

FROM THE STATE DIRECTOR'S DESK

We have come to the end of another eventful year. As we step into the New Year and look back and reflect on the various milestones, it gives a mixed feeling of optimism and pessimism. Last year has been really a battle for conservationists with regard to addressing the various environment and development related issues. And when we look at the various issues that arose time and again last year, we see that no spheres of life has been spared from the anthropocentric mode of development. The initial day's battles were to save the avenue trees in Thiruvananthapuram City from being felled in the name of road widening and related development activities. This battle was very unique in that it brought together concerned individuals and institution to stand hand in hand and fight for the cause. Later on came the issue of clearing of vast extent of mangrove vegetation in Valanthakad in Kochi to give way for an IT Park. This struggle was also very unique in that the local people fought very bravely for the cause and till date the proposal has been stalled. With the Chairman of the State Biodiversity Board raising his apprehension against the development approach, the project is on a stand still as of now. But then also, we need to be very vigilant. Then there was the national battle with regard to CRZ and CZMP. With the Union Ministry scrapping the CZMP and the Minister announcing Public Hearings with regard to CRZ, it has really

raised the hopes of conservationists. The year also saw the emergence of the most bizarre development proposal by KINFRA to reclaim 5000ha of land from the sea along the coastal belt of Veli in Thiruvananthapuram. Concerned citizens fought outright against the proposal and forced the Industries Department to shelve it. The announcement by the Fisheries Department on reward for killing cormorants in Kollam to save the fish population was yet another surprise. This has also been withdrawn with much publicity on public media that cormorants are included as Schedule species under the Wildlife Protection Act. The issue of marine species mortality along Kerala Coast still stands unaddressed to a very great extent. As we step into a new year, the challenges are varied. Already Forests Department has approached us to address the issue of extensive illegal poaching of wild species in Kasargod in the name of Theyyam. An international property developers has come up with the proposal to reclaim 'Methran Kayal' in Vembanad for a 18 hole golf course, condominiums, resorts etc. So many such surprises are yet to come. And we need to stand hand-in-hand and always very vigilant to fight against such ever-increasing development pressures.

Renjan Mathew Varghese, State Director

IMPORTANT NEWS ON ENVIRONMENT AND NATURE

GLOBAL

'Green' plastic engineers

Scientists have successfully bio-engineered polymers, completely bypassing fossil fuel based chemicals. This breakthrough opens the way for the commercial production of 'green' plastics. Polymers are molecules found in the form of plastics and rubbers. The team, from KAIST University, South Korea and LG Chem, led by Sang Yup Lee, professor, focused on polylactic acid (PLA), a bio-based polymer, the key to producing plastics through renewable resources. "PLA

is considered a good alternative to petroleum based plastics as it is both biodegradable and has a low toxicity to humans," he added. Until now PLA has been produced in a two-step fermentation and polymerisation, which is both complex and expensive. Now, through the use of a metabolically engineered strain of E. coli, the team has produced polylactic acid and its co-polymers through direct fermentation. This makes the renewable production of PLA and lactate-containing copolymers cheaper and more commercially viable, said a KAIST University release (The Hindu, 26.11.09).

Study finds birds have 'X-ray' vision

The red-breasted robins in your own backyard have

a kind of "X-ray" vision which allows them to navigate in bad weather or even at night, according to a team of German researchers. For decades, scientists have known that robins and many other migratory birds somehow sense the Earth's magnetic fields, which they use as a compass to find their way to nesting grounds. Carrier pigeons are the prime examples. But none knew precisely how birds registered those magnetic fields. Now, for the first time, scientists say they have discovered that the tiny robin can "see" the Earth's magnetic field at night. It used to be thought that a special organ in birds' beaks was the centre of magnetic field detection. But the scientists say it is in fact a specialised part of the brain called "Cluster N," a part of the brain involved in processing light — in other words a vision region of the brain. Hitherto, many experts believed that tiny magnets in the beak wired to the nervous system detect lines of magnetic force. But the new study suggests that birds "see" magnetic fields via their eyes using a complex light-sensitive mechanism. The researchers, led by Dr Henrik Mouritsen from the University of Oldenburg, wrote in the journal Nature: "The results of the present study ... specifically suggest that Cluster N of European robins is an essential part of a circuit processing light-dependent magnetic compass information for night-time orientation. Other types of magnetic sensor may also exist in birds, said the scientists DPA.

