

Magpie News



January 2006

Magpie Monitors

Welcome to Magpie Monitors (also known as Bicycle Bird Biologists), an organization dedicated to helping better understand the relationship between Yellow-billed Magpie populations and the West Nile Virus. Many of you have expressed an interest and a curiosity about our unique valley bird because you noticed an apparent recent decline of the Yellow-bills after years of sharing your neighborhoods with them. **Over 200** of you have e-mailed our web site with valuable information about magpies you have seen or in many cases *not* seen. Partly because of your interest and reporting, the potential threats to Yellow-billed magpie populations **are being taken seriously**.

We now have Magpie Monitors throughout the valley from Atascadero and Turlock to Chico and all points in between. We have Monitors in urban, suburban, and rural areas. All your observations are increasingly important, particularly data collected at regular frequent intervals following our protocols. You are a valued contributor to building a knowledge base for our very special valley bird.

New e-mail account:
magpie-mail@magpiemonitor.org

How You Can Help

There are several ways that you can help monitor magpie populations.

1. You can count magpies on a given **route**. It may be a walk you take every day or it may be on your way to work
2. You can participate in a **Saturday Magpie Count**, an easy, weekly, quick count at a location of your choosing.
3. A **roost** count would involve counting birds as they leave the roost each morning.
4. Finally, later this spring we will invite you to participate in a **nesting count**.

For details on each of these ways of monitoring, please visit our website at www.magpiemonitor.org

By counting magpies in so many different ways, **we hope to give scientists a better feel for magpie populations** and the impact the West Nile Virus might be having on them.

Dec. 15, 2005 An Important Day for Yellow-Bills

On December 15, 2005, a workshop was held at the UC Davis School of Veterinary Medicine to discuss the impact of West Nile Virus on Yellow-billed Magpies. The goal of the workshop was to come to an agreement and produce recommendations to benefit this species. This day-long event was attended by a diverse group of scientists, along with representatives from state agencies and non-governmental organizations. We heard presentations and discussed the biology of West Nile Virus and mosquitoes in California, ecology of Yellow-billed Magpies, and the science of monitoring bird populations. *Magpie Monitor / Bicycle Bird Biologist program was highlighted as one of the few monitoring efforts specific to Yellow-billed Magpies (thanks to all of you volunteers!).*

Volunteer magpie monitors are critical to success of these scientific objectives.



•The following conclusions and recommendations were made by the working group:

- Substantial concern was expressed that West Nile Virus may endanger the welfare and persistence of Yellow-billed Magpies.
- **Data is seriously lacking**; increased monitoring efforts are needed
 - Information is needed to estimate population sizes and to estimate exposure to West Nile Virus (and other threats, including habitat loss).
 - Populations and distribution of Yellow-billed Magpies need to be tracked through and following the West Nile Virus epidemic.
 - Monitoring centered around roost and nest sites is extremely important
 - Volunteer magpie counters are critical to success of these scientific objectives.
- **Funding is needed** to support monitoring and science involving Yellow-billed Magpies and West Nile Virus: roost and nest monitoring, assistance to dead bird surveillance, support to citizen science programs (like Magpie Monitors) in which volunteers count and monitor Yellow-billed Magpies.
- Members of the Working Group enthusiastically offered to continue working together to help facilitate recommendations. Effective monitoring will require collaboration among many agencies, researchers and volunteers.
- **If data indicate a need, the following potential actions may be instituted:**
 - Consider state and/or federal listing as species of special concern, threatened, or endangered. Yellow-billed Magpies have not yet been placed on the state list as species of special concern due to lack of data and because the most recent listing effort occurred before the impact of West Nile Virus was evident. They are included in the Audubon Watch List (<http://audubon2.org/webapp/watchlist/viewWatchlist.jsp>)
 - Protection of habitat, including reducing risk of mosquito-borne diseases.
 - Assessment of need for and practicality of a captive breeding program.

Highlights of the December 15 Meeting

The following is a summary of what we learned about magpies at the workshop on December 15, 2005:

• **Large numbers of Yellow-billed Magpies died in 2005**, representing a substantial proportion of the population, with very high rate of West Nile Virus prevalence.

