

Centre, Bijni Complex, Shillong during the month of October, November and December, 1999.

National Service Volunteer (NSV) : The NSS Cell deployed a NSV to assist the Cell. The post is funded by the NSS Regional Centre, Guwahati. Ms. Unimary Kharkongor joined the Cell in September 1999 for a period of one year.

Orientation Course for programme Officers : As decided in the Programme Officer's meeting held on 18th June, 1999 the NSS Cell organised an Orientation Course for untrained Programme Officers at TORC, Narendrapur from 10-19th December 1999. The course was arranged specifically for NSS Programme Officers of NEHU, Meghalaya. A total of ten Programme Officers underwent successful training.

World Aids Day : Various units observed World Aids Day on 1st December 1999 in a befitting manner through Poster Campaign, Awareness Camps, Quiz, debates etc.

Pre-Republic Day Camp : A Pre Republic Day Camp organised by the NSS Regional Centre, Guwahati was held at Umroi Army Contonment from 28th November - 4th December 1999. Eight volunteers including 3 males and 5 females volunteers participated in the same. Ms. Kynjai R Mawthoh of Raid Laban College, Ms. Wanda Rynjah of Synod College and Mr. Arbind Roy of Umshyrpi College were selected for the Republic Day Parade Camp at New Delhi from 31st December, 1999 - 31st January, 2000.

Vande mataram Campaign : The NSV was part of the Jatha team of the Vande Mataram Campaign organised by the Nehru Yuva Kendra. The team which comprised of NSV's of NSS and NYKS toured all districts of Meghalaya from 1-12 January as part of the Campaign.

Special Camping Programme : The NSS unit of Ri-Bhoi College, Nongpoh conducted a ten day camp on literacy and Women's reproductive health at Garikhana, Nongpoh from 29th November - 8th December, 1999. Sixty volunteers and four local youths participated in the same.

CENTRAL SERVICES

COMPUTER CENTRE

The Centre provides computation facility to faculty members, research scholars and students of the University and conduct training programmes in computer related subjects and develops software for the University's Finance Department.

Head : Dr. S N Rai

PRESENT STAFF :

Director : Dr. S N Rai, Ph.D. (BHU)
 Sr. Lecturer : Dr. T K Sinha, Ph.D. (NEHU)
 Sr. System Analyst : Mr. P P Dey, B.Tech. (Warangal)
 System Analyst : Ms. B Rynjah, B.Tech (Kakinada)
 : Mr. S Ghosh, M.E. (Jadavpur)

Courses conducted :

The M.Sc. Physics students did their Computer lab. In the Computer Centre under the supervision of Dr. T K Sinha.

The Centre conducts the following courses for IGNOU: Certificate in Computer, Diploma in Computer and Office Management and Post Graduate Diploma in Computer Application. The Centre taught a special paper for Post Graduate Students of the Department of Economics.

In future, the Centre plans to assist in running MCA/M.Sc. (Computer Science) course, whenever it starts, Three certificate courses to be conducted by the Centre are under consideration of the appropriate authorities. The centre undertakes consultancy/contractual work relating to software design and/or computation for outside agencies on payment basis independently or jointly with some software professionals and public/private sector organisations in accordance with the Rules/Statutes/Ordinances of the University.

Publications :

Sinha, T.K. and Sharan, R.N., Theory of Biophotons in *Conference Proceedings, April 2000, Statistical Mechanics Conference, University of Minnesota, USA.*

Other activities :

Dr. T.K. Sinha taught Statistical Mechanics to M.Sc. Physics students.
 Dr. T.K. Sinha and Dr. R.N. Sharan, Biochemistry Department, got a grant of \$6000 from ICTP, Trieste, Italy to continue their work on DNA.
 Mr. P.P. Dey visited IGNOU, New Delhi to study online documentation system.
 Dr. S.N.Rai and Mr. P.P. Dey provided technical assistance for VSAT Network.
 Mr. P.P. Dey provided technical consultation for setting up of Bio-Informatics Centre
 Ms. B.Rynjah went as a guest lecturer to Department of Forestry, Mizoram to teach computer courses.
 Mr. S.Ghosh attended a workshop on INTERNET APPLICATION conducted by Institute of Microbial Technology (IMTECH), Chandigarh.

