

# North American Bird Phenology Program

## What is Phenology?

Phenology is the study of recurring plant and animal life cycle stages, or phenophases, such as leafing and flowering of plants, maturation of agricultural crops, emergence of insects, and migration of birds. Many of these events are sensitive to climatic variation and change, and are simple to observe and record.



Photo by Abe Borker

## What is the BPP?

The North American Bird Phenology Program, part of the USA-National Phenology Network, was a network of volunteer observers who recorded information on first arrival dates, maximum abundance, and departure dates of migratory birds across the North America. Active between 1880 and 1970, the program was coordinated by the Federal government and sponsored by the American Ornithologists' Union. It exists now as a historic collection of millions of migration card observations, illuminating almost a century of migration patterns and population status of birds. Today, in an innovative project to curate the data and make them publically available, the records are being scanned and placed on the internet, where volunteers worldwide transcribe these records and add them into a database for analysis.

## How did the BPP begin?

This program was started in 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 digitizing and databasing these records.

## How is the BPP integrated with the USA-National Phenology Network?

The USA National Phenology Network (USA-NPN) collects phenological observations of plants and animals in cooperation with existing phenology monitoring programs, with the aim to increase our understanding of how the phenology of organisms and landscapes respond to environmental variation and climate change. The goals of the USA-NPN and the BPP align naturally. In particular, the USA-NPN database will provide an ideal location to store the BPP data, making it publicly accessible and integrating it with other phenological data. Also, the BPP methods for digitizing historical data can be adapted to digitize other historical datasets of phenology data. The USA-NPN's relationships with numerous government agencies, academic institutions, nongovernmental programs, and other organizations, and its knowledge of many key historical datasets, will facilitate the use of the BPP's digitization techniques to rescue important data.

## How can you 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 BPP. Historical migration cards are currently being scanned and are available on the BPP website ([www.pwrc.usgs.gov/bpp/](http://www.pwrc.usgs.gov/bpp/)). You can become one of the many volunteers from around the world to sign onto our site and transcribe these records for our database. This will allow the migration records to become accessible for analysis. Also, if you live in the Baltimore-Washington area and would like to volunteer in the BPP office we welcome you to come and take part in this program. Please use the contact information provided.

## How can you get Bird Phenology Program Data?

BPP data is now available and openly accessible to the public! If you are interested in downloading data, go to: [www.pwrc.usgs.gov/bpp/](http://www.pwrc.usgs.gov/bpp/). Additional records will be added to the website as they become available.



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

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