NATIONAL

Dinosaur's egg basket

About 270 km from the metropolitan Chennai - Dinosaurs dwelt. The fossilized eggs found in the village of Sendurai in Ariyalur district reveal this interesting bit of history. This area of Cauvery basin was probably the largest habitat for them in India. A group of researchers, including students, led by the Periyar University Geology Lecturer MU Ram Kumar discovered the cluster of eggs. "We found clusters and clusters of spherical-shaped eggs of dinosaurs. Each cluster contained eight eggs. Each egg was about 13 to 20 cm in diameter and they were lying in sandy nests which were 1.25 metres in size," he said. "We always knew that dinosaurs once roamed the area as fossils had been found there during earlier expeditions. But this is the first time that hundreds of nests embedded with clusters of dinosaur eggs have been unearthed in the district," he said. Preliminary investigations showed that the eggs could belong to the aggressive Carnosaur and the docile, leaf-eating Sauro pod

species. The first Dinosaur fossils were traced by British geologists in the 1860s. More than 150 years later, a dinosaur egg was found in a cement factory of the state-owned Tamil Nadu Cements Ltd in the 1990s. But officials realised it was a dinosaur egg only 10 years later (Gobar Times, 1-15 Nov, 2009).

Four youths to attend Copenhagen Summit

The Union Ministry of Environment and Forests and WWF-India announced the names of a four-member youth delegation that will be part of the India contingent at the climate change summit in Copenhagen. The four — Ramsha Sajid and Aadya Dube of Carmel Convent Senior Secondary School, Bhopal; Ruchika Pokhriyal of Acharya Narendra Dev College, New Delhi; and Deeksha Singh of Patna Women's College — were selected through "Prithvi Ratna," a national-level essay writing competition for youth on climate change. The objective of the competition was to inculcate sense of ecological citizenship among the youth by providing them a platform to express their views. Eight other finalists will travel to the Jim Corbett National Park in Uttarakhand for an expedition. Congratulating the delegates, Union Minister of State for Environment and Forests Jairam Ramesh said: "This is first time that the youth have been included as part of an official delegation. I hope it will not be the last. The signal that we are sending is that the Environment and Forests Ministry is willing and looking forward to working with civil society and the younger generation. We want to work with the younger generation and create a mass movement about protecting the environment and taking responsibility." The Minister said several programmes were being initiated along with WWF, including saving of the Gangetic dolphins, bio-diversity conservation and bringing in new and improved devices to catch tiger poachers. (The Hindu, 05.12.'09)

STATE

Wayanad, hot spot of rare flora, shows up three new species

Wayanad district, a part of the Nilgiri Biosphere Reserve, is a hot spot of rare flora in Kerala. A study conducted by scientists of the M.S. Swaminathan Research Foundation (MSSRF) at Puthuroyal, near here, identified 2,034 flowering plants, including three new species — *Miliusa wayanadica* and *Miliusa gokhalae*,

belonging to the Annonaceae family (custard apple family) and *Oberonia swaminathanii* of the orchid family. Two rare and endangered species, considered 'possibly extinct,' — *Eugenia argentea* and *Hedyotis wayanadensis* — were collected after 130 years. According to the study, 587 endemic species of plants and 175 orchids enriched the biodiversity of the district. Ratheesh Narayanan, Senior Scientist, conducted the study under the direction of N. Anil Kumar, Director, MSSRF, and M. Sivadas, former Professor of Botany, Calicut University. Dr. Narayanan told that the study identified 2,034 flowering plants of the total 4,321 reported in the State. Wayanad district has the largest number of flowering plants in Kerala. Biodiversity, especially of orchids, was higher in Wayanad than in any other region of the State. As many as 108 species of orchids were identified in the Silent Valley region, he said. *Oberonia swaminathanii* is the new species belonging to the orchid family that was identified during the study. The plant was found in the Kurichiar Mala reserve forest area of the Kalpetta range. (The Hindu, 08.11.'09)

