

Editorial

When there was the great flood, Noah in his proverbial ark, gave shelter to pairs of several species of wild and domestic animals including man, but never thought of taking chunks of habitats aboard, writes David Quammen in 'Natural Acts'. Habitats have often lagged behind in conservation. We have always focused on species. However, in the epic Ramayana, when Ram, Sita and Laxman had left the beautiful capital city of Ayodhya for fourteen years of exile or Vanvas (literally stay in a forest), King Bharat visited them. A large tract of forest had to be cleared for making a road. It is mentioned in the epic that the wild trees that were cleared from the forest were first identified and planted in an available existing clearing. This is a unique Indian example of conservation of habitats undertaken 5000 years ago. Indian culture has paid meticulous attention to our environment. Indians understood that man is an integral part of nature co-inhabiting earth with several visible and invisible life forms and certainly not their master; that the natural wealth was finite and the resources should be used judiciously. When the sages from one *gurukul* (the seat of learning where students stayed with their teachers) visited another *gurukul*, they first enquired about the welfare of trees and animals in their precincts and then asked about the wellbeing of pupils, teachers and others. One of our most beautiful wild orchids, Vanda, that blooms on trees is named after *Vanadevi* (literally the forest goddess), and on this page we have blossoming Vandas to remind our readers the

cultural richness and environmental awareness nurtured by our heritage.

In this issue we have focused on habitats. The article on *Vayu*, tells us about the divinity of clean air as understood by ancient Indians. Today, conserving habitats outside protected areas essentially means that they should be under private ownership and we have an excellent authoritative example of how an environmentally sensitive corporate house, one of the largest in the country, has protected a treasure island for wild species in their salt pans. A permanent risk to our habitats is from forest fires. An insight into the social aspects behind this manmade disaster reveals that the truth is stranger than fiction. The aspect of government fund allocation for the protection of wild birds is highlighted in 'Asia Speaks' where we can see how a small country like Japan can prioritize large funds for raptor conservation, an aspect sadly neglected in India. The silver lining to this is that to focus on raptors, key indicator species of environmental health, Ela Foundation shall host the first ever international Raptor Conference in 2014 in Pune, India, where we shall have experts from over twenty countries. We expect the scene to change for the better. To stir imagination, along with prose, there is nature-poetry on the Wild Page. People have worked and cared for nature in their finite capacities, and we have a unique experiment in this issue, where in the foothills of the Sahydris, an amateur conservationist succeeds in hatching reptile eggs, with a

thought for the unborn life. Through the Ela Journal we focus on the positive aspects and success stories; on the untiring urge for conserving nature, habitats and species; because we believe that people care and that success, however small, is possible. Let us make a positive difference and not be discouraged. As Rabindranath Tagore has observed, the flower bud that one sees in the evening, blossoms in the morning, telling us that nature is at work while we sleep. If we do not destroy, Nature may still take care of itself, if given time and opportunity.

-Dr. Satish Pande



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Ancient Wisdom - India

Vaayu — the Life Giving Air - Dr. Suruchi Pande *

The Taaittiriya Upanishada says in the first stanza,

*“Namaste Vaayo |
Tvameva Pratyaksham Brahmaasi |”*

The sage humbly bows down to one of the five basic elements — the vaayu — air.

He says, “O, vaayu, I bow down to you. You are the veritable Brahman (the supreme being or the all-pervading soul and spirit of the universe).” Vaayu is also said to be a deity. It is the air that acts inside the body as one of the five major praanas and five subsidiary praanas.

The five major types of life principles — (praana, vyaana, apaana, samaana and udaana) are known as maha praana. Praana is that vital energy by which one lives or exists. It is said to be centered in the nose and is responsible for respiration. Vyaana occupies the whole body and supplies energy necessary for hard work. Apaana is a form of vital energy that works in the downward direction. It is responsible for the functioning of the excretory and reproductive organs. Samaana is situated in the central region of the body and is responsible for digestion and

assimilation of food. Udaana, which is located in the throat, has an upward movement. It helps the individual soul leave the body at the time of death.

Ancient sages have equated air to the veritable form of spirit of the universe because it is externally experienced through the sense of touch.

Air is also present in our body to keep its functions healthy. The tradition of offering food to the five praanas exists in the Hindu culture. It is believed that the praana is satiated when the Chakshus (eyes), Aditya (sun) and Dyu (heaven) are satiated. Likewise, the vyaana's satiation is linked to the Shrotra (ears), Chandras (moon) and Diks (directions); apaana to Vak (speech), Agni (fire) and Pritivi (earth); Samaana to manas (mind), Parjanya (rains) and Vidyut (lightning); and, udaana to Vayu (air) and Akasha (sky). The Chhandogya Upanishada has discussed this topic to correlate the internal and external universe in terms of praana and vaayu.

Sant Ramdas aptly said,

*“Vaayokarita shvaasoshvaasa |
naanaa vidyaanchaa abhyaasa |*

*vaayokarita shariraasa |
chalana ghade ||”*

(because of the air principle, we breathe, study various subjects and our bodily movement is possible). We know that poor or shallow breathing negatively affects our energy and mental alertness.

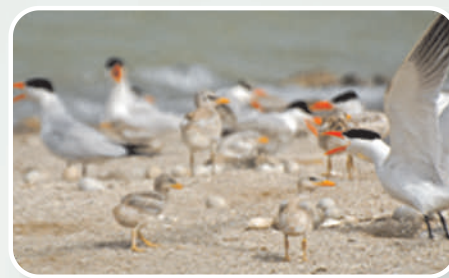
On Earth, we experience the wind as a natural force and perceive it as the movement of air. The powerful wind may cause damage but it also serves as a source of energy. The thought expounded here is related to the respiratory system within our body. At the same time, it makes us aware that human beings and all other sentient beings are merely a part of the infinite universe.

* Suruchi Pande, PhD (Philosophy), PhD (Sanskrit), is a post-doc research scholar presently working on “Owl in Indian Culture”

Corporate House in Conservation

The Treasure Island In A Salt Pan - Satish Pradhan *

All Photographs - Satish Pradhan



The Caspian Tern *Sterna caspia* (47-54 cm) is the largest tern in the world. Though cosmopolitan, it shows scattered distribution. The bird's stout coral red bill and gull-like size are unmistakable. The small global population of the bird is estimated to be about 50,000 pairs. The Baltic Sea population (1,400-1,475 pairs in the early 1990s) is declining and of conservation concern. The bird is protected under the 'Agreement on the Conservation of African-Eurasian Migratory Waterbirds' (AEWA).

