, Ohio.
- Rufous Hummingbird (AHY-F) captured on 9 November 2013 near Oxford, Butler County, Ohio (same home as above). First observed by the homeowner on about 26 October 2013 and last observed on 15 November 2013. Was originally banded on 19 December 2012 near McDonough, Henry County, Georgia (~420 miles south) by Karen Theodorou.
- Rufous Hummingbird (AHY-F) banded on 9 November 2013 in Williamsburg, Clermont County, Ohio. First observed by the homeowner on 17 October 2013 and last observed on 15 November 2013, though it may have lingered (unconfirmed) until 23 November. This same home hosted a HY-F Rufous Hummingbird last year.
- Rufous Hummingbird (AHY-M) banded on 5 November 2013 in Westerville, Delaware County, Ohio. First observed by the homeowner on about 12 October 2013 and last observed on 14 December 2013.

- Rufous Hummingbird (adult male), not banded, was first observed (and photographed) by the homeowner on about 1 November 2013, and last observed on 11 November 2013, in Delaware, Delaware County, Ohio.
- Rufous Hummingbird (HY-F) banded on 5 November 2013 in near Charm, Holmes County, Ohio. First observed by the homeowner on 10 September 2013 and last observed on 18 November 2013.
- Rufous Hummingbird (AHY-F) captured on 5 November 2013 in Walnut Creek Twp., Holmes County, Ohio. First observed by the homeowner on 27 October 2013 and last observed on 24 November 2013. Originally banded at this same home in 2012!
- Rufous Hummingbird (AHY-F) banded on 10 November 2013 in Toledo, Lucas County, Ohio. First observed by the homeowner on 17 October 2013, and last observed on 26 November 2013. The bird was not observed from 14-20 November, so may have been visiting another feeder in the area.
- Rufous Hummingbird (HY-M) banded on 16 November 2013 at a feeder in the central courtyard of a mental health facility (!) in Mansfield, Richland County, Ohio. First observed on 8 November 2013 and last observed on 23 November 2013.
- Rufous Hummingbird (AHY-F) banded on 8 December 2013 in North Royalton, Cuyahoga County, Ohio. First observed by the homeowner on about 1 October 2013 and last observed on 11 December 2013.

#### Northern Indiana Rufous Hummingbirds

- Rufous Hummingbird (AHY-F) banded on 14 November 2013 in Indianapolis, Marion County, Indiana. First observed by the homeowner on 12 November 2013 and last observed on 24 December 2013.
- Rufous Hummingbird (AHY-F) banded on 14 November 2013 near Peru, Miami County, Indiana. First observed by the homeowner on 21 October 2013 and last observed on 25 November 2013.
- Rufous Hummingbird (HY-F) banded on 14 November 2013 near Wabash, Wabash County, Indiana. First observed by the homeowner on 9 November 2013 and last observed on 23 November 2013.

#### Other Rare Hummingbird Reports (not banded)

- Rufous/Allen's Hummingbird (female, photographed) was first observed by the homeowner on 1 November 2013 and last observed on 23 November 2013, in Cleveland, Cuyahoga County, Ohio. Banding attempts on 16 & 21 November were unsuccessful as the bird was a no-show on both days; another feeder in the neighborhood was suspected.
- Rufous/Allen's Hummingbird (male?) was first observed (and photographed) by the homeowner on about 20 October 2013 and last observed on 12 November 2013, in Westerville, Delaware County, Ohio. The strong throat spotting visible in photos suggests a hatch-year male, but this cannot be confirmed based only on photos.
- Rufous/Allen's Hummingbird (female) was first observed (and photographed) by the homeowner on 10 November 2013 and last observed on 20 November 2013, near Grove City, Franklin County, Ohio.
- Rufous/Allen's Hummingbird (female) was first observed (and photographed) by the homeowner on 24 October 2013 and last observed on 23 November 2013, near Columbus Grove, Putnam County, Ohio. On 14 November the bird was found in torpor on feeder hook, with tongue frozen to hook. It was brought indoors to thaw out and it escaped, but it was released back outdoors on 15 November. Banding attempt on 21 November was rained out.

- Rufous/Allen's Hummingbird (?) was first observed by the homeowner on 12 November 2013 in torpor on the feeder. It was brought indoors where it warmed up and escaped into the house. It was returned outdoors the next day (13 November) on my advice and was reportedly doing fine. No last date was reported.



Adult male Rufous Hummingbird, Victor Twp., Clinton County, Michigan. 2 September 2013.