The Centre generates funds for the University by way of conducting in-service courses for various Govt. organisations and by letting out PCs to IGNOU.

The Centre also manages the E-Mail facility of the University at Bijni Complex.

LIBRARY

The University Library has a collection of 1,75,402 Books and 38,036 volumes of bound periodicals. The allocation for books during the year was 11.00 lakhs and an amount of Rs.12.4 lakhs was received as 9th Plan allocation. A total of 12,532 volumes of books and 1,141 volumes of bound journals were added to the collection during the year. An allocation of Rs.71.5 lakhs was available for subscription of periodicals during the year 1999-2000, and 310 foreign and 250 Indian periodicals were subscribed. The libraries of the Departments of History and Political Science were shifted to the Permanent Campus during the year, thus the total number of departmental libraries has gone up to eight.

Currently 3,181 members are registered users of the library. On an average, 276 books were issued and 339 members consulted the library per day. The library facility is extended to affiliated college teachers, and consultation facility is provided to B.A. (Honours) students of the affiliated colleges also. However, the library is extensively used by teachers, research scholars and other students from the whole of North-East India. The reference and documentation facility is provided to the research scholars and teachers, on demand, relating to specific topics. During the year, Internet and E-mail facility has been made available in the library, and a separate computer has been allocated for the users.

The library at Tura Campus which came into existence in 1996 has a collection of 2959 books and subscription to 18 Indian and 15 Foreign journals.

Library Statistics at a Glance :

	Shillong Campus		Tura Campus
	1998-99	1999-2000	1999-2000
Total collection of books	1,62,870	1,75,402	2959
Total bound volumes	36,895	38,036	-
Registered users (no.)	3,122	3,181	113
Foreign journals subscribed (no.)	276	310	15
Indian journals subscribed (no.)	215	250	18
Average no. of users consulting the library	445	339	250
Average no. of books issued daily	373	276	65
Bound volumes of journals added	131	1,141	-
Sitting arrangement for library users	225	240	30
Books added during the year	1,184	12,532	479
Books classified	7,043	3,272	-
Allocation for periodicals Rs. (in lakhs)	60.00	71.50	0.64
Allocation for books Rs. (in lakhs)	10.00	11.00	-
Allocation for books (Plan) Rs. (in lakhs)	-	12.40	1.42

Publications :

Pathak, Lalit.P. ; Pandey, M.C. "Population growth and literacy". *Reading material on adult education*. Shillong, Centre for Adult and Continuing Education, NEHU, 1999: pp. 26-31.

Lalhmachhuana; Binwal, J.C. "Knowledge-based systems for library technical operations : developments and future prospects". *Jl. Lib. & Inf. Sci*, 24(1), 1999: pp. 38-58.

Kundu, A.K., Financial Famine and its impact on Library Resource Development. *Indian Journal of Information Library and Society*. V 13 (1-2), Jan-Jun, 2000.

HEALTH CENTRE

The NEHU : Health Centre caters to the health needs of the students, staff (Teaching & Non-Teaching) and their dependants totalling nearly 10,000 (ten thousand) beneficiaries.

The Health Centre has 2 branches one at Bijni Complex and the other at the Permanent Campus and are manned by both Lady & Gent Doctors who are assisted by an adequate number of para-medical staff.

Medical Officers are available for regular consultation at fixed hours as well as for emergency consultations, Health Centre stocks all necessary medicines and dispenses them. Besides, dressings, injections and minor surgical operations are also done at the Health Centres. First Aid and Medical Attendance is also provided during Athletic meets and various tournaments conducted by NEHU.

Regular immunisation facilities are available and the Health Centre participates in the National Pulse Polio Programme every year. The Health Centre also has a well equipped Ambulance Service.

Space for Laboratory has been secured and a Lab-Technician is undergoing the required training. In the very near future, the Health Centre's Laboratory will be functional.

The patients requiring in-patient treatment are referred to the local Hospitals recognised by NEHU. As all specialists are not available in Shillong, some cases are referred to hospitals outside the State. We have credit billing system with C.M.C Hospital Vellore and attempts are being made to have a similar system with local Hospitals viz. Nazareth and K.J.P. Synod Hospital.

The Health Centre maintains a list of Voluntary Donors from among NEHU Community and arranges blood - donation in case of emergency not only for the University community, but also for the needy among the community outside NEHU.