The Caspian Tern is found in North America, Europe (Baltic Sea and Black Sea), Asia, Africa and Australasia. In our subcontinent, there are just a few sporadic breeding records from India but they are reported to breed in Pakistan, Sri Lanka and Maldives. Their breeding, passage and wintering habitats are confined to sheltered sea coasts, estuaries, harbours, lagoons, salt marshes, salt pans, sandbars and mudflats, as well as fresh or saline wetlands. Their diet consists of fish, but they also eat eggs and the young ones of other birds or rodents, carrion, aquatic invertebrates, insects and earthworms. Like all terns, they plunge-dive for fish.

Till recent times, there have been sporadic but no regular or permanent breeding records of the Caspian Tern from India. Therefore, the breeding site that we observed amidst the salt pans in Gujarat in July 2011 assumes importance. The initial clue to the breeding activity was the sighting of a Caspian Tern flying low over the wetland with a 3-inch fish in its beak. We soon realized that a chain of terns was flying with fish in one direction only. We were thrilled. Were these terns

going to breeding grounds? None had been recently reported. Were we on the brink of making a discovery? We decided to follow the proverbial bread crumbs as we tracked these terns, a difficult task, because they were flying low and tended to get lost in the undulating terrain. We had to wait till the next one showed up to guide us a little further. We were on an ornithological mystery hunt, suddenly and unexpectedly.

The first possibility of the nesting site was a shallow island in a salt marsh. An incessant stream of terns was flying towards this island. Initially, it looked like a cormorant roost. But we were playing detective and were not to be fooled. We identified a few terns behind the wall of the Little Cormorants *Phalacrocorax niger*. The size of this small oval island was approximately 200 m x 30 m. As we got closer, the 'watchdog' terns approached us and sounded an alarm with loud continual raucous screeching calls. The cormorants lifted in a sable cloud of flapping wings and the cloud had a silver lining. Their departure revealed an amazing sight of 400-450 tightly packed adult Caspian Terns breeding on the island. There were eggs, hatchlings, nestlings and fledglings everywhere, indicating that breeding had begun in May 2011 (assuming 26 to 28 days incubation and another 10 days for fledging). The activity was ongoing given the size and number of clutches and eggs observed. This was a veritable festival of life.

The nests were either on plain ground or in a shallow depression in the sand, gravel or dried mud, amidst shells and sparse vegetation, without any additional nesting material. No other species was nesting. The neighboring nests were placed 0.7 to 4 m

apart, with a mean inter-nest distance of slightly less than 1 m. Seventy per cent clutches constituted of 1 to 4 eggs (average - 3 eggs; range - 1 to 8 eggs per clutch). Walking on the island demanded vigilance because there were eggs and hatchlings everywhere. Our subsequent observations revealed that the adults were foraging within a radius of 10 km. We conservatively estimated that at least 200 pairs were breeding. With an average of 3 eggs per clutch, the recruitment was 600 and assuming 10% mortality, we still had 540 Caspian Terns added to their population from this site.

India may henceforth be included as one more important country for breeding of the largest tern in the world. The onus of protection of these magnificent birds is ours, with an immense responsibility to conserve our rich natural heritage. In the present-day situation where habitats are lost at an alarming rate, India has received a gift by way of a breeding colony of rare birds, an opportunity bestowed upon us by Mother Nature. Fortunately, this important site is protected by a corporate house sensitive to ecological issues, and entry there is restricted. The habitat has been preserved for the future to assure that the innocence in feathers shall prevail.

* Satish Pradhan is deeply interested in birds and is involved in the conservation of their habitats. He is Chief, Group Human Resources, Tata Sons Limited. He is also a member of Ela Foundation and is on the governing body of the Bombay Natural History Society.



Habitat Problems

Why Forest Fires - Nitin Kakodkar *

In India, all forest fires are man-made. We mostly have ground fires, as opposed to canopy fires that occur in forests with resin and oil rich trees in the US and Europe. An unusual kind of fire in our country is seen in bamboo dominant forests where the entire bamboo stands literally explode noisily scattering the embers over wide areas. The season of forest fires commences from November, when the grass dries and peaks through the summer month of May.

There are several causes of forest fires. In Vidarbha region of eastern Maharashtra, some people intentionally light them to stimulate a fresh flush of tendu leaves *Diospyros melonoxylon*, which are rolled to make bidis. If the tendu trees are stimulated by inflicting injury by way of coppicing (slashing or pruning), they react and produce rich sprouts that increase the yield and subsequently augment income from leaf harvest. The easier alternative that saves both labor and time is to burn the forests rich in tendu trees and cause the desired injury. Such fires are lit by the stake holders around 45 days prior to the expected flush. The 'phad munshi' or the chief local auctioneer's agent controls the tendu patta collection and gets such fires lit around mid March.

The collection of Moha flowers *Madhuca longifolia* is a major activity of the forest dwellers and tribal peoples. Moha flower collectors light forest fires for a special reason. It is difficult, time consuming and risky (snake and scorpion bites) to glean the fallen yellowish-white Moha flowers from the forest leaf litter. Hence, taking advantage of the flower colour, the local people light forest fires such that the ground becomes black and the fallen flowers become visible. They also believe that the flowering is more profuse after the tree is 'warmed' by the fire.

The hunter gatherer communities light forest fires for catching small mammals. They deploy snares and other traps on the opposite side of fire, and the running animals get easily caught in such traps. Before the ban on trade in deer and sambar antlers, forest fires were lit to easily locate the shed antlers lying on the forest floor. The calcium-rich antlers do not burn easily and become visible when the undergrowth is burnt. Presently this reason has abated.

The forest department employs traditional fire controllers from the local communities for four to five months from November, on daily wage basis, to protect the forests. These people are called Angaris. If Angaris are not employed in time for cash crunch or other reasons, they cause forest fires to pressurize the officials for employing them. Needless to say that such forest fires are of smaller magnitude. Rivalry between forest staff and people or between two angaris, is yet one more cause. If the forest officials have registered an offence for illicit grazing, poaching, tree felling, etc. against the local people, they seek revenge by lighting simultaneous forest fires at several places in the forest. The already depleted forest staff is unable to manage the catastrophe and the offenders go scot free.

People who seek livelihood from the forest produce have different reasons to light forest fires. They have to roam in the forests and often confront wild animals that attack them. In order to obtain better visibility and protection from bears and carnivores, they burn the undergrowth by causing forest fires.

Yet one more belief is that lighting forest fires on the top of mountains enriches the farm land on the hill slopes and near the base. Monsoon showers cause streams that carry

the mineral rich fertilizer-ash from the burnt mountain tops and slopes to the fields below. Where cattle grazing is a common practice, large expanses of pasture land with coarse grass having prickly awn is purposefully burnt to produce fresh emergence of palatable grass species preferred by cattle, goat and sheep.

