

National Mourning Dove Banding Study

Principal Investigator: David L. Otis
Collaborators: Multiple state and federal migratory webless gamebird coordinators
Duration: January 2003 to December 2006
Funding Source(s): U.S. Fish and Wildlife Service Multiple state wildlife agencies

Goals and Objectives:

- Estimate age-specific harvest rates and band reporting rates in a representative set of subregions in each of the 3 national dove harvest management units.
 - Estimate band reporting rates with the same subregions.
 - Establish protocols, training, and cost estimates for a future coordinated nationwide banding program designed to monitor harvest and survival rates.
 - Provide information on geographical distribution and derivation of harvest.
 - Provide initial estimates of annual survival and breeding site fidelity of subregion breeding populations.
-

Progress:

Contemporary and statistically reliable estimates of harvest rates, survival rates, and geographical distribution and derivation of harvest throughout the U.S. are necessary to improve science-based harvest management of mourning doves. A 3-year national pilot banding program was initiated in 2003 to produce data for estimation of these demographic parameters. This cooperative effort between state wildlife agencies, the U.S. Fish and Wildlife Service (USFWS), and the U.S. Geological Survey Bird Banding Laboratory (BBL) will result in much needed information for improvement of dove harvest management.

During the summers of 2003 - 2005, state and federal cooperators in 29 states banded and released approximately 95,000 doves, including more than 8,000 doves with reward bands. Approximately 5,000 recoveries, including > 600 reward bands, of these banded cohorts have been reported to the BBL. Final analysis of 2003 – 2005 data produced estimates of state reporting rates that ranged from 0.245 – 0.770 in the Eastern Management Unit (EMU), from 0.309 – 1.000 in the Central Management Unit (CMU), and from 0.499 – 1.000 in the Western Management Unit (WMU). Nationwide, reporting rate estimates averaged 0.56, with an average CV of 28%. Average harvest rate estimates for the 3 years ranged from 0.018 – 0.204 for adults and from 0.021 – 0.176 for juveniles. In general, harvest rates were greater in more southern latitudes. Annual survival probabilities for state populations were imprecise, with an average CV ~ 35%. Average survival probabilities for adults and juveniles were 0.36 and 0.23 in the EMU, 0.45 and 0.31 in the CMU, and 0.38 and 0.36 in the WMU. With the exception of the northernmost regions in the CMU, > 80% of the band recoveries in a state were from birds banded in the same state. Moreover, averaged over all states, more than 90% of each state's harvest of both age classes was derived from birds banded in that same state.

Conclusions and Recommendations:

Thirty-one states continued the banding program in 2006, with quotas that were similar to 2005. A final report of the 2003 – 2005 data analysis was completed and sent to state and federal cooperators in fall 2006. Also included in this report were estimates of state population abundance derived from harvest rates and total harvest estimates taken from the USFWS Harvest Information Program. The field protocols and sampling designs used and tested by the cooperating state agency field staffs, and the resultant parameter estimates generated from this study, will be critical in the design of a cooperative state and federal long-term operational banding program. Recommendations for the design of this monitoring effort will be contained in a Banding Needs Assessment to be developed in 2007 in cooperation with the USFWS Division of Migratory Bird Management. Molt data collected from banded birds as ancillary data are also being used in development of a technique to adjust harvest age ratio estimates that could be obtained by a parts collection survey. Finally, results will also be used in development of revised interim harvest management strategies that are being developed in a separate but related study. All of these efforts are integral components in the implementation of the long term national harvest management strategy for mourning doves.