

CONE NESTS OFFER AID TO MOURNING DOVES

BY JOHN B. COWAN

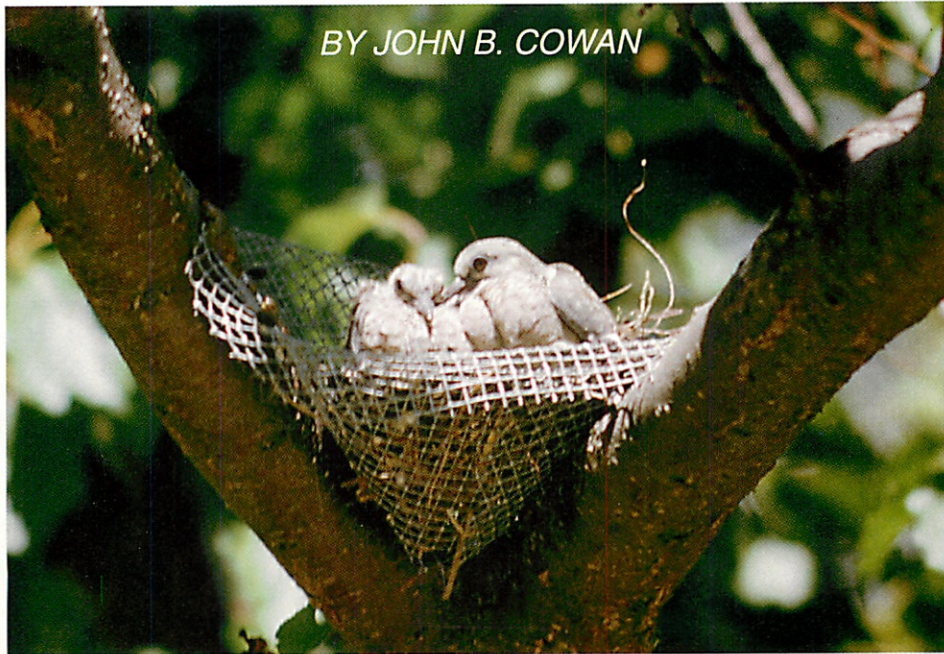


Photo by John B. Cowan

The mourning dove is a bird which offers pleasure to both the hunter and the bird lover. It is the most hunted animal in California. And it is a bird you can help.

Mourning doves are notoriously poor nest builders. Dove nests are often loose, flimsy platforms of twigs constructed in precarious locations where wind and weather can take their toll. Wire cone nests are a tool you can use to help doves do a better job of nest building. If you live in California, mourning doves nest near you. Mourning doves nest in all 58 counties of California, but the valleys, foothills and desert areas are their major nesting grounds.

The following information tells how, where, when and why you can help mourning doves.

HOW: Purchase either quarter-inch or three-eighths inch galvanized wire mesh hardware cloth. It is sold at most large hardware stores. With tin snips or good wire cutters, cut the screen into 12-inch squares. Each square will make one cone nest.

Cut off the four corners of the square, approximately four inches down from each corner, to make a rough circle of screen. Now, cut out a four-inch wide piece of pie-shaped mesh screen extending into the center

of the circular screen. Leave the cutout wire nests flat for transporting or storage.

When you are ready to install your cone nest, just close the pie-shaped opening by overlapping the pie-cut edges about four inches. Presto! You have your wire cone nest.

To hold the nest firmly in place at your selected tree site, use at least four staples, large roofing tacks or nails that are pounded in and bent over the screen. Place the staples or nails into two or three sides of the nest. Bend the rough outer edges of the nest down slightly to form a smooth place for the birds to alight.

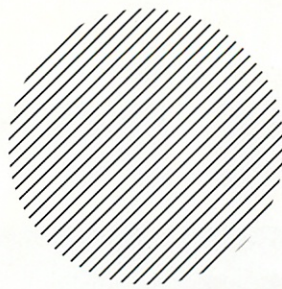
WHERE: The best nest sites are along tree limbs with forked branches and moderate shade. At the Department of Fish and Game's Gray Lodge Wildlife Area, where the wire cone nest was first used, most all doves preferred nests from six to 18 feet above ground.

Doves like good visibility from their nest location. So, don't select nest sites with heavy, brushy limb growth. Doves prefer areas where easy escape in several directions is possible. Install the nests in the interior part of trees where limbs are sturdy.

