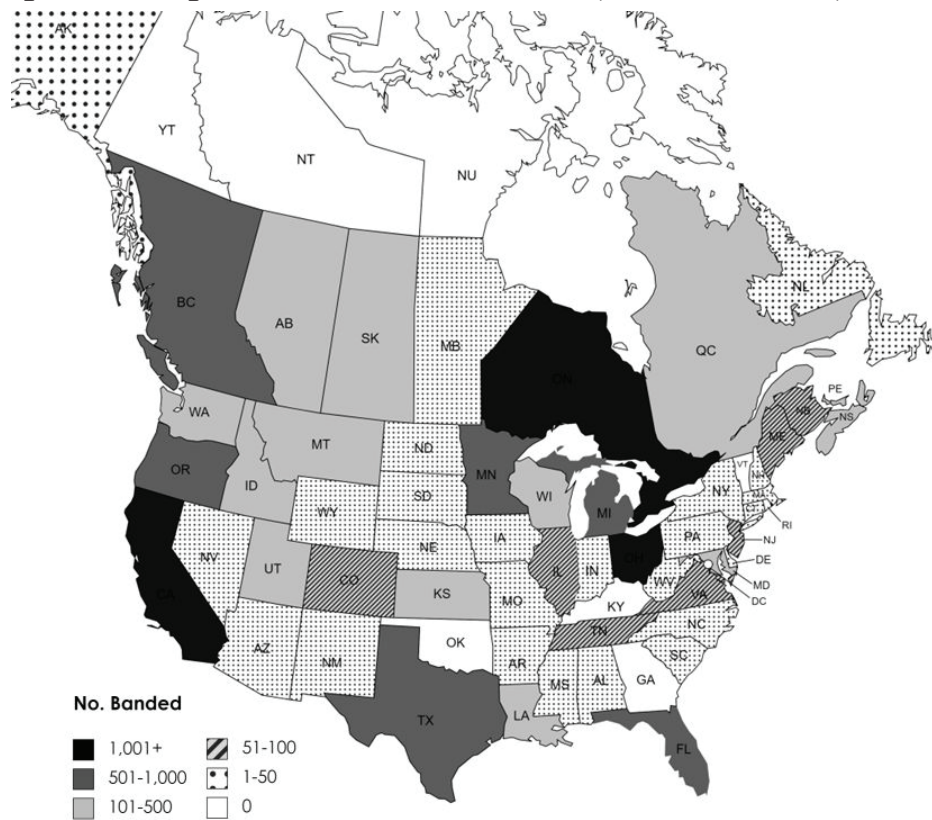


Species	AL	AR	IL	IN	IA	KS	KY	LA	MI	MN	MS	MO	NE	ND	OH	OK	SD	TN	TX	WI	MB	SK	Grand Total	Top permits
Veery	8		51	2	1			1	48	111					47			19	3	8	3		302	23937-51;24165-25;23587-22
Gray-cheeked Thrush	10		86	6	4		2	1	92	9	1				191			59	1	5	1	16	484	20929-79;21624-60;23587-52
Swainson's Thrush	98	1	556	33	49	7	3	1	489	173	3		4		898	3	27	301	15	23	1	79	2764	20929-282;21776-264;23587-229;24057-229
Hermit Thrush	24	6	364		7	1		5	438	42	6		1		456			19	71	11		34	1485	23587-235;21624-217;23156-179
American Robin		1	654	206	21	27	2		295	35	6		2		340	4	11	83	11	78	4	144	1924	21422-247;08355-242;20261-192
Clay-colored Thrush																			71				71	22758-70;24234-1
Eastern Bluebird	273	1084	124	4	79		1	1	652	380	34	40	5		1786	20		249	142	254	15		5143	20929-831;23811-702;23587-473
Mountain Bluebird																			1		74	2	77	10767-74;10242-1;10816-1;20942-1
Scaly-breasted Munia	50																		7				57	24217-50;09415-7
Hybrid Passerine																			20				20	21999-18;24108-2
Active Permits	11	18	23	14	16	7	6	14	27	33	12	11	7	9	31	10	8	22	41	41	8	16	335	
<b>Grand Total</b>	<b>5882</b>	<b>8562</b>	<b>32785</b>	<b>6844</b>	<b>10422</b>	<b>6879</b>	<b>4883</b>	<b>16693</b>	<b>23966</b>	<b>19078</b>	<b>2726</b>	<b>6668</b>	<b>4928</b>	<b>8874</b>	<b>33846</b>	<b>2314</b>	<b>14855</b>	<b>13507</b>	<b>15412</b>	<b>14297</b>	<b>8108</b>	<b>8981</b>	<b>270490</b>	
Species in State	113	88	178	96	107	68	77	79	147	149	102	81	93	25	167	61	79	138	203	137	92	131	347	

### Species Snapshot: Great Blue Heron (*Ardea herodias*)



**Figure 1. Geographic distribution of banding locations of Great Blue Herons in the United States and Canada between 1960 and Apr 2021. Not shown: Mexico, n = 71; Bahamas, n = 2; and Lesser Antilles, n = 1**

This is the 12th installment in our regular feature presenting a brief synopsis of the banding and encounter records submitted to the Bird Banding Laboratory for a particular species. Each installment will feature a new species; suggestions for species to be covered or data to be presented

are welcome (swgabrey@gmail.com). Space limitations of **NABB** prohibit any in-depth analysis of the data and these notes are not meant to show any trends in population parameters such as population density or growth rate, geographic distribution, etc., and should not be viewed as a definitive analysis of the status of the species.