1. In 2005 as of December 15, 2005, **6596 Yellow-billed Magpies were reported dead by members of the public** (California Dept of Health Services data for West Nile Virus Surveillance; <http://westnile.ca.gov/>). Of 439 Yellow-billed Magpies tested for West Nile Virus, 82% tested positive.
2. In 2004 (the first year West Nile Virus entered Yellow-billed Magpie habitat), 2037 Yellow-billed Magpies were reported dead. Of 374 tested for West Nile Virus 81% tested positive.
3. **These numbers likely represent the "tip of the ice berg"**: many more Yellow-billed Magpies died than were reported. Even if 20% of dead Yellow-billed Magpies were reported (and that would be an extremely high rate), for 2005 this would correspond to 32,980 dead Yellow-billed Magpies – and a more reasonable estimate of 10% equates to over 65,000 dead Yellow-billed Magpies in 2005 alone.
4. Pathology study of Yellow-billed Magpies infected with West Nile Virus indicates rapid severe onset of disease leading to fatality (Holly Ernest and Leslie Woods).
5. **Survivorship of Yellow-billed Magpies** exposed to West Nile Virus is **unknown**.

• Population sizes of Yellow-billed Magpies are unknown. Experts at the meeting who estimated Yellow-billed Magpies numbers said that the published numbers of "180,000" and between 100,000-200,000 are at best guesses based on very tenuous assumptions. If these numbers are close to reality, the Yellow-billed Magpies deaths in 2005 may represent 25-50% or more of the population.

1. In bird roosts monitored in Sacramento County by Scott Crosbie, **2 out of 3 roosts that had been occupied by large numbers of birds in 2003-2004 were vacant in fall of 2005**.
2. Sacramento county had high West Nile Virus activity in 2005 (dead birds, mosquito pools, human cases, volunteer reports to the citizen science program Magpie Monitor (www.magpiemonitor.org)).
3. Neighboring Yolo County was not as heavily impacted by West Nile Virus as Sacramento County. Sacramento-Yolo mosquito district officials and others predict that Yolo county and other areas may see high impact in the upcoming year.

• **Yellow-billed Magpies are unique, have keystone species qualities, and are worthy of monitoring and protection if necessary. They are one of only two California endemic bird species.**

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How Magpie Monitors Started

In 2002, when I started my faculty position at the UC Davis School of Veterinary Medicine, West Nile Virus was starting its sweep across North America. That year, raptors (birds of prey) and corvids (crows, magpies, jays, and relatives) were hit very hard by the virus in mid-western North America. As a wildlife veterinarian and geneticist, I think about wildlife health and how I can make positive difference to wildlife populations. As many of you have reported, I too enjoy watching the hawks, crows, jays, and especially the Yellow-billed Magpies as I ride my bike to work each day. Back then I wondered what would happen to them once WNV arrived in Central California.

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My first step was to start a research program to develop and apply DNA tests specific to Yellow-billed Magpies to compare genetical diversity and population structure before and after West Nile Virus arrived (that work is ongoing and proceeding well). Then early in 2004, I thought, "I can collect data on local magpies as I ride to work" - and started counting regularly. I really look forward to seeing the birds, and clicking on my tally counter whenever I ride. After those first few weeks, I wondered whether other people will want to help me and count magpies during their regular bike rides or walks ("route counts"). Since then, response has been unbelievable. Now I have the wonderful help of a volunteer, Julie Serences, to help me coordinate volunteers and their data. Also joining us is Scott Crosbie, who studied urban magpie roosts as a Masters Project at CSUS.

-Holly Ernest

Data Organizer

We really need the help of anyone with special skills in Access, database management and/or data analysis. Those who can travel to Davis and allocated at least 9 hours per week to volunteer help, please contact Holly at magpie-mail@magpiemonitor.org

Would love to hear from you. If you would like to share any special stories or experiences with Yellow-billed Magpies, please contact Julie Serences at magpie-mail@magpiemonitor.org

