

How to Use the Baby Photos and Prognosticator to Determine if Your Martin Nestlings Have Fledged

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Throughout our 12 year history, we at the Purple Martin Conservation Association have been trying to convince martin landlords everywhere to conduct weekly nest checks on the martins under their care. Our research shows that a properly-managed colony site will fledge twice as many babies per active nest as a non-managed site will, and conducting weekly nest checks is the first step towards proper colony management. Numbering compartments, doing frequent nest checks, and keeping written records is just as important to martin management as recording transactions is to maintaining a balanced checkbook. Without such records, you won't have a clue where you stand.

The most important information a landlord can record when managing a martin site are which cavities are active, the date the first eggs are laid in each nest, how many eggs are laid in each nest, how many young hatch in each nest, the date young begin hatching in each nest, and how many young fledge from each nest. The Laminated Baby Martin Photos (one page of five pages shown on the opposite page) will help you determine the exact age, and therefore the exact hatching date, of the young in each of your active Purple Martin nests. This information is not only helpful for landlords, but it is also an important part of Project Martinwatch. For more information on Project Martinwatch, please refer to the Martinwatch forms in the centerfold of the 1999/2000 Martin Market Place catalog. We hope you will participate in this worthwhile study.

How and Why to Age Nestlings: The first time that hatched young are found in a nest, age the oldest (largest) nestling in that



Housing Type & Cavity #	Date	Male/Female	Date First Egg is Laid	Projected Hatch Date	Actual Hatch Date	Earliest Possible Fledge Date	19 June												Egg #		Hatch #	
							19 June	24 June	29 June	4 July	9 July	14 July	19 July	24 July	29 July	3 August	8 August	Egg #	Hatch #			
SG-1	A	A	6/20-22	7/07-09	7/06	8/01	PMN	3E	3E	3E	3Y 3do	3Y NR	3Y	3Y NR	2Y	0Y	N	3	3	2		
MH-1	S	A	6/18	7/07	7/07	8/02	2E	5E	5E	5E	5Y 2do	5Y	4Y NR	4Y	4Y NR	2Y	0Y	5	5	4		
WH-1	A	?	6/19	7/07	7/09	8/04	1E	4E	4E	4E	1E 3Y HD	3Y 1D/D	3Y NR	3Y	3Y NR	3Y	0Y	4	4	3		

Project Martinwatch Nest Data Sheet

Nest Record Sheet Totals:

12 12 9

nest by carefully removing it and comparing it to the life-size index photos found on the Laminated Baby Photos (see nestling being aged in the photo on the following page). Determine its age, then place it back in the nest huddle with its sibs. Record the age on the Martinwatch sheet (see the July 9th entries shown above for SG-1, MH-1, WH-1). Later, using the Prognosticator, align that age cell with the nest-check date cell and read backwards to the "Hatching Begins" date. Record this in the "Actual Hatch Date" column for that nest. If you do nest checks every five days, then the young in any given nest can only be a minimum age of

hatching-day-old (HD) and a maximum age of 5-days-old (5do) when first encountered. The nestling being aged against the Laminated Baby Photos in the picture on the next page is 3-days-old based on its size and development. As seen on the Prognosticator above, a nestling aged as 3-days-old on a July 9th nest check would have actually hatched on July 6th. Use the actual hatch date to

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Photo at right: A landlord ages the oldest (largest) nestling from one of his SuperGourds during a weekly nest check by comparing it to the Laminated Baby Photos available from the Purple Martin Conservation Association. This age, used in combination with the Prognosticator, will allow the landlord to know the earliest possible fledging date for that nest, and subsequently, whether the young in that nest survive to fledging age.



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calculate the "Earliest Possible Fledge Date" using the Prognosticator and record this date in the appropriate Martinwatch column (see SG-1 above).

Always age the young in each nest the first time you see them even if you already know the brood's exact clutch-initiation date. This is because incubation length can vary by a day or two (typical) or can be delayed by up to a week or more during cold weather (uncommon). Therefore, aging the young in each nest is absolutely necessary if you want to know for certain whether those particular young survive to fledging age (i.e., 26 days of age or greater) as the season progresses. Without knowing the earliest possible fledge date for each brood, a landlord cannot know for certain whether that brood fledged successfully or not. This key piece of information depends on landlords recording accurate data as to clutch-initiation dates and actual hatching dates.

Determining Clutch-initiation Dates: There are many instances when a landlord won't be able to pinpoint the exact date of clutch initiation for a given nest, even when conducting regular nest checks. Let's say you do nest checks every five days. If all the martins lay 5, 6, or 7-egg clutches, you'll be able to count backwards to the exact clutch-initiation date once the clutches are complete. But with martins that lay 2, 3, or 4-egg clutches, there will be instances where you will have to enter a range of possible dates. (See the "Date First Egg is Laid" and "Projected Hatch Date" columns shown above for SG-1.) By using the photos to age the young from such nests, and then using the Prognosticator, you will be able to calculate backwards to determine the clutch-initiation date, and thus, accurate hatch dates and earliest possible fledge dates. To limit the number of nests that end up with a range of possible egg dates, you can do nest checks every four days during the 4-week time window when the martins at your site are in the egg-laying phase of their nesting cycle. To provide

accurate data for your records and for Project Martinwatch, continue nest checks until every nestling has fledged (see precautions below).

Preventing Premature Fledging: To provide complete and accurate data for Project Martinwatch (and for your own

records), you need to continue nest checks until every last nestling at the colony site has fledged. When the nestlings approach or reach fledging age, extra caution is needed. In combination with the Prognosticator, the baby pictures, and their Project Martinwatch nest records, a landlord should know the age of every brood BEFORE lowering housing for a check. Housing with nests of young 24-days-old or older needs to be raised and lowered slowly and quietly, to prevent premature fledging of older young. As soon as housing has been lowered, plug compartments or gourds containing 24-day-old young. Check those nests by removing the plug, counting heads, and replacing the plug. After completing the nest check, raise the housing system and then remove plugs. The easiest way to do this is to prepare special plugs prior to the nest check, consisting of paper cups with long strings attached to them. Remove cups by tugging gently on the strings after the nest

check is completed and the housing is raised again. Nestlings that have already fledged and have returned to their nests, may fly out regardless. Their departure during a nest check is normal and expected.

The Laminated Baby Photos and Prognosticator are available from the *Purple Martin Conservation Association* as individual items or as a discounted package. **To order online please visit our website at <http://www.purplemartin.org>; or contact us at 814-833-7656.**



A landlord counting Purple Martin eggs in a plastic SuperGourd during one of his 4- to 7-day nest checks. Frequent nest checks, used in combination with Project Martinwatch nest-record sheets, the Laminated Baby Photos, and the Prognosticator, allow landlords to know exactly what is going on in each of the martin nests under their care. This knowledge, used with other "hands on" management techniques, has been shown to double the reproductive success of Purple Martins.

