



## Editorial

Dear Readers!

Welcome back! It is good to meet you all again after a long hiatus. The present issue is sure packed with loads of goodies and information as we always promise.

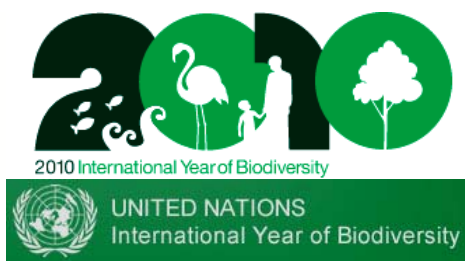
In this issue, we get to know about climate change and how it is affecting our country. We really need to put a serious thought about this as it the future of our kids that is on stake! We also speak about the mangroves that are an integral part of the Coringa Wildlife Sanctuary. Mangroves are important as they serve as the buffer zone between the land and the sea and of late many mangroves are being destroyed due to human greed. We speak about the tiny, beautiful, flitting pollinators of flowers—the butterflies. Without them the world could have been so bland. Then we come to know about *Terminalia pallida* and its importance and the mighty Sloth Bear that is suffering in the hands of humans.

Also in this issue, we speak about the recent and on-going snake mania. It is appalling to see that in this era of advanced medicine and technology how can one still be ignorant enough to think that by devouring or using any animal

part they will be healthy, wealthy and wise! That's height of ignorance!

Beside all these, its time to recommit ourselves to the greater cause of our existence. The United Nations has recognized the year 2010 as the International Year of Biodiversity. Their slogan says "Biodiversity is life, Biodiversity is our life". This is what needs to be mulled up on.

Concerned by the continued loss of biological diversity, the United Nations General Assembly declared 2010 the International Year of Biodiversity. The year coincides with the target adopted by governments in 2002 to achieve, by 2010, significant reduction in the current rate of loss of biodiversity. Biodiversity conservation and sustainable use with equitable sharing of benefits derived from its natural services are the basis of human well-being. Vital signs for biodiversity are plummeting and the related ecosystem services seriously undermined. Biodiversity benefits are being threatened by development choices



that ignore the full value of these natural services to us all and particularly the poorest. Reversing this negative trend is not only possible, but essential to human well-being.

At the state-level, we are happy to inform you that Andhra Pradesh Biodiversity Board has solemnly decided and urged the Government of Andhra Pradesh to ban the entry of Bt Brinjal in Andhra Pradesh. We also take pride in welcoming and introducing Dr. S.N. Jadhav as the new Member Secretary of the AP Biodiversity Board. Dr. Jadhav is an expert in in-situ conservation of medicinal plants and had contributed a lot in this while being at FRLHT, Bengaluru.

**Dr. R. Hampaiah**  
Chairman  
AP State Biodiversity Board

## Briefly

### Rare species of skink rediscovered in Andhra Pradesh

Vosmer's Skink *Lygosoma vosmaerii* was still recently known only from one specimen based on which it was described in the 19th century.

Since its description the species has not been collected. Vosmer's Skink resembles the Com-

mon Lined Skink *Lygosoma lineata*, but differs from it in possessing five toes on forelimbs.

This species was discovered in a highly disturbed habitat near a mine in Guntur district. This rare species was rediscovered by

the researchers attached to Osmania University, Hyderabad and Biodiversity Research and Conservation Society, Secunderabad. This is a very rare species of reptile.

**C. Srinivasulu**  
Dept. of Zoology, Osmania University,  
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## Special Feature

# Climate Change and India



The climate is changing. The earth is warming up, and there is now overwhelming scientific consensus that it is happening, and human-induced. With global warming on the increase and species and their habitats on the decrease, chances for ecosystems to adapt naturally are diminishing.

A lot of people confuse Climate Change with Global Warming. Humans are obviously changing the climate due to changing life on earth and adding 80,000 synthetic chemicals to the global system. Because of the complexity of the system it is impossible to predict the changes. However, to say that increasing CO<sub>2</sub> by x amount will increase global temperatures by y amount is naïve. CO<sub>2</sub> is trivial given the massive human overpopulation, the destruction of nature, the pollution of environment that supports life on earth. Global implications of climate change and global warming are to the world to see with increased incidences of storms, depletion of global fish communities, drying up of major rivers, increased desertification, depletion of food resources leading to a food crisis, honey bee colony collapse, species specific to certain environments being pushed to extinction due to temperature related changes.

