

August - September 2015

ECOTRAIL

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FOCUS ON ENVIRONMENT

The Ethereal Snow

It was sometime in December 1996 that I first interacted with snow. It was an element alien to me. I was standing atop the Swiss Alps, alone and in front of me as far as the eyes could see, there was an expanse of a most delicate white carpet with occasional and beautiful green alpine trees breaking the monotony. It was silence all around. Then I felt and saw the tiny glistening snowflakes fall down so silently. I was gently getting covered with white snowflakes. The weightlessness of the crystals we know as flakes kept falling for two hours or more and the green trees faded from view. In the background I could hear children as small as 5 year olds skiing and then whoooooosh woooooosh, a boy and girl leapt up in the sky, and were momentarily suspended, not going up any further and not coming down, just a fraction of a second, then thump and away they went snowboarding as soon as they landed on the soft snow laughing and excitedly talking amongst themselves. I was with youngsters from across India, some 18 of them who came to learn to ski and snowboard. The snowy ecosystem is a world of its own. The climate change worries may soon envelope the Planet Earth once again in its folds causing immense pain and destruction and the human species as well may be in peril. The beauty of the snow for a tropical man is indeed awesome. Snow is a part of cryosphere originating from the Greek word kryos meaning frost. Snow essentially is a precipitation of water vapour, missing the liquid stage and going right into condensing to solid state because of extreme cold, or where the temperature is 0 degree or 32 degree Fahrenheit or even lower. Once the crystal is formed it attracts more and more vapour to form clouds of snow as it

becomes heavy and gravity does the rest. Even though snow only falls in certain parts of the world, it plays an important role in Earth's hydrologic cycle. It forms part of many northern ecosystems and provides irrigation for crops and drinking water for communities that may be far downstream.

Snow is also a mineral. Surprised I am sure you are. Just read on. As snow is composed of frozen water or ice, it can also be classified as a mineral. And a better way to know more about snow is to join Trailblazers skiing and snowboarding camps this December. Calling all children and corporate executives to learn the truly global sport and enjoy your student-year winters in US or Europe or your corporate board room discussions in Davos. Our training center is not far from Davos. By any yardstick, as a parent it is one of the most meaningful gift you can give your child and schools to their students and of course, the corporate world as a unique HR training to your top end executives as part of global grooming.

So well said by **Robert Frost** in his poem...

Stepping by the woods on a snowy evening

Whose woods these are I think I know.
His house is in the village, though;
He will not see me stopping here
To watch his woods fill up with snow.

My little horse must think it queer
Stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.

He gives his harness bells a shake
To ask if there is some mistake.
The only other sound's the sweep
Of easy wind and downy flake.

The woods are lovely, dark, and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

Overview

Dear Reader,

Kaiser- I - Hind, the spectacular butterfly of India hinges on a thin balance of threatened and rare. This magnificent species is of grave concern to all naturalists. Found mainly in the North East and West Bengal, this butterfly as the name suggests is a majestic imperial emperor, worth going thousands of miles to have a dekho before it gets extinct due to man's greed.

This issue also covers the global concerns of climate change, Mia MacMeekin's innovative infographic on learning outcomes and learning objectives, all about the slow onset of winter and snow and the global sport of skiing. In strides of science we cover topics from the antidote to whitefly which has caused havoc to the cotton farms in Punjab to the alarming death of seabirds because of plastics.

The highlights of Trailblazers' last month was the second special camp for paediatric burn survivors and the teacher training workshop which were transformational.

Can we make the shift to green living and can we plant and save trees?

Can we save our wildlife, or are we too selfish to make the effort? As educators we have a niche role to play. Can we, or should we?

Ranjan Biswas

Editor

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On the Brink....

The rare Kaiser-i- Hind butterfly or The Emperor of India (*Teinopalpus imperialis*) with its shimmering greens, bright yellows and delicate blacks is a visual delight. It is a member of the Swallow tail butterfly group. The IUCN Red List lists this butterfly as "Near Threatened" species. The Government of India, Postal Department issued a postage stamp to commemorate this beautiful butterfly on 20th October 1981.



