

Registered with the Registrar of Newspapers in India under serial No MAHENG/2015/65640

# ECOTRAIL

June-July 2018 Vol. No. 3 Issue No. 5

Price Rs.10

## A SPOT OF HOPE

EXPLORING THE OCEAN AND  
THE ART OF SCUBA DIVING

## ON THE BRINK

*ORNATE FLYING SNAKE*

## HIDDEN TREASURES

*THE BIODIVERSITY HOTSPOT  
THAT IS THE ANDAMANS AND  
NICOBAR ISLANDS*

## COLOURING THE WORLD CORAL

*WHAT CAUSES CORAL  
BLEACHING?*

# CONTENTS

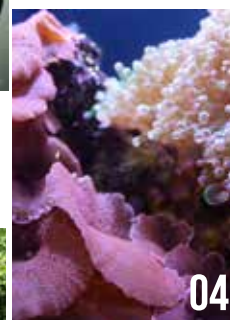
03

**FROM THE EDITOR**



04

**ON THE BRINK  
INTO THE WILD**



06

**CAMP STORIES  
CAMP LITTLE EXPLORERS**



07

**CAMP STORIES  
CAMP DISCOVERERS**



08

**NEW FRONTIERS  
THE ANDAMAN ISLANDS**

10

**KNOW YOUR GEAR  
SCUBA GEAR**





11


**TRAILBLAZERS FOUNDATION  
WILD TAILS**




## LOOK FOR US ON

 Trailblazers.TheOutdoorSchool

 trailblazers\_in

 trailblazers.theoutdoorschool

 www.thetrailblogger15.blogspot.com

 www.trailblazersfoundation.blogspot.com

Printed, Published and Edited by  
**RANJAN BISWAS** on behalf of  
**TRAILBLAZERS ADVENTURE TRAVEL PVT. LTD.**  
Edenwoods, Bay House, Ground Floor A, Gladys  
Alwares Marg, Off Pokhran Road No. 2, Thane  
(West) 400 610

Download softcopy from  
[www.trailblazersindia.com](http://www.trailblazersindia.com)  
Call us to participate in our camps/activities:  
022 21739737 or 022 21739732  
OR email us on: [contact@trailblazersindia.com](mailto:contact@trailblazersindia.com)

Editor : Ranjan Biswas

Associate Editor : Sachin Sata

Reporters : Nayantara Deshpande  
Aalap Kulkarni, Sachin Sata,  
Nitisha Sethia, Krusha Mota,  
Manali Gindra, Riya Kartha

Photo credits : Nayantara Deshpande,  
Varahan Patankar, Zoya Tayabji



# DIVING INTO WONDER: THE OCEAN AND HER TREASURES

Dear Reader,

As I sit down to write this editorial, it's drizzling outside and the sun is fighting its way back through the clouds. Lord Varuna, the God of Oceans has just been venerated by the fishing community on the occasion of Coconut Day or "Narial Pournima" and water has been on the news for good and bad reasons. The Thailand football team of teenagers stuck in a cave, the floods in Kerala and parts of Karnataka, and the intermittent floods of Mumbai city- and we have not yet seen the end of it. The good news is that some perennially parched lands have seen sufficient rains and some forest fires in Australia and the USA have been brought under control due to sudden cloud bursts.

A vast part of planet Earth comprises of oceans, and they too are now on the brink. Humans have left nothing to get past their voracious and rapacious appetite to get richer and more powerful. Just last week, the International Whaling Commission warned Japan yet again that they have killed far more whales than they are allowed to. The protein rich krill is the next target, nature's wonder- the

Great Barrier Reef- is now mere calcium carbonate, the corals are dying in hordes due to incremental thermal conditions which in turn are related to the climate change the goings-on of which are somewhere else on the planet. Finally, the man-made gift of plastics are playing their role and are entering the food chain through the oceans, back into our bodies. This edition of ECOTRIL focuses on oceans.

