

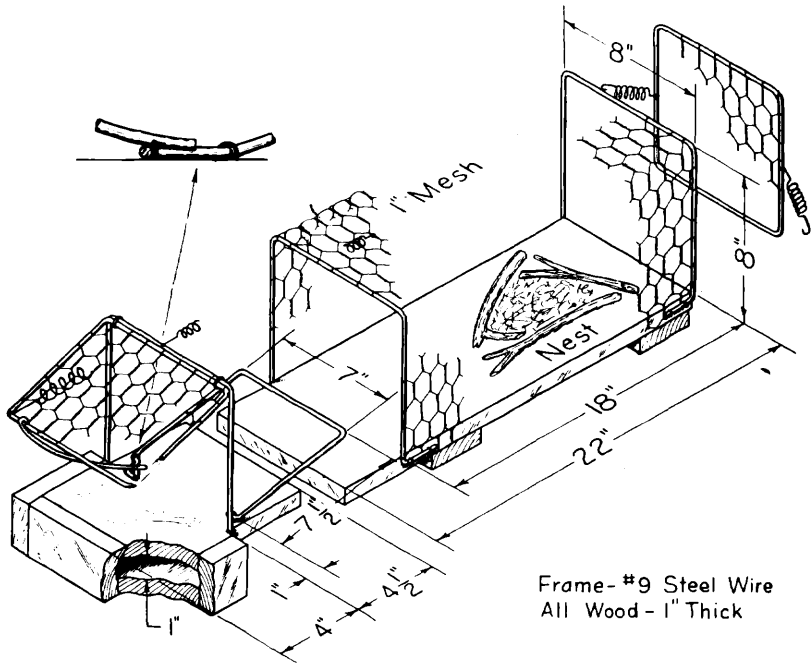
**COMBINATION SUBSTRATUM AND AUTOMATIC TRAP  
FOR NESTING MOURNING DOVES**

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Calhoun (1948) experimented, on the Ohio State University campus, with simple nesting substrata for attracting Mourning Doves, and he found a rather high degree of utilization. The substrata consisted of flattened, cone-shaped platforms made of heavy-weight roofing paper. Some of these substrata were still in place during 1950, and a large percentage were being used as nesting platforms by doves. This observation suggested that Mourning Doves might nest on platforms which, with slight modification, could be converted into traps.

Two types of combination nesting substrata and trap platforms were tested during 1951-1953 on the Ohio State University campus. One of these consisted of a short board placed in a tree in a horizontal position. Three small sticks, arranged in the form of a triangle, were nailed to the surface of the board. This was done to give the platform a more natural appearance and to prevent the nest from being dislodged by the wind. The entire top of the trap was removable, and only the bases were placed in likely Mourning Dove nesting sites. None of the nine substrata of this type was used for nesting. The second type platform was similar to the first except that most of its length was covered with an arch of poultry netting. The two ends which formed the trap were removable. Fifteen of these open-end cages were erected during 1951 for use by nesting doves. Of the 15, six were occupied by doves, and three were destroyed in land-clearing operations soon after erection. The six pairs nesting on the substrata represented about half of the pairs of doves known to be nesting in the immediate area. In 1952 eight of these substrata were erected and four were used by nesting doves; during 1953 ten were erected and six were used. Each of these counts cover separate substrata and do not include renestings on the same substrata; although from one to three pairs used the same substrata for a second nesting attempt each year.

The top and sides of the cage were made of one-inch mesh poultry netting reinforced at the ends with number nine-gauge smooth steel wire. The arch of wire was permanently attached to the base board. The removable ends were also made of poultry netting reinforced with the heavier wire. The ends were attached to the open-end cage with small springs. In order to hold the hinged door firmly in place, the double base of the end holding the trap mechanism was fitted over and under the end of the piece of wood forming the nesting substratum. When the trap was in operation, the door was closed with a light spring. It was held open by a heavy wire fitted with a notch, the latter of which engaged a small staple driven into the removable base which held the door in place. With the treadle in a slightly elevated position, the trigger fitted under the prop near the notch. Slight downward pressure on the treadle disengaged the prop and permitted the door to close. The sensitivity of the trigger was adjusted by changing the depth and angle of the notch in the prop. The entire assembly was painted black.



Doves were fledged in 19 of the 23 nests located on substrata during the period 1951-1953. This represents a nesting success of 82.6 per cent. The four unsuccessful nests suffered the following fates: No. 1 was destroyed by land-clearing operations; No. 2, a nest established during March in which only one egg was laid, was deserted before incubation had begun; No. 3, the week-old young perished during a heavy snowstorm; and No. 4, the eggs disappeared from the nest. James P. Mackey, Jr. (unpublished field notes), studying Mourning Doves on the Ohio State University campus in 1952, determined that 33 (64.7 per cent) of 51 nests were successful. It should be noted that the nesting success drops to 62.2 per cent when the six nests on the substrata are not included in the calculation. Mackey indicated that wind was a major factor in the destruction of nests in 1952. The loss from wind is largely averted when the doves place their nests on these substrata.

Swank (1952) recently developed a pull-string trap for the capture of nesting Mourning Doves, and he was successful in taking 94 birds. The Mourning Dove normally does not enter a nesting trap readily, and when a pull-string trap is used the operator may have a long wait before the bird enters the trap. Also, it is sometimes impossible for the operator to station himself in such a position that he has an unobstructed view of the nest, and good visibility is imperative when a pull-string trap is used. Accordingly, it seemed desirable to investigate the feasibility of using an automatic trap. Although the sample was relatively small, the automatic trap was used with notable success

in 1951. Of the six pairs of doves nesting on the substrata, all but one bird were captured.

The trap described herein seems to be quite versatile, and it can be operated either automatically or manually. If it is desired to have a pull-string trap, the prop holding the door ajar may be placed against the staple on which the treadle hinges. By attaching a string at the site of the notch in the prop and threading the string through the top of the cage, a tripping device can be extended to a point of vantage and the trap operated manually.

Trapping operations were carried on when the nestlings were between three and eight days of age. At night the door of the trap was propped open without the trigger engaging the treadle. If a bird were sitting on the nest the following morning, the prop under the door was pushed from its resting place with a forked stick. The brooding bird was thus captured, and the trap was set for the second bird.

Where studies are conducted on nesting doves, it is sometimes desirable to nest-trap all of the adult doves in a chosen area. Of course, it cannot be expected that all of these birds can be induced to place their nests on the substrata. Accordingly, tests were made as to the feasibility of moving nests onto substrata. Again the sample was admittedly small, but all efforts at moving nests were attended with a high degree of success. Twelve birds were trapped on the six nests that were moved onto substrata.

A total of 23 adult doves were trapped. Four of these birds sustained slight injuries on the bends of the wings, and this was the only apparent damage imposed by the trapping operations. The captive birds often fluttered about in the trap immediately after the door was released, but they soon quieted down and brooded the nestlings. The author made no attempt to trap the nesting doves during 1952 and 1953.

Preliminary results indicate that this substratum may have value for reducing nesting losses, but it must be tested under diverse situations before it can be unconditionally recommended. The trapping of adult birds on their nests always carries with it potential hazards, but such hazards need not be augmented by the use of an automatic trap for the Mourning Dove if appropriate precautions are exercised. In at least some instances, an automatic trap is preferable to a pull-string trap. The marked success attending the limited operation of this combination substratum and automatic trap for nesting Mourning Doves suggests that its utility should be given further test by wildlife biologists.

#### LITERATURE CITED

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