



NED NEWSLETTER

From Faculty Chief's Desk



Fungi are the second largest group of organisms in the biosphere after the insects. They are important bioresource and crucial to almost all aspects of human well-being and ecosystem health. Even then its significance was disregarded and its importance underrated within biology/botany/microbiology etc. Fungi are neither plants nor animals belonging to their own separate biological kingdom Fungi. In Nepal, fungal research started two centuries back but the pace is rather slow. It has a too low profile. Most of the parts of the country are still virgin. Mycology must grow fast beyond where it is today. The potential of fungi for a more sustainable world must be released to address global challenges of climate change, higher demands on natural resources, and the increased burden of lifestyle diseases. Interestingly, up to now, industry makes use only of a minute portion of the fungal kingdom. Fungal biodiversity is a resource pool for the future. However, fungal diversity is endangered by loss of habitat, causing loss of species and loss of biodiversity in general. Since the Rio (1991) and Johannesburg (2001) Summits of Convention for Biological Diversity (CBD), every country around the world has recognized the importance of its own bio-resources. The CBD has conferred every nation a sovereign or permanent right on its bio-resources. It has, therefore, become mandatory for every nation to establish the nation's biodiversity authority, document its bio-resources and set out guidelines for regulation of its bio-resources. It has also been apparent that unless the countries have their own documented list of bio-resources, it is impossible to regulate the movement of organisms, big or small within and out of the country. Therefore, documentation of bio-resources has become an urgent task. Keeping in view the aforementioned facts NAST has already started several mushroom programs like exploration and documentation of wild mushrooms,

molecular barcoding of promising indigenous mushrooms, mycochemical/pharmacological screening, phylogeny of mushrooms, development of farming technology for indigenous mycorrhizal mushrooms, and domestication of highly prized medicinal or culinary mushrooms. We need to stimulate mycology and work more efficiently together to take good care of the resource and unlock the full potential of the fungal kingdom for future use. Wish you all wonderful happy new year 2019 !

Jaishree Sijapati

Jaishree Sijapati
Chief
Faculty of Science, NAST



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Note: Views expressed herein do not imply Bioresource Unit, NAST endorsement.

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Dear Esteemed Readers !

The fungal resource of Nepal is globally important and there are vast areas that are still unexplored. At present, Nepal needs more mycologists and funds to explore and develop this research field. This is the right time to make the peoples aware of the immense importance of fungi for sustainable development. We need to put mycology higher up on national as well as global agendas. This will attract more talents to our field of study, empower mycologists to generate more funds for necessary basic research, and strengthen the field of mycology. With your valuable suggestions and comments, we have been continuously working hard to foster mycology nationwide through various outreach programs such as academic talks, fungal walks etc. We have put tremendous effort to engage a wider audience through our social media platforms. We will be delighted to hear from you with your healthy comments and feedbacks in the days ahead as well. We always strive to make new connections, further raising awareness of the fungal kingdom and role of fungi to play in our world.

The newsletter is published quarterly by Bioresource Unit, Faculty of Science, NAST. It aims to provide a platform for sharing ideas, experiences, knowledge and common interests regarding fungi and to furnish mycological information and educational materials to those who wish to increase their knowledge about mushrooms including other fungi. It accepts short feature articles, book reviews, photos, recipes, artwork, classified advertisements (jobs, services, mushroom/spawn wanted), news relevant to mushroom business and other fungi. Have a beautiful & happy new year 2019 !!!

- Editors



With the following action plan, mycology can be strengthened within the country

Collaboration

- Establish a national mycological society including those working on all aspects of pure and applied mycology and seek membership of the International mycological Association (IMA)
- Actively recruit mycologists of all kinds to membership of the national society, preparing society's leaflet for distribution
- Organize annual scientific meeting regularly, with invited and offered papers, posters, and social events (e.g. mushroom festival), ideally in a different town each year
- Compile a directory of mycologists in the country and their specialism
- Encourage the formation of specialist groups of mycologists and local fungus groups
- Organize an annual meeting between officers of national and international scientific societies (especially from SAARC region) with complementary interests in the region (e.g. those concerned with biodeterioration, biotechnology, botany, ecology, medical mycology, microbiology, plant pathology)

Promotion

- Identify government and other national bodies on which mycologists should be represented and facilitate such representation
- Issue an annual hard-copy as well as electronic version newsletter for distribution
- Make contacts with key scientists and government officials in a position to promote mycology
- Explain by letters to key personnel in universities, government departments, conservation agencies, and museums, that fungi are more closely related to animals than plants and that they are independent of and not subsumed within departments or actions relating to botany/plants, or even microbiology (bacteria and viruses are in different domains)
- Appoint a Press Officer responsible for alerting newspapers, radio, and television stations to items of potentially wide interest involving fungi