Still, there are many ecowarriors who are doing their bit and that is slowly but surely making a difference. The Government of Maharashtra for instance has banned plastic of certain grammage. Other governments are too falling in line. The oceans are not as well researched as the moon although they are in our backyards. They have made us richer and remain the very reason we humans exist on this planet. Our weather patterns, monsoon, our proteins, minerals, oil and many other aspects come from these vast water bodies. There is a lot to discover even now, be it the vast array of marine species or as a source of proteins and energy from tidal waves, we are just skimming and have a lot to

learn and discover. Trailblazers is running its unique scuba diving camps in Bali, Indonesia and I urge all our readers and school principals to look at this camp for and join with their students not only to learn an international sport or skill, but also to seek out the wonders and the mysteries the ocean will surely throw at each of us. The experience is truly transformative.

Come, let's all reflect on the oceans, seek ways to keep it in its pristine state and not use it as a garbage bin. For just a moment let's listen to the waves drifting in simple harmonic motions, the crescendo getting louder as it comes to shores. The waxing and waning of the waves is also akin to waxing and waning of civilisations, conquests, birth and death, of days into nights and changing of seasons. The ocean has seen it all and has many stories to tell. One of the simplest - like the Earth, I giveth my all to you. I am a sheath of cloth covering Mother Earth. Depends on how you treat me. I am the father and the earth is the mother, together we only nurture you.

**Ranjan Biswas**

*Editor*

[ecotrail@trailblazersindia.com](mailto:ecotrail@trailblazersindia.com)

## ORNATE FLYING SNAKE

This exquisite creature can be found in the jungles of South East Asia. The name is a bit misleading as the ornate flying snake doesn't fly but glides instead. These snakes contort their bodies by extending their ribs and pulling in their underside, thereby forming a sort of 'C' that can trap air. To gain momentum, flying snakes usually climb up high into the trees and prepare for take-off. Once in the air it can take turns by swiveling its body.



Ornate Flying Snake – *Chrysopelea ornata*

What caused this snake to develop this amazing feature is still being studied, but the most probable answer is to escape from predators. Ornate Flying Snakes are mostly arboreal and rarely descend from the canopy.

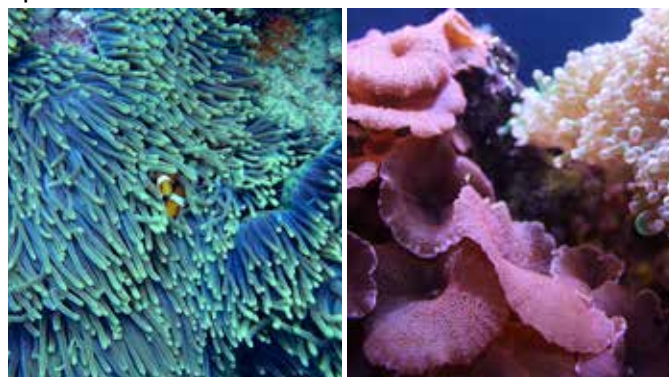
They are mildly venomous and prey on rodents, amphibians and small birds. These animals are very difficult to spot even though they are diurnal in nature. Consider yourself lucky if you ever come across one of these!

The species is not endangered but in recent years they have become increasingly available in the exotic pet trade, survey of this species and identifying conservation needs is advised.

## COLOURING THE WORLD CORAL

Among the finest wonders of the oceanic landscape that can often be witnessed closer to shore are corals, tiny marine invertebrates that live in colonies on the ocean floor.

However, these colourful little friends of the ocean were gravely affected by the 2016 heat wave, caused by rapidly rising sea temperatures. This phenomenon, known as bleaching, went on for the greater part of a year, effectively wiping out almost half the world's corals. Among the areas that faced the greatest impact was the Great Barrier Reef, Australia's famed coastline, home to some of the world's most marvellous species of coral.



Coral bleaching occurs when excessive heat warms the oceans, the rising water temperatures killing *zooxanthellae*, the algae responsible for feeding corals with nutrients they require to survive. With their disappearance, corals begin to lose their colour, and their lives.

While bleaching isn't an entirely new event--there have been instances of coral bleaching for over 350 years – the severity and duration of these events have steadily caused greater damage, with the 2016 bleaching posing an imminent threat to corals, one from which complete recovery seems unlikely.

