

Project Martinwatch: Results from the 2005 Season

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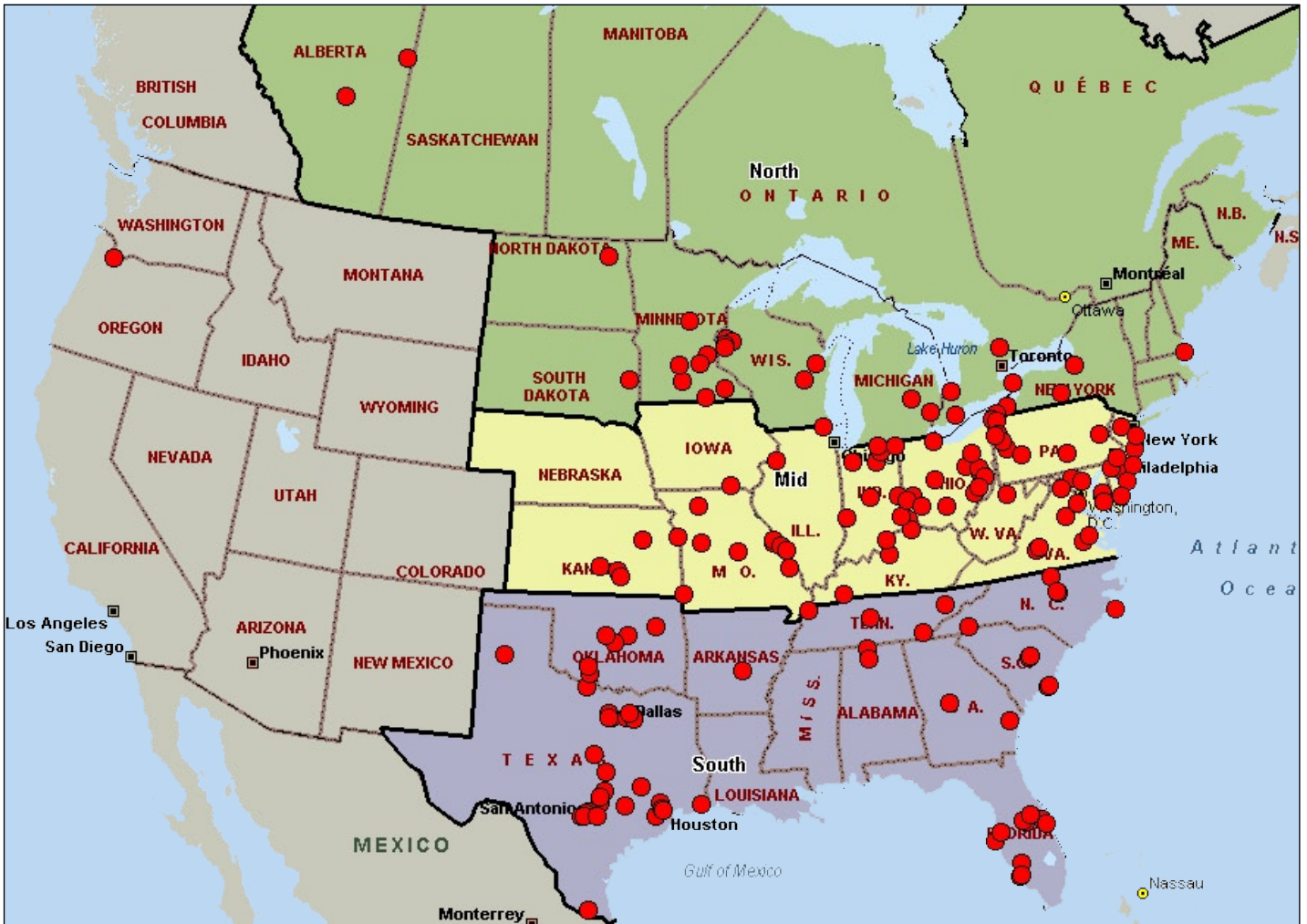


Fig. 1. Colony site locations of 2005's 190 Project Martinwatch participants.

	State/Provinces	Total # of Participants
Northern	AB, MA, MI, MN, NY, ON, RI, SD & WI	31
Mid	DE, IA, IL, IN, KS, KY, MD, MO, NJ, OH, PA, VA & WV	93
Southern	AL, AR, FL, GA, NC, OK, SC, TN & TX	66

Table 1. The breakdown of participants by regions.

