

10-1983

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Cole, Patrick H.; Johnson, Ron J.; and Stroup, Walter W., "THE RESPONSE OF STARLINGS TO THREE AUDITORY STIMULI" (1983). *Bird Control Seminars Proceedings*. 258.

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THE RESPONSE OF STARLINGS TO THREE AUDITORY STIMULI

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ABSTRACT

Recordings of a starling (*Sturnus vulgaris*) distress call, white noise, and a 917 Hz pure tone were presented to starlings in an outdoor enclosure to determine their relative effectiveness in frightening the birds into flight. Stimuli were presented during early morning hours on two consecutive days during two seasons, summer and winter. Effectiveness was measured as a function of the time birds remained off the ground and away from the food source after a presentation was made.

The pure tone elicited essentially no response. Early responses (first 10 presentations) to the distress call and white noise did not differ significantly during the first or second test day of the summer and the first test day of the winter ($P > 0.05$); during the second test day of the winter, the distress call elicited a greater early response ($P < 0.05$). Later responses (after 10 presentations) for the distress call were consistently greater than for the white noise during both test days each season ($P < 0.05$).

Habituation to the distress call was consistently slower than to the white noise for both days each season ($P < 0.05$). The second day of testing showed a spontaneous recovery from the habituation acquired on the first day for both the distress call and the white noise during both seasons. Rehabilitation to the white noise on the second test day was consistently faster than the habituation on the first test day during both seasons ($P < 0.05$). Rehabilitation to the distress call on the second day was faster than habituation on the first during the summer ($P < 0.05$) but did not differ during the winter ($P > 0.05$).

Summer responses to the distress call and the white noise were consistently greater than the winter responses on both test days ($P < 0.05$). Advantages and disadvantages of the technique used were discussed.

DISCUSSION

Question: In small roosts, we recommend use of distress calls, but the tapes are expensive (\$15). Would the radio static (white noise) be a more economical approach?

Johnson: Radio static may be less expensive but not as effective. We used white noise along with the other sounds because we wanted to test a range of sounds including both biological and non-biological. If you wanted to use something other than distress calls, I would recommend that you use a whole lot of variable sounds — beating on a tin sheet, shotgun sounds, other strange and unusual noises.

Laidlaw: The 1812 Overture has given some degree of control. If you want, you could capture a starling and make your own distress call recording.

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