

## National Panda Day: Celebrating the Gentle Giants of the Bamboo Forest

Observed annually on March 16, National Panda Day honours one of the world's most beloved and endangered animals, the giant panda. Native to China, pandas are known for their distinctive black-and-white coats and their love for bamboo, which makes up almost their entire diet. Beyond their adorable appearance, pandas symbolise global conservation efforts. Thanks to sustained wildlife protection, habitat restoration and breeding programmes, their status has improved from 'endangered' to 'vulnerable'. The day encourages awareness about wildlife preservation and reminds us of the importance of protecting fragile ecosystems for future generations.



# The Great Indian Bustards



## In Maharashtra Can Be Counted On Fingers

The GIB is nomadic in nature and uses large areas without distinguished boundaries, and therefore, requires a robust sampling method to evaluate its status and distribution. Since the present status of the GIB is not known beyond the designated bustard areas, a probability distribution map for GIB covering an area of 55,000 sq km was developed through probability distribution modeling (Phillips et al., 2006) using locations of tagged GIBs across the landscape to survey potential GIB habitat in Maharashtra.

### ● Bilal Habib

The Great Indian Bustard (GIB) is a magnificent, large flying bird and was previously found throughout India and parts of Pakistan. In India, it was distributed throughout the grasslands of North India

and the Deccan landscape, but in the last three decades, there has been a drastic change in its former range. Only about 250 individuals survive today in India, with no breeding range outside India (Dutta et al., 2011). The largest population of 100-150 birds is found in the state of Rajasthan (Rahmani, 2006) followed by less than 35 individuals in the states of Gujarat, Madhya Pradesh, Maharashtra and Andhra

Pradesh (BirdLife International, 2015). The GIB is listed under Schedule I of the Wildlife (Protection) Act, 1972, and listed as 'Endangered' or an Appendix I species of CITES. Although just lately, some egg hatching in incubators has been successfully achieved.

As a part of the project titled "Tracking of Great Indian Bustard (Ardeotis nigripes) and mapping its potential habitat across the Deccan Landscape, Maharashtra" funded by the Forest Department, Government of Maharashtra, we, a team of researchers from the Wildlife Institute of India (WII), Dehradun, fitted three GIBs with GPS transmitters and their movement was tracked for one year. The tracking data has helped in identifying suitable areas for GIB conservation beyond the protected area system in Maharashtra. In order to ascertain the status of GIB and its potential habitat in Maharashtra, a landscape level survey was conducted in September, 2017, in collaboration with the Maharashtra Forest Department.

The GIB is nomadic in nature and uses large areas without distinguished boundaries, and therefore, requires a robust sampling method to evaluate its status and distribution. Since the present status of the GIB is not known beyond the designated bustard areas, a probability distribution map for GIB covering an area of 55,000 sq km was developed through probability distribution modeling (Phillips et al., 2006) using locations of tagged GIBs across the landscape to survey potential GIB habitat in Maharashtra.

This survey revealed the status of GIB, Blackbuck and Chinkara in potential GIB habitat which is mostly in a human-dominated landscape of Maharashtra. A systematic survey was conducted in 372 grids of 12

## #ENDANGERED



x12 km across the state. Vehicle-based species and habitat surveys were conducted from September 25-30, 2017, by 31 teams (1 researcher, 1-2 volunteers and 2-3 forest officials). Grids were surveyed along road trails of 3.03 ± 1.74 km length (single continuous or multiple broken transects) in a slow moving (10-20 km/hr) vehicle. At every 1 km interval along the transect, habitat characteristics that potentially influence species distribution were recorded. To overcome the issue of low detection owing to very low



population size and their ecology, a blind test using life-size GIB dummies was conducted to know the possibility of detection in sampling grids by the sampling team. The dummies placed in the sampling grids were put there by a separate team. The sampling team was unaware of the location of the dummy GIB. Questionnaire surveys were conducted by opportunistically interviewing up to three residents per grid with a semi-structured questionnaire. Respondents were

asked whether they knew or could identify the bird, and about reports or sightings of GIB in their vicinity. Information about the occurrence of associated species from these areas was also collected.

A total of 238 groups of Blackbuck were recorded across 2117 line transects covering a distance of 6436.6 km (mean length 3.03 ± 1.74 km) in 372 grids. Density of Chinkara in potential GIB habitat was found to be 0.02 ± 0.01 /km2 and total population was found to be 1481 ± 577. The data was left-truncated at 20 m, so that the model was not constrained by the limited number of Chinkara observed on or close to the transect.

During the survey, no GIB was sighted. However, out of 1,401 respondents, 72 confirmed GIB presence in their area within the last 4 days to 6 months. We used this information along with locations of tagged birds in Maharashtra to identify 87 out of 372 grids as conservation priority areas for GIB. These grids constituted 11 clusters spread across 12 forest divisions of Maharashtra covering an area of 12,528 sq km dominated by kharif crops and open areas.