Awards & Honours

- Arrange exhibition on the importance of mycology to be displayed in different parts of the country
- Establish a homepage on the world wide web with links to regional and other national & international webs
- Prepare and seek sponsors for the publication of posters on the importance of fungi to human welfare and ecosystem health

Education

- Identify speakers able to make presentations on different aspects of mycology in the country's language and make that list available to schools and universities
- Develop and recommend the suitable mycological course for schools and universities in the country
- Award a certificate and modest cash prize for the best oral presentation and (or) the best poster given by a student at the annual meeting of the society
- Arrange workshops on specific topics, including various mycological techniques yearly
- Plan an annual field excursion, and also a visit to a center conducting mycological research (in association with the annual meeting)
- Ensure any codes of conduct produced by the IMA are appropriately distributed in the country

Conservation

- Compile and publish a national checklist of fungi recorded in the country
- Develop & implement a national fungal recording scheme
- Seek and ensure representation on national conservation bodies
- Establish a national fungal conservation forum, including professional and amateur bodies as well as government environmental agencies
- Identify areas of major importance for fungal conservation in collaboration with government conservation agencies
- Select a site for an all taxa biodiversity inventory (ATBI) for fungi in the country and identify specialists to help, and collections to deposit voucher material in

(Hawksworth, 2003 with modification by Dr. Jay Kant Raut)



There is a great news to report that Dr. Mahesh Kumar Adhikari, an eminent mycologist is a recipient of this year's Science and Technology Academy Award. The award was given to him on 10th June 2018 by Nepal Academy of Science & Technology (NAST) for his consistent four-decades-long contribution in the study of Nepalese fungi.

He has been working on the systematics and biodiversity of fungi for many years. Dr. Adhikari has published around 200 fungal related articles and seven books. He has discovered 16 fungal species from the territory of Nepal which are new to science. Two newly discovered fungi have been named as *Puccinia adhikarii* Ono and *Suillus adhikarii* Das, Chakraborty & Cotter which is not a great honour to him but also great pride for us. Now he has retired from government's job but still active in several mycological activities.

Congratulations to Dr. Adhikari !

Mark Your Calendar

International Conference on Mushroom Biotechnology and Applications

Zurich, Switzerland

January 14 - 15, 2019

<https://waset.org/conference/2019/01/zurich/ICMBA>

3rd International Conference on Basic and Applied Mycology
March 9-10, 2019

Assiut University Mycological Center, Assiut, Egypt

Contact: Abdel-Aal H. Moubasher ahamaumc@yahoo.

International Symposium on Fungal Stress

São José dos Campos, SP, Brazil

May 20 – 23, 2019

<https://isfus2019.wordpress.com/>

International Conference on Mycology, Fungi and Fungal Biology

Berlin, Germany

May 21 - 22, 2019

<https://waset.org/conference/2019/05/berlin/icmffb>

International Conference on Mushroom Biotechnology and Applications

New York, USA

December 9 - 10, 2019

<https://waset.org/conference/2019/12/new-york/ICMBA>

Get Well Message



It is the matter of great pity to report here that a senior member of our research team Dr. Prabina Rana went through brain surgery in abroad during her travel last month. Really, we got shocked knowing this. Now she is

getting recovery in hospital at Kathmandu. Seeing her feel better after the surgery made us feel so happy & hopeful. We hope to see her bounce back to her normal self soon. May the almighty God shower his mercy upon her for the speedy recovery and grant her good health in the remaining years!



Have a blissful stay in the hospital and get a good rest!

-NFD Team

Bioresource Unit

Bioresource Unit among several research units in NAST under the Faculty of Science has been conducting in-house innovative researches in the priority areas of Science and Technology collaborating with many national and international organizations.

Major research areas

- Land use change
- Biodiversity and livelihood of fragile landscapes
- Fungal ecology, mycorrhiza & biochar
- Fungal diversity, systematic & conservation
- Animal ecology & ecosystem services
- Mushroom cultivation/biotechnology
- Dendroecological study
- Wild edible fruits & biomaterials
- Medicinal & aromatic plants (MAPs)

Research Team

1. Dr. Anjana Giri (Forest Ecology & Soil Science)
2. Mr. Bishwanath Prasad Yadav (Agriculture/ MAPs)
3. Dr. Prabina Rana (Dendroecology)
4. Dr. Lok Ranjan Bhatt (Natural Product Development)
5. Dr. Jay Kant Raut (Mycology/Mushroom Science)
6. Dr. Puspa Raj Acharya (Animal Ecology)
7. Ms. Minu Adhikari (Botany)
8. Ms. Santoshi Bhusal (Botany)
9. Ms. Ganga Phuyal (Zoology)

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Submission can be sent to the editor by email (outreach@myconast.net.np) as attachments, preferably in MS

Word. If you submit pictures, these need to be sent as separate JPG or GIF files of high resolution (more than 300 psi), not embedded in the word document. The editors reserve the right to edit copy submitted in accordance with the policies of NFD newsletter and the Bioresource Unit, NAST.

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