The effects of climate change on people would change a lot from place-to-place. Economically developed societies, like those in North America, Europe and Japan, could use technology to reduce direct impacts.

In contrast, economically less developed societies, like those in parts of Africa, Asia, and South America depend much more directly on climate, and could be hit much harder by sudden or large changes. Places like coastal Bangladesh and low-lying islands, could be flooded by storms or rising sea level. Droughts in Africa might become more serious. Developing countries have far fewer resources for adapting to such changes.

Climate may change faster than plants & animals can move from one region to another. This may cause species extinction, lower biodiversity, and changes in the way species interact. Slightly warmer tropical water may kill the algae which reef animals use for food. Climate change can affect the number and kinds of pests directly. This can influence plant survival, food chains, and the spread of disease.

India has also been experiencing many changes since the last decade more so in the recent years.

Several effects of global warming, including steady sea level rise, increased cyclonic activity, and changes in ambient temperature and precipitation patterns, are affecting India.

Ongoing sea level rises have submerged several low-lying islands in the Sundarbans, displacing thousands of people. Temperature rise on the Tibetan Plateau, which are causing Himalayan glaciers to retreat. Increased landslides and flooding are causing an impact upon states such as Assam.

Ecological disasters, such as

coral bleaching event that killed off more than 70% of corals in the reef ecosystems off Lakshadweep and the Andamans was brought on by elevated ocean temperatures tied to global warming, would become increasingly common.

Kashmir, which once had a warm subtropical climate, shifted to a substantially colder temperate climate 2.6–3.7 mya; it was then repeatedly subjected to extended cold spells starting 1 year ago.

Meghalaya meaning 'Abode of the Clouds' is home to the towns of Cherrapunji and Mawsynram, which are credited with being the wettest places in the world due to their high rainfall. But scientists state that global climate change is causing these areas to experience an increasingly sparse and erratic rainfall pattern and a lengthened dry season, affecting the livelihoods of thousands of villagers who cultivate paddy



and maize. Some areas are also facing water shortages.

Climate Change in India will have a disproportionate impact on the more than 400 million that make up India's poor. Government needs to address the interests of the majority of these peoples for whom climate change will mean hunger, food insecurity, and destruction of livelihoods.

**Dr. C. Srinivasulu &  
Dr. S.N. Jadhav**  
Osmania University, Hyderabad &  
AP Biodiversity Board, Hyderabad

### Briefly.....

"We are experiencing the greatest wave of extinctions since the disappearance of the dinosaurs. Extinction rates are rising by a factor of up to 1,000 above natural rates. Every hour, three species disappear. Every day, up to 150 species are lost. Every year, between 18,000 and 55,000 species become extinct. The cause: human activities."

**Ahmed Djoghlaif**  
Head,

United Nations, Convention  
on Biological Diversity

## Feature - Floral Diversity

### Mangrove of Coringa Estuary

Mangrove forests are considered to be highly productive tropical ecosystems. Mangrove areas are ecologically sensitive and provide physical protection for the communities, more importantly they are believed to play a major role in supporting tropical estuarine and coastal food webs. It is a fact that the mangrove forests represent an important carbon and nutrient source to the adjacent lagoonal and coastal systems.



*Avicennia officinalis* - Important mangrove species in Coringa.

The mangrove forests in Andhra Pradesh are located in the estuaries of the Godavari and the Krishna rivers. The Godavari mangroves are located in Godavari estuary of East Godavari district and the Krishna mangroves in Krishna estuary of Krishna and Guntur districts. Apart from these estuaries, mangroves are also found in small patches along the coast of Visakhapatnam, West Godavari, Guntur and Prakasam districts.

The total area under Godavari and Krishna mangrove wetlands are 58,263 ha of which 33,263.32 ha are under Godavari and 24,999.47 ha are in Krishna. However, the dense mangroves in Godavari and Krishna are only 17,000 ha and

7,347 ha respectively. The rest are distributed between mudflats, water bodies, sand bodies and casuarina plantations. The Coringa Wildlife Sanctuary has three Reserve Forests, namely Corangi RF, Corangi Extn. RF and Bhairavapalem RF. Most of the mangroves in the Sanctuary are not directly connected with the Bay of Bengal.

The mangroves of Coringa Wildlife Sanctuary receives tidal flushing through Matlapalem canal, Corangi river and Gaderu river. The Gaderu and Corangi rivers are the distributaries of the River Godavari.

Coringa mangrove forest is located in the Godavari delta, Andhra Pradesh, India. It is the second largest coastal ecosystem in the east coast of India, connected to Kakinada bay on its north and to the Gautami-Godavari on its south. The presence of numerous canals, river tributaries along with dense mangrove vegetation makes it a unique habitat.

Mangroves are a valuable component of estuarine biodiversity. This natural ecosystem is exploited by both internal and external agents. The internal forces like the utilization

of the mangroves by fisherman for timber, fuel, fodder and medicine is in practice since a long time even from prior to systematic identification of these taxa. External forces like large scale prawn culture practices are devastating these forests and the mangrove stretch is getting depleted day by day. Overexploitation is resulting in the disturbed distribution of some taxa, which are currently under pressure and these army end up in erosion unless conserved.

The mangrove community consisted of more than 13 species of mangrove and other plants. The following three dominant mangrove plants, *Avicennia marina*, *Excoecaria agallocha* and *Sonneratia apetala* were found to be present on the banks of a major channel of the Godavari river running through the forest. The area behind the belt consisting of *Acanthus ilicifolius* and *Myriostachya wightiana* is generally colonized by *Excoecaria agallocha* and *Avicennia marina*. Adjacent to this zone species like *Aegiceras corniculatum* and *Avicennia officinalis* were the common species. In the flat clayey soil, *Suaeda maritima* was found to grow. In areas of high elevation, devoid of inundation of tidal seawater during the high tidal period, species such as *Myrtiostachya wightiana* and *Acanthus ilicifolius* were found to colonize both the banks of the channels.

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**Dr. C. Srinivasulu**

Department of Zoology,  
Osmania University, Hyderabad-07

- Mangrove forests are complex ecosystems that occur along intertidal accretive shores in the tropics.
- Dominated by estuarine trees, they draw many of their physical, chemical and biological characteristics from the influences of the sea, inflowing fresh water and upland forests.
- They serve as ecotones between land and sea and elements from both are stratified horizontally and vertically, between the forest canopy and subsurface soil. Mangroves are the characteristic littoral plant formations of sheltered tropical and subtropical coastlines.
- They have been variously described as "coastal woodland", "mangal", "tidal forest" and "mangrove forest". Where conditions are suitable, they form extensive and productive forests. A distinctive character of a 'mangal' is its diversity.

## Feature - Floral Diversity

### Preserving Threatened Butterflies in AP

In insects diversity is immense. Among insects butterflies which are both useful as pollinators and as indicators of changing environment stand apart. Insects dominate the earth, species wise and population number wise and since time immemorial have coevolved with flowering trees. It has been found that more than 75% of the faunal diversity is that of insects. The biodiversity of insects is immense and the coleopterans constitute more than 3,50,000 species, largest among class insect followed only by 1,50,000 species of Lepidoptera which include 17,000 species of butterflies and rest are moths.

In spite of these vast numbers, their very existence is under threat. Butterflies and moths which depends on varied habitats of trees, crops and orchards are facing sure extinction due to various factors both man-made and natural. A few causes which are responsible are:

**1. Destruction of habitats:** The butterfly survival depends upon availability of well grown larval food plants like shrubs, creepers, saplings etc. When more area is converted from forests and waste lands to large agricultural tracts, the butterflies are unable to thrive and develop into large community of colorful species.

**2. Urbanization:** The faster rate of urbanization is leading to reclamation of vegetative tracts into urban concrete jungles is resulting in loss of habitats which these butterfly species could grow and multiply.

**3. Disturbance:** Grazing by cattle, inundation of tourists in forests and butterfly diversity zones to watch, study and photographing is also leading to deprivation of larval food sources, pupa development and multiplication.

**4. Habitat Change:** Habitat conversion for crop plantation:

Large scale establishment of crop plantation like coffee, tea and other monoculture planta-



Tawny Rajah

Courtesy [www.butterflyindia.blogspot.com](http://www.butterflyindia.blogspot.com)

tion in forest tracts is causing a great threat to butterflies in general and endemic species in particular which many a time depends on a single tree species for their survival. Another reason for dwindling butterfly population is the fragmentation of potential forest tracts.

Some measures which help in conserving the butterfly species are

**1. Protected Areas:** To create and declare protected hotspots for butterflies and moths, both within and outside protected area networks.

**2. Research and management:** Periodic surveys to be conducted to establish the species diversity and related dependence on trees and plants which sustain the population and encourage preservation.

