IUCAA
ISSN 0972-7647

KHAGOL

A quarterly bulletin of the
Inter-University Centre for Astronomy and Astrophysics
(An autonomous institution of the University Grants Commission)

Available online at http://ojs.iucaa.ernet.in/

No. 95 | July 2013

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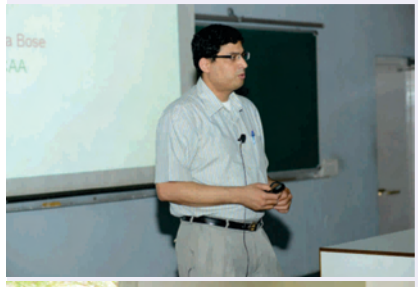
CONTENTS

Refresher Course in Astronomy and Astrophysics for College/University Teachers

The biennial Refresher Course in Astronomy and Astrophysics for college and university teachers was held during May 6 to June 7, 2013 at IUCAA. The course introduced the participants to the basic and advanced topics of Astronomy and Astrophysics. The course included hands-on sessions, where different astronomical data analysis techniques were demonstrated. The participants were also given tours of the IUCAA Girawali Observatory (IGO) and the Giant Metrewave Radio Telescope (GMRT).

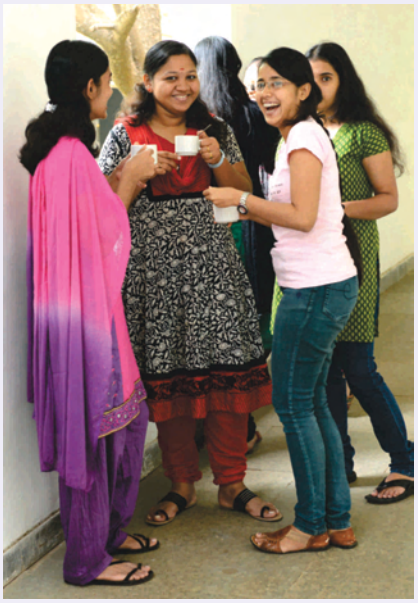
The lectures were given by IUCAA faculty members and a few faculty members from other institutions. The hands on sessions were mostly managed by the young researchers of IUCAA. The scientific, technical and administrative staff of IUCAA played a vital role in ensuring that the course runs smoothly. Specially, Santosh Khadilkar managed a significant part of the administrative work. Faculty coordinator for the refresher course was Sanjit Mitra.



In the end, the participants provided positive feedback about the courses, and they were excited about teaching and pursuing research in Astronomy and Astrophysics in their home institutions.

Vacation Students' Programme

The Vacation Students' Programme (VSP), for students in their penultimate year of M.Sc. (Physics) or engineering degree course was held during May 6 - June 21, 2013. Exceptionally motivated final year B.Sc. and second year engineering students were also invited. This year, twelve students participated in this programme. The participants attended about 50 lectures, dealing with a wide variety of topics in Astronomy and Astrophysics, given by the academic members of IUCAA. They also did a project with one of the faculty members of IUCAA, and at the end of the programme, the students gave presentations in front of the faculty members and others. R. Srianand was the faculty coordinator of this programme.



School Students' Summer Programme

IUCAA's outreach group conducted the regular School Students' Summer programme as well as an Astronomy Summer Camp during April-May, 2013, for six weeks. A total of one hundred and fifty students of class VIII/IX/X participated in these programmes, who were nominated by their respective schools.

Starting every Monday, teams of 2-6 students were guided on scientific projects by volunteering scientists at IUCAA. In the spirit of true research, the students and guides worked together unfettered by a set syllabus and time schedules. This year the students carried out projects under the supervision of J. V. Narlikar, Anirban Ain, Prasanta Bera, Rajeshwari Dutta, Bhooshan Gadre, Vikram Khaire, Krishnamohan Parattu, Kaustubh Waghmare, and Samir Dhurde.

The projects were diverse, covering wide range of topics, including studies of projectile motion, light, binary stars, galaxies and the Hubble diagram. The students were given access to the IUCAA library and the facilities of IUCAA's Science Exploratorium - the Muktangan Vidnayan Shodhika, like the library, computer section and workshop. To give a finishing to their work, on the last working day of every batch, the student teams made presentations about the work they did during the week and submitted a report.

