

Tips for Improving Your Project Martinwatch Data

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We greatly appreciate the reports sent in by Project Martinwatch participants. Landlords who do regular nest checks and keep written records can share those whether or not they use the Martinwatch data form. Previous years' records are welcome too.

However, despite the landlord's hard work, some of the reports sent in have data that could not be included in the annual Martinwatch report. To help improve the quality of the information we receive and to encourage more landlords to participate, we're offering tips on how to make participation easier and more accurate. To begin with, here is a review of the basic guidelines:

Project Martinwatch Guidelines: Participants conduct nest checks on their martin housing every 5 days and record what they find in each cavity, and what actions they may take. Participants start monitoring nests when nest building begins and continue at 5-day intervals until all the young have fledged. It is critical for our research to have one empty nest check at the end, after young have fledged. If 5-day nest checks are not possible, a 7-day schedule is acceptable. Checks are done during the day, are avoided during cool or rainy weather, and are done quickly to minimize the time parents are kept away from their eggs or young. Sites that are checked regularly may be more productive than sites that aren't monitored, since checks will reveal problems that might effect nesting success in time for the landlord to correct them. [See Fig 1.]

normally skip a day. Incubation begins the day before the last egg is laid and normally lasts 15 days (from the laying of the last egg until the hatching of the first egg). During cool weather, incubation may be delayed, causing clutches not to hatch until 16-24 days after clutch initiation. Once hatching begins, it may take 48 hours for all the eggs in a clutch to hatch. Due to this staggered hatch, siblings may vary in age by as much as 2 days, resulting in fledging of most nests to be spread over 2-3 calendar days. Nestling martins don't fledge until 26-35 days after hatching.

Aging Nestlings: The very first time that you encounter a hatchling in each active nest, age the oldest nestling in that nest by comparing it to the life-size laminated photos (available from the PMCA). Record the age on the Project Martinwatch sheet. Later, using the Prognosticator, you can calculate the actual hatch date and the earliest possible fledge date and record those dates on the form. The calculations are easy to do with the Prognosticator, (a calculator wheel available from the PMCA that shows incubation and nestling periods) by using the formula in the next paragraph.

Counting Eggs and Nestlings: Before incubation begins Purple Martins often hide their eggs under a layer of green leaves. During checks, inspect this leaf layer gently with your fingertips to feel for hidden eggs. After hatching, nestlings huddle together, so it can take a moment to count them correctly. A head count is usually the easiest way to get an accurate count.

Martin Breeding Biology: Purple Martins lay 1 egg a day in the morning until they've laid from 1 to 7 eggs. They do not

normally skip a day. Incubation begins the day before the last egg is laid and normally lasts 15 days (from the laying of the last egg until the hatching of the first egg). During cool weather, incubation may be delayed, causing clutches not to hatch until 16-24 days after clutch initiation. Once hatching begins,

Housing Type/ Hole Type & Cavity #	Date	Male/female	Age	Date First Egg is Laid	Projected Hatch Date	Actual Hatch Date	Earliest Possible Fledge Date	Nest Record Sheet Totals:												Egg #	Hatch #	Fledge #	
								20 May	25 May	30 May	4 June	9 June	14 June	19 June	24 June	29 June	4 July	9 July	14 July				19 July
WH-1 EH	A	A	5/18	6/08	6/08	7/04	PMN 3E	7E	7E	7E	2E 5Y 1do	7Y NR	7Y	7Y NR	6Y	6Y	N	N	N	N	7	7	6
WH-2 OH	S	A	6/03	6/21	6/22	7/18	ST ND	HS ND	PM N	2E	4E	4E	1E* 3Y 2do	1E/3Y NR	3Y	3Y NR	3Y	3Y	N	N	4	3	3
WH-3 CH	A	?	6/04	6/24	6/24	7/20	X	PM N	N	1E	6E	6E	6E	3E 3Y HD	5Y/NR 1DY/D	5Y	5Y NR	5Y	4Y	N	6	6	4
WH-4 RH	S	S	5/31	6/19	6/19	7/15	X	PM N	N	5E	5E	5E	2E 3Y HD	5Y NR	3Y 2DY/D	3Y NR	3Y	3Y	1Y	N	5	5	3
AG-1 CH	A	A	5/26-30 6/10-12	6/10-14 6/27-29	6/28	7/24	X	PM N	1E	1E	0E	3E RA	3E	3Y 1do	3Y NR	3Y	3Y	2Y NR	2Y	N	1 3	0 3	0 2
NG-1 CH	A	S	6/01	6/20	6/20	7/16	X	PM N	N	4E	5E	5E	5E	5Y 4do	4Y NR	4Y NR	4Y NR	4Y	N	N	5	5	4
														31	29	22							

Using the codes below, record exactly what you find in each compartment on every nest check and any action you may take. Using the laminated baby pictures, record age of nestlings on first encounter.

Martin Codes:	CH = Crescent Hole	HD = Young Hatching-day-old	* = See Comments on Back
	EH = Excluder Hole	3do = Young 3-days-old	RA = Renesting Attempt
	OH = Obround Hole	B = Banded	BB = Bluebird
	RH = Round Hole	MH = Metal House	HF = House Finch
	X = Empty Cavity	PH = Plastic House	HS = House Sparrow
	N = Nest	WH = Wooden House	PM = Purple Martin
	E = Egg(s)	NG = Natural Gourd	ST = Starling
	Y = Young (Living)	AG = Artificial Gourd	TS = Tree Swallow
	DY = Dead Young	A = Adult (ASY)	HW = House Wren
	NR = Nest Replaced	S = Subadult (SY)	
	D = Discarded	? = Unknown	

Fig 1. A Martinwatch form showing all the required elements filled in—number of eggs and young, regular nest checks until young have fledged, and a final nest check showing an empty nest. Optional information, such as parents' age, is helpful but not required.

Fledged or Failed?: The only way to tell how many young have fledged from a nest is to determine how many survived to the date on which they would have reached the minimum fledging age of 26 days old. A formula for determining it is:

