



Your Saturday  
Magazine

## Green Diary



### Swelling seas

A study shows that global warming is not the only cause of swelling seas. Much comes from "water mining", the pumping of vast amounts of groundwater from beneath the earth, mainly to irrigate crops. This inevitably ends up in the oceans after it evaporates from farmlands and comes down as rain. This accounts for about quarter of global sea-level rise, as much as the melting ice from all the glaciers outside Greenland and Antarctica.



### Sun gets cool

An increase in solar activity actually cools the Earth, suggests new research. As solar activity waned at the end of one of the sun's cycles, new data shows the amount of light and heat reaching Earth rose. Its impact on melting polar ice caps, and drying up of rivers could have been exaggerated by conventional climate models during the period. Scientists believe that during the next upturn of the cycle, when solar activity increases, there might be a cooling effect at the Earth's surface.



### Bumblebees return

The five most threatened bumblebees in England have made an unprecedented comeback in the south east this year thanks to environmental work by farmers. The five species have suffered from intensive farming, — there are fewer wildflowers and more urban space like cities and towns. However environmental schemes that pay farmers to plant wild flowers on field margins and use less chemicals mean many of the species are being seen once again.

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### Enshrined surf

A nonprofit organisation declared the waves off Malibu's Surfrider Beach the first-ever World Surfing Reserve. The designation is largely ceremonial and does not grant greater protection for the surf. But conservationists hope that enshrining the world's best breaks, an idea based loosely on UNESCO's list of World Heritage sites and a similar surfing reserve programme in Australia, will one day lead to legally binding protections against development and pollution.



### Providing protection

Planting genetically modified, pest-resistant corn can provide a halo effect — offering protection from insects to nearby corn plants that have not been engineered to kill bugs, scientists said. Since its introduction in 1996, Bt corn — so called because it has been engineered to produce insecticidal proteins from the bacterium *Bacillus thuringiensis* — has effectively suppressed the European corn borer, a widespread pest in the US, according to new research published in the journal Science.

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**A** first of its kind satellite tracking project to monitor leopards in India recently released data of a young male leopard's remarkable journey from the hinterland to the forests of the Sanjay Gandhi National Park in Mumbai. The leopard that was trapped in a well in the small town of Alephata, in Pune District was fitted with a satellite collar and released in the nearby forests of Malshej Ghat. In the 23 days that followed, the animal walked through agricultural lands, densely populated human habitations, across roads, a railway line and swam across a creek to cover a distance of 120 kms and reach the green oasis in the heart of India's commercial capital.

Wildlife biologist Vidya Athreya, who is lead researcher of Project Waghoba ([www.projectwaghoba.in](http://www.projectwaghoba.in)) that seeks to study leopard presence and behaviour in human-dominated landscapes, believes that this proof of the leopard's journey has important policy implications to deal with cases of human-wildlife conflict across India. The first indications of this had been evident to her in 2003, when she started researching human-leopard conflict in the agriculture-dominated landscapes of Western Maharashtra. It is linked to a spate of incidents in the forests of Yawal WLS located in Jalgaon district of Maharashtra. These forests are inhabited by a range of wild animals including large carnivores such as leopards. They have also been dotted with human settlements for a very long time and yet there had been no instances of conflict with the carnivore that is one of the most intelligent and adaptive of wild cats.

All this suddenly changed towards the end of 2003. The two-month period from October 31 to December 24 saw six vicious attacks by leopards in the region that had not experienced a single one till then. The attacks stopped only when trap cages were put up and two leopards were caught in them. These were the same animals that had, only a few months ago, terrorised the human population in the agriculture-dominated landscape of Junnar near the city of Pune. Labelled 'straying' animals, they were trapped here and as per existing management policy moved 400 km to the forests of Yawal, where they were released back into the 'wild'.

The identity of the leopards, the reason for their presence and the explanation of the attacks lay in a small electronic tag that lay inserted at the base of the tail of these animals. They had been electronically tagged before release as part of a pioneering research project by the Maharashtra Forest Department and assisted by Athreya and wildlife veterinarian Dr Aniruddh Belsare. The rice-grain-



PHOTOS: PROJECT WAGHOBHA

sized tag can be read like a bar-code in the supermarket and it was hoped that the tagging would help track the problem animals once they were captured and set free elsewhere. In the case of Yawal, Athreya and Belsare had shown that translocation of the problem leopards was no solution at all; it lay at the root of the problem. The translocation of the animal from the area of conflict had in fact caused the conflict to move to new areas. The animals had taken the conflict with them, and significantly, to an area where it had never existed.