Summer Astronomy Camp

The new format "Astro Camp" was conducted with 125 school students in total, who got to work at the IUCAA Muktangan Vidnyan Shodhika in the month of May. The aim was to give an overview of Astronomer's tools to school students, while getting them to try out various observations. The newly developed structured content and experiments were very popular with the students. Topics covered ranged from simple geometry and statistics to optics and spectroscopy. The students found out the difficulty in measuring something as dimunitive as a mustard seed. They used the Samrat Yantra for studying trigonometry as well as the celestial motions of the Sun. They were able to understand the scales of the solar system by finding the ratio of the distance to the Sun to its diameter. Star maps were distributed and sky watching practice sessions were held for all the students on Friday evenings.

Throughout the duration, efforts were taken to clarify misconceptions and give a better understanding of motives of Science. The days were interspersed with viewing fun videos and science toy making.

The programme was coordinated by Samir Dhurde. Experimental devices used were prepared by Maharudra Mate. Considerable teaching help was provided by summer interns, Abha Vaishampayan, Ketan Rikame and Omkar Gavali, all of them being Physics students. The ability of the students of that age to put data into a graphical form was looked into, in collaboration with Amit Dhakulkar, a research student at HBCSE-TIFR, Mumbai.

INAAD Radio Astronomy Meeting – II

The IUCAA Node for Astronomy and Astrophysics Development (INAAD), at Newman College, Thodupuzha, Kerala, conducted the Radio Astronomy Meeting - II at St. Thomas College, Kozhencheri during May 8-10, 2013. This was a follow up of the meeting held at MACFAST, Thiruvalla, in February 2013, which gave training on the fundamentals of radio astronomy and the use of AIPS software for reducing GMRT data. Since the aim of the programme was to promote multi-wavelength skills among Astronomy researchers, the participants were drawn from various branches of Astronomy. While the first meeting was for a larger audience that wanted to or were already involved in radio astronomy research, the second one was a trainer's training hands-on programme with a participation of only six researchers. During the programme, the participants analysed the low frequency radio data from a galaxy cluster and reconfirmed the existence of a very unusual and huge radio jet emanating from the centre of the cluster, and discussed the possible science involved. INAAD has envisaged this sequential radio astronomy meeting with a broader aim of enhancing the capabilities of the astronomers in the region so as to equip them to use the various telescopes in different wavelengths coming up in India and abroad.

Announcements of the upcoming events

Workshop on Astronomy and Astrophysics at Jaipur, September 2-4, 2013

Jaipur, with its three hundred years old heritage of astronomical studies, attracts thousands of visitors from around the world. However, the state of academic research in this field remains abysmal with a few individual exceptions. In order to inject a new enthusiasm and to attract new young academic talents in this field, IUCAA has joined hands with the Department of Physics, University of Rajasthan, to organise a three day workshop on introductory astronomy with a special thrust on visual observations. The B. M. Birla Planetarium, Jaipur, which has newly initiated rudimentary research facility using a Celestron 11 inch CGEM telescope with its various backend equipments including a solid state photometer, would be contributing a strong backup support towards the successful organisation of the workshop. The workshop is aimed at the students of MSc with Physics background, research students and university/college teachers. It is designed to accommodate a total of 30 local and 10 outstation participants from neighbouring regions.

Limited travel assistance funding is available to support the outstation participants (upto IInd A/C train fare) for teachers, and second class sleeper to students on production of ticket copy.

Last date for receiving applications (along with the recommendation from their teacher or head of the department, only by email is July 31, 2013. Selected participants will be intimated by August 10, 2013. Contact persons for the workshop are :

Aruna Bharti (aruna1224@gmail.com) and
Sandip Bhattacharya (sandip_jaipur@yahoo.co.uk).

Workshop on Astronomical Techniques and Science with Virtual Observatories

The Department of Physics, University of Kashmir, Srinagar, jointly with the IUCAA, Pune, will be organising a Workshop on Astronomical Techniques and Science with Virtual Observatories, to be held at University of Kashmir, during September 23 - 26, 2013.