UNIVERSITY PUBLICATIONS

The work of NEHU Publications may be conveniently grouped into (a) Publications and (b) Printing. The first relates to the Publications of monographs, lectures delivered in the University, printing of new edition and important rare books

and also the reprint of some textbooks. The following were taken up during the year under report :

1. The Problem of Hill Tribes
Vol I and Vol. II by H.K. Borpujari
2. An Introduction to the History of Manikyas - by J.P. Singh
3. The Coins and Taken of Assam - by S.K. Bose
4. the Tokharians - by A.K. Narain

Among the textbooks, reprinting of the Anthology of English Verse and the NEHU Anthology of English Prose were reprinted by the NEHU Publications. Both the textbooks were prescribed for the Class XI and XII course. As in the past year an important printing job was the University's Annual Report.

Sales during the year relating to categories of books textbooks and general books have been sluggish. However, efforts were made to push up the sales - results awaited. NEHU and National Book Trust, New Delhi organised the Shillong Book Fair in October 1999. Positive responses to the fair has given optimum to make this fair an annual feature.

The Fair was attended by more than 60 publishers and Book-sellers including NEHU Publications.

REGIONAL SOPHISTICATED INSTRUMENTATION CENTRE

The RSIC-NEHU was established by the Department of Science & Technology, Government of India, to cater to the analytical requirement of the scientific community in the North Eastern Region. In addition to analytical services, the RSIC-Shillong conducts training workshops, offers limited repair and maintenance services in computer, instrumentation and compressor based system (ACs, refrigerators, cold rooms). As of 1999-2000 the DST has imposed a 20% cut per year in its payment of salaries to the RSIC staff which ;support would now come from NEHU.

Head : Professor Darlando Khathing

Faculty :

Senior Scientific Officer : T. Chakraborty - M.Sc., Ph.D. (NEHU)

Scientific Officers : T.S. Basu Baul - M.Sc. (Jabal.), Ph.D. (NBU)

S. Dey - M.Sc., Ph.D. (NEHU)

T. Job - M.Sc. (NEHU), M.Tech (IISc)

B. Dkhar - M.Sc. (NEHU)

Extension Lectures:

Sudip Dey, "Electron Microscopy and its Biological Applications" at B.C. College, Silchar, Assam on 10th January, 2000.

Dr. Sudip Dey, "Biomedical Application of Electron Microscopy" at Assam Science Society, Veterinary College, Khanapara on 18th Feb 2000.

Seminar/Symposia/Workshop.**Organised :**

Awareness programme on National Association for Applications of Radioisotopes and Radiation in industry in collaboration with NAARI, Bombay (November 26-27, 1999).

Attended :

R.N.K. hooroo, B.R. Noghri and S. Dey. Submitted a paper "Fine ultrastructural specialisation of the integument in the frog (female) *Rana limnocharis* during the breeding period" at the National Conference of Electron Microscope Society of India, Kanpur, December 1-3, 1999.

N. Biswas, P.K. Das and S. Dey. Submitted a paper "Detection of ultraviolet patterns in the wings of non-mulberry silkworm using SEM and their possible role in coupling behaviour" at the National Conference of Electron Microscope Society of India, Kanpur, December 1-3, 1999.

S. Dey. Submitted a paper "Ultrastructural features of liver and skin of fresh water fish with Epizootic ulcerative syndrome" at the National Conference of Electron Microscope Society of India, Kanpur, December 1-3, 1999.

S. Dey, P.C. Bhattacharjee, R.J. Stafford and C.R. Bhattacharjee. Submitted a paper "Shell ultrastructure of successfully hatched eggs of an endangered bird species, *Leptoptilos dubius* (Greater adjutant stork)" at the UGC sponsored seminar on conservation of Biodiversity of North East India, DHSK College, Dibrugarh, 11th April, 1999.

A.R. Varman, S. Dey, S. C. Choudhury, B. Kharbuli and M.S. Blum. "Casual factors responsible for the blue colour of the beetle, *Olosonyx chalybeates* (Hope)" at the National Symposium on Trends in Environmental Biology, NEHU, Shillong, June 23-25, 1999.

