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[Note: Most of the information presented above is taken from the eBird website and this article is intended to get more birdwatchers to share/upload their sightings, to form a database of birds of Gujarat.]

Bird watching as a hobby is now gaining popularity. More and more people are attracted towards it. Due to the easy access to digital cameras and well illustrated field guides, and popularity of bird photography on the social media, identification of birds has also become easier. Almost all birdwatchers maintain a personal database of their sightings, including trip lists and life lists. This data is very important for understanding bird distribution, seasonal movements etc.

The advent of eBird in India is a very important step in maintaining and sharing data with others so that the individual observations, collected from many observers, are shared with other birdwatchers and researchers/ornithologists.

## What is eBird?

eBird is a global, internet-based checklist programme for gathering observations of birds and for birders to maintain their personal records. It was launched in 2002 by the Cornell Lab of Ornithology and National Audubon Society (USA) with a goal to maximize the utility and accessibility of the vast numbers of bird observations made each year by recreational and professional bird watchers.

## How eBird works?

The observations of each participant join those of others in an international network of eBird users. eBird then shares these observations with a global community of educators, land managers, ornithologists, and conservation biologists. In time, this data will become the foundation for a better understanding of bird distribution.

eBird encourages users to participate by providing Internet tools that maintain their personal bird records and enable them to visualize data with interactive maps, graphs, and bar charts. All these features are available in English, Spanish, and French.

A birder simply enters when, where, and how they went birding, then fills out a checklist of all the birds seen and heard during the outing. Automated data quality filters developed by

regional bird experts review all submissions before they enter the database. Local experts review unusual records that are flagged by the filters and ask observers to provide additional information, thus verifying their sightings.

eBird data are stored in a secure facility and archived daily, and are accessible to anyone via the eBird web site, [www.ebird.org](http://www.ebird.org).

## Benefits of eBird

- Easy to use
- It keeps the records safely.
- Acts as an easy search engine.
- Provides opportunity to explore dynamic maps, graphs and bar charts.
- Provides facility to share one's sightings with others.
- Provides opportunity to contribute to science and conservation
- Embedding photos, videos, sound files etc is also possible.
- Maintains life list, location-wise lists, species-wise lists and summarize observations by week, month or year.

## Data Integration

eBird collects observations from birders through portals managed and maintained by local partner conservation organizations. In this way eBird targets specific audiences with the highest level of local expertise, promotion, and project ownership. Each eBird portal is fully integrated within the eBird database and application infrastructure so that data can be analyzed across political and geographic boundaries.

## Why Should I contribute to eBird?

Every time that you see and identify a bird, you are holding a piece of a puzzle. Whether you are casually watching birds in your backyard, or chasing rare species across the country, you are helping to put this puzzle together. It might be a personal puzzle. For example, you might wonder when the Pied Cuckoo appears in your backyard each monsoon or what time of day the House Sparrow take a bath in your neighborhood fountain. Each time that you see and identify one of these birds - so long as you note the time and date - one piece of the puzzle falls into place.



*"Down the millennia of struggling against great odds, even the most successful of species can succumb to unforeseen changes in life situations and mankind has been very vigorously creating newer and newer dangers for which animals are not prepared."*

Or it might be a regional puzzle. For instance, scientists might be wondering how quickly House Sparrows are declining. Each time that you identify and count the numbers of one of these species, you are piecing together a part of that puzzle.

Or it might be an international puzzle. Each year during migration, hundreds of species fly from northern breeding grounds to southern wintering grounds. When do they arrive? where do they breed? and when do they return? Whether recording common birds in your backyard or searching for rarities, your sightings of these birds – with time, date, and location included – are pieces that can help ornithologists solve this huge puzzle, day by day, week by week, and year by year.

Unfortunately, just like puzzle pieces, these observations lose their value if they remain separate from one another. The sightings tucked away in your memory, or in your desk drawer, or in an old shoebox in your closet leave gaps in a partially painted picture. In truth, the only way that all these bird sightings make a contribution to our understanding of nature is when they are collected and organized into a central database where they can help complete this picture of birds worldwide.

eBird is this database. With thousands of birdwatchers across the continent helping to construct it by contributing their sightings, eBird will soon become a vast source of bird and environmental information useful not only to bird watchers but to scientists and conservationists the world over.