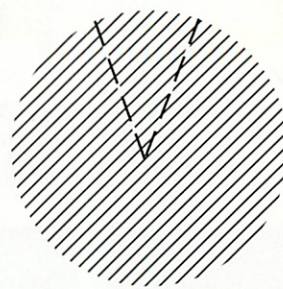
For optimal use of cone nests, it is best to place them in or near established nesting areas. Doves are unlikely



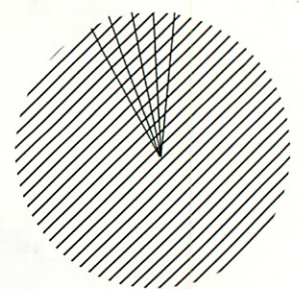
1. Cut out 12" square piece of hardware cloth



2. Trim the 12" square to form a circle



3. Cut out a piece of pie as shown



4. Close the pie cut by overlapping edges about 3"

to move their nest site more than 30 yards, if at all. The advantage of placing wire cone nests in established areas will be apparent by the very next nesting season.

However, over time, new nesting areas can be established. At Gray Lodge, wire cone nests were placed in a grove of trees where doves did not nest. During the first season, two pair used the cone nests. By the fourth year, there were seven nesting pairs in the grove.

Another point to remember: Doves search for nesting materials no more than 60 feet away from their nest location. So, if your selected site is devoid of old dry weed stocks, you can gather some and scatter it under or near the nest tree. Dry star thistle weed stocks were the most preferred nest lining material at Gray Lodge.

Doves are not fussy in their choice of trees used for nesting. Over the years, on Gray Lodge and adjacent ranches, doves have nested in willow, cottonwood, black walnut, Chinese elm, Russian olive, catalpa, Arizona cypress, black locust, apricot, prune, almond — the list could go on. In all our Gray Lodge studies, we found only two ground nests.

Doves have strong homing traits. They return to the same nesting territory where they were hatched and raised. This fact was corroborated by our Gray Lodge studies and highlighted by an experience I had at the Gray Lodge Headquarters Study Area.

Many dove nestlings (squabs) were banded during the various studies. I banded one on Sept. 13, 1952 from a wire cone nest in an elm tree in the headquarters area, only 25 feet from my residence. On Sept. 23, 1958, I found

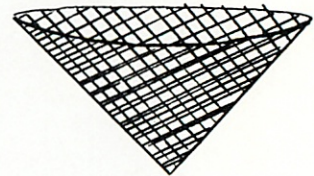
the same dove, its leg band intact, lying on the ground less than 20 feet from the tree where it had been hatched. The dove died of injuries, presumably from a flying accident. In between the two dates there was a life span of 6 years, 10 days. This certainly lends credence to the strong homing traits of mourning dove.

WHEN: Actually, wire cone nests can be put out at any time of the year. However, for good first year results, they should be installed by late February, March or April. This is before most resident doves have started their nesting activities. Some migrant doves may not arrive until June, so it is best to get your cones out before then.

Studies at Gray Lodge were all done in established tree nesting areas. However, there are several areas where dove build nests on the ground. For example, in Glenn and Modoc counties, there are large pockets where ground nesting occurs and in some locations in the San Joaquin Valley, particularly in cotton fields where dove find shaded spots under the cotton plants.

Management experiments with wire cone nests in trees or shrubs in ground nesting areas could greatly increase the productivity of the dove population. Off-the-ground nests would eliminate nest failures due to predators such as skunks, raccoons, rats, feral house cats, possum, squirrels and snakes, as well as detrimental agricultural practices.

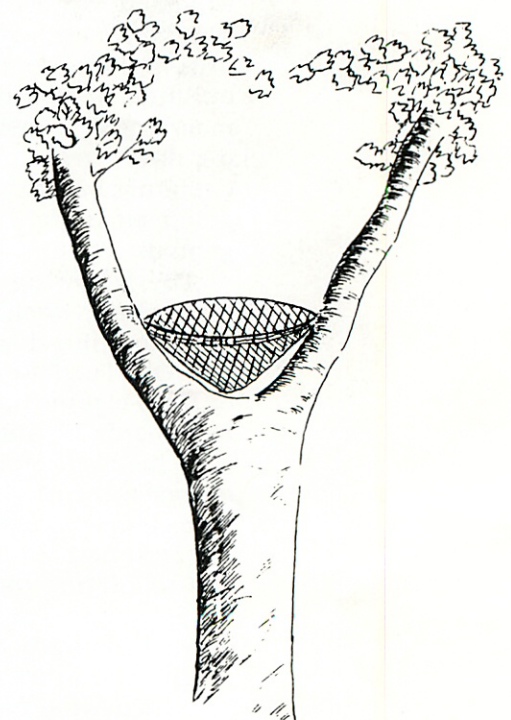
John B. Cowan retired from the California Department of Fish and Game after many years of managing Gray Lodge Wildlife Area. He is credited with developing the wire cone nest which carries his name — the "Cowan cone nest."



5. Side view of cone nest ready for tying into tree

Installation

Select the site for the nest in a moderate shade from 6 to 16 feet above the ground. Nest sites must have limb clearance for easy escape for doves. Tie nest into place and bend the edges of the nest down slightly after it is fastened to the tree or branch.