**3. Awareness:** Creating awareness and imparting education about the species diversity of butterflies and moths to the stakeholders.

**4. Farming and Ranching:** Butterfly farming and ranching has to be encouraged so that they can be productively multiplied and released into forest areas for restocking

**5. Legislative methods:** Under the international union the red data book of the IUCN lists the

threatened species of Lepidoptera and many of the Indian species featured in this list.

The butterflies are protected in India under the various schedules of Indian Wildlife Protection Act of 1972, many species are listed as follows

**Schedule I:** 15 butterfly species, Kaiser-e-Hind, Bhutan Glory and some Apollos are listed. Disturbance, destruction and collection of these butterflies can attract very rigorous punishments including up to 6 months imprisonment and fine.

**Schedule II:** Some 45 species of butterflies are protected under this schedule.

**Schedule IV:** This schedule includes some common butterflies which are under threat.

**Forest Department:** The forest department should adopt special policies to take measures to conserve insects including butterflies in Wildlife Sanctuaries and National Parks in the State.

**Integrated Management:** Recently there is a growing interest in setting up of butterfly parks and gardens which needs to be encouraged for protecting and presenting the butterflies and to impart education, entertainment and to create awareness of the species diversity and importance.

There are about 1,500 species of butterflies of which more than 250 species can be observed in different locations in Andhra Pradesh, among these many are rare and endangered species which are also endemic to Eastern Ghats. There is an urgent need to prepare a proper inventory including that of flora on which they depend so that these valuable species can be protected and preserved in their identified hotspots.

**Dr. S. Tej Kumar**

President

Butterfly Conservation Society  
Hyderabad

#### Schedule I

Danaid Eggfly, Malabar Swallowtail and Crimson Rose.

#### Schedule II

Common Beak, Small Leopard, Common baron, Grey Count, Southern Blue Oak, Great Brown, Whitebar Bushbrown, Pea Blue, Indigo Flash, Scare Shot Silverline, Longbanded Silverline, Peacock Royal, Malabar Banded Peacock, Common Albatross, Chocolate Albatross, Lesser Gull and Common Wanderer.

#### Schedule IV

Brown King Crow, Gaudy Baron, Plain Banded Awl, Dark Pierrot, Striped Albatross and Painted Sawtooth.

## Endangered Plants of Andhra Pradesh

### Tella Karaka *Terminalia pallida*

Tella Karaka *Terminalia pallida* is restricted in distribution to Cuddapah and Chittoor districts of Andhra Pradesh. It is found at an altitude of 600-800 msl.

This species belongs to the family Combretaceae.

This is a small to big sized deciduous tree species with a grayish bark, ovate leaves that are rounded at the base, obtuse or emarginated at apex. The petiole is glabrous.

*Terminalia pallida* is globally endangered according to Red Listed Medicinal Plants assessed through Conservation Assessment and Management Plan Workshop, CAMP, 2001.



*Terminalia pallida* in flowering.

Source: svimstpt.ap.nic.in

ous.

Fruits are drupaceous, brown in colour and are consumed as dry pickled preparation.

The medicinal properties of this plant are immense. The fruit is used as antipyretic, diuretic and against cold and

cough. The plant parts are used as decoction to prevent diarrhea. It is taken with honey to cure peptic ulcers, the powdered form is mixed in water to control diabetes.

The bark is anti-inflammatory. Infusion of dry fruit kernel with the root of *Pimpenella tirupatensis* is given in the treatment of venereal diseases and peptic ulcers.

Fruit powder useful for treating dysentery. Fruit decoction is useful to cure piles. The plant parts are applied as powder on affected parts and given orally for swellings and fever.

Research shows that *Terminalia pallida* extract showed a significant hypothermic action by significantly lowering body temperature



Vernacular name:

Tella karaka was accorded

Endangered status by the 2001  
CAMP Workshop on Threatened  
Plants of Andhra Pradesh.

## Endangered Animals of Andhra Pradesh

### The Sloth Bear - *Melursus ursinus*

The Sloth Bear *Elugu Banti* in the local lingo is an terrestrial sometimes arboreal, nocturnal and insectivorous species of bear restricted to the Indian subcontinent. They have a large built, long shaggy coat, pale muzzle and white claws. The muzzle is thick and long bulbous snout with wide nostrils. The paws have highly developed, sickle shaped blunt claws. The coat is black with a V shaped mark on the chest. They weigh 220 lbs and measure 2.5 ft in height. They are solitary in nature. The breeding season is between April to June and birthing season is between December and early January during which 1-2 cubs are born. They feed on termites, they also eat fruits and other plant mat-

ter, flowers of Mohwa tree, mangoes, pods of golden shower tree and fruits of Jack



Sloth Bear

tree and especially honey.