Some causes of unintended forest fires also exist, but their cumulative percentage is negligible. Unwanted forest fires rarely start from the intentional controlled fires that are lit by farmers to bake the cropland (rab burning) adjacent to forests. For various reasons, tribal people roam in forests at night with lighted mashals or torches made of wood, cloth and oil. The burning debris from such torches falls on the ground and causes forest fires in summer. People hiking in forests cook food or seek warmth at night by lighting camp fires. In summer, embers from such camp fires spread with wind and ignite the dry wood and cause forest fires and rarely human fatalities. Un-extinguished cigarette or bidi butts casually thrown away by tourists, drivers or passengers traveling through forests can potentially cause forest fires. In summer, the harsh afternoon sun light focusing through pieces of broken bottles thrown in forests can ignite forest fires by burning dry grass, though this is a very rare occurrence.

* Mr. Nitin Kakodkar is Chief Conservator of Forests (T), Pune Circle. These are excerpts of his interview taken and penned by Dr. Satish Pande, to throw light on the serious and devastating problem of forest fires. We shall present the solutions to this problem in the next issue of the eLa Journal.

Asia Speaks

Overview of Raptor Conservation in Japan - Inoue Takehiko *

Inoue Takehiko



Among raptors, which are the top predators of the avian world, 22 species of Accipitridae and seven of Falconidae are known to be from Japan. All these species are strictly protected. Hunting or capturing them is prohibited by the Wildlife Protection and Hunting Law. The frequency of poisoning and poaching of raptors is negligible. The raptors of Japan are characterized by the small size of the breeding population in a small land area. Many conflicts occur between conservation and development. The major problems in the habitat are food shortage and decrease in the available breeding sites. In the Red Data Book of Japan, five species are ranked as 'critically endangered' (13.2%), six species as 'endangered' (15.8%), three as 'vulnerable' (7.9%) and four as 'near threatened' (10.5%).

In the 1990s, many development projects had a negative impact on raptors. Now, however, the interest in the conservation of raptors has increased among the people. In 1997, the ministry of environment published

guidelines for the conservation, investigation and environmental assessment of raptors. The ministry has been working on a project, "Study of prevention measures of collision of raptors with wind farms", and other six projects last year. The total budget for these projects is nearly US\$961,500. Till now, these projects were urgent and of a short duration; hence the results were not good. The individual number of birds of prey has been decreasing. For example, the population of Blakinston's Fish Owl became stable after the project but only 140 numbers were recorded from Hokkaido Island.

This year, the ministry has formed a committee to prepare a master plan for the conservation of the Golden Eagle. The forestry agency is working on a green corridor project for habitat management in 47 areas. This and other projects planned for 2012 have a total budget of nearly US\$2,470,000.

NGOs and land developers have also started taking efforts for conservation of birds of prey. The NGOs have enrolled several young members. The 'Society for Research of Golden Eagle Japan', a pioneering

organization concerning birds of prey, has a membership of around 200 researchers. The 'Wild Bird Society of Japan', the largest NGO, has around 40,200 members.

Besides birds of prey, cranes and swans are also strictly protected. These species are artificially fed during the winters and their numbers are stable. However, the wintering places are quite limited and a large number of birds are concentrated in small feeding areas. Diseases such as avian influenza have become a big threat to the species.

Our mission for the future should be:

- To establish a systematic strategy.
- To implement educational activities and elicit the cooperation of more people.
- To create clear goals and deadlines.
- To conduct some model projects for public display to understand the raptors and their environment.
- To promote basic research.
- To employ full-time experts for the projects by the government because, till now, the government has left almost all of the projects to private organizations.

* Inoue Takehiko is an active member of the Asian Raptor Research and Conservation Network. He stays at:

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Range Extension & Unusual Reports

Collared Pratincoles nesting in Project Tiger - Mandar Khollam* & Anak Bhagwat *

We visited Tadoba Andhari Tiger Reserve (TATR) in the 2nd week of May 2012. The park was named after the local god 'Taru', popularly worshipped as Tadoba. Legend holds that Taru was apparently a village chief who killed a tiger in a mythological fight and a temple of Taru-Tadoba constructed by the local tribes in his memory stands under a huge tree on the banks of the Tadoba Lake till date. TATR in the Chimur Hills in Chandrapur district, with an area of 625 sqkm is home to over 70 tigers and 195 species of birds, of which we recorded 60 species in 3days. Interestingly, we found a breeding colony of the Collared Pratincoles *Glareola pratincola*, with 18 active nests each with 1 to 3 eggs on the banks of the lake near Moharli village. The habitat is a grassy patch in a mud flat which is flooded during monsoon. It is grazed by domestic cattle and annually burnt by local people. In May the hoof marked scrape was hard and sun baked. The soil was black cotton type with lime

stone and empty shells. The uncovered camouflaged eggs were laid in the hoof print depressions left by cattle and were surrounded by burnt grass shoots. The egg color was pale stony yellow, densely spotted with grey and black. The temperature was over 45 degree C. The pratincoles were 'cooling' their eggs by soaking their belly feathers in the lake water and wetting the eggs. This act was repeated every 15 min. While one parent sat on the eggs, the other took grasshoppers and other flying insects from nearby and kept a watch. Both parents alternately incubated. Along with the Collared Pratincoles were lapwings on the ground and Bronze-winged and Pheasant-tailed Jacanas in the lake on the floating vegetation. Because of our short stay we could not continue our observations. Since the records of nesting of this species in India are scarce we report our observations.

* Both Mandar and Anak have completed the 'Certificate Course in Basic Ornithology' and are interested in bird and nature photography.



Mandar Khollam & Anak Bhagwat

Popular Science

Darwin's Frog Is A Good Parent - Dr. Anand Padhye *

Darwin's Frog *Rhinoderma darwinii* is a frog native to the forest streams of Chile and Argentina in South America. It was first described by the French Zoologist André Marie Constant Duméril and his assistant Gabriel Bibron and is named after Charles Darwin who discovered it in Chile during his world voyage on the HMS Beagle.

Characteristics

This tiny frog is 2.5–3.5 cm from snout to rump. It eats insects and other arthropods. To avoid predation it relies on camouflage. The colour of its back resembles leaf litter. Hence, it lies on the ground realistically appearing like a dead leaf until the predator passes by.

Mouth Brooding

The most striking feature of the Darwin's Frog is the way it raises its tadpoles - inside the vocal sac of the male. The female lays about 30 eggs and then the male guards them for about two weeks, when they hatch. Then the male takes all the survivors and carries the developing young around in his vocal pouch. The tadpoles develop further in the vocal sac made of the baggy chin skin of the male, feeding off their egg yolk attached to their tiny bodies. When the small tadpoles have developed about half an inch they hop out and swim away. Then everyone is by itself. The interesting part in this illustration is the parental care given to the young by an animal from the lower taxa.