Image Credit: <http://www.ifoundbutterflies.org/>

This magnificent butterfly is found along the Eastern Himalayas (West Bengal, Meghalaya, Assam, Sikkim and Manipur) in India. In these areas, it occurs at medium and higher elevations from 6000 to 10,000 feet in well-wooded terrain. It has a strong and fast flight. It usually flies at tree-top level but when there is strong morning sunlight it descends to sit on low vegetation. April to July is the period when it is in flight.

Its eggs are laid on the underside of leaves and are pale purplish red in colour and smooth and spherical in shape.

Although the butterfly is protected under Indian law, it is hunted to be supplied to butterfly collectors. WWF-India is working to conserve the habitat of this butterfly.

STRIDES IN SCIENCE



NBRI develops cotton resistant to whitefly

Even as Punjab farmers rue the loss of nearly two-thirds of their cotton crop to whitefly, Lucknow-based National Botanical Research Institute (NBRI) has developed a cotton variety that is resistant to the pest.

The technology has been tested on cotton plants at the institute's polyhouse, where a gene derived from a vegetable was found effective against whitefly. The ones injected with the 'gene' at the polyhouse are healthy and others are stunted and infested with whitefly.

"The 'gene' makes whitefly sterile thus controlling the reproduction of the pest," said Dr. P. K. Singh, principal investigator of the project. NBRI, a research lab of Council

of Scientific and Industrial Research (CSIR), has applied for a patent for the technology in eight countries. The technology is now ready for field trials. "We want industrial partners to take the technology forward for field trials and efficacy test," said director, NBRI, Dr. C. S. Nautiyal.

Whitefly is a common pest which affects 30 plant varieties, including cotton. Though cotton is grown in Punjab, Haryana, Rajasthan, Maharashtra, Madhya Pradesh, Gujarat, Telangana, Tamil Nadu and Karnataka, it's the northern states where the pest affects the crop more. Once the pest spreads, it can destroy the crop in 6-8 weeks. It was after testing genes from 250 plants that NBRI found the gene.

Excess net use ups BP risk in teens

Researchers found that teens who spent at least 14 hours a week on the internet had elevated blood pressure. Of 134 teens described by researchers as heavy internet users, 26 had elevated BP. This is believed to be the first study to show a link between time spent on the internet and high BP. The findings add to growing research that has shown an association between heavy internet use and other health risks like addiction, anxiety, depression, obesity and social isolation. "Using the internet is part of our daily life but it shouldn't consume us. In our study, teens considered heavy internet users were on the internet an average of 25 hours a week," said Andrea Cassidy-Bushrow, a researcher at Henry Ford's department of public health sciences. "It's important that young people take regular breaks from their computer or smartphone, and engage in some form of physical activity. I recommend to parents they limit their children's time at home on the internet," she said.

What's in 90% of seabirds' guts? Plastic

As many as 9 out of 10 of the world's seabirds are likely to have pieces of plastic in their guts, a new study estimates. Previously, scientists figured about 29% of seabirds had swallowed plastic. Australian scientists, who have studied birds and marine debris for decades, calculated that far more seabirds are. "It's pretty astronomical," said study co-author Denise Hardesty, warning that plastics in the ocean is increasing as the world makes more of



the stuff. "In the next 11 years we will make as much plastic as has been made since industrial plastic production began in the 1950s," she said. Birds mistake plastic bits for fish eggs. Usually it's tiny pieces of plastic, but she has seen far bigger things, such as an entire glow stick and 3 balloons in a bird!



A Transformational Experience



I sometimes wonder why was the company Trailblazers ever established. Was it for sharing knowledge or bartering it? Was it to give individuals experiences for life or of life?

When I saw the wonderful bunch of children who were burn survivors, having endured the pain and suffering of burn injuries as well as undergoing number of plastic surgeries and yet laughing and dancing to the tunes of Hindi films, trekking, rappelling, or cooking apna manka pasandi da in the Master Chef game, I realized we were born to bring smiles on the faces of these children and if in that process we also made them aware of the significance of the bumble bee or the importance of water or what to do to reduce pollution, we have done our job.

Trailblazers successfully conducted its second Camp Karma-India's ONLY camp for pediatric burn survivors in association with the Department of Plastic Surgery of KEM Hospital, Mumbai and Burns Advocates Network Ltd, USA, from 22-24 September.

