

## Registration

To register please use the registration form available with the brochure, fill the details and e-mail soft copy to the Organizing Secretary. The Registration fee is Rs. 1250/- for faculty and Scientists and Rs. 750/- for students and research scholars. Payment has to be made by demand draft or online payment, payable at State Bank of Travancore, Kariavattom Branch, Kerala University Campus in favour of the Organising Secretary, National Seminar on Biodiversity Conservation. The account details are:

**Name: Seminar on Biodiversity**  
**A/c No. 67384900563**  
**IFSC code: SBTR0000043**  
**MICR code: 695009040**

For more details contact the Organising Secretary.

## Accommodation

Accommodation should be arranged by the participants themselves. Local assistance will be extended by the organizers. Limited accommodation on payment basis will be available in the University guest House- which will be allocated on the first come first serve basis.

Organising Secretary

**Dr. G. Prasad**

Head of the Department

Department of Zoology

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### ABOUT THE DEPARTMENT

The Department of Zoology was established as a full-fledged teaching and research Department in July 1968 at Kariavattom with the late Prof. K.K Nayar as the Professor and the Head of the Department. During the formation period the Department was concentrated mainly on research. The thrust area being comparative invertebrate endocrinology especially insect. There were a large number of projects going on in that period especially funded by various International and National agencies like Ford foundation, PL 480, CSIR, UGC, INSA, IMA, Tea Board, Atomic Energy Commission etc. During this period the Department was equipped with modern equipments like TEM.

The Department started MSc. and M.Phil courses in Zoology (General and Applied) in 1983 -1984. The Department has produced 100% pass in all the examinations with high degree of first classes. For the PhD. Programme, which has been offered in the Department since its inception, more than 150 candidates have been awarded the PhD. Degree. , 250 M.Phils and more than 600 Research publications. The work carried out by the Department particularly on Aquatic Biology, Insect Biology, Stress physiology, Endocrinology, Caecilian Biology, Conservation Biology, Ethology and Immunology has attracted international acclaim. The Department is now under UGC-SAP funding Phase – II.

# NATIONAL SEMINAR ON CONSERVATION — OF FRESHWATER BIODIVERSITY — UNDER CHANGING CLIMATE AND LAND-COVER

20<sup>TH</sup> AND 21<sup>ST</sup> JANUARY 2017



Organised by  
DEPARTMENT OF ZOOLOGY  
UNIVERSITY OF KERALA  
Kariavattom P.O., Trivandrum-695 581

[www.keralauniversity.ac.in](http://www.keralauniversity.ac.in)





**G**lobally, freshwater ecosystems deliver vital resources to humans while supporting 10% of all known species including nearly 50% of the world's fishes. However, because of the strong human dependence on fresh waters, changes in land use, water course alterations, and the introduction of species have led to widespread water pollution, habitat degradation, and biodiversity loss. As a result, freshwater ecosystems are one of the most endangered classes of ecosystems in the world. Without significant changes to the current unsustainable use of water resources, future degradation of river, lake, and wetlands will jeopardize both biodiversity and critical ecosystem services relied upon by humanity. Human activities have reached a scale where we affect vital planetary processes, and these alterations have pervasive negative effects on freshwater biodiversity by reducing species richness, distribution patterns, and food web interactions. Human land use changes, such as the expansion of urban and crop cover, are probably the greatest future threat to freshwater biodiversity. Indeed, in many parts of the world, increasing human population and development pressures, create a double squeeze on freshwater ecosystems from both cropland and urban expansion. The expansion of croplands increases the amount of sediments, nutrients, and pesticides entering fresh waters.

Furthermore, the complex and often synergistic interactions between ecosystem stressors or threats to freshwater biodiversity will be compounded by human induced global climate change, causing higher temperatures and shifts in precipitation and river runoff, increas-

ing the difficulty of predicting outcomes for biodiversity and consequential extinction risks but, most likely, amplifying them. In addition, hydrological alterations used to support agricultural systems can reduce in stream flows and groundwater stores, attenuate flood pulses, and reduce riparian habitat and native fish movement. Similarly, even seemingly small proportions of urban land cover can lead to substantial increases in the amount of chemical and thermal pollution in rivers and decreases in stream-channel habitat structure and biodiversity.

The vast expanses of both the developed and developing world experience acute levels of human water security and biodiversity loss. The biota of fresh waters has yet to be fully inventoried, especially in tropical latitudes and a global assessment demonstrates that it is very much larger than would be expected from the area occupied by inland waters. 10% of the total described species in the world almost live in the freshwaters and of these approximately 50% of global fish diversity and one quarter of global vertebrate diversity. When amphibians, aquatic reptiles and mammals are added to the fish, the total comprises one third of all vertebrate species. This is surprising in view of the tiny amount of fresh water that is actually available as habitat.

Fresh waters as a whole are a hotspot for biodiversity. High fragmentation and endemism reduces the ability of freshwater species to migrate freely across the landscape. Therefore, fresh waters are hotspots of endangerment as well as of biodiversity. Even in cases where species have not yet disappeared altogether, human activities have eliminated many populations and have caused

a marked thinning of ranges that could reduce the future viability of many species. Although substantial uncertainties remain about the effects of changing land use and climate on the world's freshwater ecosystems, conservation actions are needed as we approach the upper limit for human use and degradation of water beyond which the loss of essential ecosystem services and irreplaceable species loss is likely.

This conference provide a platform for the students, Scientists and researchers to deliberate and sort out measures that will at least reduce the rate of deterioration of ecosystem and its supported biodiversity

The Conference will deal on the following major themes:

- **Freshwater Biodiversity**
- **Aquatic Ecology**
- **Exotic flora and fauna**
- **Impact of Land use on Biodiversity**
- **Climate Change and Biodiversity**
- **Fresh water Pollution and Biodiversity**
- **Freshwater Ecosystem Conservation**

## Call for Papers

Papers are invited on the above themes for oral or poster presentation. A student prize will be awarded for the best presentation among the young scientists (PhD and Post-doctoral students below 35 years). Researchers who are interested to participate in the competition have to register and submit two copies of full paper with proof of age and certificate that the work is bona fide.

## Abstract Submission

Abstract of Scientific papers not exceeding 300 words on various themes may be submitted on or before 15th January 2017 as e-mail attachment as MS Word. Send e-mails to probios1@gmail.com or bioconserv2016@gmail.com

## Guidelines for Abstract Preparation

Font: Times New Roman, Size: 12 points. Name of the presenting author underlined, followed by e-mail address and postal address. An academic committee will select the abstract for oral or poster presentation.

## Guidelines for Oral Presentation

Time: 7 Minutes for presentation, 3minutes for interaction. Please have your presentations (PPT) in CD for windows format. (Please note that it will not be possible to use personal laptops for presentations).

## Guidelines for Poster Presentation

Poster can be displayed near the main presentation hall for the length of the whole Conference. Poster must not exceed dimension of A0 format (880 x 1230mm).

## PATRONS

**Dr. P. K. Radhakrishnan**  
Vice Chancellor  
University of Kerala

**Dr. N. Veeramanikandan**  
Pro-Vice Chancellor  
University of Kerala

**Dr. M. C. Subhash Peter**  
Dean  
Faculty of Science

## Organising Committee

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Organising Secretary

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