* Dr. Anand Padhye is Assoc.Prof. in Zoology, MES Abasaheb Garware College, Pune, and member IUCN group for Amphibians.



Source: <http://en.wikipedia.org/wiki/Axolotl>

8THARRCN CONFERENCE IN INDIA BY ELA FOUNDATION - COUNTDOWN BEGINS:

The preparations for this important event for bird conservation are in full swing. The dates are in February 2014. The Venue is Pune. We would like to remind you that the conference shall be held in India for the first time. We shall keep you posted.

ACADEMIC ACHIEVEMENT:

The University of Pune conferred the degree of Ph.D. (Env. Sci.) on Dr. Satish Pande, Director, Ela Foundation, for his work in ornithology. The study offers an important tool to conservationists and habitat managers for protection of the elusive but ecologically and economically important owls. This strengthens our resolve to continue our work in nature conservation.

The Sleepy Owlet

When The Owlet Took A Nap - Vishal Gokhale *

On a December afternoon in 2008, I went to the Balewadi Sports City in search of the Laggar Falcon *Falco jugger*. I had seen the falcon in this area a couple of times earlier. I moved around from one stadium to another in the sports complex, carefully looking for the possible perch sites of this amazing raptor.

I checked under the known perch sites of the bird, mainly looking for pellets. Suddenly, I heard a commotion. Interspersed with the harsh cawing of aggressive crows, I heard the distinctive calls of the Spotted Owlet *Athene brama*. The cacophony echoed in the stadium. The watchman there noticed the owlet, which was perched on the iron angles supporting the roof.

The bird wasn't too far from the upper stands, so I decided to take a few photographs. I climbed the stands and positioned myself in such a way that I could see the bird at eye level. It was around 1.45 pm and the owlet, being a nocturnal creature, should have been taking a nap at that time. Instead, it seemed to be alert but was still reluctant to leave its perch. A few crows on the roof had seen the owlet. Crows are known to mob owls if they spot them during the day. However, much to my relief, the crows lost interest in the placid owlet and flew away.

With the danger and cause of annoyance having passed, the owlet decided it was time for a nap. Initially, it attempted to sleep in the conventional way, by simply closing its eyelids. However, it soon decided it was not

happy with this position and, to my utter amazement, adopted a unique and really comfortable position. I lingered there long enough to try and understand what was on the bird's mind. The owlet first stretched its wings, one by one, yawned and stretched its legs. It then simply bent forward and lay horizontally on the iron frame, closing its eyes. I have never seen a bird sleeping in this manner, like a human being. But well, it's the quality of sleep that matters in the end, isn't it?

By the way I also had my Laggar Falcon sighting, about which I shall communicate sometime in the future.

* Vishal is a software engineer and is interested in bird behavior and photography. He also directs and acts for the Marathi stage.

Anak Bhagwat



Ela in Conservation



Voraciously feeding vulture flocks, once a common sight on carcasses across the subcontinent, have become a rare sight today. For several reasons the *Gyps* vulture populations have declined by 99 % over the past 15 years. With corrective measures being implemented, the vulture numbers seem to have stabilized. At the same time, in lieu of lack of previous data an urgent need to study vulture biology has become paramount.

One of the five species of *Gyps* vultures found in India, the Long-billed or Indian Vulture *Gyps indicus*, nests mainly on inaccessible cliffs. This makes it challenging to study their nesting behavior. Their nesting colonies have been observed in cliffs in the northern Western Ghats. We focused on one such active colony at Tamhini village in Pune district.

This colony is under our study for the past fifteen years. On the insistence of the noted ornithologist Dr. Satish Pande, with the support of Ela Foundation, as a part of its conservation efforts, we were exploring



ways to gather data on these vultures without causing them any disturbance. During the raptor conference in South Korea, we had met Dr. Richard Reading and Dr. Dave Kenny of Denver Zoo, who had successfully used a camera trap method on the nests of the threatened Cinereous Vultures in Mongolia. This had yielded fantastic data on the vulture's breeding biology. With detailed understanding of this method from Dr's. Reading and Kenny, we were eager to use this method for the study of Indian Vultures. The camera is used in India for census study of large mammals by the Forest Department. For the first time this camera would be used for the study of this species of vultures in India. But there were several obstacles.

Prashant Deshpande of Ela Foundation helped procure the camera. He made a sturdy steel bracket with housing so that the camera could be installed on the cliff in trying weather conditions. Extensive testing was carried out on other bird species to ensure that we would get the required data. The next challenge was daunting. We had to mount this camera on the sheer vertical cliffs of the

Sahyadris. The team from 'High Places Management Pvt. Ltd.', who own and run a wonderful management training center in Tamhini, came to our help. Their CEO, Vasant Limaye, himself an ace mountaineer, welcomed the idea and put forth all his resources at our disposal. Amol Pendse, Manager in HPMP and an experienced mountaineer handpicked a team of expert rock climbers for this task. It consisted of Anand Kumar, Pancham Kelkar, Ravi Baraf, Pankaj, and Jivan Gaikar. After a couple of recon trips, Amol and his team installed the camera near one nest of an Indian Vulture while taking care to avoid any disturbance to the bird. The CCF (T), Pune gave us a go ahead, after confirming that the birds would not be handled or disturbed.

The results that came after first three weeks exceeded our expectations. The camera recorded wonderful details on the nesting behavior of vultures. In the two months data, activity time budget of the nestling was revealed along with the time spent by parents in nestling care. Camera's ability to record temperature and take pictures at night without any visible flash revealed a very active night life of the nestling. The photos reveal several unknown facets of vulture life, while in the nest. A detailed study of thousands of photographs is going on. This analysis will help us take informed steps towards conservation of the vultures which shall be shared with the forest department officials.

* Rajgopal Patil is an IT Professional presently focused on Bio-Acoustics.

Travel



Location: North Gujarat. Nearest airport and railway station: Bhuj, Kutch, approachable from Ahmedabad via Gandhidham. Bhuj is known for Kutchi embroidery work, famous all over India. From Bhuj, one can reach the village Khavda, which is about 70 km to the north of Bhuj. From this place Kala Dungar (Black Mountain in Kutchi language), (altitude about 462 m asl) is about 25 km to the north-east. Local transport in Khavda is the traditional rickshaw called *chhakada*, however for reaching Kala Dungar one can hire a private vehicle, which will cost about a thousand bucks to and fro. Kala Dungar is the only place in the Rann from where one can

have a panoramic view of the Great Rann of Kutch. Worth seeing is the sunset and also the Rann on a full moon night, when the stars appear to have descended on the salt pans. On the mountain top is a 400 years old temple of the god Dattatreya. The story goes that jackals asked for food from Lord Dattatreya who was meditating here. He offered the flesh of his body to them, since he had no food with him. According to the legend his body continuously regenerated. A temple of Dattatreya was built here and for the past four centuries, boiled rice is traditionally offered to the Lord and is then served to the local jackals as prasada by the local priest. The priest invites the jackals by calling 'le-ang, le-ang' (meaning take my body). This unusual site can be observed every day around 1800 hrs when the jackals turn up after the evening prayers. Sadly, the numbers of the jackals are now dwindling. In October 2011 we saw around twelve jackals. The local people told us that as many as fifty jackals were observed up to four years back.