On the bright side, by monitoring corals in their natural habitat, ensuring that tourists and local communities avoid water pollution and over-fishing, there is still a chance for corals to recover from in between the cycles of bleaching.

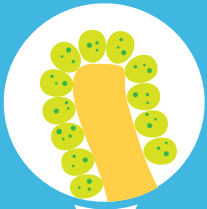
Though the coral world appears to be far away for some of us, our efforts to take responsibility for our actions towards curbing global warming can go a long way. So let's reuse, recycle, and read up about all the ways in which we can make a change and bring the colour back to our corals!

# CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

## HEALTHY CORAL

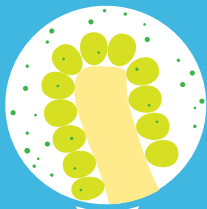
**1** Coral and algae depend on each other to survive.



Corals have a symbiotic relationship with microscopic algae called zooxanthellae that live in their tissues. These algae are the coral's primary food source and give them their color.

## STRESSED CORAL

**2** If stressed, algae leaves the coral.



When the symbiotic relationship becomes stressed due to increased ocean temperature or pollution, the algae leave the coral's tissue.

## BLEACHED CORAL

**3** Coral is left bleached and vulnerable.



Without the algae, the coral loses its major source of food, turns white or very pale, and is more susceptible to disease.

## WHAT CAUSES CORAL BLEACHING?



### Change in ocean temperature

Increased ocean temperature caused by climate change is the leading cause of coral bleaching.



### Runoff and pollution

Storm generated precipitation can rapidly dilute ocean water and runoff can carry pollutants — these can bleach near-shore corals.



### Overexposure to sunlight

When temperatures are high, high solar irradiance contributes to bleaching in shallow-water corals.



### Extreme low tides

Exposure to the air during extreme low tides can cause bleaching in shallow corals.



NOAA's Coral Reef Conservation Program <http://coralreef.noaa.gov/>

# 10 ways to protect CORAL REEFS

Corals are already a gift. Don't give them as presents.

It takes corals decades or longer to create reef structures, so leave them on the reef.

Long-lasting light bulbs - ARE A - BRIGHT IDEA

Energy efficient light bulbs reduce greenhouse gas emissions. Climate change is one of the leading threats to coral reef survival.



EDUCATE yourself about coral reefs & the creatures they support.



When you further your own education, you can help others understand the fragility and value of the world's coral reefs.

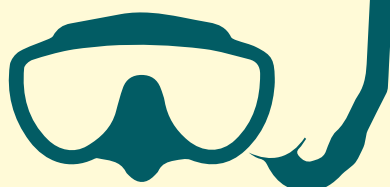
Choose sustainable seafood.



Learn how to make smart seafood choices at [www.FishWatch.gov](http://www.FishWatch.gov).

IF YOU DIVE DON'T TOUCH.

Coral reefs are alive. Stirred-up sediment can smother corals.



BE A MARINE DEBRIS CRUSADER.

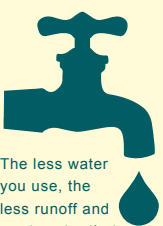
In addition to picking up your own trash, carry away the trash that others have left behind.

Don't send chemicals into our waterways.

Nutrients from excess fertilizer increases algae growth that blocks sunlight to corals.



CONSERVE WATER



The less water you use, the less runoff and wastewater that eventually find their ways back into the ocean.

Volunteer!

Volunteer in local beach or reef cleanups. If you don't live near the coast, get involved in protecting your watershed.



Practice safe boating.



Anchor in sandy areas away from coral and sea grasses so that the anchor and chain do not drag on nearby corals.



[oceanservice.noaa.gov](http://oceanservice.noaa.gov)

## A SMILING TRAIL OF LITTLE EXPLORERS

Excited at the prospect of a nature trek during the monsoons, the students of a prominent school were all geared up to visit Sanjay Gandhi National Park under the watchful eyes of the Trailblazers team. The day began with an introduction to the students, and the excitement level at the assembly point was simply overwhelming. Once on the bus, students were engrossed in playing games, excitedly eating their snacks, and catching up with their friends.

