

## In this issue

### Talking science in India

*A perspective on SciCom*

When scientific advances and science policies are discussed in the public domain, it creates an enabling environment for the development of scientific temper. This prevents society from falling prey to blind faith and superstition.

But even as science communication is being promoted as an academic discipline around the world, India seems to have a lackadaisical approach to science popularization. Only a handful of Indian universities offer science communication or journalism programmes and there are even fewer job opportunities for science communication graduates. Even existing courses are being discontinued at a time when India urgently needs SciCom professionals to connect science and society.

For India to become a knowledge economy, it is paramount that this field is resuscitated. As science is funded by taxpayer money and scientific advances impact society, there is a cogent need to establish a two-way dialogue between scientists and society.

A General Article on **page 2262** in this issue examines the status of science communication in India and the hurdles it faces.

### Pioneering an Indian ROV

*Advances in shallow water monitoring*

The National Institute of Ocean Technology with support from the Government of India has created India's first shallow water cum polar ROV – a remote operating vehicle. The new machine, PROVe, can work at a depth of 500 m and could be utilized for monitoring corals in shallow waters.

The idea is not new. Many countries use underwater ROVs stacked with sophisticated instruments to monitor the ocean. But, in India, due to lack of technical expertise, these tasks were previously carried out by

divers. With PROVe, scientists are aiming to reduce the technological knowledge gap.

The vehicle is an electric powered inspection class ROV, fitted with an underwater positioning system, a high definition camera and scientific payload capable of gauging underwater light status, temperature, salinity and other aspects of water quality.

To test PROVe's usability, the scientists monitored the shallow water corals around five Andaman Islands. The study was carried out last year between April–June to test if rising summer temperature affects coral health in this region.

The team found that even when the surface temperature of water bodies was higher, the temperature in the vicinity of the corals was below the bleaching temperature. Read more about the vehicle and its uses in a Research Communication on **page 2353**.

### Hello, are you listening?

*The perils of using a cellphone*

Aided by a continuous growth in cell phone users, telecom service providers have extended their labyrinth of network towers all over the country. Between July 2015 and February 2016 alone, 65,000 new mobile towers were added. These base stations are installed on tall buildings and hills.

But high frequency electromagnetic radiation emitted by the towers can cause health issues. As a testimony to this fact, complaints of dizziness, headaches and tremors have been reported by people living in close proximity to telecom base stations. However, most reports are anecdotal and sufficient experimental evidence for this phenomenon seems to be lacking.

Now a team of researchers from the University College, Thiruvananthapuram have addressed this issue. The scientists studied insect physiology after subjecting the insects to

electromagnetic waves originating from a cell phone. In a Research Article on **page 2275** in this issue, the scientists present their findings.

The cockroaches exposed to cell phone radiation exhibited altered physiology and signs of stress. They also found that only 1 hour of exposure was sufficient to change the shape of their haemocytes – the insect equivalent of blood cells. These findings underpin the health hazards of electromagnetic wave exposure and call for judicious cell phone use.

### In good company

*Growing basil helps pollination*

Wild basil, or tulsi, is a common Indian shrub. It has excellent therapeutic properties and is farmed for pharmaceutical purposes. But now scientists have found that growing tulsi in the vicinity of crop plants has added advantages.

The male and female parts of a tulsi flower mature at different times and hence the plant relies on insects for pollination. Due to their strong aroma, the flowers attract many pollinators. But once in the area, some of these pollinators also visit other crops growing adjacent to the tulsi.

In Jammu, where scientists were investigating the mode of pollination in wild basil, they recorded as many as sixteen species of insects in the basil farm. Several of these pollinators then also visited adjoining areas where farmers were growing brinjal, cucumber, bitter melon, leguminous plants or oilseed crops. A similar visitation pattern has been reported for both tulsi and other crops in the area.

Recently, dwindling pollinator visitation has been reported from several regions. Growing tulsi in the vicinity may solve this problem. For more about these benefits, turn to the Research Communication on **page 2359** in this issue.

Sarah Iqbal  
arii.iq@gmail.com