The explanation lies in a simple fact of animal behaviour and biology. Translocated animals are forced to negotiate unfamiliar territory and this increases the chance of conflict. The stress encountered during the move itself can also result in an animal becoming more aggressive and problematic. Territorial animals like bears, leopards and tigers have a very strong homing tendency and instinctively try to return to the area from which they have been moved. "In the case of Yawal," notes Athreya, "one of the problem animals was

left: the leopard being collared; below, the same leopard trapped in a well in Alephata

captured 90 km from its site of release in the direction of Junnar, the town from where it had been brought."

This was borne out again earlier in June this year, when an elephant from a herd responsible for large-scale damage was captured in the Hassan district of Karnataka. It was moved to the Bandipur National Park but had walked back 70 km towards its home territory within days. In another documented case in 2005, a herd of 20 elephants was relocated from the Hambantota town in south east Sri Lanka to the Yala National Park. One of them was radio-collared by the Centre for Conservation and Research and the Sri Lankan Department of Wildlife Conservation to track the progress of the relocation process. The collared animal, the researchers found out, was back at its original site in Hambantota in a few days time.

There is increasing evidence that translocation of what are considered 'problem animals' is no solution at all. "Translocation," says Athreya, "is a procedure commonly used to deal with people or animals which are a problem. It is reactive and involves large amounts of resources. What we require are proactive processes, but these can be devised only after a careful analysis of the problem, be it conflict between villagers and wildlife in protected areas or in croplands." Modern technology like micro-chipping, use of satellite and radio collars and innovative research projects are for the first time, giving important insights into the hitherto unknown outcomes of translocation projects.

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**Pankaj Sekhsaria** finds that translocation of animals is not always a viable solution to the conflict between animals in the wild and humans

# The need for more proactive solutions



Letters to the editor  
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## An exhilarating write-up that inspires more reading

The introduction of two authors, Lijia Zhang and Deborah Baker, (*Coming of age in China* and *A tale of two religions*, *Zeitgeist*, Oct 9) inspires the readers' quest for reading more books. The Kovalam Literary Festival was a venue for birds of a feather to flock together and exchange different views. These two authors are outstanding women. Kudos for an exhilarating write-up! — **Sunny Joseph Edattakaran, Mala**

### Pointers to the future

The writer brought out a lucid contrast between the cultural polarities embraced by two different authors of whom, one had exposed criticism against the communist-ruled China and the other against an offensive launched to irreconcilable western and Islamic civilisations. While the story of Deborah Baker revolves around conversion from Judaism to Islam in a developed democratic nation, the description by Lijia Zhang is confined to the development China has recently made economically and socially. But there are indications of a major democracy movement emerging in China in the backdrop of the Nobel peace prize for 2010 being awarded to Liu Xiaobo who is under a 11-year detention due to his anti-communist movement in China.

— **B H Indu Sekhar, Hyderabad**

### Emphasis on freedom

The story emphasises the tolerance and individual freedom enjoyed in a democracy. Kamala Das's conversion to Islam in our country is a classic example. Though there may be a beginning, "Coming of age in China" may take time. Instead of protesting against the award of Nobel Peace Prize to Chinese dissident Liu Xiaobo in jail, will they release him?

— **Jacob Sahayam, Thiruvananthapuram**

### Inherently dangerous diet

A fierce battle has once again erupted across the world over genetically modified crops, raising more questions about its safety for consumption ("Contaminated seeds of a new revolution", Oct 9). This is a setback to agribusiness desperate that India goes ahead with GM crops for commercial cultivation. India charged Mon-

santo with certifying GM crops risk-free when the crops have an ability to produce toxins and chemicals causing birth defects. Even studies and tests by Austria and Australia shows that GM crops diet have serious allergic reactions. Is it prudent to go in for a technology which is by far declared all over the world as unfit and poses a serious threat to human health with inherent dangers such as pesticides and chemicals hidden in it?

— **K R Srinivasan, Secunderabad**

### A distant dream for women

"Let us unite and fight for our Peedom" (*Zeitgeist*, Oct 9) rightly portrays the tribulations of women. It is ironical that even after 63 years of independence our *netas* have done little to construct lavatories, especially in the rural belt, to cater to females. Our country can boast of women occupying exalted posts like

President, Lok Sabha Speaker and the Opposition leader but things have not changed a bit. There is a stiff opposition to bringing in 33 per cent seats for ladies in Parliament in the male-dominated politics. Emancipation of women in the near future still remains a distant dream in our country.

— **H P Murali, Bangalore**

### Need for educated leaders

This dismal scenario can change only when women constitute the majority in the Parliament and state legislatures and make laws to ameliorate their social and economic well being. Needless to say, they must be educated and competent enough to effect the change.

— **S Ramakrishnasayee, Ranipet**

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