Before starting the trail, in line with Trailblazers policy, the students were briefed about the trek and standard safety instructions were given. Our expert Trailblazers team took over and made sure that even those who were initially hesitant about their first trail could make the most of their experience in the outdoors by overcoming their apprehensions. Students who had already been on treks shared their experience amongst themselves, elevating their excitement levels, and soon they were helping and motivating their other friends to complete their trail.

When the group reached the summit, the students were thrilled with the view and started exploring the space around. Forgetting all weariness from their climb, they sat on the lush grass and enjoyed their snacks.

Soon it was time for Trailblazers activities, which were designed to be fun and informative at once. After the overwhelming fun, students descended to the base to click a group picture with wide smiles and pink cheeks.

On the bus, students made a beeline for their hot packed lunch boxes before they headed back to school. The trip ended on a very happy note as parents, teachers and students expressed their happiness at being part of this nature trail and Trailblazers experience.



## CAMP STORIES



## ADVENTURE TALES FROM TRAILBLAZERS CAMP DISCOVERER

As a popular saying goes, life is meant for good friends and great adventures. Participants from Trailblazers Camp Discoverer will agree with this! The journey began with campers from two cities who became friends as soon as they met each other. From Dehradun to the campsite they cemented their bond, and before we knew it, the camp had begun!

Mountain Biking was one of the most exciting adventures undertaken on the camp. A 17 km cycling route gave participants time to build up their enthusiasm for all the other activities to follow. They also enjoyed Wilderness Camping, where they pitched tents, lay on mattresses and collected firewood for cooking

which was a great experience for the campers. Interacting with local villagers, learning about their lifestyle, trekking through the valley, camping on the banks of a tributary of Ganges - were all deeply enriching experiences.

The campers participated in a 14 km stretch of rafting where they came across three mid-level rapids and one base level rapid.

They also enjoyed another adventure activity called cliff-rappelling which involves a descent from height of 80 feet on a dry river bed. Coupled with this was valley crossing, which involves ropes tied on two ends of valley or river banks which participants have to cross using proper safety gear and body harnesses.

To add to these, our art and craft sessions and many fun games which focused on key skills of team bonding, leadership, developing their communication and strategic planning skills- all of which made for a good learning curve.

The Trailblazers team conducted a special session on bird watching, and campers learnt about many new birds and their key features. We cannot forget the most important night, where all campers and the Trailblazers displayed their talent at the spectacular Talent Night. The camp ended with a beautiful journey through the mountains and memories made for a lifetime.

# A SPOT OF HOPE

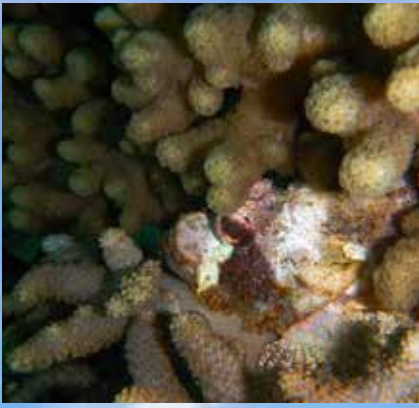
ZOYA TAYABJI WRITES TO US OF HER EXPERIENCE AS A DIVER  
IN THE BIODIVERISTY HOTSPOT OF THE ANDAMAN ISLANDS

Flipping a reverse summersault from the boat, the bubbles welcome me as I ease afloat thanks to my SCUBA gear. Fitting my mask onto my face, I look down, half submerged, and see the sunlight streaming through the water casting a golden glow on the blue world below. I sink-weightless and free- as the rest of the underwater world becomes visible, and I a part of it. What I see overwhelms me – territorial damselfish flirt in and out of coral crevices, female clownfish defend their sea anemones, a manta swirls in the current, barracudas form a vortex, and a curious giant pufferfish follows us on our explorations.