People can observe the jackals from a distance of about thirty meters. There is also a Border Security Force (BSF) outpost on the mountain since the Pakistan border is close and can be seen from the top through binoculars. If lucky, one may see a few birds of prey in the sky as one travels from Bhuj to Kala Dungar. North-west of Kala Dungar is the India Bridge, a water channel flooding in Monsoon that connects the Rann with the Arabian Sea. The Dholavira Islands famous for archaeological sites and the famed Flamingo Island, where the flamingos breed are close to this place. Once this region was submerged beneath the Arabian Sea and hence one can find the terrain strewn with sea shells.

* Vishu Kumar is a software development manager, presently working with 'StayinFront' at Infocity, Gandhinagar. He is keenly interested in travelling and indulges in nature photography.



wild page

Self Portrait



Within those depths lay
the seeds of humanity,
behind those eyes its soul.
But when they gaze upon us now,
I wonder what they might say?
Would there be reproach
burning deep and indignant
or a fatal and ruthless acceptance?
If the fabric of our existence
were to be rolled back
into a small ball
and with the thunderous clap
of the Magician's hands
it were to vanish;
And if the Magician
were to hold out his hand
once more
to this creature of infinite depths,
I wonder,
would we do better with -
a second chance?
Would we make them proud?

Rama Desai *

* Rama Desai has done her B.Com. and Diploma from the SNDT college. She is presently based in the USA and works for a local zoo as a volunteer. Poetry and painting are her hobbies.

Minerva's Owl



Minerva's owl
Distant woods
Intrigued yet Quiet
Sits Minerva's owl
Mukta Kamplkar

* Dr. Mukta is a senior consultant at Aon Hewitt in their Leadership Practice. She has done her Ph.D and Post-Doctoral research in marketing. She has published a book of poems.

Personality



Dr. Raymond Ditmars, an American herpetologist (June 22, 1876 to May 12, 1942)

Dr. Raymond Ditmars was an author and scientist but above all a great human being.

He did extensive research on frogs, butterflies, insects and snake venom at the Department of Entomology, American Museum of Natural History. He initially worked as a stenographer and reporter for New York Times in 1898. Later, he was employed as assistant conservationist (reptiles) at the Zoological Park at Bronx. He was eventually made in-charge of the sections on mammals and insects.

Dr. Ditmars wrote several books on his research and travels — 'The Reptile Book' (1907), 'Reptiles of the World' (1910), 'Snakes of the World' (1931), 'Strange Animals I have Known' (1931), 'Reptiles of North America' (1936) and 'Field Book of North American Snakes' (1939). He also wrote three autobiographies — 'Confessions of a Scientist' (1934), 'The Making of a Scientist' (1937) and 'Thrills of a Naturalist's Quest' (1939).

Dr. Ditmars helped in establishing antivenom centres in the United States and Brazil.

He produced 29 documentaries on various wildlife subjects including 'The Four Seasons', 'Porcupines', 'Turtles of All Lands' and 'Evolution'.



The Puff-throated Babbler is telling you something.
Can you decipher it's call?

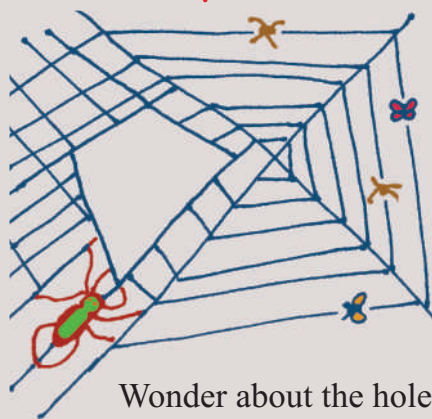
- Vishakha Patil



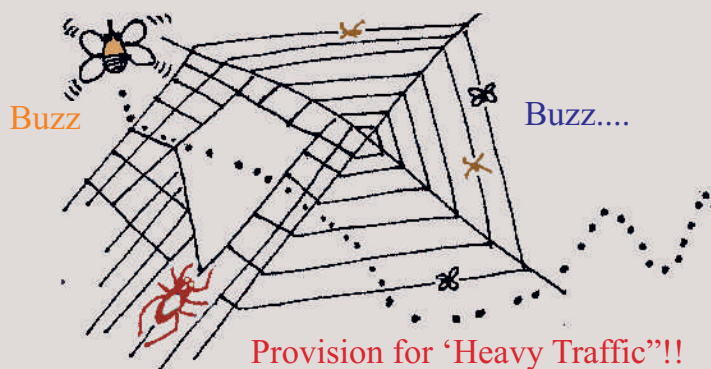
Rajgopal Patil



www.website.fun - satish pande



Wonder about the hole
in my web??



Our Endangered Trees

Mahwa, Mahua, Butter Tree or Honey Tree *Madhuca longifolia*, (Family Sapotaceae) is an Indian tropical tree abundantly found in the central and north Indian plains and forests. It is a fast-growing tree that reaches 20 m in height and has evergreen or semi-evergreen foliage. The flowering season is from February to April. It is adapted to arid environments, being a prominent tree of tropical mixed deciduous forests in the states of Chhattisgarh, Jharkhand, Uttar Pradesh, Bihar, Madhya Pradesh, Kerala, Gujarat and Orissa and some parts of the Western Ghats. The tree is considered a boon by the forest dwelling tribal's who consciously conserve this tree. Virtually being the lifeline of the tribal belt in central India, the tree is culturally amalgamated with Indian life in the plains. Tribal's call it "Kalpavruksha" - the wish granter - for its multiple uses.

USES: It is cultivated in warm and humid regions for its oil rich seeds (20 and 200 kg of seeds annually per tree, depending on

maturity). The fat (solid at ambient temperature) is used for skin care, to manufacture soap or detergents, and as vegetable butter. The oil can be used for burning. The fat is often used in sweets and chocolates. The seed cakes made after extraction of oil constitute good organic fertilizer. It possesses insecticidal properties. The flowers are used to make an alcoholic drink in India. Seed paste is applied to cure muscle fatigue and relieve joint. Bark decoction is used for treating bleeding gums and ulcers. Madhuca oil extracted from the seeds has laxative properties. The leaves are used to treat eczema. Flower juice is traditionally used in the treatment of neurotic disorders. The Madhuca leaves are eaten by the moth *Antheraea paphia*, which produces tassar silk of commercial importance.

