

Science Reporter

COMETARY FACTS

The February 2013 issue of SR was interesting in many respects. The article **Two Comets Come Visiting in 2013** was very well-timed and useful. Readers interested in cosmic facts, like me, enjoyed the article extremely. I would like to present some interesting and amazing facts about comets for the readers of SR.



Cometary nuclei are among the darkest objects known to exist in our solar system. They reflect very little of the light that falls on them. It is thought that complex organic molecules are responsible for this low reflectivity of the cometary surface. The very darkness of cometary surface allows them to absorb the heat necessary to drive their outgassing. Comet nucleus is indeed very tiny, ranging from 100 metres to 40 km. across. The most visible part of a comet is its coma.

As a comet approaches the inner solar system the solar radiation pressure causes the volatile materials within the comet to vaporise and steam out of the cometary nucleus carrying dust away with them forming an extremely large volumed coma often larger than the Sun. A comet tail is even larger.

Finally, comets are not everlasting. They lose ice and dust each time they come close to the Sun leaving trails of debris. Eventually comets lose

all their ice and turn into fragile inactive objects like asteroids. Sometimes they appear as meteor showers.

Sudhamoy Banerjee

LAUGHING TO FAME AND GLORY

The feature article **Scientists Injured in their Explorations** published in the April issue mentions Davy along with several other scientists who were injured while engaged in their research activities. Even though he came from a modest background, by dint of his extraordinary achievement, he rose to become a baronet. At the comparative young age of twenty he discovered nitrous oxide or laughing gas which made him 'happy as well as immune to pain'. Its discovery also made him famous throughout the length and breadth of England.

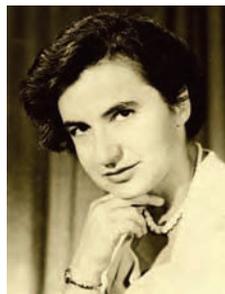
For his discovery of sodium and potassium the Emperor Napoleon presented the scientist the Medal of the French Institute, despite the fact that England and France were at war. This speaks highly of Napoleon's interest in honouring science and scientists. Davy died at the relative young age of fifty. He was the saviour of mineworkers, the discoverer of six chemical elements (more than any other scientist) and the father of electro-chemistry.

Dr. S.K. Gurtu
Jaipur



UNSUNG HERO OF SCIENCE

In the April 2013 issue, Ms. Arpita Das Choudhury's feature article **Scientists Injured In Their Explorations** was a real eye opener. Kudos to her for bringing into the limelight the pioneering efforts of those trailblazers who sacrificed their life for the pursuit of science. However, the case of English biophysicist and X-ray crystallographer Rosalind Franklin deserves special mention.



Franklin is just one of the female stars in the galaxy of science who were denied their share of the Nobel recognition on the mere grounds of their gender. In spite of her huge contributions to the understanding of the ultrastructures of RNA, viruses, coal, graphite and most importantly, the double helical model of the DNA, Franklin lived a life of anonymity before succumbing to a fatal ovarian cancer, while her colleagues Maurice Wilkins, Watson and Crick went on to achieve world-wide success and publicity by stealthily using her crystallographic data to propound the DNA double helix model.

Her story remains by far the most debatable evidence regarding the blatant prejudiced approach of the then Nobel Academy which was inclined towards patronising its fraternity. Due to her so-called "prickly" temperament and reserved attitude, Rosalind earned the sobriquet "the dark lady".

However Franklin's case also carries a message

that women scientists need a little extra measure of toughness, assertiveness and independence if they are to get their fair share of credit and recognition. Pursuing science in isolation would only contribute to their being marginalized and deprived of recognition in the scientific community.

Varun Singh
Varanasi, Uttar Pradesh

ROLE OF ZOOS

The January 2013 issue gave a detailed account of how zoos are playing a big role in preserving the endangered species. Since zoos offer an ambient environment to these endangered species, it is vital that zoos are less interfered with. Visitors may create psychological disturbances in animals which may have deleterious effect on them. We need to have a better understanding of our responsibility towards preserving the ecology.

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WE WOULD LIKE TO HEAR FROM YOU

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