The aim of this workshop is to introduce M. Sc. (Physics) students, research scholars and young college / university teachers, to the excitement in astronomy as well as to provide a flavour of the tools and techniques used in astronomy research. There will be introductory lectures in the current research in astrophysics as well as hands-on sessions on computers, where selected participants will get a chance to get acquainted with data analysis and mathematical tools. An important component of the workshop will be a few sessions on the "Science with Virtual Observatories". It is aimed to familiarize the participants with the VOi capabilities through hands-on exercises. The outstation participants will be provided with free local hospitality. Limited travel support will be available for genuinely deserving participants. Applications detailing name, affiliation, address, mobile number, email, present academic position, reason for participation and justification for financial support, may be emailed to the following address:

Manzoor A. Malik
Local Coordinator,
Email: mmalik@kashmiruniversity.ac.in, mmaalik@gmail.com

Workshop on Astronomy and Physics for Science Communicators

Post-graduate Department of Physics and JES Observatory of J.E.S. College, Jalna, Maharashtra, will be organizing a workshop on Astronomy and Physics for Science Communicators during September 26-27, 2013 with the support of IUCAA. The workshop will be mainly organized for 'Science Communicators', who are teachers in school and college, NGO workers who are concerned with science popularization or outreach activity. The workshop will provide necessary background of some of the concepts in astronomy and physics through conceptual lectures and laboratory /observational work enabling a science communicator to extend the same in an effective manner.

Interested candidates should send their applications by e-mail to the Coordinator M. L. Kurtadikar, so as to reach before August 15, 2013. They should mention 1. Name, 2. Date of Birth, 3. Contact – (a) mobile no. and (b) e-mail ID, 4. Designation and Institutional Affiliation, 5. Role in Science Popularization/Outreach (give specific details about current and past activities 6. Recommendation (by e-mail) of Head of the institute/ school/college/organization. Selected candidates will be provided free hospitality.

Contact :
M. L. Kurtadikar, J.E.S.College,
Jalna 431 203, Maharashtra.
E-mail : mkurtadikar@yahoo.com

Autumn School on Cosmology

November 5-15, 2013
at BITS-Pilani, Rajasthan

Contact persons:
Debashis Bandyopadhyay
(debashis.bandy@gmail.com)

Tarun Souradeep
(tarun@iucaa.ernet.in)

For more details visit the website:
http://www.bits-pilani.ac.in/pilani/physics/Physics

Workshop on Light Scattering Techniques and Applications to Astronomy and other areas

Over the past few decades, the light scattering techniques have improved due to various advances in computational power as well as improvement in mathematical abilities. The most common techniques use Mie Theory, T-Matrix approach, Discrete Dipole Approximation (DDA), eikonal methods and many other approximations and numerical approaches. These techniques are adapted to suit various applications viz. (i) interpretation of astrophysical phenomena as a result of light scattered from cosmic dust (ii) laboratory experiments on simulated dust analogues of astronomical and atmospheric aerosols, etc. (iii) medical and other applications. On the international scene, there are multiple conferences held every year relating to these topics. In India, there are several interested workers in this field ranging from astronomers, theoreticians and laboratory physicists, who will find this workshop as an important platform to exchange new ideas and possible inter-disciplinary areas, where collaborations can be initiated. This workshop is meant for workers in these areas, who could be interested in attending and making presentations. The participation is only by invitation.

This workshop will be conducted at S. N. Bose National Centre for Basic Sciences, Kolkata, during November 19-21, 2013. The contact persons are:

S. K. Sharma (Email: sharma@bose.res.in) and
Ranjan Gupta (Email: rag@iucaa.ernet.in)

Gravitational Wave Physics and Astronomy Workshop

The next Gravitational Wave Physics and Astronomy Workshop (GWPAW) will be held at IUCAA during December 17- 20, 2013. It will be hosted by the Inter-University Centre for Astronomy and Astrophysics (IUCAA). It is a general meeting on the physics and astronomy of gravitational waves, techniques for their detection, and interpretation of data and results.

More information and updates will be available on the IUCAA website by early August 2013.

Colloquium

03.04.2013	Nityanand Singh on Holocene climatic changes and cultural evolution of the Indian subcontinent.
02.05.2013	Tarun Souradeep on Planck's universe: Cosmic simplicity or duplicity?
09.05.2013	Suparna Telang on Journey through mind.
13.06.2013	Rana Adhikari on Turning on and tuning up the interferometers for gravitational wave detection.

