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A new technique for trapping female Red-winged Blackbirds

Jaroslav Picman

Many studies conducted with Red-winged Blackbirds (*Agelaius phoeniceus*) require capture and colour-marking. Territorial males can be captured within their territories with traps holding a redwing male 'intruder' (Bray et al. 1975). Less successful methods of capturing males involve mist nets and Potter traps baited with corn (Peek 1971). But catching breeding females is much more difficult and time-consuming. Mist-netting results in destruction of the vegetation near nests, and does not catch all the females (Jackson 1971). Catching females in traps baited with white bread (Nero 1956a) and corn is also inefficient (G. Orians, pers. comm.). Snare traps set on Red-winged Blackbird nests and commercial bird traps baited with redwing young used by Jackson (1971) result in disturbance directly on the nest and thus increase the chance of nest desertion. Most of these disadvantages also apply to the more successful hoop-netting traps used by Seubert (1963), and the nest-traps designed by Fankhauser (1964) and Nero (1956a).

In 1976 I began studying polygamy in Red-winged Blackbirds and designed a new trapping technique that eliminates most of the disadvantages of previous methods. This technique makes use of the fact that redwing females defend breeding territories against other intruding females (e.g. Nero 1956b). Thus it should be possible to capture breeding females in the same way as territorial males — by using a trap baited with a captive female intruder.

Bray et al. (1975) gave a detailed description of a trap designed for capturing territorial male redwings. I assume, however, that this trap may be less efficient if used for capturing female redwings because breeding females are less aggressive towards a female 'intruder', and more cautious after arriving on a trap than territorial males, and thus they might refuse to enter the enclosed top compartment of this trap. Therefore, I describe the most efficient version of the trap which I used for capturing females in my study.

The trap consists of a cage (50 x 50 x 20 cm) for the intruder, with a door and two small containers for

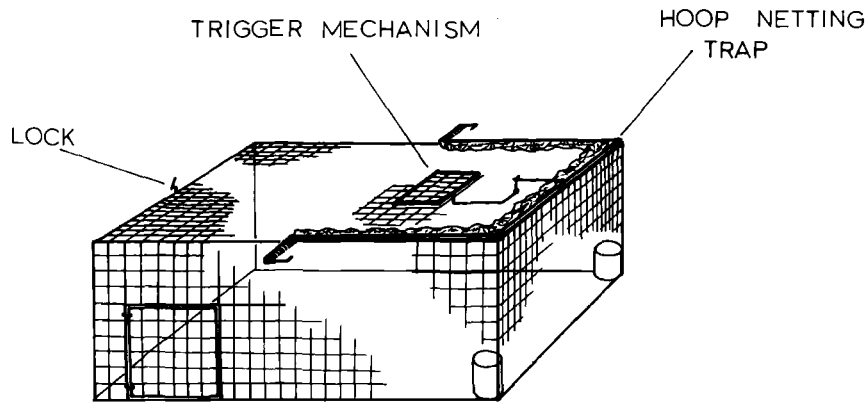
food and water. The cage is made of wire-mesh (2.5 x 2.5 cm). A hoop-netting trap is attached to the top of the cage, and a trigger mechanism is set off by the attacking female (Fig. 1). Two hoops of the trap are made of a hardened stainless steel wire (piano wire, diam. 3.0 mm). One hoop is attached to the cage, the other left free. Springs, wound from a hardened stainless wire (piano wire, diam. 1.0 mm), force the free hoop to flip over on the top of the cage. When it hits the cage top, the free hoop is locked down (Fig. 1a) and thus prevents the captured bird from escaping. The netting attached to both hoops has a mesh approximately 1 x 1 cm (larger mesh may be more suitable). The trigger platform (15 x 7.5 cm) is made of wire mesh (2.5 x 2.5 cm). Other parts of the trigger mechanism (Fig. 1b) are made of piano wire (diam. 1 mm). All metal parts are painted to make the trap better camouflaged.

I used this trap successfully during the 1976 and 1977 seasons, when I captured and colour-banded 74 and 34 redwing females, respectively. I was unable to capture a female on three occasions, but this was most likely because it was in early June, when females are more tolerant towards each other.

I set the trap about two meters from a nest on a wooden stand about one meter high. The best times for trapping females are early in the morning and late in the afternoon. Redwing females are easy to trap during the early stages of incubation, when they can be caught in 10-20 minutes. Later, especially when young are in the nest, trapping usually takes longer. This could be explained by the fact that the mutual tolerance between redwing females increases with the progress of their breeding cycle. (Nero 1956b).

To conclude, I recommend this technique because it is fast and efficient, does not damage the vegetation near the nest, and does not disturb the nest itself. The described trap is presumably more suitable for capturing redwing females than the trap designed by Bray et al. (1975). In addition, the described trap is smaller and therefore easier to handle. This technique probably could be modified for capturing other territorial bird species.

a.



b.

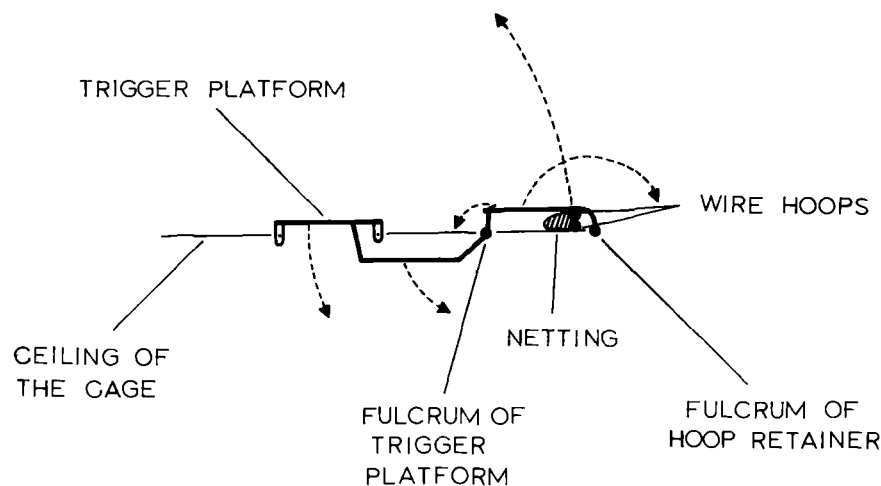


Fig. 1: a. Trap for capturing female redwings.

b. Details of the trigger mechanism; movement of individual parts of the trigger is indicated by dashed arrows.

Acknowledgments

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