A.R. Varman, S. Dey, S.R. Hajong, D.K.B. Mukhim and B.K. Sharma "Effects of solar eclipse on the compound eye of the larvae of the dragonfly, *Aeschna verticalis* (L)" at the National Symposium on Trends in Environmental Biology, NEHU, Shillong, June 23-25, 1999.

S. Dey, R. Stafford and P.C. Bhattacharjee. "Cellular and behavioural studies on symptoms related to toxicity and deficiency of a few elements in some wild animals species from North East India" at the National Symposium on Trends in Environmental Biology, NEHU, Shillong, June 23-25, 1999.

S. Dey punctatus. S. Dey and C. R. Bhattacharjee. "Studies on relation between pH of polluted water and cellular disturbances in some vital organs I in *channa punctatus*" at the National Symposium on Trends in Environmental Biology, NEHU, Shillong, June 23-25, 1999.

Devjani Ghosh and Sudip Dey "Reversal of Acid Stress effect in common carp (cyprinus carpio) at cellular level" at the Conference on Fifth Indian Fisheries forum, Bhubaneshwar, 17-2000 January, 2000.

S. Dey, R.J. Stafford, P.C. Bhattacharjee. "Role of electron Microscopy in assessing the impact of Environmental stress on egg shell thinning of some endangered bird species of Assam" at the UGC sponsored state level seminar on Biodiversity of Assam and its conservation, Department of Botany, Karimganj College, 30th January, 2000.

R. Chakraborty and S. Dey. "Threat of urban pollution (Industrial, domestic, etc.) as found in some wild animals from North East" at the UGC sponsored state level seminar on Biodiversity of Assam and its conservation, Department of Botany, Karimganj College, 30th January, 2000.

R. Chakraborty and S. Dey. "Possible transmission of pathogens and toxic metals through dirty currency: An Electron Micro-scopic and Spectroscopical study" at the National Seminar on Environmental Issues and Priorities: Challenges of the Millennium. Department Ecology, Assam University, Silchar, March 2-4, 2000.

Publications :

Basu Baul, T.S., Dutta, S. and Tiekink, ERT, 1999. Crystal structure of diphenyltin (IV) N-(2)-hydroxy-5-methylacetophenone)-glycinate, $C_{23}H_{21}NO_3Sn$, *Z. Kristallogor.*, 214, 361-362.

Basu Baul, TS, Dhar, S., Kharbani, N., Pyke, SH., Butcher, R and Smith, FE, 1999. The synthesis and structural characterization of some triorganotin (IV) complexes of 5-(4-chlorophenylazo) salicylic acid: Crystal and molecular structure of triphenyltin 5-(4-chlorophenylazo) salicyli-cylate. $0.5 C_6H_{14}$, *Main Gr. Chem.*, 22, 413-421.

Basu Baul, S., Basu Baul TS and Tiekink, ERT, 1999. Synthesis and X-ray Crystal structure of $nBu_2SnCl_2.(C_6H_5H_4N_2)$, *Indian J. Chem.*, 338A, 501-505.

Borthakur, M., Das, M. and Dey, S, 1999. Ascorbic acid as a possible protective agent against Caffeine - induced cellular stress on albino rat erythrocyte, *Biomed. Letters*, 60: 191-201.

Dey, S., Arjun, J., Das, M, 1999. Erythrocyte membrane dynamics in albino mice offspring born to female with induced lead toxicity during pregnancy: A scanning electron microscopic study *Biomed. Letters.*, 59: 55-66.

Dey, S., Stafford, R., Deb Roy, MK., Bhattacharjee, CR., Khathing, DT., Bhattacharjee, PC and Dkhar, PS, 1999. Metal toxicity and trace element deficiency in some wild animal species from North-East India, as revealed by cellular, bio-inorganic and behavioural studies, *curr. Sci.*, 77(2): 276-280.

Dey S., 1999. Scanning electron microscopic detection of an unusual giant sensilla on the abdominal cuticle of the fifth instar larvae of the muga silkworm, *Antherae assama*, 30(4): 339-348.

Dey, s., Hooroo, RNK., Biswas, N., Raghuvarman, A. and Choudhury, S, 1999. Cellular features of the muga silkworm *Antheraea assama*, Ww. Lepidoptera: Saturnidae) midgut and its possible impact on indoor rearing, *Sericologia*, 39(4): 1-7.