The camp focused on the psycho-social rehabilitation of burn injured children and gave an opportunity to the children to share experiences. The activities were designed to boost self esteem and improve self image through team games, adventure activities, Zumba dancing, music, talent night, sharing, caring and more. Camp Karma had every ingredient to keep every child excited, entertained, motivated and engaged.

Along with the highly dedicated Trailblazers team, a team of thoroughly committed and proficient doctors and nurses headed by Dr. Mrs. Vinita Puri, Head of the Plastic Surgery Department of KEM Hospital were intensely involved with the children. Volunteers, artists and musicians were also part of the camp. All were committed to creating a difference & transforming the lives of these 16 children all scarred both physically and mentally.

Seeing the children braving it out with Sachin pulling the rope against all odds or going off on a trek with Amey or preparing

delicacies with Meena, all draped in immaculate aprons and seeing the children rich and poor from Bandra to Dharavi, to Aurangabad all patients of Dr. Vinita Puri, enjoying every moment, was indeed gratifying. This camp did not prepare me to see Dr. Puri, Dr. Venkat, Dr. Gupta, Dr. Pabari, Dr. Ghubade, Dr. Sarda and nurses Ms. Jaya and Mr. Chavan, dancing through the night with the children, having fun, encouraging them at every step, oblivious to the pain and terrible memories.

The last day was the day for reflection and motivation, where the children were invited to speak up on their perspective of life and how had it changed over the course of the camp. The heartrending recounting of their experiences of courage and their pure carefree enjoyment of the camp days and their renewed optimism, remain an example for all. The kids went back with a smile on their face and a spring in their feet. Now I know why Trailblazers was established.

-Editor 



Teacher Training Workshop



10,35,700 and counting. This is the number of students made aware till date through Dow India and Trailblazers pathbreaking initiative "Multiply the Message" now in its 7th year. Year after year more than 600 in-service teachers and B.Ed. students undergo this intensive teacher training on how to teach environment science, make it creative, relevant and initiate enquiry for answers lest the human species itself gets lost. Then replicate the workshop with their students over and over again in every platform. This year the topic changed from "Water" to "Climate change" with special reference to the unloved and unheard of element "Soil". Though soil represents you and me and one of the critical player in climate change we generally don't hear much of its key role.

This year the number of in-service teachers was overflowing. We had 107 registrations with well over 50 seats waitlisted. The workshop rolled on in its new assignment. Almost all the top schools from across Mumbai and Navi Mumbai and Thane

deputed teachers to see, learn, share, enquire, ask, debate and seek solutions on how to enjoin our gen next or the millennials to save us. Can they build the Noah's ark for us? I know the Noah's ark is the planet Earth ...why are we looking askance? The teachers rain down the questions. And the next session begins. Thank god it is Tea time!

Meena the workshop director is surrounded by teachers animatedly asking this and that I seek out Sachin but to reach him I have to pass the wall of teachers who have mobbed him. I let my question pass, after all it was to ask all the teachers to be requested to pick



To read more about this unique "Multiply the Message" programme and the innovative projects undertaken by teachers for their students, after having undergone this training programme, please visit www.multiplythemessage.org. Also have a look at an interesting 3 minute video on Youtube which shows you the various ways that teachers are influencing children to reduce, reuse and recycle. Visit <https://www.youtube.com/watch?v=NiFX233IMNA>



up the plastic water bottles strewn all over in the enthusiasm of the game and deliberating on big terms like biomagnification. Dow International a leading company using science to find solutions to the world's problems have remained steadfast in supporting the globally award winning CSR project Initiative Multiply the Message conceived and implemented by Trailblazers and Dow India. Cause all of us are in the same boat with the same aim to save the Noah's ark.



Forest and Cave Trail Teachers' Day Out

As the Trailblazers team entered the school premises, they were greeted by the hustle and bustle of an excited group of students animatedly discussing the trail with the teachers. The teachers were being bombarded with million of questions from the youngsters about the forest and Cave trail. This positive energy at the school gave a great start to a rainy day.

The trek was amidst beautiful trees leading to the ancient rock cut caves.

The forest had come alive with 124 kids trying to know everything about their surroundings. During the trek the kids made friends with two species of spiders: the signature spider and the common wood spider. Trailblazers team were on their toes and shared a lot of information about the different species of trees, crabs, termites and butterflies.