Although the banding program began in the 1920s, the currently available digital records for banding data include only those records from 1960 to the present (pre-1960 banding data are available in other formats, however). All encounters, including those of birds banded before 1960, are available in digital format. The following summary includes only those birds banded and encountered from 1960 through Apr 2021 in the United States, Canada, Mexico, the Caribbean, and Central America.

### **Banded birds (see Appendix A)**

**Numbers and Age and Sex Categories.**— Since 1960, 16,143 Great Blue Herons have been banded in the United States, Canada, Mexico, and the Caribbean (Table 1). Sex was identified (either at banding or upon encounter) for <1% (n = 129) of these, 17% (n = 22) were males and 83% (n = 107) were females. Twenty of the 22 males (91%) were aged as AHY, SY, ASY, TY, or ATY and 2 (9%) were aged as HY or L (no males were aged as U). Twenty-six of the 107 females (24%) were aged as AHY, SY, ASY, TY, or ATY, 81 (76%) were aged as HY or L (no females were aged as U). Of the 16,014 herons for which sex was not identified, 7% (n = 1,191) were aged as AHY, SY, ASY, TY, or ATY compared to 91% (n = 14,591) aged as HY or L and 1% (n = 232) aged as U.

**Geographic distribution.**— Great Blue Herons have been banded in 44 of the United States (n = 12,843); in 10 Canadian provinces (n = 3,226); in Mexico (n = 71); in the Bahamas (n = 2); and in the Lesser Antilles (n = 1) (Table 2). At least 1,000 herons were banded in each of 2 states and in 1 province (Figure 1). The top 5 states (Ohio, n = 3,958; California, n = 1,930; Oregon, n = 883; Florida, n = 830; and Minnesota, n = 788) accounted for 65% of all herons banded in the United States. One province (Ontario, n = 1,086) accounted for 34% of all herons banded in Canada.

**Seasonal distribution.**— Overall, 89% (n = 14,433) of all Great Blue Herons were banded between May and Aug, 2% (n = 350) between Sep and Oct, 3% (n = 425) between Nov and Feb, and 6% (n = 935) between Mar and Apr (Table 2). Of the herons banded in the United States, 88% (n = 11,352) were banded between May and Aug compared to 2% (n = 258) between Sep and Oct, Jul.- Dec. 2021

3% (n = 366) between Nov and Feb, and 7% (n = 867) between Mar and Apr. Of the herons banded in Canada, 95% (n = 3,059) were banded between May and Aug, 3% (n = 92) between Sep and Oct, 2% (n = 57) between Nov and Feb, and <1% (n = 18) between Mar and Apr. Of the herons banded in Mexico and the Caribbean, 30% (n = 22) were banded between May and Aug, 3% (n = 2) between Nov and Feb, and 68% (n = 50) between Mar and Apr. No herons were banded in Mexico or the Caribbean between Sep and Oct.

### **Encounters**

**Numbers and Age and Sex Categories.**— There have been 980 encounters representing 953 Great Blue Herons in the United States, Canada, Mexico, the Caribbean, and Central America between 1960 and Apr 2021 (Table 3). No encounter records had invalid or mismatched sex, age, or species data. Birds encountered on the day they were banded (n = 2) are not included in the following summary. Thus, there were 978 encounters of 951 individual herons. Seventeen herons were encountered twice, one was encountered 3 times, one was encountered 4 times, and one was encountered 6 times.

Sex was identified for just 3 of the herons encountered: 1 AHY-M, 1 AHY-F, and 1 L-F (Table 1). Of the remaining 948 herons, 78% (n = 736) were aged as HY or L compared to 21% (n = 196) aged as AHY, SY, ASY, TY, or ATY and 2% (n = 16) aged as U.

Fifteen of the herons encountered were 15 yr 0 mo or older when encountered: 12 banded as L-U, 2 as AHY-U, and 1 as AHY-F. About 3% (n = 24) of the herons encountered were between 10 yr 0 mo and 14 yr 11 mo, 9% (n = 86) between 5 yr 0 mo and 9 yr 11 mo, and 30% (n = 290) between 1 yr 0 mo and 4 yr 11 mo. The remaining 536 herons were less than 1 yr 0 mo old when encountered or had no minimum age at encounter recorded (incomplete or inexact band or encounter date, or the how obtained code indicated that the band or number only was found [50, 96, 97, 98, for example]).