Camera trap proves presence of leopard at Chimmony Sanctuary

Wildlife researchers were in for a pleasant surprise when they started monitoring the wildlife population of the Chimmony Wildlife Sanctuary (CWLS) a fortnight ago. The camera trap set deep in the forest brought them a few images of a leopard which was strolling majestically in the forest track in the darkness. Researchers claimed that this was the first photo of a leopard from the sanctuary. The researchers including Malik Fazil, Bijo Joy, Leonald G. Melite, Bhavya Mohan and P. Jayalaksmi are surveying the CWLS as part of the research project of the Kerala Forests and Wildlife Department to document the diversity of mammals. Digital images of wild dogs have also been obtained from the sanctuary. The study is carried out primarily using camera traps. Whenever a warm-blooded animal crosses the camera's infra red trajectory, a sensor detects the object and the camera opens up. Though the researchers had earlier collected evidence regarding the presence of leopards like pugmarks and scat, no picture could be obtained, they said. (The Hindu, 13.12.'09)

SPECIES OF THIS ISSUE

Gangetic River Dolphin (*Platanista gangetica*)

The Gangetic River Dolphin has been recognized by the Government of India as its **National Aquatic Animal**. They are primarily found in the Ganges and

Brahmaputra Rivers and their tributaries, which is a sub-species of fresh water or river dolphins found in Bangladesh, India, Nepal and Pakistan. They prefer deep waters, in and around the confluence of two or more rivers. The species does not have a crystalline eye lens, rendering it effectively blind, although it may still be able to detect the intensity and direction of light. Navigation and hunting are carried out using echolocation. They have the long, pointed noses and teeth are visible in both the upper and lower jaws even when the mouth is closed. They have a sturdy, yet flexible, body with large flippers and a low triangular dorsal fin. Listed by IUCN as 'endangered' and placed in Schedule-I of the Wildlife (Protection) Act, 1972, the Gangetic River Dolphin enjoys high levels of legal protection both nationally and internationally.



CHILDREN'S CORNER

Philately

It is the collection and study of stamps and related items. It is a distinct hobby to people who are interested in the background study and other information about a stamp. It gives information as well as entertainment. Some of the Indian stamps related to wildlife conservation is given below. Can you collect the story behind them?



NOVEMBER 2009

Friday Forum

Friday forum, the monthly interactive forum for Nature Club members of Thiruvananthapuram for this month was on the topic 'Rivers of Kerala - issues and concerns' and was led by Dr. George Chakkachery, Scientist and Officer-in-charge of CWRDM sub-center, Thiruvananthapuram. The forum was attended by 120 students from different schools in and around the City. The programme was highly interactive and informative.



Quiz Programme for students on Nature and Environment

Education Officer mastered a quiz competition as part of State Children's Environmental Congress organized by the State Biodiversity Board on 11th November 2009 at Kanakakkunnu Palace, Thiruvananthapuram. It was a state level programme aimed at bringing in the children to main stream of environmental protection.

Salim Ali Day observed

WWF-India, Kerala State Office and Viswadarshanam, Pathanamthitta jointly observed the Dr. Salim Ali Day 2009 with two sessions of bird watching at Pathanamthitta on 12th November 2009. Nearly fifty students attended the programme. Education Officer and Sri. C. Harikumar led the technical sessions and the field bird watching. The participants were able to observe about thirty six species of birds around the venue. Multimedia presentations on bird watching and Birds of Kerala were presented and the same helped the participants in the field activity also.