Project Martinwatch aims to collect breeding data for Purple Martins (*Progne subis*) throughout their North American breeding range. This citizen science program has just completed its 11th season! Since its launch in 1995, participation has steadily grown.

Participants check their Purple Martin nests frequently and record what they observe, including the number of eggs, nestlings, and fledglings. These standardized data provide insight into the breeding success of Purple Martins throughout their range.

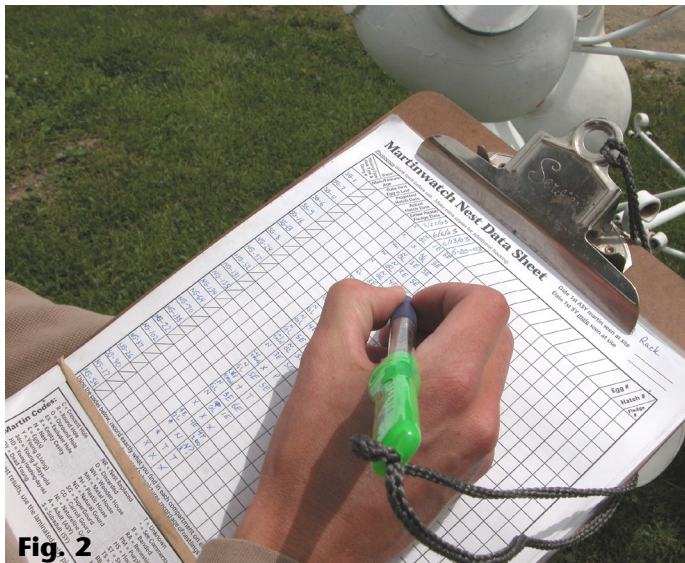


Fig. 2

Fig. 2. The PMCA's research assistant, Pat Kramer, filling out a Project Martinwatch form.



Fig. 3

Fig 3. Colony site of landlords Ray King and Marvina Bowker in Wilmington, IL.

Participation

Continent wide, the number of participants has grown since last year from 167 to 190, a net gain of 23! Regionally, four participants were lost in the North, an impressive 25 were gained in the Mid region, and two participants were gained in the South.

Table 1 lists the 32 participating states and provinces. Iowa, Kansas, and Oregon are newly participating states this year. Despite gaining 3 states from last year, we still have the same total of participating states. We hope that former participants from Louisiana, Nebraska, and Rhode Island will again join us for next year. If you still have Martinwatch data, you may submit it at any time; there is no deadline.

Texas had 29 participants; more than any other state or province. New Jersey and Ohio each had 15 participants, followed by 11 participants in Florida, Indiana, and Pennsylvania.

New Jersey had an impressive 10 more participants than in 2004! Kansas, a new state this year, had 6 new partici-

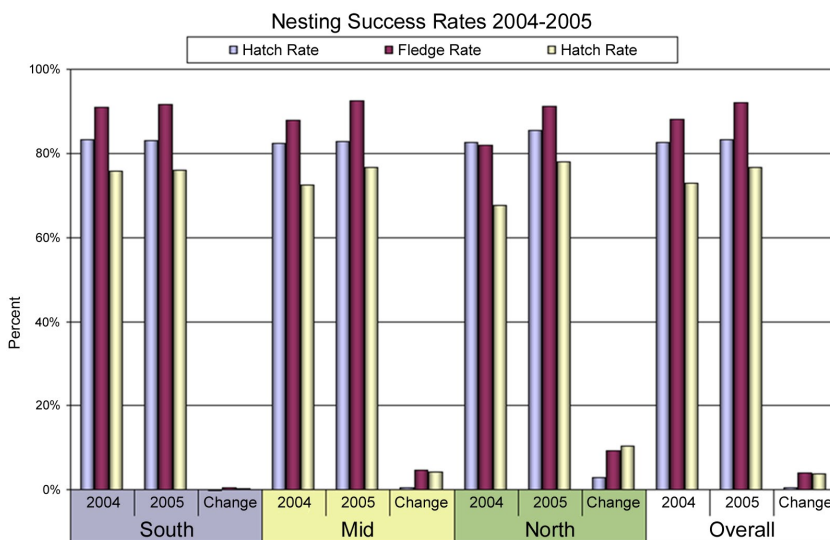


Fig. 4. Regional nesting success rates from 2004 and 2005 for each of the regions, as well as overall.

