

A symposium to commemorate 100 years after Wallace

To commemorate and honour Alfred Russel Wallace, a legendary evolutionary biologist on the occasion of his death centenary numerous events, including exhibitions and symposia, are being held all over the world. In India, the National Centre for Biological Sciences (NCBS), Bangalore, organized a symposium on 7 November 2013, bringing together eminent evolutionary biologists from all over the country.

Wallace was fascinated by life on earth, and his early goal was to find principles that explained the evolution and distribution of biological diversity. As a young man, he spent many years exploring vast stretches of forests and oceanic islands studying animals and plants of

South America and later the Malay Archipelago. His tremendous prowess of observation and synthesis led him to propose evolution by natural selection. He presented this revolutionary idea, along with Charles Darwin, at the Linnean Society meeting in 1858. He went on to explore and articulate complexity of evolution. His ideas influence our thinking to this day.

Wallace, known as the 'Father of Biogeography', proposed zoogeographic regions of the world more than 150 years ago, which are largely valid till this day. From first-hand observations, he distinguished Asian geographic elements in Borneo and Bali Distincta from the biogeographic elements in Wallacea, which

includes Sulawesi and Lombok and other nearby island groups in SE Asia. The line separating these two provinces has been named in his honour as the Wallace Line. In addition to honouring Wallace, the goal of the day-long symposium at NCBS was to facilitate academic interaction among Indian evolutionary biologists at all career stages and to take stock of the progress in the field of evolutionary biology *Current Science* hopes to bring out the major contributions of this symposium shortly.

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Nobel laureates – 2013

The Nobel Prize is awarded for path-breaking advances in the field of science or in recognition of one's contribution in the field of literature and peace. The much awaited results of the Nobel Prize 2013 in Physiology or Medicine, Chemistry, Physics and Economics were announced last month.

The Nobel Assembly at Karolinska Institutet has awarded the prestigious Nobel Prize in Physiology or Medicine, jointly to James Rothman of Yale University; Randy Schekman of University of California, Berkeley and Thomas Sudhof of Stanford University, all in USA, for their work on cell transport system. A prokaryotic cell found in higher organisms produces many essential organic and inorganic substances. These substances are transported to various parts of the cell in small bubble-like packages termed vesicles. The winners of the Nobel Prize discovered the mechanism by which the substance containing vesicles are transported to different parts of the cell and also between the cells.

The results are relevant to processes like release of insulin, signalling between neurons and signalling in the immune system.

The Nobel Prize in Chemistry has been jointly awarded to Martin Karplus of Strasbourg University, France, Michael Levitt of Stanford University, USA and Arieh Warshel of University of Southern California, USA for pioneering the use of computer modelling to map and predict chemical processes. Using computers instead of laboratory test tubes, the scientists devised a method derived from the principles of classical and quantum physics that is now applied in understanding how new drugs interact with proteins in the body. It is also applicable in many industrial processes such as in designing solar cells.

The Nobel Prize in Physics has been awarded to Peter Higgs of University of Edinburgh, UK and Francois Englert of Université Libre de Bruxelles, Belgium for their research on Higgs boson or the 'God particle' as it is more popularly

called. Higgs boson is the key particle in theories explaining the make-up of the universe. Hailed as one of the most important discoveries in the field of particle physics, the presence of Higgs boson was confirmed by experimentation in the Large Hadron Collider at CERN, the European Organization for Nuclear Research in 2012.

The Nobel Prize in Economics, also called the Sveriges Riksbank Prize, was jointly awarded to three economists from USA – Eugene Fama and Lars Peter Hansen of the University of Chicago and Robert Shiller of Yale University. The trio have 'laid the foundation for the empirical analysis of asset prices', said the awarding committee. The individual contributions of these three economists helps to foresee the course of the financial stocks and bonds over a long period of time and has strongly influenced the way people carry out their economic investments.

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