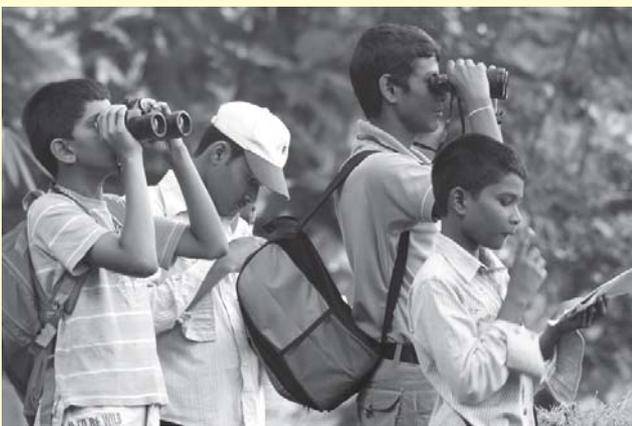
Kerala Bird Race 2009

Kerala Bird Race 2009 is a national level bird watching programme conducted every year supported by HSBC. For 2009, the event in Thiruvananthapuram was held in six different locations in and around the City with the active participation of 54 birdwatchers ranging from the age of 10 - 70. The Bird Race was coordinated locally by WWF-India, Kerala State Office and Warblers & Waders. The participants were grouped into six teams and were equipped with binoculars and bird log books. Peroorkada, Akkulam wetlands, Punchakkari paddyfields - Vellayani Lake and surrounding areas, Arippa, Museum - Zoo compound and Kallar-Ponmudi were the bird race sites. Each team compulsorily included an expert bird watcher accompanied by budding birdwatchers and enthusiasts. All the teams were out in the field the entire day up from 6am till 5 pm. On return to the City, the participants gathered together in the Conference Hall at Hotel Pankaj, Thiruvananthapuram by 6pm.

The gathering was inaugurated by Prof. D. Thankamony, Member Secretary of Kerala State Pollution Control Board. Sri. Renjan Mathew Varghese, State Director of WWF-India welcomed the guests and participants of the programme. Sri Ajay Sondhi, Vice President and Branch Head of HSBC Thiruvananthapuram briefed on the background of the Bird Race and the CSR mandate of HSBC. Sri. J. Praveen, the State Coordinator of the Bird Race 2009 did a PowerPoint presentation on the Migrant Watch Programme and about the Bird Race. The presentation dealt with the trends of bird migration with respect to climate change. Sri. A. K. Sivakumar, Coordinator of the Bird Race and Education Officer of WWF-India briefed on the programme at Thiruvananthapuram and the sites of the race and its potentials.

All the six team leaders along with their team members introduced themselves to the gathering and shared their experience and presented the findings. The location, number of species, Bird of the Day (most important sighting) and Dip of the Day (the bird most expected, but not seen) for each location, and the highlights of major observations were covered in the presentations. The judging panel comprising of Sri. C. Sushanthkumar (Executive Member, Warblers and Waders) and Sri. S. Rajeevan (Advisory Board Member, Warblers and Waders) gave their comments and analysis of the findings. The winners who sighted maximum number of species were announced and the team Black Baza who had surveyed Arippa Forests won the 1st prize with a sighting of 87 species, the team Osprey who surveyed Punchakkari paddyfields and Vellayani Lake won the 2nd prize with 80 species and the team Honey Buzzard who visited Kallar-Ponmudi

area won the 3rd prize with the sighting of 66 species. In total, the teams reported 145 species of birds during the Race. Mr. Unus Kunju who was the eldest among the participants and Master Kevin S. Biju who was the youngest birdwatcher of the race were also felicitated. About 30 photographs of Sri Sushanthkumar were displayed in the venue and this attracted a lot of attention.



Nature Education Trip to Chathancode

The trip was had participation of 8 professionals from US Technologies, Technopark, Thiruvananthapuram and was led by Education Officer from WWF-India. The team had a nice and informative nature watch through the evergreen and deciduous forest of Chathancode and enjoyed the fresh stream and waterfalls of Thodayar, a part of Peppara Wildlife Sanctuary of Thiruvananthapuram district.

DECEMBER 2009

Teachers Training Workshop on Environment Education

The seventh programme in the series of workshops for Teachers on Environment Education organised with the support of CPREEC, Chennai was held at Santa Maria Academy, Vallachira, Thrissur on 2nd December 2009. Forty-six teachers from different schools attended the single day workshop organised from 10am to 4.30pm. The workshop was inaugurated by Ms.Molly

Thayyil, President of Sahodaya Schools (Association of CBSE Schools) of the district and Principal of the venue school. Mr. Bavan, Principal of Grace Public School, Chelakkara and the Treasurer of the Thrissur Sahodaya delivered the welcome speech. Sri. A.K. Sivakumar, Education Officer from WWF-India briefed on the objectives, mode and schedule of the workshop. Sri. Abdul Basheer, Secretary of the Sahodaya Complex proposed vote of thanks for the participants and guests.