Sloth bears face severe habitat loss and heavy poaching mainly for the medicinal market.

Threats to sloth bears include poaching for their gall bladders

and other body parts, capture of bear cubs from the wild, retaliatory killing of bears for protection of crops, depletion of forests, disjointed forests leading to population fragmentation of sloth bears etc. and in addition, the capture of sloth bears for supply to the Kalandar community for itinerant street performances.

The sloth Bear is found in Kawal Wildlife Sanctuary (WLS), Kaundinya WLS, GBM WLS, Kinnerasani WLS, Papikonda WLS, Pranahita WLS, Pakhal WLS, Pocharam WLS and Rajiv Gandhi WLS.

Sloth Bear is listed in Appendix I of the CITES and listed under Schedule I of the Wildlife Protection Act.

The Sloth bear is listed under Schedule I of the WLPA. It is considered Vulnerable in the IUCN Red List.

Between 5000-6000 individuals only survive in the wild.

The Sloth Bear is mainly under threat due to habitat loss and poaching for various body parts and poaching and illegal trade of cubs to use as 'dancing bears'.

Man-human conflicts have increased due to severe habitat loss and fragmentation.

Although, education may help reduce man-animal conflict, the deteriorating habitat is increasing these interactions. Habitat improvement will help alleviate this problem effectively.

## Environment Education

### Rulers of the Night - Bats

Bats are the only group of mammals capable of sustained flight. They evolved about 68-72 million years ago and have been exploiting the aerial niche since then. There are as many as 1117 species of bats the world over, they occur every where excepting the poles. Bats are broadly divided into the fruit eating or the megabats and the insect eating or the microbats.

The megabats are larger in size and feed on ripened fruits that grow wild or are cultivated, also on flowers and also devour nectar and in doing so help in pollination of night flowering plants that depend on these bats for the spread of their kind.

The insect eating bats or the microbats on the other hand feed majorly on insects, sometimes small mammals, frogs, other smaller bats. They help in the control of night flying insect pests of agriculture and human importance. They help in control of

hordes of insects that are active during nights and cause considerable damage and diseases. Each microbat can devour insects upto 25% of its body weight or easily put, 3000-6000 mosquitoes per

feeding about per night.

They do much good than harm.

But are persecuted and their habitats destroyed

roosting sites, fumigated, blocked, set fire into to drive away or kill the bats only due to superstitions and myths that have been prevalent among the general public.

India is home to 113 species of bats of which 13 are fruit-eating, while the rest are insect-eating species. Excepting two species of bats, one fruitbat and a insectivorous bat, none of the bats are protected under the Wildlife

Protection Act. Bats need urgent and stringent protection from the policy makers as they are essential for the ecosystem. Without bats there would be no pollination of night blooming plants and no control to night flying insects that cause extensive damage to our crops and illness to humans.

A lot of confusion exists in common public about the bats. This stems out from superstitions, misinformation and ignorance. To expels these superstitions and myths, education activities are being carried out by us since many years. Dr. C. Srinivasulu recently conducted such an activity in the Vikas Concept School for children selected from various schools in Hyderabad, wherein the children were made aware that when one is ignorant about any animal there is always a fear attached to it as it is unknown. He spoke of their ecosystem services. Their unique ability to echolocate to detect prey and also to avoid obstacles, their behavior, diet, how they look like and so on.

*Dr. Bhargavi Srinivasulu,*

*Dept. of Zoology, Osmania University, Hyd'bad*



A group of students listening about bats.