Welcome to ...

Nidhi Pant

Nidhi Pant did her Ph.D. under the guidance of Sanjay Jhingan (Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi) and Tarun Souradeep (IUCAA, Pune). She has joined IUCAA as a post-doctoral fellow.

Her work during Ph.D. mainly comprised of several aspects of statistical isotropy violation in cosmic microwave background (CMB) radiation.

Her areas of research interests are cosmology, cosmic microwave background, theoretical and observational aspects of statistical isotropy violation, and statistical techniques for data analysis in cosmology and gravitational waves.

A. Pavan Kumar

Pavan Kumar obtained his Ph.D. from the Department of Physics, IIT Kanpur working under the supervision of Pankaj Jain. After completing his Ph.D., he spent a year at IISER, Bhopal as a post-doctoral fellow, working with Rajib Saha. He has joined IUCAA as a post-doctoral fellow.

His Ph.D. thesis is based on large scale anomalies of Cosmic Microwave Background Radiation (CMBR), namely, the breakdown of statistical isotropy (SI) as indicated by the anomalous alignment of low-multipoles and, even-odd multipole power asymmetry, also seen at low-multipoles, in the WMAP data. The effect of CMB foreground residuals on these anomalies, and a possible pre-inflationary origin of SI violation leading to alignment of large scale CMB modes were particularly studied.

His present interests include CMBR (theory and data analysis), anisotropic (Bianchi) cosmological models, and modified theories of gravity.

Seminars

Listed below are the seminars given at IUCAA during April - June 2013.

01.04.2013	Aseem Paranjape on Counts, clustering and collapse: Analytical methods for large scale structure
04.04.2013	Suprit Singh on Quantum musings in de Sitter spacetime.
10.04.2013	Hadi Rahmani Bayegi on The Uves large programme for testing fudamental physice: II constraints on a change in m towards quasars
18.04.2013	Varun Bhalerao on Making a X-ray telescope.
18.04.2013	Kaustubh Vaghmare on The ones in the middle-II.
23.04.2013	Amitabh Virmani, On conformal symmetry of mutli-charge black holes.
25.04.2013	Russell Cannon, on 60 years of blue straggler stars.
26.04.2013	Prasant Samantray, Holography in Rindler space
29.04.2013	L. Sriramkumar on The scalar bispectrum during inflation and preheating in single field inflationary models.
30.04.2013	Gaurav Goswami on Maximum entropy-deconvolution of primordial power spectrum
03.05.2013	Achamveedu Gopakumar on Accurate and efficient gravitational wave phasing for spinning compact binaries.
07.05.2013	Aditya Rotti on Beyond the isotropic universe.
08.05.2013	Angel Ruiz on Multiwavelength studies of AGNs: HyLIRG and red quasars
10.05.2013	Anuradha Gupta on Probing the benefits of a new approach for constructing templates for spinning compact binaries.
13.05.2013	Himadri Sekhar Das on Polarimetric observations of Comet C/2009 P1 (Garradd) from IUCAA Girawali Observatory, Pune and ARIES Sampurnanand Telescope, Nainital.
15.05.2013	Eric Tatulli on Performance of laser tomography adaptive optics (LTAO).
16.05.2013	Krishna Mohan Parattu on The structure of the gravitational action and its relation with horizon thermodynamics and emergent gravity paradigm.
17.05.2013	Irom Ablu Meitei on Quantum non-thermal radiation from non-stationry rotating de Sitter black hole
23.05.2013	Nagendra Kumar on Thermal Comptonization model and implication on the rapid temporal behaviour of X-ray binaries.
29.05.2013	Krishna Venkateswara on Seismic isolation in advanced LIGO.
30.05.2013	Santanu Das on ISW effect as probe of features in the expansion history of the Universe.
30.05.2013	Srividya Subramanian on Coronal Heating in Solar Active Regions
31.05.2013	Arun Kumar Singh on Intrinsic shapes of elliptical galaxies by photometry alone.
04.06.2013	Sarbari Guha on A study of the cylindrical collapse of charged fluid in presence of dissipative effects.
04.06.2013	Subenoy Chakraborty on Generalized Bekenstein system and logarithmic correction.
05.06.2013	Nishant Singh on the generation of large-scale magnetic fields due to fluctuations in turbulent helicity.
06.06.2013	Bibhas Ranjan Majhi on Origin of Thermality of the horizon.
11.06.2013	Soumen Mondal on Possibilities of shock in the accretion and wind flows wiht temperature dependent adiabatic index.
11.06.2013	Broja Dutta on Systematic evolution of phase lag and quasi-periodic oscillations in galactic black hole sources.
13.06.2013	Rana Adhikari on Turning on and tuning up the interferometers for gravitational wave detection.
13.06.2013	Pallavi Bhat on Fluctuation dynamo and their Faraday rotation signatures.
13.06.2013	Prakash Sarkar on Quantifying the cosmic WEB using the shapefinder diagnostic.
14.06.2013	Arunava Mukherjee on Studying Galactic LMXBs to test gravity in the strong field regime and understanding the nature of Supra-Nuclear degenerate matter in neutron stars.
17.06.2013	Hemwati Nandan on Geodesic flows in rotating black hole backgrounds.
20.06.2013	Jayanti Prasad on Reconstruction of stochastic gravitational waves background with quadratic regularization.
20.06.2013	Main Pal on Variable compton reflection from 1H 0419-577.
25.06.2013	Parijat Thakur on Possible transit timing variations of the TrES-3 extra-solar planetary system.
26.06.2013	P. Shalima on Modelling the scattering of radiation by dust grains.
26.06.2013	Charles Jose on Clustering at high redshifts: The connection between LAEs and LBGs.