These are the Andaman Islands. Designated by the IUCN (International Union of Conservation of Nature) and Mission Blue as a 'Hope Spot', they encompass high-diversity fringing reefs, extensive mangroves and seagrass meadows. Spinner dolphins spin to the waves of the boat, banded sea snakes glide along the coral crevice looking for eels to eat, manta rays filter feeding. They are home to 16 species of marine mammals, 4 species of sea turtles and 1434 species of fish, amongst others. To name a few, you can see in the rich phytoplankton currents, and if you are lucky enough, you might get an opportunity to swim with the state animal – the dugong, an elusive and shy creature.

I have more than 150 logged dives and yet I have not seen everything that the underwater life offers-a myriad of creatures-the larger charismatic but elusive megafauna - spinner and bottlenose dolphins, reef sharks, dugongs, manta rays, camouflaged octopus; to the smaller more beautiful, unexpected and incredibly unique sightings – psychedelic coral reefs, sea cucumbers, starfish, Christmas tree worms, nudibranchs, to name a few. If you are not comfortable being completely submerged in water, and are feeling uncomfortable with the dive gear, don't worry, snorkeling is for you. Thanks to the good visibility of the water, you can still see most of the





**Bearded Scorpion Fish**  
(*Scorpaenopsis Barbata*)



**Unidentified Juvenile Moray Eel**



**Sea Anemone and False Clownfish**  
(*Amphiprion Ocellaris*)



**Yellow Boxfish** (*Ostacion Cubicus*)



**Dorid Nudibranch**  
(*Goniobranchus Gleniei*)



**Dugong** (*Dugong Dugon*)

things that the reef has – huge variety of fish, scorpionfish lurking amongst the coral reefs, camouflaged octopus and banded sea snakes coming up for air. These are a few usual suspects, but if you are lucky there are many other reef associated marvels that you can experience.

Sea kayaking is one of the safest, relaxing and most peaceful ways to be immersed amongst nature.

You can explore the marine life of the mangroves while kayaking, kayaking to a pristine and untouched snorkeling site where crocodile fish with stellar eyes hang around, or go night kayaking where the glow from the fireflies merges with

the starry night and bioluminescent waters.

Having had an affinity for the water all my life, I chose to pursue my life defending it to ensure the beauty remains for many generations to experience. Unfortunately, most people are either scared of the water or do not know what exists underneath, thus thinking it's an endless pit for us to dump our waste in.

Pioneer of SCUBA diving and a terrific scientist, Jacques Cousteau, once wrote, "The sea once it casts its spell, holds one in its wonder forever."

I couldn't agree more, as you just have to submerge your head once and your life will be forever changed, as mine has.

*Zoya Tayabji is a marine biologist currently pursuing her research on coral reefs and elasmobranchs (sharks and rays) in the Andamans. Apart from this, her additional superpower includes being a certified rescue diver.*

## DIVING INTO THE DEEP END

The survival 'Rule of 3' states that humans can go 3 minutes without air, 3 days without water and 3 weeks without food.

However, the brilliance of the human mind is such that we have created equipment that enables us to be continuously underwater for durations ranging from 30 minutes to even up to hours, and literally swim like a fish in the deep oceans.

SCUBA- a commonly used acronym that has come to become a word of its own, actually stands for 'Self Contained Underwater Breathing Apparatus'.