*A Bat is a bat is a bat*

*fascinating, misunderstood and vital...*

*There are 113 species of bats in India amounting to almost 25% of all the mammals of India. Yet, these vital faunal elements are facing threat due to habitat loss, lack of any protection, hunting for medicinal purposes and for human sustenance, persecuted due to myths and superstitions, smoked out and poisoned. The bats are not harmful in turn very useful to humans.*

## Pioneers in Conservation

### Adisheshaiah, Rollapadu Wildlife Sanctuary, A.P.



Great Indian Bustard

*Courtesy - Raj Purohit, Pune*

A person par excellence, a humble human being to the core, a very patient and keen observer, very knowledgeable and experienced and we can go on about Adisheshaiah who has been since many years working in the Rollapadu Wildlife Sanctuary, Kurnool, Andhra Pradesh. He has worked with and assisted many birdwatchers with enthusiasm, eagerness and a welcoming smile on his face to Rollapadu Wildlife Sanctuary where he has kept watch since all these years and observing even the tiniest of the movements of the Great Indian Bustard, the Blackbuck, the wolves and the many faunal elements residing in the Sanctu-

ary. Ask him about the Great Bustard or about a rodent he can pour out his observations and information equally about the same. His observational skills are spoken of far and wide and he is regarded with respect in the ornithological community for his spotting skills that keep improving by the years.

He has been tracking the animals through every waking moment of his life and concerned about their welfare. Prod him to speak above his shy demeanor and he has the capacity to suggest conservation measures that is suitable for each faunal element of the Sanctuary as he has understanding of their every

need and behavior, be it an owl or a snake, a Bustard or a wolf. Adisheshaiah is a person of such a caliber that he does not need any accolades or awards, he finds his satisfaction watching over the animals and the sanctuary like a guardian angel.

However, it is very unfortunate that a person of such a caliber remains an unknown hero languishing as a daily wage earner who finds it difficult to make both ends meet. It is a sincerely appeal to the concerned from the Forest Department to realize his potential and upgrade him to a permanent employee. Feel proud to have such a person in our midst.

## Nature for Kids

### Lungless Frog - *Barbourula kalimantanensis*

An animal that can breathe through its skin and not through its lungs might sound a little alien-like, but strangely enough, this animal lives on Earth and is known as *Barbourula kalimantanensis*, the frog without lungs.



Lungless Frog

The first recorded species of frog that breathes without lungs was found in a clear, cold-water stream on the island of Borneo in Indonesia. It gets all of its oxygen through its skin.

First described in 1978 from one specimen, this species was not found about for 15 years

when, fishermen found another individual.

Each specimen was deemed so valuable that scientists did not want to sacrifice the animals for dissection. But during recent surveys, a number of specimen were found and thorough research found out that the lunglessness in *B. kalimantanensis* may be an adaptation to the higher oxygen content in fast-flowing, cold water.

The frog also has a low metabolic rate, which means it needs

less oxygen. What's more, the species is severely flat compared to other frogs, which increases the surface area of the skin. So biologists are unsure why a few species have entirely gotten rid of the organs. This species is so rare that nothing concerning its biology is known. Loss of lungs as an adaptation to the cold, fast-flowing water seems like a rational hypothesis.

Future research on these frogs hampered by the species' rarity and endangered habitat.

*Aditya Srinivasulu*

Biodiversity Research and Conservation Society (BRaConS), Secunderabad



#### Some Musings on

#### Climate Change

A new study, published by the US National Academy of Sciences, shows that CO<sub>2</sub> emissions from fossil-fuel burning and industrial processes have been accelerating at a global scale, with their growth rate increasing from 1% for 1990-1999 to more than 3% for 2000-2004.

The study found that the growth rate in emissions is strongest in rapidly developing economies, particularly China. Developed countries, with less than a sixth of the world's people, still contribute more than two-thirds of total emissions of the greenhouse gas.

The study also shows the Arctic ice cap is melting three times as fast - and the seas are rising twice as rapidly - as had been predicted. A study by the University of California's National Snow and Ice Data Center shows that Arctic ice has declined by 7.8 per cent a decade over the past 50 years, compared with an average estimate by IPCC computer models of 2.5 per cent.

## News

### Global Warming - India to study its impact on coasts

India initiated a project aimed at "hazard mapping" across its coastline to study the impact of global warming and assist in protecting coastal communities and infrastructure.

The study will be done

within a span of four-and-half years using an aerial mapping system by the Survey of India through a World Bank-funded project - Integrated Coastal Zone Management (ICZM).

The Ministry of Environ-

ment and Forest and the Ministry of Science and Technology collaborate on this project.

The project in the first phase will focus on three of the eight coastal states - Orissa, Gujarat and West Bengal.