IUCAA Preprints

IUCAA preprints released during April - June 2013 can be obtained from the IUCAA library (library@iucaa.ernet.in). The preprints can also be freely downloaded from :

http://www.iucaa.ernet.in/~library/main.html.

Visitors (April - June 2013)

Gunmalla Abhinav, Piyush Acharya, Rana Adhikari, Shantanu Agarwal, Vivek Agrawal, Shah Alam, Saiyad Sk. Ali, Syed Moosa Ali, S. Annapurni, Anam Ansari, Anil Nagorao Ardad, Reshma Babar, Jasjeet Bagla, Anil Bajaj, Prasad Basu, Swetha Bhagwat, N.K. Bhatt, Debbijoy Bhattacharya, Saikat Bhowmick, K.G. Biju, Atreyee Biswas, Dhiraj Bora, Russell Cannon, Subenoy Chakraborty, Sumanta Chakraborty, Nabajit Chakravarty, A. Chattopadhyay, Pradip Kumar Chattopadhyay, Surajit Chattopadhyay, Laxmikant Chaware, Rabin Chhetri, Mamta Dahiya, Prathamesh Dalvi, Mitali Damle, Himadri Sekhar Das, S.B. Das, Sudipta Das, Nilkanth Dattatray, Ishant Dave, Aritra De, Soumi De, Swati Deshmukh, Amit Dhakulkar, Reetika Dudi, Broja Gopal Dutta, Rinku Dutta, Nagnath Garad, Hareesh Gautham, Gourav Kumar Ghosh, Shaon Ghosh, Sushant Ghosh, Sambit Kumar Giri, Rounaq Goenka, Rupjyoti Gogoi, A. Gopakumar, Gopakumar, Sarbari Guha, Anuradha Gupta, Manoj Gupta, P.D. Gupta, P.K. Gupta, Tanul Gupta, Vishakha Gupta, K.P. Harikrishnan, Ritesh Hatkar, Sk. Monowar Hossein, Tanvir Hussain, K. Indulekha, Bala Iyer, Joe Jacob, Deepak Jain, Manish Jain, Namrata Jain, Purushottam Jangid, Jeena K. Sanjay Jhingan, Jithesh V., Reju Sam John, Dhanya Joseph, Kanti Jotania, Minu Joy, Anil Kakodkar, Md. Mehedi Kalam, Aditya Kandaswamy, Swarali Karkhanis, Prasanna Madhukar Khadse, Pravin Kokne, Dawood Kothawala, Ajai Kumar, Anupam Kumar, Nagendra Kumar, Pankaj Kumar, Saurabh Kumar, Suresh Kumar, Vivek Kumar, Rakesh Laxman, Albert Lazzarini, Nilanjana Mahata, Soma Mandal, Bari Maqbool, Nairwita Mazumder, Karmesh Mehta, Parita Mehta, Bivudutta Mishra, Subhasmita Mishra, Rekhesh Mohan, Aditya Sow Mondal, Soumen Mondal, S. Mukherjee, Sargam Mulay, Pramod G. Musrif, Hemwati Nandan, Rajesh Nayak, Nithya C., Amitesh Omar, Mayukh Pahari, Siddhesh Pai, Supriya Pan, P.N. Pandita, Aseem Paranjape, Maulik Parikh, Amit Pathak, K.D. Patil, Mayur Hiralal Patel, B.C. Paul, Niladri Paul, Sonu Tabitha Paulson, Devraj Pawar, Pramod Pawar, K. Venkata Phani, Sateesha Poojary, Anirudh Pradhan, Prabhunath Prasad, V.P. Prajwal, A.U. Preetha, D. Shanti Priya, B. Purniah, Sendhil Raja S., S.R. Rajesh, Shantanu Rastogi, C.D. Ravikumar, Saibal Ray, M.K. Richharia, Martin Roth, Ram Sagar, Anirban Saha, Subhajit Saha, Sanjay Kumar Sahay, Sunder B. Sahayanathan, Sandeep Sahijpal, Prasant Kumar Samantray, Rathin Sarma, Bhim Prasad Sarmah, T.R. Seshadri, Amit Seta, Ekta Shah, Shreya Ninad Shah, Hina Jabeen Shaikh, Ashu Sharma, Pankaj Sheoran, Juie Shetye, Atreyee Sinha, Satish Sonkamble, Radha Srinivasan, S. Sriram, L. Sriramkumar, Amit Srivastava, Aniket Sule, Avinash Surendran, Preeti Tahliani, Parijat Thakur, Bhagorao Tukaram Tate, Buddhi Vallabh Tripathi, C.S. Unnikrishnan, A.A. Usmani, D.B. Vaidya, Krishna Venkateswara, Rajeev Verma, Subham Vidyant, S. Vinitha, Amitabh Virmani, Naveel Wani, Stanley Whitcomb, Lalthakimi Zadeng,