After the 2 km walk to the caves, the group of excited kids were welcomed by an equally excited bunch of our ancestors: the ever curious Monkeys! During the cave exploration our team shared the history and the purpose of the stunning caves and sculptures with the students. They were also lucky to spot the largest species of lizard, the Monitor Lizard.

Soon the sun was at its peak. It was time for lunch. Post lunch the group was introduced to a simple yet effective game explaining the food chain in the wildlife. A visit to the Nature Centre was informative and helped the kids recollect what they saw in the wild.



After an exhilarating day it was time to head back to our own concrete habitat. Each and every one of the 124 students, their teachers and the parents who were volunteering were delighted with the trek and thanked Trailblazers for the wonderful day.



Teachers are the last bastion of the society and an important pillar who lay the foundation of any society. In India we have a special day to celebrate and recognise their efforts. One such day is 5th September. It is celebrated as Teachers Day as a mark of tribute to the contribution made by teachers to the society. 5th September is the birthday of a great teacher Dr. Sarvepalli Radhakrishnan, who was a staunch believer of education and was a well-known diplomat, scholar, the President of India and above all, a teacher. When some of his students and friends approached him and requested him to allow them to celebrate his birthday, he said, "instead of celebrating my birthday separately, it would be my proud privilege, if 5th September is observed as Teachers day". From then onwards in 1967, the 5th of September has been observed as Teachers Day, in India till date.

Trailblazers was privileged and honoured to be a part of this special celebration with numerous teachers. With some there was an in-house celebration, with others, in the

outdoors. One such celebration was bonding with teachers from an upcoming international school. The day was spent amidst the serene, lush greenery of a resort with various fun games focussing on team spirit, leadership and fun. We feel blessed to be connected with them every single day.



Trailblazers Corporate Treks - Kaas & Lohgad



Saudi National Day Coastal & Estuarine Habitat Restoration



L to R: Consul General of Saudi Arabia in Mumbai H.E. Abdullah Suliman Al-Eisa with Associate Editor of Ecotrail, Mala Biswas.

The 85th National day of the Kingdom of Saudi Arabia which falls on 23rd September was celebrated on a high note in Mumbai on the 29th of September at the Trident Hotel. The function which was hosted by H.E the Consul General of Saudi Arabia in Mumbai, Mr. Abdullah Suliman Al-Eisa, was well attended by eminent personalities from the Government, Industry, Diplomatic community, Education sector and Media. Mr. Sumit Mullick, Chief Protocol Officer, Govt. of Maharashtra was seen wishing the Consul General on this important event.



Dr. Sanjay Desmukh, Vice Chancellor, University of Mumbai, addressing the participants.

Trailblazers was invited to the National Conference on "Coastal and Estuarine Habitat Restoration" held in September at VPM's B. N. Bandodkar College of Science, Thane. It was jointly organised by the college and NASS Powai in association with IAAB Hyderabad and SREERAM Pune and attended by renowned dignitaries. The Chief Guest for the conference was Honorable Mr. Sanjay Deshmukh, Vice-Chancellor, University of Mumbai. One of the high points of the speech of Mr. Deshmukh was his special reference to Trailblazers and Mr. Ranjan Biswas and about the work Trailblazers has been continuing for more than two

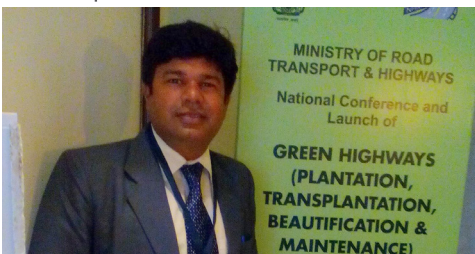


L to R: Dr. P. A. Azeez, Dr. A. G. Untawale, Dr. N. S. Tekale and Mr. Ranjan Biswas in discussion.

decades now. This was applauded by all the dignitaries. Leading Scientists like Dr. P. A. Azeez, Salim Ali Center for Ornithology and Natural History (SACON), Dr. A. G. Untawale, President, Mangrove Society of India, Dr. Goldin Quodrous, Sr. Scientist, SACON, Dr. S. G. Yeragi, President, NASS, Mumbai, Dr. N. S. Tekale, Vice-President, IAAB, Hyderabad, Dr. Mangesh Kashyap, SREERAM, Pune, Dr. Madhuri Pejaver, Principal, B. N. Bandodkar College of Science focused on action for conservation of Mangroves in their speech and during their interaction with Mr. Biswas.