Taposh Chakraborty, Bajpai, PK and Verma, AL, 1999. Room temperature spectroscopic investigations of $K^{14}NO_3$, $K^{15}NO_3$, $K^{14}N^{16}O_3-x^{18}O_x$ and 1:1 Mixture of $^{14}NO_3$ and $K^{15}NO_3$: Inter molecular coupling Revealed in the Vibrational spectra, *J. Raman, Spectroscopy* 30, 189-194.

Other Activities : Dr. Sudip Dey was Recipient of Best Electron Micrograph Award, Electron Microscopical Society of India at its National Conference in Kanpur, 1999.

UNIVERSITY SCIENCE INSTRUMENTATION CENTRE

The establishment of USIC was approved by the UGC Visiting Team during the Fifth period Plan. USIC facilities were envisaged to cater to the needs of different Science Departments and University Departments for repair and maintenance of equipments, fabrication of different gadgets for Science Departments, fabrication of different items of wood in the Mechanical Section. USIC has a large number of sophisticated machines in Mechanical and Carpentry Sections which have been installed and are working satisfactorily over the years. USIC has been undertaking repairs and maintenance and fabrication of many accessories required by different users' departments. USIC has also deputed one staff for training in Refrigeration and another staff for training in winding of transformer.

Head : Dr. Y. S. Jain

Other activities :

(a). Glass Blowing Section of USIC has completed the installation of the lathe machine, grinding machine and tube cutting machine and made them functional and can start to repair and manufacture small glass apparatus needed for the Science departments.

(b). Mechanical Section of USIC has fabricated and repaired some scientific parts for science departments and fabricate some steel works for the University and its staff and other users. Orders received for fabrication of steel frame beds, steel almiraahs, flower pot stands, trolley carrying generator, trolley for domestic use, repair of mechanical typewriter, reproduction apparatus, photograph box etc were completed in time.

(c). Carpentry Section of USIC has helped in polishing of wooden discs meant for research work of science departments and making of furnitures and repairing them for various departments of NEHU and other users. We have received orders for making of wooden tables, T.V.Cabinet, Wooden key board, wooden chairs, wooden filter stand, wooden steps, wooden computer table, extension boxes, wooden pigeon hole, wooden letter box, display boards, wooden stool, notice boards, wooden lecterns, wooden cots. The above orders were completed in time.

(d). The Electronic Section has carried out repair and fabrication of miscellaneous electrical and electronics items for different science departments and sections of the University. Orders received for repairing of autoclave, AC Servo stabilizers, De-ioniser, muffle furnace, distillation unit, high voltage power supplies, reproduction apparatus, photometer, centrifuge, room heater & hot air blower, typewriters, refrigerators etc were completed in time. Orders for fabrication of extension boards, voltage stabiliser (A.C), rewinding and fabrication of transformer, eliminator etc. were carried out. This section had also been given the responsibility by the University to assess the value of different old electrical and electronic and mechanical items for condemnation vis, xerox machines, electronic typewriters, manual typewriters, VCR, Calculator, etc were carried out on request from the University.

Design and development work of scientific equipment particularly useful to demonstrate some important natural phenomena has been taken up by USIC for the first time. The working of some equipments such as power stabiliser, self convector heater etc are under study. Fabrication of several teaching aid/laboratory equipment has been planned.

Head : Dr. Y. S. Jain

Other activities :

(a) Glass Blowing Section of USIC has completed the installation of the machine; grinding machine and tube cutting machine and made them functional and can start to repair and manufacture small glass apparatus needed for the Science departments.

(b) Mechanical Section of USIC has fabricated and repaired some scientific parts for science departments and fabricated some steel works for the University and its staff and other users. Orders received for fabrication of steel frame beds, steel sinners, flower pot stands, trolley carrying generator, trolley for domestic use, repair of mechanical typewriter, reproduction apparatus, photograph box etc were completed in time.

(c) Carpentry Section of USIC has helped in polishing of wooden discs meant for research work of science departments and making of furniture and repairing them for various departments of NEHU and other users. We have received orders for making of wooden tables, T.V. Cabinet, Wooden key board, wooden chair, wooden filter stand, wooden steps, wooden computer table, extension boxes, wooden pigeon hole, wooden letter box display boards, wooden stool, notice boards, wooden lecterns, wooden cots. The above orders were completed in time.