Visitors Expected

July 2013

Shantanu Agarwal, IIT, Mumbai; Farooq Ahmad, University of Kashmir, Srinagar; R.P. Bambah, Chandigarh; Vasudha Bhatnagar, University of Delhi; Subenoy Chakraborty, Jadavpur University, Kolkata; Asis Chattopadhyay, Calcutta University, Kolkata; B.C. Chauhan, Government College Karsog, Mandi, Himachal Pradesh; Jishnu Dey, Presidency University, Kolkata; Mira Dey, Presidency University, Kolkata; T. Gangopadhyay, Presidency University, Kolkata; Ritesh Ghosh, Visva-Bharati University, Santiniketan; Sushant Ghosh, Jamia Millia Islamia, Delhi; Aruna Govada, BITS-Pilani, Goa; Mubashir Hamid, University of Kashmir, Srinagar; Vinay Kashyap, Dhriti Khanna, University of Delhi; V.C. Kuriakose, Cochin University of Science and Technology, Kochi; Soma Mandal, Taki Government College, West Bengal; Aditi Mittal, University of Delhi; Ghada Farouk Mohamedien, NRIAG, Egypt; Sailo Mukherjee, North Bengal University, Siliguri; N. Mukunda, Bangalore; Rajesh Nayak, IISER, Kolkata; Yash Pal, Delhi; P.N. Pandita, North-Eastern Hill University, Shillong; M.K. Patil, Swami Ramanand Teerth Marathwada University, Nanded; Sajeeth Ninan Philip, St. Thomas College, Kozhencheri, Kerala, L. Radhakrishna, Bangalore; Shantanu Rastogi, DDU Gorakhpur University, Uttar Pradesh; Biplab Raychaudhuri, Visva-Bharati, Santiniketan; L. Resmi, Indian Institute of Space Science and Technology, Trivandrum; P.K. Sahoo, Birla Insitute of Technology and Science, Hyderabad Campus; Subrata Sarkar, Visva-Bharati University, Santiniketan; H.P. Singh, University of Delhi; Vikram Soni, Jamia Millia Islamia, Delhi; Ashutosh Tripathi, IISER, Mohali; Pranjal Trivedi, Sri Venkateswara College, Delhi; P. Udayashankar, NIET, Mysore; Charitarth Vyas, Sardar Vallabhbhai National Institute of Technology, Surat.

