

# Project MartinRoost: A Cooperative Program for Conserving Purple Martin Roosts



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Fig 1

Fig 1: Cattail islands where Purple Martins and other bird species roost at Presque Isle State Park, Erie, PA. The islands total 1.8 hectares in area. Inset shows a close-up view of the cattails where the birds roost.

Purple Martins are highly social birds. After leaving the nesting colony and the care of the Purple Martin landlords, they form large, premigratory communal roosts where they sleep at night. Banding studies indicate that martins using a particular roost may come from a wide geographic area. Individual martins may use a roost for several weeks before migrating, but the roost itself may last 8-12 weeks or more.

Martin roosts typically are associated with larger water bodies. Reed beds or dry islands with low, thick brush are commonly used as roost sites (Fig. 1). Chosen roost sites typically provide sanctuary from predators and a micro-environment warmer and less windy than land roosts which can also form in clumps of trees in urban and suburban settings. Martins also roost on man-made structures, particularly bridges over water (Fig. 2), and on pipes and girders of petroleum refineries.

Scores of martin roosts are thought to exist in the eastern half of the country, and some can be very large. Clemson University scientists Kevin Russell and Sidney Gauthreaux, writing in the 1999 *Wilson Bulletin*, estimated that one roost at Lake Murray, South Carolina contained 703,000 martins. Although this is exceptional, many martin roosts are large enough to be detected by Doppler radar. As the martins leave

the roost in early morning, going in all compass directions to forage for the day, their synchronous departures show as distinct rings on radar (Fig. 3). Once established, martin roosts may be reused for many consecutive years.

## Problems and opportunities at Purple Martin roosts

Martin roosts occurring in natural areas such as reed beds or on dry islands seldom pose problems and often are unnoticed or ignored. Roosts that form in trees in urban and suburban areas, and roosts that occur on man-made structures tend to be better known. Unfortunately, this is because they may be perceived as a nuisance to municipalities and owners of private property, or they may be hazardous to the birds or humans. In an example of the latter case, the once hazardous roost at the Lake Pontchartrain, LA causeway achieved some notoriety before conservationists and transportation authorities cooperated to install fencing that prevented martins from colliding with vehicles (Fig. 4). Similar but unresolved situations exist at other roosts with the one at Umstead Bridge, Manns Harbor, NC being the prime example (Fig. 2).

On the positive side, martin roosts can be quite spectacular with tens of thousands of birds descending to roost at dusk (Fig. 5). With few exceptions, though, communities and

