

Appendix 1. Sample sizes and sources for $\delta^2\text{H}_f$ and wing measurements from migration count sites.

Location name	Prov/ State	Migration site code	Latitude	Longitude	Isotope samples n spring/n fall	Year of feather samples	Wing chord n spring/ n fall	Contributor ¹
Creamer's Field Migration Station	AK	CFMS	64.86	-147.74			465/146	Claire Stuyck
Teslin Lake Bird Banding Station	YK	TLBBS	60.23	-132.92			-/140	Ben Schonewille, Ted Murphy-Kelly
Albert Creek Bird Observatory	YK	ACBO	60.06	-128.92	25/-	2007	566/76	Ben Schonewille, Ted Murphy-Kelly
Mackenzie Nature Observatory	BC	MNO	55.40	-123.21	-/29	1998-2001	2/89	Vi Lambie, David Lambie, CMMN
Lesser Slave Lake Bird Observatory	AB	LSLBO	55.41	-114.81			138/10	Patti Campsall
Inglewood Bird Observatory	AB	IBO	51.02	-114.01			65/22	Doug Colliester
Last Mountain Lake	AB	LMBO	51.35	-105.22			171/283	Al Smith
South Dakota Game, Fish & Parks	SD ²	SDGFP	44.55	-100.67			261/	Eileen Dowd Stukel
Delta Marsh Bird Observatory	MB	DMBO	50.18	-98.39	-/30	1998-2001	455/50	Paula Grief, CMMN
Thunder Cape Bird Observatory	ON	TCBO	48.31	-88.93	-/56	1999 and 2007	86/85	Rinchen Boardman, CMMN
Pittsfield Bird Observatory	MI	PFBO	42.36	-85.59			7/253	Rich Keith
Black Swamp Bird Observatory	OH	BSBO	41.61	-83.19			1822/4962	Mark Shieldcastle
Pelee Island Bird Observatory	ON	PIBO	41.74	-82.68			25/75	Sumiko Onishi
Bruce Peninsula Bird Observatory	ON	BPBO	45.21	-81.42			29/35	Stéphane Menu
Long Point Bird Observatory	ON	LPBO	42.55	-80.25	54/81	2000, 2001, 2007, 2014, 2015	1634/4716	Stuart Mackenzie, Yanju Ma, CMMN
Cape Florida Banding Station	FL	CFBS	25.68	-80.16			297/14	Michelle Davis, Rebecca Holberton
Powdermill Avian Research Center	PA	PARC	40.16	-79.27	-/54	2007-2008	168/356	Luke De Groote
Presque Isle State Park	PA	PIPS	42.17	-80.11			233/-	Sarah Sargent
Haldimand Bird Observatory (Ruthven)	ON	RUTH	42.58	-79.52	10/-	2007	57/-	Rick Ludkin, CMMN
Tommy Thompson Park	ON	TTPBRS	43.63	-79.33	8/15	2007		CMMN
Braddock Bay Bird Observatory	NY	BBBO	43.32	-77.72			571/599	Andrea Patterson
Prince Edward Point Bird Obs	ON	PEPBO	43.94	-76.86	25/-	2007-2008	242/575	Nick Bartok, CMMN
Foreman's Branch Bird Observatory	MD	FBBO	39.22	-76.07			117/48	Maren Gimpel
First Landing State Park	VA	FLSP	36.92	-76.05			321/-	Bob Reilly
Innis Point Bird Observatory	ON	IPBO	45.42	-75.92			367/13	Bill Petrie
McGill Bird Observatory	PQ	MGBO	45.43	-73.94	9/-	2008	265/57	Simon Duval, CMMN
Block Island Banding Station	RI	BIBS	41.17	-71.58				Kim Gaffett, Steve Reinert
Kingston Wildlife Research Station	RI	KWRS	41.48	-71.51			-/158	Peter Paton
Appledore Island Migration Station	ME	AIMS	42.99	-70.62	22/-	2014	1898/172	Sara Morris, Kristen Covino
Manomet Bird Observatory	MA	MBO	41.80	-70.50	-/68	2007-2009	1118/1736	Trevor Lloyd-Evans, Evan Dalton
Metinic Island	ME	MEIS	43.89	-69.13	25/40	2011, 2013, 2014	23/15	Rebecca Holberton
Atlantic Bird Observatory	NS	ABO	43.40	-66.02	-/25	1998-2001	263/469	Phil Taylor
Cap Tourmente Nat'l Wildlife Area	PQ	RNCT	47.06	-70.80			-/25	Pierre-Alexandre Dumas
Louisiana Gulf Coast	LA ²	LGC	29.45	-91.05			134/-	Frank Moore, Kristen Covino
Massachusetts tower kills	MA ²	MASS	42.37	-71.24	-/28	c. 1970		Rebecca Holberton
Mississippi Barrier Islands	MS ²	MBI	30.27	-88.90			267/-	Frank Moore, Kristen Covino
Wisconsin tower kills	WI ²	WISC	44.77	-91.26	-/8	c. 1970		Rebecca Holberton

¹ 'CMMN' indicates isotope values provided by the Canadian Migration Monitoring Network

² Regional coordinates only