Green Highways

Trailblazers was invited for attending a conference on Green Highways (Plantation, Transplantation, Beautification & Maintenance) organized by Government of India, Ministry of Road Transport and Highways. Shri Nitin Gadkari, Hon'ble Minister (RT&H,S) launched a comprehensive policy to promote greening of Highway corridors with participation of community, farmers, pvt sector, NGOs and government institutions. It provides guidelines to ensure uniformity of operations in enhancing highway landscapes.




Dr. M. R. Srinivasan visits Trailblazers office



L to R: Mr. Ranjan Biswas, Mrs Geetha Srinivasan, Padma Vibhushan Dr. M.R. Srinivasan and Mrs. Mala Biswas at the Trailblazers Office.

It was a significant day for Trailblazers. Padma Vibhushan Dr. M.R. Srinivasan, former Chairman & Secretary, Department of Atomic Energy and Scientific Adviser to Prime Minister of India along with his more than equally accomplished wife Smt. Geetha Srinivasan, former Chairperson of WWF India-Maharashtra & Goa, VP Nilgiris Wild Life

& Environment Association and Convener of INTACH (Nilgiris Chapter) and Members of the Board of Trailblazers Adventure Travel Pvt Ltd visited the headquarter of the company in Thane and addressed the team with an inspiring talk. The team was delighted to hear their varied experiences and were truly enriched by their presence. 

Trailblazers opens offices in Jaipur & Surat

In accordance with the vision of Trailblazers to bring their expertise to various cities across India, it has opened its offices in Jaipur and Surat. Ms. Namita Uberoi and Mr. Anand Lokhande were appointed as Trailblazers representatives in Jaipur

and Surat respectively, who came to the headquarters to undertake intensive training on products, places and school management. Trailblazers currently has offices in Thane near Mumbai, Kolkata, Chennai and Hyderabad.



L to R: Ms. Namita Uberoi, Ms. Kiran Islania and Mr. Anand Lokhande

Upcoming Camp in Switzerland



WINTER SKI & SNOWBOARD CAMP JOIN OUR FUN FILLED SWISS HOLIDAY



Get ready to Enjoy the Fun and Exhilaration of Trailblazers Ski Camp
Experience the Swiss Alps with top coaches.
It's all about learning a new International sport,
making new friends and great memories!!

- * High standards of safety
- * Intense Ski & Snowboard lessons
- * Snow Tubing
- * Sledding
- * Ice skating
- * Movie nights
- * Snow sculptures
- * Certified for C.A.S.
- * Nestle Chocolate factory visit
- * Gruyere cheese factory visit
- * Shopping for souvenirs
- * Visit the Allalin ice Pavilion at 10,500 feet
- * Christmas & New Year party



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2 TO 8 OCTOBER - WILD LIFE WEEK

5 OCTOBER - WORLD TEACHERS' DAY

6 OCTOBER - WORLD HABITAT DAY

11 OCTOBER - INTERNATIONAL DAY OF THE GIRL CHILD

16 OCTOBER - WORLD FOOD DAY

10 NOVEMBER - WORLD SCIENCE DAY FOR PEACE AND DEVELOPMENT

14 NOVEMBER - CHILDREN'S DAY

19 NOVEMBER - WORLD TOILET DAY

20 NOVEMBER - UNIVERSAL CHILDREN'S DAY

19 NOVEMBER TO 19 DECEMBER - NATIONAL ENVIRONMENT MONTH

CERN & God Particle

Three years after discovering the elusive Higgs boson or so-called 'God particle', CERN physicists have drawn the sharpest picture yet of this novel particle and found that it behaves just as predicted.

The Atlas and CMS Collaborations at CERN have presented combined measurements of many of the particle's properties for the first time. The new results provide in particular the best precision on its production and decay and on how it interacts with other particles. All of the measured properties are in agreement with the predictions of the Standard Model and will become the reference for new analyses in the coming months, enabling the search for new physics phenomena, CERN said. By combining their results, Atlas and CMS determined with the best precision to date the rates of the most common decays.



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