Photo by James R. Hill III; inset photo by Patrick Kramer

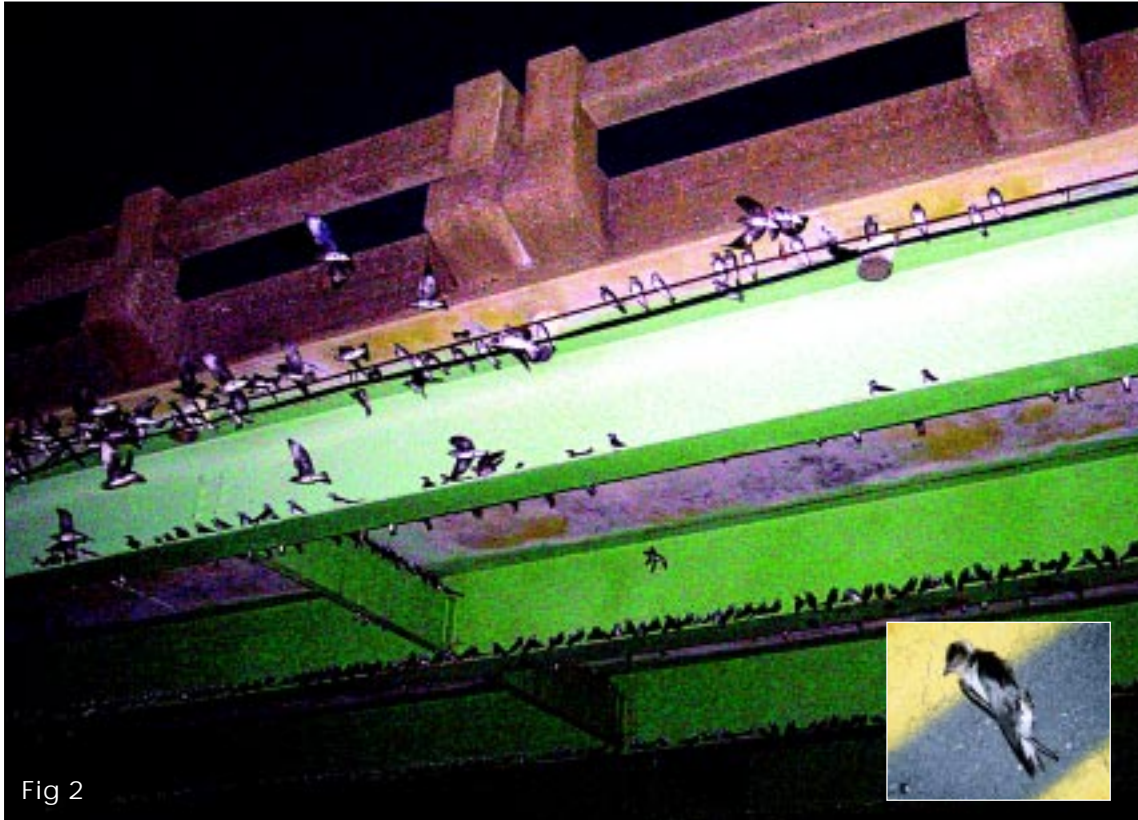


Photo by James R. Hill III. Inset photo by Alisa Esposito

Fig 2

Fig 2: Purple Martins roosting at the Manns Harbor Bridge (William B. Umstead Memorial Bridge) over Croatan Sound in NC. (Inset): One of 2,800 Purple Martins found dead, presumably killed by traffic, on Manns Harbor Bridge in 2004. Fig 3: Sequential radar images showing the characteristic rings of a known Purple Martin roost located in Decatur, AL. Frames progress from top to bottom at intervals of 9 to 11 minutes apart on the morning of July 20, 2004.

conservation groups have not capitalized on opportunities to incorporate the roost phenomenon into environmental education programs, birding festivals or ecotourism promotions. Likewise, little has been done proactively to protect roosts before problems arise, a notable exception being the *Purple Martin Conservation Association's (PMCA)* successful effort to obtain Important Bird Area status for the Presque Isle Bay roost at Erie, Pennsylvania.

### Project MartinRoost

Regardless of their location or associated problems and/or opportunities, martin roosts are critically important to the annual life cycle and ecology of Purple Martins. The *PMCA* is developing Project MartinRoost to protect and promote Purple Martin roosts with the assistance of *PMCA* members and others.

The first stage of Project MartinRoost, locating and cataloging known and suspected roosts, is nearly complete. Some roosts have been reported by the public via the *PMCA's* web site <<http://purplemartin.org/roost/>>. Most, however, were located by examining Doppler radar images obtained from the National Weather Service and intellicast.com. *PMCA* staff downloaded 4,461 images from 103 NEXRAD radar stations operating

from mid-July to mid-September in 2004, then spent many hours examining the images looking for the characteristic rings indicating martins departing roosts at sunrise. Currently, based on public reports and *PMCA* Doppler analyses, more than 200 known or suspected martin roosts have been located (Fig 6) and entered into the on-line *PMCA* roost catalog.

The second stage of Project MartinRoost, on the ground documentation, starts now with the 2005 roost season. The third stage, monitoring and protecting martin roosts, is expected to be a long-term effort.

### The critical roles of *PMCA* members in Project MartinRoost

*PMCA* staff can examine radar images and maintain a roost catalog, but ultimately the success of Project MartinRoost will depend on member involvement at the local level where the roosts are. *PMCA* members and others can help by documenting roosts and getting involved with local conservation efforts. Documentation, essentially fact finding, is an important initial step in any conservation program. Some martin roosts like the large one at Decatur, Alabama are well known, but many more are only suspected and need to be documented. Thus, volunteers are needed to verify roosts, de-