Technical sessions on 'Significance of Environment Education in Schools and the Society' and 'Basic principles on Environment Education with reference to Wetlands and its conservation' was led by Sri. K.M. Jayahari, Programme Officer of Winrock India, New Delhi and by the Education Officer.

The post lunch sessions included a technical session on Wetlands of Kerala and How to run Nature Clubs by Education Officer and Sri. Jain J. Therattil from St. Alosious College, Thrissur. Two activity sessions were introduced in the form of some games that could be used as a tool for imparting environment education to the young student community. The game 'Tiger in our life' and mini drama presentation on environment related issues were done by the teachers and their involvement was really appreciable.



Nature Education Trip to Chathancode

A second trip was arranged to Chathancode, the tribal hamlet near the Peppara Wildlife Sanctuary on



Friday Forum

Friday Forum, the monthly interactive forum for Nature Club members of Thiruvananthapuram had a major change in this month from the usual and that was in the form of presentations by each individual participant schools. Poster presentation and PowerPoint presentation by students on different topics were held by the various schools and this assured the involvement of student community in this unique programme.

5th December 2009 and had participation of 14 professionals of US Technology, Technopark, Thiruvananthapuram. The trip was led by Education Officer from WWF-India. The team had a nice interaction with the local tribal people and informative nature watch through the evergreen and deciduous forest of Chathancode. It was a totally different experience for them from their normal routine.

Three day camp held at Nelliampathy

WWF-India, Kerala State Office conducted a Nature Education Camp at Nelliampathy, Palakkad from 14th to 16th December 2009 with the participation of 20 students from MAMO College, Kozhikode. Nelliampathy is a wonderful forest area of Palakkad district of Kerala with rich habitat and biodiversity. Evergreen, deciduous, semi evergreen and teak plantations also keeps the habitat varied. The base camp was the Thoothanpara Estate which is in the midst of the forest.



On the first day itself, on the way to the camp site, the team had the first experience of sighting a whip snake. The nature walk within the vicinity of the estate was interesting and was a totally fresh experience to the participants. During the night, Mr.C.Harikumar, resource person from WWF-India provided a detailed session on the importance of nature conservation and related environmental issues.

On the second day after breakfast, the team started their nature watch around 7.30 am. During the long walk the students experienced the sight and sound of

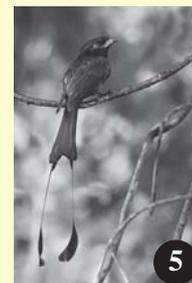


many birds. Animals such as Wild Boar, Mouse Deer, Sambar Deer, Gaur, Draco, Nilgiri langur, Common macaque etc also seen. In the evening, the students were trained to experience the nature by their ear and nose through 'Feel the Nature' session. At night, Mr. A.K.Sivakumar, Education Officer, WWF-India did a multimedia session on the 'Biodiversity of Kerala'. The session provided enough information to them and the team got much insight into the rich biodiversity treasure of our State.

On the third day, the team had a morning safari through the wilderness. They got the wonderful sighting of Lion Tailed Macaque and its food plant in the thick canopies of the evergreen forest. After spending few good long hours in the forest, they returned back to the base camp at around 11.00 am. During the valedictory session, as a feedback of the camp, collectively the students admitted that they enjoyed the camp and learned and experienced a lot from the forest. Also they promised that they will start to care for the nature. After lunch, the team started their return back to their college.

ANSWER TO CHILDREN'S CORNER OF THE PREVIOUS ISSUE

- (Answers: 1. Asian paradise-flycatcher, 2. Indian treepie, 3. Wire-tailed swallow, 4. Indian peafowl, 5. Greater racket-tailed drongo)



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NEAT AND CLEAN PREMISES ARE ACHIEVABLE

Segregate degradable and non-degradable wastes
and store separately at source
(houses, office, shops, markets, institution, auditoria etc.)

Avoid throwing waste on roadsides, public places,
water bodies, drains etc.

Recycle/reuse plastic, rubber, glass, metal, paper etc.

Compost or make bio-gas out of degradable waste or
hand over to collection service engaged by local bodies.

The care we give to our State,
Our beautiful, bountiful State,
Will be returned to us manifold.



KERALA STATE POLLUTION CONTROL BOARD

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