	South	Mid	Northern	Total
Participants	66	93	31	190
Nests with Eggs	1525	2553	546	4624
Total # of Eggs (E)	7782	12398	2809	22989
Total # of Young Hatched (Y)	6466	10268	2401	19135
Hatch Rate (Y/E)	83.09%	82.82%	85.48%	83.24%
Total # of Young Fledged (F)	5919	9505	2190	17614
Young that Fledged Rate (F/Y)	91.54%	92.57%	91.21%	92.05%
Overall Success Rate (F/E)	76.06%	76.67%	77.96%	76.62%

Table 2. The nesting success at participating colonies by region and overall.

pants, and Missouri had 5.

Continent wide results

Our participants reported that out of 22,989 eggs, 83.24% hatched and 76.62% fledged. Of the 19,135 young that hatched, 92.05% fledged. All of these numbers are up from last year (Fig. 2). These figures are based on 4,624 nests that had at least one egg. The continent-wide average clutch size was 4.97.

Regional results

The same three regions as last year's article, North, Mid and South (Fig. 1) were again used. There was little regional variation among all three success rate mea-

asures (Table 2). However, compared to those same measures from 2004, there were differences. 2005 proved to be a much better summer than 2004 for Purple Martins in the Northern Region and, to a smaller degree, the Mid Region. The Southern



Fig. 5. Long-time Project Martinwatch participant Andrew Troyer conducts a routine nestcheck in one of his T-14's. **Fig. 6.** This nest of seven eggs was found during a nest check.



Fig. 7. Removeable nest trays make nest checks and replacements easier. **Fig. 8.** Having one person record while the other checks makes the process much easier and faster.

James R. Hill, III

region was consistent both summers on all three success rates.

Many northern areas including the PMCA's research sites in Edinboro, PA, suffered high mortality in nestlings and eggs in the summer of 2004, due to a weather-induced food shortage. This is the single best explanation of the differences between 2004 and 2005. These periodic weather-induced mortality events are the primary reason the population density of Purple Martins, and indeed all obligate aerial insectivores, is typically lower as you go further north.

The weather-induced die off of early returning adults in 2005 (prior to egg laying) that occurred in Ohio through Iowa and up through Wisconsin is not directly reflected in these data. All three breeding success measures and mean clutch size (approximately 5.0) were consistent in 2005 among all three regions.

Rank	Landlord	State/Region	Eggs	Hatch	Success Rate
1	Eichholz	MO/M	17	17	100%
2	Silvey	MO/M	4	4	100%
3	Duffy	OH/M	4	4	100%
4	Shaffer	OH/M	10	10	100%
5	Loibl	FL/S	15	15	100%
6	O'Neal	TX/S	52	52	100%
7	Ray	TX/S	10	10	100%
8	Smith	TS/S	5	5	100%
9	Klugow	WI/N	34	33	97.06%
10	Krisik	WI/N	65	63	96.92%

Table 3. Top ten colonies that reported having the highest success rates, which were calculated by the percent of eggs laid that led to fledged young. Also exceptional are the top five landlords who fledged the most young. The Frederickses, TX fledged 1,357 young with a 83.32% success rate while the Lathams, KS fledged 894, a 88.25% success rate and the Bontragers, IN fledged 454, a 66.57% success rate. The Colaners, OH fledged 360, a 73.47% success rate and the Lehmanns, IN fledged 340, a 85.52% success rate. Congratulations everyone!

data is being used.

How to participate

If you do not already participate in Project Martinwatch please consider joining in 2006. You can learn more about Project Martinwatch or download forms at <http://purplemartin.org/pmw/>. If you do not have internet access, contact us by phone, mail, or fax.

Conclusion

Thank You!
The PMCA greatly appreciates the efforts of each and every participant. The benefits of closely monitoring your colony site are clear, and by doing so you are contributing to our knowledge of the species overall. See Scott Rush's article on page 11 to see one interesting example of how your Project Martinwatch