**Table 2. Michigan totals of Ruby-throated Hummingbirds banded for all sites (May-November 2013), 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]	24	28	139	115	306	2010 (2) 2011 (3) 2012 (8)
St. Joseph Co., Constantine Twp. (James & Nancy Summers) [STJ2]	18	111	8	3	140	-
Macomb Co., Metro Beach Metropark [MBMP]	4	11	41	32	88	-
Kalamazoo Co., Fort Custer Training Center [FCTC]	10	27	27	18	82	2010 (1) 2011 (1) 2012 (9)
Calhoun Co., Battle Creek (Mary Bird) [CAL3]	19	32	16	6	73	2009 (2) 2010 (2) 2011 (10) 2012 (10)
Jackson Co., Waterloo Twp. (Frank & Rose Blackwell) [JAC11]	9	19	17	8	53	2010 (1) 2012 (1)
Jackson Co., Waterloo Twp. (Arlene Taylor & Matt Laux) [JAC2A]	19	22	5	3	49	2006 (1) 2009 (3) 2010 (4) 2011 (4) 2012 (8)
Kalamazoo Co., Augusta (Rhonda Dunithan) [KAL16]	15	18	11	4	48	2009 (2) 2010 (2) 2011 (3) 2012 (15)
Washtenaw Co., Lyndon Twp. (Mike & Becky Wise) [WAS25]	8	34	3	1	46	-
Jackson Co., Waterloo Twp. (Lathe & Kathy Claflin) [JAC2]	11	31	0	1	43	2010 (2) 2011 (2) 2012 (6)
Hillsdale Co., Litchfield Twp. (Bill & Marlene Koons) [HIL3]	8	30	1	1	40	2010 (1) 2011 (5) 2012 (9)
Hillsdale Co., Montgomery (Diana & Mark McKibben) [HIL4]	6	26	2	1	35	-
Kalamazoo Co., Kalamazoo NC (Rich & Brenda Keith) [KNC]	1	10	17	7	35	-
Hillsdale Co., Hillsdale (Tim Tyler) [HIL2]	6	18	8	1	33	2010 (1) 2011 (3) 2012 (1)
Jackson Co., Waterloo Twp. (Charity Steere) [JAC10]	6	17	5	1	29	2007 (1) 2009 (2) 2010 (5) 2011 (7) 2012 (4)

**Table 2. Cont'd.**

<b>Location/Host</b>	<b>AHY-M</b>	<b>AHY-F</b>	<b>HY-M</b>	<b>HY-F</b>	<b>Total</b>	<b>Re-captures</b>
Livingston Co., Fowlerville (Craig & Heather Wise) [LIV15]	5	13	4	1	23	2012 (3)
Jackson Co., Parma Twp. (Aaron & Danielle Potts) [JAC13]	4	15	2	0	21	2010 (1) 2011 (1) 2012 (1)
Van Buren Co., Paw Paw (Jim & Joyce Moulthorp) [VAN7]	2	16	0	2	20	2011 (2)
St. Joseph Co., Constantine (Todd & Penny Engels) [STJ1]	3	17	0	0	20	2011 (1)
Wayne Co., Inkster (Allen & Nancy Chartier) [WAY1]	3	3	2	5	13	2012 (1)
Jackson Co., Sandstone Twp. (Lynn Ward) [JAC15]	2	5	4	0	11	2011 (1)
Oakland Co., Milford (Barb Jensen) [OAK13B]	1	6	0	4	11	2009 (1)
Washtenaw Co., Sylvan Twp. (Jocelyn Granger) [WAS23]	6	4	0	0	10	2011 (2) 2012 (1)
Washtenaw Co., Salem Twp. (Sheila Boyer) [WAS22]	4	2	1	1	8	2009 (1)
Jackson Co., Waterloo Twp. (Gary Siegrist) [JAC16]	1	5	2	0	8	-
Washtenaw Co., Hudson Mills (Ben Colman) [WAS21]	2	5	0	0	7	-
Oakland Co., Milford (Stella & Vaughn Koshkarian) [OAK13]	1	3	1	2	7	-
Barry Co., Barry Twp. (Josh & Kara Haas) [BAR2]	4	3	0	0	7	-
Livingston Co., Hamburg Twp. (Jim & Melissa Pappas) [LIV11]	0	3	1	1	5	-
Jackson Co., Dahlem Center [JAC-DC]	1	1	2	1	5	-
Washtenaw Co., Salem Twp NE (Amy Donoghue) [WAS24]	1	1	2	0	4	-
Kent Co., Kentwood (Julie Pedreros) [KEN5]	0	0	1	0	1	-
Kalamazoo Co., Pavilion Twp. (Rod & Kathy Rhodes) [KAL12]	0	0	0	0	0	2012 (1)
<b>TOTAL OF ALL LOCATIONS</b>	204	536	322	219	1281	2006 (1) 2007 (1) 2009 (11) 2010 (22) 2011 (45) 2012 (78)
	15.9%	41.8%	25.2%	17.1%		