The oldest heron encountered (minimum age at encounter 24 yr 6 mo) was an L-U banded in Texas in Jun 1977 and found dead (how obtained

code = 0) at its banding location in Dec. 2011. The oldest heron banded as AHY or older was an SY-U banded in Florida in Feb 2003 and caught due to injury (how obtained code = 3) 29 km from its banding location in Dec 2019 (minimum age at encounter 18 yr 6 mo, seventh oldest overall). The oldest known female heron to be encountered was an AHY-F banded in British Columbia in May 1994 and caught due to injury 23 km from its banding location in Nov 2009 (minimum age at encounter 16 yr 9 mo, fourteenth oldest overall). The only known male heron to be encountered was banded as an AHY-M in Maine in June 2016 and found dead 2163 km away in Florida in Mar 2018 (minimum age at encounter 2 yr 9 mo). The only other encountered heron for which sex was identified was an L-F banded in Oregon in May 1963 and found dead 171 km from its banding location in California in Feb 1965 (minimum age at encounter 1 yr 9 mo).

**Geographic distribution.**— About 61% (n = 580) of the encounters of Great Blue Herons occurred in the state or province in which the bird was banded (Table 3). Forty-four herons were encountered more than 2413 km from their banding location: 37 banded as L-U and 7 as HY-U. Forty-two of the remaining herons were encountered between 1611 and 2414 km, 96 between 806 and 2609 km, and 209 between 163 and 805 km. The remaining 560 herons were encountered 161 km or less from their banding locations or had no distance recorded.

The greatest distance between banding and encounter locations was 4419 km for an L-U banded in Saskatchewan in Jul 1986 and found dead in Panama in Nov 1988. The greatest distance for a heron aged as HY was 3441 km (third greatest distance overall) for an HY-U banded in Montana in Jun 1965 and shot (how obtained code = 1) in Guerrero, Mexico, in May 1972. The greatest distance for a heron aged AHY or older was 2163 km (54th greatest distance overall) for the lone known male encounter discussed above. The greatest distance for a heron identified as female was 171 km for the L-F discussed above.

**Other interesting encounters.**— A Great Blue Heron banded as an AHY-U near San Pedro, California,

in May 2015, was encountered (federal band seen or photographed, how obtained code = 52) 6 times between Aug 2015 and Dec 2020 (minimum age at last encounter 6 yr 6 mo); each encounter was within 3.2 km of its banding location. Another heron banded as an SY-U in Largo, Florida, in Jul 2006, was encountered (federal band seen or photographed) 4 times between May 2014 and Feb 2015 (minimum age at last encounter 10 yr 8 mo); each encounter was within 6.4 km of its banding location. A heron banded as an L-U near Castalia, Ohio, in May 1977, was encountered (other than federal band seen or photographed, how obtained code = 29) in Jun and Sep 1978, 248 km southwest of its banding location. This same bird was again seen/photographed near Castalia in Oct 1978.

**Birds banded before 1960.**— Six-hundred and one Great Blue Herons banded before 1960 have been encountered (one was encountered twice, the remainder once). Sex was identified for just 3 of these: 2 U-M and 1 U-F. Of the herons for which sex was not identified, 80 were banded as U-U, 6 as AHY-U, and the remaining 512 as L-U, HY-U, or J-U (obsolete code for “juvenile,” most likely meaning HY). The earliest banding date for a heron that was later encountered was Jul 1916 for an HY-U banded near Brigham City, Utah, and encountered 563 km away in Montana in Nov 1916; this is also the earliest encounter date for a banded heron. The oldest heron banded before 1960 and later encountered was banded as J-U in Jun 1947 and encountered in Sep 1970 at its banding location (minimum age at encounter 23 yr 3 mo). The greatest distance between banding and encounter locations is 4809 km for an HY-U banded in Wisconsin in Jun 1957 and encountered in Colombia in Oct 1960.

**Acknowledgements.**— I thank the more than 360 permit holders who have banded Great Blue Herons over the decades, all the individuals who reported encounters, and staff at the Bird Banding Lab for supplying the data.

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Appendix A

Age code	Banded birds				Encountered birds			
	Male	Female	Unknown	Total	Male	Female	Unknown	Total
L	2	81	13,722	13,805		1	660	661
HY			869	869			76	76
SY	1	9	428	438			20	20
AHY	19	16	656	691	1	1	62	64
TY		1	4	5			1	1
ASY			95	95			112	112
ATY			8	8			1	1
Unknown			232	232			16	16
<b>Total</b>	<b>22</b>	<b>107</b>	<b>16,014</b>	<b>16,143</b>	<b>1</b>	<b>2</b>	<b>948</b>	<b>951</b>

**Table 1. Number of Great Blue Herons banded and encountered in the United States, Canada, Mexico, the Caribbean, and Central America between 1960 and Apr 2021 by age at banding and sex (either sex at banding or sex updated upon encounter).**



Country/region	May – Aug	Sep – Oct	Nov – Feb	Mar – Apr	Total
United States	11,352	258	366	867	12,843
Canada	3,059	92	57	18	3,226
Mexico/Caribbean	22	0	2	50	74
<b>Total</b>	<b>14,433</b>	<b>350</b>	<b>425</b>	<b>935</b>	<b>16,143</b>

**Table 2. Number and seasonal distribution of Great Blue Herons banded in the United States, Canada, Mexico, and the Caribbean, between 1960 and Apr 2021.**