CONSERVATION: Large numbers of seeds are often fall beneath the tree in May. The seeds sprout immediately after the first monsoon showers. Such sprouted seeds can

be collected and grown in a mixture of good soil and Farm Yard Manure (3:1). Their initial growth is very slow; hence the seedling should be grown in a nursery for a year and then transplanted in the forest. Watering, protecting the sapling after transplanting and protection from forest fires will augment survival rates. As this tree grows in forests and waste or fallow land, its cultivation will not adversely impact food production, but can improve the environment by large scale afforestation.

* Vivek Vishwasrao is the chief horticulturist with Tata Power, Valvan, Lonavala. He is involved in conservation education.



Vivek Vishwasrao

Book Review

Nightjars, Potoos, Frogmouths, Oilbird And Owlet-nightjars Of The World.

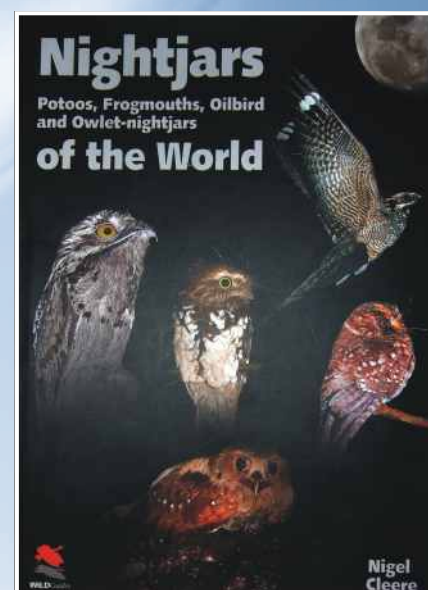
Author: Nigel Cleere. Publisher: Princeton University Press in the US and Wild Guides in UK. Price: Rs. 2600. This is an ultimate identification guide to all 137 species of these cryptic and elusive night birds except owls. Every species and sub-species is depicted with photographs. Key identification features, vocalizations, distribution and habitats are given with breeding season and sites and colour distribution map for each species.

FOREST PEOPLES: Numbers across the world.

Sophie Chao, 4 May, 2012 This is a new publication by Forest Peoples Programme. By providing estimated figures for indigenous and forest peoples' populations in countries and regions across the globe, this new Forest Peoples Programme report seeks to raise awareness of the existence of peoples who primarily depend on forests for their livelihoods, and to enhance their visibility as key actors and

rights-holders in the management and use of forests and forest resources. These figures may serve as a useful reference in advocacy for the recognition of forest peoples' legal and human rights. For more info- <http://www.forestpeoples.org>

Some indicative figures from the book: 1.6 billion rural people are dependent upon forests to some extent. In developing countries about 1.2 billion people rely on agro-forestry farming systems. 1 billion out of 1.2 billion extreme poor depend on forest resources for all or part of their livelihoods. 240 million people live in predominantly forested ecosystems. 300 - 350 million people are highly dependent on forests and live within or adjacent to dense forests on which they depend for their subsistence and income. 600 million forest users qualify as long-term users. There are an estimated 500 million forest-dependent people of which 200 million are indigenous peoples. Sources: World Bank 2002; World Bank 2004; World Bank 2008; World Bank 2009a; Rainforest Foundation (n.d.); World Rainforest Movement 2005.



Website Review

The monsoon has finally arrived and the parched earth is now green with new life. Innumerable herbs have sprouted and will be blooming soon. Trees and shrubs now sport a beautiful polished foliage - a welcome sight for sore eyes. What better time than this for knowing our plants! The information and photo packed website 'Flowers of India' (<http://www.flowersofindia.net/>) is the right one to help you identify and know our flowers. And you don't need a botany degree for this. Options like searching by flower colors make it easy for a layman to identify flora. With little effort you can understand some of the botanical terms and gain access to a larger store of plant knowledge. The website has a brief tutorial on parts of flower, shapes of leaves and flowers to make the transition easy.

The front page is bit dense but a wealth of information is hidden behind it. The key feature of the website is its vast repository of photographs of flowers from different parts of India. The collection can be accessed in various ways. You can look up plants based on flower color, botanical name or shape of the leaves. If you know the name in one of our languages then that can be used as well. The species page includes names in many Indian languages, botanical details and plant uses. You can also browse by the plant groups such as orchids, cacti, flowering trees, grasses, etc. One interesting section is on the

medicinal plants. Even better is the page on plants in ancient literature. All though more information is being added to this page, it is still eminently readable.

This is a commendable effort by Tabish and Thingnam Girija who started building this site back in 2005 and over the years it has become rich with contributions from many flower enthusiasts including our own Ela Foundation member Pravin Kawale from Alibag.

In short you can spend hours on this website and enrich your understanding of our green world.



(<http://www.flowersofindia.net/index.html>)

Flowers of India

Science

Report of a Freshwater Bryozoa *Asajirella gelatinosa* from Pune

- Shirraj S. Jakhalekar *

Phylum Bryozoa (Ectoprocta) is traditionally called Polyzoa. Bryozoans are exclusively aquatic colonial invertebrates. There are more than 5000 known species of bryozoans, most of which are marine. Currently there are 94 valid freshwater bryozoan species broadly divided under 2 classes, namely Phylactolaemata and Gymnolaemata (Massard & Geimer 2008).

While searching for freshwater sponges at Pashan Lake, Pune, we came across a colony of a bryozoan, *Asajirella gelatinosa* (Oka, 1891). The colony measured about 2.5 cm in diameter and was loosely attached to the submerged vegetation. The colony was made up of translucent milky-white gelatinous mass in the centre (statoblasts) and the individuals (polypides) popping out along the periphery. Each microscopic polypide (or zooid) has a fan like structure, called 'lophophore', surrounded by 80-90 tentacles. They help in drawing food particles towards the mouth by creating a delicate current in water. For this reason these animals are called filter-feeders and these feed on suspended organic particles. Gut is 'U' shaped, due to which the mouth and excretory opening are on the same end, side by side!

Bryozoans reproduce sexually as well as asexually. Asexual propagation is mainly due to production and dispersal of dormant stages called 'statoblasts'. These are of two distinct kinds: 'floatoblasts' (float on water surface) and 'sessoblasts' (sink to the bottom). These dormant stages help the species to disperse in space as well as in time because these are resistant to extreme conditions such as desiccation or freezing.