A number of senior members, Visiting Associates, and the UGC Review Committee will be visiting IUCAA on July 15, 2013, and will be followed by 'Jayant@75' during July 18 - 19, 2013, to celebrate the Founder Director, and Emeritus Professor Jayant Narlikar, becoming 75 years of age.

August 2013

Naseer Iqbal, University of Kashmir, Srinagar; Bhola Ishwar, B.R.A. Bihar University, Muzaffarpur; Kanti Jotania, The M.S. University of Baroda, Vadodara; Ashish Mahabal, CALTECH, USA; Tabasum Masood, University of Kashmir, Srinagar; Anvar Shukurov, University of Newcastle, United Kingdom.

Long Term Visitors

P. C. Agrawal, Sanjeev Dhurandhar, Shaon Ghosh, Pushpa Khare, Gopal Krishna, and M. Parthasarathy.

Know Thy Birds-2

— Chaitanya Rajarshi

House Sparrow

Hello friends,

I am going to tell you a story of a small but magnificent bird. Once upon a time in China, there was a dictator Mao Zedong. In 1958, he initiated Four Pests Campaign to eliminate rats, flies, mosquitoes, and SPARROWS. The last were included on the list because they eat grains and as China being the largest populated country, they needed more food. In this campaign, sparrows were shot down, nests were destroyed and nestlings were killed. This resulted in the near extinction of the species in China, which upset the ecological balance, and enabled crop-eating insects to flourish. Then came the Great Chinese Famine (1958-61), in which more than 20 million people died of starvation. By 1960, Chinese leaders realized that sparrows not only eat grains but also large number of insects like locusts which are harmful for the crop.

After reading this one example, you must have understood the importance of the birds in the ecosystem. So, let's introduce ourselves to THE SPARROWS.

There are about 25 known species of the sparrows. The most commonly found is Passer Domesticus, i.e., House Sparrow (Chimni in Marathi, Goraiya in Hindi, Chatak/Vartika in Sanskrit). This bird is widely spread in most parts of the world.

With a typical length of 14-18 cm, it weighs around 25-40 g. The females are usually smaller than males. The male has black bill, mask, throat and breast . The cap is gray and the nape is rufous. The wings and the back are reddish with black streaks, while the shoulder has white stripe. The female lacks black colour. The head is brown with darker streaks around the mantle and a distinct pale supercilium.

Female feeding a fledgling

The House Sparrow is a very social bird. The sparrows have complex social structure. Typically, the size and the shape of black spot on the male's chest determines his hierarchy in the society. Sparrows prefer to nest in manmade structures, such as roof space or walls of buildings, street lights and nest boxes. They breed throughout the year depending on the food availability. They usually lay 4-5 eggs. The eggs are lighter white with gray/brown spots. The incubation period is about two weeks.

Sparrow's menu card consists mainly of grains and weeds, insects for their young, and many other foods like corn, oat, wheat, millet, etc.

Dust bath of sparrows

WHERE HAVE THE SPARROWS GONE? Many of us wonder where have the sparrows gone from the city. The reasons are

* lack of nesting sites in modern concrete building.
* increased use of chemicals in farming (lack of insect food).
* unavailability of the soil for their dust bath (many birds take dust and water bath to get rid of the body parasites).
* electromagnetic radiation from the mobile towers. (Microwaves can damage eggs and embryos, and can misguide them while navigating).

So, just watch these amazing birds near your locality and fall in love with them. Please don't throw away their nesting material if they wish to build a nest in your house, and you will enjoy their neighbourhood with the sweet and melodious chirping sound.

Hatchlings with eggs

Water bath

I have uploaded a video on the YouTube. The link is following: http://www.youtube.com/watch?v=-BbM8AHtsyo.

Photographs Courtesy : Chaitanya Rajarshi and Abhay Kohok (IUCAA)

Khagol (the Celestial Sphere)
is the quarterly bulletin of

IUCAA
ISSN 0972-7647

We welcome your responses at the following address :
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