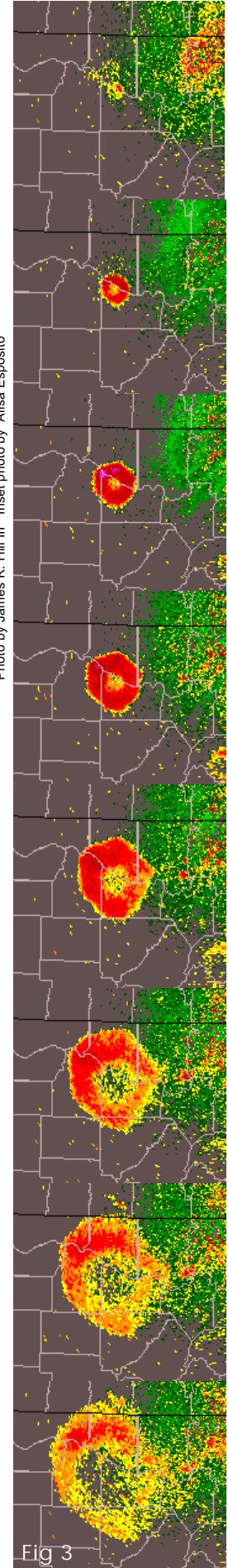


Fig 3



Photo by Keith Kimberlin Inset photo by Jim Vance



Photo by James R. Hill III

Fig 4: Bridge traffic over Lake Pontchartrain, New Orleans resulted in thousands of Purple Martin deaths until fencing was installed (inset), forcing the birds to fly over the traffic. Fig 5: Purple Martin roost on Lunch Island, Lake Murray, SC.

scribe them (precise location, size, habitat, ownership, etc.), and enter data into the on-line *PMCA* roost catalog. Ultimately, it is hoped that volunteers who initially document roosts will become roost stewards, monitoring and reporting annually on the status of "their" roosts.

In some cases, documentation will identify problems at particular roosts. Human activities at the roost may disturb or threaten the birds. Or the reverse situation may occur, with the roost being a nuisance to a property owner. In very rare cases, a roost may pose a real hazard to people, for example, if one was at an airport. On the positive side, documentation of martin roosts will also identify opportunities to educate people and promote appreciation and protection of martins. Across the country, community-based education programs and birding festivals are developing around such opportunities. Martin roosts can provide an excellent focal point for these events.

Whether problems, opportunities or both are documented at a martin roost, local knowledge and involvement will be critical to implementing appropriate conservation measures. Roost stewards will be encouraged to take the lead and work with local authorities and landowners to protect and promote martin roosts. Where feasible and appropriate, the *PMCA* will

support local conservation efforts. The *PMCA's* involvement with the Umstead Bridge roost at Manns Harbor, North Carolina is a good example of how this can work.

### Getting involved

As a *PMCA* member, you may be an ideal candidate to help document, protect and promote martin roosts. You have community connections and knowledge of local conditions, and, as a martin landlord, you have already demonstrated a stewardship ethic. Going from care of martins at the colony to care of martins at the roost will be a natural advancement for many of you. It's also a great way to enjoy martins after they leave your colony site.

To get involved with Project MartinRoost, log on to our web site at <http://www.purplemartin.org/roost/> and follow directions. Check the map of known and suspected roosts to get an idea of what is in your area. Go to the catalog page to see what is known about a particular roost that you might be interested in. In many cases, there will be little information. This is where you can make a significant contribution to Project MartinRoost. Find the roost and document what you observe. Give us




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Fig 6: Approximate locations of known and suspected Purple Martin roosts. See <<http://www.purplemartin.org/roost/>> for more details.

feedback on the project and catalog (e-mail [patrick@purplemartin.org](mailto:patrick@purplemartin.org)). We expect this to be a long-term project subject to continuous improvement. If you are interested in helping with Project MartinRoost, but do not have access to the Internet, contact us at 814-734-4420 to inquire about procedures.

### Expected benefits

Numerous benefits are expected from Project MartinRoost. Detailed information will be available for conservation plans designed to protect roosts. More prominent roosts may serve as focal points for educational events, or one of the evermore popular and common birding festivals. People who simply wish to enjoy a spectacular birding experience will be able to locate and visit a roost in their area. Martin landlords will benefit from knowing that, after leaving the colony, their birds are still being watched over at a roost. Ultimately, Purple Martins will benefit from a better educated public and the sustained recognition and protection of martin roosts. 

For more information on Purple Martin ecology and roosts see articles listed below. Many of the Update articles can be found at <<http://www.purplemartin.org/update/Reprints.html>>

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