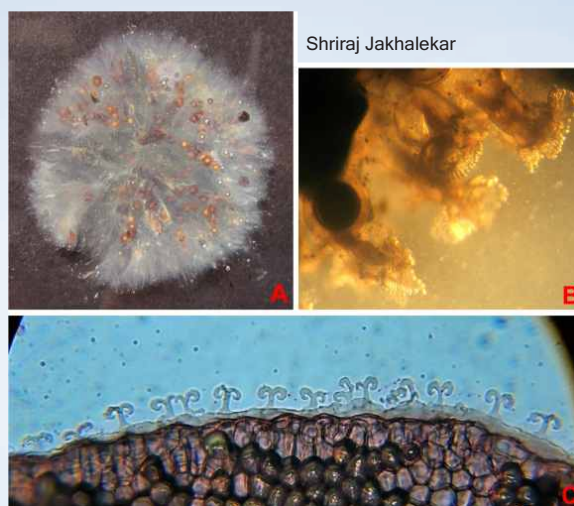
On return of favourable conditions, the dormancy is terminated. The statoblasts then hatch to form fresh colonies, which grow, divide and flourish in suitable environments.

A. gelatinosa (cf. *Pectinatella burmanica*) was previously reported from a pond in the campus of University of Pune by Tonapi & Varghese in 1983. Annandale (1911) has given detailed taxonomic diagnosis and notes on its biology. There are not many studies on Indian species of freshwater Bryozoa. The International Bryozoology Association or IBA is preparing the website: <http://bryozoa.net/iba/index.html>. Bryozoans are identified by the morphology of colony, polypide and statoblasts.

* Shirraj is working in the Department of Zoology, Modern College, Shivajinagar, Pune-5. Dr. Masato Hirose (Japan) and Dr. Timothy Wood (USA) identified the bryozoan species from photographs and descriptions sent to them. Dr. Hemant Ghate reviewed this manuscript and provided the facilities.

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Shirraj Jakhalekar

LEGENDS FOR FIGURES:

A – Decaying colony of *A. gelatinosa*, showing rounded brown statoblasts near the centre.

B – Polypides showing fan-like structure of lophophore; present on the periphery of bryozoan colony.

C – High magnification photograph of diagnostic recurved hooks present on the margins of statoblast of *A. gelatinosa*.

Global News

World News as Reported By Janusz Sielicki:

Tree-nesting Peregrines are back in Poland after 48 years. We ringed them! The two chicks were male and female. We ringed them in presence of Adam Mrugasiewicz - who ringed last known Polish tree-nesting Peregrines 48 years ago; and Piotr Adamiok, who found this nest, our friends from German Falconers Order (DFO), Polish falconers and local hosts, foresters and ornithologists. This day was a real milestone for our tree-nesting project. This is an effect of reintroductions conducted by Polish falconers in cooperation with DFO, supported by many falconers, ornithologists, hunters, foresters, protectionists from Poland and abroad. The Peregrine Project in Poland was initiated by Czeslaw Sielicki and Zygmunt Pielowski in 1980's, with a big support of Gunther Trommer. Unfortunately they are no more with us to see the effect of their great idea. Celebrate this great achievement with us!

IUCN Report on East Asian Coastal Wetlands:

'IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea)' states the situation of the East Asian shorebirds and the threats they are facing. All sectors of these habitats face a variety of threats, but the Yellow Sea (including the Bohai Sea) is of greatest concern, with six of 16 key areas identified in this report in the region. The fast pace of coastal land reclamation is the most pressing threat. Remote sensing and geographical information system (GIS) analyses show losses of up to 60% of intertidal habitats in some key areas. As per this study, more than 41% of the existing tidal flat area was reclaimed within the six key areas. Losses of such magnitude shall lead to declines in biodiversity and ecosystem services in the intertidal zone of the region. The report can be downloaded at this site:

http://www.iucn.org/about/work/programmes/species/our_work/regional_initiatives/asian_coastal_wetlands/



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Bee Line

Trees for Honey Bees - R. M. Dhole *

No.	Local Name	Botanical Name
1.	Ain	<i>Terminalia elliptica</i>
2.	Amaltas	<i>Cassia fistula</i>
3.	Amba	<i>Mangifera indica</i>
4.	Arjun	<i>Terminalia arjuna</i>
5.	Jambhul	<i>Syzygium cumini</i>
6.	Karanj	<i>Pongamia pinnata</i>
7.	Moha	<i>Madhuca longifolia</i>
8.	Nana	<i>Lagestromia microcarpa</i>
9.	Palas	<i>Butea monosperma</i>
10.	Ranjai (Creeper)	<i>Clematis heynei</i>

Above plants are useful for honey bees. They feed on flowers of these plants for nectar. In the year 1930, the famous scientist Albert Einstein said "If the bee became extinct, man would only survive a few years beyond it".

* R. M. Dhole owns nurseries and is a participant of the "Certificate Course in Basic Ornithology". He is a committed tree lover and promotes tree plantation at every occasion and every possible venue.

A Brush with Raptor

Mottled Wood Owl - *Strix ocellata* - Dilip Navalkar *

Drawing is based on a photograph by Satish Pande



Naturally with Nature

Yekale Guruji and Birds of Bhigwan

Bhigwan is an important Indian destination on the map of bird lovers. This irrigation reservoir near Dalaj and Bhadalwadi, near Bhima river, in the eastern Pune district is a wintering stop for thousands of water birds such as Flamingoes, Painted Storks, Eurasian Spoonbills, Openbills, Ibises, ducks, egrets, herons and others. The partly submerged *Acacia* trees at high water level house thousands of nests of Painted Storks, Grey Herons, Ibises, Little, Cormorants and Eurasian Spoonbills. Today it is one of the largest heronry of the threatened Painted Storks in India.

In 1996-97, the birds had to face human disturbance due to firewood collection, tree felling and poaching. The grim scenario changed when advocate Mahesh Kanherkar and the school teacher from Bhadalwadi, Ramkrushna Yekale decided to intervene. In 1996-97, birds used to come to Bhadalwadi in fewer numbers. Yekale guruji (respectfully called so) noticed that these were the near threatened Painted Storks. They roosted on the *Acacia* trees at night but during the day there was too much of a disturbance. He started working with people to convince them to leave the place for birds. Many young volunteers joined him seeing his concern and determination. Others were not convinced and were angered. As guruji and volunteers guarded the trees, people

threatened them with dire consequences. Undeterred they continued vigilance at night and over the next few weeks people calmed down. The tree felling stopped and disturbance was reduced. Slowly the Painted Storks, Grey Herons and Cormorants started nesting on the *Acacia* trees. Over the years their numbers have increased to thousands. It is also one of the favorite wintering grounds for Rosy Starlings.

When I asked guruji how he developed the sense of purpose to save these birds, he told me an interesting story. As a kid while working in the fields he fell asleep under a tree. He was awakened by the babblers causing a commotion. He looked around and saw a cobra with its hood fanned, coming towards him. He escaped but the incident left a lasting effect.

