

# Carbon Footprint Club's Monthly

Issue no.02

Date: October 3,2015

Motto:

*"Deo gratiam habeamus"*

Let us be grateful to God



## Species of the Month



Conservation status: **Critically Endangered** (IUCN 3.1)



"*Rhacophorus pseudomalabaricus*" In: Kulkarni, S. (2014), *Conservation of the Biodiversity of India*.  
[https://www.cricrindia.org/4437/Rhacophorus\\_pseudomalabaricus.pdf](https://www.cricrindia.org/4437/Rhacophorus_pseudomalabaricus.pdf)

*Rhacophorus pseudomalabaricus* (Animatai flying frog or false Malabar gliding frog) is a species of frog in the Rhacophoridae family endemic to the Animatai Hills of Tamil Nadu and Kerala states, India. Its natural habitats are tropical moist montane forests and intermittent freshwater marshes. It is found in the lower canopy and understory of tropical moist evergreen forest, all within about 100 km<sup>2</sup> in the Indira Gandhi National Park region of the Western Ghats. It mates on vegetation hanging over temporary pools, where the tadpoles develop. It is severely threatened by habitat loss.

## Recent activities of Carbon Footprint Club

### The Inauguration

The inauguration of Carbon Footprint Club was held on September 15, 2015 at NVPAS Auditorium, VVN. The welcome address was given by Mr. Alap Bhatt- President of Carbon Footprint Club followed by the special address by Mr. Krishnakant Amin-the Chief Guest of the occasion. Other dignitaries included Dr. Rita Kumar (Head of Department of Biological and Environmental Sciences, NVPAS), Dr. Basudeb Bakshi (Principal, NVPAS), Mr. Sharad Amin (a Business person and patron of Carbon Footprint Club).



Mr. Krishnakant Amin is an environmentalist and believes in principles for reducing individual carbon footprint. He notably said that using and maintaining appliances like a car for prolonged time is better than recycling and replacing. He also showed concern for future environmental issues and drew attention to daily life measures to reduce carbon emissions.

## Poster-making competition

The Poster making competition was held on the same day after Inauguration. Around fifteen posters were registered for display. Environmental Science students Bhavik Patel and Aishwarya Patel stood on Winner and Runner-up position respectively.



## Essay-writing competition

The Essay-writing competition on was also held on the same day and around Twenty-five participants wrote essays.

- Mr. Jigar Bambhroliya, a TY Chemistry student won the competition.
- Ms. Aditi Saxena, a TY Genetics student got runner-up position.

## Ozone Day observance by Outreach programme

The Carbon Footprint Club's Outreach programme went to Vatsalya International School, Borsad & S.M.Patel College of Home Science, Vallabh Vidhyanagar on September 16, 2015 to educate the students about Ozone Layer Depletion and its consequences by showing a comprehensive slide show.



## The Jack O' Lantern-making competition

After receiving admiration and positive reviews on previous year's The Jack O' Lantern-making competition (October, 2014), the National Service Scheme (NSS) unit of NVPAS-led by NSS Coordinator Dr. Yogesh Patel and Carbon Footprint Club jointly organized this event for the purpose of creating awareness among people on celebrating Diwali Festival by making Jack O' Lanterns instead of fireworks (which causes Air and Noise pollution on a huge scale).

The event was held on September 24, 2015 on the occasion of nationwide NSS Day. Total eight teams consisting around five members each, made numerous Jack O' Lanterns and other related articles from various vegetables and fruits. The team led by Ms. Bhumi Patel was declared as winner of the competition.





Last year, Principal Dr. Basudeb Bakshi had praised the 'Jack O' Lantern-making event' saying that the event was an innovative approach for creating environmental awareness among the public.



## Monthly Article-Global dimming

Global dimming is the gradual reduction in the amount of global direct radiant flux received by a surface per unit area at the Earth's surface that was observed for several decades after the start of systematic measurements in the 1950s.

The effect varies by location, but worldwide it has been estimated to be of the order of a 4% reduction over the three decades from 1960–1990. However, after discounting an anomaly caused by the eruption of Mount Pinatubo in 1991, a very slight reversal in the overall trend has been observed.

Global dimming is thought to have been caused by an increase in particulates such as sulfate aerosols in the atmosphere due to human action.

It has interfered with the hydrological cycle by reducing evaporation and may have reduced rainfall in some areas. Global dimming also creates a cooling effect that may have partially counteracted the effect of greenhouse gases on global warming.



This true-color image over eastern China was acquired by the Moderate Resolution Imaging Spectroradiometer (MODIS), flying aboard NASA's Aqua satellite, on Oct. 16, 2002 (<http://earthobservatory.nasa.gov/Newsroom/NewsImages/ma>)



It is thought that global dimming is probably due to the increased presence of aerosol particles in the atmosphere caused by human action. Aerosols and other particulates absorb solar energy and reflect sunlight back into space.

The pollutants can also become nuclei for cloud droplets. Water droplets in clouds coalesce around the particles. Increased pollution causes more particulates and thereby creates clouds consisting of a greater number of smaller droplets (that is, the same amount of water is spread over more droplets).

The smaller droplets make clouds more reflective, so that more incoming sunlight is reflected back into space and less reaches the Earth's surface. This same effect also reflects radiation from below, trapping it in the lower atmosphere. In models, these smaller droplets also decrease rainfall. Clouds intercept both heat from the sun and heat radiated from the Earth. Their effects are complex and vary in time, location, and altitude.

Usually during the daytime the interception of sunlight predominates, giving a cooling effect; however, at night the re-radiation of heat to the Earth slows the Earth's heat loss.

The incomplete combustion of fossil fuels (such as diesel) and wood releases black carbon into the air. Though black carbon, most of which is soot, is an extremely small component of air pollution at land surface levels, the phenomenon has a significant heating effect on the atmosphere at altitudes above two kilometers (6,562 ft). Also, it dims the surface of the ocean by absorbing solar radiation.