Correlates of population recovery goals in endangered birds in the United States

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Endangered species recovery plans commonly set population size goals that are used to define the success of recovery efforts. We examined variation in these goals for bird species listed under the United States Endangered Species Act to determine whether there were simple predictors of recovery population size. The median population sizes that must be met for a species to be removed from the list or down-listed to the threatened category are 4,000 and 1,500 respectively, but there was much variation. Most variation in population recovery goals ($\geq$ 75%) was explained by the population's size when the recovery plan was written. Species listed when their population's size was relatively large have higher population recovery goals, whereas those listed when populations were small have lower population goals. Population sizes set for recovery also increased over time and were higher for species listed throughout the United States, rather than just in part of the country. In combination, these three variables explained 86% of the variance in de-listing population goals and 94% of the variance in down-listing goals. Body mass, annual fecundity, maximum life-span, whether the population was listed as threatened or endangered, and whether a population viability analysis was conducted were not significantly associated with population recovery goals. Overall, we found that variables relating to the circumstances under which the populations were listed explained almost all of the variance in recovery population goals, and that biological traits of the endangered birds explained little variance.