



INDIAN INSTITUTE OF SCIENCE  
BANGALORE

Cordially invites you to the  
INSTITUTE COLLOQUIUM  
(Biological Sciences)

By  
**Professor R Sukumar**  
Chairperson  
Centre for Ecological Sciences

On  
**"ECOLOGY THROUGH AN ELEPHANT'S EYES"**

Date : Wednesday, 9<sup>th</sup> November 2011  
Time : 4-00 p.m  
Venue : Faculty Hall, Main Building

**Professor P. Balaram**, Director  
will preside

Tea: 5-15 p.m Reception Hall

**ALL ARE WELCOME**

## Abstract

Research in my laboratory has spanned a number of seemingly disparate fields of investigation such as wildlife ecology (in particular, that of the elephant), climate change and tropical forest ecology. However, there has been a binding factor – the elephant – that interconnects and reinforces much of this research. My early work on the ecology of elephant-human conflicts has since diversified to a more complete understanding of the biology and ecology of this species through studies on ranging patterns, behavior, population modeling, molecular genetics and phylogeography, reproductive endocrinology, and conservation biology. This has provided the impetus for branching into other lines of investigation. My investigations on the feeding ecology of elephants using stable carbon isotope analysis of bone collagen, for instance, also drew me to the field of palaeoclimate in which I used an identical technique in reconstructing the late Quaternary climate change in southern India from records in high-elevation peat bogs. My interest in the impact of elephants on the vegetation and its implications for forest dynamics led me to study ecological processes in permanent forest plots in the Western Ghats. This work spanning more than two decades has not only brought out the importance of long-term observations before drawing firm conclusions of many ecological phenomena, but also the surprising resilience of tropical dry forests to stress and disturbance from factors such as climate (e.g. drought), fire and herbivory by mammals. I shall highlight some of the significant results that have emerged from these studies.