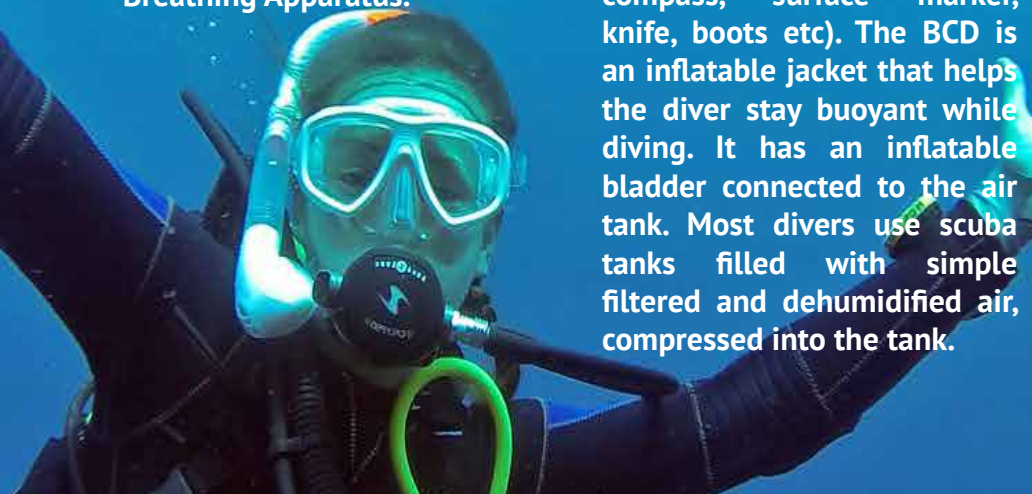
A scuba diver's gear is a piece of genius, designed for science, sport ergonomics and even aesthetics, enduring high underwater pressure, allowing for water resistance, being lightweight and compact for the diver to easily navigate with, and additionally to give the diver the advantage of swimming like a fish.

The gear consists of a BCD, or the Buoyancy Control Device, a Regulator, a Mask, Fins, Scuba Tank, Wet Suit, other equipment (computer, compass, surface marker, knife, boots etc). The BCD is an inflatable jacket that helps the diver stay buoyant while diving. It has an inflatable bladder connected to the air tank. Most divers use scuba tanks filled with simple filtered and dehumidified air, compressed into the tank.

The standard volume of air for recreational divers is 200 bars, the use of which they can monitor at all times through the air gauge. Many advanced divers also use enriched air tanks (Nitrox) with higher composition of oxygen for better diving performance.

The equipment completes itself with a wetsuit that the diver wears to keep warm in cold underwater temperatures, a mask for the eyes to see underwater, and fins for better underwater movement.

A full set of mid-ranged scuba equipment can cost from INR 70,000 to INR 1 lakh. Owing to the high cost and difficulty to carry around, most recreational divers prefer to rent out the equipment from dive shops they are diving with.



## MULTIPLY THE MESSAGE: A SOCIAL AUDIT

"Multiply the Message" started in 2009 and now in its 10th year is an annual workshop for teachers and BEd. Students across Mumbai where they are trained in environment education and innovative methods of classroom teaching. Till date approximately 4000 teachers from schools and colleges all over India have benefitted from this project, which has reached millions of students over the last nine years. Trailblazers Foundation took a bold step by participating in the social audit of its flagship Teacher Training Workshop 'Multiply the Message', with the sole purpose of learning from these findings to improve future workshops. The social audit was done by an independent institute- The Nirmala Niketan College of Social Work. The findings were presented to the public wherein the whole ecosystem of the Multiply the Message workshop took part in it - the participants i.e. in-service teachers, student teachers,

principals of school and college; Dow Chemicals International, Director, Public and Government Affairs, Ms. Ruby Thapar; Trailblazers Foundation Trustees, Mr. Ranjan Biswas, Ms. Kiran Islania and Mrs. Rashmi Sharma; and most importantly auditors from Nirmala Niketan College of Social Work, Dr. Gracy Fernandes, Vice President; Dr. Lidwin Dias, Principal; Dr. Ronald Yesudas, Lead Auditor; Dr. Mansi Bawdekar, Associate Director Research; and Ms. Maryam Agarbattiwala, Research Assistant. A panel discussion ensued following the social audit presentation initiated by panelists. All the invitees participated actively expressing their views and shared their inputs and experience of the workshop. Trailblazers Foundation took note of the findings and pledged to implement them to improve the future workshops.



**Clockwise:** (1) Participants browse through audit files (2) Principal Dr. Ratnaprabha Rajmane shares feedback (3) Mrs. Sunita George, Principal Bombay Scottish Powai offers an opinion (4) Dr. Arpita Bhatia offers an opinion (4) Panelists on dais L-R Mr. Ranjan Biswas, Trustee, Trailblazers Foundation; Ms. Riya Kartha, Operations Manager, Trailblazers Adventure Travel Pvt Ltd; Dr. Gracy Fernandes, Vice President; Dr. Lidwin Dias, Principal, Nirmala Niketan College of Social Work and Ms. Ruby Thapar, Director, Government and Public Affairs, Dow Chemical International (5) Dr. Ronald Yesudas briefing the group about the Social Audit.