Mourning dove attends to her cone-nest chicks. Photo by John B. Cowan.

DOVE WIDELY-STUDIED

Driven by money provided by hunters, research continues into the beautiful mourning dove, with at least a half dozen studies going on in California.

In May, 1994 California Department of Fish and Game wildlife biologists took part in a nationwide "call-count" survey of mourning doves. Researchers listened for dove calls along dozens of 20-mile routes. The same routes have been surveyed each year since 1966. Analysis of the 1994 survey shows a 3.9 percent increase in doves from 1993 to 1994.

Nearly 10,000 mourning doves were trapped and banded during 1993 and 1994 in seven southern California counties. City of San Diego personnel helped Fish and Game in this five-year project to assess migration patterns and survival rates.


Also in 1993, DFG began a study to determine how many mourning doves and band-tailed pigeons are afflicted with trichomoniasis. This disease occurs when a single-celled animal called a protozoan infects the throat of these birds. After one or two weeks, seriously infected birds usually die. Trichomoniasis is not communicable to humans, but dove or pigeon die-offs should be reported to Fish and Game. Biologists want to know what role the disease plays in dove and pigeon populations. Recent analysis of throat swabs taken from captured doves and dead pigeons showed a disease rate of 5 to 7.5 percent in doves, and 8.3 to 26.1

percent in pigeons. A disease rate over 23 percent can reduce production of doves and pigeons.

Every year, Fish and Game biologists collect dove wings from hunters to monitor annual dove production. In September, 1994, 7,332 dove wings were collected, of which 3,814 came from juvenile birds and 3,518 came from adults. This represents an ratio of 1.08 young per adult. The 1993 ratio was 0.98. An annual production of 1.4 young per adult is optimal.

DFG researchers also survey hunters each year to determine species they hunted and numbers taken. The 1993-1994 survey estimated a mourning dove harvest of 1,531,521 birds taken by 91,706 hunters. This survey is another way to provide trend information for game species. The same survey in 1992-1993 showed 2,286,603 doves taken by 148,581 hunters.

Other mourning dove studies by Fish and Game and the U.S. Biological Service are aimed at determining how many nests are concentrated in various habitat types, how often nests are re-used and how successful mourning doves pairs are in raising young.

All these studies provide valuable information to help Fish and Game biologists manage mourning doves in California. 

Information supplied by Sam Blankenship, DFG wildlife biologist

Doves flock to cone nests at Gray Lodge

As manager of the California Department of Fish and Game's Gray Lodge Wildlife Area in the 1950s, John B. Cowan was interested in helping mourning dove populations. While some research was being done with solid cone material as a nesting aid for birds, Cowan decided to try the hardware cloth described in his article.

Results were dramatic.

"Doves liked them, doves used them and no cone nests were lost to other elements," Cowan said.

Cowan set out 20 wire cone nests in one area of Gray Lodge, then meticulously kept track of their use by birds.

"After four years, 37 pairs of mourning doves had nested in that area and 27 of those pairs had used the wire cone nests," Cowan said. "Use of the area by nesting doves doubled and several cones were used by other birds — Brewer's blackbirds, western kingbirds and shrikes."

Cone nests could also attract nesting doves to entirely new sites, Cowan said. Cowan placed 20 wire cone nests in a grove of Catalpa trees where no birds were nesting. Two pair of doves nested in the grove the first year. Three nesting seasons later, seven pairs of mourning doves were using the grove, along with kingbirds and shrikes.



This natural dove nest blew down five days after this photo was taken. Photo by John B. Cowan.

A CENSUS OF ONE DOVE NESTING SEASON SHOWED:

| Month of Census | Cone Nests in Use by Dove | Other Dove Nests | Total Active Dove Nests |
|-----------------|---------------------------|------------------|-------------------------|
| April | 12 | 13 | 25 |
| May | 17 | 21 | 38 |
| June | 18 | 33 | 51 |
| July | 19 | 60 | 79 |
| August | 11 | 27 | 38 |
| September | 5 | 10 | 15 |
| TOTALS | 82 | 164 | 246 |

OUTDOOR CALIFORNIA first reported on the development of the wire cone nest for mourning doves in its July, 1957 issue. The findings were the result of approximately eight years of research carried on by the author at the Department of Fish and Game's Gray Lodge Wildlife Area in Butte County. Since that time, many wire cone nests have been put in place by conservation groups, Boy Scouts and other interested individuals. The purpose of this article is to enlist and educate any interested helpers in proper installation and site selection. The purpose is also to highlight the importance of "human's helping hand" in the preservation of our wildlife resources.

Feb 1996

Cone hosts

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Need another 3' x 3' piece of screen