

North American Bird Phenology Program

What is Phenology?

Phenology is the scientific study of the relationship between natural phenomena (flowering, breeding, migration) and climatic or seasonal changes.

What is the NABPP?

The North American Bird Phenology Program houses a unique and largely forgotten collection of six million Migration Observer Cards that illuminate migration patterns and population status of birds in North America. These handwritten cards contain almost all of what was known of bird distribution and natural history from the Second World War back to the later part of the 19th century. The bulk of the records are the result of a network of observers who recorded migration arrival dates in the spring and fall that, in its heyday, involved 3000 participants. Today, those records are being processed and placed into a modern database for analysis. This information will be used, along with recently collected arrival times of migrant birds, in conjunction with historical weather data to show how migration is effected by climate change. The information from this analysis will provide critical information on bird distribution, migration timing and migration pathways and how they are changing. There is no other program that has this depth of information that can help us understand the effect that global climate change has on bird populations across the country.

How did this Program Begin?

This program was started in the 1881 by Wells W. Cooke, who wanted to broaden knowledge and understanding of migration. While teaching on the White Earth Indian Reservation in Minnesota, Cooke began noting the arrival dates of migratory birds. He later coordinated volunteers throughout the Mississippi flyway to collect arrival and departure data. His success sparked the interest of C. Hart Merriam, of the newly formed American Ornithologist's Union (AOU) who expanded the volunteer network to include the entire United States, Canada and a portion of the West Indies. The program was then passed, in the late 1880's, to the Division of Economic Ornithology where it reached its greatest extent of 3000 volunteers. Although the program was actively maintained by the Federal Government, participation gradually declined and in 1970 the program was closed. For many years since, these records have been kept safe by USGS Senior Scientist Chan Robbins and after years of little use and even less recognition passed on to Jessica Zelt who is databasing these past records and reviewing the program's possible uses and potential for collecting new data.

Who else records bird phenology data?

More recently, many Ornithological Societies have taken interest in phenology and have begun recording first arrival dates. There has been extensive data collected by many bird groups across the country, many of whom collect information on specific species. While there are millions of records from observers nationwide, only a few summaries have been produced on the changes of phenology on birds over time in North America. Herb Wilson, Professor of Colby College, is the only person, to our knowledge, that current has an organized regional collection of comparable bird phenology data.

How can I get involved?

This is a very exciting and timely program which welcomes participants from all backgrounds and ages who would like to get involved. There are several ways to take part with the NABPP. Past migration cards are currently being scanned and becoming available on the NABPP website (www.pwrc.usgs.gov/bpp/). You can become one of the many volunteers from around the country to sign onto our site and convert these files into our database. This will allow the migration records to become accessible for analysis. Also, if you are in the Baltimore-Washington area and would like to volunteer in the NABPP office to help with scanning, working with the historic files, and developing our website, we welcome you to come and take part in this program. Please use the contact information below.

For more information or to contribute or participate in this project, please contact:

Jessica Zelt, Program Coordinator (Contractor)
United States Geological Survey
Patuxent Wildlife Research Center
BARC-East, Bldg 308- Room 113
10300 Baltimore Avenue
Beltsville, MD 20705
Phone: 301-497-5745
Fax: 301-497-5624
Email: jzelt@usgs.gov



References:

Droege, Sam. 2003. Spring Arrivals of Maryland and Washington, D.C. Birds. Maryland Birdlife, Volume 59, No. 1-2.

Wilson, Jr., W. H., A. Savage '96 and R. Zierzow '96. 1997. Arrival dates of migratory breeding birds in Maine: results from a volunteer network. North. Nature. 4:83-92.