## SAVING EVERY DROP

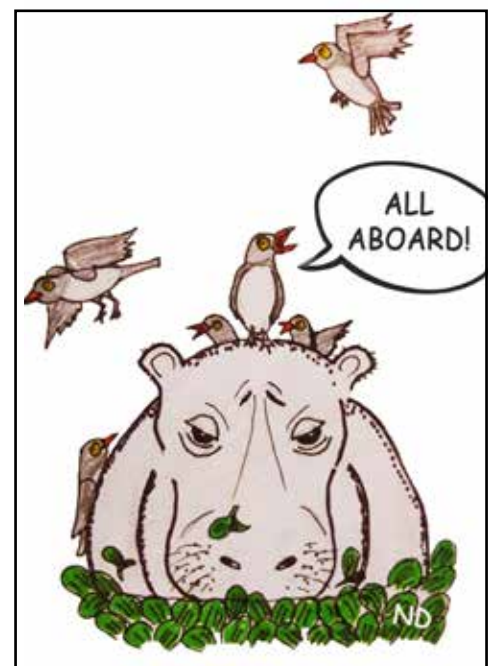
"I believe thoughts are like seeds. We are not sure which thought will germinate into an earth-shaking concept." Meet a man who is credited with saving millions of gallons of water.

Aabid Surti is an ordinary resident of Mira Road, Mumbai who has an extraordinary vision. What does he do? He fixes leaking taps. At the age of 83 he still volunteers a few hours of his week along with a plumber and another volunteer to fix leaking taps in different areas. An octogenarian who has devoted most of his time to a noble cause, he is also an author who has written 80 books, an iconic cartoonist, a fine painter, a journalist and an environmentalist- the list just goes on.

It all started when he was rattled as he saw a leaking tap in a friend's house.

Statistics say that 1,000 litres of water is wasted every month due to a leaking tap. He has been the founder of Drop Dead Foundation since 2007 which simply fixes leaking taps in and around the area of Mira Road for free, and if there is one with the help of a plumber, he fixes it with no cost whatsoever to the residents!

## WILD TAILS



# BALI SCUBA DIVING ESCAPE



- EXPERIENCE THE UNDERWATER WORLD
- EXPLORE BALINESE CULTURE
- CYCLE THROUGH RICE TERRACES
- KNOW MORE ABOUT KOPI LUWAK
- EXPLORE AN UNDERWATER SHIPWRECK
- BECOME A SKILLED DIVER

- SKI/ SNOWBOARDING LESSONS
- CHOCOLATE AND CHEESE FACTORY VISIT
- SNOW SCULPTURES
- CERTIFIED FOR C.A.S.
- CHRISTMAS CELEBRATION
- SLEDDING AND ICE SKATING

# SWISS SKI ADVENTURE



IS NOW



NEW ENERGY, NEW PASSION  
SAME VALUES, SAME COMMITMENT

LOOK FOR US ON

- Trailblazers.TheOutdoorSchool
- trailblazers\_in
- trailblazers.theoutdoorschool
- www.thetrailblogger15.blogspot.com
- www.trailblazersfoundation.blogspot.com

Printed, Published and Edited by  
**RANJAN BISWAS** on behalf of  
**TRAILBLAZERS ADVENTURE TRAVEL PVT. LTD.**  
Edenwoods, Bay House, Ground Floor A, Gladys  
Alwars Marg, Off Pokhran Road No. 2, Thane  
(West) 400 610

Download softcopy from  
[www.trailblazersindia.com](http://www.trailblazersindia.com)  
Call us to participate in our camps/activities:  
022 21739732 or 022 21739737  
OR email us on: [contact@trailblazersindia.com](mailto:contact@trailblazersindia.com)

