

UPDATED DISTRIBUTION AND REINTRODUCTION OF THE LOWER KEYS MARSH RABBIT

PROBLEM STATEMENT

Listed as federally endangered in 1990, the Lower Keys marsh rabbit (LKMR) exists as a metapopulation in patches of wetland habitat in Florida's Lower Keys. This species is susceptible to a host of threats, not least of which is human development and the associated loss of habitat and conflicts (e.g., vehicle/animal collisions). According to the US Fish and Wildlife Service (1999), there exist between 100 and 300 adult males. Ominously, a population viability model has predicted that the LKMR metapopulation has a 100% probability of being extinct in 50 years (Forys and Humphrey 1999).

OBJECTIVES

The objectives of this study were to monitor current LKMR populations and to reintroduce LKMR in suitable habitat within the species range. Monitoring the distribution and status of LKMR populations is critical for targeting future management actions. Reintroductions provide a means of artificially recolonizing potential habitat. Both actions are needed for the recovery of the LKMR.

FINDINGS AND CONCLUSIONS

Transects for rabbit fecal pellets were used to survey habitat patches documented in previous surveys (1988-1995) and to identify additional patches of occupied and potential habitat. Pellet surveys included 228 patches of occupied and potential habitat—102 of the patches were occupied by rabbits. Patches were arranged in 56 occupied and 88 potential populations.

Current surveys revealed new patches of both occupied and potential habitat. Considering only areas included in the 1988-1995 surveys, however, revealed a net decrease in the number of occupied patches. Many of the recently extirpated populations, which tended to occupy the periphery of larger islands or small neighboring islands, were unlikely to be recolonized without human intervention. Two pilot reintroductions were conducted to evaluate this conservation strategy for the species. The second reintroduction was postponed, but the first effort met all criteria for short-term success, including survival comparable to a control group, fidelity to release sites, and evidence of reproduction.

BENEFITS

This research improved existing knowledge concerning the LKMR. First, pellet surveys identified potential and occupied patches that can be used by federal and state agencies that need

to consider the welfare of endangered species such as the LKMR. Second, an evaluation of reintroductions found the strategy to be promising. Few potential release sites exhibited suitable habitat quality and landscape context. Thus, reintroduction, in order to be more widely applied for this species, must be part of a comprehensive management plan involving land acquisition, control of secondary impacts from development, and habitat restoration and enhancement.

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