

# Mourning Dove Call-count Survey

## LIMITATIONS

The survey covers most, but not all, of the breeding range. Since no effort is presently made to estimate detection probability for observers conducting the survey, it is not possible to estimate absolute abundance from the counts obtained. When analyzing survey data, observer data should be used as a covariable in trend estimation to adjust for differences in observers' ability to hear mourning doves.

Data contained herein is summarized at the route level only. Currently, we lack the ability to provide users with the computer programs required to estimate trends from such data. To estimate state and regional trends, we calculate weighted averages from individual routes for each area of interest. For example, estimates for each state are weighted by the land area of physiographic regions within each respective state. Extrapolating our estimated trend statistic (% change per year) over time (e.g. 40 years) may exaggerate the total change over time.

Additional information on estimating population trends and indices can be found in the Mourning Dove Population Status report located on the Division of Migratory Bird Management's website (<http://www.fws.gov/migratorybirds/reports/reports.html>).

## POINT OF CONTACT

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## LITERATURE CITED

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## PURPOSE

The mourning dove (*Zenaida macroura*) is a migratory bird, thus, authority and responsibility for its management is vested in the Secretary of the Interior. This responsibility is conferred by the Migratory Bird Treaty Act of 1918, which, as amended, implements migratory bird treaties between the United States and other countries. Mourning doves are included in the treaties with Great Britain (for Canada) and Mexico. These treaties recognize sport hunting as a legitimate use of a renewable migratory bird resource. As one of the most abundant species in both urban and rural areas of North America, it is familiar to millions of people. Maintenance of mourning dove populations in a healthy, productive state is a primary management goal. To this end, management of doves includes assessment of population status, regulation of harvest, and habitat management. Call-count surveys are conducted annually in the 48 conterminous states by state and federal biologists to monitor mourning dove populations. The resulting information on status and trends is used by wildlife administrators to set annual hunting regulations.

## PROCEDURES

The Mourning Dove Call-count Survey was developed to provide an annual index to population size (Dolton 1993). This survey is based on work by McClure (1939) in Iowa. Field studies demonstrated the feasibility of the survey as a method for detecting annual changes in mourning dove breeding populations (Foote and Peters 1952). In the United States, the survey currently includes more than 1,000 randomly selected routes, stratified by physiographic region. The total number of doves heard on each route is used to determine trends in populations and provides the basis for determining an index to population size during the breeding season. Within the United States, there are 3 zones that contain mourning dove populations that are largely independent of each other (Kiel 1959). These zones encompass the principal breeding, migration, and U.S. wintering areas for each population. As suggested by Kiel (1959), these 3 areas were established as separate management units in 1960 (Kiel 1961). Since that time, management decisions have been made within the boundaries of the Eastern (EMU), Central (CMU), and Western (WMU) Management Units.

Each call-count route is usually located on secondary roads and has 20 listening stations spaced at 1-mile intervals. At each stop, the number of doves heard calling, the number seen, and the level of disturbance (noise) that impairs the observer's ability to hear doves are recorded. The number of doves seen while driving between stops is also noted. Counts begin one-half hour before sunrise and continue for about 2 hours. Routes are run once between 20 May and 5 June. Intensive studies in the eastern United States (Foote and Peters 1952) indicated that dove calling is relatively stable during this period. Surveys are not made when wind velocities exceed 12 miles per hour or when it is raining.

Again, more detailed information about survey procedures or analyses of these data can be found in the annual Mourning Dove Breeding Population Status report on the Division of Migratory Bird Management web site (<http://www.fws.gov/migratorybirds/reports/reports.html>).

## DATABASES

A route-level count summary database derived from the Mourning Dove Call-Count Survey is made available online through the FWS/USGS Migratory Bird Data Center.

### Not Run Routes

A route was not run in a particular year if the following fields are simultaneously zero filled: month, day, totalsn, totalhrd, tlnstop, tlnsdrv. Missing data in multiple fields is also an indicator. Within the obscode field, 'Not' indicates Not Run.

## DOWNLOADABLE FIELD DEFINITIONS

Field Name	Field Definition
rtlocatn	General description of route location
year	The year the survey was run
stcode	Numeric code given to individual states – <a href="#">State codes</a>
routeno	4 digit numeric code identifying route
obscode	Observer code that enables users to identify changes in route observers
county	Name of the county that the route is in
physreg	3 digit numeric code based on Fenneman's map (Fenneman, N.M. 1931) featuring physical divisions of the U.S.
date	Date the survey was conducted
sunrise	Sunrise civilian time at beginning of route
swind	Wind speed ( <a href="#">Beaufort scale</a> ) at start of survey
fwind	Wind speed ( <a href="#">Beaufort scale</a> ) at end of survey
stemp	Temperature °F at start of survey
ftemp	Temperature °F at end of survey
time1	Civilian time recorded at stop 1 before listening time
time20	Civilian time recorded at stop 20 before listening time
totalsn	Total doves seen while driving and stopped stops 1 - 21
totalhrd	Total doves heard stops 1 - 20
tlnstop	Total doves seen stopped stops 1 - 20
tlnsdrv	Total doves seen driving between stops 1 - 21