By keeping track of your bird observations and entering them into the eBird database, you'll benefit, too. You can access your own bird records anytime you want, allowing you an easy way to look at your observations in new ways and to answer your personal questions about what birds you saw and when and where you saw them.

### What should I record?

The most effective and useful way to get your data into eBird is at the site level. Each time you go birding you should try to keep a complete checklist of birds with estimated counts of each species, and try to limit your checklists to fairly refined geographic areas (e.g., your yard, a local park, a favorite birding location). eBird has the ability to accept data at the county and state level, but these broad-scale observations are harder to work with for analysis, and eBird really thrives on site-specific bird information.

The more specific you are about your locations, the better the 'My eBird' tools are at building your lists, so it's a nice mutually beneficial relationship. There is no limit to the number of locations you can have, and a good general rule for eBird is that the more specific you are with your site information the better.

### How are scientists using the data?

Researchers in the fields of ecology and conservation frequently conduct studies aimed at answering two questions: Where does a given species live? and how abundant is it? Knowing where species live, what habitats they use, and how abundant they are is the most basic information needed to protect a species. Knowing whether these patterns are changing with time is perhaps even more critical, since changes in bird occurrence can often be one of the first signal of more widespread environmental changes.

Plotting all of the observations of any species over days, weeks, months, or years allows eBird to determine the species' range, including movement patterns and changes in distribution.

Each species' seasonal movements become evident when comparing its distribution from various times throughout the year. By comparing a bird's range among different years, scientists can keep track of changes in distribution. Are breeding and wintering ranges of different species expanding, shrinking, or staying the same? Do migratory paths change between years? Answering these questions will help us understand birds more completely and aid in their conservation. From a scientist's perspective, knowing if a bird species is absent is equally important as knowing if it is present. For this reason, it is important that you report all of the birds you saw or heard whenever possible, so researchers analyzing your observations will know not only which species you saw, but also which species you didn't see. If birders only report the birds they went out looking for, the resulting distribution map ends up only showing where birders like to go birding and not where the birds are distributed. Accurate distribution maps need to reflect where birds are and where they are not.

When you submit actual counts for all species, your counts are especially useful. Comparing how birds' numbers change over time is especially important in conservation biology and your counts will be instrumental in helping scientists determine whether populations are increasing, decreasing, or remaining the same.



*"It is a great tragedy of mankind that death is feared even as the present life is polluted, weakened, converted into suffering on account of a great desire for security and comfort in this life or earning points to encash in the next."*

### Research at the Cornell Lab of Ornithology

A new study takes a novel approach to studying avian migration by using crowd sourced eBird data to quantify the day-to-day population-level movement of bird species during migration. The unique perspective provided by eBird has allowed researchers at the Cornell Lab of Ornithology to document for the first time population-level variation in migration speeds and routes:

Using eBird data, the authors confirm that established theories regarding the optimal speed of migration — theories that have only been tested with information from handfuls of individual birds and only from large species — are able to describe differences in migration speed among populations of broadly distributed species based on their body size. Additionally, the study's findings suggests that the total distance birds must traverse to and from breeding and non-breeding grounds influences the speed at which they travel. More generally, this work has demonstrated the viability of using eBird to provide knowledge about the ecology and evolution of avian

migration strategies, which will play an important role in the management and conservation of migratory species worldwide.

So go to [www.ebird.org](http://www.ebird.org), login to your account or register with eBird and submit your observations. One can also upload data directly from the field with iPhone or android phone by using Bird Log Asia app.

Your observations regarding birds from Gujarat will help in understanding bird distributions, seasonal movements, bird diversity and help experts get an idea regarding important bird areas and their conservation. These observations are also helpful in building a database which can be used by researchers and ornithologists in the future. □



*"Whether it is the communal and caste frictions or matters of the environment and wildlife conservation, the time has come for each and every one of us to start analyzing our very personal lives. This demand, for Government to do things or "they" or "we" must do this or that, is just shifting personal responsibilities. "What am I doing to reduce my footprint on the planet" should exercise the thinking of each one of us."*

◀ Lighting the lamp as a mark of beginning of BCSG in the year 2000.



*"Death is the cessation of life and instead of making it a preoccupation, it is living life vigorously and purposefully that alone can place it in its correct perspective."*