Protocol for Monitoring Yellow-billed Magpie (*Pica nuttalli*) Nests

Introduction

Since the West Nile virus arrived in central California in 2004, thousands of Yellow-billed Magpies have died and populations are at risk for decline. To better document and understand magpie population trends, monitoring magpie nesting activities should be initiated range-wide.

Finding Nests

Yellow-billed Magpies are a social and conspicuous species, often making their nests easy to find and observe. Magpies build large, globular stick nests, about 1 meter (3 feet) in diameter, with prominent domes (stick-canopies). Nests are usually constructed in relatively high locations and multiple types of vegetation or other structures may be used. Nests are most commonly constructed in oaks (sometimes within mistletoe clumps, which can make them hard to identify), sycamores, cottonwoods, locusts, gums (*Eucalyptus* spp.), pines, cypresses, willows, palm trees and utility poles. Magpies will either nest in loose colonies (groups of nests fairly close together) or solitarily. Colonies may be spread out over several acres and it is less common for more than one active nest to be present in the same tree.

Nesting cycle

Magpies will visit nesting areas and previously used nests throughout the year. Generally, magpie pairs build a new nest each year but occasionally they will reuse the same nest for several years. Nest construction or refurbishment occurs most frequently from December through March. In studied populations, the nesting season starts in early April and is completed by the end of June. Females generally lay eggs from the beginning of April through May. When incubation begins, the female will remain on the nest for most of the day (often vocalizing very loudly) and the male will provide her with most of her food. Young generally hatch from early May through June and they generally fledge (leave the nest) within 30 days. Following hatching, both parents will feed the young. The young, which are slightly smaller than adults, generally remain in the nest tree for 4-5 days after hatching before venturing to the ground or other trees. They will beg for food when approached by their parents and after about six days they will fly/glide to the ground and peck at objects and engage in social activities. Magpies usually have one brood (group of young produced) each year but may re-nest if the first nest fails early in the breeding season.

	MONTH											
	J	F	M	A	M	J	J	A	S	O	N	D
Nest Construction/Refurbishment												
Nesting Season												
Eggs Laid												
Young Born												
RECOMMENDED MONITORING PERIOD												

Monitoring Nests

Observers are encouraged to monitor nests at all times of year **but especially from mid-March through July (prior to, during, and just after the breeding and fledging seasons)**. When visiting the nest, take care to not interfere with the bird's behaviors. Do not feed the birds or attempt to climb up to the nest. Simply observe the behavior of the magpies and note what you see on the Data Sheet provided at the end of this document. Binoculars or a spotting scope will be very handy in assisting with your observations.

Ideally, observers should conduct at least four observations per month from mid-March through July. Observers should look for specific activities associated with each stage of the nesting cycle.

Mid-March – watch for nest construction or refurbishment.

April – watch for behavior indicating that the female (males and females cannot be distinguished by appearance) is incubating eggs. For example, one bird (the female) will sit inside the nest for long periods of time and will be fed by another bird (the male). Females also begin food-begging (a very nosy and conspicuous whining cry) at approximately the onset of egg laying. This behavior continues throughout the incubation period but decreases in frequency.

May – watch for behavior indicating that the female is incubating eggs or that young have hatched (i.e. both parents bring food to the nest or vocalizations of young, but care should be taken not to confuse female food begging with vocalizations of young).

June – watch for behavior indicating that young have hatched and for the presence of young outside the nest (fledging).

July – **once fledging has occurred, observers should increase the frequency of observations to try to determine how many young were raised and whether they survive their first few weeks of life. Determining whether the nest is successful (young are fledged), and how many were fledged (if possible) is the most vital part of nest monitoring**. However, it can often be difficult to determine the number of young

fledged. Young magpies will be smaller than the adults but will grow quickly. They can often be identified by their noticeably shorter tails (adult tails are as long as the body).

Submitting Data

Print Data Sheets and take them with you into the field to record your observations. The Data Sheet following this page has multiple questions for the observer(s) to answer. Answering these questions as accurately as possible will aid in determining the stage of the breeding/fledging cycle the pair is at and whether they were successful in raising young. When observing a nest for the first time, name the nest using street names and addresses when possible, or use Latitude and Longitude data if it can be obtained. Use one sheet for each observation date. Data Sheets in Microsoft Excel are also available, if preferred.

Once data has been collected, fill out the Data Sheet and email a copy of it to:

magpie-mail@magpiemonitor.org

Data Sheets may be submitted singly or observers may wait until the end of the nesting season to submit all data sheets at once.

If emailing the data sheet is not possible, send a hardcopy of the data sheets to:

Devine, Tarbell & Associates, Inc.
c/o Scott Crosbie
2720 Gateway Oaks Drive, Suite 300
Sacramento, CA 95833

YELLOW-BILLED MAGPIE NEST MONITORING DATA SHEET

Date: Observer(s): Contact Information:

Nest Name: Nest Location (Street address, description):

Latitude: Longitude:

Nest Qualities (Check answers that apply)

Where is the nest constructed?

☐ Oak ☐ Sycamore ☐ Cottonwood ☐ Locust ☐ Other:
☐ Gum (*Eucalyptus*) ☐ Pine ☐ Palm ☐ Utility Pole Species of tree or shrub nest is in:

NESTING STAGE	YES	NO	NOT SURE	FOLLOW-UP QUESTIONS
NEST CONSTRUCTION				
Is the nest newly constructed?	☐	☐	☐	If "No", how long has it been used?
Is the nest part of a loose colony?	☐	☐	☐	If "Yes", how many nests are present?
Are magpies active at the nest?	☐	☐	☐	If "Yes", what are they doing?
EGG LAYING/INCUBATION				
Is a female sitting on the nest (incubating)?	☐	☐	☐	If "Yes", what is your evidence?
Is a male taking food to the female?	☐	☐	☐	If "Yes", what food?
NESTLING				
Are both parents taking food to the nest (i.e. fledglings present)?	☐	☐	☐	If "Yes" what food?
Are the young begging for food?	☐	☐	☐	
FLEDGING				
Have the young left the nest?	☐	☐	☐	If "Yes", how many are present?
Have the young left the nest tree?	☐	☐	☐	If "Yes", what are they doing?

Did you observe any interactions between the magpie pair and other birds? ☐ Yes ☐ No If "Yes", what were they?

Other Observations:

Length of Observation: