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ANALYSIS OF PREDATOR AVOIDANCE BEHAVIOR IN CALIFORNIA VALLEY QUAIL

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ABSTRACT

Quail populations have been in decline across the United States, primarily due to habitat loss and climate. For remedy, landowners and game managers have attempted to restore populations by releasing captive-reared quail. These releases were largely unsuccessful, presumably due to high predation losses. Recently, there has been an increased interest in quail translocations, which tend to have lower mortality rates than captive-reared bird releases. Translocations are expensive and unpredictable, and require many person-hours; releasing captive-reared quail would be more efficient if the practice were successful. We compared predator avoidance behavior between captive-reared and wild-translocated California quail (*Callipepla californica*) in an aviary using simulated predator attacks (raptorial and mammalian). We recorded predator detection time, antipredator response time, and antipredator response type. Antipredator response type (run, flush, or freeze) frequencies were different, where captive-reared quail ran more frequently than wild-translocated quail when encountering a simulated predator. Predator detection time between captive-reared and wild-translocated quail was not different. However, antipredator response time was quicker for captive-reared quail than wild-translocated quail when subjected to simulated raptorial and mammalian attacks. The differences in antipredator response time and response type may be due to the lack of predator interaction experience of captive-reared birds and offer insight into observed differences in postrelease mortality between captive-reared and wild-trapped quail.

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