## Events

### Biodiversity Board participates in DDS festival

One of a series of bullock carts filled with wondrous local variety of grains, legumes, and other seeds of prosperity in the drylands of Andhra Pradesh. The travelling display of biodiversity, inaugurated on Sankranti day, 14th January 2010, rode on the festive spirit of the season through the villages of Medak District for two weeks, engaging people in dialogue about traditional seed varieties and the

viability of organic methods of agriculture, with prospects for a secure tomorrow. Deccan Development Society (DDS), based in Pastapur organized this "pata pantala panduga" or "biodiversity festival".

Since 1999, the annual Mobile Bio-diversity Festival of DDS has made its presence felt as a unique festival of the rural communities, dialoguing with fellow

farmers and citizens about ecologically sustainable agriculture, community seed sovereignty and the idea of local production, local consumption and local markets. Hundreds of traditional varieties of seeds (of the Deccan dryland region) are displayed in the caravan of tastefully decorated bullock-carts. The Board appreciates the festival and urges DDS and likes to conduct more such festivals.

# Biodiversity News of Andhra Pradesh

A Newsletter of Andhra Pradesh State Biodiversity Board

You too can contribute to this Newsletter

If you have any views, findings or opinion on Biodiversity of Andhra Pradesh and its Conservation, to share, or any article for the 'Features' and 'Environment Education' sections, please send in your contribution in MS Word format to Article Editor Dr. Bhargavi Srinivasulu (braconsindia@gmail.com). Articles will be modified to suit the format of the Newsletter.

You can get in touch with the Article Editor with your name, address, email and telephone details for inclusion in our mailing list.

## Views

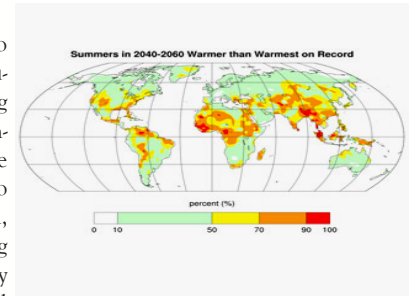
### *Effects of Global Warming on Species Survival*

Studies have indicated that global warming has the potential to cause extinctions in a great majority of the world's especially valuable ecosystems. Habitat losses resulting due to global warming and predictions based on species-area relationships it can be concluded that biodiversity loss would certainly take place. Only the species that have the ability to migrate to new sites in response to the effects of the global warming stand some chance of survival, others may be lost. Global warming is likely to have a winnowing effect on the ecosystems, filtering out species that are not highly mobile and favoring a less diverse, more "weedy" vegetation and ecosystems that are dominated by pioneer species, invasive species, and others with high dispersal capabilities.

Thus, the effects of global warming are influenced significantly by species geographic distributions and climatic tolerances. Species with relatively large distributions and greater climatic tolerances are at lesser risk. Species with on Islands with restricted distribution range, small population and limited opportunities to migrate may be at special risk.

That's not all. Human population growth, land-use change, habitat destruction, and pollution stress will also exacerbate climate impacts on species survival.

*Dr. C. Srinivasulu*, Department of Zoology, Osmania University, Hyderabad -07



Predicted scenario - India will be affected more vis-à-vis climate change and crop loss

*Courtesy Science/AAAS*

## Signing Off Snake "Mania"

The Red Sand Boa *Eryx johnii* is a medium sized stocky snake commonly referred to as a 'two-headed snake' because of its shovel shaped snout and a blunt tail. Of late, rampant smuggling of this species is making the headlines every other day. The reason being a peculiar belief that worshipping a Red Sand Boa will make one wealthy. Some members of the religious fraternity, snake-charmers and an underworld gang are spreading the belief that if one worships the snake, he or she stands to gain a lot of money. The snake is even rented out for pooja on an hourly basis. Due to this, a large number of people including NRIs, government officials and politicians, come to South India in

search of the Red Sand Boa. The Red Sand Boa is also being smuggled out of the state because of its "supposed" medicinal value, although it does not possess any medicinal value. The smugglers claim that the extract from the snake is used to cure AIDS and other chronic diseases and is also used as an aphrodisiac. It is also smuggled for pet trade. This smuggling is rampant in Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra and Gujarat and the snakes are exported to South-east Asian countries. The smuggling of this species draws a fine amounting to Rs 25,000 and an imprisonment of up to three years as it is included under Schedule IV of the Wildlife Protection. People



Sand Boa - *Eryx conicus*

need to be made aware by educational campaigns about the importance of this snake and to quell any myths and superstitions surrounding the welfare of this snake. This is an endangered species and continuation of such activities will push it to the brink of extinction.

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