Out of the 30 GIB dummies placed, only 4 were detected by the respective sampling teams. The detection probability was found to be 13 per cent which is within the range of previous studies (Rahmani, 1986). Power analysis on detection probability (13 per cent) and occupancy (8.06 per cent) of dummy life-sized GIB showed

that 8 replicates required in 180 grids of detecting 53 per cent change in occupancy. This would mean that, if the population of GIB ranges from 8 to 10, there is a chance of detecting one GIB with a minimum sampling effort of 8 temporal replicates for each transect considering that detection probability of dummy GIB and live GIB are the same. During the survey, no GIB was sighted, which implies

that the number of GIB might be less than 8 in Maharashtra. Eleven clusters in 12 forest divisions have been identified important for GIB conservation in the state of Maharashtra. Most of these areas are dominated by kharif crops (sorghum, peanut, groundnut, seed oils), preferred by GIB as foraging grounds.

rajeshsharma1049@gmail.com



## #WHEN THE WORLD FEELS HEAVY

# Here's Some Good News That Might Lift Your Spirits

Scientists now report that the ozone layer is recovering faster than expected, thanks largely to the global ban on harmful chemicals that damage it

In times when the news cycle can feel overwhelming, it's easy to believe that the world is only moving in the wrong direction. But beneath the noise, remarkable progress is happening across the globe, in science, environmental recovery, public health, and human compassion. If life has felt a little heavy lately, here are some uplifting developments from around the world that remind us progress is still very real.

### The Return of a Legendary Bird in Brazil

The blue Spix's macaw, the rare parrot species that inspired the animated film Rio, has officially returned to the wild in Brazil after being declared extinct in nature for over two decades. Through years of conservation work, breeding programs, and habitat restoration, these stunning blue birds are flying freely again, a powerful symbol that extinction can sometimes be reversed with dedication and global cooperation.

### Whales Are Returning to the Oceans

Marine scientists have reported encouraging signs across the world's oceans. Several whale populations are returning to areas where they hadn't been seen for decades. As protections, conservation efforts, and reduced hunting continue, ocean ecosystems appear to be recovering faster than expected in some regions. The comeback of these massive marine mammals is not just beautiful, it's a sign that the health of the oceans may be improving.

### Indonesia Ends Elephant Riding Tourism

In a major win for animal welfare, Indonesia has officially banned elephant riding tourism nationwide. For years, animal advocates have highlighted the cruelty often involved in training elephants for tourism activities. This new policy encourages ethical wildlife tourism that protects animals rather than exploiting them.

### The Ozone Layer Is Healing

One of humanity's greatest environmental success stories continues to unfold. Scientists now report that the ozone layer is recovering faster than expected, thanks largely to the global ban on harmful chemicals that damage it. If progress continues, the ozone layer could return to healthy levels between 2040 and 2066, protecting life on Earth from dangerous ultraviolet radiation.



### A Breakthrough in HIV Prevention

Medical researchers have developed a groundbreaking injectable drug called lenacapavir that shows near-100% effectiveness in preventing HIV infection. Even more promising, the injection only needs to be taken twice a year. This innovation could dramatically reduce new infections and save countless lives around the world.

### Hope for Alzheimer's Patients

Researchers have discovered that a vaccine originally developed to prevent shingles may also help slow the progression of Alzheimer's disease. Early findings suggest that it could provide protective effects on brain health, offering new hope to millions of patients and families facing the condition.

### A Breakthrough for Spinal Cord Injuries

In Brazil, scientists at UFRJ have developed a new experimental drug made from poly-laminin that has helped para-

plegic patients regain movement after spinal cord injuries. At least four patients have already shown significant improvements, marking a promising step forward in regenerative medicine.

### Costa Rica Runs Entirely on Renewable Energy

Costa Rica has achieved a remarkable milestone generating 100% of its electricity from renewable energy sources for an entire year. Hydropower, wind, geothermal, and solar energy now power the country, demonstrating that a clean energy future is not just possible, but already happening.

### Millions of Trees Planted in Burkina Faso

In West Africa, Burkina Faso is leading a large-scale reforestation effort, with millions of trees already planted and a goal of reaching 20 million by 2025. These efforts help restore ecosystems, prevent desertification, and improve climate resilience for communities.

### Cleaner Water in Peru

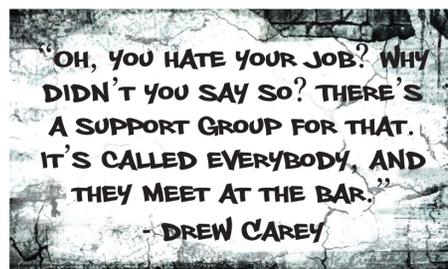
Peru is steadily improving water quality across the country while expanding access to safe drinking water. Infrastructure upgrades and environmental protections are helping ensure healthier communities and stronger ecosystems.

### Helsinki Achieves Zero Traffic Deaths

Finland's capital city, Helsinki, recorded an extraordinary milestone: zero fatal traffic accidents over an entire year. By lowering speed limits, redesigning streets, and prioritizing safer transportation systems, the city has shown that traffic deaths are preventable with smart urban planning.



## THE WALL



## BABY BLUES



By Rick Kirkman & Jerry Scott

## ZITS



By Jerry Scott & Jim Borgman