Guruji sees that today birds face new threats. The chicks fall prey to dogs and jackals if water level recedes. Few people were caught trying to poach chicks. Guruji formed a society with their contributions and support from few companies and started providing the volunteers with allowances. Thousands of students, through visits to this site, have become sensitive to nature. Most of them have curbed their tendencies to pelt stones at birds. Guruji says, few years ago, for people, birds meant meat for food, but today children

and people from the surrounding villages are becoming aware of their ecological value. In his spare time guruji writes poems about nature and indulges in photography. He is worried about the *Acacia* trees that are now dying from water logging. He is organizing tree plantation drives to plant more trees around there to replace old trees.



- As told to Rajgopal Patil.

Note: Ela Foundation is working with Yekale guruji in a project to create alternative arrangements for the nesting birds. With the help from the state irrigation and forest departments, we are planning to erect platforms that can be used for nesting. With some financial aid, this should work well as similar platforms have helped birds elsewhere in the world. We will keep our members updated on the progress of this effort.

Communication

My wife and I very much enjoyed the Ela Foundation field visit to Bhadalwadi and Organic Farm on Sunday. It was very interesting as well as informative. Thanks for arranging such a wonderful trip.

- Kishor Rathi

It was a thrilling experience to observe the Heronry at the back waters of Bhadalwadi with Ela Foundation. It was indeed a nice birding experience with Ela members for the first time. Organic farm visit was equally interesting.

- Deepti Thorat.

Members Write

I liked the journal a lot. It is interesting and full of valuable information.

- Mustansir Mulla.

Collaboration in Conservation : Talk at KPIT Cummins, Pune

On 5th June 2012 at 0530 PM, on the occasion of the World Environment Week, KPIT Cummins and Ela Foundation collaborated to arrange an interactive session for the employees of KPIT Cummins, at their Auditorium at Hinjewadi, to promote nature conservation. The event was organized by the CSR department. The topic was 'Owls Our Friends: Superstitions and Science' and was delivered by Dr. Satish Pande, Director, Ela Foundation, based on over 2000 night hours of observations. The talk gave a unique insight on the secret life of these mysterious nocturnal predators.

For the KPIT Cummins this was an opportunity to interact with ornithologists and researchers and get a first-hand experience about pioneering conservation

initiatives and join the conservation movement to make a positive change for our future generations. Tushar Juvekar, Chirag Munje, Ganesh Kavathekar and Avishkar Chaware of KPIT Cummins made the event a great success.

Mr. Pawan Sharma, President and Head, IES, KPIT Cummins was the guest of honour. Mr. Rajgopal Patil and Mr. Pradeep Marathe of Ela Foundation participated in an interactive program prior to the talk, where seeds of nine species of indigenous trees were exhibited and the audience was asked to identify them. The various properties of these species were explained to the audience.



Ela Events

ELA FOUNDATION'S UNIQUE FIELD VISIT:

The Summer Birding Experience and Visit to an Organic Farm.

The visit was planned on the occasion of the 'Vasundahara Diwas' or the 'World Earth Day' on **Sunday, 22nd April, 2012**. The venue was the special birding destination – 'Bhadalwadi Heronry', one of the largest heronries in India. Dr. Satish Pande, who did the pioneering study and scientifically reported this heronry for the first time in our country, accompanied the members. Other experts were Dr. Anand Padhye and Mr. Rajendra Kadam, (DCF, Pune Circle). Ela Foundation with Forest Department, Maharashtra has previously carried out bird ringing studies here.

A mesmerizing atmosphere with a din and hustle-bustle of birds welcomed all. The breeding birds were seen flying to and from the heronry to feed the hungry chicks and bringing sticks to repair the nests and attacking any predators - a sight never to be forgotten. The species breeding in multiples of hundreds were Painted Storks, Open-bills, Grey Herons, White Ibises, Glossy Ibises, Little Cormorants, Eurasian Spoonbills, Pond Herons and Night Herons. Also recorded were Purple Moorhens, White-breasted Water-hens, Common Moorhens, White-throated and Pied Kingfishers and Tawny and Bonelli's Eagles. Passerines were seen in adjoining fields.

An interaction with the forest department and the local Joint Forest Management Committee (JFMC) particularly Bharat Mallav, Yekale guruji and his team, helped us understand its conservation objectives.

On the way back we enjoyed the healthy and pollution free lunch at the 'Nav Nirman Nyas', the Organic Fertilizer Farm run by Mrs. Vasudha Sardar and her colleagues near Choufula-Kedgaon where we were briefed about farming without the use of chemicals, either as fertilizers or pesticides (Organic Farming).



Rescue Report

A Jarring Note on the Trinket's Eggs - Avinash Nagare *

Avinash Nagare



Place: Malavali, foothills of the Western Ghats, district, Pune. 16th October, 2010. Vikas Ragade received a phone call. A snake had entered someone's home. He attended the call, one of the several he receives every week. It was the non-venomous Common Trinket *Coelognathus helena* in the middle of an urban locality and since it was late evening he decided to keep the snake overnight to release it the next day in a suitable habitat. In the plastic jar where he had kept the snake for the night, he found 13 eggs by the side of the snake the very next morning. The female had laid a clutch. He contacted his friend Shailesh Jadhav, another

herpetology enthusiast for advice, who was equally fumbled. They decided to contact me, because they were aware of my keen interest and experience in snake handling and rescues.

We released the mother trinket and decided against throwing the eggs. We wanted to indulge in an experiment in conservation by trying to artificially incubate the eggs by placing them in the same jar. I laid a layer of small pieces of bricks, charcoal and sand on the bottom of the jar and placed the eggs carefully on this substrate and covered the eggs with pieces of coconut coir. I then sprinkled some water on them to generate the required temperature and perforated some holes in the bottle for air circulation. The jar was covered with a piece of cloth tied to its neck. I kept the jar in my dark attic and observed it every day. One month passed and the eggs were intact. After two months there was no sign of hatching. I was getting

dejected. Was my experiment about to fail? Then on the 78th day, which happened to be the auspicious day of Dasera, I saw a crack in one egg, and by 1800 hrs baby snakes starting emerging from the eggs, one after another. 12 of the 13 eggs hatched and the jar became a mass of a dozen wriggling beauties. Trinket literally means a jewel, after the beautiful design on its skin, and in my jar were live jewels ready to face the world. We had won. Our efforts and experimental model would become exemplary for future egg rescues. The next day we identified a safe natural habitat away from human habitation and released the young beauties back in the lap of Mother Nature.

* Avinash is a committed conservationist and a hard core activist. He works in ThyssenKrupp Industries (India) and is a member of Ela Foundation. He likes wild life photography and has won awards for his work in conservation.

